

WS/WSX Rotary Unions

For Water



EULER MISSION STATEMENT

The goal of the EULER Company is to supply our customers the highest quality rotary unions and joints that are competitively priced and offer the best delivery in the industry. EULER will work to partner with our customers to initiate new products and applications, along with internal programs for continuous product improvements and cost containment.



The **EULER WS/WSX Rotary Unions** have premium features not found in other unions such as low torque, seals for filtered and unfiltered media and is RoHS compliant. Typical applications include printing, can labeling, rubber, plastics, food and steel processing equipment and other industries that require water heating or cooling.



Design Features

- Stainless steel components provide the ultimate in corrosion resistance.
- Two different seal combinations available. Carbon graphite to silicon carbide seals for filtered media. Silicon carbide to silicon carbide seals for abrasive media.
- Stainless steel elbows in a variety of styles for in and out flow.
- Seals can easily be replaced with an inexpensive repair kit.
- Low turning torque for Web driven rolls.

Torque Ratings @ 1MPa (150PSI)

Size	lb-in	N-m
3/8"	1.77	0.20
1/2"	3.81	0.43
3/4"	6.30	0.71
1"	13.28	1.50
1-1/4"	16.82	1.90
1-1/2"	12.48	1.41
2"	19.91	2.25

Operating Parameters

Max. Pressure

150 PSI / 10.3 BAR

Temperature

+225°F / + 107°C

For higher temperature fluids, contact Euler Engineering.

Max. Speed

3/8" - 3,500 RPM

1/2" - 3,500 RPM

3/4" - 3,500 RPM

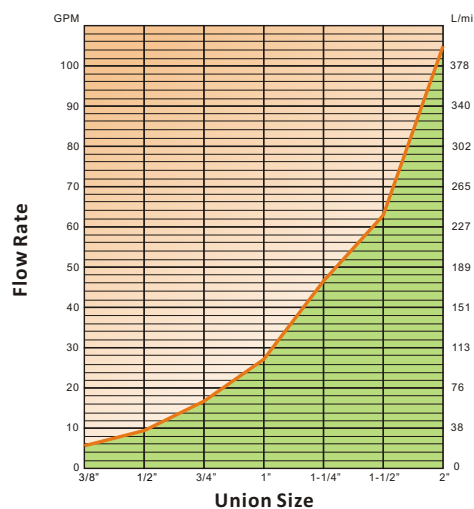
1" - 3,000 RPM

1-1/4" - 2,500 RPM

1-1/2" - 2,500 RPM

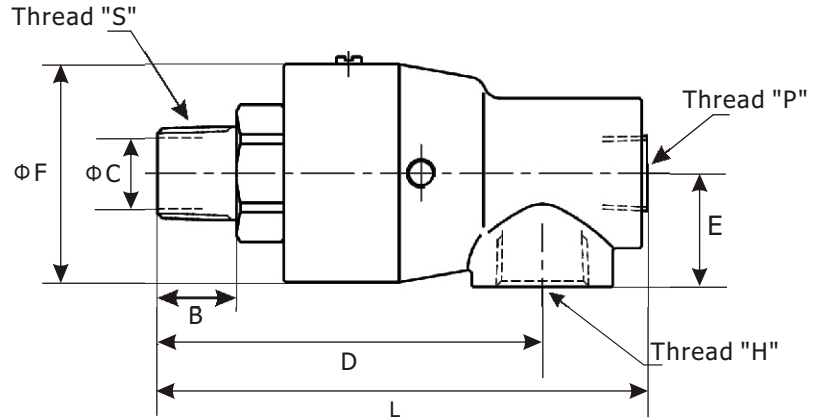
2" - 750 RPM

Union Flow Rates



Note: Water flow in Green area is acceptable. Avoid water flow in Orange area.

Mono-Flow Unions NPT Hose Connection



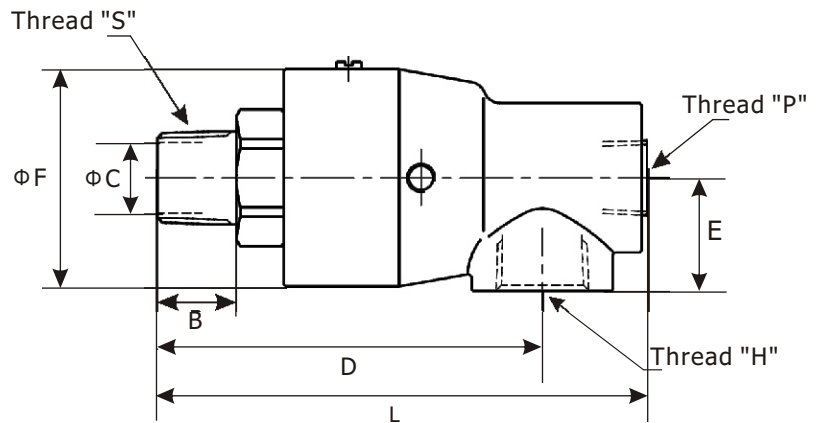
WS-Silicon carbide to carbon graphite mechanical seals.

WSX-For abrasive applications, silicon carbide to silicon carbide mechanical seals.

SIZE	WS Part Number	WSX Part Number	Thread "S"	B	Φ C	D	E	Φ F	L	"H" N.P.T.	"P" N.P.T.
3/8"	EU-12106-06-00	EU-13106-06-00	5/8"-18 UNF R.H.	.50"	.38"	3.32"	.91"	1.81"	3.99"	3/8"	1/4"
	EU-12106-07-00	EU-13106-07-00	5/8"-18 UNF L.H.	(12.7)	(9.6)	(84)	(23)	(46)	(101)		
	EU-12106-00-00	EU-13106-00-00	3/8"-18 NPT R.H.	.56"	.38"	3.32"	.91"	1.81"	3.99"		
	EU-12106-01-00	EU-13106-01-00	3/8"-18 NPT L.H.	(14.2)	(9.6)	(84)	(23)	(46)	(101)		
1/2"	EU-12108-08-00	EU-13108-08-00	3/4"-16 UNF R.H.	.69"	.50"	3.90"	1.13"	2.25"	4.69"	1/2"	3/8"
	EU-12108-09-00	EU-13108-09-00	3/4"-16 UNF L.H.	(17.5)	(12.7)	(99)	(29)	(57)	(119)		
	EU-12108-00-00	EU-13108-00-00	1/2" NPT R.H.	1.00"	.50"	4.19"	1.13"	2.25"	4.98"		
	EU-12108-01-00	EU-13108-01-00	1/2" NPT L.H.	(25.4)	(12.7)	(106)	(29)	(57)	(126)		
3/4"	EU-12112-10-00	EU-13112-10-00	1"-14 UNS R.H.	.69"	.66"	4.44"	1.44"	2.88"	5.44"	3/4"	1/2"
	EU-12112-11-00	EU-13112-11-00	1"-14 UNS L.H.	(17.5)	(16.7)	(113)	(37)	(73)	(138)		
	EU-12112-00-00	EU-13112-00-00	3/4" NPT R.H.	1.00"	.66"	4.75"	1.44"	2.88"	5.75"		
	EU-12112-01-00	EU-13112-01-00	3/4" NPT L.H.	(25.4)	(16.7)	(121)	(37)	(73)	(146)		
1"	EU-12116-12-00	EU-13116-12-00	1-1/2"-12 UNF R.H.	1.12"	1.00"	5.46"	1.62"	3.25"	6.89"		
	EU-12116-13-00	EU-13116-13-00	1-1/2"-12 UNF L.H.	(28.4)	(25.4)	(139)	(41)	(82)	(175)		
	EU-12116-00-00	EU-13116-00-00	1" NPT R.H.	1.12"	1.00"	5.46"	1.62"	3.25"	6.89"		
	EU-12116-01-00	EU-13116-01-00	1" NPT L.H.	(28.4)	(25.4)	(139)	(41)	(82)	(175)		
1-1/4"	EU-12120-24-00	EU-13120-24-00	1-3/4"-12 UN R.H.	1.13"	1.25"	6.00"	1.78"	3.56"	7.69"	1-1/4"	1"
	EU-12120-25-00	EU-13120-25-00	1-3/4"-12 UN L.H.	(28.7)	(31.7)	(152)	(45)	(90)	(195)		
	EU-12120-00-00	EU-13120-00-00	1-1/4" NPT R.H.	1.13"	1.25"	6.00"	1.78"	3.56"	7.69"		
	EU-12120-01-00	EU-13120-01-00	1-1/4" NPT L.H.	(28.7)	(31.7)	(152)	(45)	(90)	(195)		
1-1/2"	EU-12124-14-00	EU-13124-14-00	2"-12 UN R.H.	1.06"	1.50"	6.48"	1.84"	3.68"	8.01"	1-1/2"	1-1/4"
	EU-12124-15-00	EU-13124-15-00	2"-12 UN L.H.	(26.9)	(38.1)	(164)	(47)	(93)	(203)		
	EU-12124-00-00	EU-13124-00-00	1-1/2" NPT R.H.	1.13"	1.50"	6.54"	1.84"	3.68"	8.07"		
	EU-12124-01-00	EU-13124-01-00	1-1/2" NPT L.H.	(28.7)	(38.1)	(166)	(47)	(93)	(205)		
2"	EU-12132-00-00	EU-13132-00-00	2" NPT R.H.	1.19"	1.75"	7.73"	2.31"	4.62"	9.97"	2"	1-1/4"
	EU-12132-01-00	EU-13132-01-00	2" NPT L.H.	(30.2)	(44.4)	(196)	(59)	(117)	(253)		

Other sleeve connections available. Contact Euler.

Mono-Flow Unions BSPP Hose Connection



WS-Silicon carbide to carbon graphite mechanical seals.

WSX-For abrasive applications, silicon carbide to silicon carbide mechanical seals.

SIZE	WS Part Number	WSX Part Number	Thread "S"	B	Φ C	D	E	Φ F	L	"H"	"P" N.P.T.
3/8"	EU-12106-02-01	EU-13106-02-01	G 3/8" R.H.	.56"	.38"	3.32"	.91"	1.81"	3.99"	G 3/8"	1/4"
	EU-12106-03-01	EU-13106-03-01	G 3/8" L.H.	(14.2)	(9.6)	(84)	(23)	(46)	(101)		
	EU-12106-04-01	EU-13106-04-01	R 3/8" R.H.	.56"	.38"	3.32"	.91"	1.81"	3.99"		
	EU-12106-05-01	EU-13106-05-01	R 3/8" L.H.	(14.2)	(9.6)	(84)	(23)	(46)	(101)		
1/2"	EU-12108-02-01	EU-13108-02-01	G 1/2" R.H.	.75"	.50"	3.96"	1.13"	2.25"	4.75"	G 1/2"	3/8"
	EU-12108-03-01	EU-13108-03-01	G 1/2" L.H.	(19.1)	(12.7)	(101)	(29)	(57)	(121)		
	EU-12108-04-01	EU-13108-04-01	R 1/2" R.H.	.75"	.50"	3.96"	1.13"	2.25"	4.75"		
	EU-12108-05-01	EU-13108-05-01	R 1/2" L.H.	(19.1)	(12.7)	(101)	(29)	(57)	(121)		
3/4"	EU-12112-02-01	EU-13112-02-01	G 3/4" R.H.	.75"	.66"	4.50"	1.44"	2.88"	5.50"	G 3/4"	1/2"
	EU-12112-03-01	EU-13112-03-01	G 3/4" L.H.	(19.1)	(16.7)	(114)	(37)	(73)	(140)		
	EU-12112-04-01	EU-13112-04-01	R 3/4" R.H.	.75"	.66"	4.50"	1.44"	2.88"	5.50"		
	EU-12112-05-01	EU-13112-05-01	R 3/4" L.H.	(19.1)	(16.7)	(114)	(37)	(73)	(140)		
1"	EU-12116-02-01	EU-13116-02-01	G 1" R.H.	.87"	.88"	5.46"	1.62"	3.25"	6.89"	G 1"	3/4"
	EU-12116-03-01	EU-13116-03-01	G 1" L.H.	(22.1)	(22.4)	(139)	(41)	(82)	(175)		
	EU-12116-04-01	EU-13116-04-01	R 1" R.H.	.87"	.88"	5.46"	1.62"	3.25"	6.89"		
	EU-12116-05-01	EU-13116-05-01	R 1" L.H.	(22.1)	(22.4)	(139)	(41)	(82)	(175)		
1-1/4"	EU-12120-02-01	EU-13120-02-01	G 1-1/4" R.H.	1.13"	1.25"	6.00"	1.78"	3.56"	7.69"	G 1-1/4"	1"
	EU-12120-03-01	EU-13120-03-01	G 1-1/4" L.H.	(28.7)	(31.7)	(152)	(45)	(90)	(195)		
	EU-12120-04-01	EU-13120-04-01	R 1-1/4" R.H.	1.13"	1.25"	6.00"	1.78"	3.56"	7.69"		
	EU-12120-05-01	EU-13120-05-01	R 1-1/4" L.H.	(28.7)	(31.7)	(152)	(45)	(90)	(195)		
1-1/2"	EU-12124-02-01	EU-13124-02-01	G 1-1/2" R.H.	1.14"	1.38"	6.48"	1.84"	3.68"	8.01"	G 1-1/2"	1-1/4"
	EU-12124-03-01	EU-13124-03-01	G 1-1/2" L.H.	(28.9)	(35.1)	(164)	(47)	(93)	(203)		
	EU-12124-04-01	EU-13124-04-01	R 1-1/2" R.H.	1.14"	1.38"	6.54"	1.84"	3.68"	8.07"		
	EU-12124-05-01	EU-13124-05-01	R 1-1/2" L.H.	(28.9)	(35.1)	(166)	(47)	(93)	(205)		
2"	EU-12132-02-01	EU-13132-02-01	G 2" R.H.	1.14"	1.75"	7.66"	2.29"	4.62"	9.95"	G 2"	1-1/4"
	EU-12132-03-01	EU-13132-03-01	G 2" L.H.	(29)	(44.4)	(195)	(58)	(117)	(253)		

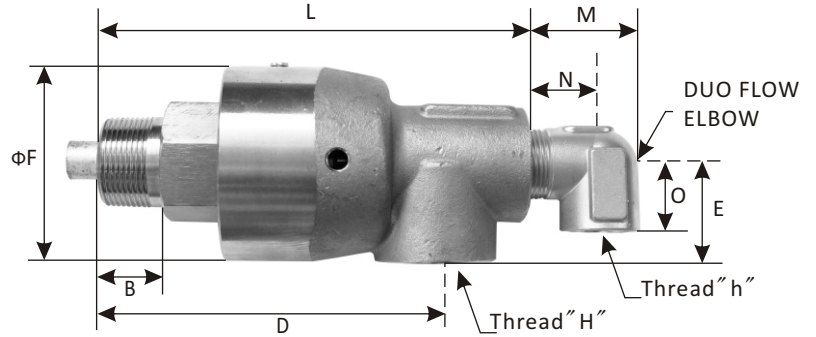
Other sleeve connections available. Contact Euler.

Duo-Flow Application Order Info

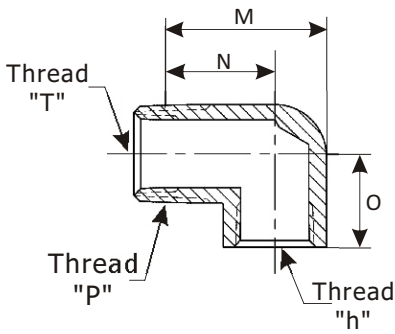
Mono-Flow Union + Duo-Flow Elbow = Duo-Flow Union

1. Order Mono-Flow Union part number.
2. Order Duo-Flow Elbow part number.

Note: For special Duo-Flow elbows, contact Euler.



Thread Pipe Connection Elbows

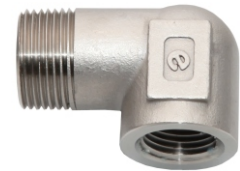
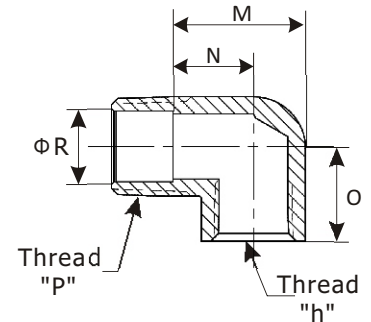


Union Size	Part Number	T Thread	h Thread	M	N	O
1/2"	49-100-08-20	1/8" NPT	3/8" NPT	1.12"	.76"	.50"
	49-102-08-20	G 1/8"	G 3/8"	(28)	(19)	(13)
3/4"	49-100-12-20	1/4" NPT	1/2" NPT	1.67"	1.07"	1.04"
	49-102-12-20	G 1/4"	G 1/2"	(42)	(27)	(26)
1"	49-100-16-20	3/8" NPT	1/2" NPT	1.88"	1.28"	.94"
	49-102-16-20	G 3/8"	G 1/2"	(48)	(33)	(24)
1-1/4"	49-100-20-20	1/2" NPT	3/4" NPT	2.17"	1.48"	1.25"
	49-102-20-20	G 1/2"	G 3/4"	(55)	(38)	(32)
1-1/2"	49-100-24-20	3/4" NPT	1" NPT	2.71"	1.83"	1.62"
	49-102-24-20	G 3/4"	G 1"	(69)	(46)	(41)
2"	49-100-32-20	1" NPT	1" NPT	2.71"	1.83"	1.62"
	49-102-32-20	G 1"	G 1"	(69)	(46)	(41)

Note: 1. Listed sizes provide the maximum flow rate for the union.
 2. Addition sizes are available. Contact Euler.

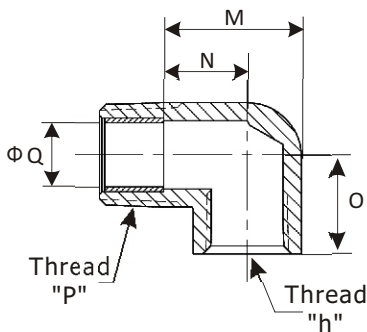
Union Size	Part Number	ϕR	h Thread	M	N	O
3/8"	49-200-06-20	.25"	1/4" NPT	1.10"	.68"	.45"
	49-202-06-20	(6.4)	G 1/4"	(28)	(17)	(11)
1/2"	49-200-08-20	.38"	3/8" NPT	1.12"	.76"	.50"
	49-202-08-20	(9.7)	G 3/8"	(28)	(19)	(13)
3/4"	49-200-12-20	.50"	1/2" NPT	1.67"	1.07"	1.04"
	49-202-12-20	(12.7)	G 1/2"	(42)	(27)	(26)
1"	49-200-16-20	.63"	1/2" NPT	1.88"	1.28"	.94"
	49-202-16-20	(16)	G 1/2"	(48)	(33)	(24)
1-1/4"	49-200-20-20	.75"	3/4" NPT	2.17"	1.48"	1.25"
	49-202-20-20	(19)	G 3/4"	(55)	(38)	(32)
1-1/2"	49-200-24-20	1.00"	1" NPT	2.71"	1.83"	1.62"
	49-202-24-20	(25.4)	G 1"	(69)	(46)	(41)
2"	49-200-32-20	1.25"	1" NPT	2.71"	1.83"	1.62"
	49-202-32-20	(31.8)	G 1"	(69)	(46)	(41)

Brazed Tube Elbows



Note: 1. Listed sizes provide the maximum flow rate for the union.
2. Addition sizes are available. Contact Euler.

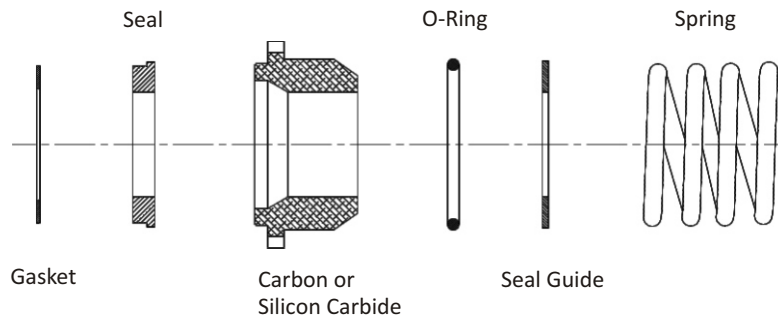
Rotating Pipe Elbows



Union Size	Part Number	ϕQ	h Thread	M	N	O
1/2"	49-300-08-00	.372" (9.45)	3/8" NPT	1.12"	.76"	.50"
	49-302-08-00	.371" (9.42)	G 3/8"	(28)	(19)	(13)
3/4"	49-300-12-00	.497" (12.62)	1/2" NPT	1.67"	1.07"	1.04"
	49-302-12-00	.496" (12.60)	G 1/2"	(42)	(27)	(26)
1"	49-300-16-00	.622" (15.80)	1/2" NPT	1.88"	1.28"	.94"
	49-302-16-00	.621" (15.77)	G 1/2"	(48)	(33)	(24)
1-1/4"	49-300-20-00	.810" (20.57)	3/4" NPT	2.17"	1.48"	1.25"
	49-302-20-00	.808" (20.52)	G 3/4"	(55)	(38)	(32)
1-1/2"	49-300-24-00	1.000" (25.40)	1" NPT	2.71"	1.83"	1.62"
	49-302-24-00	.998" (25.35)	G 1"	(69)	(46)	(41)
2"	49-300-32-00	1.247" (31.67)	1" NPT	2.71"	1.83"	1.62"
	49-302-32-00	1.245" (31.62)	G 1"	(69)	(46)	(41)

Note: 1. Listed sizes provide the maximum flow rate for the union.
2. Addition sizes are available. Contact Euler.

Repair Kits

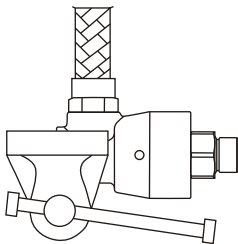


Union	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"
WS	48-100-06-AA	48-100-08-AA	48-100-12-AA	48-100-16-AA	48-100-20-AA	48-100-24-AA	48-100-32-AA
WSX	48-101-06-AA	48-101-08-AA	48-101-12-AA	48-101-16-AA	48-101-20-AA	48-101-24-AA	48-101-32-AA

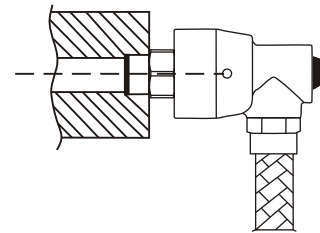
-AA Elastomer Suffix, Specify: -01=Viton (Standard), -02=EPDM(Special), -03=HNBR(Special).

Installation Instructions

1. Always use a flexible hose rated for the media, pressure and temperature.



2. Always attach the hose before installing on the machine. Clamp rear of union in a bench vise.



EULER Warranty

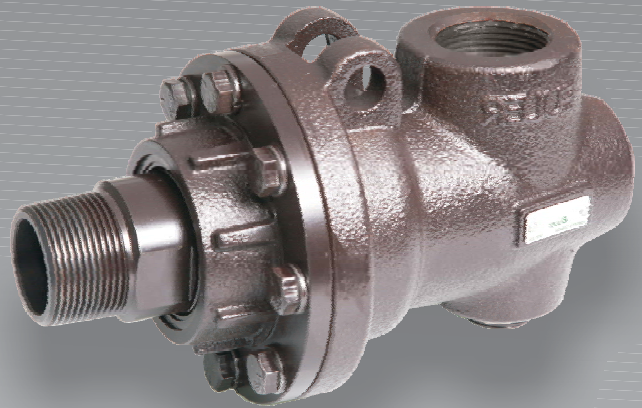
EULER warrants its products for one year, except for three years on the WS Series unions, from date of shipment are free from defects in materials and workmanship. Euler's sole liability is for repair or replacement when returned transportation prepaid after obtaining a Return Goods Authorization after a reasonable time from the warranty period.

This warranty is void if in Euler's judgment the union has been dismantled, modified, damaged from improper maintenance, side loading, excessive temperature, abrasive or chemical action or other forms of abuse.

Euler makes no other warranties either express or implied on merchantability and fitness for a particular purpose. No representative, agent or employee of Euler has the authority to modify the terms of this warranty. Euler will not be responsible for any consequential or resulting damage claimed to be caused by the use of its products.

ADDITIONAL

EULER ENGINEERED PRODUCTS



The **EULER SS Steam Rotary Joint** is a flexible design offered in monoflow and duoflow in both fixed and rotating pipe styles. Request Bulletin 1001 or visit www.eulerinc.com for complete information.

euler

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