

**CARY** ROTATING UNIONS

- ✓ DEPENDABLE
- ✓ LEAKPROOF
- ✓ SEALING
- ✓ ECONOMICAL



*Left: "R" Series;*

*Right: "O" Series Compact Double Flow*

FOR IMMEDIATE DELIVERY....Quality, precision **CARY** unions are offered in a variety of 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 and stationary feed tubes.

The dependable, leakproof **CARY** Rotating Union works on the face sealing principle and features mating carbon seals and ceramic seats. These mating parts 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 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 high temperature 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. Unions made with stainless steel rotors and housings are available in "R" Series and "O½" series.

## OPERATING SPECIFICATIONS

<b>SPEED:</b>	To 2500 RPM max. ("R" & "O")	<b>TEMPERATURE:</b>	To 250° F. max.
	To 1200 RPM max. ("O½")		
<b>PRESSURE:</b>	To 300 PSI Hydraulic max.	For other operating conditions	Consult Cary Engineering
	To 125 PSI Air max.		

## PRESSURE DROPS AND FLOW RATES

**CARY** Rotating Unions are made in two standard sizes: "R" Series and "O" Series. Also available is a special "O½" Series made from all stainless steel housing and viton seals with either right hand or left hand rotor. To determine which series and 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.

$$Cv = Q / \sqrt{\Delta P}$$

Where *Q* is the required flow rate of water in gallons per minute and  $\Delta P$  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:

$$Cv = 30 / \sqrt{5} = 13.42.$$

The Cv values listed below show that an "O" Series union with a ¾" 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 email.

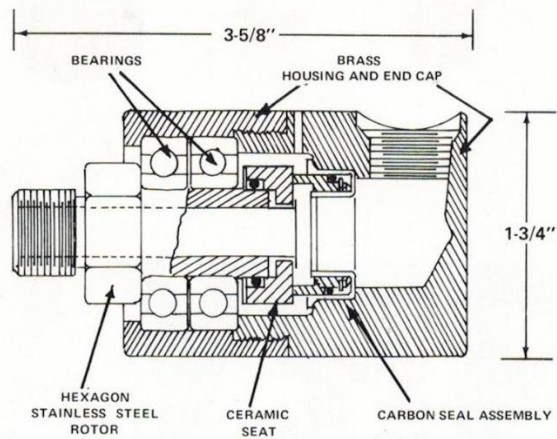
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# CARY MANUFACTURING CORPORATION

PHONE 704/527-4402

116 SOUTHSIDE DRIVE, CHARLOTTE, NC 28217

## "R" SERIES ROTATING UNIONS



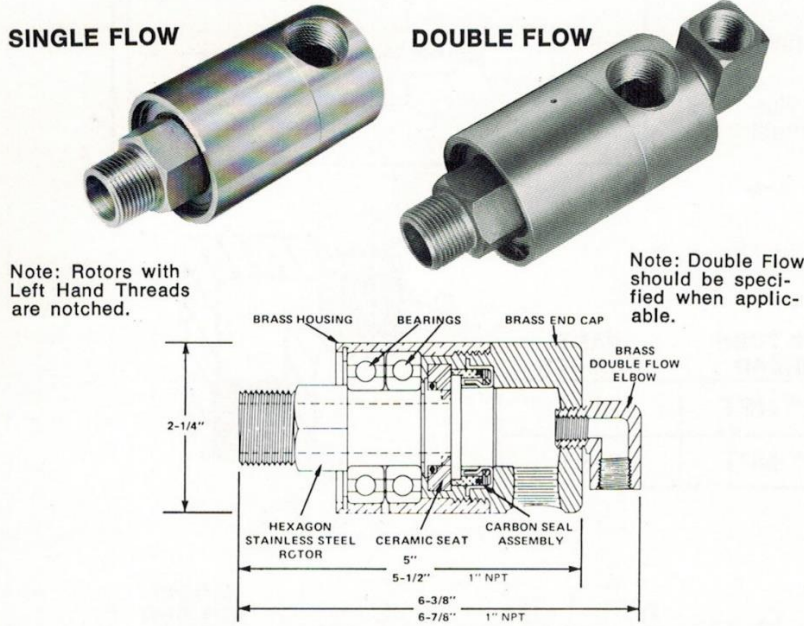
ROTOR SIZE	INLET SIZE	Cv	MODEL NUMBER
1/4" NPT R.H.	1/4" NPT *	3.5	46000
1/4" NPT L.H.	1/4" NPT *	3.5	46001
3/8" NPT R.H.	3/8" NPT	3.5	46002
3/8" NPT L.H.	3/8" NPT	3.5	46003
5/8"-18 NF R.H.	3/8" NPT	3.5	46004
5/8"-18 NF L.H.	3/8" NPT	3.5	46005
5/8"-18 NF R.H.	1/4" NPT *	3.5	46006
5/8"-18 NF L.H.	1/4"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

\* May require use of bushing

Standard Rebuild Kits are available.

Visit our website: [WWW.CARYMFG.COM](http://WWW.CARYMFG.COM)

## “O” SERIES ROTATING UNIONS

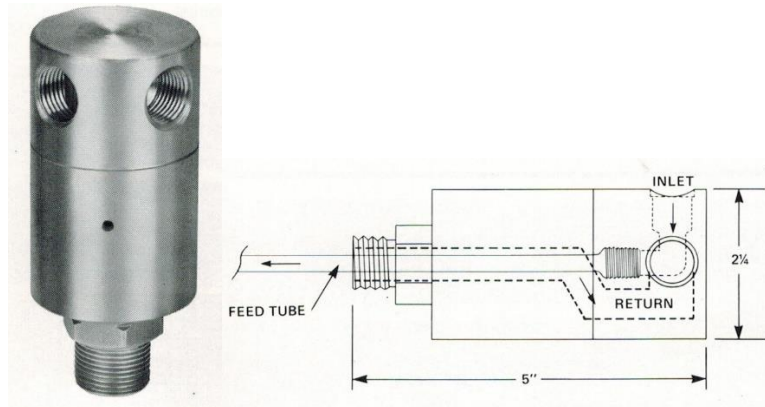


ROTOR SIZE	INLET SIZE	Cv	MODEL NUMBER
1/2" NPT R.H.	1/2" NPT	6	46030
1/2" NPT L.H.	1/2" NPT	6	46031
1/2" NPT R.H.	3/4" NPT	6	46054
1/2" NPT L.H.	3/4" NPT	6	46055
3/4" NPT R.H.	1/2" NPT	14.5	46056
3/4" NPT L.H.	1/2" NPT	14.5	46057
3/4" NPT R.H.	3/4" NPT	14.5	46032
3/4" NPT L.H.	3/4" NPT	14.5	46033
3/4"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

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Double Flow application is designated with "-DF" part# suffix. Double Flow Elbow purchased separately.

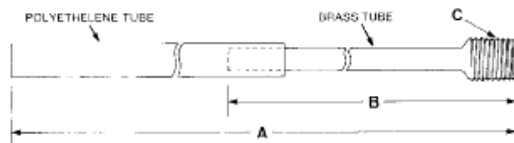
## COMPACT DOUBLE FLOW "O" SERIES ROTATING UNIONS



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.

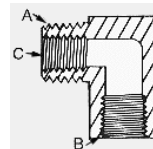
ROTOR SIZE	INLET & RETURN SIZE	MODEL NUMBER
1/2" NPT R.H.	1/2" NPT	46038
1/2" NPT L.H.	1/2" NPT	46039
3/4" NPT R.H.	1/2" NPT	46042
3/4" NPT L.H.	1/2" NPT	46043
1"-14 NF R.H.	1/2" NPT	46046
1"-14 NF L.H.	1/2" NPT	46047
1" NPT R.H.	1/2" NPT	46050
1" NPT L.H.	1/2" NPT	46051

### STATIONARY FEED TUBE PART# 42122



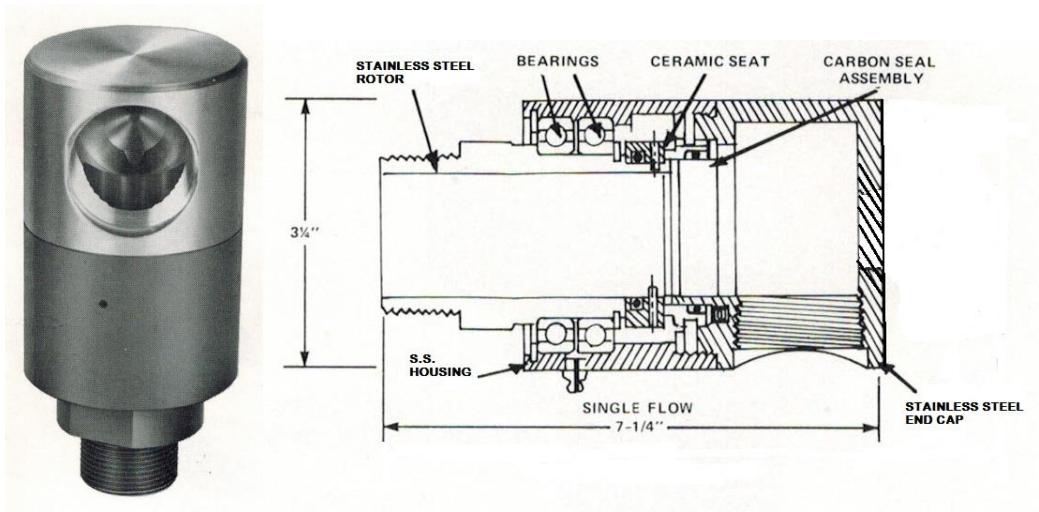
A = 72"; B = 12"; C = 1/4" NPT

### DOUBLE FLOW ELBOW PART# 42121



A = 1/2" NPT; B = 1/2" NPT (F); C = 1/4" NPT

## "O $\frac{1}{2}$ " SERIES ROTATING UNIONS



The "O $\frac{1}{2}$ " 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.

This series is only offered in a full, stainless-steel, constructed union in either a right or left hand rotor variation.

ROTOR SIZE	INLET SIZE	Cv	MODEL NUMBER
1- $\frac{1}{2}$ " NPT R.H.	1 $\frac{1}{2}$ " NPT	52	46108-SSV
1- $\frac{1}{2}$ " NPT L.H.	1 $\frac{1}{2}$ " NPT	52	46109-SSV

*Standard Rebuild Kits are available.*