

# K-PORT

Metal Port Seal Technology



The K-Port seal is designed to prevent fluid leakage and/or pressure loss between a fitting (per AS-933; supercedes MS-33656) and a connection port (per AS-5202; supercedes MS-33649).

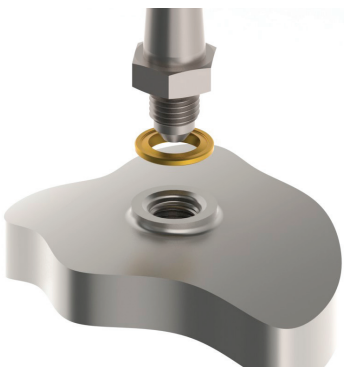
The K-Port seal design was optimized in house by our expert engineering staff and analyzed through FEA, burst pressure testing and leak testing. It is designed to function under extreme temperatures over a wide pressure range.

The K-Port seal design has been qualified for space flight and is also used in cryogenic and high temperature applications. This seal can be found in various gas, solid and liquid fuel delivery hardware such as nozzles, AN fittings, sensors, instrumentation and valves.

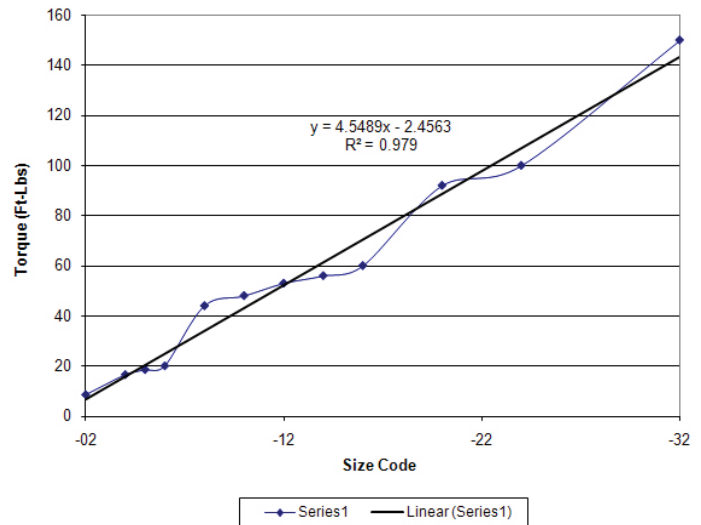
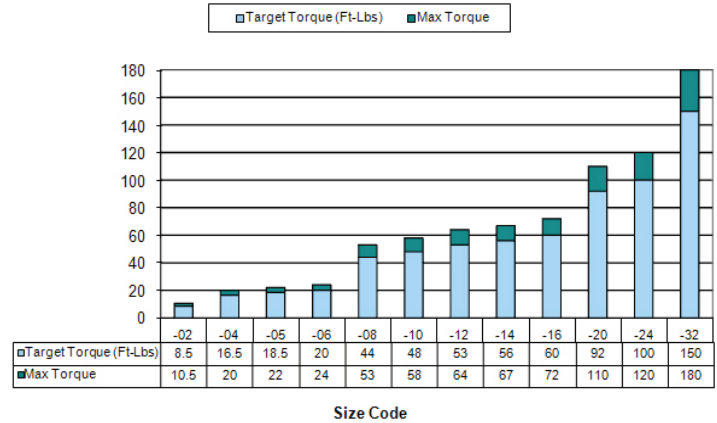
## TECHNICAL INFORMATION

Suggested torque for pressure up to 3000 P.S.I. for boss seals manufactured from X-750 or A-286 with Gold Plating at LN2 and Room Temperatures.

These torque values were tested on AS5202/AS933 Control designed hardware machined from SS316.



## PORT SEAL TORQUE CHARTS



Size Code	Seal Dimension Outer Diameter	Seal Dimension Inner Diameter
-02	0.562	0.325
-03	0.625	0.387
-04	0.688	0.451
-05	0.750	0.514
-06	0.812	0.577
-07	0.875	0.640
-08	1.000	0.766
-09	1.062	0.829
-10	1.125	0.893
-11	1.325	1.020
-12	1.403	1.083
-14	1.531	1.208
-16	1.656	1.333
-18	1.844	1.521
-20	1.970	1.645
-24	2.245	1.895
-28	2.656	2.270
-32	2.938	2.521

METAL PORT SEALING TECHNOLOGY



Part Number Prefix	Base Material	Plating/Coating	Pressure Limit	Temperature Limit	Surface Finish
F-400455-Size Code	SS 304	PTFE	3500*	450°F	32 rms or better
F-400617-Size Code	SS 304	Silver	3500*	700°F	16 rms or better
F-400521-Size Code	SS 304	Gold	3500*	700°F	16 rms or better
F-400623-Size Code	17-4 PH	PTFE	3500*	450°F	32 rms or better
F-400456-Size Code	17-4 PH	Gold	3500*	900°F	16 rms or better
F-400458-Size Code	A286	PTFE	3500*	450°F	32 rms or better
F-400421-Size Code	A286	Gold	3500*	1000°F	16 rms or better
F-400616-Size Code	A286	Silver	3500*	800°F	16 rms or better
F-400413-Size Code	Alloy X-750	PTFE	3500*	450°F	32 rms or better
F-400440-Size Code	Alloy X-750	Silver	3500*	800°F	16 rms or better
F-400422-Size Code	Alloy X-750	Gold	3500*	1400°F	16 rms or better

\* Pressure Limit on all seals is much higher than 3500 psi; however, special hardware is required.  
 Size Code is tubing Outer Diameter in sixteenths of an inch

# APPLICATIONS DATA SHEET

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E-Mail: sales@technetics.com



EnPro Industries companies

COMPANY:	PHONE:
CONTACT:	FAX:
ADDRESS:	E-MAIL:
	DATE:

## APPLICATION: (please attach customer drawing / sketch)

Brief Description: \_\_\_\_\_

Annual quantities: \_\_\_\_\_ RFQ Quantities: \_\_\_\_\_

Is This a New Design?  Yes  No Are Modifications Possible?  Yes  No

Drawing or Sketch Attached?  Yes  No What is the Seal Type?  Shaped  Circular

## SERVICE CONDITIONS:

Media: _____	Life Expectancy: _____
Working Temperature: _____	Max/Proof Pressure: _____ @ Temp. = _____
Working Pressure: _____	Max Temperature: _____ @ Pressure = _____
Pressure Direction: <small>(Internal/External/Axial)</small> _____	<b>Target Sealing Level:</b> Helium: _____ Std.cc/sec
Pressure Cycles: _____	Flow Rate: _____ cc/minute
Temperature Cycles: _____	Other: _____

## FLANGE DETAILS: (Please Provide Drawing)

Amount of Flange Movement in Service: (Inches) Radial: \_\_\_\_\_ Axial: \_\_\_\_\_ #Cycles: \_\_\_\_\_

Material: \_\_\_\_\_ Thickness: \_\_\_\_\_

Groove / Counter Bore: \_\_\_\_\_ Please list dimensions in Groove Details section

ANSI Raised Face Size: \_\_\_\_\_ # Rating: \_\_\_\_\_ Face Surface Finish: \_\_\_\_\_ (RMS)

Flange(s) with Clamping System: (ISO,KF, etc) Standard: \_\_\_\_\_ Size: \_\_\_\_\_

Other: \_\_\_\_\_ Description: \_\_\_\_\_ (Please Provide Drawing)

## GROOVE DETAILS: (Please Provide Drawing)

Type (Rectangular, Dovetail, etc.): \_\_\_\_\_

Outer Diameter: _____ Tolerance: _____	Depth: _____ Tolerance: _____
Inner Diameter: _____ Tolerance: _____	Finish (RMS) _____ Type: _____

Finish Type: lathe (circular), endmill (multi-directional), other

## BOLTING DETAILS: (Please Provide Drawing)

Size: _____	Type / Grade: _____
Number: _____ Bolt Circle _____	Tapped / Through: _____

## OTHER:

Special coating / plating specification: \_\_\_\_\_

Special quality / inspection specifications: \_\_\_\_\_

Other: \_\_\_\_\_