

2021 CATALOG

Vacuum Equipment and Supplies



Gate Valves



Diffusion Pumps



Turbo Pumps



Ion Pumps



Mechanical Pumps



Duniway Stockroom Corporation

Supplying reliable vacuum equipment since 1976

Our Company

- Low Prices
- Delivery from Stock
- Real People
- Technical Support



▼ The Duniway Team

Background

Duniway Stockroom Corporation was founded by Ralph Duniway in 1976, and provides high quality products, both new and used, at reasonable prices to the vacuum equipment market. We take pride in providing comprehensive information about our products and their applications for our customers. This business model has supported growth since our company was founded. Our knowledgeable customer service representatives provide informed assistance to help you meet your requirements.

Product Range and Availability

We have a large stock of new vacuum products and supplies, and in most cases, items are shipped the same day as ordered. Our wide access to used vacuum equipment and rebuilding services provides an additional excellent resource for low-cost solutions.

Information Access

On a regular basis, we publish this catalog, with updated products and prices. A complete copy is available on our website for reference or download. In 1997, we also provided a website with additional information about our products and services. On our home page, www.duniway.com, we have information about products and prices, rebuilding services, special offers, news items, reports, Material Safety Data Sheets, quotation forms, product manuals, and online ordering. Check our home page frequently to keep up on our product offers. Our customer representatives can be reached by telephone, FAX and e-mail to answer your questions and take your orders.

Customers

Our customers are worldwide. Universities, government laboratories, OEM's, Fortune 500 corporations and smaller end-users are all extensively represented in our customer base.

Services

Duniway Stockroom Corporation also provides a selection of rebuilding services intended to extend the service life of your equipment and save you money. All of our rebuilding services come with a one year warranty covering defective parts and workmanship. Please check the specific product areas for services performed and the associated pricing.

Open Monday through Friday from 7:30 AM to 4:30 PM PST

Toll Free / USA and Canada **1-800-446-8811**

Telephone 650-969-8811

Facsimile 650-965-0764

eMail Info@duniway.com

Website www.duniway.com

Shipping Policy:

- Minimum Order:** Domestic - \$25, International - \$100.
- Delivery:** Stock items normally ship the same day, provided the order is placed by 12:00 pm (PST).
- Availability:** Rebuilt equipment is subject to availability and performance check at time of order.
- F.O.B.** All shipments are F.O.B. Fremont, CA unless otherwise quoted.
- Shipping:** Freight Collect, with your account number provided, or UPS Prepaid and added, unless otherwise quoted.
- Payment Terms:** Net 30 days upon credit approval. All other payments are due upon delivery.
- Credit Cards Accepted:** Visa®, MasterCard®, American Express®.
- Warranty:** We offer a standard 1 year warranty against defective parts and workmanship, unless otherwise quoted.
- RMA #s:** When shipping to us for any reason, please call us prior to shipment for a "Return Merchandise Authorization" number. Products returned for repair or replacement should be sent prepaid.
- HazMat Forms:** In order to comply with current environmental protection policies, we require a completed Hazardous Materials Form (HAZMAT) to be forwarded to us prior to our giving you an RMA #. Please download our HAZMAT Form from our website, which can be found under the Documents tab.
- Restocking Fee:** Some items being returned to us for reasons other than warranty/replacement are subject to a restocking fee.
- Prices:** Prices are shown in U.S. dollars. Prices are current at press time, but are subject to change without notice.
- Terms & Conditions:** For our complete Terms & Conditions, Please see our website.

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Hardware

Valves

Supplies

Ion Pumps

Diffusion Pumps

Mechanical Pumps

Turbo Pumps

Leak Detectors

Gauge Controls

Vacuum Sensors

Hardware



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Features

- 304 Stainless Steel
- Some parts also available in Aluminum or Brass
- Dupont Dow Certified
- All Viton o-rings are Vacuum degassed

Dimensions / Specifications

Part No.	Tube OD	Flange OD	Thickness
Prefix	Inch	Inch	mm
KF16-	3/4	1.18	30
KF25-	1	1.57	40
KF40-	1-1/2	2.16	55
KF50-	2	2.95	75

KF® Fittings, Qwik Flanges

Part No.	Description	Price	Sketch
Duniway	--	US \$	#
KF16-CP	KF16 Clamp, Aluminum, With Wing Nut	5.00	1
KF25-CP	KF25 Clamp, Aluminum, With Wing Nut	7.00	1
KF40-CP	KF40 Clamp, Aluminum, With Wing Nut	8.00	1
KF50-CP	KF50 Clamp, Aluminum, With Wing Nut	14.00	1
KF10-CR	KF10 Centering Ring, With Viton O-Ring	5.75	2
KF16-CR	KF16 Centering Ring, With Viton O-Ring	5.25	2
KF25-CR	KF25 Centering Ring, With Viton O-Ring	7.00	2
KF40-CR	KF40 Centering Ring, With Viton O-Ring	9.00	2
KF50-CR	KF50 Centering Ring, With Viton O-Ring	12.00	2
KF16-10-CR	Adaptive KF Centering Ring, KF16 to KF10, O-Ring Included	10.25	--
KF25-20-CR	Adaptive KF Centering Ring, KF25 to KF20, O-Ring Included	12.00	--
KF40-32-CR	Adaptive KF Centering Ring, KF40 to KF32, O-Ring Included	14.00	--
KF16-OV	KF16 Viton O-Ring, Replacement	2.00	3
KF25-OV	KF25 Viton O-Ring, Replacement	2.00	3
KF40-OV	KF40 Viton O-Ring, Replacement	3.00	3
KF50-OV	KF50 Viton O-Ring, Replacement	4.00	3
KF10-FB	KF10 Flange, Blank	7.50	4
KF16-FB	KF16 Flange, Blank	7.25	4
KF25-FB	KF25 Flange, Blank	8.00	4
KF40-FB	KF40 Flange, Blank	12.50	4
KF50-FB	KF50 Flange, Blank	16.00	4
KF16-075	KF16 Flange, 0.75" Bored Weld	8.25	6
KF16-075B	KF16 Flange, 0.75" Socket Weld Brass	10.50	5
KF25-100	KF25 Flange, 1.00" Bored Weld	9.00	6
KF25-100B	KF25 Flange, 1.00" Socket Weld Brass	11.80	5
KF40-150	KF40 Flange, 1.50" Bored Weld	12.50	6
KF40-150B	KF40 Flange, 1.50" Socket Weld Brass	16.50	5
KF50-200	KF50 Flange, 2.00" Bored Weld	18.00	6
KF50-200B	KF50 Flange, 2.00" Socket Weld Brass	25.00	5



Image 1



Image 2



Image 3



Image 4

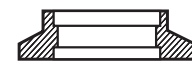
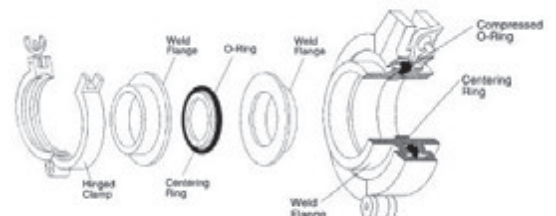


Image 5



Image 6



KF® and Large ISO Flanges/Fittings

Hardware

KF® Fittings, Qwik Flanges

Hardware

KF® Fittings, Qwik Flanges

Part No.	Description	Price	Sketch
Duniway	--	US \$	#
KF25-050	KF25 Flange, Weld Reducer, 0.50"	9.00	6
KF25-075	KF25 Flange, Weld Reducer, 0.75"	9.00	6
KF40-050	KF40 Flange, Weld Reducer, 0.50"	Inquire	6
KF40-075	KF40 Flange, Weld Reducer, 0.75"	12.50	6
KF40-100	KF40 Flange, Weld Reducer, 1.00"	12.50	6
KF50-075	KF50 Flange, Weld Reducer, 0.75"	Inquire	6
KF50-100	KF50 Flange, Weld Reducer, 1.00"	18.00	6
KF50-150	KF50 Flange, Weld Reducer, 150"	18.00	6
KF16-S0	KF16 Flange, Stub, Blank	11.75	7
KF25-S0	KF25 Flange, Stub, Blank	12.75	7
KF40-S0	KF40 Flange, Stub, Blank	18.00	7
KF50-S0	KF50 Flange, Stub, Blank	Inquire	7
KF16-1/8	KF16 Flange, Stub, 1/8" NPT	25.50	8
KF16-1/4	KF16 Flange, Stub, 1/4" NPT	26.50	8
KF25-1/8	KF25 Flange, Stub, 1/8" NPT	28.00	8
KF25-1/4	KF25 Flange, Stub, 1/4" NPT	28.00	8
KF40-1/8	KF40 Flange, Stub, 1/8" NPT	32.25	8
KF40-1/4	KF40 Flange, Stub, 1/4" NPT	35.00	8
KF50-1/8	KF50 Flange, Stub, 1/8" NPT	42.00	8
KF50-1/4	KF50 Flange, Stub, 1/4" NPT	42.00	8
KF16-133	KF16 Flange to CF 1.33" OD	54.00	9
KF25-275	KF25 Flange to CF 2.75" OD	67.00	9
KF40-275	KF40 Flange to CF 2.75" OD	72.00	9
KF50-450	KF50 Flange to CF 4.50" OD	140.00	9
KF25-CP050	KF25 Flange to 1/2" Compression Port	76.00	10
KF40-CP050	KF40 Flange to 1/2" Compression Port	78.00	10
KF16-CP075	KF16 Flange to 3/4" Compression Port	80.00	10
KF25-CP075	KF25 Flange to 3/4" Compression Port	80.00	10
KF40-CP075	KF40 Flange to 3/4" Compression Port	82.00	10
KF50-CP075	KF50 Flange to 3/4" Compression Port	91.00	10
KF25-CP100	KF25 Flange to 1.0" Compression Port	91.00	10
KF40-CP100	KF40 Flange to 1.0" Compression Port	100.00	10
KF50-CP100	KF50 Flange to 1.0" Compression Port	110.00	10
KF25-CP118	KF25 Flange to 1 1/8" Compression Port	98.00	10
KF40-CP118	KF40 Flange to 1 1/8" Compression Port	122.00	10
KF50-CP118	KF50 Flange to 1 1/8" Compression Port	130.00	10



Image 6

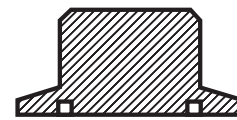


Image 7



Image 8

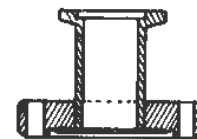


Image 9



Image 10

KF® Fittings, Qwik Flanges

Part No.	Description	Price	Sketch
Duniway	--	US \$	#
KF25-3/4M	KF25 Flange, Stub, 3/4" Male	70.00	11-A
KF16-1400	KF16 Flange to Welch 1400 Pump Inlet	79.00	11-B
KF25-1402	KF25 Flange to Welch 1402 Pump Intake or Exhaust, Model 1376 Exhaust Only	84.00	11-C
KF40-1397	KF40 Flange to Welch 1397 or 1374 Pump Intake or Exhaust	115.00	11-D
KF16-HA	KF16 Flange to Hose Adapter, Aluminum (Fits 5/8" or 3/4" ID Gum Rubber Hose)	11.00	12
KF25-HA	KF25 Flange to Hose Adapter, Aluminum (Fits 3/4" or 13/16" ID Gum Rubber Hose)	13.00	12
KF40-HA	KF40 Flange to Hose Adapter, Aluminum (Fits 1 1/2" or 1 5/8" ID Gum Rubber Hose)	17.00	12
KF50-HA	KF50 Flange to Hose Adapter, Aluminum (Fits 1 1/2" or 1 5/8" ID Gum Rubber Hose)	25.00	12
KF50-HA-2	KF50 Flange to Hose Adapter, Aluminum (Fits 1 7/8" or 2" ID Gum Rubber Hose)	20.00	--
KF25-TP118	KF25 Flange to Leak Detector Port	80.00	13
KF40-TP118	KF40 Flange to Leak Detector Port	97.00	13
KF16-HN	KF16 Flange , Half Nipple	13.00	14
KF25-HN	KF25 Flange , Half Nipple	15.75	14
KF40-HN	KF40 Flange , Half Nipple	18.00	14
KF50-HN	KF50 Flange , Half Nipple	26.00	14
KF16-NP	KF16 Flange , Nipple	38.00	15
KF25-NP	KF25 Flange , Nipple	44.00	15
KF40-NP	KF40 Flange , Nipple	55.00	15
KF50-NP	KF50 Flange , Nipple	67.00	15

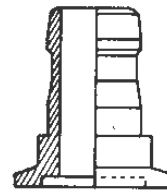


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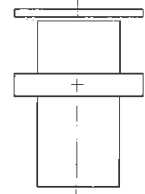


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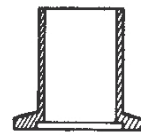


Image 14



Image 15



Image 11-A — KF25 Flange, Stub, 3/4" Male



Image 11-B — KF16 Flange to Welch 1400 Pump Inlet



Image 11-C — KF25 Flange to Welch 1402 Pump Intake or Exhaust, Model 1376 Exhaust Only



Image 11-D — KF40 Flange to Welch 1397 or 1374 Pump Intake or Exhaust

Hardware

KF® Fittings, Qwik Flanges

Hardware

KF® Fittings, Qwik Flanges

Part No.	Description	Price	Sketch
Duniway	--	US \$	#
KF25-NR16	KF25 Flange, Reducing Nipple to KF16	36.00	16
KF40-NR16	KF40 Flange, Reducing Nipple to KF16	40.00	16
KF40-NR25	KF40 Flange, Reducing Nipple to KF25	40.00	16
KF50-NR16	KF50 Flange, Reducing Nipple to KF16	43.00	16
KF50-NR25	KF50 Flange, Reducing Nipple to KF25	48.00	16
KF50-NR40	KF50 Flange, Reducing Nipple to KF40	48.00	16
KF16-EL45	KF16 Flange, 45 Elbow	52.00	17
KF25-EL45	KF25 Flange, 45 Elbow	56.00	17
KF40-EL45	KF40 Flange, 45 Elbow	85.00	17
KF50-EL45	KF50 Flange, 45 Elbow	90.00	17
KF16-EL90	KF16 Flange, 90 Elbow	43.00	18
KF25-EL90	KF25 Flange, 90 Elbow	47.00	18
KF40-EL90	KF40 Flange, 90 Elbow	65.00	18
KF50-EL90	KF50 Flange, 90 Elbow	85.00	18
KF16-TE	KF16 Flange, Tee	64.00	19
KF25-TE	KF25 Flange, Tee	72.00	19
KF40-TE	KF40 Flange, Tee	82.00	19
KF50-TE	KF50 Flange, Tee	120.00	19
KF16-CS	KF16 Flange, Cross	98.00	20
KF25-CS	KF25 Flange, Cross	110.00	20
KF40-CS	KF40 Flange, Cross	142.00	20
KF50-CS	KF50 Flange, Cross	189.00	20
KF16-FX4	KF16 Flange, Flex Coupling, 4" Long	89.00	21
KF16-FX10	KF16 Flange, Flex Coupling, 10" Long	89.00	21
KF16-FX20	KF16 Flange, Flex Coupling, 20" Long	105.00	21
KF16-FX40	KF16 Flange, Flex Coupling, 40" Long	154.00	21
KF25-FX4	KF25 Flange, Flex Coupling, 4" Long	78.00	21
KF25-FX10	KF25 Flange, Flex Coupling, 10" Long	91.00	21
KF25-FX20	KF25 Flange, Flex Coupling, 20" Long	112.00	21
KF25-FX40	KF25 Flange, Flex Coupling, 40" Long	161.00	21
KF40-FX4	KF40 Flange, Flex Coupling, 4" Long	86.00	21
KF40-FX10	KF40 Flange, Flex Coupling, 10" Long	118.00	21
KF40-FX20	KF40 Flange, Flex Coupling, 20" Long	143.00	21
KF40-FX40	KF40 Flange, Flex Coupling, 40" Long	203.00	21
KF50-FX4	KF50 Flange, Flex Coupling, 4" Long	110.00	21
KF50-FX10	KF50 Flange, Flex Coupling, 40" Long	160.00	21
KF50-FX20	KF50 Flange, Flex Coupling, 20" Long	175.00	21
KF50-FX40	KF50 Flange, Flex Coupling, 40" Long	225.00	21



Image 16

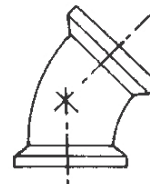


Image 17

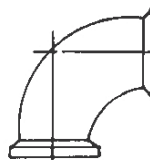


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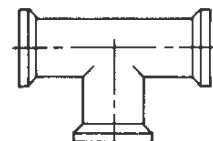


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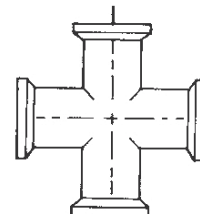


Image 20



Image 21

Features

- Flanges and Bolts are 304 Stainless Steel
- Claw-Clamps are Aluminum

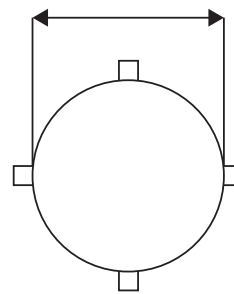
ISO Large Flanges

Part No.	Description	Price	Sketch
Duniway	--	US \$	#
LF063-DCC	NW63 LF Double Claw Clamp	\$6.50	1
LF100-DCC	NW100 LF Double Claw Clamp	\$6.50	1
LF160-DCC	NW160 LF Double Claw Clamp	\$6.50	1
LF200-DCC	NW200 LF Double Claw Clamp	\$6.50	1
LF063-SCC	NW63 LF Single Claw Clamp	\$5.00	2
LF100-SCC	NW100 LF Single Claw Clamp	\$5.00	2
LF160-SCC	NW160 LF Single Claw Clamp	\$6.00	2
LF200-SCC	NW200 LF Single Claw Clamp	\$6.00	2
LF063-BDF	NW63 Double Flange Bolts, Set of 4	Inquire	3
LF100-BDF	NW100 Double Flange Bolts, Set of 8	Inquire	3
LF160-BDF	NW160 Double Flange Bolts, Set of 8	Inquire	3
LF200-BDF	NW200 Double Flange Bolts, Set of 12	Inquire	3
LF063-BTF	NW63 Tapped Flange Bolts, Set of 4	Inquire	4
LF100-BTF	NW100 Tapped Flange Bolts, Set of 8	\$7.00	4
LF160-BTF	NW160 Tapped Flange Bolts, Set of 8	\$13.50	4
LF200-BTF	NW200 Tapped Flange Bolts, Set of 12	Inquire	4
LF063-CR	NW63 Centering Ring Ass'y, SST, Includes VITON O-Ring	\$45.00	5
LF100-CR	NW100 Centering Ring Ass'y, SST, Includes VITON O-Ring	\$62.00	5
LF160-CR	NW160 Centering Ring Ass'y, SST, Includes VITON O-Ring	\$76.00	5
LF200-CR	NW200 Centering Ring Ass'y, SST, Includes VITON O-Ring	\$110.00	5
LF063-CRA	NW63 Centering Ring Ass'y, Aluminum, Includes VITON O-Ring	\$29.00	6
LF100-CRA	NW100 Centering Ring Ass'y, Aluminum, Includes VITON O-Ring	\$35.00	6
LF160-CRA	NW160 Centering Ring Ass'y, Aluminum, Includes VITON O-Ring	\$45.00	6
LF200-CRA	NW200 Centering Ring Ass'y, Aluminum, Includes VITON O-Ring	\$63.00	6
LF063-OV	NW63 O-Ring Replacement, VITON	\$9.00	--
LF100-OV	NW100 O-Ring Replacement, VITON	\$12.00	--
LF160-OV	NW160 O-Ring Replacement, VITON	\$20.00	--
LF200-OV	NW200 O-Ring Replacement, VITON	\$25.00	--

Dimensions / Specifications

ISO	Tube OD	Clamp Flange OD	Bolted Flange OD
Duniway	Inch	mm/Inch	mm/inch
NW63	2.50	95mm/3.74"	130mm/5.12"
NW100	4.00	130mm/5.12"	165mm/6.50"
NW160	6.00	180mm/7.09"	225mm/8.86"
NW200	8.00	240mm/9.45"	285mm/11.22"

Clamp Flange OD



Bolted Flange OD

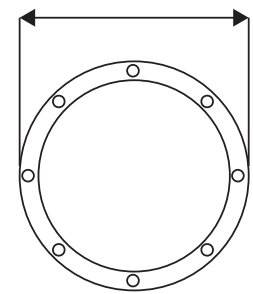


Image 1

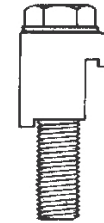


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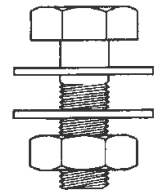


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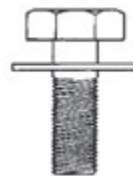


Image 4



Image 5 & 6

Hardware

ISO Large Flanges

Hardware

ISO Large Flanges

Part No.	Description	Price	Sketch
Duniway	--	US \$	#
LF063-BRR	NW63 Rotatable Ring, Bolt, With Retainer Wire	Inquire	7
LF100-BRR	NW100 Rotatable Ring, Bolt, With Retainer Wire	\$185.00	7
LF160-BRR	NW160 Rotatable Ring, Bolt, With Retainer Wire	\$365.00	7
LF200-BRR	NW200 Rotatable Ring, Bolt, With Retainer Wire	Inquire	7
LF063-250	NW63 Short Weld Flange	\$53.00	8
LF100-400	NW100 Short Weld Flange	\$72.00	8
LF100-400-316	NW100 Short Weld flange - Stainless Steel 316	\$90.00	8
LF160-600	NW160 Short Weld Flange	Inquire	8
LF200-800	NW200 Short Weld Flange	Inquire	8
LF063-HN	NW63 Half-Nipple (Long Butt Flange)	\$110.00	9
LF100-HN	NW100 Half-Nipple (Long Butt Flange)	\$120.00	9
LF160-HN	NW160 Half-Nipple (Long Butt Flange)	\$165.00	9
LF200-HN	NW200 Half-Nipple (Long Butt Flange)	\$250.00	9
LF063-FB	NW63 Blank Flange, SST	\$53.00	10
LF100-FB	NW100 Blank Flange, SST	\$78.00	10
LF160-FB	NW160 Blank Flange, SST	\$105.00	10
LF200-FB	NW200 Blank Flange, SST	\$180.00	10
LF063-B250	NW63 Weld Flange, Bolted	Inquire	11
LF100-B400	NW100 Weld Flange, Bolted	Inquire	11
LF160-B600	NW160 Weld Flange, Bolted	Inquire	11
LF200-B800	NW200 Weld Flange, Bolted	Inquire	11
LF063-NP	NW63 Nipple	\$205.00	12
LF100-NP	NW 100 Nipple	\$255.00	12
LF160-NP	NW160 Nipple	\$355.00	12
LF200-NP	NW200 Nipple	Inquire	12
LF063XKF40	NW63 to KF40 Adapter	\$135.00	13
LF063XKF50	NW63 to KF50 Adapter	\$145.00	13
LF100XKF25	NW100 to KF25 Adapter	\$185.00	13
LF100XKF40	NW100 to KF40 Adapter	\$190.00	13
LF100XKF50	NW100 to KF50 Adapter	\$195.00	13
LF160XKF40	NW160 to KF40 Adapter	\$210.00	13
LF160XKF50	NW160 to KF50 Adapter	\$215.00	13
LF063XLF100	NW63 to NW100 Adapter	\$220.00	14
LF063XLF160	NW63 to NW160 Adapter	Inquire	14
LF100XLF160	NW100 to NW160 Adapter	\$350.00	14
LF200XLF100	NW200 to NW100 Adapter	\$390.00	14
LF200XLF160	NW200 to NW160 Adapter	Inquire	14

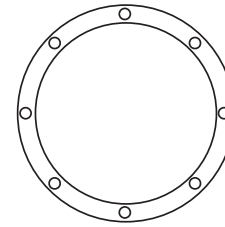


Image 7



Image 8

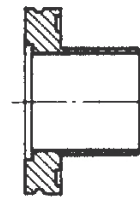


Image 9

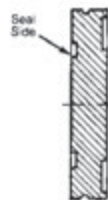


Image 10



Image 11

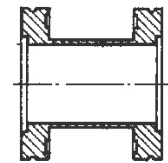


Image 12

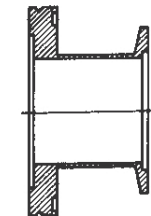


Image 13

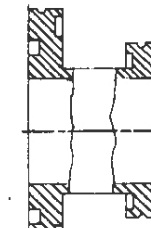


Image 14

ISO Large Flanges

Part No.	Description	Price	Sketch
Duniway	--	US \$	#
LF063X450	NW63 to 4.50" OD CFF Adapter	\$203.00	15
LF100X600	NW100 to 6.00" OD CFF Adapter	\$276.00	15
LF160X800	NW160 to 8.00" OD CFF Adapter	\$390.00	15
LF200X1000	NW200 to 10.00" OD CFF Adapter	Inquire	15
LF063-ASA200	NW63 to ASA200 Flange, w/o Groove	Inquire	16
LF100-ASA200	NW100 to ASA200 Flange, w/o Groove	Inquire	16
LF160-ASA400	NW160 to ASA400 Flange, w/o Groove	Inquire	16
LF200-ASA600	NW200 to ASA600 Flange, w/o Groove	Inquire	16
LF063-SSTB	SST Bellows (Thin Wall), NW63 Flanges, L= 6"	\$270.00	17
LF100-SSTB	SST Bellows (Thin Wall), NW100 Flanges, L= 6"	\$370.00	17
LF160-SSTB	SST Bellows (Thin Wall), NW160 Flanges, L= 8"	\$546.00	17
LF200-SSTB	SST Bellows (Thin Wall), NW200 Flanges, L= 8"	Inquire	17
LF063-FX20	Flexible Metal Hose, NW63 Flanges, L= 20"	\$360.00	18
LF100-FX10	Flexible Metal Hose, NW100 Flanges, L= 10"	\$365.00	18
LF100-FX20	Flexible Metal Hose, NW100 Flanges, L= 20"	\$430.00	18
LF063-FX10	Flexible Metal Hose, NW63 Flanges, L= 10"	\$270.00	18
LF063-EL90	Elbow, 90, NW63 Flanges	\$210.00	19
LF100-EL90	Elbow, 90, NW100 Flanges	\$280.00	19
LF160-EL90	Elbow, 90, NW160 Flanges	Inquire	19
LF200-EL90	Elbow, 90, NW200 Flanges	Inquire	19
LF063-TE	Tee - NW63 Flanges	Inquire	20
LF100-TE	Tee - NW100 Flanges	\$400.00	20
LF160-TE	Tee - NW160 Flanges	Inquire	20
LF200-TE	Tee - NW200 Flanges	Inquire	20
LF063-CS	Cross - NW63 Flanges	\$380.00	21
LF100-CS	Cross - NW100 Flanges	Inquire	21
LF160-CS	Cross - NW160 Flanges	Inquire	21
LF200-CS	Cross - NW200 Flanges	Inquire	21

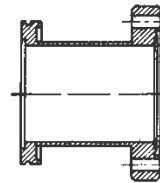


Image 15

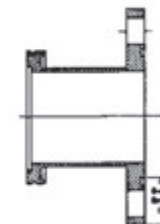


Image 16

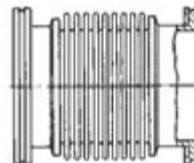


Image 17 & 18

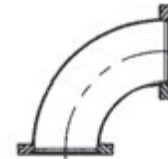


Image 19

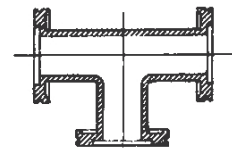


Image 20

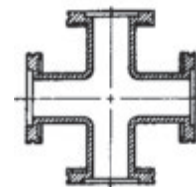


Image 21

Hardware

Conflat-Type Flanges

Hardware **D**

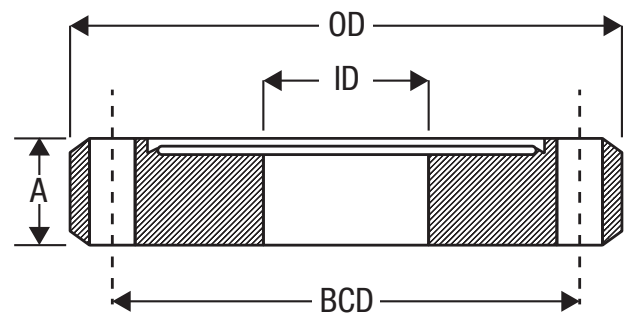
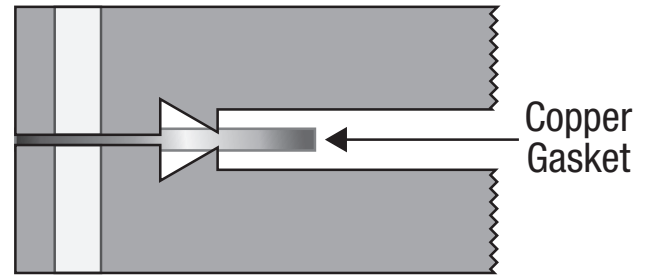
Duniway Stockroom Corp. supplies an extensive range of Conflat-type hardware, including: fixed flanges, rotatable flanges, fittings, gaskets and fasteners. Conflat® flanges are the industry standard for high and ultrahigh vacuum applications. The unique design captures a **FLAT** copper gasket between two symmetrical, outward sloping, **CON**ical stainless steel knife-edges on identical mating flanges. (Thus the name Conflat®)

As the knife edges are pushed together during tightening of the flange, the copper gasket is constrained from outward flow by the inner diameter of the flange face (see sketch). This design gives reliable, all-metal, leak-free seals over a wide range of temperatures (cryogenic to 450° C).

For Sizes Not Shown, Please Request A Quote.

Dimensions / Specifications

ISO	Part #	OD	BCD	Thickness A	# of Bolts
Duniway	Prefix	Inch	Inch	Inch	--
NW16	133-	1.33	1.062	.300	6
NW25	218-	2.125	1.625	.470	4
NW35	275-	2.75	2.312	.500	6
NW50	338-	3.375	2.850	.625	8
NW63	450-	4.50	3.628	.680	8
NW75	458-	4.625	4.030	.750	10
NW100	600-	6.00	5.128	.780	16
NW130	675-	6.75	5.969	.840	18
NW150	800-	8.00	7.128	.880	20
NW200	1000-	10.00	9.128	.970	24
NW250	1200-	12.00	11.100	1.02	32
NW275	1325-	13.25	12.060	1.12	30



▼ CF Flange Rotatable

CF Flanges 1 1/3" OD

Part No.	Description	Price
Duniway	--	US \$
F0133-000N	CF Flange, 1.33" OD Blank Non-Rotatable	\$14.00
F0133-000NT	CF Flange, 1.33" OD Blank Non-Rotatable-Tapped	\$19.50
F0133-000R	CF Flange, 1.33" OD Blank Rotatable	\$16.00
F0133-000RT	CF Flange, 1.33" OD Blank Rotatable-Tapped	\$22.00
F0133-025N	CF Flange, 1.33" OD 0.250" ID Non-Rotatable	\$14.00
F0133-025NT	CF Flange, 1.33" OD 0.250" ID Non-Rotatable, Tapped	\$19.50
F0133-038N	CF Flange, 1.33" OD 0.375" ID Non-Rotatable	\$14.00
F0133-038NT	CF Flange, 1.33" OD 0.375" ID Non-Rotatable, Tapped	\$19.50
F0133-038R	CF Flange, 1.33" OD 0.375" ID Rotatable	\$16.00
F0133-050N	CF Flange, 1.33" OD 0.50" ID Non-Rotatable	\$14.00
F0133-050NT	CF Flange, 1.33" OD 0.50" ID Non-Rotatable, Tapped	\$19.50
F0133-050R	CF Flange, 1.33" OD 0.50" ID Rotatable	Inquire
F0133-050RT	CF Flange, 1.33" OD 0.50" ID Rotatable, Tapped	Inquire
F0133-075N	CF Flange, 1.33" OD 0.63" ID Non-Rotatable	\$14.00
F0133-075NT	CF Flange, 1.33" OD 0.63" ID Non-Rotatable, Tapped	\$19.50
F0133-075R	CF Flange, 1.33" OD 0.63" ID Rotatable	\$16.00
F0133-075RT	CF Flange, 1.33" OD 0.63" ID Rotatable, Tapped	Inquire

Bolt and Nut Sets for 1 1/3" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
Through Hole Flanges:		
SAN-32-075	Silver-Plated Bolts, Allen Head, for 1.33" OD CF Flanges (8-32 X 0.75") - with Hex Nuts & Washers 25/pkg	\$22.00
SPAN32-075-133	Silver-Plated Bolts, Allen Head, for 1.33" OD CF Flanges (8-32 x 0.75") - with Platenuts & Washers 25/pkg	\$33.00
MP-0133-25	Metric Platenuts For 1.33" OD CFF (Bolt D = 4 mm Thread Pitch: 0.7 mm) 25/pkg	\$37.50
PN-0133-025	Platenut for 1.33" OD CF Flange (8-32) 25/pkg	\$37.50
PN-0133-100	Platenut for 1.33" OD CF Flange (8-32) 100/pkg	150.00
Tapped:		
SAX-32-050	Silver-Plated Bolts, Allen Head, for 1.33" OD CF Tapped Flanges (8-32 X 0.50") - with Washers 25/pkg	\$19.50

Gaskets for 1 1/3" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
G-0133	Copper Gaskets for 1.33" OD CF Flange (OD 0.838", ID 0.641") 10/pkg	Inquire
G-013X	Copper Gaskets for 1.33" OD CF Flange (OD 0.838", ID 0.680") 10/pkg	Inquire
SG-0133	Silver-Plated Copper Gaskets for 1.33" OD CF Flange (OD 0.838", ID 0.641") 10/pkg	Inquire
SG-013X	Silver-Plated Copper Gaskets for 1.33" OD CF Flange (OD 0.838", ID 0.680") 10/pkg	Inquire
VG-0133-5	Viton Gaskets for 1.33" OD CF Flange Gasket OD 0.838" 5/pkg	\$15.00

CF Flanges 2 1/8" OD

Part No.	Description	Price
Duniway	--	US \$
F0218-000N	CF Flange, 2.125" OD Blank Non-Rotatable	\$17.00
F0218-000NT	CF Flange, 2.125" OD Blank Non-Rotatable, Tapped	\$22.00
F0218-000R	CF Flange, 2.125" OD Blank Rotatable	Inquire
F0218-000RT	CF Flange, 2.125" OD Blank Rotatable, Tapped	Inquire
F0218-100N	CF Flange, 2.125" OD 1.00" ID Non-Rotatable	\$17.00
F0218-100NT	CF Flange, 2.125" OD 1.00" ID Non-Rotatable, Tapped	Inquire
F0218-100R	CF Flange, 2.125" OD 1.00" ID Rotatable	\$21.00
F0218-100RT	CF Flange, 2.125" OD 1.00" ID Rotatable, Tapped	Inquire

Bolt and Nut Sets for 2 1/8" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
Through Hole Flanges:		
SBN-28-125	Silver-Plated Bolts, 12-Point Head, for 2.75" OD CF Flanges (1/4-28 x 1.25") - with Hex Nuts & Washers 25/pkg	\$24.00
SFBN-28-125	Silver-Plated Bolts, 12-Point Head, for 2.75" OD CF Flanges (1/4-28 x 1.25") - with Flangenuts & Washers 25/pkg	\$24.00
PN-0218-025	Platenut for 2.125" OD CF Flange (1/4-28) 25/pkg	\$37.50
PN-0218-100	Platenut for 2.125" OD CF Flange (1/4-28) 100/pkg	\$150.00
Tapped:		
SBX-28-087	Silver-Plated Bolts, 12-Point Head, for 2.75" OD CF Tapped Flanges (1/4-28 x 0.875") - with Washers 25/pkg	\$22.50

Hardware

Conflat-Type Flanges

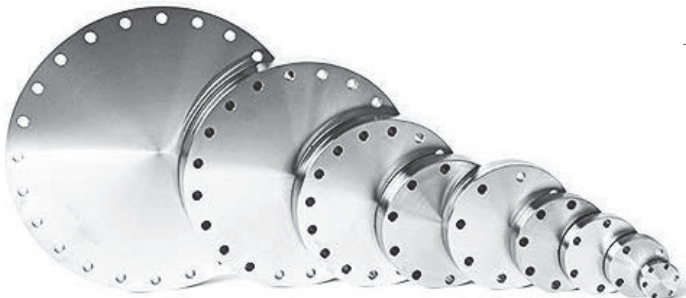
Hardware **D**

Gaskets for 2 1/8" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
G-0218	Copper Gaskets for 2.125" OD CF Flange (OD 1.290", ID 1.010") 10/pkg	Inquire
VG-0218-5	Viton Gaskets for 2.125" OD CF Flange Gasket OD 1.290" 5/pkg	\$18.00

CF Flanges 2 3/4" OD

Part No.	Description	Price
Duniway	--	US \$
F0275-000N	CF Flange, 2.75" OD Blank Non-Rotatable	\$16.00
F0275-000NT	CF Flange, 2.75" OD Blank Non-Rotatable, Tapped	\$24.00
F0275-000R	CF Flange, 2.75" OD Blank Rotatable	\$24.00
F0275-000RT	CF Flange, 2.75" OD Blank Rotatable, Tapped	Inquire
F0275-050N	CF Flange, 2.75" OD 0.50" ID Non-Rotatable	\$16.00
F0275-050NT	CF Flange, 2.75" OD 0.50" ID Non-Rotatable, Tapped	Inquire
F0275-050R	CF Flange, 2.75" OD 0.50" ID Rotatable	\$24.00
F0275-050RT	CF Flange, 2.75" OD 0.50" ID Rotatable, Tapped	Inquire
F0275-075N	CF Flange, 2.75" OD 0.63" ID Non-Rotatable	\$16.00
F0275-075NT	CF Flange, 2.75" OD 0.63" ID Non-Rotatable, Tapped	Inquire
F0275-075R	CF Flange, 2.75" OD 0.63" ID Rotatable	\$24.00
F0275-100N	CF Flange, 2.75" OD 1.00" ID Non-Rotatable	\$16.00
F0275-100NT	CF Flange, 2.75" OD 1.00" ID Non-Rotatable, Tapped	\$24.00
F0275-100R	CF Flange, 2.75" OD 1.00" ID Rotatable	\$24.00
F0275-100RT	CF Flange, 2.75" OD 1.00" ID Rotatable, Tapped	Inquire
F0275-150N	CF Flange, 2.75" OD 1.50" ID Non-Rotatable	\$16.00
F0275-150NT	CF Flange, 2.75" OD 1.50" ID Non-Rotatable, Tapped	\$24.00
F0275-150R	CF Flange, 2.75" OD 1.50" ID Rotatable	\$24.00
F0275-150RT	CF Flange, 2.75" OD 1.50" ID Rotatable, Tapped	\$34.00



▼ CF Flange Blank Non-Rotatable

Bolt and Nut Sets for 2 3/4" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
Through Hole Flanges:		
MP-0275-25	Metric Platenuts For 2.75" OD CFF (Bolt D = 6 mm Thread Pitch: 1.0 mm) 25/pkg	\$37.50
PN-0275-025	Platenut for 2.75" OD CF Flange (1/4-28) 25/pkg	\$37.50
PN-0275-100	Platenut for 2.75" OD CF Flange (1/4-28) 100/pkg	\$150.00
SBN-28-125	Silver-Plated Bolts, 12-Point Head, for 2.75" OD CF Flanges (1/4-28 x 1.25") - with Hex Nuts & Washers 25/pkg	\$24.00
SFBN-28-125	Silver-Plated Bolts, 12-Point Head, for 2.75" OD CF Flanges (1/4-28 x 1.25") - with Flangenuts & Washers 25/pkg	\$24.00
SPBN28-125-275	Silver-Plated Bolts, 12-Point Head, for 2.75" OD CF Flanges (1/4-28 x 1.25") - with Platenuts & Washers 25/pkg	\$37.50
SPMN-M6-35-275	Silver Plated Metric Bolts, Hex Head, for 2.75" OD CF Flanges (D-6 mm L=35 mm Thread Pitch: 1 mm) - w/ Platenuts & Washers 25/pkg	\$34.00
Tapped:		
SBX-28-087	Silver-Plated Bolts, 12-Point Head, for 2.75" OD CF Tapped Flanges (1/4-28 x 0.875") - with Washers 25/pkg	\$22.50

Gaskets for 2 3/4" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
G-0275	Copper Gaskets for 2.75" OD CF Flange (OD 1.895", ID 1.451") 10/pkg	Inquire
G-027X	Copper Gaskets for 2.75" OD CF Flange (OD 1.895", ID 1.530") 10/pkg	Inquire
SG-0275	Silver-Plated Copper Gaskets for 2.75" OD CF Flange (OD 1.895", ID 1.451") 10/pkg	Inquire
SG-027X	Silver-Plated Copper Gasket for 2.75" OD CF Flange (OD 1.895", ID 1.530") 10/pkg	Inquire
VG-0275-5	Viton Gaskets for 2.75" OD CF Flange Gasket OD 1.895" 5/pkg	\$19.00

CF Flanges 3³/₈" OD

Part No.	Description	Price
Duniway	--	US \$
F0338-000N	CF Flange, 3.375" OD Blank Non-Rotatable	\$40.00
F0338-000NT	CF Flange, 3.375" OD Blank Non-Rotatable, Tapped	\$55.00
F0338-000R	CF Flange, 3.375" OD Blank Rotatable	Inquire
F0338-000RT	CF Flange, 3.375" OD Blank Rotatable, Tapped	Inquire
F0338-200N	CF Flange, 3.375" OD 2.00" ID Non-Rotatable	\$42.00
F0338-200NT	CF Flange, 3.375" OD 2.00" ID Non-Rotatable, Tapped	\$55.00
F0338-200R	CF Flange, 3.375" OD 2.00" ID Rotatable	\$52.00
F0338-200RT	CF Flange, 3.375" OD 2.00" ID Rotatable, Tapped	Inquire

Bolt and Nut Sets for 3³/₈" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
Through Hole Flanges:		
SBN-24-175	Silver-Plated Bolts, 12-Point Head, for 3.375" OD CF Flanges (5/16-24 x 1.75") - with Hex Nuts & Washers 25/pkg	\$35.00
SFBN-24-175	Silver-Plated Bolts, 12-Point Head, for 3.375" OD CF Flanges (5/16-24 x 1.75") - with Flangenuts & Washers 25/pkg	\$36.50
SPBN24-175-338	Silver-Plated Bolts, 12-Point Head, for 3.375" OD CF Flanges (5/16-24 x 1.75") - with Platenuts & Washers 25/pkg	\$49.00
PN-0338-025	Platenut for 3.375" OD CF Flange (5/16-24) 25/pkg	\$40.50
PN-0338-100	Platenut for 3.375" OD CF Flange (5/16-24) 100/pkg	\$160.00
Tapped:		
SBX-24-125	Silver-Plated Bolts, 12-Point Head, for 3.375" or 4.50" or 6.00" OD CF Tapped Flanges (5/16-24 x 1.25") - with Washers 25/pkg	\$30.00

Gaskets for 3³/₈" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
G-0338	Copper Gaskets for 3.375" OD CF Flange (OD 2.425", ID 2.010") 10/pkg	Inquire
SG-0338	Silver-Plated Copper Gaskets for 3.375" OD CF Flange (OD 2.425", ID 2.010") 10/pkg	Inquire
VG-0338-1	Viton Gasket for 3.375" OD CF Flange Gasket OD 2.425" 1/pkg	\$13.00

CF Flanges 4¹/₂" OD

Part No.	Description	Price
Duniway	--	US \$
F0450-000N	CF Flange, 4.50" OD Blank Non-Rotatable	\$58.00
F0450-000NT	CF Flange, 4.50" OD Blank Non-Rotatable, Tapped	\$65.00
F0450-000R	CF Flange, 4.50" OD Blank Rotatable	\$72.00
F0450-000RT	CF Flange, 4.50" OD Blank Rotatable, Tapped	\$84.00
F0450-250N	CF Flange, 4.50" OD 2.50" ID Non-Rotatable	\$58.00
F0450-250NT	CF Flange, 4.50" OD 2.50" ID Non-Rotatable, Tapped	\$65.00
F0450-250R	CF Flange, 4.50" OD 2.50" ID Rotatable	\$72.00
F0450-250RT	CF Flange, 4.50" OD 2.50" ID Rotatable, Tapped	Inquire

Bolt and Nut Sets for 4¹/₂" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
Through Hole Flanges:		
SBN-24-200	Silver-Plated Bolts, 12-Point Head, for 4.50" or 6.00" OD CF Flanges (5/16-24 x 2.00") - with Hex Nuts & Washers 25/pkg	\$39.50
SFBN-24-200	Silver-Plated Bolts, 12-Point Head, for 6.00" OD CF Flanges (5/16-24 x 2.00") - with Flangenuts & Washers 25/pkg	\$40.00
SPBN24-200-450	Silver-Plated Bolts, 12-Point Head, for 4.50" OD CF Flanges (5/16-24 x 2.00") - with Platenuts & Washers 25/pkg	\$54.00
SPMN-M8-55-450	Silver Plated Metric Bolts, Hex Head, for 4.50" OD CF Flanges (D=8 mm L=55 mm Thread Pitch: 1.25 mm) - w/ Platenuts & Washers 25/pkg	\$41.00
PN-0450-025	Platenut for 4.50" OD CF Flange (5/16-24) 25/pkg	\$40.50
PN-0450-100	Platenut for 4.50" OD CF Flange (5/16-24) 100/pkg	\$160.00
MP-0450-25	Metric Platenuts For 4.50" OD CFF (Bolt D = 8 mm Thread Pitch: 1.25 mm) 25/pkg	\$42.50
Tapped:		
SBX-24-125	Silver-Plated Bolts, 12-Point Head, for 3.375" or 4.50" or 6.00" OD CF Tapped Flanges (5/16-24 x 1.25") - with Washers 25/pkg	\$30.00

Hardware

Conflat-Type Flanges

Hardware

Gaskets for 4½" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
G-0450	Copper Gaskets for 4.50" OD CF Flange (OD 3.243", ID 2.506") 10/pkg	Inquire
G-045X	Copper Gaskets for 4.50" OD CF Flange (OD 3.243", ID 2.800") 10/pkg	Inquire
SG-0450	Silver-Plated Copper Gaskets for 4.50" OD CF Flange (OD 3.243", ID 2.506") 10/pkg	Inquire
SG-045X	Silver-Plated Copper Gasket for 4.50" OD CF Flange (OD 3.243", ID 2.800") 10/pkg	Inquire
VG-0450-1	Viton Gasket for 4.50" OD CF Flange Gasket OD 3.243" 1/pkg"	\$15.00

CF Flanges 4⁵/₈" OD

Part No.	Description	Price
Duniway	--	US \$
F0458-000N	CF Flange, 4.625" OD Blank Non-Rotatable	\$64.00
F0458-000NT	CF Flange, 4.625" OD Blank Non-Rotatable, Tapped	\$76.00
F0458-000R	CF Flange, 4.625" OD Blank Rotatable	Inquire
F0458-000RT	CF Flange, 4.625" OD Blank Rotatable, Tapped	Inquire
F0458-300N	CF Flange, 4.625" OD 3.00" ID Non-Rotatable	\$64.00
F0458-300NT	CF Flange, 4.625" OD 3.00" ID Non-Rotatable, Tapped	Inquire
F0458-300R	CF Flange, 4.625" OD 3.00" ID Rotatable	\$76.00
F0458-300RT	CF Flange, 4.625" OD 3.00" ID Rotatable, Tapped	Inquire

Bolt and Nut Sets for 4⁵/₈" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
Non-rotatable Through Hole Flanges:		
SBN-24-200	Silver-Plated Bolts, 12-Point Head, for 4.50" or 6.00" OD CF Flanges (5/16-24 x 2.00") - with Hex Nuts & Washers 25/pkg	\$39.50
SFBN-24-200	Silver-Plated Bolts, 12-Point Head, for 6.00" OD CF Flanges (5/16-24 x 2.00") - with Flangenuts & Washers 25/pkg	\$40.00
PN-0458-025	Platenut for 4.625" OD CF Flange (5/16-24) 25/pkg	\$40.50
PN-0458-100	Platenut for 4.625" OD CF Flange (5/16-24) 100/pkg	\$160.00
Rotatable Through Hole Flanges:		
SBN-24-225	Silver-Plated Bolts, 12-Point Head, for 6.00" or 8.00" OD CF Flanges (5/16-24 x 2.25") - with Hex Nuts & Washers 25/pkg	\$40.00
SFBN-24-225	Silver-Plated Bolts, 12-Point Head, for 6.00" or 8.00" OD CF Flanges (5/16-24 x 2.25") - with Flangenuts & Washers 25/pkg	\$42.00
Tapped:		
SBX-24-125	Silver-Plated Bolts, 12-Point Head, for 3.375" or 4.50" or 6.00" OD CF Tapped Flanges (5/16-24 x 1.25") - with Washers 25/pkg	\$30.00

Gaskets for 4⁵/₈" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
G-0458	Copper Gaskets for 4.625" OD CF Flange (OD 3.598", ID 3.010") 10/pkg	Inquire
VG-0458-1	Viton Gasket for 4.625" OD CF Flange Gasket OD 3.598" 1/pkg"	\$16.00

CF Flanges 6" OD

Part No.	Description	Price
Duniway	--	US \$
F0600-000N	CF Flange, 6.00" OD Blank Non-Rotatable	\$87.00
F0600-000NT	CF Flange, 6.00" OD Blank Non-Rotatable, Tapped	\$115.00
F0600-000R	CF Flange, 6.00" OD Blank Rotatable	\$109.00
F0600-000RT	CF Flange, 6.00" OD Blank Rotatable, Tapped	\$125.00
F0600-400N	CF Flange, 6.00" OD 4.00" ID Non-Rotatable	\$87.00
F0600-400NT	CF Flange, 6.00" OD 4.00" ID Non-Rotatable, Tapped	\$115.00
F0600-400R	CF Flange, 6.00" OD 4.00" ID Rotatable	\$109.00
F0600-400RT	CF Flange, 6.00" OD 4.00" ID Rotatable, Tapped	\$125.00

Bolt and Nut Sets for 6" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
Non-rotatable Through Hole Flanges:		
SBN-24-200	Silver-Plated Bolts, 12-Point Head, for 4.50" or 6.00" OD CF Flanges (5/16-24 x 2.00") - with Hex Nuts & Washers 25/pkg	\$39.50
SFBN-24-200	Silver-Plated Bolts, 12-Point Head, for 6.00" OD CF Flanges (5/16-24 x 2.00") - with Flangenuts & Washers 25/pkg	\$40.00
SPBN24-200-600	Silver-Plated Bolts, 12-Point Head, for 6.00" OD CF Flanges (5/16-24 x 2.00") - with Platenuts & Washers 25/pkg	\$54.00
SPMN-M8-55-600	Silver Plated Metric Bolts, Hex Head, for 6.00" OD CF Flanges (D=8 mm L=55 mm Thread Pitch: 1.25 mm) - w/ Platenuts & Washers 25/pkg	\$41.00
PN-0600-025	Platenut for 6.00" OD CF Flange (5/16-24) 25/pkg	\$40.50
PN-0600-100	Platenut for 6.00" OD CF Flange (5/16-24) 100/pkg	\$160.00
MP-0600-25	Metric Platenuts For 6.00" OD CFF (Bolt D = 8 mm Thread Pitch: 1.25 mm) 25/pkg	\$42.50
Rotatable Through Hole Flanges:		
SBN-24-225	Silver-Plated Bolts, 12-Point Head, for 6.00" or 8.00" OD CF Flanges (5/16-24 x 2.25") - with Hex Nuts & Washers 25/pkg	\$40.00
SFBN-24-225	Silver-Plated Bolts, 12-Point Head, for 6.00" or 8.00" OD CF Flanges (5/16-24 x 2.25") - with Flangenuts & Washers 25/pkg	\$42.00
SPBN24-225-600	Silver-Plated Bolts, 12-Point Head, for 6.00" OD CF Flanges (5/16-24 x 2.25") - with Platenuts & Washers 25/pkg	\$54.00
Tapped:		
SBX-24-125	Silver-Plated Bolts, 12-Point Head, for 3.375" or 4.50" or 6.00" OD CF Tapped Flanges (5/16-24 x 1.25") - with Washers 25/pkg	\$30.00



▼ CF Flange Blank Rotatable

Gaskets for 6" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
G-0600	Copper Gaskets for 6.00" OD CF Flange (OD 4.743", ID 4.010") 10/pkg	Inquire
G-060X	Copper Gaskets for 6.00" OD CF Flange (OD 4.743", ID 4.25") 10/pkg	Inquire
SG-0600	Silver-Plated Copper Gaskets for 6.00" OD CF Flange (OD 4.743", ID 4.010") 10/pkg	Inquire
SG-060X	Silver-Plated Copper Gaskets for 6.00" OD CF Flange (OD 4.743", ID 4.25") 10/pkg	Inquire
VG-0600-1	Viton Gasket for 6.00" OD CF Flange Gasket OD 4.743" 1/pkg	\$18.00

Hardware

Conflat-Type Flanges

Hardware

CF Flanges 6¾" OD

Part No.	Description	Price
Duniway	--	US \$
F0675-000N	CF Flange, 6.75" OD Blank Non-Rotatable	\$110.00
F0675-000NT	CF Flange, 6.75" OD Blank Non-Rotatable, Tapped	Inquire
F0675-000R	CF Flange, 6.75" OD Blank Rotatable	Inquire
F0675-000RT	CF Flange, 6.75" OD Blank Rotatable, Tapped	Inquire
F0675-400N	CF Flange, 6.75" OD 4.00" ID Non-Rotatable	Inquire
F0675-400NT	CF Flange, 6.75" OD 4.00" ID Non-Rotatable, Tapped	Inquire
F0675-400R	CF Flange, 6.75" OD 4.00" ID Rotatable	Inquire
F0675-400RT	CF Flange, 6.75" OD 4.00" ID Rotatable, Tapped	Inquire
F0675-500N	CF Flange, 6.75" OD 5.00" ID Non-Rotatable	Inquire
F0675-500NT	CF Flange, 6.75" OD 5.00" ID Non-Rotatable, Tapped	Inquire
F0675-500R	CF Flange, 6.75" OD 5.00" ID Rotatable	Inquire
F0675-500RT	CF Flange, 6.75" OD 5.00" ID Rotatable, Tapped	Inquire

Bolt and Nut Sets for 6¾" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
Through Hole Flanges:		
SBN-24-225	Silver-Plated Bolts, 12-Point Head, for 6.00" or 8.00" OD CF Flanges (5/16-24 x 2.25") - with Hex Nuts & Washers 25/pkg	\$40.00
SFBN-24-225	Silver-Plated Bolts, 12-Point Head, for 6.00" or 8.00" OD CF Flanges (5/16-24 x 2.25") - with Flangenuts & Washers 25/pkg	\$42.00
Tapped:		
SBX-24-125	Silver-Plated Bolts, 12-Point Head, for 3.375" or 4.50" or 6.00" OD CF Tapped Flanges (5/16-24 x 1.25") - with Washers 25/pkg	\$30.00

Gaskets for 6¾" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
G-0675	Copper Gaskets for 6.75" OD CF Flange (OD 5.567", ID 5.010") 10/pkg	Inquire
VG-0675-1	Viton Gasket for 6.75" OD CF Flange Gasket OD 5.567" 1/pkg	\$21.00

CF Flanges 8" OD

Part No.	Description	Price
Duniway	--	US \$
F0800-000N	CF Flange, 8.00" OD Blank Non-Rotatable	\$142.00
F0800-000NT	CF Flange, 8.00" OD Blank Non-Rotatable, Tapped	\$165.00
F0800-000R	CF Flange, 8.00" OD Blank Rotatable	\$179.00
F0800-000RT	CF Flange, 8.00" OD Blank Rotatable, Tapped	Inquire
F0800-600N	CF Flange, 8.00" OD 6.00" ID Non-Rotatable	\$142.00
F0800-600NT	CF Flange, 8.00" OD 6.00" ID Non-Rotatable, Tapped	Inquire
F0800-600R	CF Flange, 8.00" OD 6.00" ID Rotatable	\$179.00
F0800-600RT	CF Flange, 8.00" OD 6.00" ID Rotatable, Tapped	Inquire

Bolt and Nut Sets for 8" OD Flanges

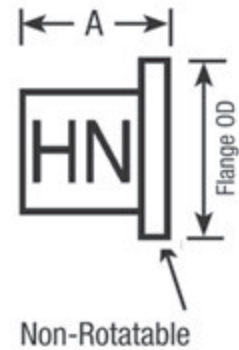
Part No.	Description	Price
Duniway	--	US \$
Through Hole Flanges:		
SBN-24-225	Silver-Plated Bolts, 12-Point Head, for 6.00" or 8.00" OD CF Flanges (5/16-24 x 2.25") - with Hex Nuts & Washers 25/pkg	\$40.00
SFBN-24-225	Silver-Plated Bolts, 12-Point Head, for 6.00" or 8.00" OD CF Flanges (5/16-24 x 2.25") - with Flangenuts & Washers 25/pkg	\$42.00
SPBN24-225-800	Silver-Plated Bolts, 12-Point Head, for 8.00" OD CF Flanges (5/16-24 x 2.25") - with Platenuts & Washers 25/pkg	\$54.00
PN-0800-025	Platenut for 8.00" OD CF Flange (5/16-24) 25/pkg	\$40.50
PN-0800-100	Platenut for 8.00" OD CF Flange (5/16-24) 100/pkg	\$160.00
MP-0800-25	Metric Platenuts For 8.00" OD CFF (Bolt D = 8 mm Thread Pitch: 1.25 mm) 25/pkg	\$42.50
Tapped:		
SBX-24-175	Silver-Plated Bolts, 12-Point Head, for 8.00" or 10.00" OD CF Tapped Flanges (5/16-24 x 1.75") - with Washers 25/pkg	\$32.50

Gaskets for 8" OD Flanges

Part No.	Description	Price
Duniway	--	US \$
G-0800	Copper Gaskets for 8.00" OD CF Flange (OD 6.743", ID 6.007") 10/pkg	Inquire
SG-0800	Silver-Plated Copper gaskets for 8.00" OD CF Flange (OD6.743", ID6.007"), 10/pkg	Inquire
VG-0800-1	Viton Gasket for 8.00" OD CF Flange Gasket OD 6.743" 1/pkg	\$24.00

Half Nipples

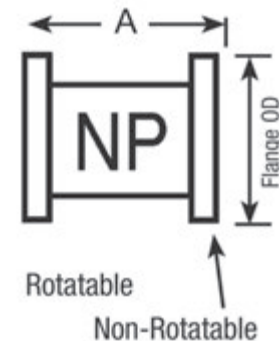
Part No.	Description	Price
Duniway	--	US \$
HN-0133	CF Half Nipple , Flange OD 1.33" Length 1.50" Tube OD 0.75"	\$33.00
HN-0218	CF Half Nipple , Flange OD 2.125" Length 2.00" Tube OD 1.00"	Inquire
HN-0275	CF Half Nipple , Flange OD 2.75" Length 2.50" Tube OD 1.50"	\$40.00
HN-0338	CF Half Nipple , Flange OD 3.375" Length 3.20" Tube OD 2.00"	\$81.00
HN-0450	CF Half Nipple, Flange OD 4.50" Length 4.10" Tube OD 2.50"	\$115.00
HN-0458	CF Half Nipple, Flange OD 4.625" Length 3.50" Tube OD 3.00"	Inquire
HN-0600	CF Half Nipple, Flange OD 6.00" Length 5.30" Tube OD 4.00"	\$160.00
HN-0675	CF Half Nipple, Flange OD 6.75" Length 4.90" Tube OD 5.00"	Inquire
HN-0800	CF Half Nipple , Flange OD 8.00" Length 6.60" Tube OD 6.00"	Inquire
HN-1000	CF Half Nipple, Flange OD 10.00" Length 8.00" Tube OD 8.00"	Inquire



“A” Dimensions may vary from lot-to-lot. Please contact your Duniway customer representative if your application requires exact dimensions.

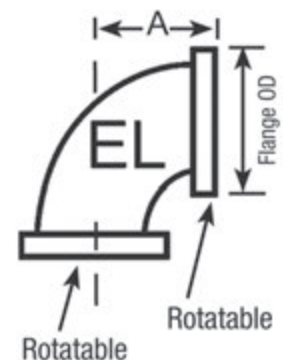
Nipples

Part No.	Description	Price
Duniway	--	US \$
NP-0133	CF Nipple, Flange OD 1.33" Length 3.00" Tube OD 0.75"	\$57.00
NP-0218	CF Nipple, Flange OD 2.125" Length 4.10" Tube OD 1.00"	\$65.00
NP-0275	CF Nipple , Flange OD 2.75" Length 4.90" Tube OD 1.50"	\$70.00
NP-0338	CF Nipple , Flange OD 3.375" Length 6.40" Tube OD 2.00"	\$165.00
NP-0450	CF Nipple, Flange OD 4.50" Length 8.20" Tube OD 2.50"	\$225.00
NP-0458	CF Nipple, Flange OD 4.625" Length 7.10" Tube OD 3.00"	\$250.00
NP-0600	CF Nipple, Flange OD 6.00" Length 10.60" Tube OD 4.00"	\$270.00
NP-0675	CF Nipple, Flange OD 6.75" Length 9.90" Tube OD 5.00"	Inquire
NP-0800	CF Nipple, Flange OD 8.00" Length 13.10" Tube OD 6.00"	Inquire
NP-1000	CF Nipple, Flange OD 10.00" Length 16.00" Tube OD 8.00"	Inquire



Elbows

Part No.	Description	Price
Duniway	--	US \$
EL-0133	CF Elbow, Flange OD 1.33" Dimension "A" 1.60" Tube OD 0.75"	\$67.00
EL-0218	CF Elbow, Flange OD 2.125" Dimension "A" 1.70" Tube OD 1.00"	\$75.00
EL-0275	CF Elbow, Flange OD 2.75" Dimension "A" 2.50" Tube OD 1.50"	\$75.00
EL-0338	CF Elbow, Flange OD 3.375" Dimension "A" 3.20" Tube OD 2.00"	\$180.00
EL-0450	CF Elbow, Flange OD 4.50" Dimension "A" 4.10" Tube OD 2.50"	\$275.00
EL-0458	CF Elbow, Flange OD 4.625" Dimension "A" 4.90" Tube OD 3.00"	Inquire
EL-0600	CF Elbow, Flange OD 6.00" Dimension "A" 6.50" Tube OD 4.00"	\$345.00
EL-0675M	CF Elbow, Mitered , Flange OD 6.75" Dimension "A" 4.90" Tube OD 5.00"	Inquire
EL-0800M	CF Elbow, Mitered , OD 8.00" Dimension "A" 6.60" Tube OD 6.00"	Inquire
EL-1000M	CF Elbow, Mitered , Flange OD 10.00" Dimension "A" 8.00" Tube OD 8.00"	Inquire



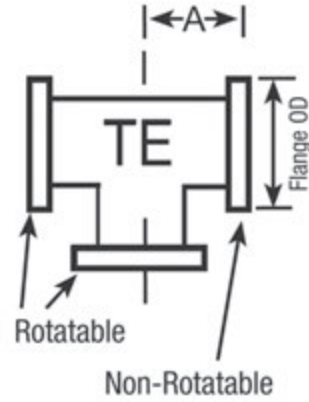
Hardware

Conflat-Type Fittings

Hardware D

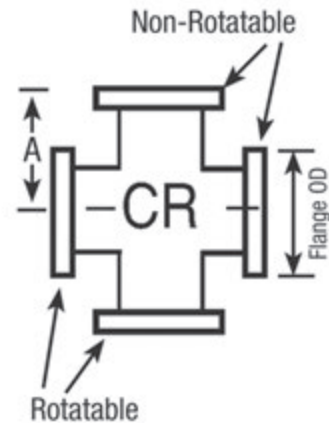
Tees

Part No.	Description	Price
Duniway	--	US \$
TE-0133	CF Tee, Flange OD 1.33" Dimension "A" 1.50" Tube OD 0.75"	\$98.00
TE-0218	CF Tee, Flange OD 2.125" Dimension "A" 2.00" Tube OD 1.00"	\$120.00
TE-0275	CF Tee, Flange OD 2.75" Dimension "A" 2.50" Tube OD 1.50"	\$120.00
TE-0338	CF Tee, Flange OD 3.375" Dimension "A" 3.20" Tube OD 2.00"	\$255.00
TE-0450	CF Tee, Flange OD 4.50" Dimension "A" 3.40" Tube OD 2.50"	\$320.00
TE-0458	CF Tee, Flange OD 4.625" Dimension "A" 3.60" Tube OD 3.00"	Inquire
TE-0600	CF Tee, Flange OD 6.00" Dimension "A" 4.30" Tube OD 4.00"	\$440.00
TE-0675	CF Tee, Flange OD 6.75" Dimension "A" 4.90" Tube OD 5.00"	Inquire
TE-0800	CF Tee, Flange OD 8.00" Dimension "A" 6.10" Tube OD 6.00"	Inquire
TE-1000	CF Tee, Flange OD 10.00" Dimension "A" 7.50" Tube OD 8.00"	Inquire



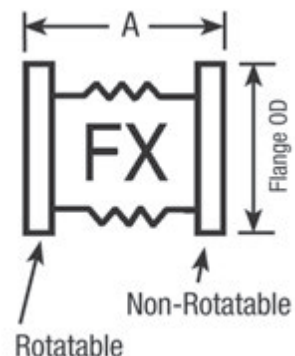
Crosses

Part No.	Description	Price
Duniway	--	US \$
CR-0133	CF Cross, Flange OD 1.33" Dimension "A" 1.50" Tube OD 0.75"	\$125.00
CR-0218	CF Cross, Flange OD 2.125" Dimension "A" 2.00" Tube OD 1.00"	Inquire
CR-0275	CF Cross, Flange OD 2.75" Dimension "A" 2.50" Tube OD 1.50"	\$155.00
CR-0338	CF Cross, Flange OD 3.375" Dimension "A" 3.20" Tube OD 2.00"	Inquire
CR-0450	CF Cross, Flange OD 4.50" Dimension "A" 3.40" Tube OD 2.50"	\$450.00
CR-0458	CF Cross, Flange OD 4.625" Dimension "A" 3.60" Tube OD 3.00"	Inquire
CR-0600	CF Cross, Flange OD 6.00" Dimension "A" 5.30" Tube OD 4.00"	\$675.00
CR-0675	CF Cross, Flange OD 6.75" Dimension "A" 4.90" Tube OD 5.00"	Inquire
CR-0800	CF Cross, Flange OD 8.00" Dimension "A" 6.10" Tube OD 6.00"	Inquire
CR-1000	CF Cross, Flange OD 10.00" Dimension "A" 8.00" Tube OD 8.00"	Inquire



Flex Couplings

Part No.	Description	Price
Duniway	--	US \$
FX-0133	CF Flex Coupling, Flange OD 1.33" Length 3.00" Tube OD 0.75"	\$95.00
FX-0133-10	CF Flex Coupling, Flange OD 1.33" Length 10.00" Tube OD 0.75"	\$115.00
FX-0218	CF Flex Coupling, Flange OD 2.125" Length 3.44" Tube OD 1.00"	Inquire
FX-0275	CF Flex Coupling, Flange OD 2.75" Length 3.60" Tube OD 1.50"	\$120.00
FX-0338	CF Flex Coupling, Flange OD 3.375" Length 4.00" Tube OD 2.00"	Inquire
FX-0450	CF Flex Coupling, Flange OD 4.50" Length 6.25" Tube OD 2.50"	\$345.00
FX-0458	CF Flex Coupling, Flange OD 4.625" Length 7.00" Tube OD 3.00"	Inquire
FX-0600	CF Flex Coupling, Flange OD 6.00" Length 7.62" Tube OD 4.00"	Inquire
FX-0675	CF Flex Coupling, Flange OD 6.75" Length 7.00" Tube OD 5.00"	Inquire
FX-0800	CF Flex Coupling, Flange OD 8.00" Length 8.00" Tube OD 6.00"	Inquire
FX-1000	CF Flex Coupling, Flange OD 10.00", Length 7.00", Tube OD 8.00"	Inquire



Zero Length Adapter Flanges

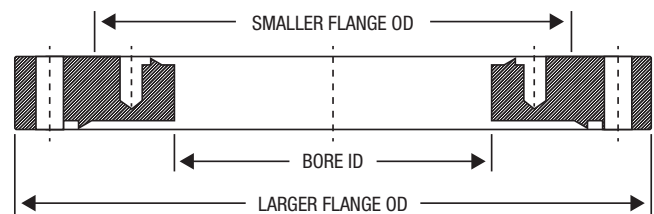
Part No.	Description	Price
Duniway	--	US \$
A0218TX133T	CF Adapter Flange, 2.125" OD to 1.33" 0.63" ID	\$65.00
A0275TX218T	CF Adapter Flange, 2.75" OD to 2.125" 1.00" ID	\$65.00
A0275X133T	CF Adapter Flange, 2.75" OD to 1.33" 0.63" ID	\$65.00
A0338TX218T	CF Adapter Flange, 3.375" OD to 2.125" 1.00" ID	Inquire
A0338TX275T	CF Adapter Flange, 3.375" OD to 2.75" 1.50" ID	\$80.00
A0338X133T	CF Adapter Flange, 3.375" OD to 1.33" 0.63" ID	Inquire
A0450TX338T	CF Adapter Flange, 4.50" OD to 3.375" 2.00" ID	\$110.00
A0450X133T	CF Adapter Flange, 4.50" OD to 1.33" 0.63" ID	\$85.00
A0450X218T	CF Adapter Flange, 4.50" OD to 2.125" 1.00" ID	\$87.00
A0450X275T	CF Adapter Flange, 4.50" OD to 2.75" 1.50" ID	\$97.00
A0458X133T	CF Adapter Flange, 4.625" OD to 1.33" 0.63" ID	\$115.00
A0458X218T	CF Adapter Flange, 4.625" OD to 2.125" 1.00" ID	Inquire
A0458X275T	CF Adapter Flange, 4.625" OD to 2.75" 1.50" ID	\$115.00
A0458X338T	CF Adapter Flange, 4.625" OD to 3.375" 2.00" ID	\$115.00
A0600TX458T	CF Adapter Flange, 6.00" OD to 4.625" 3.00" ID	Inquire
A0600X133T	CF Adapter Flange, 6.00" OD to 1.33" 0.63" ID	\$125.00
A0600X218T	CF Adapter Flange, 6.00" OD to 2.125" 1.00" ID	Inquire
A0600X275T	CF Adapter Flange, 6.00" OD to 2.75" 1.50" ID	\$125.00
A0600X338T	CF Adapter Flange, 6.00" OD to 3.375" 2.00" ID	\$147.00
A0600X450T	CF Adapter Flange, 6.00" OD to 4.50" 2.50" ID	\$168.00

Part No.	Description	Price
Duniway	--	US \$
A0675TX600T	CF Adapter Flange, 6.75" OD to 6.00" 4.00" ID	Inquire
A0675X133T	CF Adapter Flange, 6.75" OD to 1.33" 0.63" ID	Inquire
A0675X218T	CF Adapter Flange, 6.75" OD to 2.125" 1.00" ID	Inquire
A0675X275T	CF Adapter Flange, 6.75" OD to 2.75" 1.50" ID	Inquire
A0675X338T	CF Adapter Flange, 6.75" OD to 3.375" 2.00" ID	Inquire
A0675X450T	CF Adapter Flange, 6.75" OD to 4.50" 2.50" ID	Inquire
A0800X133T	CF Adapter Flange, 8.00" OD to 1.33" 0.63" ID	Inquire
A0800X218T	CF Adapter Flange, 8.00" OD to 2.125" 1.00" ID	Inquire
A0800X275T	CF Adapter Flange, 8.00" OD to 2.75" 1.50" ID	Inquire
A0800X338T	CF Adapter Flange, 8.00" OD to 3.375" 2.00" ID	Inquire
A0800X450T	CF Adapter Flange, 8.00" OD to 4.50" 2.50" ID	Inquire
A0800X458T	CF Adapter Flange, 8.00" OD to 4.625" 3.00" ID	Inquire
A0800X600T	CF Adapter Flange, 8.00" OD to 6.00" 4.00" ID	Inquire
A1000X133T	CF Adapter Flange, 10.00" OD to 1.33" 0.63" ID	Inquire
A1000X218T	CF Adapter Flange, 10.00" OD to 2.125" 1.00" ID	Inquire
A1000X275T	CF Adapter Flange, 10.00" OD to 2.75" 1.50" ID	Inquire
A1000X338T	CF Adapter Flange, 10.00" OD to 3.375" 2.00" ID	Inquire
A1000X450T	CF Adapter Flange, 10.00" OD to 4.50" 2.50" ID	Inquire
A1000X600T	CF Adapter Flange, 10.00" OD to 6.00" 4.00" ID	Inquire
A1000X800T	CF Adapter Flange, 10.00" OD to 8.00" 6.00" ID	Inquire

Please note: The **T** in the Duniway Part Number indicates that the relevant side of the flange has tapped holes.

Examples: **A0600X450T** is a CF Adapter Flange with a Large Flange OD of 6.00" with untapped holes that reduces to a Smaller Flange OD of 4.5" with tapped holes and an ID of 2.5".

A0600TX458T is a CF Adapter Flange with a Large Flange OD of 6.00" with tapped holes that reduces to a Smaller Flange OD of 4.625" with tapped holes and an ID of 3.0".



Zero Length Adapter Flange Schematic

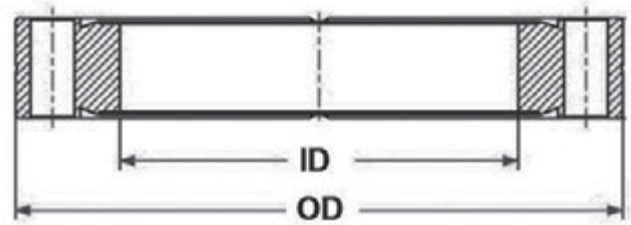
Hardware

Conflat-Type Flanges

Hardware

Double Sided CF Flanges

Part No.	Description	Price
Duniway	--	US \$
FD-133075	CF Double Sided Flange, 1.33" OD, 0.75" ID	\$25.00
FD-275000	CF Double Sided Flange, 2.75" OD, Blank	\$42.00
FD-275150	CF Double Sided Flange, 2.75" OD, 1.50" ID	\$42.00
FD-338200	CF Double Sided Flange, 3.375" OD, 2.00" ID	\$65.00
FD-450000	CF Double Sided Flange, 4.50" OD, Blank	\$95.00
FD-450150	CF Double Sided Flange, 4.50" OD, 1.50" ID	Inquire
FD-450250	CF Double Sided Flange, 4.50" OD, 2.50" ID	\$95.00
FD-600000	CF Double Sided Flange, 6.00" OD, Blank	\$160.00
FD-800600	CF Double Sided Flange, 8.00" OD, 6.00" ID	\$200.00



▼ Double Sided CF Flange Schematic

Double Side-Ported CF Flanges

Part No.	Description	Price
Duniway	--	US \$
FD-275150-1H	CF Double Sided Flange, 2.75" OD, 1.50" ID, One 1/8" NPT Port	\$85.00
FD-275150-2H	CF Double Sided Flange, 2.75" OD, 1.50" ID, Two 1/8" NPT Ports @ 90	\$110.00



▼ FD-217150-1H – CF Double Sided Ported Flange



▼ FD-217150-2H – CF Double Sided Ported Flange

Vacuum Viewports

Part No.	Description	Price
Duniway	--	US \$
VP-133-075	0.75" OD Glass Vacuum Viewport on 1.33" OD CF Flange	\$108.00
VP-275-150	1.50" OD Glass Vacuum Viewport on 2.75" OD CF Flange	\$111.00
VP-450-250	2.50" OD Glass Vacuum Viewport on 4.50" OD CF Flange	\$221.00
VP-600-400	4.00" OD Glass Vacuum Viewport on 6.00" OD CF Flange	\$355.00
VP-800-600	6.00" OD Glass Vacuum Viewport on 8.00" OD CF Flange	\$675.00



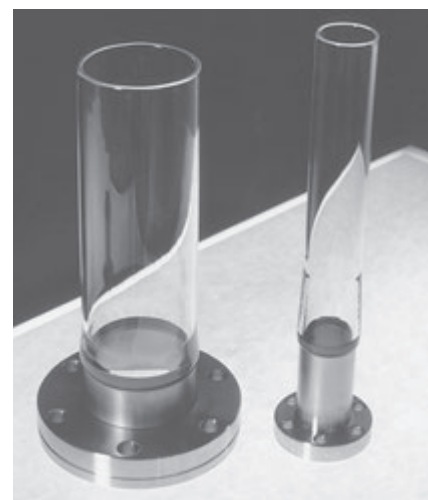
Features

▾ Vacuum Viewport

- Bakeout Temperature: 400°C
- 7056 Glass
- Conflat® Flanges
- UHV Zero Profile
- Kovar® Sleeve

Pyrex® Glass to Metal Adapters

Part No.	Description	Price
Duniway	--	US \$
GM-133075K	0.75" OD Pyrex Glass to Kovar Adapter on 1.33" OD CF Flange	Inquire
GM-133075S	0.75" OD Pyrex Glass to SST Adapter on 1.33" OD CF Flange	Inquire
GM-275150K	1.50" OD Pyrex Glass to Kovar Adapter on 2.75" OD CF Flange	Inquire
GM-275150S	1.50" OD Pyrex Glass to SST Adapter on 2.75" OD CF Flange	Inquire
GM-450250K	2.50" OD Pyrex Glass to Kovar Adapter on 4.50" OD CF Flange	Inquire
GM-450250S	2.50" OD Pyrex Glass to SS Adapter on 4.50" OD CF Flange	Inquire
GM-600400K	4.00" OD Pyrex Glass to Kovar Adapter on 6.00" OD CF Flange	Inquire
GM-600400S	4.00" OD Pyrex Glass to SST Adapter on 6.00" OD CF Flange	Inquire
GM-800600K	6.00" OD Pyrex Glass to Kovar Adapter on 8.00" OD CF Flange	Inquire
GM-800600S	6.00" OD Pyrex Glass to SST Adapter on 8.00" OD CF Flange	Inquire



▾ Pyrex® Glass to Metal Adapters

Features

- Bakeout Temperature: 400°C
- Conflat® Flanges

Hardware

Ports, Plugs & Adapters

Hardware

Adapters – Compression Ports Viton® Sealed Quick Disconnect

Part No.	Description	Price
Duniway	--	US \$
CP-075-SS	Compression Port, SST, Port ID=0.75"	\$60.00
CP-100-SS	Compression Port, SST, Port ID=1.00"	\$70.00
CP-112-SS	Compression Port, SST, Port ID=1.125"	\$80.00
CP-275-075	Compression Port, SST, Port ID=0.75" on 2.75" CF Flange	\$120.00
CP-275-100	Compression Port, SST, Port ID=1.00" on 2.75" CF Flange	\$125.00



▼ Compression Ports, Viton® Sealed Quick Disconnect

Adapters – Blank Plugs

Part No.	Description	Price
Duniway	--	US \$
BP-100AL	Blank Base-Plate Plug for 1.00" Hole Aluminum	\$25.00
BP-100SST	Blank Base-Plate Plug for 1.00" Hole SST	\$40.00



▼ Blank Plugs

Features

All of our gaskets are made from .080 ($\pm .003$ ") high-purity, electronic grade oxygen-free copper alloy 101 (99.99% pure), 1/4-hard temper, Rockwell 63-83 hardness, ASTM F 68-77, ASTM B 152-79.

Gaskets are punched dry, but the dyes are wiped with a vanishing cutting fluid which comes in contact with the gasket. It evaporates, leaving no residue. Nicks or scratches shall not exceed .0005" deep, or .003" wide. Burrs shall not exceed .002".

We also offer silver-plated copper gaskets designed to prevent oxidation at high temperatures.

Copper CF Gaskets

Part No.	Description	Price
Duniway	--	US \$
G-0133	Copper Gaskets for 1.33" OD CF Flange (OD 0.838", ID 0.641") 10/pkg	Inquire
G-013X	Copper Gaskets for 1.33" OD CF Flange (OD 0.838", ID 0.680") 10/pkg	Inquire
G-0218	Copper Gaskets for 2.125" OD CF Flange (OD 1.290", ID 1.010") 10/pkg	Inquire
G-0275	Copper Gaskets for 2.75" OD CF Flange (OD 1.895", ID 1.451") 10/pkg	Inquire
G-027X	Copper Gaskets for 2.75" OD CF Flange (OD 1.895", ID 1.530") 10/pkg	Inquire
G-0338	Copper Gaskets for 3.375" OD CF Flange (OD 2.425", ID 2.010") 10/pkg	Inquire
G-0450	Copper Gaskets for 4.50" OD CF Flange (OD 3.243", ID 2.506") 10/pkg	Inquire
G-0458	Copper Gaskets for 4.625" OD CF Flange (OD 3.598", ID 3.010") 10/pkg	Inquire
G-045X	Copper Gaskets for 4.50" OD CF Flange (OD 3.243", ID 2.800") 10/pkg	Inquire
G-0600	Copper Gaskets for 6.00" OD CF Flange (OD 4.743", ID 4.010") 10/pkg	Inquire
G-060X	Copper Gaskets for 6.00" OD CF Flange (OD 4.743", ID 4.25") 10/pkg	Inquire
G-0675	Copper Gaskets for 6.75" OD CF Flange (OD 5.567", ID 5.010") 10/pkg	Inquire
G-0800	Copper Gaskets for 8.00" OD CF Flange (OD 6.743", ID 6.007") 10/pkg	Inquire
G-1000	Copper Gaskets for 10.00" OD CF Flange (OD 8.743", ID 8.007") 10/pkg	Inquire

CFF Copper Gasket Specifications

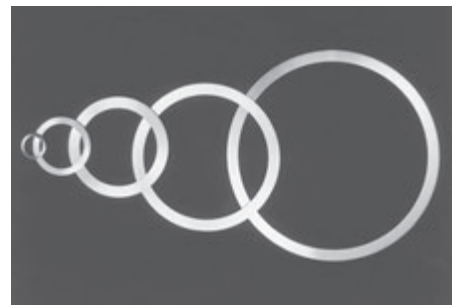
ISO	Flange Size	OD $\pm .002$ "	ID $\pm .003$ "
Duniway	Inch	Inch	Inch
NW16	1.33	0.838	0.640
NW25	2.12	1.290	1.010
NW35	2.75	1.895	1.451
NW50	3.37	2.425	2.010
NW63	4.50	3.243	2.506
NW75	4.62	3.598	3.010
NW100	6.00	4.743	4.006
NW130	6.75	5.567	5.010
NW150	8.00	6.743	6.007
NW200	10.00	8.743	8.007

Silver Plated Copper CF Gaskets

Part No.	Description	Price
Duniway	--	US \$
SG-0133	Silver-Plated Copper Gaskets for 1.33" OD CF Flange (OD 0.838", ID 0.641") 10/pkg	Inquire
SG-013X	Silver-Plated Copper Gaskets for 1.33" OD CF Flange (OD 0.838", ID 0.680") 10/pkg	Inquire
SG-0275	Silver-Plated Copper Gaskets for 2.75" OD CF Flange (OD 1.895", ID 1.451") 10/pkg	Inquire
SG-027X	Silver-Plated Copper Gasket for 2.75" OD CF Flange (OD 1.895", ID 1.530") 10/pkg	Inquire
SG-0338	Silver-Plated Copper Gaskets for 3.375" OD CF Flange (OD 2.425", ID 2.010") 10/pkg	Inquire
SG-0450	Silver-Plated Copper Gaskets for 4.50" OD CF Flange (OD 3.243", ID 2.506") 10/pkg	Inquire
SG-045X	Silver-Plated Copper Gasket for 4.50" CF Flange (OD 3.243", ID 2.800") 10/pkg	Inquire
SG-0600	Silver-Plated Copper Gaskets for 6.00" OD CF Flange (OD 4.743", ID 4.010") 10/pkg	Inquire
SG-060X	Silver-Plated Copper Gaskets for 6.00" OD CF Flange (OD 4.743", ID 4.25") 10/pkg	Inquire
SG-0800	Silver-Plated Copper Gaskets for 8.00" OD CF Flange (OD 6.743", ID 6.007") 10/pkg	Inquire
SG-1000	Silver-Plated Copper Gaskets for 10.00" OD CF Flange (OD 8.743", ID 8.007") 10/pkg	Inquire



▼ Silver Plated Copper CF Gaskets



▼ Copper CF Gaskets

Hardware

Gaskets for Conflat® Flanges

Hardware

Solid (Blank) Copper CF Gaskets

Part No.	Description	Price
Duniway	--	US \$
BG-0133	Solid (Blank) Copper Gaskets for 1.33" OD CF Flange (OD 0.838") 10/pkg	Inquire
BG-0275	Solid (Blank) Copper Gaskets for 2.75" OD CF Flange (OD 1.895") 10/pkg	Inquire
BG-0338	Solid (Blank) Copper Gaskets for 3.375" OD CF Flange (OD 2.425") 10/pkg	Inquire
BG-0450	Solid (Blank) Copper Gaskets for 4.50" OD CF Flange (OD 3.243") 10/pkg	Inquire
BG-0600	Solid (Blank) Copper Gaskets for 6.00" OD CF Flange (OD 4.743") Single Unit	Inquire
BG-0800	Solid (Blank) Copper Gaskets for 8.00" OD CF Flange (OD 6.743") Single Unit	Inquire



▼ Solid (Blank) Copper CF Gaskets

Copper CF Pinch-Off Adapters

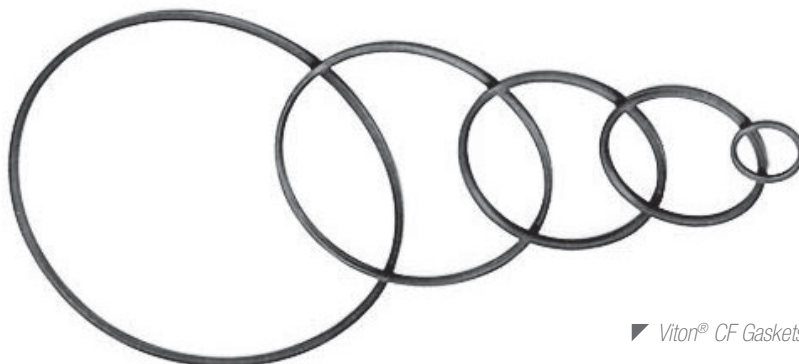
Part No.	Description	Price
Duniway	--	US \$
CA-133	Copper Pinch-Off Adapter, Gasket for 1.33" OD CF Flange to 3/8" OD 6" Long Tube 4/pkg	Inquire
CA-275	Copper Pinch-Off Adapter, Gasket for 2.75" OD CF Flange to 3/8" OD 6" Long Tube 4/pkg	Inquire



▼ Copper CF Pinch-Off Adapters

Viton® CF Gaskets

Part No.	Description	Price
Duniway	--	US \$
VG-0133-5	Viton Gaskets for 1.33" OD CF Flange Gasket OD 0.838" 5/pkg	\$15.00
VG-0218-5	Viton Gaskets for 2.125" OD CF Flange Gasket OD 1.290" 5/pkg	\$18.00
VG-0275-5	Viton Gaskets for 2.75" OD CF Flange Gasket OD 1.895" 5/pkg	\$19.00
VG-0338-1	Viton Gasket for 3.375" OD CF Flange Gasket OD 2.425" 1/pkg	\$13.00
VG-0450-1	Viton Gasket for 4.50" OD CF Flange Gasket OD 3.243" 1/pkg	\$15.00
VG-0458-1	Viton Gasket for 4.625" OD CF Flange Gasket OD 3.598" 1/pkg	\$16.00
VG-0600-1	Viton Gasket for 6.00" OD CF Flange Gasket OD 4.743" 1/pkg	\$18.00
VG-0675-1	Viton Gasket for 6.75" OD CF Flange Gasket OD 5.567" 1/pkg	\$21.00
VG-0800-1	Viton Gasket for 8.00" OD CF Flange Gasket OD 6.743" 1/pkg	\$24.00
VG-1000-1	Viton Gasket for 10.00" OD CF Flange Gasket OD 8.743" 1/pkg	\$29.00



▼ Viton® CF Gaskets

Features

All Duniway Viton® o-rings (KF Fittings) and gaskets (Conflat) are vacuum degassed in our dedicated vacuum degassing oven. The Viton® products are baked under vacuum at a temperature of 150C for four hours which reduces the outgassing rate of Viton® from a few times 10^{-7} torr-liters/sec/cm² to a few times 10^{-10} torr-liters/sec/cm². Storage in a dry atmosphere retains most of the benefits of vacuum degassing.



▼ Viton® Gasket Cross Section

Notes About Part Numbers

All Bolts & Studs are provided 25 per package.

- **S** in Part Number indicates bolts are Silver Plated. Silver Plating is 0.0002" thick.
- **A** in Part Number indicates Allen-Head. Alloy A-286 (90k psi min yeild strength).
- **B** in Part Number indicates 12-Point Head, SST-302 HQ (70k psi min yield strength).
- **M** in Part Number indicates Metric Thread, Hex-Head, SST-302.

Nuts and/or Washers, non-plated are provided in the packages with the Bolts.

- **N** in Part Number indicates 25 Hex Nuts and 25 Washers.
- **N & F** in Part Number indicates 25 Flange Nuts and 25 Washers.
- **N & P** in Part Number indicates 13 Plate Nuts and 25 Washers.
- **X** in Part Number excludes Nuts but includes 25 Washers.

Bolts and Studs, non-silver plated, are also available and can be ordered by deleting the letter **S** from the Part Number.

Custom Bolt lengths are available but require a minimum of 1,500 parts per order.

Silver-Plated CF Flange Hex Nuts & Washers

Part No.	Description	Price
Duniway	--	US \$
SAN-32-075	Silver-Plated Bolts, Allen Head, for 1.33" OD CF Flanges (8-32 X 0.75") - with Hex Nuts & Washers 25/pkg	\$22.00
SBN-28-125	Silver-Plated Bolts, 12-Point Head, for 2.75" OD CF Flanges (1/4-28 x 1.25") - with Hex Nuts & Washers 25/pkg	\$24.00
SBN-28-212	Silver-Plated Bolts, 12-Point Head, for 2.75" OD CF Flanges (1/4-28 x 2.125") - with Hex Nuts & Washers 25/pkg	\$32.00
SBN-24-175	Silver-Plated Bolts, 12-Point Head, for 3.375" OD CF Flanges (5/16-24 x 1.75") - with Hex Nuts & Washers 25/pkg	\$35.00
SBN-24-200	Silver-Plated Bolts, 12-Point Head, for 4.50" or 6.00" OD CF Flanges (5/16-24 x 2.00") - with Hex Nuts & Washers 25/pkg	\$39.50
SBN-24-225	Silver-Plated Bolts, 12-Point Head, for 6.00" or 8.00" OD CF Flanges (5/16-24 x 2.25") - with Hex Nuts & Washers 25/pkg	\$40.00
SBN-24-250	Silver-Plated Bolts, 12-Point Head, for 10.00" OD CF Flanges (5/16-24 x 2.50") - with Hex Nuts & Washers 25/pkg	\$41.00

Silver-Plated CF Flange Flange Nuts & Washers

Part No.	Description	Price
Duniway	--	US \$
SFBN-28-125	Silver-Plated Bolts, 12-Point Head, for 2.75" OD CF Flanges (1/4-28 x 1.25") - with Flangenuts & Washers 25/pkg	\$24.00
SFBN-28-212	Silver-Plated Bolts, 12-Point Head, for 2.75" OD CF Flanges (1/4-28 x 2.125") - with Flangenuts & Washers 25/pkg	\$33.00
SFBN-24-175	Silver-Plated Bolts, 12-Point Head, for 3.375" OD CF Flanges (5/16-24 x 1.75") - with Flangenuts & Washers 25/pkg	\$36.50
SFBN-24-200	Silver-Plated Bolts, 12-Point Head, for 6.00" OD CF Flanges (5/16-24 x 2.00") - with Flangenuts & Washers 25/pkg	\$40.00
SFBN-24-225	Silver-Plated Bolts, 12-Point Head, for 6.00" or 8.00" OD CF Flanges (5/16-24 x 2.25") - with Flangenuts & Washers 25/pkg	\$42.00
SFBN-24-250	Silver-Plated Bolts, 12-Point Head, for 10.00" OD CF Flanges (5/16-24 x 2.50") - with Flangenuts & Washers 25/pkg	\$42.00



▼ SAN-32-075 – Silver-Plated Allen Head Bolts, Hex Nuts & Washers



▼ Silver-Plated 12-Point Head Bolts, Hex Nuts & Washers



▼ Silver-Plated 12-Point Head Bolts, Flange Nuts & Washers

Hardware

Bolts, Studs, Nuts & Washers — Packages

Hardware

Silver-Plated CF Flange Plate Nuts & Washers

Part No.	Description	Price
Duniway	--	US \$
SPAN32-075-133	Silver-Plated Bolts, Allen Head, for 1.33" OD CF Flanges (8-32 x 0.75") - with Platenuts & Washers 25/pkg	\$33.00
SPBN28-125-275	Silver-Plated Bolts, 12-Point Head, for 2.75" OD CF Flanges (1/4-28 x 1.25") - with Platenuts & Washers 25/pkg	\$35.50
SPBN28-212-275	Silver-Plated Bolts, 12-Point Head, for 2.75" OD CF Flanges (1/4-28 x 2.125") - with Platenuts & Washers 25/pkg	\$42.00
SPBN24-175-338	Silver-Plated Bolts, 12-Point Head, for 3.375" OD CF Flanges (5/16-24 x 1.75") - with Platenuts & Washers 25/pkg	\$47.00
SPBN24-200-450	Silver-Plated Bolts, 12-Point Head, for 4.50" OD CF Flanges (5/16-24 x 2.00") - with Platenuts & Washers 25/pkg	\$52.00
SPBN24-200-600	Silver-Plated Bolts, 12-Point Head, for 6.00" OD CF Flanges (5/16-24 x 2.00") - with Platenuts & Washers 25/pkg	\$52.00
SPBN24-225-600	Silver-Plated Bolts, 12-Point Head, for 6.00" OD CF Flanges (5/16-24 x 2.25") - with Platenuts & Washers 25/pkg	\$52.00
SPBN24-225-800	Silver-Plated Bolts, 12-Point Head, for 8.00" OD CF Flanges (5/16-24 x 2.25") - with Platenuts & Washers 25/pkg	\$52.00
SPBN24-250-1000	Silver-Plated Bolts, 12-Point Head, for 10.00" OD CF Flanges (5/16-24 x 2.50") - with Platenuts & Washers 25/pkg	\$52.00



► Silver-Plated Allen Head Bolts, Plate Nuts & Washers



► Silver-Plated 12-Point Head Bolts, Plate Nuts & Washers

Silver-Plated CF Flange Hex Head Metric Bolts with Hex Nuts & Washers

Part No.	Description	Price
Duniway	--	US \$
SMN-M6-35	Silver Plated Metric Bolts, Hex Head, for 2.75" OD CF Flanges (D-6 mm L=35 mm Thread Pitch: 1 mm) - with Hex Nuts & Washers 25/pkg	\$13.80
SMN-M8-55	Silver Plated Metric Bolts, Hex Head, for 4.00" or 6.00" OD CF Flanges (D-8 mm L=55 mm Thread Pitch: 1.25 mm) - with Hex Nuts & Washers 25/pkg	\$25.20



► Silver-Plated Hex Head Bolts, Hex Nuts & Washers

Silver-Plated CF Flange Hex Head Metric Bolts with Plate Nuts & Washers

Part No.	Description	Price
Duniway	--	US \$
SPMN-M6-35-275	Silver Plated Metric Bolts, Hex Head, for 2.75" OD CF Flanges (D-6 mm L=35 mm Thread Pitch: 1 mm) - w/ Platenuts & Washers 25/pkg	\$32.00
SPMN-M8-55-450	Silver Plated Metric Bolts, Hex Head, for 4.50" OD CF Flanges (D-8 mm L=55 mm Thread Pitch: 1.25 mm) - w/ Platenuts & Washers 25/pkg	\$39.00
SPMN-M8-55-600	Silver Plated Metric Bolts, Hex Head, for 6.00" OD CF Flanges (D-8 mm L=55 mm Thread Pitch: 1.25 mm) - w/ Platenuts & Washers 25/pkg	\$39.00



► Silver-Plated Hex Head Metric Bolts, Plate Nuts & Washers

Silver-Plated Bolts for Tapped CF Flanges

Part No.	Description	Price
Duniway	--	US \$
SAX-32-050	Silver-Plated Bolts, Allen Head, for 1.33" OD CF Tapped Flanges (8-32 X 0.50") - with washers 25/pkg	\$19.50
SBX-28-087	Silver-Plated Bolts, 12-Point Head, for 2.75" OD CF Tapped Flanges (1/4-28 x 0.875") - with Washers 25/pkg	\$22.50
SBX-24-125	Silver-Plated Bolts, 12-Point Head, for 3.375" or 4.50" or 6.00" OD CF Tapped Flanges (5/16-24 x 1.25") - with Washers 25/pkg	\$30.00
SBX-24-175	Silver-Plated Bolts, 12-Point Head, for 8.00" or 10.00" OD CF Tapped Flanges (5/16-24 x 1.75") - with Washers 25/pkg	\$32.50



▼ Silver-Plated Bolts for Tapped CF Flanges

Silver-Plated Non-Standard Bolts

Part No.	Description	Price
Duniway	--	US \$
SBX-28-050	Silver-Plated Bolts, 12-Point Head, (1/4-28 x 0.50") - with Washers 25/pkg	\$26.50
SBX-28-100	Silver-Plated Bolts, 12-Point Head, (1/4-28 x 1.00") - with Washers 25/pkg	\$30.50
SBN-28-150	Silver-Plated Bolts, 12-Point Head, (1/4-28 x 1.50") with Nuts & Washers 25/pkg	\$34.00
SBN-28-175	Silver-Plated Bolts, 12-Point Head, (1/4-28 x 1.75") with Nuts & Washers 25/pkg	\$37.00
SBX-24-075	Silver-Plated Bolts, 12-Point Head, (5/16-24 x 0.75") - with Washers 25/pkg	\$37.50
SBX-24-100	Silver-Plated Bolts, 12-Point Head, (5/16-24 x 1.00") - with Washers 25/pkg	\$35.00
SBX-24-150	Silver-Plated Bolts, 12-Point Head, (5/16-24 x 1.50") - with Washers 25/pkg	\$36.25



▼ Silver-Plated 12-Point Head Bolts & Washers

Silver-Plated Studs

Part No.	Description	Price
Duniway	--	US \$
SR-24-200	Silver-Plated Custom Studs (5/16-24 x 2.00") 25/pkg	\$35.00
SR-24-250	Silver-Plated Custom Studs (5/16-24 x 2.50") 25/pkg	\$43.00
SR-24-300	Silver-Plated Custom Studs (5/16-24 x 3.00") 25/pkg	\$49.00
SR-28-150	Silver-Plated Studs (1/4-28 x 1.50"), 25/pkg	\$25.00
SR-28-225	Silver-Plated Studs (1/4-28 x 2.25"), 25/pkg	\$30.00



▼ Silver-Plated Studs

Wrenches & Sockets

Part No.	Description	Price
Duniway	--	US \$
SOCKET-1/4	1/4" 12-Point Socket for 1/4 " Drive	\$7.00
SOCKET-5/16	5/16" 12-Point Socket for 3/8" Drive	\$7.00
WRENCH-1/4	12pt 1/4" Combination Wrench	\$13.00
WRENCH-5/16	12pt 5/16" Combination Wrench	\$13.00



▼ 12-Point Socket



▼ Combination Wrench

Hardware

CF Flange Nuts & Accessories

Hardware **D**

Plate Nuts – 304 SST, Fine Threads

Part No.	Description	Price
Duniway	--	US \$
PN-0133-025	Platenut for 1.33" OD CF Flange (8-32) 25/pkg	\$37.50
PN-0133-100	Platenut for 1.33" OD CF Flange (8-32) 100/pkg	\$150.00
PN-0218-025	Platenut for 2.125" OD CF Flange (1/4-28) 25/pkg	\$37.50
PN-0218-100	Platenut for 2.125" OD CF Flange (1/4-28) 100/pkg	\$160.00
PN-0275-025	Platenut for 2.75" OD CF Flange (1/4-28) 25/pkg	\$37.50
PN-0275-100	Platenut for 2.75" OD CF Flange (1/4-28) 100/pkg	\$150.00
PN-0338-025	Platenut for 3.375" OD CF Flange (5/16-24) 25/pkg	\$40.50
PN-0338-100	Platenut for 3.375" OD CF Flange (5/16-24) 100/pkg	\$160.00
PN-0450-025	Platenut for 4.50" OD CF Flange (5/16-24) 25/pkg	\$40.50
PN-0450-100	Platenut for 4.50" OD CF Flange (5/16-24) 100/pkg	\$160.00
PN-0458-025	Platenut for 4.625" OD CF Flange (5/16-24) 25/pkg	\$40.50
PN-0458-100	Platenut for 4.625" OD CF Flange (5/16-24) 100/pkg	\$160.00
PN-0600-025	Platenut for 6.00" OD CF Flange (5/16-24) 25/pkg	\$40.50
PN-0600-100	Platenut for 6.00" OD CF Flange (5/16-24) 100/pkg	\$160.00
PN-0800-025	Platenut for 8.00" OD CF Flange (5/16-24) 25/pkg	\$40.50
PN-0800-100	Platenut for 8.00" OD CF Flange (5/16-24) 100/pkg	\$160.00
PN-1000-025	Platenut for 10.00" OD CF Flange (5/16-24) 25/pkg	\$42.00
PN-1000-100	Platenut for 10.00" OD CF Flange (5/16-24) 100/pkg	\$170.00
PN-1200-025	Platenut for 12.00" OD CF Flange (5/16-24) 25/pkg	\$40.50
PN-1200-100	Platenut for 12.00" OD CF Flange (5/16-24) 100/pkg	\$160.00



► Plate Nuts, Standard & Metric



► Flange Nuts

Metric Plate Nuts — 304 SST

Part No.	Description	Price
Duniway	--	US \$
MP-0133-25	Metric Platenuts For 1.33" OD CFF (Bolt D = 4 mm Thread Pitch: 0.7 mm) 25/pkg	\$37.50
MP-0275-25	Metric Platenuts For 2.75" OD CFF (Bolt D = 6 mm Thread Pitch: 1.0 mm) 25/pkg	\$37.50
MP-0450-25	Metric Platenuts For 4.50" OD CFF (Bolt D = 8 mm Thread Pitch: 1.25 mm) 25/pkg	\$42.50
MP-0600-25	Metric Platenuts For 6.00" OD CFF (Bolt D = 8 mm Thread Pitch: 1.25 mm) 25/pkg	\$42.50
MP-0800-25	Metric Platenuts For 8.00" OD CFF (Bolt D = 8 mm Thread Pitch: 1.25 mm) 25/pkg	\$42.50
MP-1000-25	Metric Platenuts For 10.00" OD CFF (Bolt D = 8 mm Thread Pitch: 1.25 mm) 25/pkg	\$42.50



► Silver-Plated Nuts

Flange Nuts – 304 SST, High Strength: 100,000 psi

Part No.	Description	Price
Duniway	--	US \$
FN-2528-100	Flange Nuts (1/4-28), 100/pkg	\$30.00
FN-3124-100	Flange Nuts (5/16-24), 100/pkg	\$30.00

Silver-Plated Nuts – Only for use with Non-Plated Bolts

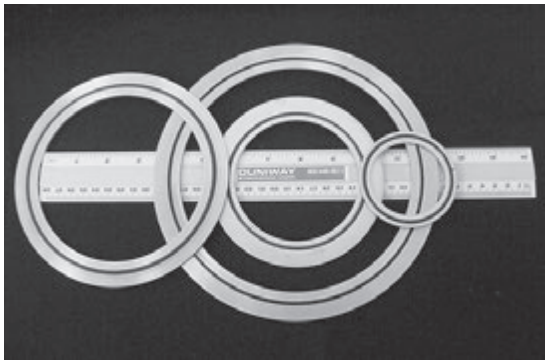
Part No.	Description	Price
Duniway	--	US \$
SN-1/4	Silver Plated Nuts (Bolt D=0.25", 28 Threads per Inch) 25/pkg	\$8.00
SN-5/16	Silver Plated Nuts (Bolt D=5/16", 24 Threads per Inch) 25/pkg	\$8.00

Features

Econo Rings are made for sealing two ungrooved ASA/ANSI flanges.

A normal O-ring of either Buna®-N or Viton®-A is captured and located between two aluminum retaining rings. The O-ring is included and the standard O-ring dash number designator is included for convenient replacement.

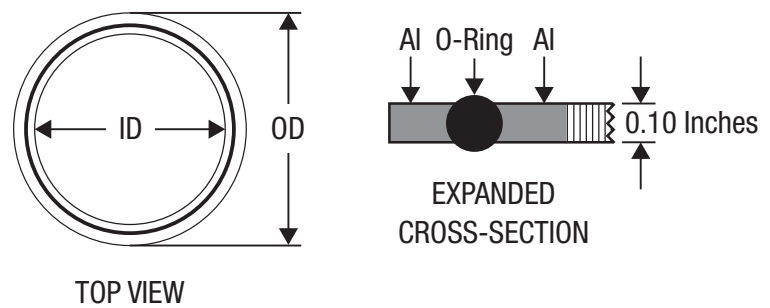
The thickness of the aluminum retaining rings is 0.10 inches and the O-ring cross section diameter is 0.139 inches.



▼ Econo Rings

Econo Rings

Part No.	Description	Price
Duniway	--	US \$
ECB-2	Econo Ring (OD=2.97" ID=2.25") Buna O-Ring(-230) for 2" ASA	Inquire
ECB-3	Econo Ring (OD=5.25" ID=3.75") Buna O-Ring(-242) for 3" ASA	Inquire
ECB-4	Econo Ring (OD=6.75" ID=5.25") Buna O-Ring(-256) for 4" ASA	Inquire
ECB-6	Econo Ring (OD=8.63" ID=7.00") Buna O-Ring(-263) for 6" ASA	Inquire
ECV-2	Econo Ring (OD=2.97" ID=2.25") Viton O-Ring(-230) for 2" ASA	Inquire
ECV-3	Econo Ring (OD=5.25" ID=3.75") Viton O-Ring(-242) for 3" ASA	Inquire
ECV-4	Econo Ring (OD=6.75" ID=5.25") Viton O-Ring(-256) for 4" ASA	Inquire
ECV-6	Econo Ring (OD=8.63" ID=7.00") Viton O-Ring(-263) for 6" ASA	Inquire



Hardware

Rotary & Electrical Feedthroughs

Hardware **D**

Varian-Style Ion Pump High Voltage Feedthroughs

Part No.	Description	Price
Duniway	--	US \$
HVFT-0006-00	High Voltage Feedthrough, VA Classic-Style	\$145.00
HVFT-0006-02	High Voltage Feedthrough, VA Classic-Style, Hole in Shaft	\$145.00
HVFT-5024	High Voltage Feedthrough, VA Old-Style (Obsolete)	\$280.00
HVFT-5120	High Voltage Feedthrough, Early VIP/Starcell-Style Pumps, on 1.33" (mini) CFF	\$230.00
HVFT-5125	High Voltage Feedthrough, New VIP/Starcell-Style Pumps, on 1.33" (mini) CFF	\$330.00
HVFT-5143	High Voltage Feedthrough, VA Classic-Style- For 30l/s and Larger Pumps, on 1.33" (mini) CFF	\$180.00



▼ HVFT-0006-00



▼ HVFT-0006-02



▼ HVFT-5120



▼ HVFT-5125



▼ HVFT-5143



▼ FRMF-1-25

Rotary Motion Feedthroughs

Part No.	Description	Price
Duniway	--	US \$
FRMF-15	RIGAKU FerroFluid Rotary Motion Feedthrough, Shaft D=0.375" Port OD=1.0" with #14 Thread	\$475.00
RMF-1-25	Direct Drive Rotary Motion Feedthrough, Shaft D = 0.25" L = 4.37" Port OD = 1.0" Through Hole	\$370.00

Electrical Feedthroughs – Medium Current

Part No.	Description — 150 AMP, 12 KV, 0.25" OD Conductor(s)	Price
Duniway	--	US \$
FT-150-000	Medium Current Feedthrough, No Flange, 0.75" OD Port	\$100.00
FT-150-133	Medium Current Feedthrough, 1.33" OD CF Flange	\$130.00
FT-150-275	Medium Current Feedthrough, 2.75" OD CF Flange	\$150.00
FT-152-275	Dual Medium Current Feedthrough, 2.75" OD CF Flange	\$295.00



▼ FT-150-133



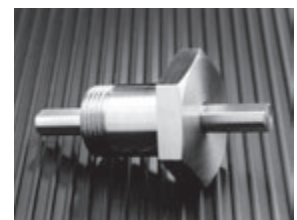
▼ FT-150-275



▼ FT-152-275

Electrical Feedthroughs – High Voltage

Part No.	Description	Price
Duniway	--	US \$
PE-HVFT-ASSY	High Voltage Feedthrough, New Style, for PE/PHI/Ultek Ion Pump, No Flange	\$150.00
PE-FT-133	High Voltage Feedthrough, New Style, for PE/PHI/Ultek Ion Pump, on 1.33" (mini) CFF	\$202.00
PE-FT-218	High Voltage Feedthrough, Old Style, for PE/PHI/Ultek Ion Pump, on 2 1/8" CFF	\$215.00



▼ RMF-15

Valves

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Valves

New Valves

Stainless Steel Valves

- Manual & Pneumatic
- Stainless Steel

Solenoid options

Please Specify at time of order

Three-Way 120V AC, 50/60 Hz (Default)
 Three-Way 12/24V DC and Three-Way
 208/240 VAC, 50/60 Hz available upon
 request.

Features

- Rough Vacuum Application
- Viton® Seals
- High Conductance
- Long-life Bellows
- Low Cost Replacement Parts Available
- Pneumatic valves are air to open/spring to close

Stainless Steel Valves

Part No.	Description	Price
Duniway	--	US \$
SFAE-075-KF16	Pneumatic Right Angle Valve, Stainless Steel, 3/4" Port, KF16 Flange Connect	\$380.00
SFAE-112-KF25	Pneumatic Right Angle Valve, Stainless Steel, 1 1/8" Port, KF25 Flange Connect	\$423.00
SFAE-162-KF40	Pneumatic Right Angle Valve, Stainless Steel, 1 5/8" Port, KF40 Flange Connect	\$460.00
SFAE-200-KF50	Pneumatic Right Angle Valve, Stainless Steel, 2" Port, KF50 Flange Connect	\$589.00
SFAM-075-KF16	Manual Right Angle Valve, Stainless Steel, 3/4" Port, KF16 Flange Connect	\$280.00
SFAM-112-KF25	Manual Right Angle Valve, Stainless Steel, 1 1/8" Port, KF25 Flange Connect	\$295.00
SFAM-150-CF275	Manual Right Angle Valve, Stainless Steel, 1 1/2" Port, 2.75" CFF Connect	\$370.00
SFAM-162-KF40	Manual Right Angle Valve, Stainless Steel, 1 5/8" Port, KF40 Flange Connect	\$320.00
SFAM-200-KF50	Manual Right Angle Valve, Stainless Steel, 2" Port, KF50 Flange Connect	\$460.00
SFLE-075-KF16	Pneumatic In-Line Valve, Stainless Steel, 3/4" Port, KF16 Flange Connect	\$400.00
SFLE-112-KF25	Pneumatic In-Line Valve, Stainless Steel, 1 1/8" Port, KF25 Flange Connect	\$445.00
SFLE-162-KF40	Pneumatic In-Line Valve, Stainless Steel, 1 5/8" Port, KF40 Flange Connect	\$525.00
SFLE-200-KF50	Pneumatic In-Line Valve, Stainless Steel, 2" Port, KF50 Flange Connect	\$579.00
SFLM-075-KF16	Manual In-Line Valve, Stainless Steel, 3/4" Port, KF16 Flange Connect	\$380.00
SFLM-112-KF25	Manual In-Line Valve, Stainless Steel, 1" Port, KF25 Flange Connect	\$365.00
SFLM-150-CF275	Manual In-Line Valve, Stainless Steel, 1 1/2" Port, 2.75" CFF Connect	\$465.00
SFLM-162-KF40	Manual In-Line Valve, Stainless Steel, 1 5/8" Port, KF40 Flange Connect	\$400.00
SFLM-200-KF50	Manual In-Line Valve, Stainless Steel, 2" Port, KF50 Flange Connect	\$625.00



▼ Manual Right Angle Valve, Stainless Steel



▼ Manual In-Line Valve, Stainless Steel



▼ SFAE-112-KF25, Electro-Air Right Angle Valve, Stainless Steel

Brass Valves

- Manual & Pneumatic
- Brass

Solenoid options

Please Specify at time of order

Three-Way 120V AC, 50/60 Hz (Default)

Additional Price for Three-Way 24V DC available

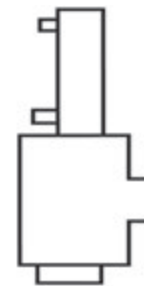
Additional Price for Three-Way 240 VAC, 50/60 Hz available

Features

- Rough Vacuum Application
- Viton® Seals
- High Conductance
- Long-life Bellows
- Low Cost Replacement Parts Available
- Seal Against Atmosphere In Either Direction

Brass Valves

Part No.	Description	Price	Image
Duniway	--	US \$	#
BSAE-037	Electro-Air Right Angle Valve, Brass, 3/8" Port, Solder Connect	Inquire	--
BSAE-050	Electro-Air Right Angle Valve, Brass, 1/2" Port, Solder Connect	Inquire	--
BSAE-075	Electro-Air Right Angle Valve, Brass, 3/4" Port, Solder Connect	Inquire	--
BSAE-112	Electro-Air Right Angle Valve, Brass, 1 1/8" Port, Solder Connect	Inquire	--
BSAE-162	Electro-Air Right Angle Valve, Brass, 1 5/8" Port, Solder Connect	Inquire	--
BSAE-200	Electro-Air Right Angle Valve, Brass, 2" Port, Solder Connect	Inquire	1
BSAM-037	Manual Right Angle Valve, Brass, 3/8" Port, Solder Connect	Inquire	2
BSAM-050	Manual Right Angle Valve, Brass, 1/2" Port, Solder Connect	Inquire	2
BSAM-075	Manual Right Angle Valve, Brass, 3/4" Port, Solder Connect	Inquire	2
BSAM-112	Manual Right Angle Valve, Brass, 1 1/8" Port, Solder Connect	Inquire	2
BSAM-162	Manual Right Angle Valve, Brass, 1 5/8" Port, Solder Connect	Inquire	2
BSAM-200	Manual Right Angle Valve, Brass, 2" Port, Solder Connect	Inquire	2
BSLE-037	Electro-Air In-Line Valve, Brass, 3/8" Port, Solder Connect	Inquire	3
BSLE-050	Electro-Air In-Line Valve, Brass, 1/2" Port, Solder Connect	Inquire	3
BSLE-075	Electro-Air In-Line Valve, Brass, 3/4" Port, Solder Connect	Inquire	3
BSLE-112	Electro-Air In-Line Valve, Brass, 1 1/8" Port, Solder Connect	Inquire	3
BSLE-162	Electro-Air In-Line Valve, Brass, 1 5/8" Port, Solder Connect	Inquire	3
BSLE-200	Electro-Air In-Line Valve, Brass, 2" Port, Solder Connect	Inquire	3
BSLM-037	Manual In-Line Angle Valve, Brass, 3/8" Port, Solder Connect	Inquire	4
BSLM-050	Manual In-Line Valve, Brass, 1/2" Port, Solder Connect	Inquire	4
BSLM-075	Manual In-Line Valve, Brass, 3/4" Port, Solder Connect	Inquire	4
BSLM-112	Manual In-Line Valve, Brass, 1 1/8" Port, Solder Connect	Inquire	4
BSLM-162	Manual In-Line Valve, Brass, 1 5/8" Port, Solder Connect	Inquire	4
BSLM-200	Manual In-Line Valve, Brass, 2" Port, Solder Connect	Inquire	4



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Valves

New Valves

Leak Valves

Valve Specifications

- Bakeable to 450° C (Opened or Closed)
- Sapphire Assembly with Vented Threads
- Prevents Trapped Gas in the Piston Assembly
- Controlled Leak Rate: 10^{-10} Torr L/S (Minimum)
- Vacuum Range: Atmosphere to Below 10^{-11} Torr (mbar)
- Leak Rate: No Leak Detectable on a Helium Mass Spectrometer Leak Detector with Sensitivity of 1×10^{-10} std cc/sec

Valves D

Part No.	Description	Price	Image
Duniway	--	US \$	#
VLVE-1000	Bakeable Variable Leak Valve, Dead Volume = 20 cc, Bottom Flange 2.75" CFF, Inlet Flange 1.33" CFF	\$1,200.00	1
VLVE-2000	Bakeable Variable Leak Valve, Dead Volume = 1.5 cc, Bottom Flange 1.33" CFF, Inlet Flange 1.33" CFF	\$1,200.00	2
REBG-LEAK-VLV	Bakeable Leak Valve - Complete Rebuilding Service.	\$550.00	--
0072-INS-TOOL	Insertion Tool to Change SAPPHIRE-0072	\$71.00	3
A133X025VCRF	Mini CFF to 1/4" Female VCR Adapter	\$65.00	--
A133X025VCRM	Mini CFF to 1/4" Male VCR Adapter	\$65.00	--
A133XFLARE	Mini CFF to Flare Fitting Adapter (Varian Equiv. PN 951-5117)	\$149.00	--
BV-WASHER	Belleville Washer for Bakeable Variable Leak Valve, 3/pkg	\$35.00	4
FSA-COMPLETE	Fine Screw Assembly & Belleville Washer	\$115.00	5
GASKET-5050	Replacement Gasket Assembly (Varian Equiv. PN 953-5050)	\$250.00	6
SAPPHIRE-0072	Replacement Sapphire Assembly (Varian Equiv. PN 953-0072)	\$304.00	7
VLVE-CAS	Coarse adjustment screw for Variable Leak Valves	\$18.00	8
VLVE-FS	Fine Screw - Threaded Rod	\$39.00	9
VLVE-HANDLE	Bakeable Leak Valve Handle	\$118.00	10
VLVE-KNOB	Bakeable Leak Valve Knob, (2 needed per valve)	\$35.00	11



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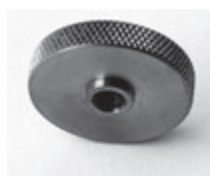
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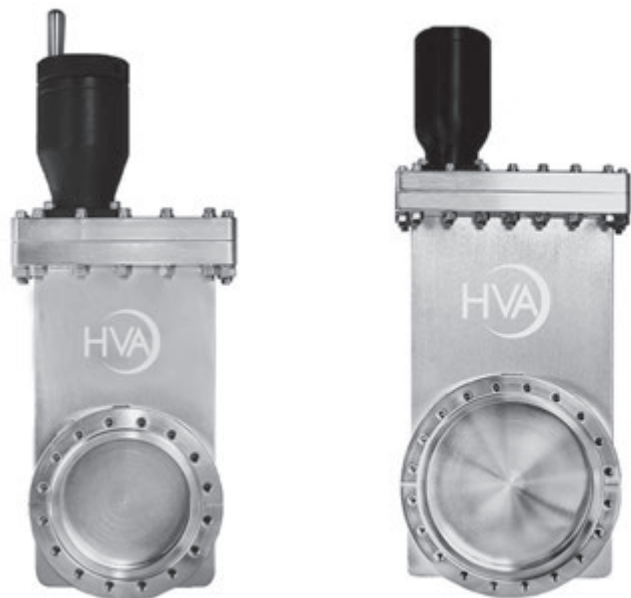


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11

UHV Gate Valves



11000 Series Standard Cycle Gate Valves are designed for high vacuum and ultra high vacuum applications.

Multi Application Use

Cryopumps, turbo pumps, ion pumps, etc.

Low Vibration/Lowest Outgassing

Proprietary vacuum brazing process

UHV Systems

Metal sealed CF flanges allow 1×10^{-10} mbar and temperatures of 200°C

Size Range

Commonly used CFF sizes in stock (other options available)

Part No.	Description	Price
Duniway	--	US \$
GVMM-150-CF	Metal Bonnet, Manual Actuation for 1.5" ID gate valve, 2.75" CF port flanges	\$1,350.00
GVMM-250-CF	Metal Bonnet, Manual Actuation for 2.5" ID gate valve, 4.50" CF port flanges	\$1,590.00
GVMM-400-CF	Metal Bonnet, Manual Actuation for 4.0" ID gate valve, 6.00" CF port flanges	\$2,235.00
GVMM-600-CF	Metal Bonnet, Manual Actuation for 6.0" ID gate valve, 8.00" CF port flanges	\$2,700.00
GVMP-150-CF	Metal Bonnet, Pneumatic Actuation for 1.5" ID gate valve, 2.75" CF port flanges	\$1,440.00
GVMP-250-CF	Metal Bonnet, Pneumatic Actuation for 2.5" ID gate valve, 4.50" CF port flanges	\$1,700.00
GVMP-400-CF	Metal Bonnet, Pneumatic Actuation for 4.0" ID gate valve, 6.00" CF port flanges	\$2,330.00
GVMP-600-CF	Metal Bonnet, Pneumatic Actuation for 6.0" ID gate valve, 8.00" CF port flanges	\$2,835.00

Valves

Rebuilt Valves

Manual

ID	Flange	Body	Material	Bonnet Seal	Price Range
Inch	--	--	--	--	US \$
5/8"	KF 16	Unit	SST	Metal / Elastomer	\$600 - \$850
1"	KF 25	Unit	SST	Metal / Elastomer	\$725 - \$850
1.5"	KF 40	Unit	SST	Metal / Elastomer	\$800 - \$900
2"	KF 50	Unit	SST	Metal / Elastomer	\$850 - \$950
2.5"	ISO-F 63	Unit	SST	Metal / Elastomer	\$925 - \$1,175
4"	ISO-F 100	Unit	SST	Metal / Elastomer	\$1,350 - \$1,575
6"	ISO-F 160	Unit	SST	Metal / Elastomer	\$1,425 - \$1,650
8"	ISO-F 200	Unit	SST	Metal / Elastomer	\$2,100 - \$2,625
10"	ISO-F 250	Unit	SST	Metal / Elastomer	\$4,000 - \$5,200
5/8"	1.33" CF	Unit	SST	Metal / Elastomer	\$650 - \$800
1.5"	2.75" CF	Unit	SST	Metal / Elastomer	\$900 - \$1,050
2.5"	4.5"/4.625" CF	Unit	SST	Metal / Elastomer	\$1,075 - \$1,275
4"	6" CF	Unit	SST	Metal / Elastomer	\$1,550 - \$1,800
6"	8" CF	Unit	SST	Metal / Elastomer	\$1,850 - \$2,200
8"	10" CF	Unit	SST	Metal / Elastomer	\$2,600 - \$3,050
10"	12" CF	Unit	SST	Metal / Elastomer	\$4,100 - \$5,300
2" -3.5"	ASA / ANSI	Unit	SST	Elastomer	\$700 - \$800
2" -3.5"	ASA / ANSI	Unit	AI	Elastomer	\$425 - \$550
2" -3.5"	ASA / ANSI	Split	AI	Elastomer	\$425 - \$550
3" -4"	ASA / ANSI	Unit	SST	Elastomer	\$1,175 - \$1,375
3" -4"	ASA / ANSI	Unit	AI	Elastomer	\$475 - \$625
3" -4"	ASA / ANSI	Split	AI	Elastomer	\$450 - \$625
4" -6"	ASA / ANSI	Unit	SST	Elastomer	\$1,550 - \$1,800
4" -6"	ASA / ANSI	Unit	AI	Elastomer	\$650 - \$850
4" -6"	ASA / ANSI	Split	AI	Elastomer	\$600 - \$800
6" -7"	ASA / ANSI	Unit	SST	Elastomer	\$1,850 - \$2,200
6" -7"	ASA / ANSI	Unit	AI	Elastomer	\$775 - \$975
6" -7"	ASA / ANSI	Split	AI	Elastomer	\$725 - \$925
10" -12"	ASA / ANSI	Unit	SST	Elastomer	\$3,000 - \$4,400

Notes Manual

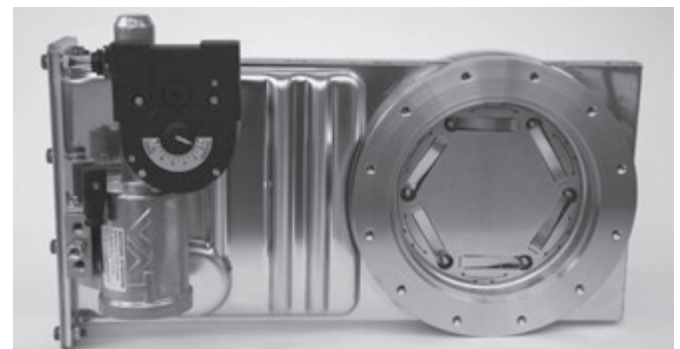
SUBJECT TO AVAILABILITY.
FOR ASA / ANSI, SPECIFY # OF FLANGES w/ O-RING GROOVE,
BCD, & # OF Bolts.

Notes Pneumatic

SUBJECT TO AVAILABILITY.
SOLENOID INCLUDED; SPECIFY VOLTAGE AT TIME OF ORDER.
FOR ASA / ANSI, SPECIFY # OF FLANGES w/ O-RING GROOVE,
BDC, & # OF Bolts.

Pneumatic

ID	Flange	Body	Material	Bonnet Seal	Price Range
Inch	--	--	--	--	US \$
5/8"	KF 16	Unit	SST	Metal / Elastomer	\$650 - \$1,125
1"	KF 25	Unit	SST	Metal / Elastomer	\$775 - \$1,125
1.5"	KF 40	Unit	SST	Metal / Elastomer	\$850 - \$1,125
2"	KF 50	Unit	SST	Metal / Elastomer	\$900 - \$1,125
2.5"	ISO-F 63	Unit	SST	Metal / Elastomer	\$975 - \$1,225
4"	ISO-F 100	Unit	SST	Metal / Elastomer	\$1,400 - \$1,675
6"	ISO-F 160	Unit	SST	Metal / Elastomer	\$1,475 - \$1,725
8"	ISO-F 200	Unit	SST	Metal / Elastomer	\$2,200 - \$2,875
10"	ISO-F 250	Unit	SST	Metal / Elastomer	\$4,000 - \$5,400
5/8"	1.33" CF	Unit	SST	Metal / Elastomer	\$700 - \$850
1.5"	2.75" CF	Unit	SST	Metal / Elastomer	\$950 - \$1,150
2.5"	4.5"/4.625" CF	Unit	SST	Metal / Elastomer	\$1,125 - \$1,325
4"	6" CF	Unit	SST	Metal / Elastomer	\$1,600 - \$1,875
6"	8" CF	Unit	SST	Metal / Elastomer	\$1,900 - \$2,275
8"	10" CF	Unit	SST	Metal / Elastomer	\$2,650 - \$3,075
10"	12" CF	Unit	SST	Metal / Elastomer	\$4,100 - \$5,400
2" -3.5"	ASA / ANSI	Unit	SST	Elastomer	\$800 - \$900
2" -3.5"	ASA / ANSI	Unit	AI	Elastomer	\$450 - \$650
2" -3.5"	ASA / ANSI	Split	AI	Elastomer	\$450 - \$650
3" -4"	ASA / ANSI	Unit	SST	Elastomer	\$1,225 - \$1,425
3" -4"	ASA / ANSI	Unit	AI	Elastomer	\$500 - \$725
3" -4"	ASA / ANSI	Split	AI	Elastomer	\$475 - \$725
4" -6"	ASA / ANSI	Unit	SST	Elastomer	\$1,600 - \$1,875
4" -6"	ASA / ANSI	Unit	AI	Elastomer	\$650 - \$850
4" -6"	ASA / ANSI	Split	AI	Elastomer	\$600 - \$800
6" -7"	ASA / ANSI	Unit	SST	Elastomer	\$1,900 - \$2,275
6" -7"	ASA / ANSI	Unit	AI	Elastomer	\$775 - \$975
6" -7"	ASA / ANSI	Split	AI	Elastomer	\$725 - \$925
10" -12"	ASA / ANSI	Unit	SST	Elastomer	\$3,100 - \$4,700

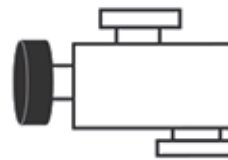


Gate Valves, Rebuilt

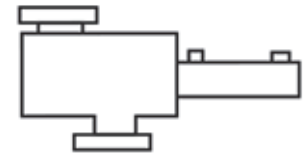
Misc. Valves

Rebuilt In-Line Valves

ID	Body	Actuation	Flange	Price
Inch	--	--	--	US \$
1.0"	SST	Manual	KF25	\$230.00
1.0"	SST	Air	KF25	\$260.00
1.5"	SST	Manual	KF40	\$260.00
1.5"	SST	Air	KF40	\$290.00
1.5"	SST	Manual	2.75" CF	\$275.00
1.5"	SST	Air	2.75" CF	\$300.00
2.0"	SST	Manual	KF50	\$345.00
2.0"	SST	Air	KF50	\$375.00



**In-Line
Manual**



**In-Line
Air**

Valves

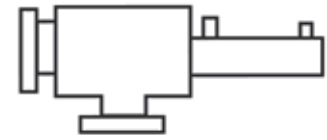


Rebuilt Right Angle Valves

ID	Body	Actuation	Flange	Price
Inch	--	--	--	US \$
0.75"	Alum Block	Manual	KF25	\$275.00
1.0"	Alum Block	Manual	KF25	\$185.00
1.0"	Alum Block	Air	KF25	\$215.00
1.0"	SST	Manual	KF25	\$200.00
1.0"	SST	Air	KF25	\$230.00
1.0"	SST	Manual Lever	KF25	\$180.00
1.5"	Alum Block	Manual	KF40	\$220.00
1.5"	Alum Block	Air	KF40	\$230.00
1.5"	SST	Manual	KF40	\$220.00
1.5"	SST	Air	KF40	\$250.00
1.5"	SST	Manual	2.75" CF	\$280.00
1.5"	SST	Air	2.75" CF	\$290.00
2.0"	SST	Manual	KF50	\$300.00
2.0"	SST	Air	KF50	\$330.00



**Right Angle
Manual**



**Right Angle
Air**

**Rebuilt valves are originally from:
Varian, Nor-Cal, HPS, Edwards or HVA**

**Rebuilt valves are subject to availability. Please call for
items in stock.**

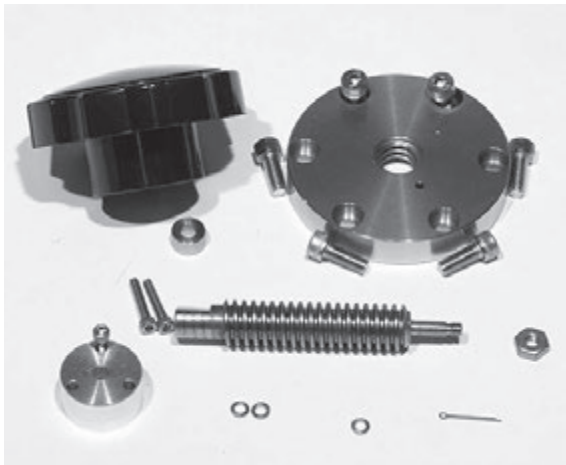
Valves

Misc Valves

Misc. Valves

Valves **D**

Part No.	Description	Price	Image
Duniway	--	US \$	#
VV-CONV-KIT	Conversion Kit for Pneumatic Valve to Manual Valve, Includes: Plastic Handle, Lead Screw, Bonnet Flange, Spacer and Attachment Disc.	\$101.00	1
VV-GASKET	Gasket, Viton Static Seal, (Varian Equiv PN 953-0017)	\$13.00	2
VV-MAIN-SEAL	Main Seal, Viton, Varian-Style Viton Valve	\$5.00	--
HORA-GASKET	Main Seal Replacement, Viton, for Varian 951-0035, 1/2" Valve	\$26.00	3
HORA-TOPSEAL	Bellows O-Ring Replacement, Viton, for Varian 951-0035, 1/2" Valve	\$8.00	4



1



2



3



4



Supplies

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Supplies

PentaVac 5™

PentaVac 5™

This high performance, ultra-clean product is equivalent in performance to other PPE vacuum pump fluids.

PentaVac 5™ is a polyphenyl-ether liquid for use in diffusion pump applications requiring the ultimate in thermal stability, low ultimate pressures and low backstreaming. Ultimate pressures in the 10⁻¹⁰ torr range can be achieved. Because of its low back-streaming rates, the use of this product often makes it possible to eliminate the need for traps and baffles.



Supplies D

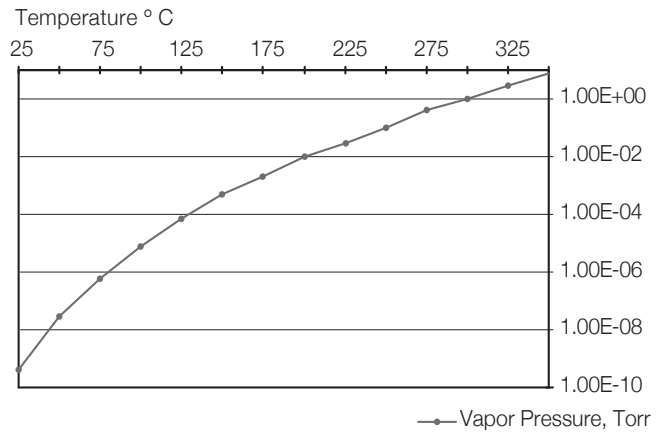


▼ Duniway offers an extensive array of Diffusion Pump Oils

PentaVac 5™ Typical Properties

Vapor Pressure @ 25 °C	4 x 10 ⁻¹⁰ Torr
Boiling Point @ 0.5 Torr	275 °C
Viscosity @ 40 °C	279.3 cst
Viscosity @ 100 °C	12.64 cst
Relative Density @ 20 °C	v1.204

Vapor Pressure Curve – PentaVac 5™



Diffusion Pump Oils

Part No.	Description	Price
Duniway	--	US \$
DS-7040-100	Diffusion Pump Oil - 100 cc, same as DC-704	\$35.00
DS-7040-500	Diffusion Pump Oil - 500 cc, same as DC-704	\$82.00
DS-7040-1	Diffusion Pump Oil - 1 gallon, same as DC-704	\$508.00
DS-7050-100	Diffusion Pump Oil - 100 cc, same as DC-705	\$40.00
DS-7050-500	Diffusion Pump Oil - 500 cc, same as DC-705	\$150.00
DS-7050-1	Diffusion Pump Oil - 1 gallon, same as DC-705	\$900.00
PENTAVAC-5-100	Diffusion Pump Oil - 100 cc, same as Santovac	\$220.00
PENTAVAC-5-500	Diffusion Pump Oil - 500 cc, same as Santovac	\$995.00
PENTAVAC-5-1	Diffusion Pump Oil - 1 gallon, same as Santovac	Inquire
SANTOVAC-5-100	Diffusion Pump Oil - Santovac - 100 cc	\$235.00
SANTOVAC-5-500	Diffusion Pump Oil - Santovac - 500 cc	\$1025.00
SANTOVAC-5-1	Diffusion Pump Oil - Santovac - 1 gallon	Inquire

Table of Equivalent Oils

	Duniway Equivalent	
	MPO-190	MPO-200
CVC	70/19	Convoil™ 20
Inland	Inland 19	Invoil 20
Leybold	HE-175	HE-200
Welch®	--	

Fomblin® is compatible and can be mixed with certain inert fluids from other manufacturers. Please call.

Fomblin® Units Conversion

1 Quart = 1.79 Kilograms = 3.93 Pounds
 1 Gallon = 7.15 Kilograms = 15.74 Pounds



▼ Mechanical Pump Oil

Mechanical Pump Oils

Part No.	Description	Price
Duniway	--	US \$
MPO-190-1	Mechanical Pump Oil - 1 gallon, General Use, Direct Drive	\$25.00
MPO-190-4	Mechanical Pump Oil - 4 gallons, General Use, Direct Drive	\$75.00
MPO-190-5	Mechanical Pump Oil - 5 gallons, General Use, Direct Drive	\$95.00
MPO-190-55	Mechanical Pump Oil - 55 gallons, General Use, Direct Drive	\$825.00
MPO-195-1	Mechanical Pump Oil - 1 gallon, High Viscosity Piston Pump	\$25.00
MPO-195-4	Mechanical Pump Oil - 4 gallons, High Viscosity Piston Pump	\$75.00
MPO-195-5	Mechanical Pump Oil - 5 gallons, High Viscosity Piston Pump	\$95.00
MPO-195-55	Mechanical Pump Oil - 55 gallons, High Viscosity Piston Pump	\$825.00
MPO-200-1	Mechanical Pump Oil - 1 gallon, General Use Hydrocarbon	\$50.00
MPO-200-4	Mechanical Pump Oil - 4 gallons, General Use Hydrocarbon	\$185.00
MPO-200-5	Mechanical Pump Oil - 5 gallons, General Use Hydrocarbon	\$220.00
MPO-200-55	Mechanical Pump Oil - 55 gallons, General Use Hydrocarbon	\$1,775.00
TWO-QRT	Mechanical Pump Technical White Oil - 1 quart, Harsh Use Hydrocarbon	\$15.00
TWO-1	Mechanical Pump Technical White Oil - 1 gallon, Harsh Use Hydrocarbon	\$55.00
TWO-4	Mechanical Pump Technical White Oil - 4 gallons, Harsh Use Hydrocarbon	\$195.00
TWO-5	Mechanical Pump Technical White Oil - 5 gallons, Harsh Use Hydrocarbon	\$225.00
TWO-55	Mechanical Pump Technical White Oil - 55 gallons, Harsh Use Hydrocarbon	\$1,950.00
DSFF-1	Flushing Fluid - 1 gallon, General Purpose	\$18.00
DSFF-4	Flushing Fluid - 4 gallons, General Purpose	\$62.00
DSFF-5	Flushing Fluid - 5 gallons, General Purpose	\$80.00
DSFF-55	Flushing Fluid - 55 gallons, General Purpose	\$755.00
DS-06-6	Mechanical Pump Oil-1 kg-PFPE Inert Fluid, Equal to Fomblin 06-6; Viscosity 64 cST	\$245.00
DS-14-6	Mechanical Pump Oil - 1 kg - PFPE Inert Fluid, Equal to Fomblin 14-6; Viscosity 148 cST	\$245.00
DS-16-6	Mechanical Pump Oil - 1 kg - PFPE Inert Fluid, Equal to Fomblin 16-6; Viscosity 168 cST	\$245.00
DS-25-6	Mechanical Pump Oil - 1 kg - PFPE Inert Fluid, Equal to Fomblin 25-6; Viscosity 276 cST	\$245.00
DSFF-PFPE-1	Flushing Fluid - 1 gallon, PFPE	\$715.00
DSFF-PFPE-HLF	Flushing Fluid - 1/2 gallon, PFPE	\$365.00
DSFF-PFPE-QRT	Flushing Fluid - Quart, PFPE	\$190.00
MPO-45-1	Mechanical Pump Oil - 1 gallon, Synthetic	\$130.00
MPO-45-4	Mechanical Pump Oil - 4 gallons, Synthetic	\$500.00
MPO-45-5	Mechanical Pump Oil - 5 gallons, Synthetic	\$600.00

Mechanical Pump Oils

Part No.	Description	Price
Duniway	--	US \$
MPO-55-1	Mechanical Pump Oil - 1 gallon, High Viscosity Synthetic	\$210.00
MPO-55-4	Mechanical Pump Oil - 4 gallons, High Viscosity Synthetic	Inquire
MPO-55-5	Mechanical Pump Oil - 5 gallons, High Viscosity Synthetic	Inquire
MPO-80-1	Mechanical Pump Oil - 1 gallon, Plasma Systems, Hydrocarbon	\$85.00
MPO-80-4	Mechanical Pump Oil - 4 gallons, Plasma Systems, Hydrocarbon	\$320.00
MPO-80-5	Mechanical Pump Oil - 5 gallons, Plasma Systems, Hydrocarbon	\$375.00
MPO-ULTRA 20-1	Mechanical Pump Oil - 1 gallon, Semi-Synthetic, Ultra 20	\$65.00
MPO-ULTRA 20-4	Mechanical Pump Oil - 4 gallons, Semi-Synthetic, Ultra 20	\$235.00
MPO-ULTRA 20-5	Mechanical Pump Oil - 5 gallons, Semi-Synthetic, Ultra 20	\$265.00
MPO-ULTRA 70-1	Mechanical Pump Oil - 1 gallon, Semi-Synthetic, Ultra 70	\$65.00
MPO-ULTRA 70-4	Mechanical Pump Oil - 4 gallons, Semi-Synthetic, Ultra 70	\$235.00
MPO-ULTRA 70-5	Mechanical Pump Oil - 5 gallons, Semi-Synthetic, Ultra 70	\$265.00

Supplies

Greases, Sealants & Lubricants

Greases

Part No.	Description	Price
Duniway	--	US \$
DC-150	Vacuum Grease - 5.3 oz Tube - Inert, Low Vapor Pressure, Temp. Range -40 °C to +260 °C	\$27.00
APIEZON-L	Vacuum Grease - 25 g, Melting Point 47 °C, Vapor Pressure at 20 °C = 8×10^{-11} Torr	\$110.00
APIEZON-M	Vacuum Grease - 25 g, Melting Point 44 °C, Vapor Pressure at 20 °C = 2×10^{-9} Torr	\$71.00
APIEZON-N	Cryogenic Vacuum Grease - 25 g, Vapor Pressure at 20 °C = 6×10^{-10} Torr	\$195.00
KRYTOX-GREASE	Vacuum Grease - 2 oz Tube - Low Vapor Pressure	\$115.00



▼ DC-150 Vacuum Grease



▼ Apiezon-L Vacuum Grease



▼ Apiezon-M Vacuum Grease



▼ Apiezon-N Vacuum Grease



▼ Krytox Vacuum Grease

Sealants

Part No.	Description	Price
Duniway	--	US \$
EP-8034	Loctite Epoxy Patch Adhesive/Sealer - A-Resin 2.8 oz, B-Hardener 1.2 oz, Temp Range -45 °C to +150 °C	\$18.00
TEFLON-TAPE	Teflon Thread Sealant Tape, 1/2" wide, 520" Roll	\$5.00
LT-592	Loctite Thread Sealant , PTFE Grease, 50 ml Tube	\$26.00
DS-454	Duxseal Temporary Sealer, 1 pound - Easily Removed, Reusable	\$10.00
CELVA-2	Leak Sealant, 2 oz / Brush, Cure Time 30 mins at 450 °C, 60 mins at 250 °C, 24 hrs at Room Temp. Operating Temp: Continuous at 250 °C, Short Periods at 400 °C	\$55.00
CELVA-6	Leak Sealant, 6 oz / Spray, Cure Time 30 mins @ 450 °C, 60 min at 250 °C, 24 hrs at Room Temp. Operating Temp: Continuous at 250 °C, Short Periods at 400 °C	\$55.00



▼ EP-8934 - Loctite® Epoxy Patch Sealer



▼ CELVA-6 Leak Sealant / Spray



▼ Teflon Tape



▼ CELVA-2 Leak Sealant / Brush

Lubricants

Part No.	Description	Price
Duniway	--	US \$
51001-4	Anti-Seize - 4 oz - Colloidal Copper-C5-A- Maximum Temp 800 °C	\$12.00
51605	Anti-Seize - 9 oz - Graphite & CaFl-C-102 - Maximum Temp 1350 °C	\$37.00
51609	Anti-Seize - 1 oz - Graphite & CaFl-C-102 - Maximum Temp 1350 °C	\$13.00



▼ 51609 - Loctite® Anti-Seize Lubricant



▼ 51001 - Loctite® Anti-Seize Lubricant



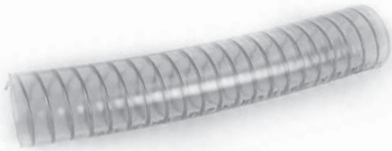
▼ 51605 - Loctite® Anti-Seize Lubricant

ALL TUBING IS CUT TO ORDER – PVC Tubing & Gum Rubber Tubing Shipments are **NON-REFUNDABLE**

Supplies **D**

PVC Tubing Specifications

Hardness, Shore A±5	73
Specific Gravity	1.22
Tensile Strength, PSI	2100
Elongation at Break, %	270
Brittle Temperature	-23 °F
Max. Operating Temp.	150 °F



PVC Tubing

Part No.	Description	Price
Duniway	--	US \$
PVC-063	PVC Tubing - 5/8" ID, 0.906" OD, (Uses Clamp Size #16) - per foot	\$4.25
PVC-075	PVC Tubing - 3/4" ID, 1.024" OD, (Uses Clamp Size #16) - per foot	\$5.25
PVC-100	PVC Tubing - 1" ID, 1.319" OD, (Uses Clamp Size #20) - per foot	\$6.25
PVC-125	PVC Tubing - 1 1/4" ID, 1.634" OD, (Uses Clamp Size #24) - per foot	\$8.25
PVC-150	PVC Tubing - 1 1/2" ID, 1.909" OD, (Uses Clamp Size #28) - per foot	\$11.25
PVC-200	PVC Tubing - 2" ID, 2.382" OD, (Uses Clamp Size #36) - per foot	\$14.25

Gum Rubber Tubing Specifications

Hardness, Shore A±5	45
Specific Gravity	1.08
Tensile Strength, PSI	3000
Elongation at Break, %	600
Brittle Temperature	-40 °F
Max. Operating Temp.	180 °F



Gum Rubber Tubing

Part No.	Description	Price
Duniway	--	US \$
VH-063	Gum Rubber Tubing - 5/8" ID, 3/8" Wall, (Uses Clamp Size #16) - per foot	\$7.50
VH-075	Gum Rubber Tubing - 3/4" ID, 7/16" Wall, (Uses Clamp Size #20) - per foot	\$9.50
VH-081	Gum Rubber Tubing - 13/16" ID, 3/8" Wall, (Uses Clamp Size #24) - per foot	\$13.00
VH-100	Gum Rubber Tubing - 1" ID, 5/8" Wall, (Uses Clamp Size #32) - per foot	\$16.00
VH-125**	Gum Rubber Tubing - 1 1/4" ID, 1/2" Wall, (Uses Clamp Size #32) - per foot	\$19.00
VH-150**	Gum Rubber Tubing - 1 1/2" ID, 1/2" Wall, (Uses Clamp Size #36) - per foot	\$21.00
VH-163	Gum Rubber Tubing - 1 5/8" ID, 11/16" Wall, (Uses Clamp Size #44) - per foot	\$27.00

****NOTE:** Gum Rubber Tubing sections longer than 8" need to be supported internally to prevent collapse under vacuum.



Clamps

Part No.	Description	Price
Duniway	--	US \$
CLP-063	Tubing Clamp - #16	\$2.50
CLP-075	Tubing Clamp - #20	\$2.50
CLP-081	Tubing Clamp - #24	\$2.60
CLP-100	Tubing Clamp - #28	\$2.60

Clamps, continued

Part No.	Description	Price
Duniway	--	US \$
CLP-125	Tubing Clamp - #32	\$2.60
CLP-150	Tubing Clamp - #36	\$2.60
CLP-163	Tubing Clamp - #44	\$3.65
CLP-200	Tubing Clamp - #44	\$3.65

Supplies

Pyrex® Bell Jars, L-Gaskets, Bell Jar Guards, & Dessicators

Pyrex® Bell Jars

Part No.	Description	Price
Duniway	--	US \$
10X12	Pyrex Bell Jar - OD = 10 1/4" +/- 5/32", ID = 9 1/4" min, Height - 12" +/- 1/8"	\$650.00
12X12	Pyrex Bell Jar - OD = 12 1/2" +/- 3/16", ID = 11 1/2" min, Height - 12" +/- 1/8"	\$840.00
12X18	Pyrex Bell Jar - OD = 12 1/2" +/- 5/32", ID = 11 1/2" min, Height - 18" +/- 1/8"	\$995.00
18X18	Pyrex Bell Jar - OD = 18" +/- 7/32", ID = 16 7/8" min, Height - 18" +/- 1/8"	\$2,200.00
18X30	Pyrex Bell Jar - OD = 18" +/- 7/32", ID = 16 7/8" min, Height - 30" +/- 3/16"	\$2,250.00



Pyrex® Bell Jar



Bell Jar Guard



Dessicator

L-Gaskets

Part No.	Description	Manufacturer	Price
Duniway	--	--	US \$
BBJG-10	L-gasket for Bell Jar, Buna, 10" Diameter	Buna™	\$30.00
BBJG-12	L-gasket for Bell Jar, Buna, 12" Diameter	Buna™	\$33.00
BBJG-14	L-gasket for Bell Jar, Buna, 14" Diameter	Buna™	\$37.00
BBJG-18	L-gasket for Bell Jar, Buna, 18" Diameter	Buna™	\$48.00
VBJG-07	L-gasket for Bell Jar, Viton, 7" Diameter	Viton®	\$40.00
VBJG-10	L-gasket for Bell Jar, Viton, 10" Diameter	Viton®	\$47.00
VBJG-12	L-gasket for Bell Jar, Viton, 12" Diameter	Viton®	\$57.00
VBJG-14	L-gasket for Bell Jar, Viton, 14" Diameter	Viton®	\$75.00
VBJG-18	L-gasket for Bell Jar, Viton, 18" Diameter	Viton®	\$80.00
VBJG-22	L-gasket for Bell Jar, Viton, 22" Diameter	Viton®	Inquire
VBJG-24	L-gasket for Bell Jar, Viton, 24" Diameter	Viton®	\$115.00
VBJG-30	L-gasket for Bell Jar, Viton, 30" Diameter	Viton®	\$154.00

Bell Jar Guards

Part No.	Description	Price
Duniway	--	US \$
GRD-10X12	Metal Guard for 10" x 12" Bell jar	\$695.00
GRD-12X12	Metal Guard for 12" x 12" Bell jar	\$715.00
GRD-12X18	Metal Guard for 12" x 18" Bell jar	\$875.00
GRD-14X24	Metal Guard for 14" x 24" Bell jar	Inquire
GRD-18X18	Metal Guard for 18" x 18" Bell jar	Inquire
GRD-18X30	Metal Guard for 18" x 30" Bell jar	\$925.00

Dessicators

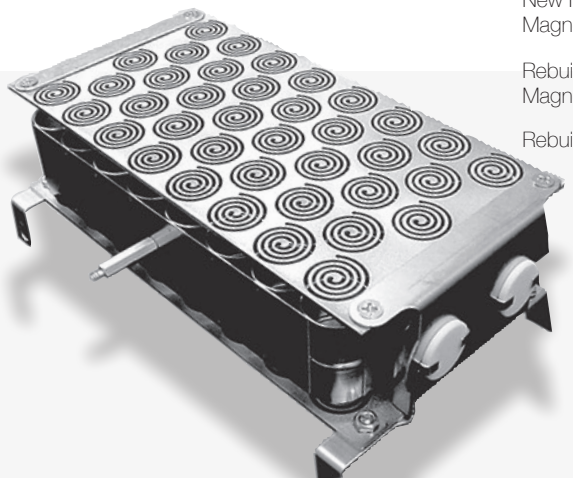
Part No.	Description	Price
Duniway	--	US \$
P-10X10	Plastic Vacuum Dessicator/ Bell Jar - 10" x 10", Side Exhaust Valve and O-Ring Seal Between Top and Bottom Halves	\$130.00
P-10x10-BX	Plastic Vacuum Dessicator/ Bell Jar - 10" x 10", with 4" Bottom Port & L-Gasket, Two 1/8 NPT Gauge Ports, Bourdon Gauge	\$280.00
P-10X10-TX	Plastic Vacuum Dessicator/ Bell Jar - 10" x 10", Two 1/8 NPT Gauge Ports, Bourdon Gauge, Side Exhaust Valve & O-Ring Seal Between Top & Bottom Halves	\$250.00



Ion Pumps

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The Ion Pump Experts

For more than 30 years, Duniway Stockroom has been building ion pumps with innovative technologies aimed at maximizing performance while minimizing cost. Our patented Galaxy® elements, which efficiently pump noble gases without reducing active gas pumping speed, represent the latest significant advance in ion pump technology.

Ion Pumps

We manufacture and rebuild all ion pumps in our Fremont, CA facility using the best materials, construction and processing techniques for ion pumps & elements. Pumps are shipped under vacuum (unless otherwise specified) to assure integrity until installation in the final application.

- New Complete line of Duniway Ion Pumps (10 I/s to 400 I/s)
- New and Rebuilt Varian-Style Classic and Perkin-Elmer style Ion Pumps(1 I/s to 500 I/s)
- Various configurations for pumping virtually any gas
- Customized ion pumps for specialized applications

Ion Pump Control Units

Whether you need the control and easy integration of a digital switching power supply, or the robustness and quiet electrical characteristics of an analog power supply, Duniway has an ion pump power supply that will meet your needs.

- New Terranova Ion Pump Control Units with digital display, process control, computer interface, single or dual output
- New Duniway Analog Ion Pump Control Units and Pressure Relay
- Custom controls for specialized applications
- Rebuilt Ion Pump Control Units

Products and Services

Duniway offers a full complement of ion pump parts and services, and we take pride in our ability to rebuild almost any ion pump in the world. Custom cables can be built very quickly, and most parts are in stock for immediate shipment.

- Ion Pump Rebuilding Service
- High-Voltage Cables
- Spare Parts such as Magnets, High-Voltage Feed-throughs, Elements, etc.

Ion Pump Build / Rebuild Overview

Duniway Stockroom Corporation builds and rebuilds sputter-ion pumps and pump elements from all original manufacturers as a service to our customers. For new ion pumps, all new parts of the highest quality and cleanliness are used. For rebuilding, all deposits are removed, material is outgassed and electrical leakage is minimized. The rebuilt pumps have the same performance and warranty as our new pumps.

Below is a list of what we will do with your pump —

Ion Pump New-Build

- 1 Acquire New Parts to Specifications
- 2 Clean Parts for Surface Contamination
- 3 Bake Ceramic Parts
- 4 Vacuum Degas all Metal Element Parts
- 5 TIG Weld Body and Feedthrough
- 6 Leak Check Welded Body
- 7 Assemble Elements
- 8 Install the Elements in the Clean Body
- 9 Leak Check
- 10 Bake-Out on Vacuum Manifold
- 11 Check for leakage current
- 12 Pinch off Seal
- 13 Clean Exterior
- 14 Check for Leakage Current

Ion Pump Rebuild

- 1 Open Pump & Remove Elements
- 2 Disassemble Elements Completely
- 3 Clean Stainless Steel Parts
- 4 Replace Titanium and Tantalum Parts
- 5 Clean and/or Replace Ceramic Parts
- 6 Vacuum Degas all Metal Element Parts
- 7 Reassemble Elements
- 8 Install the Elements in the Clean Body
- 9 Leak Check
- 10 Bake-Out on Vacuum Manifold
- 11 Check for leakage current
- 12 Pinch off Seal
- 13 Clean Exterior
- 14 Check for Leakage Current

A New Generation of Ion Pump Technology

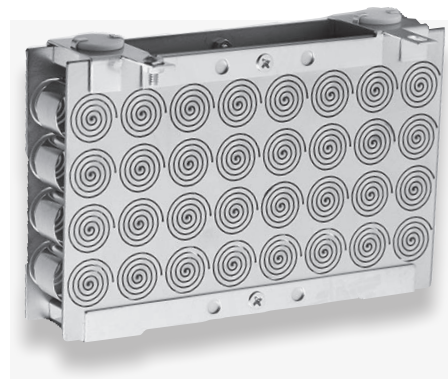
Sputter-ion pump element design has just entered a new era, with the introduction of Galaxy® Technology cathode design by Duniway Stockroom Corporation. By putting getter-cathode material where it really needs to be, we have succeeded in providing stable pumping speed for air without sacrificing overall pumping speed.

Galaxy® Element is new and unique Duniway proprietary technology covered by US Patent #6004104. Sputter-ion pumps and elements with this design offer —

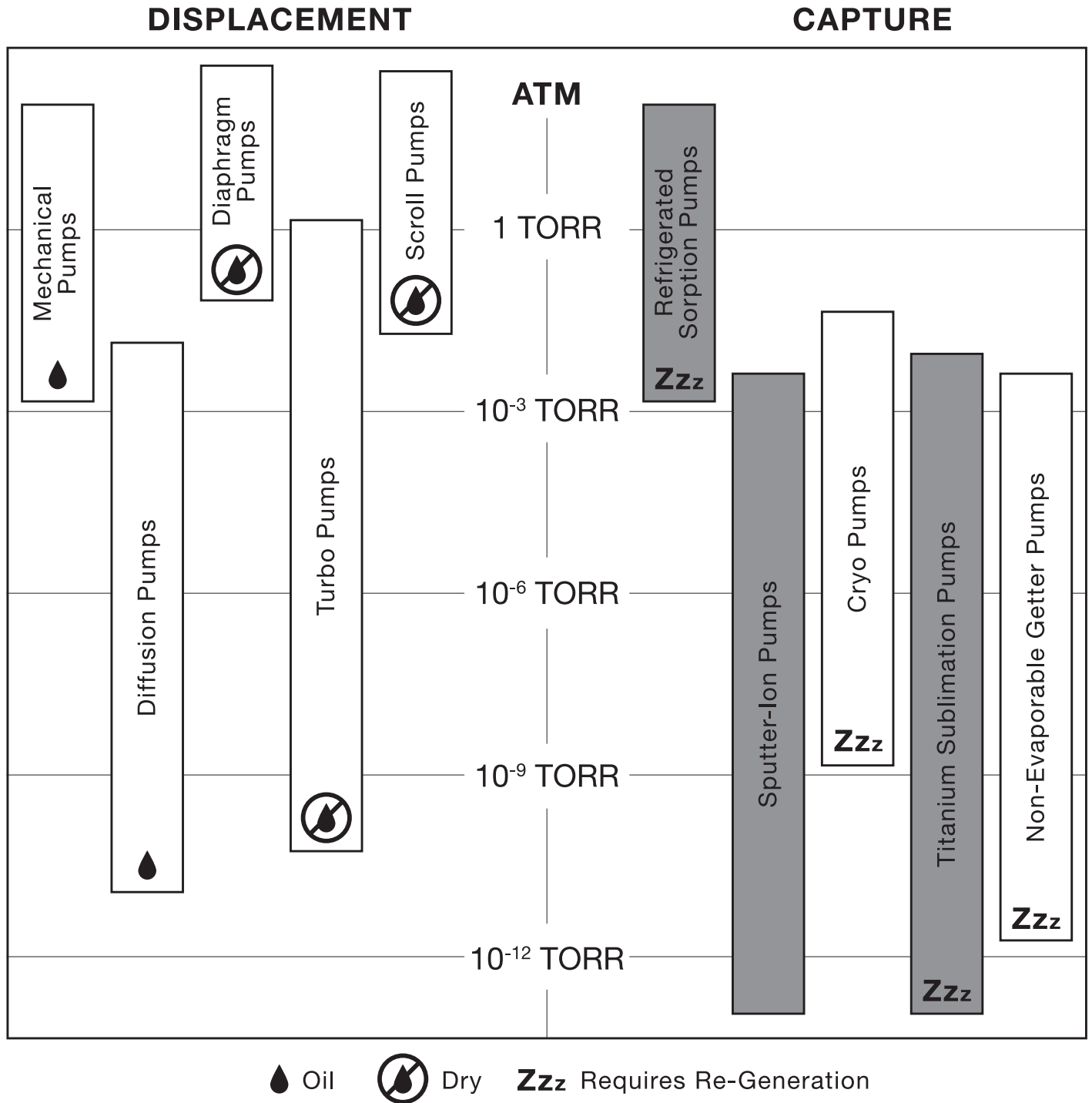
- The pumping speed of a standard diode for active gases.
- The structural stability, long life and better low pressure operation of standard diode elements.
- The air/argon pumping stability of triode, StarCell® and differential/noble diode elements.
- Higher capacity for hydrogen/water vapor than the triode or Starcell® elements.
- Lower price than the differential/noble diode, since Galaxy® does not require expensive tantalum.

Galaxy® Technology elements are available for delivery in selected new ion pumps, new ion pump elements and for rebuilding selected ion pumps and elements.

- 1 Replacement element for Starcell® pumps, (EL-ST-GX): This element will give stable air/argon pumping and higher long-term capacity for water/hydrogen. It can be used for rebuilding Starcell® pumps for better performance and a lower price.
- 2 Replacement diode element for Vacion-style pumps (EL-LG-GX): This element and the pumps using this element have better pumping speed performance at pressures below 10^{-8} torr than any other ion pump. Combined with its initial reasonable price, this can result in much higher (up to 10 times!) pumping speed per dollar at low pressures than other designs.
- 3 Replacement element for PE-style pumps (NEW-GXY-2000): This element gives stable air/argon pumping speed at lower cost than the DI (differential ion) designs, since it does not use expensive tantalum cathode material.
- 4 Replacement element for PE CapTorr-style ion pumps. (PE38-GXY): This element gives stable air/argon pumping speed at lower cost than the DI (differential ion) designs, since it does not use expensive, scarce tantalum cathode material. See the following pages for additional models, part numbers and prices. Also, visit our website, www.duniway.com for more information on ion pump design and low pressure operation.



Vacuum Pumps / Types & Ranges



Ion Pumps

New Duniway Ion Pumps

Duniway Stockroom Corporation has a completely updated line of Ion Pump products. We have incorporated our extensive experience with a wide variety of ion pumps to provide an improved offering for our customers.

Features

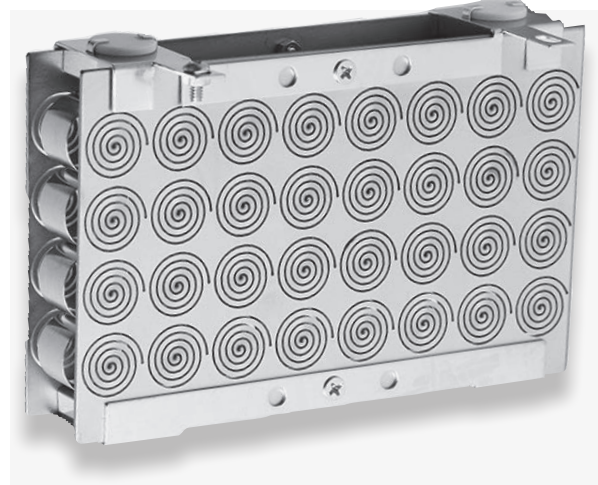
- Improved Element Design
- Choice of Element Technology
- Standard Diode
- Galaxy® Diode
- Noble Diode
- Efficient, Modular Design
- Choice of High Voltage Feedthrough
 - Standard — HVFT-5125 New StarCell-Style Interlock
 - Optional — HVFT-5143 Varian-Style HVFT-5120 Varian Starcell-Style FT-PE-133 PE-Style

Benefits

- Higher Pumping Speed/Volume Ratio
- Low Cost, Long Life for UHV
- Stable Pumping for Air Load/Leaks
- Stable Pumping for Argon Loads
- Smaller Size
- Lower Profile
- Match Application/Control Unit

Pump Dimensions / Specifications

Pump	Flange	Height	Width	Depth	Weight
l/s	Inch (mm)	Inch (m m)	Inch (mm)	Inch (mm)	Pound (kg)
10	2.75 (70)	8.3 (210)	4.0 (100)	4.0 (100)	8.7 (3.9)
20	2.75 (70)	8.3 (210)	4.0 (100)	5.3 (140)	10.8 (4.9)
30	2.75 (70)	7.5 (190)	8.5 (220)	5.3 (140)	23.8 (10.8)
50	4.50 (114)	8.5 (220)	11.0 (280)	5.3 (140)	30.5 (13.9)
100	6.00 (154)	11.5 (290)	14.0 (312)	5.3 (140)	56.0 (25.4)
200	8.00 (203)	11.5 (290)	17.0 (430)	17.0 (430)	105.1 (47.7)
400	8.00 (203)	18.0 (450)	17.0 (430)	17.0 (430)	185.6 (84.3)



▼ Duniway Patented GalaxyTechnology®

New Ion Pumps

New Duniway Ion Pumps

Part No.	Description	Price	Image
Duniway	--	US \$	#
DGD-010-5125-M	Duniway Galaxy Diode Ion Pump, 10 l/s, w/Magnet, 2.75"CFF	\$1,200.00	1
DND-010-5125-M	Duniway Noble Diode Ion Pump, 8 l/s, w/ Magnet, 2.75"CFF	\$1,300.00	1
DSD-010-5125-M	Duniway Standard Diode Ion Pump, 10 l/s, w/Magnet, 2.75"CFF	\$1,150.00	1
DGD-020-5125-M	Duniway Galaxy Diode Ion Pump, 20 l/s, w/Magnet, 2.75"CFF	\$1,400.00	2
DND-020-5125-M	Duniway Noble Diode Ion Pump, 16 l/s, w/Magnet, 2.75"CFF	\$1,500.00	2
DSD-020-5125-M	Duniway Standard Diode Ion Pump, 20 l/s, w/Magnet, 2.75"CFF	\$1,350.00	2
DGD-030-5125-M	Duniway Galaxy Diode Ion Pump, 30 l/s, w/Magnet, 2.75"CFF	\$1,550.00	3
DND-030-5125-M	Duniway Noble Diode Ion Pump, 24 l/s, w/Magnet, 2.75"CFF	\$1,700.00	3
DSD-030-5125-M	Duniway Standard Diode Ion Pump, 30 l/s, w/Magnet, 2.75"CFF	\$1,450.00	3
DGD-050-5125-M	Duniway Galaxy Diode Ion Pump, 50 l/s, w/Magnet, 4.50"CFF	\$1,750.00	4
DND-050-5125-M	Duniway Noble Diode Ion Pump, 40 l/s, w/Magnet, 4.50"CFF	\$1,840.00	4
DSD-050-5125-M	Duniway Standard Diode Ion Pump, 50 l/s, w/Magnet, 4.50"CFF	\$1,615.00	4
DGD-100-5125-M	Duniway Galaxy Diode Ion Pump, 100 l/s, w/Magnets, 6.00"CFF	\$2,770.00	5
DND-100-5125-M	Duniway Noble Diode Ion Pump, 80 l/s, w/Magnets, 6.00"CFF	\$4,050.00	5
DSD-100-5125-M	Duniway Standard Diode Ion Pump, 100 l/s, w/Magnets, 6.00"CFF	\$2,630.00	5
DGD-200-5125-M	Duniway Galaxy Diode Ion Pump, 200 l/s, w/Magnets, 8.00"CFF	\$4,775.00	6
DND-200-5125-M	Duniway Noble Diode Ion Pump, 160 l/s, w/Magnets, 8.00"CFF	\$5,250.00	6
DSD-200-5125-M	Duniway Standard Diode Ion Pump, 200 l/s, w/Magnets, 8.00"CFF	\$4,450.00	6
DGD-400-5125-M	Duniway Galaxy Diode Ion Pump, 400 l/s, w/Magnets, 8.00"CFF	\$8,000.00	7
DND-400-5125-M	Duniway Noble Diode Ion Pump, 320 l/s, w/Magnets, 8.00"CFF	\$8,800.00	7
DSD-400-5125-M	Duniway Standard Diode Ion Pump, 400 l/s, w/Magnets, 8.00"CFF	\$7,000.00	7

- Choice of High Voltage Feedthrough
 - Standard —
 - HVFT-5125 New StarCell-Style Interlock
 - Optional —
 - HVFT-5143 Varian-Style
 - HVFT-5120 Varian Starcell-Style
 - FT-PE-133 PE-Style



Ion Pumps

Varian Classic Style Ion Pumps

New Varian Classic Style Pumps

Part No.	Description	Price	Image
Duniway	--	US \$	#
VA-008-DD-M	New VA 8 l/s Standard Diode, 2.75" CFF w/Magnet	\$990.00	1
VA-008-GX-M	New VA 8 l/s Galaxy Diode, 2.75" CFF w/ Magnet	\$1,060.00	1
VA-008-DD-O	New VA 8 l/s Standard Diode, 2.75" CFF no Magnet	\$750.00	2
VA-008-GX-O	New VA 8 l/s Galaxy Diode, 2.75" CFF no Magnet	\$820.00	2
VA-020-DD-M	New VA 20 l/s Standard Diode, 2.75" CFF w/Magnet	\$1,350.00	3
VA-020-GX-M	New VA 20 l/s Galaxy Diode, 2.75" CFF w/Magnet	\$1,450.00	3
VA-020-TR-M	New VA 20 l/s Triode, 2.75" CFF w/ Magnet	\$1,350.00	3
VA-020-DD-O	New VA 20 l/s Standard Diode, 2.75" CFF no Magnet	\$1,080.00	4
VA-020-GX-O	New VA 20 l/s Galaxy Diode, 2.75" CFF no Magnet	\$1,180.00	4
VA-020-TR-O	New VA 20 l/s Triode, 2.75" CFF no Magnet	\$1,080.00	4
VA-030-DD-M	New VA 30 l/s Standard Diode, 4.50" CFF w/Magnet	\$1,450.00	5
VA-030-GX-M	New VA 30 l/s Galaxy Diode, 4.50" CFF w/Magnet	\$1,550.00	5
VA-030-TR-M	New VA 30 l/s Triode, 4.50" CFF w/Magnet	\$1,450.00	5
VA-030-DD-O	New VA 30 l/s Standard Diode, 4.50" CFF no Magnet	\$1,180.00	6
VA-030-GX-O	New VA 30 l/s Galaxy Diode, 4.50" CFF no Magnet	\$1,280.00	6
VA-030-TR-O	New VA 30 l/s Triode, 4.50" CFF no Magnet	\$1,180.00	6
VA-060-DD-M	New VA 60 l/s Standard Diode, 6.00" CFF w/Magnet	\$2,400.00	7
VA-060-GX-M	New VA 60 l/s Galaxy Diode, 6.00" CFF w/Magnet	\$2,560.00	7
VA-060-TR-M	New VA 60 l/s Triode, 6.00" CFF w/Magnet	\$2,400.00	7



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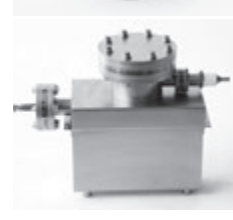
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Ion Pumps

Varian Classic Style Ion Pumps

New Varian Classic Style Pumps

Part No.	Description	Price
Duniway	--	US \$
VA-060-DD-O	New VA 60 I/s Standard Diode, 6.00" CFF no Magnet	\$2,100.00
VA-060-GX-O	New VA 60 I/s Galaxy Diode, 6.00" CFF no Magnet	\$2,280.00
VA-060-TR-O	New VA 60 I/s Triode, 6.00" CFF no Magnet	\$2,100.00
VA-110-TR-M	New VA 110 I/s Triode, 8.00" CFF w/Magnet	\$3,900.00
VA-110-TR-O	New VA 110 I/s Triode, 8.00" CFF no Magnet	\$3,600.00
VA-140-DD-M	New VA 140 I/s Standard Diode, 8.00" CFF w/Magnet	\$3,450.00
VA-140-GX-M	New VA 140 I/s Galaxy Diode, 8.00" CFF w/Magnet	\$4,200.00
VA-140-DD-O	New VA 140 I/s Standard Diode, 8.00" CFF no Magnet	\$3,150.00
VA-140-GX-O	New VA 140 I/s Galaxy Diode, 8.00" CFF no Magnet	\$3,900.00
VA-220-TR-M	New VA 220 I/s Triode, 8.00" CFF w/ Magnet	\$4,700.00
VA-220-TR-O	New VA 220 I/s Triode, 8.00" CFF no Magnet	\$4,200.00
VA-270-DD-M	New VA 270 I/s Standard Diode, 8.00" CFF w/Magnet	\$4,300.00
VA-270-GX-M	New VA 270 I/s Galaxy Diode, 8.00" CFF w/Magnet	\$5,000.00
VA-270-DD-O	New VA 270 I/s Standard Diode, 8.00" CFF no Magnet	\$3,700.00
VA-270-GX-O	New VA 270 I/s Galaxy Diode, 8.00" CFF no Magnet	\$4,400.00
VA-400-TR-M	New VA 400 I/s Triode, 8.00" CFF w/ Magnet	\$7,700.00
VA-400-TR-O	New VA 400 I/s Triode, 8.00" CFF no Magnet	\$5,900.00
VA-500-DD-M	New VA 500 I/s Standard Diode, 8.00" CFF w/Magnet	\$7,700.00
VA-500-GX-M	New VA 500 I/s Galaxy Diode, 8.00" CFF w/Magnet	\$9,100.00
VA-500-DD-O	New VA 500 I/s Standard Diode, 8.00" CFF no Magnet	\$5,900.00
VA-500-GX-O	New VA 500 I/s Galaxy Diode, 8.00" CFF no Magnet	\$7,900.00



▼ 220/270 I/s ion pump without magnet



▼ 400/500 I/s ion pump without magnet



▼ 400/500 I/s ion pump with magnet

Ion Pumps

Varian Classic Style Ion Pumps

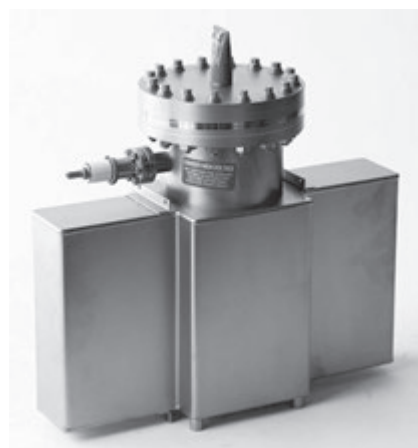
Rebuilt Varian Classic Style Pumps

Ion Pumps **D**

Part No.	Description	Price
Duniway	--	US \$
RVA-008-DD-M	Rebuilt VA 8 I/s Standard Diode, 2.75" CFF w/Magnet (VA-911-5005)	\$745.00
RVA-008-GX-M	Rebuilt VA 8 I/s Galaxy Diode, 2.75" CFF w/Magnet	\$815.00
RVA-008-DD-O	Rebuilt VA 8 I/s Standard Diode, 2.75" CFF no Magnet (VA-911-5005)	\$520.00
RVA-008-GX-O	Rebuilt VA 8 I/s Galaxy Diode, 2.75" CFF no Magnet	\$590.00
RVA-020-DD-M	Rebuilt VA 20 I/s Standard Diode, 2.75" CFF w/Magnet (VA-911-5036)	\$940.00
RVA-020-GX-M	Rebuilt VA 20 I/s Galaxy Diode, 2.75" CFF w/Magnet	\$1,040.00
RVA-020-TR-M	Rebuilt VA 20 I/s Triode, 2.75" CFF w/ Magnet (VA-911-5030)	\$940.00
RVA-020-DD-O	Rebuilt VA 20 I/s Standard Diode, 2.75" CFF no Magnet	\$820.00
RVA-020-GX-O	Rebuilt VA 20 I/s Galaxy Diode, 2.75" CFF no Magnet	\$920.00
RVA-020-TR-O	Rebuilt VA 20 I/s Triode, 2.75" CFF no Magnet (VA-911-5031)	\$820.00
RVA-030-DD-M	Rebuilt VA 30 I/s Standard Diode, 4.50" CFF w/Magnet (VA-911-5037)	\$1,075.00
RVA-030-GX-M	Rebuilt VA 30 I/s Galaxy Diode, 4.50" CFF w/Magnet	\$1,155.00
RVA-030-TR-M	Rebuilt VA 30 I/s Triode, 4.50" CFF w/Magnet (VA-911-5032)	\$1,075.00
RVA-030-DD-O	Rebuilt VA 30 I/s Standard Diode, 4.50" CFF no Magnet	\$980.00
RVA-030-GX-O	Rebuilt VA 30 I/s Galaxy Diode, 4.50" CFF no Magnet	\$1,050.00
RVA-030-TR-O	Rebuilt VA 30 I/s Triode, 4.50" CFF no Magnet (VA-911-5033)	\$980.00
RVA-060-DD-M	Rebuilt VA 60 I/s Standard Diode, 6.00" CFF w/Magnet (VA-911-5038)	\$1,600.00
RVA-060-GX-M	New VA 60 I/s Galaxy Diode, 6.00" CFF w/Magnet	\$1,760.00
RVA-060-TR-M	Rebuilt VA 60 I/s Triode, 6.00" CFF w/Magnet (VA-911-5034)	\$1,760.00
RVA-060-DD-O	Rebuilt VA 60 I/s Standard Diode, 6.00" CFF no Magnet	\$1,440.00
RVA-060-GX-O	Rebuilt VA 60 I/s Galaxy Diode, 6.00" CFF no Magnet	\$1,600.00
RVA-060-TR-O	Rebuilt VA 60 I/s Triode, 6.00" CFF no Magnet	\$1,600.00
RVA-110-TR-M	Rebuilt VA 110 I/s Triode, 8.00" CFF w/ Magnet	\$3,120.00
RVA-110-TR-O	Rebuilt VA 110 I/s Triode, 8.00" CFF no Magnet (VA-912-7006)	\$2,880.00
RVA-140-DD-M	Rebuilt VA 140 I/s Standard Diode, 8.00" CFF w/Magnet	\$2,760.00
RVA-140-GX-M	Rebuilt VA 140 I/s Galaxy Diode, 8.00" CFF w/Magnet	\$3,400.00
RVA-140-DD-O	Rebuilt VA 140 I/s Standard Diode, 8.00" CFF no Magnet (VA-912-7000)	\$2,520.00
RVA-140-GX-O	Rebuilt VA 140 I/s Galaxy Diode, 8.00" CFF no Magnet	\$3,200.00
RVA-220-TR-M	Rebuilt VA 220 I/s Triode, 8.00" CFF w/Magnet	\$3,780.00
RV A-220-TR-O	Rebuilt VA 220 I/s Triode, 8.00" CFF no Magnet (VA-912-7014)	\$3,360.00
RVA-270-DD-M	Rebuilt VA 270 I/s Standard Diode, 8.00" CFF w/Magnet	\$3,460.00
RV A-270-GX-M	Rebuilt VA 270 I/s Galaxy Diode, 8.00" CFF w/Magnet	\$4,000.00



Rebuilt VA 220 I/s Triode, no Magnet



Rebuilt VA 60 I/s Standard Diode, no Magnet

Varian Classic Style Ion Pumps

Rebuilt Varian Classic Style Pumps

Part No.	Description	Price
Duniway	--	US \$
RVA-270-DD-O	Rebuilt VA 270 I/s Standard Diode, 8.00" CFF no Magnet (VA-912-7008)	\$2,960.00
RVA-270-GX-O	Rebuilt VA 270 I/s Galaxy Diode, 8.00 CFF no Magnet	\$3,600.00
RVA-400-TR-M	Rebuilt VA 400 I/s Triode, 8.00" CFF w/Magnet	\$5,000.00
RVA-400-TR-O	Rebuilt VA 400 I/s Triode, 8.00" CFF no Magnet (VA-912-7022)	\$4,000.00
RVA-500-DD-M	Rebuilt VA 500 I/s Standard Diode, 8.00" CFF w/Magnet	\$4,600.00
RVA-500-GX-M	Rebuilt VA 500 I/s Galaxy Diode, 8.00" CFF w/Magnet	\$5,500.00
RVA-500-DD-O	Rebuilt VA 500 I/s Standard Diode, 8.00" CFF no Magnet (VA-912-7016)	\$3,600.00
RVA-500-GX-O	Rebuilt VA 500 I/s Galaxy Diode, 8.00" CFF no Magnet	\$4,500.00



400/500 I/s ion pump with magnet ▼



400/500 I/s ion pump without magnet ▼



220/270 I/s ion pump without magnet ▼

Rebuilding Services

Part No.	Description	Price	Image
Duniway	--	US \$	#
REBG-VA-008-DD	Rebuilding Service, VA (911-5005) 8 I/s, Standard Diode	\$435.00	1
REBG-VA-008-DG	Rebuilding Service, VA (911-5005) 8 I/s, Galaxy Diode	\$510.00	1
REBG-VA-020-DD	Rebuilding Service, VA (911-5036) 20 I/s, Standard Diode	\$480.00	2
REBG-VA-020-DG	Rebuilding Service, VA (911-5036) 20 I/s, Galaxy Diode	\$570.00	2
REBG-VA-020-TG	Rebuilding Service, VA (911-5031) 20 I/s, Galaxy Triode	\$710.00	2
REBG-VA-020-TT	Rebuilding Service, VA (911-5031) 20 I/s, Triode	\$495.00	2
REBG-VA-030-DD	Rebuilding Service, VA (911-5037) 30 I/s, Standard Diode	\$545.00	3
REBG-VA-030-DG	Rebuilding Service, VA (911-5037) 30 I/s, Galaxy Diode	\$755.00	3
REBG-VA-030-TG	Rebuilding Service, VA (911-5033) 30 I/s, Galaxy Triode	\$755.00	3
REBG-VA-030-TT	Rebuilding Service, VA (911-5033) 30 I/s, Triode	\$570.00	3
REBG-VA-060-DD	Rebuilding Service, VA (911-5038) 60 I/s, Standard Diode	\$700.00	4
REBG-VA-060-DG	Rebuilding Service, VA (911-5038) 60 I/s, Galaxy Diode	\$1,025.00	4
REBG-VA-060-TG	Rebuilding Service, VA (911-5034) 60 I/s, Galaxy Triode	\$1,125.00	4
REBG-VA-060-TT	Rebuilding Service, VA (911-5034) 60 I/s, Triode	\$775.00	4
REBG-VA-110-TT	Rebuilding Service, VA (912-7006) 110 I/s, Triode	\$1,185.00	5
REBG-VA-140-DD	Rebuilding Service, VA (912-7000) 140 I/s, Standard Diode	\$1,100.00	5
REBG-VA-140-DG	Rebuilding Service, VA (912-7000) 140 I/s, Galaxy Diode	\$1,570.00	5
REBG-VA-220-TT	Rebuilding Service, VA (912-7014) 220 I/s, Triode	\$1,550.00	6
REBG-VA-270-DD	Rebuilding Service, VA (912-7008) 270 I/s, Standard Diode	\$1,505.00	6
REBG-VA-270-DG	Rebuilding Service, VA (912-7008) 270 I/s, Galaxy Diode	\$2,050.00	6
REBG-VA-400-TT	Rebuilding Service, VA (912-7022) 400 I/s, Triode	\$2,350.00	7
REBG-VA-500-DD	Rebuilding Service, VA (912-7016) 500 I/s, Standard Diode	\$2,370.00	7
REBG-VA-500-DG	Rebuilding Service, VA (912-7016) 500 I/s, Galaxy Diode	\$3,050.00	7



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Varian Vacion Plus Ion Pumps

Rebuilt Varian Vacion™ Plus Pumps

Part No.	Description	Price	Image
Duniway	--	US \$	#
RVIP-020-DD-M	Rebuilt Varian VIP 20 I/s Ion Pump, Diode - Positive Polarity, 2.75" CFF, with Magnet	\$1,500.00	1
RVIP-020-GX-M	Rebuilt Varian VIP 20 I/s Ion Pump, StarCell to Galaxy, with Magnet	\$1,700.00	1
RVIP-020-ST-M	Rebuilt Varian VIP 20 I/s Ion Pump, StarCell - Negative Polarity, 2.75" CFF, with Magnet	\$1,400.00	1
RVIP-040-DD-M	Rebuilt Varian VIP 40 I/s Ion Pump, Diode - Positive Polarity, 2.75" CFF, with Magnet	\$1,900.00	2
RVIP-040-GX-M	Rebuilt Varian VIP 40 I/s Ion Pump, StarCell to Galaxy, with Magnet	\$2,000.00	2
RVIP-040-ST-M	Rebuilt Varian VIP 40 I/s Ion Pump, StarCell - Negative Polarity, 2.75" CFF, with Magnet	\$1,800.00	2
RVIP-055-DD-M	Rebuilt Varian VIP 55 I/s Ion Pump, Diode - Positive Polarity, 4.50" CFF, with Magnet	\$2,200.00	3
RVIP-055-GX-M	Rebuilt Varian VIP 55 I/s Ion Pump, StarCell to Galaxy, with Magnet	\$2,300.00	3
RVIP-055-ST-M	Rebuilt Varian VIP 55 I/s Ion Pump, StarCell - Negative Polarity, 4.50" CFF, with Magnet	\$2,100.00	3
RVIP-075-DD-M	Rebuilt Varian VIP 75 I/s Ion Pump, Diode - Positive Polarity, 6.00" CFF, with Magnet	\$2,300.00	4
RVIP-075-GX-M	Rebuilt Varian VIP 75 I/s Ion Pump, StarCell to Galaxy, with Magnet	\$2,400.00	4
RVIP-075-ST-M	Rebuilt Varian VIP 75 I/s Ion Pump, StarCell - Negative Polarity, 6.00" CFF, with Magnet	\$2,200.00	4
RVIP-150-DD-M	Rebuilt Varian VIP 150 I/s Ion Pump, Diode - Positive Polarity, 6.00" CFF, with Magnet	\$4,000.00	5
RVIP-150-GX-M	Rebuilt Varian VIP 150 I/s Ion Pump, StarCell to Galaxy, with Magnet	\$4,400.00	5
RVIP-150-ST-M	Rebuilt Varian VIP 150 I/s Ion Pump, StarCell - Negative Polarity, 6.00" CFF, with Magnet	\$3,700.00	5
RVIP-300-DD-M	Rebuilt Varian VIP 300 I/s Ion Pump, Diode - Positive Polarity, 8.00" CFF, with Magnet	\$5,000.00	6
RVIP-300-GX-M	Rebuilt Varian VIP 300 I/s Ion Pump, StarCell to Galaxy, with Magnet	\$5,600.00	6
RVIP-300-ST-M	Rebuilt Varian VIP 300 I/s Ion Pump, StarCell - Negative Polarity, 8.00" CFF, with Magnet	\$4,500.00	6
RVIP-500-DD-M	Rebuilt Varian VIP 500 I/s Ion Pump, Diode - Positive Polarity, 8.00" CFF, with Magnet	\$6,000.00	7
RVIP-500-GX-M	Rebuilt Varian VIP 500 I/s Ion Pump, StarCell to Galaxy, with Magnet	\$6,700.00	7
RVIP-500-ST-M	Rebuilt Varian VIP 500 I/s Ion Pump, StarCell - Negative Polarity, 8.00" CFF, with Magnet	\$5,500.00	7



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Ion Pumps

Rebuilding Services

Part No.	Description	Price	Image
Duniway	--	US \$	#
REBG-VIP-020-D	Rebuilding Service Varian VIP 20 I/s, Diode-Diode, Positive Polarity	\$649.00	1
REBG-VIP-020-G	Rebuilding Service Varian VIP 20 I/s, Starcell-Galaxy, Negative Polarity	\$775.00	1
REBG-VIP-020-N	Rebuilding Service Varian VIP 20 I/s, Noble Diode- Noble Diode, Positive Polarity	Inquire	1
REBG-VIP-020-S	Rebuilding Service Varian VIP 20 I/s, Starcell-Starcell, Negative Polarity	\$543.00	1
REBG-VIP-040-D	Rebuilding Service Varian VIP 40 I/s, Diode-Diode, Positive Polarity	\$857.00	2
REBG-VIP-040-G	Rebuilding Service Varian VIP 40 I/s, Starcell-Galaxy, Negative Polarity	\$925.00	2
REBG-VIP-040-N	Rebuilding Service Varian VIP 40 I/s, Noble Diode- Noble Diode, Positive Polarity	Inquire	2
REBG-VIP-040-S	Rebuilding Service Varian VIP 40 I/s, Starcell-Starcell, Negative Polarity	\$700.00	2
REBG-VIP-055-D	Rebuilding Service Varian VIP 55 I/s, Diode-Diode, Positive Polarity	\$857.00	3
REBG-VIP-055-G	Rebuilding Service Varian VIP 55 I/s, Starcell-Galaxy, Negative Polarity	\$925.00	3
REBG-VIP-055-N	Rebuilding Service Varian VIP 55 I/s, Noble Diode- Noble Diode, Positive Polarity	Inquire	3
REBG-VIP-055-S	Rebuilding Service Varian VIP 55 I/s, Starcell-Starcell, Negative Polarity	\$700.00	3
REBG-VIP-075-D	Rebuilding Service Varian VIP 75 I/s, Diode-Diode, Positive Polarity	\$857.00	4
REBG-VIP-075-G	Rebuilding Service Varian VIP 75 I/s, Starcell-Galaxy, Negative Polarity	\$925.00	4
REBG-VIP-075-N	Rebuilding Service Varian VIP 75 I/s, Noble Diode- Noble Diode, Positive Polarity	Inquire	4
REBG-VIP-075-S	Rebuilding Service Varian VIP 75 I/s, Starcell-Starcell, Negative Polarity	\$700.00	4
REBG-VIP-150-D	Rebuilding Service Varian VIP 150 I/s, Diode-Diode, Positive Polarity	\$1,066.00	5
REBG-VIP-150-G	Rebuilding Service Varian VIP 150 I/s, Starcell-Galaxy, Negative Polarity	\$1,380.00	5
REBG-VIP-150-N	Rebuilding Service Varian VIP 150 I/s, Noble Diode- Noble Diode, Positive Polarity	Inquire	5
REBG-VIP-150-S	Rebuilding Service Varian VIP 150 I/s, Starcell-Starcell, Negative Polarity	\$917.00	5
REBG-VIP-300-D	Rebuilding Service Varian VIP 300 I/s, Diode-Diode, Positive Polarity	\$1,575.00	6
REBG-VIP-300-G	Rebuilding Service Varian VIP 300 I/s, Starcell-Galaxy, Negative Polarity	\$2,370.00	6
REBG-VIP-300-N	Rebuilding Service Varian VIP 300 I/s, Noble Diode- Noble Diode, Positive Polarity	Inquire	6
REBG-VIP-300-S	Rebuilding Service Varian VIP 300 I/s, Starcell-Starcell, Negative Polarity	\$1,275.00	6
REBG-VIP-500-D	Rebuilding Service Varian VIP 500 I/s, Diode-Diode, Positive Polarity	\$2,650.00	7
REBG-VIP-500-G	Rebuilding Service Varian VIP 500 I/s, Starcell-Galaxy, Negative Polarity	\$4,150.00	7
REBG-VIP-500-N	Rebuilding Service Varian VIP 500 I/s, Noble Diode- Noble Diode, Positive Polarity	Inquire	7
REBG-VIP-500-S	Rebuilding Service Varian VIP 500 I/s, Starcell-Starcell, Negative Polarity	\$2,050.00	7



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Varian-Style Mini, 2 L/S Pumps & Magnets

Part No.	Description	Price
Duniway	--	US \$
MAG-0011	Magnet for 2 I/s Ion Pump, Alnico 5, 1200 Gauss, Requires Bracket	\$144.00
MAG-0042	Magnet for Mini-Appendage Ion Pump, Alnico 5, 1000 Gauss	\$85.00
MAG-0112	Magnet for 2 I/s Ion Pump, Sm/Co, 1200 Gauss, No Bracket Required	\$400.00
VA2-38CU-VAC	Varian-Style 2 I/s Pump, 0.38" CU Port, No Magnet, Under Vacuum	\$390.00
VA2-38CU-VAC-B	Varian-Style 2 I/s Pump, 0.38" CU Port, Magnet Bracket, No Magnet, Under Vacuum	\$390.00
VA2-75ST-AIR	Varian-Style 2 I/s Pump, 0.75" ST Port, No Magnet, at Atmosphere	\$345.00
VA2-75ST-AIR-B	Varian-Style 2 I/s Pump, 0.75" ST Port, Magnet Bracket, No Magnet, at Atmosphere	\$345.00
VA2-75ST-VAC	Varian-Style 2 I/s Pump, 0.75" ST Port, no Magnet, Under Vacuum	\$390.00
VA2-75ST-VAC-B	Varian-Style 2 I/s Pump, 0.75" ST Port, Magnet Bracket, No Magnet, Under Vacuum	\$390.00
VA2-MINI-VAC	Varian-Style 2 I/s Pump, 0.75" ST Port, Mini CFF, No Magnet, Under Vacuum	\$415.00
VA2-MINI-VAC-B	Varian-Style 2 I/s Pump, 0.75" ST Port, Mini CFF, Magnet Bracket, no Magnet, Under Vacuum	\$415.00
VA2-TEE-AIR	Varian-Style 2 I/s Pump, 2X 0.75" ST Port, No Magnet, at Atmosphere	\$435.00
VA2-TEE-AIR-B	Varian-Style 2 I/s Pump, 2X 0.75" ST Port, Magnet Bracket, no Magnet, at Atmosphere	\$435.00



▼ VA2-38CU-VAC Pump



▼ VA2-75ST-AIR Pump



▼ VA2-75ST-VAC Pump



▼ VA2-MINI-VAC Pump



▼ A2-TEE-AIR Pump



▼ MAG-0011



▼ MAG-0042



▼ MAG-0112

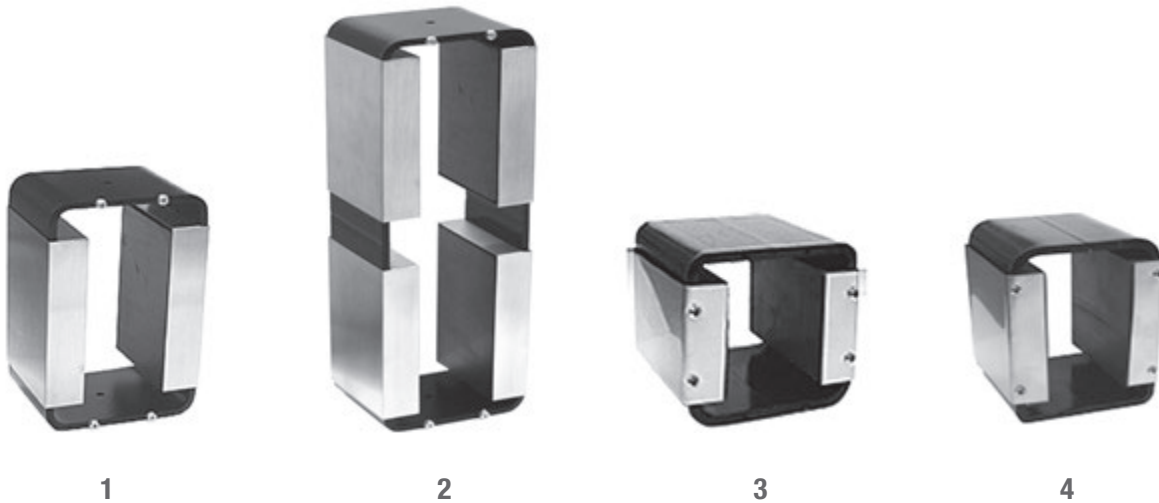
Ion Pumps

New Ion Pumps Magnets

New Duniway Ion Pump Magnets

Part No.	Description	Price	Sketch
Duniway	--	US \$	#
MAG-0114	Magnet for New Duniway 30 0 I/s or 50 I/s & Varian-Style 20 or 30 I/s Ion Pumps, Ferrite, 1200 Gauss, set of 1	\$220.00	1
MAG-0114-2	Magnets for New Duniway 100 I/s & Varian-Style 60 I/s Ion Pump, Ferrite, 1200 Gauss, set of 2	\$440.00	1
MAG-0114-4	Magnets for New Duniway 200 I/s Ion Pump, Ferrite, 1200 Gauss, set of 4	\$880.00	1
MAG-0400-4	Magnets for New Duniway 400 I/s Ion Pump, Ferrite, 1200 Gauss, set of 4	\$1,600.00	2
MAG-1010	Magnet for New Duniway 10 I/s Ion Pump, Ferrite, 1200 Gauss, set of 1	\$195.00	3
MAG-2020	Magnet for New Duniway 20 I/s Ion Pump, Ferrite, 1200 Gauss, set of 1	\$220.00	4

Ion Pumps **D**



New Varian Style Magnets

Part No.	Description	Price	Sketch
Duniway	--	US \$	#
MAG-0030	Magnet, Varian-Style 8 I/s Ion Pump, Ferrite, 1200 Gauss, set of 1	\$265.00	1
MAG-0114	Magnet for New Duniway 30 I/s or 50 I/s & Varian-Style 20 or 30 I/s Ion Pumps, Ferrite, 1200 Gauss, set of 1	\$220.00	2
MAG-0114-2	Magnets for New Duniway 100 I/s & Varian-Style 60 I/s Ion Pump, Ferrite, 1200 Gauss, set of 2	\$440.00	2
MAG-7006	Magnet, Varian-Style 110 or 140 I/s Ion Pump, Ferrite, 1200 Gauss, set of 1	\$660.00	3
MAG-7014	Magnet, Varian-Style 220 or 270 I/s Ion Pump, Ferrite, 1200 Gauss, set of 1	\$880.00	4
MAG-7014-2	Magnets, Varian-Style 400 or 500 I/s Ion Pump, Ferrite, 1200 Gauss, set of 2	\$1,760.00	5



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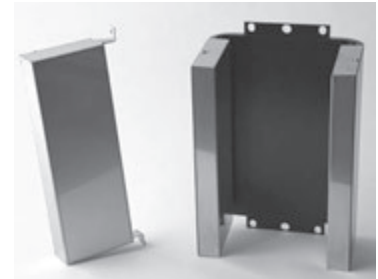
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Ion Pumps

Perkin Elmer Style Ion Pumps

Perkin Elmer Style Pumps with Magnets

Part No.	Description	Price	Image
Duniway	--	US \$	#
PE-11DI	New PE-Style Differential/Noble Diode Ion Pump, 11 l/s, 2.75" CFF w/Magnet	Inquire	1
PE-11STD	New PE-Style Standard Diode Ion Pump, 11 l/s, 2.75" CFF w/Magnet	\$1,238.00	1
PE-20DI	New PE-Style Differential/Noble Diode Ion Pump, 20 l/s, 2.75" CFF w/Magnet	Inquire	2
PE-20GXY	New PE-Style Galaxy Diode Ion Pump, 20 l/s, 2.75" CFF w/Magnet	\$1,484.00	2
PE-20STD	New PE-Style Standard Diode Ion Pump, 20 l/s, 2.75" CFF w/Magnet	\$1,350.00	2
PE-25DI	New PE-Style Differential/Noble Diode Ion Pump, 25 l/s, 3.375" CFF w/Magnet	Inquire	3
PE-25GXY	New PE-Style Galaxy Diode Ion PUmp, 25 l/s, 3.375" CFF w/Magnet	\$1,486.00	3
PE-25STD	New PE Style Standard Diode Ion Pump, 25 l/s, 3.375" CFF w/Magnet	\$1,354.00	3



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Rebuilt Perkin Elmer Style Pumps with Magnets

Part No.	Description	Price	Image
Duniway	--	US \$	#
RPE-008DI	Rebuilt PE-Style Differential/Noble Diode Ion Pump, 8 l/s, 2.75" CFF with Magnet	Inquire	1
RPE-008STD	Rebuilt PE-Style Standard Diode Ion Pump, 8 l/s, 2.75" CFF with Magnet	\$824.00	1
RPE-011DI	Rebuilt PE-Style Differential/Noble Diode Ion Pump, 11 l/s, 2.75" CFF with Magnet	Inquire	2
RPE-011STD	Rebuilt PE-Style Standard Diode Ion Pump, 11 l/s, 2.75" CFF with Magnet	\$824.00	2
RPE-020DI	Rebuilt PE-Style Differential/Noble Diode Ion Pump, 20 l/s, 2.75" CFF w/Magnet	Inquire	3
RPE-020STD	Rebuilt PE-Style Standard Diode Ion Pump, 20 l/s, 2.75" CFF w/Magnet	\$940.00	3
RPE-025DI	Rebuilt PE-Style Differential/Noble Diode Ion Pump, 25 l/s, 3.375" CFF w/Magnet	Inquire	4
RPE-025STD	Rebuilt PE-Style Standard Diode Ion Pump, 25 l/s, 3.375" CFF w/Magnet	\$1,040.00	4
RPE-060DI	Rebuilt PE-Style Differential/Noble Diode Ion Pump, 60 l/s, 8.00" CFF w/Magnet	Inquire	5
RPE-080STD	Rebuilt PE-Style Standard Diode Ion Pump, 80 l/s, 8.00" CFF w/Magnet	\$1,600.00	5
RPE-120DI	Rebuilt PE-Style Differential/Noble Diode Ion Pump, 120 l/s, 8.00" CFF w/Magnet	Inquire	--
RPE-150STD	Rebuilt PE-Style Standard Diode Ion Pump, 150 l/s, 8.00" CFF w/Magnet	\$2,700.00	--
RPE-220-DI	Rebuilt PE-Style Differential/Noble Diode Ion Pump, 220 l/s, 8.00" CFF w/Magnet	Inquire	6
RPE-270STD	Rebuilt PE-Style Standard Diode Ion Pump, 270 l/s, 8.00" CFF w/Magnet	\$3,200.00	6
RPE-400DI	Rebuilt PE-Style Differential/Noble Diode Ion Pump, 400 l/s, 8.00" CFF w/Magnet	Inquire	--
RPE-500STD	Rebuilt PE-Style Standard Diode Ion Pump, 500 l/s, 8.00" CFF w/Magnet	\$4,000.00	--



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Is a Rebuilt Ion Pump Equal in Performance to a New One?

Yes. If an ion pump is thoroughly cleaned and the elements are equipped with new titanium, it will have the same performance as a new pump.

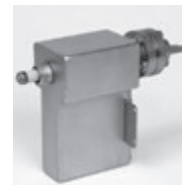
New and rebuilt pumps include magnets.

Ion Pumps

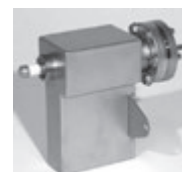
Perkin Elmer Style Ion Pumps

Rebuilding Service

Part No.	Description	Price	Image
Duniway	--	US \$	#
REBG-PE-008DI	Rebuilding Service PE-Style Differential/Noble Diode Ion Pump, 8 I/s, 2.75" CFF	Inquire	1
REBG-PE-008STD	Rebuilding Service PE-Style Standard Diode Ion Pump, 8 I/s, 2.75" CFF	\$410.00	1
REBG-PE-011DI	Rebuilding Service PE-Style Differential/Noble Diode Ion Pump, 11 I/s, 2.75" CFF	Inquire	2
REBG-PE-011STD	Rebuilding Service PE-Style Standard Diode Ion Pump, 11 I/s, 2.75" CFF	\$410.00	2
REBG-PE-020DI	Rebuilding Service PE-Style Differential/Noble Diode Ion Pump, 20 I/s, 2.75" CFF	Inquire	3
REBG-PE-020GXY	Rebuilding Service PE-Style Galaxy Diode Ion Pump, 20 I/s, 2.75" CFF	\$630.00	3
REBG-PE-020STD	Rebuilding Service PE-Style Standard Diode Ion Pump, 20 I/s, 2.75" CFF	\$520.00	3
REBG-PE-025DI	Rebuilding Service PE-Style Differential/Noble Diode Ion Pump, 25 I/s, 3.375" CFF	Inquire	4
REBG-PE-025GXY	Rebuilding Service PE-Style Galaxy Diode Ion Pump, 25 I/s, 3.375" CFF	\$630.00	4
REBG-PE-025STD	Rebuilding Service PE-Style Standard Diode Ion Pump, 25 I/s, 3.375" CFF	\$520.00	4
REBG-PE-060DI	Rebuilding Service PE-Style Differential/Noble Diode Ion Pump, 60 I/s, 8.00" CFF	Inquire	5
REBG-PE-080GXY	Rebuilding Service PE-Style Galaxy Diode Ion Pump, 80 I/s, 8.00" CFF	\$890.00	5
REBG-PE-080STD	Rebuilding Service PE-Style Standard Diode Ion Pump, 80 I/s, 8.00" CFF	\$775.00	5
REBG-PE-120DI	Rebuilding Service PE-Style Differential/Noble Diode Ion Pump, 120 I/s, 8.00" CFF	Inquire	--
REBG-PE-150GXY	Rebuilding Service PE-Style Galaxy Diode Ion Pump, 150 I/s, 8.00" CFF	\$1,465.00	--
REBG-PE-150STD	Rebuilding Service PE-Style Standard Diode Ion Pump, 150 I/s, 8.00" CFF	\$1,195.00	--
REBG-PE-220DI	Rebuilding Service PE-Style Differential/Noble Diode Ion Pump, 220 I/s, 8.00" CFF	Inquire	6
REBG-PE-270GXY	Rebuilding Service PE-Style Galaxy Diode Ion Pump, 270 I/s, 8.00" CFF	\$3,110.00	6
REBG-PE-270STD	Rebuilding Service PE-Style Standard Diode Ion Pump, 270 I/s, 8.00" CFF	\$1,785.00	6
REBG-PE-400DI	Rebuilding Service PE-Style Differential/Noble Diode Ion Pump, 400 I/s, 8.00" CFF	Inquire	--
REBG-PE-500GXY	Rebuilding Service PE-Style Galaxy Diode Ion Pump, 500 I/s, 8.00" CFF	\$4,250.00	--
REBG-PE-500STD	Rebuilding Service PE-Style Standard Diode Ion Pump, 500 I/s, 8.00" CFF	\$2,700.00	--
REBG-PE-TNBX-D	Rebuilding Service PE-Style Differential/Noble Diode Ion Pump, TNBX, Wire Seal	Inquire	7
REBG-PE-TNBX-G	Rebuilding Service PE-Style Galaxy Diode Ion Pump, TNBX, Wire Seal	Inquire	7
REBG-PE-TNBX-S	Rebuilding Service PE-Style Standard Diode Ion Pump, TNBX, Wire Seal	Inquire	7



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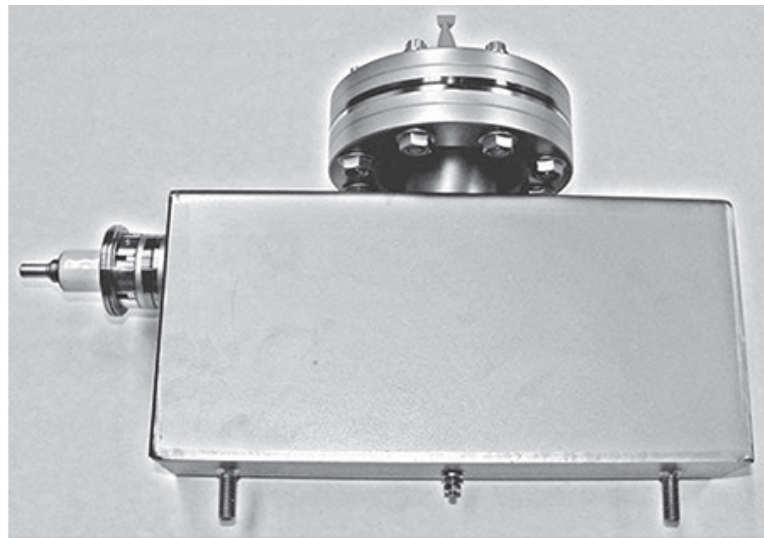
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New Edwards-Style Pumps

Part No.	Description	Price
Duniway	--	US \$
DS-EP30-0	New Edwards-Style 30 I/s Ion Pump, 4.5" OD CFF, No Magnet	\$1,300.00
REBG-EDWARDS	Rebuilding Service Edwards EP-100, 100 I/s Diode pump	\$1,260.00
REBG-EDWARDS-15	Rebuilding Service Edwards 15 I/s, Diode	\$520.00
REBG-EDWARDS-30	Rebuilding Service Edwards 30 I/s, Diode	\$800.00



▼ *New Edwards-Style 30 I/s Ion Pump, 4.5" OD CFF, No Magnet*

Rebuilding Service for Many Other Ion Pump Brands:

Duniway Stockroom Corp. rebuilds Ion Pumps from many other manufacturers, including:

- | | | |
|----------------|--------------------|---------------|
| Anelva | Cambridge | Cameca |
| Edwards | JEOL | Kratos |
| Leybold | Meca | Riber |
| Satsuki | Thermionics | Ulvac |

Please inquire about the rebuilding prices for these Ion Pumps or any other types you might have.

Ion Pumps

Elements & Parts

New VA-Style Classic & Vacion Plus-Style Parts

Part No.	Description	Price	Image
Duniway	--	US \$	#
EL-FC-TR	New Varian Triode Replacement Element - Classic-Style FC-12 Systems	\$420.00	--
EL-LG-DD	New Varian Classic-Style Large Diode Element for 140 l/s (1), 270 l/s (2), and 500 l/s (4)	\$720.00	--
EL-LG-GX	New Varian Classic-Style Large Galaxy Diode Element for 140 l/s (1), 270 l/s (2), and 500 l/s (4)	\$950.00	--
EL-LG-TR	New Varian Classic-Style Large Triode Element for 110 l/s (1), 220 l/s (2), and 400 l/s (4)	\$820.00	--
EL-SM-DD	New Varian Classic-Style Small Diode Element for 20 l/s (1), 30 l/s (1), and 60 l/s (2)	\$420.00	--
EL-SM-GX	New Varian Classic-Style Small Galaxy Diode Element for 20 l/s (1), 30 l/s (1), and 60 l/s (2)	\$500.00	--
EL-SM-TR	New Varian Classic-Style Small Triode Element for 20 l/s (1), 30 l/s (1), and 60 l/s (2)	\$420.00	--
EL-ST-GX-H	New Varian Starcell-Style Replacement Element (Galaxy) For Hydroformed Body	\$800.00	--
EL-ST-GX-W	New Varian Starcell-Style Replacement Element (Galaxy) For Welded Body	\$800.00	--
GSP-1000	Grounding Spring - Varian Classic-Style High Voltage Feedthrough, 5/pkg	\$15.00	--
HVFT-0006-00	High Voltage Feedthrough, VA Classic-Style	\$145.00	1
HVFT-0006-02	High Voltage Feedthrough, VA Classic-Style, Hole in Shaft	\$145.00	2
HVFT-5024	High Voltage Feedthrough, VA Old-Style (Obsolete)	\$280.00	--
HVFT-5120	High Voltage Feedthrough, Early VIP/Starcell-Style Pumps, on 1.33" (mini) CFF	\$230.00	3
HVFT-5125	High Voltage Feedthrough, New VIP/Starcell-Style Pumps, on 1.33" (mini) CFF	\$330.00	4
HVFT-5143	High Voltage Feedthrough, VA Classic-Style- For 30l/s and Larger Pumps, on 1.33" (mini) CFF	\$180.00	5
HVFT-GRND	Grounding Plate for Early VIP Starcell-Style High Voltage Feedthrough (HVFT-5120)	\$10.00	--
INS-7000	Varian Classic-Style Anode Stand-Off Insulator	\$16.00	--
INS-7001	Sputter Shield for Varian Classic-Style High Voltage Feedthrough	\$18.00	--
TIT-0090	Cathode for Large Classic-Style Varian Diode Element, Ti, (2 Required per Element)	\$120.00	--
TIT-0098	Titanium Strips for Large Classic-Style Varian Triode Element, 36/pkg, (2 Pkgs Required per Element)	\$130.00	--
TIT-0116	Titanium Strips for Small Classic-Style Varian Triode Element, 25/pkg, (2 Pkgs Required per Element)	\$72.00	--
VA-SM-CATHODE	Cathode for Small Classic-Style Varian Diode Element, Ti, (2 Required per Element)	\$80.00	--
VLT-GRID	Grid for Large Classic-Style Varian Triode Element, Ti, Complete Assembly	\$350.00	--
VSD-ANODE	Anode for Small Classic-Style Varian Diode Element	\$100.00	--
VST-ANODE	Anode for Small Classic-Style Varian Triode Element	\$100.00	--
VST-GRID	Grid for Small Classic-Style Varian Triode Element, Ti, (2 Required per Element)	\$160.00	--



► New Varian Triode Replacement Element for Classic style FC-12 systems



► New Varian Classic-Style Small Triode Element



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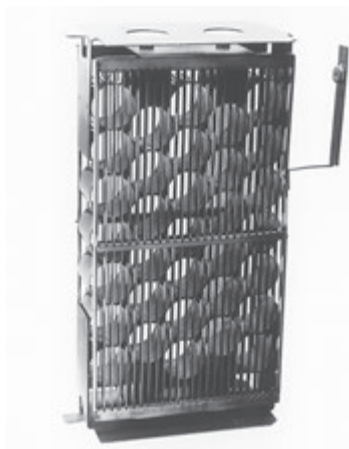
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Rebuilding Services for VA-Style Elements

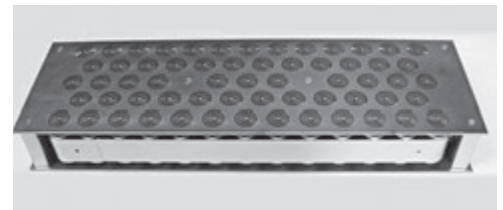
Part No.	Description	Price	Image
Duniway	--	US \$	#
REBG-EL-FC-TR	Rebuilding Service Varian Triode Replacement Element - Classic-Style FC-12 Systems	\$275.00	1
REBG-EL-LG-DD	Rebuilding Service Varian Classic-Style Large Diode Element for 140 I/s (1), 270 I/s (2), and 500 I/s (4)	\$410.00	2
REBG-EL-LG-GX	Rebuilding Service Varian Classic-Style Large Galaxy Diode Element for 140 I/s (1), 270 I/s (2), and 500 I/s (4)	\$525.00	3
REBG-EL-LG-TR	Rebuilding Service Varian Classic-Style Large Triode Element for 110 I/s (1), 220 I/s (2), and 400 I/s (4)	\$410.00	4
REBG-EL-SM-DD	Rebuilding Service Varian Classic-Style Small Diode Element for 20 I/s (1), 30 I/s (1), and 60 I/s (2)	\$275.00	--
REBG-EL-SM-GX	Rebuilding Service Varian Classic-Style Small Galaxy Diode Element for 20 I/s (1), 30 I/s (1), and 60 I/s (2)	\$355.00	--
REBG-EL-SM-TR	Rebuilding Service Varian Classic-Style Small Triode Element for 20 I/s (1), 30 I/s (1), and 60 I/s (2)	\$275.00	5
REBG-EL-ST-GX	Rebuilding Service Varian Starcell-Style Replacement Element (Galaxy)	\$475.00	--



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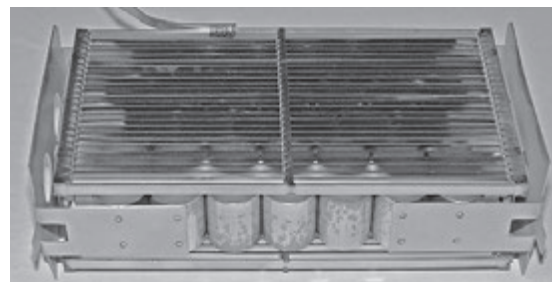
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Read about our Galaxy® cathode design which provides stable pumping speed for air without sacrificing overall pumping speed.

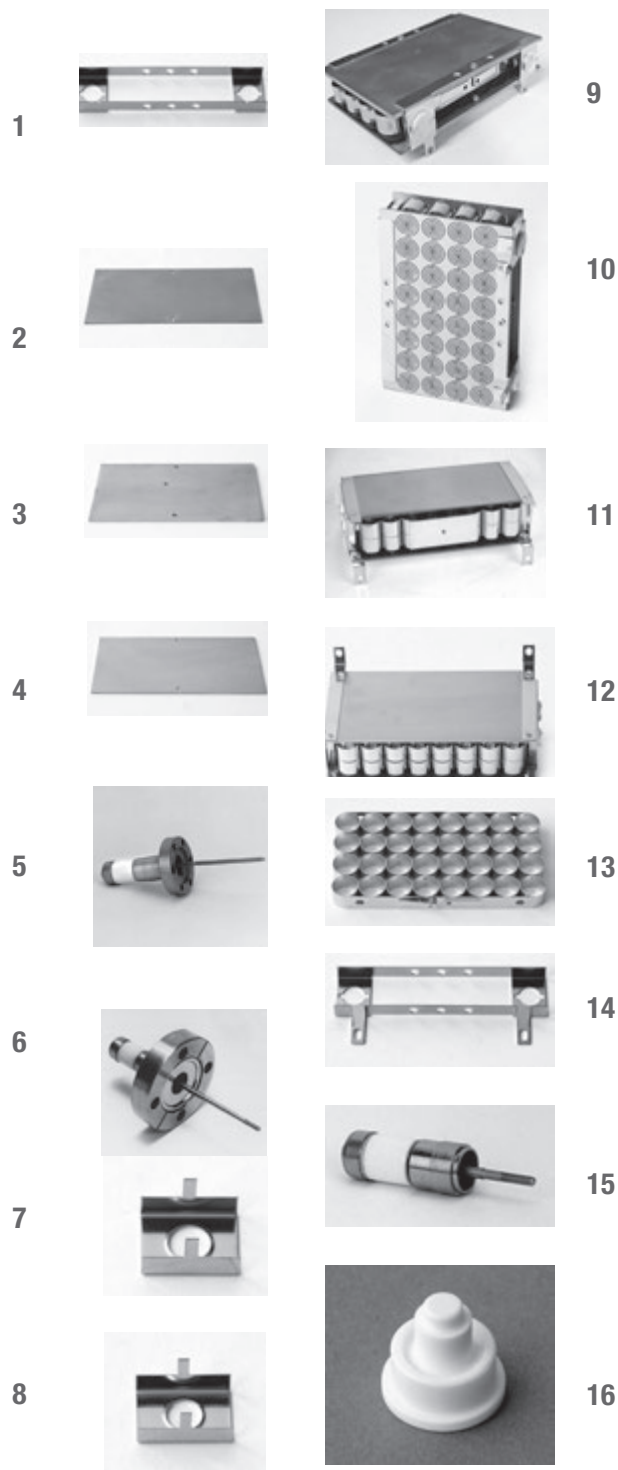
Ion Pumps

Elements & Parts

New Perkin-Elmer Elements & Parts

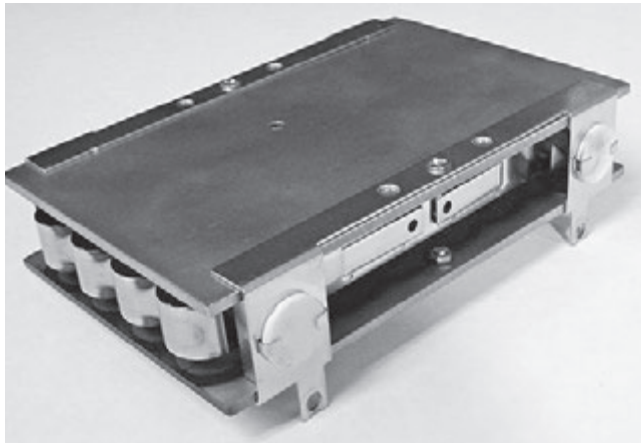
Ion Pumps **D**

Part No.	Description	Price	Image
Duniway	--	US \$	#
PE-BRASSY-NO-TAB	Element Bracket Assembly for PE/PHI/Ultek Ion Pump, without Tabs	\$15.00	1
PE-CATH-DIF-TA	Cathode for PE/PHI/Ultek Differential (DI) Diode Ion Pump Element, Ta, 0.040"	Inquire	2
PE-CATHODE-HYD	Cathode for PE/PHI/Ultek Hydrogen Diode Ion Pump Element, Ti, 0.120"	\$45.00	3
PE-CATHODE-STD	Cathode for PE/PHI/Ultek Standard Diode Ion Pump Element, Ti, 0.060"	\$30.00	4
PE-FT-133	High Voltage Feedthrough, New Style, for PE/PHI/Ultek Ion Pump, on 1.33" (mini) CFF	\$202.00	5
PE-FT-218	High Voltage Feedthrough, Old Style, for PE/PHI/Ultek Ion Pump, on 2 1/8" CFF	\$215.00	6
PE-INS-HOLDER-HYD	Insulator Holder for PE/PHI/Ultek Hydrogen Diode Ion Pump Element (0.120" Cathodes)	\$5.00	7
PE-INS-HOLDER-STD	Insulator Holder for PE/PHI/Ultek Standard Diode Ion Pump Element (0.060" Cathodes)	\$4.00	8
PE-INS-OLD	Insulator, Old Style for PE/PHI/Ultek Ion Pump Element, Old Style, Threaded Each End	\$10.00	--
PE-EL-DIF-0250	New Differential (DI) Diode Element for PE/PHI/Ultek Ion Pump, 1 ea. 0.060" Ti & 0.040" Ta Cathodes	Inquire	9
PE-EL-HYD-1420	New Hydrogen Diode Element for PE/PHI/Ultek Ion Pump, 2 x 0.120" Ti Cathodes	Inquire	9
PE-EL-STD-0905	New Standard Diode Element for PE/PHI/Ultek Ion Pump, 2 x 0.060" Ti Cathodes	\$206.00	9
PE-EL-GXY-2000	New Galaxy Diode Element for PE/PHI/Ultek Ion Pump, 2 x 0.060" Ti Galaxy Cathodes	\$275.00	10
PE-EL-38-GXY	New Galaxy Diode Element for PHI Captorr Ion Pump, 2 x 0.120" Ti Galaxy Cathodes	\$510.00	11
PE-EL-38-HYD	New Hydrogen Diode Element for PHI Captorr Ion Pump, 2 x 0.120" Ti Cathodes	\$435.00	--
PE-EL-38-STD	New Standard Diode Element for PHI Captorr Ion Pump, 2 x 0.060" Ti Cathodes	\$375.00	12
PE-ANODE	Anode for PE/PHI/Ultek Ion Pump Element, Includes Side Bands	\$80.00	13
PE-BRK-ASSY	Element Bracket Assembly for PE/PHI/Ultek Ion Pump, with Tabs	\$15.00	14
PE-HVFT-ASSY	High Voltage Feedthrough, New Style, for PE/PHI/Ultek Ion Pump, No Flange	\$150.00	15
PEU-2070	Element Insulator for PE/PHI/Ultek Ion Pump, New Style, Flat Top, No Threads	\$5.00	16



Rebuilding Service for PE-Style Elements

Part No.	Description	Price
Duniway	--	US \$
REBG-DIF-0250	Rebuilding Service Differential (DI) Diode Element for PE/PHI/Ultek Ion Pump, 1 ea. 0.060" Ti & 0.040" Ta Cathodes	Inquire
REBG-HYD-1420	Rebuilding Service Hydrogen Diode Element for PE/PHI/Ultek Ion Pump, 2 x 0.120" Ti Cathodes	\$215.00
REBG-STD-0905	Rebuilding Service Standard Diode Element for PE/PHI/Ultek Ion Pump, 2 x 0.060" Ti Cathodes	\$155.00
REBG-GXY-2000	Rebuilding Service Galaxy Diode Element for PE/PHI/Ultek Ion Pump, 2 x 0.060" Galaxy Cathodes	\$240.00
REBG-PE-038-GXY	Rebuilding Service Galaxy Diode Element for PHI Captorr Ion Pump, 2 x 0.060" Ti Galaxy Cathodes	\$320.00
REBG-PE-038-HYD	Rebuilding Service Hydrogen Diode Element for PHI Captorr Ion Pump, 2 x 0.120" Ti Cathodes	\$280.00
REBG-PE-038-STD	Rebuilding Service Standard Diode Element for PHI Captorr Ion Pump, 2 x 0.060" Ti Cathodes	\$220.00



▼ Differential (DI) Diode Element for PE/PHI/Ultek Ion Pump



▼ Galaxy Diode Element for PHI Captorr Ion Pump

Read about our Galaxy® cathode design which provides stable pumping speed for air without sacrificing overall pumping speed.

Please complete our HAZMAT form and forward to info@duniway.com for an RMA# prior to shipment to Duniway Stockroom Corp.

Ion Pumps

Ion Pump Control Units

New Terranova Ion Pump Controllers

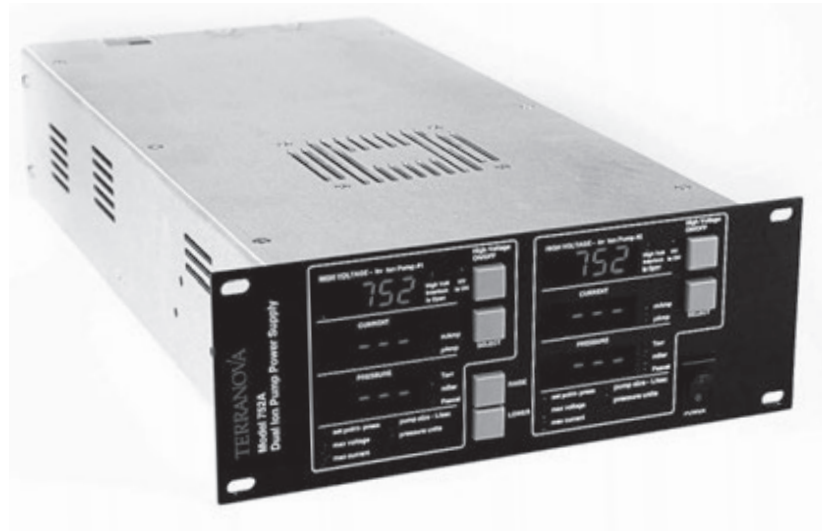


The Terranova® 751A Ion Pump Controller Unit

is designed to supply operating power to sputter-ion pumps while displaying the voltage, current and pressure. The unit is available with either Kings type or Fischer-type high voltage output connectors; and with either one or two high voltage output connectors for the single high voltage supply.

The Terranova® Model 752A Dual Ion Pump

Control Unit is designed to supply operating power to two sputter ion pumps and to display the voltage, current and pressure independently for each. The unit is available with either 2 Kings-type or 2 Fischer-type high voltage output connectors; one each for the two independent high voltage power supplies. These are programmable, microprocessor controlled units, which give them great versatility in operation, display, control and data communication.



New Terranova Ion Pump Controllers

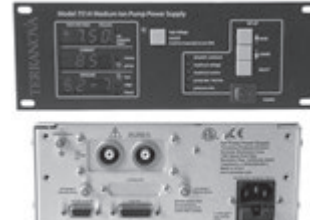
Part No.	Description	Price	Image
Duniway	--	US \$	#
T-751A-1F	Small/Medium (1-100 l/s) Ion Pump Control and Display Unit, Max Current Settings: 1-50 mA, 1 Fischer HV Connector; specify voltage of operation 110/220	\$2,030.00	1
T-751A-1K	Small/Medium (1-100 l/s) Ion Pump Control and Display Unit, Max Current Settings: 1-50 mA, 1 Kings HV Connector; specify voltage of operation 110/220	\$2,000.00	2
T-751A-2F	Small/Medium (1-100 l/s) Ion Pump Control and Display Unit, Max Current Settings: 1-50 mA, 2 Fischer HV Connectors; specify voltage of operation 110/220	\$2,090.00	3
T-751A-2K	Small/Medium (1-100 l/s) Ion Pump Control and Display Unit, Max Current Settings: 1-50 mA, 2 Kings HV Connectors; specify voltage of operation 110/220	\$2,070.00	4
T-752A-F	Dual Small/Medium (1-100 l/s) Ion Pump Control and Display Unit, Max Current Settings: 1-50 mA, 2 Fischer HV Connectors; specify voltage of operation 110/220	\$2,910.00	5
T-752A-K	Dual Small/Medium (1-100 l/s) Ion Pump Control and Display Unit, Max Current Settings: 1-50 mA, 2 Kings HV Connectors; specify voltage of operation 110/220	\$2,850.00	6
RS232-TN751A	Serial RS232 Cable for T-751A and T-752A Ion Pump Control Units, 10 ft long	\$55.00	7



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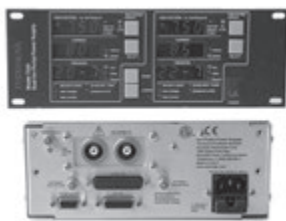
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Features

- Programmable High Voltage Output from 3.5 kV to 7.5 kV
- Up to 50 Watts Power for High Pressure Operation
- Plus or Minus High Voltage Polarity User Selectable
- Programmable Current Limit
- Programmable Pump Size for Pressure Display
- Choice of Pressure Units; torr, mbar, pascal
- Programmable Process Control Set Point Relay
- Automatic Cool-Down, Shut-Down mode
- Display for Voltage, Pump Current and Pressure
- Serial I/O for Data Collection: RS-232, 422 and 485
- Analog Outputs for Monitoring Voltage and Current
- Ground Sensing Circuit for Operator Safety
- CE, UL and CSA Conformance for Safety, EMC and EMI
- Universal Power Supply 85-250 VAC, 50/60 Hz
- Dimensions: 9.5" (24cm) wide, 3.5" (9cm) high, 16" (41cm) deep

Ion Pumps

Ion Pump Control Units

New Varian-Style Classic Pump Controllers

Part No.	Description	Price	Image
Duniway	--	US \$	#
IPC-0062	Medium (8, 20, 30, 60 l/s) Ion Pump Control/Display, Half 19" Rack Package, Output: +3300 & -5200 volts, 200 ma. Input: 120/240 VAC	Inquire	1
IPC-0066	Large (110/140, 220/270, 400/500 l/s) Ion Pump Control/Display, Full 19" Rack Package, Output: +7200 & - 5200 volts, 675 mA. Input: 208/240 VAC	\$4,000.00	2
PR-0048	Pressure Relay for Bakeout Control with IPC-0062 and IPC-0066 Ion Pump Control/Display; Includes Cables	\$825.00	3
48-CABLE1	Cable from PR-0048 Pressure Relay to Bakeout System, 10 ft.	\$100.00	4
48-CABLE2	Cable from IPC-0062 or IPC-0066 to PR-0048 Pressure Relay, 10 ft.	\$130.00	5
HRA-0019	19" Half Rack Adapter for IPC-0062	Inquire	6

Ion Pumps **D**



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Features

- Manufactured by Duniway Stockroom Corp.
- These units can be used with all manufacturers' pumps.
- Purchase INCLUDES power cable.

Rebuilt Varian & PE/Ultek

Rebuilt Varian

Model #	Pumping Speed	Volts out	MA	Volts in	Price
Duniway	L/S	volts	--	volts	--
921-0000	1000	+7200	2000	230/460	Inquire
921-0004	140	+7200	235	115/230	Inquire
921-0005	500	+7200	750	208/230	Inquire
921-0006	Appendage	+3300	40	115/230	Inquire
921-0007	80	+7200	190	115/230	Inquire
921-0011	8	+3550	180	115/230	Inquire
921-0012	50	+3750	350	115/230	Inquire
921-0013	15	+7200	70	115/230	Inquire
921-0014	Multi-Pump(5)	+3300	40	115/230	Inquire
921-0015	Appendage	+3300	40	115/230	Inquire
921-0018	11 (H2O)	+7200	750	208/230	Inquire
921-0034	140	+7200	300	115/230	Inquire
921-0036	270	+7200	600	115/230	Inquire
921-0038	500	+7200	1250	208/230	Inquire
921-0041	110	-5200	480	115/208/230	Inquire
921-0043	220	-5200	800	115/208/230	Inquire
921-0045	400	-5200	1600	208/230	Inquire
921-0062	8 20, 30, 60	+3300 -5200	120 200	120/240	Inquire
921-0066	110, 220, 400 110, 220, 400	-5200 +7200	675 465	208/240	Inquire

Duniway Stockroom Corporation provides a wide array of rebuilt Ion Pump Controllers originally from Varian and PE/Ultek. Each unit is refurbished to its original functional state and is thoroughly tested by our Electronics Department. All units we offer may not be listed. Please inquire.



Varian Model 921-0062

Rebuilt PE/Ultek

Model #	Pumping Speed	Volts out	MA	Volts in	Price
Duniway	L/S	volts	--	volts	--
60-063	5-25	+4750	150	115	Inquire
222-0410	5-25	+4750	150	115	Inquire
60-655	50	+4750	350	115	Inquire
60-104	50	+4750	350	115	Inquire
222-0510	50	+4750	350	115	Inquire
60-160	100-500	+4750	1000	208/230	Inquire
222-0530	80-220	±5500	250	115/208/230	Inquire
222-0600	100-500	+4750	1000	208/230	Inquire
222-0630	120-500	±7000	600	208/230	Inquire
224-0630	BOOSTIVAC	+5500	250	117	Inquire



Varian Model 921-0066

Ion Pumps

Ion Pump Cables and Connectors

New Standard Cables

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Part No.	Description	Price	Image
Duniway	--	US \$	#
FS-110N-10	Ion Pump Cable, VIP-Style Interlock IP Connector, 10KV Control Connector	\$310.00	1
FS-110N-FR	Ion Pump Cable, VIP-Style Interlock IP Connector, VIP/Fischer w/Ring Terminal Control Connector	\$395.00	2
FS-110N-FT	Ion Pump Cable, VIP-Style Interlock IP Connector, VIP/Fischer w/Tip Plug Control Connector	\$395.00	--
FS-110N-MS	Ion Pump Cable, VIP-Style Interlock IP Connector, Varian Old-Style Control Connector	\$370.00	3
FS-110N-X	Ion Pump Cable, VIP-Style Interlock IP Connector, Unterminated	\$250.00	5
P-110N-10	Ion Pump Cable, Perkin Elmer IP Connector, 10KV Control Connector	\$230.00	4
P-110N-FR	Ion Pump Cable, Perkin Elmer IP Connector, VIP/Fischer w/Ring Terminal Control Connector	\$287.00	6
P-110N-FT	Ion Pump Cable, Perkin Elmer IP Connector, VIP/Fischer w/Tip Plug Control Connector	\$287.00	--
P-110N-MS	Ion Pump Cable, Perkin Elmer IP Connector, Varian Old-Style Control Connector	\$290.00	7
P-110N-X	Ion Pump Cable, Perkin Elmer IP Connector, Unterminated	\$180.00	8
S-110N-10	Ion Pump Cable, Early StarCell-Style IP Connector, 10KV Control Connector	\$305.00	9
S-110N-FR	Ion Pump Cable, Early StarCell-Style IP Connector, VIP/Fischer w/Ring Terminal Control Connector	\$362.00	10
S-110N-FT	Ion Pump Cable, Early StarCell-Style IP Connector, VIP/Fischer w/Tip Plug Control Connector	\$362.00	--
S-110N-MS	Ion Pump Cable, Early StarCell-Style IP Connector, Varian Old-Style Control Connector	\$365.00	11
S-110N-X	Ion Pump Cable, Early StarCell-Style IP Connector, Unterminated	\$255.00	12
V-110N-10	Ion Pump Cable, Std Varian Classic Style IP Connector, 10KV Control Connector	\$305.00	13
V-110N-FR	Ion Pump Cable, Std Varian Classic Style IP Connector, VIP/Fischer w/Ring Terminal Control Connector	\$362.00	--
V-110N-FT	Ion Pump Cable, Std Varian Classic Style IP Connector, VIP/Fischer w/Tip Plug Control Connector	\$362.00	14
V-110N-MS	Ion Pump Cable, Std Varian Classic Style IP Connector, Varian Old-Style Control Connector	\$365.00	15
V-110N-X	Ion Pump Cable, Std Varian Classic Style IP Connector, Unterminated	\$255.00	16



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Cables above made with Type 1 cable. See specifications and other cable types on page 76.

Custom Ion Pump Cables

All standard cables on previous page are 10 feet long. Cables are also available in different lengths, and with mesh or SST armor covers. Design your own Custom Cable. See tables & example below.

Part #	Pump End Connector	Price
Duniway	--	US \$
V	Std. Varian Style	\$165.00
S	Starcell-Style	\$165.00
P	P-E Style	\$90.00
FS	Interlock Style	\$180.00
M	Varian Mini Molded	Inquire

Part #	Cable Type	Length	Price
Duniway	--	--	US \$/ft
1	New RR 80°C Coax, Sense W	1+Length	\$4.00/ft
4	RR 150°C Coax, Sense W	4+Length	\$7.00/ft
V**	V-Wire 200 °C	V+Length	\$7.00/ft

RR = Radiation Resistant

Part #	Sheath Type	Price
Duniway	--	US \$/ft
N	None	\$0.00/ft
S	SST Armor	\$3.00/ft
M	Mesh	\$5.00/ft

Part #	Controller End Connector	Price
Duniway	--	US \$
X	None	\$0.00
MS	Old Varian Style	\$130.00
F	Starcell-Style Fischer	\$125.00
05*	Old Style P-E, 5kV	\$50.00
10	10kV	\$50.00

Custom Cable Part Number and Cost Determination:

Part Number = PumpEnd + CableTypeLength + SheathTypeLength + ControllerEnd

Cost = PumpEndCost + (CableCost x Length) + (SheathCost x Length) + ControllerEndCost+LaborCost

Notes: Labor cost is \$50. Sheath length always equals cable length.

Example: S-412S-MS, Starcell pump connector (\$165.00), type 4 coax, 12 feet long (12 x \$7.00 = \$84.00), SST armor sheath, 12ft long (12ft x \$3.00/ft = \$36.00), Old Varian Style controller connector (\$110.00), + \$50.00 labor = \$465.00 Total.

Example: P-V15N-X, P-E style IP connector (\$90.00), V-Wire 15 feet long (15 x \$7.00 = \$105.00), no sheath (\$0.00), No Controller Connector (\$0.00), + \$50.00 labor = \$245.00 Total.

Note: All cables with SSTarmor do not have secondary ground wire (or Sense wire) unless requested. If requested, the ground (Sense) wire will be external to the armored sheath. All other cables have secondary ground.

* Connectors marked with an asterisk are available only with coax type 1 and type 4.









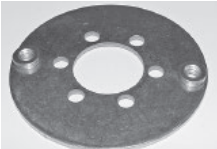


** Cable marked with a double asterisk is available only with SST Armor Sheath.

See page 78 for pictures of connectors and chart showing connector compatibilities.




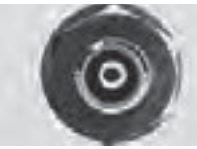
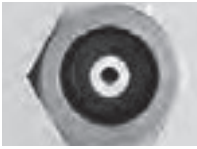










Ion Pumps

Ion Pump Cables and Connectors

Ion Pump High Voltage Feedthroughs, Mating Connectors and Grounding Pieces (if needed)

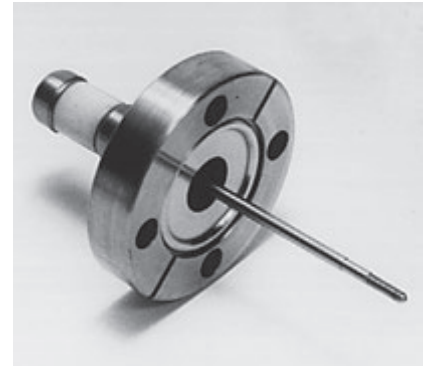
V-				P-			
	V-100-X	HVFT-5143	GSP-1000		X-200-X	PE-FT-218	X-002-X
S-				FS-			
	S-100-X	HVFT-5120	HVFT-GRND		FS-105-X	HVFT-5125	

Ion Pump Controller Back Panel Connectors and Mating Cable Connectors

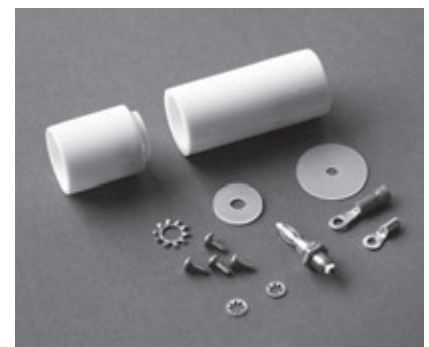
Endviews					
	SP-CONNECT	PE-5KV-CU	SHV-1704-01	PE-10KV-CU	STRCL-FEMALE
Sideviews					
Controller End Cable Connectors					
	MS-COMPLETE	P/E-5KV	SHV-1705-14	P/E-10KV	STRCL-MALE
	-MS	-05	-SHV	-10	-F

High Voltage Feedthroughs, Connectors and Parts

Part No.	Description	Price
Duniway	--	US \$
SP-CONNECT	HV Controller Rear Panel Connector,VA -0062(J4), -0066(J1)	\$102.00
FS-105-X	HV Cable Connector Kit, Ion Pump End, VA VIP/StarCell-Style Interlock; For kit assembly instructions,see our website under Documents.	\$180.00
PE-FT-218	High Voltage Feedthrough, Old Style, for PE/PHI/Ultek Ion Pump, on 2 1/8" CFF	\$215.00
HVFT-5120	High Voltage Feedthrough, Early VIP/Starcell-Style Pumps, on 1.33" (mini) CFF	\$230.00
HVFT-5125	High Voltage Feedthrough, New VIP/Starcell-Style Pumps, on 1.33" (mini) CFF	\$330.00
HVFT-5143	High Voltage Feedthrough, VA Classic-Style- For 30l/s and Larger Pumps, on 1.33" (mini) CFF	\$180.00
HVFT-GRND	Grounding Plate for Early VIP Starcell-Style High Voltage Feedthrough (HVFT-5120)	\$10.00
MS-COMPLETE	HV Cable Connector Kit, Controller End, VA -0062(J4), -0066(J1); For kit assembly instructions,see our website under Documents.	\$110.00
PE-10-KV	HV Cable Connector, Controller End, PE 10KV	\$50.00
PE-10KV-CU	HV Controller Rear Panel Connector, PE 10KV	\$55.00
PE-5-KV	HV Cable Connector, Controller End, PE 5KV	\$50.00
PE-5KV-CU	HV Controller Rear Panel Connector, PE 5KV	\$30.00
PE-FT-133	High Voltage Feedthrough, New Style, for PE/PHI/Ultek Ion Pump, on 1.33" (mini) CFF	\$202.00
R-030-INS	Ceramic Insulator Kit, for V-100-X	\$92.00
R-040-SHL	Aluminum Shell for V-100-X	\$70.00
S-100-X	HV Cable Connector Kit, Ion Pump End, VA Early Starcell-Style, Bakeable; For kit assembly instructions,see our website under Documents.	\$165.00
SHV-1704-01	HV Controller Rear Panel Connector, PE SHV - 5KV Shielded	\$15.00
SHV-1705-14	HV Cable Connector, Controller End, PE SHV 5KV-Shielded	\$44.00
STRCL-FEMALE	HV Controller Rear Panel Connector,VA Starcell-Style	\$86.00
STRCL-MALE	HV Cable Connector, Controller End, VA Starcell-Style	\$125.00
V-100-X	HV Cable Connector Kit, Ion Pump End, VA Classic Style, Bakeable; For kit assembly instructions,see our website under Documents.	\$165.00
X-002-X	HV Cable/Ion Pump Collar, PE Style	\$30.00
X-200-X	HV Cable Connector Kit, Ion Pump End, PE Style	\$90.00
PE-5KV-59U	HV Cable Connector, RG-59, Controller End, PE 5KV	\$60.00



High Voltage Feedthrough



Ceramic Insulator Kit, for V-100-X

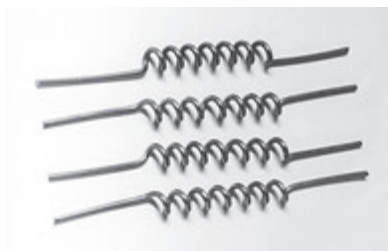
Ion Pumps

Titanium Sublimation Pumps

New Titanium Sublimation Pumps & Parts

Part No.	Description	Price	Image
Duniway	--	US \$	#
TSP-12-PE	Filaments for PE Style TSP Cartridge, Package of 12 (Degassed @ 700C-Alloy Wire: 85% Titanium, 15% Moly)	\$210.00	1
TSP-12-VA	Filaments for Varian Style TSP-275-003 Cartridge, Package of 12 (Degassed @ 700C-Alloy Wire: 85% Titanium, 15% Moly)	\$230.00	2
TSP-275-003	Varian-Style Titanium Sublimation Pump Cartridge, with 3 Filaments, on 2.75" CFF	\$915.00	3
TSP-CABLE	Cable for TSP-275-003, 12 Ft. Only works with Varian TSP controllers.	\$500.00	4
TSP-PE-LN2	Cryoshroud with 3.375" CFF for PE Style TSP Cartridge, Mounted on 8.00" CFF *	\$1,400.00	5
TSP-VA-LN2	Cryoshroud with 2.75" CFF for Varian Style TSP-275-003 Cartridge, Mounted on 8.00" CFF *	\$1,400.00	5

* **NOTE:** The only difference between the Perkin Elmer and the Varian cryoshroud is the flange for the TSP cartridge.



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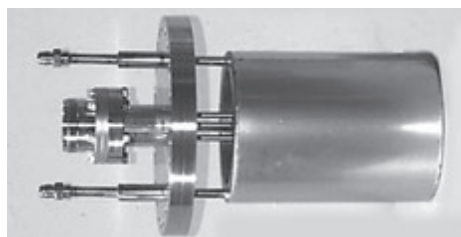
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Rebuilt Titanium Sublimation Pump Controllers

All of our reconditioned equipment is functionally equivalent to new equipment and each item comes with our one year warranty against defective parts and workmanship.

Reconditioned equipment is subject to availability.

Rebuilt Varian

Equivalent Varian #	Description	Price
--	--	US \$
916-0033	Combo Ion Pump & TSP, 35 & 800 l/s	\$ 3,300.00
916-0017	TSP Cartridge on 2.75" Conflat® Flange	\$600.00
922-0032	TSP Control Unit, 19" Rack	\$800.00
922-0043	TSP & Mini Ti-Ball™ Control, 19" Rack	\$950.00
922-0039	Ti-Ball™ Control Unit, 1/2 Rack	\$1,000.00
922-0040	Ti-Ball™ Cycle Timer, 1/8 Rack	\$990.00
929-0022	New Style TSP Digital Control, 1/2 Rack	\$1,200.00

Rebuilt Ultek

Equivalent Ultek #	Description	Price
--	--	US \$
224-0540	Boostivac® Control Unit	\$800.00
224-0630	Boostivac Control Unit for Ion Pump & TSP	\$1,900.00
100-1341	LN2 Shroud, 8" Flange with Port for TSP Cart.	\$800.00
214-0410	Boostivac Cartridge, 4 Filaments, Bake 120°C	\$400.00
214-0411	Boostivac Cartridge, 4 Filaments, Bake 400°C	\$570.00

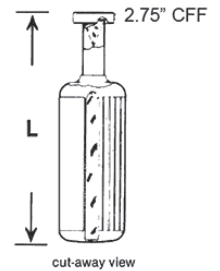
Ion Pumps

Sorption Pumps

New Sorption Pumps and Parts

How Do Molecular Sieves Pump?

By the process of adsorption. This is somewhat similar to catching flies with fly paper. When the molecular sieve is chilled to LN2 temperature, it will adsorb most air gases on its vast surface area. Gas atoms or molecules which contact the molecular sieve will "stick." They will not become "unstuck" until the molecular sieve becomes warmed.



Sorption Pump & Parts

Part No.	Description	Price
Duniway	--	US \$
DSP-651	Sorption Pump, New, Standard Size, L=15.06"	Inquire
FSB-003	Flange Support Bracket, 3/pkg	Inquire
LN2-100	LN2 Container (Polystyrene)	\$70.00
LN2-150	LN2 Container (Stainless Steel)	Inquire
MS-5A-23	Molecular Sieve - 1/2 gallon	\$35.00
SC-200	Screen-Cone	\$20.00
ST-800	Screen-Tube	\$12.00
VSC-100	Viton™ Stopper	\$9.00
VTB-375	Viton Tube	\$6.00
BN-28-175	Bolt Nut Set, (1/4-28 x 1.75"), 25/pkg	\$35.25

Sorption Pumps - Reconditioned and/or good used items

Part #	Description	Price
Duniway	--	US \$
941-6501	Sorption Pump, Standard Size, Reconditioned	\$450.00
941-6502	Sorption Pump, Double Size, Reconditioned	Inquire
941-6503	Sorption Pump, Triple Size, Reconditioned	Inquire

Sorption pumps - Good used tested parts

Part #	Description	Price
Duniway	--	US \$
944-0011	Dewar, Stainless Steel, Standard	\$250.00
944-0012	Dewar, Stainless Steel, Double	\$350.00
944-0044	Heater, 120V	\$200.00
944-0045	Heater, 230V	\$200.00
944-0007	Splash Shield Dewar Support	\$50.00

Diffusion Pumps

Table of Contents



Rebuilt Pumps

Rebuilt Diffusion Pumps	84
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Diffusion Pump Parts

New Varian Style Diffusion Pump Heaters	86
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Oils

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Baffles & Traps	94



Diffusion Pumps

Rebuilt Diffusion Pumps & Tech Tips

Rebuilt Diffusion Pumps

All rebuilt diffusion pumps are completely rebuilt in-house and come with our standard one year warranty against defective parts and workmanship. Rebuilt items are subject to availability.

Please call for stock.

Duniway Stockroom Corp. also provides a complete diffusion pump rebuilding service. Whether your pump has oxidized from years of use, has been dumped to atmosphere, has a burned out heating element, or has a non-functional cooling line, we can return your tired pump to new pumping condition. The process includes:

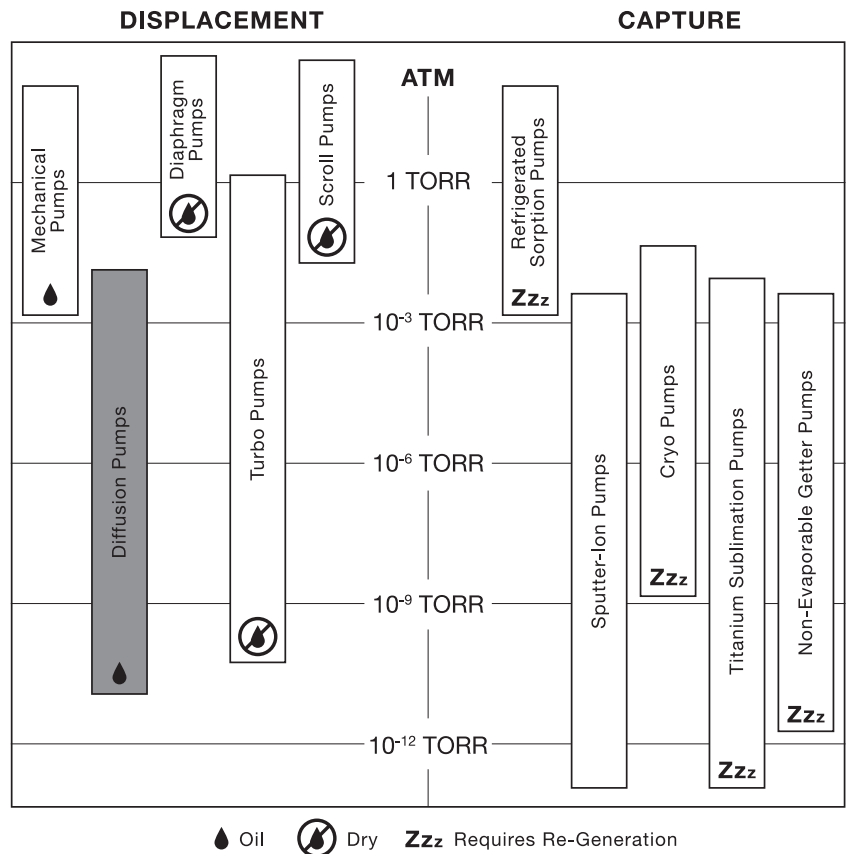
1. Incoming Inspection and Disassembly
2. Thorough Cleaning and Bead Blasting of body and appropriate parts
3. Water and Helium Pressure & Flow Check
4. Complete Refinishing of Pump
5. Heater Element Assembly, Thermal Switch and Plug are replaced where applicable
6. Installation of necessary O-Rings
7. Final Inspection

Call or e-mail us with the manufacturer, model number and a description of the symptoms of the problem to get a RMA (Return Merchandise Authorization) number.

Our customer service representatives will contact you following the inspection to provide you with our findings and an estimate for complete repair, if indicated. All diffusion pump rebuilds come with our full one-year warranty on defective parts and workmanship.

Prices include fan, where applicable.

Vacuum Pumps / Types & Ranges



Diffusion Pumps

Rebuilt Diffusion Pumps

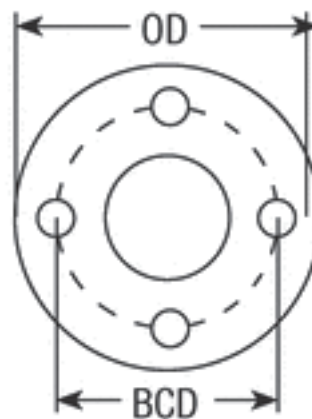
Rebuilt Diffusion Pumps

Diffusion Pumps

Part #	MFG	ANSI	Speed	Cooling	Price
Duniway	--	--	(L/S)	--	US \$
R-VMF-11	CVC	S	12.5	Air	\$400.00
R-VMF-21	CVC	S	22	Air	\$550.00
R-PMC-2	CVC	2	105	Water	\$600.00
R-M-2	Varian	2	175	Water	\$1,750.00
R-HSA	Varian	2	150	Air	\$950.00
R-HSA-150	Varian	S	150	Air	\$950.00
R-HS-2	Varian	2	285	Water	\$2,000.00
R-4530-009	Veeco	3	170	Air	\$1,500.00
R-PMC-4	CVC	4	720	Water	\$1,200.00
R-M-4	Varian	4	800	Water	\$1,650.00
R-VHS-4-S1⁽¹⁾	Varian	4	1200	Water	\$2,000.00
R-VHS-4-S2⁽²⁾	Varian	4	1200	Water	\$2,150.00
R-PMC-6	CVC	6	1400	Water	\$1,800.00
R-HS-6	Varian	6	1500	Water	\$2,300.00
R-VHS-6-S1⁽¹⁾	Varian	6	2400	Water	\$2,800.00
R-VHS-6-S2⁽²⁾	Varian	6	2400	Water	\$3,000.00
R-M-6	Varian	6	1500	Water	\$2,200.00
R-PMC-10	CVC	10	4000	Water	\$4,000.00
R-VHS-250-S1	Varian	250mm	3700	Water	\$3,900.00
R-VHS-250-S2	Varian	250mm	3700	Water	\$4,100.00
R-VHS-10-S1	Varian	10	5300	Water	\$5,500.00
R-VHS-10-S2	Varian	10	5300	Water	\$6,300.00
R-VHS-400	Varian	400mm	8000	Water	\$7,100.00
R-HS-16	NRC	16	10000	Water	\$8,000.00
R-HS-20	Varian	20	17500	Water	\$10,000.00

ANSI/ASA Reference

ANSI/ASA	OD	BCD	# of Bolts
lt/weight	--	--	--
2	4.00"	3.312"	6
2	6.00"	4.750"	4
4	9.00"	7.500"	8
6	11.00"	9.500"	8
10	16.00"	14.250"	12
16	23.50"	21.250"	16
20	27.50"	25.00"	20



- (1) Classic Varian/NRC VHS6 without sight glass
- (2) Newer style Varian/Agilent VHS6 with sight glass



Veeco 3"
4530-009

CVC 2"
PMC-2

Varian 2"
HSA

Varian 2"
HS2

Diffusion Pumps

Diffusion Pump Heaters

Varian Style Diffusion Pump Heaters, New

Part No.	Description	Price	Image
Duniway	--	US \$	#
HS2-HTR-120V	Varian Model HS-2 DP Replacement Cartridge Heater, 120V/450W/3.7A	\$105.00	1
HS2-HTR-240V	Varian Model HS-2 DP Replacement Cartridge Heater, 240V/450W/1.9A	\$105.00	1
HSA-HTR-120V	Varian Model HSA & HSA-150 DP Replacement Cartridge Heater, 120V/350W/2.9A	\$52.00	2
HSA-HTR-240V	Varian Model HSA & HSA-150 DP Replacement Cartridge Heater, 240V/350W/1.4A	\$52.00	2
M2-HTR-120V	Varian Model M-2 DP Replacement Pancake Heater, 120V/450W/3.7A	\$100.00	3
M2-HTR-240V	Varian Model M-2 DP Replacement Pancake Heater, 240V/450W/1.9A	\$100.00	3
M4-HTR-120V-P	Varian Model M-4 DP Platen Heater, Full Assembly, 120V/1190W/10A	\$200.00	4
M4-HTR-240V-P	Varian Model M-4 DP Platen Heater, Full Assembly, 240V/1190W/5A	\$200.00	4
M6-ASY-240V	Varian Model M-6 DP Replacement Stovetop Heater, Full Assembly 240V/1785W/7.4A	\$215.00	6
M6-HTR-120V-P	Varian Model M-6 DP Platen Heater, Full Assembly, 120V/1785W/15A	\$121.00	7
M6-HTR-208V-P	Varian Model M-6 DP Platen Heater, Full Assembly, 208V/1500W/7.2A.	\$200.00	7
M6-HTR-240V	Varian Model M-6 DP Replacement Stovetop Heater, 240V/1785W/7.4A	\$121.00	5
VHS-10-HTR-208V-P	Varian Model VHS-10/VHS-400 DP Platen Heater, Full Assembly, 208V/4400W/10.6A	\$1,065.00	8
VHS-10-HTR-240V-P	Varian Model VHS-10/VHS-400 DP Platen Heater, Full Assembly, 240V/4400W/9.2 A	\$1,065.00	8
VHS-10-HTR-480V-P	Varian Model VHS-10/VHS-400 DP Platen Heater, Full Assembly, 480V/4400W/4.6A	\$1,065.00	8
VHS-4-HTR-120V-P	Varian Model VHS-4 DP Platen Heater, Full Assembly, 120V/1450W/12.1A	\$200.00	4
VHS-4-HTR-208V-P	Varian Model VHS-4 DP Platen Heater, Full Assembly, 208V/1450W/7A	\$200.00	4
VHS-4-HTR-240V-P	Varian Model VHS-4 DP Platen Heater, Full Assembly 240V/1450W/6A	\$200.00	4
VHS-6-HTR-120V-P	Varian Model VHS-6/VHS-250 DP Platen Heater, Full Assembly, 120V/2200W/18.3A	\$225.00	7
VHS-6-HTR-208V-P	Varian Model VHS-6/VHS-250 DP Platen Heater, Full Assembly, 208V/2200W/10.6A	\$225.00	7
VHS-6-HTR-240V-P	Varian Model VHS-6/VHS-250 DP Platen Heater, Full Assembly, 240V/2200W/9.2A	\$225.00	7

Diffusion Pumps

Diffusion Pump Heaters



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D Diffusion Pumps

Diffusion Pumps

Other Diffusion Pump Heaters & Heater Wire

CVC-Style Diffusion Pump Heaters

Part No.	Description	Price	Image
Duniway	--	US \$	#
CVC-115V-300W	CVC Cartridge Heater, 115V/300W. Used in 2", 3", 4", 6", & 10" diffusion pumps. CVC P/N: 065192	\$58.00	1
CVC-208V-300W	CVC Cartridge Heater, 208V/300W. Used in 2", 3", 4", 6", & 10" diffusion pumps. CVC P/N: 065192-2	\$58.00	2
CVC-230V-300W	CVC Cartridge Heater, 230V/300W. Used in 2", 3", 4", 6", & 10" diffusion pumps. CVC P/N: 065192-1	\$58.00	3
CVC-230V-250W	CVC Cartridge Heater, 230V/250W. Used in 10" diffusion pumps. CVC P/N: 270819	\$58.00	3

Veeco-Style Diffusion Pump Heaters

Part No.	Description	Price	Image
Duniway	--	US \$	#
0120-195	Veeco Model MS-90 DP Replacement 3" Pancake Heater, 115V/350W/3A	Inquire	4
0121-195	Veeco Model MS-9 DP Replacement 4" Pancake Heater, 120V/200W/1.7A	Inquire	--
1180-030	Veeco Model MS-17/MS170 DP Replacement 3" Pancake Heater, 115V/350W/3A	Inquire	4

Innotec-Style Diffusion Pump Heaters

Part No.	Description	Price	Image
Duniway	--	US \$	#
R-220-HTR-120	Innotec Model R-220 Replacement Cartridge Heater. 120V/300W/2.5A	Inquire	--

Heater Wire

Part No.	Description	Price	Image
Duniway	--	US \$	#
NSW-10	DP Heater Wire, 10 Gauge, (Rated at 22A and 350C), per Foot	\$11.00	5
NSW-12	DP Heater Wire, 12 Gauge, (Rated at 15A and 350C), per Foot	\$9.00	5
NSW-16	DP Heater Wire, 16 Gauge, (Rated at 8A and 350C), per Foot	\$9.00	5
NSW-LUG-10-12	Lug Terminals for 10/12 Gauge Wire, 10/pkg	\$6.00	6
NSW-LUG-14-16	Lug Terminals for 14/16 Gauge Wire, 10/pkg	\$6.00	7



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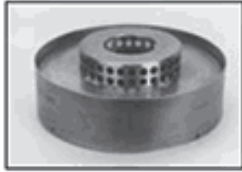


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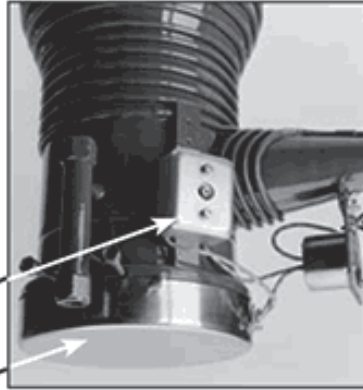


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New Varian Style Parts

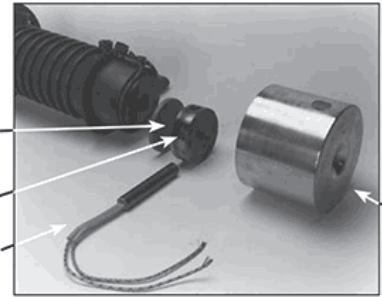


VHS-10 Splash Shield Bottom



Aluminum Cover Box

VHS-6 Bottom



Aluminum Block

Steel Platen

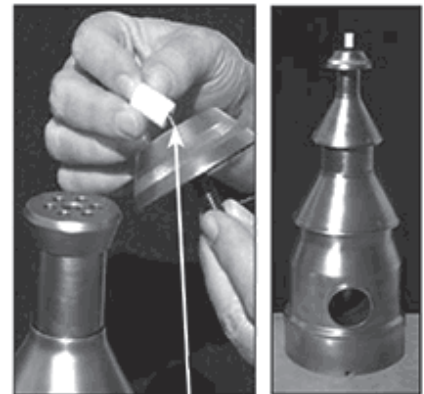
Heater

Bottom

#1) Heater Back - SST 1/4" thick, faces the bottom cover on diffusion pump.

#2) Heater Insulation - 1/4" thick alumino-silicate ceramic fiber.

#3) Heater Front - SST .035" thick, faces the stovetop type heater.



What used to be a breakable, ceramic piece, is now made available in Teflon® from Duniway Stockroom Corp.



Diffusion Pumps

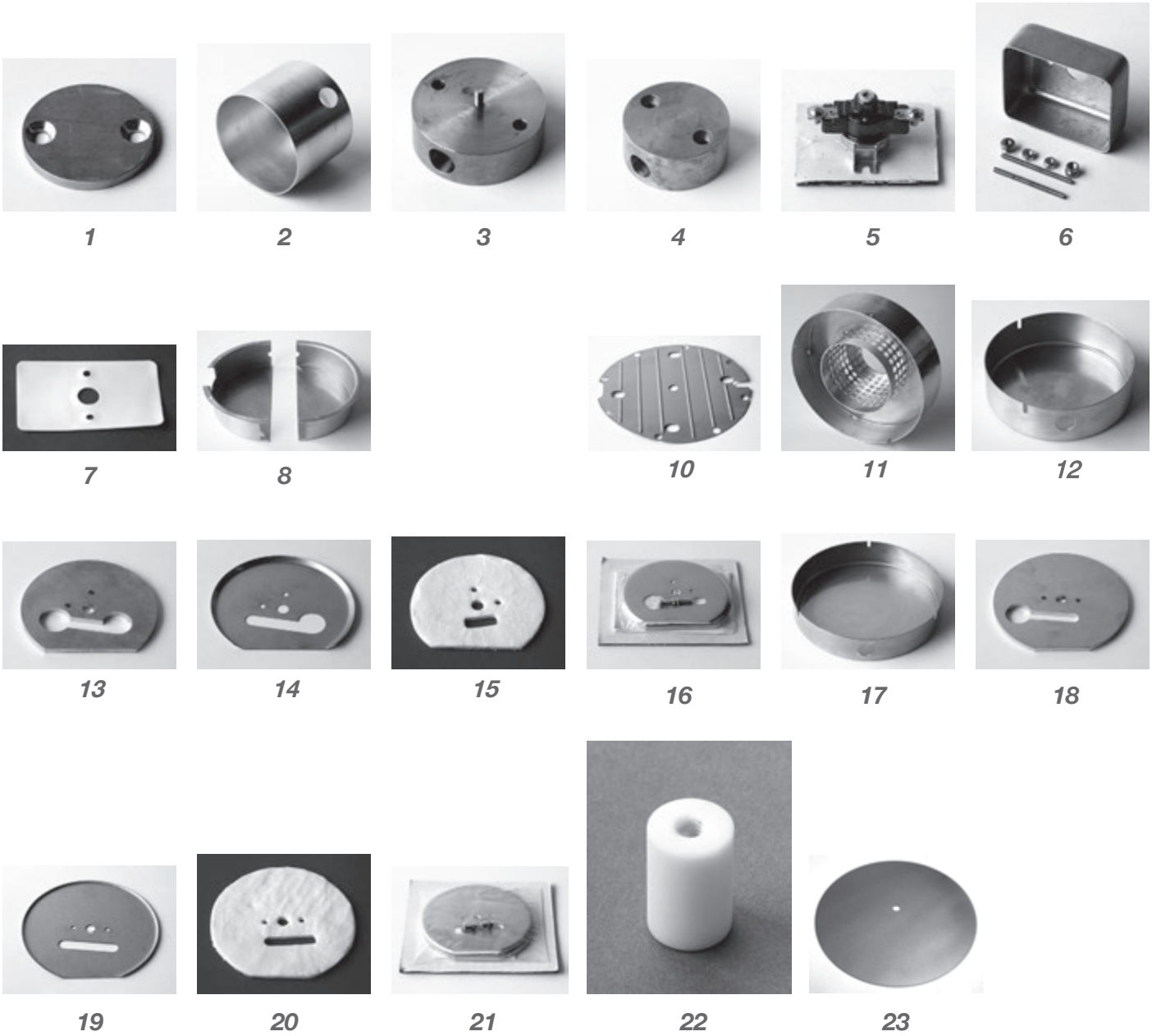
Diffusion Pump Parts

New Varian Style Parts

Part No.	Description	Price	Image
Duniway	--	US \$	#
HS2-BLOCK	Varian DP Aluminum Block HS2	\$33.00	1
HS2-BOTTOM	Varian DP Aluminum Bottom Cover HS2	\$40.00	2
HS2-PLATEN	Varian DP Steel Platen for Heater Housing HS2	\$115.00	3
HSA-PLATEN	Varian DP Steel Platen for Heater Housing HSA	\$115.00	4
VA-KLIXON-225	Varian DP Thermal Overload Switch, (M-4, M-6) 225F (106C)	\$85.00	5
VA-KLIXON-300	Varian DP Thermal Overload Switch, (VHS-4, VHS-6, VHS-10) 300F (147C)	\$75.00	5
VA-KLIXON-BOX	Varian DP Aluminum Cover Box for Thermal Overload Switch, (VHS-4, VHS-6, VHS-10, M-4, M-6) includes Threaded Studs & Brass Nuts	\$30.00	6
VA-KLIXON-TEF	Varian DP Teflon Insulation for Cover Box, Thermal Overload Switch, (VHS-4, VHS-6, VHS-10, M-4, M-6)	\$6.00	7
VHS-10-BOTTOM	Varian DP Aluminum Bottom Cover VHS-10	\$300.00	8
VHS-10-CRUSH-P	Varian DP Crush Plate VHS-10	\$90.00	10
VHS-10-SHIELD	Varian DP Splash Shield Bottom VHS-10	\$452.00	11
VHS-4-BOTTOM	Varian DP Aluminum Bottom Cover VHS-4	Inquire	12
VHS-4-HTR-BAK	Varian DP Heater Back, SST, VHS-4	\$48.00	13
VHS-4-HTR-FNT	Varian DP Heater Front, SST, VHS-4	\$45.00	14
VHS-4-HTR-INS	Varian DP Heater Insulation, Ceramic Fiber, VHS-4	\$9.00	15
VHS-4-INS-ASY	Complete Varian VHS-4 Heater Assembly, minus the heater. Includes the Heater Back, Insulation, Front and nuts/bolts.	Inquire	16
VHS-6-BOTTOM	Varian DP Aluminum Bottom Cover VHS-6	\$160.00	17
VHS-6-HTR-BAK	Varian DP Heater Back, SST, VHS-6	\$53.00	18
VHS-6-HTR-FNT	Varian DP Heater Front, SST, VHS-6	\$38.00	19
VHS-6-HTR-INS	Varian DP Heater Insulation, Ceramic Fiber, VHS-6 (Illustration #2)	\$10.00	20
VHS-6-INS-ASY	Complete Varian VHS-6 Heater Assembly, minus the 6" heater. Includes the Heater Back, Insulation, Front, and Nuts/Bolts.	\$99.00	21
VHS-JET-INS	Varian DP Teflon Insulation for Jet Stack, (VHS-4, VHS-6, VHS-10)	\$9.00	22
VHS-6-BOTTOM-FLAT	Varian VHS-6 Flat Bottom Cover	\$45.00	23

Diffusion Pumps

Diffusion Pump Parts



P

Diffusion Pumps

Diffusion Pumps

Diffusion Pump Oils

PentaVac 5™

This high performance, ultra-clean product is equivalent in performance to other PPE vacuum pump fluids.

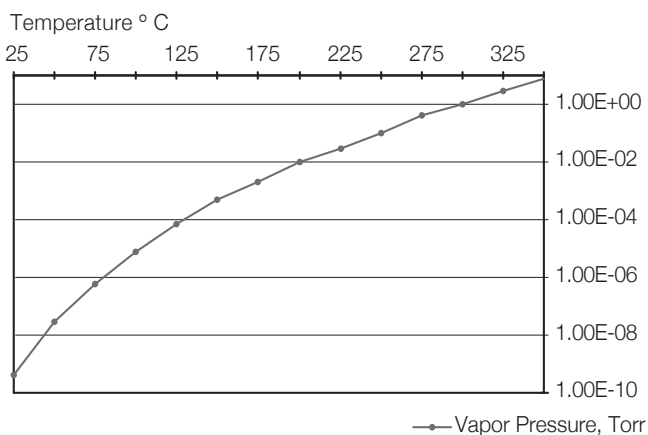
PentaVac 5™ is a polyphenyl-ether liquid for use in diffusion pump applications requiring the ultimate in thermal stability, low ultimate pressures and low backstreaming. Ultimate pressures in the 10^{-10} torr range can be achieved. Because of its low back-streaming rates, the use of this product often makes it possible to eliminate the need for traps and baffles.



PentaVac 5™ Typical Properties

Vapor Pressure @ 25 °C	4×10^{-10} Torr
Boiling Point @ 0.5 Torr	275 °C
Viscosity @ 40 °C	279.3 cst
Viscosity @ 100 °C	12.64 cst
Relative Density @ 20 °C	v1.204

Vapor Pressure Curve – PentaVac 5™



▼ Duniway offers an extensive array of Diffusion Pump Oils

Diffusion Pump Oils

Part No.	Description	Price	Image
Duniway	--	US \$	#
DS-7040-1	Diffusion Pump Oil - 1 gallon, same as DC-704	\$508.00	1
DS-7040-100	Diffusion Pump Oil - 100 cc, same as DC-704	\$35.00	2
DS-7040-500	Diffusion Pump Oil - 500 cc, same as DC-704	\$82.00	3
DS-7050-1	Diffusion Pump Oil - 1 gallon, same as DC-705	\$900.00	4
DS-7050-100	Diffusion Pump Oil - 100 cc, same as DC-705	\$40.00	5
DS-7050-500	Diffusion Pump Oil - 500 cc, same as DC-705	\$150.00	6
PENTAVAC-5-100	Diffusion Pump Oil - 100 cc, same as Santovac	\$208.00	7
PENTAVAC-5-500	Diffusion Pump Oil - 500 cc, same as Santovac	\$920.00	8
SANTOVAC-5-100	Diffusion Pump Oil - Santovac - 100 cc	\$220.00	9
SANTOVAC-5-500	Diffusion Pump Oil - Santovac - 500 cc	\$930.00	10



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Diffusion Pumps

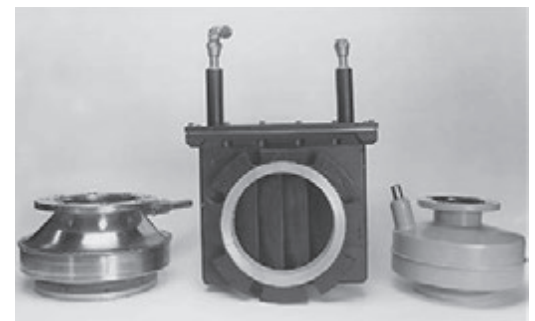
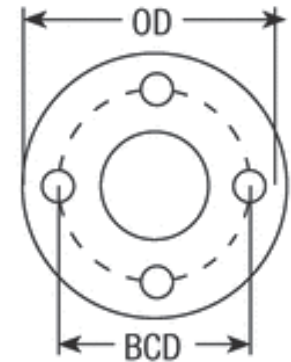
Diffusion Pump Baffles & Traps

Diffusion Pump Baffles & Traps

MFG	ANSI	Description	Cooling	Price
--	--	--	--	US \$
CVC	2	BCR-21A Alum Chevron, Ambient	Baffle	\$120.00
CVC	2	BC-21 Multi-Coolant	Trap	\$480.00
Varian	2	Conduction-Cooled Inlet Baffle	Baffle	\$180.00
Varian	2	M-2, 332 Model Water Baffle	Baffle	\$400.00
Varian	2	325 LN2	Trap	\$999.00
CPA	4	Long Life	Trap	\$1350.00
CVC	4	BCR-41A, Alum, Chevron, Ambient	Baffle	\$250.00
CVC	4	BCRW-41A, Alum, chevron, H2O-cooled	Baffle	\$560.00
CVC	4	BC-41, Multi-Coolant	Trap	\$600.00
CVC	4	BNC-41, LN2	Trap	\$900.00
Varian	4	316-4, LN2	Trap	\$500.00
Varian	4	334 M4 Water Baffle	Baffle	\$900.00
Varian	4	362-4, Long Life	Trap	\$1800.00
CPA	6	Long Life	Trap	\$1350.00
CVC	6	BC-61 Multi-Coolant	Trap	\$1000.00
CVC	6	BCN-61, LN2	Trap	\$1300.00
CVC	6	BCR-61 Alum, Chevron, Ambient	Baffle	\$300.00
CVC	6	BCRW-61 Alum, Chevron, H2O-cooled	Baffle	\$1000.00
GP	6	SST Model 224	Trap	\$1500.00
GP	6	SST Model 278	Trap	\$1800.00
Varian	6	316-6 LN2	Trap	\$1000.00
Varian	6	Model 336, Water Baffle	Baffle	\$1100.00
Varian	6	951-5212, Trap/Valve Combination	Combo	\$3700.00
Varian	6	326-6 LN2 Drawer Design	Trap	\$2000.00
Varian	6	362-6 LN2	Trap	\$2200.00
CVC	10	Chevron Baffle, H2O-cooled	Baffle	\$1300.00
CVC	10	BC-101 Multi-Coolant	Trap	\$1800.00
Varian	10	316-10 Type with LN2	Trap	\$4500.00
Varian	10	326 Type, Drawer Design with LN2 & H2O	Combo	\$4000.00

ANSI/ASA Reference

ANSI/ASA	OD	BCD	# of Bolts
lt/weight	--	--	--
2	4.00"	3.312"	6
2	6.00"	4.750"	4
4	9.00"	7.500"	8
6	11.00"	9.500"	8
10	16.00"	14.250"	12
16	23.50"	21.250"	16
20	27.50"	25.00"	20



Varian
316-4

CVC
BC-61

Varian
325

Mechanical Pumps



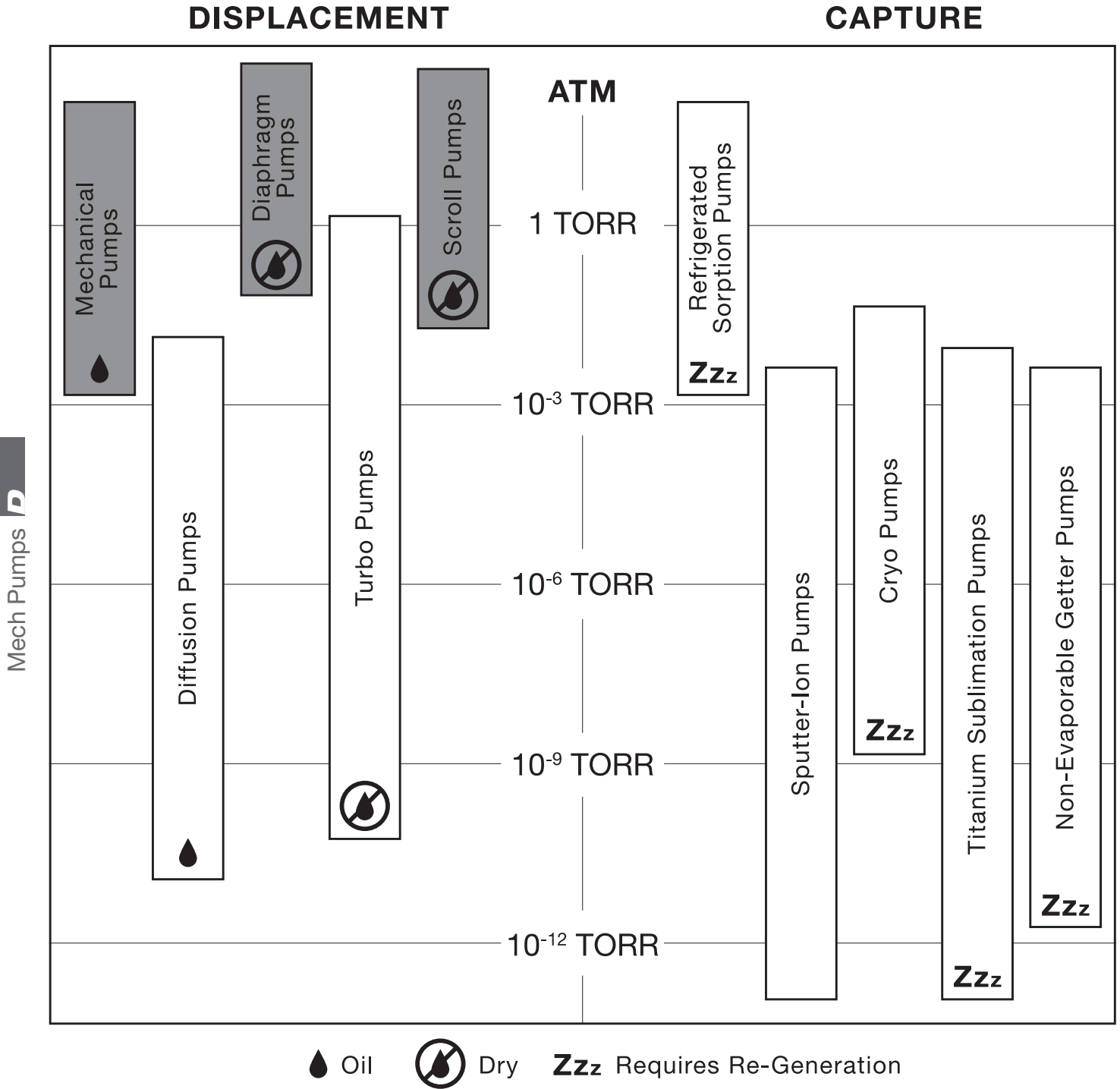
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Mech Pumps

Tech Tips

Vacuum Pumps / Types & Ranges



Mech Pumps

New Mechanical Pumps

New mechanical pumps are now available from Duniway and Welch®. All pumps are fully covered under the original equipment manufacturer's warranty for one year.

Welch®

Part No.	Description	Price	Image
Duniway	--	US \$	#
1374B-01	Mechanical Pump, Welch Model 1374, 650 L/M (23 CFM)- 2 Stage, 1-1/2 HP Single Phase, 115V	\$7,750.00	--
1374M-01	Mechanical Pump, Welch Model 1374, 650 L/M (23 CFM)- 2 Stage, 1-1/2 HP Three Phase	\$7,980.00	--
1376B-01	Mechanical Pump, Welch Model 1376, 300 L/M (10.6 CFM)- 2 Stage, 1 HP Single Phase, 115V	\$4,835.00	--
1376M-01	Mechanical Pump, Welch Model 1376, 300 L/M (10.6 CFM)- 2 Stage, 1 HP Three Phase	\$5,210.00	--
1376N-01	Mechanical Pump, Welch Model 1376N, 300 L/M (10.6 CFM)- 2 Stage Chemstar™, 1 HP Single Phase, 115V	\$5,700.00	--
1397B-01	Mechanical Pump, Welch Model 1397, 500 L/M (17.7 CFM)- 2 Stage, 1 HP Single Phase, 115V	\$6,480.00	1
1397M-01	Mechanical Pump, Welch Model 1397, 500 L/M (17.7 CFM)- 2 Stage, 1 HP Three Phase	\$6,880.00	1
1400B-01	Mechanical Pump, Welch Model 1400, 25 L/M (.9 CFM)- 2 Stage, 1/3 HP Single Phase, 115V	\$2,360.00	2
1400C-01	Mechanical Pump, Welch Model 1400, 25 L/M (.9 CFM)- 2 Stage, 1/3 HP Single Phase, 230V	\$2,490.00	2
1402B-01	Mechanical Pump, Welch Model 1402, 160 L/M (5.6 CFM)- 2 Stage, 1/2 HP Single Phase, 115V	\$3,410.00	3
1402N-01	Mechanical Pump, Welch Model 1402, 160 L/M (5.6 CFM)- 2 Stage, Chemstar(TM), 1/2 HP Single Phase, 115V	\$4,055.00	3
1402M-01	Mechanical Pump, Welch Model 1402, 160 L/M (5.6 CFM)- 2 Stage, 1/2 HP Three Phase	\$3,985.00	3
1405B-01	Mechanical Pump, Welch Model 1405, 60 L/M (3.2 CFM)- 2 Stage, 1/2 HP Single Phase, 115V	\$3,215.00	--



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Mech Pumps

Mech Pumps

Dry Pumps - New

Anest/Iwata Scroll

Applications

- Sputtering Systems
- Vacuum Cooling Systems
- Helium Leak Detector Systems
- Vacuum Furnace Systems
- Laboratory Applications
- Electron Beam Processes

Features

- Oil Free
- Improved Sealing Design
- Improved Water Handling
- Patented Air-Purge Circuit
- Latest Design Revision
- Air Cooled



▼ 1 ISP-500



▼ 2 ISP-250

Part No.	Description	Price	Image
Duniway	--	US \$	#
ISP-500	Dry Scroll Pump, Anest/Iwata, 21.2 CFM, 7.5 mTorr Base Pressure, 0.8 hp Motor, NW40 Inlet, NW25 Outlet, 102 # Weight	\$10,650.00	1
ISP-250	Dry Scroll Pump, Anest/Iwata, 10.6 CFM, 12 mTorr Base Pressure, 0.5 hp Motor, NW25 Inlet, NW16 Outlet, 55 # Weight	\$6,400.00	2

Welch WOB-L® Piston

Part No.	Description	Price
Duniway	--	US \$
2581B-24	New Dry Piston Pump, Welch WOB-L, 3.5 CFM, 5 Torr Base Pressure, 0.33 hp Motor, 1/4 NPT inlet, 30# Weight	\$2,345.00
2581B-50	New Dry Piston Pump with Regulator, Welch WOB-L, 3.5 CFM, 5 Torr Base Pressure, 0.33 hp Motor, 1/4 NPT inlet, 30# Weight	\$2,680.00

Applications

- Vacuum Drying
- Desiccation
- Aspiration
- Degassing
- Chamber Roughing



▼ Dry Piston Pump

Model 2581B-24 is wired for 115 VAC, 60Hz, single phase power. For other power requirements, please inquire.

Edwards

Part No.	Description	Price
Duniway	--	US \$
EDWARDS-E2M2	Rebuilt Edwards E2M2 Mechanical Direct Drive Pump, 57 L/M, 2 CFM, 2 Stage, Single Phase, 1/3 HP	Inquire
EDWARDS-E2M5	Rebuilt Edwards E2M5 Mechanical Direct Drive Pump, 113 L/M, 4 CFM, 2 Stage, Single Phase, .5 HP	Inquire
EDWARDS-E2M8	Rebuilt Edwards E2M8 Mechanical Direct Drive Pump, 190 L/M, 6.7 CFM, 2 Stage, Single Phase, .5 HP	Inquire
EDWARDS-E2M12	Rebuilt Edwards E2M12 Mechanical Direct Drive Pump, 289 L/M, 10.2 CFM, 2 Stage, Single Phase, .75 HP	Inquire
EDWARDS-E2M18	Rebuilt Edwards E2M18 Mechanical Direct Drive Pump, 417 L/M, 14.7 CFM, 2 Stage, Single Phase, .75 HP	\$2,200.00
EDWARDS-E2M30/E2M28	Rebuilt Edwards E2M30 Mechanical Direct Drive Pump, 650 L/M, 23 CFM, 2 Stage, Single Phase, 1.5 HP	\$2,700.00
EDWARDS-E2M40	Rebuilt Edwards E2M40 Mechanical Direct Drive Pump, 845 L/M, 30 CFM, 2 Stage, Three Phase, 2 HP	\$4,100.00
EDWARDS-E2M80	Rebuilt Edwards E2M80 Mechanical Direct Drive Pump, 1613 L/M, 57 CFM, 2 Stage, Three Phase, 3 HP	\$5,000.00
EDWARDS-E2M175	Rebuilt Edwards E2M175 Mechanical Direct Drive Pump, 3562 L/M, 1250 CFM, 2 Stage, Three Phase, 5.5 HP OR 8.7 HP	\$7,500.00
EDWARDS-E1M275	Rebuilt Edwards E1M275 Mechanical Direct Drive Pump, 5985 L/M, 210 CFM, 1 Stage, Three Phase, 11 HP	Inquire
EDWARDS-E2M275	Rebuilt Edwards E2M275 Mechanical Direct Drive Pump, 5824 L/M, 206 CFM, 2 Stage, Three Phase, 11 HP	\$8,100.00
EDWARDS-RV3	Rebuilt Edwards RV3 Mechanical Direct Drive Pump, 75 L/M, 2.7 CFM, 2 Stage, Single Phase, .5 HP	\$1,800.00
EDWARDS-RV5	Rebuilt Edwards RV5 Mechanical Direct Drive Pump, 117 L/M, 4.1 CFM, 2 Stage, Single Phase, .5 HP	\$1,900.00
EDWARDS-RV8	Rebuilt Edwards RV8 Mechanical Direct Drive Pump, 195 L/M, 6.9 CFM, 2 Stage, Single Phase, .75 HP	\$2,000.00
EDWARDS-RV12	Rebuilt Edwards RV12 Mechanical Direct Drive Pump, 283 L/M, 10 CFM, 2 Stage, Single Phase, .75 HP	\$2,200.00



Edwards E2M30

All rebuilt mechanical pumps are completely rebuilt in-house and come with our one year warranty against defective parts and workmanship. Rebuilt items are subject to availability. **Please call for stock.**

Mech Pumps

Rebuilt Pumps

Alcatel®

Part No.	Description	Price
Duniway	--	US \$
ALCATEL-2004A	Rebuilt Alcatel 2004A Mechanical Direct Drive Pump, 90 L/M, 3.2 CFM, 2 Stage, Single Phase, .5 HP	\$1,700.00
ALCATEL-2008A	Rebuilt Alcatel 2008A Mechanical Direct Drive Pump, 190 L/M, 7 CFM, 2 Stage, Single Phase, .5 HP	\$1,800.00
ALCATEL-2012A	Rebuilt Alcatel 2012A Mechanical Direct Drive Pump, 310 L/M, 11 CFM, 2 Stage, Single Phase, .75 HP	\$1,900.00
ALCATEL-2020A	Rebuilt Alcatel 2020A Mechanical Direct Drive Pump, 450 L/M, 16 CFM, 2 Stage, Single Phase, .75 HP	\$2,100.00
ALCATEL-2008AC	Rebuilt Alcatel 2008AC Mechanical Direct Drive Pump, Chemical Series, 190 L/M, 7 CFM, 2 Stage, Single Phase, .5 HP	\$1,900.00
ALCATEL-2012AC	Rebuilt Alcatel 2012AC Mechanical Direct Drive Pump, Chemical Series, 310 L/M, 11 CFM, 2 Stage, Single Phase, .75HP	\$2,200.00
ALCATEL-2005SD	Rebuilt Alcatel 2005 Mechanical Direct Drive Pump, 107 L/M, 3.8 CFM, 2 Stage, Single Phase, .5 HP	\$1,800.00
ALCATEL-2010SD	Rebuilt Alcatel 2010 Mechanical Direct Drive Pump, 191 L/M, 6.8 CFM, 2 Stage, Single Phase, .5 HP	\$1,900.00
ALCATEL-2015SD	Rebuilt Alcatel 2015 Mechanical Direct Drive Pump, 298 L/M, 10.6 CFM, 2 Stage, Single Phase, .75 HP	\$2,000.00
ALCATEL-2021SD	Rebuilt Alcatel 2021 Mechanical Direct Drive Pump, 411 L/M, 14.6 CFM, 2 Stage, Single Phase, .75 HP	\$2,200.00
ALCATEL-2021i	Rebuilt Alcatel 2021i Mechanical Direct Drive Pump, 411 L/M, 14.6 CFM, 2 Stage, Single Phase, .75 HP	\$2,200.00
ALCATEL-2033	Rebuilt Alcatel 2033 Mechanical Direct Drive Pump, 765 L/M, 27 CFM, 2 Stage, Three Phase, 1.5 HP	\$3,250.00
ALCATEL-2063	Rebuilt Alcatel 2063 Mechanical Direct Drive Pump, 1420 L/M, 50 CFM, 2 Stage, Three Phase, 3 HP	\$4,200.00
ALCATEL-2033C	Rebuilt Alcatel 2033C Mechanical Direct Drive Pump, Chemical Series, 765 L/M, 27 CFM, 2 Stage, Three Phase, 1.5 HP	\$4,200.00
ALCATEL-2033CP	Rebuilt Alcatel 2033CP Mechanical Direct Drive Pump, Chemical Plus Series, 765 L/M, 27 CFM, 2 Stage, Three Phase, 1.5 HP	\$4,200.00
ALCATEL-2063C	Rebuilt Alcatel 2063C Mechanical Direct Drive Pump, Chemical Series, 1420 L/M, 50 CFM, 2 Stage, Three Phase, 3 HP	\$5,300.00
ALCATEL-2100A	Rebuilt Alcatel 2100A Mechanical Direct Drive Pump, 2547 L/M, 90 CFM, 2 Stage, Three Phase, 4.8 HP	\$8,000.00

Kinney

Part No.	Description	Price
Duniway	--	US \$
KINNEY-KDH-150	Rebuilt Kinney KDH-150 Mechanical Pump, Motor, Base & Guard, 4245 L/M, 150 CFM, 1 Stage, 7.5 HP	\$5,300.00
KINNEY-KT-150	Rebuilt Kinney KT-150 Mechanical Pump, Motor & Guard, 4245 L/M, 150 CFM, 1 Stage, 7.5 HP	\$4,900.00
KINNEY-KT-300	Rebuilt Kinney KT-300 Mechanical Pump, Motor & Guard, 8490 L/M, 300 CFM, 1 Stage, 15 HP	\$7,900.00
KINNEY-KT-500	Rebuilt Kinney KT-500 Mechanical Pump, Motor & Guard, 13980 L/M, 494 CFM, 1 Stage, 30 HP	\$8,400.00
KINNEY-KTC-112	Rebuilt Kinney KTC-112 Mechanical Pump, Motor & Guard, 3170 L/M, 112 CFM, 2 Stage, 7.5 HP	\$7,400.00

All rebuilt mechanical pumps are completely rebuilt in-house and come with our one year warranty against defective parts and workmanship. Rebuilt items are subject to availability. **Please call for stock.**

Leybold

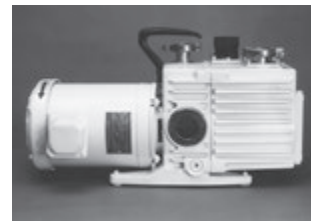
Part No.	Description	Price	Image
Duniway	--	US \$	#
LEYBOLD-D2A	Rebuilt Leybold D2A Mechanical Direct Drive Pump, 62 L/M, 2.2 CFM, 2 Stage, Single Phase, 1/3 HP	\$1,500.00	--
LEYBOLD-D4A	Rebuilt Leybold D4A Mechanical Direct Drive Pump, 127 L/M, 4.5 CFM, 2 Stage, Single Phase, 1/3 HP	\$1,700.00	1
LEYBOLD-D8A	Rebuilt Leybold D8A Mechanical Direct Drive Pump, 198 L/M, 7 CFM, 2 Stage, Single Phase, 1 HP	\$1,800.00	3
LEYBOLD-D16A	Rebuilt Leybold D16A Mechanical Direct Drive Pump, 400 L/M, 14.1 CFM, 2 Stage, Single Phase, 1 HP	\$2,000.00	--
LEYBOLD-D30A	Rebuilt Leybold D30A Mechanical Direct Drive Pump, 760 L/M, 26.8 CFM, 2 Stage, Three Phase, 1.5 HP	\$2,300.00	--
LEYBOLD-D60A	Rebuilt Leybold D60A Mechanical Direct Drive Pump, 1039 L/M, 36.7 CFM, 2 Stage, Three Phase, 2 HP	\$3,400.00	--
LEYBOLD-D90A	Rebuilt Leybold D90A Mechanical Direct Drive Pump, 1556 L/M, 55 CFM, 2 Stage, Three Phase, 3 HP	\$3,900.00	--
LEYBOLD-D4B	Rebuilt Leybold D4B Mechanical Direct Drive Pump, 96 L/M, 3.4 CFM, 2 Stage, Single Phase, 1/3 HP	\$1,800.00	2
LEYBOLD-D8B	Rebuilt Leybold D8B Mechanical Direct Drive Pump, 194 L/M, 6.9 CFM, 2 Stage, Single Phase, .5 HP	\$1,900.00	--
LEYBOLD-D16B	Rebuilt Leybold D16B Mechanical Direct Drive Pump, 378 L/M, 13.4 CFM, 2 Stage, Single Phase, 1 HP	\$2,200.00	--
LEYBOLD-D25B	Rebuilt Leybold D25B Mechanical Direct Drive Pump, 591 L/M, 20.9 CFM, 2 Stage, Three Phase, 1.5 HP	\$2,900.00	--
LEYBOLD-D40B	Rebuilt Leybold D40B Mechanical Direct Drive Pump, 920 L/M, 32.5 CFM, 2 Stage, Three Phase, 3 HP	\$4,200.00	--
LEYBOLD-D65B	Rebuilt Leybold D65B Mechanical Direct Drive Pump, 1500 L/M, 53 CFM, 2 Stage, Three Phase, 3 HP	\$5,200.00	--
LEYBOLD-D25BCS	Rebuilt Leybold D25BCS Mechanical Direct Drive Pump, Chemical Series, 591 L/M, 20.9 CFM, 2 Stage, Three Phase, 1.5 HP	\$3,400.00	--
LEYBOLD-D40BCS	Rebuilt Leybold D40BCS Mechanical Direct Drive Pump, Chemical Series, 920 L/M, 32.5 CFM, 2 Stage, Three Phase, 3 HP	\$4,900.00	--
LEYBOLD-D65BCS	Rebuilt Leybold D65BCS Mechanical Direct Drive Pump, Chemical Series, 1500 L/M, 53 CFM, 2 Stage, Three Phase, 3 HP	\$6,000.00	--
LEYBOLD-E75	Rebuilt Leybold E75 Mechanical Direct Drive Pump, 1415 L/M, 503 CFM, 1 Stage, Three Phase, 3 HP	\$4,300.00	--
LEYBOLD-E150	Rebuilt Leybold E150 Mechanical Direct Drive Pump, 28305 L/M, 100 CFM, 1 Stage, Three Phase, 5 HP	\$6,600.00	--
LEYBOLD-E250	Rebuilt Leybold E250 Mechanical Direct Drive Pump, 4839 L/M, 171CFM, 1 Stage, Three Phase, 7.5 HP	\$7,600.00	--
LEYBOLD-DK100	Rebuilt Leybold DK100 Mechanical Direct Drive Pump, 1924 L/M, 683 CFM, 2 Stage, Three Phase, 5 HP	\$7,100.00	--
LEYBOLD-DK200	Rebuilt Leybold DK200 Mechanical Direct Drive Pump, 3735 L/M, 132 CFM, 2 Stage, Three Phase, 7.5 HP	\$8,600.00	--



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All rebuilt mechanical pumps are completely rebuilt in-house and come with our one year warranty against defective parts and workmanship. Rebuilt items are subject to availability. **Please call for stock.**

Mech Pumps

Rebuilt Pumps

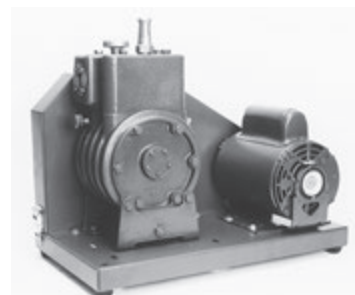
Welch®

Part No.	Description	Price	Image
Duniway	--	US \$	#
WELCH-1400	Rebuilt Welch 1400 Mechanical Pump Only, 25 L/M, .9 CFM, 2 Stage	\$1,200.00	--
WELCH-1400B	Rebuilt Welch 1400 Mechanical Pump, Motor, Base & Guard, 25 L/M, .9 CFM, 2 Stage, 1/3 HP	\$1,400.00	--
WELCH-1405	Rebuilt Welch 1405 Mechanical Pump Only, 60 L/M, 2.1 CFM, 2 Stage	\$1,375.00	2
WELCH-1405B	Rebuilt Welch 1405 Mechanical Pump, Motor, Base & Guard, 60 L/M, 2.1 CFM, 2 Stage, .5 HP	\$1,600.00	--
WELCH-1402	Rebuilt, Welch 1402 Mechanical Pump Only, 160 L/M, 5.6 CFM, 2 Stage	\$1,700.00	--
WELCH-1402B	Rebuilt, Welch 1402 Mechanical Pump, Motor, Base & Guard, 160 L/M, 5.6 CFM, 2 Stage, .5 HP	\$2,000.00	1
WELCH-1376	Rebuilt Welch 1376 Mechanical Pump Only, 300 L/M, 10.6 CFM, 2 Stage	\$1,900.00	1
WELCH-1376B	Rebuilt Welch 1376 Mechanical Pump, Motor, Base & Guard, 300 L/M, 10.6 CFM, 2 Stage, 1 HP	\$2,200.00	1
WELCH-1397	Rebuilt Welch 1397 Mechanical Pump Only, 500 L/M, 17.7 CFM, 2 Stage	\$2,500.00	1
WELCH-1397B	Rebuilt Welch 1397 Mechanical Pump, Motor, Base & Guard, 500 L/M, 17.7 CFM, 2 Stage, 1 HP	\$2,900.00	1
WELCH-1374	Rebuilt Welch 1374 Mechanical Pump Only, 650 L/M, 23 CFM, 2 Stage	\$2,700.00	1
WELCH-1374B	Rebuilt Welch 1374 Mechanical Pump, Motor, Base & Guard, 650 L/M, 23 CFM, 2 Stage, 1.5 HP	\$3,100.00	1
WELCH-1375	Rebuilt Welch 1375 Mechanical Pump Only, 1000 L/M, 35.4 CFM, 2 Stage	\$3,200.00	1
WELCH-1375B	Rebuilt Welch 1375 Mechanical Pump, Motor, Base & Guard, 1000 L/M, 35.4 CFM, 2 Stage, 2 HP	\$3,800.00	1
WELCH-1398	Rebuilt Welch 1398 Mechanical Pump Only, 1500 L/M, 53.1 CFM, 2 Stage	\$4,400.00	1
WELCH-1398B	Rebuilt Welch 1398 Mechanical Pump, Motor, Base & Guard, 1500 L/M, 53.1 CFM, 2 Stage, 3 HP	\$5,300.00	1
WELCH-1395	Rebuilt Welch 1395 Mechanical Pump Only, 2000 L/M, 71 CFM, 2 Stage	\$4,800.00	1
WELCH-1395B	Rebuilt Welch 1395 Mechanical Pump, Motor, Base & Guard, 2000 L/M, 71 CFM, 2 Stage, 5 HP	\$6,000.00	1
WELCH-1396	Rebuilt Welch 1396 Mechanical Pump Only, 2800 L/M, 99.1 CFM, 2 Stage	\$4,800.00	1
WELCH-1396B	Rebuilt Welch 1396 Mechanical Pump, Motor, Base & Guard, 2800 L/M, 99.1 CFM, 2 Stage, 7.5 HP	\$6,000.00	1

Mech Pumps



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All rebuilt mechanical pumps are completely rebuilt in-house and come with our one year warranty against defective parts and workmanship. Rebuilt items are subject to availability. **Please call for stock.**

Stokes

Part No.	Description	Price
Duniway	--	US \$
STOKES-148H-10	Rebuilt Stokes 148H-10 Mechanical Pump, Motor & Guard, 1415 L/M, 50 CFM, 1 Stage, 2 HP	\$3,600.00
STOKES-149H-11	Rebuilt Stokes 149H-11 Mechanical Pump, Motor & Guard, 2264 L/M, 80 CFM, 1 Stage, 3 HP	\$4,600.00
STOKES-212H-10	Rebuilt Stokes 212H-10 Mechanical Pump, Motor & Guard, 4245 L/M, 150 CFM, 1 Stage, 5 HP	\$7,800.00
STOKES-212H-11	Rebuilt Stokes 212H-11 Mechanical Pump, Motor & Guard, 4245 L/M, 150 CFM, 1 Stage, 7.5 HP	\$8,300.00
STOKES-412H-10	Rebuilt Stokes 412H-10 Mechanical Pump, Motor & Guard, 8490 L/M, 300 CFM, 1 Stage, 10 HP	\$8,700.00
STOKES-412H-11	Rebuilt Stokes 412H-11 Mechanical Pump, Motor & Guard, 8490 L/M, 300 CFM, 1 Stage, 10 HP	\$9,500.00
STOKES-V-017-2	Rebuilt Stokes V-017-2 Mechanical Direct Drive Pump, 1038 L/M, 36.7 CFM, 2 Stage, 2 HP	\$3,300.00
STOKES-V-023-2	Rebuilt Stokes V-023-2 Mechanical Direct Drive Pump, 1556 L/M, 55 CFM, 2 Stage, 3 HP	\$3,500.00



Mechanical Pump, Motor & Guard

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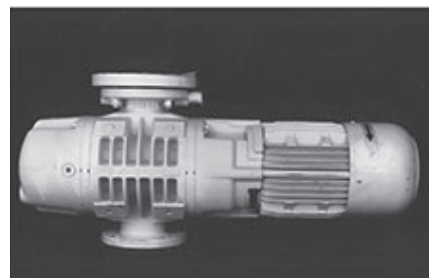
Mech Pumps

Rebuilt Pumps

Rebuilt Blowers

Duniway Stockroom Corporation performs repair and rebuilding services for a wide variety of blowers. All blowers are rebuilt at our location in Fremont, CA and each leaves with our one year warranty against defective parts and workmanship. Blowers taken in for a complete rebuild undergo the following process:

- Disassembly, inspection and cleaning.
- Total replacement of all seals, gaskets, bearings, o-rings and bushing sleeves.
- All other parts replaced as required.
- Two or more changes of hydrocarbon oil.
- Complete test run for 24 hours.
- Exterior painting and a final tagging of rebuild information.
- For a small charge, standard or chemical series pumps can be prepped for "Fomblin®" (inert fluid).



▀ Leybold WS251

Blowers

MFR	Model #	Motor	CFM	HP	Starting TORR	Cooling	Inlet/outlet flanges	Price
--	Duniway	--	--	--	--	--	--	--
Edwards	EH-250	Air	220	1.5	760	Air	ISO 63/40	\$4,500.00
Edwards	EH-500	Air	355	1.5	760	Water	ISO 100/63	\$5,800.00
Edwards	EH-1200	Air	845	3.0	760	Water	ISO 160/100	\$7,500.00
Edwards	EH-2600	Air	1830	7.5	760	Water	ISO 160/100	\$10,500.00
Leybold	WA 150	Air	104	1.5	50	Air	3 ASA	\$2,900.00
Leybold	WA 250	Air	169	1.5	50	Air	3 ASA	\$4,000.00
Leybold	WA 500	Air	341	3.0	40	Air	3 ASA	\$4,500.00
Leybold	WA 1000	Air	685	5.0	30	Air	4 ASA	\$6,500.00
Leybold	WA 2000	Air	1383	10.0	20	Air	6 ASA	\$9,600.00
Leybold	WAU 250	Air	169	1.5	760	Air	3 ASA	\$4,000.00
Leybold	WAU 251	Air	169	1.5	760	Air	3 ASA	\$4,250.00
Leybold	WAU 500	Air	341	3.0	760	Air	3 ASA	\$4,800.00
Leybold	WAU 501	Air	341	3.0	760	Air	3 ASA	\$5,250.00
Leybold	WS 151	Canned	100	0.8	10	Air	3 ASA	\$3,700.00
Leybold	WS 250	Canned	164	0.8	10	Air	3 ASA	\$4,100.00
Leybold	WS 251	Canned	164	0.8	10	Air	3 ASA	\$4,900.00
Leybold	WS 500	Canned	331	1.5	10	Air	3 ASA	\$5,200.00
Leybold	WS 1001	Canned	666	3.5	10	Air	4 ASA	\$7,200.00
Leybold	WS 2000	Canned	1342	7.0	10	Air	6 ASA	\$10,500.00
Leybold	WSU 151	Canned	100	0.8	760	Air	3 ASA	\$4,400.00
Leybold	WSU 500	Canned	331	1.7	760	Air	3 ASA	\$5,900.00
Leybold	WSU 501	Canned	331	1.6	760	Air	3 ASA	\$6,200.00
Stokes	306	Air	245	2.0	20	Air	3 ASA	\$3,700.00
Stokes	310	Air	400	2.0	20	Air	4 ASA	\$4,700.00

Rebuilt equipment is completely rebuilt in-house and comes with our one year warranty against defective parts and workmanship. Rebuilt items are subject to availability. **Please call for stock.**

Blower Packages

MFR	Model #	CFM	Phase	Volts	Price
--	Duniway	--	--	--	US \$
Edwards	E2M80/EH500	282	Three	208/230	\$11,000.00
Edwards	E2M175/EH2600	1900	Three	208/230	\$18,000.00
Leybold	D25BCS/WS151	108	Three	208/230	\$6300.00
Leybold	D40BCS/WS251	179	Three	208/230	\$8800.00
Leybold	S30/WAU150	108	Three	208/230	\$6000.00
Leybold	D65BCS/WS251	179	Three	208/230	\$9900.00



▸ D40 BCS/WS 151

Blower Rebuilding Services

MFR	Model #	Price
--	Duniway	US \$
Leybold	WA/WAU/WS/WSU 150, 151, 250, 251	\$1,500.00
Leybold	WA/WAU/WS/WSU 500, 501	\$1,700.00
Leybold	WA/WAU/WS/WSU 1000, 1001	\$2,000.00
Leybold	WA/WAU/WS/WSU 2000, 2001	\$2,750.00
Stokes	306-401	\$1,500.00
Stokes	310-401	\$1,500.00
Edwards	EH250	\$1,950.00
Edwards	EH500	\$1,950.00
Edwards	EH1200	\$2,750.00
Edwards	EH2600	\$3,500.00



D40 BCS/WS 151 ▾

All rebuilt mechanical pumps are completely rebuilt in-house and come with our one year warranty against defective parts and workmanship. Rebuilt items are subject to availability. **Please call for stock.**

Mech Pumps

Oils

Mechanical Pump Oil



Mech Pumps **D**

Fomblin® is compatible and can be mixed with certain inert fluids from other manufacturers. **Please call for stock.**

Fomblin® Units conversion

1 Quart = 1.79 Kilograms = 3.93 Pounds
 1 Gallon = 7.16 Kilograms = 15.74 Pounds

Duniway Equivalent

	MPO-190	MPO-200
CVC	70/19	Convoil™ 20
Inland	Inland 19	Invoil 20
Leybold	HE-175	HE-200
Welch®	--	

▀ Table of equivalent oils

Table of Equivalent Oils

	Duniway Equivalent	
	MPO-190	MPO-200
CVC	70/19	Convoil™ 20
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Leybold	HE-175	HE-200
Welch®	--	

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 1 Gallon = 7.15 Kilograms = 15.74 Pounds



▼ Mechanical Pump Oil

Mechanical Pump Oils

Part No.	Description	Price
Duniway	--	US \$
MPO-190-1	Mechanical Pump Oil - 1 gallon, General Use, Direct Drive	\$25.00
MPO-190-4	Mechanical Pump Oil - 4 gallons, General Use, Direct Drive	\$80.00
MPO-190-5	Mechanical Pump Oil - 5 gallons, General Use, Direct Drive	\$100.00
MPO-190-55	Mechanical Pump Oil - 55 gallons, General Use, Direct Drive	\$845.00
MPO-195-1	Mechanical Pump Oil - 1 gallon, High Viscosity Piston Pump	\$25.00
MPO-195-4	Mechanical Pump Oil - 4 gallons, High Viscosity Piston Pump	\$80.00
MPO-195-5	Mechanical Pump Oil - 5 gallons, High Viscosity Piston Pump	\$100.00
MPO-195-55	Mechanical Pump Oil - 55 gallons, High Viscosity Piston Pump	\$845.00
MPO-200-1	Mechanical Pump Oil - 1 gallon, General Use Hydrocarbon	\$50.00
MPO-200-4	Mechanical Pump Oil - 4 gallons, General Use Hydrocarbon	\$185.00
MPO-200-5	Mechanical Pump Oil - 5 gallons, General Use Hydrocarbon	\$220.00
MPO-200-55	Mechanical Pump Oil - 55 gallons, General Use Hydrocarbon	\$1,800.00
TWO-QRT	Mechanical Pump Technical White Oil - 1 quart, Harsh Use Hydrocarbon	\$15.00
TWO-1	Mechanical Pump Technical White Oil - 1 gallon, Harsh Use Hydrocarbon	\$55.00
TWO-4	Mechanical Pump Technical White Oil - 4 gallons, Harsh Use Hydrocarbon	\$195.00
TWO-5	Mechanical Pump Technical White Oil - 5 gallons, Harsh Use Hydrocarbon	\$230.00
TWO-55	Mechanical Pump Technical White Oil - 55 gallons, Harsh Use Hydrocarbon	\$2,020.00
DSFF-1	Flushing Fluid - 1 gallon, General Purpose	\$18.00
DSFF-4	Flushing Fluid - 4 gallons, General Purpose	\$62.00
DSFF-5	Flushing Fluid - 5 gallons, General Purpose	\$80.00
DSFF-55	Flushing Fluid - 55 gallons, General Purpose	\$755.00
DS-06-6	Mechanical Pump Oil-1 kg-PFPE Inert Fluid, Equal to Fomblin 06-6; Viscosity 64 cST	\$250.00
DS-14-6	Mechanical Pump Oil - 1 kg - PFPE Inert Fluid, Equal to Fomblin 14-6; Viscosity 148 cST	\$250.00
DS-16-6	Mechanical Pump Oil - 1 kg - PFPE Inert Fluid, Equal to Fomblin 16-6; Viscosity 168 cST	\$250.00
DS-25-6	Mechanical Pump Oil - 1 kg - PFPE Inert Fluid, Equal to Fomblin 25-6; Viscosity 276 cST	\$250.00
DSFF-PFPE-1	Flushing Fluid - 1 gallon, PFPE	\$715.00
DSFF-PFPE-HLF	Flushing Fluid - 1/2 gallon, PFPE	\$365.00
DSFF-PFPE-QRT	Flushing Fluid - Quart, PFPE	\$190.00
MPO-45-1	Mechanical Pump Oil - 1 gallon, Synthetic	\$130.00
MPO-45-4	Mechanical Pump Oil - 4 gallons, Synthetic	\$500.00
MPO-45-5	Mechanical Pump Oil - 5 gallons, Synthetic	\$600.00

Mech Pumps

Oils

Mechanical Pump Oils

Part No.	Description	Price
Duniway	--	US \$
MPO-55-1	Mechanical Pump Oil - 1 gallon, High Viscosity Synthetic	\$210.00
MPO-55-4	Mechanical Pump Oil - 4 gallons, High Viscosity Synthetic	Inquire
MPO-55-5	Mechanical Pump Oil - 5 gallons, High Viscosity Synthetic	Inquire
MPO-80-1	Mechanical Pump Oil - 1 gallon, Plasma Systems, Hydrocarbon	\$85.00
MPO-80-4	Mechanical Pump Oil - 4 gallons, Plasma Systems, Hydrocarbon	\$320.00
MPO-80-5	Mechanical Pump Oil - 5 gallons, Plasma Systems, Hydrocarbon	\$375.00
MPO-ULTRA19-1	Mechanical Pump Oil - 1gallon, Semi-Synthetic, Ultra 20	\$65.00
MPO-ULTRA19-4	Mechanical Pump Oil - 4 gallons, Semi-Synthetic, Ultra 20	\$235.00
MPO-ULTRA19-5	Mechanical Pump Oil - 5 gallons, Semi-Synthetic, Ultra 20	\$265.00
MPO-ULTRA20-1	Mechanical Pump Oil - 1gallon, Semi-Synthetic, Ultra 20	\$65.00
MPO-ULTRA20-4	Mechanical Pump Oil - 4 gallons, Semi-Synthetic, Ultra 20	\$235.00
MPO-ULTRA20-5	Mechanical Pump Oil - 5 gallons, Semi-Synthetic, Ultra 20	\$265.00
MPO-ULTRA70-1	Mechanical Pump Oil - 1 gallon, Semi-Synthetic, Ultra 70	\$65.00
MPO-ULTRA70-4	Mechanical Pump Oil - 4 gallons, Semi-Synthetic, Ultra 70	\$235.00
MPO-ULTRA70-5	Mechanical Pump Oil - 5 gallons, Semi-Synthetic, Ultra 70	\$265.00

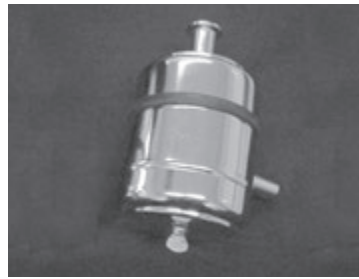
Alcatel Style Filters

High quality accessories are available for your pump including intake & exhaust nipples, exhaust filters, and replacement cartridges. These are Duniway parts which are equivalent to those of the original manufacturers.

Part No.	Description	Price	Image
Duniway	--	US \$	#
FX-KF25	Exhaust Filter: Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, E2M18, E2M30, Leybold D8A, D16A, Welch 1402, 1375	\$168.00	1
FX-KF25-DB	Drainback Filter, Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, Leybold D8A, D16A, Welch 1402	\$225.00	2
FX-KF40	Exhaust Filter: Alcatel Models 2033, 2063, Edwards Models E2M40, E2M80, Leybold Models D30A, D60A, D90A, Welch Models 1397, 1374	\$263.00	3
FXR-KF25	Replacement Cartridge, Exhaust Filter: Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, E2M18, E2M30, Leybold D8A, D16A, Welch 1402, 1375	\$46.00	4
FXR-DB	Replacement Cartridge, Drainback Filter: Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, Leybold D8A, D16A, Welch 1402 (1/2" Taller than Orig.)	\$38.00	5
FXR-KF40	Replacement Cartridge, Exhaust Filter: Alcatel 2033, 2063, Edwards E2M40, E2M80, Leybold D30A, D60A, D90A, Welch 1374-1375, 1395-1398	\$68.00	6



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New foreline traps are also available. **See page 112.**

Mech Pumps

Exhaust Filters

Edwards Style Filters

Part No.	Description	Price	Image #
Duniway	--	US \$	#
FX-KF25	Exhaust Filter: Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, E2M18, E2M30, Leybold D8A, D16A, Welch 1402, 1375	\$168.00	1
FX-KF25-DB	Drainback Filter, Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, Leybold D8A, D16A, Welch 1402	\$225.00	2
FX-KF40	Exhaust Filter: Alcatel Models 2033, 2063, Edwards Models E2M40, E2M80, Leybold Models D30A, D60A, D90A, Welch Models 1397, 1374	\$263.00	3
FXR-KF25	Replacement Cartridge, Exhaust Filter: Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, E2M18, E2M30, Leybold D8A, D16A, Welch 1402, 1375	\$46.00	4
FXR-DB	Replacement Cartridge, Drainback Filter: Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, Leybold D8A, D16A, Welch 1402 (1/2" Taller than Orig.)	\$38.00	5
FXR-KF40	Replacement Cartridge, Exhaust Filter: Alcatel 2033, 2063, Edwards E2M40, E2M80, Leybold D30A, D60A, D90A, Welch 1374-1375, 1395-1398	\$68.00	6
KF40-NR25	KF40 Flange, Reducing Nipple to KF25	\$40.00	7
NP-C10501014	Nipple, Intake or Exhaust, Mod E2M2, E2M5, E2M8 (Pump to KF25) Nipple, Exhaust Only, Mod E2M12, E2M18, E2M30, RV-3, RV-5, RV-8, RV-12 (Pump to KF25)	\$66.00	8



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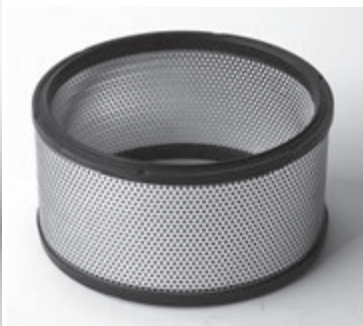
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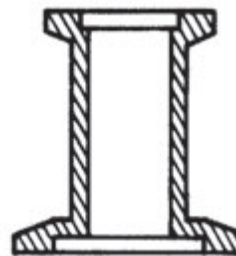
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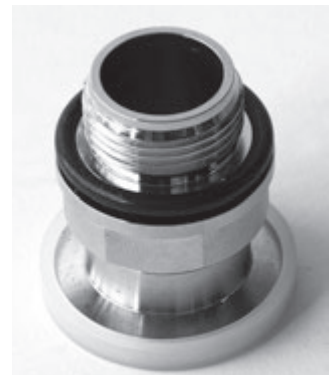
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New foreline traps are also available. **See page 112.**

Leybold Style Filters

Part No.	Description	Price	Image
Duniway	--	US \$	#
FX-KF16	Exhaust Filter, Models D2A, D4A	\$105.00	1
FX-KF25	Exhaust Filter: Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, E2M18, E2M30, Leybold D8A, D16A, Welch 1402, 1375	\$168.00	2
FX-KF25-DB	Drainback Filter, Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, Leybold D8A, D16A, Welch 1402	\$225.00	3
FX-KF40	Exhaust Filter: Alcatel Models 2033, 2063, Edwards Models E2M40, E2M80, Leybold Models D30A, D60A, D90A, Welch Models 1397, 1374	\$263.00	4
FXR-KF16	Replacement Cartridge, Exhaust Filter, Models D2A, D4A	\$20.00	5
FXR-KF25	Replacement Cartridge, Exhaust Filter: Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, E2M18, E2M30, Leybold D8A, D16A, Welch 1402, 1375	\$46.00	6
FXR-DB	Replacement Cartridge, Drainback Filter: Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, Leybold D8A, D16A, Welch 1402 (1/2" Taller than Orig.)	\$38.00	7
FXR-KF40	Replacement Cartridge, Exhaust Filter: Alcatel 2033, 2063, Edwards E2M40, E2M80, Leybold D30A, D60A, D90A, Welch 1374-1375, 1395-1398	\$68.00	8



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New foreline traps are also available. **See page 112.**

Mech Pumps

Exhaust Filters

Welch Style Filters



Part No.	Description	Price	Image
Duniway	--	US \$	#
AD-1397	Adapter, Needed for FX-1402	Inquire	1
DC-1400	Dust Cap, Models 1400, 1405	Inquire	2
DC-1402	Dust Cap, Models 1402, 1376	\$25.00	3
FX-1397-DB	Exhaust Filter, Drainback, Model 1397	\$336.00	4
FX-1397DB-SEAL	Replacement Seal, Exhaust Filter, Drainback, Model 1397	\$18.00	5
FX-1400	Exhaust Filter, Models 1400, 1405	\$110.00	6
FX-1402	Exhaust Filter, Disposable, for Models 1402 & 1376 (Needs AD-1397 Adapter to fit on 1397)	\$68.00	7
FX-1402-DB	Exhaust, Filter, Drainback, Model 1402	\$225.00	8
FX-1402DB-SEAL	Replacement Seal, Exhaust Filter, Drainback, Model 1402	\$17.50	9
FX-KF25	Exhaust Filter: Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, E2M18, E2M30, Leybold D8A, D16A, Welch 1402, 1375	\$168.00	10
FX-KF25-DB	Drainback Filter, Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, Leybold D8A, D16A, Welch 1402	\$225.00	11
FX-KF40	Exhaust Filter: Alcatel Models 2033, 2063, Edwards Models E2M40, E2M80, Leybold Models D30A, D60A, D90A, Welch Models 1397, 1374	\$263.00	12
FXR-1397-DB	Replacement Cartridge, Exhaust Filter, Drainback, Model 1397	\$55.00	13
FXR-1400	Replacement Cartridge, Exhaust Filter, Models 1400, 1405	\$26.50	14
FXR-KF25	Replacement Cartridge, Exhaust Filter: Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, E2M18, E2M30, Leybold D8A, D16A, Welch 1402, 1375	\$46.00	15
FXR-DB	Replacement Cartridge, Drainback Filter: Alcatel 2004A, 2008A, 20012A, 2020A, Edwards E2M2, E2M5, E2M8, E2M12, Leybold D8A, D16A, Welch 1402 (1/2" Taller than Orig.)	\$38.00	16
FXR-KF40	Replacement Cartridge, Exhaust Filter: Alcatel 2033, 2063, Edwards E2M40, E2M80, Leybold D30A, D60A, D90A, Welch 1374-1375, 1395-1398	\$68.00	17
KF16-1400	KF16 Flange to Welch 1400 Pump Inlet	\$79.00	18
KF16-1405	Nipple, Intake or Exhaust, Model 1405	\$92.00	19
KF25-1402	KF25 Flange to Welch 1402 Pump Intake or Exhaust, Model 1376 Exhaust Only	\$84.00	20
KF40-1397	KF40 Flange to Welch 1397 or 1374 Pump Intake or Exhaust	\$110.00	21



New foreline traps are also available. **See page 112.**

Oil Filters for Leybold OF1000 filtration Systems



Replacement oil filters for all (single, dual, triple) Leybold OF1000 filtration systems.

Part No.	Description	Price	Image #
Duniway	--	US \$	#
OF-AA-606	Replacement Cartridge, Activated Alumina, (Replaces Leybold 898504). Element provides 10 micron particulate retention and is extremely effective for Lewis acids and polar compounds.	\$64.00	1
OF-FE-606	Replacement Cartridge, Fullers Earth, (Replaces Leybold 898505). Element provides high capacity for standard acids and can be used to trap particulates down to 10 micron in size.	\$69.00	2
OF-PP-606-10	Replacement Cartridge, Pleated Paper, (Replaces Leybold 898507). Suitable for particulate removal down to 10 micron in size.	\$58.00	3



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Mech Pumps

Intake Traps

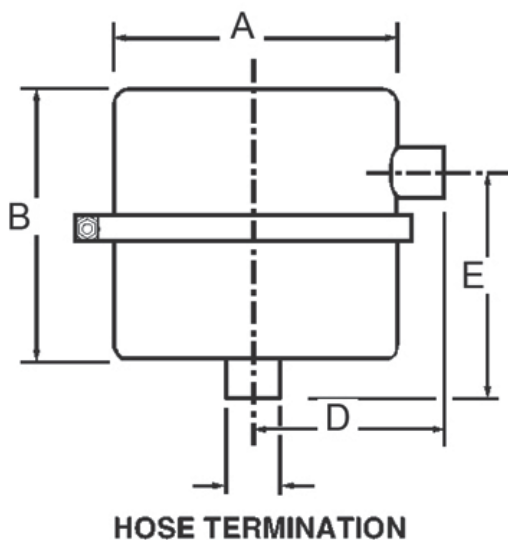
Posi Traps®

POSI-TRAP®

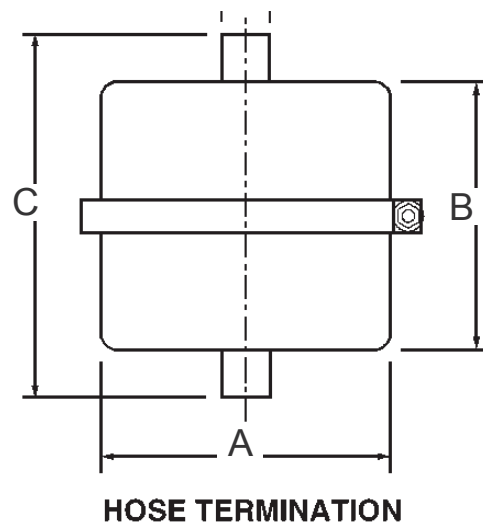
Posi-Trap vacuum inlet trap filter elements are sealed at both the inlet and exhaust to provide positive trapping of the effluent gas stream and eliminate "blow-by." Forcing all particulates to pass through the filter medium, the Posi-Trap comes in a 4" (25 mm ports) model which uses one user selectable filter element and an 8" (40 mm ports) model that holds four filter elements. Made from stainless steel in straight-thru and right-angle styles, they are equipped with a quick-release clamp for easily changing the filter elements.

Key Features

- Ensures positive flow with no "blow-by."
- All stainless steel construction.
- Straight-thru and right angle styles offered.
- Wide variety of filter elements to choose from:
 1. Sodasorb® filter elements are used for trapping acids.
 2. Copper Gauze filter elements have a large surface area to trap condensable particles and oil vapors.
 3. Stainless Steel gauze filter elements are the same as copper but with added corrosion protection.
 4. PolyPro 2 filter elements trap high volumes of solids and particulates as small as 2 microns.
 5. PolyPro 5 filter elements trap high volumes of solids and particulates as small as 5 microns.
 6. Activated Charcoal filter elements remove Lewis acids, polar compounds, other acids, water, and particles.
 7. Activated Alumina filter elements remove organic vapors.



▼ Right Angle



▼ Straight Through

Posi Traps®

Part No.	Description	Price
Duniway	--	US \$
P-4RA-25-AC	POSI TRAP, Right Angle, Activated Charcoal Element, NW25 Flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", D : 3.5", E: 5.8", Port OD: 1.0"	\$370.00
P-4RA-25-CU	POSI TRAP, Right Angle, Copper Gauze Element, NW25 Flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", D : 3.5", E: 5.8", Port OD: 1.0"	\$370.00
P-4RA-25-P2	POSI TRAP, Right Angle, PolyPro 2 Element, NW25 Flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", D : 3.5", E: 5.8", Port OD: 1.0"	\$370.00
P-4RA-25-P5	POSI TRAP, Right Angle, PolyPro 5 Element, NW25 Flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", D : 3.5", E: 5.8", Port OD: 1.0"	\$370.00
P-4RA-25-SD	POSI TRAP, Right Angle, Sodasorb Element, NW25 Flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", D : 3.5", E: 5.8", Port OD: 1.0"	\$370.00
P-4RA-25-SS	POSI TRAP, Right Angle, Stainless Steel Gauze Element, NW25 Flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", D : 3.5", E: 5.8", Port OD: 1.0"	\$370.00
P-4RA-40-AC	POSI TRAP, Right Angle, Activated Charcoal Element, NW40 Flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", D : 3.5", E: 5.8", Port OD: 1.5"	\$425.00
P-4RA-40-CU	POSI TRAP, Right Angle, Copper Gauze Element, NW40 Flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", D : 3.5", E: 5.8", Port OD: 1.5"	\$425.00
P-4RA-40-P2	POSI TRAP, Right Angle, PolyPro 2 Element, NW40 Flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", D : 3.5", E: 5.8", Port OD: 1.5"	\$425.00
P-4RA-40-P5	POSI TRAP, Right Angle, PolyPro 5 Element, NW40 Flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", D : 3.5", E: 5.8", Port OD: 1.5"	\$425.00
P-4RA-40-SD	POSI TRAP, Right Angle, Sodasorb Element, NW40 Flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", D : 3.5", E: 5.8", Port OD: 1.5"	\$425.00
P-4RA-40-SS	POSI TRAP, Right Angle, Stainless Steel Gauze Element, NW40 Flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", D : 3.5", E: 5.8", Port OD: 1.5"	\$425.00
P-8RA-40-SD	POSI TRAP, Right Angle, Sodasorb Element, NW40 Flanges, A (Body OD): 8.0", B (Body Ht.): 7.6", D : 5.5", E: 8.4", Port OD: 1.5"	\$835.00
P-8RA-40-SS	POSI TRAP, Right Angle, Stainless Steel Gauze Element, NW40 Flanges, A (Body OD): 8.0", B (Body Ht.): 7.6", D : 5.5", E: 8.4", Port OD: 1.5"	\$835.00
P-8RA-50-SD	POSI TRAP, Right Angle, Sodasorb Element, NW50 Flanges, A (Body OD): 8.0", B (Body Ht.): 7.6", D : 5.5", E: 8.4", Port OD: 1.5"	\$870.00
P-8RA-50-SS	POSI TRAP, Right Angle, Stainless Steel Gauze Element, NW50 Flanges, A (Body OD): 8.0", B (Body Ht.): 7.6", D : 5.5", E: 8.4", Port OD: 1.5"	\$870.00
P-4ST-25-AC	POSI TRAP, Straight Through, Activated Charcoal Element, NW25 flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", C (Total Ht.): 8.0", Port OD: 1	\$360.00
P-4ST-25-CU	POSI TRAP, Straight Through, Copper Gauze Element, NW25 flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", C (Total Ht.): 8.0", Port OD: 1.0"	\$360.00
P-4ST-25-P2	POSI TRAP, Straight Through, PolyPro 2 Element, NW25 flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", C (Total Ht.): 8.0", Port OD: 1.0"	\$360.00
P-4ST-25-P5	POSI TRAP, Straight Through, PolyPro 5 Element, NW25 flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", C (Total Ht.): 8.0", Port OD: 1.0"	\$360.00
P-4ST-25-SD	POSI TRAP, Straight Through, Sodasorb Element, NW25 Flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", C (Total Ht.): 8.0", Port OD: 1.0"	\$360.00
P-4ST-25-SS	POSI TRAP, Straight Through, Stainless Steel Gauze Element, NW25 flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", C (Total Ht.): 8.0", Port OD: 1	\$360.00
P-4ST-40-AC	POSI TRAP, Straight Through, Activated Charcoal Element, NW40 flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", C (Total Ht.): 8.0", Port OD: 1.5"	\$425.00
P-4ST-40-CU	POSI TRAP, Straight Through, Copper Gauze Element, NW40 flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", C (Total Ht.): 8.0", Port OD: 1.5"	\$425.00
P-4ST-40-P2	POSI TRAP, Straight Through, PolyPro 2 Element, NW40 flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", C (Total Ht.): 8.0", Port OD: 1.5"	\$425.00
P-4ST-40-P5	POSI TRAP, Straight Through, PolyPro 5 Element, NW40 flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", C (Total Ht.): 8.0", Port OD: 1.5"	\$425.00
P-4ST-40-SD	POSI TRAP, Straight Through, Sodasorb Element, NW40 flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", C (Total Ht.): 8.0", Port OD: 1.5"	\$425.00
P-4ST-40-SS	POSI TRAP, Straight Through, Stainless Steel Gauze Element, NW40 flanges, A (Body OD): 4.0", B (Body Ht.): 5.7", C (Total Ht.): 8.0", Port OD: 1.5"	\$425.00
P-8ST-40-CU	POSI TRAP, Straight Through, Copper Gauze Element, NW40 Flanges, A (Body OD): 8.0", B (Body Ht.): 7.6", C (Total Ht.): 11.0", Port OD: 1.5"	\$820.00
P-8ST-40-SD	POSI TRAP, Straight Through, Sodasorb Element, NW40 Flanges, A (Body OD): 8.0", B (Body Ht.): 7.6", C (Total Ht.): 11.0", Port OD: 1.5"	\$820.00
P-8ST-40-SS	POSI TRAP, Straight Through, Stainless Steel Gauze Element, NW40 Flanges, A (Body OD): 8.0", B (Body Ht.): 7.6", C (Total Ht.): 11.0", Port OD: 1.5"	\$820.00
P-8ST-50-SD	POSI TRAP, Straight Through, Sodasorb Element, NW50 Flanges, A (Body OD): 8.0", B (Body Ht.): 7.6", C (Total Ht.): 11.0", Port OD: 1.5"	\$840.00
P-8ST-50-SS	POSI TRAP, Straight Through, Stainless Steel Gauze Element, NW50 Flanges, A (Body OD): 8.0", B (Body Ht.): 7.6", C (Total Ht.): 11.0", Port OD: 1.5"	\$840.00
FE-CU	Filter Element, POSI TRAP, Copper Gauze	\$42.00
FE-P2	Filter Element, POSI TRAP, PolyPro 2	\$40.00
FE-P5	Filter Element, POSI TRAP, PolyPro 5	\$40.00
FE-SD	Filter Element, POSI TRAP, Sodasorb	\$38.00
FE-SS	Filter Element, POSI TRAP, Stainless Steel Gauze	\$46.00
FE-AA	Filter Element, POSI AND VISI TRAP, Activated Alumina	\$40.00
FE-AC	Filter Element, POSI AND VISI TRAP, Activated Charcoal	\$38.00

Mech Pumps

Intake Traps

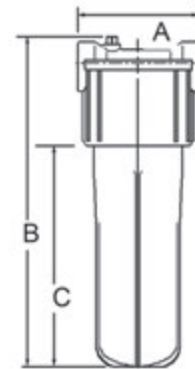
Visi Traps®

VISI-TRAP®

The Visi-Trap® features a transparent sump which contains a filter element that traps foreign particles and vapors to protect the pump from corrosion and reduce oil backstreaming. Easily tailored to user requirements, two sizes, and a variety of filtration and termination (flanges) options are available.

Key Features

- Can be mounted horizontally or vertically.
- Protects vacuum pumps from foreign materials.
- Transparent sump for visual monitoring.
- Select filter elements for trapping particles, water, oil or corrosive chemicals.
- Filter elements can be easily changed without breaking down the vacuum system.



▼ VISI-TRAP, Straight In-Line

Part No.	Description	Price
Duniway	--	US \$
V-45A-25	VISI-TRAP, Straight In-Line, Activated Alumina Element, NW25 Flanges, A (Body OD): 5.5", B (Total Ht): 9.25", C (Body Ht): 4.5", Port OD: 0.75"	\$220.00
V-45C-25	VISI-TRAP, Straight In-Line, Activated Charcoal Element, NW25 Flanges, A (Body OD): 5.5", B (Total Ht): 9.25", C (Body Ht): 4.5", Port OD: 0.75"	\$220.00
V-45S-25	VISI-TRAP, Straight In-Line, Sodorb Element, NW25 Flanges, A (Body OD): 5.5", B (Total Ht): 9.25", C (Body Ht): 4.5", Port OD: 0.75"	\$220.00
V-95A-25	VISI-TRAP, Straight In-Line, Activated Alumina Element, NW25 Flanges, A (Body OD): 5.5", B (Total Ht.): 14.12", C (Body Ht.): 9.5", Port OD: 0.75"	\$240.00
V-95C-25	VISI-TRAP, Straight In-Line, Activated Charcoal Element, NW25 Flanges, A (Body OD): 5.5", B (Total Ht.): 14.12", C (Body Ht.): 9.5", Port OD: 0.75"	\$240.00
V-95S-25	VISI-TRAP, Straight In-Line, Sodorb Element, NW25 Flanges, A (Body OD): 5.5", B (Total Ht.): 14.12", C (Body Ht.): 9.5", Port OD: 0.75"	\$240.00
FE-AA	Filter Element, VISI-TRAP, Activated Alumina, 1/trap	\$40.00
FE-AC	Filter Element, VISI-TRAP, Activated Charcoal, 1/trap	\$38.00
FE-SD	Filter Element, VISI-TRAP, Sodorb, 1/trap	\$38.00
FE-SS	Filter Element, VISI-TRAP, Stainless Steel, 1/trap	\$46.00
FE-AA-95	Filter Element, VISI TRAP, Activated Alumina, 1/trap	\$50.00
FE-AC-95	Filter Element, VISI TRAP, Activated Charcoal, 1/trap	\$50.00
FE-SD-95	Filter Element, VISI-TRAP, Sodorb, 1/trap	\$50.00
FE-CU	Filter Element, POSI and VISI-TRAP, Copper Gauze	\$42.00
FE-P2	Filter Element, POSI and VISI-TRAP, Poly Pro 2	\$40.00
FE-P5	Filter Element, POSI and VISI-TRAP, Poly Pro 5	\$40.00

Solberg Intake/Exhaust Traps

Part No.	Description	Price
Duniway	--	US \$
FES-AA	Activated Alumina, 1 Pound Can	\$35.00
FES-AC	Activated Charcoal, 1 Pound Can	\$35.00
FES-SD-4	Sodasorb, 1 Pound Can	\$35.00
FES-AA-4	Activated Alumina Replacement Element, 4" Body	\$75.00
FES-AA-6	Activated Alumina Replacement Element, 6" Body	\$150.00
FES-AA-8	Activated Alumina Replacement Element, 8" Body	\$250.00
FES-AC-4	Activated Charcoal Replacement Element, 4" Body	\$65.00
FES-AC-6	Activated Charcoal Replacement Element, 6" Body	\$125.00
FES-AC-8	Activated Charcoal Replacement Element, 8" Body	\$225.00
FES-FG-4	Fiberglass Replacement Element, 4" Body	\$80.00
FES-FG-6	Fiberglass Replacement Element, 6" Body	\$95.00
FES-FG-8	Fiberglass Replacement Element, 8" Body	\$110.00
FES-PE-4	Polyester Replacement Element, 4" Body	\$15.00
FES-PE-6	Polyester Replacement Element, 6" Body	\$25.00
FES-PE-8	Polyester Replacement Element, 8" Body	\$32.00
FES-PP-4	Polypropylene Replacement Element, 4" Body	\$80.00
FES-PP-6	Polypropylene Replacement Element, 6" Body	\$95.00
FES-PP-8	Polypropylene Replacement Element, 8" Body	\$110.00
FES-CU-4	Copper Mesh, 4" Body	\$30.00
FES-CU-6	Copper Mesh, 6" Body	\$60.00
FES-CU-8	Copper Mesh, 8" Body	\$95.00
FES-MS-4	Molecular Sieve Replacement Element, 4" Body	\$85.00
FES-MS-6	Molecular Sieve Replacement Element, 6" Body	\$165.00
FES-MS-8	Molecular Sieve Replacement Element, 8" Body	\$265.00
FES-SS-4	Stainless Steel Mesh, 4" Body	\$35.00
FES-SS-6	Stainless Steel Mesh, 6" Body	\$75.00
FES-SS-8	Stainless Steel Mesh, 8" Body	\$110.00
FT-4-MS	Molecular Sieve Replacement Material, Zeolite 13-X, 1 #Can	\$22.00
FX-DEE-KF16	Dee Exhaust Filter With KF16 Flange	\$400.00
FX-DEE-KF25	Dee Exhaust Filter With KF25 Flange	\$400.00
FX-DEE-KF40	Dee Exhaust Filter With KF40 Flange	\$450.00
FX-ST897-KF40	Solberg KF40 Inline Vacuum Filter with see through bucket & SST drain, to be used on pump ranging from 17 CFM to 60 CFM.	\$495.00
FXR-ST897	Polyester Replacement Filter Cartridge For Solberg ST/CT Vacuum Filter, ST897	\$33.00
MS-13X	Molecular Sieve Replacement Material, ZEolite 13-X, 1/2 Gallon (2 # 10 Oz)	\$38.00
VTL-NW16-4	Angle Flex Trap, KF16 FLG, .75 Port, 4" Body, For Steel or Copper Mesh	\$420.00
VTL-NW25-4	Angle Flex Trap, KF25 FLG, 1" Port, 4" Port, For Steel or Copper Mesh	\$430.00
VTL-NW40-4	Angle Flex Trap, KF40 FLG, 1.5" Port, 4" Body, For Steel or Copper Mesh	\$440.00
VTL-NW40-6	Angle Flex Trap, KF40 FLG, 1.5" Port, 6" Body, For Steel or Copper Mesh	\$595.00



► Note: All bodies are empty. Elements, mesh or media are ordered separately.

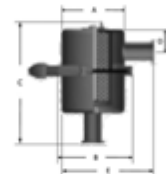


Mech Pumps

Solberg Intake/Exhaust Traps

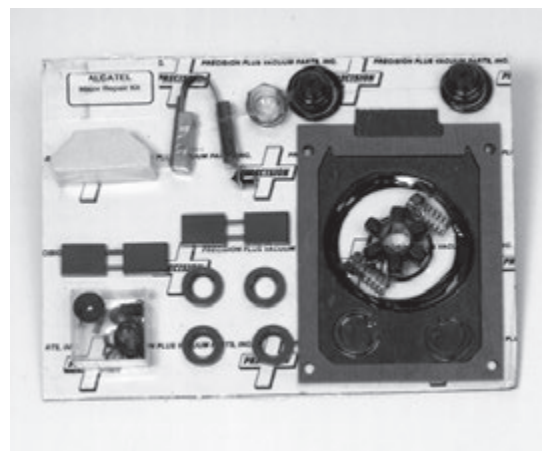
Solberg Intake/Exhaust Traps

Part No.	Description	Price
Duniway	--	US \$
VTL-NW50-4	Angle Flex Trap, KF50 FLG, 2.0" Port, 4" Body, For Steel or Copper Mesh	\$450.00
VTL-NW50-6	Angle Flex Trap, KF50 FLG, 2.0" Port, 6" Body, For Steel or Copper Mesh	\$605.00
VTL-NW50-8	Angle Flex Trap, KF50 FLG, 2.0" Port, 8" Body, For Steel or Copper Mesh	\$995.00
VTL-NW16-4-LC	Angle Flex Trap, KF16 FLG, .75 Port, 4" Body, For Loose Chemical Media	\$450.00
VTL-NW25-4-LC	Angle Flex Trap, KF25 FLG, 1.0" Port, 4" Body, For Loose Chemical Media	\$450.00
VTL-NW40-4-LC	Angle Flex Trap, KF40 FLG, 1.5" Port, 4" Body, For Loose Chemical Media	\$500.00
VTL-NW40-6-LC	Angle Flex Trap, KF40 FLG, 1.5" Port, 6" Body, For Loose Chemical Media	\$750.00
VTL-NW50-6-LC	Angle Flex Trap, KF50 FLG, 2.0" Port, 6" Body, For Loose Chemical Media	\$775.00
VTL-NW16-4-MS	Angle Flex Trap, KF16 FLG, 0.75 Port, 4" Body, With Heater For Use With Molecular Sieve Only	\$495.00
VTL-NW25-4-MS	Angle Flex Trap, KF25 FLG, 1.0" Port, 4" Body, With Heater For Use With Molecular Sieve Only	\$495.00
VTL-NW40-4-MS	Angle Flex Trap, KF40 FLG, 1.5" Port, 4" Body, With Heater For Use With Molecular Sieve Only	\$550.00
VTL-NW40-6-MS	Angle Flex Trap, KF40 FLG, 1.5" Port, 6" Body, With Heater For Use With Molecular Sieve Only	\$785.00
VTL-NW50-6-MS	Angle Flex Trap, KF50 FLG, 2.0" Port, 6" Body, With Heater For Use With Molecular Sieve Only	\$800.00
VTL-NW16-4-RE	Angle Flex Trap, KF16 FLG, .75 Port, 4" Body, For Replaceable Elements	\$435.00
VTL-NW25-4-RE	Angle Flex Trap, KF25 FLG, 1" Port, 4" Body, For Replaceable Elements	\$435.00
VTL-NW40-6-RE	Angle Flex Trap, KF40 FLG, 1.5" Port, 6" Body, For Replaceable Elements	\$445.00
VTL-NW40-8-RE	Angle Flex Trap, KF40 FLG, 1.5" Port, 8" Body, For Replaceable Elements	\$515.00
VTL-NW50-6-RE	Angle Flex Trap, KF50 FLG, 2.0" Port, 6" Body, For Replaceable Elements	\$445.00
VTL-NW50-8-RE	Angle Flex Trap, KF50 FLG, 2.0" Port, 8" Body, For Replaceable Elements	\$525.00
VTS-NW16-4	Coaxial Flex Trap, KF16 FLG, .75 Port, 4" Body, For Steel or Cooper Mesh	\$420.00
VTS-NW25-4	Coaxial Flex Trap, KF25 FLG, 1.0" Port, 4" Body, For Steel or Cooper Mesh	\$430.00
VTS-NW40-4	Coaxial Flex Trap, KF40 FLG, 1.5" Port, 4" Body, For Steel or Cooper Mesh	\$440.00
VTS-NW40-6	Coaxial Flex Trap, KF40 FLG, 1.5" Port, 6" Body, For Steel or Cooper Mesh	\$595.00
VTS-NW50-4	Coaxial Flex Trap, KF50 FLG, 2.0" Port, 4" Body, For Steel or Cooper Mesh	\$450.00
VTS-NW50-6	Coaxial Flex Trap, KF50 FLG, 2.0" Port, 6" Body, For Steel or Cooper Mesh	\$605.00
VTS-NW50-8	Coaxial Flex Trap, KF50 FLG, 2.0" Port, 8" Body, For Steel or Cooper Mesh	\$995.00
VTS-NW16-4-RE	Coaxial Flex Trap, KF16 FLG, .75 Port, 4" Body, For Replaceable Elements	\$435.00
VTS-NW25-4-RE	Coaxial Flex Trap, KF25 FLG, 1.0" Port, 4" Body, For Replaceable Elements	\$435.00
VTS-NW40-6-RE	Coaxial Flex Trap, KF40 FLG, 1.5" Port, 6" Body, For Replaceable Elements	\$445.00
VTS-NW40-8-RE	Coaxial Flex Trap, KF40 FLG, 1.5" Port, 8" Body, For Replaceable Elements	\$515.00
VTS-NW50-6-RE	Coaxial Flex Trap, KF50 FLG, 2.0" Port, 6" Body, For Replaceable Elements	\$445.00
VTS-NW50-8-RE	Coaxial Flex Trap, KF50 FLG, 2.0" Port, 8" Body, For Replaceable Elements	\$525.00



Alcatel Style Rebuilding Kits

Part No.	Description	Price
Duniway	--	US \$
MIN-2005-21	Minor Rebuild Kit, Alcatel Model 2005-21	\$152.00
MIN-2005-21SD	Minor Rebuild Kit, Alcatel Model 2005-21SD	\$100.00
MIN-52610	Minor Rebuild Kit, Alcatel Models: 2004A, 2008A, 2012A,2020A	\$76.00
MIN-52624	Minor Rebuild Kit, Alcatel Models: 2004AC, 2008AC, 2012AC,2020AC	\$122.00
MIN-54285	Minor Rebuild Kit, Alcatel Model 2033	\$156.00
MIN-54286	Minor Rebuild Kit, Alcatel Model 2033C	\$226.00
MIN-54485	Minor Rebuild Kit, Alcatel Model 2063	\$190.00
MIN-54488	Minor Rebuild Kit, Alcatel Model 2063C	\$262.00
MAJ-2005	Major Rebuild Kit, Alcatel Model 2005	\$267.00
MAJ-2005SD	Major Rebuild Kit, Alcatel Model 2005SD	\$240.00
MAJ-2010SD	Major Rebuild Kit, Alcatel Model 2010SD	\$259.00
MAJ-2015SD	Major Rebuild Kit, Alcatel Model 2015SD	\$289.00
MAJ-2021SD	Major Rebuild Kit, Alcatel Model 2021SD	\$317.00
MAJ-2010	Major Rebuild Kit, Alcatel Model 2010	\$279.00
MAJ-2015	Major Rebuild Kit, Alcatel Model 2015	\$294.00
MAJ-2021	Major Rebuild Kit, Alcatel Model 2021	\$338.00
MAJ-52611	Major Rebuild Kit, Alcatel Model 2012A-kit includes the anti-suck-back lever	\$249.00
MAJ-52613	Major Rebuild Kit, Alcatel Model 2008A-kit includes the anti-suck-back lever	\$233.00
MAJ-52625	Major Rebuild Kit, Alcatel Model 2012AC-kit includes the anti-suck-back lever	\$294.00
MAJ-52626	Major Rebuild Kit, Alcatel Model 2008AC-kit includes the anti-suck-back lever	\$256.00
MAJ-52982	Major Rebuild Kit, Alcatel Model 2020A-kit includes the anti-suck-back lever	\$275.00
MAJ-52984	Major Rebuild Kit, Alcatel Model 2020AC-kit includes the anti-suck-back lever	\$302.00
MAJ-52614	Major Rebuild Kit, Alcatel Model 2004A-kit includes the anti-suck-back lever	\$200.00
MAJ-52614AC	Major Rebuild Kit, Alcatel Model 2004AC-kit includes the anti-suck-back lever	\$250.00
MAJ-54288	Major Rebuild Kit, Alcatel Model 2033	\$306.00
MAJ-54289	Major Rebuild Kit, Alcatel Model 2033C	\$459.00
MAJ-54487	Major Rebuild Kit, Alcatel Model 2063	\$393.00
MAJ-54489	Major Rebuild Kit, Alcatel Model 2063C	\$490.00



Major Rebuild Kit

ALCATEL-STYLE MINOR KIT INCLUDES:

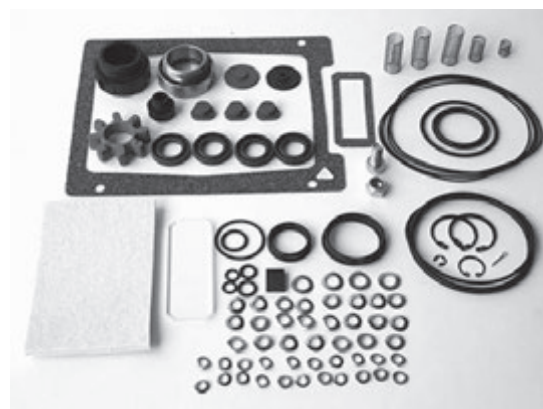
Coupling element, c-clips, washer, necessary o-rings, gaskets, valves, shaft seals.

ALCATEL-STYLE ("A" SERIES) MAJOR KIT INCLUDES:

Coupling element, c-clips, washer, necessary o-rings, gaskets, valves, shaft seals, sight glass, springs, pins, vanes.

ALCATEL-STYLE (PASCAL SERIES) MAJOR KIT INCLUDES:

Coupling element, c-clips, washer, necessary o-rings, gaskets, valves, shaft seals, sight glass, oil pump valves, vanes.



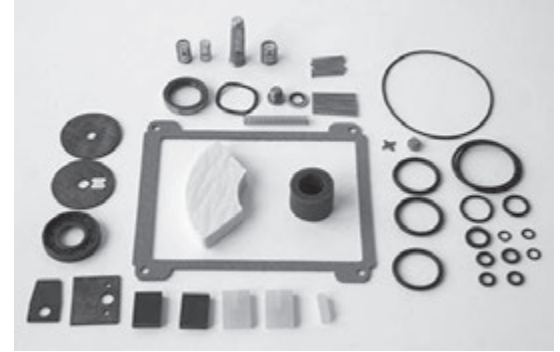
Minor Rebuild Kit

Mech Pumps

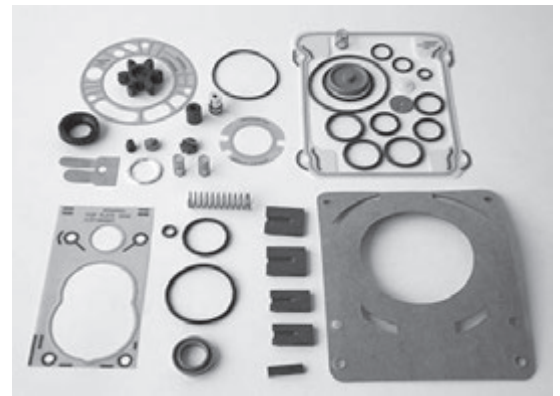
Pump Rebuilding Kits

Edwards Style Rebuilding Kits

Part No.	Description	Price
Duniway	--	US \$
MIN-34101131	Minor Rebuild Kit, Edwards Models: E2M2, E2M5, E2M8	\$94.30
MIN-34401131	Minor Rebuild Kit, Edwards Model E2M40	\$141.00
MIN-34501131	Minor Rebuild Kit, Edwards Model E2M80	\$183.00
MIN-36301131	Minor Rebuild Kit, Edwards Model E2M18	\$123.00
MIN-37001131	Minor Rebuild Kit, Edwards Model E2M12	\$107.00
MIN-37301131	Minor Rebuild Kit, Edwards Model E2M30	\$165.00
MIN-65201131	Minor Rebuild Kit, Edwards Model RV3-12	\$162.00
MAJ-36001800	Major Rebuild Kit, Edwards Model E2M2	\$180.00
MAJ-36101800	Major Rebuild Kit, Edwards Model E2M5	\$213.00
MAJ-36201800	Major Rebuild Kit, Edwards Model E2M8	\$229.00
MAJ-36301800	Major Rebuild Kit, Edwards Model E2M18; Kit does not include blade springs or pins-Blades are no longer drilled.	\$261.00
MAJ-36401800	Major Rebuild Kit, Edwards Model E2M40; Kit does not include blade springs or pins-Blades are no longer drilled.	\$468.00
MAJ-36501800	Major Rebuild Kit, Edwards Model E2M80; Kit does not include blade springs or pins-Blades are no longer drilled.	\$561.00
MAJ-37301800	Major Rebuild Kit, Edwards Model E2M30	\$318.00
MAJ-37001800	Major Rebuild Kit, Edwards Model E2M12	\$253.00
MAJ-RV12	Major Rebuild Kit, Edwards Model RV12	\$243.00
MAJ-RV5	Major Rebuild Kit, Edwards Model RV4	\$204.00
MAJ-RV8	Major Rebuild Kit, Edwards Model RV8	\$218.00
MAJ-RV3	Major Rebuild Kit, Edwards Model RV3	\$186.00



Minor Rebuild Kit



Major Rebuild Kit

EDWARDS-STYLE MINOR KIT INCLUDES:

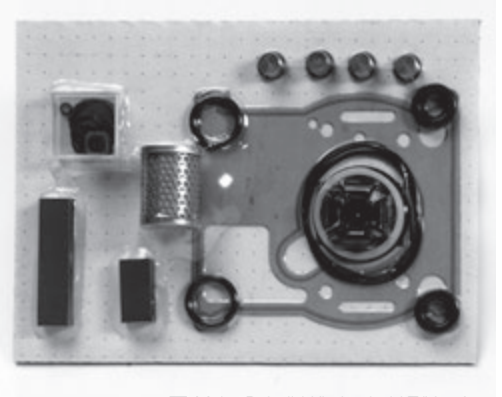
O-rings, gaskets, shaft seals, springs, rubber valves, filter assemblies, seal washers, waved distributor washer.

EDWARDS-STYLE MAJOR KIT INCLUDES:

O-rings, gaskets, shaft seals, rubber valves, blades, filter assemblies blade pins, c-clips, bearings, sight glass.

Leybold Style Rebuilding Kits

Part No.	Description	Price
Duniway	--	US \$
MAJ-10166CK	Major Rebuild Kit, Leybold TriVac A, Model D2AC	\$211.00
MAJ-10167CK	Major Rebuild Kit, Leybold TriVac A, Model D4AC	\$214.00
MAJ-10167K	Major Rebuild Kit, Leybold TriVac A, Model D4A	\$196.00
MAJ-10166K	Major Rebuild Kit, Leybold TriVac A, Model D2A	\$186.00
MAJ-10168CK	Major Rebuild Kit, Leybold TriVac A, Model D8AC	\$237.00
MAJ-10168K	Major Rebuild Kit, Leybold TriVac A, Model D8A	\$217.00
MAJ-10169CK	Major Rebuild Kit, Leybold TriVac A, Model D16AC	\$245.00
MAJ-10169K	Major Rebuild Kit, Leybold TriVac A, Model D16A	\$229.00
MAJ-10170K	Major Rebuild Kit, Leybold TriVac A, Model D30A	\$256.00
MAJ-10171CK	Major Rebuild Kit, Leybold TriVac A, Models: D60AC, D90AC	Inquire
MAJ-10171K	Major Rebuild Kit, Leybold TriVac A, Models: D60A, D90A	\$265.00



Major Rebuild Kit, Leybold TriVac A

LEYBOLD-STYLE MINOR KIT INCLUDES:

Viton® o-rings, asbestos free static seals, two Viton® shaft seals, coupling element, anti-suckback valve.

LEYBOLD-STYLE MAJOR KIT INCLUDES:

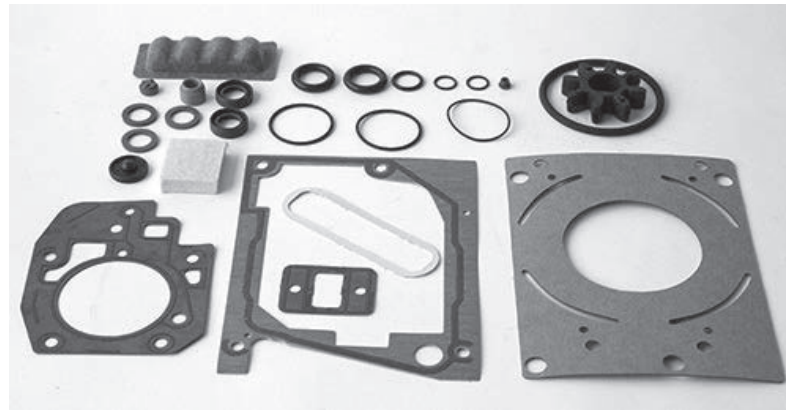
Viton® o-rings, asbestos free static seals, two Viton® shaft seals, coupling element, anti-suckback valve, exhaust valve plate, vanes, oil demister (if required).

Mech Pumps

Pump Rebuilding Kits

Leybold Style Rebuilding Kits

Part No.	Description	Price
Duniway	--	US \$
MIN-19102B2	Minor Rebuild Kit, Leybold TriVac A, Models D2A D4A, D2AC ,D4AC	\$100.00
MIN-19104B2	Minor Rebuild Kit, Leybold TriVac A, Models: D8A, D8AC, D16A, D16AC	\$108.00
MIN-19106B2	Minor Rebuild Kit, Leybold TriVac A, Models: D30A, D30AC, D60A, D60AC, D90A,D90AC	\$117.00
MIN-19120B4	Minor Rebuild Kit, Leybold TriVac B, for Model D4B	\$138.00
MIN-19120B8	Minor Rebuild Kit, Leybold TriVac B, for Model D8B	\$134.00
MIN-19131BCS16	Minor Rebuild Kit, Leybold TriVac B, Model D16BCS	\$169.00
MIN-19131BCS25	Minor Rebuild Kit, Leybold TriVac B, Model D25BCS	\$169.00
MIN-19132	Minor Rebuild Kit, Leybold TriVac B, Models: D40BCS,D65BCS	\$216.00
MIN-19721B16	Minor Rebuild Kit, Leybold TriVac B, Model D16B	\$162.00
MIN-19721B25	Minor Rebuild Kit, Leybold TriVac B, Model D25B	\$165.00
MIN-19722	Minor Rebuild Kit, Leybold TriVac B, Models: D40B, D65B	\$224.00
MAJ-19120D4K	Major Rebuild Kit, Leybold TriVac B, for Model D4B	\$268.00
MAJ-19120D8K	Major Rebuild Kit, Leybold TriVac B, for Model D8B	\$296.00
MAJ-19121D16K	Major Rebuild Kit, Leybold TriVac B, Model D16B	\$299.00
MAJ-19121D25K	Major Rebuild Kit, Leybold TriVac B, Model D25B	\$278.00
MAJ-19122D40K	Major Rebuild Kit, Leybold TriVac B, Model D40B	\$312.00
MAJ-19122D65K	Major Rebuild Kit, Leybold TriVac B, Model D65B	\$350.00
MAJ-19131D16K	Major Rebuild Kit, Leybold TriVac B, for Model D16BCS	\$314.00
MAJ-19131D25K	Major Rebuild Kit, Leybold TriVac B, for Model D25BCS	\$294.00
MAJ-19132D40K	Major Rebuild Kit, Leybold TriVac B, for Model D40BCS	\$349.00
MAJ-19132D65K	Major Rebuild Kit, Leybold TriVac B, for Model D65BCS	\$374.00



Minor Rebuild Kit, Leybold TriVac B

Welch Style Rebuilding Kits

Part No.	Description	Price
Duniway	--	US \$
GS-1374	Gasket Kit, Welch Model 1374	\$93.30
GS-1376	Gasket Kit, Welch Model 1376	\$82.00
GS-1397	Gasket Kit, Welch Model 1397	\$89.00
GS-1398	Gasket Kit, Welch Model 1398	\$209.00
GS-1400	Gasket Kit, Welch Model 1400	\$73.00
GS-1402	Gasket Kit, Welch Model 1402	\$77.00
GS-1405	Gasket Kit, Welch Model 1405	\$68.70
MIN-1374S	Minor Rebuild Kit, Welch Model 1374	\$178.00
MIN-1376S	Minor Rebuild Kit, Welch Model 1376	\$135.00
MIN-1397S	Minor Rebuild Kit, Welch Model 1397	\$140.00
MIN-1398S	Minor Rebuild Kit, Welch Model 1398	\$405.00
MIN-1400S	Minor Rebuild Kit, Welch Model 1400	\$101.00
MIN-1402S	Minor Rebuild Kit, Welch Model 1402	\$122.00
MIN-1405S	Minor Rebuild Kit, Welch Model 1405	\$80.20
MAJ-1374PI	Major Rebuild Kit, Welch Model 1374	\$440.00
MAJ-1376PI	Major Rebuild Kit, Welch Model 1376	\$294.00
MAJ-1397PI	Major Rebuild Kit, Welch Model 1397	\$374.00
MAJ-1398PI	Major Rebuild Kit, Welch Model 1398	\$718.00
MAJ-1400PI	Major Rebuild Kit, Welch Model 1400	\$205.00
MAJ-1402PI	Major Rebuild Kit, Welch Model 1402	\$275.00
MAJ-1405PI	Major Rebuild Kit, Welch Model 1405	\$216.00

WELCH-STYLE GASKET KIT INCLUDES:

Shaft seal, neoprene gaskets, o-rings, rubber washers.

WELCH-STYLE MINOR KIT INCLUDES:

Shaft seal, neoprene gaskets, o-rings, rubber washers, spring, spring holders, V-belts, exhaust valves.

WELCH-STYLE MAJOR KIT INCLUDES:

Shaft seal, neoprene gaskets, o-rings, rubber washers, spring, spring holders, V-belts, exhaust valves, steel vanes.

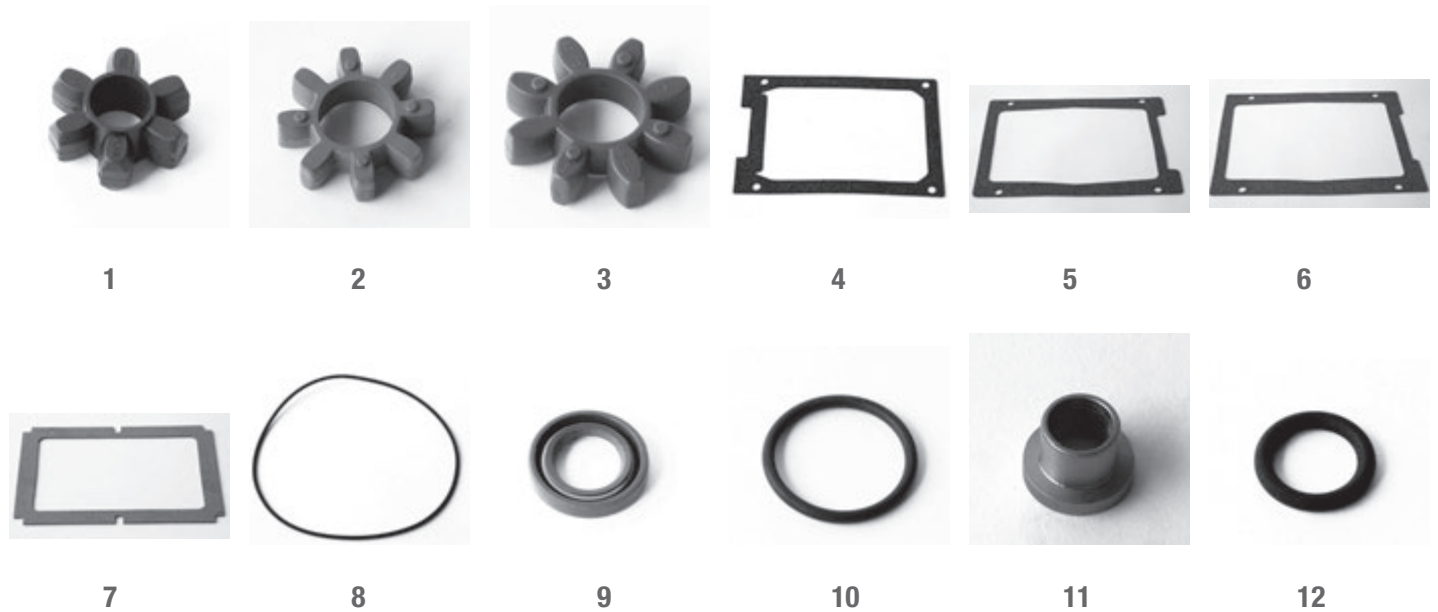
Mech Pumps

Pump Rebuilding Parts

Alcatel Style Pump Parts

Part No.	Description	Price	Image
Duniway	--	US \$	#
CE-52553	Coupling Element, Alcatel, A-Series Models: 2004A-2021C2	\$5.00	1
CE-54091	Coupling Element, Alcatel, A-Series Models 2033, 2033C and Edwards E2M18, E2M30	\$10.00	2
CE-54356	Coupling Element, Alcatel, A-Series Models 2063, 2063c	\$14.25	3
CG-52755	Case Gasket, Alcatel, A-Series Models: 2004A-2020AC	\$3.00	4
CG-54128	Case Gasket, Alcatel, A-Series Models 2033, 2033C	\$5.00	5
CG-54427	Case Gasket, Alcatel, A-Series Models 2063, 2063C	\$5.00	6
CG-83650	Case Gasket, Alcatel, A-Series Models 2004, 2007, 2007C, 2012	\$3.50	7
CGOR-079072	Oil Case Gasket O-Ring, Alcatel Pascal Series (All)	\$8.00	8
LS-79101	Lip Seal, Alcatel, A-Series Models 2033, 2033C, 2063, 2063AC:	\$10.00	--
LS-82063	Lip Seal, Alcatel, A-Series Models: 2004A-2021C2	\$7.00	9
MG-65795	Module Gasket, Alcatel Pascal Series Models 2005-2021	\$12.50	--
SHOR-082125	Shaft Seal Housing O-Ring, Alcatel Pascal Series (All)	\$2.00	10
SR-65846	Shoulder Ring, Alcatel Pascal Series (All)	\$32.00	11
SROR-082110	Shoulder Ring O-Ring, Alcatel Pascal Series (All)	\$2.00	12

Mech Pumps



Edwards Style Pump Parts

Part No.	Description	Price	Image
Duniway	--	US \$	#
CE-21071033	Coupling Element, Edwards Models E2M40, E2M80	\$16.75	1
CFA-A34001021	Coupling & Fan Ass'y, USA Edwards Models E2M2, E2M5, E2M8, E2M12	\$461.00	2
LS-02109067V	Lip Seal, Edwards Models E2M2, E2M5, E2M8, E2M12, E2M18	\$16.50	3
LS-02109075	Lip Seal, Edwards Model E2M30	\$17.25	--
LS-02109094	Lip Seal, Edwards ModelS E2M40, E2M80	\$12.50	--
LS-02109124	Outer Shaft Seal, Edwards Model RV3-12	\$17.00	4
OCG-27159616	Oil Case Gasket, Edwards Models E2M2, E2M5, E2M8, E2M12	\$5.00	5
OCG-27159618	Oil Case Gasket, Edwards Model E2M80	\$18.00	--
OCG-27159629	Oil Case Gasket, Edwards Model E2M40	\$12.00	--
OCG-27159635	Oil Case Gasket, Edwards Models E2M18, E2M30	\$16.00	--
OCG-27160005	Oil Case Gasket, Edwards Model RV3-12	\$23.50	7
OF-22304041	Oil Filter, Edwards Models E2M40, E2M80	\$31.00	8
PCG-27160006	Printed Cartridge Gasket, Edwards Model RV3-12	\$12.50	9
SCG-27160008	Seal Carrier Gasket, Edwards Model RV3-12	\$12.50	10
TPG-27160007	Top Plate Gasket, Edwards Model RV3-12	\$16.50	11



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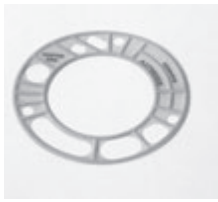
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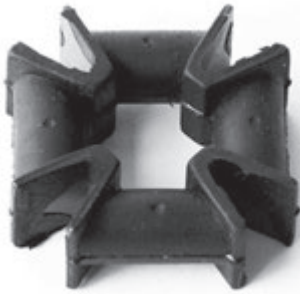
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Mech Pumps

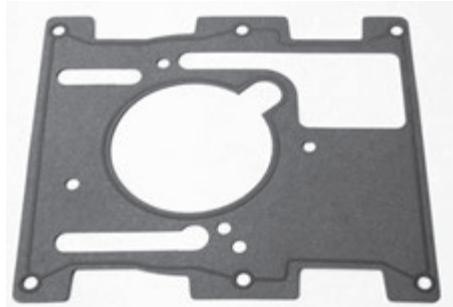
Mechanical Pump Parts

Leybold Style Pump Parts

Part No.	Description	Price	Image
Duniway	--	US \$	#
CE-70100147	Coupling Element, Leybold Models D2A. D2AC, D4A, D4AC D8A. D8AC, D16A, D16AC	\$6.00	1
CE-70100196	Coupling Element, Leybold Models D30A. D30AC, D60A, D60AC. D90A, D90AC	\$12.00	--
CG-23811123	Case Gasket, Leybold Models D2A, D2AC, D4A, D4AC	\$19.00	--
CG-23811126	Case Gasket, Leybold Models D8A, D8AC, D16A, D16AC	\$12.00	--
CG-23811142	Case Gasket, Leybold Models D30A, D30AC, D60A, D60AC. D90A, D90AC	\$16.00	2
LS-23953110	Lip Seal, Leybold Models D30A. D30AC, D60A, D60AC. D90A, D90AC	\$8.00	--
LS-23953124	Lip Seal, Leybold Models D2A. D2AC, D4A, D4AC	\$6.50	--
LS-23953142	Lip Seal, Leybold Models D8A. D8AC, D16A, D16AC	\$15.50	3



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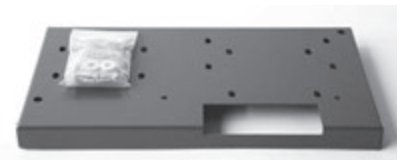
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Welch Style Pump Parts

Part No.	Description	Price
Duniway	--	US \$
1397-1	Oil Case Gasket, Welch Model 1397 (1 Required), 1374 (1 Required)	\$7.50
1397-2	Intake Chamber Gasket, Welch Model 1397, 1374	\$3.50
1397-4	Valve Gasket, Welch Model 1397, 1374	\$3.50
1397-5	O-Ring, Buna Parker, Welch Models 1397, 1374, 1375, 1398, 1395, 1396	\$3.00
1400-1	Oil Case Gasket, Welch Model 1400	\$4.50
1400-1402-4	Lip Seal, Welch Model 1400 and Gas Exhaust Seal, Welch Models: 1402, 1376	\$8.00
1400-2	Intake Chamber Gasket Welch Model 1400	\$3.50
1400-3	Seal Gasket, Welch Model 1400	\$3.50
1402-1	Oil Case Gasket, Welch Model 1402 (1 Required), 1376 (2 Required)	\$3.00
1402-2	Intake Chamber Gasket, Welch Model 1402, 1376	\$3.00
1402-3	Seal Cover Gasket, Welch Model 1402, 1376	\$3.00
1405-1	Oil Case Gasket, Welch Model 1405	\$3.50
1405-2	Intake Chamber Gasket, Welch Model 1405	\$3.50
3VX-560	V-Belt, Welch Models: 1375, 1398, 1395, 1396; (3-4 each required depending on pump model)	\$20.00
4L-490	V-Belt, Welch Model 1397, (2 Required)	\$15.00
4L-500	V-Belt, Welch Model 1374, (2 Required)	\$15.00
4L-340	V-Belt, Welch Model 1400	\$11.00
4L-420	V-Belt, Welch Models: 1405, 1402, 1376	\$12.00
AD-GRD-1402	Adapter Plate, New Style Guard to Old Style Base, Welch Model 1402, 1376	\$35.00
BAS-1376	Base, Welch Model 1376	\$162.00
BAS-1397	Base, Welch Model 1397, 1374	\$154.00
BAS-1400	Base, Welch Model 1400	\$105.00
BAS-1402	Base, Welch Model 1405, 1402	\$105.00
DSC-411711	Oil Case Gasket, Welch Model 1375	\$5.00
DSC-412481	Intake Chamber O-Ring Top, Welch Models: 1375, 1398, 1395, 1396	\$4.00
DSC-412482	Intake Chamber O-Ring, Welch Models: 1375, 1398, 1395, 1396	\$4.50
DSC-412518	Oil Case Gasket, Welch Models: 1398, 1395, 1396	\$7.00



▀ Base, Welch Model 1376



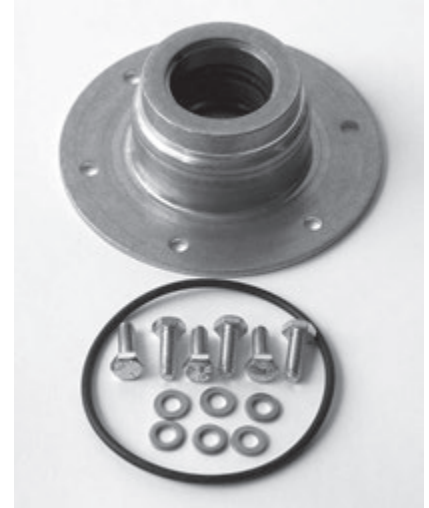
▀ Base, Welch Model 1405, 1402

Mech Pumps

Mechanical Pump Parts

Welch Style Pump Parts

Part No.	Description	Price
Duniway	--	US \$
GRD-1397	Guard, Welch Model 1397, 1374 (Fits BAS-1397 Only)	\$195.00
GRD-1400	Guard, Welch Model 1400	\$160.00
GRD-1402	Guard, Welch Models: 1405, 1402, 1376	\$170.00
LF-0588	Rubber Foot, Welch Models: 1397, 1374, 1375, 1398, 1395, 1396	\$5.00
LS-1397	Shaft Seal, Welch Model 1397, 1374	\$80.00
LS-1400	Shaft Seal, Welch Models: 1400, 1405	\$30.00
LS-1402	Shaft Seal, Welch Model 1402, 1376	\$30.00
NP-1397	Nipple, Intake or Exhaust, Welch Model 1397, 1374	\$70.00
NP-1400	Nipple, Intake Only, Welch Model 1400	\$40.00
NP-1402	Nipple, Intake or Exhaust, Welch Model 1402	\$47.00
NP-1405	Nipple, Exhaust Only, Welch Model 1400 and Intake or Exhaust, Welch Model 1405	\$52.50
PMTR-1374	Motor Pulley, Welch Model 1374	\$82.00
PMTR-1375	Motor Pulley, Welch Model 1375 (Please indicate the diameter of your pump motor shaft at time of order)	Inquire
PMTR-1395	Motor Pulley, Welch Model 1395 (Please indicate the diameter of your pump motor shaft at time of order)	Inquire
PMTR-1396	Motor Pulley, Welch Model 1396 (Please indicate the diameter of your pump motor shaft at time of order)	Inquire
PMTR-1397	Motor Pulley, Welch Model 1397	\$60.00
PMTR-1398	Motor Pulley, Welch Model 1398 (Please indicate the diameter of your pump motor shaft at time of order)	Inquire
PMTR-1400	Motor Pulley, Welch Model 1400	\$22.50
PMTR-1402	Motor Pulley, Welch Model 1402, 1376	\$30.00
PMTR-1405	Motor Pulley, Welch Model 1405	\$30.00
PPMP-1375	Pump Pulley, Welch Model 1375 (Please indicate the diameter of your pump motor shaft at time of order)	Inquire
PPMP-1397	Pump Pulley, Welch Model 1397, 1374	\$140.00
PPMP-1398	Pump Pulley, Welch Model 1398 (Please indicate the diameter of your pump motor shaft at time of order)	Inquire
PPMP-1400	Pump Pulley, Welch Model 1400	\$40.00
PPMP-1402	Pump Pulley, Welch Model 1402, 1376	\$70.00
PPMP-1405	Pump Pulley, Welch Model 1405	\$60.00
SF-0929	Rubber Foot, Welch Models: 1405, 1402, 1400, 1376	\$3.00
SS-412491COM	Shaft Seal Complete, Welch Models: 1375, 1398, 1395, 1396	\$378.00
SS-412491INS	Shaft Seal Insert, Welch Models: 1375, 1398, 1395, 1396	\$255.00
SS-412515	Shaft Seal O-Ring, Welch Models: 1375, 1398, 1395, 1396	\$2.50
W-1	Rubber Washer, Window, Welch Models: 1400, (1 required); 1402/1405, 1374-1376, 1395-1398; (2 Required)	\$3.00
W-2	Tension Washer, Window, Welch Models: 1400, (1 Required); 1402/1405, 1374-1376, 1395-1398; (2 Required)	\$3.50



▀ Shaft Seal Complete

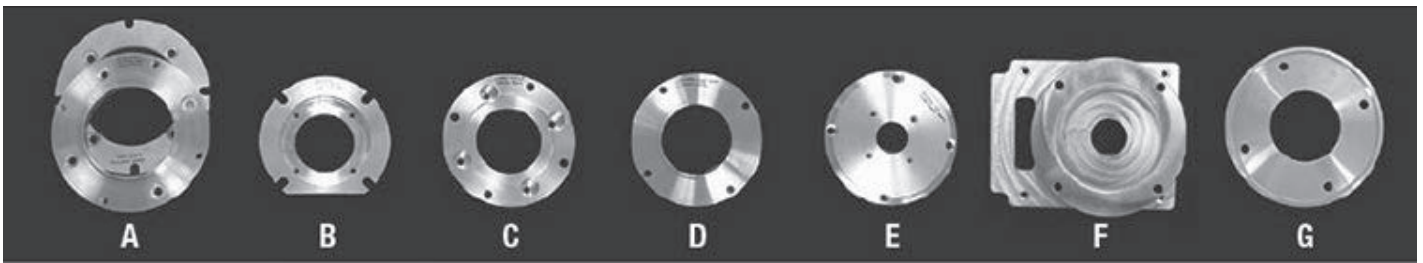


▀ Guard, Welch Models: 1405, 1402, 1376

Motor Adapter Kits

With these Motor Adapter Kits, the lifetime of mechanical pumps can be extended. USA made electrical motors can be installed, thus extending indefinitely the useful life of your mechanical pumps. You can purchase the kits for your own installation or send your pump to us for rebuilding and/or installation of the appropriate motor and adapter.

Motor Adapter Kits include adapter plate(s), bolts, nuts, washers, coupling and coupling element. Motor Kits include power cord and plug, except as noted. If you have space restrictions, please inquire about exact dimensions. Special Offer: Buy a Motor Adapter Kit and a Replacement Motor Kit and get free assembly.



Shown above are some examples of Motor Adapter Plates for Mechanical Pumps. Photo Key:

- A.** Leybold 30A Pump & Motor Adapter Plates
- B.** Leybold D2/4A Motor Adapter Plate
- C.** Leybold D8/16A Motor Adapter Plate
- D.** Alcatel® 2033 Motor Adapter Plate
- E.** Alcatel® SD Motor Adapter Plate
- F.** Edwards RV1-12 Motor Adapter Plate
- G.** Alcatel® 2063 Motor Adapter Plate

Motor Adapter plates are available separately, please inquire.

Complete Coupling Sets, consisting of pump coupling, motor coupling and spider element, are available for the Leybold D2A/D4A and the Leybold D8A/D16A pumps. **Please inquire.**

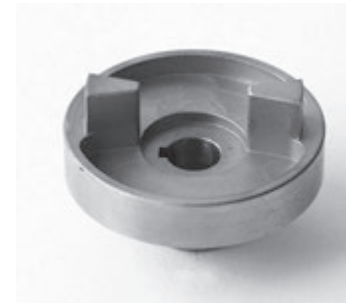
Replacement Motors are available for Alcatel, Edwards and Leybold oil sealed mechanical pumps and Iwata dry pumps. **Please inquire for part number and pricing.**

Mech Pumps

Mechanical Pump Parts

Motor Adapter Kits

Part No.	Description	Price
Duniway	--	US \$
1LH	Motor Adapter Kit (European to U.S.) Leybold Models D2A, D2AC, D4A, D4AC	\$185.00
1LH1	Replacement Motor, Single Phase, For Leybold Models D2A, D2AC	Inquire
1PA	Motor Adapter Kit (European to U.S.) Alcatel Models Pascal Orange/Black	\$135.00
1RV	Motor Adapter Kit (European to U.S.) Edwards Models RV3, RV5, RV8, RV12**	\$220.00
1SD	Motor Adapter Kit (European to U.S.) Alcatel Models S/D White/Grey*	\$175.00
2063MAP	Motor Adapter Plate Only for Alcatel 2063 to 182TC Frame Motor	\$95.00
2LH	Motor Adapter Kit (European to U.S.) Leybold Models D8A, D16AC	\$225.00
3AL	Motor Adapter Kit (European to U.S.) Alcatel/Edwards Models 2033, 2033CP, E2M40*	\$195.00
3LH	Motor Adapter Kit (European to U.S.) Leybold Models D30A, D30AC	\$300.00
4AL	Motor Adapter Kit (European to U.S.) Alcatel Model 2063*	\$225.00
500MAK	Motor Adapter Kit (European to U.S.) IWATA Model 500 Scroll Pump	\$225.00
500MEK	Motor Electrical Kit, Includes Power Switch & Connectors IWATA Model 500 Scroll Pump	\$80.00
LABOR500	Labor to Install MAK, PASD2, MEK on IWATA Model 500 Scroll Pump	\$100.00



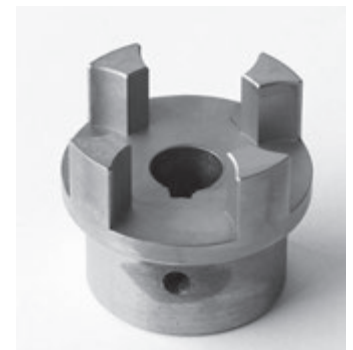
Pump Coupling, Leybold ▼

* **NOTE:** Requires a RMA # for your shipment of original motor front plate.

** **NOTE:** Requires a RMA # for your shipment of original motor coupling.

Pump/Motor couplings

Part No.	Description	Price
Duniway	--	US \$
57042130PS	Pump Coupling, Leybold Models D2, D4A (No Clutch), 12 mm Bore Pump Side	\$80.00
2830MS	Pump Motor Coupling, Edwards Models E2M28, E2M30, 5/8" Bore Motor Side	\$95.00
57042132MS	Pump Motor Coupling, Leybold Model D30, 5/8" Bore Motor Side	\$95.00
2033MS	Pump Motor Coupling, Alcatel Model 2033, 5/8" Bore Motor Side	\$95.00
57042134MS	Pump Motor Coupling, Leybold Models D2, D4A D8, D16A, 5/8" Bore Motor Side	\$90.00
57042134PS	Pump Coupling, Leybold Models D8, D16A (No Clutch), 15 mm Bore Pump Side	\$90.00



Pump Motor Coupling ▼

Mechanical Pump Service

Duniway Stockroom Corporation performs repair and rebuilding services for a wide variety of mechanical pumps. All pumps are rebuilt at our location in Fremont, CA and each leaves with our standard 1 year warranty. Pumps taken in for a complete rebuild undergo the following process:

- Disassembly, inspection and cleaning.
- Total replacement of all seals, gaskets, springs, o-rings and valves. (Minor kit)
- All other parts replaced as required, with customer approval, for an extra charge.
- Two or more changes of hydrocarbon oil.
- Complete test run for 24 hours.
- Thorough draining and cleaning.
- Exterior painting and a final tagging of rebuild information.
- For an additional charge, standard or chemical series pumps can be prepped for inert fluid.

All pumps are subject to an evaluation charge of \$125 which will be applied to the repair cost. If the customer decides to not have the pump repaired/rebuilt, then they will only be charged \$125.

Alcatel®

Model #	Price
Duniway	US \$
2004A	\$860.00
2005 Pascal	\$860.00
2008A	\$860.00
2008AC	\$860.00
2010 Pascal	\$860.00
2012A	\$860.00
2012AC	\$860.00
2015 Pascal	\$860.00
2020A	\$860.00
2020AC	\$860.00
2021 Pascal	\$860.00
2033	\$1,100.00
2033C	\$1,100.00
2063	\$1,100.00
2060C	\$1,100.00
2063C	\$1,100.00
2100A	\$2,750.00
2100AC	\$2,950.00

Cenco

Model #	Price
Duniway	US \$
HyVac 2	Inquire
HyVac 7	Inquire
HyVac 14	Inquire
HyVac 28	Inquire

Kinney

Model #	Price
Duniway	US \$
KDH-65	Inquire
KDH-130	Inquire
KTC-60	Inquire
KTC-112	Inquire
KT-150	Inquire
KT-300	Inquire

Precision

Model #	Price
Duniway	US \$
D25	Inquire
D75	Inquire
D150	Inquire
D500	Inquire

Ulvac

Model #	Price
Duniway	US \$
GLD-135	\$860.00

Edwards

Model #	Price
Duniway	US \$
E2M2	\$800.00
E2M5	\$800.00
E2M8	\$800.00
E2M12	\$800.00
E2M18	\$875.00
E2M28	\$975.00
E2M30	\$975.00
E2M40	\$1250.00
E2M80	\$1250.00
RV3	\$860.00
RV5	\$860.00
RV8	\$860.00
RV12	\$860.00

Please note: prices assume pumps require no special servicing or parts. Upon inspection, we will notify customer if such a condition exists and quote accordingly.

Mech Pumps

Mechanical Pump Parts

Mechanical Pump Service

Be sure to obtain an RMA # and a Hazmat form prior to shipment to Duniway Stockroom Corp.

Welch®

Model #	Price
Duniway	US \$
1373	\$775.00
1374	\$1,035.00
1375	\$1,350.00
1376	\$825.00
1380	\$775.00
1395	\$1,500.00
1396	\$1,500.00
1397	\$1,075.00
1398	\$1,500.00
1399	\$675.00
1400	\$700.00
1402	\$800.00
1403	\$775.00
1405	\$800.00
8917A	\$875.00
8920	\$875.00

Varian

Model #	Price
Duniway	US \$
DS-102	\$850.00
DS-202	\$850.00
DS-302	\$850.00
DS-402	\$925.00
DS-602	\$925.00

Dry Pumps

Model #	Price
Duniway	US \$
Iwata ISP250 ¹	\$2,200.00
Iwata ISP500 ²	\$2,300.00
Varian PTS300	\$1,900.00
Varian PTS600	\$1,950.00
Varian SH100/110	\$1,500.00
Edwards XDS5/10	\$1,700.00
Edwards XDS35i	\$2,500.00
Edwards NXDS6i	\$1,900.00
Edwards NXDS10i	\$1,900.00
Edwards NXDS6ic	\$2,400.00
Edwards NXDS10ic	\$2,400.00
Edwards NXDS15ic	\$2,400.00
Edwards NXDS20ic	\$2,900.00
Agilent IDP ³	\$600.00
Agilent IDP15	\$2,200.00
Vacuubrand MD2	\$950.00
Vacuubrand MD4	\$1,175.00
Vacuubrand MD4C	\$1,575.00

Stokes

Model #	Price
Duniway	US \$
149H10	\$1,950.00
149H11	\$1,950.00
212H10	\$2,000.00
212H11	\$2,000.00
412H10	\$3,200.00
412H11	\$3,200.00

Hitachi

Model #	Price
Duniway	US \$
VP-160	\$860.00

Leybold

Model #	Price
Duniway	US \$
D2A	\$800.00
D4A	\$800.00
D8A	\$850.00
D16A	\$850.00
D30A	\$975.00
S30A	\$900.00
D60A	\$985.00
S60	\$950.00
D1.6B	\$800.00
D4B	\$875.00
D8B	\$875.00
D16B/BCS	\$945.00
D25B/BCS	\$975.00
D40B/BCS	\$1,200.00
D65B/BCS	\$1,400.00
DK-100	\$2,300.00
E-150	\$2,300.00
DK-200	\$2,500.00
E-250	\$2,500.00
D90A	\$975.00

Equivalent Dry Pumps to the Iwatas (same rebuild price):

1. Edwards ESDP12; Leybold SC15D; Ulvac DIS250/251; Varian 300DS
2. Edwards ESDP30/30A; Edwards GVSP30; Leybold SC30D; Ulvac DIS500/501; Varian 600DS
3. Tip Seal Replacement Only

Turbo Pumps

Duniway Stockroom, The Turbo Pump Experts



Turbo Pumps

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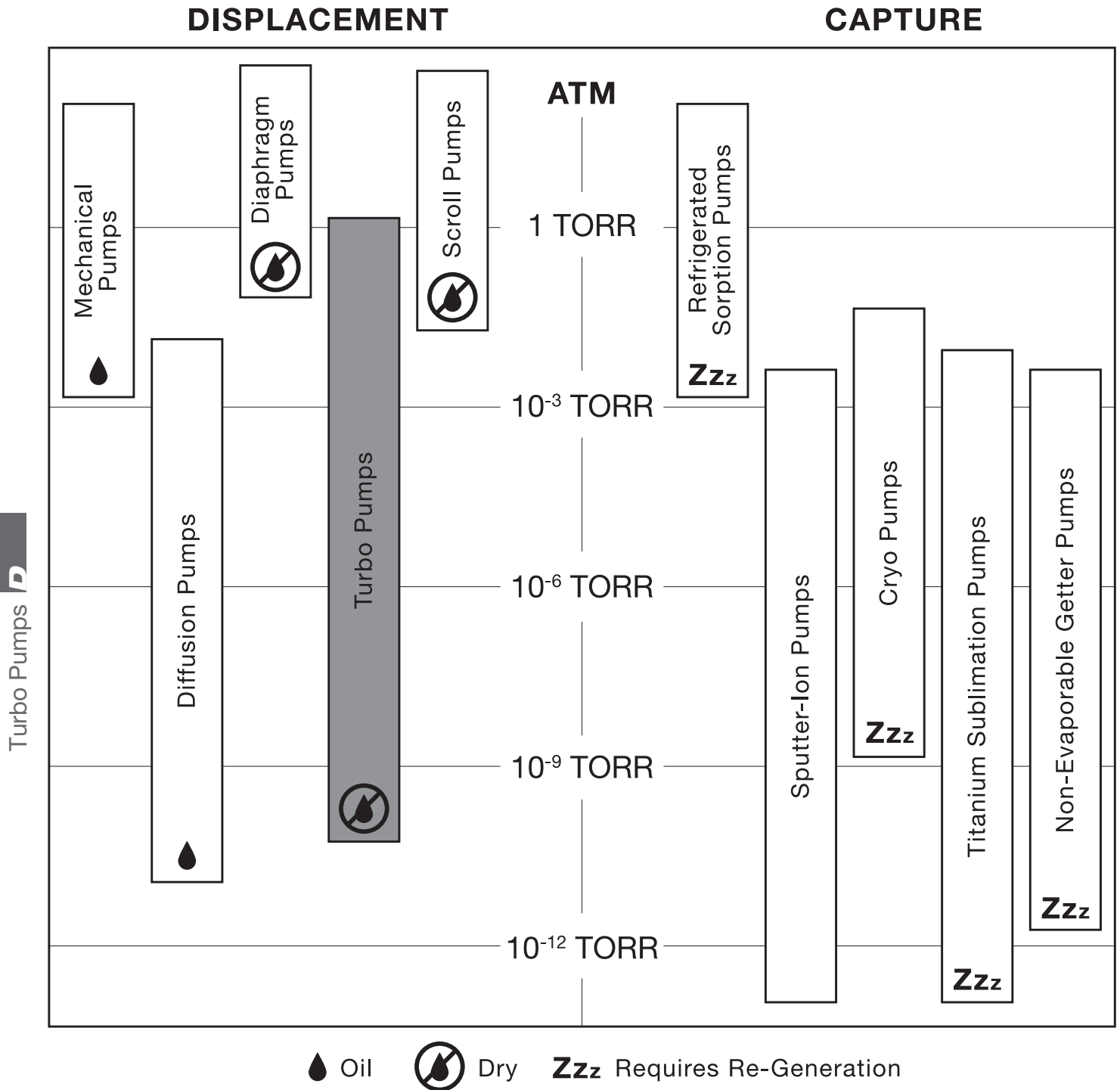


D
Turbo Pumps

Turbo Pumps

Tech Tips

Vacuum Pumps / Types & Ranges



Rebuilt Turbo Pumps & Controllers – Overview

- All pumps and controllers are subject to availability.
- Duniway Stockroom offers Rebuilt Turbo Pumps, Controllers, Cables and Accessories for most Alcatel, Edwards, Leybold, Pfeiffer and Varian models.
- Duniway Stockroom also offers an array of new cables and turbo pump accessories manufactured by Duniway.

Rebuilding and Repair of Turbo Pumps – Overview

- We also offer a rebuilding service for most Alcatel, Edwards, Leybold, Pfeiffer and Varian models. For rebuild pricing, please email, info@duniway.com or call, 1-800-446-8811.
- All of the service on rebuilt pumps, as well as our rebuilding service, is completed by our in-house Turbo Pump Shop. All pumps are disassembled, cleaned, high speed bearings replaced, reassembled, tested and balanced as necessary.
- For older Leybold and Varian pump models, turbo pump shop technicians can convert your oil lubricated pump to a permanently lubricated ceramic bearing pump.
- Our warranty period for new Turbo Pump products as well as rebuilt and repaired Turbo Pumps is up to twelve months for defective parts and workmanship.



Turbo Pumps

Turbo Pumps Cables & Accessories

Accessories – Overview

These new turbo pump accessories are available for replacement of cables, vents and vent valves and base cups for conversion of oil bearings to grease bearings. The converter cups are made of aluminum with cooling grooves for better durability and improved cooling efficiency.

An example of a Varian 200 with the old oil bearing cup is shown on the left and with the new grease cup on the right.

The upgraded grease cup is included as part of Duniway Stockroom Corp. rebuilding service with all Leybold TMP-150 and 360; Varian V80, 200, 450, 1000 and 1800 turbo pumps.



Turbo Pump Accessories – New

Part No.	Description	Price
Duniway	--	US \$
ALC-CFF450-JMPR	Alcatel Turbo Pump J-2 Jumper	\$85.00
TURBO-OIL-100	Hydrocarbon Turbo Pump Oil, 100cc	\$50.00
TRBO-VENT-24VDC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 24VDC	\$180.00
TRBO-VENT-120VAC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 120VAC	\$180.00
TRBO-VENT-240VAC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 240VAC	\$180.00
PFE-VENT-AL	Pfeiffer Turbo Pump Vent Screw Knob - Aluminum - G 1/8 Thread, with O-ring	\$50.00
PFE-VENT-FLG	Pfeiffer Turbo Pump Vent Flange - KF10 to G 1/8 Thread, with O-ring	\$90.00
PFE-VENT-SST	Pfeiffer Turbo Pump Vent Screw Knob - Stainless Steel - G 1/8 Thread, with O-ring	\$60.00
PFE-TCP-CBL	Pfeiffer Turbo Pump Cable, used on most TCP Model Control Units (3 M Long)	\$625.00
PFE-TPS-CBL-15	Pfeiffer Turbo Pump Cable, used on most TPS Model Control Units (3 M Long)	\$100.00
PFE-TPS-CBL-4	Pfeiffer Turbo Pump Cable, used on the TC-600 and TC-750 controllers (3M Long)	\$125.00
VAR-1000-CUP	Varian V450/1000 Turbo Pump Oil to Grease Converter Cup	\$300.00
VAR-1800-CUP	Varian V1800 Turbo Pump Oil to Grease Converter Cup	\$350.00
VAR-200-CUP	Varian V80/200 Turbo Pump Oil to Grease Converter Cup	\$250.00
VAR-TRBO-CBL	Varian V-80/200/300/450/1000 Turbo Pump Cable (3 M Long)	\$175.00
VAR-1800-CBL	Varian Turbo Pump Cable for V1800 Control Unit (3 M Long)	\$400.00
VAR-VENT-550	Varian V-550/1000 Turbo Pump Vent Screw, with O-ring	\$50.00
VAR-VENT-70	Varian V-70/250 Turbo Pump Vent Screw, with O-ring	\$40.00
LEY-CUP-NEW	Leybold TMP 150/360 Turbo Pump Oil to Grease Converter Cup- Later Style	\$480.00
LEY-CUP-ORIG	Leybold TMP 150/360 Turbo Pump Oil to Grease Converter Cup- Original Style	\$250.00
LEY-NT10-CBL	Cable for Leybold NT10, NT50 Turbo Controller Model 89501 (3 M Long)	\$165.00
LEY-NT150151-CBL	Cable for Leybold NT150/360 and NT151/361 Turbo Controller (3 M Long)	\$325.00
LEY-NT20-CBL	Cable for Leybold NT20/TD20 Classic to 151(C)/361(C)/600C/1000C/1100C (3 M Long)	\$200.00
LEY-NT50-CBL	Cable for Leybold NT10, NT50, Turbo Controllers Models: 85403 & 85701 (3 M Long)	\$250.00
LEY-NT20-PCORD	Power Cord for Leybold NT20- (120V-3 M Long)	\$100.00
EDW-EXT-CBL	Cable for EXT Turbo Pump Models	\$375.00

Part Number Codes Indicate Application

Code	Application
ATS	Turbo-Drag Hybrid
ATH	Turbo-Drag Hybrid
ATP	Turbo Single Stage
ATH-M	Magnetically Levitated
CP	Corrosive Pump
CPIS	Chemical Plasma Inverted Seal Series
HPC	High Pressure Throughput, Corrosive Series
MDP	Molecular Drag Pump



ALL PUMPS AND CONTROLLERS ARE SUBJECT TO AVAILABILITY

Rebuilt Alcatel Turbo Pumps

Part No.	Description	Price
Duniway	--	US \$
ALC-5080	Alcatel 5080/5081, 80 L/S Turbo Pump, ISO63/4.5"CFF Inlet/KF25 Exhaust Flange	\$3,600.00
ALC-5100	Alcatel 5100/5101, 100 L/S Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$3,800.00
ALC-5150	Alcatel 5150, 140 I/s Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$3,200.00
ALC-5150CP	Alcatel 5150CP, 140 I/s Turbo Chemical Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$3,500.00
ALC-5400	Alcatel 5400, 400 I/s Turbo Pump, ISO100 Inlet/KF25 Exhaust Flange	\$4,900.00
ALC-5400CP	Alcatel 5400CP, 400 I/s Turbo Chemical Pump, ISO100 Inlet/KF25 Exhaust Flange	\$5,000.00
ALC-5402	Alcatel 5402, 380 I/s Turbo Pump, ISO160 Inlet/KF40 Exhaust Flange	\$5,000.00
ALC-5402CP	Alcatel 5402CP, 380 I/s Turbo Chemical Pump, ISO160 Inlet/KF40 Exhaust Flange	\$5,500.00
ALC-5900	Alcatel 5900, 900 I/s Turbo Pump, ISO160 Inlet/KF40 Exhaust Flange	\$6,500.00
ALC-ATP80	Alcatel ATP 80, 80 I/s Single Stage Turbo Pump, ISO63/4.5"CFFInlet/KF25 Exhaust Flange	\$3,500.00
ALC-ATP100	Alcatel ATP 100, 100 I/s Single Stage Turbo Pump, ISO100/6"CFF Inlet/KF40 Exhaust Flange	\$3,800.00
ALC-ATP150	Alcatel ATP 150, 140 I/s Single Stage Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$5,000.00
ALC-ATP400	Alcatel ATP 400, 400 I/s Single Stage Turbo Pump, ISO160/8"CFF Inlet/KF40 Exhaust Flange	\$5,900.00
ALC-ATP900	Alcatel ATP 900, 900 I/s Single Stage Turbo Pump, ISO200/10"CFF Inlet/KF40 Exhaust Flange	\$9,000.00
ALC-MDP5010	Alcatel MDP 5010, 7.5 I/s Molecular Drag Pump, ISO63 Inlet/KF16 Exhaust Flange	\$2,000.00
ALC-MDP5011	Alcatel MDP 5011, 7.5 I/s Molecular Drag Pump, ISO63 Inlet/KF25 Exhaust Flange	\$2,100.00
ALC-MDP5011CP	Alcatel MDP 5011CP, 7.5 I/s Molecular Drag Chemical Pump, ISO63 Inlet/KF25 Exhaust Flange	\$2,200.00
ALC-MDP5030	Alcatel MDP 5030, 30 I/s Molecular Drag Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$4,500.00
ALC-MDP5030CP	Alcatel MDP 5030CP, 30 I/s Molecular Drag Chemical Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$5,000.00

Turbo Pumps

New Alcatel Turbo Pump Cables & Accessories

Rebuilt Alcatel Turbo Pump Controllers

Part No.	Description	Price
Duniway	--	US \$
ALC-CFF-100	Alcatel CFF-100 Turbo Pump Controller for MDP 5080, 5081	\$1,500.00
ALC-CFF-450	Alcatel CFF-450 Turbo Pump Controller for 5150, 5402, 5030, 5400	\$1,400.00



▼ Alcatel CFF-100 Turbo Pump Controller



▼ Alcatel CFF-450 Turbo Pump Controller

Alcatel Turbo Pump Cables & Accessories

Part No.	Description	Price
Duniway	--	US \$
ALC-CFF100-CBL	Alcatel CFF-100 Turbo Pump Cable (3 M Long)	\$275.00
ALC-CFF450-CBL	Alcatel CFF-450 Turbo Pump Cable (3 M Long)	\$275.00
ALC-CFV100-CBL	Alcatel CFV and ACT100 Turbo Pump Cable (3M Long)	\$275.00
ALC-CFF450-JMPR	Alcatel Turbo Pump J-2 Jumper	\$85.00
TRBO-VENT-120VAC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 120VAC	\$180.00
TRBO-VENT-240VAC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 240VAC	\$180.00
TRBO-VENT-24VDC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 24VDC	\$180.00



▼ Alcatel CFF-100 Turbo Pump Cable (3 M Long)



▼ Alcatel CFF-450 Turbo Pump Cable (3 M Long)



▼ Alcatel CFV Turbo Pump Cable (3 M Long)



▼ Alcatel Turbo Pump J-2 Jumper



▼ Solenoid Turbo Pump Vent Valve

ALL PUMPS AND CONTROLLERS ARE SUBJECT TO AVAILABILITY

Rebuilt Edwards Turbo Pumps

Part No.	Description	Price
Duniway	--	US \$
EDW-EXT200	Edwards EXT200, 200 l/s Turbo Pump, ISO100 Inlet/KF25 Exhaust Flange	\$6,000.00
EDW-EXT250	Edwards EXT250, 250 l/s Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$4,500.00
EDW-EXT250H	Edwards EXT250H, 250 l/s Turbo-Drag Hybrid Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$4,500.00
EDW-EXT250HI	Edwards EXT250HI, 250 l/s Turbo-Drag Hybrid Pump with Instrument Port, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$4,500.00
EDW-EXT255	Edwards EXT255, 255 l/s Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$5,000.00
EDW-EXT255H	Edwards EXT255H, 255 l/s Turbo-Drag Hybrid Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$5,000.00
EDW-EXT255HI	Edwards EXT255HI, 255 l/s Turbo-Drag Hybrid Pump with Instrument Port, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$5,000.00
EDW-EXT351C	Edwards EXT351C, 350 l/s Turbo Pump for Corrosive Applications, ISO100 Inlet/KF25 Exhaust Flange	\$4,750.00
EDW-EXT501	Edwards EXT501, 500 l/s Turbo Pump, ISO160/8"CFF Inlet/KF40 Exhaust Flange	\$6,000.00
EDW-EXT70	Edwards EXT70, 70 l/s Turbo Pump, ISO63/4.5"CFF Inlet/KF16 Exhaust Flange	\$3,000.00
EDW-EXT70H	Edwards EXT70H, 70 l/s Turbo-Drag Hybrid Pump, ISO63/4.5"CFF Inlet/KF25 Exhaust Flange	\$3,600.00



▼ Edwards EXT250H

Turbo Pumps

Rebuilt Edwards Turbo Pumps & Controllers, New Cables & Accessories

Rebuilt Edwards Turbo Pump Controllers

Part No.	Description	Price
Duniway	--	US \$
EDW-EXC-120	Edwards EXC120 Turbo Pump Controller for EXT70, EXT70H, EXT250 & EXT250H	\$1,800.00
EDW-EXC-300	Edwards EXC300 Turbo pump controller for EXT 70 series, 250 series, 350 series and 500 series pumps (no magnetically levitated pumps)	\$2,100.00



▼ Edwards EXC120 Turbo Pump Controller



▼ Edwards EXC300 Turbo Pump Controller

Edwards Turbo Pump Cables & Accessories

Part No.	Description	Price
Duniway	--	US \$
EDW-EXT-CBL	Cable for EXT Turbo Pump Models	\$410.00
TRBO-VENT-120VAC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 120VAC	\$180.00
TRBO-VENT-240VAC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 240VAC	\$180.00
TRBO-VENT-24VDC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 24VDC	\$180.00



▼ EXT Turbo Pump Cable



▼ Solenoid Turbo Pump Vent Valve

ALL PUMPS AND CONTROLLERS ARE SUBJECT TO AVAILABILITY

NOTE: Oil lubricated pumps can be converted to greased ceramic bearings upon request.

Rebuilt Leybold Turbo Pumps

Part No.	Description	Price
Duniway	--	US \$
LEY-TMP50	Leybold TMP50, 55 l/s Turbo Pump, ISO63/4.5"CFF Inlet Flange	\$2,500.00
LEY-TMP150	Leybold TMP150, 145 l/s Turbo Pump, ISO100/6"CFF Inlet Flange	\$3,500.00
LEY-TMP150C	Leybold TMP150C, 145 l/s Turbo Pump for Corrosive Applications, ISO100/6"CFF Inlet Flange	\$3,500.00
LEY-TMP151	Leybold TMP151, 145 l/s Turbo Pump, ISO100/6"CFF Inlet Flange	\$4,000.00
LEY-TMP151C	Leybold TMP151C, 145 l/s Turbo Pump for Corrosive Applications, ISO100/6"CFF Inlet Flange	\$4,200.00
LEY-TMP340M	Leybold TMP340M, 400 l/s Magnetically Levitated Turbo Pump, ISO100/6"CFF Inlet Flange	\$5,000.00
LEY-TMP360	Leybold TMP360, 345 l/s Turbo Pump, ISO100/6"CFF Inlet Flange	\$5,000.00
LEY-TMP361	Leybold TMP361, 345 l/s Turbo Pump, ISO100/6"CFF Inlet Flange	\$6,500.00
LEY-TMP361C	Leybold TMP361C, 345 l/s Turbo Pump for Corrosive Applications, ISO100/6"CFF Inlet Flange	\$7,000.00
LEY-TMP1000C	Leybold TMP1000C, 1100 l/s Turbo Pump for Corrosive Applications, ISO200/ISO250/10" CFF Inlet Flange	\$10,000.00



▼ Leybold TMP50
Turbo Pump



▼ Leybold TMP150
Turbo Pump



▼ Leybold TMP360
Turbo Pump

Rebuilt Leybold Turbo Pump Controllers

Part No.	Description	Price
Duniway	--	US \$
LEY-NT-10	Leybold NT-10, NT13, Turbo Pump Controller for use with Model TMP50	\$1,250
LEY-NT-20	Leybold NT-20 Turbo Pump Controller for TMP150, 360, 151, 361, 600, 1000	\$1,700.00
LEY-NT-50	Leybold NT-50, Turbo Pump Controller for use with Models TMP50	\$1,300.00
LEY-NT-150	Leybold NT-150/360, Turbo Pump Controller for use with models TMP150, 360	\$1,300.00
LEY-NT-151	Leybold NT-151/361, Turbo Pump Controller for use with Model TMP150, 151, 360, 361	\$1,500.00
LEY-NT-1000/1500	Leybold NT-1000, 1500, Turbo Pump Controller for use with Models TMP1000, 1500	Inquire



▼ Leybold NT-20
Turbo Pump Controller

Turbo Pumps

New Leybold Turbo Pump Cables & Accessories

Leybold Turbo Pump Cables & Accessories

Part No.	Description	Price
Duniway	--	US \$
LEY-NT10-CBL	Cable for Leybold NT10, NT50 Turbo Controller Model 89501 (3 M Long)	\$165.00
LEY-NT20-CBL	Cable for Leybold NT20/TD20 Classic to 151(C)/361(C)/600C/1000C/1100C (3 M Long)	\$300.00
LEY-NT20-PCORD	Power Cord for Leybold NT20- (120V-3 M Long)	\$100.00
LEY-NT50-CBL	Cable for Leybold NT10, NT50, Turbo Controllers Models: 85403 & 85701 (3 M Long)	\$250.00
LEY-NT150151-CBL	Cable for Leybold NT150/360 and NT151/361 Turbo Controller (3 M Long)	\$325.00
LEY-CUP-ORIG	Leybold TMP 150/360 Turbo Pump Oil to Grease Converter Cup- Original Style	\$250.00
LEY-CUP-NEW	Leybold TMP 150/360 Turbo Pump Oil to Grease Converter Cup- Later Style	\$480.00
TURBO-OIL-100	Hydrocarbon Turbo Pump Oil, 100cc	\$50.00
TRBO-VENT-120VAC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 120VAC	\$180.00
TRBO-VENT-240VAC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 240VAC	\$180.00
TRBO-VENT-24VDC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 24VDC	\$180.00



▼ Leybold NT10, NT50 Turbo Controller Cable 89501 (3M Long)



▼ Leybold NT20/TD20 Classic (3M Long)



▼ Leybold NT20 Power Cord (3M Long)



▼ Leybold NT10, NT50 Turbo Controller Cable 85403 & 85701 (3M Long)



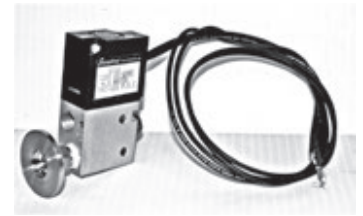
▼ Leybold NT150/151 Turbo Controller Cable (3M Long)



▼ Leybold TMP 150/360 Turbo Pump Oil to Grease Converter Cup - Original Style



▼ Leybold TMP 150/360 Turbo Pump Oil to Grease Converter Cup - Later Style



▼ Solenoid Turbo Pump Vent Valve

ALL PUMPS AND CONTROLLERS ARE SUBJECT TO AVAILABILITY

Rebuilt Pfeiffer Turbo Pumps

Part No.	Description	Price
Duniway	--	US \$
PFE-TPD020	Pfeiffer TPD020, 20 l/s Turbo Pump, ISO63 Inlet/KF16 Exhaust Flanges	\$1,900.00
PFE-TPH/U055	Pfeiffer TPH/U055, 55 l/s Turbo Pump, ISO63/4.5"CFF Inlet/KF16 Exhaust Flange	\$2,000.00
PFE-TPH/U060	Pfeiffer TPH/U060, 56 l/s Turbo Pump, ISO63/4.5"CFF Inlet/KF16 Exhaust Flange	\$2,500.00
PFE-TPH/U062	Pfeiffer TPH/U062, 56 l/s Turbo Pump, ISO63/4.5"CFF Inlet/KF16 Exhaust Flange	\$2,700.00
PFE-TMH/U064	Pfeiffer TMH/U064, 30-53 l/s Turbo Pump, ISO63/4.5"CFF Inlet/KF16 Exhaust Flange	\$3,000.00
PFE-TMH/U065	Pfeiffer TMH/U065, 30-56 l/s Turbo Pump, ISO63/4.5"CFF Inlet/KF16 Exhaust Flange	\$3,000.00
PFE-TMH/U071P	Pfeiffer TMH/U071P, 33-60 l/s Turbo Pump, ISO63/4.5"CFF Inlet/KF16 Exhaust Flange. Includes TC100 controller. Needs 24VDC TPS supply.	\$4,000.00
PFE-HIPACE80	Pfeiffer HIPACE80, 67 l/s Turbo Pump, ISO63 Inlet/KF16 Exhaust Flange. Includes TC110 controller. Needs 24VDC TPS supply.	\$4,300.00
PFE-TPH/U110	Pfeiffer TPH/U110, 110 l/s Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$2,000.00
PFE-TPH/U170	Pfeiffer TPH/U170, 170 l/s Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$3,200.00
PFE-TPH/U180H	Pfeiffer TPH/U180, 180 l/s Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$3,500.00
PFE-TPH/U190	Pfeiffer TPH/U190, 190 l/s Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$3,000.00
PFE-TPH/U240	Pfeiffer TPH/U240, 230 l/s Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$4,300.00
PFE-TMH/U260	Pfeiffer TMH/U260, 230 l/s Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$4,300.00
PFE-TMH/U261	Pfeiffer TMH/U261, 230 l/s Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange. Includes TC600 controller. Needs 24VDC TPS supply.	\$6,500.00
PFE-TMH/U262	Pfeiffer TMH/U262, 210 l/s Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange. Includes TC100 controller, needs 24 VDC TPS supply.	\$6,500.00
PFE-TMH/260-130	Pfeiffer TMH260-130, 130-210 l/s Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$5,500.00
PFE-TMH/261-250	Pfeiffer TMH261-250, 230 l/s Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange. Includes TC600 controller. Needs 24VDC TPS supply.	\$5,500.00
PFE-TPH/U330	Pfeiffer TPH/U330, 300 l/s Turbo Pump, ISO100/6"CFF Inlet/KF25 Exhaust Flange	\$4,300.00
PFE-TPH/U450H	Pfeiffer TPH/U450H, 450 l/s Turbo Pump, ISO160/8"CFF Inlet/KF25 Exhaust Flange	\$5,000.00
PFE-TPH/U510	Pfeiffer TPH/U510, 500 l/s Turbo Pump, ISO160/8"CFF Inlet/KF40 Exhaust Flange	\$6,250.00
PFE-TPH/U521PC	Pfeiffer TPH521PC, 430 l/s Turbo Pump, ISO100 Inlet/KF25 Exhaust Flange. Includes TC600 controller. Needs 24VDC TPS300 supply.	\$12,000.00



▼ Pfeiffer HIPACE80
Turbo Pump



▼ Pfeiffer TMH/U071P
Turbo Pump



▼ Pfeiffer TPH/U180H
Turbo Pump

Turbo Pumps

Rebuilt Pfeiffer Turbo Pump Controllers, New Cables & Accessories

Rebuilt Pfeiffer Turbo Pump Controllers

Part No.	Description	Price
Duniway	--	US \$
PFE-TCP-040	Pfeiffer TCP040 Turbo Pump Controller for Model Numbers 040/040A/050/060/062	\$1,000.00
PFE-TCP-120	Pfeiffer TCP120 Turbo Pump Controller for most Model Numbers 060-330	\$1,000.00
PFE-TCP-120A	Pfeiffer TCP120A Turbo Pump Controller for most Model Numbers 060-330	\$1,000.00
PFE-TCP-121	Pfeiffer TCP121 Turbo Pump Controller for Model Number 050-260	\$1,200.00
PFE-TCP-300	Pfeiffer TCP300 Turbo Pump Controller for most Model Numbers 110-520	\$1,550.00
PFE-TCP-310	Pfeiffer TCP310 Turbo Pump Controller for most Model Numbers 110-520	\$1,550.00
PFE-TCP-380	Pfeiffer TCP380 Turbo Pump Controller for most Model Numbers 060-520	\$2,000.00
PFE-TCP-600	Pfeiffer TCP600 Turbo Pump Controller for most Model Numbers 180-2200	\$2,500.00
PFE-TPS-300	REBUILT Pfeiffer TPS300 Turbo Pump Controller (Subject to Availability)	\$1,250.00
PFE-TPS-600	REBUILT Pfeiffer TPS600 Turbo Pump Controller (Subject to Availability)	\$1,500.00



▼ Pfeiffer TCP121
Turbo Pump Controller



▼ Pfeiffer TCP120/TCP120A
Turbo Pump Controller

Turbo Pumps

Pfeiffer Turbo Pump Cables & Accessories

Part No.	Description	Price	Photo
Duniway	--	US \$	#
PFE-TCP-CBL	Pfeiffer Turbo Pump Cable, used on most TCP Model Control Units (3 M Long)	\$625.00	1
PFE-TPS-CBL-15	Pfeiffer Turbo Pump Cable, used with TC-100 (3M Long)	\$100.00	2
PFE-TPS-CBL-4	Pfeiffer Turbo Pump Cable, used with TC600 or TC750 (3M Long)	\$125.00	--
PFE-VENT-AL	Pfeiffer Turbo Pump Vent Screw Knob - Aluminum - G 1/8 Thread, with seals	\$50.00	3
PFE-VENT-SST	Pfeiffer Turbo Pump Vent Screw Knob - Stainless Steel - G 1/8 Thread, with seals	\$60.00	4
PFE-VENT-FLG	Pfeiffer Turbo Pump Vent Flange - KF10 to G 1/8 Thread, with seals	\$90.00	5
TRBO-VENT-120VAC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 120VAC	\$180.00	6
TRBO-VENT-240VAC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 240VAC	\$180.00	6
TRBO-VENT-24VDC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 24VDC	\$180.00	6



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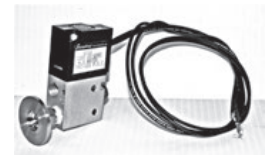
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Turbo Pumps

Rebuilt Varian Turbo Pumps & Controllers

ALL PUMPS AND CONTROLLERS ARE SUBJECT TO AVAILABILITY

NOTE: Oil lubricated pumps can be converted to greased ceramic bearings upon request.

Rebuilt Varian Turbo Pumps

Part No.	Description	Price
Duniway	--	US \$
VAR-V60	Varian V60, 55 I/s Turbo Pump, ISO60 Inlet Flange	\$2,100.00
VAR-V70	Varian V70, 65 I/s Turbo Pump, ISO63 Inlet Flange	\$2,500.00
VAR-V70D	Varian V70D, 65 I/s Turbo Pump, ISO63 Inlet Flange	\$2,600.00
VAR-V70LP	Varian V70LP, 68 I/s Turbo Pump, ISO63/2.75"CFF Inlet Flange	\$2,600.00
VAR-V80	Varian V80, 75 I/s Turbo Pump, ISO63/4.5"CFF Inlet Flange	\$2,500.00
VAR-V80A	Varian V80A, 75 I/s Turbo Pump, ISO63/4.5"CFF Inlet Flange	\$3,000.00
VAR-V200	Varian V200, 220 I/s Turbo Pump, ISO100/6"CFF Inlet Flange	\$2,500.00
VAR-V250	Varian V250, 250 I/s Turbo Pump, ISO100/6"CFF Inlet Flange	\$4,000.00
VAR-V300	Varian V300, 320 I/s Turbo Pump, ISO160 Inlet Flange	\$3,200.00
VAR-V300HT	Varian V300HT/V300ICE, 250 I/s Turbo Pump, ISO100 Inlet Flange	\$4,000.00
VAR-V450	Varian V450, 470 I/s Turbo Pump, ISO160 Inlet Flange	\$3,500.00
VAR-V450A	Varian V450A, 470 I/s Turbo Pump, ISO160 Inlet Flange	\$4,000.00
VAR-V550	Varian V550, 550 I/s Turbo Pump, ISO160 Inlet Flange	\$6,000.00
VAR-V551	Varian V551, 550 I/s Turbo Pump, ISO160 Inlet Flange	\$6,500.00
VAR-V700HT	Varian V700HT, 690 I/s Turbo Pump, ISO200/IS250 Inlet Flange	\$6,750.00
VAR-V700ICE	Varian V700ICE, 690 I/s Turbo Pump, ISO200/IS250 Inlet Flange	\$7,000.00
VAR-V1000	Varian V1000, 1000 I/s Turbo Pump, ISO200 Inlet Flange	\$7,000.00
VAR-V1000A	Varian V1000A, 1000 I/s Turbo Pump, ISO200 Inlet Flange	\$7,000.00
VAR-V1000HT	Varian V1000HT, 1000 I/s Turbo Pump, ISO200 Inlet Flange	\$7,500.00
VAR-V1800	Varian V1800, 1600 I/s Turbo Pump, ISO250/10" ASA Inlet Flange	\$11,000.00
VAR-V1800A	Varian V1800A, 1600 I/s Turbo Pump, ISO250/10" ASA Inlet Flange	\$11,000.00
VAR-V2000HT	Varian V2000HT, 1950 I/s Turbo Pump, ISO250 Inlet Flange	\$15,000.00



Varian V60 Turbo Pump



Varian V70D Turbo Pump



Varian V200 Turbo Pump

Turbo Pumps



Varian V300 Turbo Pump



Varian V700 Turbo Pump



Varian V1000HT Turbo Pump

Turbo Pumps

New Varian Turbo Pump Cables & Accessories

Rebuilt Varian Turbo Pump Controllers

Part No.	Description	Price
Duniway	--	US \$
VAR-V60-CU	Varian V60 Turbo Pump Controller	\$1,300.00
VAR-V70-CU	Varian V70 Turbo Pump Controller	\$1,900.00
VAR-V80-CU	Varian V80 Turbo Pump Controller	\$1,200.00
VAR-V200-CU	Varian V200 Turbo Pump Controller	\$1,300.00
VAR-V250-CU	Varian V250 Turbo Pump Controller	\$1,600.00
VAR-V300HT-CU	Varian V300HT Turbo Pump Controller	\$1,800.00
VAR-V301NAV-CU	Varian V301 Navigator Turbo Pump Controller	\$1,300.00
VAR-V450-CU	Varian V450 Turbo Pump Controller	\$1,800.00
VAR-V550-CU	Varian V550/V551 Turbo Pump Controller	\$1,800.00
VAR-V700HT-CU	Varian V700HT Turbo Pump Controller	\$1,800.00
VAR-V1000HT-CU	Varian V1000HT Turbo Pump Controller	\$2,000.00
VAR-V1800-CU	Varian V1800/V1800A Turbo Pump Controller	\$3,500.00
VAR-V2000HT-CU	Varian V2000HT Turbo Pump controller	Inquire



Varian V700HT Turbo Pump Controller

Varian Turbo Pump Cables & Accessories

Part No.	Description	Price	Photo
Duniway	--	US \$	#
VAR-1800-CBL	Varian Turbo Pump Cable for V1800 Control Unit (3 M Long)	\$400.00	1
VAR-TRBO-CBL	Varian V-80/200/300/450/1000 Turbo Pump Cable (3 M Long)	\$175.00	2
VAR-1800-CUP	Varian V1800 Turbo Pump Oil to Grease Converter Cup	\$350.00	3
VAR-1000-CUP	Varian V450/1000 Turbo Pump Oil to Grease Converter Cup	\$300.00	4
VAR-200-CUP	Varian V80/200 Turbo Pump Oil to Grease Converter Cup	\$250.00	5



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Varian Turbo Pump Cables & Accessories, continued

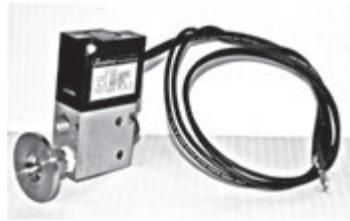
Part No.	Description	Price	Photo
Duniway	--	US \$	#
VAR-VENT-70	Varian V-70/250 Turbo Pump Vent Screw, with O-ring	\$40.00	1
TURBO-OIL-100	Hydrocarbon Turbo Pump Oil, 100cc	\$50.00	2
TRBO-VENT-120VAC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 120VAC	\$180.00	3
TRBO-VENT-240VAC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 240VAC	\$180.00	3
TRBO-VENT-24VDC	Solenoid Turbo Pump Vent Valve - KF10 Flange, 24VDC	\$180.00	3



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Leak Detectors

Duniway Stockroom, The Leak Detector Experts

Leak Detectors

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Duniway Stockroom Corp. offers a full range of products and services, including:

- New parts for Varian/NRC-Style units (please inquire for price/availability)
- New parts for Veeco units (please inquire for price/availability)
- Filaments & Ion Sources
- Calibrated Helium Leaks
- Accessories
- A Rebuild/Exchange program for Ion Sources
- A Rebuild/Exchange program for Pre-Amps



► Veeco LD Tungsten Filament (LDF-5-V)

Varian/NRC-Style Parts

Part No.	Description	Price
Duniway	--	US \$
936-LAMP	AV Indicator Box Lamps	\$24.00
936-PREAMP	936, Pre-Amp., Rebuild/Exchange Program*	\$400.00
NEW-301	Varian-Style LD Ion Source, Tungsten Filament, New, (equal to 82850301)	\$115.00
0981-82850-301	Varian LD Ion Source, Tungsten Filament, Rebuild/Exchange Program*	\$50.00
NEW-302	Varian-Style LD Ion Source, Iridium Filament, New, (equal to 82850302)	\$185.00
0981-82850-302	Varian LD Ion Source, Iridium Filament, Rebuild/Exchange Program*	\$106.00
Repair-Mini-I	Varian Mini-Ion Gauge (Varian #K9681301, used on 947, 948 and 960 leak detectors), Rebuild/Exchange Program*	\$97.00

*Please contact Duniway for an RMA# prior to sending in your core.

Veeco, Alcatel and CEC Filaments

Part No.	Description	Price
Duniway	--	US \$
LDF-5-V	Veeco LD Tungsten Filament, New, #0103-141-01, 5/Box	\$195.00
38760	CEC/Dupont LD Tungsten Filament, New, #38760	\$95.00
LDF-ALCTL-N	Alcatel LD Tungsten Filament, New, #053146	\$130.00
LDF-ALCTL-R	Alcatel LD Tungsten Filament, Rebuild Service*	\$64.00

*Please contact Duniway for an RMA# prior to sending in your core.

Helium Leak Probe

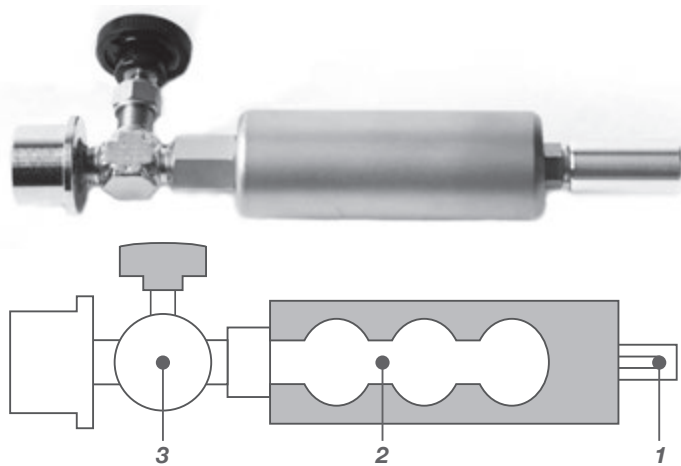
Part No.	Description	Price
Duniway	--	US \$
HELP-10	Helium Leak Probe, 10 ft Plastic Tube with 1/8 NPT Port	\$50.00

HELP-10 Details:

- Precise flow control at probe
- 10-foot long flexible plastic tubing
- 1/8 " NPT attachment to helium tank pressure controller
- Makes awkward leak checking jobs more convenient
- Improves accuracy of leak location

Leak Detectors

Parts, New



1. Helium gas filled to 1 atmosphere and sealed here with copper pinch-off.
2. Helium reservoir approximately 100 cc. Helium gas diffuses through the glass walls at a steady rate, which increases with rising temperature.
3. In use, this valve allows the helium to pass into the mass spectrometer. The leak rate, and the lifetime of this leak are both totally unaffected by whether the valve is open or closed.

NOTE ON LIFETIME: If a calibrated leak has a rate of 1×10^{-8} standard cc/second, then 1 standard cc will diffuse through the walls in 10^8 seconds, which is very close to 3 years. Because the reservoir holds about 100 standard cc of helium, the rate will fall by 1 percent at the end of 3 years.

Calibrated Helium Leaks

Part No.	Description	Price
Duniway	--	US \$
LEAK-7-CERT	Helium Leak, 10 -7 std cc/sec, with NIST Certificate	\$450.00
LEAK-8-CERT	Helium Leak, 10 -8 std cc/sec, with NIST Certificate	\$450.00



► Calibrated Helium Leak (LEAK-7-CERT)

Unbreakable Helium Leak

Part No.	Description	Price
Duniway	--	US \$
LEAK-T-7-CERT	Helium Leak, 10 -7 std cc/sec, Unbreakable Teflon Membrane, with NIST Certificate	\$685.00

This calibrated helium leak is different than most in that it has a Teflon™ membrane instead of the traditional glass, rendering it virtually unbreakable. It has the same form factor and operation as glass-walled leaks and has been successfully tested for stability over extended periods of time.

Calibration Service

Part No.	Description	Price
Duniway	--	US \$
LEAK-CERTIFY	NIST Certification Renewal, Helium Leak	\$275.00

We also offer a Certification to NIST Standards for your calibrated leak. Please allow a 2-3 week lead time for this service. Please call for an RMA (Return Merchandise Authorization) number.

All leak detectors are completely rebuilt in-house and come with our one year warranty against defective parts and workmanship. Items are subject to availability. Please call for stock.

Rebuilt Leak Detectors

Part No.	Manufacturer	Description	Price
Duniway	--	--	US \$
ASM10	Alcatel	Uses LN2, Alcatel® 2004A Mechanical Pump	\$8,000.00
936-40	Varian	Porta-test™, No LN2, Leak Detector Module Only	\$7,500.00
936-40	Varian	Porta-test™, No LN2, Cart and Oil-Sealed Roughing Pump	\$9,000.00
936-60	Varian	Uses LN2, Pneumatic Valves, Two Roughing Pumps	\$10,000.00
936-70	Varian	No LN2, Pneumatic Valves, Two Roughing Pumps	\$10,000.00
947	Varian	No LN2, Vacuum Actuated Valves, Two Roughing Pumps, Built-in Helium Leak	\$15,000.00
938-41	Varian	Porta-test™, No LN2, Turbo Cart, Oil Roughing Pump	\$10,000.00
938-41	Varian	Porta-test™, No LN2, Turbo Scroll Pump Cart	\$14,500.00
959	Varian	Porta-test™, Turbo Auto Operation with Oil-Sealed Roughing Pump	\$11,000.00
959	Varian	Porta-test™, Turbo Auto Operation with Dry Scroll Pump	\$15,500.00
MS-9AB	Veeco	Automatic Operation, Two Roughing Pumps, LN2, Audio Leak Indicator Available on some units	\$6,000.00
MS-17AM	Veeco	Manual Operation, LN2, Two Roughing Pumps	\$8,000.00
MS-17AB	Veeco	Automatic Operation, LN2, Vacuum Actuated Valves, Two Roughing Pumps, Audio Leak Indicator Available on some units	\$9,000.00
MS-170	Veeco	Automatic Operation, LN2, Vacuum Actuated Valves, Two Roughing Pumps, Digital Auto Ranging Leak Box	\$11,000.00

Rebuilding Services

Duniway Stockroom Corp. also offers minor repair, complete refurbishing and calibration services for helium leak detectors.

Repair includes disassembly, cleaning and replacement of required parts. We check sensitivity against calibrated helium leaks which are traceable to NIST.

Call or e-mail us with the manufacturer, model number and a description of the symptoms of the problem to get a RMA (Return Merchandise Authorization) number.

Our customer service representatives will contact you following the inspection to provide you with an estimate for the job.

Rental Services

We have several leak detectors available for rental in the San Francisco/San Jose Bay Area. Please call for more information.

Gauge Controls

Daniway Stockroom, The Gauge Control Experts

Gauge Controls



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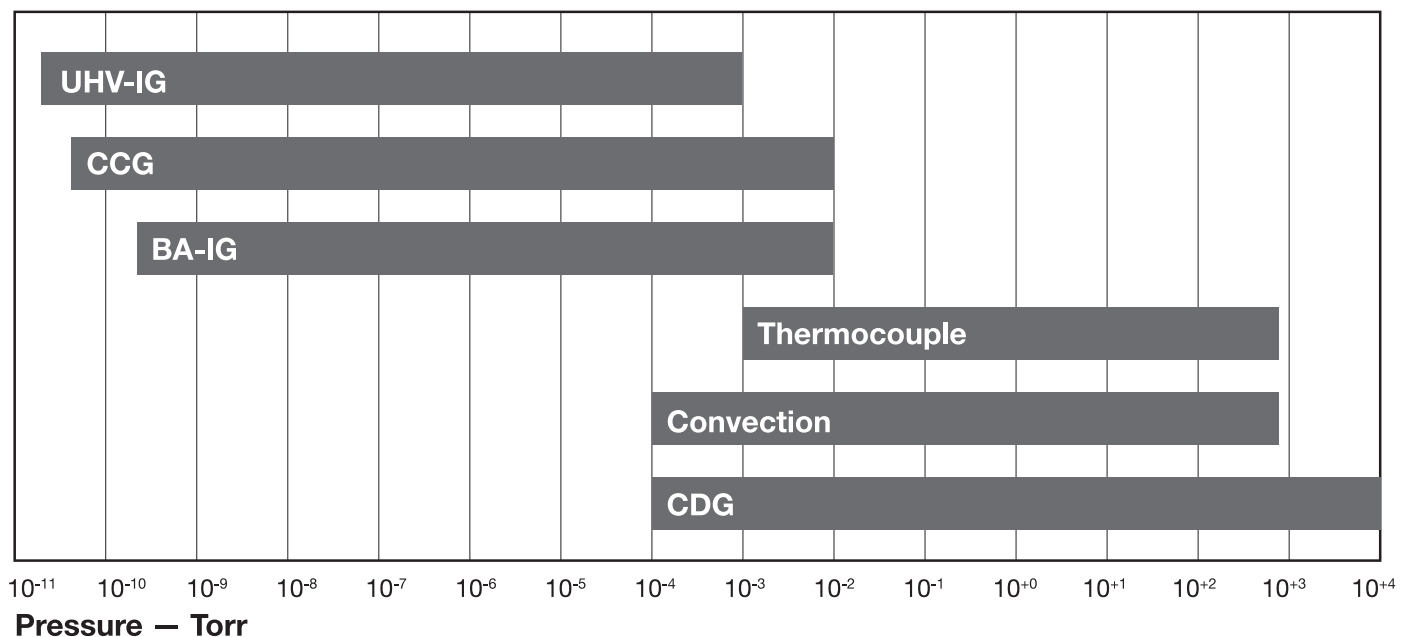
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Terranova® Vacuum Controllers And Vacuum Sensors Ranges - Key Features - Application - Limitations

Gauge / Sensor Technology	Terranova Model	Useful Pressure Range - TORR	Applications	Special Sensor Considerations
Thermocouple	924	10 ⁻³ to ATM	Roughing Gauge	Limited accuracy above 10 torr. Sensitive to contamination. Requires correction factor for gas species other than air.
Convection/Pirani	906/926	10 ⁻⁴ to ATM	Roughing gauge, Limited Gas Control	Sensitive to contamination. Requires correction factor for gas species other than air.
Dual Capacitance Diaphragm	908A	10 ⁻⁴ to 10 ⁺⁴ (with multiple sensors)	Precision Pressure Control, any Gas Species	High accuracy independent of gas species. Each sensor accurate for 3-1/2 decades below its full scale range.
Low-Cost, Single Diaphragm	809	3 1/2 decades between 10 ⁻⁴ and 10 ⁺⁴ depending on sensor chosen	Accurate Pressure Measurement, Gas Species Independent	Low cost diaphragm sensor control/display
Bayard-Alpert Ionization	934*	10 ⁻¹⁰ to 10 ⁻²	High Vacuum Measurement and Control	Choice of Tungsten or Thoria-coated Iridium filaments. (*934 also includes option of 2 thermo-couple or 2 convection roughing gauges.)
UHV-Ionization	934*	10 ⁻¹¹ to 10 ⁻³	Ultra-High Vacuum Measurement and Control	Choice of Tungsten or Thoria-coated Iridium filaments. (*934 also includes option of 2 thermo-couple or 2 convection roughing gauges.)
Convection + Cold Cathode	960	1x10 ⁻⁸ to ATM	Roughing plus rugged, reliable high vacuum	Single display for wide range, reliable pressure measurement.
Hybrid: Convection - Capacitance	907	10 ⁻⁴ to 10 ⁺⁴	Roughing plus precision gas control	Single display, with a convection gauge for roughing and a CDG gauge for precision gas backfill.
Multi-Modular	970	10 ⁻¹⁰ to 2 ATM	Roughing, backfill plus UHV measurement/control	Single display- single sensor from a variety of choices.

Gauge Range Chart



Gauge Controls

Terranova® Model 809 – Diaphragm Gauge Controller, Single

Terranova® Model 809 – Diaphragm Gauge Controller, Single

Operates a standard, unheated capacitance diaphragm gauge

Pressure Range: 1×10^3 Torr to 1×10^{-4} Torr

Pressure Unit: torr

Features

- Small, Compact 1/8 DIN Package
- Universal Power Supply
- One Process Control Set Point



Terranova® 809 – Diaphragm Gauge Controller, Single – Sensors & Cable

Part No.	Description	Price	Image
Duniway	--	US \$	#
TERRA-809	Terranova 809 Vacuum Gauge Controller for Single Terranova 808 or MKS 722B Diaphragm Gauge	\$485.00	--
CDG-CBL-1-10	Diaphragm Gauge Cable From Terra 809 to 15 pin connector on Type 808 or 722B Sensor, 10 ft long	\$63.00	1
722B-1	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (1 Torr Full Scale Range)	\$1,270.00	2
722B-10	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (10 Torr Full Scale Range)	\$1,131.00	2
722B-100	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (100 Torr Full Scale Range)	\$1,131.00	2
722B-1000	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (1000 Torr Full Scale Range)	\$1,131.00	2
808-1000-NPT	Type 808 Terranova Piezo Diaphragm Vacuum Sensor, 1/8" NPT Port (1000 Torr Full Scale Range)	\$395.00	3
808-C100-NPT	Type 808 Terranova Piezo Diaphragm Vacuum Sensor, 1/8" NPT Port (100 Torr Full Scale Range)	\$395.00	4



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Terranova® Model 906A – Convection Vacuum Gauge Controller, Single

Terranova® Model 906A – Convection Vacuum Gauge Controller, Single

Operates a standard convection-enhanced Pirani gauge

Pressure Range: 1×10^3 Torr to 1×10^{-4} Torr

Pressure Units: torr, millibar

Features

- CE Compliant; UL Listed
- Small, Compact 1/8 DIN Package
- Universal Power Supply
- Two Process Control Set Points
- RS-232 Compatible



Terranova® 906A – Convection Vacuum Gauge Controller, Single – Sensors & Cable

Part No.	Description	Price	Image
Duniway	--	US \$	#
TERRA-906A	Terranova 906A Vacuum Gauge Controller for Single Type 275 Convection Gauge	\$525.00	--
275-CBL-10	Convection Gauge Cable from Terra 906A or Terra 960 to Type 275 Sensor, 10 ft Long	\$80.00	1
CEP-CBL-1-10	Convection Gauge Cable from Terra 906A or Terra 960 to Type HPS/MKS 317 CEP Sensor, 10 ft Long	\$70.00	2
CEP-HPS-SH	MKS/HPS Convection Enhanced Pirani Gauge Sensor Tube, Shielded 1/8" NPT Port	\$325.00	3
CVT-275-101	ConvecTech™ Convection Gauge Sensor Tube, 1/8" NPT Port; (Equivalent to GP 275071)	\$130.00	4
CVT-275-KF25	ConvecTech™ Convection Gauge Sensor Tube, KF25 Port	\$175.00	5
CVT-275-VCR-4	ConvecTech™ Convection Gauge Sensor Tube, 1/4" Female VCR Port	\$175.00	6
GP275-071	Convecron Gauge Sensor Tube, 1/8" NPT Port	\$191.00	7
RS232-TN9DIN	RS232 Serial Cable from Terranova 905, 906, 906A 907, 908, 908A, 921, 924, 924A, 926, 926A, 960, 990, 10 ft long	\$60.00	8



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Gauge Controls

Terranova® Model 907 – Diaphragm and Convection Gauge Controller

Terranova® Model 907 – Diaphragm and Convection Gauge Controller

Simultaneously operates a standard capacitance diaphragm gauge and a standard convection-enhanced Pirani gauge

Pressure Range: 1×10^4 Torr to 1×10^{-4} Torr

Pressure Units: torr, millibar, Pascal

Features

- CE Compliant
- Small, Compact 1/8 DIN Package
- Universal Power Supply
- Two Process Control Set Points
- RS-232 Compatible



Terranova® 907 – Diaphragm and Convection Gauge Controller – Sensors & Cable

Part No.	Description	Price	Image
Duniway	--	US \$	#
TERRA-907	Terranova 907 Hybrid Vacuum Gauge Controller for 1-808 or 722B Diaphragm & 1-275 Convection Sensor	\$625.00	--
HYB-275	Dual Gauge Cable from Terra 907 to 1-808 or 722B Diaphragm & 1-275 Convection Sensor, 10 ft Long	\$105.00	1
HYB-CEP	Dual Gauge Cable from Terra 907 to 1-HPS/MKS 317 CEP Sensor and 1-MKS Type 722B CDG, 10 ft Long	\$60.00	2
722B-1	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (1 Torr Full Scale Range)	\$1,270.00	3
722B-10	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (10 Torr Full Scale Range)	\$1,131.00	3
722B-100	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (100 Torr Full Scale Range)	\$1,131.00	3
722B-1000	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (1000 Torr Full Scale Range)	\$1,131.00	3
808-1000-NPT	Type 808 Terranova Piezo Diaphragm Vacuum Sensor, 1/8" NPT Port (1000 Torr Full Scale Range)	\$395.00	4
808-C100-NPT	Type 808 Terranova Piezo Diaphragm Vacuum Sensor, 1/8" NPT Port (100 Torr Full Scale Range)	\$395.00	--
CEP-HPS-SH	MKS/HPS Convection Enhanced Pirani Gauge Sensor Tube, Shielded 1/8" NPT Port	\$325.00	5
CVT-275-101	ConvecTech™ Convection Gauge Sensor Tube, 1/8" NPT Port; (Equivalent to GP 275071)	\$130.00	6
CVT-275-KF25	ConvecTech™ Convection Gauge Sensor Tube, KF25 Port	\$175.00	7
CVT-275-VCR-4	ConvecTech™ Convection Gauge Sensor Tube, 1/4" Female VCR Port	\$175.00	8
GP275-071	Convecron Gauge Sensor Tube, 1/8" NPT Port	\$191.00	9
RS232-TN9DIN	RS232 Serial Cable from Terranova 905, 906, 906A 907, 908, 908A, 921, 924, 924A, 926, 926A, 960, 990, 10 ft long	\$60.00	--

Gauge Controls



Terranova® Model 908A – Diaphragm Gauge Controller, Dual

Simultaneously operates two standard capacitance diaphragm gauges

Pressure Range: 1×10^4 Torr to 1×10^{-4} Torr

Pressure Units: torr, millibar, Pascal

Features

- CE Compliant; UL Listed
- Small, Compact 1/8 DIN Package
- Universal Power Supply
- Two Process Control Set Points
- RS-232 Compatible



Terranova® 908A – Diaphragm Gauge Controller, Dual – Sensors & Cable

Part No.	Description	Price	Image
Duniway	--	US \$	#
TERRA-908A	Terranova 908A Vacuum Gauge Controller for 2 Terranova 808 or 2 MKS 722B Diaphragm Sensors	\$645.00	--
CDG-CBL-2-10	Diaphragm Gauge Cable From Terra 908A to 15 pin connectors on 2 Type 808 or 722B Sensors , 10 ft Long	\$110.00	1
722B-1	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (1 Torr Full Scale Range)	\$1,270.00	2
722B-10	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (10 Torr Full Scale Range)	\$1,131.00	2
722B-100	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (100 Torr Full Scale Range)	\$1,131.00	2
722B-1000	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (1000 Torr Full Scale Range)	\$1,131.00	2
808-1000-NPT	Type 808 Terranova Piezo Diaphragm Vacuum Sensor, 1/8" NPT Port (1000 Torr Full Scale Range)	\$395.00	3
808-C100-NPT	Type 808 Terranova Piezo Diaphragm Vacuum Sensor, 1/8" NPT Port (100 Torr Full Scale Range)	\$395.00	4
RS232-TN9DIN	RS232 Serial Cable from Terranova 905, 906, 906A 907, 908, 908A, 921, 924, 924A, 926, 926A, 960, 990, 10 ft long	\$60.00	5



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D Gauge Controls

Gauge Controls

Terranova® Model 924A – Thermocouple Gauge Controller, Single

Terranova® Model 924A – Thermocouple Gauge Controller, Single

Operates a standard type-531 thermocouple gauge

Pressure Range: 1×10^3 Torr to 1×10^{-3} Torr

Pressure Units: torr, millibar

Features

- CE Compliant
- Small, Compact 1/8 DIN Package
- Universal Power Supply
- Two Process Control Set Points
- RS-232 Compatible



Terranova® 924A – Thermocouple Gauge Controller, Single – Sensors & Cable

Part No.	Description	Price	Image
Duniway	--	US \$	#
TERRA-924A	Terranova 924A Vacuum Gauge Controller for Single Type 531 Thermocouple Gauge	\$525.00	--
TC-924A-CBL-10	Thermocouple Vacuum Gauge Cable from Terra 924A to Type 531 Sensor, 10 ft long	\$65.00	1
DST-531	Thermocouple Sensor Tube, Nickel-plated, Mild Steel, 1/8" NPT Port; (Equivalent: Varian F0472301, Hastings DV-531)	\$70.00	2
DST-531S	Thermocouple Sensor Tube, Stainless Steel, 1/8" NPT Port (Equivalent: Varian F0472303)	\$140.00	3
RS232-TN9DIN	RS232 Serial Cable from Terranova 905, 906, 906A 907, 908, 908A, 921, 924, 924A, 926, 926A, 960, 990, 10 ft long	\$55.00	4



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Terranova® Model 926A – Convection Gauge Controller, Dual

Simultaneously operates two standard convection-enhanced Pirani gauges

Pressure Range: 1×10^3 Torr to 1×10^{-4} Torr

Pressure Units: torr, millibar

Features

- CE Compliant; UL Listed
- Small, Compact 1/8 DIN Package
- Universal Power Supply
- Two Process Control Set Points
- RS-232 Compatible



Terranova® 926A – Convection Gauge Controller, Dual – Sensors & Cable

Part No.	Description	Price	Image
Duniway	--	US \$	#
TERRA-926A	Terranova 926A Vacuum Gauge Controller for 2 Type 275 Convection Gauges	\$625.00	--
275-CBL-2-10	Convection Vacuum Gauge Cable from Terra 926A or Terra 934 to 2 - Type 275 Sensors, Non-Bakeable, 10 ft Long	\$110.00	1
CEP-CBL-2-10	Convection Gauge Cable from Terra 926A to 2 - Type HPS/MKS 317 CEP Sensor, Non-Bakeable, 10 ft Long	\$100.00	2
CEP-HPS-SH	MKS/HPS Convection Enhanced Pirani Gauge Sensor Tube, Shielded 1/8" NPT Port	\$325.00	3
CVT-275-101	ConvecTech™ Convection Gauge Sensor Tube, 1/8" NPT Port; (Equivalent to GP 275071)	\$130.00	4
CVT-275-KF25	ConvecTech™ Convection Gauge Sensor Tube, KF25 Port	\$175.00	5
CVT-275-VCR-4	ConvecTech™ Convection Gauge Sensor Tube, 1/4" Female VCR Port	\$175.00	6
GP275-071	Convecron Gauge Sensor Tube, 1/8" NPT Port	\$191.00	7



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Gauge Controls

Terranova® Model 934 – Wide Range Vacuum Gauge Controller

Terranova® Model 934 – Wide Range Vacuum Gauge Controller

Simultaneously operates a standard hot cathode ionization gauge and two standard low vacuum gauges

Pressure Range: 1×10^3 Torr to 2×10^{-11} Torr

Pressure Units: torr

The Terranova 934 Wide Range Vacuum Gauge Controller is available in two models: Standard and UHV. The Standard model is set to operate Bayard-Alpert-type glass or nude ionization gauges. The UHV model is set to operate UHV-type nude ionization gauges. Both the Standard and UHV model come with the option to operate either two standard convection-enhanced Pirani gauges or two type-531 thermocouple gauges. Four process control set points and RS-232 compatibility is available in all configurations.



Terranova® Model 934 – Wide Range Vacuum Gauge Controller – Controller & Cables

Part No.	Description	Price	Image
Duniway	--	US \$	#
T-934-CV110	Standard Terranova 934 Ionization & Dual Type 275 Convection Gauge Controller, 110 VAC Power	\$1,975.00	--
T-934-CV220	Standard Terranova 934 Ionization & Dual Type 275 Convection Gauge Controller, 220 VAC Power	\$1,975.00	--
T-934-TC110	Standard Terranova 934 Ionization & Dual Type 531 Thermocouple Gauge Controller, 110 VAC Power	\$1,975.00	--
T-934-TC220	Standard Terranova 934 Ionization & Dual Type 531 Thermocouple Gauge Controller, 220 VAC Power	\$1,975.00	--
T-934-UHVCV110	UHV Terranova 934 Ionization & Dual Type 275 Convection Gauge Controller, 110 VAC Power	\$2,125.00	--
T-934-UHVCV220	UHV Terranova 934 Ionization & Dual Type 275 Convection Gauge Controller, 220 VAC Power	\$2,125.00	--
T-934-UHVT110	UHV Terranova 934 Ionization & Dual Type 531 Thermocouple Gauge Controller, 110 VAC Power	\$2,125.00	--
T-934-UHVT220	UHV Terranova 934 Ionization & Dual Type 531 Thermocouple Gauge Controller, 220 VAC Power	\$2,125.00	--
275-CBL-2-10	Convection Vacuum Gauge Cable from Terra 926A or Terra 934 to 2 - Type 275 Sensors, Non-Bakeable, 10 ft Long	\$110.00	1
GD-IGH-10-934	Glass Ionization Gauge Cable, GD Connector, Bakeable, 10 ft Long	\$145.00	2
ND-IGH-10-934	Nude Ionization Gauge Cable, Bakeable, 10 ft Long	\$145.00	3
TC-934-CBL-10	Thermocouple Vacuum Gauge Cable from Terra 934 to Type 531 Sensor, Non-Bakeable, 10 ft Long, (2 Required)	\$60.00	4
RS232-TN934	RS232 Serial Cable from Terranova 934, 935, 10 ft Long	\$55.00	5



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See Page **171** for glass ionization gauges

See Page **174** for nude ionization gauges

See Page **168** for type-531 thermocouple gauges

See Page **170** for convection-enhanced Pirani gauges

Ion Gauge & Nude Gauge Cables

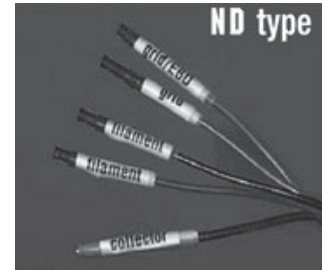
New Teflon® Connector for Glass Tubes

- New Design specifically for glass ion gauge tubes
- Engages all 6 pins at once
- Available alone as a kit p/n GD-SOCKET \$40.00 — see page 166



Slide-On Connector for Nude Gauges

- Easy slide-on connectors
- Color coded for quick connections
- Labels on Bakeable Cable are on controller end



Glass Ion Gauge Cables

Description	Part #	Prices for lengths		
		10'	25'	50'
--	Duniway			
Complete Cable Assembly GD Type Connector Wire useable to 200°C	GD-IGH -__- ____	\$155.00	\$195.00	\$280.00
Single End Assembly GD Type Connector Wire useable to 200°C	GD-IGH -__-BARE	\$125.00	\$165.00	\$240.00

Nude Ion Gauge Cables

Description	Part #	Prices for lengths		
		10'	25'	50'
--	Duniway			
Complete Cable Assembly ND Type Connector Wire bakeable to 200°C	ND-IGH -__- ____	\$155.00	\$215.00	\$355.00
Single End Assembly ND Type Connector Wire bakeable to 200°C	ND-IGH -__-BARE	\$125.00	\$185.00	\$325.00

Use the table below to help construct the correct Duniway Part # for your desired cable.

Connector Type	Wire Type	Wire Length	Granville Phillips
GD = Glass Tube Teflon® Connector	IGH = Bakeable to 200°C	10 = 10 ft long	260, 270, 280, 303, 306, 307, 330, 340, 350, 360, or 370
ND = Nude Gauge Slide-on Connector		25 = 25 ft long	Varian
		50 = 50 ft long	831, 836, 842, 843, 844, 845, 880, 971-0003, 971-0014, 971-1008, or MULTI-GAUGE
			PE
			DGC3
			SRS
			1GC100

Example:

GD-IGH-10-260 is a Glass Tube Teflon® Connector, bakeable to 200°C, 10 ft long, Granville Phillips 260 cable.

Gauge Controls

Terranova® Model 960 – Convection and Cold Cathode Gauge Controller

Terranova® Model 960 – Convection and Cold Cathode Gauge Controller

Simultaneously operates a standard convection-enhanced Pirani gauge and a type-525 cold cathode gauge

Pressure Range: 1×10^3 Torr to 1×10^{-8} Torr

Pressure Units: torr, millibar, Pascal

Features

- CE & UL Compliant
- Small, Compact 1/8 DIN Package
- Universal Power Supply
- Two Process Control Set Points
- RS-232 Compatible



Terranova® 960 – Convection and Cold Cathode Gauge Controller – Sensors & Cables

Part No.	Description	Price	Image
Duniway	--	US \$	#
TERRA-960	Terranova 960 Vacuum Gauge Controller for Type 275 Convection and Type 525 Cold Cathode Sensors	\$760.00	--
05-110-SHV	Cold Cathode Gauge Cable from Terra 960 to Type 525 Sensor, 10 ft Long, RG-59 Coaxial Cable, Non-bakeable	\$120.00	1
05-410-SHV	Cold Cathode Gauge Cable from Terra 960 to Type 525 Sensor, 10 ft Long, Radiation Resistant/Bakeable to 150°C	\$165.00	2
275-CBL-10	Convection Gauge Cable from Terra 906A or Terra 960 to Type 275 Sensor, 10 ft Long	\$80.00	3
CCG-525-1	Type 525 Cold Cathode Gauge Sensor, 1" Tube Port	\$380.00	--
CCG-525-CFF	Type 525 Cold Cathode Gauge Sensor, 2.75" CF Flange Port	\$400.00	--
CCG-525-KF25	Type 525 Cold Cathode Gauge Sensor, KF25 Port	\$400.00	--
CCG-525-KF40	Type 525 Cold Cathode Gauge Sensor, KF40 Port	\$400.00	--
CVT-275-101	ConvecTech™ Convection Gauge Sensor Tube, 1/8" NPT Port; (Equivalent to GP 275071)	\$130.00	4
CVT-275-KF25	ConvecTech™ Convection Gauge Sensor Tube, KF25 Port	\$175.00	5
CVT-275-VCR-4	ConvecTech™ Convection Gauge Sensor Tube, 1/4" Female VCR Port	\$175.00	6
GP275-071	Convecron Gauge Sensor Tube, 1/8" NPT Port	\$191.00	7



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Terranova® Model 970 – Multi-modular Vacuum Gauge Controller

Operates a number of combination gauges including the Inficon BPG-400

Pressure Range: 1.5×10^3 Torr to 5×10^{-10} Torr

Pressure Units: torr, millibar, Pascal

Features

- CE & UL Compliant
- Small, Compact 1/8 DIN Package
- Universal Power Supply
- Two Process Control Set Points
- RS-232 Compatible



Terranova® Model 970 – Multi-modular Vacuum Gauge Controller – Sensors & Cables

Part No.	Description	Price	Image
Duniway	--	US \$	#
TERRA-970	Terranova 970 Multi-Modular Vacuum Gauge Controller	\$725.00	--
97015-10-900	Gauge Cable from Terra 970 to MKS/HPS 910, 972 or 979B Sensors, 10 ft Long	\$70.00	1
9709-10-925	Gauge Cable from Terra 970 to MKS/HPS 925 Sensor, 10 ft Long	\$70.00	2
BPG-970-CBL-10	Gauge Cable from Terra 970 to BPG-400 Sensor, 10 ft Long	\$65.00	3
910-11030	MKS/HPS 910 Dual Piezo-Pirani Gauge Sensor, KF-16 Flange, (Range 1500 to 10^{-4} Torr)	\$700.00	4
925-11010	MKS/HPS 925 Micro Pirani Gauge Sensor, KF-16 Flange, (Range ATM to 10^{-5} Torr)	Inquire	5
972B-CFF	MKS/HPS 972 Pirani-Cold Cathode Gauge Sensor, 2.75" CF Flange, (Range 1500 to 10^{-8} Torr)	\$1,025.00	6
BPG-400-CFF	Inficon BPG-400 Combination Pirani/Ion Gauge Sensor, 2.75" CF Flange, (Range ATM to 10^{-10} Torr)	\$1,385.00	7
BPG-400-KF25	Inficon BPG-400 Combination Pirani/Ion Gauge Sensor, KF25 Flange, (Range ATM to 10^{-10} Torr)	\$1,345.00	8
RS232-TN9DIN	RS232 Serial Cable from Terranova 905, 906, 906A 907, 908, 908A, 921, 924, 924A, 926, 926A, 960, 990, 10 ft long	\$60.00	9



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Gauge Controls

Gauge Controls

Digital Controllers & Sensors

Digital Controllers & Sensors

With the convenience of digital display, these thermocouple gauge controllers are direct replacements for the Varian 801 or the Hastings VT-6. The more rugged digital meter offers

a readout for the vacuum range of 0 to 1999 mTorr. Price includes the 6 foot power cord & 10 foot TC cable.

Part No.	Description	Price
Duniway	--	US \$
DST-06M	Thermocouple Sensor Tube, 1/8" NPT Port; (Equivalent: Hastings DV-6M, GP 270006, Varian VR0060-301)	\$70.00
DST-531	Thermocouple Sensor Tube, Nickel-plated, Mild Steel, 1/8" NPT Port; (Equivalent: Varian F0472301, Hastings DV-531)	\$70.00
DST-531S	Thermocouple Sensor Tube, Stainless Steel, 1/8" NPT Port (Equivalent: Varian F0472303)	\$140.00
DTC-06M-115	Digital Thermocouple Type 06M Gauge Controller, including DST-06M Sensor Tube, 110 VAC	\$370.00
DTC-06M-115-BX	Digital Thermocouple Type 06M Gauge Controller, in Box, including DST-06M Sensor Tube, 110 VAC	\$435.00
DTC-06M-115NT	Digital Thermocouple Type 06M Gauge Controller without DST-06M Sensor Tube, 110 VAC	\$300.00
DTC-06M-230	Digital Thermocouple Type 06M Gauge Controller, including DST-06M Sensor Tube, 220 VAC	\$370.00
DTC-06M-230-BX	Digital Thermocouple Type 06M Gauge Controller, in Box, including DST-06M Sensor Tube, 220 VAC	\$435.00
DTC-06M-230NT	Digital Thermocouple Type 06M Gauge Controller, without DST-06M Sensor Tube, 220 VAC	\$300.00
DTC-531-115	Digital Thermocouple Type 531 Gauge Controller, including DST-531 Sensor Tube, 110 VAC	\$360.00
DTC-531-115-BX	Digital Thermocouple Type 531 Gauge Controller, in Box, including DST-531 Sensor Tube, 110 VAC	\$425.00
DTC-531-115NT	Digital Thermocouple Type 531 Gauge Controller, without DST-531 Sensor Tube, 110 VAC	\$295.00
DTC-531-230	Digital Thermocouple Type 531 Gauge Controller, including DST-531 Sensor Tube, 220 VAC	\$360.00
DTC-531-230-BX	Digital Thermocouple Type 531 Gauge Controller, in Box, including DST-531 Sensor Tube, 220 VAC	\$425.00
DTC-531-230NT	Digital Thermocouple Type 531 Gauge Controller, without DST-531 Sensor Tube, 220 VAC	\$295.00
DTC06M-115BXNT	Digital Thermocouple Type 06M Gauge Controller, in Box, without DST-06M Sensor Tube, 110 VAC	\$365.00
DTC06M-230BXNT	Digital Thermocouple Type 06M Gauge Controller, in Box, without DST-06M Sensor Tube, 220 VAC	\$365.00
DTC531-115BXNT	Digital Thermocouple Type 531 Gauge Controller, in Box, without DST-531 Sensor Tube, 110 VAC	\$360.00
DTC531-230BXNT	Digital Thermocouple Type 531 Gauge Controller, in Box, without DST-531 Sensor Tube, 220 VAC	\$360.00
TCG-BOX	Box for Thermocouple Gauge Controller	\$65.00



▼ *DST-06M Thermocouple Sensor Tube*



▼ *DST-531 Thermocouple Sensor Tube*



▼ *Digital Thermocouple Type 06M Gauge Controller*



▼ *Digital Thermocouple Type 531 Gauge Controller*



▼ *Digital Thermocouple Type 06M Gauge Controller, in Box*



▼ *Box for Thermocouple Gauge Controller*

Duniway Model DRPG-531 – Portable Thermocouple Gauge Controller

The Duniway Ruggedized Portable Gauge, DRPG-531, is a rugged battery operated portable vacuum instrument designed for the demands of field work. With a strong magnet for hands free use and built in analytics, the DRPG is a perfect addition to the field tech's vacuum tool box. The DRPG-531 uses the reliable DST-531 Thermocouple Gauge Tube and has a useful range of 0.001 to 800 Torr.

Features

- Auto Off
- On/Off soft switch
- Backlight for night viewing
- Low Battery indication
- Uses four 'AA' batteries (included) or Micro-B USB
- 70 hour battery life
- Good/Bad tube indication
- Self Test Mode
- Precise accuracy available in 11 measurement units
- Field Calibratable
- Bluetooth – Remote monitoring and troubleshooting from your phone (iOS or Android)

Specifications

Useful Measuring Range	0.001-800 Torr
Units of display	11 different units of vacuum (microns, millitorr, Torr, mm of Hg, mbar, bar, Kpa, Pa, PSIA, in of Hg, and in of water)
Vacuum Gauge	DST-531 or equivalent from other suppliers (e.g. Varian 531)
Pressure Display	LED backlit
VAC and ATM Adjust	Set by front panel push buttons
Power Input	Four 'AA' alkaline batteries or Micro-B USB
Accuracy	±17% 1-2000 millitorr ±30% 2001-800,000 millitorr
Weight	2 lb / 1 kg
Dimensions	6.2" x 3.7" x 1.3"



Duniway Model DRPG-531 – Portable Thermocouple Vacuum Gauge Controller & Sensors

Part No.	Description	Price
Duniway	--	US \$
DRPG-531	Thermocouple Type 531 Field Gauge Controller, Battery Operated, includes DST-531 Sensor Tube	\$525.00
DRPG-531NT	Thermocouple Type 531 Field Gauge Controller, Battery Operated, without DST-531 Sensor Tube	\$460.00
DST-531	Thermocouple Sensor Tube, Nickel-plated, Mild Steel, 1/8" NPT Port; (Equivalent: Varian F0472301, Hastings DV-531)	\$70.00
DST-531S	Thermocouple Sensor Tube, Stainless Steel, 1/8" NPT Port (Equivalent: Varian F0472303)	\$140.00
DRPG-531S	Thermocouple Type 531 Field Gauge Controller, Battery Operated, includes DST531S Stainless Steel Sensor Tube	\$595.00

Gauge Controls

Rebuilt Ion Gauge Controllers, Thermocouple Controllers & Sensors

Rebuilt Ion Gauge Controllers

Manufacturer	Model	Description	Price
--	--	--	US \$
Granville-Phillips	270-001	Autorange	\$800.00
Granville-Phillips	270-002	Autorange with dual TC	900.00
Granville-Phillips	270-003	Autorange with process control	1,000.00
Granville-Phillips	270-004	Autorange with dual TC and process control	1,200.00
Granville-Phillips	271-004	UHV gauge process control and autoranging	800.00
Granville-Phillips	280-002	Digital 2 TC Autorange	1,200.00
Granville-Phillips	303-001	Dual CONVECTRON®	1,800.00
Granville-Phillips	303-007	Reads 2 ion gauges	1,800.00
Granville-Phillips	303-007	With dual CONVECTRON®, process control & RS-232	2,600.00
Granville-Phillips	330	Half rack digital ion gauge only	900.00
Granville-Phillips	340	Digital Ion Gauge with Dual Convection	1,100.00
Leybold Heraeus	Combivac	Digital	Inquire
Varian	842-301	Gauge only	800.00
Varian	843-301	With dual TC (531)	1,000.00
Varian	843-302	With dual TC, 2 setpoints on ion gauge, 1 on TC	1,100.00
Varian	844-301	Gauge only	1,100.00
Varian	844-302	With 2 setpoints on ion gauge	1,300.00
Varian	845-301	With dual TC, 1 setpoint	1,800.00
Varian	845-302	With dual TC, 2 ion gauge setpoints	2,000.00
Varian	880	Digital ion gauge	900.00
Varian	880	Digital ion gauge with dual TC	1,100.00

Items are subject to availability. All units come with our standard 90-day warranty covering all parts and labor.



Reconditioned Varian 843 & 845



Reconditioned Thermocouple Gauge Controllers

Thermocouple Gauge Controllers

Manufacturer	Model	Mounting	Tube	Range	Price
--	--	--	--	millitor	US \$
Granville-Phillips	275-092	1/4 DIN	275-071	1 - 1000	\$350.00
Granville-Phillips	275-094	1/4 DIN	275-071	1 - 1000	\$450.00
Granville-Phillips	275-096	1/4 DIN	275-071	1 - 1000	\$525.00
Granville-Phillips	275-102	1/4 DIN	275-071	1 - 1000	\$650.00
Granville-Phillips	316-001	Half Rack	275-071	1 - 1000	\$590.00
Varian	801	Panel Mount	531	1 - 1000	\$180.00
Varian	801	In Box	531	1 - 1000	\$240.00
Varian	804	In Box	531	1 - 1000	\$400.00
Varian	810	Panel Mount	531	1 - 1000	\$400.00
Varian	810-2	Panel Mount	531	1 - 1000	\$400.00

Discharge Gauge Controllers & Gauge Tubes

MFG	Model	Description	Price
--	--	--	US \$
CVC	GPH-001A	Tube, 1" SST Tubulation, BNC Connector	\$250.00
Varian	860	Discharge Gauge Control with Power Cord	\$550.00
Varian	860-2	Discharge Gauge Control, 2 setpoints	\$700.00
Varian	524	Tube, 1" Tubulation	\$250.00

See Vacuum Sensor section for thermocouple gauges, convection gauges, ionization gauges and cold cathode gauges for above controllers.

Other Gauge Cables

Part No.	Description	Price	Image
Duniway	--	US \$	#
802-4-TC-CABLE	Thermocouple Gauge Cable from Varian 802, 804 Controllers to Type 531 Sensor, 10 ft Long	\$70.00	1
843-5-TC-CABLE	Thermocouple Gauge Cable from Varian 843, 845 Controllers to Type 531 Sensor, 10 ft Long	\$90.00	2
880-TC-CABLE	Thermocouple Gauge Cable from Varian 880 Controllers to Two Type 531 Sensor, 10 ft Long	\$100.00	--
VEECO-TC-CABLE	Thermocouple Gauge Cable from Veeco TG-7 and TG-27 Controllers to Type DV-1M or DV-4M Sensors, 9 ft Long	\$120.00	3



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GD-Socket Kit

Part No.	Description	Price
Duniway	--	US \$
GD-SOCKET	Ion Gauge Cable Connector for Glass Tube(KIT)	\$40.00



▼ *GD-SOCKET – Ion Gauge Cable Connector for Glass Tube (KIT)*



Vacuum Sensors

Duniway Stockroom, The Vacuum Sensor Experts



Vacuum Sensors

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Thermocouple Gauge Sensor Tubes

Duniway Stockroom Corp. offers a comprehensive array of solutions for thermocouple gauge measuring systems. We sell a wide variety of replacement tubes for the most commonly used thermocouples as displayed in the tables on this page.

In addition, we sell control/readout units in the following configurations:

- Simple digital readout and control, free-standing and in a box. See page **164**
- Digital readout and control, microprocessor controlled, with many features. See page **158**
- Surplus readout and control units. See page **166**

Part No.	Description	Price	Image
Duniway	--	US \$	#
DST-004	Thermocouple Sensor Tube, 1/8" NPT Port (Equivalent: CVC GTC-004)	\$50.00	1
DST-023	Thermocouple Sensor Tube, 1/8" NPT Port (Equivalent: Hastings DV-23 Orange)	\$81.00	2
DST-036	Thermocouple Sensor Tube, 1/8" NPT Port (Equivalent: CVC GTC-036)	\$55.00	3
DST-04D	Thermocouple Sensor Tube, 1/8" NPT Port (Equivalent: Veeco DV-4M, Hastings DV-4D Purple)	\$75.00	4
DST-05M	Thermocouple Sensor Tube, 1/8" NPT Port (Equivalent: Hastings DV-05M)	\$165.00	5
DST-06M	Thermocouple Sensor Tube, 1/8" NPT Port; (Equivalent: Hastings DV-6M, GP 270006, Varian VR0060-301)	\$70.00	6
DST-531	Thermocouple Sensor Tube, Nickel-plated, Mild Steel, 1/8" NPT Port; (Equivalent: Varian F0472301, Hastings DV-531)	\$70.00	7
DST-531S	Thermocouple Sensor Tube, Stainless Steel, 1/8" NPT Port (Equivalent: Varian F0472303)	\$140.00	8
DV-6R	Thermocouple Sensor Tube, Stainless Steel, 1/8" NPT Port (Equivalent: Hastings 55-38R)	\$90.00	9



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Vacuum Sensors

Capacitance & Piezo Diaphragm Vacuum Sensors, New

Capacitance Diaphragm Vacuum Sensors, New

Diaphragm Vacuum Sensors are highly accurate, gas-species-independent gauges for critical process control and research applications. All sensors have a 15-pin, D-type connector with a signal output of 0-10 VDC full scale.

MKS 722B Baratron Capacitance Gauge

Gas-species Independent Vacuum Gauge

Specifications

- CE & ROHS Compliant
- Accuracy: 0.5% of Reading
- Temperature Range: 0°C - 50°C; 15°C - 40°C (1 Torr only)
- Output Voltage: 0 V – 10 V DC
- Electrical Connection: Male 15-pin D-sub Connector
- Inert Vacuum Surfaces



Part No.	Description	Price
Duniway	--	US \$
722B-1	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (1 Torr Full Scale Range)	\$1,270.00
722B-10	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (10 Torr Full Scale Range)	\$1,131.00
722B-100	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (100 Torr Full Scale Range)	\$1,131.00
722B-1000	Type 722B MKS Baratron Capacitance Diaphragm Vacuum Sensor, 1/2" Tube Port (1000 Torr Full Scale Range)	\$1,131.00

Also available with VCR®-8 Female, 1.33" CFF or KF-16 fittings at an additional cost

Piezo Diaphragm Vacuum Sensors, New

The Terranova® Model 808 Silicon Diaphragm Vacuum Sensor provides a low cost alternative for gas-species independent pressure measurement in the range from 0.5 Torr to 1000 Torr.

Terranova® Model 808

Low Cost, Gas-species Independent Vacuum Gauge

Specifications

- Accuracy: 2% of Full Scale
- Output Voltage: 0 V – 10 V DC
- Electrical Connection: Male 15-pin D-sub Connector
- Inert Vacuum Surfaces



Part No.	Description	Price
Duniway	--	US \$
808-1000-NPT	Type 808 Terranova Piezo Diaphragm Vacuum Sensor, 1/8" NPT Port (1000 Torr Full Scale Range)	\$395.00
808-C100-NPT	Type 808 Terranova Piezo Diaphragm Vacuum Sensor, 1/8" NPT Port (100 Torr Full Scale Range)	\$395.00

Convectech™ Convection-enhanced Pirani Gauge

Specifications

- Pressure Range: 1×10^3 Torr to 1×10^{-4} Torr
- CE & ROHS Compliant
- Drop-in replacement for MKS / GP 275 Convecatron gauge
- Bakeable to 150°C; Non-operating, cable detached

MKS / HPS 317 Convection-enhanced Pirani Gauge

Specifications

- Pressure Range: 1×10^3 Torr to 1×10^{-3} Torr
- UHV Compatible Materials
- Bakeable to 200°C

MKS / Granville-Phillips 275 Convecatron Gauge

Specifications

- Pressure Range: 1×10^3 Torr to 1×10^{-4} Torr
- ROHS Compliant
- Bakeable to 150°C; Non-operating, cable detached

Part No.	Description	Price	Image
Duniway	--	US \$	#
CEP-HPS-SH	HPS/MKS Convection Enhanced Pirani Gauge Sensor Tube, Shielded 1/8" NPT Port	\$325.00	1
CVT-275-101	ConvecTech™ Convection Gauge Sensor Tube, 1/8" NPT Port; (Equivalent to GP 275071)	\$130.00	2
CVT-275-KF25	ConvecTech™ Convection Gauge Sensor Tube, KF25 Port	\$175.00	3
CVT-275-VCR-4	ConvecTech™ Convection Gauge Sensor Tube, 1/4" Female VCR Port	\$175.00	4
GP275-071	Convecatron® Gauge Sensor Tube, 1/8" NPT Port	\$191.00	5



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Type 525 Cold Cathode Gauge

Specifications

- Pressure Range: 1×10^{-2} Torr to 1×10^{-8} Torr
- Drop-in replacement for Varian 525 cold cathode gauge
- Quick Response Time
- Non-bakeable

Part No.	Description	Price	Image
Duniway	--	US \$	#
CCG-525-1	Type 525 Cold Cathode Gauge Sensor, 1" Tube Port	\$380.00	1
CCG-525-CFF	Type 525 Cold Cathode Gauge Sensor, 2.75" CF Flange Port	\$400.00	2
CCG-525-KF25	Type 525 Cold Cathode Gauge Sensor, KF25 Port	\$400.00	3
CCG-525-KF40	Type 525 Cold Cathode Gauge Sensor, KF40 Port	\$400.00	4



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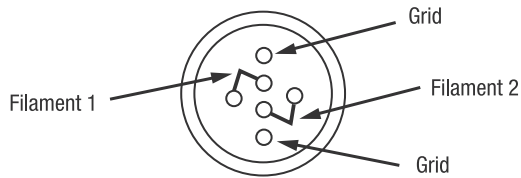
4

Vacuum Sensors

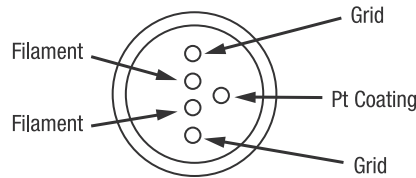
Glass Ion Gauge Vacuum Sensor Tubes

Glass Ion Gauge Vacuum Sensor Tubes

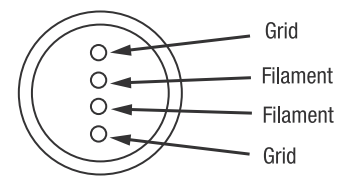
Filament / Pin Patterns



Tungsten Filament Pin Pattern fits the "old-style" connectors but requires a wire "jumper" from D to E

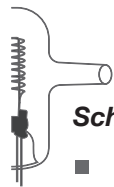


Broad Range Iridium Filament Pin Pattern "old-style" connectors but requires a ground connection to the Pt Coating



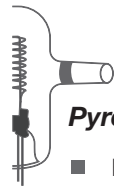
Iridium Filament Pin Pattern is the same for all manufacturers

Tube & Tubulations Explained



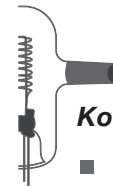
Schott Glass

- Lowest Cost Model
- Part number prefixed by "N"



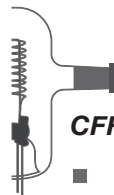
Pyrex® Glass

- For sealing tube to Pyrex® glass vacuum system
- Part number prefixed by "P"



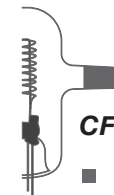
Kovar® to Glass

- Required for welding to flanges
- Stronger tubulation
- More certain to be round
- Part number prefixed by "K"



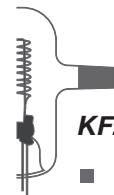
CFF-133

- Mini-Conflat type
- 1.33" O.D. Rotatable Flange



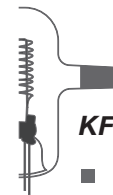
CFF-275

- Conflat type
- 2.75" O.D. Rotatable Flange



KF25

- Qwik Flange



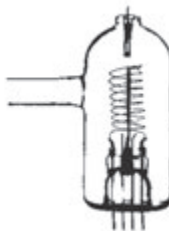
KF40

- Qwik Flange

Filaments & Bulbs Explained

Iridium Filament:

- Thoria coated single ribbon filament in each tube
- "Non-burnout" type; occasional exposure to atmosphere during operation will not damage or shorten filament life *10 milliamps*
- Filament easily poisoned by back-streaming of oil from diffusion pump
- 4-pins
- Part number prefixed by "I"



Coated Bulb:

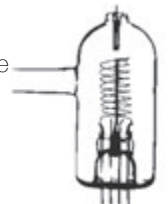
- Platinum film on the inside
- Coating prevents non-uniform static charge inside the bulb
- Helpful only at pressures of 10^{-4} Torr range and up
- Iridium filament
- 4-pins
- Part number prefixed by "C"



10 milliamps

Tungsten Filament:

- Two spiral Tungsten filaments in each tube
- Instant burnout occurs if let up to air while hot
- Preferred in vacuum system with heavy backstreaming of oil from diffusion pump
- 6-pins
- Part number prefixed by "T"



8 milliamps

Vacuum Sensors

Glass Ion Gauge Vacuum Sensor Tubes, New

Uncoated - Standard Range - Iridium filament

Operating pressure: 2×10^{-10} to 1×10^{-3} Torr

Sensitivity: 10/Torr

X-ray limit: 2×10^{-10} Torr

Part No.	Equivalent Part No.	Description		Price
Duniway	Varian	Brooks-GP	--	US \$
I-075-N	571-K2471304	NA	Uncoated Glass Ion Gauge Tube, Iridium Filament, 0.75" Diameter Schott Glass Port	\$177.00
I-075-P	NA	274002	Uncoated Glass Ion Gauge Tube, Iridium Filament, 0.75" Diameter Pyrex Glass Port	\$185.00
I-075-K	571-K2471305	274003	Uncoated Glass Ion Gauge Tube, Iridium Filament, 0.75" Diameter Kovar Port	\$190.00
I-100-N	571-K2471301	NA	Uncoated Glass Ion Gauge Tube, Iridium Filament, 1.0" Diameter Schott Glass Port	\$175.00
I-100-P	NA	274005	Uncoated Glass Ion Gauge Tube, Iridium Filament, 1.0" Diameter Pyrex Glass Port	\$177.00
I-100-K	571-K2471302	274006	Uncoated Glass Ion Gauge Tube, Iridium Filament, 1.0" Diameter Kovar Port	\$190.00
I-CFF-133	NA	274020	Uncoated Glass Ion Gauge Tube, Iridium Filament, 1.33" CF Flanged Port	\$235.00
I-CFF-275	571-K2471303	274008	Uncoated Glass Ion Gauge Tube, Iridium Filament, 2.75" CF Flanged Port	\$235.00
I-KF25	571-K2471306	274032	Uncoated Glass Ion Gauge Tube, Iridium Filament, KF25 Flanged Port	\$235.00
I-KF40	571-K2471311	NA	Uncoated Glass Ion Gauge Tube, Iridium Filament, KF40 Flanged Port	\$235.00

Platinum Coated - Standard Range - Iridium Filament

Operating pressure: 2×10^{-10} to 1×10^{-3} Torr

Sensitivity: 10/Torr

X-ray limit: 2×10^{-10} Torr

Part No.	Equivalent Part No.	Description		Price
Duniway	Varian	Brooks-GP	--	US \$
I-075-NC	563-K2466304	NA	Coated Glass Ion Gauge Tube, Iridium Filament, 0.75" Diameter Schott Glass Port	\$200.00
I-075-KC	563-K2466305	NA	Coated Glass Ion Gauge Tube, Iridium Filament, 0.75" Diameter Kovar Port	\$205.00
I-100-NC	563-K2466301	NA	Coated Glass Ion Gauge Tube, Iridium Filament, 1.0" Diameter Schott Glass Port	\$200.00
I-100-KC	563-K2466302	NA	Coated Glass Ion Gauge Tube, Iridium Filament, 1.0" Diameter Kovar Port	\$205.00
IC-CFF-275	563-K2466303	NA	Coated Glass Ion Gauge Tube, Iridium Filament, 2.75" CF Flanged Port	\$255.00

Uncoated - Standard Range - Tungsten Filament

Operating pressure: 2×10^{-10} to 1×10^{-3} Torr

Sensitivity: 10/Torr

X-ray limit: 2×10^{-10} Torr

Part No.	Equivalent Part No.	Description		Price
Duniway	Varian	Brooks-GP	--	US \$
T-075-N	572-K7360303	NA	Uncoated Glass Ion Gauge Tube, Tungsten Filament, 0.75" Diameter Schott Glass Port	\$140.00
T-075-P	NA	274012	Uncoated Glass Ion Gauge Tube, Tungsten Filament, 0.75" Diameter Pyrex Glass Port	\$142.00
T-075-K	572-K7360304	274013	Uncoated Glass Ion Gauge Tube, Tungsten Filament, 0.75" Diameter Kovar Port	\$150.00
T-100-N	572-K7360301	NA	Uncoated Glass Ion Gauge Tube, Tungsten Filament, 1.0" Diameter Schott Glass Port	\$140.00
T-100-P	NA	274015	Uncoated Glass Ion Gauge Tube, Tungsten Filament, 1.0" Diameter Pyrex Glass Port	\$142.00
T-100-K	572-K7360302	274016	Uncoated Glass Ion Gauge Tube, Tungsten Filament, 1.0" Diameter Kovar Port	\$150.00
T-CFF-133	NA	274021	Uncoated Glass Ion Gauge Tube, Tungsten Filament, 1.33" CF Flanged Port	\$195.00
T-CFF-275	572-K7360307	274018	Uncoated Glass Ion Gauge Tube, Tungsten Filament, 2.75" CF Flanged Port	\$195.00
T-KF25	572-K7360305	NA	Uncoated Glass Ion Gauge Tube, Tungsten Filament, KF25 Flanged Port	\$192.00
T-KF40	572-K7360306	NA	Uncoated Glass Ion Gauge Tube, Tungsten Filament, KF40 Flanged Port	\$192.00

Vacuum Sensors

Glass Ion Gauge Vacuum Sensor Tubes, New

Platinum Coated - Broad Range - Iridium Filament

Operating pressure: 4×10^{-10} to 1×10^{-1} Torr

Sensitivity: 8/Torr

X-ray limit: 4×10^{-10} Torr

Part No.	Equivalent Part No.	Description		Price
Duniway	Varian	Brooks-GP	--	US \$
I-164-N	0564-K2500-301	NA	Coated Broad Range Glass Ion Gauge Tube, Iridium Filament, 1.0" Diameter Schott Glass Port	\$210.00
I-164-K	0564-K2500-302	303039	Coated Broad Range Glass Ion Gauge Tube, Iridium Filament, 1.0" Diameter Kovar Port	\$225.00
I-164-275	0564-K2500-303	303041	Coated Broad Range Glass Ion Gauge Tube, Iridium Filament, 2.75" CF Flanged Port	\$265.00
I-164-KF25	0564-K2500-310	NA	Coated Broad Range Glass Ion Gauge Tube, Iridium Filament, KF25 Flanged Port	\$260.00
I-164-KF40	0564-K2500-311	NA	Coated Broad Range Glass Ion Gauge Tube, Iridium Filament, KF40 Flanged Port	\$260.00

Uncoated - Standard Range - Iridium Filament - Sealed

Sealed below 5×10^{-8} Torr

Sensitivity: 10/Torr

Part No.	Equivalent Part No.	Description		Price
Duniway	Varian	Brooks-GP	--	US \$
I-SLD-N	0571-K2471-307	274031	Uncoated Sealed Glass Ion Gauge Tube, Iridium Filament, 0.75" Diameter Schott Glass Port, Sealed	\$255.00

NOTE: This is not a vacuum standard. The sealed tube is very handy for comparing performance of control units and operating tubes in service. Pressure falls with long term operation (several hours) and pressure rises when grid is degassed.

Hot Filament Triode Tube

X-ray limit: 1×10^{-7} Torr

Part No.	Equivalent Part No.	Description		Price
Duniway	Varian	Brooks-GP	--	US \$
T-071-N	0507-89628-301	NA	Glass Hot Filament Triode Ion Gauge Tube, Tungsten Coated Filament, 0.709" Diameter Schott Glass Port	Inquire



▼ I-075-K –
Uncoated Glass
Ion Gauge Tube,
Iridium Filament



▼ I-075-KC –
Platinum Coated
Glass Ion Gauge
Tube, Iridium
Filament



▼ T-KF25 –
Uncoated Glass
Ion Gauge Tube,
Tungsten Filament



▼ I-164-275 –
Coated Broad Range
Glass Ion Gauge Tube,
Iridium Filament, CF
Flanged Port



▼ I-SLD-N –
Uncoated Sealed
Glass Ion Gauge
Tube, Iridium
Filament



▼ T-071-N – Glass
Hot Filament Triode Ion
Gauge Tube, Tungsten
Coated Filament

Vacuum Sensors

Nude Ion Gauge Vacuum Sensors, New

Nude Ion Gauge Vacuum Sensors, New

Part No.	Equivalent Part No.				Description	Price
Duniway	Varian	Brooks-GP	Perkin Elmer	Leybold	--	US \$
T-NUDE-F	971-5008	274022	605-7673	NA	Nude UHV Ion Gauge, Dual Tungsten Filament, Type I , 2.75" CFF	\$395.00
I-NUDE-F	971-5007	274023	605-7672	NA	Nude UHV Ion Gauge, Dual Iridium Filament, Type I , 2.75" CFF	\$420.00
T-NUDE-BAC	NA	NA	NA	NA	Nude Bayard-Alpert Ion Gauge, Dual Tungsten Filament, Type III , 2.75" CFF	\$400.00
I-NUDE-BAC	NA	274028	NA	NA	Nude Bayard-Alpert Ion Gauge, Single Iridium Filament, Type III , 2.75" CFF	\$435.00
I-BAC-DI	NA	NA	NA	NA	Nude Bayard-Alpert Ion Gauge, Dual Iridium Filament, Type II , 2.75" CFF	\$465.00
LH-NUDE-40	NA	NA	NA	16314	Nude Bayard-Alpert Ion Gauge, Single Iridium Filament, Type IV , KF40 Flange	\$300.00
I-580-275	L5150302	NA	NA	NA	Nude Bayard-Alpert Ion Gauge, Broad Range, Single Iridium Filament, Type VI , 2.75" CFF	\$465.00
I-580-KF40	L5150303	NA	NA	NA	Nude Bayard-Alpert Ion Gauge, Broad Range, Single Iridium Filament, Type VI , KF40 Flange	\$430.00

Operating Data

Description	UHV	Bayard Alpert
--	--	--
Maximum Pressure, Torr	1×10^{-3}	1×10^{-3}
X-Ray Limit, Torr	2×10^{-11}	2×10^{-10}
Sensitivity $\pm 20\%$	25/Torr	10/Torr
Emission	4 ma.	10 ma.
Filament Voltage	3-4.5 Volts	3-5 Volts
Filament Current	2-4 amps	4-6 amps
Filament Potential	+ 30 Volts	+ 30 Volts
Collector Potential	0 Volts	0 Volts
Grid Potential	+ 180 Volts	+ 180 Volts
Degas, Watts	30-40 by EB	70 by I ² R
Bakeout Temperature	450°C	450°C



▼ T-NUDE-F
Type I (UHV)



▼ I-BAC-DI
Type II (Bayard-Alpert)



▼ I-NUDE-BAC
Type III (Bayard-Alpert)



▼ LH-NUDE-40
Type IV (Bayard-Alpert)



▼ Varian Type V
(Bayard-Alpert) For
reference only.



▼ I-580-275
Type VI (Bayard-Alpert)

Construction Data

Description	UHV	Bayard Alpert
--	--	--
Filament, Iridium	Dual	Single
Filament, Tungsten	Dual	Single
Grid	Moly Clad Pt	Tungsten
Collector	Tungsten	Tungsten
Length	3" Insertion	3" Insertion
Flange	2 3/4" OD CF	2 3/4" OD CF
Mounting	Any Position	Any Position



▼ I-580-KF40
Type VI



▼ I-NUDE-F
Type I



▼ T-NUDE-BAC
Type III

D

Vacuum Sensors

Vacuum Sensors

Nude Ion Gauge Vacuum Sensor Parts, New

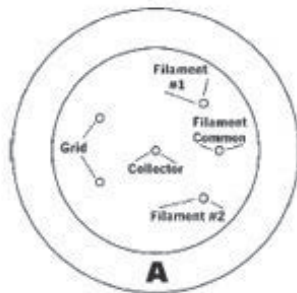
Nude Ion Gauge Vacuum Sensor Parts, New

Choosing a Replacement Filament for a Nude Ion Gauge

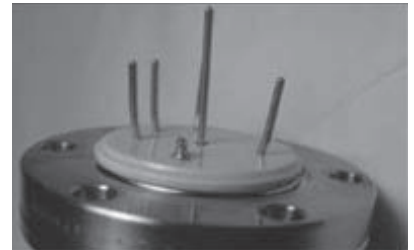
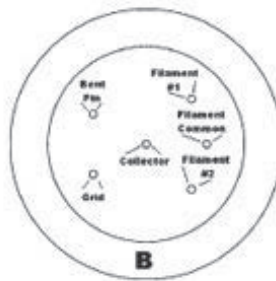
- Identify the Nude Gauge Type from the Previous Page: I, II, III, IV or V
- Identify the Filament Material: T-Tungsten or I-Iridium (thoria coated)
- Check the External Pins: A-Straight Pins or B-Bent or C-Varian (see photos below)
- Select Replacement Filament from the table on page **176**.



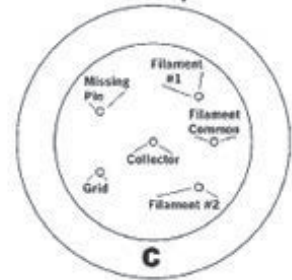
A – Straight Pins



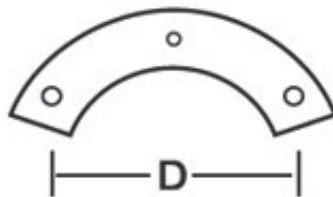
B – Bent Pins



**C – Varian - Bent Pins;
Ceramic Spacers**



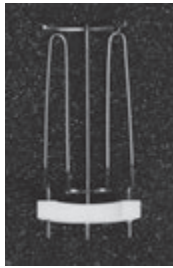
**Ceramic Base
Hole Spacing**



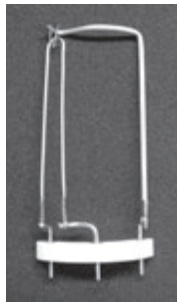
For Type A (New) : D = 0.825"
For Type B (Old) : D = 0.785"

Nude Ion Gauge Vacuum Sensor Parts, New

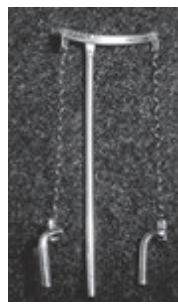
Part No.	Description	Price	Image
Duniway	--	US \$	#
FIL-12A	Replacement Iridium Filament Assembly for I-BAC-DI Type II, Straight Pins	\$125.00	1
FIL-12B	Replacement Iridium Filament Assembly for Old Duniway Type II, Bent Pins	\$125.00	1
FIL-13A	Replacement Iridium Filament Assembly for I-NUDE-BAC, PE#274-028 Type III, Straight Pins	\$100.00	2
FIL-4A	Replacement Tungsten Filament Assembly for Varian #971-5008 Type V, Varian Bent Pins/Ceramic Spacer	\$45.00	3
FIL-580IR	Replacement Iridium Filament Assembly for I-580-275, I-580-KF-40, Type VI, Straight Pins	\$85.00	4
FIL-7A	Replacement Tungsten Filament Assembly for T-NUDE F, PE#605-7673, GP#274-022 Type I, Straight Pins	\$70.00	5
FIL-7B	Replacement Tungsten Filament Assembly for Old Duniway Type I, Bent Pins	\$70.00	5
FIL-8A	Replacement Iridium Filament Assembly for I-NUDE-F, PE#605-7672, GP#274-023 Type I, Straight Pins	\$85.00	6
FIL-8B	Replacement Iridium Filament Assembly for Old Duniway Type I, Bent Pins	\$85.00	6
FIL-9A	Replacement Iridium Filament Assembly for Varian #971-5007 Type V, Varian Bent Pins/Ceramic Spacer	\$75.00	7



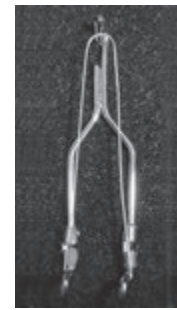
1



2



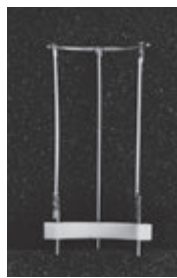
3



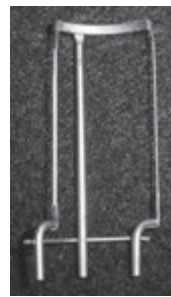
4



5



6



7

Vacuum Sensors

Nude Ion Gauge Vacuum Sensor Rebuilding Service

Nude Ion Gauge Vacuum Sensor Rebuilding Service

Duniway Stockroom Corp. rebuilds most makes and models of nude ion gauges. We offer a flat rebuilding rate for both tungsten and iridium filament gauges. Prices assume that ceramic-to-metal seals are leak tight.

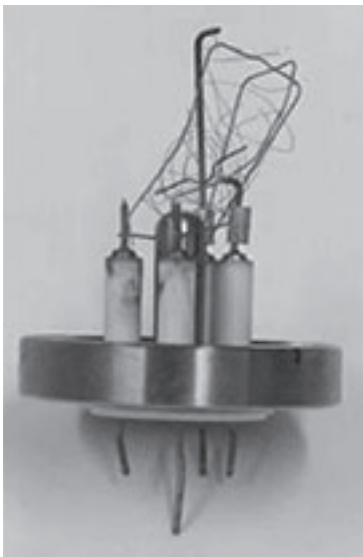
Rebuilding Service Includes:

- Leak check the flange and header assembly.
- Remove the filament, grid cage, collector shield and wire.
- Clean the header thoroughly.
- Install new parts; filament, grid cage, collector wire and original shield.

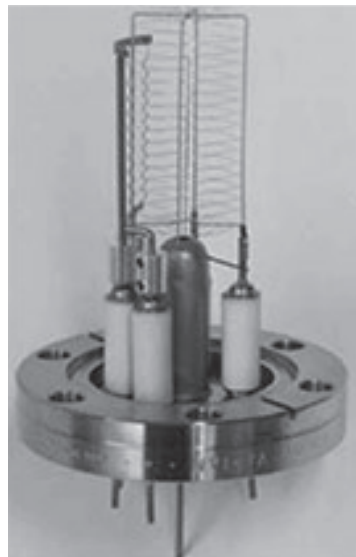
Pricing

Filament Material	Price
--	US \$
Tungsten	\$170.00
Iridium	\$225.00

Be sure to obtain an RMA # prior to shipment to Duniway Stockroom



▼ BEFORE



▼ AFTER

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Duniway Stockroom Corporation

Supplying reliable vacuum equipment since 1976

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Trademarks 29

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Baratron®	MKS Instruments, Inc.
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Conflat®	Varian Vacuum Products
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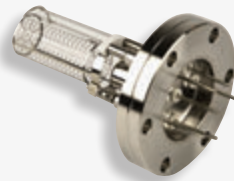
Vacuum Equipment and Supplies



Supplies



Hardware



Pressure Sensors



Gauge Controls



Angle Valves



Duniway Stockroom Corporation

48501 Milmont Drive
Fremont, CA 94538

800-446-8811

United States — Canada

T 650-969-8811

F 650-965-0764

info@duniway.com

www.duniway.com