



Series 50	<b>414</b>
Series 4	<b>416</b>
Series 5	<b>422</b>
Series 18	<b>427</b>
Series 22	<b>433</b>
Series 13	<b>442</b>
Series 25	<b>449</b>
Series 45	<b>455</b>



## Nine series to cover every crimping operation.

### Crimping dies for Klauke crimping tools.

Klauke crimping dies are set apart by their outstanding durability and highest precision. Only top-quality material is used in production. Precision is the key to production. The dies are subject to a rigid quality control. All dies are bright polished to achieve best possible crimping results.

We offer a broad range of crimping dies for all Klauke tools with interchangeable dies. We guarantee safe electrical connections subject to the use of matched Klauke tools, Klauke dies and Klauke connecting material.

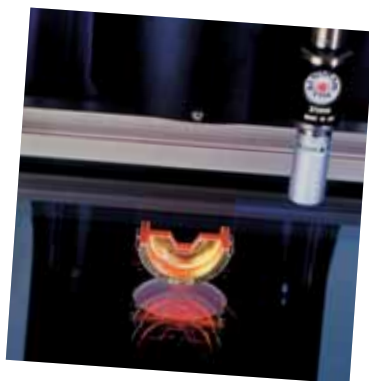
### blue connection®

Simple. Safe. Efficient.

























Blue dies for blue connection, yellow-chromed for copper, silver-coloured for aluminum.

- Nine series of dies are perfectly matched to Klauke tools.
- The correct crimping types for every connecting material.
- Polished profiled surfaces for maximum crimping results.
- Dies for blue connection®, copper and aluminum differ in colour.



In the production of Klauke crimping dies, precision is paramount.

Connecting material	50	4	5	18	22	13	25	45	100
	Классика	Классика	Классика	Классика	Классика	Классика	Классика	Классика	Классика
 blue connection									
		6-150 mm <sup>2</sup>	6-185 mm <sup>2</sup>		6-300 mm <sup>2</sup>	16-400 mm <sup>2</sup>			
	0.75-10 mm <sup>2</sup>	6-150 mm <sup>2</sup>	6-240 mm <sup>2</sup>	6-185 mm <sup>2</sup>	6-300 mm <sup>2</sup>	16-400 mm <sup>2</sup>	16-400 mm <sup>2</sup>		
		10-70 mm <sup>2</sup>	10-95 mm <sup>2</sup>	10-95 mm <sup>2</sup>	10-150 mm <sup>2</sup>	10-150 mm <sup>2</sup>	10-150 mm <sup>2</sup>		
		10-50 mm <sup>2</sup>	10-50 mm <sup>2</sup>	10-50 mm <sup>2</sup>	10-70 mm <sup>2</sup>	16-150 mm <sup>2</sup>	16-300 mm <sup>2</sup>		
	1.5-10 mm <sup>2</sup>	1.5-16 mm <sup>2</sup>		1.5-16 mm <sup>2</sup>	1.5-16 mm <sup>2</sup>				
	VA	0.5-16 mm <sup>2</sup>			10-50 mm <sup>2</sup>				
	Ni	0.5-16 mm <sup>2</sup>			10-50 mm <sup>2</sup>				
	DIN	6-120 mm <sup>2</sup>	6-185 mm <sup>2</sup>	6-185 mm <sup>2</sup>	6-300 mm <sup>2</sup>	16-300 mm <sup>2</sup>	16-625 mm <sup>2</sup>	120-1000 mm <sup>2</sup>	Upon request
		0.5-10 mm <sup>2</sup>	10-35 mm <sup>2</sup>	10-50 mm <sup>2</sup>	10-70 mm <sup>2</sup>	16-150 mm <sup>2</sup>	16-240 mm <sup>2</sup>		
		10-16 mm <sup>2</sup>	10-16 mm <sup>2</sup>		10-50 mm <sup>2</sup>	10-70 mm <sup>2</sup>	10-95 mm <sup>2</sup>	10-150 mm <sup>2</sup>	
			10sm <sup>1)</sup> - 150se <sup>2)</sup> / 120sm <sup>1)</sup>	10sm <sup>1)</sup> - 300se <sup>2)</sup> / 240sm <sup>1)</sup>	10sm <sup>1)</sup> - 240se <sup>2)</sup> / 185sm <sup>1)</sup>	10sm <sup>1)</sup> - 300se <sup>2)</sup> / 240sm <sup>1)</sup>	10sm <sup>1)</sup> - 300sm <sup>1)</sup>		
	Al	10-70 mm <sup>2</sup>	10-150 mm <sup>2</sup>	10-185 mm <sup>2</sup>	10-240 mm <sup>2</sup>	10-240 mm <sup>2</sup>	10-500 mm <sup>2</sup>	150-500 mm <sup>2</sup>	Upon request
	Aldrey	25-50 mm <sup>2</sup>	25-95 mm <sup>2</sup>	25-95 mm <sup>2</sup>	25-185 mm <sup>2</sup>	25-185 mm <sup>2</sup>	25-300 mm <sup>2</sup>	100-300 mm <sup>2</sup>	Upon request
	Al/St				4 (St)-120 (Al)	4 (St)-120 (Al)	4 (St)-120 (Al)		
	Al/Cu	10-70 mm <sup>2</sup>		10-185 mm <sup>2</sup>	10-240 mm <sup>2</sup>	10-240 mm <sup>2</sup>	10-500 mm <sup>2</sup>	150-500 mm <sup>2</sup>	Upon request
			4-35 mm <sup>2</sup>	16-35 mm <sup>2</sup>	4-50 mm <sup>2</sup>	4-50 mm <sup>2</sup>	10-70 mm <sup>2</sup>	10-185 mm <sup>2</sup>	
				70 mm <sup>2</sup>	70-120 mm <sup>2</sup>	70-120 mm <sup>2</sup>			
		0.14-50 mm <sup>2</sup>	10-50 mm <sup>2</sup>	10-95 mm <sup>2</sup>	10-95 mm <sup>2</sup>	10-240 mm <sup>2</sup>	25-240 mm <sup>2</sup>	25-240 mm <sup>2</sup>	
			2x4-2x16 mm <sup>2</sup>	2x4-2x16 mm <sup>2</sup>	2x4-2x16 mm <sup>2</sup>	2x4-2x16 mm <sup>2</sup>			
		0.1-16 mm <sup>2</sup>							
		0.1-6 mm <sup>2</sup>							
BNC plugs	RG 58, RG 59, RG 62, RG 71								
Turned pin receptacle and pin connectors	0.1-4 mm <sup>2</sup>								

<sup>1)</sup> Sector shaped multi-stranded. <sup>2)</sup> Sector shaped single wire.

# 50

Klauke



K 50



EK 50 ML



EK 15/50



EK 15/50 G



TEKP1

## Crimping dies R 50



### Suitable for

- Copper tubular cable lugs and connectors, standard type

Cross section mm <sup>2</sup>	Part No.
0,75-2,5	<b>R501</b>
4-10	<b>R502</b>

## Crimping dies M 50



### Suitable for

- Copper tubular cable lugs and compression joints for solid conductors

Cross section mm <sup>2</sup>	Part No.
1,5-4	<b>M50154</b>
6-10	<b>M50610</b>

## Crimping dies Q 50



### Suitable for

- Copper solderless terminals (DIN 46234) and pin terminals (DIN 46230) acc. to DIN
- Copper solderless connectors (DIN 46341) acc. to DIN

Cross section mm <sup>2</sup>	Part No.
0,5-10	<b>Q501</b>

## Crimping dies AE 50



### Suitable for

- Cable end-sleeves

Cross section mm <sup>2</sup>	Part No.
0,14 - 10	<b>AE501</b>
10-25	<b>AE502</b>
35-50	<b>AE503</b>



**Crimping dies IS 50, single crimping**

**Suitable for**

- Insulated cable connections, single crimping

Cross section mm <sup>2</sup>	Part No.	for part-no.
10-16	<b>IS502</b>	
0,5-2,5	<b>IS504</b>	670 WS, 680 WS
4-6	<b>IS505</b>	700 WS



**Crimping dies IS 50, double crimping**

**Suitable for**

- Insulated cable connections, double crimping

Cross section mm <sup>2</sup>	Part No.	for part-no.
0,5-6	<b>IS501</b>	
0,1-1	<b>IS503</b>	8201-8201B



**Crimping dies CR 50**

**Suitable for**

- Non-insulated receptacles

Cross section mm <sup>2</sup>	Part No.	tab width mm	for part-no.
0,25-6	<b>CR501</b>	2,8 / 6,3	
0,5-2,5	<b>CR502</b>	4,8	
0,5-1	<b>CR503</b>	2,8	38201, 38201A
0,5-2,5	<b>CR504</b>	6,3	3720, 3735
0,5-1,5	<b>CR505</b>	6,3	3725



**Crimping dies BNC 50**

**Suitable for**

- For stud and shielded sleeves
- BNC plugs for coax cable RG 58, 59, 62 and 71

Part No.
<b>BNC501</b>



**Crimping dies SB 50**

**Suitable for**

- Turned pin receptacles
- Pin connectors

Cross section mm <sup>2</sup>	Part No.
0,1-1	<b>SB501</b>
1,5-2,5	
4	





K 35/4

EK 35/4

EK 35/4 L

Crimping dies, blue connection® HB 4



► Accurate assignment of crimping tool/crimping die through colour-coding system

Suitable for

- Tubular cable lugs and connectors, blue connection® for compacted conductors acc. to VDE 0295 Class 2

Cross section mm <sup>2</sup>	Part No.	Crimp width mm	Number of crimps
6	HB46	9	1
10	HB410	9	1
16	HB416	9	1
25	HB425	9	1
35	HB435	9	1
50	HB450	9	1
70	HB470	5	2
95	HB495	5	2
120	HB4120	5	2
150	HB4150	5	2

Crimping die set 6 - 150 mm<sup>2</sup>, blue connection® HB 4 in plastic case, 11 pieces



Suitable for

- Tubular cable lugs and connectors, blue connection® for compacted conductors acc. to VDE 0295 Class 2

Part No.
HB4SET

**Crimping dies HR 4**

**Suitable for**

- Copper tubular cable lugs and connectors, standard type
- Tubular cable lugs for switchgear connections



Cross section mm <sup>2</sup>	Part No.	Crimp width mm
6	HR46	5
10	HR410	5
16	HR416	5
25	HR425	5
35	HR435	5
50	HR450	5
70	HR470	5
95	HR495	5
120	HR4120	5
150	HR4150	5

**Crimping die set, 6 - 150 mm<sup>2</sup> HR 4 in plastic case, 11 pieces**

**Suitable for**

- Copper tubular cable lugs and connectors, standard type
- Tubular cable lugs for switchgear connections



Part No.
HR4SET

**Crimping dies HIS 4**

**Suitable for**

- Insulated tubular cable lugs and connectors
- Insulated pin terminals



Cross section mm <sup>2</sup>	Part No.	Crimp width mm
10	HIS410	5
16	HIS416	5
25	HIS425	5
35	HIS435	5
50	HIS450	5
70	HIS470	5

## Crimping dies HF 4



## Suitable for

- Tubular cable lugs and connectors for fine stranded conductors

Cross section mm <sup>2</sup>	Part No.
10	HF410
16	HF416
25	HF425
35	HF435

## Crimping dies HM 4

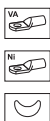


## Suitable for

- Tubular cable lugs and compression joints for solid conductors

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
1.5-2.5 4	HM4154	5
6-10	HM4610	5
16	HM416	5

## Crimping dies HN 4



## Suitable for

- Nickel tubular cable lugs and connectors
- Stainless steel tubular cable lugs and connectors

Cross section mm <sup>2</sup>	Part No.
0,5-1,0	HN4051
1,5-2,5	HN41525
4-6	HN446
10	HN410
16	HN416

## Crimping dies HD 4



## Suitable for

- Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
6	HD46	5	5
10	HD410	6	5
16	HD416	8	5
25	HD425	10	5
35	HD435	12	5
50	HD450	14	5
70	HD470	16	5
95	HD495	18	5
120	HD4120	20	5

**Crimping die set, 6 - 120 mm<sup>2</sup> HD 4 in plastic case, 10 pieces**

**Suitable for**

- Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN



Part No.
<b>HD4SET</b>

**Crimping dies HQ 4**

**Suitable for**

- Copper solderless terminals (DIN 46234) and pin terminals (DIN 46230) acc. to DIN
- Copper solderless connectors (DIN 46341) acc. to DIN



Cross section mm <sup>2</sup>	Part No.
10	<b>HQ410</b>
16	<b>HQ416</b>
25	<b>HQ425</b>
35	<b>HQ435</b>

**Crimping dies HISQ 4**

**Suitable for**

- Insulated solderless terminals and pin terminals



Cross section mm <sup>2</sup>	Part No.
10	<b>HISQ410</b>
16	<b>HISQ416</b>

**Crimping dies HRU 4**

**Suitable for**

- Pre-rounding dies for sector-shaped Al and Cu conductors
- 3- and 4-core sector-shaped conductors



Cross section mm <sup>2</sup> sm	Cross section mm <sup>2</sup> se	Part No.	Conductor dia. mm	Pre-rounding width mm
10		<b>HRU410</b>	4,1	9
16		<b>HRU416</b>	5,1	9
25	35	<b>HRU43525</b>	6,3	9
35	50	<b>HRU45035</b>	7,5	9
50	70	<b>HRU47050</b>	9,0	9
70	95	<b>HRU49570</b>	10,5	9
95	120	<b>HRU412095</b>	12,5	9
120	150	<b>HRU4150120</b>	14,0	9

## Crimping dies HA 4



## Suitable for

- Aluminum compression cable lugs and connectors acc. to DIN
- Aluminum/copper compression cable lugs and connectors (aluminum side)

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
10	HA410	10	7
16-25	HA41625	12	7
35	HA435	14	7
50	HA450	16	7
70	HA470	18	7

## Crimping dies HAD 4



## Suitable for

- Compression joints for full tension connections of Aldrey conductors acc. to DIN EN 50182

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
25	HAD425	12	7
35	HAD435	14	7
50	HAD450	16	7

## Crimping dies HC 4 / HMC 4



## Suitable for

- Clamps, C-type

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
16	HC416	5
25	HC425	5
4-4	HMC44	5
10-10	HMC410	5
10-16 10-25 35-35	HMC435	5

## Crimping dies HAE 4



## Suitable for

- Cable end-sleeves

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
10	HAE410	10
16	HAE416	10
25	HAE425	10
35	HAE435	10
50	HAE450	10

**Crimping dies HZAE 4**

**Suitable for**

- Twin cable end-sleeves

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
2 x 4	<b>HZAE44</b>	10
2 x 6	<b>HZAE46</b>	10
2 x 10	<b>HZAE410</b>	10
2 x 16	<b>HZAE416</b>	10



**Crimping dies HAES 4**

**Suitable for**

- Cable end-sleeves
- Special trapezoid crimp for fine stranded conductors

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
10	<b>HAES410</b>	10
16	<b>HAES416</b>	10
25	<b>HAES425</b>	10
35	<b>HAES435</b>	10
50	<b>HAES450</b>	10



**Crimping dies HZAES 4**

**Suitable for**

- Twin cable end-sleeves
- Special trapezoid crimp for fine stranded conductors

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
2 x 4	<b>HZAES44</b>	10
2 x 6	<b>HZAES46</b>	10
2 x 10	<b>HZAES410</b>	10
2 x 16	<b>HZAES416</b>	10



HK 60 UNV  
+ UA5

EK 50/5-L

EKM 60 UNV-L  
+ UA5EK 60 UNV-L  
+ UA5PK 60 UNV  
+ UA5

## Crimping dies, blue connection® HB 5



► Accurate assignment of crimping tool/crimping die through colour-coding system

## Suitable for

- Tubular cable lugs and connectors, blue connection® for compacted conductors acc. to VDE 0295 Class 2

Cross section mm <sup>2</sup>	Part No.	Crimp width mm	Number of crimps
6 + 35	HB5635	9	1
10 + 50	HB51050	9	1
16 + 70	HB51670	9	1
25 + 95	HB52595	9	1
120	HB5120	5	2
150	HB5150	5	2
185	HB5185	5	2

Crimping die set 6 - 185 mm<sup>2</sup>, blue connection® HB 5 in plastic case, 8 pieces

## Suitable for

- Tubular cable lugs and connectors, blue connection® for compacted conductors acc. to VDE 0295 Class 2

Part No.
HB5SET

## Crimping dies HR 5



## Suitable for

- Copper tubular cable lugs and connectors, standard type

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
6 + 35	HR5635	5
10 + 50	HR51050	5
16 + 70	HR51670	5
25 + 95	HR52595	5
120	HR5120	5
150	HR5150	5
185	HR5185	5
240	HR5240	5



**Crimping die set, 6 - 240 mm<sup>2</sup>, HR 5 in plastic case, 9 pieces**

**Suitable for**

- Copper tubular cable lugs and connectors, standard type



Part No.
<b>HR5SET</b>

**Crimping dies HIS 5**

**Suitable for**

- Insulated tubular cable lugs and connectors
- Insulated pin terminals



Cross section mm <sup>2</sup>	Part No.	Crimp width mm
10	<b>HIS510</b>	5
16	<b>HIS516</b>	5
25	<b>HIS525</b>	5
35	<b>HIS535</b>	5
50	<b>HIS550</b>	5
70	<b>HIS570</b>	5
95	<b>HIS595</b>	5

**Crimping dies HF 5**

**Suitable for**

- Tubular cable lugs and connectors for fine stranded conductors



Cross section mm <sup>2</sup>	Part No.
10	<b>HF510</b>
16	<b>HF516</b>
25	<b>HF525</b>
35	<b>HF535</b>
50	<b>HF550</b>

**Crimping dies HD 5**

**Suitable for**

- Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN



Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
6 + 35	<b>HD5635</b>	5 + 12	5
10 + 50	<b>HD51050</b>	6 + 14	5
16 + 70	<b>HD51670</b>	8 + 16	5
25 + 95	<b>HD52595</b>	10 + 18	5
120	<b>HD5120</b>	20	5
150	<b>HD5150</b>	22	5
185	<b>HD5185</b>	25	5

Crimping die set, 6 - 185 mm<sup>2</sup> HD 5 in plastic case, 8 pieces**Suitable for**

- Copper compression cable lugs (DIN 46234) and connectors (DIN 46267, part 1) acc. to DIN

Part No.

HD5SET

## Crimping dies HQ 5

**Suitable for**

- Copper solderless terminals (DIN 46234) and pin terminals (DIN 46230) acc. to DIN

Cross section mm <sup>2</sup>	Part No.
10	HQ510
16	HQ516
25	HQ525
35	HQ535
50	HQ550

## Crimping dies HRU 5

**Suitable for**

- Pre-rounding dies for sector-shaped Al and Cu conductors
- 3- and 4-core sector-shaped conductors

Cross section mm <sup>2</sup> sm	Cross section mm <sup>2</sup> se	Part No.	Conductor dia. mm	Pre-rounding width mm
10		HRU510	4,1	12
16		HRU516	5,1	12
25	35	HRU53525	6,3	12
35	50	HRU55035	7,5	12
50	70	HRU57050	9	12
70	95	HRU59570	10,5	12
95	120	HRU512095	12,5	12
120	150	HRU5150120	14	12
150	185	HRU5185150	15,7	12
185	240	HRU5240185	17,5	12
240	300	HRU5300240	20,3	12

**Crimping dies HA 5**

**Suitable for**

- Aluminum compression cable lugs and connectors to DIN
- Aluminum/copper compression cable lugs and connectors (aluminum side)

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
10	<b>HA510</b>	10	7
16-25	<b>HA51625</b>	12	7
35	<b>HA535</b>	14	7
50	<b>HA550</b>	16	7
70	<b>HA570</b>	18	7
95-120	<b>HA595120</b>	22	7
150	<b>HA5150</b>	25	7



**Crimping dies HAD 5**

**Suitable for**

- Compression joints for full tension connections of Aldrey conductors acc. to DIN EN 50182

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
25	<b>HAD525</b>	12	7
35	<b>HAD535</b>	14	7
50	<b>HAD550</b>	16	7
70	<b>HAD570</b>	18	7
95	<b>HAD595</b>	20	7



**Crimping dies HC 5**

**Suitable for**

- Clamps, C-type

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
16	<b>HC516</b>	5
25	<b>HC525</b>	5
35	<b>HC535</b>	5



**Crimping dies HAE 5**

**Suitable for**

- Cable end-sleeves

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
10	<b>HAE510</b>	20
16	<b>HAE516</b>	20
25	<b>HAE525</b>	20
35	<b>HAE535</b>	20
50	<b>HAE550</b>	20
70	<b>HAE570</b>	20
95	<b>HAE595</b>	20



## Crimping dies HZAE 5



## Suitable for

- Twin cable end-sleeves

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
2 x 4	<b>HZAE54</b>	20
2 x 6	<b>HZAE56</b>	20
2 x 10	<b>HZAE510</b>	20
2 x 16	<b>HZAE516</b>	20

## Crimping dies HAES 5



## Suitable for

- Cable end-sleeves
- Special trapezoid crimp for fine stranded conductors

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
10	<b>HAES510</b>	20
16	<b>HAES516</b>	20
25	<b>HAES525</b>	20
35	<b>HAES535</b>	20
50	<b>HAES550</b>	20
70	<b>HAES570</b>	20
95	<b>HAES590</b>	20

## Crimping dies HZAES 5



## Suitable for

- Twin cable end-sleeves
- Special trapezoid crimp for fine stranded conductors

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
2 x 4	<b>HZAES54</b>	20
2 x 6	<b>HZAES56</b>	20
2 x 10	<b>HZAES510</b>	20
2 x 16	<b>HZAES516</b>	20

**18**  
Klauke



Crimping dies R

Suitable for

- Copper tubular cable lugs and connectors, standard type
- Tubular cable lugs for switchgear connections

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
6	<b>R6</b>	5
10	<b>R10</b>	5
16	<b>R16</b>	5
25	<b>R25</b>	5
35	<b>R35</b>	5
50	<b>R50</b>	5
70	<b>R70</b>	5
95	<b>R95</b>	5
120	<b>R120</b>	5
150	<b>R150</b>	5
185	<b>R185</b>	5

► For connectors see assembly instructions for connector materials (general information) in the technical index, page I-8



Crimping dies IS

Suitable for

- Insulated tubular cable lugs and connectors
- Insulated pin terminals

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
10	<b>IS10</b>	5
16	<b>IS16</b>	5
25	<b>IS25</b>	5
35	<b>IS35</b>	5
50	<b>IS50</b>	5
70	<b>IS70</b>	5
95	<b>IS95</b>	5



## Crimping dies F

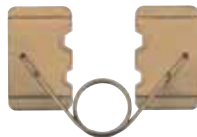


## Suitable for

- Tubular cable lugs and connectors for fine stranded conductors

Cross section mm <sup>2</sup>	Part No.
10	<b>F10</b>
16	<b>F16</b>
25	<b>F25</b>
35	<b>F35</b>
50	<b>F50</b>

## Crimping dies M



## Suitable for

- Tubular cable lugs and compression joints for solid conductors

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
1.5-4	<b>M154</b>	5
6-10	<b>M610</b>	5
16	<b>M16</b>	5

## Crimping dies D



## Suitable for

- Compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) to DIN - Cu

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
6	<b>D6</b>	5	5
10	<b>D10</b>	6	5
16	<b>D16</b>	8	5
25	<b>D25</b>	10	5
35	<b>D35</b>	12	5
50	<b>D50</b>	14	5
70	<b>D70</b>	16	5
95	<b>D95</b>	18	5
120	<b>D120</b>	20	5
150	<b>D150</b>	22	5
185	<b>D185</b>	25	5

► For connectors see assembly instructions for connector materials (general information) in the technical index, page i-8

Crimping dies Q

Suitable for

- Copper solderless terminals (DIN 46234) and pin terminals (DIN 46230) to DIN
- Copper solderless connectors (DIN 46341) to DIN

Cross section mm <sup>2</sup>	Part No.
10	<b>Q10</b>
16	<b>Q16</b>
25	<b>Q25</b>
35	<b>Q35</b>
50	<b>Q50</b>
70	<b>Q70</b>

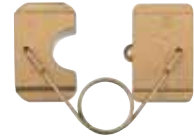


Crimping dies ISQ

Suitable for

- Insulated solderless terminals and pin terminals

Cross section mm <sup>2</sup>	Part No.
10	<b>ISQ10</b>
16	<b>ISQ16</b>
25	<b>ISQ25</b>
35	<b>ISQ35</b>
50	<b>ISQ50</b>

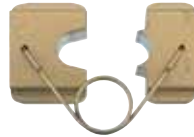


Crimping dies RU

Suitable for

- Pre-rounding dies for sector-shaped Al and Cu conductors
- 3- and 4-core sector-shaped conductors

Cross section mm <sup>2</sup> sm	Cross section mm <sup>2</sup> se	Part No.	Conductor dia. mm	Pre-rounding width mm
10		<b>RU10</b>	4,1	19,5
16		<b>RU16</b>	5,1	19,5
25	35	<b>RU3525</b>	6,3	19,5
35	50	<b>RU5035</b>	7,5	19,5
50	70	<b>RU7050</b>	9,0	19,5
70	95	<b>RU9570</b>	10,5	19,5
95	120	<b>RU12095</b>	12,5	19,5
120	150	<b>RU150120</b>	14,0	19,5
150	185	<b>RU185150</b>	15,8	19,5
185	240	<b>RU240185</b>	17,5	19,5



## Crimping dies A



## Suitable for

- Aluminum compression cable lugs and connectors to DIN
- Aluminum/copper compression cable lugs and connectors (aluminum side)

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
10	<b>A10</b>	10	7
16-25	<b>A1625</b>	12	7
35	<b>A35</b>	14	7
50	<b>A50</b>	16	7
70	<b>A70</b>	18	7
95-120	<b>A95120</b>	22	7
150	<b>A150</b>	25	7
185	<b>A185</b>	28	7

► For connectors see assembly instructions for connector materials (general information) in the technical index, page i-8

## Crimping dies AD



## Suitable for

- Compression joints for full tension connections of Aldrey conductors according to DIN EN 50182

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
25	<b>AD25</b>	12	7
35	<b>AD35</b>	14	7
50	<b>AD50</b>	16	7
70	<b>AD70</b>	18	7
95	<b>AD95</b>	20	7

► For connectors see assembly instructions for connector materials (general information) in the technical index, page i-8

## Crimping dies C / MC



## Suitable for

- Clamps, C-type

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
16	<b>C16</b>	5
25	<b>C25</b>	5
35	<b>C35</b>	5
50	<b>C50</b>	5
4-4	<b>MC4</b>	5
10-10	<b>MC10</b>	5
10-16 10-25 10-35	<b>MC35</b>	5



**Crimping dies AE**

**Suitable for**

- Cable end-sleeves

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
10	<b>AE10</b>	20
16	<b>AE16</b>	20
25	<b>AE25</b>	20
35	<b>AE35</b>	20
50	<b>AE50</b>	20
70	<b>AE70</b>	20
95	<b>AE95</b>	20



**Crimping dies ZAE**

**Suitable for**

- Twin cable end-sleeves

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
2 x 4	<b>ZAE4</b>	20
2 x 6	<b>ZAE6</b>	20
2 x 10	<b>ZAE10</b>	20
2 x 16	<b>ZAE16</b>	20



**Crimping dies AES**

**Suitable for**

- Cable end-sleeves
- Special trapezoid crimp for fine stranded conductors

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
10	<b>AES10</b>	20
16	<b>AES16</b>	20
25	<b>AES25</b>	20
35	<b>AES35</b>	20
50	<b>AES50</b>	20
70	<b>AES70</b>	20
95	<b>AES95</b>	20



## Crimping dies ZAES



## Suitable for

- Twin cable end-sleeves
- Special trapezoid crimp for fine stranded conductors

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
4	<b>ZAES4</b>	20
6	<b>ZAES6</b>	20
10	<b>ZAES10</b>	20
16	<b>ZAES16</b>	20

## Cutting die



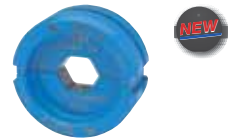
► For multi-stranded Al and Cu cables without armouring

Cutting range	Part No.
18 mm	<b>S18</b>



**Crimping dies, blue connection® B 22**

▶ Accurate assignment of crimping tool/crimping die through colour-coding system



**Suitable for**

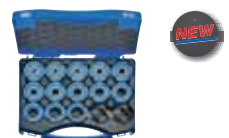
- Tubular cable lugs and connectors, blue connection® for compacted conductors acc. to VDE 0295 Class 2

Cross section mm <sup>2</sup>	Part No.	Crimp width mm	Number of crimps
6	<b>b226</b>	9	1
10	<b>b2210</b>	9	1
16	<b>b2216</b>	9	1
25	<b>b2225</b>	9	1
35	<b>b2235</b>	9	1
50	<b>b2250</b>	9	1
70	<b>b2270</b>	9	1
95	<b>b2295</b>	9	1
120	<b>b22120</b>	9	1
150	<b>b22150</b>	9	1
185	<b>b22185</b>	5	2
240	<b>b22240</b>	5	2
300	<b>b22300</b>	5	3

**Crimping die set 6 - 300 mm<sup>2</sup>, blue connection® B 22 in plastic case, 14 pieces**

**Suitable for**

- Tubular cable lugs and connectors, blue connection® for compacted conductors acc. to VDE 0295 Class 2



Part No.
<b>B22SET</b>

## Crimping dies R 22



## Suitable for

- Copper tubular cable lugs and connectors, standard type
- Tubular cable lugs for switchgear connections

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
6	R226	5
10	R2210	5
16	R2216	5
25	R2225	5
35	R2235	5
50	R2250	5
70	R2270	5
95	R2295	5
120	R22120	5
150	R22150	5
185	R22185	5
240	R22240	5
300	R22300	5

Crimping die set, 6 - 300 mm<sup>2</sup> R 22 in plastic case, 14 pieces

## Suitable for

- Copper tubular cable lugs and connectors, standard type
- Tubular cable lugs for switchgear connections

Part No.
R22SET

## Crimping dies IS 22



## Suitable for

- Insulated tubular cable lugs and connectors
- Insulated pin terminals

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
10	IS2210	5
16	IS2216	5
25	IS2225	5
35	IS2235	5
50	IS2250	5
70	IS2270	5
95	IS2295	5
120	IS22120	5
150	IS22150	5

Crimping dies F 22

Suitable for

- Tubular cable lugs and connectors for fine stranded conductors

Cross section mm <sup>2</sup>	Part No.
10	F2210
16	F2216
25	F2225
35	F2235
50	F2250
70	F2270



Crimping dies M 22

Suitable for

- Tubular cable lugs and compression joints for solid conductors

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
1,5-4	M22154	5
6-10	M22610	5
16	M2216	5



Crimping dies N 22

Suitable for

- Nickel tubular cable lugs and connectors
- Stainless steel tubular cable lugs and connectors

Cross section mm <sup>2</sup>	Part No.
10	N2210
16	N2216
25	N2225
35	N2235
50	N2250



## Crimping dies D 22



## Suitable for

- Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
6	D226	5	5
10	D2210	6	5
16	D2216	8	5
25	D2225	10	5
35	D2235	12	5
50	D2250	14	5
70	D2270	16	5
95	D2295	18	5
120	D22120	20	5
150	D22150	22	5
185	D22185	25	5
240	D22240	28	5
300	D22300	32	5

Crimping die set, 6 - 300 mm<sup>2</sup> D 22 in plastic case, 14 pieces

## Suitable for

- Copper compression cable lugs (DIN 46235) and connectors (DIN 46267, part 1) acc. to DIN

Part No.
D22SET

## Crimping dies DP 22



## Suitable for

- Double compression cable lugs

Cross section mm <sup>2</sup>	Part No.	Code
2 x 50	DP2250	22 DP
2 x 70	DP2270	24 DP

Crimping dies Q 22

Suitable for

- Copper solderless terminals (DIN 46234) and pin terminals (DIN 46230) acc. to DIN
- Copper solderless connectors (DIN 46341) acc. to DIN



Cross section mm <sup>2</sup>	Part No.
10	Q2210
16	Q2216
25	Q2225
35	Q2235
50	Q2250
70	Q2270

Crimping dies ISQ 22

Suitable for

- Insulated solderless terminals and pin terminals



Cross section mm <sup>2</sup>	Part No.
10	ISQ2210
16	ISQ2216
25	ISQ2225
35	ISQ2235
50	ISQ2250
70	ISQ2270

Crimping dies RU 22

Suitable for

- Pre-rounding of sector-shaped Al- and Cu-conductors
- 3- and 4-core sector-shaped conductors



Cross section mm <sup>2</sup> sm	Cross section mm <sup>2</sup> se	Part No.	Conductor dia. mm	Pre-rounding width mm
10		RU2210	4,1	19,5
16		RU2216	5,1	19,5
25	35	RU223525	6,3	19,5
35	50	RU225035	7,5	19,5
50	70	RU227050	9,0	19,5
70	95	RU229570	10,5	19,5
95	120	RU2212095	12,5	19,5
120	150	RU22150120	14,0	19,5
150	185	RU22185150	15,8	19,5
185	240	RU22240185	17,5	19,5
240	300	RU22300240	20,3	19,5

## Crimping dies A 22



## Suitable for

- Aluminum compression cable lugs and connectors acc. to DIN
- Aluminum/copper compression cable lugs and connectors (aluminum side)

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
10	A2210	10	7
16-25	A221625	12	7
35	A2235	14	7
50	A2250	16	7
70	A2270	18	7
95-120	A2295120	22	7
150	A22150	25	7
185	A22185	28	7
240	A22240	32	5
300	A22300	34	5

Crimping die set, 10 - 300 mm<sup>2</sup> A 22 in plastic case, 11 pieces

## Suitable for

- Aluminum compression cable lugs and connectors to DIN
- Aluminum/copper compression cable lugs and connectors (aluminum side)

Part No.
A22SET

## Crimping dies AD 22



## Suitable for

- Compression joints for full tension connections of Aldrey conductors acc. to DIN EN 50182
- Al-conductor DIN EN 50182, 120 - 185 mm<sup>2</sup>

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
25	AD2225	12	7
35	AD2235	14	7
50	AD2250	16	7
70	AD2270	18	7
95	AD2295	20	7
120	AD22120	25	7
150-185	AD22150185	28	7



**Crimping dies AST 22**

**Suitable for**

- Compression joints acc. to DIN 48085, part 3 for Al-/St-cable acc. to DIN EN 50182
- Aluminum crimping



Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
25-4	AST2225	12	7
35-6	AST2235	14	7
50-8	AST2250	16	7
70-12	AST2270	18	7
95-15	AST2295	22	7
120-20	AST22120	25	7

**Crimping dies ST 22**

**Suitable for**

- Compression joints acc. to DIN 48085, part 3 for Al-/St-cable acc. to DIN EN 50182
- Steel crimping



Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
25-4 35-6	ST2246	6	5
50-8	ST228	7	5
70-12 95-15	ST221215	9	5
120-20	ST2220	13	5

**Crimping dies C 22 / MC 22**

**Suitable for**

- Clamps, C-type



Cross section mm <sup>2</sup>	Part No.	Crimp width mm
16	C2216	5
25	C2225	5
35	C2235	5
50	C2250	5
4-4	MC224	5
10-10	MC2210	5
10-16 10-25 35-35	MC2235	5

**Crimping dies H 22**

**Suitable for**

- Clamps, H-type



Cross section mm <sup>2</sup>	Part No.	Crimp width mm
70	H2270	5

## Crimping dies AE 22



## Suitable for

- Cable end-sleeves

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
10	AE2210	20
16	AE2216	20
25	AE2225	20
35	AE2235	20
50	AE2250	20
70	AE2270	20
95	AE2295	20
120	AE22120	20
150	AE22150	20
185*	AE22185	20
240*	AE22240	20

▶ \* = except THK 22

## Crimping dies ZAE 22



## Suitable for

- Twin cable end-sleeves

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
2 x 4	ZAE224	20
2 x 6	ZAE226	20
2 x 10	ZAE2210	20
2 x 16	ZAE2216	20

## Crimping dies AES 22



## Suitable for

- Cable end-sleeves
- Special trapezoid crimp for fine stranded conductors

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
10	AES2210	20
16	AES2216	20
25	AES2225	20
35	AES2235	20
50	AES2250	20
70	AES2270	20
95	AES2295	20
120	AES22120	20
150	AES22150	20
185*	AES22185	20
240*	AES22240	20

▶ \* = except THK 22

**Crimping dies ZAES 22**

**Suitable for**

- Twin cable end-sleeves
- Special trapezoid crimp for fine stranded conductors



Cross section mm <sup>2</sup>	Part No.	Crimp width mm
2 x 4	<b>ZAES224</b>	20
2 x 6	<b>ZAES226</b>	20
2 x 10	<b>ZAES2210</b>	20
2 x 16	<b>ZAES2216</b>	20



# 13

Klauke



## Crimping dies blue connection® HB 13



► Accurate assignment of crimping tool/crimping die through colour-coding system

### Suitable for

- Tubular cable lugs and connectors, blue connection® for compacted conductors acc. to VDE 0295 Class 2

Cross section mm <sup>2</sup>	Part No.	Crimp width mm	Number of crimps
16	hb1316	9	1
25	hb1325	9	1
35	hb1335	12	1
50	hb1350	12	1
70	hb1370	12	1
95	hb1395	12	1
120	hb13120	12	1
150	hb13150	12	1
185	hb13185	12	1
240	hb13240	12	1
300	hb13300	9	2
400	hb13400	9	2

## Crimping die set 16 - 400 mm<sup>2</sup>, blue connection® HB 13 in plastic case, 13 pieces



### Suitable for

- Tubular cable lugs and connectors, blue connection® for compacted conductors acc. to VDE 0295 Class 2

Part No.  
HB13SET

**Crimping dies HR 13**

**Suitable for**

- Copper tubular cable lugs and connectors, standard type
- Tubular cable lugs for switchgear connections



Cross section mm <sup>2</sup>	Part No.	Crimp width mm
16	<b>HR1316</b>	10
25	<b>HR1325</b>	10
35	<b>HR1335</b>	10
50	<b>HR1350</b>	13
70	<b>HR1370</b>	13
95	<b>HR1395</b>	14
120	<b>HR13120</b>	14
150	<b>HR13150</b>	14
185	<b>HR13185</b>	11
240	<b>HR13240</b>	11
300	<b>HR13300</b>	11
400	<b>HR13400</b>	5*

► For connectors see assembly instructions for connector materials (general information) in the technical index, page I-8

► \* = Narrow crimping (press 5 x)

**Crimping dies HIS 13**

**Suitable for**

- Insulated tubular cable lugs and connectors
- Insulated pin terminals



Cross section mm <sup>2</sup>	Part No.	Crimp width mm
10	<b>HIS1310</b>	5
16	<b>HIS1316</b>	5
25	<b>HIS1325</b>	5
35	<b>HIS1335</b>	5
50	<b>HIS1350</b>	5
70	<b>HIS1370</b>	5
95	<b>HIS1395</b>	5
120	<b>HIS13120</b>	5
150	<b>HIS13150</b>	5

## Crimping dies HF 13



## Suitable for

- Tubular cable lugs and connectors for fine stranded conductors

Cross section mm <sup>2</sup>	Part No.
16	HF1316
25	HF1325
35	HF1335
50	HF1350
70	HF1370
95	HF1395
120	HF13120
150	HF13150

## Crimping dies HD 13



## Suitable for

- Copper compression cable lugs (DIN 46235) acc. to DIN
- Copper compression connectors (DIN 46267, part 1) acc. to DIN

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
16	HD1316	8	10
25	HD1325	10	10
35	HD1335	12	10
50	HD1350	14	13
70	HD1370	16	13
95	HD1395	18	14
120	HD13120	20	14
150	HD13150	22	10
185	HD13185	25	10
240	HD13240	28	10
300	HD13300	32	7*

▶ For connectors see assembly instructions for connector materials (general information) in the technical index, page i-8

▶ \* = Narrow crimping (press 5 x)

## Crimping dies HDP 13



## Suitable for

- Double compression cable lugs

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
2 x 50	HDP1350	22 DP	12
2 x 70	HDP1370	24 DP	12
2 x 95	HDP1395	29 DP	12

**Crimping dies HQ 13**

**Suitable for**

- Copper solderless terminals (DIN 46234) and pin terminals (DIN 46230) acc. to DIN
- Copper solderless connectors (DIN 46341) acc. to DIN



Cross section mm <sup>2</sup>	Part No.
16	HQ1316
25	HQ1325
35	HQ1335
50	HQ1350
70	HQ1370
95	HQ1395
120	HQ13120
150	HQ13150

**Crimping dies HISQ 13**

**Suitable for**

- Insulated solderless terminals and pin terminals



Cross section mm <sup>2</sup>	Part No.
10	HISQ1310
16	HISQ1316
25	HISQ1325
35	HISQ1335
50	HISQ1350
70	HISQ1370
95	HISQ1395

**Crimping dies HRU 13**

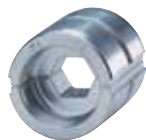
**Suitable for**

- Pre-rounding dies for sector-shaped Al and Cu conductors
- 3- and 4-core sector-shaped conductors



Cross section mm <sup>2</sup> sm	Cross section mm <sup>2</sup> se	Part No.	Conductor dia. mm	Pre-rounding width mm
10		HRU1310	4,1	35
16		HRU1316	5,1	35
25	35	HRU133525	6,3	35
35	50	HRU135035	7,5	35
50	70	HRU137050	9,0	35
70	95	HRU139570	10,5	35
95	120	HRU1312095	12,5	35
120	150	HRU13150120	14,0	35
150	185	HRU13185150	15,8	35
185	240	HRU13240185	17,5	35
240	300	HRU13300240	20,3	35
300		HRU13300SM	22,5	35

## Crimping dies HA 13

**Suitable for**

- Aluminum compression cable lugs and connectors acc. to DIN
- Aluminum/copper compression cable lugs and connectors (aluminum side)

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
10	HA1310	10	12
16-25	HA131625	12	12
35	HA1335	14	12
50	HA1350	16	12
70	HA1370	18	12
95-120	HA1395120	22	14
150	HA13150	25	14
185	HA13185	28	14
240	HA13240	32	5

► For connectors see assembly instructions for connector materials (general information) in the technical index, page i-8

## Crimping dies HAD 13

**Suitable for**

- Compression joints for full tension connections of Aldrey conductors according to DIN EN 50182
- Al-conductor acc. to DIN EN 50182, 120 - 185 mm<sup>2</sup>

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
25	HAD1325	12	12
35	HAD1335	14	12
50	HAD1350	16	12
70	HAD1370	18	12
95	HAD1395	20	14
120	HAD13120	25	14
150-185	HAD13150185	28	14

► For connectors see assembly instructions for connector materials (general information) in the technical index, page i-8

## Crimping dies HAST 13

**Suitable for**

- Compression joints acc. to DIN 48085, part 3 for Al-/St-cable acc. to DIN EN 50182
- Aluminum crimping

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
25-4	HAST1325	12	12
35-6	HAST1335	14	12
50-8	HAST1350	16	12
70-12	HAST1370	18	12
95-15	HAST1395	22	14
120-20	HAST13120	25	14

► For connectors see assembly instructions for connector materials (general information) in the technical index, page i-8



**Crimping dies HST 13**

**Suitable for**

- Compression joints acc. to DIN 48085, part 3 for Al-/St-cable acc. to DIN EN 50182
- Steel crimping



Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
25-4 35-6	<b>HST1346</b>	6	12
50-8	<b>HST138</b>	7	12
70-12 95-15	<b>HST131215</b>	9	12
120-20	<b>HST1320</b>	13	12

► For connectors see assembly instructions for connector materials (general information) in the technical index, page i-8

**Crimping dies HAH 13**

**Suitable for**

- Clamps, H-type



Cross section mm <sup>2</sup>	Part No.	Crimp width mm
70	<b>HAH1370</b>	30
95	<b>HAH1395</b>	30
120	<b>HAH13120</b>	30

**Crimping dies HC 13 / HMC 13**

**Suitable for**

- Clamps, C-type



Cross section mm <sup>2</sup>	Part No.	Crimp width mm
16	<b>HC1316</b>	16
25	<b>HC1325</b>	17
35	<b>HC1335</b>	20
50	<b>HC1350</b>	20
70	<b>HC1370</b>	20
10 - 10	<b>HMC1310</b>	13
10 - 16 10 - 25 35 - 35	<b>HMC1335</b>	18
25 - 50 50 - 50	<b>HMC1350</b>	20
35 - 70	<b>HMC1370</b>	20

## Crimping dies HAE 13



## Suitable for

- Cable end-sleeves

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
25	HAE1325	20
35	HAE1335	20
50	HAE1350	26
70	HAE1370	26
95	HAE1395	26
120	HAE13120	26
150	HAE13150	26
185	HAE13185	26
240	HAE13240	26

## Crimping dies HAES 13



## Suitable for

- Cable end-sleeves
- Special trapezoid crimp for fine stranded conductors

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
25	HAES1325	20
35	HAES1335	20
50	HAES1350	26
70	HAES1370	26
95	HAES1395	26
120	HAES13120	26
150	HAES13150	26
185	HAES13185	26
240	HAES13240	26



**Crimping dies HR 25**

**Suitable for**

- Copper tubular cable lugs and connectors, standard type
- Tubular cable lugs for switchgear connections



Cross section mm <sup>2</sup>	Part No.	Crimp width mm
16	HR2516	10
25	HR2525	10
35	HR2535	10
50	HR2550	13
70	HR2570	13
95	HR2595	15
120	HR25120	15
150	HR25150	20
185	HR25185	20
240	HR25240	20
300	HR25300	20
400	HR25400	20

**Crimping dies HIS 25**

**Suitable for**

- Insulated tubular cable lugs and connectors
- Insulated pin terminals



Cross section mm <sup>2</sup>	Part No.	Crimp width mm
10	HIS2510	7
16	HIS2516	7
25	HIS2525	8
35	HIS2535	8
50	HIS2550	10
70	HIS2570	12
95	HIS2595	14
120	HIS25120	14
150	HIS25150	16

## Crimping dies HF 25



## Suitable for

- Tubular cable lugs and connectors for fine stranded conductors

Cross section mm <sup>2</sup>	Part No.
16	HF2516
25	HF2525
35	HF2535
50	HF2550
70	HF2570
95	HF2595
120	HF25120
150	HF25150
185	HF25185
240	HF25240
300	HF25300

## Crimping dies HD 25



## Suitable for

- Copper compression cable lugs (DIN 46235) acc. to DIN
- Copper compression connectors (DIN 46267, part 1) acc. to DIN

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
16	HD2516	8	10
25	HD2525	10	10
35	HD2535	12	10
50	HD2550	14	13
70	HD2570	16	13
95	HD2595	18	14
120	HD25120	20	14
150	HD25150	22	15
185	HD25185	25	15
240	HD25240	28	15
300	HD25300	32	17
400	HD25400	38	17
500	HD25500	42	17
625	HD25625	44	15

## Crimping dies HDP 25



## Suitable for

- Double compression cable lugs

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
2 x 50	HDP2550	22 DP	15
2 x 70	HDP2570	24 DP	15
2 x 95	HDP2595	29 DP	15
2 x 120	HDP25120	32 DP	15

**Crimping dies HQ 25**

**Suitable for**

- Copper solderless terminals (DIN 46234) and pin terminals (DIN 46230) acc. to DIN
- Copper solderless connectors (DIN 46341) acc. to DIN



Cross section mm <sup>2</sup>	Part No.
16	HQ2516
25	HQ2525
35	HQ2535
50	HQ2550
70	HQ2570
95	HQ2595
120	HQ25120
150	HQ25150
185	HQ25185
240	HQ25240

**Crimping dies HISQ 25**

**Suitable for**

- Insulated solderless terminals and pin terminals



Cross section mm <sup>2</sup>	Part No.
10	HISQ2510
16	HISQ2516
25	HISQ2525
35	HISQ2535
50	HISQ2550
70	HISQ2570
95	HISQ2595
120	HISQ25120
150	HISQ25150

**Crimping dies HRU 25**

**Suitable for**

- Pre-rounding dies for sector-shaped Al and Cu conductors
- 3- and 4-core sector-shaped conductors



Cross section mm <sup>2</sup> sm	Cross section mm <sup>2</sup> se	Part No.	Conductor dia. mm	Pre-rounding width mm
10		HRU2510	4,1	40
16		HRU2516	5,1	40
25	35	HRU253525	6,3	40
35	50	HRU255035	7,5	40
50	70	HRU257050	9,0	40
70	95	HRU259570	10,5	40
95	120	HRU2512095	12,5	40
120	150	HRU25150120	14,0	40
150	185	HRU25185150	15,8	40
185	240	HRU25240185	17,5	40
240	300	HRU25300240	20,3	40
300		HRU25300SM	22,5	40

## Crimping dies HA 25



## Suitable for

- Aluminum compression cable lugs and connectors acc. to DIN
- Aluminum/copper compression cable lugs and connectors (aluminum side)

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
10	HA2510	10	12
16-25	HA251625	12	12
35	HA2535	14	12
50	HA2550	16	12
70	HA2570	18	12
95-120	HA2595120	22	14
150	HA25150	25	14
185	HA25185	28	14
240	HA25240	32	17
300	HA25300	34	17
400	HA25400	38	17
500	HA25500	44	15

## Crimping dies HAD 25



## Suitable for

- Compression joints for full tension connections of Aldrey conductors acc. to DIN EN 50182
- Al-conductor acc. to DIN EN 50182, 120 - 300 mm<sup>2</sup>

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
25	HAD2525	12	12
35	HAD2535	14	12
50	HAD2550	16	12
70	HAD2570	18	12
95	HAD2595	20	14
120	HAD25120	25	14
150-185	HAD25150185	28	14
240	HAD25240	34	17
300	HAD25300	38	17

## Crimping dies HAST 25



## Suitable for

- Compression joints acc. to DIN 48085, part 3 for Al-/St-cable acc. to DIN EN 50182
- Aluminum crimping

Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
25-4	HAST2525	12	12
35-6	HAST2535	14	12
50-8	HAST2550	16	12
70-12	HAST2570	18	12
95-15	HAST2595	22	14
120-20	HAST25120	25	14

**Crimping dies HST 25**

**Suitable for**

- Compression joints acc. to DIN 48085, part 3 for Al-/St-cable acc. to DIN EN 50182
- Steel crimping



Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
25-4; 35-6	<b>HST2546</b>	6	14
50-8	<b>HST258</b>	7	14
70-12 95-15	<b>HST251215</b>	9	14
120-20	<b>HST2520</b>	13	14

**Crimping dies HAH 25**

**Suitable for**

- Clamps, H-type



Cross section mm <sup>2</sup>	Part No.	Crimp width mm
70	<b>HAH2570</b>	20
95	<b>HAH2595</b>	20
120	<b>HAH25120</b>	20

**Crimping dies HC 25 / HMC 25**

**Suitable for**

- Clamps, C-type



Cross section mm <sup>2</sup>	Part No.	Crimp width mm
16	<b>HC2516</b>	16
25	<b>HC2525</b>	17
35	<b>HC2535</b>	20
50	<b>HC2550</b>	20
70	<b>HC2570</b>	20
95	<b>HC2595</b>	20
10-16 10-25 35-35	<b>HMC2535</b>	18
25-50 50-50	<b>HMC2550</b>	20
35-70	<b>HMC2570</b>	20
35-95 70-95	<b>HMC2595</b>	20
120-120	<b>HMC25120</b>	20
150-150	<b>HMC25150</b>	20
185-185	<b>HMC25185</b>	20

## Crimping dies HAE 25



## Suitable for

- Cable end-sleeves

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
25	HAE2525	20
35	HAE2535	20
50	HAE2550	26
70	HAE2570	26
95	HAE2595	26
120	HAE25120	26
150	HAE25150	26
185	HAE25185	26
240	HAE25240	26

## Crimping dies HAES 25

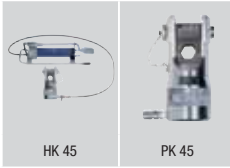


## Suitable for

- Cable end-sleeves
- Special trapezoid crimp for fine stranded conductors

Cross section mm <sup>2</sup>	Part No.	Crimp width mm
25	HAES2525	20
35	HAES2535	20
50	HAES2550	26
70	HAES2570	26
95	HAES2595	26
120	HAES25120	26
150	HAES25150	26
185	HAES25185	26
240	HAES25240	26





**Crimping dies HD 45**

**Suitable for**

- Copper compression cable lugs (DIN 46235) acc. to DIN
- Copper compression connectors (DIN 46267, part 1) acc. to DIN



Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
120	<b>HD45120</b>	20	15
150	<b>HD45150</b>	22	15
185	<b>HD45185</b>	25	15
240	<b>HD45240</b>	28	15
300	<b>HD45300</b>	32	17
400	<b>HD45400</b>	38	17
500	<b>HD45500</b>	42	17
625	<b>HD45625</b>	44	17
800	<b>HD45800</b>	52	20
1000	<b>HD451000</b>	58	20

**Crimping dies HA 45**

**Suitable for**

- Aluminum compression cable lugs and connectors acc. to DIN
- Aluminum/copper compression cable lugs and connectors (aluminum side)



Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
150	<b>HA45150</b>	25	15
185	<b>HA45185</b>	28	15
240	<b>HA45240</b>	32	17
300	<b>HA45300</b>	34	20
400	<b>HA45400</b>	38	20
500	<b>HA45500</b>	44	20

**Crimping dies HAD 45**

**Suitable for**

- Compression joints for full tension connections of Aldrey conductors according to DIN EN 50182
- Al-conductor acc. to DIN EN 50182, 150 - 300 mm<sup>2</sup>



Cross section mm <sup>2</sup>	Part No.	Code	Crimp width mm
150-185	<b>HAD45150185</b>	28	20
240	<b>HAD45240</b>	34	20
300	<b>HAD45300</b>	38	20



” *With our hand tools  
you will get the hang of it.  
Professionals trust Klauke  
quality, Made in Germany.“*

Karl-Ulrich Schütz,  
Sales and Distribution

**VDE tools 458**

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Pliers	460
Screwdrivers	464
Assortments and sets	466
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Electronic/precision mechanic's tools	489
Screwdrivers	490
Bits, holders and adapters	493
Assortments and sets	495
Measuring and marking	501
Basic tools	503
Tool case	507

**Wire stripping tools 514**

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**Stripping tools 518**

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**Stripping tools for communication technology 522**

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# Klauke®

## Heavy-duty insulation up to 1000 V.

**Tested and approved VDE tools  
from Klauke.**

Every Klauke VDE tool is produced and tested as per the latest directives for the safety testing procedure according to EN/IEC 60900 (VDE 0682 Part 201). All VDE tools are approved to 1000 volt AC and 1500 volt DC.



Klauke pliers have been granted the IF Product Design Award.



- VDE Pliers.
- VDE Side cutters.
- VDE Cable cutters.
- VDE Screwdrivers.
- Fully-insulated tools.



*The impact-resistant hard core optimises the durability of the tools. The handle also offers the option of using the screwdriver as a lever. Another special feature is the profile stamp that clearly identifies the tools.*



## ■ Everything under control, even under voltage.

- ▶ Pliers with **heavy-duty hand protection** to protect against flying sparks.
- ▶ A cold impact test (at  $-25\text{ }^{\circ}\text{C}$ ), a test of the adhesive strength of the insulation (with 500 N) and a single voltage test in a water bath (10,000 V/AC) are carried out in accordance with EN/IEC 60900.
- ▶ 2-component safety handle.

### Benefits:

- ▶ The heavy-duty hand protection provides added safety when working under voltage.
- ▶ Guaranteed protection even under extreme conditions.
- ▶ Non-slip overlay thanks to matched elastomer materials.

## ■ The screwdriver that goes deep.

- ▶ With magnet and immersion depth of up to 41 mm.

### Benefits:

- ▶ The magnet holds the nut in position in tight spaces.
- ▶ The spring body enables nuts that sit on a long thread easy to fit and remove.



▶ More from Page 466.



## ■ Compacts in narrow situations.

- ▶ Versatile thanks to its small dimensions.
- ▶ Automatic self-triggers when the set torque value is reached.
- ▶ Torque range from 5 to 25 Nm.

### Benefits:

- ▶ The display with clear Nm scale enables the values to be quickly read off.
- ▶ More safety with 2-colour multi-layer insulation to DIN - VDE/EN 60900:2004.

## ■ Safety to hand - the fully-insulated tool set.

- ▶ Fully-insulated to EN 60900, 1/2", 20-part.
- ▶ To DIN 7448 from vanadium special steel.
- ▶ 2-colour dipped insulation - outside orange, inside yellow.
- ▶ Sturdy, impact-proof plastic box with foam inlay.

### Benefits:

- ▶ The most important VDE tools are to hand immediately.
- ▶ The tools are protected from damage in the robust box with foam inlay.
- ▶ Increased safety with 2-colour dipped insulation - damage is immediately visible.



## VDE tools

## VDE Cable cutter



## Characteristics

- Adjustable joint
- Cuts fine and superfine stranded copper and alu cables

Part No.	KL010160IS	KL010210IS
Item	VDE Cable cutter, 160 mm	VDE Cable cutter, 210 mm
Part No. POS	KL010160ISSB	KL010210ISSB
Dimension mm	160	210
Weight g	225	340
Cutting power single and multistranded cable	16	25

## VDE Heavy-duty combination plier



## Characteristics

- With combination spanner from 11 - 17 mm (M8 - M10)
- Holds flat and round material
- Cuts soft wires, e.g. copper, alu, medium-hard wires e.g. nails, wire nails and hard wires, e.g. wire cable, steel wire

Part No.	KL020165IS	KL020180IS	KL020205IS
Item	VDE Heavy-duty combination plier, 165 mm	VDE Heavy-duty combination plier, 180 mm	VDE Heavy-duty combination plier, 205 mm
Part No. POS	KL020165ISSB	KL020180ISSB	KL020205ISSB
Dimension mm	165	180	205
Weight g	200	255	280
Cutting power soft wire dia. mm	4,0	5,2	5,9
Cutting power medium wire dia. mm	3,1	3,4	3,8
Cutting power hard wire dia. mm	2,0	2,2	2,5

## VDE Heavy-duty combination plier, angled



## Characteristics

- 45° angled head
- With combination spanner from 11 - 17 mm (M8 - M10)
- Holds flat and round material
- Cuts soft wires, e.g. copper, alu, medium-hard wires e.g. nails, wire nails and hard wires, e.g. wire cable, steel wire

Part No.	KL026205IS
Item	VDE Heavy-duty combination plier, angled 205 mm
Dimension mm	205
Weight g	285
Cutting power soft wire dia. mm	5,9
Cutting power medium wire dia. mm	3,8
Cutting power hard wire dia. mm	2,5

**VDE Side cutter**

**Characteristics**

- Wave profile for optimized cutting of insulated cables
- Cuts soft wires, e.g. copper, alu, medium-hard wires e.g. nails, wire nails and hard wires, e.g. wire cable, steel wire

Part No.	KL040145IS	KL040160IS	KL040180IS
Item	VDE Side cutter, 145 mm	VDE Side cutter, 160 mm	VDE Side cutter, 180 mm
Part No. POS	KL040145ISSB	KL040160ISSB	KL040180ISSB
Dimension mm	145	160	180
Weight g	180	210	265
Cutting power soft wire dia. mm	5,0	6,0	7,0
Cutting power medium wire dia. mm	2,5	3,5	4,0
Cutting power hard wire dia. mm	1,7	2,0	2,5
Cutting power single and multistranded cable	8,0	11,0	13,0



**VDE Electrician side cutter**

**Characteristics**

- Inductive hardened precision cutting edges for superfine wires
- Cuts soft wires, e.g. copper, alu, medium-hard wires e.g. nails, wire nails and hard wires, e.g. wire cable, steel wire
- Stripping range for single and multi-stranded cables: 1.5mm<sup>2</sup> and 2.5mm<sup>2</sup>

Part No.	KL042190IS
Item	VDE Electrician side cutter, 190 mm
Part No. POS	KL042190ISSB
Dimension mm	190
Weight g	285
Cutting power soft wire dia. mm	2,0
Cutting power medium wire dia. mm	1,0
Cutting power single and multistranded cable	4,0



## VDE Heavy duty side cutter



## Characteristics

- Wave profile for optimized cutting of insulated cables
- Ergonomically designed handles
- High cutting performance on hard wires and piano wires

Part No.	KL045180IS	KL044200IS	KL045240IS
Item	VDE Heavy-duty side cutter, 180 mm	VDE Electrician's heavy duty 200 mm	VDE Heavy-duty side cutter, 240 mm
Part No. POS	KL044200ISSB		
Dimension mm	180	200	240
Weight g	285	310	420
Cutting power soft wire dia. mm	3,7	4,0	4,5
Cutting power medium wire dia. mm	2,6	2,8	3,5
Cutting power hard wire dia. mm	2,2	2,5	3,0

## VDE Heavy-duty lever side cutter



## Characteristics

- 40% saving in power
- Inductively-hardened precision cutting edges
- Special tool steel drop-forged, oil-hardened
- Cuts medium-hard wires, e.g. nails, wire nails and hard wires, e.g. wire cable, steel wire as well as piano wire

Part No.	KL046200IS
Item	VDE Heavy-duty lever side cutter, 200 mm
Part No. POS	KL046200ISSB
Dimension mm	200
Cutting power medium wire dia. mm	4,5
Cutting power hard wire dia. mm	3,5
Cutting power piano wire dia. mm	3,0

## VDE Telephone plier, straight



## Characteristics

- Long, flat/round jaws
- Serrated jaws
- Cutting edge inductive hardened
- With combination spanner from 11 - 17 mm (M8 - M10)
- With wire cutter for soft wires, e.g. copper, alu, medium-hard wires e.g. nails, wire nails and hard wires, e.g. wire cable, steel wire

Part No.	KL050205IS
Item	VDE Telephone plier, straight, 205 mm
Part No. POS	KL050205ISSB
Dimension mm	205
Weight g	215
Cutting power soft wire dia. mm	3,9
Cutting power medium wire dia. mm	3,2
Cutting power hard wire dia. mm	2,2



**VDE Telephone plier, bent**

**Characteristics**

- Long, 45° angled, flat/round jaws
- Serrated jaws
- Cutting edge inductive hardened
- With combination spanner from 11 - 17 mm (M8 - M10)
- Cuts soft wires, e.g. copper, alu, medium-hard wires e.g. nails, wire nails and hard wires, e.g. wire cable, steel wire

Part No.	<b>KL055205IS</b>
Item	VDE Telephone plier, bent, 205 mm
Part No. POS	KL055205ISSB
Dimension mm	205
Weight g	215
Cutting power soft wire dia. mm	3,9
Cutting power medium wire dia. mm	3,2
Cutting power hard wire dia. mm	2,2



**VDE Wire stripper**

**Characteristics**

- With opening spring and V-shaped cutting edges
- With setting screw for adjustment the cable diameter
- Stripping range for single and multi-stranded cables 0 to 5.0 mm dia. and 10.0 mm<sup>2</sup> conductor cross-sections

Part No.	<b>KL060160IS</b>
Item	VDE Wire stripper, 160 mm
Part No. POS	KL060160ISSB
Dimension mm	160
Weight g	185



**VDE Water pump plier, jaw width 50 mm**

**Characteristics**

- Jaw width 50 mm
- Integrated hand protection
- Ratchet adjustment
- Box joint design
- Double serrated jaws

Part No.	<b>KL070250IS</b>
Item	VDE Water pump plier, jaw width 50 mm
Part No. POS	KL070250ISSB
Dimension mm	250
Weight g	410



## VDE tools

Automatic VDE wire stripper 0.2 - 6 mm<sup>2</sup>

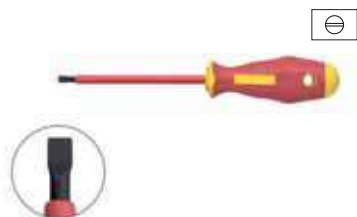
1000V  
IEC 60900

## Characteristics

- Tested acc. to VDE standards for safe working on live conductors up to 1000 V
- Adjustable length stop from 5 - 12 mm
- For flexible and solid conductors from 0.2 - 6 mm<sup>2</sup>
- Locking function to protect blades

Part No.	<b>KL760180IS</b>
Item	Automatic VDE wire stripper 0.2 - 6 mm <sup>2</sup>
Dimension mm	215
Weight g	130

## VDE Slotted screwdrivers



D'E

1000V  
IEC 60900

Item	Dimension mm	Weight g	Part No.
VDE Slotted screwdriver, 2.5 x 0.4 mm	75 x 2,5 x 0,4	22	<b>KL1007525IS</b>
VDE Slotted screwdriver, 3.0 x 0.5 mm	100 x 3,0 x 0,5	28	<b>KL10010030IS</b>
VDE Slotted screwdriver, 3.5 x 0.6 mm	100 x 3,5 x 0,6	30	<b>KL10010035IS</b>
VDE Slotted screwdriver, 4.0 x 0.8 mm	100 x 4,0 x 0,8	44	<b>KL10010040IS</b>
VDE Slotted screwdriver, 5.5 x 1.0 mm	125 x 5,5 x 1,0	70	<b>KL10012555IS</b>
VDE Slotted screwdriver, 6.5 x 1.2 mm	150 x 6,5 x 1,2	86	<b>KL10015065IS</b>
VDE Slotted screwdriver, 8.0 x 1.2 mm	175 x 8,0 x 1,2	135	<b>KL10017580IS</b>

## VDE Phillips screwdrivers



D'E

1000V  
IEC 60900

Item	Dimension mm	Weight g	Part No.
VDE Phillips screwdriver, PH1	80 x PH 1	52	<b>KL110PH1IS</b>
VDE Phillips screwdriver, PH2	100 x PH 2	80	<b>KL110PH2IS</b>
VDE Phillips screwdriver, PH3	150 x PH 3	145	<b>KL110PH3IS</b>

**VDE Pozidriv screwdrivers**

Item	Dimension mm	Weight g	Part No.
VDE Pozidriv screwdriver, PZ1	80 x PZ 1	49	<a href="#">KL120PZ1IS</a>
VDE Pozidriv screwdriver, PZ2	100 x PZ 2	76	<a href="#">KL120PZ2IS</a>
VDE Pozidriv screwdriver, PZ3	150 x PZ 3	140	<a href="#">KL120PZ3IS</a>



**VDE Plus/minus screwdrivers**

Item	Dimension mm	Weight g	Part No.
VDE Plus/Minus screwdriver, Z1	80 x Z1	52	<a href="#">KL130PM1IS</a>
VDE Plus/Minus screwdriver, Z2	100 x Z2	80	<a href="#">KL130PM2IS</a>



**VDE TORX® screwdriver**

Item	Dimension mm	Weight g	Part No.
VDE TORX® screwdriver TX 10	100 x TX 10	45	<a href="#">KL150TX10IS</a>
VDE TORX® screwdriver TX 15	100 x TX 15	45	<a href="#">KL150TX15IS</a>
VDE TORX® screwdriver TX 20	100 x TX 20	69	<a href="#">KL150TX20IS</a>
VDE TORX® screwdriver TX 25	100 x TX 25	69	<a href="#">KL150TX25IS</a>
VDE TORX® screwdriver TX 30	100 x TX 30	96	<a href="#">KL150TX30IS</a>



## VDE-M-TEC Hexagon nut drivers



## Characteristics

- With box spanner tube - immersion depth approx. 41 mm - ideal for deep-seated screws and nuts
- With spring-loaded magnetic body

Item	Dimension mm	Für Gewinde	Weight g	Part No.
VDE-M-TEC Hexagon nut driver size 5.5	110 x 5,5	M3	100	KL14555IS
VDE-M-TEC Hexagon nut driver size 6	110 x 6,0	M3,5	100	KL14560IS
VDE-M-TEC Hexagon nut driver size 7	110 x 7,0	M4	100	KL14570IS
VDE-M-TEC Hexagon nut driver size 8	110 x 8,0	M5	110	KL14580IS
VDE-M-TEC Hexagon nut driver size 10	125 x 10,0	M6	110	KL145100IS
VDE-M-TEC Hexagon nut driver size 13	110 x 13,0	M8	110	KL145130IS

## Voltage tester with heavy duty handle, single-pole, VDE 0680 150V - 250V



## Characteristics

- Single-pole
- With heavy duty handle
- For voltage detection

Item	Dimension mm	Weight g	Part No.
Voltage tester with heavy duty handle, single-pole, VDE 0680 150V - 250V	73 x 3,0 x 0,8	30	KL19073IS

## VDE Pliers set, 3-pieces



Item	Part No.
VDE Plier set, 3-pieces	KL303IS

Scope of supply	Part No.	Page
VDE Heavy-duty combination plier, 180 mm	KL020180IS	460
VDE Side cutter, 160 mm	KL040160IS	461
VDE Telephone plier, straight, 205 mm	KL050205IS	462

**VDE Plier set, 4-pieces**

Item	Part No.
VDE Plier set, 4-pieces	<b>KL304IS</b>

Scope of supply	Part No.	Page
VDE Heavy-duty combination plier, 180 mm	KL020180IS	460
VDE Electrician Heavy-duty side cutter, 200 mm	KL044200IS	462
VDE Telephone plier, straight, 205 mm	KL050205IS	462
VDE Wire stripper, 160 mm	KL060160IS	463

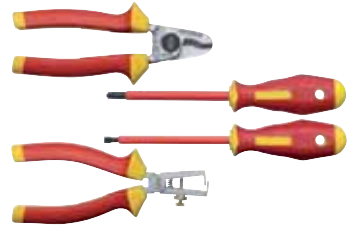


**VDE Plier/screwdriver set, 4-pieces**

Item	Part No.
VDE Plier/screwdriver set, 4-pieces	<b>KL305IS</b>

Scope of supply	Part No.	Page
VDE Cable cutter, 160 mm	KL010160IS	460
VDE Wire stripper, 160 mm	KL060160IS	463
VDE Slotted screwdriver, 3.5 x 0.6 mm	KL10010035IS	464
VDE Plus/Minus screwdriver, Z1	KL130PM1IS	465

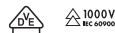
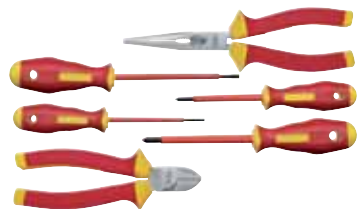


**VDE Plier/screwdriver set, 6-pieces**

Item	Part No.
VDE Plier/screwdriver set, 6-pieces	<b>KL306IS</b>

Scope of supply	Part No.	Page
VDE Telephone plier, straight, 205 mm	KL050205IS	462
VDE Side cutter, 160 mm	KL040160IS	461
VDE Phillips screwdriver, PH1	KL110PH1IS	464
VDE Phillips screwdriver, PH2	KL110PH2IS	464
VDE Slotted screwdriver, 2.5 x 0.4 mm	KL1007525IS	464
VDE Slotted screwdriver, 4.0 x 0.8 mm	KL10010040IS	464



VDE tools

## VDE Screwdriver set, 3-pieces

1000V  
IEC 60900

Item	Part No.
VDE Screwdriver set, 3-pieces	<b>KL391IS</b>

Scope of supply	Part No.	Page
VDE Phillips screwdriver, PH1	KL110PH1IS	464
VDE Phillips screwdriver, PH2	KL110PH2IS	464
VDE Slotted screwdriver, 3,5 x 0,6 mm	KL10010035IS	464

## VDE Screwdriver set, 3-pieces

1000V  
IEC 60900

Item	Part No.
VDE Screwdriver set, 3-pieces	<b>KL392IS</b>

Scope of supply	Part No.	Page
VDE Pozidriv screwdriver, PZ1	KL120PZ1IS	465
VDE Pozidriv screwdriver, PZ2	KL120PZ2IS	465
VDE Slotted screwdriver, 4,0 x 0,8 mm	KL10010040IS	464

## VDE Screwdriver set, 3-pieces

1000V  
IEC 60900

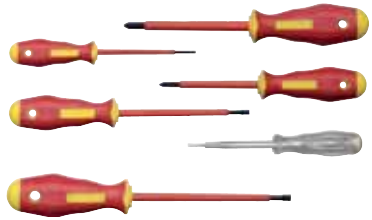
Item	Part No.
VDE Screwdriver set, 3-pieces	<b>KL393IS</b>

Scope of supply	Part No.	Page
VDE Plus/Minus screwdriver, Z1	KL130PM1IS	465
VDE Plus/Minus screwdriver, Z2	KL130PM2IS	465
Voltage tester with heavy duty handle, single-pole, VDE 0680 150V - 250V	KL19073IS	466

**VDE Screwdriver set, 6-pieces**

Item	Part No.
VDE Screwdriver set, 6-pieces	<b>KL390IS</b>

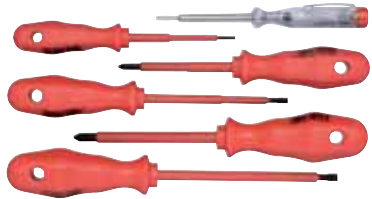
Scope of supply	Part No.	Page
VDE Phillips screwdriver, PH1	KL110PH1IS	464
VDE Phillips screwdriver, PH2	KL110PH2IS	464
VDE Slotted screwdriver, 2.5 x 0.4 mm	KL1007525IS	464
VDE Slotted screwdriver, 4.0 x 0.8 mm	KL10010040IS	464
VDE Slotted screwdriver, 5.5 x 1.0 mm	KL10012555IS	464
Voltage tester with heavy duty handle, single-pole, VDE 0680 150V - 250V	KL19073IS	466



**VDE Screwdriver set, 6-pieces**

Item	Part No.
VDE Screwdriver set, 6-pieces	<b>KL399IS</b>

Scope of supply	Part No.	Page
VDE Slotted screwdriver, 8.0 x 1.2 mm		
VDE Slotted screwdriver, 8.0 x 1.2 mm		
VDE Slotted screwdriver, 8.0 x 1.2 mm		
VDE Slotted screwdriver, 8.0 x 1.2 mm		
VDE Slotted screwdriver, 8.0 x 1.2 mm		
VDE Slotted screwdriver, 8.0 x 1.2 mm		



## Klauke E-smart box, 13-pieces



## Characteristics

- 10 IEC Exchangeable blade set for all applications incl. contactless voltage tester
- Secure grip of blades in the handle by automatic locking
- Snap-on rotating cap and soft coating zone for use as a precision tool
- Safety tool acc. to EN/IEC 60900
- Blades can be re-ordered individually

Item	Part No.	
Klauke E-smart box, 13-pieces	<b>KL301IS</b>	
Scope of supply	Part No.	Page
Blade 2.5 x 0.4 mm	KLE300IS1	
Blade 3.5 x 0.6 mm	KLE300IS3	
Blade 4.0 x 0.8 mm	KLE300IS4	
Blade 5.5 x 1.0 mm	KLE300IS5	
Blade PH 1	KLE300IS6	
Blade PH 2	KLE300IS7	
Blade PZ 2	KLE300IS8	
Blade TX 20	KLE300IS11	
Blade Plus/Minus Z1	KLE300IS13	
Blade Plus/Minus Z 2	KLE300IS14	
Rotating cap	KLE300IS15	
E-smart handle 93 x 32 mm	KLE300IS12	
GT-12A Contactless voltage tester 50 - 1000 V	52063422	618

## VDE Exchangeable blades



## Characteristics

- Blades from special Chrome-molybdenum-vanadium alloy
- Shank 1/4" for high flexibility
- 100% safe due to VDE single part testing

Item	Part No.
Tool bag, including 9 VDE exchangeable blades	<b>KL390TB9</b>
VDE slotted blade, 3.5 x 0.6 mm	<b>KL400S35170ISSB</b>
VDE slotted blade, 4.0 x 0.8 mm	<b>KL400S40170ISSB</b>
VDE slotted blade, 5.5 x 1.0 mm	<b>KL400S55170ISSB</b>
VDE Phillips blade, PH1	<b>KL400PH1170ISSB</b>
VDE Phillips blade, PH2	<b>KL400PH2170ISSB</b>
VDE Pozidriv blade, PZ1	<b>KL400PZ1170ISSB</b>
VDE Pozidriv blade, PZ2	<b>KL400PZ2170ISSB</b>
VDE Plus/Minus blade, PM1	<b>KL400PM1170ISSB</b>
VDE Plus/Minus blade, PM2	<b>KL400PM2170ISSB</b>

Accessories	Part No.	Page
Tool bag, empty	KL390TL	
Nm handle 0.6 - 1.5 Nm	KLE3871513	
Nm handle 1.5 - 3.0 Nm	KLE3883013	
Nm handle 3.0 - 5.4 Nm	KLE3895413	



**NH-Safety handle with guard**

**Characteristics**

- Designation 1,000 V
- Acc. to DIN VDE 0680/4
- Made from impregnated leather
- With non-slip and cuff protection
- For NH fuses sizes 00-3

Item	Weight g	Part No.
NH-Safety handle with guard	470	<b>KL600</b>



1000V  
IEC 60900

**Electrician's safety helmet**

**Characteristics**

- Designation 1,000 V
- Acc. to DIN EN 397
- 440 V AC
- Sizes adjustable

Item	Weight g	Part No.
Electrician's safety helmet	370	<b>KL602GELB</b>



1000V  
IEC 60900

**Electrician's face protection shield**

**Characteristics**

- Designation 1,000 V
- Acc. to VDE
- Suitable for helmet KL602GELB

Item	Weight g	Part No.
Electrician's face protection shield	195	<b>KL603</b>



1000V  
IEC 60900

VDE tools

## Insulating floor mat



## Characteristics

- Tested acc. to DIN 0303, part 21
- Safety mat for safe working with live parts in high voltage areas up to 1,000 Volt
- Penetration resistant up to 14.4 kV/mm (&gt;50 kV/4mm)
- Sure-footed

Item	Dimension mm	Weight g	Part No.
Insulating floor mat	1000 x 1000 x 4	5300	<b>KL620S1000</b>

## Rubber cover



## Characteristics

- Tested acc. to DIN VDE 0680, part 1
- Test voltage: 5 kV/1 min.
- Insulating cover
- Penetration resistant
- Upper and lower side flat

Item	Dimension mm	Weight g	Part No.
Rubber cover, small	500 x 500 x 1,6	440	<b>KL625A500</b>
Rubber cover, large	1000 x 1000 x 1,6	1900	<b>KL625A1000</b>

## Plastic clamp



## Characteristics

- To fix rubber cover

Item	Dimension mm	Weight g	Part No.
Plastic clamp for rubber cover	150	70	<b>KL628</b>

## Safety gloves

### Characteristics

- Acc. to DIN EN 60903
- For working in voltage ranges up to 1000 Volt

Item	Dimension mm	Weight g	Part No.
Safety gloves, size 9	Size 09	250	<b>KL60509</b>
Safety gloves, size 10	Size 10	250	<b>KL60510</b>
Safety gloves, size 11	Size 11	250	<b>KL60511</b>



## Cotton gloves

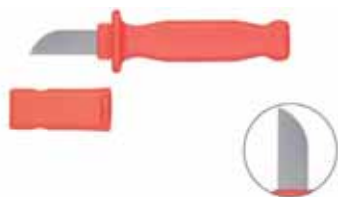
### Characteristics

- Inner gloves from cotton
- For use with safety gloves, Part No. KL60509 / KL60510

Item	Weight g	Part No.
Cotton gloves	50	<b>KL605U</b>



## Cable knife, straight



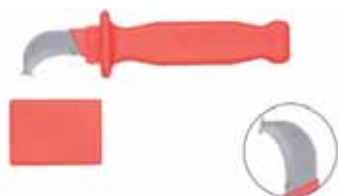
1000V  
IEC 60900

## Characteristics

- With straight blade and safety cap
- Blade length: 50 mm

Item	Dimension mm	Weight g	Part No.
Cable knife, straight	200	105	<b>KL640GK</b>

## Cable knife, hooked blade



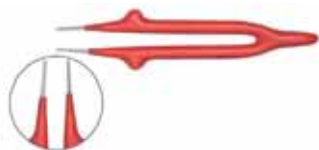
1000V  
IEC 60900

## Characteristics

- With hooked blade and safety cap
- Blade length: 40 mm
- Special blade tip to protect insulation of conductor

Item	Dimension mm	Weight g	Part No.
Cable knife, hooked blade	190	100	<b>KL642HK</b>

## Tweezer



1000V  
IEC 60900

## Characteristics

- Straight and pointed tips
- With 2-layer safety insulation
- Non-slip protection

Item	Dimension mm	Weight g	Part No.
Tweezer	130	30	<b>KL690130</b>

## Cleaning brush



1000V  
IEC 60900

## Characteristics

- Length 400 mm
- Brush width 45 mm
- All-plastic version

Item	Weight g	Part No.
Cleaning brush	75	<b>KL698</b>

**VDE Guide wedge**

Item	Part No.
Guide wedge	<b>K610</b>



**Fully insulated tool set, 1/2", 20-pieces**

**Characteristics**

- Fully insulated acc. to EN 60900
- 2-colour dipped insulation - outside orange / inside yellow
- Vanadium special steel acc. to DIN 7448

**Suitable for**

- General working on live conductors



Item	Part No.	
Fully insulated tool set, 1/2", 20-pieces	<b>KL1300IS12B20</b>	
Scope of supply	Part No.	Page
Case KL1300L	KL1300L	
Ratchet Klemmfix 1/2" drive	KL1000IS12	477
T-wrench 1/2" drive	KL1299IS12	477
Extension 1/2" drive, 250 mm	KL1290IS12250	477
Extension 1/2" drive, 125 mm	KL1290IS12125	477
Socket 1/2" drive, AF 10 mm	KL1240IS1210	478
Socket 1/2" drive, AF 11 mm	KL1240IS1211	478
Socket 1/2" drive, AF 12 mm	KL1240IS1212	478
Socket 1/2" drive, AF 13 mm	KL1240IS1213	478
Socket 1/2" drive, AF 14 mm	KL1240IS1214	478
Socket 1/2" drive, AF 17 mm	KL1240IS1217	478
Socket 1/2" drive, AF 19 mm	KL1240IS1219	478
Socket 1/2" drive, AF 22 mm	KL1240IS1222	478
Socket 1/2" drive, AF 24 mm	KL1240IS1224	478
Socket 1/2" drive for slotted screws, 5.5 mm	KL1200IS1255	479
Socket 1/2" drive for Phillips screws, PH2	KL1210IS12PH2	479
Insert 1/2" drive for Plus/Minus PM2	KL1230IS12PM2	479
Cable knife, straight	KL640GK	474
VDE Side cutter, 180 mm	KL040180IS	461
VDE Slotted screwdriver, 3.5 x 0.6 mm	KL10010035IS	464
VDE Slotted screwdriver, 5.5 x 1.0 mm	KL10012555IS	464



## Fully insulated open-end spanner



## Characteristics

- Fully insulated acc. to EN 60900
- 2-colour dipped insulation - outside orange / inside yellow
- DIN 7448 from vanadium special steel

## Suitable for

- Hexagonal head screws

Item	Part No.
Fully insulated open-end spanner 6 AF	KL1100IS6
Fully insulated open-end spanner 7 AF	KL1100IS7
Fully insulated open-ended spanner 8 AF	KL1100IS8
Fully insulated open-end spanner 10 AF	KL1100IS10
Fully insulated open-end spanner 11 AF	KL1100IS11
Fully insulated open-end spanner 12 AF	KL1100IS12
Fully insulated open-end spanner 13 AF	KL1100IS13
Fully insulated open-end spanner 17 AF	KL1100IS17
Fully insulated open-end spanner 19 AF	KL1100IS19
Fully insulated open-end spanner 22 AF	KL1100IS22

## Torque wrench compact 3/8" and 1/2" drive



## Characteristics

- Fully insulated acc. to EN 60900
- 2-colour dipped insulation - outside orange / inside yellow
- With automatic release
- Ball locking device on the square, pull-off force up to 50 Nm
- Setting of response value using rotating grip
- Quickly read-off the values on the scale
- +/- 4% response accuracy
- Versatile use thanks to small dimensions

Item	Part No.
Torque wrench compact, 3/8", drive 5 - 25 Nm	KL1000IS38NM25
Torque wrench compact, 1/2", drive 5 - 25 Nm	KL1000IS12NM25

## Torque wrench 3/8" and 1/2" drive



## Characteristics

- Fully insulated acc. to EN 60900
- 2-colour dipped insulation - outside orange / inside yellow
- With automatic release
- Ball locking device on the square, pull-off force up to 50 Nm
- Setting of response value using rotating grip
- Clearly readable values on the scale
- +/- 4% response accuracy

Item	Part No.
Torque wrench, 3/8", 2-27 Nm	KL1000IS38NM27
Torque wrench, 3/8", 5-50 Nm	KL1000IS38NM50
Torque wrench, 1/2", 2-27 Nm	KL1000IS12NM27
Torque wrench, 1/2", 5-50 Nm	KL1000IS12NM50

**Ratchet Klemmfix 3/8" and 1/2" drive**

**Characteristics**

- Fully insulated acc. to EN 60900
- 2-colour dipped insulation - outside orange / inside yellow
- Chrome-vanadium steel
- One-hand operation

Item	Part No.
Ratchet Klemmfix 3/8" drive	<b>KL1000IS38</b>
Ratchet Klemmfix 1/2" drive	<b>KL1000IS12</b>



1000V  
IEC 60900

**T-wrench 3/8" and 1/2" drive**

**Characteristics**

- Fully insulated acc. to EN 60900
- 2-colour dipped insulation - outside orange / inside yellow
- Chrome-vanadium steel

Item	Part No.
T-wrench 3/8" drive	<b>KL1299IS38</b>
T-wrench 1/2" drive	<b>KL1299IS12</b>



1000V  
IEC 60900

**Extension 3/8" and 1/2" drive**

**Characteristics**

- Fully insulated acc. to EN 60900
- 2-colour dipped insulation - outside orange / inside yellow
- Chrome-vanadium steel

Item	Dimension mm	Part No.
Extension 3/8" drive, 125 mm	125	<b>KL1290IS38125</b>
Extension 3/8" drive, 250 mm	250	<b>KL1290IS38250</b>
Extension 1/2" drive, 125 mm	125	<b>KL1290IS12125</b>
Extension 1/2" drive, 250 mm	250	<b>KL1290IS12250</b>



1000V  
IEC 60900

## Hexagonal sockets 3/8" and 1/2" drive



## Characteristics

- Fully insulated acc. to EN 60900
- 2-colour dipped insulation - outside orange / inside yellow
- DIN 7448 from vanadium special steel
- For hex. head screws

△ 1000V  
IEC 60900

Item	Part No.
Socket 3/8" drive, AF 10 mm	KL1240IS3810
Socket 3/8" drive, AF 11 mm	KL1240IS3811
Socket 3/8" drive, AF 12 mm	KL1240IS3812
Socket 3/8" drive, AF 13 mm	KL1240IS3813
Socket 3/8" drive, AF 14 mm	KL1240IS3814
Socket 3/8" drive, AF 17 mm	KL1240IS3817
Socket 3/8" drive, AF 19 mm	KL1240IS3819
Socket 1/2" drive, AF 10 mm	KL1240IS1210
Socket 1/2" drive, AF 11 mm	KL1240IS1211
Socket 1/2" drive, AF 12 mm	KL1240IS1212
Socket 1/2" drive, AF 13 mm	KL1240IS1213
Socket 1/2" drive, AF 14 mm	KL1240IS1214
Socket 1/2" drive, AF 16 mm	KL1240IS1216
Socket 1/2" drive, AF 17 mm	KL1240IS1217
Socket 1/2" drive, AF 19 mm	KL1240IS1219
Socket 1/2" drive, AF 22 mm	KL1240IS1222
Socket 1/2" drive, AF 24 mm	KL1240IS1224
Socket 1/2" drive, AF 27 mm	KL1240IS1227

## Allen key sockets 3/8" and 1/2" drive



## Characteristics

- Fully insulated acc. to EN 60900
- 2-colour dipped insulation - outside orange / inside yellow
- DIN 7448 from vanadium special steel

## Suitable for

- Allen key

△ 1000V  
IEC 60900

Item	Part No.
Socket 3/8" drive for Allen key, AF 4 mm	KL1260IS3814
Socket 3/8" drive for Allen key, AF 5 mm	KL1260IS3815
Socket 3/8" drive for Allen key, AF 6 mm	KL1260IS3816
Socket 3/8" drive for Allen key, AF 8 mm	KL1260IS3818
Socket 1/2" drive for Allen key, AF 4 mm	KL1260IS1214
Socket 1/2" drive for Allen key, AF 5 mm	KL1260IS1215
Socket 1/2" drive for Allen key, AF 6 mm	KL1260IS1216
Socket 1/2" drive for Allen key, AF 8 mm	KL1260IS1218



**Screwdriver sockets 3/8" and 1/2" drive**

**Characteristics**

- Fully insulated acc. to EN 60900
- 2-colour dipped insulation - outside orange / inside yellow
- DIN 7448 from vanadium special steel

**Suitable for**

- Plus/Minus



Item	Part No.
Socket 3/8" drive for Plus/Minus PM1	<b>KL1230IS38PM1</b>
Socket 3/8" drive for Plus/Minus PM2	<b>KL1230IS38PM2</b>
Socket 3/8" drive for Plus/Minus PM3	<b>KL1230IS38PM3</b>
Insert 1/2" drive for Plus/Minus PM1	<b>KL1230IS12PM1</b>
Insert 1/2" drive for Plus/Minus PM2	<b>KL1230IS12PM2</b>
Insert 1/2" drive for Plus/Minus PM3	<b>KL1230IS12PM3</b>

**Screwdriver sockets 3/8" and 1/2" drive, for slotted screws**

**Characteristics**

- Fully insulated acc. to EN 60900
- 2-colour dipped insulation - outside orange / inside yellow
- DIN 7448 from vanadium special steel

**Suitable for**

- Slotted screws 5.5



Item	Part No.
Socket 3/8" drive for slotted screws, 5.5 mm	<b>KL1200IS3855</b>
Socket 1/2" drive for slotted screws, 5.5 mm	<b>KL1200IS1255</b>

**Screwdriver sockets 3/8" and 1/2" drive for Phillips screws**

**Characteristics**

- Fully insulated to EN 60900
- 2-colour dipped insulation - outside orange / inside yellow
- DIN 7448 from vanadium special steel

**Suitable for**

- Phillips PH 2 screws



Item	Part No.
Socket 3/8" drive for Phillips screws, PH2	<b>KL1210IS38PH2</b>
Socket 1/2" drive for Phillips screws, PH2	<b>KL1210IS12PH2</b>

## VDE Tool case, 27-pieces



## Characteristics

- Hard-shell tool case, red
- Equipped with 27 mainly VDE-tested tools to DIN EN 60900

Item	Dimension mm	Weight g	Part No.
VDE Tool chest, 27-pieces	515x420x230	9800	<b>KL880B26IS</b>
Scope of supply			Part No. Page
VDE Heavy-duty combination plier, 180 mm			KL020180IS 460
VDE Water pump plier, jaw width 50 mm			KL070250IS 463
VDE Side cutter, 160 mm			KL040160IS 461
VDE Telephone plier, straight, 205 mm			KL050205IS 462
VDE Wire stripper, 160 mm			KL060160IS 463
VDE Cable cutter, 160 mm			KL010160IS 460
VDE Slotted screwdriver, 2.5 x 0.4 mm			KL1007525IS 464
VDE Slotted screwdriver, 3.5 x 0.6 mm			KL10010035IS 464
VDE Slotted screwdriver, 4.0 x 0.8 mm			KL10010040IS 464
VDE Slotted screwdriver, 5.5 x 1.0 mm			KL10012555IS 464
VDE Phillips screwdriver, PH1			KL110PH1IS 464
VDE Phillips screwdriver, PH2			KL110PH2IS 464
VDE Pozidriv screwdriver, PZ1			KL120PZ1IS 465
VDE Pozidriv screwdriver, PZ2			KL120PZ2IS 465
VDE Plus/Minus screwdriver, Z1			KL130PM1IS 465
VDE Plus/Minus screwdriver, Z2			KL130PM2IS 465
Voltage tester with heavy duty handle, single-pole, VDE 0680 150V - 250V			KL19073IS 466
Cable knife, straight			KL640GK 474
Rubber cover, large			KL625A1000 472
Plastic clamp for rubber cover			KL628 472
Safety gloves, size 10			KL60510 473
Cotton gloves			KL605U 473
Tweezer			KL690130 474
Cleaning brush			KL698 474
Control cabinet spirit level, 200 mm			KL420200 501
Automatic VDE wire stripper 0.2 - 6 mm <sup>2</sup>			KL760180IS 464
Tool chest red, empty			KL880L 480
VDE Electrician Heavy-duty side cutter, 200 mm			KL044200IS 462

## Tool chest red, empty



## Characteristics

- Hard shell, red

Item	Dimension mm	Weight g	Part No.
Tool chest red, empty	515 x 420 x 230	4400	<b>KL880L</b>



# Klauke®

**Innovative. Functional.**  
*And ergonomic.*

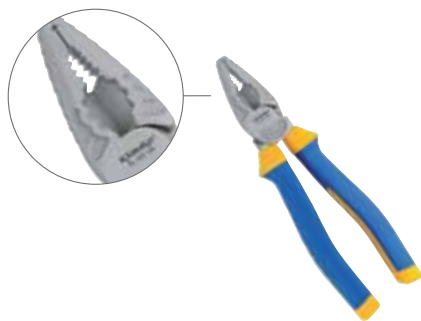
**Top quality tools made in Germany.**

The Klauke tool range spans standard tools, safety tools, measuring and marking tools.



Pliers and VDE pliers have been granted with the IF Product Design Award.

**Multi-function tool:**  
*Holding, cutting and tightening.*



- **Pliers, screwdrivers.**
- **Bits, holders and adapters.**
- **Basic tools, safety tools.**
- **Measuring and marking tools.**

- ▶ Holds flat and round materials.
- ▶ Cuts hard and soft wires.
- ▶ Combi-ring key function 11-17 mm (M8-10).

**Benefits:**

- ▶ You need only one tool for various applications.
- ▶ Versatile applications.
- ▶ *More on Page 484.*

## ■ Special handle for grip and cushion.

- ▶ Protection by safety cushion at the end of handle.
- ▶ Secure positioning thanks to **non-slip handle material**.
- ▶ Ergonomically-designed handles.

### Benefits:

- ▶ The safety cushion protects the pliers from damage even when dropped.
- ▶ Pliers won't slip even when placed on inclines.
- ▶ Specially-designed handles for increased force. Efficiency is also improved.



## ■ The correct blade for every screw.



- ▶ More from Page 490.

- ▶ Available in 8 different shapes.
- ▶ Ergonomically designed two-component handles.
- ▶ All screwdrivers are also available VDE approved.

### Benefits:

- ▶ The Klauke range offers a **suitable screwdriver for every screw type**.
- ▶ The two-component handles developed specifically for Klauke tools have a pleasant feel and offer outstanding torque transfer.

## ■ Ideally integrated into the handle.

### Ergonomic design, impact protection and inscription space.

- ▶ Protection by safety cushion at the end of handle.
- ▶ Inscription space or signature panel on the inside of the handle.
- ▶ Ergonomically-designed handle sleeves.

### Benefits:

- ▶ The safety cushion protects the pliers from damage even when dropped.
- ▶ You will find a suitable tool every time.
- ▶ Two component handles have a pleasant feel and offer outstanding torque transfer.



## Cable cutter



## Characteristics

- Adjustable joint
- Cuts fine and superfine stranded copper and alu cable

Part No.	KL010160	KL010210
Item	Cable cutter 160 mm	Cable cutter 210 mm
Dimension mm	160	210
Weight g	250	335
Cutting power single and multistranded cable	16	25

## Heavy duty combination plier



## Characteristics

- With combination spanner from 11 - 17 mm (M8 - M10)
- Holds flat and round material
- Cuts soft wires, e.g. copper, alu, medium-hard wires e.g. nails, wire nails and hard wires, e.g. wire cable, steel wire

Part No.	KL020165	KL020180	KL020205
Item	Heavy-duty combination plier, 165 mm	Heavy-duty combination plier, 180 mm	Heavy-duty combination plier, 205 mm
Dimension mm	165	180	205
Weight g	200	255	285
Cutting power soft wire dia. mm	4,0	5,2	5,9
Cutting power medium wire dia. mm	3,1	3,4	3,8
Cutting power hard wire dia. mm	2,0	2,2	2,5

## Heavy-duty combination plier, angled



## Characteristics

- 45° angled head
- With combination spanner from 11 - 17 mm (M8 - M10)
- Holds flat and round material
- Cuts soft wires, e.g. copper, alu, medium-hard wires e.g. nails, wire nails and hard wires, e.g. wire cable, steel wire

Part No.	KL026205
Item	Heavy-duty combination plier, angled 205 mm
Dimension mm	205
Weight g	285
Cutting power soft wire dia. mm	5,9
Cutting power medium wire dia. mm	3,8
Cutting power hard wire dia. mm	2,5

**Long flat nose plier**

**Characteristics**

- With long, flat jaws
- Serrated jaws
- Tool steel drop-forged, oil-hardened

Part No.	<b>KL030160</b>
Item	Long flat nose plier, 160 mm
Dimension mm	160
Weight g	155



**Long round nose plier**

**Characteristics**

- With long, round jaws
- Anti-slip, rounded precision tips
- Tool steel drop-forged, oil-hardened

Part No.	<b>KL035160</b>
Item	Long round nose plier, 160 mm
Dimension mm	160
Weight g	165



**Side cutters**

**Characteristics**

- Wave profile for optimized cutting of insulated cables
- Cuts soft wires, e.g. copper, alu, medium-hard wires e.g. nails, wire nails and hard wires, e.g. wire cable, steel wire

Part No.	<b>KL040145</b>	<b>KL040160</b>	<b>KL040180</b>
Item	Side cutter, 145 mm	Side cutter, 160 mm	Side cutter, 180 mm
Dimension mm	145	160	180
Weight g	180	210	265
Cutting power soft wire dia. mm	5,0	6,0	7,0
Cutting power medium wire dia. mm	2,5	3,5	4,0
Cutting power hard wire dia. mm	1,7	2,0	2,5
Cutting power single and multistranded cable	8,0	11,0	13,0



## Heavy duty side cutters



## Characteristics

- Wave profile for optimized cutting of insulated cables
- Cuts soft wires, e.g. copper, alu, medium-hard wires e.g. nails, wire nails and hard wires, e.g. wire cable, steel wire

Part No.	KL045180	KL045200
Item	Heavy-duty side cutter, 180 mm	Heavy-duty side cutter, 200 mm
Dimension mm	180	200
Weight g	285	310
Cutting power medium wire dia. mm	3,7	4,0
Cutting power hard wire dia. mm	2,6	2,8
Cutting power piano wire dia. mm	2,2	2,5

## Telephone pliers, straight



## Characteristics

- Long, straight flat/round jaws
- Serrated jaws (KL050205 only)
- Cutting edge inductive hardened
- With combination spanner from 11 - 17 mm (M8 - M10)
- Cuts soft wires, e.g. copper, alu, medium-hard wires e.g. nails, wire nails and hard wires, e.g. wire cable, steel wire

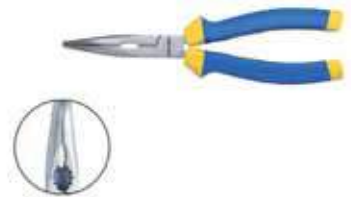
Part No.	KL050170	KL050205
Item	Telephone plier, straight 170 mm	Telephone plier, straight 205 mm
Dimension mm	170	205
Weight g	165	215
Cutting power soft wire dia. mm	2,5	3,9
Cutting power medium wire dia. mm	1,6	3,2
Cutting power hard wire dia. mm		2,2



**Telephone pliers, bent**

**Characteristics**

- Long, 45° angled, flat/round jaws
- Serrated jaws (KL055205 only)
- Cutting edge inductive hardened
- With combination spanner from 11 - 17 mm (M8 - M10)
- Cuts soft wires, e.g. copper, alu, medium-hard wires e.g. nails, wire nails and hard wires, e.g. wire cable, steel wire



Part No.	KL055170	KL055205
Item	Telephone plier, bent 170 mm	Telephone plier, bent 205 mm
Dimension mm	170	205
Weight g	165	215
Cutting power soft wire dia. mm	2,5	3,9
Cutting power medium wire dia. mm	1,6	3,2
Cutting power hard wire dia. mm		2,2

**Wire stripper**

**Characteristics**

- With opening spring and V-shaped cutting edges
- With adjustment screw for setting the cable diameter
- Stripping range for single and multi-stranded cables 0 to 5.0 mm dia. and 10.0 mm<sup>2</sup> conductor cross-section



Part No.	KL060160
Item	Wire stripper, 160 mm
Dimension mm	160
Weight g	185

**Water pump plier, jaw width 50 mm (40% above DIN ISO)**

**Characteristics**

- Jaw width 50 mm (40% above DIN ISO)
- Integrated hand protection
- Ratchet adjustment
- Box joint design
- Double serrated jaws
- Plastic coated handles (KL070250G)
- 2-component handle (KL070250)



Part No.	KL070250G	KL070250
Item	Water pump plier, jaw width 50 mm	Water pump plier, jaw width 50 mm
Dimension mm	250	250
Weight g	355	395

## Water pump plier



## Characteristics

- Jaw width up to 65 mm (40% above DIN ISO)
- Integrated hand protection
- Push button adjustment for setting quickly and accurately
- Box joint design with wide guide surfaces
- Double serrated jaws
- Teeth additionally inductive hardened
- Plastic coated handles (KL072180G / KL072250G / KL072300G)
- 2-component handle (KL072250)

Part No.	KL072180G	KL072250G	KL072250	KL072300G
Item	Water pump plier, jaw width 35 mm	Water pump plier, jaw width 50 mm	Water pump plier, jaw width 50 mm	Water pump plier, jaw width 65 mm
Dimension mm	180	250	250	300
Weight g	190	300	350	530

## Waterpump pliers, grooved, jaw width 50 mm



## Characteristics

- Jaw width 50 mm
- Double grooved joint and safety stop
- Optimum pivot point - lower effort
- Non-slip overlay due to matched elastomers
- Plastic coated handles (KL075250G)
- 2-component handle (KL075250)

Part No.	KL075250G	KL075250
Item	Waterpump pliers, grooved, jaw width 50 mm	Waterpump pliers, grooved, jaw width 50 mm
Dimension mm	250	250
Weight g	390	433

## Fitting plier, jaw width 53 mm



## Characteristics

- Parallel and moveable jaws for maximum force
- Large jaw opening adjustable from 0 - 53 mm
- Integrated hand protection
- Push-button adjustment
- Box joint design
- Plastic coated handles

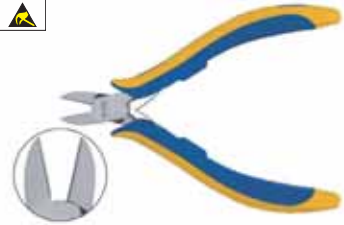
Part No.	KL078250G
Item	Fitting plier
Dimension mm	250
Weight g	375

**ESD Electronic side cutters**

**Characteristics**

- For soft wires to 1.2 mm
- Precision pliers for high precision work
- Double leaf spring with low friction
- Cutting edges additionally induction hardened
- With electrical discharging grips
- Surface resistance amounts 1 to 100 MOhm

Item	Dimension mm	Weight g	Part No.
Electronic side cutter, with facet	115	62	<b>KL040115EL</b>
Electronic side cutter, without facet	115	60	<b>KL040115ELW</b>



**ESD Electronic chain nose plier**

**Characteristics**

- Smooth inside jaws, edges rounded
- With electrical discharging grips
- Surface resistance amounts 1 to 100 MOhm
- Optimised for gripping fine edges or forms of wires

Item	Dimension mm	Weight g	Part No.
Electronic chain nose plier	115	64	<b>KL050115EL</b>



**Electronic side cutter**

**Characteristics**

- Clearance angle 21°
- For soft wires to 1.3 mm dia.
- Free from backlash
- With opening spring
- 2-component handle

Item	Dimension mm	Weight g	Part No.
Electronic side cutter, without wire trapping spring	128	64	<b>KL040128EL</b>
Electronic side cutter, with wire trapping spring	128	66	<b>KL040128ELH</b>



## Electronic assortment, 7-pieces



## Characteristics

- 2-component handle
- Cross-slotted PH-screws PH000 to PH1
- Cross-slotted PZ-screws PZ0 to PZ1
- Holder with replaceable blades
- Slotted screws 1.5 to 4.0 mm

Item	Weight g	Part No.
Electronic assortment, 7-pieces	161	<b>KL350</b>
Scope of supply		Page
Blade 1.5 x 0.25 - 3.0 x 0.5 mm		KLE3501
Blade 2.0 x 0.4 - 3.5 x 0.6 mm		KLE3502
Blade 2.5 x 0.4 - 4.0 x 0.8 mm		KLE3503
Blade PH 000 - PH 00		KLE3504
Blade PH 0 - PH 1		KLE3505
Blade PH 0 - PZ 1		KLE3506
Tool holder 95 x 14 mm		KLE3507

## Slotted screwdrivers



Item	Dimension mm	Weight g	Part No.
Slotted screwdriver 2.5 mm	75 x 2,5 x 0,4	26	<b>KL1007525</b>
Slotted screwdriver 3 mm	80 x 3,0 x 0,5	28	<b>KL1008030</b>
Slotted screwdriver 3.5 mm	100 x 3,5 x 0,6	32	<b>KL10010035</b>
Slotted screwdriver 4 mm	100 x 4,0 x 0,8	45	<b>KL10010040</b>
Slotted screwdriver 5.5 mm	125 x 5,5 x 1,0	71	<b>KL10012555</b>
Slotted screwdriver 6.5 mm	150 x 6,5 x 1,2	89	<b>KL10015065</b>
Slotted screwdriver 8 mm	175 x 8,0 x 1,2	129	<b>KL10017580</b>

## Slotted screwdriver



Item	Dimension mm	Weight g	Part No.
Slotted screwdriver, 5.5 x 1.0 mm	100 x 5,5 x 1,0	74	<b>KL10510055</b>
Slotted screwdriver, 6.5 x 1.2 mm	125 x 6,5 x 1,2	100	<b>KL10512565</b>
Slotted screwdriver, 8.0 x 1.2 mm	150 x 8,0 x 1,2	162	<b>KL10515080</b>

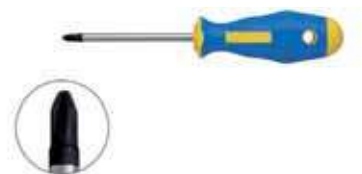
**Phillips screwdrivers**

Item	Dimension mm	Weight g	Part No.
Phillips screwdriver PH1	80 x PH 1	51	<b>KL110PH1</b>
Phillips screwdriver PH2	100 x PH 2	79	<b>KL110PH2</b>
Phillips screwdriver PH3	150 x PH 3	138	<b>KL110PH3</b>



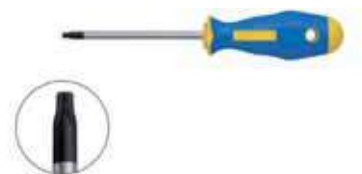
**Pozidriv screwdrivers**

Item	Dimension mm	Weight g	Part No.
Pozidriv screwdriver PZ1	80 x PZ 1	51	<b>KL120PZ1</b>
Pozidriv screwdriver PZ2	100 x PZ 2	79	<b>KL120PZ2</b>
Pozidriv screwdriver PZ3	150 x PZ 3	138	<b>KL120PZ3</b>



**TORX® TR screwdrivers**

Item	Dimension mm	Weight g	Part No.
TORX® Screwdriver Tamper Resistant TR10	100 x TX TR 10	46	<b>KL150TR10</b>
TORX® Screwdriver Tamper Resistant TR15	100 x TX TR 15	48	<b>KL150TR15</b>
TORX® Screwdriver Tamper Resistant TR20	100 x TX TR 20	69	<b>KL150TR20</b>
TORX® Screwdriver Tamper Resistant TR25	100 x TX TR 25	69	<b>KL150TR25</b>
TORX® Screwdriver Tamper Resistant TR30	115 x TX TR 30	97	<b>KL150TR30</b>
TORX® Screwdriver Tamper Resistant TR40	125 x TX TR 40	129	<b>KL150TR40</b>



## Ball-point head screwdrivers



Item	Dimension mm	Weight g	Part No.
Ball-point head screwdriver 3 mm	100 x 3,0	29	<b>KL160K13</b>
Ball-point head screwdriver 4 mm	100 x 4,0	49	<b>KL160K14</b>
Ball-point head screwdriver 5 mm	100 x 5,0	76	<b>KL160K15</b>
Ball-point head screwdriver 6 mm	125 x 6,0	91	<b>KL160K16</b>
Ball-point head screwdriver 8 mm	150 x 8,0	152	<b>KL160K18</b>

## Slotted carburettor screwdriver



Item	Dimension mm	Weight g	Part No.
Slotted carburettor screwdriver, 5.5 mm	25 x 5,5 x 1,0	35	<b>KL1002555</b>

## Phillips carburettor screwdriver



Item	Dimension mm	Weight g	Part No.
Phillips carburettor screwdriver, PH1	25 x PH 1	35	<b>KL11025PH1</b>

**Slotted screwdriver bit 1/4", 73 mm**

**Characteristics**

- Shank 1/4" (6.3) DIN3126

Item	Dimension mm	Weight g	Number parts	Part No.
Slotted screwdriver bit 1/4", 73 mm	73 x 0,6 x 3,5	16	2	<b>KL2007335</b>
Slotted screwdriver bit 1/4", 73 mm	73 x 0,8 x 4,0	18	2	<b>KL2007340</b>
Slotted screwdriver bit 1/4", 73 mm	73 x 1,0 x 5,5	26	2	<b>KL2007355</b>
Slotted screwdriver bit 1/4", 73 mm	73 x 1,2 x 6,5	34	2	<b>KL2007365</b>



**Phillips screwdriver bits 1/4", 73 mm**

**Characteristics**

- Shank 1/4" (6.3) DIN3126

Item	Dimension mm	Weight g	Number parts	Part No.
Phillips screwdriver bit 1/4", 73 mm PH1	73 x PH 1	22	2	<b>KL21073PH1</b>
Phillips screwdriver bit 1/4", 73 mm PH2	73 x PH 2	30	2	<b>KL21073PH2</b>



**Pozidriv screwdriver bit 1/4", 73 mm**

**Characteristics**

- Shank 1/4" (6.3) DIN3126

Item	Dimension mm	Weight g	Number parts	Part No.
Pozidriv screwdriver bit 1/4", 73 mm PZ1	73 x PZ 1	22	2	<b>KL22073PZ1</b>
Pozidriv screwdriver bit 1/4", 73 mm PZ2	73 x PZ 2	30	2	<b>KL22073PZ2</b>



## Plus/Minus screwdriver bit, 1/4", 73 mm



## Characteristics

- Shank 1/4" (6.3) DIN3126

Item	Dimension mm	Weight g	Number parts	Part No.
Plus/Minus screwdriver bit, 1/4", 73 mm	73 x Z 1	20	2	<b>KL23073PM1</b>
Plus/Minus screwdriver bit, 1/4", 73 mm	73 x Z 2	30	2	<b>KL23073PM2</b>

## TORX® screwdriver bit, 1/4", 73 mm



## Characteristics

- Shank 1/4" (6.3) DIN3126

Item	Dimension mm	Weight g	Number parts	Part No.
TORX® screwdriver bit, 1/4", 73 mm TX10	73 x TX 10	22	2	<b>KL25073TX10</b>
TORX® screwdriver bit, 1/4", 73 mm TX15	73 x TX 15	22	2	<b>KL25073TX15</b>
TORX® screwdriver bit, 1/4", 73 mm TX20	73 x TX 20	25	2	<b>KL25073TX20</b>
TORX® screwdriver bit, 1/4", 73 mm TX25	73 x TX 25	25	2	<b>KL25073TX25</b>
TORX® screwdriver bit, 1/4", 73 mm TX27	73 x TX 27	25	2	<b>KL25073TX27</b>
TORX® Screwdriver bit, 1/4", 73 mm TX30	73 x TX 30	30	2	<b>KL25073TX30</b>
TORX® Screwdriver bit, 1/4", 73 mm TX40	73 x TX 40	40	2	<b>KL25073TX40</b>

## Magnetic bit holder, 1/4", 58 mm



## Characteristics

- Shank 1/4" (6.3) DIN3126
- Strong magnet

Item	Dimension mm	Weight g	Part No.
Magnetic bit holder, 1/4", 58 mm	58	32	<b>KL290</b>



**Mechanical bit holder, 1/4", 52 mm**

**Characteristics**

- Shank 1/4" (6.3) DIN3126
- With quick-change chuck



Item	Dimension mm	Weight g	Part No.
Mechanical bit holder, 1/4", 52 mm	52	30	<b>KL291</b>

**Adapter, 1/4", 50 mm**

▶ Shank E 6.3 and 1/4" drive

**Characteristics**

- Shank 1/4" (6.3)

**Suitable for**

- Drive for 1/4" socket wrenches



Item	Dimension mm	Weight g	Part No.
Adapter, 1/4", 50 mm	50	15	<b>KL295</b>

**Adapter, 3/8", 50 mm**

**Characteristics**

- Shank 3/8" (10)

Item	Dimension mm	Weight g	Part No.
Adapter, 3/8", 50 mm	50	22	<b>KL296</b>



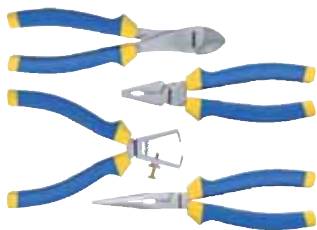
**Plier set, 3-pieces**

Item	Weight g	Part No.
Plier set, 3-pieces	790	<b>KL303</b>

Scope of supply	Part No.	Page
Heavy-duty combination plier, 180 mm	KL020180	484
Side cutter, 160 mm	KL040160	485
Telephone plier, straight 205 mm	KL050205	486



## Plier set, 4-pieces



Item	Weight g	Part No.
Plier set, 4-pieces	1050	<b>KL304</b>

Scope of supply	Part No.	Page
Heavy-duty combination plier, 180 mm	KL020180	484
Heavy-duty side cutter, 200 mm	KL045200	486
Telephone plier, straight 205 mm	KL050205	486
Wire stripper, 160 mm	KL060160	487

## Plier set, 3-pieces



Item	Weight g	Part No.
Plier set, 3-pieces	1100	<b>KL310</b>

Scope of supply	Part No.	Page
Heavy-duty combination plier, 180 mm	KL020180	484
Heavy-duty side cutter, 200 mm	KL045200	486
Water pump plier, jaw width 50 mm	KL072250	488

## Plier set, 3-pieces



Item	Weight g	Part No.
Plier set, 3-pieces	1000	<b>KL315</b>

Scope of supply	Part No.	Page
Fitting plier	KL078250G	488
Water pump plier, jaw width 35 mm	KL072180G	488
Water pump plier, jaw width 50 mm	KL072250G	488

## Slotted workshop screwdriver set, 3-pieces



Item	Weight g	Part No.
Slotted workshop screwdriver set, 3-pieces	425	<b>KL380</b>

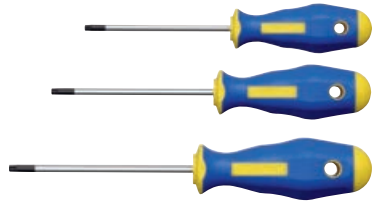
Scope of supply	Part No.	Page
Slotted screwdriver, 5.5 x 1.0 mm	KL10510055	490
Slotted screwdriver, 6.5 x 1.2 mm	KL10512565	490
Slotted screwdriver, 8.0 x 1.2 mm	KL10515080	490

**TORX® Screwdriver set, 3-pieces**

Item	Weight g	Part No.
TORX® Screwdriver set, 3-pieces	385	<b>KL385</b>

Scope of supply	Part No.	Page
TORX® Screwdriver Tamper Resistant TR15	KL150TR15	491
TORX® Screwdriver Tamper Resistant TR20	KL150TR20	491
TORX® Screwdriver Tamper Resistant TR25	KL150TR25	491



**Socket bit set 1/4", 28 pieces**



**Characteristics**

- 16 bits: C6.3 x 25m PH1 / PH2 / PZ1 / PZ2 / PZ3 / SW3 / SW4 / SW5 / SW6 / 3.5 x 0.6 / 5.5 x 0.8 / 6.5 x 1.2 / T15 / T20 / T25 / T30
- 1 Quick-change adapter
- 7 sockets: 5 mm / 5.5 mm / 6 mm / 7 mm / 8 mm / 10 mm / 13 mm
- 1 Adapter 1/4"
- 1 Extension 1/4"
- 1 Extension for sockets
- 1 Fine-toothed professional ratchet
- 1 Screwdriver with innovative T-Smart handle

Item	Weight g	Number parts	Part No.
Socket bit set 1/4", 28 pieces	1130	28	<b>KL361</b>

Scope of supply	Part No.	Page
16-pce. Bit set C 6.3 1/4"	KLE3601	
7-pce. Socket set 1/4"	KLE3602	
Adapter 1/4" x 25 mm	KLE3603	
Adapter 1/4" x 150 mm	KLE3604	
Extension 75 mm	KLE3605	
Professional ratchet 1/4"	KLE3606	
T-Smart handle 105 x 39 mm	KLE3607	



**Allen key set, 7 pieces**

**Characteristics**

- SW 2 / SW 2.5 / SW 3 / SW 4 / SW 5 / SW 6 / SW 8
- In practical plastic holder

Item	Dimension mm	Weight g	Number parts	Part No.
Allen key set, 7 pieces	SW 2 - 8	171	7	<b>KL370</b>



## Ball point allen key set, 9 pieces



## Characteristics

- SW 1.5 / SW 2 / SW2.5 / SW 3 / SW 4 // SW 5 / SW 6 / SW 8 / SW 10
- In plastic holder

Item	Dimension mm	Weight g	Number parts	Part No.
Ball point allen key set, 9 pieces	SW 1.5 - 10	273	9	<b>KL375</b>

## Torque-wrench set, 0.6 - 1.5 Nm



## Characteristics

- Torque range from 0.6 - 1.5 Nm
- Easy torque adjustment using an Allen key
- Precise release when reaching the set torque

Item	Weight g	Number parts	Part No.	
Torque-wrench set, 0.6 - 1.5 Nm	1048	14	<b>KL38715</b>	
Scope of supply			Part No.	Page
Nm-slotted blade 3.0 x 0.5 x 170 mm			KLE387158	
Nm-slotted blade 3.5 x 0.6 x 170 mm			KLE387159	
Nm-Phillips blade PH 0 x 170 mm			KLE3871510	
Nm blade PZ 0 x 170 mm			KLE3871511	
Nm-TORX® blade TX 6 x 170 mm			KLE387151	
Nm-TORX® blade TX 7 x 170 mm			KLE387152	
Nm-TORX® blade TX 8 x 170 mm			KLE387153	
Nm-TORX® blade TX IP 7 x 170 mm			KLE387155	
Nm-TORX® blade TX IP 8 x 170 mm			KLE387156	
Nm-TORX® blade TX IP 9 x 170 mm			KLE387157	
Nm blade Z1 x 170 mm			KLE3883014	
Nm blade magnetic 170 mm			KLE3871512	
Nm handle 0.6 - 1.5 Nm			KLE3871513	
Adjusting spanner			KLE3871514	

**Torque-wrench set, 1.5 - 3.0 Nm**

**Characteristics**

- Torque range from 1.5 - 3.0 Nm
- Easy torque adjustment using an Allen key
- Precise release when reaching the set torque

Item	Weight g	Number parts	Part No.	
Torque-wrench set, 1.5 - 3.0 Nm, 14 pieces	1066	14	<b>KL38830</b>	
Scope of supply			Part No.	Page
Nm-slotted blade 4.0 x 0.8 x 170 mm			KLE388301	
Nm-Phillips blade PH 1 x 170 mm			KLE388302	
Nm-Phillips blade PH 2 x 170 mm			KLE388303	
Nm blade PZ 1 x 170 mm			KLE388304	
Nm blade PZ 2 x 170 mm			KLE388305	
Nm-TORX® blade TX 10 x 170 mm			KLE388307	
Nm-TORX® blade TX 15 x 170 mm			KLE388308	
Nm-TORX® blade TX IP 10 x 170 mm			KLE3883010	
Nm-TORX® blade TX IP 15 x 170 mm			KLE3883011	
Nm blade Z1 x 170 mm			KLE3883014	
Nm blade Z2 x 170 mm			KLE3883015	
Nm blade magnetic 170 mm			KLE3883012	
Nm handle 1.5 - 3.0 Nm			KLE3883013	
Adjusting spanner			KLE3871514	



**Torque-wrench set, 3.0 - 5.4 Nm**

**Characteristics**

- Torque range from 3.0 - 5.4 Nm
- Easy torque adjustment using an Allen key
- Precise release when reaching the set torque

Item	Weight g	Number parts	Part No.	
Torque-wrench set, 3.0 - 5.4 Nm	1066	14	<b>KL38954</b>	
Scope of supply			Part No.	Page
Nm-slotted blade 4.0 x 0.8 x 170 mm			KLE388301	
Nm-Phillips blade PH 2 x 170 mm			KLE388303	
Nm-Phillips blade PH 1 x 170 mm			KLE388302	
Nm blade PZ 1 x 170 mm			KLE388304	
Nm blade PZ 2 x 170 mm			KLE388305	
Nm-TORX® blade TX 15 x 170 mm			KLE388308	
Nm-TORX® blade TX 20 x 170 mm			KLE389541	
Nm-TORX® blade TX 25 x 170 mm			KLE389542	
Nm-TORX® blade TX IP 10 x 170 mm			KLE3883010	
Nm-TORX® blade TX IP 15 x 170 mm			KLE3883011	
Nm blade Z2 x 170 mm			KLE3883015	
Nm blade magnetic 170 mm			KLE3883012	
Nm handle 3.0 - 5.4 Nm			KLE3895413	
Adjusting spanner			KLE3871514	



## Bit set, 6 pieces, 1/4", 73 mm



## Characteristics

- Shank 1/4" (6.3) DIN3126
- KL330: 3.0 x 0.5 mm / 3.5 x 0.6 mm / 4.0 x 0.8 mm / 5.5 x 1.0 mm / PH 1 / PH 2
- KL331: PH 1 / PH 2 / PH 3 / PZ1 / PZ2 / PZ3
- KL335: TX10 / TX15 / TX20 / TX25 / TX30 / TX40

Item	Blade length mm	Weight g	Number parts	Part No.
Bit set, 1/4", 73 mm	73	120	6	<b>KL330</b>
Bit set, 1/4", 73 mm	73	120	6	<b>KL331</b>
TORX® bit set, 1/4", 73 mm	73	120	6	<b>KL335</b>

## Bit box Swift, 7 pieces, 1/4", 25 mm



## Characteristics

- Shank 1/4" (6.3) DIN3126
- In practical holder
- Incl. magnetic holder
- KL340: 1.0 x 5.5 mm / 1.2 x 6.5 mm / PZ 1 / PZ 2 / PH 1 / PH 2
- KL345: TX10 / TX15 / TX20 / TX25 / TX30 / TX40

Item	Blade length mm	Weight g	Number parts	Part No.
Bit box Swift, 1/4", 25 mm	25	75	7	<b>KL340</b>
TORX® bit box Swift, 1/4", 25 mm	25	75	7	<b>KL345</b>

## Combination spanner set, 12 pieces



## Characteristics

- Width across flats SW 8/9/10/11/12/13/14/15/16/17/19/22 mm
- Material: Chromium-Vanadium
- Surface: chromed

Item	Dimension mm	Weight g	Part No.
Combination spanner set, 12 pieces	SW 8 - 22	1055	<b>KL365</b>

**Control cabinet spirit level, 200 mm**

**Characteristics**

- With horizontal, vertical and 45° level

Item	Dimension mm	Weight g	Part No.
Control cabinet spirit level, 200 mm	200x42x17	65	<b>KL420200</b>



**Aluminum spirit levels**

**Characteristics**

- With vertical and horizontal level

Item	Dimension mm	Weight g	Part No.
Aluminum spirit level, 400 mm	400 x 40 x 15	210	<b>KL425400</b>
Aluminum spirit level, 600 mm	600 x 40 x 15	305	<b>KL425600</b>



**Folding rule, 2 m**

**Characteristics**

- White/yellow
- No. of links 10

Item	Weight g	Part No.
Folding rule, 2 m	126	<b>KL402</b>



**Measuring tape, 3 m**

**Characteristics**

- With 3 functions: Length, inside dimension and circles

Item	Weight g	Part No.
Measuring tape, 3 m	124	<b>KL403</b>



## Carpenter's pencil



## Characteristics

- Oval shape
- Pointed

Item	Weight g	Part No.
Carpenter's pencil	10	<b>KL449</b>

## Marking pen



## Characteristics

- Multimark permanent marker, black
- Fine tip 0.6 mm

Item	Weight g	Part No.
Marking pen	10	<b>KL440F</b>

## Chalk for chalk lines



## Characteristics

- 100 g bottle

Item	Weight g	Part No.
Chalk for chalk lines, red	100	<b>KL451ROT</b>
Chalk for chalk lines, blue	100	<b>KL451BLAU</b>

## Chalk line



## Characteristics

- Cord length: 15 m
- Allows simple marking of lines when laying conductors

Item	Weight g	Part No.
Chalk line	380	<b>KL450</b>

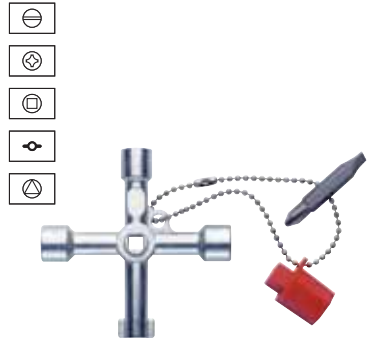


**Control cabinet key**

**Characteristics**

- With chain and adapter and reversible bit 1/4"
- Square socket 5, 6 and 7 - 8 mm
- Triangular 9 mm
- Double pin keys 3 - 5 mm
- Bit PH2 and slotted 1.0 - 7 mm
- Radiator air venting (5 mm square drive) in centre

Item	Weight g	Part No.
Control cabinet key	75	<b>KL500</b>

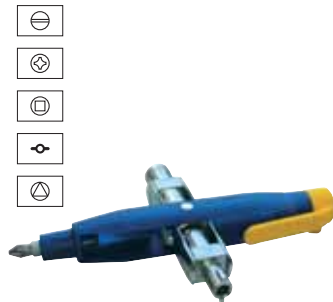


**Universal cabinet key, Subkey Electro**

**Characteristics**

- 30% lower in weight and simplified opening mechanism
- Square socket 5, 6 and 7 - 8 mm
- Triangular 9 mm
- Double pin keys 3 - 5 mm
- Including 1/4" drive and 2 double bits
- Radiator air venting (5 mm square drive) at pin head
- Bit slotted 1, 2 x 7 mm, PH2

Item	Dimension mm	Weight g	Part No.
Universal cabinet key, subkey Electro	145	120	<b>KL510</b>

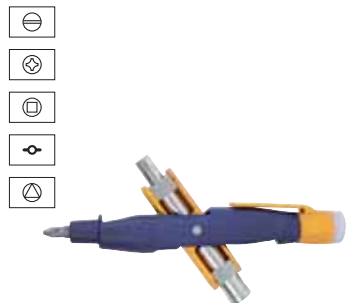


**Universal cabinet key - SuBMaVo**

**Characteristics**

- Incl. contact free voltage finder for secure detection of voltages from 50-600V on cables, sockets, lamps, etc.
- Integrated magnet field tester for contact free detection of permanent magnets and magnetic fields
- Double swivel lock with 4 different cabinet key options
- Square socket 6, 7 - 8 mm
- Triangular 9 mm
- Double pin keys 3 - 5 mm
- Bit slotted 1.2 - 7 mm, PH2

Item	Weight g	Part No.
Universal cabinet key - SuBMaVo	105	<b>KL520</b>



## Engineer's hammer



## Characteristics

- Steel-forged head
- Ground finish
- With protective nylon shroud

Item	Dimension mm	Weight g	Part No.
Engineer's hammer, 300 g	370	300	<b>KL580300</b>
Engineer's hammer, 500 g	610	500	<b>KL580500</b>

## Sledge hammer

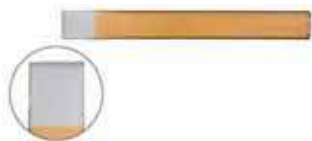


## Characteristics

- Steel-forged head
- Ground finish
- With protective nylon shroud

Item	Dimension mm	Weight g	Part No.
Sledge hammer, 1000 g	1150	1000	<b>KL5821000</b>
Sledge hammer, 1250 g	1400	1250	<b>KL5821250</b>

## Jointing chisel



## Characteristics

- Chrome-vanadium steel, air-hardened
- Safety head, annealed

Item	Dimension mm	Weight g	Part No.
Jointing chisel	230 x 26 x 7	250	<b>KL584230</b>

## Electrician's chisel



## Characteristics

- Chrome-vanadium steel, air-hardened
- Safety head, annealed

Item	Dimension mm	Weight g	Part No.
Electrician's chisel, 200 mm	200	90	<b>KL585200</b>
Electrician's chisel, 250 mm	250	120	<b>KL585250</b>

**Safety handle for jointing chisel**

**Suitable for**

- Jointing chisel, part no. KL584230

Item	Weight g	Part No.
Safety handle for jointing chisel	110	<b>KL586</b>



**Electrician's knife**

**Characteristics**

- Hinged, with plastic handle

Item	Dimension mm	Weight g	Part No.
Electrician's knife	80	115	<b>KL540</b>



**Hand saw**

**Characteristics**

- With fixed wooden handle

Item	Dimension mm	Weight g	Part No.
Hand saw	290	95	<b>KL559</b>
Metal saw blades, 12 pieces	150	2	<b>KL550ES</b>



**Universal saw**

**Characteristics**

- With fibreglass reinforced plastic handle

Item	Dimension mm	Weight g	Part No.
Universal saw	250	170	<b>KL550</b>
Metal saw blades, 12 pieces	150	2	<b>KL550ES</b>



## Combination scissors



## Characteristics

- Serrated cutting edges
- With safety lock
- Cuts e.g. round and flat material from copper, aluminum, plastic, paper, cardboard, leather

Item	Dimension mm	Weight g	Part No.
Combination scissors	190	100	<b>KL545</b>

## Universal knife



## Characteristics

- With adjustable and replaceable blades

Item	Weight g	Dimension mm	Part No.
Universal knife	305		<b>KL542</b>
Replacement blade for universal knife	8	60x19x0,5	<b>KL542ES</b>

## Cutter knife



## Characteristics

- Knife with knock-off blades, all 9 mm

Item	Dimension mm	Weight g	Part No.
Cutter knife	9	45	<b>KL544</b>
Replacement blade for Cutter knife	9	5	<b>KL544ES</b>

**Safety glasses uvex i-vo in microfibre bag**

**Characteristics**

- Duo component technology with soft components for the sensitive zones (nose, forehead, ears) giving optimum and long-term wearing comfort
- Individual earpiece length adjustment
- Individual incline setting
- Clear lens for permanent anti-fog inside, extremely scratch-resistant outside
- Sun protection lens extremely scratch-resistant on both sides
- Easy and quick replacement of the sunglasses' lens
- 100 % UV protection
- EN 166
- Elegant microfibre pouch, also suitable for cleaning the glasses



Item	Weight g	Part No.
Safety glasses uvex i-vo in microfibre bag	33	<b>KL604</b>
Sun protection lens for safety glasses KL604	23	<b>KL604S</b>

**L-BOXX with basic equipment for electrician's, 18-pieces**

**Characteristics**

- L-BOXX from shock and impact resistant ABS plastic, loadable to 100 kg
- For integration in TÜV-approved in-vehicle equipment systems
- Stackable L-BOXXs with Easy-Click system



Item	Dimension mm	Part No.
L-BOXX with basic equipment for electrician's, 18-pieces	442x357x151 (B/T/H)	<b>LBOXXKL18</b>
Scope of supply	Part No.	Page
L-BOXX with front handle (W/D/H: 442 x 357 x 151 mm)	LBOXX136LFG	
VDE Telephone plier, straight, 205 mm	KL050205IS	462
VDE Heavy-duty combination plier, 180 mm	KL020180IS	460
VDE Side cutter, 160 mm	KL040160IS	461
VDE Cable cutter, 160 mm	KL010160IS	460
Automatic VDE wire stripper 0.2 - 6 mm <sup>2</sup>	KL760180IS	464
VDE Water pump plier, jaw width 50 mm	KL070250IS	463
Measuring tape, 3 m	KL403	501
VDE Slotted screwdriver, 4.0 x 0.8 mm	KL10010040IS	464
VDE Slotted screwdriver, 5.5 x 1.0 mm	KL10012555IS	464
VDE Plus/Minus screwdriver, Z1	KL130PM1IS	465
VDE Plus/Minus screwdriver, Z2	KL130PM2IS	465
VDE Phillips screwdriver, PH1	KL110PH1IS	464
VDE Phillips screwdriver, PH2	KL110PH2IS	464
Voltage tester with heavy duty handle, single-pole, VDE 0680 150V - 250V	KL19073IS	466
DM-45 Digital multimeter 600 V AC/DC with temperature measurement	52059477	625
GT-85NE Bipolar voltage tester with LCD display	52049407	619
Allen key set, 7 pieces	KL370	497
Cable knife, hooked blade	KL745HK	521

## Tool case for electricians, small



Item	Dimension mm	Weight kg	Part No.
Tool case for electricians, small	495 x 410 x 175	5,7	<b>KL850BS</b>
<b>Scope of supply</b>			<b>Part No.</b>
Voltage tester with heavy duty handle, single-pole, VDE 0680 150V - 250V			KL19073IS
VDE Slotted screwdriver, 4,0 x 0.8 mm			KL10010040IS 464
VDE Slotted screwdriver, 5,5 x 1.0 mm			KL10012555IS 464
VDE Phillips screwdriver, PH1			KL110PH1IS 464
VDE Phillips screwdriver, PH2			KL110PH2IS 464
VDE Plus/Minus screwdriver, Z1			KL130PM1IS 465
VDE Plus/Minus screwdriver, Z2			KL130PM2IS 465
VDE Side cutter, 160 mm			KL040160IS 461
VDE Telephone plier, straight, 205 mm			KL050205IS 462
Carpenter's pencil			KL449 502
Folding rule, 2 m			KL402 501
Control cabinet key			KL500 503
Hard shell case for KL850BS			KL850L 512

## Tool case for electricians, medium



Item	Dimension mm	Weight kg	Part No.
Tool case for electricians, medium	495 x 420 x 200	6,0	<b>KL860BM</b>
<b>Scope of supply</b>			<b>Part No.</b>
Voltage tester with heavy duty handle, single-pole, VDE 0680 150V - 250V			KL19073IS 466
VDE Slotted screwdriver, 3,5 x 0.6 mm			KL10010035IS 464
VDE Slotted screwdriver, 4,0 x 0.8 mm			KL10010040IS 464
VDE Slotted screwdriver, 5,5 x 1.0 mm			KL10012555IS 464
VDE Phillips screwdriver, PH1			KL110PH1IS 464
VDE Phillips screwdriver, PH2			KL110PH2IS 464
VDE Pozidriv screwdriver, PZ1			KL120PZ1IS 465
VDE Pozidriv screwdriver, PZ2			KL120PZ2IS 465
VDE Plus/Minus screwdriver, Z1			KL130PM1IS 465
VDE Plus/Minus screwdriver, Z2			KL130PM2IS 465
VDE Side cutter, 160 mm			KL040160IS 461
VDE Heavy-duty combination plier, 180 mm			KL020180IS 460
VDE Telephone plier, straight, 205 mm			KL050205IS 462
VDE Wire stripper, 160 mm			KL060160IS 463
VDE Cable cutter, 160 mm			KL010160IS 460
Carpenter's pencil			KL449 502
Folding rule, 2 m			KL402 501
Control cabinet spirit level, 200 mm			KL420200 501
Hand saw			KL559 505
Engineer's hammer, 300 g			KL580300 504
Electrician's chisel, 250 mm			KL585250 504
Allen key set, 7 pieces			KL370 497
Bit box Swift, 1/4", 25 mm			KL340 500
Cable knife, hooked blade			KL745HK 521
Control cabinet key			KL500 503
KL860L hard – shell case for KL860BM and KL870BL			KL860L 512

**Tool case for electricians, large**

Item	Dimension mm	Part No.
Tool case for electricians, large	495 x 420 x 200	<b>KL870BL</b>



Scope of supply	Part No.	Page
Voltage tester with heavy duty handle, single-pole, VDE 0680 150V - 250V	KL19073IS	466
VDE Slotted screwdriver, 3.5 x 0.6 mm	KL10010035IS	464
VDE Slotted screwdriver, 4.0 x 0.8 mm	KL10010040IS	464
VDE Slotted screwdriver, 5.5 x 1.0 mm	KL10012555IS	464
VDE Slotted screwdriver, 6.5 x 1.2 mm	KL10015065IS	464
VDE Phillips screwdriver, PH1	KL110PH1IS	464
VDE Phillips screwdriver, PH2	KL110PH2IS	464
VDE Pozidriv screwdriver, PZ1	KL120PZ1IS	465
VDE Pozidriv screwdriver, PZ2	KL120PZ2IS	465
VDE Plus/Minus screwdriver, Z1	KL130PM1IS	465
VDE Plus/Minus screwdriver, Z2	KL130PM2IS	465
VDE TORX® screwdriver TX 15	KL150TX15IS	465
VDE TORX® screwdriver TX 20	KL150TX20IS	465
VDE TORX® screwdriver TX 25	KL150TX25IS	465
VDE TORX® screwdriver TX 30	KL150TX30IS	465
VDE Side cutter, 160 mm	KL040160IS	461
VDE Heavy-duty combination plier, 180 mm	KL020180IS	460
VDE Water pump plier, jaw width 50 mm	KL070250IS	463
VDE Telephone plier, straight, 205 mm	KL050205IS	462
Automatic VDE wire stripper 0.2 - 6 mm²	KL760180IS	464
VDE Cable cutter, 210 mm	KL010210IS	460
Carpenter's pencil	KL449	502
Folding rule, 2 m	KL402	501
Cutter knife	KL544	506
Aluminum spirit level, 400 mm	KL425400	501
Universal saw	KL550	505
Ball point allen key set, 9 pieces	KL375	498
Mechanical bit holder, 1/4", 52 mm	KL291	495
Bit set, 1/4", 73 mm	KL331	500
Cable knife, hooked blade	KL745HK	521
Round cable stripper 8 - 13mm²	KL710	521
Combination spanner set, 12 pieces	KL365	500
Control cabinet key	KL500	503
KL860L hard – shell case for KL860BM and KL870BL	KL860L	512



## Professional roller trolley, 88 pieces



## Characteristics

- With 4-section telescopic handle, up to 1050 mm
- Document compartment in lid
- Double aluminum frame
- Large rubber casters
- Case shell from non-breakable X-ABS
- Loads up to 40 kg
- Hinges for case lid lock

Item	Dimension mm	Weight g	Part No.	
Professional roller trolley, 88 pieces	470x210x355	15500	<b>KL890TB88</b>	
Scope of supply			Part No.	Page
Professional roller trolley, empty			KL890TL	511
VDE Heavy-duty combination plier, 180 mm			KL020180IS	460
VDE Telephone plier, straight, 205 mm			KL050205IS	462
VDE Electrician Heavy-duty side cutter, 200 mm			KL044200IS	462
VDE Wire stripper, 160 mm			KL060160IS	463
VDE Slotted screwdriver, 2.5 x 0.4 mm			KL1007525IS	464
VDE Slotted screwdriver, 3.5 x 0.6 mm			KL10010035IS	464
VDE Slotted screwdriver, 4.0 x 0.8 mm			KL10010040IS	464
VDE Slotted screwdriver, 5.5 x 1.0 mm			KL10012555IS	464
VDE Phillips screwdriver, PH1			KL110PH1IS	464
VDE Phillips screwdriver, PH2			KL110PH2IS	464
VDE Pozidriv screwdriver, PZ1			KL120PZ1IS	465
VDE Pozidriv screwdriver, PZ2			KL120PZ2IS	465
Voltage tester with heavy duty handle, single-pole, VDE 0680 150V - 250V			KL19073IS	466
VDE Plus/Minus screwdriver, Z1			KL130PM1IS	465
VDE Plus/Minus screwdriver, Z2			KL130PM2IS	465
VDE Cable cutter, 210 mm			KL010210IS	460
Water pump plier, jaw width 50 mm			KL070250	487
Bit set, 1/4", 73 mm			KL330	500
Wire stripper for flexible and solid conductors			KL760180	516
Combination spanner set, 12 pieces			KL365	500
Socket bit set 1/4", 28 pieces			KL361	497
Universal cabinet key, subkey Electro			KL510	503
Universal saw			KL550	505
Crimping tool with interchangeable dies			K507	258
Folding rule, 2 m			KL402	501
Carpenter's pencil			KL449	502
Cable knife, hooked blade			KL745HK	521
Round cable stripper 8 - 13mm <sup>2</sup>			KL710	521
Allen key set, 7 pieces			KL370	497
Engineer's hammer, 300 g			KL580300	504
Safety glasses uvex i-vo in microfibre bag			KL604	507
Marking pen			KL440F	502
GT-85NE Bipolar voltage tester with LCD display			52049407	619
Kwik Stepper™ step bit with ROTASTOP® shaft ISO 12 - 40 mm			50069888	579
NETcat® Micro NC-100 + 200EP			NC100EP	657
CSJ-100 Jaw meter, open			52020887	644
NETcat® Micro NC-100			52024541	657
TC-20 Nylon carrying case with carrying strap for measuring instruments			50075357	633



**Engineers professional case, 15-pieces**

► Engineers basic equipment, mainly with VDE tools

**Characteristics**

- Technicians Notebook tool bag
- Material: hard-wearing nylon
- 90° folding-out front pocket
- High-quality zipper
- Spray-water protected floor
- Each side pocket has a zipper
- Adjustable carrying belt with quick-release fastener and shoulder pad
- Twin fixed carrying handle
- Compartment for business cards



Part No.		
Scope of supply	Part No.	Page
Technicians bag, empty	KL905L	512
VDE Phillips screwdriver, PH1	KL110PH1IS	464
VDE Phillips screwdriver, PH2	KL110PH2IS	464
VDE Slotted screwdriver, 2.5 x 0.4 mm	KL1007525IS	464
VDE Slotted screwdriver, 4.0 x 0.8 mm	KL10010040IS	464
VDE Slotted screwdriver, 5.5 x 1.0 mm	KL10012555IS	464
Voltage tester with heavy duty handle, single-pole, VDE 0680 150V - 250V	KL19073IS	466
VDE Plus/Minus screwdriver, Z1	KL130PM1IS	465
VDE Plus/Minus screwdriver, Z2	KL130PM2IS	465
Cable knife, hooked blade	KL745HK	521
VDE Telephone plier, straight, 205 mm	KL050205IS	462
VDE Electrician Heavy-duty side cutter, 200 mm	KL044200IS	462
Round cable stripper 8 - 13mm <sup>2</sup>	KL710	521
VDE Heavy-duty combination plier, 165 mm	KL020165IS	460
Measuring tape, 3 m	KL403	501

**Professional roller trolley, empty**

**Characteristics**

- With 4-section telescopic handle, up to 1050 mm
- Document compartment in lid
- Double aluminum frame
- Large rubber casters
- Case shell from non-breakable X-ABS
- 2 compartments for business cards
- Two straps for writing instruments

Item	Dimension mm	Weight g	Part No.
Professional roller trolley, empty	470x210x355	6600	<b>KL890TL</b>



## KL 860L Hard-shell case, empty



## Characteristics

- Max. load capacity: 30 kg – Volume 32L
- Robust aluminum frame with abutting edge
- Case shell made of impact resistant ABS material
- Document compartment
- Variable bottom shell with customized sections

Item	Dimension mm	Weight kg	Part No.
KL860L hard – shell case for KL860BM and KL870BL	495 x 420 x 200	6.0	<b>KL860L</b>

## KL850L Hard – shell case, empty



## Characteristics

- Max. load capacity: 25 kg – Volume 26L
- Case shell made of impact resistant ABS material
- Robust aluminum frame with abutting edge
- Document compartment
- Variable bottom shell with customized sections

Item	Dimension mm	Weight kg	Part No.
Hard shell case for KL850BS	495 x 410 x 175	5.7	<b>KL850L</b>

## Profi-installer's pocket



## Characteristics

- Robust design with plastic guide rails, metal rods and sponge rubber handle
- Adjustable carrying bag with shoulder pad
- Outside section: 1 large lockable pocket with 2 boxes for small parts, 9 pockets, 2 Velcro strips for spirit levels etc., inside section: 3 compartments, 14 straps

Dimension mm	Weight g	Part No.
350 x 200 x 200	2600	<b>KL920L</b>

## Technicians bag, empty



## Characteristics

- Material: hard-wearing nylon, spray-water protected floor
- 90% folding front bag, lateral bags with zip
- Twin fixed carrying handle
- Adjustable carrying strap with fastener and shoulder rest
- Protected laptop compartment
- Compartment for business cards
- High-quality zipper

Item	Dimension mm	Weight g	Part No.
Technicians bag, empty	330 x 440 x 200	2600	<b>KL905L</b>

## Tool wallet, Nylon, empty

## Characteristics

- Material: Polytex
- Room for up 11 tools

Item	Dimension mm	Weight g	Part No.
Tool wallet, Nylon, empty	200x200x50	100	<b>KL910L</b>



## Insulation easily removed.

### Stripping tools for professional use.

Thousands of conductors are stripped every day. Mostly using professional tools. But also often in a hurry using a sharp blade. A standard action for many craftsmen but with potential serious consequences for electrical connections: Conductors and insulation are damaged or specified stripping lengths are not respected - the connections no longer meet requirements.

The use of professional stripping tools prevents such mistakes. Procedures can be standardised. The quality of connections remains consistent. Klauke stripping tools are designed for professional use and are set apart by their extremely long service life.



Standardised stripping ...

- Automatic wire stripping tools.
- For stripping ranges from 0.02 mm<sup>2</sup> to 25 mm<sup>2</sup>.
- Also one-hand operation for larger cross sections.



.....by simple adjustment of the tools.

## ■ Ergonomically-designed handle and interchangeable blade cassettes: K 432.



### ▶ Ergonomically-designed rubber-coated handles.

- ▶ Made from fibreglass reinforced special plastic.
- ▶ Automatic adjustment of the cable cross-section.
- ▶ Interchangeable blade cassettes for flexible and solid conductors, and also for PVC and PTFE insulation.

### Your benefits:

- ▶ The ergonomically-designed rubber coated handles guarantee convenient, user-friendly operation.
- ▶ The fibreglass reinforced special plastic guarantees maximum durability.
- ▶ Highly flexible thanks to interchangeable blade cassettes.



## ■ KL 765 PV: Solar cables easily processed.

- ▶ For stripping all standard flexible cables from 1.5 to 6.0 mm<sup>2</sup> in the solar technology sector.
- ▶ 5-fold adjustable fine setting.
- ▶ With integrated side cutter.

### Your benefits:

- ▶ **Just with one tool for processing practically every cable in the solar technology sector.**
- ▶ Simple stripping - even with multi-layer insulation.
- ▶ Cables up to 3.0 mm dia.



## ■ Stripping V-shapes with KL 760180.



- ▶ For flexible and solid conductors from 0.2 mm<sup>2</sup> to 6 mm<sup>2</sup>.
- ▶ Adjustable length stop from 5 mm to 12 mm.

### Your benefits:

- ▶ **The V-shaped blade enables precise stripping of flexible conductors.**
- ▶ The required stripping length can be set precisely - also to individual requirements.
- ▶ Type for working under live voltage: KL760180IS.



Automatic stripping tool, 0.02 - 10 mm<sup>2</sup>

## Characteristics

- Self – regulating cutting and stripping tool for standard flexible cables and conductors from 0.02 - 10.0 mm<sup>2</sup> and solid conductors up to 1.5 mm<sup>2</sup>
- Easily replaceable blade system
- Precise adjustability for stripping of thin insulations without damaging the conductor
- Integrated side cutter

Item	Stripping range mm <sup>2</sup>	Weight g	Part No.
Automatic wire stripping tool K43/2	0.02-10	140	<b>K432</b>
<b>NEW</b> Automatic wire stripping tool K43/2-90, 90° angled	0.02-10	140	<b>K43290</b>

Accessories	Part No.	Page
Interchangeable cassette, black, for wire-stripping tool K432 0.02 - 10 mm <sup>2</sup> flexible conductors and to 1.5 mm <sup>2</sup> solid conductors	K432E	
Interchangeable cassette, blue, for wire-stripping tool K432 for PTFE insulated conductors 0.1 - 4 mm <sup>2</sup>	K432E2	
Interchangeable cassette, red, for wire-stripping tool K432 / 4 - 16 mm <sup>2</sup>	K432E3	

K 44 Automatic wire stripper, 1 - 25 mm<sup>2</sup>

## Characteristics

- Stripping length up to 22 mm
- With adjustable stop

Item	Stripping range mm <sup>2</sup>	Weight g	Part No.
Automatic wire stripper with adjustable stop	1-25	680	<b>K44</b>

Wire stripper, 0.2 – 6 mm<sup>2</sup>

## Characteristics

- For all standard flexible and solid conductors from 0.2 - 6 mm<sup>2</sup>
- Adjustable length stop from 5 – 12 mm
- Integrated easy to reach side cutter up to max. 2 mm dia.

Item	Dimension mm	Stripping range mm <sup>2</sup>	Weight g	Part No.
Wire stripper for flexible and solid conductors	180	0,2 - 6	130	<b>KL760180</b>

**Wire stripper for round and flat cables**

**Characteristics**

- Fine adjustment (5-way) on various cable types and cable diameters
- Optical length dimension 8-24 mm (5/16 - 1 inch)
- Integrated side cutter up to max. 3 mm dia.

**Suitable for**

- Flat cable: baring and stripping 2 core PVC-insulated flat cables from 0.75 - 1.5 mm<sup>2</sup>
- Round cable: baring and stripping flexible cables in the range 0.5 - 16 mm<sup>2</sup> (20-6 AWG), solid conductors 0.5 - 10 mm<sup>2</sup> (20-8 AWG)

Item	Dimension mm	Stripping range mm <sup>2</sup>	Weight g	Part No.
Wire stripper for round and flat cables	180	0,5 - 16	205	<b>KL765FR215</b>



**Automatic wire-stripping tool for round cables used in solar technology**

**Characteristics**

- Fine adjustment (5-way) on various cable types and cable diameters
- Integrated side cutter up to max. 3 mm dia.
- Optical length dimension 8 - 24 mm (5/16 - 1 inch)

**Suitable for**

- Baring and stripping of all standard, flexible cables from 1.5 mm<sup>2</sup> - 6.0 mm<sup>2</sup> (15-9 AWG) used in solar technology

Item	Dimension mm	Stripping range mm <sup>2</sup>	Weight g	Part No.
Automatic wire-stripping tool for round cables used in solar technology, 1.5 - 6 mm <sup>2</sup>	180	1,5 - 6	205	<b>KL765PV</b>



## Cables stripped

**quickly and easily.**

**Stripping tools for round, moisture-proof and coaxial cables.**

Round, moisture-proof and coaxial cables often get stripped using knives. Certainly a quick way, but is it also an effective one? The insulation of the individual wires can get damaged. The risk of injury is high. And in terms of precision, the cuts are anything but exemplary.

Klauke's special stripping tools eliminate these problems. You can strip a cable in just one action. Very fast. Very simple. And very safe.



*Stripping and splitting in one operation.*

- Stripping tools for round and moisture-proof cables.
- Wire stripper for coaxial cables.
- Up to 40 mm dia.







### ■ *E400: for cables up to 40 mm dia.*

- ▶ **Interchangeable hooks** for diameters from 6 mm to 25 mm and 20 mm to 40 mm.
- ▶ Blade always rebounds to its original position.
- ▶ Also suitable for window cuts.

#### **Your benefits:**

- ▶ High flexibility due to a broad range of cable diameters.
- ▶ No damage to cutting blade, highly durable.
- ▶ Time saved, as window cuts for tap conductors can be made quickly and precisely.

### ■ *Stepless for diameters from 4 mm to 28 mm: KL 745 HK.*

- ▶ Stepless adjustment of cutting depth.
- ▶ For all standard round cables from 4 mm to 28 mm diameters.
- ▶ Removable reducing adapter of extremely wear-resistant plastic.
- ▶ With hook blade.

#### **Your benefits:**

- ▶ No damage to the inner conductors.
- ▶ One tool **for virtually all standard cables** in building installation and in switch board construction.



### ■ *Short and flush wire stripping: KL 710.*

- ▶ For round and moisture-proof cables from 8 mm to 13 mm diameters.
- ▶ For flush stripping even **in tight areas**.
- ▶ No need to adjust cutting depth.

#### **Your benefits:**

- ▶ One tool allows fast, flush stripping of a wide range of cables in ceilings or walls, and also in junction or distribution boxes and switch cabinets.



## K 400 Professional wire stripping tool 4.5 - 40 mm



## Characteristics

- Max. cutting depth of the knife: 4.5 mm
- Max. stripping diameter: 21 mm (small hook)
- Max. stripping diameter: 40 mm (large hook)
- Replaceable stop hooks

Item	Dimension mm	Weight g	Part No.
K 400 Professional wire stripping tool 4.5 - 40 mm	200 x 93 x 33	120	<b>K400</b>

Accessories	Part No.	Page
K 400E Replacement blade for wire stripping tool K 400	K400E	

## Electrician's knife, without blade



## Characteristics

- Precise, fast and safe baring of all standard round cables
- Beschädigung der inneren Leiter ist durch stufenlose Einstellung der Schnitttiefe ausgeschlossen
- Self-rotating blade for circular and longitudinal cut

Item	Dimension mm	Weight g	Part No.
Electrician's knife, without blade 4 - 16 mm dia.	4 - 16	70	<b>KL740416</b>
Electrician's knife, without blade 8 - 28 mm dia.	8 - 28	70	<b>KL740828</b>

Accessories	Part No.	Page
Replacement blade for electrician's knife with hooked blade	KL749ES	

## Electrician's knife with straight blade



## Characteristics

- Precise, fast and safe stripping of all standard round cables from 4 - 28 mm dia.
- Including protective cover for the blade
- Removable plastic reducing inset made from highly wear resistant plastic (POM)
- Damage of inner conductors is excluded thanks to infinitely adjustable cutting depth
- Self-rotating blade for circular and longitudinal cut

Item	Dimension mm	Weight g	Part No.
Electrician's knife with straight blade	4 - 28	80	<b>KL745GK</b>

Accessories	Part No.	Page
Replacement blade for electrician's knife with hooked blade	KL749ES	

**Cable knife, hooked blade**

**Characteristics**

- Precise, fast and safe stripping of all standard round cables from 4 - 28 mm dia.
- Including protective cover for the blade
- Removable plastic reducing inset made from highly wear resistant plastic (POM)
- Damage of inner conductors is excluded thanks to infinitely adjustable cutting depth
- Self-rotating blade for circular and longitudinal cut



Item	Dimension mm	Weight g	Part No.
Cable knife, hooked blade	4 - 28	80	<b>KL745HK</b>

Accessories	Part No.	Page
Replacement blade for electrician's knife with hooked blade	KL749ES	

**Round cable stripper 8 - 13mm<sup>2</sup>**

**Characteristics**

- Simple stripping even in hard-to-reach areas, e.g. ceiling and walls, junction and distribution boxes, switch cabinets etc.
- Strips round and moist room cables from 8 - 13 mm dia. (e.g. NYM 3 x 1.5 mm<sup>2</sup> to 5 x 2.5 mm<sup>2</sup>)
- No need to adjust the cutting depth



Item	Dimension mm	Weight g	Part No.
Round cable stripper 8 - 13mm <sup>2</sup>	8 - 13	43	<b>KL710</b>

**Multi stripper**

**Characteristics**

- Universal stripping tool with the following functions: stripping, round cut, longitudinal cut, cutting

Item	Dimension mm	Weight g	Part No.
Multi stripper	8 - 13	77	<b>KL730</b>



**Photovoltaic stripper**

**Characteristics**

- For all standard PV cables to 8.5 mm
- Replaceable blade system
- Protected blade
- Simple handling
- Fixed stripping from 8.5 mm
- Stripping of photovoltaic cables 2.5 - 6 mm<sup>2</sup>
- Compact design



Item	Dimension mm	Weight g	Part No.
Photovoltaic stripper	8,5	40	<b>KL735PV</b>

# Professional processing of coax and twisted-pair cables.

## Tools for communication technology.

Our range offers quality professional tools for preparing coaxial cables and data lines. Procedures can be standardised. The quality of connections or joints is improved, faults are avoided and complaints are eliminated.

The tools come either individually for retrofitting or in complete sets. Everything you need for dressing coaxial cables and data lines is to hand with just one grip.



*Quick and easy cable dressing with  
Greenlee professional tools.*

- Wire cutters for cross-sections up to 10 mm<sup>2</sup>.
- Stripping tools for two and three-stage stripping.
- Crimping tool for BNC, F and F compression plugs.



**Coax stripper**

**Characteristics**

- No need to adjust the cutting depth
- Gradual stripping of all standard coaxial cables (e.g. antenna and transmission cables) 4.8 - 7.5 mm outside diameter

**Suitable for**

- Flexible cables, e.g. 3 x 0.75 mm<sup>2</sup>, 10 mm<sup>2</sup> and 16 mm<sup>2</sup>



Item	Part No.
Coax stripper	<b>KL720</b>

**Kwik Stripper Coax wire stripper - 2 stage**

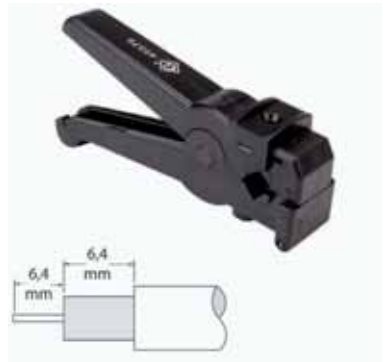
► Pre-set for 3 different cable types

**Characteristics**

- Removes braiding and insulator to 6.4 mm
- Dresses coaxial cable types RG58, RG59, RG62 and RG6 and many more
- Blade adjustable to cutting depth
- Quick and simple interchangeable blade holder
- Frame takes only 2-stage holders

Item	Part No.
Kwik Stripper Coax wire stripper - 2 stage	<b>50455761</b>

Accessories	Part No.	Page
Spare holder - 2 stage	50450409	



**Kwik Stripper Coax wire stripper - 3 stage**

► Pre-set for 3 different cable types

**Characteristics**

- Dresses coaxial cable types RG58, RG59, RG62 and RG6 and many more
- Blade adjustable to cutting depth
- Quick and simple interchangeable blade holder
- The frame takes both 2 and 3 stage holders

Item	Part No.
Kwik Stripper Coax wire stripper - 3 stage	<b>50455770</b>

Accessories	Part No.	Page
Spare holder - 3 stage	50450395	
Spare holder - 2 stage	50450409	



## Crimping tool for XFC F-type compression plugs



## Characteristics

- Special crimping tool for weather-resistant F-type compression plug
- Ergonomic handles
- Adjustable to all makes of compression plug
- Dual protection with external sleeve and internal O-ring
- Sleeves colour-coded for simple identification
- Simple processing with practically all compression tools
- Less effort than traditional hex-crimping

Item	Part No.
Crimping tool for XFCX F-type compression plugs	<b>50608073</b>

Accessories	Part No.	Page
XFC Plug for RG6, 50 piece, black	50125869	
XFC Plug for RG6, 50 piece, red	50125940	

## DN-AW3 wire stripping tool, 2.5 - 11 mm



## Characteristics

- For stripping copper and optical fibre cables, such as signal -, telephone-, AV-, control- and data transmission cables
- 9 adjustable cutting depths
- Cable capacity: 2.5 - 11 mm diameter
- Insulation thickness: up to 1 mm
- Interchangeable blade holder
- Includes cassette with spare blade

Item	Part No.
DN-AW3 wire stripping tool, 2.5 - 11 mm <sup>2</sup>	<b>DNAW3</b>

Accessories	Part No.	Page
Spare holder for DN-AW3	DNAW3M	

**Ratchet crimping tool for telephone lines**

**Characteristics**

- Integrated cutting and stripping tool for ribbon cable
- The full radius ratchet mechanism permits consistent terminations with each operation
- Straight access guarantees consistent crimp connection
- Ergonomic handle provides user comfort

**Suitable for**

- Modular connectors of type RJ10 4P4C, RJ11 6P4C, RJ12 6P6C and RJ45 8P8C



Item	Part No.
Ratchet crimping tool for telephone lines	<b>50455753</b>





” *Punching tools from Greenlee:  
We accept no compromise when  
it comes to function, quality and  
durability.*“

Mohammed Benali,  
Product Management



**Round and special shape punches**
**528**

Standard punch systems	530
SLUG-BUSTER® punch systems	532
SLUG-SPLITTER® punch systems (stainless steel)	533
SPEED PUNCH™ Knockout-System	534
Special shape punches	536

**Punching tools and sets**
**544**

Speed Nut	546
Mechanical and hydraulic punching tools	546
Slug Buster® punch set	556
Speed Punch™ set	558
SLUG-SPLITTER® punch set	559
Slug Buster® hand hydraulic punch driver set	560

**Hole saws**
**566**

HSS bi-metal hole saws	568
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**Bits and step bits**
**576**


## *Die-free after every punch!*



### **Efficient punching with Speed Punch™, Slug Buster® and Slug Splitter®.**

Greenlee punching tools are set apart by technical innovations and high quality. Extremely simple handling and fast operations are a matter of course.

The Speed Punch™, Slug Buster® and standard tools are suitable for punching steel, aluminum and plastic. The Slug Splitter® range is also suitable for stainless steel.



*Fix the die and start punching.*



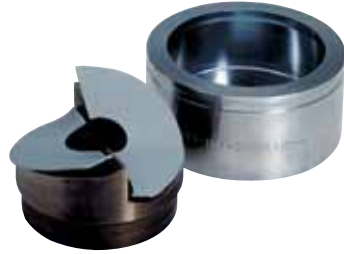
- For holes from 12.5 mm to 143.7 mm.
- For sheet metal up to 3.5 mm thickness.
- Extremely high capacity and long durability.
- For hydraulic and manual operation.

## ■ Efficient punching and splitting: *Slug Buster® and Slug Splitter®.*

- ▶ Patented punching profile **splits the slugs into two halves..**
- ▶ Innovative cutting edge shape reduces effort.

### Benefits:

- ▶ The slugs fall free from the die, saving you time.
- ▶ Increased efficiency due to fast operations for little effort.
- ▶ Prolonged service life.



▶ *More from Page 532.*



## ■ Fits any tool:

*Greenlee tools are compatible.*

- ▶ All **punching tools are compatible** and can be used with drivers from other manufacturers.

### Benefits:

- ▶ The investment framework remains manageable.

## ■ Fast. Faster



- ▶ Up to 3-times faster than conventional punching tools.
- ▶ Compatible with all Greenlee hand-operated and battery powered hydraulic tools.

### Benefits:

- ▶ Saves a lot of time, as there is no need to screw and unscrew the counter nut.
- ▶ In combination with the LS50-L FLEX battery powered hydraulic punch, the best possible solution for speed and performance.

## ■ Our punching tools at a glance:

	Mild steel/ Aluminum/ Plastic	V2A	Self-centring	Splits the slugs	Manual	Hydraulic	Dimensions in mm	Material thickness
Standard	✓				✓	✓	12.5 – 143.7	<=3 mm
Slug Buster®	✓			✓	✓	✓	12.5 – 64	<=3 mm
Slug Splitter®	✓	✓		✓		✓	15.2 – 64	<=3.5 mm
Slug Splitter SC™	✓	✓	✓	✓		✓	22.5 – 61.5	<=3.5 mm
Speed Punch™	✓			✓		✓	16 – 63	<=3.5 mm

## Standard punch systems



► Ball bearing draw stud for easy manual operation

### Suitable for

- Mild steel (St37), plastic and aluminum up to 3.5 mm thick

### Operation

- Manual and hydraulic

### Predrilling

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia. 50360183  
Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030

### Scope of supply

- Complete system consisting of punch, die and draw stud for manual operation

### Order info

- \*50042181 Draw stud without ball-bearing

Punch size			Max. Material thickness	Complete Unit	Individual parts for manual operation						Draw studs + accessories for hydraulic units			
True dimension	Standard size				Part No.	Punch	Die	Draw stud with ball bearing	Ball bearing nut	Spacer	Draw studs			Accessories
	mm	Pg	ISO	mm (St37)							Hand hydraulic 7304E 7904E	Battery f. powered LS 50 L FLEX LS 60 L	Hydr. pump 80153062 50250973	Adapter sleeves 19.0 / 28.6
12.7	Pg 7		1.5	50024086	50069969	50042351	50042181*							
14.3			1.5	50024337	50042300	50042297	50042181*							
15.2	Pg 9		2.0	50211153	50213164	50320025	50000420							
15.9			1.5	50024094	50042238	50042246	50042181							50339672
16.2		ISO 16	2.0	50351923	50351931	50351621	50000420			51300430	51300430			50339672
18.6			2.0	50188860	50177001	50320033	50000420			51300430	51300430			50339672
19.1			2.0	50206672	50039989	50039997	50000420			51300430	51300430			50339672
20.4	Pg 13	ISO 20	2.0	50188879	50176978	50320041	50000420			51300430	51300430			50339672
20.6			2.0	50206680	50042262	50042254	50000420			51300430	51300430			50339672
22.5	Pg 16		3.5	50225634	51040060	51147220	50000420			51300430	51300430			50339672
23.8			2.0	50253417	50042386	50042378	50000420			51300430	51300430			50339672
25.4		ISO 25	2.0	50206702	50039865	50351648	50000420			51300430	51300430			50339672
27.0			2.0	50253425	50042408	50042424	50000420			51300430	51300430			50339672
28.3	Pg 21		3.5	50225642	51040080	51069720	50040405			51300430	51300430			50339672
28.3	Pg 21		2.0	50369105	50368826	50320068	50000420			51300430	51300430			50339672
28.6			2.0	50206710	50039903	50039911	50000420			51300430	51300430			50339672
30.5			1.5	50365061	50362828	50362798	50000420			51300430	51300430			50339672
31.8			1.5	50206737	50040022	50040030	50000420			51300430	51300430			
32.5	Pg 32		3.5	50244760	50244590	50351680	50040405			50318721	50318721			
33.4			1.5	50253441	50065874	50065866	50000420			51300430	51300430			
34.6			3.5	50225650	50040103	50040111	50040405			50318721	50318721			
34.9			3.5	50254278	50047345	50047353	50040405			50318721	50318721			
37.0	Pg 29		3.5	50188909	50183311	50320084	50040405			51300430	51300430			
38.1			3.5	50254286	50047361	50070444	50040405			50318721	50318721			
40.5		ISO 40	3.5	50244779	50244620	50351591	50040405			50318721	50318721			
41.3			3.5	50253492	50042513	50042505	50040405			50318721	50318721			
43.2			3.5	50225669	51069740	50040138	50040405			50318721	50318721			
44.5			3.5	50253506	50042572	50042564	50040405			50318721	50318721			
47.0			3.5	50188917	50176870	50320092	50040421			50318721	50318721			
47.6			3.5	50253514	50042483	50042491	50040421			50318721	50318721			
49.6			3.5	50225677	50069780	50040618	50040421			50318721	50318721			
50.8		ISO 50	3.5	50206761	50042327	50351613	50040421			50318721	50318721			

Punch size			Max. Material thickness	Complete Unit	Individual parts for manual operation					Draw studs + accessories for hydraulic units			
True dimension	Standard size				Part No.	Punch	Die	Draw stud with ball bearing	Ball bearing nut	Spacer	Draw studs		
	mm	Pg	ISO	mm (SI37)							Hand hydraulic 7804E 7904E	Battery f. powered LS 50 L FLEX LS 60 L	Hydr. pump 50159062 50250973
54.0	Pg 42		3.5	<b>50206788</b>	50042459	50361732	50040421				50318721	50318721	
57.2			3.5	<b>50253603</b>	50040588	50040596	50040421				50318721	50318721	
60.0	Pg 48		3.5	<b>50188925</b>	50176900	50320114	50040421						
61.5			3.5	<b>50225685</b>	50040626	50040634	50040421						
63.5		ISO 63	3.5	<b>50206796</b>	50042343	50042335	50041886						
66.7			3.5	<b>50212141</b>	50042521	50069977	50041886	50041878			52045040	52045040	
69.9			3.5	<b>50253611</b>	50042475	50042467	50041886	50041878			52045040	52045040	
70.6			3.5	<b>50253832</b>	50024450	50024434	50040421	50041878			52045040	52045040	
74.0			3.5	<b>50199757</b>	50041754	50041770	50041886	50041878			52045040	52045040	
76.2			3.5	<b>50253727</b>	50042599	50042580	50041886	50041878			52045040	52045040	
79.4			3.5	<b>50254030</b>	50063634	50063626	50041886	50041878			52045040	52045040	
82.0			3.5	<b>50186353</b>	50189050	50189069	50041886	50041878			52045040	52045040	
89.8			3.5	<b>50199765</b>	50041800	50041835	50041886	50041878			52045040	52045040	
95.3			3.5	<b>50212168</b>	50052659	50052667	50041886	50041787			52045040	52045040	
102.7			3.5	<b>50199773</b>	50046535	50046527	50046799	50046853	50046861		52045040	50031708	
115.4			3.5	<b>50199781</b>	50046551	50046543	50046799	50046853	50046861		52045040	50031708	
120.0			3.5	<b>50215191</b>	50214896	50214918	50046799	50046853	50046861		52045040	50031708	
144.1			3.5	<b>50199803</b>	50054473	50054481	50046799	50046853	50046861		52045040	50031708	



## SLUG-BUSTER® punch systems



- ▶ For quick, clean, effortless and burr-free holes
- ▶ Split slugs fall free and can be removed easily

### Suitable for

- Mild steel (St37), plastic and aluminum up to 3.5 mm thick

### Operation

- Manual and hydraulic

### Predrilling

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia. 50360183
- Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030

### Scope of supply

- Complete system consisting of punch, die and draw stud for manual operation

### Order info

- \*50042181 Draw stud without ball-bearing

Punch size			Max. Material thickness	Complete Unit	Individual parts for manual operation			Draw studs + accessories for hydraulic units		
True dimension	Standard size				Part No.	Punch	Die	Draw stud with ball bearing	Draw studs	
	mm	Pg	ISO	mm (St37)					Hand hydraulic 7304E 7904E	Battery f. powered punch, pump LS 50 L/FLEX LS60 L
12.5	Pg 7	ISO 12	1.5	<b>50067273</b>	50067281	50067290	50042181*			
15.2	Pg 9		2.0	<b>50319892</b>	50319698	50320025	50000420	51300430	51300430	50339672
16.2		ISO 16	2.0	<b>50351770</b>	50351630	50351621	50000420	51300430	51300430	50339672
18.6	Pg 11		2.0	<b>50319906</b>	50319701	50320033	50000420	51300430	51300430	50339672
20.4	Pg 13	ISO 20	2.0	<b>50319914</b>	50319710	50320041	50000420	51300430	51300430	50339672
22.5	Pg 16		2.0	<b>50319620</b>	50317563	51147220	50000420	51300430	51300430	50339672
25.4		ISO 25	2.0	<b>50351788</b>	50351656	50351648	50000420	51300430	51300430	50339672
28.3	Pg 21		3.0	<b>50319639</b>	50317571	50069721	50040405	50318721	52045040	50339672
28.3	Pg 21		2.0	<b>50319930</b>	50319736	50320068	50000420	51300430	51300430	50339672
30.5			2.0	<b>50365088</b>	50362844	50362798	50000420	51300430	51300430	50339672
30.5			3.5	<b>50602462</b>	50602373	50362780	50040405	50318721	52045040	50339672
32.5		ISO 32	3.5	<b>50351796</b>	50351699	50351680	50040405	50318721	52045040	
34.6			3.5	<b>50319647</b>	50317580	50040111	50040405	50318721	52045040	
37.0	Pg 29		3.5	<b>50319957</b>	50319752	50320084	50040405	50318721	52045040	
40.5		ISO 40	3.5	<b>50351800</b>	50351583	50351591	50040405	50318721	52045040	
43.2			3.5	<b>50319655</b>	50317598	50040138	50040405	50318721	52045040	
47.0	Pg 36		3.5	<b>50319965</b>	50319760	50320092	50040421	50318721	52045040	
49.6			3.5	<b>50319663</b>	50317601	50040618	50040421	50318721	52045040	
50.8		ISO 50	3.5	<b>50351818</b>	50351605	50351613	50040421	50318721	52045040	
54.0	Pg 42		3.5	<b>50361716</b>	50361724	50361732	50040421	50318721	52045040	
60.0	Pg 48		3.5	<b>50319981</b>	50319787	50320114	50040421	50318721	52045040	
61.5			3.5	<b>50319671</b>	50317610	50040634	50040421	50318721	52045040	
64.0		ISO 63	3.5	<b>50351826</b>	50351672	50351664	50040421	50318721	52045040	

**SLUG-SPLITTER® punch systems (stainless steel)**

- ▶ Heavy-duty dies and stainless steel draw studs for longer life
- ▶ Unique punch profile also splits slugs for easier slug removal

**Suitable for**

- Stainless steel (V2A), mild steel (St37), plastic and aluminum up to 3.5 mm thick

**Operation**

- Hydraulic

**Predrilling**

- Draw stud 11.1 mm dia., pilot drill 12.7 mm dia. 50344102
- Draw stud 19.0 mm dia., pilot drill 20.5 mm dia. 50344030



**Scope of supply**

- Heavy duty punch unit including punch and die

**Order info**

- \* Slug Splitter SC® - self-centring



Item	Punch size			Max. Material thickness mm (V2A)	Punch and die 	Individual parts		Draw studs 
	True dimension	Standard size				Punch	Die	
Item	mm	Pg	ISO		Part No.			Pump, hand and battery powered
SLUG-SPLITTER® punch set (stainless steel) 15.2 mm	15.2	Pg 9		2.5	<b>50069519</b>	50311174	50311263	50294512
SLUG-SPLITTER® punch set (stainless steel) 16.2 mm	16.2		ISO 16	2.5	<b>50069527</b>	50045997	50045989	50294512
SLUG-SPLITTER® punch set (stainless steel) 18.6 mm	18.6	Pg 11		2.5	<b>50069535</b>	50311190	50311280	50294512
SLUG-SPLITTER® punch set (stainless steel) 20.4 mm	20.4	Pg 13	ISO 20	2.5	<b>50069543</b>	50311204	50311298	50294512
SLUG-SPLITTER® punch set (stainless steel) 22.5 mm	22.5	Pg 16		3.5	<b>50069551*</b>	50281542*	50281550*	50294512
SLUG-SPLITTER® punch set (stainless steel) 25.4 mm	25.4		ISO 25	3.5	<b>50069560</b>	50046020	50046012	50294512
SLUG-SPLITTER® punch set (stainless steel) 28.3 mm	28.3	Pg 21		3.5	<b>50069578*</b>	50281569*	50281577*	50294520
SLUG-SPLITTER® punch set (stainless steel) 30.5 mm	30.5			3.5	<b>50069586</b>	50364901	50364898	50294520
SLUG-SPLITTER® punch set (stainless steel) 32.5 mm	32.5		ISO 32	3.5	<b>50069594</b>	50046055	50046039	50294520
SLUG-SPLITTER® punch set (stainless steel) 34.6 mm	34.6			3.5		50281585*	50281593*	59294520
SLUG-SPLITTER® punch set (stainless steel) 37.0 mm	37.0	Pg 29		3.5	<b>50069608</b>	50311220	50311352	50294520
SLUG-SPLITTER® punch set (stainless steel) 40.5 mm	40.5		ISO 40	3.5	<b>50069616</b>	50046080	50046071	50294520
SLUG-SPLITTER® punch set (stainless steel) 43.2 mm	43.2			3.5		50281607*	50281615*	50294520
SLUG-SPLITTER® punch set (stainless steel) 47.0 mm	47.0	Pg 36		3.5	<b>50069624</b>	50311239	50311310	50294520
SLUG-SPLITTER® punch set (stainless steel) 49.6 mm	49.6			3.5		50281623*	50281631	50294520
SLUG-SPLITTER® punch set (stainless steel) 50.8 mm	50.8		ISO 50	3.5	<b>50069632</b>	50046110	50046098	50294520
SLUG-SPLITTER® punch set (stainless steel) 54.0 mm	54.0	Pg 42		3.5	<b>50069640</b>	50311247	50311328	50294520
SLUG-SPLITTER® punch set (stainless steel) 60.0 mm	60.0	Pg 48		3.5	<b>50069659</b>	50311255	50311336	50294520
SLUG-SPLITTER® punch set (stainless steel) 61.5 mm	61.5			3.5		50281658*	50281666*	50294520
SLUG-SPLITTER® punch set (stainless steel) 64.0 mm	64.0		ISO 63	3.5	<b>50069667</b>	50046144	50046136	50294520

## SPEED PUNCH™ Knockout-System



- ▶ “No-thread” design eliminates cross-threading
- ▶ Simple operation and great time saving due to speed lock system

### Suitable for

- Mild steel (St37), plastic and aluminum up to 3.5 mm thick

### Operation

- hydraulic

### Predrilling

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia.
- Draw stud 19 mm dia., pilot drill 20.5 mm dia.

### Scope of supply

- Complete system consisting of punch and die

### Order info

- Speed lock and draw stud not included

Punch size		Max. Material thickness	Punch and die	Individual parts		Speed lock	Draw stud
True dimension	Standard size						
mm	ISO/PG	mm (St37)	Part No.	Punch	Die	(not included)	(not included)
16,2	ISO 16	3,5	<b>52055431</b>	52066021	52066022	52066002	52066001
20,4	ISO 20	3,5	<b>52055432</b>	52066023	52066024	52066002	52066001
22,5	PG 16	3,5	<b>52055433</b>	52065998	52065999	52066002	52066001
25,4	ISO 25	3,5	<b>52055434</b>	52066025	52066026	52066002	52066001
32,5	ISO 32	3,5	<b>52055435</b>	52066027	52066028	52047817	52047818
40,5	ISO 40	3,5	<b>52055436</b>	52066029	52066030	52047817	52047818
50,8	ISO 50	3,5	<b>52055437</b>	52066031	52066032	52047817	52047818
64,0	ISO 63	3,5	<b>52055438</b>	52066033	52066034	52047817	52047818

Scope of supply	Part No.	Page
Speed lock and draw stud for ISO 16/20/25 und PG 16	52055439	
Speed lock and draw stud for ISO 32/40/50/63	52055440	



## Draw studs with Manual Drivers

► High wear resistance

### Order info

- To increase the service life, we recommend greasing the draw studs with Greenlee installation paste no. 50115472
- Sizes given are diameter x length
- Subject to tolerance deviations

Item	Part No.
Draw studs for manual operation 28.6 mm x 190 mm	50046799
Draw studs for manual operation 19.0 mm x 140 mm	50041886
Draw studs for manual operation 19.0 mm x 75 mm	50040421
Draw studs for manual operation Ø 19.0 x 55 mm	50040405
Draw studs for manual operation Ø 9.5 x 40 mm	50000420
Draw studs for manual operation 6.5 mm x 35 mm	50042181



## Draw studs for Hydraulic Drivers

### Order info

- To increase the service life, we recommend greasing the draw studs with Greenlee installation paste no. 50115472
- Sizes given are diameter x length
- Subject to tolerance deviations

Item	Part No.
Draw stud for punch with hydraulic operation 9.5 x 71 mm	51300430
Draw stud for hydraulic operation, Speed Punch 9,5 auf 19 mm, 97 mm	52066001
Draw stud for hydraulic operation 19.0 x 105 mm	50318721
Draw stud for hydraulic operation, Speed Punch 19,0 x 121 mm	52047818
Draw stud for hydraulic operation 11.1 mm to 19 mm x 108 mm	50294512
Draw stud for hydraulic operation 9.5 mm to 19 mm x 122 mm	52042827
Draw stud for hydraulic operation 19.0 x 137 mm	52045040
Draw stud for hydraulic operation 19 x 140 mm	50294520
Adapter 19.0 x 48 mm with internal thread 6.3 mm	50601148
Adapter 19.0 x 48 mm with internal thread 9.5 mm	50339672
Adapter 19.0 x 48 mm with internal thread 12.7 mm	50601679
Adapter 28.6 x 76 mm	50031708



## Rectangular punches



### Suitable for

- Mild steel (St37), plastic and aluminum up to 3.0 mm thick and V2A 1.5 mm thick
- Punching of burr-free, clean and accurate holes

### Operation

- Manual and hydraulic

### Predrilling

- 9.7 mm pilot drill 50360183
- 12.7 mm dia. pilot drill 50344102
- 15.9 mm dia. Pilot drill 50344030
- 30.2 mm dia. Pilot drill 50364146

### Scope of supply

- Complete system consisting of punch, die, draw stud, counter nut and ball-bearing nut

### Order info

- \* = only for use with hydraulic punch drivers 50159062, 50250973, L S60L and LS50LFLEX
- \*\* = only for use with hydraulic punch drivers 50159062, 50250973 and LS50LFLEX

Punch A x B	Max. Material thickness	Operating mode	Complete Unit	Individual parts for manual operation					Mounting hole-dia.	Adapter for hydr. punch driver
				Punch	Die	Draw studs	Ball bearing nut	Counter nut		
mm	mm (St37)		Part No.						mm	Part No.
11.1 x 22.2	1.5	Hand/Hydr.	<b>50600257</b>	50600265	50600273	50601156	50601202	50052446	9.7	50601148
17.0 x 19.0	2.0	Hand/Hydr.	<b>50610281</b>		50600303	52020113	50347330	50046381	12.7	50339672
19.1 x 29.0	2.0	Hand/Hydr.	<b>50600311</b>	50600320	50600338	50601172	50601652	50602586	15.9	50601679
19.1 x 33.3	2.0	Hand/Hydr.	<b>50600346</b>	50600354	50600362	50601172	50601652	50602586	15.9	50601679
21.9 x 25.9	2.0	Hand/Hydr.	<b>50600370</b>	50600389	50600397	50601172	50601652	50602586	15.9	50601679
22.0 x 30.0	2.0	Hand/Hydr.	<b>50600400</b>	50600419	50600427	50601172	50601652	50602586	15.9	50601679
22.0 x 42.0	2.0	Hand/Hydr.	<b>50600435</b>	50600451	50600460	50601172	50601652	50602586	15.9	50601679
25.1 x 29.0	2.0	Hand/Hydr.	<b>50600478</b>	50600486	50600494	50601172	50601652	50602586	15.9	50601679
31.8 x 35.1	2.0	Hand/Hydr.	<b>50600508</b>	50600516	50600524	50601172	50601652	50602586	15.9	50601679
29.0 x 71.0	3.0	Hydr.	<b>52045296</b>			52033836		52033844	28.6	
30.0 x 90.0	3.0	Hydr.	<b>52045297</b>			52045298		52045300	28.6	
33.3 x 66.7	3.0	Hydr.	<b>50600532</b>	50600540	50600559	50601180		50602357	30.2	
35.0 x 52.0	3.0	Hydr.	<b>50600567</b>	50600575	50600583	50601180		50602357	30.2	
35.0 x 65.0	3.0	Hydr.	<b>50600591</b>	50600605	50600613	50601180		50602357	30.2	
35.0 x 82.0	2.0	Hydr.*	<b>50600621</b>	50600630	50600648	50601180		50602357	30.2	
35.0 x 112.0	2.0	Hydr.*	<b>50600656</b>	50600664	50600672	50601180		50602357	30.2	
46.0 x 92.0	3.0	Hydr.*	<b>50600680</b>	50600699	50600702	50601180		50602357	30.2	
57.2 x 88.9	3.0	Hydr.*	<b>50600710</b>	50600729	50600737	50601180		50602357	30.2	
68.0 x 138.0	2.0	Hydr.**	<b>50600745</b>	50600753	50600761	50601180		50602357	30.2	

**Square punches**
**Suitable for**

- Mild steel (St37), plastic and aluminum up to 3.0 mm thick and V2A 1.5 mm thick
- Punching of burr-free, clean and accurate holes

**Operation**

- Manual and hydraulic

**Predrilling**

- 9.7 mm pilot drill 50360183
- 12.7 mm dia. pilot drill 50344102
- 15.9 mm dia. Pilot drill 50344030
- 30.2 mm dia. Pilot drill 50364146

**Scope of supply**

- Complete system consisting of punch, die, draw stud, counter nut and ball-bearing nut

**Order info**

- \* = only for use with hydraulic punch drivers 50159062, 50250973, LS60L and LS50LFLEX
- \*\* = only for use with hydraulic punch drivers 50159062 and 50250973



Punch A x B	Max. Material thickness	Operating mode	Complete Unit	Individual parts for manual operation					Mounting hole-dia.	Adapter for hydr. punch driver
				Punch	Die	Draw studs	Ball bearing nut	Counter nut		
mm	mm (St37)		Part No.						mm	Part No.
12.7 x 12.7	1.5	Hand/Hydr.	<b>50600010</b>	50600028	50600036	50601156	50601202	50052446	9.5	50601148
15.9 x 15.9	2.0	Hand/Hydr.	<b>50610045</b>			52020113	50347330	50046381	12.7	50339672
19.1 x 19.1	2.0	Hand/Hydr.	<b>50610076</b>	50600087	50600095	52020113	50347330	50046381	12.7	50339672
22.4 x 22.4	2.0	Hand/Hydr.	<b>50610106</b>			52020113	50347330	50046381	12.7	50339672
24.0 x 24.0	2.0	Hand/Hydr.	<b>50610137</b>	50600141	50600150	52020113	50347330	50046381	12.7	50339672
25.4 x 25.4	2.0	Hand/Hydr.	<b>50600168</b>	50600176	50600184	50601172	50601652	50602586	15.9	50601679
45.0 x 45.0	3.0	Hydr.	<b>50115723</b>	50767640	50767657	52033836		52033844	30.2	
46.0 x 46.0	3.0	Hydr.	<b>50600192</b>	50600206	50600214	50601180		50602357	30.2	
50.8 x 50.8	3.0	Hydr.	<b>50601687</b>	50601695	50601709	50601180		50602357	30.2	
68.0 x 68.0	3.0	Hydr.	<b>50601717</b>	50601725	50601733	50601180		50602357	30.2	
92.0 x 92.0	3.0	Hydr.*	<b>50601741</b>	50601750	50601768	50601180		50602357	30.2	
104.8 x 104.8	2.0	Hydr.*	<b>50601776</b>	50601784	50601792	50601180		50602357	30.2	
138.0 x 138.0	2.0	Hydr.**	<b>506002349</b>	50600230	50600249	50601180		50602357	30.2	

Round and special shape punches

## Special square punch with flattened corners



### Suitable for

- Mild steel (St37), plastic and aluminum up to 2.0 mm thick
- Punching of burr-free, clean and accurate holes

### Operation



- Manual and hydraulic

### Predrilling

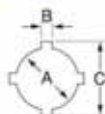
- 12.7 mm dia. pilot drill 50344102

### Scope of supply

- Complete system consisting of punch, die, draw stud, counter nut and ball-bearing nut

Punch A x B	Max. Material thickness	Operating mode	Complete Unit 	Individual parts for manual operation					Mounting hole-dia.	Adapter for hydr. punch driver
										
mm	mm (St37)		Part No.	Punch	Die	Draw studs	Ball bearing nut	Counter nut	mm	Part No.
22.5 x 20.1	2.0	Hand/Hydr.	<b>50611257</b>	50611264	50601271	52020113	50347330	50046381	12.7	50339672

## Round punch with four slots



### Suitable for

- Mild steel (St37), plastic and aluminum up to 3.0 mm thick

### Operation







- Manual and hydraulic

### Predrilling

- 15.9 mm dia. pilot drill 50344030

### Scope of supply

- Complete system consisting of punch, die, draw stud, counter nut and ball-bearing nut

Punch A x B x C	Max. Material thickness	Operating mode	Complete Unit 	Individual parts for manual operation					Mounting hole-dia.	Adapter for hydr. punch driver
										
mm	mm (St37)		Part No.	Punch	Die	Draw studs	Ball bearing nut	Counter nut	mm	Part No.
22.5 x 3.2 x 25.4	2.0	Hand/Hydr.	<b>50602381</b>	50602390	50602500	50601172	50601652	50602586	15.9	50601679
30.5 x 4.8 x 36.0	3.0	Hand/Hydr.	<b>50602420</b>	50602438	50602497	50601172	50601652	50602586	15.9	50601679

**“D” special shape punch**
**Suitable for**

- Mild steel (St37), plastic and aluminum up to 2.0 mm thick

**Operation**

- Manual and hydraulic

**Predrilling**

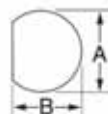
- 12.7 mm dia. pilot drill 50344102







**Scope of supply**

- Complete system consisting of punch, die, draw stud, counter nut and ball-bearing nut

**Order info**

- \* 50610809 and 50610830 available only as punch unit



Punch A x B	Max. Material thickness	Operating mode	Complete Unit 	Individual parts for manual operation					Mounting hole-dia. mm	Adapter for hydr. punch driver Part No.
										
mm	mm (St37)		Part No.	Punch	Die	Draw studs	Ball bearing nut	Counter nut	mm	Part No.
12.7 x 11.9	2.0	Hand/Hydr.	<b>50600770</b>	50600788	51600790	50601156	50601202	50052446	9.5	50601148
15.9 x 15.1	2.0	Hand/Hydr.	<b>50610809*</b>			50344218	50347330	50046381	12.7	50339672
19.1 x 17.9	2.0	Hand/Hydr.	<b>50610830*</b>			50344218	50347330	50046381	12.7	50339672

**Double-“D” special shape punch**
**Suitable for**

- Mild steel (St37), plastic and aluminum up to 2.0 mm thick

**Operation**

- Manual and hydraulic

**Predrilling**

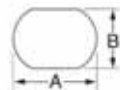
- 15.9 mm dia. pilot drill 50344030







**Scope of supply**

- Complete system consisting of punch, die, draw stud, counter nut and ball-bearing nut

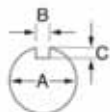
**Order info**

- All punches available only as punch unit



Punch A x B	Max. Material thickness	Operating mode	Complete Unit 	Individual parts for manual operation					Mounting hole-dia. mm	Adapter for hydr. punch driver Part No.
										
mm	mm (St37)		Part No.	Punch	Die	Draw studs	Ball bearing nut	Counter nut	mm	Part No.
19.5 x 16.3	2.0	Hand/Hydr.	<b>50610861</b>			52020113	50347330	50046381	12.7	50339672
20.2 x 17.6	2.0	Hand/Hydr.	<b>50610892</b>			52020113	50347330	50046381	12.7	50339672
23.2 x 19.2	2.0	Hand/Hydr.	<b>50610922</b>			52020113	50347330	50046381	12.7	50339672
23.2 x 20.2	2.0	Hand/Hydr.	<b>50610953</b>			52020113	50347330	50046381	12.7	50339672
34.9 x 28.6	2.0	Hand/Hydr.	<b>50600982</b>			50601660	50601652	50602586	23.8	50601679

### Keyway punch



#### Suitable for

- Mild steel (St37), plastic and aluminum up to 2.0 mm thick

#### Operation


- Manual and hydraulic

#### Predrilling

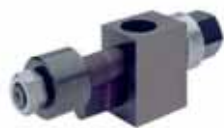
- 23.8 mm dia. pilot drill 50300083

#### Scope of supply

- Complete system consisting of punch, die, draw stud, counter nut and ball-bearing nut

Punch A x B x C	Max. Material thickness		Complete Unit 	Individual parts for manual operation					Mounting hole-dia.	Adapter for hydr. punch driver
	mm	mm (St37)		Operating mode	Part No.	Punch	Die	Draw studs		
12.2 x 1.4 x 0.8	1.5	Hand/Hydr.	<b>50601016</b>	51601020	51601030	50601156	50601202	50052446	9.5	50601148
29.7 x 3.1 x 2.5	2.0	Hand/Hydr.	<b>50601040</b>	51601050	51601060	50601660	50601652	50602586	23.8	50601679
32.1 x 4.0 x 2.5	2.0	Hand/Hydr.	<b>50601075</b>	51601080	51601090	50601660	50601652	50602586	23.8	50601679
33.7 x 2.6 x 2.5	2.0	Hand/Hydr.	<b>50601105</b>	51601110	50601121	50601660	50601652	50602586	23.8	50601679

### Cylinder lock punch



#### Suitable for

- Mild steel (St37) up to 1.5 mm thick and aluminum 3.5 mm

#### Operation

- Manual and hydraulic

#### Predrilling

- 12.7 mm dia. pilot drill 50344102

#### Scope of supply

- Complete system consisting of punch, die, draw stud, counter nut and ball-bearing nut

Punch A x B x C	Max. Material thickness		Complete Unit 	Individual parts for manual operation						Mounting hole-dia.	Adapter for hydr. punch driver
	mm	mm (St37)		Operating mode	Part No.	Punch	Die	Draw studs	Ball bearing nut		
17.0 x 33.3 x 10.5	2.0	Hand/Hydr.	<b>50053078</b>	50053027	50053035	50053043	50347330	90050113	50053051	12.7	50339672

**Sub-Min "D" punch**
**Suitable for**

- Mild steel (St37) up to 1.5 mm thick and aluminum 3.5 mm
- Front or rear mounting

**Operation**

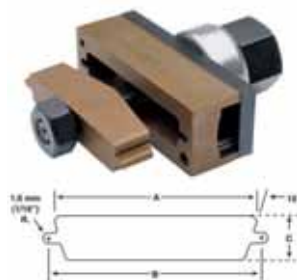
- Manual and hydraulic





**Predrilling**

- 12.7 mm dia. pilot drill 50344102

**Scope of supply**

- Complete system consisting of punch, die, draw stud, counter nut and ball-bearing nut



Standard	Number Pole	Operating mode	Dimension			Complete Unit 	Individual parts for manual operation			Adapter for hydr. punch driver Part No.
			A mm	B mm	C mm					
229	9	Hand/Hydr.	20.0	24.9	11.9	<b>50344366</b>	52020113	50347330	50046381	50339672
231	15	Hand/Hydr.	28.6	33.3	11.9	<b>50344374</b>	52020113	50347330	50046381	50339672
RS232	25	Hand/Hydr.	42.0	47.1	11.9	<b>50344200</b>	52020113	50347330	50046381	50339672
234	37	Hand/Hydr.	58.3	63.4	11.9	<b>50344293</b>	52020113	50347330	50046381	50339672
238	50	Hand/Hydr.	55.9	61.0	14.7	<b>50344447</b>	52020113	50347330	50046381	50339672

### Special shape punches for heavy duty connectors



#### Characteristics

- Rectangular punches for heavy duty connectors feature a drilling jig built into the die, for drilling the 4 locating holes.

#### Suitable for

- Mild steel (St37) up to 3.0 mm thick and aluminum up to 3.5 mm

#### Operation

- Hydraulic

#### Predrilling

- 30.2 mm dia. pilot drill 50364146

#### Scope of supply

- Complete system consisting of punch, die, draw stud and counter nut

Item	Punch size A x B mm	Max. Material thickness mm	Operating mode	Complete Unit Part No.	Individual parts for manual operation		Mounting hole-dia. mm
					Punch	Counter nut	
Special shape punch for heavy duty connectors 36 x 52 mm	36.0 x 52.0	3.0	Hydraulic	<b>52033816</b>	52033836	52033844	30.2
Special shape punch for heavy duty connectors 36 x 65 mm	36.0 x 65.0	3.0	Hydraulic	<b>52033817</b>	52033836	52033844	30.2
Special shape punch for heavy duty connectors 36 x 86 mm	36.0 x 86.0	3.0	Hydraulic	<b>52033818</b>	52033836	52033844	30.2
Special shape punch for heavy duty connectors 36 x 91 mm	36.0 x 91.0	3.0	Hydraulic	<b>52033819</b>	52033836	52033844	30.2
Special shape punch for heavy duty connectors 36 x 112 mm	36.0 x 112.0	3.0	Hydraulic	<b>52033820</b>	52033836	52033844	30.2
Special shape punch for heavy duty connectors 46 x 86 mm	46.0 x 86.0	3.0	Hydraulic	<b>52033831</b>	52033836	52033844	30.2
Special shape punch for heavy duty connectors 46 x 112 mm	46.0 x 112.0	3.0	Hydraulic	<b>52033832</b>	52033836	52033844	30.2
Special shaped punch HAN Yellock® 30 with 4 centre mark points 47.2 x 56.4 mm	47.2 x 56.4	3.0 / 3.0 VA	Hydraulic	<b>52058591**</b>	52033836	52033844	30.2
Special shaped punch HAN Yellock® 30 with 4 centre mark points 47.2 x 56.4 mm	47.2 x 85.5	3.0 / 3.0 VA	Hydraulic	<b>52058592**</b>	52033836	52033844	30.2



**Draw studs for shaped punch**
**Order info**

- To increase the service life, we recommend greasing the draw studs with Greenlee installation paste no. 50115472
- Sizes given in diameter x length
- Subject to tolerance deviations

Item	Part No.
Draw stud for shape punch 19 x 117 mm	50601180
Draw stud for shape punch 12.7 x 117 mm	50601660
Draw stud for shape punch 12.7 x 117 mm	50601172
Draw stud for shape punch 9.5 x 135 mm	50053043
Draw stud for shape punch 9.5 x 93 mm	50601130
Draw stud for shape punch 9.5 x 95 mm	51601160
Draw stud for shaped punch 9.5 x 88 mm	52020113
Draw stud for shape punch 6.3 x 87 mm	50601156



## *Force for punched holes to 143.7 mm.*

### **Hydraulic punches for manual and battery powered operation.**

No matter whether hand, foot or battery powered, all hydraulic punches serve just one purpose: punching holes. Yet, contrary to popular belief, personal preferences have very little to do with choosing a punch. The punches are suitable for various applications or for holes up to certain sizes.

In addition, each punch has its own particular features that come into their own depending on the application.



- Hydraulic punches for hand operation with straight head.
- Hydraulic punches for hand operation with angled and rotating head.
- Hydraulic punches for foot operation.
- Hydraulic punches for battery and mains operation.



*Greenlee punching tools permit punching operations in various shapes and sizes.*

## ■ Battery powered punch for every angle: *LS 50-L FLEX*

- ▶ Head rotatable through 360°.
- ▶ Compact design with high punching force of 60 kN and automatic limit switch.

### Benefits:

- ▶ Effortless operations even in difficult areas thanks to ergonomic and lightweight design.
- ▶ Can be used with all Greenlee round and special shaped punches.
- ▶ The integrated control preserves the tools and significantly increases service life, thereby saving you money.



## ■ *LS 60-L: Punches 60 mm (PG48) holes in 8 seconds and shuts off automatically.*


- ▶ Punches 60 mm (PG48) holes in ST37 up to 3 mm in just 8 seconds.
- ▶ **Integrated micro processor control shuts off motor once punching operation is complete.**

### Benefits:

- ▶ Considerably faster punching operations save you time.
- ▶ The integrated control **preserves the tools and significantly increases service life**, thereby saving you money.

▶ More on Page 549.

## ■ Features of hydraulic punches.

	Hand operation	Foot operation	Battery/mains operation	Max. hole, round	Max. hole, square	Max. punching force	Auto-matic shut-off
Quick Draw™ 	✓			64 mm	68 x 68 mm	80 kN	
Quick Draw™ 90° 	✓			64 mm	68 x 68 mm	80 kN	
LS 50-L FLEX 			✓	143.7 mm	104.8 x 104,8 mm	60 kN	✓
LS 60-L 			✓	96 mm	104.8 x 104,8 mm	60 kN	✓
Hydraulic punch with hand pump 	✓			143.7 mm	138 x 138 mm	110 kN	
Hydraulic punch with foot pump 		✓		143.7 mm	138 x 138 mm	110 kN	

## Speed Nut



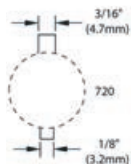
► Up to 3 x faster then conventional punch draw stud setup

### Characteristics

- Compatible with all Greenlee hand hydraulic and battery powered punch drivers
- Simple operation and great time-saving due to quick-lock system
- Suitable for all rectangular punches up to 33.3 x 66.7 mm and square punches up to 46.0 x 46.0 mm

Item	Part No.	
Speed Nut Set	<b>SLSN34</b>	
Scope of supply	Part No.	Page
Speed Nut draw stud	SLSNDS34	546
Quick-lock bajonet coupling	SLSNN34	546

## Keyway punch



► Time-saving punching of slots for anti-twist protected parts

### Suitable for

- Mild steel (St37) up to 3 mm thick
- Manual operation

Item	Part No.
Keyway punch	<b>50265342</b>

Accessories	Art-Nr.	Seite
Spare punch for keyway punch	50265369	546
Spare die for keyway punch	50265385	546

**Hydraulic punch driver Quick Draw™ 7804E**

- ▶ Perfect for fast, straight on panel punching
- ▶ Develops 8 tons of hydraulic force for easy punching

**Characteristics**

- Hand hydraulic punch driver with straight head

**Suitable for**

- Special shape punches up to a maximum size of 68 x 68 mm or 35 x 65 mm
- Round punches up to ISO 63 (64 mm dia.)

Technical data		
Dimension	321 x 110 x 70 mm	
Punching force	80 kN	
Weight	2.5 kg	
Item	Art.-Nr.	
Quick Draw™ 7804E	<b>50342916</b>	
Scope of supply	Part No.	Page
Hand hydraulic punch 7804E	50342886	547
Draw stud for punch with hydraulic operation 9.5 x 71 mm	51300430	535
Draw stud for hydraulic operation 19.0 x 105 mm	50318721	535
Spacer bush, short	50032488	547
Adapter 19.0 x 48 mm with internal thread 9,5 mm	50339672	535
Plastic case	50352024	547


**Hydraulic punch driver Quick Draw 90™ 7904E**

- ▶ Perfect for fast, straight-on front panel punching
- ▶ Head rotates 180° allows greater versatility in tight spaces

**Characteristics**

- Compact design
- Hand hydraulic punch driver with 90° head

**Suitable for**

- Special shape punches up to a maximum size of 68 x 68 mm or 35 x 65 mm
- Round punches up to ISO 63 (64 mm dia.)

Technical data		
Dimension	312 x 110 x 65 mm	
Punching force	80 kN	
Weight	3.35 kg	
Item	Part No.	
Quick Draw 90™ 7904E	<b>50342991</b>	
Scope of supply	Part No.	Page
Hand hydraulic punch 7904E	50337866	547
Draw stud for punch with hydraulic operation 9.5 x 71 mm	51300430	535
Draw stud for hydraulic operation 19.0 x 105 mm	50318721	535
Spacer bush, short	50032488	547
Adapter 19.0 x 48 mm with internal thread 9,5 mm	50339672	535
Plastic case	50352024	547



### Hand hydraulic driver



► Flexible head allows greater versatility in tight spaces

#### Characteristics

- Unlimited driver orientation

#### Suitable for

- Special shape punches up to a maximum size of 68 x 68 mm or 35 x 65 mm
- Round punches up to ISO 63 (64 mm dia.)

#### Order info

- Knockout punches not included
- Without punch

Technical data		
Dimension	340 x 150 x 85 mm	
Punching force	80 kN	
Weight	5 kg	
Revolving/rotatable	360°	
Item	Part No.	
Hand hydraulic punching set	52033843	
Scope of supply		
	Part No.	Page
Draw stud for hydraulic operation 9.5 mm to 19 mm, 122 mm	52042827	535
HSS Co5 step bit	52049371	548
Spacer bush, short	50032488	547
Plastic case		

## LS 60-L Battery powered hydraulic punching tool

- ▶ Automatic stop makes the punching tools last longer
- ▶ Lithium-ion technology allows long operating times and short recharging times

### Characteristics

- Battery-Powered punch driver with microprocessor
- Automatic retraction
- Automatic battery charge status recognition

### Suitable for

- Punches up to 104.8 x 104.8 mm St37 2.0 mm
- Punches 92 x 92 mm or 46 x 92 mm, 68 x 68 mm or ISO 63 (64 mm dia.) round in St37 3 mm
- Suitable for 96 mm round - St37 2.5 mm
- Suitable for Slug Splitter up to 64 mm round - 2.5 mm stainless steel

Technical data	
Punching force	60 kN
Weight	3.9 kg
Battery capacity	3 Ah (RAL2 / BL1830)
Charging time	22 min. (RAL2 / BL1830)
Punching time	5 s at 22,5 mm dia., 3 mm mild steel 12 s at 61,5 mm dia., 3 mm mild steel
Ambient temperature	-15 to +40 °C
Head outside diameter	73 mm
Dimensions	325 x 285 x 80 mm
Punching capacity	90 punches/battery at 22.5 mm dia. and 3.5 mm mild steel 170 punches/battery at 2,5 mm dia. and 3.5 mm mild steel 250 punches/battery at 22.5 mm dia. and 2.5 mm mild steel

Item	Part No.	
Battery-operated hydraulic punch driver LS 60-L	<b>LS60L</b>	
Scope of supply	Part No.	Page
Draw stud for punch with hydraulic operation 9.5 x 71 mm	51300430	535
Draw stud for hydraulic operation 19.0 x 105 mm	50318721	535
Spacer bush, short	50032488	547
Adapter 19.0 x 48 mm with internal thread 9,5 mm	50339672	535
HSS Co5 step bit	52049371	548
KKLS60LGL Plastic case	KKLS60LGL	549
Quick-charger for 18V Li-Ion batteries, 230 V	LGL1	400
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	316

Accessories	Part No.	Page
18 V mains adapter for 240 V Voltage	NG2230	399
EU plug		



### LS 50-L Flex Battery powered hydraulic punching tool



LS50LFLEX



LBOXXLS50LFLEX

- ▶ High flexibility using 360° rotating head
- ▶ Lithium-ion technology allows long operating times and short recharging times
- ▶ Automatic stop makes the punching tools last longer

#### Characteristics

- Battery-powered punch driver with microprocessor
- Automatic retraction
- Automatic battery charge status recognition

#### Suitable for

- Punches up to 104.8 x 104.8 mm St37 2.0 mm
- Punches 92 x 92 mm or 46 x 92 mm, 68 x 68 mm or ISO 63 (64 mm dia.) round in St37 3 mm
- Suitable for 144,1 mm round - St37 2.5 mm
- Suitable for Slug Splitter up to 64 mm round - 2.5 mm stainless steel

#### Order info

- Complete set incl. draw stud, pilot drill and spacer bush, battery and charger in case
- LBOXXLS50LFLEX: identical content, but in Sortimo L-BOXX

Technical data	
Capacity	120 punch operations at Ø 22.5 mm, 3.4 mm mild steel resp. 190 punch operations at Ø 22.5 mm, 3 mm mild steel 280 punch operations at Ø 22.5 mm, 2.5 mm mild steel
Punching force	60 kN
Weight	2.1 kg
Battery voltage	18 V DC V
Battery capacity	3 (RAL2/BL1830) or 1.5 (RAL1/BL1815)
Charging time	22 min. (RAL2/BL1830) or 15 min. (RAL1/BL1815)
Punching time	5 s at 22.5 mm dia., 3 mm mild steel 6 s at 63.5 mm dia., 3 mm mild steel
Hydraulic oil	Rivolta S.B.H. 11
Ambient temperature	-15 to +40 °C
Dimensions	340 x 115 x 80 mm

Item	Part No.	
Battery powered hydraulic punch driver LS 50-L FLEX	<b>LS50LFLEX</b>	
Scope of supply	Part No.	Page
Quick-charger for 18V Li-Ion batteries, 230 V	LGL1	400
Battery 18 V / 3.0 Ah, Li-Ion (54 Wh)	RAL2	316
Draw stud for hydraulic operation 19.0 x 105 mm	50318721	535
Spacer bush, short	50032488	547
HSS Co5 step bit	52049371	548
Adapter 19.0 x 48 mm with internal thread 9,5 mm	50339672	535
Draw stud for punch with hydraulic operation 9.5 x 71 mm	51300430	535
Plastic case	KK50LFLEX	

Accessories	Part No.	Page
18 V mains adapter for 240 V Voltage	NG2230	399
EU plug		

Variants	Part No.	Page
L-BOXX with flexible battery powered hydraulic punch LS50LFLEX	LBOXXLS50-L-FLEX	550



## Hydraulic punch driver with hand pump

► Compact design

### Characteristics

- With hand pump, hose and cylinder
- Covers ranges up to 138 x 138 mm

### Suitable for

- All punches up to 143.7 mm round and 138 x 138 mm square
- Suitable for mild steel up to 3.5 mm St37 and 3.5 mm V2A (depending on punch size)

### Operation

- Hydraulic



Technical data		
Punching force	110 kN	
Weight	8.3 kg	
Item	Part No.	
Hydraulic punch driver with hand pump, hose and cylinder	<b>50159062</b>	
Scope of supply	Part No.	Page
Hydraulic cylinder	50170910	551
Draw stud for hydraulic operation 9.5 mm to 19 mm dia., 122 mm	52042827	535
Spacer bush, short	50032488	547
Spacer bush, medium	51032490	551
Spacer bush 38 mm, long	50069047	551
Kwik Stepper™ step bit 12.7 mm	50344102	551
767 Hydraulic hand pump	50132849	551
Hydraulic hose, 0.9 m	50063022	551
Draw stud for hydraulic operation 19.0 x 137 mm	52045040	535



### Hydraulic punch driver with foot pump



#### Characteristics

- With foot pump, hose and cylinder
- Covers ranges up to 138 x 138 mm

#### Suitable for

- For all punches
- Up to 143.7 mm round and 138 x 138 mm square
- Suitable for mild steel up to 3.5 mm St37 and 3.5 mm V2A (depending on punch size)

#### Operation

- Hydraulic

Technical data		
Punching force	110 kN	
Weight	15.2 kg	
Item	Part No.	
Hydraulic punch driver with foot pump, hose and cylinder	<b>50250973</b>	
Scope of supply	Part No.	Page
Hydraulic cylinder	50170910	551
Spacer bush, short	50032488	547
Spacer bush, medium	51032490	551
Spacer bush 38 mm, long	50069047	551
Kwik Stepper™ step bit 12.7 mm	50344102	551
1725 Hydraulic foot pump	50313533	552
Hydraulic hose	50377299	552
Draw stud for hydraulic operation 9.5 mm to 19 mm dia., 122 mm	52042827	535
Draw stud for hydraulic operation 19.0 x 137 mm	52045040	535

### Assembly paste

- ▶ Increases the service life
- ▶ Prevents "seizing"
- ▶ Screws and nuts threads resistant to wear



#### Suitable for

- Statically and dynamically high stressed thread connections

Item	Part No.
Assembly paste, 30g	<b>50115472</b>

**Portable C-frame punch driver, 15.2 - 34.6 mm**

► Fast, one shot punching - no pre-drilling of pilot holes required

**Order info**

- For actuation we recommend hydraulic foot pump 1725, Part No. 50313533, hand pump 767, Part No. 50132849 or electro-hydraulic pump Part No. 50052799
- When using AHP700L the adapter CMGSK is required



Technical data	
Throat	200 mm
Weight	6.8 kg
Punching capacity	up to 3 mm St37
Punching range	15.2 - 34.6 mm

Item	Part No.
Portable C-frame punch driver 1731	<b>50159119</b>

Scope of supply	Part No.	Page
Punch adapter 9.5 mm	50132768	553
Punch adapter 19 mm	50132776	553
Punch Pg 16	51040060	553
Punch Pg 21	51040080	553
Punch 34.6 mm	50040103	553
Die Pg 16 (22.5 mm)	50120875	553
Die Pg 21 (28.3 mm)	50120867	553
Die 34.6 mm	50120859	553
Metal case	50166344	553

Accessories	Part No.	Page
Punch Pg 9 (15.2 mm)	50213164	553
Die Pg 9 (15.2mm)	50185578	553
Punch Pg 11 (18.6 mm)	50177001	553
Die Pg 11 (18.6 mm)	50185586	553
Punch Pg 13 (20.4 mm)	50176978	553
Die Pg 13 (20.4 mm)	50185594	553
Punch 30.5 mm (oil-tight)	50362828	553
Die 30.5 mm (oil-tight)	50371037	553
Die ISO 16	50766421	553
Die ISO 20	50766438	553
Die ISO 25	50766445	553
Die ISO 32	50766452	553
Punch ISO 16	50351931	553
Punch ISO 25	50039865	553
Punch ISO 32	50244590	553

### Portable C-frame punch driver, 15.2 - 115.4 mm



#### Suitable for

- For use with standard punches and dies, punching range 15.2 to 115.4 mm

#### Order info

- For actuation we recommend hydraulic hand pump 755, Part No. 50156772 or electro-hydraulic pump 50052799
- When using AHP700L the adapter CMGSK is required

Technical data	
Throat	200 mm
Weight	27 kg
Punching capacity	up to 3 mm St37
Punching range	15.2 bis 115.4 mm

Item	Part No.	
Portable C-frame punch driver 1732	<b>50273612</b>	
Scope of supply	Part No.	Page
Die adapter 9.5 mm	50117912	554
Die adapter 19 mm	50117904	554
Die adapter 28.6 mm	50117890	554
Die adapter 9.5 mm	50132660	554
Die adapter 19 mm	50132679	554
Die adapter 28.6 mm	50132687	554
Hexagonal nut	90542657	554
Metal case	50273353	554

Accessories	Part No.	Page
Punch Pg 9 (15.2 mm)	50213164	553
Die Pg 9 (15.2mm)	50185578	553
Punch Pg 11 (18.6 mm)	50177001	553
Die Pg 11 (18.6 mm)	50185586	553
Punch Pg 13 (20.4 mm)	50176978	553
Die Pg 13 (20.4 mm)	50185594	553
Punch 30.5 mm (oil-tight)	50362828	553
Die 30.5 mm (oil-tight)	50371037	553
Die ISO 16	50766421	553
Die ISO 20	50766438	553
Die ISO 25	50766445	553
Die ISO 32	50766452	553
Punch ISO 16	50351931	553
Punch ISO 25	50039865	553
Punch ISO 32	50244590	553

## LSK 120 Hydraulic hole punching head - basic tool

- ▶ Fast and precise cutting
- ▶ Punching in just a few seconds
- ▶ Compact design permits working in tight areas

### Suitable for

- For punching aluminum and copper up to 10 mm thick.
- Hole diameters: 6.5 - 17 mm
- Centric punching: 120 mm max. material width
- Drive with EHP 4 and AHP 700-L available

### Order info

- Operation with EHP 4 and AHP 700-L adapter CMGSK required



Technical data	
Max. operating pressure	max. 700 bar
Max. compressive force	160 kN
Dimension	234 x 174 x 88 mm
Weight	approx. 9.5 kg

Item	Part No.
Hydraulic hole punching head LSK 120	<b>50052110</b>

Accessories	Part No.	Page
Punch and die Ø 6.5 mm	50052276	555
Punch and die Ø 8.5 mm	50052284	555
Punch and die Ø 11 mm	50052292	555
Punch and die Ø 13 mm	50052306	555
Punch and die Ø 15 mm	50052314	555
Punch and die Ø 17 mm	50052322	555



### Slug Buster® punch set for all applications from ISO 16 - 40



#### Suitable for

- Mild steel (St37), plastic and aluminum up to 3.5 mm thick

#### Operation

- Manual

#### Predrilling

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia. 50360183  
 Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030

Item	Part No.	
Slug Buster® punch set ISO 16 - 40	<b>50366920</b>	
Scope of supply	Part No.	Page
Slug Buster® punch set ISO 16/20/25/32/40	50356178SET	563
Draw studs for manual operation Ø 9.5 x 40 mm	50000420	534
Draw studs for manual operation Ø 19.0 x 55 mm	50040405	534
Ratchet	50349414	556
Kwik Stepper™ step bit 9.7 mm	50360183	556
Plastic case	50366858	556

### Slug Buster® punch set for all applications from PG 9 to PG 21 and 30.5 mm



#### Suitable for

- Mild steel (St37), plastic and aluminum up to 3.5 mm thick

#### Operation

- Manual

#### Predrilling

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia. 50360183  
 Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030

Item	Part No.	
Slug Buster® punch set PG 9 - PG 21 and 30.5 mm	<b>50366904</b>	
Scope of supply	Part No.	Page
Slug Buster® punch set PG 9 - PG 21, 30.5 mm	50323989SET	564
Draw studs for manual operation 9.5 x 40 mm	50000420	534
Ratchet	50349414	556
Kwik Stepper™ step bit 9.7 mm	50360183	556
Plastic case	50366858	556

**Slug Buster® punch set for ISO 16 - 63**
**Suitable for**

- Mild steel (St37), plastic and aluminum up to 3.5 mm thick

**Operation**

- Manual

**Predrilling**

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia. 50360183  
 Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030



Item	Part No.	
Slug Buster® punch set ISO 16 - 63	<b>50366939</b>	
Scope of supply	Part No.	Page
Slug Buster® punch set ISO 16 - 63	50068920SET	563
Draw studs for manual operation 9.5 x 40 mm	50000420	534
Draw studs for manual operation 19.0 x 55 mm	50040405	534
Ratchet	50349414	556
Kwik Stepper™ step bit 9.7 mm	50360183	556
Plastic case	50366858	556

**Slug Buster® punch set for all applications from PG 9 - 48 and 30.5 mm**
**Suitable for**

- Mild steel (St37), plastic and aluminum up to 3.5 mm thick

**Operation**

- Manual

**Predrilling**

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia. 50360183  
 Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030



Item	Part No.	
Slug Buster® punch set PG 9 - PG 48 and 30.5 mm	<b>50366912</b>	
Scope of supply	Part No.	Page
Draw studs for manual operation 9.5 x 40 mm	50000420	534
Draw studs for manual operation 19.0 x 55 mm	50040405	534
Ratchet	50349414	556
Slug Buster® punch set PG 9 - PG 48, 30.5 mm	50328034SET	557
Plastic case	50366858	556

### Speed Punch™ set ISO 16 - 40



- ▶ Up to 3x faster than conventional punching tools
- ▶ Quick and easy handling because there is no screwing and unscrewing the lock nut needed
- ▶ Compatible with all Greenlee hydraulic and battery powered punch drivers

#### Suitable for

- Mild steel (St37), plastic and aluminum up to 3.5 mm thick

#### Operation

- hydraulic

#### Predrilling

- Draw studs 9.5 mm, pilot drill 9.7 mm 50360183  
 Draw studs 19 mm, pilot drill 20.5 mm 50344030

#### Scope of supply

- Complete system consisting of draw stud, speed lock, punch and die in 5 sizes including plastic case

Item	Part No.	
Slug Buster® punch set ISO 16 - 40	<b>50366920</b>	
Description	Part No.	Page
Punch & Die ISO 16 (16,2 mm)	52055431	534
Punch & Die ISO 20 (20,4 mm)	52055432	534
Punch & Die ISO 25 (25,4 mm)	52055434	534
Punch & Die ISO 32 (32,5 mm)	52055435	534
Punch & Die ISO 40 (40,5 mm)	52055436	534
SPEED LOCK & Draw stud 9,5 mm for ISO 16/20/25 and PG 16	52055439	534
SPEED LOCK & Draw stud 9,5 mm for ISO 32/40/50/63	52055440	534
Plastic case	KKSPISO16B63	



**Speed Punch™ set ISO 16 - 63**

- ▶ Up to 3x faster than conventional punching tools
- ▶ Quick and easy handling because there is no screwing and unscrewing the lock nut needed
- ▶ Compatible with all Greenlee hydraulic and battery powered punch drivers

**Suitable for**

- Mild steel (St37), plastic and aluminum up to 3.5 mm thick

**Operation**

- hydraulic

**Predrilling**

- Draw studs 9,5 mm, pilot drill 9,7 mm 50360183  
 Draw studs 19 mm, pilot drill 20,5 mm 50344030

**Scope of supply**

- Complete system consisting of draw stud, speed lock, punch and die in 7 sizes including plastic case

Item	Part No.
Speed Punch™ set ISO 16 – 63	<b>52055440SET</b>
Scope of supply	Part No.
Punch & Die ISO 16 (16,2 mm)	52055431
Punch & Die ISO 20 (20,4 mm)	52055432
Punch & Die ISO 25 (25,4 mm)	52055434
Punch & Die ISO 32 (32,5 mm)	52055435
Punch & Die ISO 40 (40,5 mm)	52055436
Punch & Die ISO 50 (50,8 mm)	52055437
Punch & Die ISO 63 (64,0 mm)	52055438
SPEED LOCK & Draw stud 9,5 mm for ISO 16/20/25 and PG 16	52055439
SPEED LOCK & Draw stud 9,5 mm for ISO 32/40/50/63	52055440
Plastic case	KKSPISO16B63


**SLUG-SPLITTER® punch set (stainless steel) ISO 16 - 40**

- ▶ Unique punch profile
- ▶ Split slugs fall free and can be removed easily

**Suitable for**

- Stainless steel (V2A), mild steel (St37), plastic and aluminum up to 3.5 mm thick

**Operation**

- Hydraulic

**Predrilling**

- Draw stud 19 mm, pilot drill 20.5 mm dia. 50344030  
 Draw stud 11.1 mm, pilot drill 12.7 mm dia. 50344102

Item	Part No.
Slug Splitter® punch set (stainless steel) ISO 16/20/25/32/40	<b>50766803</b>
Scope of supply	Part No.
SLUG-SPLITTER® punch set (stainless steel) 16.2 mm	50069527
SLUG-SPLITTER® punch set (stainless steel) 20.4 mm	50069543
SLUG-SPLITTER® punch set (stainless steel) 25.4 mm	50069560
SLUG-SPLITTER® punch set (stainless steel) 32.5 mm	50069594
SLUG-SPLITTER® punch set (stainless steel) 40.5 mm	50069616
Draw stud for hydraulic operation 11.1 mm to 19 mm dia., 108 mm	50294512
Draw stud for hydraulic operation 19 x 140 mm	50294520
Plastic case	KKSSISO16B63



## SLUG-SPLITTER® punch set (stainless steel) ISO 16 - 63



- ▶ Unique punch profile
- ▶ Split slugs fall free and can be removed easily

### Suitable for

- Stainless steel (V2A), mild steel (St37), plastic and aluminum up to 3.5 mm thick

### Operation

- Hydraulic

### Predrilling

- Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030
- Draw stud 11.1 mm dia., pilot drill 12.7 mm dia. 50344102

Item	Part No.	
Slug Splitter® punch set (stainless steel) ISO 16/20/25/32/40/50/63	<b>50766797</b>	
Scope of supply	Part No.	Page
SLUG-SPLITTER® punch set (stainless steel) 16.2 mm	50069527	533
SLUG-SPLITTER® punch set (stainless steel) 20.4 mm	50069543	533
SLUG-SPLITTER® punch set (stainless steel) 25.4 mm	50069560	533
SLUG-SPLITTER® punch set (stainless steel) 32.5 mm	50069594	533
SLUG-SPLITTER® punch set (stainless steel) 40.5 mm	50069616	533
SLUG-SPLITTER® punch set (stainless steel) 50.8 mm	50069632	533
SLUG-SPLITTER® punch set (stainless steel) 64 mm	50069667	533
Draw stud for hydraulic operation 11.1 mm to 19 mm dia., 108 mm	50294512	535
Draw stud for hydraulic operation 19 x 140 mm	50294520	535
Plastic case	KKISO16B63	

## Slug Buster® hand hydraulic punch driver set PG 9 - 21, 30.5 mm



### Suitable for

- Mild steel (St37), plastic and aluminum up to 3.5 mm thick

### Operation

- Hydraulic

### Predrilling

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia. 50360183
- Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030

Item	Part No.	
Slug Buster® hand hydraulic punch driver set PG 9 - PG 21 and 30.5 mm	<b>50356119SET</b>	
Scope of supply	Part No.	Page
Hand hydraulic punch 7804E	50342886	547
Draw stud for punch with hydraulic operation 9.5 x 71 mm	51300430	535
Draw stud for hydraulic operation 19.0 x 105 mm	50318721	535
Spacer short	50032488	547
Adapter 19.0 dia. x 48 mm with internal thread 9.5 mm	50339672	535
Slug Buster® punch set PG 9 - PG 21, 30.5 mm	50323989SET	556
Plastic case	50352024	547

## Slug Buster® hand hydraulic punch driver set 90° PG 9 - 21, 30.5 mm

### Suitable for

- Suitable for mild steel (ST37), plastic and aluminum up to 3.5 mm thick

### Operation

- Hydraulic

### Predrilling

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia. 50360183  
 Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030



Item	Part No.	
Slug Buster® hand hydraulic punch driver set PG 9 - PG 21 and 30.5 mm	<b>50356151SET</b>	
Scope of supply	Part No.	Page
Hand hydraulic punch 7904E	50337866	547
Draw stud for punch with hydraulic operation 9.5 x 71 mm	51300430	535
Draw stud for hydraulic operation 19.0 x 105 mm	50318721	535
Spacer, short	50032488	547
Adapter 19.0 dia. x 48 mm with internal thread 9.5 mm	50339672	535
Slug Buster® punch set PG 9 - PG 21, 30.5 mm	50323989SET	556
Plastic case	50352024	547

## Slug Buster® hand hydraulic punch driver set ISO 16 - 40

### Suitable for

- Suitable for mild steel (ST37), plastic and aluminum up to 3.5 mm thick

### Operation

- Hydraulic

### Predrilling

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia. 50360183  
 Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030



Item	Part No.	
Slug Buster® hand hydraulic punch driver set ISO 16 - 40	<b>50356143SET</b>	
Scope of supply	Part No.	Page
Hand hydraulic punch 7804E	50342886	547
Draw stud for punch with hydraulic operation 9.5 x 71 mm	51300430	535
Draw stud for hydraulic operation 19.0 x 105 mm	50318721	535
Spacer, short	50032488	547
Adapter 19.0 x 48 mm with internal thread 9.5 mm	50339672	535
Slug Buster® punch set ISO 16/20/25/32/40	50356178SET	556
Plastic case	50352024	547

### Slug Buster® hand hydraulic punch driver set 90° ISO 16 - 40



#### Suitable for

- Suitable for mild steel (ST37), plastic and aluminum up to 3.5 mm thick

#### Operation

- Hydraulic

#### Predrilling

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia. 50360183  
 Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030

Item	Part No.	
Slug Buster® hand hydraulic punch driver set ISO 16 - 40	<b>50356160SET</b>	
Scope of supply	Part No.	Page
Hand hydraulic punch 7904E	50337866	547
Draw stud for punch with hydraulic operation 9.5 x 71 mm	51300430	535
Draw stud for hydraulic operation 19.0 x 105 mm	50318721	535
Spacer, short	50032488	547
Adapter 19.0 x 48 mm with internal thread 9.5 mm	50339672	535
Slug Buster® punch set ISO 16/20/25/32/40	50356178SET	556
Plastic case	50352024	547

### Hand hydraulic punching set 90° ISO 16 - 40



► Flexible head allows greater versatility in tight spaces

#### Suitable for

- Special shape punches up to a maximum size of 68 x 68 mm or 35 x 65 mm
- Round punches up to ISO 63 (64 mm dia.)

Item	Part No.	
Hand hydraulic punching set ISO 16 - 40	<b>52034233</b>	
Scope of supply	Part No.	Page
Slug Buster® punch set ISO 16/20/25/32/40	50356178SET	556
Draw stud for hydraulic operation 9.5 mm to 19 mm, 122 mm	52042827	535
Draw stud for hydraulic operation 19.0 x 105 mm	50318721	535
Spacer, short	50032488	547
HSS Co5 step bit	52049371	548
Plastic case		

**Slug Buster® punch set ISO 16 - 40**

- ▶ For quick, clean, effortless and burr-free holes
- ▶ Split slugs fall free and can be removed easily

**Suitable for**

- Mild steel (St37), plastic and aluminum up to 3.0 mm thick

**Operation**

- Manual and hydraulic

**Predrilling**

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia. 50360183
- Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030

**Scope of supply**

- Complete system consisting of punches, dies and plastic case in 5 sizes



Item	Part No.
Slug Buster® punch set ISO 16/20/25/32/40	<b>50356178SET</b>

Accessories	Part No.	Page
Plastic case	KKISO16B63	

**Slug Buster® punch set ISO 16 - 63**

- ▶ Long service life
- ▶ Less effort thanks to simple use

**Suitable for**

- Mild steel (St37), plastic and aluminum up to 3.5 mm thick

**Operation**

- Manual and hydraulic

**Predrilling**

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia. 50360183
- Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030

**Scope of supply**

- Complete system consisting of punches, dies and plastic case in 7 sizes



Item	Part No.
Slug Buster® punch set ISO 16/20/25/32/40/50/63	<b>50068920SET</b>

Accessories	Part No.	Page
Plastic case	KKISO16B63	

### Slug Buster® punch set PG 9 - 21, 30.5 mm



- ▶ Unique punch profile
- ▶ Split slugs fall free and can be removed easily

#### Suitable for

- Mild steel (St37), plastic and aluminum up to 3.5 mm thick

#### Operation

- Manual and hydraulic

#### Predrilling

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia. 50360183
- Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030

#### Scope of supply

- Complete system consisting of punches, dies and plastic case in 6 sizes

Item	Part No.
Slug Buster® punch set PG 9/11/13/16/21 and 30.5 mm	<b>50323989SET</b>

Accessories	Part No.	Page
Plastic case	KKPG9B48	

### Slug Buster® punch set PG 9 - 48, 30.5 mm



- ▶ Unique punch profile
- ▶ Split slugs fall free and can be removed easily

#### Suitable for

- Mild steel (St37), plastic and aluminum up to 3.5 mm thick

#### Operation

- Manual and hydraulic

#### Predrilling

- Draw stud 9.5 mm dia., pilot drill 9.7 mm dia. 50360183
- Draw stud 19 mm dia., pilot drill 20.5 mm dia. 50344030

#### Scope of supply

- Complete system consisting of punches, dies and plastic case in 9 sizes

Item	Part No.
Slug Buster® punch set PG 9/11/13/16/21/29/36/48 and 30.5 mm	<b>50328034SET</b>

Accessories	Part No.	Page
Plastic case	KKPG9B48	



## *Deep cuts, fast change.*

### **Bi-metal and carbide-tipped hole saws and arbors.**

Hole saws are used extensively to cut holes in different materials. These tools differentiate from other brands (manufacturers) by their extremely long service life. Their clever design enables a quick and easy blade change.



*Countersink hole saws ensure burr free holes for easy mounting of electrical outlets.*

- For nominal dimensions from 14 mm to 152 mm.
- Suitable for a range of materials.



## ■ A strong back plate for precise concentricity.

- ▶ **Solid back plate for increased stability.**
- ▶ For installing wall outlets, halogen lightings etc.

### Benefits:

- ▶ The reinforced back plate gives additional stability, creating more precise holes.
- ▶ Hole saws are multi-purpose tools, and so fewer tools are needed.



## ■ A little more: Cutting depth to 41.3 mm.

- ▶ Cutting depth of 41.3 mm.
- ▶ For metal, aluminum, wood and plastic, stainless steel, cast iron, fibreglass, non-ferrous metal.

### Benefits:

- ▶ These hole saws achieve deeper cuts than tools from other suppliers.
- ▶ You need **just one hole saw for a range of materials.**

## ■ For fast change: *Kwik Change™*.

- ▶ **Bayonet connection for fast** hole saw change.
- ▶ Ejector spring makes removal of slugs easier.

### Benefits:

- ▶ The bayonet connection significantly reduces tooling thus, saving you time.
- ▶ Slugs are mechanically expelled - accelerating drilling operations.



▶ *More on  
Page 572.*



## ■ The multi-purpose tool: *HKP carbide-tipped hole saw.*

- ▶ Optimised chip clearance.
- ▶ **Suitable for a range of materials.**

### Benefits:

- ▶ Safe and fast operations.
- ▶ One tool for numerous applications.



### HSS bi-metal hole saws



- ▶ Vibration-reduction and high true running accuracy due to thick back section
- ▶ Positive combi-toothing easily assured, precise cut
- ▶ Cooling slots ensure low heat build-up

#### Characteristics

- Positive rake variable pitch design provides faster and easier cutting
- Variable pitch design
- Max. cutting depth 41.3 mm
- Tooth hardness Rc 65-68

#### Suitable for

- For mild steel, cast iron, brass, aluminum, fibreglass, wood and plastic

#### Order info

- Arbors have to be ordered separately, not included in scope of supply

Part No.	Item	Punch size mm	Standard size		Weight g	Recommended cutting speed r.p.m. for					
			Pg	ISO		mild steel	stainless steel	cast iron	non-ferrous metal	aluminum	wood
50191314	HSS bi-metal hole saws 14 mm	14			46	580	300	400	790	900	800
52057722	HSS bi-metal hole saws 15 mm	15			46	580	300	400	790	900	800
52057723	HSS bi-metal hole saws 16 mm	16	Pg 9	ISO 16	46	550	275	365	730	825	760
52057724	HSS bi-metal hole saws 17 mm	17			46	500	250	330	665	750	720
52057725	HSS bi-metal hole saws 18 mm	18			46	500	250	330	665	750	720
52057726	HSS bi-metal hole saws 19 mm	19	Pg 11		46	460	230	300	600	690	680
52057727	HSS bi-metal hole saws 20 mm	20		ISO 20	46	445	220	290	580	660	640
52057728	HSS bi-metal hole saws 21 mm	21	Pg 13		46	425	195	280	560	635	580
52057729	HSS bi-metal hole saws 22 mm	22	Pg 16		46	390	195	260	520	585	560
52057730	HSS bi-metal hole saws 23 mm	23			46	380	190	250	510	570	540
52057731	HSS bi-metal hole saws 24 mm	24			46	370	185	245	494	555	520
52057732	HSS bi-metal hole saws 25 mm	25		ISO 25	46	350	175	235	470	525	500
52057733	HSS bi-metal hole saws 26 mm	26			46	325	160	215	435	480	500
52057734	HSS bi-metal hole saws 27 mm	27			46	300	150	200	400	450	450
52057735	HSS bi-metal hole saws 28 mm	28			46	300	150	200	400	450	450
52057736	HSS bi-metal hole saws 29 mm	29	Pg 21		91	285	145	190	380	425	430
52057737	HSS bi-metal hole saws 30 mm	30			91	270	140	180	360	410	410
52057738	HSS bi-metal hole saws 32 mm	32		ISO 32	91	270	140	180	360	410	410
52057739	HSS bi-metal hole saws 33 mm	33			46	250	125	165	330	375	370
52057740	HSS bi-metal hole saws 35 mm	35			46	240	120	160	315	360	30
52057741	HSS bi-metal hole saws 36 mm	36			91	240	120	160	315	360	30
52057742	HSS bi-metal hole saws 37 mm	37	Pg 29		91	230	115	150	300	345	330
52057743	HSS bi-metal hole saws 38 mm	38			91	220	110	145	290	330	310
52057744	HSS bi-metal hole saws 40 mm	40		ISO 40	91	210	110	140	280	315	290
52057745	HSS bi-metal hole saws 41 mm	41			91	205	105	135	270	305	270
52057746	HSS bi-metal hole saws 42 mm	42			137	205	105	135	270	305	270
52057747	HSS bi-metal hole saws 43 mm	43			91	195	100	130	260	295	250
52057748	HSS bi-metal hole saws 44 mm	44			91	190	95	125	250	285	230
52057749	HSS bi-metal hole saws 45 mm	45			91	190	95	125	250	285	230
52057750	HSS bi-metal hole saws 46 mm	46			137	180	90	120	240	270	210
52057751	HSS bi-metal hole saws 48 mm	48	Pg 36		91	180	90	120	240	270	210
52057752	HSS bi-metal hole saws 50 mm	50		ISO 50	91	170	85	115	230	255	200
52057753	HSS bi-metal hole saws 51 mm	51			137	165	80	110	220	245	200
52057754	HSS bi-metal hole saws 52 mm	52			137	165	80	110	220	245	200
52057755	HSS bi-metal hole saws 53 mm	53			137	160	80	105	210	240	190
52057756	HSS bi-metal hole saws 54 mm	54	Pg 42		137	160	80	105	210	240	190
52057757	HSS bi-metal hole saws 55 mm	55			137	150	75	100	200	225	185
52057758	HSS bi-metal hole saws 57 mm	57			227	150	75	100	195	225	185
52057760	HSS bi-metal hole saws 59 mm	59			137	140	70	95	190	220	180
52057761	HSS bi-metal hole saws 60 mm	60	Pg 48		137	135	70	90	180	205	180

Part No.	Item	Punch size mm	Standard size		Weight g	Recommended cutting speed r.p.m. for					
			Pg	ISO		mild steel	stainless steel	cast iron	non-ferrous metal	aluminum	wood
52057762	HSS bi-metal hole saws 63 mm	63		ISO 63	182	130	65	85	175	200	175
52057763	HSS bi-metal hole saws 65 mm	65			182	130	65	85	170	195	170
52057764	HSS bi-metal hole saws 67 mm	67			182	125	60	80	160	185	165
52057765	HSS bi-metal hole saws 68 mm	68			182	125	60	80	160	185	160
52057766	HSS bi-metal hole saws 70 mm	70			182	120	55	80	160	180	160
52057767	HSS bi-metal hole saws 73 mm	73			182	115	55	75	150	170	150
52057768	HSS bi-metal hole saws 74 mm	74			182	115	55	75	150	170	150
52057769	HSS bi-metal hole saws 75 mm	75			227	115	55	75	150	170	150
52057770	HSS bi-metal hole saws 76 mm	76			227	110	55	70	140	165	145
52057771	HSS bi-metal hole saws 80 mm	80			227	110	55	70	140	165	145
52057773	HSS bi-metal hole saws 83 mm	83			273	105	50	70	140	155	140
52057774	HSS bi-metal hole saws 86 mm	86			273	100	50	65	130	150	135
52057775	HSS bi-metal hole saws 89 mm	89			273	95	45	65	130	145	130
52057776	HSS bi-metal hole saws 92 mm	92			273	95	45	60	120	130	120
52057777	HSS bi-metal hole saws 95 mm	95			318	95	45	60	120	135	110
52057778	HSS bi-metal hole saws 98 mm	98			318	90	40	60	120	135	110
52057779	HSS bi-metal hole saws 102 mm	102			318	85	10	55	110	130	100
50191772	HSS bi-metal hole saws 105 mm	105			363	80	40	55	110	120	110
50191780	HSS bi-metal hole saws 108 mm	108			363	80	40	55	110	120	110
50191799	HSS bi-metal hole saws 111 mm	111			363	80	40	50	100	120	110
50191802	HSS bi-metal hole saws 114 mm	114			409	75	40	50	100	105	100
50191810	HSS bi-metal hole saws 121 mm	121			499	75	35	50	95	95	100
50191829	HSS bi-metal hole saws 127 mm	127			545	65	35	45	90	90	100
50191837	HSS bi-metal hole saws 140 mm	140			545	60	35	35	85	85	100
50191845	HSS bi-metal hole saws 152 mm	152			636	55	35	35	75	75	100

## HSS bi-metal hole saw set

► Positive combi-toothing easily assured, precise cut

### Characteristics

- High true running accuracy
- Less effort when cutting

### Suitable for

- Metal, brass, fibreglass, non-ferrous metal, cast iron, aluminum, wood and plastics



Part No.	Description	Nominal size mm	Standard size		52059292SET	52059293SET	50069497SET	52059294SET	50292099SET	52059295SET	50125630SET
			Pg	ISO	Electro II	Universal	ISO16-63	Plumbing	830PG	Standard	Electro
52057723	Bi-Metal Hole Saw	16	PG9	ISO 63		•	•		•	•	
52057724	Bi-Metal Hole Saw	17									
52057726	Bi-Metal Hole Saw	19	PG11			•	•	•	•	•	
52057727	Bi-Metal Hole Saw	20		ISO20			•				
52057728	Bi-Metal Hole Saw	21	PG13					•			
52057729	Bi-Metal Hole Saw	22	PG16		•	•		•	•	•	
52057731	Bi-Metal Hole Saw	24					•				
52057732	Bi-Metal Hole Saw	25		ISO25		•	•				
52057733	Bi-Metal Hole Saw	26									
52057736	Bi-Metal Hole Saw	29	PG21		•	•	•	•	•	•	
52057737	Bi-Metal Hole Saw	30						•			
52057738	Bi-Metal Hole Saw	32		ISO32			•				
52057739	Bi-Metal Hole Saw	33									
52057740	Bi-Metal Hole Saw	35			•	•				•	•

Part No.	Description	Nominal size mm	Standard size		52059292SET Electro II	52059293SET Universal	50069497SET ISO16-63	52059294SET Plumbing	50292099SET 830PG	52059295SET Standard	50125630SET Electro
			Pg	ISO							
52057742	Bi-Metal Hole Saw	37	PG29						•		
52057743	Bi-Metal Hole Saw	38				•		•			
52057744	Bi-Metal Hole Saw	40	ISO40				•				
52057745	Bi-Metal Hole Saw	41									
52057748	Bi-Metal Hole Saw	44			•	•	•			•	
52057751	Bi-Metal Hole Saw	48	PG36						•		
52057752	Bi-Metal Hole Saw	50	ISO50				•				
52057753	Bi-Metal Hole Saw	51			•	•					
52057754	Bi-Metal Hole Saw	52								•	
52057758	Bi-Metal Hole Saw	57					•			•	
52057761	Bi-Metal Hole Saw	60	PG48						•		
52057762	Bi-Metal Hole Saw	63	ISO63		•	•	•				
52057764	Bi-Metal Hole Saw	67					•			•	
52057765	Bi-Metal Hole Saw	68			•						•
52057769	Bi-Metal Hole Saw	75									•
52057770	Bi-Metal Hole Saw	76				•					
52033839	Countersink for Hole Saw 68mm										•
52057780	Arbor 14 to 30 mm				•	•	•	•	•	•	•
52057781	Arbor 32 to 152 mm				•	•	•	•	•	•	•
52059258	Case				•	•	•	•	•	•	•

### Electro set with countersink

#### Characteristics

- Sockets can be mounted flush with the wall.
- Countersink with two specially-hardened cutting teeth

#### Suitable for

- Steel, non-ferrous metal, aluminum, cast iron, wood, plastic and building materials

#### Scope of supply

- Consisting of hole saws 35 mm, 68 mm, 75 mm, countersink for 68 mm hole saw, arbor with pilot drill and counter nut for hole saws 32 - 152 mm and spare HSS pilot drill 6.35 mm dia.



Item	Part No.	
Electro set with countersink 35/68/75 mm	<b>50125630SET</b>	
Scope of supply	Part No.	Page
HSS bi-metal hole saw 35 mm	52057740	568
HSS bi-metal hole saw 68 mm	52057765	569
HSS bi-metal hole saw 75 mm	52057769	569
Countersink for hole saws	52033839	570
Arbor for HSS bi-metal hole saws 8.6 mm	52057781	570
Plastic case	52059258	570

### Arbor for HSS bi-metal hole saws 14 - 30 mm

#### Suitable for

- Sizes from 14 mm - 30 mm



Item	Part No.
Arbor 6.3 mm	50371576
Arbor 7.9 mm	50385224
Arbor 8.6 mm	52057780
Arbor 11.1 mm	50371550

**Arbor for HSS bi-metal hole saws 32 - 152 mm**
**Suitable for**

- Sizes from 32 mm - 51 mm
- Sizes from 32 mm - 152 mm

Item	Part No.
Arbor 7.9 mm for HSS bi-metal hole saws 32 - 51 mm	<b>50371541</b>
Arbor 8.6 mm for HSS bi-metal hole saws 32 - 152 mm	<b>52057781</b>
Arbor 11.1 mm for HSS bi-metal hole saws 32 - 152 mm	<b>50371568</b>


**SDS arbor for HSS bi-metal hole saws**
**Suitable for**

- Sizes from 32 mm - 152 mm
- Sizes from 14 mm - 30 mm

Item	Part No.
SDS arbor for HSS bi-metal hole saws 14 - 30 mm	<b>50069691</b>
SDS arbor for HSS bi-metal hole saws 32 - 152 mm	<b>50069292</b>


**Interchangeable pilot drill arbor for HSS bi-metal hole saws**

Item	Part No.
Interchangeable pilot drill arbor for HSS bi-metal hole saws	<b>52057782</b>



## Kwik Change carbide-tipped hole saw



► Bayonet connection allows quick change of hole saws

### Characteristics

- Ejector spring pushes the metal out of the hole saw
- Triangular arbor 9.5 mm for 50057529
- Triangular arbor 12.7 mm for 50057537

### Suitable for

- Steel, stainless steel, non-ferrous metals, plastics, light building boards and wood to 4.5 mm thick

### Order info

- Arbors are not included in scope of supply, to be ordered separately
- Hole saws 19 - 54 mm - Arbor 50057529
- Hole saws 64 - 76 mm - Arbor 50057537

Item	True dimension mm	Standard size		Part No.
		Pg	ISO	
Kwik Change carbide-tipped hole saw 19 mm	19	Pg 11		50056930
Kwik Change carbide-tipped hole saw 22 mm	22.2	Pg 16		50056956
Kwik Change carbide-tipped hole saw 25 mm	25.4		ISO 25	50056964
Kwik Change carbide-tipped hole saw 29 mm	28.6	Pg 21		50056972
Kwik Change carbide-tipped hole saw 31 mm	31			50056980
Kwik Change carbide-tipped hole saw 32 mm	31.8		ISO 32	50056999
Kwik Change carbide-tipped hole saw 35 mm	34.9			50057006
Kwik Change carbide-tipped hole saw 37 mm	36.5	Pg 29		50059599
Kwik Change carbide-tipped hole saw 38 mm	38.1			50057014
Kwik Change carbide-tipped hole saw 45 mm	44.4			50057022
Kwik Change carbide-tipped hole saw 51 mm	50.8			50057030
Kwik Change carbide-tipped hole saw 54 mm	54	Pg 42		50059602
Kwik Change carbide-tipped hole saw 64 mm	63.5		ISO 63	50057057
Kwik Change carbide-tipped hole saw 76 mm	76.2			50057073

## Kwik Change carbide-tipped hole saw set

► Bayonet connection allows quick change of hole saws

### Characteristics

- Arbor 50057529
- Ejector spring pushes the metal out of the hole saw

### Suitable for

- Steel, stainless steel, non-ferrous metals, plastics, light building boards and wood to 4.5 mm thick



Item	Part No.
Kwik Change carbide-tipped hole saw set PG 16, PG 21, 35 mm, 45 mm, ISO 50	<b>50057669</b>
Kwik Change carbide-tipped hole saw set PG 16, PG 21, 35 mm	<b>50058207</b>

## Kwik Change arbor

### Suitable for

- Sizes 16 mm - 58 mm; 60 mm - 76 mm

### Order info

- Arbors are not included in scope of supply, to be ordered separately

Item	Part No.
Kwik Change arbor 16 - 58 mm	<b>50057529</b>
Kwik Change arbor 60 - 76 mm	<b>50057537</b>



## Pilot drill for arbor

Item	Part No.
Pilot drill for arbor 50057529	<b>50057618</b>
Pilot drill for arbor 50057537	<b>50057626</b>



## HKP carbide-tipped hole saw



- ▶ Easy chip removal with extra wide tooth pitch
- ▶ No clogging or burning of carbide teeth

### Characteristics

- Groove permits easy removal of the drilling core
- Maximum cutting depth: 60 mm
- Flute covers two third of the total length

### Suitable for

- Wood, chipboard, coated chipboard, pressboard, PVC, fibreglass, plaster board, porous concrete, claystone and clay tiles

Item	Part No.
HKP carbide-tipped hole saw 35 mm without arbor	52033834
HKP carbide-tipped hole saw 68 mm without arbor	52033835
HKP carbide-tipped hole saw 74 mm without arbor	52033837
HKP carbide-tipped hole saw set 35, 68 and 74 mm incl. 3-zone arbor, SDS arbor, HSS and HM pilot drill	52033833
HKP carbide-tipped hole saw set 68 mm incl. 3-zone arbor, HSS and HM pilot drill, countersink	52034333

Accessories	Part No.	Page
3-zone arbor 70 mm long, shaft diameter 13 mm	52034328	574
SDS arbor shaft for HKP carbide-tipped hole saw	52034329	574

## Carbide-tipped hole saw



- ▶ Carbide-tipped cutting edges for long service life and clean cuts
- ▶ Interchangeable cobalt steel pilot drill with unique tip to prevent long chips

### Characteristics

- Cuts quick, clean and accurate holes in stainless steel, copper, aluminum and steel
- Flange stop prevents over drilling
- Maximum cutting depth: 10 mm
- Maximum material thickness: 4 mm

Item	True dimension	Minimum chuck size	Standard size		Recommended cutting speed r.p.m.		Part No.
			Pg	ISO	Stainless steel	mild steel	
Carbide-tipped hole saw 19 mm (Pg 11)	19.0	6.4	Pg 11		550	800	50383248
Carbide-tipped hole saw 22.2 mm (PG16)	22.2	6.4	Pg 16		475	690	50383264
Carbide-tipped hole saw 25.4 mm	25.4	9.5		ISO 25	415	600	50383272
Carbide-tipped hole saw 28.6 mm (PG21)	28.6	9.5	Pg 21		370	535	50383280
Carbide-tipped hole saw 30.5 mm	30.5	9.5			345	500	50383299
Carbide-tipped hole saw 31.7 mm	31.7	9.5			330	485	50383302
Carbide-tipped hole saw 35 mm	35.0	9.5			300	435	50383310
Carbide-tipped hole saw 38.1 mm	38.1	9.5			275	400	50383329
Carbide-tipped hole saw 44.4 mm	44.4	9.5			235	340	50383337
Carbide-tipped hole saw 50.8 mm	50.8	9.5		ISO 50	205	300	50383345
Carbide-tipped hole saw 63.5 mm	63.5	12.7		ISO 63	165	240	50383361



**Pilot drill for carbide-tipped hole saws**
**Suitable for**

- Wood, aluminum, steel, plastic, fiberglass and stainless steel

Item	Part No.
Interchangeable pilot drill for carbide-tipped hole saws 19 mm - 50.8 mm	<b>50398725</b>
Interchangeable pilot drill for carbide-tipped hole saws 63.5 mm	<b>50383906</b>


**Carbide-tipped hole saw set**

- ▶ Carbide-tipped cutting edges for long service life and clean cuts
- ▶ Interchangeable cobalt steel pilot drill with unique tip to prevent long chips
- ▶ Cuts quick, clean and accurate holes in stainless steel, copper, aluminum and steel

**Characteristics**

- Flange stop prevents over drilling
- Maximum cutting depth: 10 mm
- Maximum material thickness: 4 mm

Item	Part No.
Carbide-tipped hole saw set PG 16, PG 21 and 35 mm	<b>50035991</b>

Scope of supply	Part No.	Page
Carbide-tipped hole saw 22.2 mm (PG16)	50383264	574
Carbide-tipped hole saw 28.6 mm (PG21)	50383280	574
Carbide-tipped hole saw 35 mm	50383310	574
Pilot drill for carbide-tipped hole saws	50398725	575
Plastic case		



## Step by step *burr-free.*

### Precise step bits milled using the latest CNC technology.

For burr-free drilling of sheet metal, pipes, non-ferrous metals, stainless steel and plastics.

Step bits are top quality products and manufactured to the latest standards using CNC technology.



- For holes from 3.2 mm to 40 mm.
- Suitable for a wide range of materials.
- With spiral flute and edge breaker.



*Step bits are suitable for a wide range of materials and surfaces.*

## ■ Burr-free thanks to the edge breaker: Kwik Stepper™ step bits.

- ▶ For the burr-free drilling and reaming of sheet metal, pipes, non-ferrous metals, stainless steel and plastics.
- ▶ **Centering, drilling and deburring in one operation.**

### Benefits:

- ▶ Step bits are multi-purpose tools and can be used for a wide range of materials.



## ■ Spiral flute for more holes with less effort.

- ▶ Spiral flute (DBGM) reduces effort and improves cutting performance.

### Benefits:

- ▶ Less effort means less wear and tear.
- ▶ The holes are more precise and operation is trouble free.

## ■ 90% transmission zone, 0% slippage: ROTASTOP®.

- ▶ Tool change in a flash.
- ▶ **Maximum torque transmission.**
- ▶ 90% transmission zone on the drills.



### Benefits:

- ▶ No more drill slippage, making your work more efficient.
- ▶ Faster tool change.
- ▶ Improved power transmission.

## ■ Features of bits.

Step bits	Drilling range mm Ø	Step sizes mm Ø	Length mm	Number of steps	Shank mm Ø	Rota-stop®
50344013	3.2 – 12.7	3.2 / 4.0 / 4.8 / 5.6 / 6.4 / 7.1 / 7.9 / 8.7 / 9.5 / 10.3 / 11.1 / 11.9 / 12.7	80	13	6.4	
50364022	4.8 – 12.7	4.8 / 6.4 / 7.9 / 9.5 / 11.1 / 12.7	80	6	6.4	
50344110	22.2	22.2	85	1	9.5	
50344030	4.8 – 22.2	4.8 / 6.4 / 7.9 / 9.5 / 11.1 / 12.7 / 14.3 / 15.9 / 17.5 / 19.1 / 20.6 / 22.2	85	12	9.5	
50300083	22.2 – 28.6	12.7 / 22.2 / 28.6	57	3	9.5	
50364146	22.2 – 34.9	22.2 / 28.6 / 31.0 / 31.8 / 34.9	73	5	9.5	
50360183	9.7	Pilot drill for Greenlee draw studs Ø 9.5 mm	40	1	6.4	
50344102	12.7	Pilot drill for Greenlee draw studs Ø 11.1 mm	40	1	6.4	
50360205	Pg 7 – 21	Pg7 / Pg9 / Pg11 / Pg13 / Pg16 / Pg21/30.5	90	7	9.5	
50360221	ISO 16 – 32	For ISO dimensions 16 / 20 / 25 / 32	80	4	9.5	
50069845	4 – 12	4.0 / 5.0 / 6.0 / 7.0 / 8.0 / 9.0 / 10.0 / 11.0 / 12.0	80	9	6.0	✓
50069853	4 – 20	4.0 / 6.0 / 8.0 / 10.0 / 12.0 / 14.0 / 16.0 / 18.0 / 20.0	67	9	8.0	✓
50069861	6 – 30	6.0 – 30.0 (2.0 mm steps)	98	13	10.0	✓
50069870	6 – 36	6.0 – 36.0 (3.0 mm steps)	82	11	12.0	✓
50069888	ISO 12 – 40	For ISO sizes 12 / 16 / 20 / 25 / 32 / 40	110	6	12.0	✓

### Kwik Stepper™ step bit



#### Characteristics

- For burr-free drilling of mild steel, pipes, non-ferrous metals and plastics.
- Drilling range from 3.2 mm - 34.9 mm

#### Suitable for

- Reaming of mild steel, pipes, non-ferrous metals and plastic

Item	Drilling range dia.	Step sizes dia.	Total length	Number of steps	Shank dia.	Part No.
	mm	mm	mm		mm	
Kwik Stepper™ step bit 3.2 - 12.7 mm	3.2 - 12.7	3.2 / 4.0 / 4.8 / 5.6 / 6.4 / 7.1 / 7.9 / 8.7 / 9.5 / 10.3 / 11.1 / 11.9 / 12.7	80	13	6.4	50344013
Kwik Stepper™ step bit 4.8 - 12.7 mm	4.8 - 12.7	4.8 / 6.4 / 7.9 / 9.5 / 11.1 / 12.7	80	6	6.4	50364022
Kwik Stepper™ step bit 22.2 mm	22.2	22.2	85	1	9.5	50344110
Kwik Stepper™ step bit 4.8 - 22.2 mm	4.8 - 22.2	4.8 / 6.4 / 7.9 / 9.5 / 11.1 / 12.7 / 14.3 / 15.9 / 17.5 / 19.1 / 20.6 / 22.2	85	12	9.5	50344030
Kwik Stepper™ step bit 22.2 - 28.6 mm	22.7 - 28.6	12.7 / 22.2 / 28.6	57	3	9.5	50300083
Kwik Stepper™ step bit 22.2 - 34.9 mm	22.2 - 34.9	22.2 / 28.6 / 31.0 / 31.8 / 34.9	73	5	9.5	50364146
Kwik Stepper™ step bit 9.7 mm	9.7	For drilling pilot holes for Greenlee draw studs dia. 9.5 mm	40	1	6.4	50360183
Kwik Stepper™ step bit 12.7 mm	12.9	For drilling pilot holes for Greenlee draw studs dia.11.1 mm	40	1	6.4	50344102
Kwik Stepper™ step bit Pg 7-21	Pg 7-21	Pg7 / Pg9 / Pg11 / Pg13 / Pg16 / Pg21 / 30.5	90	7	9.5	50360205
Kwik Stepper™ step bit ISO 16-32	ISO 16 – 32	ISO 16 / 20 / 25 / 32	80	4	9.5	50360221

**Kwik Stepper™ step bit with ROTASTOP® shaft**

- ▶ Longer lifetime
- ▶ Less force needed
- ▶ Improved cutting performance
- ▶ Smooth cutting
- ▶ Minimum burr

**Characteristics**

- Drilling range from 4 mm - 40.5 mm

**Suitable for**

- Reaming of mild steel, pipes, non-ferrous metals and plastic



Item	Drilling range dia.	Step sizes dia.	Total length	Number of steps	Shank dia.	Part No.
	mm	mm	mm		mm	
Kwik Stepper™ step bit with ROTASTOP® shaft 4 - 12 mm	4 – 12	4.0 / 5.0 / 6.0 / 7.0 / 8.0 / 9.0 / 10.0 / 11.0 / 12.0	80	9	6.0	<b>50069845</b>
Kwik Stepper™ step bit with ROTASTOP® shaft 4 - 20 mm	4 – 20	4.0 / 6.0 / 8.0 / 10.0 / 12.0 / 14.0 / 16.0 / 18.0 / 20.0	67	9	8.0	<b>50069853</b>
Kwik Stepper™ step bit with ROTASTOP® shaft 6 - 30 mm	6 – 30	6.0 / 8.0 / 10.0 / 12.0 / 14.0 / 16.0 / 18.0 / 20.0 / 22.0 / 24.0 / 26.0 / 28.0 / 30.0	98	13	10.0	<b>50069861</b>
Kwik Stepper™ step bit with ROTASTOP® shaft 6 - 36 mm	6 – 36	6.0 / 9.0 / 12.0 / 15.0 / 18.0 / 21.0 / 24.0 / 27.0 / 30.0 / 33.0 / 36.0	85	11	12.0	<b>50069870</b>
Kwik Stepper™ step bit with ROTASTOP® shaft ISO 12 - 40 mm	ISO 12 - 40	For ISO sizes 12 / 16 / 20 / 25 / 32 / 40	110	6	12.0	<b>50069888</b>

**Kwik Stepper™ step bit set**

- ▶ Longer lifetime
- ▶ Less force needed
- ▶ Improved cutting performance
- ▶ Smooth cutting
- ▶ Minimum burr

**Characteristics**

- Drilling range from 4 - 30 mm

**Suitable for**

- Reaming of mild steel, pipes, non-ferrous metals and plastic



Item	Part No.	
Kwik Stepper™ step bit set	<b>50069900</b>	
Scope of supply	Part No.	Page
Kwik Stepper™ step bit with ROTASTOP® shaft 4 - 12 mm	50069845	579
Kwik Stepper™ step bit with ROTASTOP® shaft 4 - 20 mm	50069853	579
Kwik Stepper™ step bit with ROTASTOP® shaft 6 - 30 mm	50069861	579

## Combi bit set in plastic cassette M 3 - M 10



► Drill, tap and deburr in one operation

### Suitable for

- For use with mild steel, non-ferrous metals and plastics

Item	Part No.	
Combi bit set in plastic cassette M 3 - M 10	<b>50116304</b>	
Scope of supply	Part No.	Page
Combi bit M3	50116312	580
Combi bit M4	50116320	580
Combi bit M5	50116339	580
Combi bit M6	50116347	580
Combi bit M8	50116355	580
Combi bit M10	50116363	580
Combi bit holder	50116371	580





” *Greenlee processing tools make your workshop mobile. This makes you much more flexible and efficient in plant and control cabinet construction.*“

Friedrich Reusch



Special cutting tools	584
Machining tools for bus bars	589
Pumps and pump accessories	592



# On-site processing

## ***and installation.***

### **Tools and systems for plant and control cabinet construction.**

Plant and control cabinet construction requires not only tools for cable assembly and connection, but numerous additional tools as well. That's why the Greenlee range offers tools such as the bus bar tool centre for cutting, punching and stepping bus bars, which would otherwise not be possible on site.

High quality, transportable profile rail cutters, punching tools and wiring duct cutters also permit fast on-site operations.



- **Bus Bar Tool Centre for stationary and portable operations.**
- **Wiring duct cutters for plastic ducts.**
- **Appliances for processing DIN profile rails.**
- **Various drive units.**

## ■ Bus bars for on-site operations.

- ▶ One compact tool for bending, cutting, punching and offsetting copper bus bars up to 120 mm x 12 mm.
- ▶ Compact design and low weight.
- ▶ Easy handling and change of tools.



### Benefits:

- ▶ One tool for all bus bar operations, **all operations can be completed quickly everywhere.**
- ▶ Suitable for solid and laminated bus bars.
- ▶ All working operations can easily be completed with just one tool with a push of a button.



- ▶ More on Page 589.

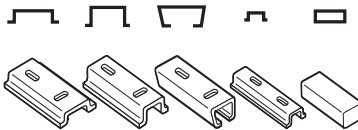


## ■ Easy cutting and punching of DIN profile rails.

- ▶ For all standard DIN profile rails.
- ▶ 5 profiles in standard range.

### Benefits:

- ▶ All standard DIN profile rails can be processed on site.
- ▶ Even the standard range offers a host of options.



## ■ Fast and clean cutting of wiring ducts.

- ▶ Wiring duct cutter for plastic channels up to 125 mm wide and 2.5 mm thick.
- ▶ Burr-free cutting.
- ▶ 90° angle cutting.

### Benefits:

- ▶ Wiring ducts can be cut anywhere with this tool.
- ▶ Maximum precision during cutting prevents mistakes and defects.
- ▶ Wiring ducts can be precisely cut with just a few operations.



- ▶ More on Page 588.



### PVC pipe cutter



#### Characteristics

- Ratchet version

Technical data		
Cutting range	to 32 mm	
Item	Part No.	
PVC pipe cutter	50042530	
Accessories		Page
Replacement blade	50003550	

### DIN rail cutting and punching tool



- ▶ For burr-free cutting and punching
- ▶ Less force needed
- ▶ Includes die plate holder with 5 profiles

#### Suitable for

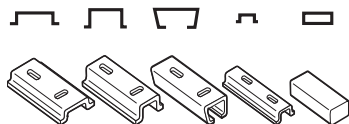
- Punches vertical and horizontal mounting holes 6.4 x 12.0 mm
- With holes for workbench assembly

Item	Part No.	
DIN rail cutting and punching tool	50115413	
Scope of supply	Part No.	Page
Hand lever	50115421	
Length stop 1 m	50115430	
Cutting die set	50115448	
Centering mask	50115456	
Fixing device	50115537	

Accessories	Part No.	Page
Special-cut plate upon request		
Special cutting die set incl. centering mask upon request		



A - 35.0 mm	A - 35.0 mm	A - 34.0 mm	A - 15.0 mm	A - 10.0 mm
B - 27.0 mm	B - 27.0 mm		B - 10.5 mm	
C - 7.5 mm	C - 15.0 mm	C - 15.0 mm	C - 5.5 mm	C - 3.0 mm
D - 1.0 mm	D - 1.5 mm		D - 1.0 mm	



**DIN rail cutting tool Compact**

- ▶ For burr-free cutting
- ▶ Less force needed
- ▶ Includes cutting die set with 2 profiles

**Suitable for**

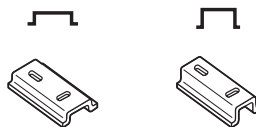
- With holes for workbench assembly
- Manual operation

Item	Length of rail guide mm	Length of hand lever mm	Part No.
DIN rail cutting tool Compact	1000	850	<b>52055684</b>



A - 35,0 mm  
 B - 27,0 mm  
 C - 7,5 mm  
 D - 1,0 mm

A - 35,0 mm  
 B - 27,0 mm  
 C - 15,0 mm  
 D - 1,5 mm



## Wiring conduit cutter



- ▶ Burr-free cutting
- ▶ 90° angle cutting
- ▶ Less effort

### Characteristics

- Standard plastic profile with 2.5 mm wall thickness and up to 125 mm width
- Blade easily replaceable
- Maintenance free

Technical data		
Cutting width	125 mm	
Dimension	285 x 280 x 290 mm	
Weight	10.5 kg	
Length of rail guide	1000 mm	
Length of hand lever	500 mm	
Wiring duct (wall thickness)	2.5 mm	
Item	Part No.	
Wiring conduit cutter	50125699	
Scope of supply	Part No.	Page
Hand lever		
Length stop		
Measurement scale		
Stainless steel support plate		
Accessories	Part No.	Page
Replacement blade for wiring conduit cutter	52047028	

**Bus bar tool centre**

- ▶ Basic tool for bending, punching and cutting solid and laminated bus bars up to 120 x 12 mm
- ▶ Compact design and low weight

**Suitable for**

- Operation with EHP4 or AHP700-L

**Order info**

- For operation with EHP4 the adaptor CMGSK and additional Part No. „EHP4“ required (50052241EHP4). For operation with AHP700-L the adaptor CMGSK and plug Sb24 required.



Technical data	
Crimping force	185 kN
Max. operating pressure	700 bar
Capacity	1.5 l / min.
Required oil volume	0.15 l
Dimension	480 x 500 x 360 mm
Weight	51 kg
Item	Part No.
Bus bar tool centre for operation with AHP700L	<b>50052241</b>

**Bending tool**

- ▶ For Al/Cu material to max. 120 x 12 mm
- ▶ Bending radius 5.0 mm

**Characteristics**

- max. bending angle 100°



Technical data	
Weight	7.1 kg
Item	Part No.
Bending tool, 5.0 mm bending radius	<b>50052250</b>

**Punching tool I**
**Characteristics**

- For Al/Cu solid bars up to max. 12 mm and steel up to 10 mm thickness

**Suitable for**

- Hole diameters from 6.5 - 21 mm



Technical data	
Weight	4.5 kg
Item	Part No.
Punching tool I	<b>50052128</b>

### Punch and die holder for punching tool I



#### Characteristics

- Al/Cu solid bars up to max. 12 mm and steel up to 10 mm material thickness

Item	Part No.
Punch and die Ø 6.5 mm	50052276
Punch and die Ø 8.5 mm	50052284
Punch and die Ø 11 mm	50052292
Punch and die Ø 13 mm	50052306
Punch and die Ø 15 mm	50052314
Punch and die Ø 17 mm	50052322
Punch and die Ø 21 mm	50052330
Oblong punch and die 6.5 x 13 mm	50052349
Oblong punch and die 8.5 x 16 mm	50052357
Oblong punch and die 11.0 x 20 mm	50052365
Oblong punch and die 13.0 x 20 mm	50052373
Oblong punch and die 17.0 x 20 mm	50052381

### Punching tool III



#### Characteristics

- Solid and laminated bus bars from Al/Cu up to max. 12 mm and steel up to 10 mm thick

#### Suitable for

- Hole diameters from 6.5 - 21 mm

Technical data	
Weight	4.5 kg
Item	Part No.
Punching tool III	50766919

### Punch and die holder for punching tool III



#### Characteristics

- Al/Cu solid and laminated bus bars up to max. 12 mm and steel up to 10 mm material thickness

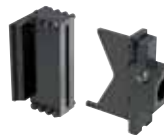
Item	Part No.
Punch and die Ø 6.5 mm	50115286
Punch and die Ø 8.5 mm	50115294
Punch and die Ø 11 mm	50115308
Punch and die Ø 13 mm	50115316
Punch and die Ø 15 mm	50115324
Punch and die Ø 17 mm	50115332
Punch and die Ø 21 mm	50115340
Oblong punch and die 6.5 x 13 mm	50115359
Oblong punch and die 8.5 x 16 mm	50115367
Oblong punch and die 11 x 20 mm	50115375
Oblong punch and die 13 x 20 mm	50115383
Oblong punch and die 17 x 20 mm	50115391



**Cutting tool**
**Characteristics**

- For Al/Cu material up to max. 120 x 12 mm

Technical data	
Weight	5.3 kg
Item	Part No.
Cutting tool	<b>50052144</b>


**Offset tool**
**Characteristics**

- Workpiece offset 5, 6, 8, 10 and 12 mm by using insertion plates
- For Al/Cu material up to max. 120 x 12 mm

Technical data	
Dimension	175 x 90 x 135 mm
Weight	10.0 kg
Item	Part No.
Offset tool	<b>50052152</b>


**Accessory box made of aluminum for punching tools, empty**
**Suitable for**

- Storage of accessories

Technical data	
Dimension	350 x 250 x 200 mm
Weight	4.3 kg
Item	Part No.
Accessory box made of aluminum for punching tools, empty	<b>50052160</b>



## 767 Hydraulic hand pump



► Lightweight, portable hand pump

### Characteristics

- In combination with punch cylinder 50170910 for all hole sizes
- Versatile operation - works in every position
- Incl. mounting holes for work bench assembly

Technical data		
Dimension	330 x 100 x 100 mm	
Operating pressure	max. 460 bar	
Weight	2.7 kg	
Item	Part No.	
Hydraulic hand pump 767	50132849	
Accessories	Part No.	Page
Hydraulic hose 6.4 mm x 0.9 m	50383167	

## 1725 Hydraulic foot pump



► Foot operation ensures two-handed operation of round and special shaped punches

### Characteristics

- Lockable pedal for storage and transport
- In combination with punch cylinder 50170910 for all hole sizes
- Versatile operation

Technical data		
Dimension	400 x 200 x 150 mm	
Operating pressure	max. 460 bar	
Weight	5.0 kg	
Item	Part No.	
Hydraulic foot pump 1725	50313533	
Accessories	Part No.	Page
Hydraulic hose 6.4 mm x 3 m	50377299	

## 755 High-pressure hydraulic hand pump



► Powerful, portable hand pump

### Characteristics

- In combination with punch cylinder 50170910 for all hole sizes
- Mounting holes for work bench assembly
- Works in every position
- Incl. 9.5 mm quick coupling with dust cap

Technical data		
Dimension	650 x 180 x 150 mm	
Operating pressure	max. 700 bar	
Weight	8.0 kg	
Item	Part No.	
High-pressure hydraulic hand pump 755	50156772	
Accessories	Part No.	Page
Hydraulic hose 9.5 mm x 1.80 m	50112899	

### Hydraulic hose 6.4 mm x 3 m

**Characteristics**

- For use with hydraulic foot pump 1725
- Filled with hydraulic oil

Item	Part No.	
Hydraulic hose 6.4 mm x 3 m	<b>50377299</b>	
Scope of supply	Part No.	Page
Hydraulic hose, 3.0 m	90525159	
Coupler plug	90541693	
Dust cap	90541707	



### Hydraulic hose 9.5 mm x 1.80 m

**Characteristics**

- For use with pump 755
- Filled with hydraulic oil

Item	Part No.	
Hydraulic hose 9.5 mm x 1.80 m	<b>50112899</b>	
Scope of supply	Part No.	Page
Hydraulic hose, 1.8 m	90507606	
Quick action coupling	90508238	
Dust cap	90541707	



### Hydraulic hose 6.4 mm x 0.9 m

**Characteristics**

- For use with hydraulic hand pump 767
- Without hydraulic oil

Item	Part No.	
Hydraulic hose 6.4 mm x 0.9 m	<b>50383167</b>	
Scope of supply	Part No.	Page
Hydraulic hose, 0.9 m	50063022	
Coupler plug	90541693	
Dust cap	90541707	



### Hydraulic oil

**Characteristics**

- Specially-developed for GREENLEE hydraulic tools

Item	Part No.
Hydraulic oil 3.8 l	<b>90510593</b>
Hydraulic oil 0.95 l	<b>90508068</b>





” *Now it's your turn.  
Greenlee cable pulling systems – the easy  
way for you to lay cables and conductors  
in various applications.“*



Cristina Garcia,  
Sales and Distribution

**Fish tapes/pulling rods 596**

Polyester	598
Perlon®	598
Nylon	599
Steel	599
Flex-O-Twist™ speed flex leader	599
Fibreglass cable pulling rods	600

**Cable pulling systems 601**

Speedy Spinner fibreglass	601
Flexi Spinner polyester	602
Oil-tempered spring steel fish tapes	602
Smart Butler fibreglass	605

**Cable puller 607**

Easy Roller cable drum unwinder	607
Cable puller	607

**Pulling grips 610**

Pulling grips, closed	610
Pulling grips, open	612

**Accessory 613**


*Pull by pull*

## **Installing cables.**

**Cable pulling systems for light and heavy duty cables.**

A host of technical solutions is available for cable pulling. These solutions vary greatly depending on the application or cable type. Our range offers solutions for light and heavy duty cables, and for long straight lines, angular channels or hollow spaces.



*The Easy Roller simplifies the rolling and unrolling of cable drums.*



- Fish tapes from polyester, perlon, nylon, steel, fibreglass.
- Fibreglass winches for civil and industrial applications.
- Cable pulling rods for cavities and suspended ceilings.
- Cable puller for pulling heavy cables.
- Cable unwinder and accessories for convenient operations.

*Ultra Tugger™:  
Use via floor device.*



## ■ For fast pulling in and out: *Speedy Spinner*.

- ▶ Fish tape lengths of 20, 30 and 40 m (Ø 3 mm).
- ▶ Fast pulling in and out with just one finger.
- ▶ Incl. extensive range of accessories and pulling aids.

### Benefits:

- ▶ Flexible fibreglass spring ensures smooth operations.
- ▶ Accessories cover enables cables to be pulled out on the floor.
- ▶ Low weight for simple handling.



## ■ Perfect buddy with pulling aid:

### *Polyester tapes*

- ▶ Extremely flexible and almost unbreakable.
- ▶ Available in lengths of 10, 15, 20, 25 and 30 m.
- ▶ Replaceable spring guide head and eye.

### Benefits:

- ▶ 50% less friction than nylon tapes.
- ▶ The higher thrust than nylon tapes makes installation easier.



Polyester tape in the winder housing

## ■ Strong supports: *Fibreglass pulling rods*.

- ▶ Extremely high tensile force.
- ▶ Practically unbreakable and extremely stable thanks to the special coating of the outer jacket.
- ▶ Flexible application with accessories such as LED lamp, chain, magnet, hook or adapter.

### Benefits:

- ▶ Effortless operations, as well as easier and faster pulling of cables in ceilings, cavity walls and under-floors.



## Fish tapes

## Polyester fish tapes green 4.5 mm



- ▶ 50% less friction than nylon tapes
- ▶ Extremely flexible and nearly unbreakable

**Characteristics**

- Drilled tape ensures high pressure thrust
- Facilitates pulling due to less friction
- Replaceable pulling eye and spring guide head

**Order info**

- Detailed information please find in application chart on page i-16

Length	Part No.	Diameter mm	
10 m	52055292	4,5	
15 m	52055293	4,5	
20 m	52055294	4,5	
25 m	52055295	4,5	
30 m	52055296	4,5	
Scope of supply		Part No.	Page
Pulling aid for pulling system 3 - 6 mm dia. (1)		52055311	602
Head with eye M5 (2)		52055398	602
Spring guide head with eye M5 7 mm dia.		52055397	602
Accessories		Part No.	Page
5-piece accessory set for polyester fish tapes		52055396	

## Perlon fish tapes 4 mm

**Characteristics**

- With pressed M4 guide head
- Spring guide head and pulling eye can be screwed off

**Order info**

- Detailed information please find in application chart on page i-16

Length	Part No.	Diameter mm	
5 m	52055276	4	
10 m	52055277	4	
15 m	52055278	4	
20 m	52055279	4	
25 m	52055280	4	
30 m	52055281	4	
Scope of supply		Part No.	Page
Comprising pulling eyes WW 1/2" (1) and spring guide head M4 (1)		52055288	598
Pulling eye M4			
Accessories		Part No.	Page
Comprising pulling eyes WW 1/2" (1) and spring guide head M4 (1)		52055288	



### Nylon fish tapes 4 mm

**Characteristics**

- With pressed spring guide head and pulling eye WW 1/4"

**Order info**

- Detailed information please find in application chart on page i-16

Length	Part No.	Diameter mm
5 m	52055270	4
10 m	52055271	4
15 m	52055272	4
20 m	52055273	4
25 m	52055274	4
30 m	52055275	4



### Steel fish tapes 4 mm

**Characteristics**

- With pressed spring guide head and pulling eye WW 1/4"

**Order info**

- Detailed information please find in application chart on page i-16

Length	Part No.	Diameter mm
5 m	52055282	4
10 m	52055283	4
15 m	52055284	4
20 m	52055285	4
25 m	52055286	4
30 m	52055287	4



### Flex-O-Twist™ speed flex leader

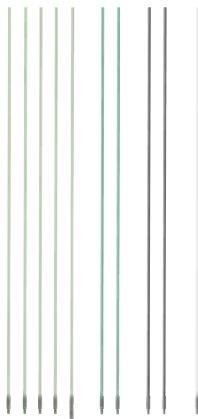
**Characteristics**

- Especially suitable for sharp bends
- Flexible fish tape leader

Length	Part No.
300 mm	50308599



## Fiberglass cable pulling rods



### Characteristics

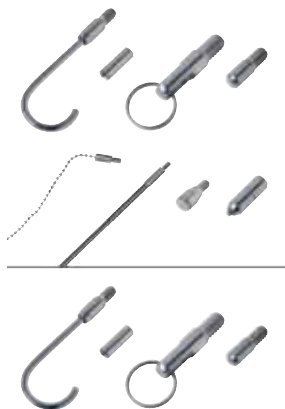
- Nearly unbreakable due to special outer sheath
- Time-saving cable laying
- Laying also under most difficult conditions

### Suitable for

- Cable installation and laying
- Pulling or pushing

Part No.	Version
<b>52055385</b>	Consists of: 4 pcs. light green fiberglass sticks 5.6 mm dia. with WW connecting bushing, 1 pc. light green fiberglass stick 5.6 mm dia. with WW connecting bushing and swivel joint, 2 pcs. black fiberglass sticks 6 mm dia. with WW connecting bushing, 2 pc
<b>52055386</b>	Consists of: 3 pce. light green fiberglass sticks 5.6 mm dia. with WW connecting bushing, 1 pce. black fiberglass stick 6 mm dia. with WW connecting bushing, 1 pce. white nylon stick 4 mm dia. with WW connecting

Accessories	Part No.	Page
Accessory set, 8-pcs.	52055387	
Accessory set, 4-pcs.	52055388	



## Speedy Spinner fibreglass cable pull system

- ▶ Unique, user-friendly design
- ▶ Easy and fast tape pay-out and rewind

### Characteristics

- Both hands operation
- Unrolling on floors also possible
- Flexible fibreglass spring for fast tape pay-out and rewind
- High pushing force
- Accessory set included in scope of supply

### Suitable for

- Tube diameter 16 - 32 mm

### Order info

- Detailed information please find in application chart on page i-16



Item	Diameter mm	Length	Part No.
Speedy Spinner fibreglass cable pull system, 20 m	3.0	20 m	<b>52055298</b>
Speedy Spinner fibreglass cable pull system, 30 m	3.0	30 m	<b>52055299</b>
Speedy Spinner fibreglass cable pull system, 40 m	3.0	40 m	<b>52055300</b>
Scope of supply	Part No.	Page	
Head with eye M5 for fibreglass tape 3 mm	52055304		
Spring guide head with eye M5 for fibreglass tape 3 mm	52055305		
Spring guide head with eye M5 - 10 mm for fibreglass tape 3 mm	52055306		
Starting leader joints M5	52055308		
Connecting sleeves for fibreglass 3 mm	52055309		
Cable grip 4 - 6 mm dia. for fibreglass tape	52055310		
Pulling aid for pulling system 3 - 6 mm (1)	52055311	602	

Accessories	Part No.	Page
Speedy Spinner fibreglass replacement tape, 20 m	52055289	
Speedy Spinner fibreglass replacement tape, 30 m	52055290	
Speedy Spinner fibreglass replacement tape, 40 m	52055291	
Speedy Spinner repair set, 10-piece	52055303	

### Flexi Spinner polyester cable pulling system



- ▶ Nearly unbreakable
- ▶ Approx. 50 % less frictional resistance as nylon and perlon
- ▶ High pushing force for large distances with narrow bends

#### Characteristics

- Highly-flexible polyester tape
- Modern design
- Rugged case

#### Order info

- Detailed information please find in application chart on page i-16

Item	Diameter mm	Length	Part No.	
Flexi Spinner polyester cable pull system, 20 m	4.5	20 m	<b>52055389</b>	
Flexi Spinner polyester cable pull system, 25 m	4.5	25 m	<b>52055390</b>	
Flexi Spinner polyester cable pull system, 30 m	4.5	30 m	<b>52055391</b>	
Flexi Spinner, winder case (empty)			<b>52055392</b>	
Scope of supply			Part No.	Page
Pulling aid for pulling system 3 - 6 mm dia. (1)			52055311	602
Head with eye M5 (2)			52055398	602
Spring guide head with eye M5 7 mm dia.			52055397	602

Accessories	Part No.	Page
Polyester fish tape green 4.5 mm dia., 20 m	52055294	598
Polyester fish tape green 4.5 mm dia., 25 m	52055295	598
Polyester fish tape green 4.5 mm dia., 30 m	52055296	598
Pulling aid for pulling system 3 - 6 mm dia. (1)	52055311	602
Head with eye M5 (2)	52055398	602
Spring guide head with eye M5 7 mm dia.	52055397	602

### MagnumPRO™ Oil-tempered spring steel fish tapes



#### Characteristics

- Winder case eases cable pulling
- Dirt-free tape finish
- High impact nylon winder case with large handle grip

#### Suitable for

- Pulling of cables over long distances

Item	Tape dimensions mm	Length	Part No.
MagnumPRO™ Oil-tempered spring steel fish tape 20 m	3.0 x 1.5	20 m	<b>52041709</b>
MagnumPRO™ Oil-tempered spring steel fish tape 30 m	6.3 x 1.5	30 m	<b>52041745</b>
MagnumPRO™ Oil-tempered spring steel fish tape 38 m	3.0 x 1.5	38 m	<b>52041741</b>
MagnumPRO™ Oil-tempered spring steel fish tape 73 m	3.0 x 1.5	73 m	<b>52041743</b>

Accessories	Part No.	Page
Rotating head eye for 3 mm fish tapes	50293672	
MagnumPRO™ Oil-tempered spring steel fish tape 60 m	52044594	

**MagnumPRO™ Stainless steel fish tapes**

- ▶ Stainless, speed flex leader
- ▶ Slim pulling eye permits trouble-free pulling in long and winding conduits

**Characteristics**

- Can be used in conjunction with every steel fish tape with a tape dimension of 3.0 x 1.5 mm
- High impact nylon winder case with large handle grip

Item	Tape dimensions mm	Length	Part No.
MagnumPRO™ Stainless steel fish tape, 30 m	3.0 x 1.5	30 m	<b>52041746</b>
MagnumPRO™ Stainless steel fish tape, 60 m	3.0 x 1.5	60 m	<b>52041747</b>

Accessories	Part No.	Page
Speed Flex leader for fish tapes with tape dimension 3.0 x 1.5 mm	50143921	603


**MagnumPRO™ Nylon fish tapes**

- ▶ Non conductive, curl resistant nylon tape for fast, clean fishing

**Characteristics**

- Diameter 4.8 mm
- High impact nylon winder case with large handle grip

Item	Diameter mm	Length	Part No.
MagnumPRO™ Nylon fish tape 4.8 mm dia., 15 m	4.8	15 m	<b>52041750</b>
MagnumPRO™ Nylon fish tape 4.8 mm dia., 30 m	4.8	30 m	<b>52041751</b>

Accessories	Part No.	Page
Replacement tip	50016644	603



### MagnumPRO™ Flexible steel fish tapes



#### Characteristics

- Made of multi-strand steel cable
- Flexible type
- For quick and simple application
- High impact nylon winder case with large handle grip

Item	Diameter mm	Length	Part No.
MagnumPRO™ Flexible steel fish tape, 15 m	4.8	15 m	<b>52041748</b>
MagnumPRO™ Flexible steel fish tape, 30 m	4.8	30 m	<b>52041749</b>

### MagnumPRO™ Fiberglass fish tapes



#### Characteristics

- Non-conductive fiberglass tape with low friction coating
- To fish in small and large conduits even with wire or cable in place
- High impact nylon winder case with large handle grip

#### Suitable for

- Data and telecommunication industry
- Pulling over distances from 15 m, 30 m, 45 m, 60 m, 76 m

Item	Diameter mm	Length	Part No.
MagnumPRO™ Fiberglass fish tape 4.5 mm dia., 15 m	4.5	15 m	<b>52041752</b>
MagnumPRO™ Fiberglass fish tape 4.5 mm dia., 30 m	4.5	30 m	<b>52041753</b>
MagnumPRO™ Fiberglass fish tape 4.8 mm dia., 60 m	4.8	60 m	<b>50357468</b>
MagnumPRO™ Fiberglass fish tape 4.8 mm dia., 76 m	4.8	76 m	<b>50357476</b>

Accessories	Part No.	Page
Fiberglass fish tape accessory set	50357506	
Pulling eyelet 3.0 mm	50359193	
Pulling eyelet 4.8 mm	50359304	

**Steel fish tape EZ Reach**
**Characteristics**

- With hand crank
- Flat steel tape for working above suspended ceilings, under carpets and through walls

**Suitable for**

- Pulling up to 7.5 m length

Item	Tape dimensions mm	Part No.
Steel fish tape EZ Reach 7.5 m	7,5 x 6	<b>50016962</b>


**Smart Butler fibreglass cable pulling system with steel reel**

- ▶ Unique, user-friendly design, galvanised and sprayed
- ▶ Teflon-coated adapter for low resistance when rolling up and out

**Characteristics**

- High pushing force
- Low-resistance winding and rewinding
- Secure working thanks to operative brake
- Effective working with accessory directly mounted on frame
- From steel reel 790 mm dia., incl. rollers



Item	Diameter mm	steel reel basket mm	Length	Weight kg	Version	Part No.
Smart Butler fibreglass cable pulling-in system 330 mm dia. steel reel basket, 40 m	4.5	Ø 330	40 m	4		<b>52055313</b>
Smart Butler fibreglass cable pulling-in system 330 mm dia. steel reel basket, 60 m	4.5	Ø 330	60 m	5		<b>52055315</b>
Smart Butler fibreglass cable pulling-in system 330 mm dia. steel reel basket, 80 m	4.5	Ø 330	80 m	6		<b>52055316</b>
Smart Butler fibreglass cable pulling-in system 550 mm dia. steel reel basket, 40 m	6.0	Ø 550	40 m	10		<b>52055325</b>
Smart Butler fibreglass cable pulling-in system 550 mm dia. steel reel basket, 60 m	6.0	Ø 550	60 m	11		<b>52055326</b>
Smart Butler fibreglass cable pulling-in system 550 mm dia. steel reel basket, 80 m	6.0	Ø 550	80 m	12		<b>52055327</b>
Smart Butler fibreglass cable pulling-in system 550 mm dia. steel reel basket, 100 m	6.0	Ø 550	100 m	12		<b>52055328</b>
Smart Butler fibreglass cable pulling-in system 660 mm dia. steel reel basket, 40 m	7.5	Ø 660	40 m	13		<b>52055337</b>
Smart Butler fibreglass cable pulling-in system 660 mm dia. steel reel basket, 60 m	7.5	Ø 660	60 m	14		<b>52055338</b>
Smart Butler fibreglass cable pulling-in system 660 mm dia. steel reel basket, 80 m	7.5	Ø 660	80 m	15		<b>52055339</b>

## Cable pulling systems

Item	Diameter mm	steel reel basket mm	Length	Weight kg	Version	Part No.
Smart Butler fiberglass cable pulling-in system 660 mm dia. steel reel basket, 100 m	7.5	Ø 660	100 m	17		<b>52055340</b>
Smart Butler fiberglass cable pulling-in system 660 mm dia. steel reel basket, 120 m	7.5	Ø 660	120 m	18		<b>52055341</b>
Smart Butler fiberglass cable pulling-in system 660 mm dia. steel reel basket, 40 m	9.0	Ø 660	40 m	14		<b>52055347</b>
Smart Butler fiberglass cable pulling-in system 660 mm dia. steel reel basket, 60 m	9.0	Ø 660	60 m	16		<b>52055348</b>
Smart Butler fiberglass cable pulling-in system 790 mm dia. steel reel basket, 80 m	9.0	Ø 790	80 m	31	incl. rollers	<b>52055349</b>
Smart Butler fiberglass cable pulling-in system 790 mm dia. steel reel basket, 100 m	9.0	Ø 790	100 m	33	incl. rollers	<b>52055350</b>
Smart Butler fiberglass cable pulling-in system 1000 mm dia. steel reel basket, 120 m	9.0	Ø 1000	120 m	35	incl. rollers	<b>52055351</b>
Smart Butler fiberglass cable pulling-in system 1000 mm dia. steel reel basket, 150 m	9.0	Ø 1000	150 m	37	incl. rollers	<b>52055352</b>
Smart Butler fiberglass cable pulling-in system 1000 mm dia. steel reel basket, 150 m	11.0	Ø 1000	150 m	53	incl. rollers	<b>52055359</b>
Smart Butler fiberglass cable pulling-in system 1000 mm dia. steel reel basket, 200 m	11.0	Ø 1000	200 m	60	incl. rollers	<b>52055360</b>
Smart Butler fiberglass cable pulling-in system 1000 mm dia. steel reel basket, 250 m	11.0	Ø 1000	250 m	67	incl. rollers	<b>52055361</b>
Smart Butler fiberglass cable pulling-in system 1000 mm dia. steel reel basket, 300 m	11.0	Ø 1000	300 m	75	incl. rollers	<b>52055362</b>

Scope of supply	Part No.	Page
4.5 / 6 mm dia.: Tension head with eyelet, pulling-in tape with pressed start/end sleeves, connecting sleeve WW 1/4"-M6, starting spinner with shackle		
7.5 / 9 / 11 mm dia. : Tension head with eyelet, fish tape with pressed start/end sleeves, connecting sleeve WW 1/2"-M12, starting spinner with shackle		

Accessories	Part No.	Page	Accessories	Part No.	Page
Smart Butler fiberglass replacement tape 4.5 mm dia., 40 m	52055317		Smart Butler fiberglass replacement tape 11 mm dia., 300 m	52055366	
Smart Butler fiberglass replacement tape 4.5 mm dia., 60 m	52055318		Starter and end bushing WW ¼" for fish tape 4.5 mm dia.	52055321	
Smart Butler fiberglass replacement tape 4.5 mm dia., 80 m	52055319		Starter and end bushing WW ¼" for fish tape 6.0 mm dia.	52055333	
Smart Butler fiberglass replacement tape 6 mm dia., 40 m	52055329		Starter and end bushing WW ½" for fish tape 7.5 mm dia.	52055369	
Smart Butler fiberglass replacement tape 6 mm dia., 60 m	52055330		Starter and end bushing WW ½" for fish tape 9 mm dia.	52055370	
Smart Butler fiberglass replacement tape 6 mm dia., 80 m	52055331		Starter and end bushing WW ½" for fish tape 11 mm dia.	52055371	
Smart Butler fiberglass replacement tape 6 mm dia., 100 m	52055332		Connecting sleeve for fiberglass 4.5 mm dia.	52055322	
Smart Butler fiberglass replacement tape 7.5 mm dia., 40 m	52055342		Connecting sleeve for fiberglass 6 mm dia.	52055334	
Smart Butler fiberglass replacement tape 7.5 mm dia., 60 m	52055343		Connecting sleeves for fiberglass tape 9 mm dia.	52055372	
Smart Butler fiberglass replacement tape 7.5 mm dia., 80 m	52055344		Connecting sleeves for fiberglass tape 11 mm dia.	52055373	
Smart Butler fiberglass replacement tape 7.5 mm dia., 100 m	52055345		Connecting sleeve WW 1/2" with rotary swivel	52055374	
Smart Butler fiberglass replacement tape 7.5 mm dia., 120 m	52055346		Bulb with shackle WW ¼" for 4.5 mm dia.	52055323	
Smart Butler fiberglass replacement tape 9 mm dia., 40 m	52055353		Bulb with shackle WW ¼" for 6.0 mm dia.	52055335	
Smart Butler fiberglass replacement tape 9 mm dia., 60 m	52055354		Bulb with shackle WW ½" for 7.5 mm dia.	52055367	
Smart Butler fiberglass replacement tape 9 mm dia., 80 m	52055355		Bulb with castor WW ½"	52055368	
Smart Butler fiberglass replacement tape 9 mm dia., 100 m	52055356		Tension head with eyelet WW 1/4" for 4.5 - 6 mm dia.	52055320	
Smart Butler fiberglass replacement tape 9 mm dia., 120 m	52055357		Emergency repair set for fiberglass tape 4.5 mm dia.	52055324	
Smart Butler fiberglass replacement tape 9 mm dia., 150 m	52055358		Emergency repair set for fiberglass tape 6 mm dia.	52055336	
Smart Butler fiberglass replacement tape 11 mm dia., 150 m	52055363		Emergency repair set for fiberglass tape 7.5 mm dia.	52055375	
Smart Butler fiberglass replacement tape 11 mm dia., 200 m	52055364		Emergency repair set for fiberglass tape 9 mm dia.	52055376	
Smart Butler fiberglass replacement tape 11 mm dia., 250 m	52055365		Emergency repair set for fiberglass tape 11 mm dia.	52055377	



**Easy Roller cable drum unwinder**

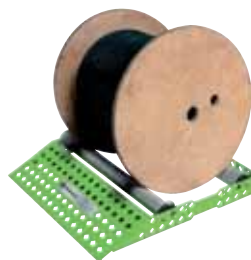
- ▶ Unique, user-friendly design
- ▶ 30 % less weight
- ▶ Ramp with shallow incline

**Characteristics**

- Light - 30% less weight
- Easy rolling up and out of heavy cable drums thanks to the ramp with shallow incline
- Rollers with integrated lateral guide
- Possible to fit to the cable drum diameter

**Suitable for**

- Large and small cable drums
- Width 500 mm, 250 kg carrying capacity
- Width 650 mm, 250 kg carrying capacity



Item	Dimension mm	Width mm	Part No.
Easy Roller cable roll-up drum, standard	530 x 570 x 90 mm	530	<b>52055383</b>
Easy Roller cable roll-up drum, wide	670 x 605 x 95 mm	670	<b>52055384</b>

**Ultra Tugger™ cable puller 6800-22 CE**

- ▶ Lightweight, portable cable puller
- ▶ Tapered capstan and patented rope guide system for better control of the rope when feeding onto the capstan
- ▶ Pulling force gauge for monitoring the max. pulling of 3.6 t

**Characteristics**

- Direct gear drive

Item	Part No.
Ultra Tugger™ cable puller 6800-22 CE	<b>50031961</b>
<b>Technical data</b>	
Maximum pulling force	3.6 t
Continuous output	3 t
Pulling rate	2.7 m/min at no load, 2.4 m/min at 900 kg load, 2.3 m/min at 1,800 kg load, 2.1 m/min at 2,700 kg load, 1.8 m/min at 3,600 kg load
Dimension	300 x 660 x 220 mm
Motor	230 V, 50 Hz
Scope of supply	Part No. Page
Pulling force gauge	50010697
Device for floor-mounting	50008650



## Cable puller

### Rope for cable puller 6800-22 CE



#### Characteristics

- Breaking strength approx. 14.2 t
- Rope diameter 22 mm
- Rope on rope stand

Item	Part No.
Rope for cable puller 6800-22 CE, 91 m long	50341367
Rope for cable puller 6800-22 CE, 182 m long	50341375
Rope for cable puller 6800-22 CE, 365 m long	50341383
Rope stand for ropes 91 and 182 m	50343629

### Tray type sheaves for cable puller 6800-22 CE



#### Characteristics

- Steel frames with forged hook 25 mm
- Sheaves from aluminum alloy with self-lubricating bearings
- Max. rated capacity 3.6 t
- For hooking

Item	External diameter mm	Internal radius mm	Width mm	Weight kg	Part No.
Tray type sheave 125 mm	300	100	125	12.0	50008722
Tray type sheave 150 mm	460	180	150	20.0	50008730
Tray type sheave 165 mm	600	250	165	30.0	50008749

### Cable tray rollers 125 mm



#### Characteristics

- Sheaves from aluminum alloy
- Self-lubricating bearings
- Steel frames for mounting to cable ducts up to 50 mm thickness

Item	Length mm	Width mm	Weight kg	Part No.
Cable tray rollers 125 mm	300	125	5.0	50153323
Cable tray rollers 125 mm	560	125	8.0	50190946

**Cable tray roller**
**Characteristics**

- Steel ball-bearings
- Steel frames
- Mounting slots
- Universal mounting brackets



Item	Version	Width of cable conduit mm	Weight kg	Part No.
Cable tray rollers 300 - 450 mm	Straight	300 - 450	3.6	<b>50273833</b>
Cable tray rollers 500 - 600 mm	Straight	500 - 600	4.5	<b>50273841</b>
Cable tray rollers 600 - 760 mm	Straight	600 - 760	5.9	<b>50273868</b>
Cable tray rollers 300 - 450 mm	Radius	300 - 450	5.0	<b>50273884</b>
Cable tray rollers 500 - 600 mm	Radius	500 - 600	5.4	<b>50273892</b>
Cable tray rollers 600 - 760 mm	Radius	600 - 760	5.9	<b>50273906</b>



## Pulling grips

## Pulling grips Junior, closed

**Characteristics**

- Single weave galvanized steel mesh with flexible pulling eyelet

**Suitable for**

- The pulling-in of small diameter cables
- For manual pulling of feed lines in pipes and cable ducts

Item	Length of mesh mm	Eye length mm	For cable diameter mm	Max. pulling force kN	Part No.
Pulling grips Junior, closed for cable diameters 5 - 6 mm	110	83	5 - 6	0.3	50305964
Pulling grips Junior, closed for cable diameters 7 - 9 mm	110	83	7 - 9	0.4	50305840
Pulling grips Junior, closed for cable diameters 10 - 12 mm	180	96	10 - 12	0.8	50305867
Pulling grips Junior, closed for cable diameters 13 - 15 mm	220	110	13 - 15	1.1	50305883
Pulling grips Junior, closed for cable diameters 16 - 18 mm	255	130	16 - 18	1.7	50305905
Pulling grips Junior, closed for cable diameters 19 - 25 mm	255	146	19 - 25	2.4	50305921
Pulling grips Junior, closed for cable diameters 26 - 31 mm	300	165	26 - 31	3.4	50305948

**T-Basket type pulling grips, closed**
**Characteristics**

- Double weave galvanized steel mesh with flexible pulling eyelet

**Suitable for**

- For medium-weight pulls in pipes and cable ducts



Item	Length of mesh mm	Eye length mm	For cable diameter mm	Max. pulling force kN	Part No.
Pulling grips type T, closed for cable dia. 13 - 15 mm	535	200	13 - 15	4.0	50305581
Pulling grips type T, closed for cable dia. 16 - 18 mm	610	200	16 - 18	4.9	50305603
Pulling grips type T, closed for cable dia. 19 - 25 mm	610	230	19 - 25	6.0	50305620
Pulling grips type T, closed for cable dia. 26 - 38 mm	610	230	26 - 38	8.7	50305646
Pulling grips type T, closed for cable dia. 39 - 50 mm	610	280	39 - 50	14.5	50305662
Pulling grips type T, closed for cable dia. 51 - 63 mm	610	300	51 - 63	16.4	50305689
Pulling grips type T, closed for cable dia. 64 - 76 mm	610	300	64 - 76	21.7	50305700
Pulling grips type T, closed for cable dia. 77 - 88 mm	610	360	77 - 88	21.7	50305727
Pulling grips type T, closed for cable dia. 89 - 100 mm	660	360	89 - 100	27.5	50305743
Pulling grips type T, closed for cable dia. 19 - 25 mm	915	230	19 - 25	6.0	50305760
Pulling grips type T, closed for cable dia. 26 - 38 mm	915	230	26 - 38	8.7	50305786
Pulling grips type T, closed for cable dia. 39 - 50 mm	915	280	39 - 50	14.5	50310100
Pulling grips type T, closed for cable dia. 51 - 63 mm	915	300	51 - 63	16.4	50305808
Pulling grips type T, closed for cable dia. 64 - 76 mm	915	300	64 - 76	21.7	50310127
Pulling grips type T, closed for cable dia. 77 - 88 mm	915	360	77 - 88	21.7	50305824
Pulling grips type T, closed for cable dia. 89 - 100 mm	1020	360	89 - 100	27.5	50310143

## Pulling grips

### Pulling grip set, closed



#### Characteristics

- Set of the most important pulling grips for the most frequently required pulling operations

Item	Diameter mm	Part No.
Pulling grip set 50305840, 50305876, 50305883, 50305905, 50305921, 50305948	7 - 31	<b>50307584</b>
Pulling grip set 50305760, 50305786, 50310100	19 - 50	<b>50314823</b>
Pulling grip set 50305808, 50310100, 50310127	51 - 76	<b>50314831</b>
Pulling grip set 50305760, 50305786, 50305808, 50310100, 50310127	19 - 76	<b>50314840</b>

### Pulling grip, open



#### Characteristics

- Single woven galvanised steel netting mesh with bar closure
- Offset flexible eyelet

#### Suitable for

- Easy and straight pulls when the cable end is not available

Item	Length of mesh mm	Eye length mm	For cable diameter mm	Max. pulling force kN	Part No.
Pulling grip open, for cable diameters 13 - 15 mm	150	175	13 - 15	1.3	<b>50306588</b>
Pulling grip open, for cable diameters 16 - 18 mm	200	175	16 - 18	1.6	<b>50310240</b>
Pulling grip open, for cable diameters 19 - 25 mm	250	175	19 - 25	1.9	<b>50306600</b>
Pulling grip open, for cable diameters 26 - 31 mm	300	200	26 - 31	3.0	<b>50310267</b>
Pulling grip open, for cable diameters 32 - 38 mm	350	200	32 - 38	4.0	<b>50306626</b>
Pulling grip open, for cable diameters 39 - 44 mm	380	230	39 - 44	5.1	<b>50310283</b>
Pulling grip open, for cable diameters 45 - 50 mm	400	250	45 - 50	6.7	<b>50306642</b>
Pulling grip open, for cable diameters 51 - 63 mm	480	250	51 - 63	8.0	<b>50310305</b>
Pulling grip open, for cable diameters 64 - 76 mm	500	250	64 - 76	9.7	<b>50306669</b>
Pulling grip open, for cable diameters 77 - 88 mm	530	300	77 - 88	10.6	<b>50310321</b>
Pulling grip open, for cable diameters 89 - 100 mm	600	300	89 - 100	10.6	<b>50306685</b>

**Cable Cream™ cable puller lubricant**
**Characteristics**

- Adheres well without dripping
- Easy to remove
- Compatible with all cable insulation types
- Environmentally safe / non-hazardous

Item	Part No.
Cable Cream™ cable puller lubricant 0.95 l	50352075
Cable Cream™ cable puller lubricant 3.8 l	50352083


**Cable installation lubricant**
**Characteristics**

- Reduces friction by up to 80 %
- Biodegradable
- Harmless to the user

**Suitable for**

- Electric/telephone cables in pipes Ø 16 - 25 mm
- Large cable diameters

Item	Part No.
Cable lubricant gel in tube 0.25 kg	52055379
Cable lubricant gel in bottle 1 kg	52055380
Cable lubricant liquid for optical fibres and power cables, canister 5 kg	52055381
Cable lubricant liquid for optical fibres and power cables, canister 10 kg	52055382


**Lubricant foam spray**
**Characteristics**

- Reduces friction by up to 80 %
- Biodegradable
- Harmless to the user
- Silicon-free

**Suitable for**

- Electric/telephone cables in pipes Ø 16 - 25 mm

Item	Part No.
Lubricant foam bottle 400 ml	52055378



” Believe your eyes: Testing and measuring instruments from Greenlee deliver highly-precise readings every single day. We guarantee this with the Limited Lifetime Warranty.“



Sebastian Hoppe,  
Quality Assurance



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## Measuring and testing up to 1000 V.

### Voltage testers for distribution boards, meters, control panels etc.

Fast testing for the presence of voltage. Suitable for measuring DC or AC voltage.

Some of the devices output warning signals, some feature a patented phase sequence indicator display. The voltage ranges are from 5 to 1000 volts, depending on the device and the testing category.

**If handled correctly, we offer a lifetime limited warranty on these products.**



- For fast contactless voltage testing (EF function).
- For DC and AC voltage.
- Also with polarity display.
- Detachable measuring tips for a range of applications.
- FI resolution function.
- 2-pole rotary field display, 1-pole phase test.
- Continuity test.
- Voltage measurement without battery.

## Fast testing at AC voltage 5 – 1000 Volt: GT-16

- ▶ Fast and contactless testing with adjustable sensitivity.
- ▶ With an optical and acoustic signal.
- ▶ Integrated On/Off switch.
- ▶ Handy pin design for any jacket pocket.

### Benefits:

- ▶ Fast and easy testing of various voltage ranges.
- ▶ Increased battery life by disabling the stand-by function.
- ▶ The voltage tester is always to hand.



## Includes phase sequence indicator display: GT-85NE



- ▶ With patented phase sequence indicator display.
- ▶ Also for resistance measurements.
- ▶ With diode test.
- ▶ **Removable tips.**

### Benefits:

- ▶ Just one measuring device for several types of measurement.
- ▶ Flexible application with wall outlets, Schuko-compatible (19 mm clearance) and terminals.
- ▶ Unique measuring point illumination for working in poor lighting conditions.

## Features of testers

	Voltage range	Category/ voltage	Contactless	Display	FI resolution	Phase rotation display	Continuity test	Single pole phase test	Measurement without battery
GT-12A	50 - 1000 AC	CAT IV / 1000 V	✓	LED					
GT-16	5 - 1000 AC	CAT IV / 1000 V	✓	LED					
GT-55NE	6 - 690V AC/DC	CAT III / 1000 V CAT IV / 600 V		LED	✓	✓	✓	✓	✓
GT-85NE	6 - 690V AC/DC	CAT III / 1000 V CAT IV / 600 V		LCD	✓	✓	✓	✓	✓

Voltage testers

**GT-12A Contactless voltage tester 50 - 1000 V**



**Characteristics**

- Fast, easy, contactless voltage testing
- Clear LED and acoustic warning signal when the voltage has been determined
- ON/OFF switch provides longer battery service life
- Handy pen format, which fits easily into a jacket or tool pocket
- Rubber-coated comfort handle
- Fast, easy replacement of batteries
- Automatic self test

Technical data		
Frequency range	50 - 500 Hz	
Voltage range	50 - 1000 V AC	
Measuring category	CAT IV 1000V	
Item	Part No.	
GT-12A Contactless voltage tester 50 - 1000 V	52063422	
Scope of supply	Part No.	Page
Battery 2 x 1.5 V AAA		

**GT-16 Adjustable, contactless voltage tester 5 - 1000 V**



**Characteristics**

- Fast, easy, contactless voltage testing
- Clear LED and acoustic warning signal when the voltage has been determined
- ON/OFF switch provides longer battery service life
- Handy pen format, which fits easily into a jacket or tool pocket
- Ergonomically shaped comfort handle
- Fast, easy replacement of batteries
- Automatic self test
- Adjustable sensibility by rotary switch

Technical data		
Frequency range	50 - 500 Hz	
Voltage range	5 - 1000 V AC	
Measuring category	CAT III 600V, CAT IV 1000V	
Item	Part No.	
GT-16 Adjustable, contactless voltage tester 5 - 1000 V	52033580	
Scope of supply	Part No.	Page
Battery 1 x 1.5 V AAA		

**GT-55NE Bipolar voltage tester with LED display**
**Characteristics**

- LED display 12, 24, 50, 120, 230, 400, 750 V AC/DC
- Power LED for measuring point illumination
- Display of AC and DC voltage
- Bipolar rotary field testing
- Unipolar phase testing, optical and acoustic
- Continuity check, optical and acoustic
- Diode test
- Polarity indicator, loud beeper
- IP 2X contact protection
- IP 65 spray water protected and dust-proof



Technical data		
Voltage range	12 - 750 V AC/DC	
Frequency	45 - 65 Hz	
Measuring category	CAT III 1000V, CAT IV 600V	
Item	Part No.	
GT-55NE bipolar voltage tester with LED display	<b>52049408</b>	
Scope of supply	Part No.	Page
Battery 2 x 1.5 V AAA		

Accessories	Part No.	Page
TC-30 Nylon carrying case for measuring instruments with belt loop	50075365	645
Replacement tips	52034234	

**GT-85NE Bipolar voltage tester with LCD display**
**Characteristics**

- LCD display with background illumination
- Actual resistance measurement up to 2 K $\Omega$
- Power LED for measuring point illumination
- Display of AC and DC voltage
- Bipolar rotary field testing
- Unipolar phase testing, optical and acoustic
- Continuity check, optical and acoustic
- Diode test
- Polarity indicator, loud beeper
- IP 2X contact protection
- IP65 - spray water protected and dust-proof



Technical data		
Voltage range	12 - 750 V AC/DC	
Resistance	0 - 2 K $\Omega$	
Frequency	0 - 65 Hz	
Measuring category	CAT III 1000V, CAT IV 600V	
Item	Part No.	
GT-85NE Bipolar voltage tester with LCD display	<b>52049407</b>	
Scope of supply	Part No.	Page
Battery 2 x 1.5 V AAA		

Accessories	Part No.	Page
TC-30 Nylon carrying case for measuring instruments with belt loop	50075365	645
Replacement tips	52034234	

## Digital *all-rounder.*

### Multimeters for every application.

Measuring, detecting, testing: These terms can be used to describe the complex performance spectrum of our digital multimeters. Their numerous functions make these devices genuine all-rounders.

The following areas reflect various applications of the multimeters:

- ▶ Multimeter for electrical and telecommunication.
- ▶ For vehicle electrics.
- ▶ For air-conditioning systems.
- ▶ For laboratory and field use.

**If handled correctly, we offer a lifetime limited warranty on these products.**



- For DC and AC.
- For DC and AC voltage.
- With digital and analogue display.
- For measuring categories II, III and IV.
- With true effective value measurement.
- For frequency, capacity and resistance measurement.



## Specifically for electricians: DM-200A

- ▶ Optical RS 232 and USB interface.
- ▶ Automatic range selection and data hold function.
- ▶ **Contactless voltage detection** (EF function).
- ▶ Large, backlit display.
- ▶ Automatic shut-off.

### Benefits:

- ▶ Fast simple and contactless testing of the presence of voltage.
- ▶ The automatic range selection function enables optimised measured value read-off at all times.
- ▶ Measured values transferred straight to a PC through the optical RS232 interface and USB cable.



## Outstanding measuring accuracy and versatile applications: DM-860A



- ▶ 5  $\frac{1}{6}$ -digit display with a display range of 500,000.
- ▶ Temperature, frequency and capacity measurement.
- ▶ **TRUE RMS effective value measurement.**

### Benefits:

- ▶ Extremely accurate when recording and displaying the measured values.
  - ▶ The broad spectrum in temperature measurements enables use in air-conditioning systems, in laboratories or in industries.
  - ▶ Quick fault diagnosis by measuring the true effective value.
- ▶ *More on Page 632.*

## TRUE RMS: precise measurement, even when consumption fluctuates.

- ▶ TRUE RMS - true effective value measurement is a special function of some GREENLEE multimeters. This function enables correct consumption measurement with non-linear - i.e. sinusoidal - consumption.

### Benefits:

- ▶ True consumption measurements without errors through sinusoidal consumers.
- ▶ More reliable planning and lower error quotas - caused for example by incorrectly calculated current consumption.
- ▶ **Devices with TRUE RMS: DM-510A, DM-810A, DM-820A and DM-860A.**



**Robust and high capacity for industrial use: DM-65.**

- ▶ The most diverse applications.
- ▶ Large **backlit display with bar chart.**

**Benefits:**

- ▶ Suitable for applications to CAT IV, 600 V.
- ▶ The large illuminated display simplifies read-off under all lighting conditions.

▶ *More on Page 626.*

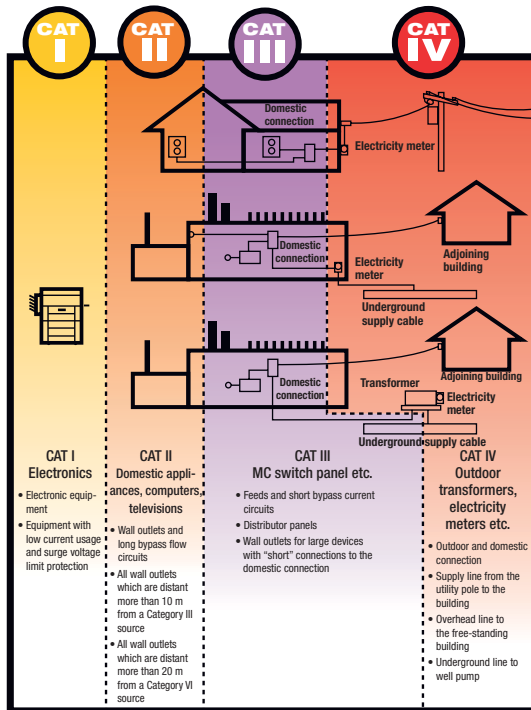


**Features of testers**

	True effective value	DC A (A max.)	AC A (A max.)	DC V (V max.)	AC V (V max.)	Resistance (M $\Omega$ )	Optical interface	Automatic and manual range selection	Contactless voltage testing	Measuring category
DM-25				600	600	2				III, 600 V
DM-45		10	10	600	600	40		✓		III, 600 V
DM-65		10	10	1000	1000	60		✓		III, 1000 V IV, 600 V
DM-200A		8	8	1000	1000	60	✓	✓	✓	IV, 300 V III, 600 V II, 1000 V
DM-210A		8	8	1000	1000	60	✓	✓	✓	IV, 300 V III, 600 V II, 1000 V
DM-510	✓	8	8	1000	1000	60	✓	✓	✓	IV, 300 V III, 600 V II, 1000 V
DM-810A	✓	10	10	1000	1000	50	✓	✓	✓	IV, 1000 V
DM-820A	✓	10	10	1000	1000	50	✓	✓	✓	IV, 1000 V
DM-860A	✓	10	10	1000	1000	50	✓	✓		IV, 1000 V



# What you should know about the nominal capacities of the measuring categories.



Protective values which greatly exceed the nominal capacity of a system are stipulated in the standards of the IEC categories. Without this additional protection, transient overvoltages which occur with increasing regularity may cause serious or fatal injuries.



## ■ Measurement Category I

is the signal level for telecommunications and electronic equipment.

## ■ Measurement Category II

is the local level for permanently connected devices or devices not operated by means of a fixed connection - including all types of illumination from household devices to office equipment such as copy machines. Can also be used in Category I ranges.

## ■ Measurement Category III

is the distribution level for fixed main or bypass flow circuits. These electric circuits are usually separated by at least one level of transformer barrier of Category IV (public utility or other high-voltage power source). Can also be used in Category II and Category I ranges.

## ■ Measurement Category IV

is the main electric supply level. Greenlee is setting new standards by offering equipment that meets the highest protective values of IEC standards and which are certified accordingly. Can be used in all category ranges.

**Greenlee equipment** – tested and certified for compliance with norms by an independent party. This catalogue states the category for many Greenlee devices, indicating that these devices comply with the various IEC categories (II, III or IV). All these references represent the categories confirmed in tests by independent testing organisations – giving you additional assurance.

### The right type of protection for the task at hand.

No matter where you may need overvoltage protection – select a device which has at least the nominal capacity suitable for the work you are carrying out.



Digital multimeter

## DM Series in detail



Part No.	52059476	52059477	52059478	52047801	52047802	52047803
Catalog-no.	DM-25	DM-45	DM-65	DM-200A	DM-210A	DM-510A
True RMS						•
DC A (A max.)		10	10	8	8	8
Maximum resolution (µA)		0.1	0.1	0.1	0.1	0.1
Best accuracy (%)		1.0	1.0	0.5	0.8	0.5
AC A (A max.)		10	10	8	8	8
Maximum resolution (µA)		0.1	0.1	0.1	0.1	0.1
Best accuracy (%)		1.8	1.8	1.0	1.0	1.0
DC V (V max.)	600	600	1000	1000	1000	1000
Maximum resolution (µV)	10 mV	100	100	10	10	10
Best accuracy (%)	0.8	0.8	0.8	0.2	0.2	0.2
AC V (V max.)	600	600	1000	1000	1000	1000
Maximum resolution (µV)	100 mV	1000	1000	10	10	10
Best accuracy (%)	1.2	0.8	0.8	1.0	1.0	1.0
Resistance (MΩ)	2	40	60	60	60	60
Maximum resolution (mΩ)	100	100	100	100	100	100
Best accuracy (%)	1.0	1.0	1.0	0.5	0.5	0.5
Continuity and beeper	•	•	•	•	•	•
Diode test	•	•	•	•	•	•
Capacitance		200 µF	400 µF		•	•
Frequency measurement		•	•	•	•	•
Frequency response (Hz)	40-400	40-400	40-400	40-500	40-500	40-500
Temperature (T1)		•	•		•	•
Display type	Digital	Digital	Digital	Digital	Digital	Digital
Display of updating rate (x/s)	2.5	3.0	3.0	5	5	5
Coverage	2000	4000	6000	2500	2500	2500
Analogue bar chart			•	24	24	24
Updating rate analogue (x/s)				40	40	40
Computer Interface				USB, RS 232	USB, RS 232	
Automatic and manual range selection		•	•	•	•	•
Automatic stop		•	•	•	•	•
Non-contact voltage detection				•	•	•
Data Hold (measured data memory)		•	•	•	•	•
Minimum value / maximum value						
Relative compensation function				•	•	•
Measurement category rating	CAT III 600 V	CAT III 600 V	CAT III 1000 V CAT IV 600 V	CAT II 1000 V CAT III 300 V CAT IV 600 V	CAT II 1000 V CAT III 300 V CAT IV 600 V	CAT II 1000 V CAT III 300 V CAT IV 600 V
CE	•	•	•	•	•	•
Limited lifetime warranty	•	•	•	•	•	•

**DM-25 Digital multimeter 600 V AC/DC**
**Characteristics**

- AC/DC voltage measurement
- Resistance measurement
- Audible continuity test
- Diode test

Technical data		
Display	Digital	
Voltage measurement	0.1 - 600 V	
Resistance	0.1 Ω - 2 MΩ	
Measuring category	CAT III 600V	
Item	Part No.	
DM-25 Digital multimeter 600 V AC/DC	<b>52059476</b>	
Scope of supply	Part No.	Page
Test leads		
Battery 9 V		
Protective cover		


**DM-45 Digital multimeter 600 V AC/DC with temperature measurement**
**Characteristics**

- AC/DC voltage and current measurement
- Resistance measurement
- Audible continuity testing, diode test, temperature measurement
- Frequency and capacitance measurement

Technical data		
Display	Digital	
Capacitance	10 pF - 200 μF	
Voltage measurement	1 mV - 600 V	
Current measurement	0.10 μA - 10 A	
Resistance	0.1 Ω - 40 MΩ	
Frequency	1 Hz - 9.999 MHz	
Measuring category	CAT III 600V	
Temperature measurement	-20°C - 1000°C	
Item	Part No.	
DM-45 Digital multimeter 600 V AC/DC with temperature measurement	<b>52059477</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
Temperature probe		
Protective cover		
Battery 9 V		



Digital multimeter

## DM-65 Digital multimeter 1000 V AC/DC with temperature measurement



### Characteristics

- AC/DC voltage and current measurement
- Resistance measurement
- Audible continuity testing, diode test, temperature measurement
- Frequency and capacitance measurement

Technical data		
Display	Digital with bar chart	
Capacitance	10 pF - 400 µF	
Voltage measurement	1 mV - 1000 V	
Current measurement	0.1 µA - 10 A	
Resistance	0.1 Ω - 60 MΩ	
Frequency	1 Hz - 9.999 MHz	
Measuring category	CAT III 1000 V, CAT IV 600 V	
Temperature measurement	-20°C - 1000°C	
Item	Part No.	
DM-65 Digital multimeter 1000 V AC/DC	<b>52059478</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
Temperature probe		
Protective cover		
Battery 9 V		

**DM-200A / DM-210A Digital multimeter**
**Characteristics**

- PC interface
- Automatic and manual range selection
- Large, backlit LC-display
- Automatic stop
- Analogue bar chart
- Optical and audible warning in the event of incorrect handling



Technical data	52047802	
Item	DM-200A Digital multimeter for temperature measurement K-type, -4 °F - 572 °F	DM-210A Digital multimeter for temperature measurement -50 °C - 1000 °C
Voltage measurement	0.01 mV - 1000V AC/DC	0.01 mV - 1000V AC/DC
Current measurement	0.1 μA - 8A AC/DC	0.1 μA - 8A AC/DC
Resistance	0.1 Ω - 60 MΩ	0.1 Ω - 60 MΩ
Frequency	10 Hz - 50 kHz sine wave; 5 Hz - 1 MHz logic levelsquare wave	10 Hz - 50 kHz sine wave; 5 Hz - 1 MHz logic levelsquare wave
Measuring category	CAT II 1000V, CAT III 600, CAT IV 300	CAT II 1000V, CAT III 600, CAT IV 300
Capacitance		60 nF - 3000 μF
Frequency pickup		50 Hz - 400 Hz
Temperature measurement		-50 °C - 1000 °C



Item	Part No.	
DM-200A Digital multimeter for temperature measurement K-type, -4 °F - 572 °F	<b>52047801</b>	
DM-210A Digital multimeter for temperature measurement -50 °C - 1000 °C	<b>52047802</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
Protective cover		
Battery 2 x 1.5 V AAA		

Digital multimeter

## DM-510A Digital multimeter, True RMS



### Characteristics

- Autocheck function permits the automatic selection of AC V / DC V or resistance with low impedance for Ghost-Voltage-Removal
- PC interface
- Frequency, temperature and capacitance measurement
- Automatic and manual range selection
- Large, backlit LC-display
- Automatic stop
- Analogue bar chart
- Optical and audible warning in the event of incorrect handling

Technical data		
Capacitance	60.00nF - 3000µF	
Voltage measurement	0.01 mV - 1000 V AC/DC	
Frequency pickup	50Hz - 400Hz	
Current measurement	0.1µA - 8A AC/DC	
Resistance	0.1Ω - 60MΩ	
Frequency	5 Hz - 1 MHz	
Measuring category	CAT III 600V; CAT II 1000V; CAT IV 300 V	
Temperature measurement	-50°C - 1000°C	
Item	Part No.	
DM-510A Digital multimeter, True RMS	<b>52047803</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
Temperature sensor, bright finish		
Battery 2 x 1.5 V AAA		
Accessories	Part No.	Page
TC-20 Nylon carrying case with carrying strap for measuring instruments	50075357	633
DMSC-2U Interface kit, for downloading data	52047947	633

**DM-800 Series in detail**


Part No.	52047805 DM-810A	52047806 DM-820A	50077970 DM-860A
True RMS	•	•	•
DC A (A max.)	10	10	10
Maximum resolution (µA)	0.1	0.1	0.01
Best accuracy (%)	0.2	0.2	0.1
AC A (A max.)	10	10	10
Maximum resolution (µA)	0.1	0.1	0.01
Best accuracy (%)	0.6	0.6	0.5
DC V (V max.)	1000	1000	1000
Maximum resolution (µV)	10	10	1
Best accuracy (%)	0.06	0.06	0.02
AC V (V max.)	1000	1000	1000
Maximum resolution (µV)	10	10	10
Best accuracy (%)	0.5	0.5	0.3
Resistance (MΩ)	60	60	50
Maximum resolution (mΩ)	100	100	10
Best accuracy (%)	0.1	0.1	0.07
Continuity and beeper	•	•	•
Diode test	•	•	•
Capacitance	•	•	•
Frequency measurement	•	•	•
Frequency response (Hz)	40-500	40-500	20-100 k
Temperature (T1)			•
Temperature (Dual T1, T2)			•
Display type	Digital	Digital	Digital
Display of updating rate (x/s)	5	5	5
Coverage			50.000 AC/500.000
Analogue bar chart	•	•	•
Updating rate analogue (x/s)	41	41	41 segments
Updating rate analogue (x/s)	60	60	60
Conductance 0.01 nS ~ 100 nS	•	•	•
Computer Interface	USB	USB	USB
Automatic and manual range selection	•	•	•
Automatic stop			yes
Peak hold			•
Data Hold (measured data memory)	•	•	•
Minimum value / maximum value			yes
Relative compensation function	•	•	•
Operating clearance			•
Safety category classification	CAT IV 1000 V	CAT IV 1000 V	CAT IV 600 V CAT III 1000 V
CE	•	•	•
Limited lifetime warranty	•	•	•

Digital multimeter

## DM-810A Digital multimeter, True RMS



### Characteristics

- PC interface
- Automatic and manual range selection
- Large, backlit LC-display
- Automatic stop
- Analogue bar chart
- Optical and audible warning in the event of incorrect handling

Technical data		
Capacitance	0,01 nF - 25 mF	
Voltage measurement	0,01 mV - 1000 V AC/DC	
Current measurement	0.1µA - 10A AC/DC	
Resistance	0.1Ω - 60MΩ	
Frequency	5 Hz - 1 MHz	
Measuring category	CAT IV, 1,000V	
Item	Part No.	
DM-810A Digital multimeter, True RMS	<b>52047805</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
TC-20 Nylon carrying case with carrying strap for measuring instruments	50075357	633
Battery 9 V		
Accessories	Part No.	Page
DMSC-9U Interface kit, for downloading data	52047948	633
TSGF Measuring cable set with fuses (500 mA) CAT IV 1,000V	52034235	644



**DM-820A Digital multimeter, True RMS**
**Characteristics**

- PC interface (DMSC-9U) USB cable and software for data logging via PC software (accessories optional)
- Recording of peak value (5 ms peak hold) max, min and max/min results
- Automatic and manual range selection
- Large, backlit LC-display
- Automatic stop
- Analogue bar chart
- Optical and audible warning in the event of incorrect handling



Technical data		
Capacitance	0,01 nF - 25 mF	
Voltage measurement	0,01 mV - 1000 V AC/DC	
Current measurement	0.1µA - 10A AC/DC	
Resistance	0.1Ω - 60MΩ	
Frequency	5 Hz - 1 MHz	
Measuring category	CAT IV, 1,000V	
Temperature measurement	-50°C - 1000°C	
Item	Part No.	
DM-820A Digital multimeter, True RMS	<b>52047806</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
TC-20 Nylon carrying case with carrying strap for measuring instruments	50075357	633
Battery 9 V		
Temperature sensor, bright finish		
Accessories	Part No.	Page
TSGF Measuring cable set with fuses (500 mA) CAT IV 1,000V	52034235	644
DMSC-9U Interface kit, for downloading data	52047948	633

Digital multimeter

**DM-860A Industrial digital multimeter, True RMS**

**Characteristics**

- Recording of maximum, minimum and maximum/minimum results
- Recording of peak value (peak hold) max, min and max/min display
- 5 5/6-place display with a display range of 500,000 for greater precision
- Carrying out frequency, temperature and capacitance measurements as well as diode tests and continuity checks
- Display of the relative measured value offset for checking the relative measured value changes
- Automatic range selection
- Analogue 42-segment bar chart
- Large, backlit LC-display
- Temperature measurements up to 1000 °C

Technical data		
Capacitance	50.00; 500.0nF; 5.000, 50.00, 500.0µF, 5000, 25.00mF	
Voltage measurement	500 mV - 1000 V	
Current measurement	500.00, 5000.0µA; 50.000, 500.00mA; 5.0000, 10.000A	
Resistance	500.00Ω; 5.0000, 50.000, 500.00kΩ; 5.0000, 50.000MΩ	
Frequency	5 Hz - 200 kHz sinus wave; 5 Hz - 2 MHz square wave logic level	
Measuring category	CAT IV 1000V	
Temperature measurement	K-type, -50 °C to 1,000°C (-58°F - 1832°F)	
Item	Part No.	
DM-860A Industrial digital multimeter, True RMS	<b>50077970</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
TC-20 Nylon carrying case with carrying strap for measuring instruments	50075357	633
Battery 9 V		
Temperature sensor, bright finish		
Accessories	Part No.	Page
DMSC-9U Interface kit, for downloading data	52047948	633
TSGF Measuring cable set with fuses (500 mA) CAT IV 1,000V	52034235	644

### DMSC-2U Interface kit, for downloading data (DM-200A, DM-210A, DM-510A)

**Characteristics**

- For connecting to a serial PC port for saving the data recorded by digital multimeters
- For recording and graphically representing data in real time
- For exporting data for analysis with every type of table calculation program

Technical data	
Connection	Free series COM connector with 9-pin plug/USB.
Monitor	Minimum resolution 640 x 480, 800 x 600 recommended
Fixes disc	Minimum 20 megabyte free memory
Hardware requirements	Processor and working memory must correspond at least to the requirements of Windows
Software requirements	Windows ME/98/95 or Windows XP/2000/NT4/Vista
Item	Part No.
DMSC-2U Interface kit, for downloading data	<b>52047947</b>



### DMSC-9U Interface kit, for downloading data (DM-810A / DM-820A / DM-860)

**Characteristics**

- For connecting to a serial PC port for saving the data recorded by digital multimeters
- For recording and graphically representing data in real time
- For exporting data for analysis with every type of table calculation program

Technical data	
Connection	Free series COM connector with 9-pin plug/USB
Monitor	Minimum resolution 640 x 480, 800 x 600 recommended
Fixes disc	Minimum 20 megabyte free memory
Hardware requirements	Processor and working memory must correspond at least to the requirements of Windows
Software requirements	Windows ME/98/95 or Windows XP/2000/NT4/Vista
Item	Part No.
DMSC-9U Interface kit, for downloading data	<b>52047948</b>



### TC-20 Nylon carrying case with carrying strap for measuring instruments

**Characteristics**

- With inner pocket for test leads

**Suitable for**

- Series 200, Series 500 and Series 800 measuring instruments

Item	Part No.
TC-20 Nylon carrying case with carrying strap for measuring instruments	<b>50075357</b>



## Take the current to the meter.

### Clamp meters for DC and AC.

Our clamp meters are set apart by their versatile functions. The displays allow measured values to be read quickly, even under difficult conditions.

Most devices conform to IEC CAT IV and are able to safely measure currents up to 1,000 A.

**If handled correctly, we offer a lifetime limited warranty on these products.**



- For DC and AC.
- For DC and AC voltage.
- With digital and analogue display.
- For measuring categories III and IV.
- With true effective value measurement.



*Clamp meters available for diverse applications and conductor diameters.*

## ■ Also suitable for DC: CM-950

- ▶ Instrument for measuring direct and alternating voltage and direct and alternating current.
- ▶ With **double hall sensor for optimised accuracy** with direct current measurements.
- ▶ With residual compensation during direct current measurements.

### Benefits:

- ▶ Just one measuring device for both DC and AC.
- ▶ Highly accurate measurements.
- ▶ Measuring errors are practically impossible.



## ■ Analogue bar display for fast indication: CM-1300

- ▶ Also with analogue display.
- ▶ **With acoustic continuity test.**

### Benefits:

- ▶ Variances are indicated immediately as the analogue bar display responds faster than conventional digital displays.
- ▶ Fast testing of contact faults with the acoustic continuity function.



## ■ Measures direct and alternating current to 1000 A: CM-1550

- ▶ Approved for measuring categories CAT III and CAT IV.
- ▶ For DC and AC.
- ▶ **For true effective value measurement** even with distorted current flows.

### Benefits:

- ▶ Current measurements in all application ranges up to 1000 A.
- ▶ Safe and accurate voltage and current measurement thanks to true RMS effective value measurement.



## ■ Features of clamp meters.

	True effective value	DC A (A max.)	AC A (A max.)	DC V (V max.)	AC V (V max.)	Resistance (Ω)	Frequency Hz	Bar display	Measuring category
CM-330			400						III, 600 V
CM-410			400	600	600	2000			III, 600 V
CM-600			600		600	2000			III, 600 V
CM-800			600	600	600	400	✓	✓	III, 600 V
CM-850	✓		600	600	600	400	✓	✓	III, 600 V
CM-900		600	600	600	600	400	✓	✓	III, 600 V
CM-950	✓	600	600	600	600	400	✓	✓	III, 600 V
CM-1300			1000	1000	750	400	✓	✓	IV, 600 V III, 1000 V
CM-1350	✓		1000	1000	750	400	✓	✓	IV, 600 V III, 1000 V
CM-1500		1000	1000	1000	750	400	✓	✓	IV, 600 V III, 1000 V
CM-1550	✓		1000	1000	750	400	✓	✓	IV, 600 V III, 1000 V

## CMT-80 Clamp-on multimeter



### Characteristics

- Jaw size 27 mm
- Trouble-free, automatic measurement of current strength, voltage and resistance
- Compact design for measuring in tight spaces
- Low impedance rules out measurement of stray voltage from
- 400 A AC~, 600 V AC/DC measurements
- Data Hold function for recording important measurement results
- Longer battery service life due to automatic shut-off

Technical data		
Display	LCD (6000 display range)	
Voltage measurement	AC V: 1.3, 600.0; DC V: 2.1 - 600.0; 0.7 - 600.0V	
Current measurement	0.9-400.0A AC	
Resistance	2 K $\Omega$ with beeper for continuity check	
Measuring category	CAT III, 600V	
Jaw size	27 mm	
Item	Part No.	
CMT-80 Clamp-on multimeter	<b>50077350</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
TC-5 Nylon carrying case for measuring instruments with belt loop	50075888	645
Battery 9 V		

**CM Series in detail**


Part No.	50118650	52022030	52066379	52066378	52066376	52066374	52066372	52020887
Catalog-no.	CM-330	CM-410	CM-660	CM-860	CM-960	CM-1360	CM-1560	CSJ-100
True RMS			•	•	•	•	•	
AmpTip™			•	•	•	•	•	
DC A (A max.)					600		1000	
Maximum resolution (µA)					0.1		0.1	
Best accuracy (%)					1.2		1.2	
AC A (A max.)	400	400	600	600	600	1000	1000	200
Maximum resolution (µA)	0.01	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Best accuracy (%)	2.0	1.9	1.9	1.9	1.9	1.9	1.9	3.0
DC V (V max.)		600		600	600	1000	1000	1000
Maximum resolution (µV)		0.1		0.1	0.1	0.1	0.1	0.1
Best accuracy (%)		1.0		0.7	0.7	0.7	0.7	1.0
AC V (V max.)		600	600	600	600	750	750	1000
Maximum resolution (µV)		0.1	1	0.1	0.1	0.1	0.1	0.1
Best accuracy (%)		1.0	1.2	1.0	1.0	1.0	1.0	1.5
Resistance (MΩ)		20MΩ	2000Ω	400Ω	400Ω	400Ω	400Ω	20MΩ
Maximum resolution (mΩ)		0.1	1	0.1	0.1	0.1	0.1	0.1
Best accuracy (%)		0.7	1.5	1.0	1.0	1.0	1.0	1.0
Continuity and beeper		•	•	•	•	•	•	•
Frequency measurement				•	•	•	•	
Frequency threshold value (Hz)	50-60	50-500	40-500	50-400	50-500	50-400	50-500	50-500
Jaw size	30mm	27mm	35mm	34mm	35mm	51mm	51mm	16mm
Display type	Digital	Digital	Digital	Digital	Digital	Digital	Digital	Digital
Display of updating rate (x/s)	25	1.5	4	2.5	2.5	2.5	2.5	1.5
Count	2000	2000	2000	4000	4000	4000	4000	2000
Analogue bar chart				42 segments	42 segments	42 segments	42 segments	
Updating rate analogue (x/s)				13	13	13	13	
Low battery indicator	•	•	•	•	•	•	•	•
Automatic and manual range selection		•		•	•	•	•	•
Automatic stop			yes	yes	yes	yes	yes	yes
Peak Hold				•	•	•	•	
Data Hold (measured data memory)	•	•	•	•	•	•	•	•
Minimum value / maximum value				yes	yes	yes	yes	
Safety category classification	CAT III 600 V	CAT III 600 V	CAT III 600 V	CAT III 600 V	CAT III 600 V	CAT IV 600 V CAT III 1000 V	CAT IV 600 V CAT III 1000 V	CAT IV 600 V CAT III 1000 V
CE	•	•	•	•	•	•	•	•
Limited lifetime warranty	•	•	•	•	•	•	•	•

## Clamp meters

**CM-330 Clamp-on multimeter**

**Characteristics**

- Jaw size 30 mm
- Compact, ergonomic design for measuring in tight spaces
- Measurement of alternating currents to 400 A
- Max Hold function for recording peak values
- Data Hold function for recording important measurement results

Technical data		
Display	LCD	
Current measurement	0,01 A - 400 A AC	
Measuring category	CAT III, 600V	
Jaw size	30 mm	
Item	Part No.	
CM-330 Clamp-on multimeter	<b>50118650</b>	
Scope of supply	Part No.	Page
TC-5 Nylon carrying case for measuring instruments with belt loop	50075888	645
Battery 9 V		

**CM-410 Clamp-on multimeter**

**Characteristics**

- Jaw size 27 mm
- Narrow, compact design for measuring in tight spaces
- Measurement of resistances up to 20 M $\Omega$
- Data Hold function for recording important measurement results
- Automatic device switch-off
- Continuity test

Technical data		
Display	LCD	
Continuity test	Yes	
Voltage measurement	200.0 - 600V AC/DC	
Current measurement	200.0 - 400 A AC	
Resistance	200.0 $\Omega$ , 2.000, 20.00, 200.0k $\Omega$ , 2.000, 20.000M $\Omega$	
Measuring category	CAT III, 600V	
Jaw size	27 mm	
Item	Part No.	
CM-410 Clamp-on multimeter	<b>52022030</b>	
Scope of supply	Part No.	Page
TC-5 Nylon carrying case for measuring instruments with belt loop	50075888	645
Battery 2 x 1.5 V AAA		



**CM-660 Clamp-on multimeter, True RMS**
**Characteristics**

- Jaw size 30 mm
- AmpTip™ provides increased accuracy on small wires carrying 60 amps or less
- Variable Frequency Drive ACV, Hz Measurements
- Measurement of alternating voltage and alternating current
- Resistance measurement up to 60 kΩ
- Non-contact AC voltage detection
- Longer battery service life due to automatic shut-off



Technical data	
Display	LCD
Voltage measurement	0 V - 600 V AC/DC
Current measurement	600 A AC
Resistance	60kΩ
Measuring category	CAT III, 600V
Jaw size	30 mm

Item	Part No.	
CM-660 Clamp-on multimeter, True RMS	<b>52066379</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
TC-10 Nylon carrying case for measuring instruments with belt loop	50075349	645
Battery 9 V		



## CM-860 Clamp-on multimeter, True RMS



### Characteristics

- Jaw size 30 mm
- True RMS actual effective value for the most precise measurements
- AmpTip™ provides increased accuracy on small wires carrying 60 amps or less
- Variable Frequency Drive ACV, Hz Measurements
- Measurement of alternating current, direct and alternating voltage, frequency and resistance
- Easy-to-read backlit display for poor lighting conditions
- Peak Hold and Data Hold function for recording measurement results
- Non-contact AC voltage detection
- MIN/MAX function for more versatile applications
- Analogue bar chart for checking fast changes
- Longer battery service life due to selectable automatic shut-off

Technical data		
Display	LCD	
Voltage measurement	0 - 600 V AC/DC	
Current measurement	0 - 600 A AC	
Resistance	60kΩ	
Frequency	0,02 - 400 Hz	
Measuring category	CAT III 600V	
Jaw size	30 mm	
Item	Part No.	
CM-860 Clamp-on multimeter, True RMS	<b>52066378</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
TC-10 Nylon carrying case for measuring instruments with belt loop	50075349	645
Battery		

**CM-960 Clamp-on multimeter, True RMS**
**Characteristics**

- Jaw size 35 mm
- True RMS actual effective value for the most precise measurements
- AmpTip™ provides increased accuracy on small wires carrying 60 amps or less
- Variable Frequency Drive ACV, Hz Measurements
- Measurement of direct and alternating current, direct and alternating voltage, frequency, resistance and capacitance
- Non-contact AC voltage detection
- Dual reverberation sensor ensures precision during direct current measurement
- Non-Contact AC voltage detection
- Easy-to-read backlit display for poor lighting conditions
- Peak Hold and Data Hold function for recording measurement results
- Diode test
- MIN/MAX function for more versatile applications
- Analogue bar chart for checking fast changes
- Automatic zero-point setting for direct current measurement
- Longer battery service life due to selectable automatic shut-off



Technical data		
Display	LCD	
Voltage measurement	0 - 600 V AC/DC	
Current measurement	0 - 600 A AC/DC	
Resistance	60kΩ	
Frequency	0,02 - 400 Hz	
Measuring category	CAT III 600V	
Jaw size	35 mm	
Item	Part No.	
CM-960 Clamp-on multimeter, True RMS	<b>52066376</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
TC-10 Nylon carrying case for measuring instruments with belt loop	50075349	645
Battery 9 V		

## CM-1360 Clamp-on multimeter, True RMS



### Characteristics

- Jaw size 51 mm
- True RMS actual effective value for the most precise measurements
- AmpTip™ provides increased accuracy on small wires carrying 60 amps or less.
- Variable Frequency Drive ACV, Hz Measurements
- Measurement of alternating current, direct and alternating voltage, frequency, resistance, capacitance and Diode test
- Flashlight aids in positioning when working in dark areas
- Easy-to-read backlit display for poor lighting conditions
- Peak Hold and Data Hold function for recording measurement results
- MIN/MAX function for more versatile applications
- Analogue bar chart for checking fast changes
- Audible continuity check
- Longer battery service life due to selectable automatic shut-off

Technical data		
Display	LCD	
Voltage measurement	1000V AC / DC	
Current measurement	1000 A AC	
Resistance	60kΩ	
Frequency	0.02 - 400 Hz	
Measuring category	CAT IV 600V, CAT III 1000V	
Jaw size	51 mm	
Item	Part No.	
CM-1360 Clamp-on multimeter, True RMS	52066374	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
TC-30 Nylon carrying case for measuring instruments with belt loop	50075365	645
Battery 9 V		

**CM-1560 Clamp-on multimeter, True RMS**
**Characteristics**

- Jaw size 51 mm
- True RMS actual effective value for the most precise measurements
- AmpTip™ provides increased accuracy on small wires carrying 60 amps or less
- Variable Frequency Drive ACV, Hz Measurements
- Measurement of direct and alternating current, direct and alternating voltage, frequency and resistance
- Flashlight aids in positioning when working in dark areas
- Crest (Peak) Max / Min
- Dual reverberation sensor ensures precision during direct current measurement
- Easy-to-read backlit display for poor lighting conditions
- Peak Hold and Data Hold function for recording measurement results
- MIN/MAX function for more versatile applications
- Analogue bar chart for checking fast changes
- Audible continuity check



Technical data		
Display	LCD	
Voltage measurement	1000 V AC / DC	
Current measurement	0 - 1000 A AC/DC	
Resistance	60kΩ	
Frequency	0,02 - 400 Hz	
Measuring category	CAT III 1000V, CAT IV 600V	
Jaw size	51 mm	
Item	Part No.	
CM-1560 Clamp-on multimeter, True RMS AC/DC	<b>52066372</b>	
Scope of supply	Part No.	Page
TSG-3 test leads	50120344	
TC-30 Nylon carrying case for measuring instruments with belt loop	50075365	645
Battery 9 V		

Clamp meters

**CSJ-100 Jaw meter, open**



**Characteristics**

- Jaw size 16 mm
- For easy, quick voltage measurement of AC, DC and alternating voltage
- Resistance measurement up to 20 MΩ
- Audible continuity test and diode test
- Alarm and LED for contactless voltage detection
- Automatic shut-off for longer service life
- Data Hold for recording the measured values

Technical data		
Display	LCD	
Voltage measurement	200.0, 1,000V	
Current measurement	0 A - 200 A AC	
Resistance	200.0Ω; 2,000, 20.00, 200.0kΩ; 2,000, 20.00MΩ	
Frequency	50 - 500 Hz	
Measuring category	CAT III 1000V, CAT IV 600V	
Jaw size	16 mm	
Item	Part No.	
CSJ-100 Jaw meter, open	<b>52020887</b>	
Scope of supply	Part No.	Page
TC-5 Nylon carrying case for measuring instruments with belt loop	50075888	645
Battery 2 x 1.5 V AAA		
Test leads		

**TSGF Measuring cable set with fuses CAT IV 1,000V**



**Characteristics**

- Suitable for Greenlee jaw meters and digital multimeter
- Double insulated Silicon conductors with two coatings
- Superfine stranded copper cable, highly flexible
- 1.2 m cable length
- Fuses 6.3 x 32 mm FF 500 mA

Item	Part No.
TSGF Measuring cable set with fuses (500 mA) CAT IV 1,000V	<b>52034235</b>

### TC-5 Nylon carrying case for measuring instruments with belt loop

**Suitable for**

- CMT-80 / CM-330 / CM-410 / CSJ-100

Item	Part No.
TC-5 Nylon carrying case for measuring instruments with belt loop	<b>50075888</b>



### TC-10 Nylon carrying case for measuring instruments with belt loop

**Suitable for**

- CM-600 / CM-800 / CM-850 / CM-900 / CM-950

Item	Part No.
TC-10 Nylon carrying case for measuring instruments with belt loop	<b>50075349</b>



### TC-30 Nylon carrying case for measuring instruments with belt loop

**Suitable for**

- CM-1300 / CM-1350 / CM-1500 / CM-1550
- Voltage tester GT-55NE / GT-85NE

Item	Part No.
TC-30 Nylon carrying case for measuring instruments with belt loop	<b>50075365</b>



# *The right test* **for every installation.**

## **VDE tester to VDE 0100.**

All you need to do to satisfy the requirements of VDE 0100 is respect a broad range of values. The Greenlee ETest series ensures you meet all these requirements. No matter whether with the multifunctional installation tester or the special tools for earthing and insulation resistances. To the highest possible level of safety and simple operation.



*The ETest series is extremely safe to use as the display is always within view.*

- **VDE tester to VDE 0100.**
- **Continuity test.**
- **Voltage measurements.**
- **Insulation resistance tests.**
- **RCD/FI measurements.**
- **Earthing resistance measurements.**



## ■ All measurements in just one action: *ETest Multi*

- ▶ One measuring device for measuring earth continuity and insulation from 100 V – 500 V loop impedance, frequency and voltage.
- ▶ Handy design weighing just 900 g.
- ▶ With unique integrated measuring head and cordless probe.

### Benefits:

- ▶ Being multifunctional, the ETest Multi is several tools in one.
- ▶ The simple operation increases both comfort and safety when in use.
- ▶ The cordless probe enables use even at relatively inaccessible measuring points.



## ■ Measures the earthing resistance at every voltage: *ETest R<sub>E</sub>*

- ▶ Suitable for use at 110 Volt, 230 Volt and electrical 3-phase systems.
- ▶ Earth resistance measurement according to 2, 3 and 4-wire method.
- ▶ With flexible USB interface and storage capacity for 500 test results.

### Benefits:

- ▶ The ETest R<sub>E</sub> can be used at all standard voltages.
- ▶ Regardless of the applicable requirements, earth resistance can be measured according to any method.
- ▶ The test results can be quickly and easily archived on the PC.



## ETest Multi, multi-functional installation tester



### Characteristics

- DIN VDE 0100 tester for: Continuity test, voltage measurement, insulation resistance test, line and earth loop impedance measurement, automatic RCD/RCCB test sequence, test of RCD/RCCB response time, test of RCD/RCCB trip current
- Uniquely integrated measuring head (wireless probe)
- Loop impedance measurement optionally without triggering the RCCB
- Slim tester with the lightest weight of its class
- Auto test function for RCD/RCCB measurement
- Large LC display and analogue bar display
- Extremely easy to use
- More safety when working under voltage - display is located directly in field of vision during use
- Fast and precise cutting

### Technical data

Earth continuity check	
Test current at	> 200 mA
Scale range of the display	0.00 $\Omega$ - 199 $\Omega$
Resolution (Earthing)	0,01 $\Omega$ maximum
Insulation resistance	
Test voltage	100 V, 250 V, 500 V
Test current	1 mA > 1 mA with UN x (1000W/V)
Short circuit-Test current	> 2 mA
Scale range of the display (Isolation)	0.05 M $\Omega$ - 199 M $\Omega$
Resolution (Isolation)	0.01 M $\Omega$ maximum
RCD	
Mains voltage	195 - 253 V / 195 - 440 V, 40 Hz - 65 Hz V
Nominal Test current	15 mA
Scale range of the display (Impedance):	0.01 $\Omega$ - 2000 $\Omega$
Resolution (Impedance)	0.01 $\Omega$ maximum
Scale range	0 - 26 kA
RCD	
Mains voltage RDC	195 - 253 V, 40 Hz - 65 Hz
Nominal Test current RDC	10 mA, 30 mA, 100 mA, 300 mA, 500 mA
Scale range of the increase in current:	$\frac{1}{2}$ I $\Delta$ n up to 1.1 I $\Delta$ n
Measurement of voltage / frequency	
Display scale range	0 V - 400 V
Resolution (Voltage/Freq)	1 V
Accuracy	$\pm 5\% \pm 2$ Digits
Frequency range	45 Hz - 65 Hz
General information	
Safety guidelines	IEC61010-1 300V Cat III, EN 61557
Dimension	260 x 100 x 55 mm mm
Weight	0,950 kg
Power supply system	Battery - AA 1.5 V alkali, IEC-LR14 (6 incl. in scope of supply)

Item	Part No.
ETest Multi, multi-functional installation tester	<b>52045014</b>

Scope of supply	Part No.	Page
Test lead set	52046756	
Power lead	52046757	
Wireless measuring probe	52046758	
Robust plastic case	52046759	

## ETest RE, earth resistance measuring device

### Characteristics

- Test options: Earth resistance measurement with 2, 3 and 4 - Wire Method, Earth resistance measurement with jaw meter, measurement of the specific earth resistance
- USB interface
- Large LC display
- Compact design
- Comfortable operation by rotary switch and push buttons
- Memory for 500 test results
- Simple downloading options to PC via USB



Technical data	
Earth continuity check	
Scale range of the display	0,00 Ω - 50,0 kΩ
General information	
Safety guidelines	IEC 61010-1 300 V CAT II, EN 61557
Dimension	260 x 100 x 55 mm mm
Weight	0,800 kg
Power supply system	Battery - AA 1.5 V alkali, IEC-LR14 (6 incl. in scope of supply)
Measured frequency	125 Hz ± 1 Hz
Measured frequency earth resistance	125 Hz ± 1 Hz
Measured frequency clamp method	125 Hz ± 1 Hz
Measured voltage earth resistance	< 30 V effective sinusoidal
Measured voltage jaw method	< 30 V effective sinusoidal
Measuring current jaw method	< 20 mA effective
Measuring current earth resistance	< 20 mA effective
Measuring voltage	< 30 V effective sinusoidal
Measurement current	< 20 mA effective
Interface	USB
scale range jaw method	0,00 Ω - 2,0 kΩ
Storage spaces	500

Item	Part No.
ETest RE, earth resistance measuring device	<b>52045013</b>

Scope of supply	Part No.	Page
Test lead set	52046753	
Connecting cable USB to MINI DIN	52046754	
Ground spike (4)		
Carrying bag	52046755	

Accessories	Part No.	Page
Current probe	52046834	

## Measuring heat

*where nobody goes.*

### Temperature measuring devices for tight areas.

Temperature measuring devices can measure temperatures quickly and safely from a distance. The products are set apart by extreme precision. The compact device design also permits measurements in tight areas.

**If handled correctly, we offer a lifetime limited warranty on these products.**



*High optical resolution for sharp measurement.*

- For measurements from  $-60\text{ }^{\circ}\text{C}$  to  $+625\text{ }^{\circ}\text{C}$ .
- Accuracy to  $\pm 2\text{ }^{\circ}\text{C}$ .
- With laser for locating target area.
- With adjustable emissivity.



## ■ For highly-precise temperature measurement: TG-2000.



- ▶ Highly-precise temperature measurements from a distance and in tight areas.
- ▶ **Precise focussing on measuring points even from long distances.**
- ▶ Connection port for type K temperature sensors.

### Benefits:

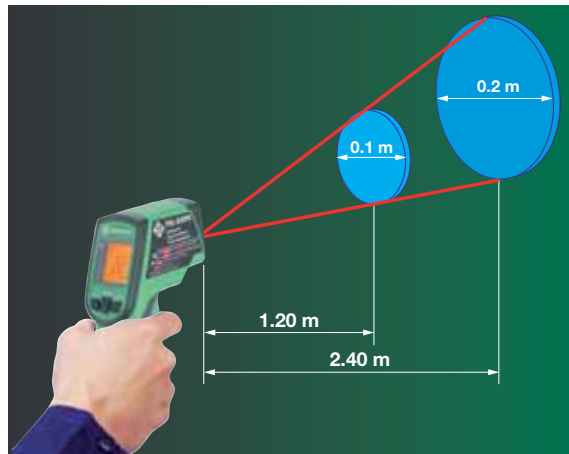
- ▶ Injuries and short circuits eliminated due to the distance during measurement.
- ▶ Temperature measurements can easily be taken even while the machine is operating.

## ■ Temperature measurement for constrained areas and from a safe distance.

- ▶ Adjustable emissivity for optimising measuring accuracy for numerous materials and surfaces.

### Benefits:

- ▶ With an optical resolution of 12:1, you can measure accurate to 20 cm from a distance of 2.4 m.
- ▶ Under-ceiling measurements, for example, can easily be taken without a ladder.



Optical resolution 12:1 and associated measuring ranges.

## ■ The TG-1000 and TG-2000 in numbers.

	Optical resolution	Temperature measurement range	Accuracy	Laser	Type K sensors
<b>TG-1000</b>	12:1	-60 °C - 550 °C (-76 °F - 1022 °F)	±2% or ±2 °C (4°F)	single	
<b>TG-2000</b>	16:1	-60 °C - 625 °C (-76 °F - 1157 °F)	±2% or ±2 °C (4°F)	dual	Yes

### TG-1000 Infra-red thermometer



#### Characteristics

- Safe, non-contact temperature measurement
- Display with background illumination for comfortable read-off in all work areas
- Temperature display selectable in Celsius (°C) or Fahrenheit (°F)
- Maximum/minimum temperature, difference and average measurements
- Laser pilot light for identification of the centre of the target measuring area

#### Suitable for

- A variety of materials through adjustable emissivity for optimising the measuring accuracy

Technical data	
Monitor	LCD
Optical resolution	12:1
Temperature measurement	-60 °C - 550 °C
Item	Part No.
TG-1000 Infra-red thermometer	52059365

### TG-2000 Dual laser infra-red thermometer



#### Characteristics

- Safe, non-contact temperature measurement
- Display with background illumination for comfortable read-off in all work areas
- Temperature display selectable in Celsius (°C) or Fahrenheit (°F)
- Maximum/minimum temperature, difference and average measurements
- Twin laser for identification of the approximate diameters of the target measuring area
- Bush for type K thermoelement

#### Suitable for

- A variety of materials through adjustable emissivity for optimising the measuring accuracy

Technical data	
Monitor	LCD
Optical resolution	16:1
Temperature measurement	-60 °C - 625 °C
Item	Part No.
TG-2000 Dual laser infra-red thermometer	52059364

### TPB Temperature probe for temperatures of -40° C to +204° C



#### Suitable for

- Surfaces, air and gases.
- Not for use with fluids and gels.

Technical data	
Sensor length	1 m ±5 mm (39.4" ±0.2")
Temperature measurement	-40°C to +204°C (-40.00°C to 203.89°C)
Thermoelement	Thermoelement type K
Item	Part No.
TPB Temperature probe for temperatures of -40° C to +204° C	50075926

### TPI-1 Temperature probe for temperatures of -40° C to +800° C

**Suitable for**

- Use in liquids and gels.

Technical data	
Accuracy	0.75% or $\pm 2.2^{\circ}\text{C}$ (4°F)
Sensor length	120 mm $\pm 5$ mm (4.72" $\pm 0.2$ " )
Temperature measurement	-40°C to 800°C (-40°F to 775.00°F)
Thermoelement	Thermoelement type K
Item	Part No.
TPI-1 Temperature probe for temperatures of -40° C to +800° C	<b>50065696</b>



### TPFSC Temperature probe for temperatures of -40° C to +500° C

**Suitable for**

- Measurement of flat or bevelled surfaces

Technical data	
Accuracy	0.75% or $\pm 2.2^{\circ}\text{C}$ (4°F)
Sensor length	120 mm $\pm 5$ mm (4.72" $\pm 0.2$ " )
Temperature measurement	-40°C to +500°C (-40°F to 932°F)
Thermoelement	Thermoelement type K
Item	Part No.
TPFSC Temperature probe for temperatures of -40° C to +500° C	<b>50065700</b>



# Cables

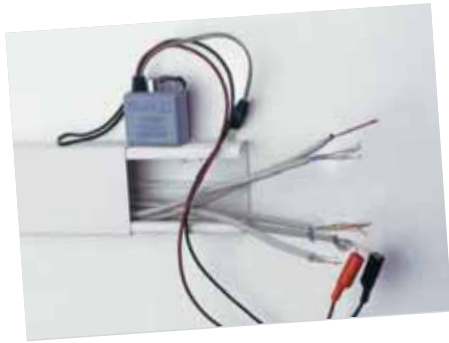
***on course.***

## Sound testing sensors for sheathed and unsheathed cables.

Sound testing sensors for cable and conductor identification allow cables to be detected within a bundle at a cross-connect point or at the remote end.

- ▶ In some cases using various tones for several conductors at the same time.
- ▶ Also without metallic contact with the receiver.

The devices enable cables and conductors to be quickly traced along a wall in full control panels and equipment rooms.



*Simply connect the transmitter and cables can be quickly detected.*

- Sound testing sensors for twisted pair, coaxial and contactless cables.
- For continuity tests and tracking cores and cables.
- Various sensitivities can be set for precise identification.





**Acoustic testing sensor kit 701K-G**
**Characteristics**

- For the identification of individual conductors or cables
- Talk battery supply
- Tone generator with crocodile terminals and RJ-11 plug
- 3-colour LED display (identifies WS call voltages)
- Weather-resistant design
- Tone generator with interchangeable tips
- Selectable wobble tone
- Polarity test
- Continuity test



Item	Part No.	
Acoustic testing sensor kit 701K-G	<b>52047869</b>	
Scope of supply	Part No.	Page
High-power sound generator 77HPCE	52055781	
Inductive amplifier 200 EP	52055782	
Bag	50086839	
Battery 9 V		

**Premium Tone and Probe Kit 801K**
**Characteristics**

- Talk battery supply
- Tone generator with crocodile terminals with pincushion and RJ-11 plug
- 3-colour LED display (identifies WS call voltage).
- Weather-resistant design
- Selectable wobble tone
- Continuity test
- Polarity test
- 50Hz filter function



Item	Part No.	
Premium Tone and Probe Kit 801K	<b>50604660</b>	
Scope of supply	Part No.	Page
77HP/6A Tone generator	50605034	
200FP filter sensor	50604678	
Bag 700C	50086839	
Battery 9 V		

## *Secure communication in the network.*

### **Network measuring devices and testers.**

Fast, precise and easy to use - these features make Greenlee's wiring and network service testers indispensable for technicians who install and maintain networks. The NETcat® Micro NC-100 is a wiring tester for testing data voice and video applications. The result is clearly shown on a backlit LCD display. In twisted-pair mode, even "split-pairs" faults can be found. An integrated sound generator combined with an inductive receiver enables laid cables to be quickly identified. The NETcat® Pro NC-500 also offers the option of TDR calibration - enabling you to determine the length of the cable without a problem.



*Greenlee measuring devices and testers for the fast and simple testing of networks.*

- Network cable tester.
- Built-in tone generator.
- Length measurement via TDR function.
- Backlit touchscreen display.



## NETcat® Micro NC-100 is a wiring tester for testing data, voice and video cables

### Characteristics

- Built-in tone generator
- Testing of twisted pair (UTP, STP) and coaxial cables
- Locating short-circuits, breaks, incorrect wiring and split pair errors
- Surge warning feature
- Digital, backlit display
- Telephone (RJ-12), LAN (RJ-45) and coaxial connector (F type) ports
- Integrated remote unit
- Three selectable sound signals for cable identification



Item	Part No.	
NETcat® Micro NC-100	<b>52024541</b>	
Scope of supply	Part No.	Page
Twisted pair, coax and crocodile clips/connecting cable		
Battery 9 V		

## NETcat® Micro NC-100 in combination with inductive receiver 200EP for cable identification

### Characteristics

- Telephone (RJ-12), LAN (RJ-45) and coaxial connector (F type) ports
- Integrated remote unit
- Three selectable tone signals for cable conductor identification
- Testing of twisted pair (UTP, STP) and coaxial cables
- Locating short-circuits, breaks, incorrect wiring and split pair errors



Item	Part No.	
NETcat® Micro NC-100 + 200EP	<b>NC100EP</b>	
Scope of supply	Part No.	Page
NETcat® Micro NC-100	52024541	657
Inductive amplifier 200 EP	52055782	
Carrying bag		
Battery 9 V		

### NETcat® Pro NC-500, wiring and network service tester with TDR function



#### Characteristics

- Length measurement using TDR function up to 600 m
- Four selectable tone signals for cable identification
- Displays active network devices (PC or hub) in 10/100 Base-T networks
- NVP calibration
- ID detection of up to eight remote units with optional NC-510 accessory kit
- Testing of twisted pair (UTP, STP) and coaxial cables
- Locating short-circuits, breaks, incorrect wiring and split pair errors

Item	Part No.	Page
NETcat® Pro NC-500	<b>52024556</b>	
<b>Scope of supply</b>	<b>Part No.</b>	<b>Page</b>
Twisted pair, coax and crocodile clips/connecting cable		
Battery 9 V		

Accessories	Part No.	Page
7 Remote units ID2 - ID8, carrying bag incl.	52024661	







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









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## ■ Technical notes on the various crimping types

	Crimp	Description	Scope of application
	<b>Hexagonal crimping</b>	for crimping tubular copper cable lugs and connectors "standard type", tubular cable lugs for switchgear connections, compression cable lugs and connectors to DIN 46235/DIN 46267, aluminum cable lugs and connectors	6 - 1000 mm <sup>2</sup>
	<b>Indent crimping</b>	for crimping tubular copper cable lugs and connectors "standard type", tubular cable lugs for switchgear connections, solderless terminals to DIN 46234 and pin cable lugs to DIN 46230, insulated solderless terminals, tubular cable lugs and connectors for fine stranded conductors, nickel tubular cable lugs and connectors, stainless steel tubular cable lugs and connectors	0.75 - 400 mm <sup>2</sup>
	<b>Oval crimping</b>	for crimping tubular double compression cable lugs, C-clamps, insulated tubular cable lugs and connectors, insulated pin cable lugs and compression joints to DIN 48217, insulated cable connectors	0.1 - 185 mm <sup>2</sup>
	<b>Indent crimping</b>	for crimping copper tubular cable lugs and connectors "standard type", tubular cable lugs for switchgear connections, tubular cable lugs and connectors for fine stranded conductors	6 - 400 mm <sup>2</sup>
	<b>Indent crimping</b>	for crimping copper tubular cable lugs and connectors "standard type", tubular cable lugs for switchgear connections, nickel tubular cable lugs and connectors, stainless steel tubular cable lugs and connectors	4 - 95 mm <sup>2</sup>
	<b>Trapezoid crimping</b>	for crimping cable end-sleeves and twin cable end-sleeves	0.14 - 240 mm <sup>2</sup>
	<b>Indent crimping</b>	for crimping cable end-sleeves and twin cable end-sleeves	0.5 - 35 mm <sup>2</sup>
	<b>Square crimping</b>	for crimping cable end-sleeves and twin cable end-sleeves	0.14 - 16 mm <sup>2</sup>
	<b>Roll crimping</b>	for crimping non-insulated receptacles and cable end-sleeves DIN 46228, part 2	0.1 - 6 mm <sup>2</sup>
	<b>Round crimping</b>	for crimping cable end-sleeves and twin cable end-sleeves of 90° and 120° sector-shaped conductors	0.14 - 16 mm <sup>2</sup> 10 sm – 300 sm 35 se – 300 se
	<b>Quad-point indent crimping</b>	for crimping copper tubular cable lugs and connectors "standard type", tubular cable lugs for switchgear connections, tubular cable lugs and connectors for fine stranded conductors	10 - 300 mm <sup>2</sup>
	<b>Four point crimping</b>	for crimping turned pin receptacles and pin connectors	0.1 - 4 mm <sup>2</sup>
	<b>Special trapezoid crimping</b>	particularly for crimping cable end-sleeves with compacted fine stranded conductors	10 - 240 mm <sup>2</sup>
	<b>Gas-tight oval crimping</b>	Crimp quality according to automotive standards	



**Legend of pictograms used for connecting materials**

	Designation
 blue connection	Tubular cable lugs and connectors, blue connection – Cu
	Tubular cable lugs and connectors – Cu, standard design
	Insulated cable lugs and connectors; “standard type”
	Tubular cable lugs and connectors for fine stranded conductors
	Tubular cable lugs and connectors for solid conductors
 VA	Tubular cable lugs and connectors – stainless steel
 Ni	Tubular cable lugs and connectors – Ni
 DIN	Compression cable lugs and connectors to DIN – Cu
	Solderless terminals, connectors and pin terminals to DIN – Cu
	Insulated solderless terminals
	Sleeves for compacted conductors and sector-shaped conductors – Cu
 Aldrey	Compression cable lugs and connectors for Aldrey cables
 Al/St	Compression cable lugs and connectors for Al/St cables
 Al	Compression cable lugs and connectors to DIN – Al
 Al/Cu	Compression cable lugs and connectors – Al/Cu
	C-clamps
	H-clamps
	Cable end-sleeves
	Twin cable end-sleeves
	Insulated cable connections
	Non-insulated receptacles

### Material properties

#### Information on materials used for copper and aluminum cable lugs and connectors

- All copper tubular cable lugs, solderless terminals, pin terminals and the corresponding connectors are manufactured from Cu to DIN 13600.
- Cable end-sleeves to DIN 46228 part 1 and part 4 are manufactured from Cu to DIN EN 13600.
- Aluminum compression cable lugs and connectors are manufactured from E-Al 99.5 to DIN 1712.

### Electrical properties

- The maximum current load of our cable connections in conjunction with insulated conductors can be found in the chart below.

Nominal cross-section mm <sup>2</sup>	Group 1 One or more single-core conductors laid in conduits		Group 2 Multi-core conductors, e. g. sheathed conductors, conduit wires, lead-sheathed conductors, flat webbed conductors, flexible cables		Group 3 Overhead single-core conductors with clearance of at least their diameter	
	Cu (A)	Al (A)	Cu (A)	Al (A)	Cu (A)	Al (A)
0.75	–	–	12	–	15	–
1	11	–	15	–	19	–
1.5	15	–	18	–	24	–
2.5	20	–	26	–	32	–
4	25	–	34	–	42	–
6	33	–	44	–	54	–
10	45	–	61	48	73	57
16	61	48	82	64	98	77
25	83	65	108	85	129	103
35	103	81	135	105	158	124
50	132	103	168	132	198	155
70	165	–	207	163	245	193
95	197	–	250	197	292	230
120	235	–	292	230	344	268
150	–	–	335	263	391	310
185	–	–	383	301	448	353
240	–	–	453	357	528	414
300	–	–	504	409	608	479
400	–	–	–	–	726	569
500	–	–	–	–	830	649

Values applicable only at an ambient temperature of 30 °C

### Mechanical properties

- The tensile strength of connections made in accordance with the processing instructions using our tools complies with DIN EN 61238-1.



**Please note** that crimping solderless cable connections using tools from other manufactures does not guarantee a proper connection. We recommend only the use of solderless cable connections from **Klauke**® using **Klauke**® tools.

**■ Assignment of cables and conductors**

**a) Copper**

■ Our copper cable lugs and connectors are suitable for connecting copper cables to DIN 48201, part 1 and copper conductors according to DIN EN 60228 (see chart).

**b) Aluminum**

■ Our aluminum cable lugs and connectors are suitable for connecting aluminum cables to DIN EN 50182 and aluminum conductors to DIN EN 60228 (see chart).

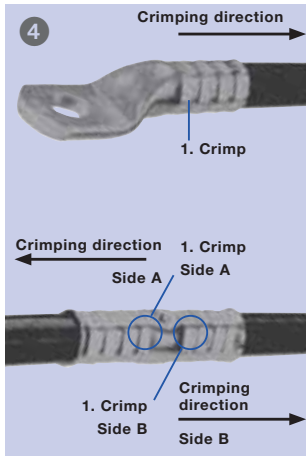


*Sector-shaped conductors must be rounded with pre-rounding tools before assembly.*

**Cross-section compatibility chart for cable lugs and connectors for copper and aluminum conductors to**

- VDE 0250
- DIN 48200
- DIN 48201 part 1, DIN EN 50182
- DIN EN 60228

Cross-section mm <sup>2</sup>	Reference cross section	Cable Cu and Al		Stranded round conductor	Compacted round conductor		Solid conductor		Fine and superfine stranded conductor
	(mm <sup>2</sup> )	DIN 48201 part 1, DIN EN 50182		VDE 0295, DIN EN 60228					
		Number of wires	Cable Ø (mm)	Conductor Ø (mm)	Conductor Ø min. (mm)	Conductor Ø max. (mm)	Conductor Ø min. (mm)	Conductor Ø max. (mm)	Cable Ø max. (mm)
0.5	-	-	-	1.1	-	-	-	0.9	1.1
0.75	-	-	-	1.2	-	-	-	1	1.3
1	-	-	-	1.4	-	-	-	1.2	1.5
1.5	-	-	-	1.7	-	-	-	1.5	1.8
2.5	-	-	-	2.2	-	-	-	1.9	2.3
4	-	-	-	2.7	-	-	-	2.4	2.9
6	-	-	-	3.3	-	-	-	2.9	3.9
10	10.02	7	4.1	4.2	-	-	-	3.7	5.1
16	15.89	7	5.1	5.3	-	-	-	4.6	6.3
25	24.25	7	6.3	6.6	5.6	6.5	5.2	5.7	7.8
35	34.36	7	7.5	7.9	6.6	7.5	6.1	6.7	9.2
50	49.48	7	9	9.1	7.7	8.6	7.2	7.8	-
50	48.35	19	9	-	-	-	-	-	11
70	65.81	19	10.5	11	9.3	10.2	8.7	9.4	13.1
95	93.27	19	12.5	12.9	11	12	10.3	11	15.1
120	116.99	19	14	14.5	12.5	13.5	11.6	12.4	17
150	147.11	37	15.8	16.2	13.9	15	12.9	13.8	19
185	181.62	37	17.5	18	15.5	16.8	-	-	21
240	242.54	61	20.3	20.6	17.8	19.2	-	-	24
300	299.43	61	22.5	23.1	20	21.6	-	-	27
400	400.14	61	26	26.1	22.9	24.6	-	-	31
500	499.83	61	29.1	29.2	25.7	27.6	-	-	35
625	626.2	91	32.6	33.2	29.3	32.5	-	-	39
800	802.09	91	36.9	37.6	-	-	-	-	-
1000	999.71	91	41.1	42.2	-	-	-	-	-



**Assembly instructions for cable lugs and connectors**

- 1 Strip conductor in line with insertion depth (+ 10 % because of length change of crimp sleeve).
- 2 The conductor ends must be cleaned mechanically prior to assembly.
- 3 Insert conductor fully into cable lug or connector.
- 4 Observing the crimping direction, crimp the cable lug or connector using the appropriate tools. The crimping direction for cable lug and connector is indicated in the diagram opposite.
- 5 Remove excess compound emerging from aluminum cable lugs and connectors.

We recommend the following number of crimps for individual cross sections:

Cross-section mm <sup>2</sup>	Tubular cable lugs		Cable lugs to DIN 46235		Al cable lugs	
	5 mm Crimping die	width Crimping dies	5 mm Crimping die	width Crimping dies	7 mm Crimping die	width Crimping dies
6	1		2			
10	1		2			
16	1	1	2	1	4	2
25	2	1	2	1	4	2
35	2	1	2	1	5	2
50	2	1	3	1	5	2
70	2	1	3	1	6	3
95	2	1	4	2	6	3
120	2	1	4	2	6	3
150	2	1	4	2	6	3
185	2	1*	4	2	6	3
240	4	2	5	2	8	3
300	4	2	5	2 (17 mm)** 5 (7 mm)***	8	3
400	4	2		3		4
500				3		4
625				3		
800				3		
1000				3		

\* when using quad-point indent crimping (HK60VP, EK 60 VP/FT-L etc.)  
Number of crimping operations: 2

\*\* Crimp with crimping dies of Series 25 and Series 45

\*\*\* Crimp with crimping dies of Series 13

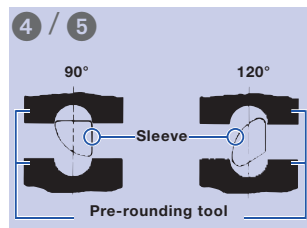
### ■ Processing instructions for sleeves for compacted and sector-shaped conductors, types VHR and VHD

We recommend the use of additional VHR and VHD sleeves for compacted round conductors to ensure that the tubular cable lugs and connectors fit accurately.

For sector-shaped conductors, we recommend the use of additional sector sleeves VHR 3 or VHR 4 and VHD 3 or VHD 4 with Cu cable lugs and connectors to prevent the conductor recoil. Sleeves need to be rounded with pre-rounding tools.

**Please note:**

- 1 Ensure that the conductor is deformed as little as possible when cutting to length.
- 2 Strip the conductor insulation in line with the insertion length.
- 3 Slip the sleeve up to the front cut edge of the conductor.
- 4 Place the conductor and sleeve in the pre-rounding tool as per the diagram.
- 5 Crimp the sleeve
  - a) Crimping operation as per the diagram (1st pre-crimp)
  - b) Crimp turned through 90° (2nd pre-crimp)
  - c) Crimp turned through 30° (finish-crimp)
  - d) Crimp turned through 30° as required (finish-crimp)



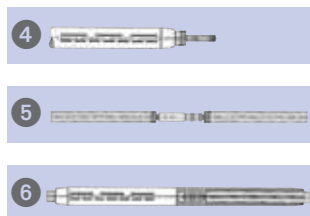
### ■ Instructions for fitting reduction sleeves

Only wide hydraulic crimping dies to be used when crimping more than two cross-sections.

### ■ Assembly instructions for full tension Al/steel connectors to DIN 48085, part 3

The connectors consist of an Al sleeve (E-Al 99.5) and a soft steel sleeve (St 52).

- 1 Straighten cable ends, remove dirt and any oxide layer.
- 2 Slip the Al-compression joint onto one of the cable ends.
- 3 Tie off the cable end and strip the Al cores.
- 4 Tie off Al and steel cores.
- 5 Slip on the steel sleeve and crimp through according to the crimping marks.
- 6 Slide the Al sleeve centrally over the crimped steel sleeve and crimp according to the crimping marks.
- 7 Remove excess compound after crimping the connector.



**Caution:** Do not crimp in the centre, in the area of the steel connector. Do not crimp in the area of the cones.



**Warning:** The compound must not be removed, either fully or partially, prior to assembly.

The tool dies can be assigned either by colour-coding, or preferably based on the code assigned to the cross-section. The dies for the steel sleeve have a black finish, those for the Al sleeve are zinc-coated.

**General information:**

The crimping process has to be continued until the dies are completely closed, otherwise a proper crimp cannot be guaranteed.

### ■ General information

#### Crimping dies:

The dies of series K 18, EK 50/18-L, PK 18, HK 18 and THK 18 and series HK 252, PK 252, HK 252 EL correspond in terms of external dimensions to DIN 48083 parts 1 and part 3 respectively.

The hexagonal dimensions of all interchangeable dies for manual and hydraulic tools of series D (i. e. for DIN cable lugs and connectors 46235 and 46267) and A (Al cable lugs and connectors, as well as Al-Cu cable lugs and connectors) are to DIN 48083 part 4.

#### Surfaces:

All above mentioned dies are supplied "chrome-yellow" for copper and "galvanized" for aluminum and nickel.

**Respect the following maximum cross-sections when crimping connectors using crimping tools K18, PK18, EK 50/18-L and HK 120/30 and EK 120/30-L:**

K 18, EK 50/18-L and PK 18 connector type / crimping dies	Max. cross section mm <sup>2</sup>	HK 120/30 and EK 120/30-L connector type / crimping dies	Max. cross section mm <sup>2</sup>
Cu standard version, R-series	95	Cu standard version, R-series	185
Cu DIN and high-tensile version, D-series	70	Cu DIN version, D-series	150
Al version, A-series	70	Al version, A-series	120
		Al for high-tensile version, A-series	95



**The following tools do not provide a code no. on crimps:**

*EK 60 VP-L, EK 60 VP/FT-L, HK 60 VP, HK 60 VPFT, PK 60 VP and PK 60 VPFT.*

**The following tightening torques apply for screws and bolts of strength category 8.8 as specified by DIN EN 61238:**

Size of thread	Tightening torque (Nm)	Size of thread	Torque (Nm)
M 5	5	M 12	75
M 6	9	M 14	120
M 7	15	M 16	190
M 8	22	M 20	380
M 10	44		

## ■ Assembly instruction for screw connectors

Because they are detachable connecting elements, screw connectors are used preferably for heat-shrunk or cast resin joints. However, they also can be used in all other types of cable joints. Four-screw connectors are especially suitable for multi-stranded conductors, since the longer connector length increases the transverse conductance of the individual wires and the contact resistance decreases accordingly. In addition, higher pull-out values are achieved. Barrier type four-screw connector clamps are suitable for cables with mass-impregnated paper insulation.

In an electrolyte-free, e.g. dry environment, aluminum as well as copper conductors can be combined. This also applies in combination with heat-shrunk hoses. If conductors of different materials (e.g. Cu and Al cables) have to be connected, a barrier type connector is recommended.

While identical types of cables (e.g. NAYY-NAVY) can be used with non-barrier types of connectors for unequal cables (e.g. NAYY-NAKBA), plastic or earth cables, the use of connectors with barrier as an oil stop is recommended.

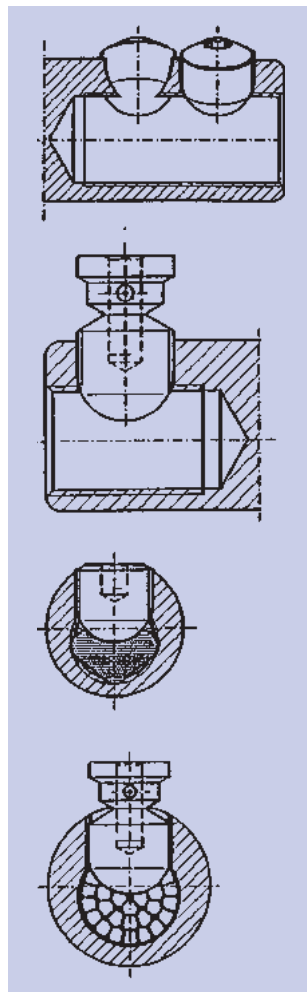
Insertion depth of conductors is controlled either by the conductor stop at the barrier, or by inspection hole on screw connectors without barrier.

In addition to the conventional screw connectors, we offer screw connectors with shear-off heads. The benefit of this design is the defined tightening torque, which is pre-determined by the maximum transferable torque at the rated breaking point. This contact force defined by the manufacturer guarantee optimum electrical and mechanical properties (DIN EN 61238). No torque wrenches are required for assembly of this connector type.

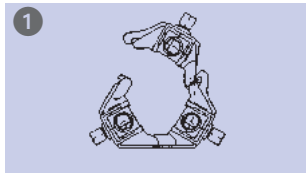
With standard screw connectors, the required contact pressures are reached at approx. 80 % of the specified torque. Over-crimping beyond the torque specified for the connector must be avoided.

The cross-grooves on the conductor channels allow high tensile forces to be transmitted. The tensile forces of our screw connectors correspond to compression joints to DIN 46267, part 2, with identical cross section.

The screws are treated with a high-gliding, molybdenum sulphide-based lubricant. This guarantees adequate contact pressure with a relatively low tightening torque.

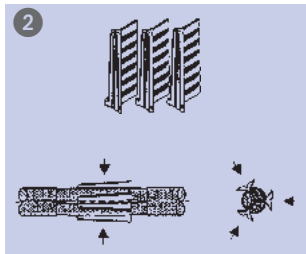


**■ Assembly instructions KSK1503**



- 1 Strip cable to DIN 47630.  
Comes with open snap-closure.

If opening is required due to inadvertent closing, open ring parts by hand against snapping direction.

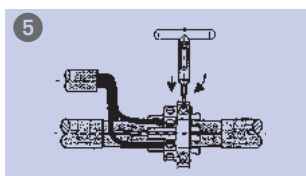
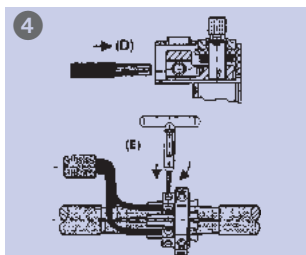
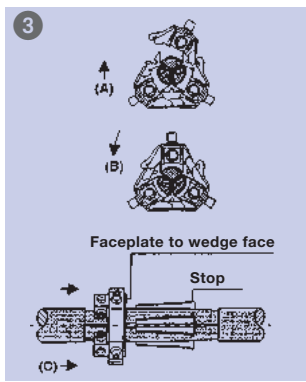


**Three conductor cable**

Cross-section	Recommended bare length*
50 - 95 mm <sup>2</sup>	200 mm
50 - 185 mm <sup>2</sup>	320 mm

\* **Observe assembly instructions of gland manufacturer!** On sets with off-centre bulge (largest gland diameter), spacer wedges must also be placed off-centre.

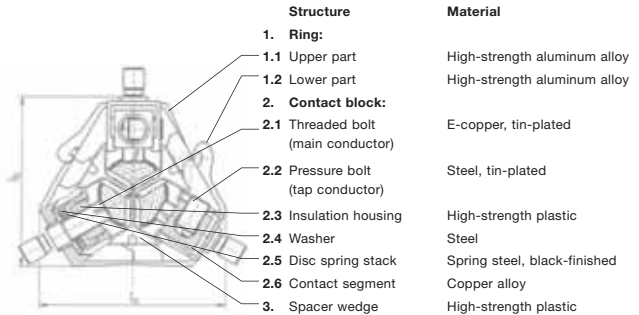
- 2 Place spacer wedges between conductors.  
Expander wedges help to spread the conductors.
- 3 (A) Place clamping ring on the main conductor cable.  
(B) Push clamping ring halves against the wedges.  
(C) Slip ring onto wedges hand-tight. It does not need to be pushed up to the stop.
- 4 (D) Strip tap conductor.  
(E) Insert phase conductor into tap hole and tighten.



**Attention!** Insert wrench fully into hexagon screw! Tap conductors below 16 mm<sup>2</sup> are recommended to be clamped with kinked ends.

- 5 Shear-off screws to be tightened until seated on insulation.
- Contact by alternating and uniform tightening until heads shear off.
- Shear-off screws ease assembly operation. However, alternating and uniform tightening of screws is still required to ensure careful assembly. Remove sheared-off heads from gland. Once sheared-off, screws cannot be loosened.

**Structure of the tap connector KSK1503 for three conductor cable**





**Assembly instructions for KSK504**

- 1 Bare conductor and insert wedge. Make sure that wires are tight to wedge.

Type	Recommended bare length*
KSK504	90 mm

\* Observe assembly instructions of gland manufacturer!  
Comes with open snap-closure.

If opening is required due to inadvertent closing, open ring parts by hand against snapping direction.

- 2 Place spacer wedges between conductors.  
Expander wedges help to spread the conductors.
- 3 (A) Place clamping ring on the main conductor cable.  
(B) Push clamping ring halves against the wedges.  
(C) Push ring onto spacers. If wedges or two piece insulator are used, push on ring only hand-tight.  
It does not need to be pushed up to the stop.
- 4 (D) Strip tap conductor.  
(E) Insert phase conductor into tap hole and tighten.

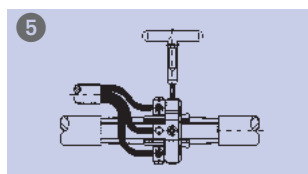
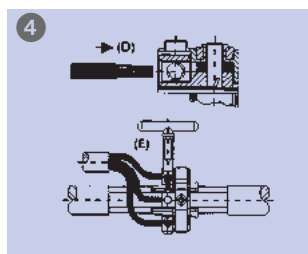
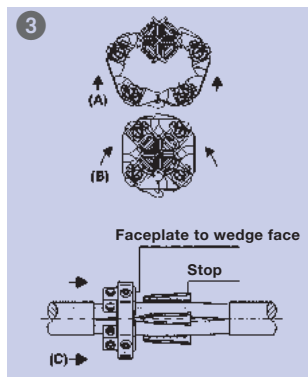
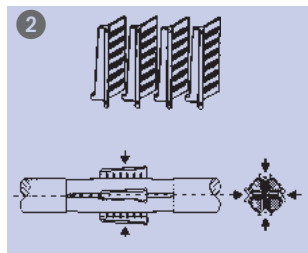
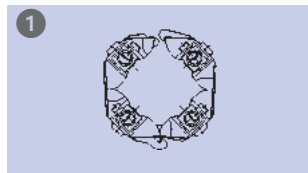


**Attention!** Insert wrench fully into hexagon screw! Tap conductors below 16 mm<sup>2</sup> are recommended to be clamped with kinked ends.

- 5 Shear-off screws to be tightened by alternating and uniform actions until seated on insulation.

Contact by alternating uniform tightening.

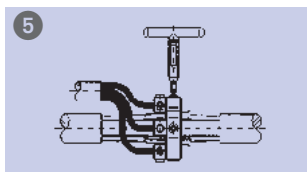
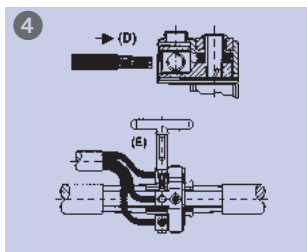
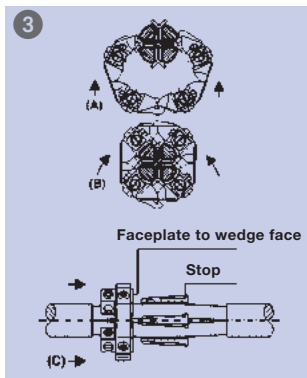
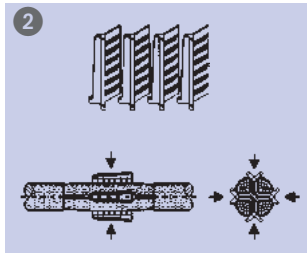
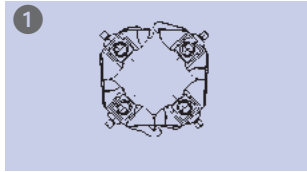
Maximum tightening force is achieved when a perceptible resistance is felt after cutting through insulation (stop), caused by penetration of bolt into conductor surface. Recommended tightening torque is approx. 15 Nm (1.5 kpm).



**Structure of the tap connector KSK504 for four connector cables**

Structure	Material
1. Ring:	
1.1 Upper part	High-strength aluminum alloy
1.2 Lower part	High-strength aluminum alloy
2. Contact block:	
2.1 Threaded bolt (main conductor)	E-copper, tin-plated
2.2 Pressure bolt (tap conductor)	Steel, tin-plated
2.3 Insulation housing	High-strength plastic
2.4 Washer	Steel
2.5 Disc spring stack	Spring steel, black-finished
2.6 Contact segment	Copper alloy
3. Spacer	High-strength plastic

**Assembly Instructions for:  
SKR1503 / SKR1204 / SKR1304 / SKR1504 /  
SKR150/1504 / SKR1854 / KSK1504 / KSK1854**



1 Strip cable to DIN 47630.

Comes with open snap-closure.  
If opening is required due to inadvertent closing,  
open ring parts by hand against snapping direction.

**Three conductor cable**

Cross-section	Recommended bare length*
50 - 95 mm <sup>2</sup>	200 mm
50 - 185 mm <sup>2</sup>	320 mm

**Four conductor cable**

Cross-section	Recommended bare length*
50 - 120 mm <sup>2</sup>	120 mm
50 - 185 mm <sup>2</sup>	160 mm

\* **Observe assembly instructions of gland manufacturer!** On sets with off-centre bulge (largest gland diameter), spacer wedges must also be placed off-centre.

2 Place spacer wedges between conductors.  
Expander wedges help to spread the conductors.

3 (A) Place clamping ring on the main conductor cable.  
(B) Push clamping ring halves against the wedges.  
(C) Slip ring onto wedges hand-tight.  
It does not need to be pushed up to the stop.

4 (D) Strip tap conductor.  
(E) Insert phase conductor into tap hole and tighten.



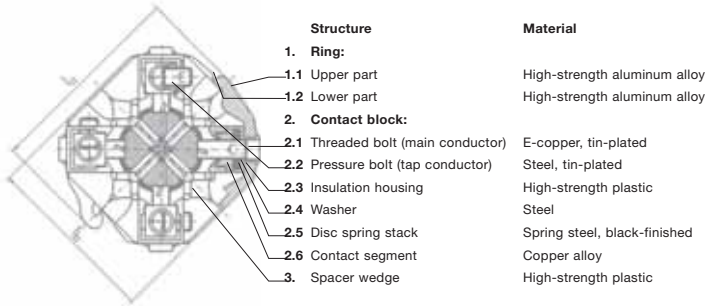
**Attention!** Insert wrench fully into hexagon screw! Tap conductors below 16 mm<sup>2</sup> are recommended to be clamped with kinked ends.

5 Shear-off screws to be tightened by alternating and uniform actions until seated on insulation.

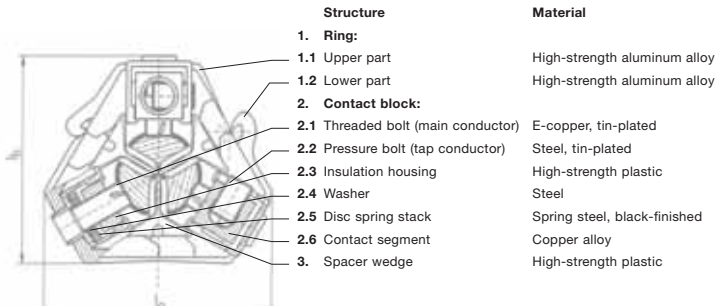
Contact by alternating uniform tightening.

Maximum tightening force is achieved when a perceptible resistance is felt after cutting through insulation (stop), caused by penetration of bolt into conductor surface. Recommended tightening torque is approx. 20 Nm (2 kpm).

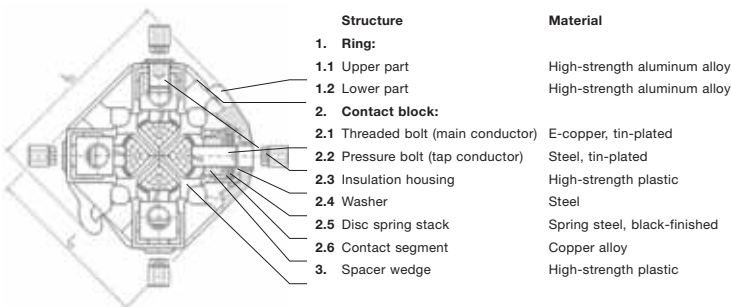
■ **Structure of the tap connectors SKR1204, SKR150/504, SKR150/1504 and SKR1854 for four connector cables**



■ **Structure of the tap connector SKR1503 for three connector cables**



■ **Structure of the tap connector KSK1504 for four connector cables**



■ Assignment of conductor cross sections (AWG or MCM sizes to mm<sup>2</sup>)

AWG	Metric conductor cross-section mm <sup>2</sup>	Comparable conductor cross-section mm <sup>2</sup>	MCM	Metric conductor cross-section mm <sup>2</sup>	Comparable conductor cross-section mm <sup>2</sup>
27	0.102	–	250	127	120
26	0.128	0.14	300	152	150
25	0.163	–	350	177	185
24	0.205	0.2	400	203	–
23	0.259	0.25	500	253	240
22	0.325	0.34	600	304	300
21	0.412	–	700	355	–
20	0.519	0.5	800	405	400
19	0.653	–	900	456	–
18	0.823	0.75	1000	507	500
17	1.04	1	1250	633	625
16	1.31	–	1500	760	800
15	1.65	1.5	1750	887	–
14	2.08	–	2000	1010	1000
13	2.63	2.5			
12	3.31	–			
11	4.15	4			
10	5.27	6			
9	6.62	–			
8	8.35	–			
7	10.6	10			
6	13.3	–			
5	16.8	16			
4	21.2	–			
3	26.7	25			
2	33.6	35			
1	42.4	–			
1/0	53.4	50			
2/0	67.5	70			
3/0	85	95			
4/0	107.2	120			

■ British and American units of measurement

Length units		Area units		Volume units		Fluid volume units		Weight	
1 mil	0.0254 mm	1 sq. in.	645.1 mm <sup>2</sup>	1 cu. in.	16.386 cm <sup>3</sup>	1 pint	0.568 l	1 grain	0.059 g
1 inch	25.4 mm	1 sq. ft.	0.093 m <sup>2</sup>	1 cu. ft.	0.028 m <sup>3</sup>	1 quart	1.136 l	1 ounce	28.349 g
1 foot	0.3048 m	1 sq. yd.	0.836 m <sup>2</sup>	1 cu. yd.	0.764 m <sup>3</sup>	1 brit. gallon	4.554 l	1 pound (lb)	0.454 kg
1 yard	0.9140 m					1 am gallon	3.785 l	1 brit. ton	1.016 t
1 mile	1.6090 km					1 quarter	290.790 l	1 am. ton	0.907 t
						1 bushel	36.350 l		

**Check-list for custom made cable lugs and connectors**

Customer / Company: ..... Customer No.: .....

Address: ..... Fax: .....

Contact person: ..... Tel.: .....

**Drawings and dimensions: Please fill in all required dimensions (see dimension chart) and necessary data.**

Cable lug

Cable lug with two holes in palm

Cable lug with hook right

left

Angle cable lug from 30° to 90°

Cable lug with angle up to 30°

Connector

Parallel connector

Number of butt marks: 0 / 1 / 2 / .....

Other types acc. to your sketches/remarks:

Dimension chart (please state nominal dimensions in "mm"):

Dimension d1 ..... Dimension l .....  
 Dimension d4 ..... Dimension l1 .....  
 Dimension d2 ..... Dimension l3 .....  
 Dimension a .....  
 Dimension b .....  
 Dimension c1 ..... Angle x .....  
 Dimension c2 .....

**Technical data**

Type of conductor (if known): .....

Cross-section (cable): .....

Inspection hole (on cable lugs):  Tubular cable lug  Compression cable lug  
 Surface:  bright  tin-plated  nickel-plated

Other: .....

Material:  Cu  Al

Other: .....

**Commercial Data**

Batch size / Annual requirement: .....

Requested delivery date: .....

Sample:  Yes  No

Test report of first sample:  Yes  No

Additional agreements:

Date: ..... Signature (customer): .....

■ Cable pulling technology – Typical applications

Type	Tape diameter	Tube diameter	Pressure energy	Min. curve radius	Breaking strength	Tensile force with start/end sleeve	Recommended length
	ø mm	ø mm	Kg	mm	Kg	Kg	m
Speedy Spinner	3	16 - 32	+++	160	400	110	20-30 (+ 2-3)
Smart Butler	4.5	40 - 60	+++	310	1200	>200	40-60 (+ 3-5)
Smart Butler	6	50 - 80	+++	400	2000	>300	40-80 (2-3)
Smart Butler	7.5	63 - 100	+++	500	3000	>400	20-30 (+ 3-5)
	9	63 - 125	+++	620	4500	>500	20-30 (+ 3-5)
	11	63 - 150	+++	770	7500	>700	150-250 (+ 3-5)
Polyester	4.5	16 - 32	+++	100	250	140	10-25
Nylon, Perlon®	4	16 - 25	+	80	280	120	10-20
Steel	4	16 - 25	+	100	900	115	10-20

■ for trade    □ for industry

## ■ Measurement Categories

Protective values which greatly exceed the nominal capacity of a system are stipulated in the standards of the IEC categories. Without this additional protection, transient overvoltages which occur with increasing regularity may cause serious or fatal injuries.

### ■ Measurement Category I

is the signal level for telecommunications and electronic equipment.

### ■ Measurement Category II

is the local level for permanently connected devices or devices not operated by means of a fixed connection - including all types of illumination from household devices to office equipment such as copy machines. Can also be used in Category I ranges.

### ■ Measurement Category III

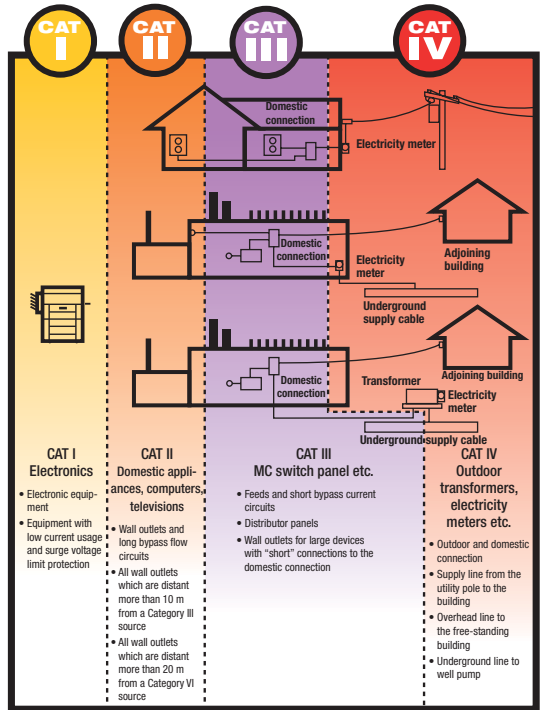
is the distribution level for fixed main or bypass flow circuits. These electric circuits are usually separated by at least one level of transformer barrier of Category IV (public utility or other high-voltage power source). Can also be used in Category II and Category I ranges.

### ■ Measurement Category IV

is the main electric supply level. Greenlee is setting new standards by offering equipment that meets the highest protective values of IEC standards and which are certified accordingly. Can be used in all category ranges.

**Greenlee equipment** – checked and certified for compliance with norms by an independent party. This catalogue states the category for many Greenlee devices, indicating that these devices comply with the various IEC categories (II, III or IV). All these references represent the categories confirmed in tests by independent testing organisations – giving you additional assurance.

**The right type of protection for the task at hand.** No matter where you may need overvoltage protection – select a device which has at least the nominal capacity suitable for the work you are carrying out.



### ■ Metric cable glands for electrical installation EN 50262

The new European standard EN 50262 defines conditions for all manufacturers of electrical appliance housings and all electrical installation.

It's scope includes cables and conductors for control cabinets, distributor housings, junction boxes, domestic connections, installation boxes, equipment housings etc.

EN 50262 replaces the Pg thread (steel tank pipe thread) used for all housing designs for decades with a metric thread. Sizes Pg 7 to Pg 48 are being replaced by ISO M 6 to M75.








### Greenlee holemaking tools in ISO sizes acc. to EN 50262

ISO sizes	mm	Slug-Buster® punch	Slug-Splitter® punch	HSS hole saws	Step bits	Kwik Change® HM saws
12	12.5	✓				
16	16.5	✓	✓		✓	
20	20.5	✓	✓	✓	✓	✓
25	25.5	✓	✓	✓	✓	✓
32	32.5	✓	✓		✓	
40	40.5	✓	✓		✓	
50	50.5	✓	✓	✓		✓
63	63.5	✓	✓	✓		✓

### ■ Holemaking systems

Round punch	Operation	Capacity	Hole size
<b>Slug-Buster®</b>	Manual, hydraulic punches	max. 3.0 mm in St 37	12.5 to 64.0 mm
<b>Slug-Splitter®</b>	Hydraulic punches	max. 3.5 mm in V2A	15.2 to 64.0 mm
<b>Speed Punch™</b>	Hydraulic punches	3.5 mm in St 37	16.2 to 64.0 mm
<b>Standard</b>	Manual, hydraulic punches	max. 3.0 mm in St 37	66.7 to 143.7 mm
Special shaped punches	Operation	Capacity	Hole size
<b>Special shaped punches</b>	Manual, hydraulic punches	max. 3.0 mm in St 37 or 1.5 mm in V2A	See data for the individual punches

### ■ Hydraulic punches

			Description
	LS 50-L Flex Battery powered hydraulic punching tool	LS50LFLEX	- with micro-processor control - 60 kN punching force - punches up to 3.0 mm St 37 and up to 3.5 mm V2A, depending on hole size
	LS 60-L Battery powered hydraulic punching tool	LS60L	- with micro-processor control - 60 kN punching force - punches up to 3.0 mm St 37 and up to 3.5 mm V2A, depending on hole size
	Hydraulic punch Quick Draw™ 7804E	50342916	- ideal for fast, frontal punching - 80 kN punching force - punches up to 3.0 mm St 37 and up to 3.5 mm V2A, depending on hole size
	Hydraulic punch Quick Draw 90™ 7904E	50342991	- rectangular cylinder head rotatable around 180° - maximum flexibility in narrow working spaces - 80 kN punching force - punches up to 3.0 mm St 37 and up to 3.5 mm V2A, depending on hole size
	Hydraulic punch with hand pump	50159062	- compact design of punch, pump and cylinder - 110 kN punching force - punches up to 3.0 mm St 37 and up to 3.5 mm V2A, depending on hole size
	Hydraulic punch with foot pump	50250973	- foot pump leaves both hands free for operating the punch - 110 kN punching force - punches up to 3.0 mm St 37 and up to 3.5 mm V2A, depending on hole size
	Hand hydraulic punch Flex Draw	52033843	- rectangular cylinder head rotatable around 180° - maximum flexibility in narrow working spaces - 80 kN punching force - punches up to 3.0 mm St 37 and up to 3.5 mm V2A, depending on hole size



## ■ Standards for cabling

A number of standardisation committees that define the technical features of cabling systems have been in existence since 1993. These directives must be observed when planning and setting up networks. Full volumes can be obtained from specialist bookshops.

## ■ International standards

International Standards are published by the ISO (International Standards Organisation). In Europe these international directives are used for information purposes.

**ISO/IEC IS 11801** Description of the performance requirements for a general cabling system

**IEC 1156** Multi-core and symmetrical conductors for digital message transmission

**IEC 1156-1** Basic specification

**IEC 1156-2** Framework specification for service cables IEC1156-3 Framework specification for patch and equipment connecting cables

**IEC 1156-4** Framework specification for building connecting and rising cables

## ■ European standards

In collaboration with national standard institutes, the European Committee for Electrical Standardisation CENELEC (Comite Europeen de Normalisation Electrotechnique) has published European standards that are based on the international ISO/IEC 11801 and hence normative for Europe.

**EN 50173** Description of the performance requirements for a general cabling system (EN 50173 also refers to HD 608 and also EN 55022)

**608** General specification for symmetrical conductors for digital message transmission

**EN 50167** Framework specification for service cables

**EN 50168** Framework specification for patch and equipment connecting cables

**EN 50169** Framework specification for building connection and rising cables

**EN 55022** Framework specification for electromagnetic compatibility (EMC). This specification contains threshold values and measuring procedures for radio interference of data processing equipment.

## ■ American standards

The American standards are published by the EINTIA (Electronic Industries Association / Telecommunication Industries Association) an American Joint Venture.

**TSB 36** Framework specification for symmetrical data cables (100 Ohm, unsheathed)

**TSB 40** Framework specification for passive components (100 Ohm, unsheathed)

**EIA/TIA 568** Framework specification for cabling systems



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## Crimping tools

**Crimping and cutting tools** Klauke®  
Mechanical crimping tools

K 35/4 Crimping tool for interchar **7** K 35/4 Crimping tool for interchar

**8** Available dies for Series 4 for K 35/4

Available for	35/4	Connecting material	Crimping range mm	Crimp profile	Page
Subtable for					
Tubular cable lugs and connectors for compacted conductors acc. to VDE 0298, class 2			6 - 150		416
Tubular cable lugs and connectors, Cu, standard type, tubular cable lugs for multiple connections			6 - 150		417
Insulated tubular cable lugs and connectors, standard type, insulated pin terminals			10 - 70		417
Tubular cable lugs and connectors for fine stranded conductors			10 - 35		418
Tubular cable lugs and compression joints for solid conductors			1.5 - 16		418
Tubular cable lugs and connectors, Ni, stainless steel					419
Tubular cable lugs and connectors, stainless steel			0.5 - 16		419
Tubular cable lugs and connectors, Ni			0.5 - 16		419
Compression cable lugs and connectors acc. to DIN - Cu					420
Compression cable lugs (DIN 46232) and connectors (DIN 46237, part 1) - Cu			6 - 120		420
Terminal, connector and pin terminals acc. to DIN - Cu					421
Terminal, connector (DIN 46232), connectors (DIN 46241), pin terminals (DIN 46232) - Cu			10 - 35		421
Insulated endless terminals and connectors			10 - 16		421
Sleeves for compacted conductors and sector shaped conductors					421
Pre-insulating die for sector shaped Al and Cu conductors			10mm - 150mm / 120mm		422
Aluminum compression cable lugs and connectors to DIN					422
Aluminum compression cable lugs and connectors to DIN			10 - 70		422
Compression plate for full tension connections of Al alloy acc. to DIN EN 50162			25 - 50		422
Aluminum/copper compression cable lugs and connectors					423
Aluminum/copper compression cable lugs and connectors			10 - 70		423
Change and screw connectors			10 - 70		423
Change, Crimp			4 - 30		423
Cable end sleeves					423
Cable end sleeves			10 - 60		423
Two cable end sleeves			10 - 60		423
Two cable end sleeves for fine stranded conductors			2 x 4 - 2 x 16		421
Cable end sleeves for fine stranded conductors			2 x 4 - 2 x 16		421

Please observe the instructions in the technical tables when choosing connectors!

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- 7** Select crimping tool.
- 8** For tools with interchangeable dies, crimping dies are selected from the Available dies chart.
- 9** From the chart, referring to the connecting material to be crimped, continue to the crimping dies via the page number indicated.

## Crimping dies

**Crimping dies** Klauke®  
Series 4

**4**

Crimping dies, blue connection® HB 4

Accurate adjustment of crimping tool/imping die through colour-coding system

**10** Suitable for Tubular cable lugs and connectors, blue connection® for compacted conductors acc. to VDE 0298 Class 2

**11** Use connecting material

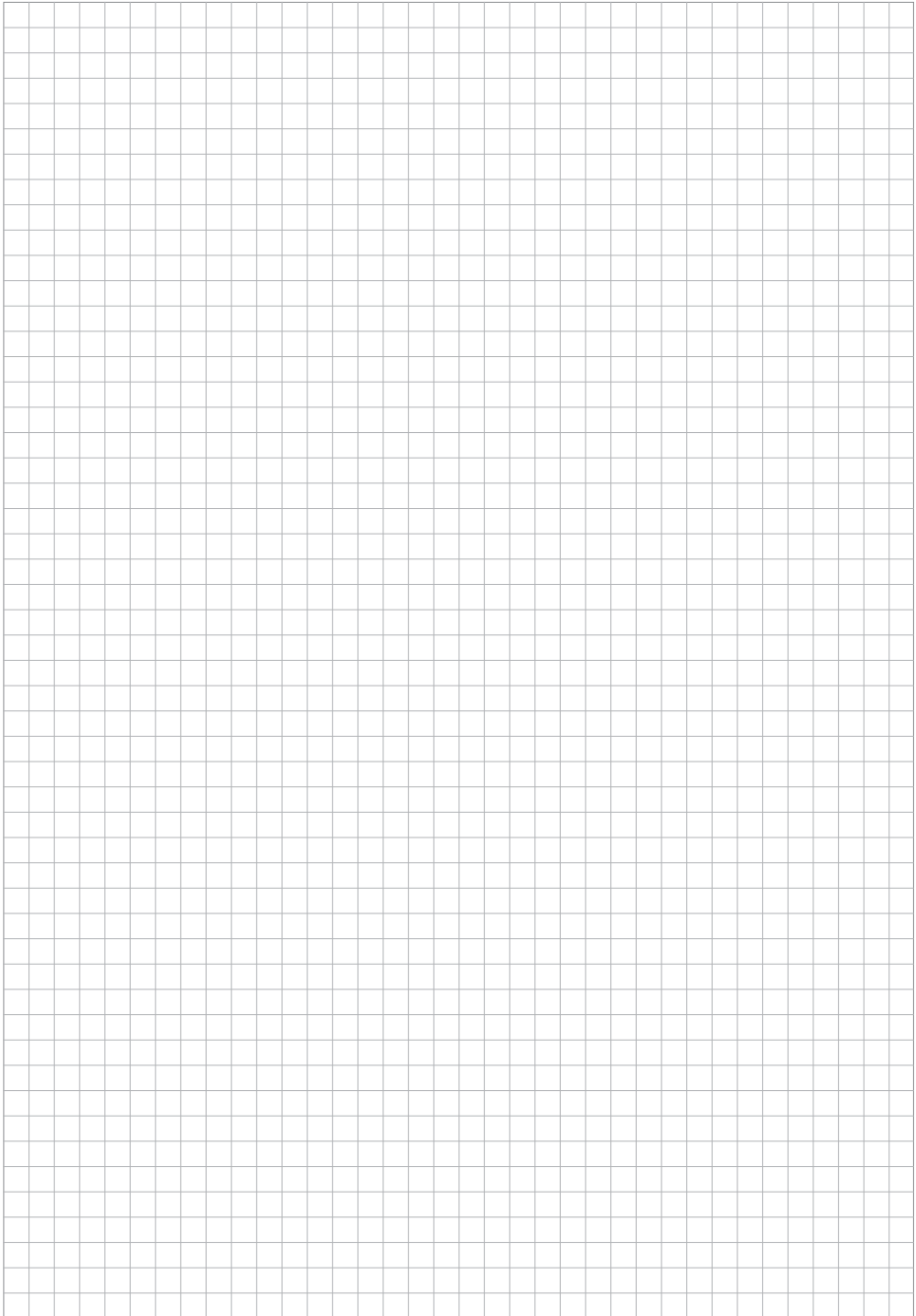
Crimp section mm	Part No.	Crimp width mm	Number of crimps
6	HB40	9	1
10	HB410	9	1
16	HB416	9	1
25	HB425	9	1
35	HB435	9	1
50	HB450	9	1
70	HB470	5	2
95	HB495	5	2
120	HB4120	5	2
150	HB4150	5	2

Crimping die set 6 - 150 mm<sup>2</sup>, blue connection

Part No. HB40

416

- 10** Select the correct chart from pictograms for connecting material and crimp profile.
- 11** In the chart, select the crimping die that matches the nominal cross section to be crimped.







## Connecting material

	Tubular cable lugs and connectors, blue connection – Cu		Tubular cable lugs and connectors – Ni		Compression cable lugs and connectors for Aldey cables		Twin cable end-sleeves
	Tubular cable lugs and connectors – Cu, standard design		Compression cable lugs and connectors to DIN – Cu		Compression cable lugs and connectors for Al/St cables		Insulated cable connectors
	Insulated tubular cable lugs and connectors; standard type		Solderless terminals, connectors and pin terminals to DIN – Cu		Compression cable lugs and connectors – Al/Cu		Non-insulated receptacles
	Tubular cable lugs and connectors for fine stranded conductors		Insulated solderless terminals		C-clamps		
	Tubular cable lugs and connectors for solid conductors		Sleeves for compacted conductors and sector-shaped conductors – Cu		H-clamps		
	Tubular cable lugs and connectors – stainless steel		Compression cable lugs and connectors to DIN – Al		Cable end-sleeves		

## Crimping profiles

	Hexagonal crimping		Roll crimping		Oval crimping		Quad-point indent crimping
	Round crimping		Indent crimping		Four point crimping		Trapezoid crimping
	Indent crimping tubular cable lug		Special trapezoid crimping		Indent crimping cable end-sleeves		
	Gas-tight oval crimping		Square crimping		Indent crimping compression cable lugs		



## Crimping and cutting tools

	Crimping force		2-component plastic case		Manual retraction stop		Energy saving function
	Opening width, C-heads		Rotating head		Manual retraction stop with teach-in function		Workplace illumination
	Narrow crimping		Two-stage hydraulics		Electronic control		Audible error message/ Intelligent Pressing System
	Wide crimping		Quick stop		Maintenance indicator		Environmentally-friendly hydraulic oil
	Centering system		Automatic retraction		NiMH battery		Easy handling / one-button operating concept
	Copper and aluminum cable		Manual retraction		Li-Ion battery		PowerSense technology
	Al/St cables		Automatic positioning control		Rated voltage		Evaluation function via USB adapter



## Hand tools

	Slot		PZ (cross-slotted)		with chamfer		Triangle
	PH (cross-slotted)		Torx TR		Groove		Stepped external square
	SQ		Plus-minus		Clamp		ESD
	Torx Plus		Two-way key bit		Torx		
	Hexagon socket		without chamfer		Half-moon		

## Measuring instruments

	Measuring category 1		TRUE RMS effective value measurement
	Measuring category 2		Lifetime Warranty
	Measuring category 3		
	Measuring category 4		

## Test mark

	VDE		DET NORSE VERITAS
	IEC		Insulated acc. to IEC 60900
	CSA		CE
	UL		GS
			Germanischer Lloyd

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