



DEUBLIN

General Purpose 55 Series Unions

- monoflow and duoflow design
- self-supported rotating union
- radial housing connection
- balanced mechanical seal
- 3 vent holes
- forged brass housing
- stainless steel rotor ($\frac{3}{8}$ " - 1")
- special options:
threaded vent holes,
low torque design
- Lubrication Guide page 55

Operating Data

Maximum Water Pressure	Model 55-555	750 PSI	50 bar
Maximum Water Pressure	Model 655	600 PSI	41 bar
Maximum Saturated Steam Pressure (Intermittent)		15 PSI	1 bar
Maximum Hot Oil Pressure		100 PSI	6.6 bar
Maximum Speed NPT Threads	Model 55-555	1,500 RPM	1,500/min
	Model 655	750 RPM	750/min
Maximum Speed Straight Threads			
	Model 55-255	3,500 RPM	3,500/min
	Model 355	3,000 RPM	3,000/min
	Model 525-555	2,500 RPM	2,500/min
	Model 655	750 RPM	750/min

Maximum Temperature

250°F

>250°F consult **DEUBLIN**

Torque Ratings 55 Series

Size	ft.lbs	Nm
55	$\frac{1}{4}$	0.34
155	$\frac{1}{2}$	0.50
255	$\frac{3}{4}$	0.68
355	1 $\frac{1}{4}$	1.80
525	1 $\frac{3}{4}$	1.80
555	2 $\frac{1}{2}$	3.40
655	3	4.07

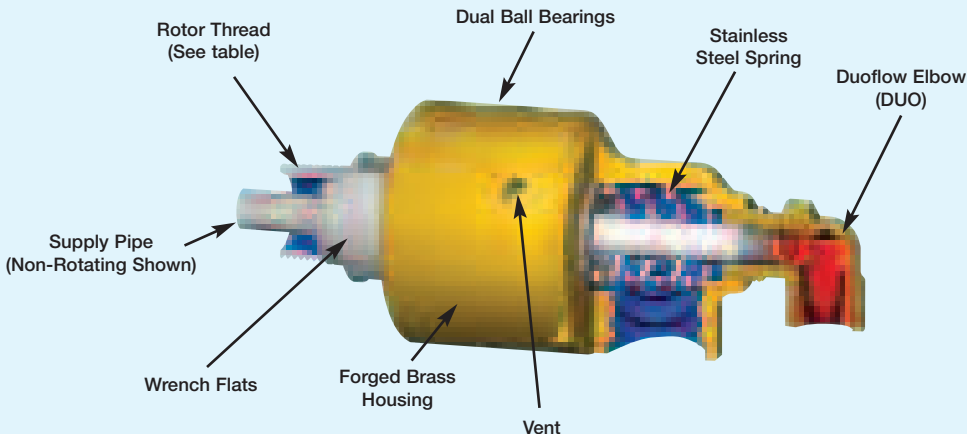
Seal Combinations

- Carbon Graphite/Bronze for water - Standard
- Carbon Graphite/Ceramic for hot oil, hot water and saturated steam - Optional
- multi-purpose applications

Seal Combination - E.L.S.

- Tungsten Carbide/Ceramic for severe conditions (poor water quality), max. temperature 200°F

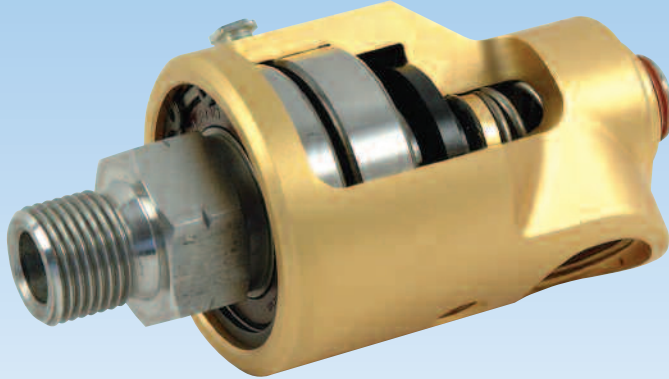
Illustration shows duoflow with fixed supply pipe. Monoflow units have pipe plugs instead of an elbow.



DEUBLIN

57 Series with Silicon Carbide Seals, for Water Service

- monoflow and duoflow design
- self-supported rotating union
- radial housing connection
- balanced mechanical seal
- keyed rotor seal
- easy and quick replacement of sealing components (rotor seal, floating seal)
- ball bearings lubricated for life
- for poor water quality (E.L.S.)
- 3 vent holes
- forged brass housing
- stainless steel rotor ($\frac{3}{8}$ " - 1")
- special options:
threaded vent holes



Operating Data

Maximum Water Pressure		150 PSI	10 bar
Maximum Speed NPT Threads	Model 57-557	1,500 RPM	1,500/min
	Model 657	750 RPM	750/min
Maximum Speed Straight Threads			
	Model 57-257	3,500 RPM	3,500/min
	Model 357	3,000 RPM	3,000/min
	Model 527-557	2,500 RPM	2,500/min
	Model 657	750 RPM	750/min

Maximum Water Temperature 200°F >200°F consult **DEUBLIN**

Seal Combination - Standard

- Carbon Graphite/Silicon Carbide

Seal Combination - E.L.S.

- Silicon Carbide/Silicon Carbide for severe conditions (poor water quality)

Torque Ratings 57 Series

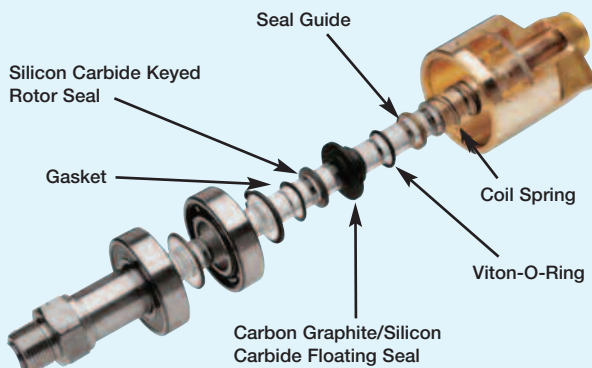
Size	ft.lbs	Nm
57	$\frac{1}{4}$	0.25
157	$\frac{1}{2}$	0.50
257	$\frac{3}{4}$	1.00
357	1 $\frac{1}{2}$	2.00
527	1 $\frac{1}{2}$	2.20
557	2 $\frac{1}{4}$	2.90
657	3 $\frac{1}{2}$	4.50

Union Repair

The 57 Series is designed for quick, easy replacement of both Floating Seal and the Rotor Seal.

The "57's" seal is seated in a keyed counter bore at the rotor's end. The worn seal simply lifts out and the new one drops right in. Since the entire rotor does not need to be replaced or relapped, the repair is fast, easy and on the spot. As you only replace the seals, the repair cost is very economical.

For Ordering Number of Repair Kit see page 5.



55 & 57 Series Monoflow Union Specifications

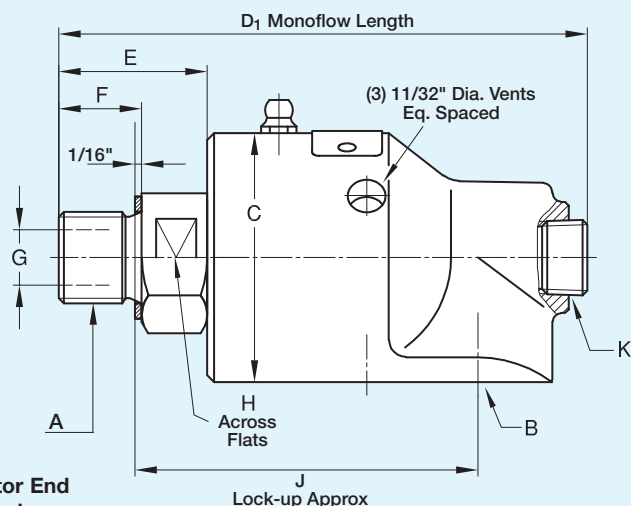


Chart Instructions

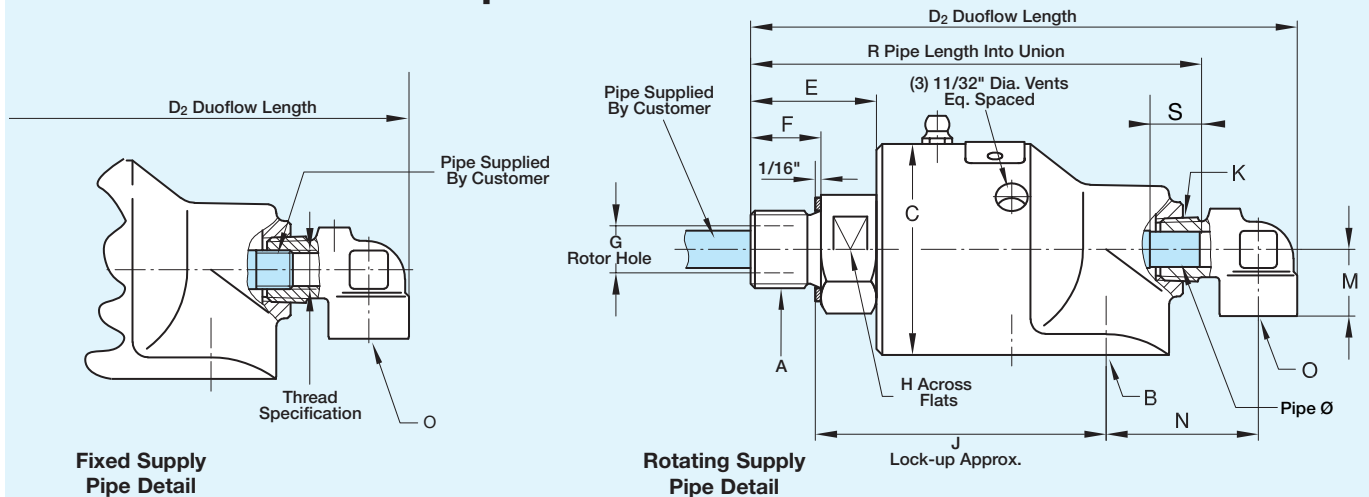
Select Union Size and Rotor Thread.
Follow this line to opposite page to
find Duoflow Elbow Specifications.
Add Duoflow Elbow Suffix to the end
of the Ordering Number.

† Recessed O-Ring in Rotor End
in Place of Copper Gasket

B Port NPT	Ordering Number												
	55 Series All Purpose	55 Series E.L.S.	57 Series Water Service	57 Series E.L.S.	A ^① Rotor Thread	C	D ₁	D ₂	E	F	G	H	J
3/8"	55-000-001	55-147-151	57-000-001	57-050-001	3/8" NPT RH	1 3/4"	3 15/16"	4 13/16"	1"	5/8"	3/8"	7/8"	2 11/16"
	55-000-002	55-147-152	57-000-002	57-050-002	3/8" NPT LH	1 3/4"	3 15/16"	4 13/16"	1"	5/8"	3/8"	7/8"	2 11/16"
	55-000-003	55-147-149	57-000-003	57-050-003	5/8"-18 UNF RH	1 3/4"	3 15/16"	4 13/16"	1"	5/8"	3/8"	7/8"	2 1/2"
	55-000-004	55-147-150	57-000-004	57-050-004	5/8"-18 UNF LH	1 3/4"	3 15/16"	4 13/16"	1"	5/8"	3/8"	7/8"	2 1/2"
	55-000-094	55-147-192	57-000-094	57-050-094	G 3/8" (BSP) RH	44.5	102	123	26	16	9.5	22.2	63
	55-000-095	55-147-193	57-000-095	57-050-095	G 3/8" (BSP) LH	44.5	102	123	26	16	9.5	22.2	63
1/2"	155-000-001	155-208-113	157-000-001	157-050-001	1/2" NPT RH	2 1/4"	4 13/16"	5 7/8"	1 1/16"	7/8"	1/2"	1 1/8"	3 1/2"
	155-000-002	155-208-114	157-000-002	157-050-002	1/2" NPT LH	2 1/4"	4 13/16"	5 7/8"	1 1/16"	7/8"	1/2"	1 1/8"	3 1/2"
	155-000-021	155-208-185	157-000-021	157-050-021	3/4"-16 UNF RH	2 1/4"	4 11/16"	5 3/4"	1 5/16"	3/4"	1/2"	1 1/8"	3 1/16"
	155-000-022	155-208-229	157-000-022	157-050-022	3/4"-16 UNF LH	2 1/4"	4 11/16"	5 3/4"	1 5/16"	3/4"	1/2"	1 1/8"	3 1/16"
	155-000-151	155-208-252	157-000-151	157-050-151	G 1/2" (BSP) RH	57.2	120	148	34	19	12.7	28.6	78
	155-000-152	155-208-253	157-000-152	157-050-152	G 1/2" (BSP) LH	57.2	120	148	34	19	12.7	28.6	78
3/4"	255-000-020	255-052-255	257-000-020	257-050-020	3/4" NPT RH	2 7/8"	5 5/16"	6 3/4"	1 7/16"	7/8"	1 1/16"	1 1/4"	4 1/16"
	255-000-021	255-052-256	257-000-021	257-050-021	3/4" NPT LH	2 7/8"	5 5/16"	6 3/4"	1 7/16"	7/8"	1 1/16"	1 1/4"	4 1/16"
	255-000-003	255-052-258	257-000-135†	257-050-135†	1"-14 UNS RH	2 7/8"	5 7/16"	6 5/8"	1 5/16"	3/4"	2 1/32"	1 1/4"	3 11/16"
	255-000-027	255-052-257	257-000-136†	257-050-136†	1"-14 UNS LH	2 7/8"	5 7/16"	6 5/8"	1 5/16"	3/4"	2 1/32"	1 1/4"	3 11/16"
	255-000-284	255-052-445	257-000-284	257-050-284	G 3/4" (BSP) RH	73	138	168	34	19	17.5	32	94
	255-000-285	255-052-446	257-000-285	257-050-285	G 3/4" (BSP) LH	73	138	168	34	19	17.5	32	94
1"	355-000-002	355-064-186	357-000-002	357-050-002	1" NPT RH	3 1/4"	6 13/16"	8 5/16"	1 5/16"	1 1/8"	1"	1 1/2"	4 1/16"
	355-000-003	355-064-187	357-000-003	357-050-003	1" NPT LH	3 1/4"	6 13/16"	8 5/16"	1 5/16"	1 1/8"	1"	1 1/2"	4 1/16"
	355-000-019	355-064-328	357-000-019	357-050-019	1 1/2"-12 UNF RH	3 1/4"	6 13/16"	8 5/16"	1 5/16"	1 1/8"	1"	1 1/2"	4 1/4"
	355-000-074	355-064-329	357-000-074	357-050-074	1 1/2"-12 UNF LH	3 1/4"	6 13/16"	8 5/16"	1 5/16"	1 1/8"	1"	1 1/2"	4 1/4"
	355-000-222	355-064-378	357-000-222	357-050-222	G 1" (BSP) RH	75.4	166	204	42	21.5	22.2	38.1	108
	355-000-223	355-064-379	357-000-223	357-050-223	G 1" (BSP) LH	75.4	166	204	42	21.5	22.2	38.1	108
1 1/4"	525-000-001	525-097-043	527-000-001	527-050-001	1 1/4" NPT RH	3 9/16"	7 9/16"	9 9/8"	2 3/16"	1 1/8"	1 1/4"	1 3/4"	5 1/4"
	525-000-002	525-097-044	527-000-002	527-050-002	1 1/4" NPT LH	3 9/16"	7 9/16"	9 9/8"	2 3/16"	1 1/8"	1 1/4"	1 3/4"	5 1/4"
	525-000-026	525-097-095	527-000-026	527-050-026	1 3/4"-12 UN RH	3 9/16"	7 9/16"	9 9/8"	2 3/16"	1 3/16"	1 1/4"	1 3/4"	4 11/16"
	525-000-027	525-097-096	527-000-027	527-050-027	1 3/4"-12 UN LH	3 9/16"	7 9/16"	9 9/8"	2 3/16"	1 3/16"	1 1/4"	1 3/4"	4 11/16"
	525-000-054	525-097-122	527-000-054	527-050-054	G 1 1/4" (BSP) RH	90.5	191	234	54	27	30.2	44.5	119
	525-000-055	525-097-123	527-000-055	527-050-055	G 1 1/4" (BSP) LH	90.5	191	234	54	27	30.2	44.5	119
1 1/2"	555-000-001	555-033-154	557-000-001	557-050-001	1 1/2" NPT RH	4 1/4"	8 1/2"	10 5/16"	2 7/16"	1 3/16"	1 1/2"	2 1/8"	6"
	555-000-002	555-033-160	557-000-002	557-050-002	1 1/2" NPT LH	4 1/4"	8 1/2"	10 5/16"	2 7/16"	1 3/16"	1 1/2"	2 1/8"	6"
	555-000-395	555-033-399	557-000-395	557-050-395	2"-12 UN RH	4 1/4"	8 7/8"	10 11/16"	2 3/16"	1 1/8"	1 1/2"	2 1/8"	5 13/16"
	555-000-396	555-033-382	557-000-396	557-050-396	2"-12 UN LH	4 1/4"	8 7/8"	10 11/16"	2 3/16"	1 1/8"	1 1/2"	2 1/8"	5 13/16"
	555-000-198	555-033-288	557-000-198	557-050-198	G 1 1/2" (BSP) RH	108	225	268	71	29	35	54	147
	555-000-199	555-033-289	557-000-199	557-050-199	G 1 1/2" (BSP) LH	108	225	268	71	29	35	54	147
2"	655-500-116	655-502-116	657-000-116	657-050-116	2" NPT RH	4 5/8"	10 1/16"	11 3/4"	3"	1 1/2"	1 7/8"	2 1/4"	7"
	655-500-117	655-502-117	657-000-117	657-050-117	2" NPT LH	4 5/8"	10 1/16"	12 1/16"	3"	1 1/2"	1 7/8"	2 1/4"	7"
	655-500-124	655-502-124	657-000-124	657-050-124	G 2" (BSP) RH	117	246	289	65	28.6	47	55	164
	655-500-125	655-502-125	657-000-125	657-050-125	G 2" (BSP) LH	117	246	289	65	28.6	47	55	164

^① Metric threads and other thread sizes are available. Contact factory for further information. For 2", 2 1/2", 3", 4" and 5" capacity unions refer to pages 11-13 and 16-20.

55 & 57 Series Duoflow Union Specifications



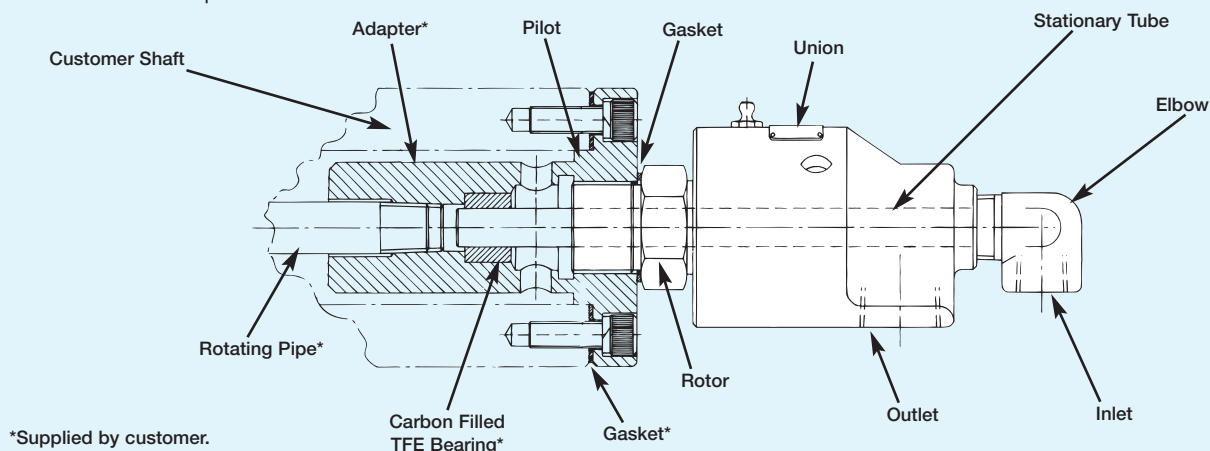
For Description See Page 10

Fixed Supply Pipe			Fixed Supply Tube			Rotating Supply Pipe									
Elbow Suffix	Thread	R	Elbow Suffix	Tube OD	R	Elbow Suffix	Pipe Size	Pipe Dia.	S	R	K NPT	M	N	O NPT	Shpg. Wt.
—	—	—	-030	.250"	4 ³ / ₁₆ "	—	—	—	—	—	1/4"	1 ¹ / ₁₆ "	1 ³ / ₈ "	1/4"	2#
—	—	—	-030	.250"	4 ³ / ₁₆ "	—	—	—	—	—	1/4"	1 ¹ / ₁₆ "	1 ³ / ₈ "	1/4"	2#
-120	M6X1	98.5	—	—	—	—	—	—	—	—	1/4"	18	35	1/4"	0.9 Kg
-012	1/8" NPT	4 ³ / ₄ "	-061	.375"	5 ⁷ / ₁₆ "	—	—	—	—	—	3/8"	1 ¹ / ₁₆ "	1 ¹ / ₂ "	3/8"	3#
-012	1/8" NPT	4 ³ / ₄ "	-061	.375"	5 ⁵ / ₁₆ "	-061	1/8"	.371" .370"	1 ¹ / ₁₆ "	5"	3/8"	1 ¹ / ₁₆ "	1 ¹ / ₂ "	3/8"	3#
-199	G1/8" (BSP)	117	—	—	—	-471	—	9.93 9.90	30	127	3/8"	18	38	3/8"	1.4 Kg
-043	1/4" NPT	5 ¹ / ₄ "	-075	.500"	5 ¹³ / ₁₆ "	—	—	—	—	—	1/2"	1"	1 ³ / ₄ "	1/2"	5#
-044	1/8" NPT	5 ¹ / ₈ "	-026	.437"		—	—	—	—	—	1/2"	1"	1 ³ / ₄ "	1/2"	5#
-043	1/4" NPT	5 ⁵ / ₈ "	-075	.500"		-075	1/4"	.496" .495"	1 ¹ / ₄ "	5 ¹¹ / ₁₆ "	1/2"	1"	1 ³ / ₄ "	1/2"	5#
-044	1/8" NPT	5"	-026	.437"		—	—	—	—	—	1/2"	1"	1 ³ / ₄ "	1/2"	5#
-368	G1/4" (BSP)	136.5	—	—	—	-681	—	12.95 12.90	31	146.5	1/2"	26	45	1/2"	2.3 Kg
-367	G1/8" (BSP)	132.5	—	—	—	—	—	—	—	—	1/2"	26	45	1/2"	2.3 Kg
-083	3/8" NPT	7 ¹ / ₁₆ "	-163	.625"	7 ⁷ / ₈ "	—	—	—	—	—	3/4"	1 ¹ / ₁₆ "	2 ⁵ / ₁₆ "	1/2"	8#
-084	1/4" NPT	7"				—	—	—	—	—	3/4"	1 ¹ / ₁₆ "	2 ⁵ / ₁₆ "	1/2"	8#
-083	3/8" NPT	7 ¹ / ₁₆ "	-163	.625"	7 ⁷ / ₈ "	-163	3/8"	.621" .619"	1 ¹ / ₄ "	7"	3/4"	1 ¹ / ₁₆ "	2 ⁵ / ₁₆ "	1/2"	8#
-084	1/4" NPT	7"				—	—	—	—	—	3/4"	1 ¹ / ₁₆ "	2 ⁵ / ₁₆ "	1/2"	8#
-255	G3/8" (BSP)	162	—	—	—	-347	—	15.95 15.90	31	175	3/4"	27	59	1/2"	3.6 Kg
-007	1/2" NPT	8 ¹ / ₈ "	-104	.750"	8 ¹ / ₄ "	—	—	—	—	—	1"	1 ³ / ₈ "	2 ¹³ / ₁₆ "	3/4"	10#
-007	1/2" NPT	8 ¹ / ₈ "	-104	.750"	8 ¹ / ₄ "	-104	1/2"	.745" .743"	1 ¹ / ₂ "	8 ³ / ₁₆ "	1"	1 ³ / ₈ "	2 ¹³ / ₁₆ "	3/4"	10#
-079	G1/2" (BSP)	185.5	—	—	—	-237	—	21.94 21.89	38	201.5	1"	35	72	3/4"	4.5 Kg
-013	3/4" NPT	8 ¹³ / ₁₆ "	-263	1.000"	9 ⁹ / ₈ "	—	—	—	—	—	1 ¹ / ₄ "	1 ¹ / ₂ "	3 ¹ / ₁₆ "	3/4"	16#
-036	1/2" NPT	8 ³ / ₄ "				—	—	—	—	—	1 ¹ / ₄ "	1 ¹ / ₂ "	3 ¹ / ₁₆ "	3/4"	16#
-013	3/4" NPT	9 ⁷ / ₁₆ "	-263	1.000"	9 ¹ / ₂ "	-144	3/4"	1.000" .998"	1 ³ / ₄ "	9 ⁵ / ₁₆ "	1 ¹ / ₄ "	1 ¹ / ₂ "	3 ¹ / ₁₆ "	3/4"	16#
-036	1/2" NPT	9 ¹ / ₈ "				—	—	—	—	—	1 ¹ / ₄ "	1 ¹ / ₂ "	3 ¹ / ₁₆ "	3/4"	16#
-221	G3/4" (BSP)	222	—	—	—	-468	—	25.91 25.81	44	244	1 ¹ / ₄ "	38	78	3/4"	7.2 Kg
-013	3/4" NPT	10 ¹ / ₄ "	-263	1.000"	10 ⁵ / ₈ "	—	—	—	—	—	1 ¹ / ₄ "	1 ¹ / ₂ "	3 ¹ / ₁₆ "	3/4"	17#
-183	1" NPT	10 ³ / ₈ "				—	—	—	—	—	1 ¹ / ₄ "	1 ³ / ₄ "	3 ¹ / ₂ "	1"	
-221	G3/4" (BSP)	243	—	—	—	-468	—	25.91 25.81	44	250	1 ¹ / ₄ "	38	78	3/4"	7.7 Kg

Duoflow Supply Pipe Installations

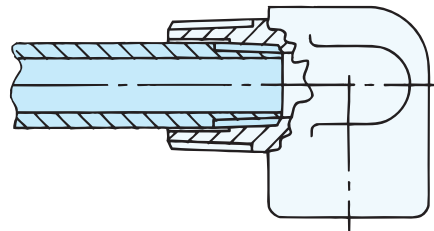
Deublin water service unions can be adapted for Duoflow applications where a single media is circulated through and around the supply pipe. Duoflow elbows are available in 3 styles to accept a variety of different supply systems. The guidelines shown below should be carefully considered. A poorly designed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



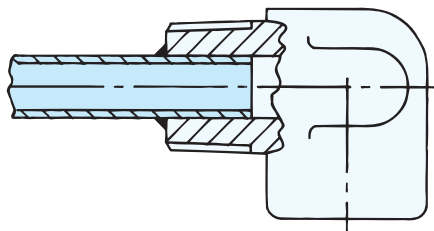
Threaded Pipe

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 ($4 \times D1$) and rotational speeds above 1000 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 length is usually limited to 6 union lengths ($6 \times D1$). Speeds to 3500 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 1000 RPM should be avoided.

