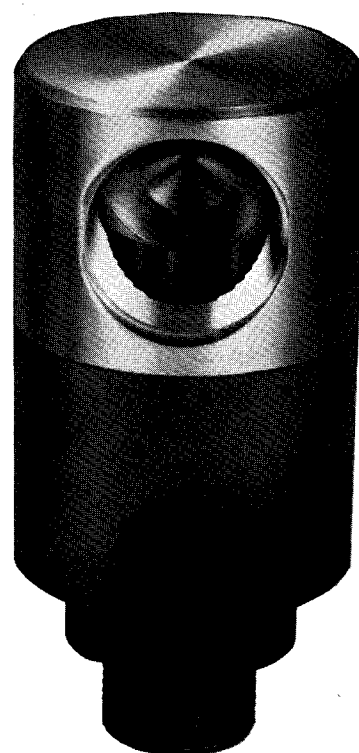
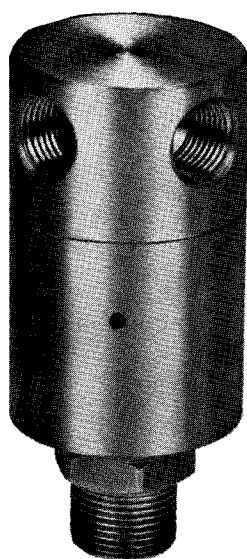
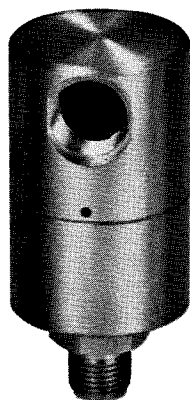


Dependable Leakproof Sealing



Rotating Unions

FOR IMMEDIATE DELIVERY.....Quality, precision Cary unions are offered in three (3) standard models with a wide range of port sizes and thread configurations. Available, as shown below, are single flow, double flow, and a special compact double flow. Also available are double flow elbows, stationary feed tubes and connecting hose assemblies.

The dependable, leakproof Cary Rotating Union works on the face sealing principle and features precision mating carbon seals and ceramic seats. The surfaces have a surface finish of four (4) rms and are lapped to obtain a true flatness of two (2) light bands or .000023 inch and inspected by optical testing. After assembly each union is bench tested to assure no leakage and is free of other abnormalities before the Cary label is applied.

All Cary Unions are provided with a pair of precision ball bearings for rigidity and accurate alignment. The bearings are factory lubricated and sealed for life. (Grease fittings and special lubricants are available for special applications.)

Standard Cary Unions are provided with stainless steel rotors and brass endcaps for good mechanical strength and corrosion resistance. (Special materials are available upon request.)

Operating Specifications

Speed— To 2500 RPM max ("R" & "O")
To 1200 RPM max ("O½")

Pressure— To 300 PSI Hydraulic max.
To 125 PSI Air max.

Temperature—To 250° F. max.

For other operating conditions please consult Cary Engineering.

Pressure Drops and Flow Rates

Cary Rotating Unions are made in three standard sizes; R-Series, O-Series, and O-½-Series. To determine which series and which rotor size, within the series, is required for your application calculate the flow co-efficient (Cv), then find in the listings below a union with a Cv equal to or greater than the calculated value.

$C_v = Q / \sqrt{\Delta P}$ Where Q is the required flow rate of water in gallons per minute and ΔP is the allowable pressure drop in psi.

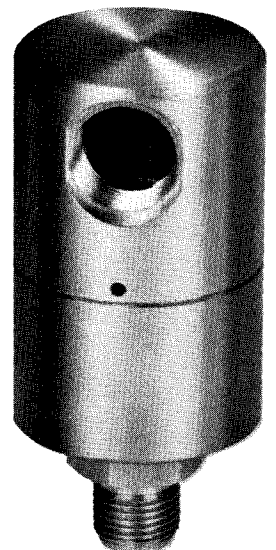
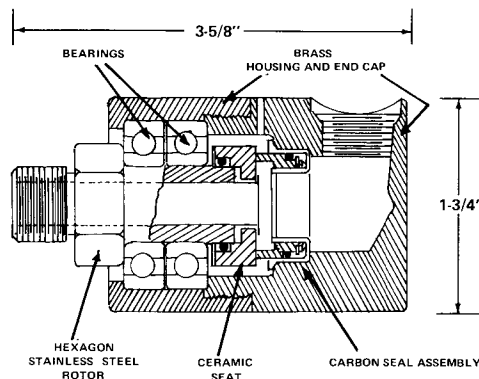
Example: If the required flow rate is 30 GPM and the maximum allowable pressure drop is 5 psi; $C_v = 30 / \sqrt{5} = 13.42$.

The Cv values listed below show that an O-Series union with a 3/4" NPT rotor (having a Cv of 14.5) is adequate.

Cary's Standard Rotating Unions are designed to have a long, trouble-free life when used with water at 125° F, 125 psi and 1250 RPM. For other fluids and operating conditions, please consult us by phone or letter.

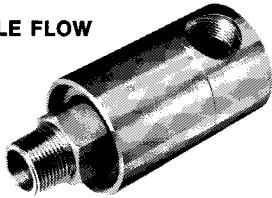
"R" Series Rotating Unions

ROTOR SIZE	INLET SIZE	MODEL NUMBER	Cv
1/4" NPT R.H. 1/4" NPT L.H.	1/4" NPT	46000 46001	3.5
3/8" NPT R.H. 3/8" NPT L.H.	3/8" NPT	46002 46003	3.5
5/8"-18 NF R.H. 5/8"-18 NF L.H.	3/8" NPT	46004 46005	3.5
5/8"-18 NF R.H. 5/8"-18 NF L.H.	1/4" NPT	46006 46007	3.5
5/8"-18 NF R.H. 5/8"-18 NF L.H.	1/2" NPT	46008 46009	3.5

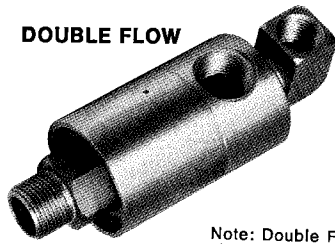


"O" Series Rotating Unions

SINGLE FLOW

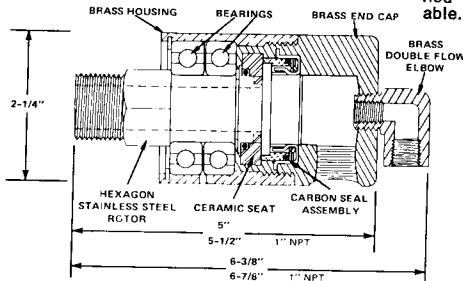


DOUBLE FLOW



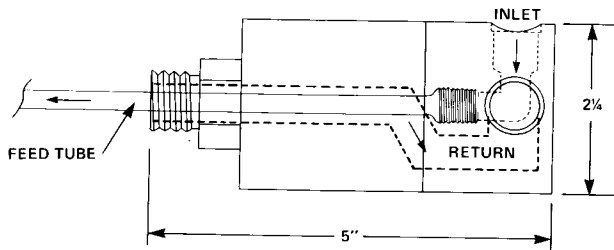
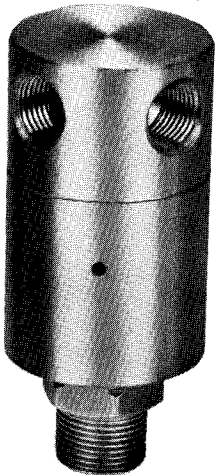
Note: Rotors with Left Hand Threads are notched.

Note: Double Flow should be specified when applicable.



ROTOR SIZE	INLET SIZE	MODEL NUMBER	Cv
1/2" NPT R.H.	1/2" NPT 3/4" NPT	46030 46054	6
1/2" NPT L.H.	1/2" NPT 3/4" NPT	46031 46055	6
3/4" NPT R.H.	1/2" NPT 3/4" NPT 1" NPT	46056 46032 46012	14.5
3/4" NPT L.H.	1/2" NPT 3/4" NPT 1" NPT	46057 46033 46013	14.5
1"-14 NF R.H.	1/2" NPT 3/4" NPT 1" NPT	46058 46034 46014	14.5
1"-14 NF L.H.	1/2" NPT 3/4" NPT 1" NPT	46059 46035 46015	14.5
1" NPT R.H.	1/2" NPT 3/4" NPT 1" NPT	46060 46061 46036	23
1" NPT L.H.	1/2" NPT 3/4" NPT 1" NPT	46062 46063 46037	23

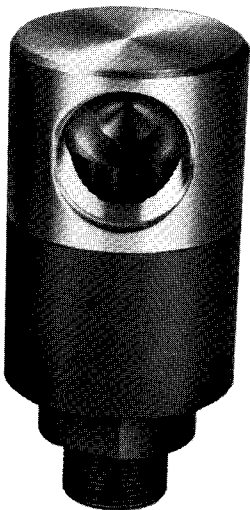
Compact Double Flow "O" Series Rotating Unions



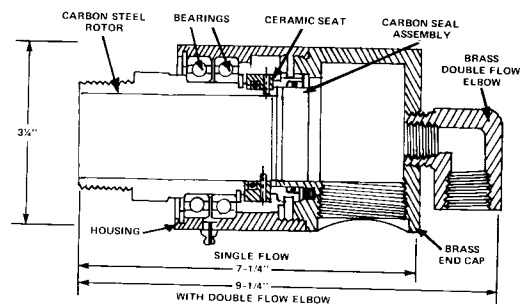
ROTOR SIZE	INLET & RETURN	MODEL NUMBER
1/2" NPT R.H. 1/2" NPT L.H.	1/2" NPT	46038 46039
3/4" NPT R.H. 3/4" NPT L.H.	1/2" NPT	46042 46043
1"-14 NF R.H. 1"-14 NF L.H.	1/2" NPT	46046 46047
1" NPT R.H. 1" NPT L.H.	1/2" NPT	46050 46051

The Cary Compact Double Flow Union is specially designed to fit into limited areas. The double flow configuration is achieved within the standard O-Series outline dimensions. No external double flow elbow is required. Except for the special endcap all components are interchangeable with the standard O-Series union.

"O^{1/2}" Series Rotating Unions



The O^{1/2}-Series unions, like the smaller O and R Series have an unobstructed flow path which reduces pressure loss and minimizes the tendency for mineral deposits to form. Very high Cv's are achieved within a modest overall size.



ROTOR SIZE	INLET SIZE	MODEL NUMBER	Cv
1-1/4" NPT R.H.	1-1/4" NPT 1-1/2" NPT	46100 46102	45
1-1/4" NPT L.H.	1-1/4" NPT 1-1/2" NPT	46101 46103	45
1-1/2" NPT R.H.	1-1/4" NPT 1-1/2" NPT	46106 46108	52
1-1/2" NPT L.H.	1-1/4" NPT 1-1/2" NPT	46107 46109	52
1-1/2-12 NF R.H.	1-1/4" NPT 1-1/2" NPT	46112 46114	45
1-1/2-12 NF L.H.	1-1/4" NPT 1-1/2" NPT	46113 46115	45

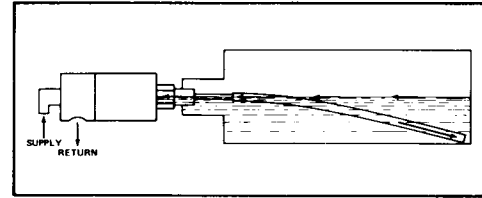
Note: Specify Double flow when applicable.

Double Flow Unions

Cary double flow unions are used when the fluid introduced into a rotating cylinder, drum, or shaft must be withdrawn from the same side.

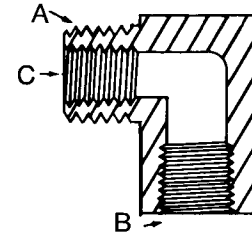
Shown is a typical water application when only one end of the rotating cylinder is available. Cooling effect is improved when water is introduced farthest from the point of return.

The Cv for double flow unions is primarily determined by the feed tube. See approximate values listed below.

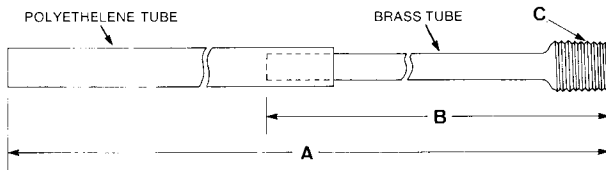


Double Flow Elbow

SERIES	A MALE THREAD	B FEMALE THREAD	C FEED TUBE THREAD	PART NUMBER
"O" SERIES	1/2" NPT	1/2" NPT	1/4" NPT	42121
"O½" SERIES	1" NPT	3/4" NPT	1/2" NPT	42151



Stationary Feed Tubes



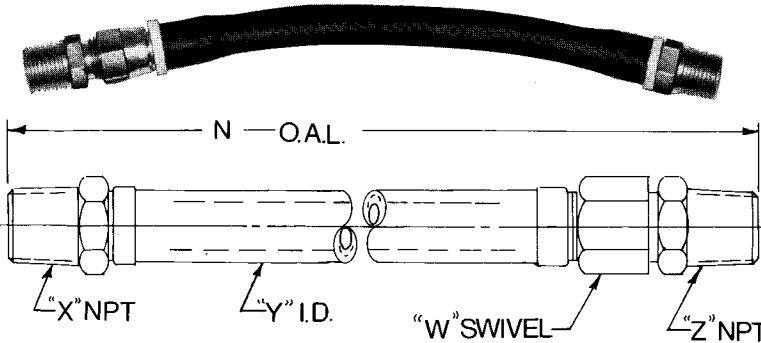
Cv	A	B	C	MODEL NUMBER
1	72"	12"	1/4" NPT	42122
4.8	96"	18"	1/2" NPT	42152

Additional sizes and styles available upon request.

Flex Hose Assembly

The Standard Cary flex hose assembly includes brass fittings and hose with synthetic rubber liner and cover and one textile braid reinforcement—used for water, air, and oil to 190° F. and 200PSI.

To order specify "X," "Y," and "Z" and overall length.



"X" PIPE SIZE	"Y" HOSE I.D.	"Z" PIPE SIZE	"W" SWIVEL
3/8" 5101	3/8" 5001	3/8" 5301	5201
3/8" 5102	1/2" 5002	1/2" 5302	5202
1/2" 5103	1/2" 5002	1/2" 5303	5202
1/2" 5104	5/8" 5003	1/2" 5304	5203
3/4" 5105	3/4" 5004	3/4" 5305	5204

A wide variety of materials, thread styles and sizes, other than those illustrated, are available. Special applications and mounting, configurations can be designed to customer requirements.