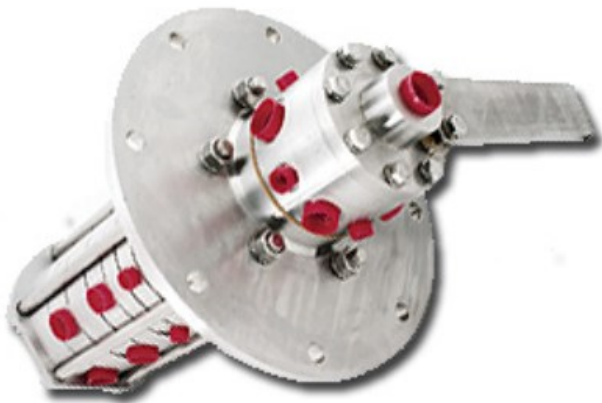


Fluid Rotary Union

Model 70

Focal Technologies Corporation, a Moog Inc. company, has over 30 years of expertise in supplying standard and custom marine products for harsh environment applications and is a leading manufacturer of high performance and high quality fluid rotary unions. Contact Focal for any assistance in selecting the best solution for your requirements.



The Model 70 is a multi-pass fluid rotary union that has served as the standard FRU to the diving industry for over 30 years. It is available as a stand alone FRU or can be combined with electric slip ring and fiber optic rotary unions. Typically configured with up to 13 passes, inter-port mixing is prevented through the use of double seals and an intermediate vent between passes. It has also proven itself in non diving applications such as centrifuge, indexing tables, and floating oil production swivels where product quality is paramount.

The Model 70 is available in several standard port configurations as illustrated below. The Model 70 is available with two standard application specific seal options. In its standard configuration, it is rated for 1000 psi [68 bar] at 10 rpm continuous service and up to 30 rpm intermittent service.

Features

- Configurable with up to 13 ports as standard
- 1/4, 1/2, 5/8 and 1 inch SAE straight thread o-ring ports standard
- Corrosion resistant materials suitable for hot sea water and other harsh chemicals
- Rated to 1000 psi [68 bar] at 10 rpm continuous service
- Maximum speed 30 rpm intermittent
- Polymer bearings eliminate the need for periodic service
- Optional rolling element bearing design available
- Available with hollow bore for ESR / FORJ pigtails

Benefits

- Continuous 360° rotation
- Proven reliability
- Provides long maintenance free service
- Configurable

Applications

- **Marine:** diving umbilical winches, seismic survey winches, hydraulic control winches
- **Scientific:** centrifuges
- **Military:** radar turrets
- **Industrial:** machining centers, rotary index tables, heavy equipment turrets, cable reels, packaging machines, palletizing machines, labeling machines, remote sensing

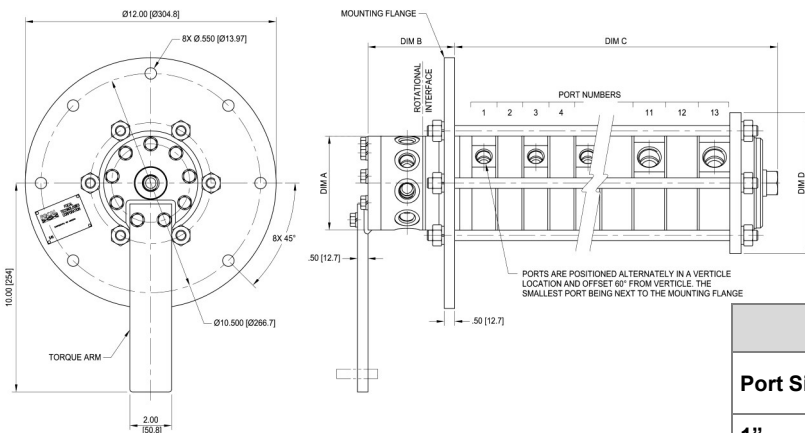
Specifications

Model 70 Specifications	
Ambient Temperature	-40°C to +60°C
Gasses	-40°C to +100°C
Liquids	0°C to +60°C
Pressure ¹	1000 psi
Rotational Speed ¹	10 rpm max continuous 30 rpm max intermittent (dependent on configuration)
Torque ²	Consult product specific installation drawing. Operating torque varies based on number of passes, shaft diameter, pressure, speed, medium and seal type
Shock / Vibration	MIL-STD-167 (ships)
Weight	Dependent on configuration
Environmental	Marine, open deck
Leakage, Standard Seal	50 std. mL / min N ₂ gas per seal rotating @ 1000 psi max Typically less than 10 std. mL / min N ₂ gas per seal rotating @ 1000 psi
Leakage, Reduced Leakage Seal	2 std. mL / min N ₂ gas per seal rotating @ 1000 psi max Typically less than 0.05 std. mL / min N ₂ gas per seal rotating @ 1000 psi
Nominal Port Size	SAE straight thread O-ring thread size
1/4 inch	7/16-20 UNF
1/2 inch	3/4-16 UNF
5/8 inch	7/8-14 UNF (passage size suitable for 3/4" nominal, 1-1/16-12 UN adapter)
1 inch	1-5/16-12 UN

¹ Operational life is dependent on pressure, temperature, rotational speed duty cycle and size of assembly. Maximum values do not apply concurrently. Please consult the factory for actual value.

² Break-in torque may be higher

Flexible conduit should be used to couple to the rotating component. The torque arm must be loose coupled.



Sample Configurations

Port Size	Number of Ports				
	1"	0	0	1	0
5/8"	1	3	1	5	3
1/2"	4	1	4	0	3
1/4"	5	6	5	5	7
DIM 'A'	4.50 [114]	4.50 [114]	4.50 [114]	4.50 [114]	5.00 [127]
DIM 'B'	4.14 [105]	4.03 [102]	4.53 [115]	4.15 [105]	4.55 [115]
DIM 'C'	14.50 [368]	14.88 [378]	16.50 [419]	15.77 [400]	18.39 [467]
DIM 'D'	6.75 [171.5]	6.75 [171.5]	6.75 [171.5]	6.75 [171.5]	7.25 [184.2]

All specifications and information are subject to change without notice. Please contact Focal for the latest updates.