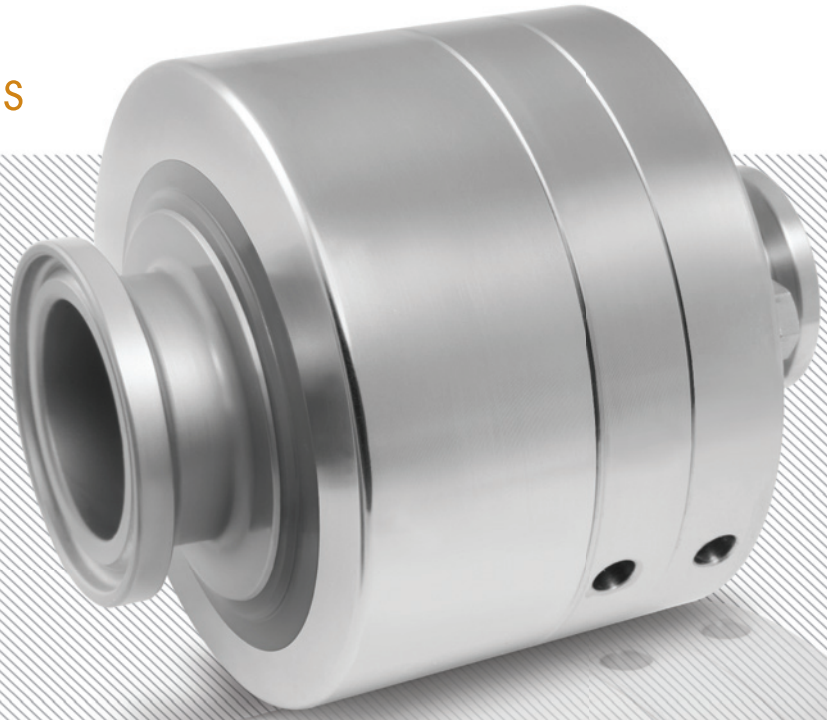
SANITARY + SINGLE FLOW

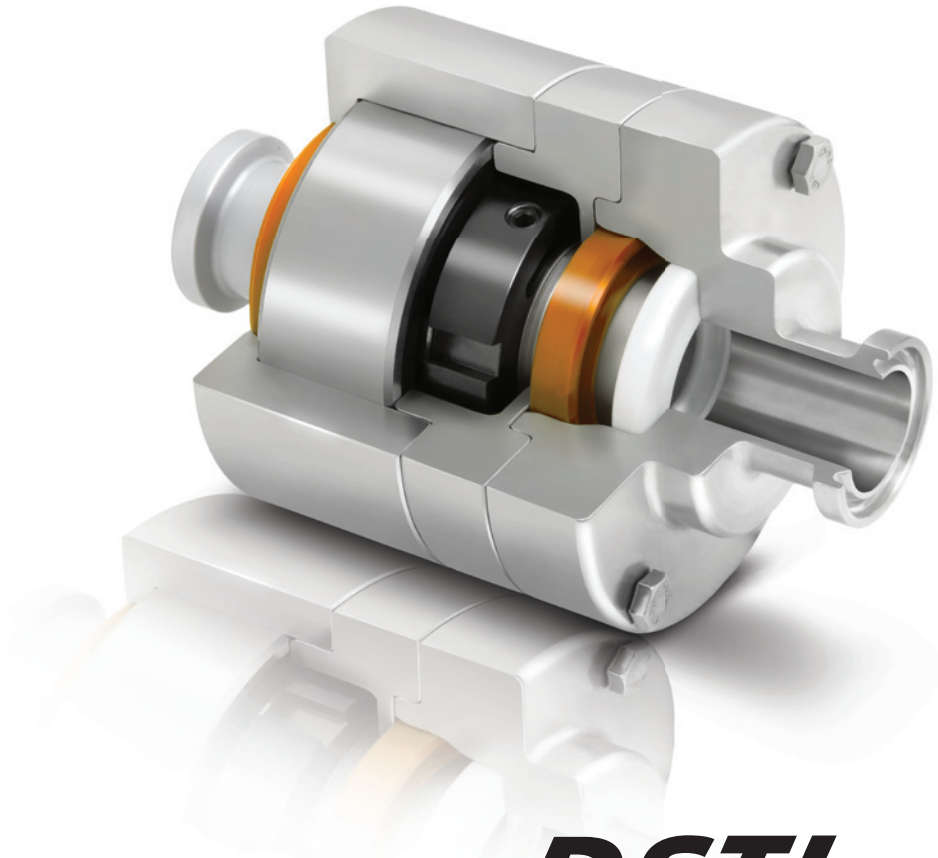
Rotary Union Solutions



SCS Series

HYGIENIC CLAMP FERRULE CONNECTION SIZE OPTIONS

- ¾"
- 1"
- 1½"
- 2"
- 2½"
- 3"
- 4"



ISO 9001:2008

DSTI
DYNAMIC SEALING TECHNOLOGIES, INC

SCS SERIES

Contents

About DSTI

Dynamic Sealing Technologies, Inc. (DSTI) is a global leader specializing in the design and manufacturing of fluid rotary union (swivel joint) and electrical slip ring products for a wide range of industries.

Learn more at www.dsti.com

Did You Know?

» DSTI Exports Rotary Union Products to Over 45 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.

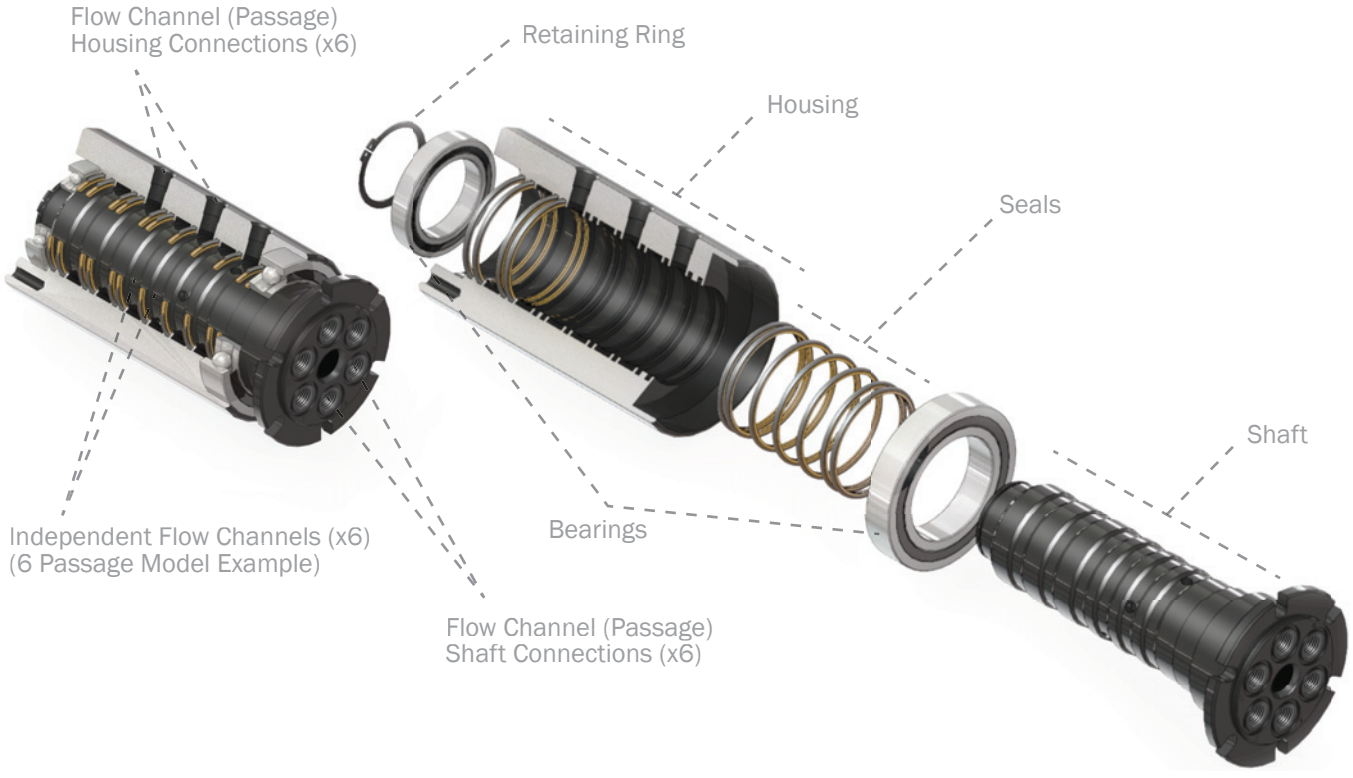
See examples at **www.dsti.com/industries**

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.*



SCS SERIES

SCS Series Overview

SANITARY STANDARDS 3A CONFORMANCE | FDA COMPLIANT MATERIALS

- Hygienic Clamp Ferrule Connections
- FDA Compliant Materials For Use With CIP (Clean-in-Place) Systems
- Food Grade Seals and Bearing Lubricant
- Engineered to Minimize Fluid Stagnation Points
- Exclusive DSTI Sealing Technology
- 316 Stainless Steel Shaft and Housing
- ASME-BPE & DIN 32676 Connections Available

ON THE WEB

Download STEP, DWG, and PDF resources.
View interactive 3D models and more!

Learn more at **www.dsti.com**

How to Order: Create your Part Number

EXAMPLE

SCS – 6 05 01 0

SCS	SCS Series (Type A ASME - BPE Connection)
SCSM	SCS Series (Series A, DIN 32676)

6	Product Series (SCS)

05	¾" Tri-Clamp Ferrule Connection
06	1" Tri-Clamp Ferrule Connection
08	1 ½" Tri-Clamp Ferrule Connection
09	2" Tri-Clamp Ferrule Connection
10	2 ½" Tri-Clamp Ferrule Connection
11	3" Tri-Clamp Ferrule Connection
13	4" Tri-Clamp Ferrule Connection

01	1 Flow Passage

NOTE All SCS Series models contain one passage.

0	No Thru-bore

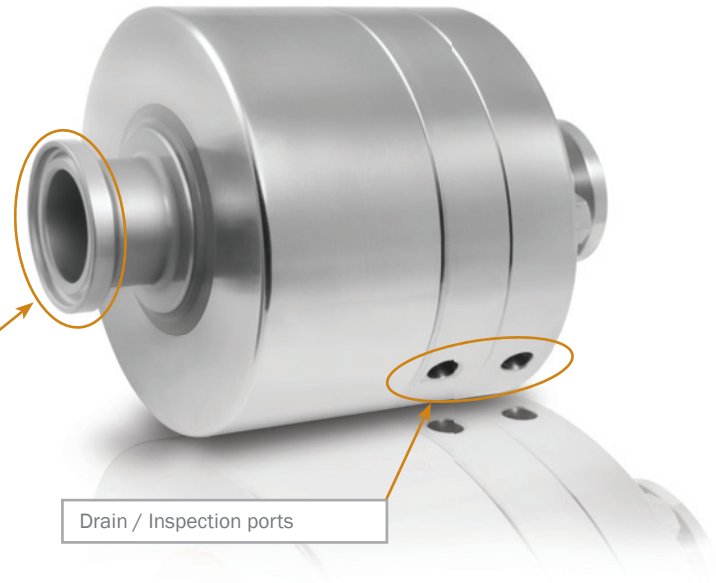
NOTE Thru-bore option is not available on the SCS Series.

EXAMPLES

SCS-608010
- SCS model with one 1.5" Type A ASME-BPE Connection passage

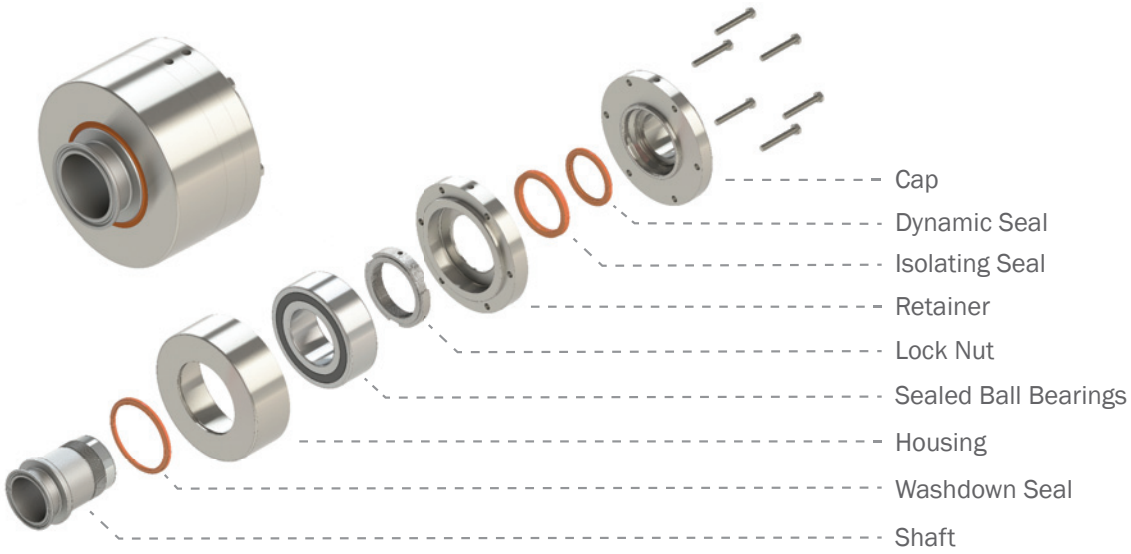
SCSM-609010
- SCS model with one DN 50, Series A, DIN 32676 Connection

SCS-613010
- SCS model with one 4" Type A ASME-BPE Connection passage



SCS SERIES

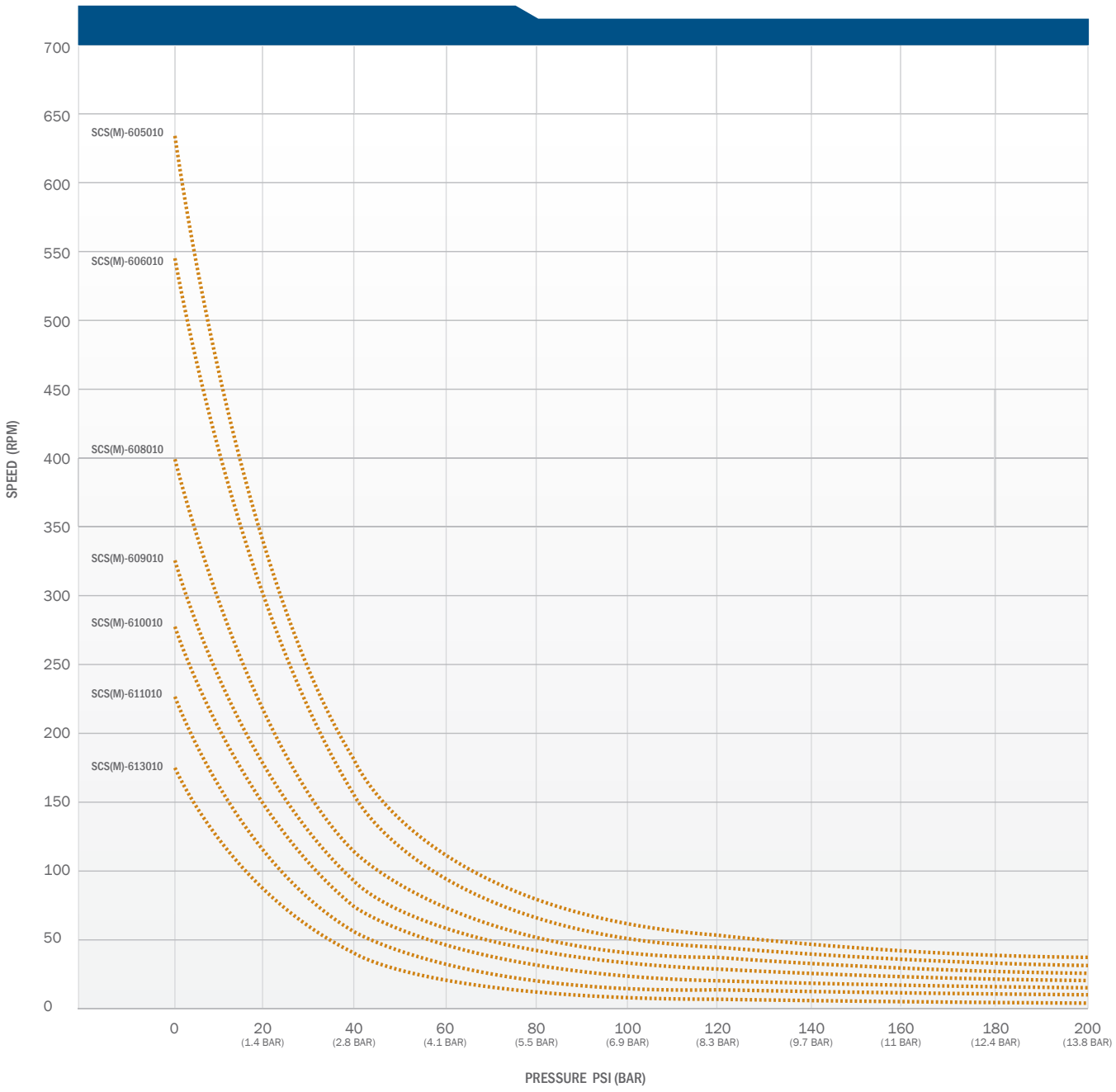
Specifications & Operating Information



Flow Passage Options	1
Media Types	Suitable for Food-Grade use
Passage Sizes	¾", 1", 1½", 2", 2½", 3", 4"
Connection Type	Type A ASME BPE-2009 (Series A, per DIN 32676)
Max. Operating Pressure	200 PSI (14 BAR)[1]
Max. Vacuum	24 HG[1]
Max. Rotational Speed	Consult with DSTI for specific speed and pressure evaluation based on application.
Operating Temperature	0° F to 220° F (-18° C to 105° C)[2]
Body Material Type	316 Stainless Steel
Slip Ring Options	Not Applicable
Mounting Options	The SCS Series rotary unions connect at the ferrule clamp connection inlet and outlet.
Seal Type	High Temperature UHMW-PE Lip Seal *(Alternative seal types available. Please consult with DSTI)*

[1] Values are dependent on a combination of all application parameters. Please consult with DSTI.
[2] High temperature applications may require alternative seal materials. Please consult with DSTI.

Performance Data: Pressure vs. Allowable Speed*



* This data is to be used as a general guideline. Data based on generic food grade media as the media type. Please consult DSTI about your specific application.

SCS SERIES

Performance Data: Pressure vs. Torque*

PRESSURE PSI (BAR)

MODEL	0	20 (1.4 BAR)	40 (2.8 BAR)	60 (4.1 BAR)	80 (5.5 BAR)	100 (6.9 BAR)
SCS-605010	14.5 [1.64]	14.8 [1.67]	15.2 [1.72]	15.6 [1.76]	16.0 [1.81]	16.4 [1.85]
SCS-606010	28.5 [3.22]	28.8 [3.25]	29.2 [3.30]	29.6 [3.34]	30.0 [3.39]	30.4 [3.43]
SCS-608010	44.3 [5.01]	44.7 [5.05]	45.1 [5.10]	45.5 [5.14]	45.9 [5.19]	46.3 [5.23]
SCS-609010	43.6 [4.93]	44.0 [4.97]	44.4 [5.01]	44.8 [5.06]	45.2 [5.12]	45.6 [5.15]
SCS-610010	55.3 [6.25]	55.7 [6.29]	56.0 [6.33]	56.4 [6.37]	56.8 [6.42]	57.2 [6.46]
SCS-611010	79.3 [8.96]	79.7 [9.00]	80.1 [9.05]	80.5 [9.09]	80.9 [9.14]	81.2 [9.17]
SCS-613010	89.3 [10.08]	89.7 [10.13]	90.1 [10.18]	90.5 [10.23]	90.9 [10.27]	91.3 [10.32]

MODEL	120 (8.3 BAR)	140 (9.7 BAR)	160 (11 BAR)	180 (12.4 BAR)	200 (13.8 BAR)
SCS-605010	16.8 [1.90]	17.2 [1.94]	17.6 [1.99]	18.0 [2.03]	18.4 [2.08]
SCS-606010	30.8 [3.48]	31.2 [3.53]	31.6 [3.57]	32.0 [3.62]	32.4 [3.66]
SCS-608010	46.6 [5.27]	47.0 [5.31]	47.4 [5.36]	47.8 [5.40]	48.2 [5.45]
SCS-609010	45.9 [5.19]	46.3 [5.23]	46.7 [5.28]	47.1 [5.32]	47.5 [5.37]
SCS-610010	57.6 [6.51]	58.0 [6.55]	58.4 [6.60]	58.8 [6.64]	59.2 [6.69]
SCS-611010	81.6 [9.23]	82.0 [9.26]	82.4 [9.31]	82.8 [9.36]	83.2 [9.40]
SCS-613010	91.7 [10.36]	92.0 [10.39]	92.4 [10.44]	92.8 [10.48]	93.2 [10.53]

PRESSURIZED TORQUE (INCH POUND [NEWTON METER])

* This data is to be used as a general guideline. Please consult DSTI about your specific application.

Performance Data: Frictional Loss at Allowable Speed @ Pressure (btu/min)*

PRESSURE PSI (BAR)

MODEL	0	20 (1.4 BAR)	40 (2.8 BAR)	60 (4.1 BAR)	80 (5.5 BAR)	100 (6.9 BAR)
SCS-605010	6.27 [108.92]	3.22 [55.93]	1.65 [28.70]	1.13 [19.62]	0.87 [15.08]	0.71 [12.36]
SCS-606010	10.57 [183.71]	5.36 [93.12]	2.71 [47.19]	1.83 [31.88]	1.39 [24.22]	1.13 [19.63]
SCS-608010	12.13 [210.82]	6.12 [106.34]	3.09 [53.63]	2.07 [36.06]	1.57 [27.78]	1.27 [22.01]
SCS-609010	9.45 [164.26]	4.77 [82.87]	2.40 [41.80]	1.62 [28.11]	1.22 [21.27]	0.99 [17.16]
SCS-610010	9.91 [172.29]	4.99 [86.75]	2.51 [43.68]	1.69 [29.32]	1.27 [22.14]	1.03 [17.84]
SCS-611010	12.13 [210.82]	6.09 [105.93]	3.06 [53.22]	2.05 [35.65]	1.55 [26.87]	1.24 [21.60]
SCS-613010	10.39 [180.63]	5.22 [90.71]	2.62 [45.55]	1.75 [30.50]	1.32 [22.97]	1.06 [18.46]

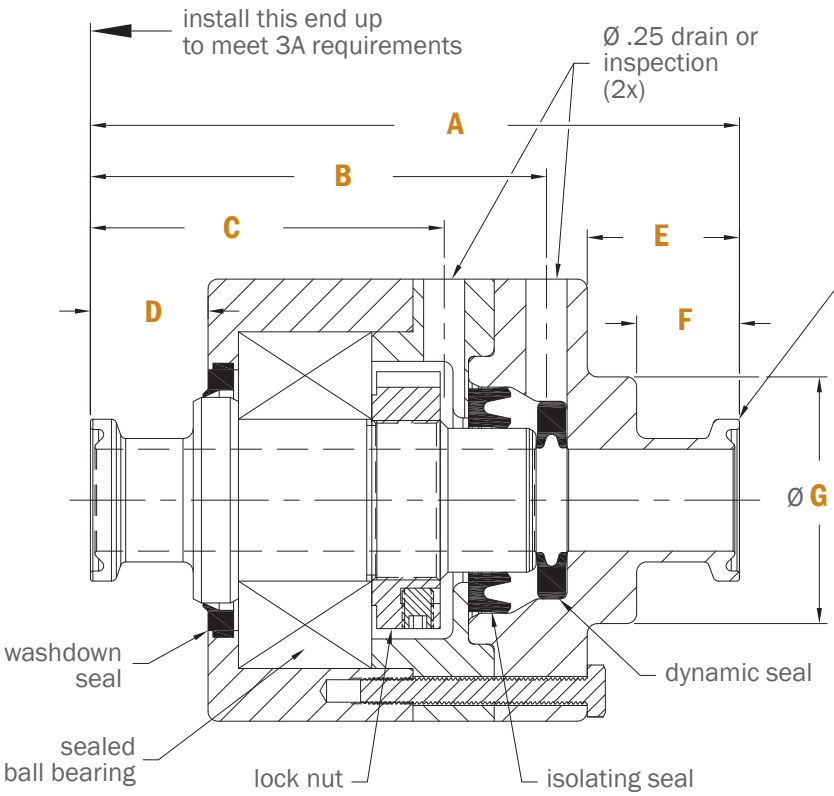
MODEL	120 (8.3 BAR)	140 (9.7 BAR)	160 (11 BAR)	180 (12.4 BAR)	200 (13.8 BAR)
SCS-605010	0.61 [10.55]	0.53 [9.25]	0.48 [8.28]	0.43 [7.52]	0.40 [6.92]
SCS-606010	0.95 [16.57]	0.83 [14.38]	0.73 [12.74]	0.66 [11.47]	0.60 [10.44]
SCS-608010	1.06 [18.50]	0.92 [15.99]	0.81 [14.10]	0.73 [12.64]	0.66 [11.47]
SCS-609010	0.83 [14.97]	0.72 [12.91]	0.63 [11.38]	0.57 [10.18]	0.51 [9.22]
SCS-610010	0.86 [14.97]	0.74 [12.91]	0.65 [11.38]	0.59 [10.18]	0.53 [9.22]
SCS-611010	1.04 [18.09]	0.90 [15.58]	0.79 [13.69]	0.70 [12.23]	0.64 [11.06]
SCS-613010	0.89 [15.45]	0.76 [13.30]	0.67 [11.68]	0.60 [10.43]	0.54 [9.43]

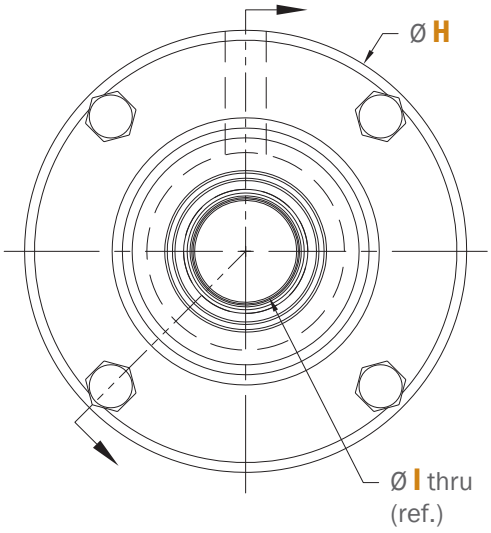
FRICTIONAL LOSS (BTU PER MINUTE [WATTS])

* This data is to be used as a general guideline. Please consult DSTI about your specific application.
1 foot pound per minute (ft-lb/min) = 0.0013 btu per minute (btu/min) [0.023 watts (W)]

SCS SERIES

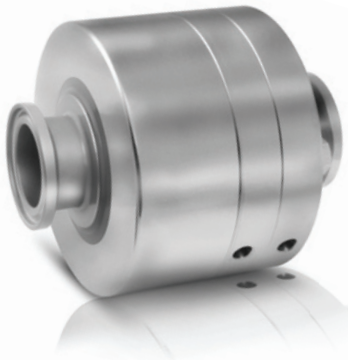
SCS ¾" Connection: Dimensions

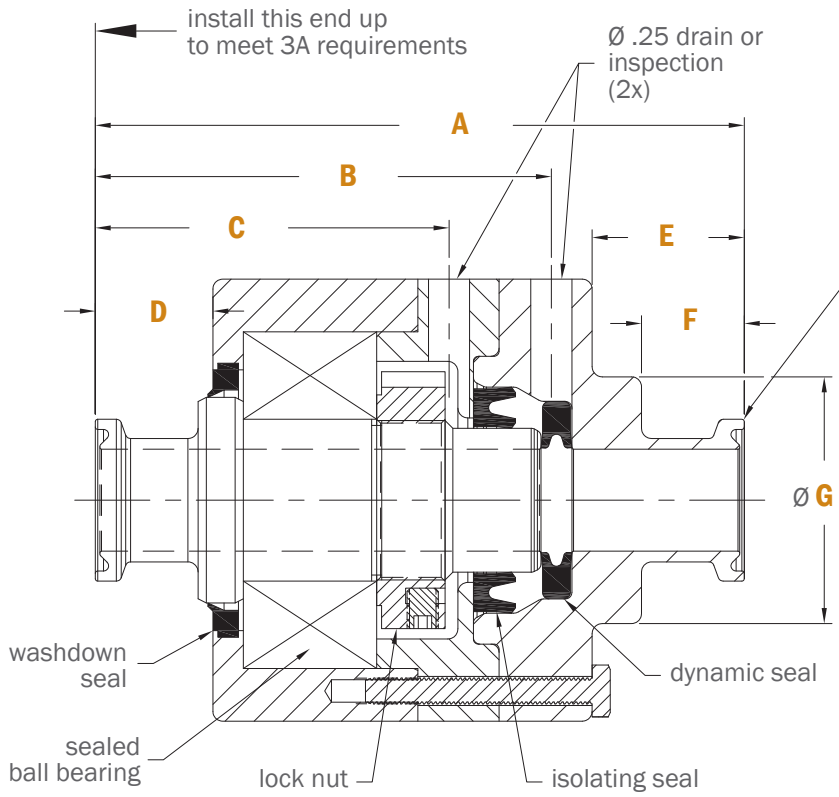


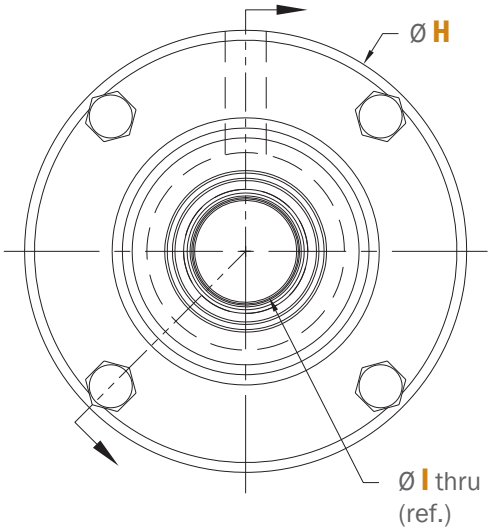


P/N	SCS-605010 [SCSM-605010]
A	3.95" [100.2mm]
B	2.77" [70.4mm]
C	2.15" [54.6mm]
D	0.72" [18.2mm]
E	0.93" [23.5mm]
F	0.63" [15.9mm]
G	1.50" [38.1mm]
H	2.69" [68.2mm]
I	0.62" [16.0mm]

SCS 1" Connection: Dimensions



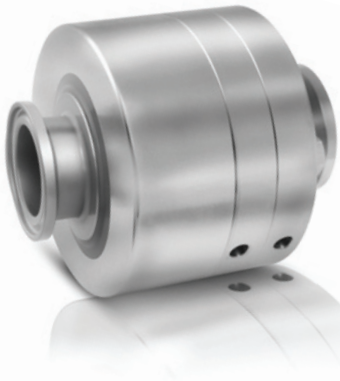


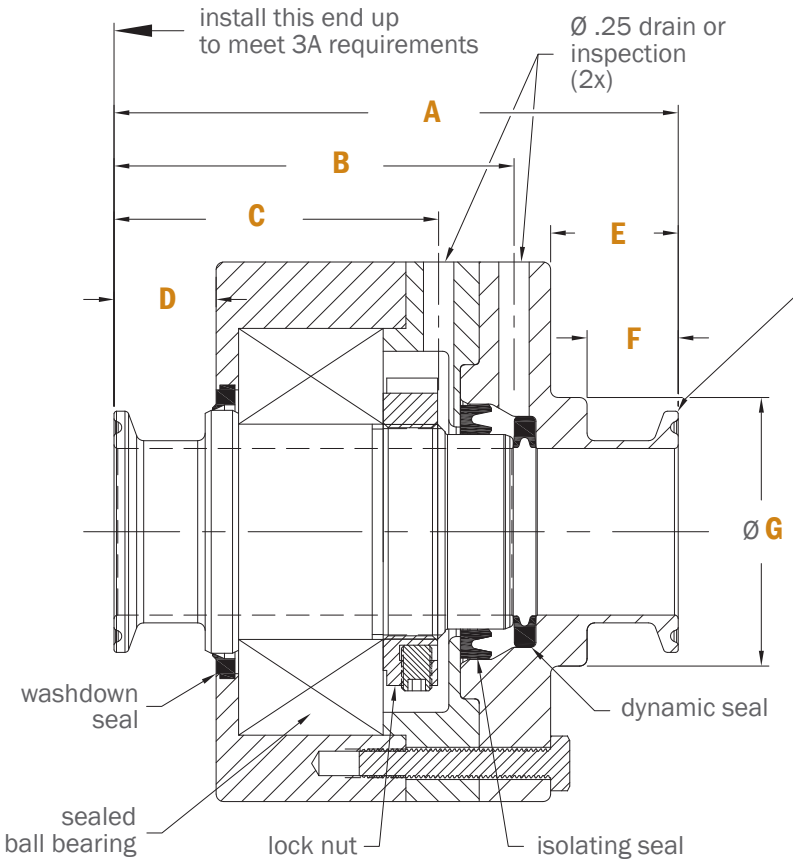


P/N	SCS-606010 [SCSM-606010]
A	4.10" [104.0mm]
B	2.87" [72.9mm]
C	2.25" [57.2mm]
D	0.72" [18.2mm]
E	0.92" [23.4mm]
F	0.63" [15.9mm]
G	1.75" [44.5mm]
H	3.44" [87.4mm]
I	0.87" [20.0mm]

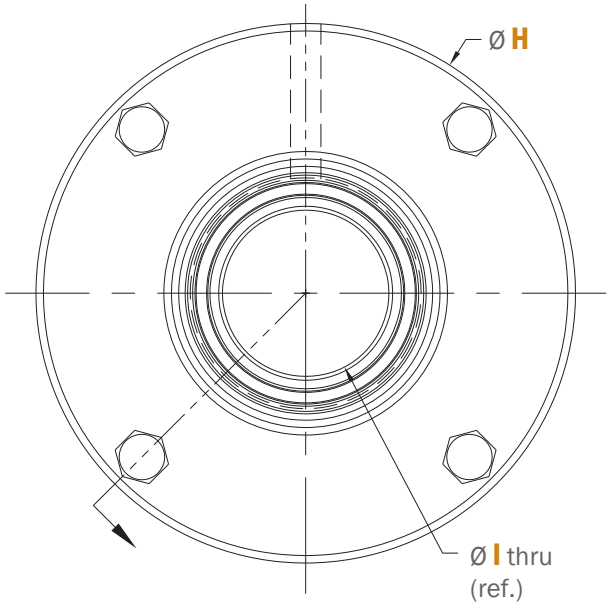
SCS SERIES

SCS 1½" Connection: Dimensions

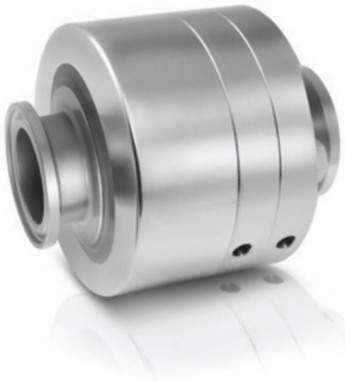


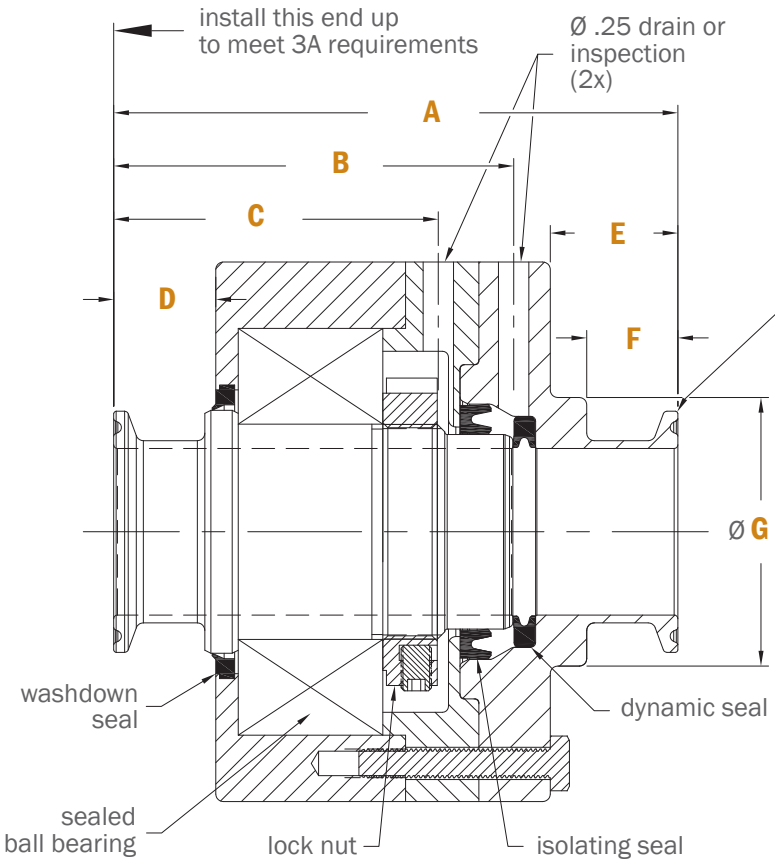


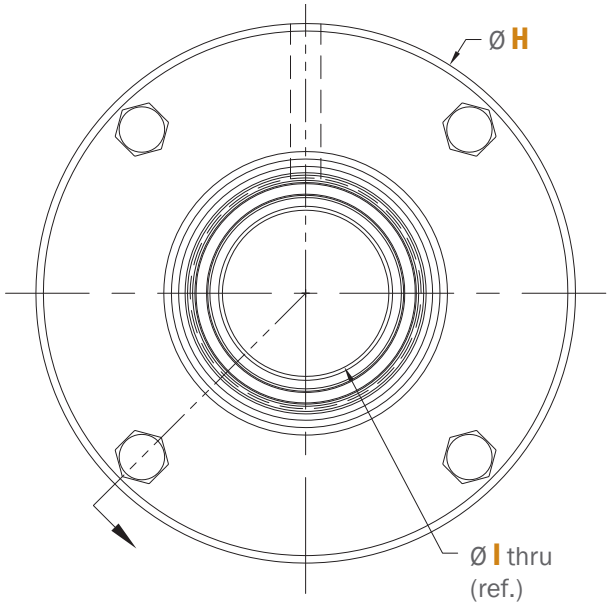
P/N	SCS-608010 [SCSM-608010]
A	4.64" [117.9mm]
B	3.29" [83.6mm]
C	2.67" [67.8mm]
D	0.84" [21.3mm]
E	1.05" [26.7mm]
F	0.75" [19.1mm]
G	2.21" [56.1mm]
H	4.44" [112.8mm]
I	1.37" [32.0mm]



SCS 2" Connection: Dimensions



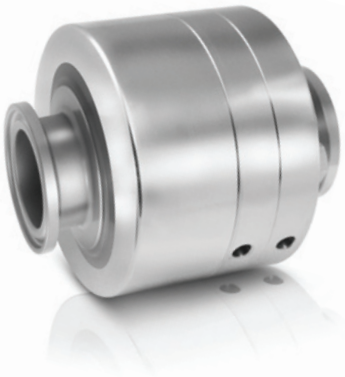


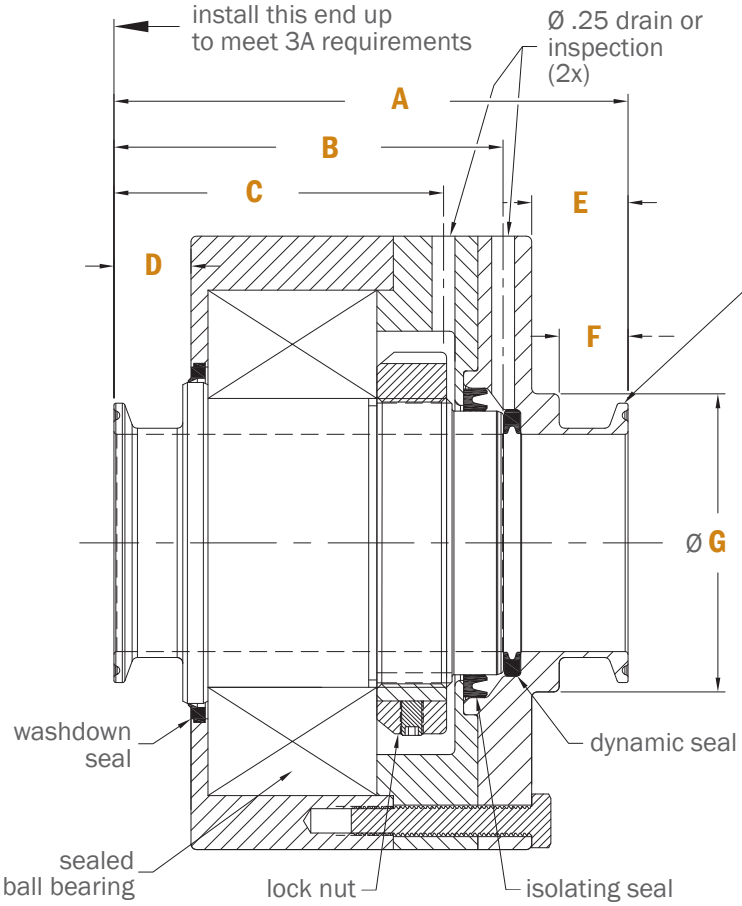


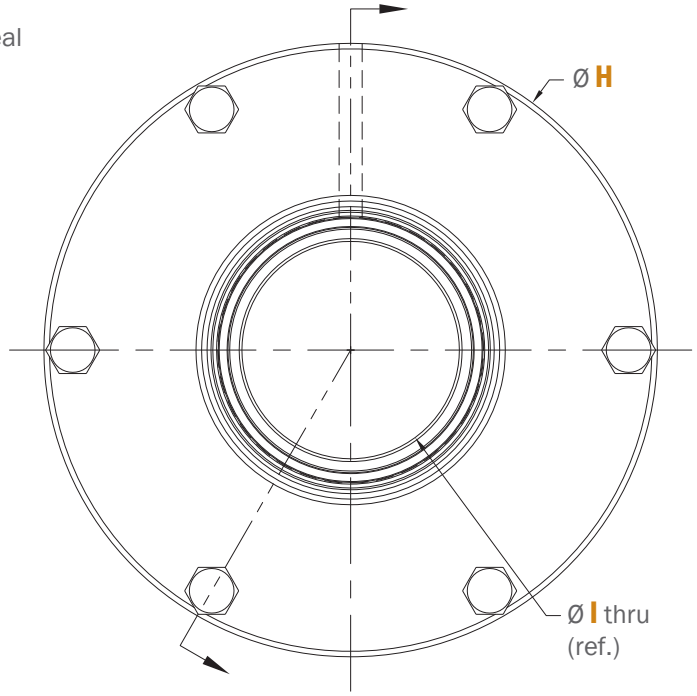
P/N	SCS-609010 [SCSM-609010]
A	4.99" [126.7mm]
B	3.63" [92.2mm]
C	2.98" [75.6mm]
D	0.84" [21.3mm]
E	1.05" [26.7mm]
F	0.75" [19.1mm]
G	2.75" [69.9mm]
H	5.44" [138.2mm]
I	1.87" [50.0mm]

SCS SERIES

SCS 2 ½" Connection: Dimensions

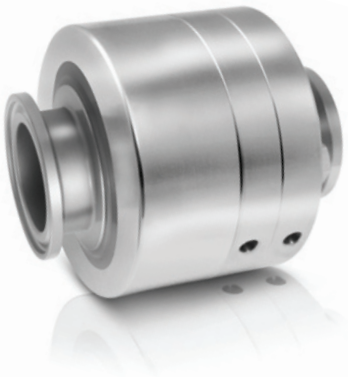


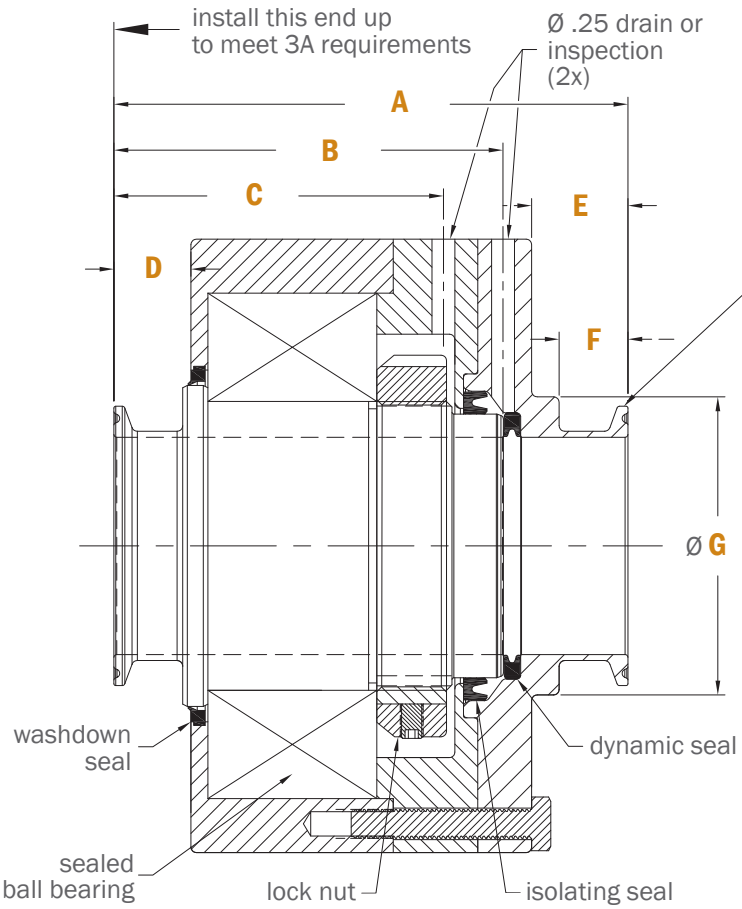


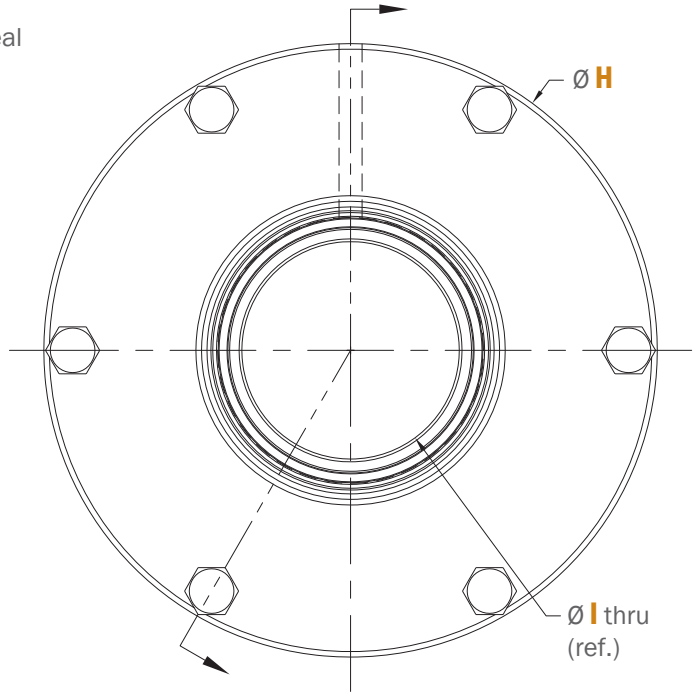


P/N	SCS-610010 [SCSM-610010]
A	5.61" [142.4mm]
B	4.24" [107.8mm]
C	3.59" [91.3mm]
D	0.84" [21.3mm]
E	1.05" [26.7mm]
F	0.75" [19.1mm]
G	3.25" [82.6mm]
H	6.69" [169.9mm]
I	2.37" [66.0mm]

SCS 3" Connection: Dimensions



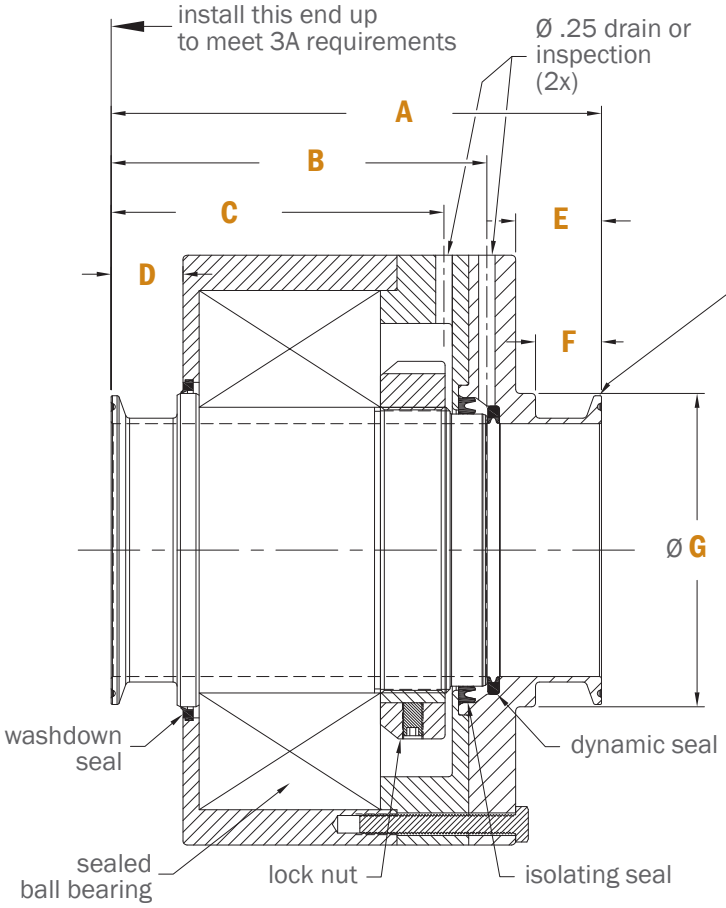


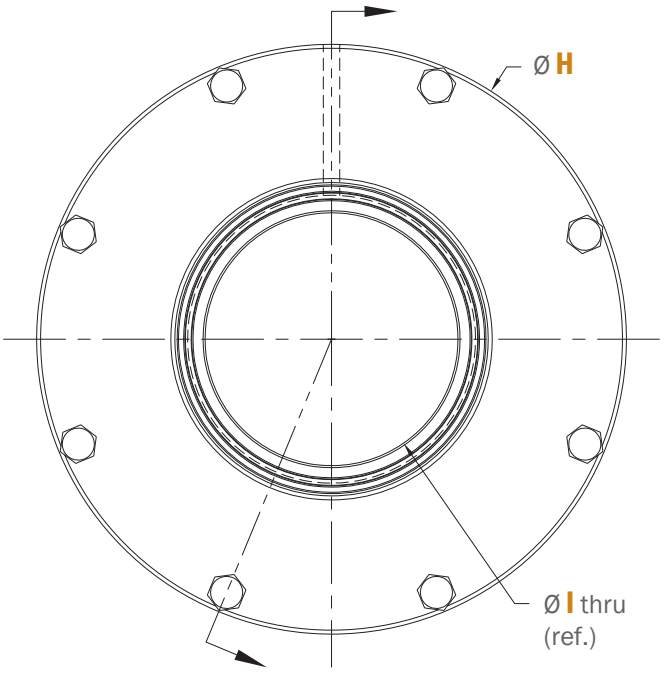


P/N	SCS-611010 [SCSM-611010]
A	6.81" [173.1mm]
B	5.20" [132.1mm]
C	4.56" [115.8mm]
D	1.09" [27.7mm]
E	1.30" [33.0mm]
F	1.00" [25.4mm]
G	3.75" [95.3mm]
H	7.94" [201.7mm]
I	2.87" [81.0mm]

SCS SERIES

SCS 4" Connection: Dimensions





P/N	SCS-613010 [SCSM-613010]
A	7.43" [188.8mm]
B	5.70" [144.7mm]
C	5.05" [128.2mm]
D	1.09" [27.7mm]
E	1.30" [33.0mm]
F	1.00" [25.4mm]
G	4.75" [120.7mm]
H	8.94" [227.1mm]
I	3.83" [100.0mm]

Installation & Mounting

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

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:

As this device is mounted in line between two pipes, alignment of the pipes is critical. These pipes may have a wide variation of temperature during normal operation and cleaning, some flexibility must be included in the installation to absorb thermal expansion of the piping system. The sanitary flanged connections are the "torque arm" in this design. Make sure fittings are tight.

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.

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.

SCS SERIES

Notes

Proven Expertise. Trusted Solutions.

Adhering to stringent quality assurance procedures and verification processes, our team designs and manufactures purpose-built rotary union and electrical slip ring products tailored to meet application-specific performance requirements.

DSTI has partnered with GE, NASA, 3M, Halliburton, the U.S. Army and numerous other organizations and fortune 500 companies – with hundreds of unique and specialized designs successfully operating in a diverse range of critical environments and applications.

Did You Know?

» All Design, Manufacturing, Inspection, Assembly, & Testing are Performed In-House

ISO 9001:2008

Engineered to your Needs

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 specialized solutions, please visit:

www.dsti.com/industries

DSTI

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