



DEUBLIN

Rotary Unions 57 Series

General Purpose, DN 10 – 50

- Monoflow and duoflow design
- Self-supported Rotary Union
- Radial housing connection
- Balanced mechanical seal
- Keyed rotor seal
- Easy and quick replacement of sealing components (rotor seal, floating seal)
- 3 vent holes
- Forged brass housing
- Stainless steel rotor
- Seal combination – standard: Carbon Graphite/Silicon Carbide
- Lubrication guide page 45

Operating Data

Max. Water Pressure	Model	57-357	750 PSI	50 bar
		527-657	300 PSI	20 bar
Max. Sat. Steam Pressure (intern.)	Model	57-657	15 PSI	1 bar
Max. Hot Oil Pressure	Model	57-657	100 PSI	6,6 bar
Max. Speed, Rotor with Straight Threads:	Model	57-257	3,500 rpm	3.500 min ⁻¹
		357	3,000 rpm	3.000 min ⁻¹
		527-557	2,500 rpm	2.500 min ⁻¹
		657	750 rpm	750 min ⁻¹
NPT Threads:	Model	57-557	1,500 rpm	1.500 min ⁻¹
		657	750 rpm	750 min ⁻¹
Max. Temperature	Model	57-657	250 °F	121 °C

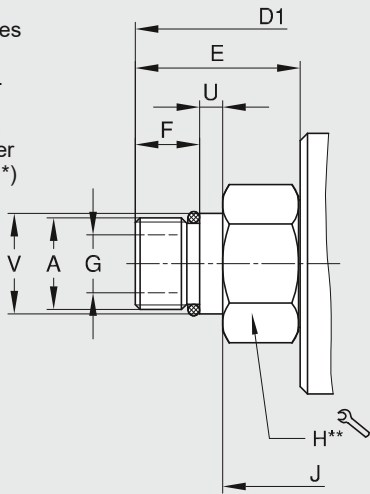
For further information, please contact Deublin or your local representative.

Torque Ratings 57 Series

DN	ft.lbs	Nm
10	0.18	0.25
15	0.37	0.50
20	0.74	1.00
25	1.48	2.00
32	1.62	2.20
40	2.14	2.90
50	3.32	4.50

Monoflow unions are used when supply and return lines are connected to opposite sides of the cylinder or roll.

Note: Recessed O-Ring in rotor end in place of Copper gasket (see table on pg. 6 *)



Pilot Type Rotor

** DN 10 – 20 = hexagon
DN 25 – 50 = two wrench flats

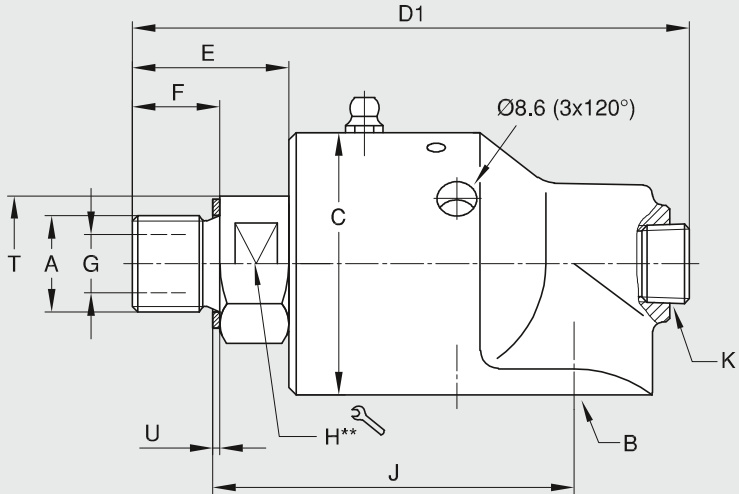
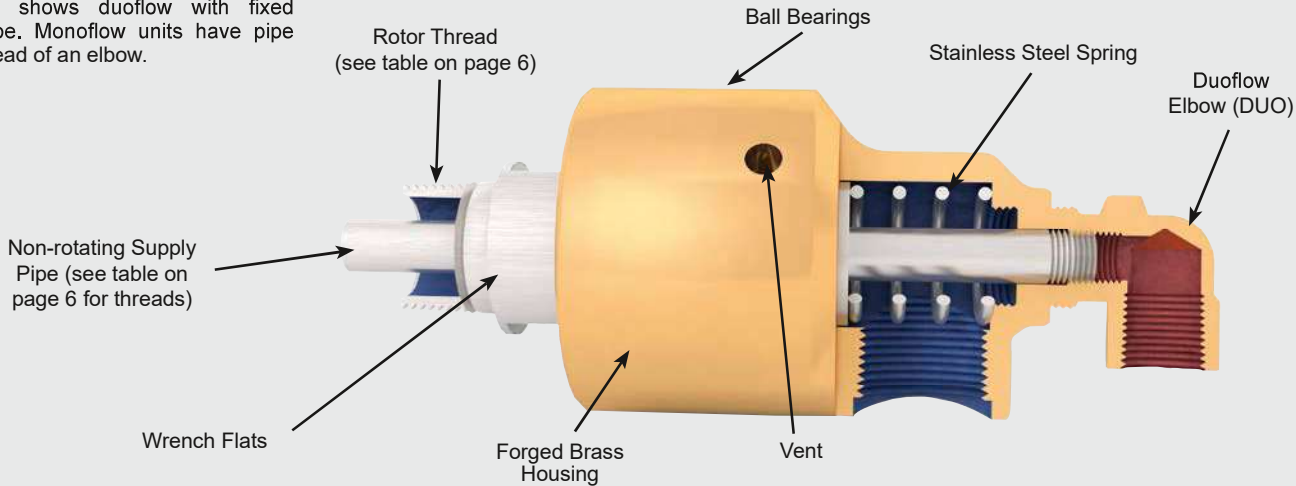


Illustration shows duoflow with fixed supply pipe. Monoflow units have pipe plugs instead of an elbow.



DEUBLIN General Industry Catalogue

DN	B	Ordering-No STD	A Rotor-Connections	C Ø	D1	E	F	G Ø	H 	J	K NPT	T	U	V Ø	
10	3/8 NPT	57-000-001	3/8 NPT RH	45	100	26	16	9.5	22	71	1/4	–	–	–	0.6
	3/8 NPT	57-000-002	3/8 NPT LH	45	100	26	16	9.5	22	71	1/4	–	–	–	0.6
	3/8 NPT	57-000-003	5/8-18 UNF RH	45	100	26	16	9.5	22	67	1/4	–	1.6	–	0.6
	3/8 NPT	57-000-004	5/8-18 UNF LH	45	100	26	16	9.5	22	67	1/4	–	1.6	–	0.6
	3/8 NPT	57-000-094	G 3/8 RH	45	100	26	16	9.5	22	67	1/4	–	1.6	–	0.6
	3/8 NPT	57-000-095	G 3/8 LH	45	100	26	16	9.5	22	67	1/4	–	1.6	–	0.6
	G 3/8	57-130-094	G 3/8 RH	45	100	26	16	9.5	22	67	1/4	–	1.6	–	0.6
	G 3/8	57-130-095	G 3/8 LH	45	100	26	16	9.5	22	67	1/4	–	1.6	–	0.6
15	1/2 NPT	157-000-001	1/2 NPT RH	57	122	38	22	12.7	30	89.5	3/8	–	–	–	1.2
	1/2 NPT	157-000-002	1/2 NPT LH	57	122	38	22	12.7	30	89.5	3/8	–	–	–	1.2
	1/2 NPT	157-000-021	3/4-16 UNF RH	57	119	34	19	12.7	30	79	3/8	–	1.6	–	1.2
	1/2 NPT	157-000-022	3/4-16 UNF LH	57	119	34	19	12.7	30	79	3/8	–	1.6	–	1.2
	1/2 NPT	157-000-151	G 1/2 RH	57	119	35	19	12.7	30	79	3/8	–	1.6	–	1.2
	1/2 NPT	157-000-152	G 1/2 LH	57	119	35	19	12.7	30	79	3/8	–	1.6	–	1.2
	G 1/2	157-130-151	G 1/2 RH	57	119	35	19	12.7	30	79	3/8	–	1.6	–	1.2
	G 1/2	157-130-152	G 1/2 LH	57	119	35	19	12.7	30	79	3/8	–	1.6	–	1.2
	G 1/2	157-130-738	M 20 x 1.5 RH	57	121	37	14	12.7	30	79	3/8	–	5	22g6	1.2
20	3/4 NPT	257-000-020	3/4 NPT RH	73	139	37	22	17.5	32	103	1/2	35	–	–	2.1
	3/4 NPT	257-000-021	3/4 NPT LH	73	139	37	22	17.5	32	103	1/2	35	–	–	2.1
	3/4 NPT	257-000-135*	1-14 UNS RH	73	139	36	19	17.5	32	94	1/2	35	–	–	2.1
	3/4 NPT	257-000-284	G 3/4 RH	73	136	34	19	17.5	36	95	1/2	–	1.6	–	2.1
	3/4 NPT	257-000-285	G 3/4 LH	73	136	34	19	17.5	36	95	1/2	–	1.6	–	2.1
	G 3/4	257-130-014	M 35 x 1.5 RH	73	140	38	15	17.5	41	102	1/2	–	1.6	–	2.2
	G 3/4	257-130-048	M 27 x 1.5 RH	73	137	35	15	17.5	36	92	1/2	–	6	28g6	2.1
	G 3/4	257-130-284	G 3/4 RH	73	136	34	19	17.5	36	95	1/2	–	1.6	–	2.1
	G 3/4	257-130-285	G 3/4 LH	73	136	34	19	17.5	36	95	1/2	–	1.6	–	2.1
25	1 NPT	357-000-002	1 NPT RH	83	173	49	29	25	36	117	3/4	45	–	–	3.1
	1 NPT	357-000-003	1 NPT LH	83	173	49	29	25	36	117	3/4	45	–	–	3.1
	1 NPT	357-000-019	1 1/2-12 UNF RH	83	173	49	29	25	36	108	3/4	45	1.6	–	3.1
	1 NPT	357-000-074	1 1/2-12 UNF LH	83	173	46	29	25	36	108	3/4	45	1.6	–	3.1
	1 NPT	357-000-222	G 1 RH	83	163	42	22	25	36	108	3/4	45	1.6	–	3.1
	1 NPT	357-000-223	G 1 LH	83	163	42	22	25	36	108	3/4	45	1.6	–	3.1
	1 NPT	357-000-235	M 35 x 1.5 RH	83	157	36	15	25	36	108	3/4	45	1.6	–	3.1
	1 NPT	357-000-236	M 35 x 1.5 LH	83	157	36	15	25	36	108	3/4	45	1.6	–	3.1
	G 1	357-130-222	G 1 RH	83	163	42	22	25	36	108	3/4	45	1.6	–	3.1
	G 1	357-130-223	G 1 LH	83	163	42	22	25	36	108	3/4	45	1.6	–	3.1
	G1	357-130-235	M 35 x 1.5 RH	83	157	36	15	25	36	108	3/4	45	1.6	–	3.1
32	1 1/4 NPT	527-000-001	1 1/4 NPT RH	91	191	57	29	31.8	46	134	1	57	–	–	4.1
	1 1/4 NPT	527-000-002	1 1/4 NPT LH	91	191	57	29	31.8	46	134	1	57	–	–	4.1
	1 1/4 NPT	527-000-026	1 3/4-12 UN RH	91	191	57	29	31.8	46	119	1	58	1.6	–	4.1
	1 1/4 NPT	527-000-027	1 3/4-12 UN LH	91	191	57	29	31.8	46	119	1	58	1.6	–	4.1
	1 1/4 NPT	527-000-054	G 1 1/4 RH	91	189	54	28	31.8	46	119	1	58	1.6	–	4.1
	1 1/4 NPT	527-000-055	G 1 1/4 LH	91	189	54	28	31.8	46	119	1	58	1.6	–	4.1
	G 1 1/4	527-130-054	G 1 1/4 RH	91	189	54	28	31.8	46	119	1	58	1.6	–	4.1
	G 1 1/4	527-130-055	G 1 1/4 LH	91	189	54	28	31.8	46	119	1	58	1.6	–	4.1
40	1 1/2 NPT	557-000-001	1 1/2 NPT RH	108	218	62	30	38	54	152	1 1/4	63.5	–	–	6.7
	1 1/2 NPT	557-000-002	1 1/2 NPT LH	108	218	62	30	38	54	152	1 1/4	63.5	–	–	6.7
	1 1/2 NPT	557-000-395	2-12 UN RH	108	228	72	29	38	54	149	1 1/4	65	1.6	–	6.7
	1 1/2 NPT	557-000-396	2-12 UN LH	108	228	72	29	38	54	149	1 1/4	65	1.6	–	6.7
	1 1/2 NPT	557-000-198	G 1 1/2 RH	108	228	72	29	38	55	149	1 1/4	65	1.6	–	6.7
	1 1/2 NPT	557-000-199	G 1 1/2 LH	108	228	72	29	38	55	149	1 1/4	65	1.6	–	6.7
	G 1 1/2	557-130-198	G 1 1/2 RH	108	228	72	29	38	55	149	1 1/4	65	1.6	–	6.7
	G 1 1/2	557-130-199	G 1 1/2 LH	108	228	72	29	38	55	149	1 1/4	65	1.6	–	6.7
	G 1 1/2	557-130-199	G 1 1/2 LH	108	228	72	29	38	55	149	1 1/4	65	1.6	–	6.7
50	2 NPT	657-000-116	2 NPT RH	118	257	74	38	47.6	60	185	1 1/4	70	–	–	7.6
	2 NPT	657-000-117	2 NPT LH	118	257	74	38	47.6	60	185	1 1/4	70	–	–	7.6
	2 NPT	657-000-124	G 2 RH	118	248	65	29	47.6	60	165	1 1/4	70	1.6	–	7.6
	2 NPT	657-000-125	G 2 LH	118	248	65	29	47.6	60	165	1 1/4	70	1.6	–	7.6
	G 2	657-130-124	G 2 RH	118	248	65	29	47.6	60	165	1 1/4	70	1.6	–	7.6
	G 2	657-130-125	G 2 LH	118	248	65	29	47.6	60	165	1 1/4	70	1.6	–	7.6

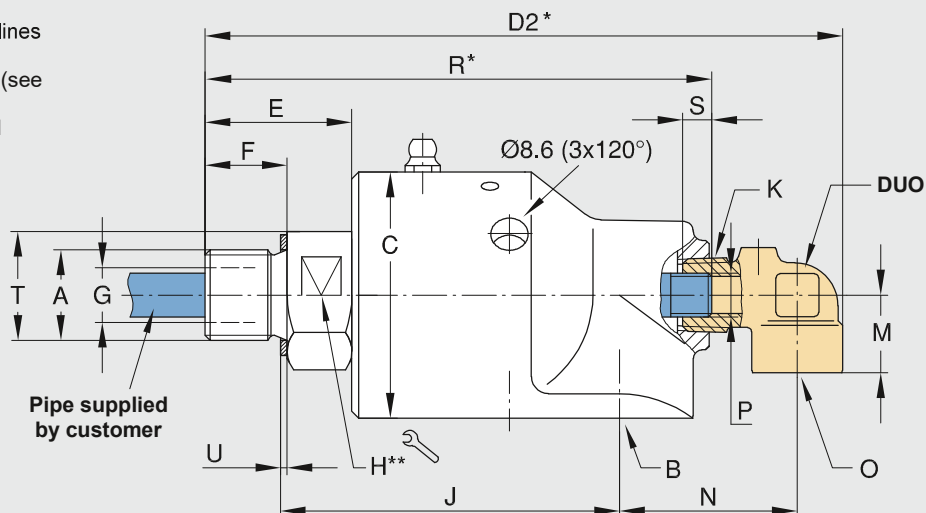
57 Series – Elbows DN 10 – 50 for Fixed, Threaded Supply Pipe

Duoflow unions are used when supply and return lines are connected to one side of the cylinder or roll; non-supported pipe lengths no longer than 4 x D1 (see page 5 and 6); max. speed 1,000 RPM; for higher speeds divided supply pipes must be used.

For Rotary Unions with pilot rotor, additional basic models and weight refer to page 6.

* Values are based on the NPT RH models. Refer to difference in E values on page 6 for length on other models or IC drawings on Deublin's website.

** DN 10 – 20 = hexagon
DN 25 – 50 = two wrench flats



Elbows 57 Series

DN	O	fixed, threaded				rotating				divided	+ self-centering	L	P1 Ø H9	Q	S	D ₂	M	N
		Ordering No. DUO	P Pipe	R	S	Ordering No. DUO	P Ø d11	R	S	Ordering No. DUO	Ordering No. DUO							
10	G 1/4	55-121	M 6	98	8	55-807	5.8	98	20	55-843	–	171	6	5	60	124	18	33
	1/4 NPT	55-120	M 6	98	8	55-446	5.8	98	20	55-030	–	171	6	5	55	124	18	33
	1/4 NPT	–	–	–	–	–	–	–	–	55-445	–	171	6	5	60	124	18	33
15	G 3/8	155-581	G 1/8	118	8	155-709	9.8	116	30	150-232	155-981	201	10	8	60	147	18	40
	3/8 NPT	155-012	1/8 NPT	120	5.5	155-061	9.8	120	30	–	–	–	–	–	–	147	18	40
	3/8 NPT	155-199	G 1/8	117	8	155-471	9.8	117	30	155-470	155-797	201	10	8	60	147	18	40
20	G 1/2	251-351	G 1/4	134	12	251-352	12.8	112	32	251-551	251-371	208	13	11	60	170	26	46
	1/2 NPT	250-043	1/4 NPT	134	7.9	250-075	12.8	138	32	–	–	–	–	–	–	170	26	46
	1/2 NPT	250-044	1/8 NPT	134	5.5	250-681	12.8	135	32	250-026	–	208	12.5	11	60	170	26	46
	1/2 NPT	250-367	G 1/8	134	5.5	–	–	–	–	250-680	250-994	208	13	11	60	170	26	46
	1/2 NPT	250-368	G 1/4	135	12	–	–	–	–	–	–	–	–	–	–	170	26	46
25	G 1/2	350-912	G 3/8	160	12	350-772	15.8	153	35	350-990	351-173	272	16	14	60	204	28	59
	1/2 NPT	350-083	3/8 NPT	166	20.9	350-163	15.8	166	32	350-366	350-974	272	16	14	60	204	28	59
	1/2 NPT	350-084	1/4 NPT	169	20.6	350-347	15.8	160	35	–	–	–	–	–	–	204	28	59
	1/2 NPT	350-255	G 3/8	160	12	–	–	–	–	–	–	–	–	–	–	204	28	59
32	G 3/4	525-594	G 1/2	189	14	525-480	21.8	185	40	525-931	525-926	285	22	20	60	237	35	72
	3/4 NPT	525-007	1/2 NPT	189	10.8	525-104	19.02	187	38	525-236	525-592	285	22	20	60	237	35	72
	3/4 NPT	525-079	G 1/2	185	14	525-237	21.8	185	40	–	–	–	–	–	–	237	35	72
40	G 3/4	451-171	G 3/4	220	16	451-173	25.8	213	44	451-274	451-175	319	26	24	60	262	38	76
	3/4 NPT	450-013	3/4 NPT	220	11.3	450-144	25.8	220	44	450-263	–	319	26	24	60	262	38	76
	3/4 NPT	450-036	1/2 NPT	230	10.8	450-468	25.8	220	44	450-467	451-162	319	26	24	60	262	38	76
	3/4 NPT	450-221	G 3/4	220	16	–	–	–	–	–	–	–	–	–	–	262	38	76
50	3/4 NPT	450-013	3/4 NPT	260	11.3	–	–	–	–	–	–	–	–	–	–	298	38	78
	G 1 1/4	450-534	G 1	261	26	450-612	32.1	240	52	655-174	655-707	382	34	31	60	316	45	96
	1 NPT	450-183	1 NPT	265	34.2	–	–	–	–	–	–	–	–	–	–	316	45	96
	1 1/4 NPT	451-242	G 1	255	19.5	450-625	31.8	240	52	655-966	655-968	382	34	31	60	316	45	96

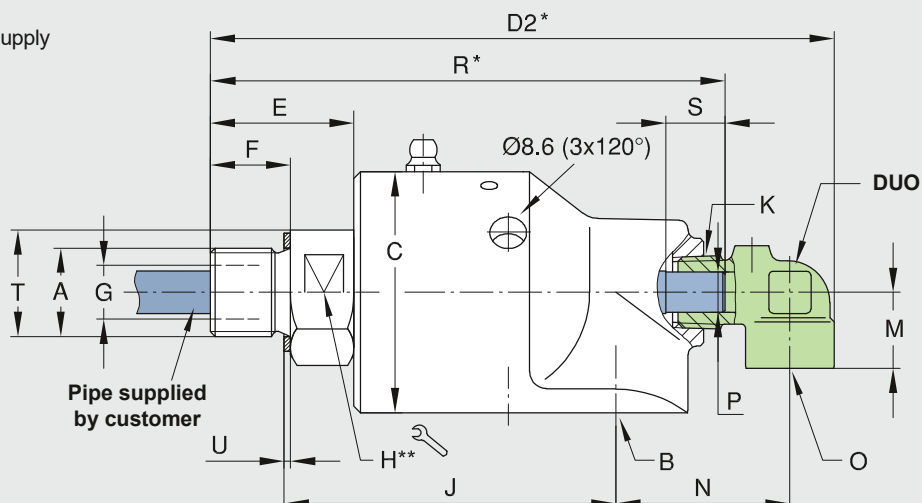
57 Series – Elbows DN 10 – 50 for Rotating Supply Pipe

Duoflow unions are used when supply and return lines are connected to one side of the cylinder or roll;
max. speed 1,000 RPM; for higher speeds divided supply pipes must be used.

For Rotary Unions with pilot rotor, additional basic models and weight refer to page 6.

* Values are based on the NPT RH models.
Refer to difference in E values on page 6 for length on other models or IC drawings on Deublin's website.

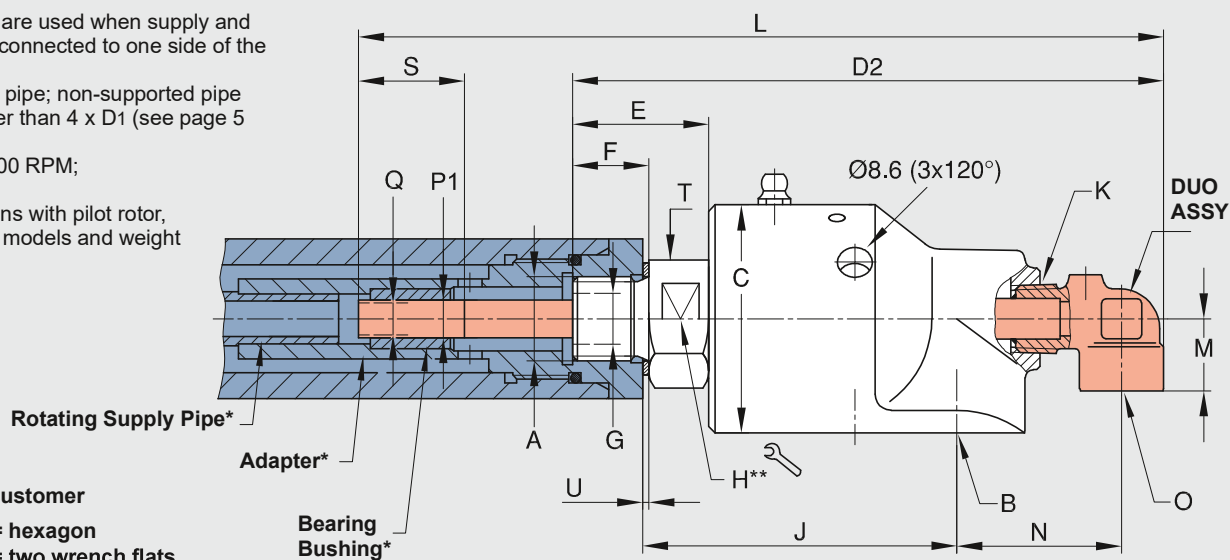
** DN 10 – 20 = hexagon
DN 25 – 50 = two wrench flats



57 Series – Elbows DN 10 – 50 with Divided Siphon Pipe (soldered)

Duoflow unions are used when supply and return lines are connected to one side of the cylinder or roll;
soldered supply pipe; non-supported pipe lengths no longer than 4 x D1 (see page 5 and 6);
max. speed 3,500 RPM;

For Rotary Unions with pilot rotor, additional basic models and weight refer to page 6.



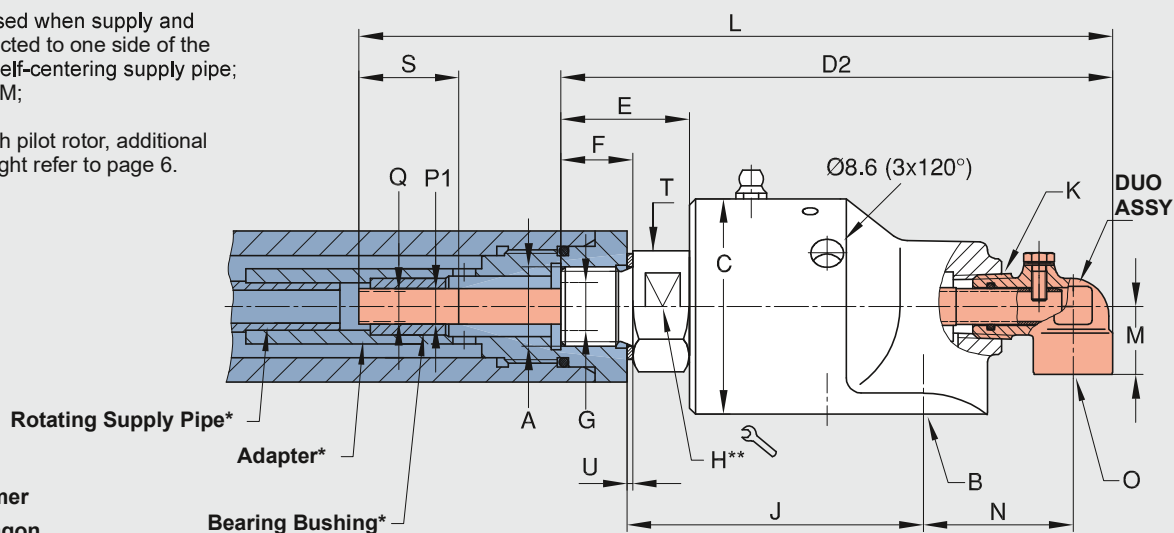
* supplied by customer

** DN 10 – 20 = hexagon
DN 25 – 50 = two wrench flats

57 Series – Elbows DN 10 – 50 with Flexible, Self-Centering Supply Pipe

Duoflow unions are used when supply and return lines are connected to one side of the cylinder or roll; fixed self-centering supply pipe;
max. speed 3,500 RPM;

For Rotary Unions with pilot rotor, additional basic models and weight refer to page 6.



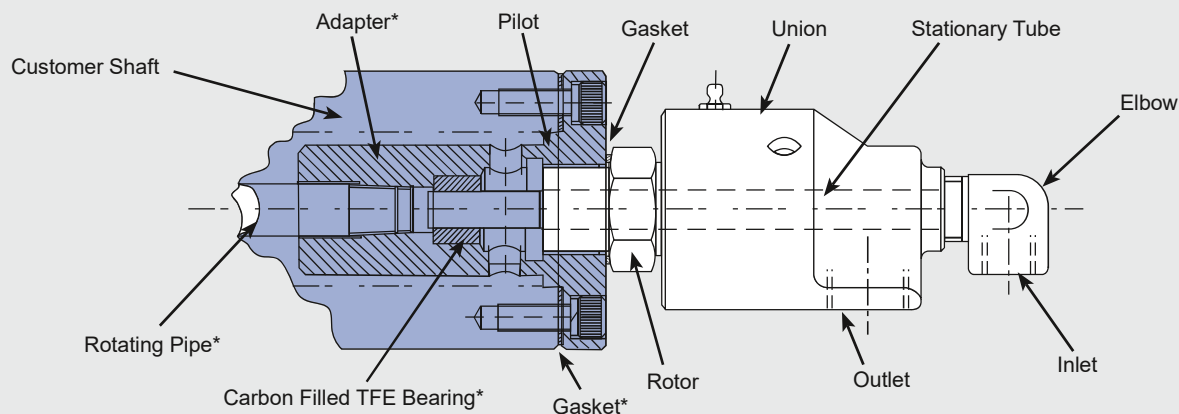
* supplied by customer

** DN 10 – 20 = hexagon
DN 25 – 50 = two wrench flats

Duoflow Supply Pipe Installations

Deublin water service unions can be adapted for Duoflow applications where a single media is circulated through and around the supply pipe. Duoflow elbows are available in 3 styles to accept a variety of different supply systems. The guidelines shown below should be carefully considered. A poorly designed supply system can contribute to premature union failure.

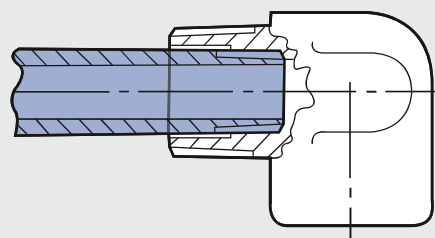
Where long pipes or high speeds are required, an adapter should be used to avoid transmitting stresses from heavy pipes, cascading water or vibrations to the union. A typical adapter is illustrated.



* Supplied by customer.

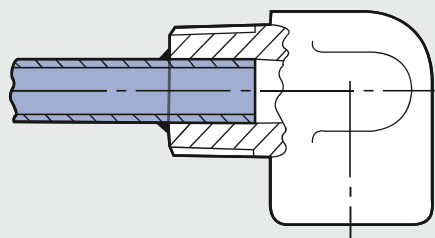
Threaded Pipe

The largest threaded supply pipe achieves the maximum flow rates available for a particular size union. Stresses at the pipe thread can cause breakage allowing the pipe to fall into the roll. For this reason pipe lengths longer than 4 union lengths (4 x D1) and rotational speeds above 1,000 RPM should be avoided.



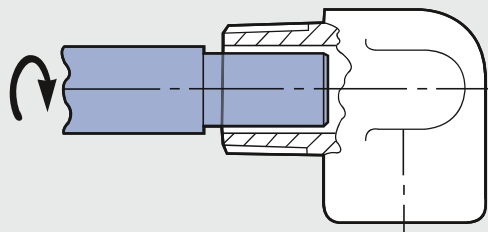
Fixed Tube

Thin wall stainless steel tube silver soldered into the Duoflow elbow produces the strongest, lightest weight assembly. The thinner wall sections allow greater flow rates than the threaded pipe. Maximum flow rates are obtained with the largest tube available for a given size union. Tube lengths is usually limited to 6 union lengths (6 x D1). Speeds to 3,500 RPM are possible.



Rotating Pipe

Rotating pipes are fastened internally to rotate with the roll. The Duoflow elbow helps to support the pipe and restrict crosstalk between passages. The pipe must be straight and concentric to the center line to avoid excessive loading of the union. The union must also have a rotor with a straight thread (Example 1" - 14 UNS) rather than a tapered pipe thread to assure concentricity. Rotational speeds above 1,000 RPM should be avoided.





DEUBLIN

Monoflow Rotary Unions 57 series

“Hot Media” for Hot Water and Hot Oil

DN 15 - 50

- Monoflow and duoflow design
- Self-supported Rotary Union
- Radial housing connection
- Balanced mechanical seal
- Keyed rotor seal
- 3 vent holes
- Forged brass housing
- Stainless steel rotor
- Seal combination – standard: Carbon Graphite/Silicon Carbide
- Lubrication guide see Operating Manual 040-550-2 (available from our website)

Operating Data

Max. Water Pressure	Model	157 – 357	750 PSI	50 bar
		527 – 657	300 PSI	20 bar
Max. Hot Oil Pressure	Model	157 – 657	100 PSI	6,6 bar
Max. Speed, Rotor with Straight Threads:	Model	157 – 257	3,500 rpm	3.500 min ⁻¹
		357	3,000 rpm	3.000 min ⁻¹
		527 – 557	2,500 rpm	2.500 min ⁻¹
		657	750 rpm	750 min ⁻¹
Max. Temperature	Model	157 – 657	320°F	160°C
For higher temperature, please consult Deublin.				

For further information, please contact Deublin or your local representative.

Monoflow Rotary Union for Hot Water

			Rotor with BSP Threads		Rotor with NPT Threads		
DN	A Rotor Connections	B	RH	LH	RH	LH	DN
15	G ½	G ½	157-2013-151	157-2013-152	157-2012-001	157-2012-002	15
20	G ¾	G ¾	257-2695-284	257-2695-285	257-2418-020	257-2418-021	20
25	G 1	G 1	357-2897-222	357-2897-223	357-2517-002	357-2517-003	25
32	G 1¼	G 1¼	527-2673-054	527-2673-055	527-2637-001	527-2637-002	32
40	G 1½	G 1½	557-2544-198	557-2544-199	557-2514-001	557-2514-002	40
50	G 2	G 2	657-2983-124	657-2983-125	657-2827-116	657-2827-117	50
50	Flange	G 2	657-2983-421		657-2827-421		50

Monoflow Rotary Union for Hot Oil

			Rotor with BSP Threads		Rotor with NPT Threads		
DN	A Rotor Connections	B	RH	LH	RH	LH	DN
15	G ½	G ½	157-2014-151	157-2014-152	157-2003-001	157-2003-002	15
20	G ¾	G ¾	257-2475-284	257-2475-285	257-2318-020	257-2318-021	20
25	G 1	G 1	357-2556-222	357-2556-223	357-2279-002	357-2279-003	25
32	G 1¼	G 1¼	527-2718-054	527-2718-055	527-2583-001	527-2583-002	32
40	G 1½	G 1½	557-2241-198	557-2241-199	557-2483-001	557-2483-002	40
50	G 2	G 2	657-2823-124	657-2823-125	657-2511-116	657-2511-117	50
50	Flange	G 2	657-2823-421		657-2511-421		50

Information: For dimensions of the Hot Media Rotary Unions, refer to page 5.

For the duoflow design, elbows and siphon pipes are available. Refer to page 7 – 9.

DEUBLIN

Rotary Union 57 Series

ATEX-Certified, DN 15 - 50

- Monoflow and duoflow design
- Self-supported Rotary Union
- Radial housing connection
- Balanced mechanical seal
- Keyed rotor seal
- Easy and quick replacement of sealing components (rotor seal, floating seal)
- 3 vent holes
- Forged brass housing
- Stainless steel rotor
- Seal combination – standard:
Carbon Graphite/Silicon Carbide
- Lubrication guide page 45

For further information, please contact Deublin or your local representative.

Operating Data

Max. Water Pressure	Model	157 – 657	150 PSI	10 bar
Max. Speed,				
Rotor with Straight Threads:	Model	157 – 257	3,500 rpm	3.500 min ⁻¹
		357	3,000 rpm	3.000 min ⁻¹
		527 – 557	2,500 rpm	2.500 min ⁻¹
		657	750 rpm	750 min ⁻¹
Max. Temperature	Model	157 – 657	250°F	121°C

For higher temperature, please consult Deublin.

Legend

CE	= Declaration of conformity
Ex	= Hazardous area
II	= Group of devices
-	= Device does not convey any potentially explosive atmosphere
2 or 3	= Device category 2 for use in zone 1 and/or zone 21 3 for use in zone 2 and/or zone 22
G	= Hazardous area due to gases, vapours, mist
D	= Hazardous area due to dust
c	= Design safety (protection by safe design)
IIB	= Explosion group of gases
IIIC	= Explosion group of dust
T195°C	= Maximum surface temperature (less 5K for type approval test); Classification of dust
T383°F	
T3	= Temperature class (classification of gases)

Example of ATEX identification

ATEX-compliant rotary union
with limited operating time.

Max. usage time: 4,000 h.

ATEX Classification:

CE Ex II-/2G Ex h IIB T3 Gb
Ex II-/2D Ex h IIIC T195°C Db
+3°C ≤ Ta ≤ 40°C

Attention



Deublin Rotary Unions for use in zone 1 and/or 21 have to be operated with a differential pressure or flow monitoring system as protective equipment to prevent an excessive temperature rise occurring due to dry operation of the axial face seal.

Monoflow Rotary Union for ATEX

DN	A Rotor Connections	B	Rotor with BSP Threads	
			RH	LH
15	G ½	G ½	157X130-151	157X130-152
20	G ¾	G ¾	257X130-284	257X130-285
25	G 1	G 1	357X130-222	357X130-223
32	G 1¼	G 1¼	527X130-054	527X130-055
40	G 1½	G 1½	557X130-198	557X130-199
50	G 2	G 2	657X130-124	657X130-125