

High-Pressure, Compact Rotary Unions

# SE Series

FLOW PASSAGE OPTIONS

2

4

6

8

12

16

24

## Contents

- 3** What is a Rotary Union?
- 4** Overview
- 5** How To Order
- 7** Specifications & Operating Information
- 8** Performance Data
- 10** SE 2 Passage Dimensions
- 12** SE 4 Passage Dimensions
- 14** SE 6 Passage Dimensions
- 16** SE 8 Passage Dimensions
- 18** SE 12 Passage Dimensions
- 20** SE 16 Passage Dimensions
- 22** SE 24 Passage Dimensions
- 24** Customer Interface using O-Ring Seal Connection
- 25** Electrical Slip Ring Integration Options
- 26** Installation & Mounting

## About DSTI

Dynamic Sealing Technologies, Inc. (DSTI) serves a wide range of global industries as a leader in engineered fluid sealing and transfer solutions for rotating applications.

DSTI core business segments are fluid rotary unions, electrical slip rings, and value-added products and services—providing customers with a single-source solution from design and manufacturing through to testing and qualification—all under one roof. Located in North America and Europe with a team of distribution partners and technical support specialists worldwide.

Learn more at [www.dsti.com](http://www.dsti.com)



### **DID YOU KNOW?**

DSTI Exports Products to Over 60 Countries.

## What is a Rotary Union?

A rotary union (or swivel joint) is a mechanism used to transfer fluid (under pressure or vacuum) from a stationary inlet to a rotating outlet, preserving and isolating the fluid connection.

Rotary unions are engineered to endure a wide range of temperatures and pressures for a variety of conditions and environments. In addition, rotary unions may integrate multiple passages and handle different types of fluid simultaneously.

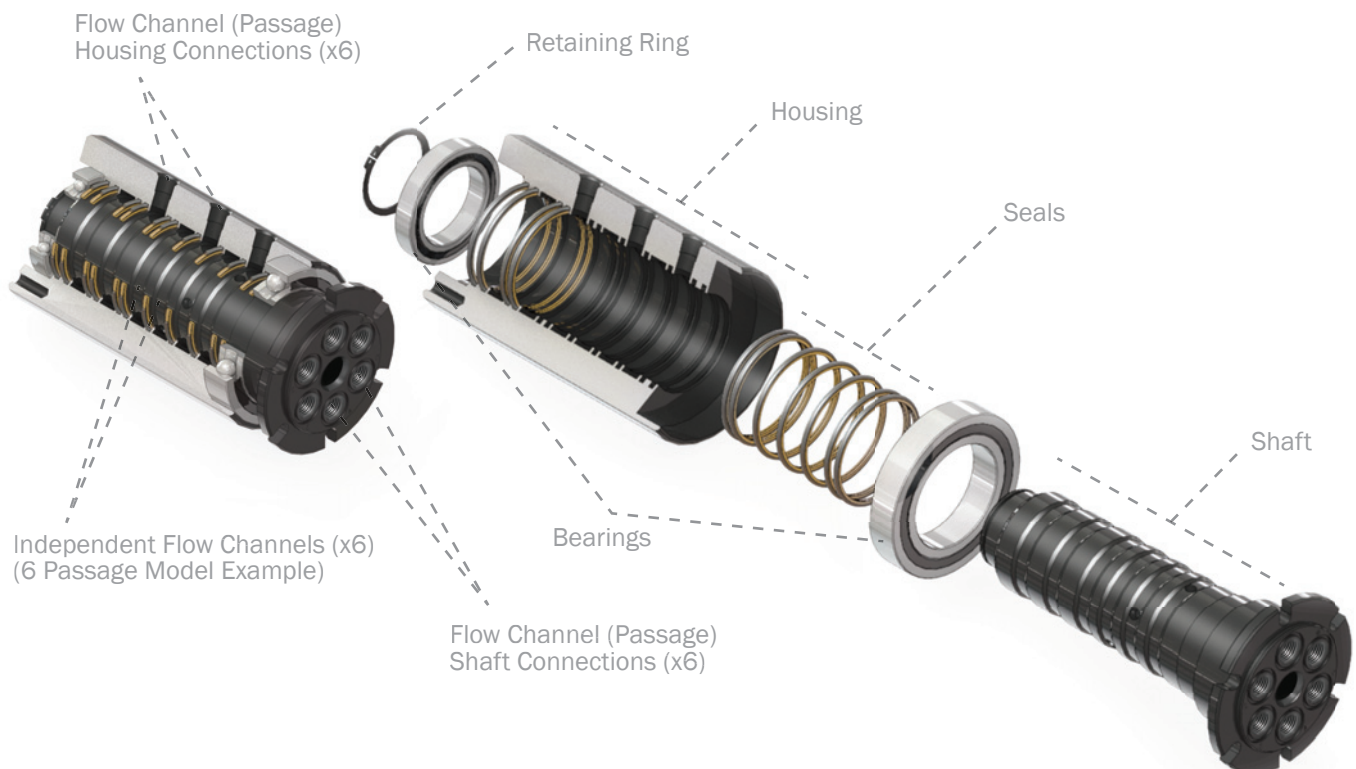
See examples at [www.dsti.com/industries](http://www.dsti.com/industries)

### HOW DO I CHOOSE THE BEST ROTARY UNION FOR MY APPLICATION?

*Tell us about your requirements so we can make a recommendation:*

- 1) Type of media(s) / fluid(s) to be transferred
- 2) Number of independent flow channels (passages)
- 3) Operating pressure
- 4) Operating temperature
- 5) Operating speed
- 6) Shaft & housing connection type
- 7) Flow channel (passage) size
- 8) Torque & load requirements
- 9) Duty cycle\*

*\*Does the temperature, speed or pressure fluctuate or change during operation? If so, please provide the detailed ranges for each parameter and time durations of each condition.*



## Overview

- + Compact Design
- + High Pressure Requirements Up To 7500 PSI
- + Vacuum & Bidirectional Sealing
- + #4 SAE-ORB / O-ring Face Seal Connections
- + Exclusive DSTI Sealing Technology
- + Integrated Electrical Slip Ring Options
- + Custom Modifications Available

The SE Series multiple passage rotary unions are available in 2, 4, 6, 8, 12, 16 and 24 passage models. These rotary unions are designed for applications with high pressure and limited space requirements. Features include specialized seals suitable for vacuum and bidirectional pressures up to 7,500 PSI [515 BAR] and independent flow passages capable of transferring different types of media simultaneously.



All SE Series models come standard with threaded connections on the sides of the shaft and housing. Models are also available with optional shaft O-ring glands for face/flush mounting (which must be specified when ordering).



### PRODUCT DOWNLOADS

For Catalogs, Brochures, Models and Drawings visit [www.dsti.com/downloads](http://www.dsti.com/downloads)

## How to Order: Create your Part Number

SE — 1 1 2 1 — OF — ES12A — F2 — C1

OPTIONS See Next Page

1 With Thru-bore

## NOTE

All SE Series rotary unions include thru-bores

2 2 Flow Passages

4 4 Flow Passages

6 6 Flow Passages

8 8 Flow Passages

12 12 Flow Passages

16 16 Flow Passages

24 24 Flow Passages

1 .187" (4.75mm) Passage Size

1 Product Series (SE)

## PART NUMBER EXAMPLES

## SE-1121

- SE 2-Passage with thru-bore, #4 SAE-ORB Connections

## SEM-11121

- SE 12-Passage with thru-bore, G1/8" -28 BSPP Connections

## SE-11241

- SE 24-Passage with thru-bore, #4 SAE-ORB Connections



## O-RING FACE SEAL GLAND CONNECTIONS

If your application requires flush mounting the rotary union using the face of the shaft, optional O-ring face seal gland connections are available. Please specify "OF" when configuring the part number (see page 6).

SE SE Series (#4 SAE-ORB Connection)

SEM SEM (Metric) Series (BSPP Connection)

## How to Order: Choose your Options

**SE** — **1** **1** **2** **1** — **OF** — **ES12A** — **F2** — **C1**

**OF** Add "OF" for Optional Shaft O-ring Face Seal Gland Connections

**OPTIONAL ELECTRICAL SLIP RINGS<sup>1</sup>**

<b>ES6A</b>	6 Circuit, 120 Volts
<b>ES12A</b>	12 Circuit, 120 Volts
<b>ESx</b>	6 - 56 Circuits 240 Volts
<b>ESEx</b>	8 - 51 Circuits 240 Volts Ethernet
<b>ESMx</b>	9 - 52 Circuits 240 Volts

**NOTE**  
(F1) Housing flange required for slip ring assembly

**F1** Housing Mounting Flange

**F2** Shaft Mounting Flange

**C1** Cover For ES6A / ES12A

**C2** Cover For All ES, ESE & ESM

**PART NUMBER EXAMPLE**

**SE-1121-ES6A-C1**

- SE 4-Passage, #4 SAE-ORB connections, Optional ES6A Electrical Slip Ring with protective cover (C1)

<sup>1</sup> See Electrical Slip Ring Options on page 23 for full specs

<sup>1</sup> See Electrical Slip Ring Options on page 23 for full specs

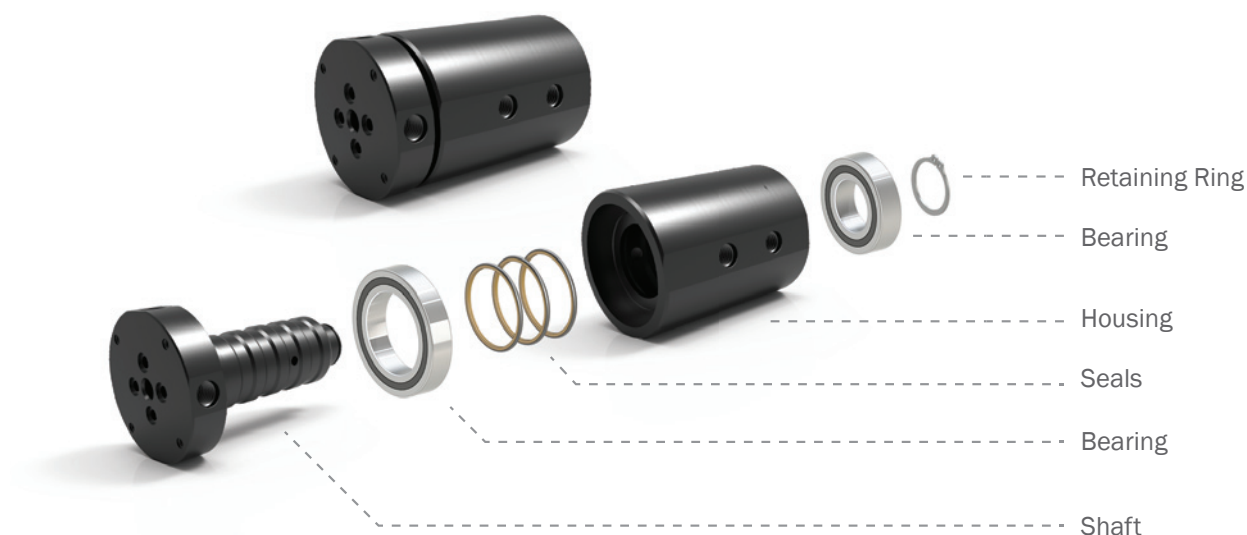
**PART NUMBER EXAMPLE**

**SE-11121-OF-ES36-F1-F2-C2**

- SE 12-Passage, #4 SAE-ORB Housing Connections, Optional O-ring Face Seal Gland Connections, ES36 Electrical Slip Ring w/ (C2) Cover and Required (F1) Housing Mounting Flange, Additional (F2) Shaft Mounting Flange



## Specifications & Operating Information



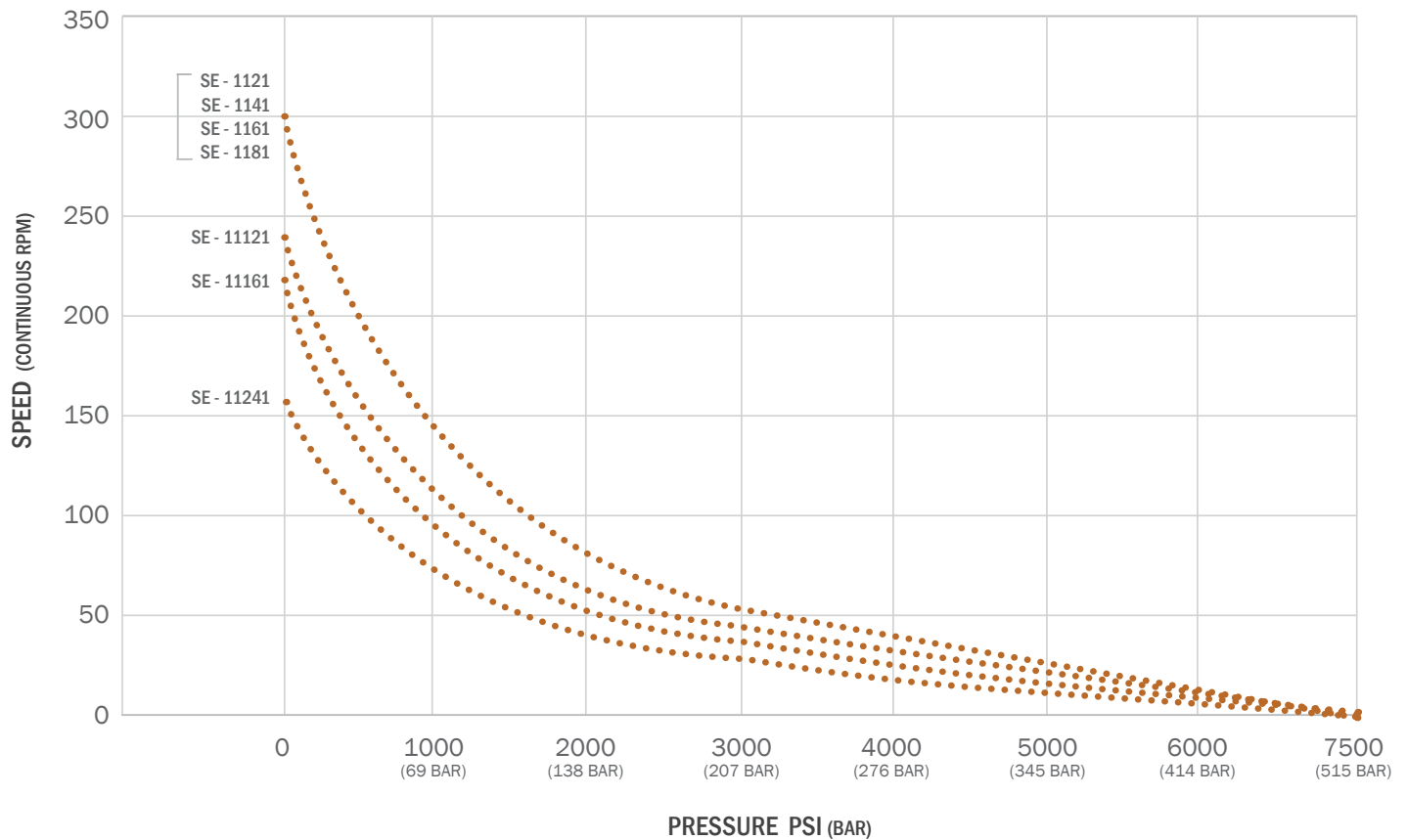
Flow Passage Options	2	4	6	8	12	16	24
Media Types	Air/Gas, Coolant <sup>1</sup> , Oil/Hydraulic <sup>1</sup> , Water/Glycol <sup>1</sup>						
Passage Sizes	0.187" (4.75mm)						
Connection Type	#4 SAE- ORB, G1/8"-28 BSPP, or O-Ring Face Seals						
Max. Operating Pressure	7500 PSI (515 BAR) <sup>2</sup>						
Max. Vacuum	30 HG <sup>2</sup>						
Max. Rotational Speed	300 RPM <sup>2</sup>						
Operating Temperature	0° F to 220° F (-18° C to 105° C) <sup>3</sup>						
Body Material Type	Carbon Steel						
Platings and Coatings	Black Oxide						
Thru-bore Size	3/8" (9.5 mm)						
Slip Ring Options	See Page 24						
Mounting Options	Tapped holes are provided on both the housing and shaft for mounting the assembly.						
Mounting Flange	Optional carbon steel flange can be bolted onto the shaft end of the assembly for O-ring face mounting. Optional carbon steel housing flange is also available.						

<sup>1</sup> Suitable Water/Glycol or Coolant media must have rust inhibitors present. Oil/Hydraulic media must be petroleum-based. Please consult with DSTI.

<sup>2</sup> Values are dependent on a combination of all application parameters. Please consult with DSTI.

<sup>3</sup> High temperature applications may require alternative seal materials. Please consult with DSTI.

## Performance Data: Pressure vs. Speed (Continuous)



\* This data is to be used as a general guideline. Data based on using hydraulic fluid with the product rotating continuously. Please consult DSTI about your specific application.

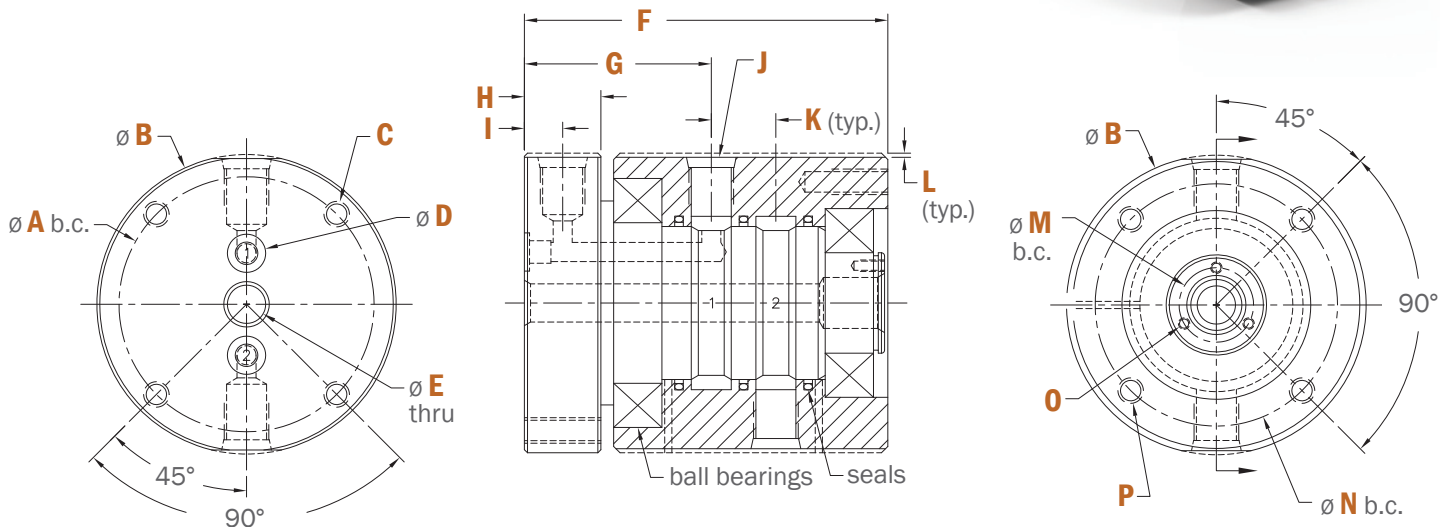


## Performance Data: Pressure vs. Torque

MODEL	PRESSURE PSI (BAR)							
	0	1000 (69 BAR)	2000 (138 BAR)	3000 (207 BAR)	4000 (276 BAR)	5000 (345 BAR)	6000 (414 BAR)	7500 (515 BAR)
<b>SE-1121</b>	1.9 [2.6]	2.9 [3.9]	3.9 [5.3]	4.8 [6.5]	5.8 [7.9]	6.8 [9.2]	7.8 [10.6]	9.2 [12.5]
<b>SE-1141</b>	3.2 [4.3]	4.8 [6.5]	6.5 [8.8]	8.1 [11.0]	9.7 [13.2]	11.3 [15.3]	12.9 [17.5]	15.4 [20.9]
<b>SE-1161</b>	4.5 [6.1]	6.8 [9.2]	9.0 [12.2]	11.3 [15.3]	13.6 [18.4]	15.8 [21.4]	18.1 [24.5]	21.5 [29.2]
<b>SE-1181</b>	5.8 [7.9]	8.7 [11.8]	11.6 [15.7]	14.5 [19.7]	17.5 [23.7]	20.4 [27.7]	23.3 [31.6]	27.7 [37.6]
<b>SE-11121</b>	11.1 [15.0]	17.1 [23.2]	23.1 [31.3]	29.2 [39.6]	35.2 [47.7]	41.2 [55.9]	47.2 [64.0]	56.2 [76.2]
<b>SE-11161</b>	13.8 [18.7]	23.1 [31.3]	32.5 [44.1]	41.9 [56.8]	51.3 [69.6]	60.7 [82.3]	70.0 [94.9]	84.1 [114.0]
<b>SE-11241</b>	44.0 [59.7]	76.4 [103.6]	108.9 [147.6]	141.3 [191.6]	173.8 [235.6]	206.2 [279.6]	238.6 [323.5]	287.3 [389.5]
PRESSURIZED TORQUE (POUND FOOT [NEWTON METER])								

\* This data is to be used as a general guideline. Please consult DSTI about your specific application. Torque data based on all passages (ports) pressurized.

## 2 Flow Passage: Dimensions



PART #	A	B	C	D	E	F	G	H	I
<b>SE-1121</b>	2.500"	2.937"	1/4"- 20	.19"	.38"	3.56"	1.83"	.750"	.375"
<b>SEM-1121</b>	63.50mm	74.60mm	M6x1.0	4.8mm	9.5mm	90.5mm	46.5mm	19.05mm	9.53mm

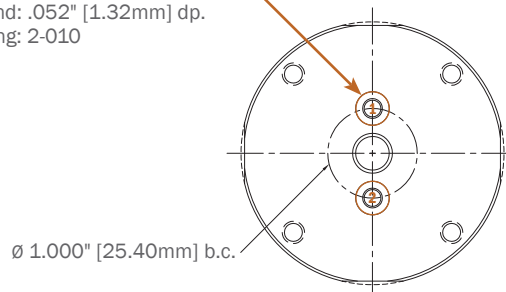
PART #	J	K	L	M	N	O	P
<b>SE-1121</b>	#4 SAE-ORB	.63"	.040"	.730"	2.375"	#4-40 UNC	1/4"- 20 UNC
<b>SEM-1121</b>	G1/8"-28 BSPP	16.1mm	1.02mm	18.54mm	60.33mm	M3x0.5	M6x1.0

### OPTIONAL O-RING FACE SEAL GLAND CONNECTION



Must specify  
when ordering.  
Please add  
"-OF" to the  
Part Number.  
(Example:  
SE-1121-OF)

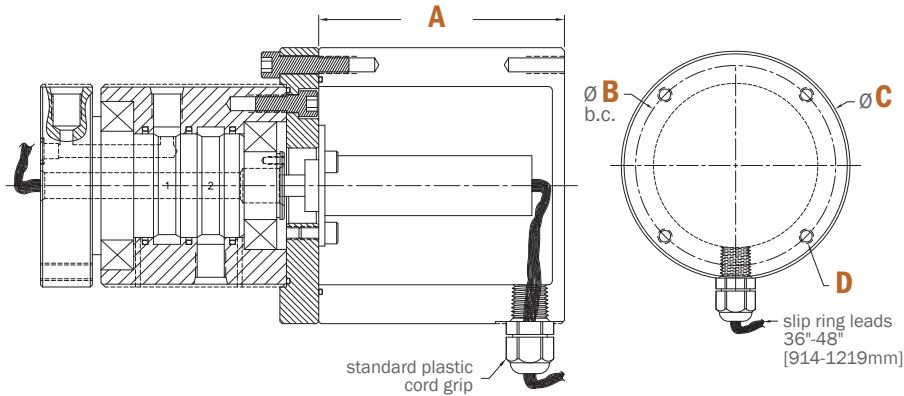
C-bore: Ø .375" [9.53mm]  
Gland: .052" [1.32mm] dp.  
O-ring: 2-010



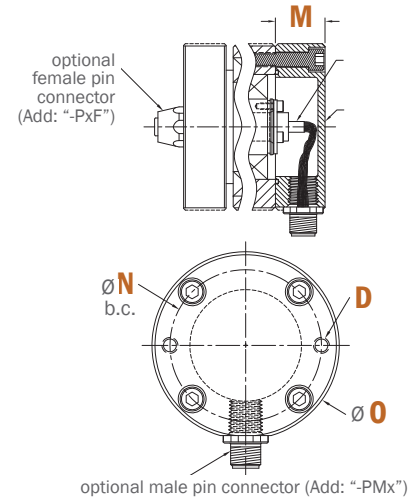
## 2 Flow Passage: Optional Equipment

### OPTIONAL ELECTRICAL SLIP RING COVERS

ES, ESE & ESM COVER (C2) Housing Flange Mount (F1) Required

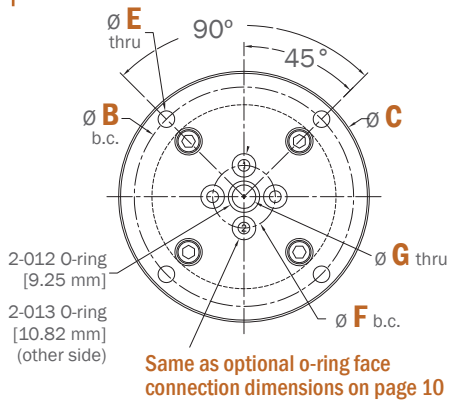


ES6A & ES12A COVER (C1)

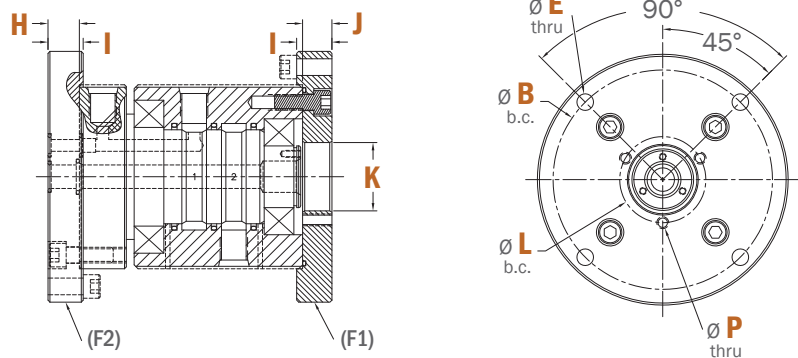


### OPTIONAL SHAFT & HOUSING FLANGE MOUNTS

SHAFT FLANGE MOUNT (F2)



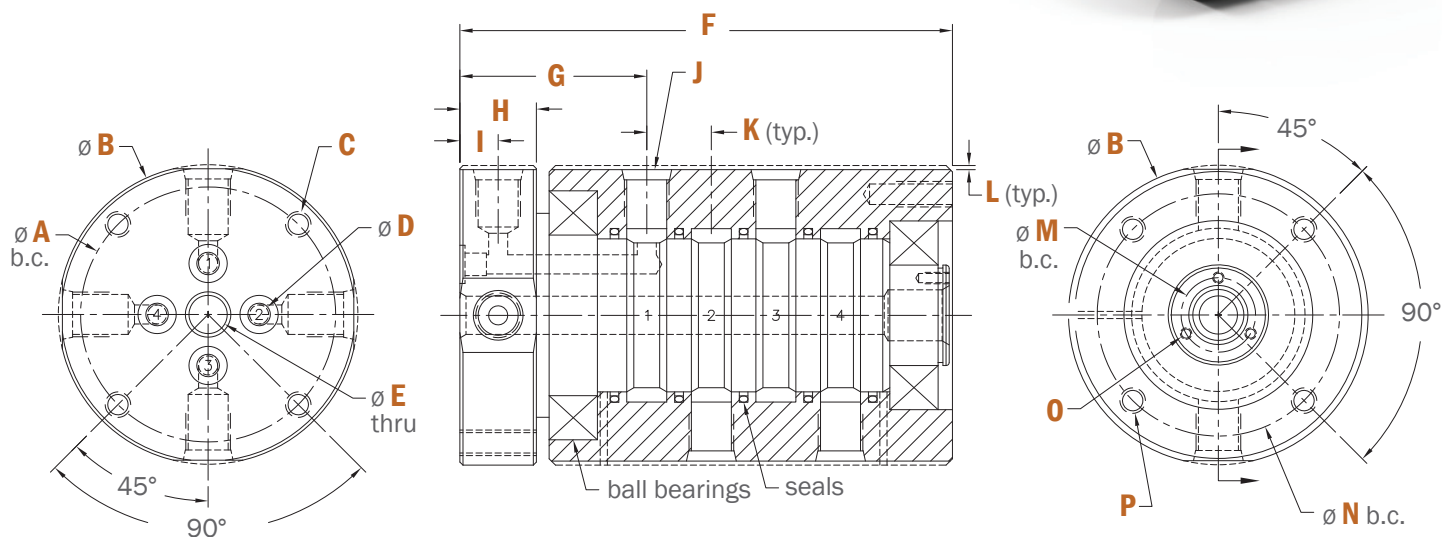
HOUSING FLANGE MOUNT (F1)



PART #	A	B	C	D	E	F	G	H	I	J
SE-1121	3.562"	3.500"	3.937"	1/4"-20	.265"	1.000"	.38"	.500"	.562"	.468"
SEM-1121	90.47mm	88.90mm	100.00mm	M6x1.0	6.73mm	25.40mm	9.5mm	12.70mm	14.27mm	11.89mm

PART #	K	L	M	N	O	P
SE-1121	1.090"	1.374"	.875"	2.375"	2.937"	#10-24
SEM-1121	27.69mm	34.90mm	22.23mm	60.33mm	74.60mm	M5x0.8

## 4 Flow Passage: Dimensions



PART #	A	B	C	D	E	F	G	H	I
<b>SE-1141</b>	2.500"	2.937"	1/4"- 20	.19"	.38"	4.83"	1.83"	.750"	.375"
<b>SEM-1141</b>	63.50mm	74.60mm	M6x1.0	4.8mm	9.5mm	122.6mm	46.5mm	19.05mm	9.53mm

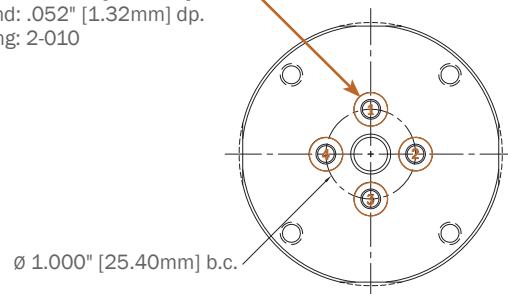
PART #	J	K	L	M	N	O	P
<b>SE-1141</b>	#4 SAE-ORB	.63"	.040"	.730"	2.375"	#4-40 UNC	1/4"- 20 UNC
<b>SEM-1141</b>	G1/8"-28 BSPP	16.1mm	1.02mm	18.54mm	60.33mm	M3x0.5	M6x1.0

### OPTIONAL O-RING FACE SEAL GLAND CONNECTION



Must specify  
when ordering.  
Please add  
"-OF" to the  
Part Number.  
(Example:  
**SE-1141-OF**)

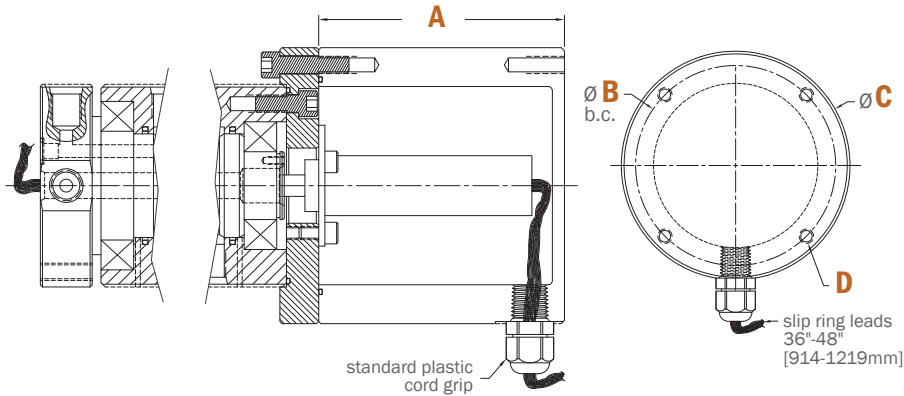
C-bore:  $\varnothing$  .375" [9.53mm]  
Gland: .052" [1.32mm] dp.  
O-ring: 2-010



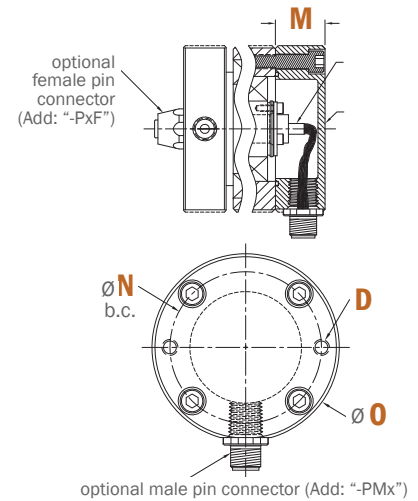
## 4 Flow Passage: Optional Equipment

### OPTIONAL ELECTRICAL SLIP RING COVERS

ES, ESE & ESM COVER (C2) Housing Flange Mount (F1) Required

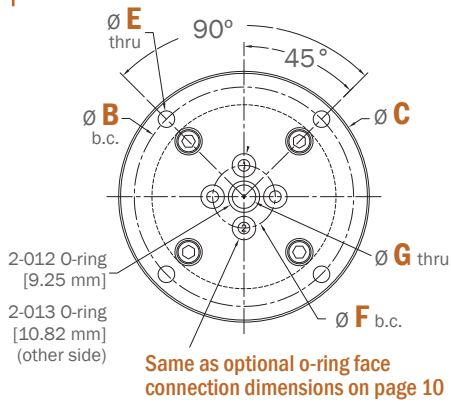


ES6A & ES12A COVER (C1)

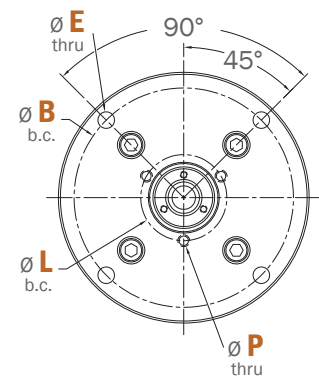


### OPTIONAL SHAFT & HOUSING FLANGE MOUNTS

SHAFT FLANGE MOUNT (F2)



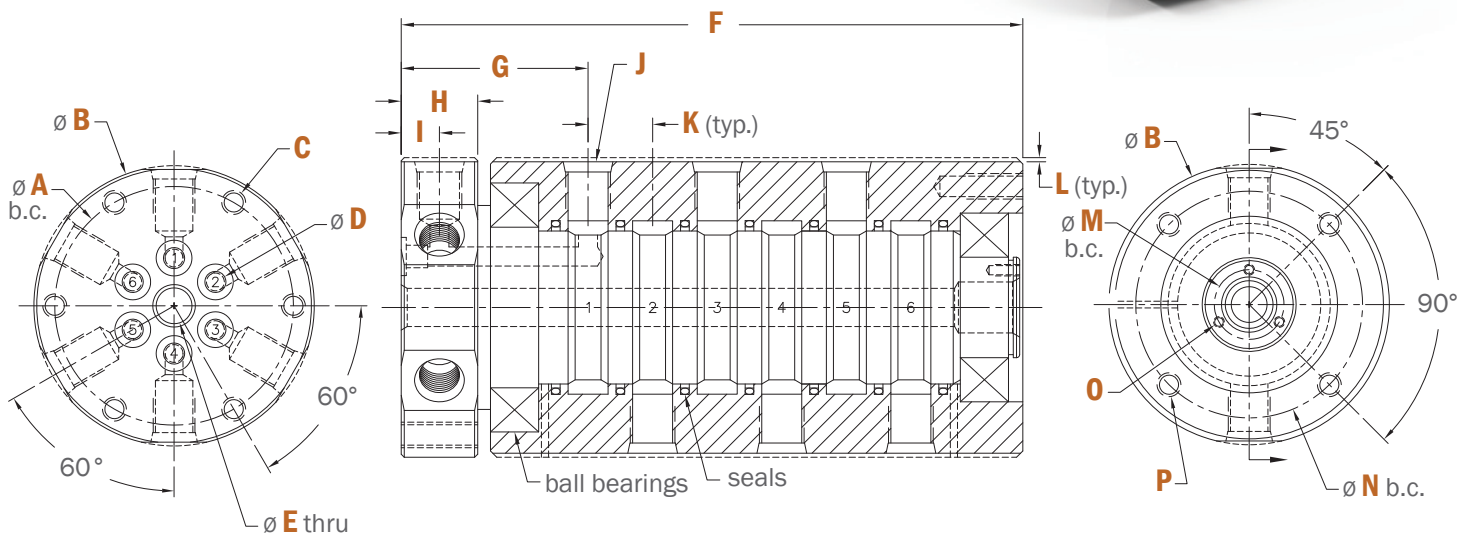
HOUSING FLANGE MOUNT (F1)



PART #	A	B	C	D	E	F	G	H	I	J
SE-1141	3.562"	3.500"	3.937"	1/4"-20	.265"	1.000"	.38"	.500"	.562"	.468"
SEM-1141	90.47mm	88.90mm	100.00mm	M6x1.0	6.73mm	25.40mm	9.5mm	12.70mm	14.27mm	11.89mm

PART #	K	L	M	N	O	P
SE-1141	1.090"	1.374"	.875"	2.375"	2.937"	#10-24
SEM-1141	27.69mm	34.90mm	22.23mm	60.33mm	74.60mm	M5x0.8

## 6 Flow Passage: Dimensions



PART #	A	B	C	D	E	F	G	H	I
<b>SE-1161</b>	2.500"	2.937"	1/4"- 20	.19"	.38"	6.09"	1.83"	.750"	.375"
<b>SEM-1161</b>	63.50mm	74.60mm	M6x1.0	4.8mm	9.5mm	154.8mm	46.5mm	19.05mm	9.53mm

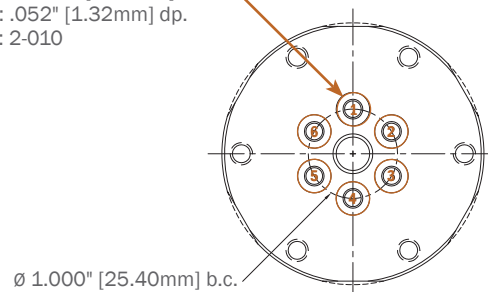
PART #	J	K	L	M	N	O	P
<b>SE-1161</b>	#4 SAE-ORB	.63"	.040"	.730"	2.375"	#4-40 UNC	1/4"- 20 UNC
<b>SEM-1161</b>	G1/8"-28 BSPP	16.1mm	1.02mm	18.54mm	60.33mm	M3x0.5	M6x1.0

### OPTIONAL O-RING FACE SEAL GLAND CONNECTION



Must specify  
when ordering.  
Please add  
"-OF" to the  
Part Number.  
(Example:  
SE-1161-OF)

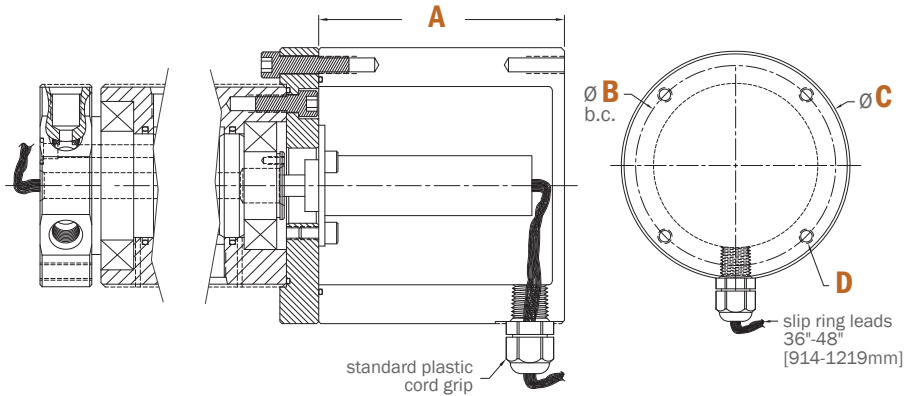
C-bore:  $\varnothing$  .375" [9.53mm]  
Gland: .052" [1.32mm] dp.  
O-ring: 2-010



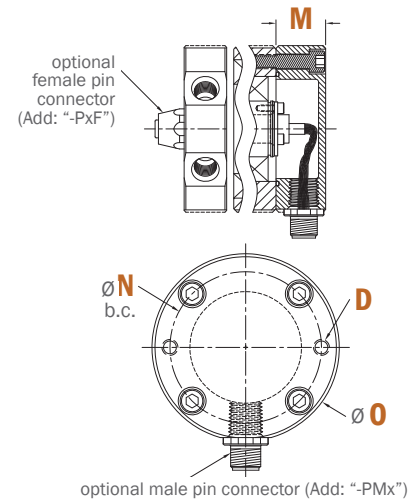
## 6 Flow Passage: Optional Equipment

### OPTIONAL ELECTRICAL SLIP RING COVERS

ES, ESE & ESM COVER (C2) Housing Flange Mount (F1) Required

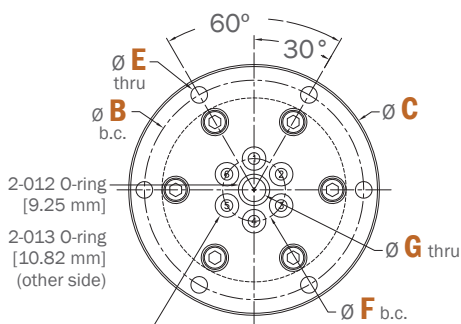


ES6A & ES12A COVER (C1)

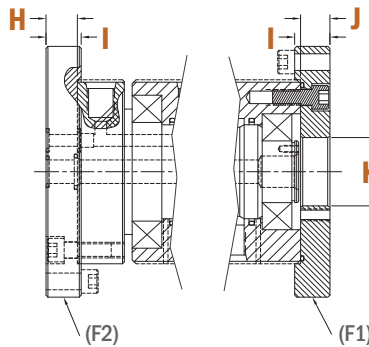


### OPTIONAL SHAFT & HOUSING FLANGE MOUNTS

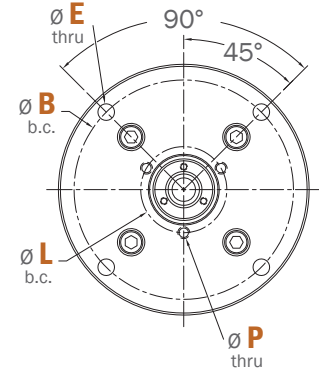
SHAFT FLANGE MOUNT (F2)



Same as optional o-ring face  
connection dimensions on page 10



HOUSING FLANGE MOUNT (F1)

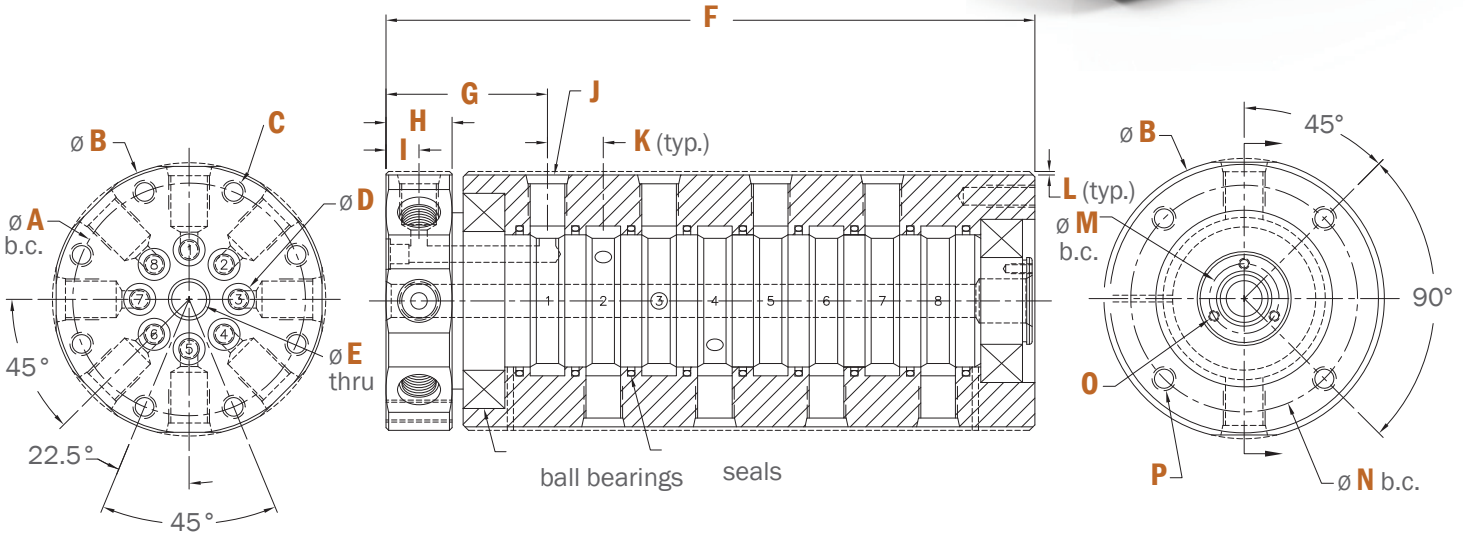


PART #	A	B	C	D	E	F	G	H	I	J
SE-1161	3.562"	3.500"	3.937"	1/4"-20	.265"	1.000"	.38"	.500"	.562"	.468"
SEM-1161	90.47mm	88.90mm	100.00mm	M6x1.0	6.73mm	25.40mm	9.5mm	12.70mm	14.27mm	11.89mm

PART #	K	L	M	N	O	P
SE-1161	1.090"	1.374"	.875"	2.375"	2.937"	#10-24
SEM-1161	27.69mm	34.90mm	22.23mm	60.33mm	74.60mm	M5x0.8



## 8 Flow Passage: Dimensions



PART #	A	B	C	D	E	F	G	H	I
<b>SE-1181</b>	2.500"	2.937"	1/4"- 20	.19"	.38"	7.36"	1.83"	.750"	.375"
<b>SEM-1181</b>	63.50mm	74.60mm	M6x1.0	4.8mm	9.5mm	186.9mm	46.5mm	19.05mm	9.53mm

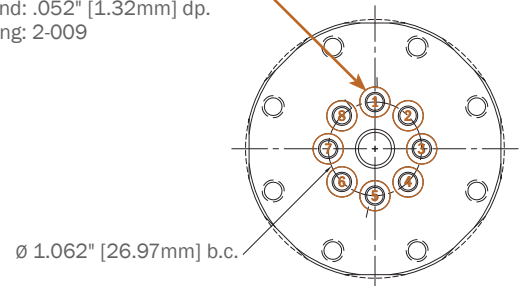
PART #	J	K	L	M	N	O	P
<b>SE-1181</b>	#4 SAE-ORB	.63"	.040"	.730"	2.375"	#4-40 UNC	1/4"- 20 UNC
<b>SEM-1181</b>	G1/8"-28 BSPP	16.1mm	1.02mm	18.54mm	60.33mm	M3x0.5	M6x1.0

### OPTIONAL O-RING FACE SEAL GLAND CONNECTION



Must specify  
when ordering.  
Please add  
"-OF" to the  
Part Number.  
(Example:  
SE-1181-OF)

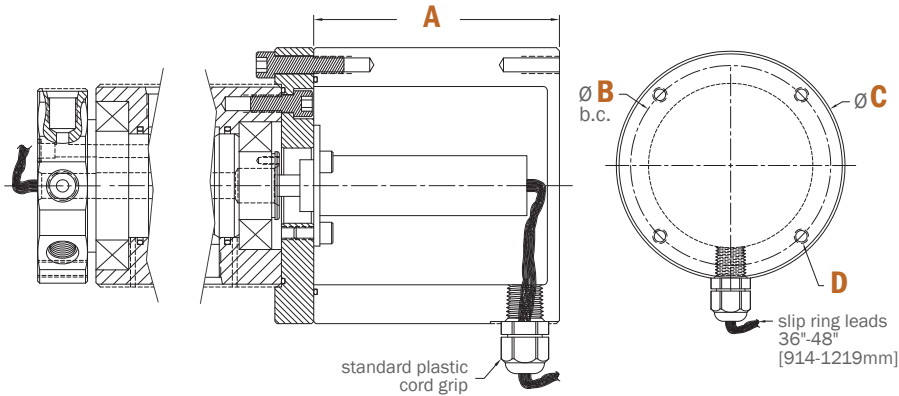
C-bore:  $\varnothing$  .344" [8.74mm]  
Gland: .052" [1.32mm] dp.  
O-ring: 2-009



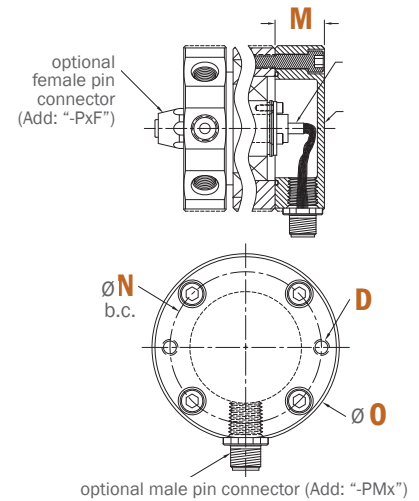
## 8 Flow Passage: Optional Equipment

### OPTIONAL ELECTRICAL SLIP RING COVERS

ES, ESE & ESM COVER (C2) Housing Flange Mount (F1) Required

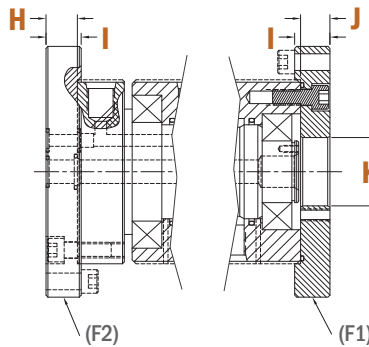
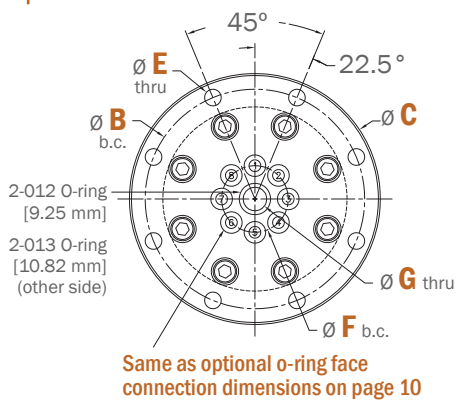


ES6A & ES12A COVER (C1)

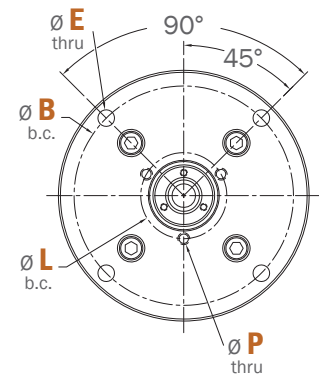


### OPTIONAL SHAFT & HOUSING FLANGE MOUNTS

SHAFT FLANGE MOUNT (F2)



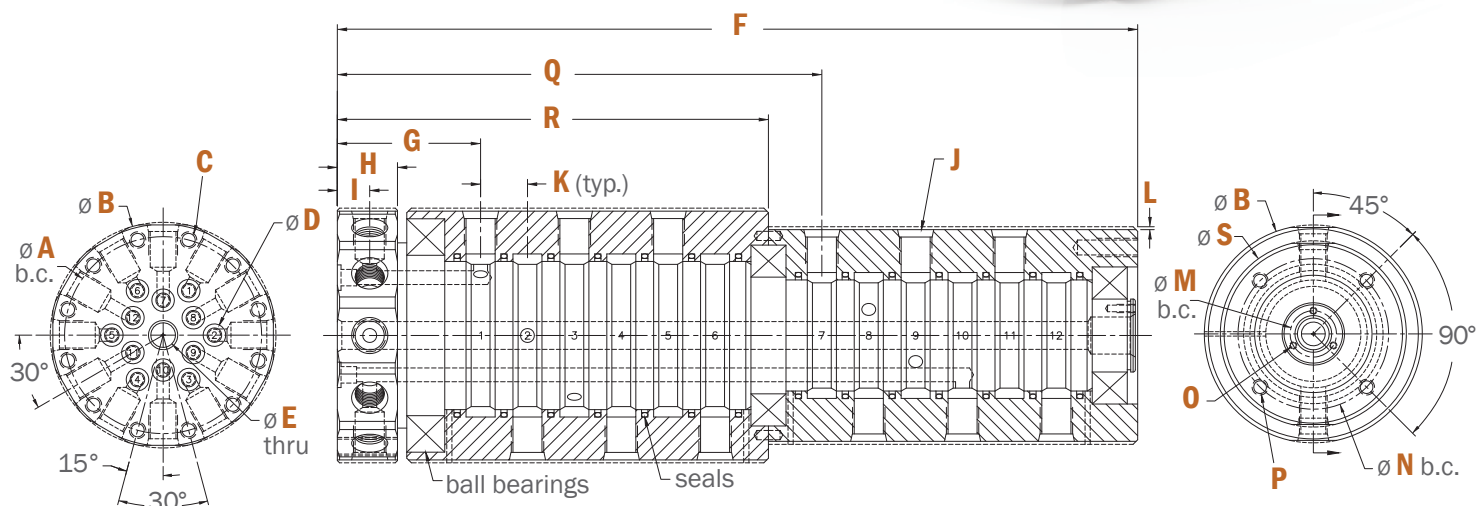
HOUSING FLANGE MOUNT (F1)



PART #	A	B	C	D	E	F	G	H	I	J
SE-1181	3.562"	3.500"	3.937"	1/4"-20	.265"	1.062"	.38"	.500"	.562"	.468"
SEM-1181	90.47mm	88.90mm	100.00mm	M6x1.0	6.73mm	26.97mm	9.5mm	12.70mm	14.27mm	11.89mm

PART #	K	L	M	N	O	P
SE-1181	1.090"	1.374"	.875"	2.375"	2.937"	#10-24
SEM-1181	27.69mm	34.90mm	22.23mm	60.33mm	74.60mm	M5x0.8

## 12 Flow Passage: Dimensions



PART #	A	B	C	D	E	F	G	H	I	J
<b>SE-11121</b>	3.000"	3.437"	1/4"- 20	.19"	.38"	10.80"	1.93"	.812"	.437"	#4 SAE-ORB
<b>SEM-11121</b>	76.20mm	87.30mm	M6x1.0	4.8mm	9.5mm	274.3mm	49.5mm	20.62mm	11.10mm	G1/8"-28 BSPP

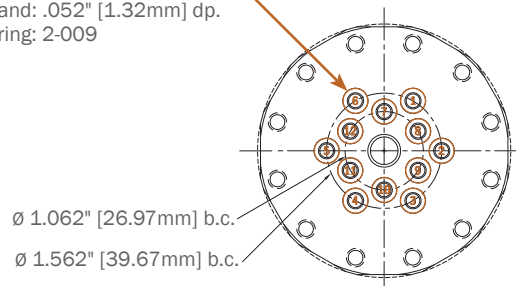
PART #	K	L	M	N	O	P	Q	R	S
<b>SE-11121</b>	.63"	.040"	.730"	2.375"	#4-40 UNC	1/4"- 20 UNC	6.54"	5.82"	2.937"
<b>SEM-11121</b>	16.1mm	1.02mm	18.54mm	60.33mm	M3x0.5	M6x1.0	166.1mm	147.8mm	74.60mm

### OPTIONAL O-RING FACE SEAL GLAND CONNECTION



Must specify  
when ordering.  
Please add  
"-OF" to the  
Part Number.  
(Example:  
SE-11121-OF)

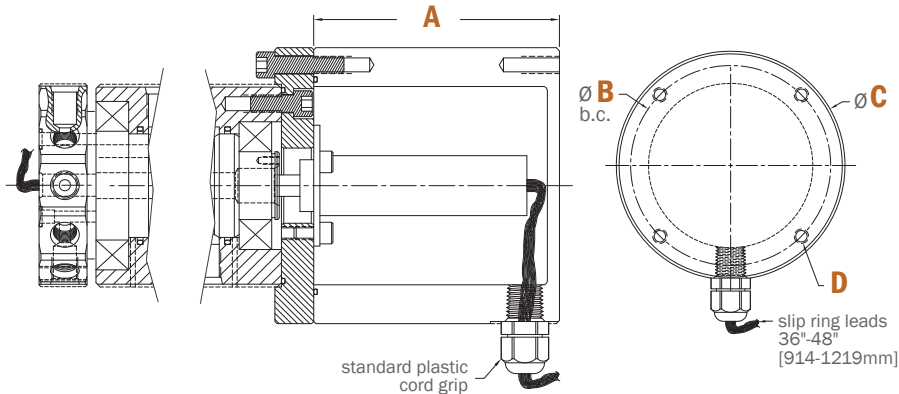
C-bore:  $\varnothing$  .344" [8.74mm]  
Gland: .052" [1.32mm] dp.  
O-ring: 2-009



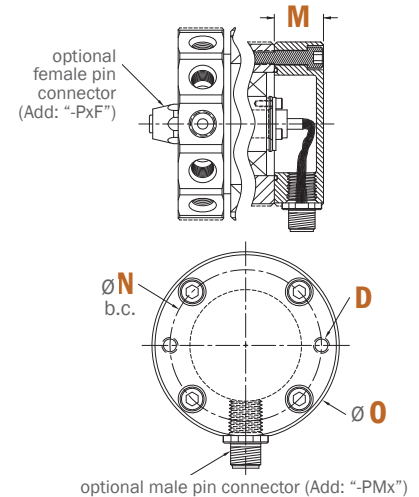
## 12 Flow Passage: Optional Equipment

### OPTIONAL ELECTRICAL SLIP RING COVERS

ES, ESE & ESM COVER (C2) Housing Flange Mount (F1) Required

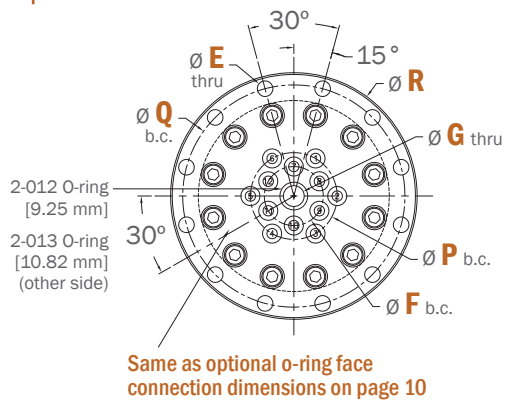


ES6A & ES12A COVER (C1)

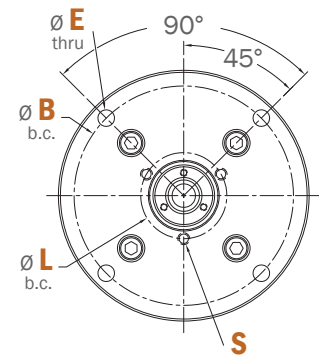


### OPTIONAL SHAFT & HOUSING FLANGE MOUNTS

SHAFT FLANGE MOUNT (F2)



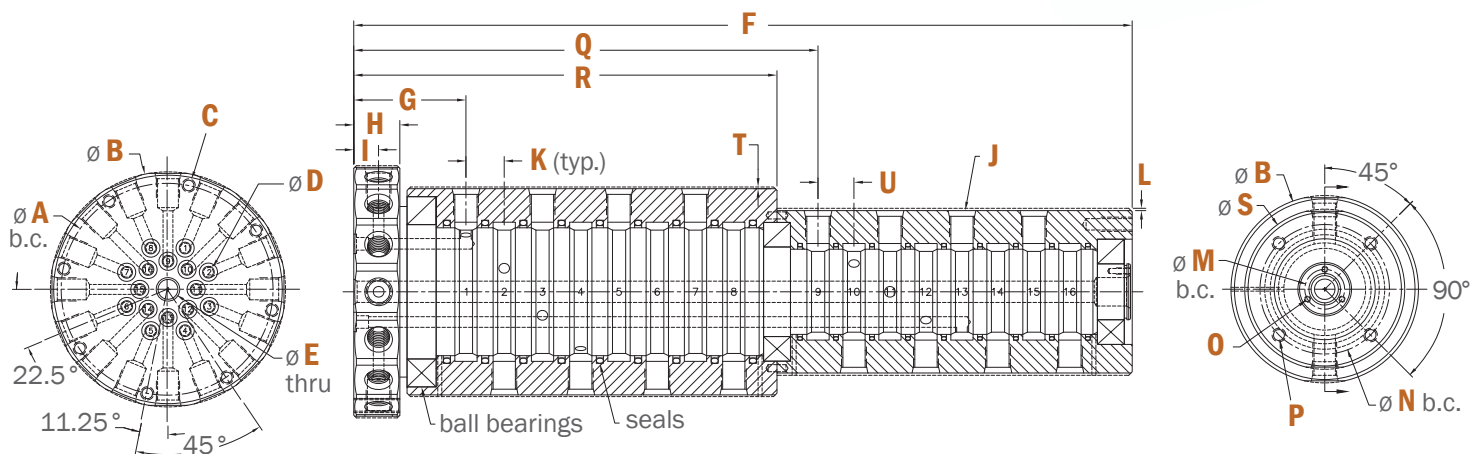
HOUSING FLANGE MOUNT (F1)



PART #	A	B	C	D	E	F	G	H	I	J
SE-11121	3.562"	3.500"	3.937"	1/4"-20	.265"	1.062"	.38"	.500"	.562"	.468"
SEM-11121	90.47mm	88.90mm	100.00mm	M6x1.0	6.73mm	26.97mm	9.5mm	12.70mm	14.27mm	11.89mm

PART #	K	L	M	N	O	P	Q	R	S
SE-11121	1.090"	1.374"	.875"	2.375"	2.937"	1.562"	4.000"	4.437"	#10-24
SEM-11121	27.69mm	34.90mm	22.23mm	60.33mm	74.60mm	39.67mm	101.60mm	112.70mm	M5x0.8

## 16 Flow Passage: Dimensions



PART #	A	B	C	D	E	F	G	H	I	J
<b>SE-11161</b>	4.000"	4.437"	1/4"- 20	.19"	.38"	13.70"	1.97"	.812"	.437"	#4 SAE-ORB
<b>SEM-11161</b>	101.60mm	112.70mm	M6x1.0	4.8mm	9.5mm	347.9mm	50.1mm	20.62mm	11.10mm	G1/8"-28 BSPP

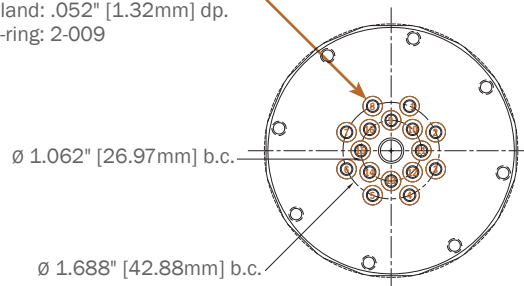
PART #	K	L	M	N	O	P	Q	R	S	T	U
<b>SE-11161</b>	.67"	.040"	.730"	2.375"	#4-40 UNC	1/4"- 20	8.17"	7.45"	2.937"	.030"	.63"
<b>SEM-11161</b>	17.1mm	1.02mm	18.54mm	60.33mm	M3x0.5	M6x1.0	207.5mm	189.2mm	74.60mm	.76mm	16.1mm

### OPTIONAL O-RING FACE SEAL GLAND CONNECTION



Must specify  
when ordering.  
Please add  
"-OF" to the  
Part Number.  
(Example:  
SE-11161-OF)

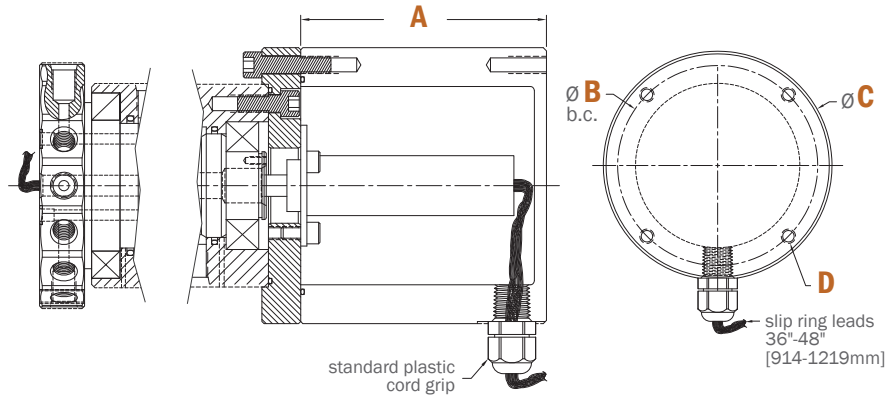
C-bore:  $\varnothing$  .344" [8.74mm]  
Gland: .052" [1.32mm] dp.  
O-ring: 2-009



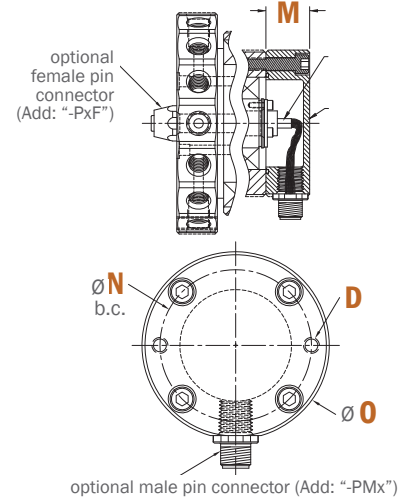
# 16 Flow Passage: Optional Equipment

## OPTIONAL ELECTRICAL SLIP RING COVERS

ES, ESE &amp; ESM COVER (C2) Housing Flange Mount (F1) Required

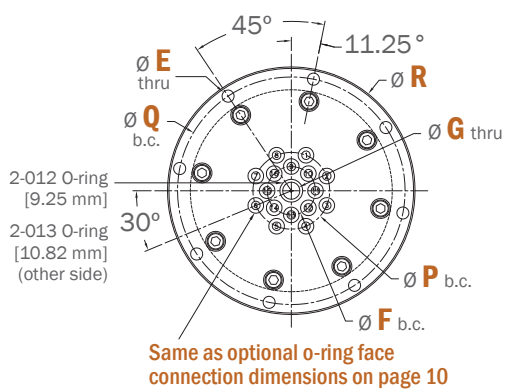


ES6A &amp; ES12A COVER (C1)

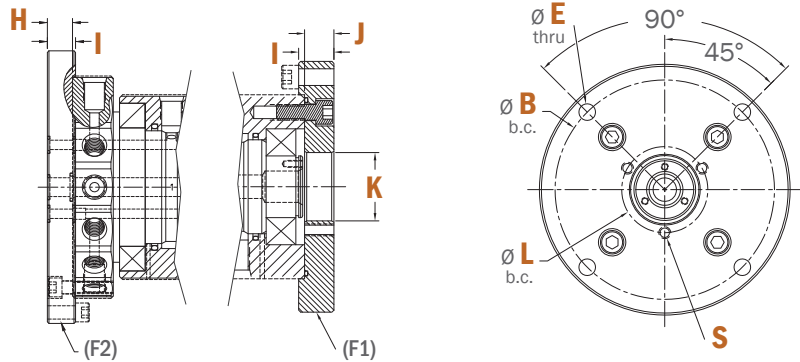


## OPTIONAL SHAFT & HOUSING FLANGE MOUNTS

SHAFT FLANGE MOUNT (F2)



HOUSING FLANGE MOUNT (F1)

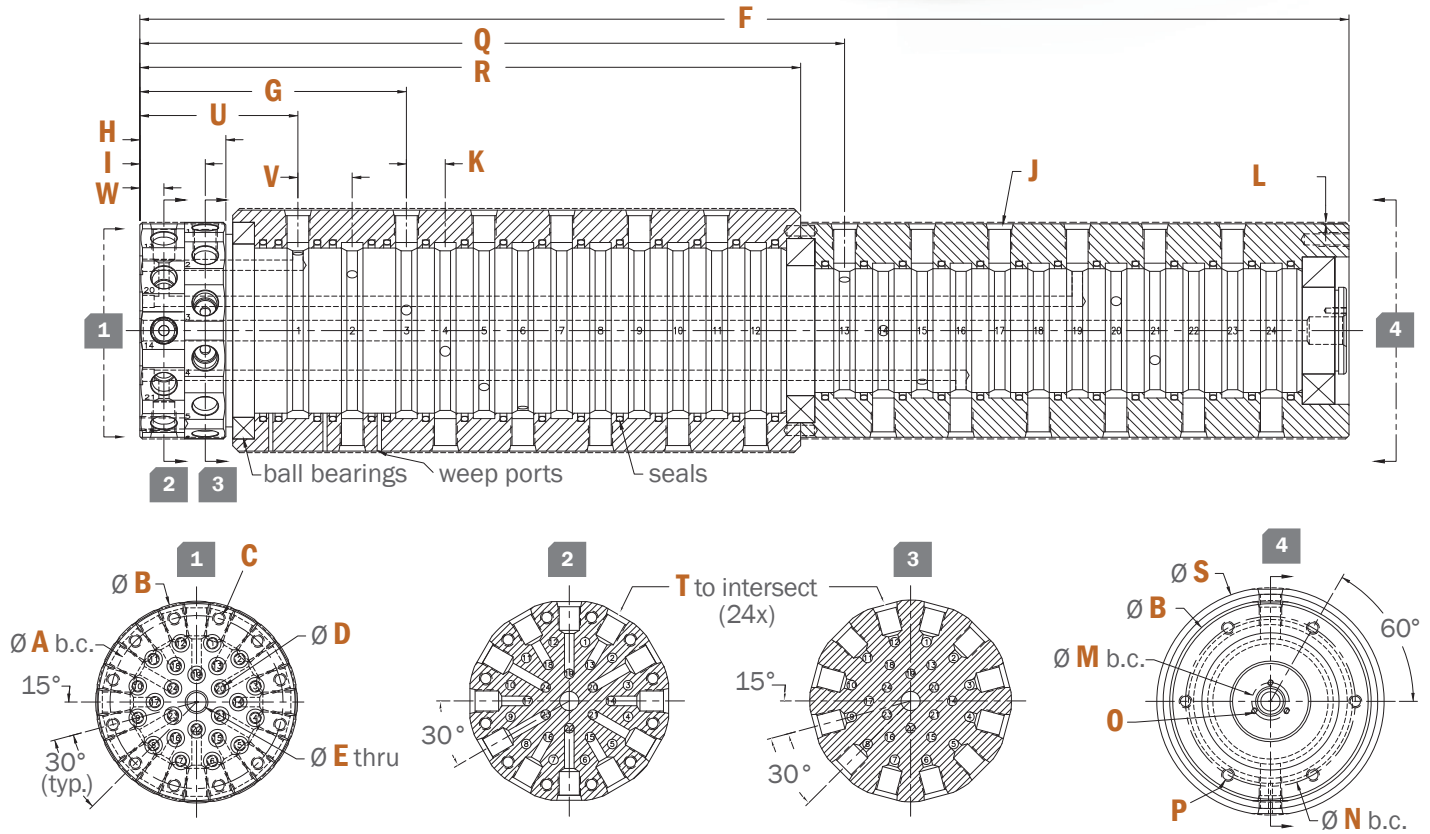


PART #	A	B	C	D	E	F	G	H	I	J
SE-11161	3.562"	3.500"	3.937"	1/4"-20	.265"	1.062"	.38"	.500"	.562"	.468"
SEM-11161	90.47mm	88.90mm	100.00mm	M6x1.0	6.73mm	26.97mm	9.5mm	12.70mm	14.27mm	11.89mm

PART #	K	L	M	N	O	P	Q	R	S
SE-11161	1.090"	1.374"	.875"	2.375"	2.937"	1.688"	5.000"	5.437"	#10-24
SEM-11161	27.69mm	34.90mm	22.23mm	60.33mm	74.60mm	42.88mm	127.00mm	138.10mm	M5x0.8



## 24 Flow Passage: Dimensions



PART #	A	B	C	D	E	F	G	H	I	J
SE-11241	3.375"	3.937"	1/4"- 20	.19"	.38"	21.97"	4.84"	1.562"	1.187"	#4 SAE-ORB
SEM-11241	85.73mm	100.00mm	M6x1.0	4.8mm	9.5mm	558.0mm	123.0mm	39.67mm	30.15mm	G1/8"-28 BSPP

PART #	K	L	M	N	O	P	Q	R	S	T	U
SE-11241	.71"	.030"	.730"	3.313"	#4-40 UNC	1/4"- 20	12.80"	12.01"	4.437"	.19"	2.87"
SEM-11241	17.9mm	.76mm	18.54mm	84.15mm	M3x0.5	M6x1.0	325.2mm	305.0mm	112.70mm	4.8mm	72.9mm

PART #	V	W
SE-11241	.99"	.437"
SEM-11241	25.0mm	11.10mm

### OPTIONAL O-RING FACE SEAL GLAND CONNECTION



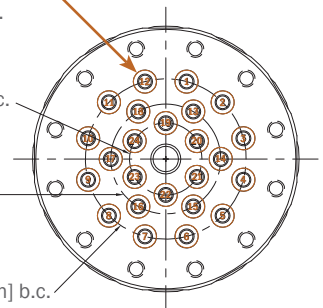
Must specify when ordering. Please add "-OF" to the Part Number. (Example: SE-11241-OF)

C-bore: Ø .344" [8.74mm]  
Gland: .052" [1.32mm] dp.  
O-ring: 2-009

Ø 1.062" [26.97mm] b.c.

Ø 1.625" [41.28mm] b.c.

Ø 2.375" [60.33mm] b.c.

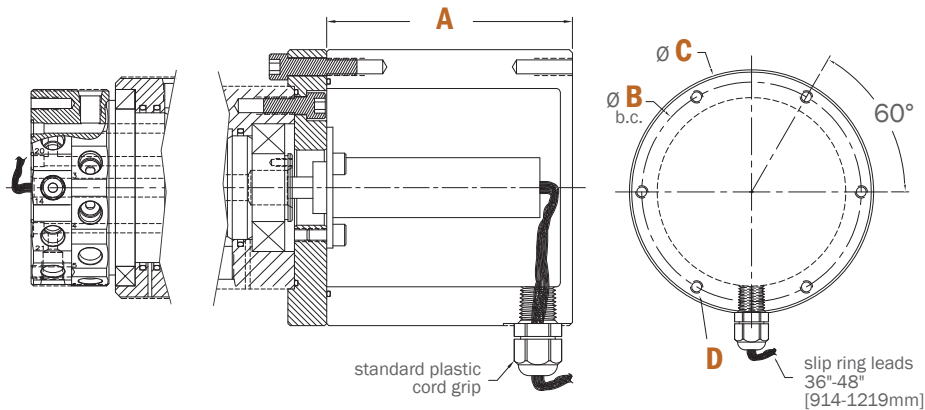




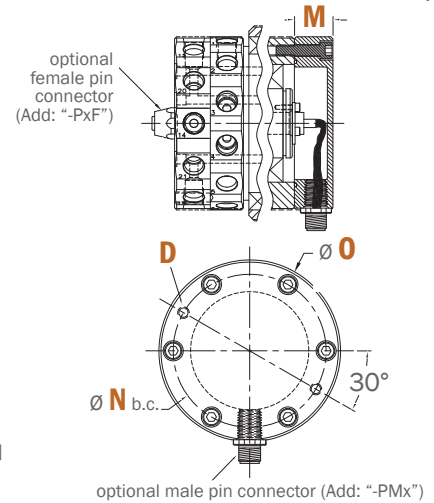
## 24 Flow Passage: Optional Equipment

### OPTIONAL ELECTRICAL SLIP RING COVERS

ES, ESE & ESM COVER (C2) Housing Flange Mount (F1) Required

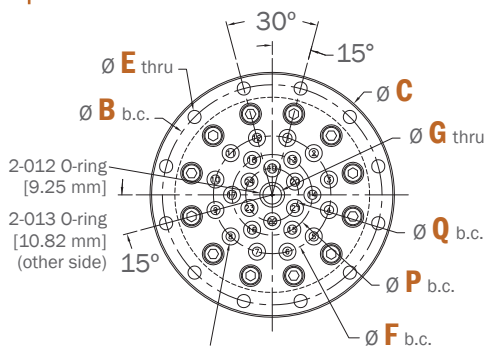


ES6A & ES12A COVER (C1)

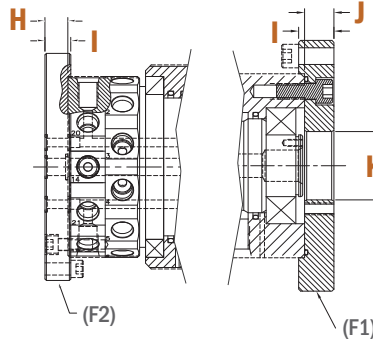


### OPTIONAL SHAFT & HOUSING FLANGE MOUNTS

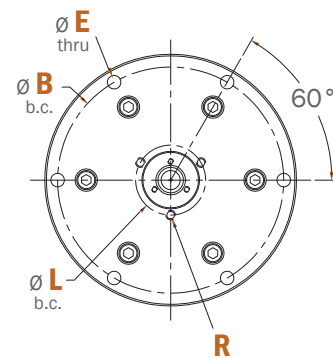
SHAFT FLANGE MOUNT (F2)



Same as optional o-ring face  
connection dimensions on page 10



HOUSING FLANGE MOUNT (F1)



PART #	A	B	C	D	E	F	G	H	I
SE-111241	3.562"	4.438"	4.938"	1/4"-20	.265"	2.375"	.38"	.500"	.562"
SEM-11241	90.47mm	112.73mm	125.43mm	M6x1.0	6.73mm	60.33mm	9.5mm	12.70mm	14.27mm

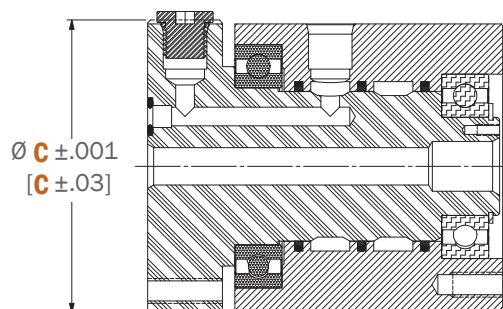
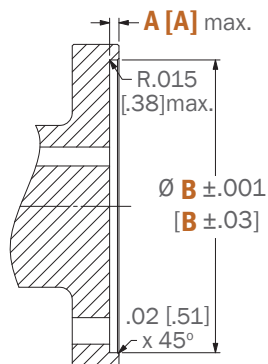
PART #	J	K	L	M	N	O	P	Q	R
SE-11241	.468"	1.090"	1.374"	.875"	3.313"	3.937"	1.625"	1.062"	#10-24
SEM-11241	11.89mm	27.69mm	34.90mm	22.23mm	84.15mm	100.00mm	41.28mm	26.97mm	M5x0.8

## Customer Interface using O-Ring Seal Connection

CUSTOMER INTERFACE EXAMPLE



SE SERIES ROTARY UNION



PART #	A	B	C	D (Nx)
SE(M)-1121	.078" [1.98mm]	2.940" [74.68mm]	2.937" [74.60mm]	.375" [9.53mm] (2x)
SE(M)-1141	.078" [1.98mm]	2.940" [74.68mm]	2.937" [74.60mm]	.375" [9.53mm] (4x)
SE(M)-1161	.078" [1.98mm]	2.940" [74.68mm]	2.937" [74.60mm]	.375" [9.53mm] (6x)
SE(M)-1181	.078" [1.98mm]	2.940" [74.68mm]	2.937" [74.60mm]	.344" [8.74mm] (8x)
SE(M)-11121	.141" [3.58mm]	3.440" [87.38mm]	3.437" [87.30mm]	.344" [8.74mm] (12x)
SE(M)-11161	.141" [3.58mm]	4.440" [112.78mm]	4.437" [112.70mm]	.344" [8.74mm] (16x)
SE(M)-11241	.141" [3.58mm]	3.940" [100.08mm]	3.937" [100.00mm]	.344" [8.74mm] (24x)

## Electrical Slip Ring Integration Options

- + Ethernet Slip Rings Available
- + 100 BaseT & 1000 BaseT Ethernet Connections
- + High-Quality, Gold-on-Gold Contacts
- + Capsule & Thru-bore Options
- + Low Electrical Noise
- + Analog/Digital Transfer
- + Cord Sets & Pin Connectors Options
- + Compatible With a Range of Data Bus Protocols



### AVAILABLE SLIP RINGS<sup>1</sup>

PART #	# OF CIRCUITS	MAX AMPS/ CIRCUIT	MAX VOLTS	MAX DATA SPEED
ES6A <sup>4</sup>	6	2	120	Under 50 Mbps
ES6 <sup>4</sup>	6	2	240	Under 50 Mbps
ES12A <sup>4</sup>	12	2	120	Under 50 Mbps
ES12 <sup>4</sup>	12	2	240	Under 50 Mbps
ES18 <sup>4</sup>	18	2	240	Under 50 Mbps
ES24 <sup>4</sup>	24	2	240	Under 50 Mbps
ES36 <sup>4</sup>	36	2	240	Under 50 Mbps
ES56 <sup>4</sup>	56	2	240	Under 50 Mbps
ESE64 <sup>2</sup>	10	(6x) 2A	240	100 Mbps
ESE264 <sup>2</sup>	12	(2x) 5A, (6x) 2A	240	100 Mbps
ESE224 <sup>2</sup>	8	(2x) 10A, (2x) 2A	240	100 Mbps
ESE2124 <sup>2</sup>	18	(2x) 5A, (12x) 2A	240	100 Mbps
ESE284 <sup>2</sup>	14	(2x) 10A, (8x) 2A	240	100 Mbps
ESE438 <sup>3</sup>	51	(43x) 2A	240	1 Gbps
ESE4358 <sup>3</sup>	47	(4x) 5A, (35x) 2A	240	1 Gbps
ESE2358 <sup>3</sup>	45	(2x) 10A, (35x) 2A	240	1 Gbps
ESE8278 <sup>3</sup>	43	(8x) 5A, (27x) 2A	240	1 Gbps
ESE24278 <sup>3</sup>	41	(2x) 10A, (4x) 5A, (27x) 2A	240	1 Gbps

PART #	# OF CIRCUITS	MAX AMPS/ CIRCUIT	MAX VOLTS	MAX DATA SPEED
ESM36 <sup>4</sup>	9	(3x) 10A, (6x) 2A	240	Under 50 Mbps
ESM312 <sup>4</sup>	15	(3x) 5A, (12x) 2A	240	Under 50 Mbps
ESM420 <sup>4</sup>	24	(4x) 10A, (20x) 2A	240	Under 50 Mbps
ESM428 <sup>4</sup>	32	(4x) 5A, (28x) 2A	240	Under 50 Mbps
ESM440 <sup>4</sup>	44	(4x) 10A, (40x) 2A	240	Under 50 Mbps
ESM448 <sup>4</sup>	52	(4x) 5A, (48x) 2A	240	Under 50 Mbps

<sup>1</sup> All slip ring lead wire lengths are 48" (1219mm)

<sup>2</sup> 100 BaseT Ethernet connections

<sup>3</sup> 1000 BaseT Ethernet connections

<sup>4</sup> In order to successfully transfer digital data signals, a variety of conditions must be met. Please consult with DSTI for approval.

## Installation & Mounting

### PREPARATION:

Remove the rotary union from the shipping container. Inspect the entire assembly, including all passage connections to make sure that they are clean and no visual damage occurred during transport. If the assembly is a rotary union/electrical slip ring, the electrical slip ring may be packaged separately to protect during shipping. If this is the case, mount the electrical slip ring to the rotating union assembly using the supplied hardware.

### RECOMMENDED ROTARY UNION INSTALLATION PRACTICE:

DSTI does not recommend mounting the rotary union with both the shaft & housing components solidly bolted into place. One of the two components should be mounted in a manner that allows for some movement in the event of misalignment or run-out during rotation. Using only the supply lines or hoses to fix the stationary component in place is also not recommended. An anti-rotation arm that attaches to the stationary part of the rotary union assembly and rests against part of the equipment framework is recommended (see figure 1.1).

### MOUNTING A ROTARY UNION W/ AN ELECTRICAL SLIP RING:

Make sure the electrical wiring is fixed in place and protected from contact with other components or equipment. Care should be taken to make sure the slip ring area remains clean and dry during use.

### SHAFT MOUNTING: O-RING MANIFOLD TYPE:

Make sure the rotary union shaft face & equipment mounting surface is clean and free from dents or chips to insure proper installation. Equipment pilot bore needs to be concentric to the center line of the rotary union shaft to assure proper function. Install face mount O-rings into groove or counter bore in rotating union shaft face. General assembly grease can be used as needed to hold O-rings into place during assembly. Align rotary union shaft with equipment pilot bore and flow passages, then insert into place. Bolt assembly into place using tapped holes or mounting flange on rotary union face.

**THESE INSTRUCTIONS ARE INTENDED TO BE USED AS A GENERAL GUIDE, PLEASE CONSULT DSTI TO DISCUSS ANY SPECIFIC QUESTIONS RELATED TO YOUR INSTALLATION.**

### SHAFT MOUNTING, THREADED CONNECTIONS:

When mounting the shaft using threaded connections, make sure all fittings are properly tightened & pipe thread sealant is used as required. Equipment mounting surface needs to be concentric to the center line of the rotary union shaft to assure proper function. After all fittings are in place, bolt assembly into place using tapped holes or mounting flange on rotating union shaft.

### INITIAL START-UP:

After rotary union is installed, a dry run is recommended to assure proper mounting of the rotating union assembly. Begin rotation of the equipment, and verify that while rotating at the maximum operating speed there is no visible movement of the rotary union assembly due to misalignment.



### WARRANTY:

*DSTI Warrants, for a period of 2 years from the date of original delivery, its products to be free from defects in material and workmanship. DSTI's obligation under this warranty is limited to repair or replacement at it's factory of any part or parts of said products which shall be returned to DSTI with transportation charges prepaid and which DSTI's examination shall disclose to it's satisfaction to have been defective. Under no circumstances shall DSTI be held liable for loss, damage, cost of repair of consequential damages of any kind in connection with the sale, use or repair of any product purchased from DSTI. Warranty is subject to change.*



# Engineered Fluid Solutions

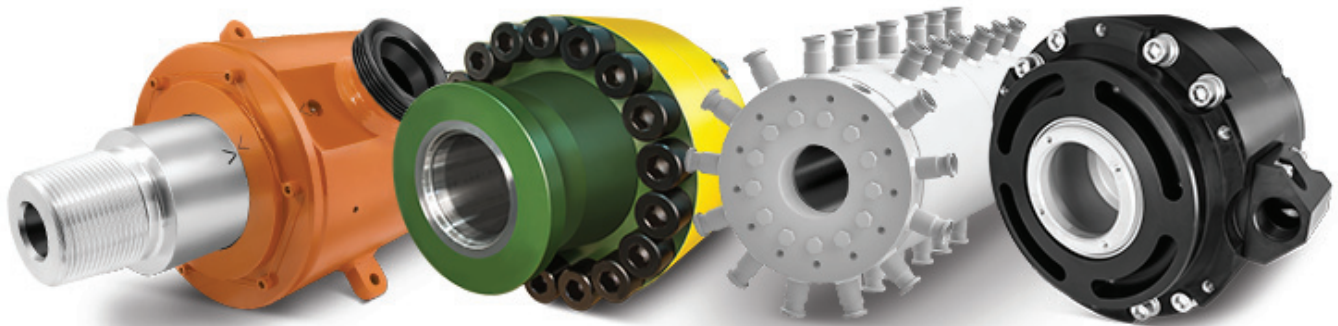
At DSTI, our product solutions are directly influenced by the industries we serve. If an existing product isn't a perfect fit for our customers' applications, we provide specialized design and manufacturing services to meet the needs of their specifications.

To see examples of our customized solutions, please visit: [www.dsti.com/industries](http://www.dsti.com/industries)



## PRODUCT DOWNLOADS

For Catalogs, Brochures, Models and Drawings visit:  
[www.dsti.com/downloads](http://www.dsti.com/downloads)



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