



Hydraulic
Power to Fluid

FITTINGS



Excellent Quality and Technical Expertise

Protec is a specialized manufacturer and exporter of hydraulic components for the global construction, mining, agricultural machinery, and heavy equipment industries.

Protec supplies high-quality hydraulic fittings that are meticulously manufactured in compliance with international standards. Our products adhere to globally recognized standards such as Dynamic BSP, JIC, SAE, JIS, ISO, and DIN, and can also be tailored to meet specific customer requirements, thereby fostering trust and satisfaction among our customers.

With a focus on technical innovation and research and development, we operate automated facilities capable of handling both small and large-batches' orders. Additionally, we run a dedicated sample line for rapid production of specialized products, enabling us to meet customer demands with greater efficiency and satisfaction.

Protec is ready to become a global leader based on its superior quality and technological expertise. Through continuous quality improvement initiatives and customer-centric management, we strive to provide enhanced services and ensure maximum customer satisfaction.



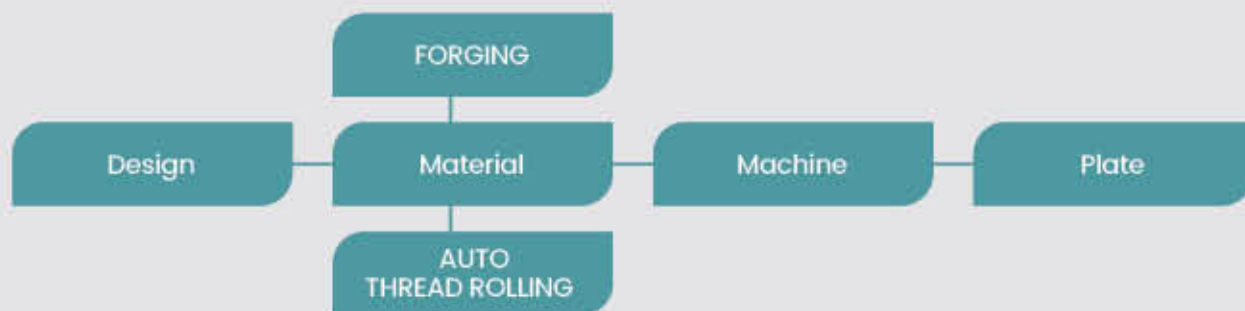
Certificate



Manufacturing process



Product System



37° Face Tube Fittings

Part. 01

Specifications

JIC fittings are made in accordance with SAE J514 standards. The JIC stands for Joint Industry Council.

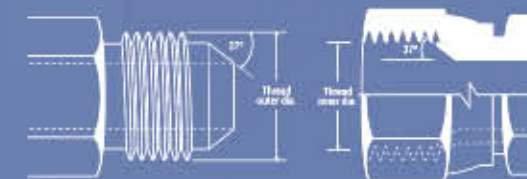
It is also known as the JIC 37 degrees flare fitting because it has a 37 degrees flare seating surface.

These fittings are used on oil hydraulic systems in many fields (fuel delivery, fuel power application, shipbuilding, mobile hydraulic equipment, etc).

A JIC fitting system has three components that make a tubing assembly: fitting, flare nut, and sleeve.

Features

- Size Range: 1/4" to 2-1/2"
- Design Standard: SAE J514/ISO 8434-2
- Material: Steel/Stainless / Brass
- Working Pressure: Up to 430 Bar
- Working Temperature
 - for carbon steel fittings: from -20°C to +120°C
 - for stainless steel fittings: from -60°C to +200°C



37°Face Tube Fittings Index

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ProtecSS-90

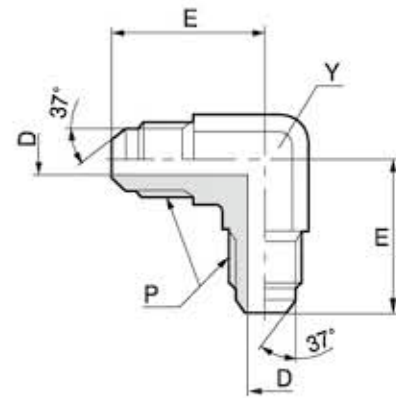
Flare tube end / Flare tube end

SAE 070201 MS51505

Part Number Information

Body only

All dimensions are in inches



PART NO	P (UNF/UN)	E	D	Y
ProtecSS-90-04-04	7/16-20	0.89	0.172	7/16
ProtecSS-90-05-05	1/2-20	0.95	0.234	9/16
ProtecSS-90-06-06	9/16-18	1.06	0.297	9/16
ProtecSS-90-08-08	3/4-16	1.25	0.391	3/4
ProtecSS-90-10-10	7/8-14	1.45	0.484	7/8
ProtecSS-90-12-12	1 1/16-12	1.66	0.609	1 1/16
ProtecSS-90-14-14	1 3/16-12	1.80	0.719	1 5/16
ProtecSS-90-16-16	1 5/16-12	1.81	0.844	1 5/16
ProtecSS-90-20-20	1 5/8-12	2.06	1.078	1 5/8
ProtecSS-90-24-24	1 7/8-12	2.33	1.312	1 7/8

ProtecSS-T3

Flare tube end (all three ends)

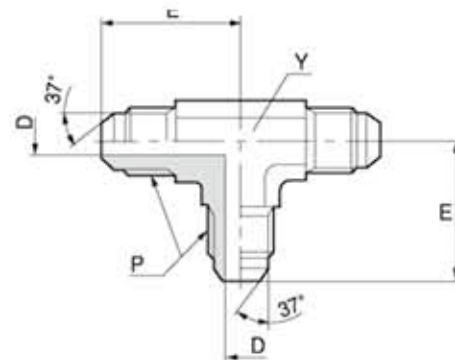
SAE 070401

MS51510

Part Number Information

Body only

All dimensions are in inches



PART NO	P (UNF/UN)	E	D	Y
ProtecSS-T3-04-04	7/16-20	0.89	0.172	7/16
ProtecSS-T3-05-05	1/2-20	0.95	0.234	9/16
ProtecSS-T3-06-06	9/16-18	1.06	0.297	9/16
ProtecSS-T3-08-08	3/4-16	1.25	0.391	3/4
ProtecSS-T3-10-10	7/8-14	1.45	0.484	7/8
ProtecSS-T3-12-12	1 1/16-12	1.66	0.609	1 1/16
ProtecSS-T3-14-14	1 3/16-12	1.80	0.719	1 5/16
ProtecSS-T3-16-16	1 5/16-12	1.81	0.844	1 5/16
ProtecSS-T3-20-20	1 5/8-12	2.06	1.078	1 5/8
ProtecSS-T3-24-24	1 7/8-12	2.33	1.312	1 7/8

ProtecSS-C4

Flare tube end (all four ends)

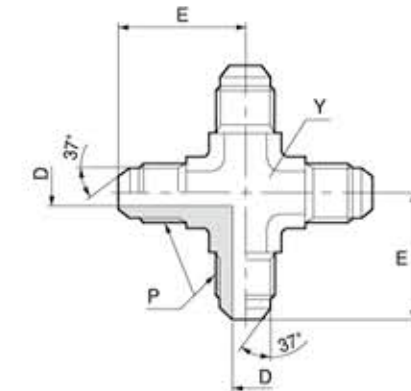
SAE 070501

MS51517

Part Number Information

Body only

All dimensions are in inches



PART NO	P (UNF/UN)	E	D	Y
ProtecSS-C4-04-04-04	7/16-20	0.89	0.172	7/16
ProtecSS-C4-05-05-05	1/2-20	0.95	0.234	9/16
ProtecSS-C4-06-06-06	9/16-18	1.06	0.297	9/16
ProtecSS-C4-08-08-08	3/4-16	1.25	0.391	3/4
ProtecSS-C4-10-10-10	7/8-14	1.45	0.484	7/8
ProtecSS-C4-12-12-12	1 1/16-12	1.66	0.609	1 1/16
ProtecSS-C4-16-16-16	1 5/16-12	1.81	0.844	1 5/16

ProtecSS

Flare tube end / Flare tube end

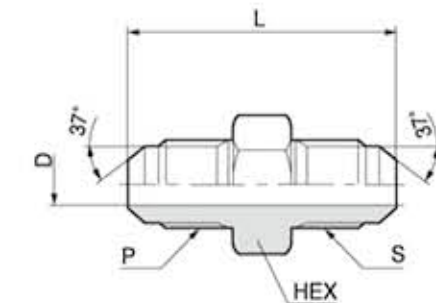
SAE 070101

MS51501

Part Number Information

Body only

All dimensions are in inches



PART NO	P (UNF/UN)	S (UNF/UN)	HEX	L	D
ProtecSS-04-04	7/16-20	7/16-20	1/2	1.37	0.172
ProtecSS-05-05	1/2-20	1/2-20	9/16	1.37	0.234
ProtecSS-06-06	9/16-18	9/16-18	5/8	1.41	0.297
ProtecSS-08-08	3/4-16	3/4-16	13/16	1.62	0.391
ProtecSS-10-10	7/8-14	7/8-14	15/16	1.88	0.484
ProtecSS-12-12	1 1/16-12	1 1/16-12	1 1/8	2.16	0.609
ProtecSS-14-14	1 3/16-12	1 3/16-12	1 1/4	2.22	0.718
ProtecSS-16-16	1 5/16-12	1 5/16-12	1 3/8	2.25	0.844
ProtecSS-20-20	1 5/8-12	1 5/8-12	1 11/16	2.44	1.078
ProtecSS-24-24	1 7/8-12	1 7/8-12	2	2.75	1.312

ProtecSS-SL

Flare tube end/ Flare tube end

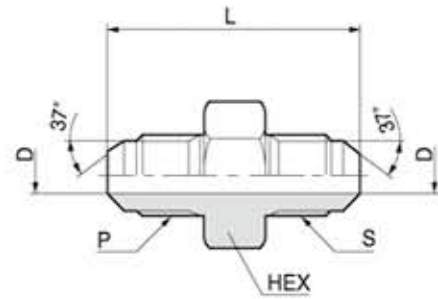
SAE 070119

MS51519

Part Number Information

Body only

All dimensions are in inches



PART NO	P (UNF/UN)	S (UNF/UN)	HEX	L	D
ProtecSS-SL-04-04	7/16-20	7/16-20	11/16	1.37	0.172
ProtecSS-SL-05-05	1/2-20	1/2-20	3/4	1.38	0.234
ProtecSS-SL-06-06	9/16-18	9/16-18	13/16	1.41	0.297
ProtecSS-SL-08-08	3/4-16	3/4-16	1	1.62	0.391
ProtecSS-SL-10-10	7/8-14	7/8-14	1 1/8	1.88	0.484
ProtecSS-SL-12-12	1 1/16-12	1 1/16-12	1 3/8	2.16	0.609
ProtecSS-SL-16-16	1 5/16-12	1 5/16-12	1 5/8	2.25	0.844

ProtecSW-90

Flare tube end / Straight thread O-ring

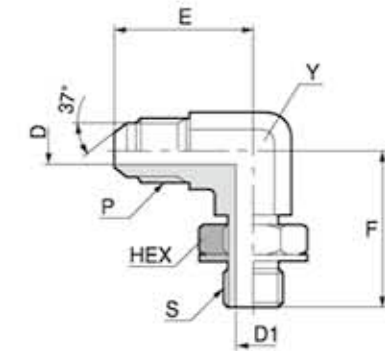
SAE 070220

MS51527

Part Number Information

Body with nut and washer, O-ring

All dimensions are in inches



PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	D1	HEX	Y
ProtecSW-90-04-04	7/16-20	7/16-20	0.89	1.03	0.172	0.172	9/16	7/16
ProtecSW-90-04-06	7/16-20	9/16-18	1.05	1.25	0.172	0.297	11/16	9/16
ProtecSW-90-05-04	1/2-20	7/16-20	0.95	1.13	0.234	0.172	9/16	9/16
ProtecSW-90-05-05	1/2-20	1/2-20	0.95	1.13	0.234	0.234	5/8	9/16
ProtecSW-90-05-06	1/2-20	9/16-18	0.94	1.25	0.234	0.297	11/16	9/16
ProtecSW-90-06-04	9/16-18	7/16-20	1.06	1.19	0.297	0.172	9/16	9/16
ProtecSW-90-06-05	9/16-18	1/2-20	1.06	1.19	0.297	0.234	5/8	9/16
ProtecSW-90-06-06	9/16-18	9/16-18	1.06	1.25	0.297	0.297	11/16	9/16
ProtecSW-90-06-08	9/16-18	3/4-16	1.14	1.45	0.297	0.391	7/8	3/4
ProtecSW-90-06-10	9/16-18	7/8-14	1.23	1.7	0.297	0.484	1	7/8
ProtecSW-90-08-06	3/4-16	9/16-18	1.25	1.36	0.391	0.297	11/16	3/4
ProtecSW-90-08-08	3/4-16	3/4-16	1.25	1.45	0.391	0.391	7/8	3/4
ProtecSW-90-08-10	3/4-16	7/8-14	1.34	1.7	0.391	0.484	1	7/8
ProtecSW-90-08-12	3/4-16	1 1/16-12	1.42	1.94	0.391	0.609	1 1/4	1 1/16
ProtecSW-90-10-06	7/8-14	9/16-18	1.45	1.41	0.484	0.297	1 1/16	7/8
ProtecSW-90-10-08	7/8-14	3/4-16	1.45	1.55	0.484	0.391	7/8	7/8
ProtecSW-90-10-10	7/8-14	7/8-14	1.45	1.7	0.484	0.484	1	7/8
ProtecSW-90-10-12	7/8-14	1 1/16-12	1.53	1.94	0.484	0.609	1 1/4	1 1/16
ProtecSW-90-12-08	1 1/16-12	3/4-16	1.66	1.63	0.609	0.391	7/8	1 1/16
ProtecSW-90-12-10	1 1/16-12	7/8-14	1.66	1.78	0.609	0.484	1	1 1/16
ProtecSW-90-12-12	1 1/16-12	1 1/16-12	1.66	1.94	0.609	0.609	1 1/4	1 1/16
ProtecSW-90-12-14	1 1/16-12	1 3/16-12	1.77	2	0.609	0.718	1 3/8	1 5/16
ProtecSW-90-12-16	1 1/16-12	1 5/16-12	1.81	2.05	0.609	0.844	1 1/2	1 5/16
ProtecSW-90-14-14	1 3/16-12	1 3/16-12	1.8	2	0.718	0.718	1 3/8	1 5/16
ProtecSW-90-16-12	1 5/16-12	1 1/16-12	1.81	2.05	0.844	0.609	1 1/4	1 5/16
ProtecSW-90-16-14	1 5/16-12	1 3/16-12	1.81	2.07	0.844	0.718	1 3/8	1 5/16
ProtecSW-90-16-16	1 5/16-12	1 5/16-12	1.81	2.05	0.844	0.844	1 1/2	1 5/16
ProtecSW-90-16-20	1 5/16-12	1 5/8-12	2.01	2.25	0.844	1.078	1 7/8	1 5/8
ProtecSW-90-20-16	1 5/8-12	1 5/16-12	2.06	2.25	1.078	0.844	1 1/2	1 5/8
ProtecSW-90-20-20	1 5/8-12	1 5/8-12	2.06	2.25	1.078	1.078	1 7/8	1 5/8
ProtecSW-90-20-24	1 5/8-12	1 7/8-12	2.2	2.39	1.078	1.312	2 1/8	1 7/8
ProtecSW-90-24-20	1 7/8-12	1 5/8-12	2.33	2.39	1.312	1.078	1 7/8	1 7/8
ProtecSW-90-24-24	1 7/8-12	1 7/8-12	2.33	2.39	1.312	1.312	2 1/8	1 7/8

ProtecSW-45

Flare tube end/ Straight thread O-ring

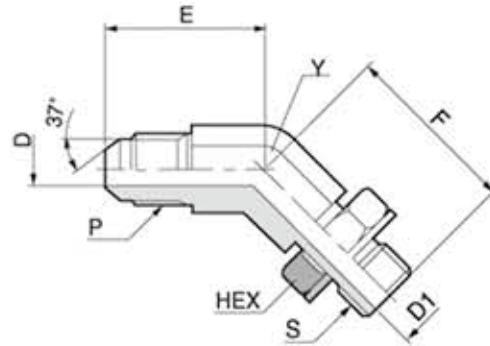
SAE 070320

MS51528

Part Number Information

Body with nut and washer, O-ring

All dimensions are in inches



PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	D1	HEX	Y
ProtecSW-45-04-04	7/16-20	7/16-20	0.72	1.05	0.172	0.172	9/16	7/16
ProtecSW-45-05-05	1/2-20	1/2-20	0.77	1.05	0.234	0.234	5/8	9/16
ProtecSW-45-06-06	9/16-18	9/16-18	0.83	1.14	0.297	0.297	11/16	9/16
ProtecSW-45-06-08	9/16-18	3/4-16	0.86	1.3	0.297	0.391	7/8	3/4
ProtecSW-45-08-08	3/4-16	3/4-16	0.98	1.3	0.391	0.391	7/8	3/4
ProtecSW-45-08-10	3/4-16	7/8-14	1	1.52	0.391	0.484	1	7/8
ProtecSW-45-10-10	7/8-14	7/8-14	1.11	1.52	0.484	0.484	1	7/8
ProtecSW-45-12-12	1 1/16-12	1 1/16-12	1.28	1.73	0.609	0.609	1 1/4	1 1/16
ProtecSW-45-12-10	1 1/16-12	7/8-14	1.28	1.73	0.609	0.484	1	1 1/16
ProtecSW-45-14-14	1 3/16-12	1 3/16-12	1.45	1.86	0.719	0.719	1 3/8	1 5/16
ProtecSW-45-16-16	1 5/16-12	1 5/16-12	1.47	1.86	0.844	0.844	1 1/2	1 5/16
ProtecSW-45-20-20	1 5/8-12	1 5/8-12	1.59	1.91	1.078	1.078	1 7/8	1 5/8
ProtecSW-45-24-24	1 7/8-12	1 7/8-12	1.78	1.91	1.312	1.312	2 1/8	1 7/8

ProtecSW-TC

Flare tube ends/ Straight thread O-ring

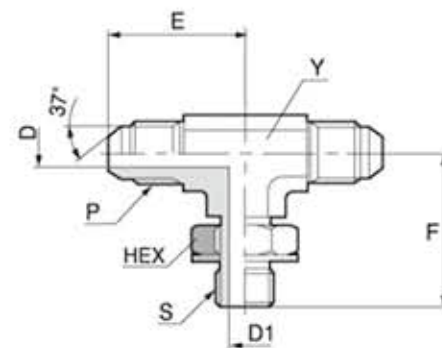
SAE 070429

MS51529

Part Number Information

Body with nut and washer, O-ring

All dimensions are in inches



PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	D1	HEX	Y
ProtecSW-TC-04-04-04	7/16-20	7/16-20	0.89	1.03	0.172	0.172	9/16	7/16
ProtecSW-TC-05-05-05	1/2-20	1/2-20	0.95	1.13	0.234	0.234	5/8	9/16
ProtecSW-TC-06-06-06	9/16-18	9/16-18	1.06	1.25	0.297	0.297	11/16	9/16
ProtecSW-TC-08-08-08	3/4-16	3/4-16	1.25	1.45	0.391	0.391	7/8	3/4
ProtecSW-TC-10-10-10	7/8-14	7/8-14	1.45	1.7	0.484	0.484	1	7/8
ProtecSW-TC-12-12-12	1 1/16-12	1 1/16-12	1.66	1.94	0.609	0.609	1 1/4	1 1/16
ProtecSW-TC-16-16-16	1 5/16-12	1 5/16-12	1.81	2.05	0.844	0.844	1 1/2	1 5/16

ProtecSW-TR

Flare tube ends/ Straight thread O-ring

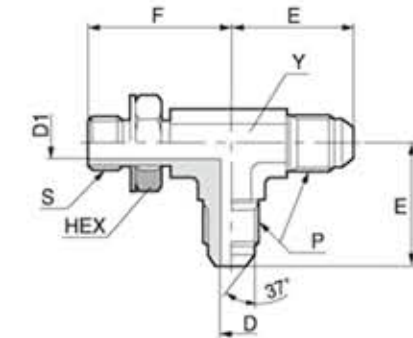
SAE 070428

MS51530

Part Number Information

Body with nut and washer, O-ring

All dimensions are in inches



PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	D1	HEX	Y
ProtecSW-TR-04-04-04	7/16-20	7/16-20	0.89	1.03	0.172	0.172	9/16	7/16
ProtecSW-TR-05-05-05	1/2-20	1/2-20	0.95	1.13	0.234	0.234	5/8	9/16
ProtecSW-TR-06-06-06	9/16-18	9/16-18	1.06	1.25	0.297	0.297	11/16	9/16
ProtecSW-TR-08-08-08	3/4-16	3/4-16	1.25	1.45	0.391	0.391	7/8	3/4
ProtecSW-TR-10-10-10	7/8-14	7/8-14	1.45	1.7	0.484	0.484	1	7/8
ProtecSW-TR-12-12-12	1 1/16-12	1 1/16-12	1.66	1.94	0.609	0.609	1 1/4	1 1/16
ProtecSW-TR-16-16-16	1 5/16-12	1 5/16-12	1.81	2.05	0.844	0.844	1 1/2	1 5/16
ProtecSW-TR-20-20-20	1 5/8-12	1 5/8-12	2.06	2.25	1.078	1.078	1 7/8	1 5/8
ProtecSW-TR-24-24-24	1 7/8-12	1 7/8-12	2.33	2.39	1.312	1.312	2 1/8	1 7/8

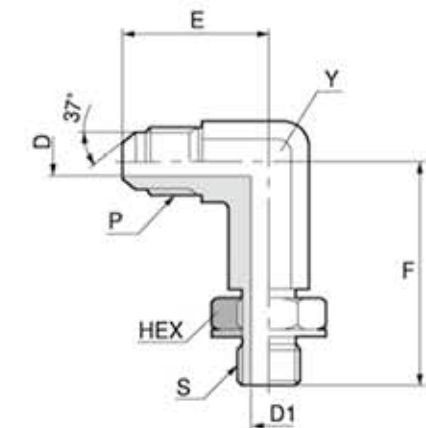
ProtecSW-9L

Flare tube end/ Straight thread O-ring

Part Number Information

Body with nut and washer, O-ring

All dimensions are in inches



PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	D1	HEX	Y
ProtecSW-9L-04-04	7/16-20	7/16-20	1	1.73	0.172	0.172	9/16	9/16
ProtecSW-9L-06-06	9/16-18	9/16-18	1.06	2.08	0.297	0.297	11/16	9/16
ProtecSW-9L-08-08	3/4-16	3/4-16	1.25	2.5	0.391	0.391	7/8	7/8
ProtecSW-9L-10-10	7/8-14	7/8-14	1.45	2.89	0.484	0.484	1	7/8
ProtecSW-9L-12-12	1 1/16-12	1 1/16-12	1.66	3.34	0.609	0.609	1 1/4	1 1/16
ProtecSW-9L-16-16	1 5/16-12	1 5/16-12	1.81	3.72	0.844	0.844	1 1/2	1 5/16

ProtecSB

Flare tube end/ Straight thread O-ring

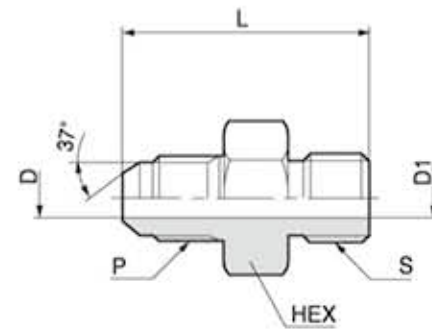
SAE 070120

MS51525

Part Number Information

Body with O-ring

All dimensions are in inches



PART NO	P (UNF/UN)	S (UNF/UN)	HEX	L	D	D1
ProtecSB-04-04	7/16-20	7/16-20	9/16	1.23	0.172	0.172
ProtecSB-04-06	7/16-20	9/16-18	11/16	1.30	0.172	0.172
ProtecSB-04-08	7/16-20	3/4-16	7/8	1.38	0.172	0.391
ProtecSB-04-10	7/16-20	7/8-14	1	1.49	0.172	0.172
ProtecSB-05-04	1/2-20	7/16-20	9/16	1.23	0.234	0.172
ProtecSB-05-05	1/2-20	1/2-20	5/8	1.23	0.234	0.234
ProtecSB-05-06	1/2-20	9/16-18	11/16	1.30	0.234	0.234
ProtecSB-05-08	1/2-20	3/4-16	7/8	1.37	0.234	0.234
ProtecSB-06-04	9/16-18	7/16-20	5/8	1.27	0.297	0.172
ProtecSB-06-06	9/16-18	9/16-18	11/16	1.30	0.297	0.297
ProtecSB-06-08	9/16-18	3/4-16	7/8	1.30	0.297	0.297
ProtecSB-06-10	9/16-18	7/8-14	1	1.50	0.297	0.297
ProtecSB-06-12	9/16-18	1 1/16-12	1 1/4	1.66	0.297	0.609
ProtecSB-08-06	3/4-16	9/16-18	7/8	1.46	0.391	0.297
ProtecSB-08-08	3/4-16	3/4-16	7/8	1.48	0.391	0.391
ProtecSB-08-10	3/4-16	7/8-14	1	1.54	0.391	0.391
ProtecSB-08-12	3/4-16	1 1/16-12	1 1/4	1.77	0.391	0.391
ProtecSB-10-06	7/8-14	9/16-18	11/16	1.17	0.484	0.297
ProtecSB-10-08	7/8-14	3/4-16	1	1.58	0.484	0.391
ProtecSB-10-10	7/8-14	7/8-14	1	1.70	0.484	0.484
ProtecSB-10-12	7/8-14	1 1/16-12	1 1/4	1.86	0.484	0.484
ProtecSB-10-16	7/8-14	1 5/16-12	1 1/2	1.89	0.484	0.484
ProtecSB-12-08	1 1/16-12	3/4-16	1 1/4	1.78	0.609	0.391
ProtecSB-12-10	1 1/16-12	7/8-14	1 1/8	1.77	0.609	0.484
ProtecSB-12-12	1 1/16-12	1 1/16-12	1 1/4	1.97	0.609	0.609
ProtecSB-12-14	1 1/16-12	1 3/16-12	1 3/8	1.96	0.609	0.609
ProtecSB-12-16	1 1/16-12	1 5/16-12	1 1/2	1.93	0.609	0.609
ProtecSB-14-14	1 3/16-12	1 3/16-12	1 3/8	1.99	0.719	0.719
ProtecSB-14-16	1 3/16-12	1 5/16-12	1 1/2	2.02	0.719	0.844
ProtecSB-16-10	1 5/16-12	7/8-14	1 1/2	2.08	0.844	0.484
ProtecSB-16-12	1 5/16-12	1 1/16-12	1 1/2	1.97	0.844	0.609
ProtecSB-16-14	1 5/16-12	1 3/16-12	1 1/2	2.08	0.844	0.719
ProtecSB-16-16	1 5/16-12	1 5/16-12	1 1/2	2.04	0.844	0.844
ProtecSB-20-20	1 5/8-12	1 5/8-12	1 7/8	2.17	1.078	1.078
ProtecSB-24-24	1 7/8-12	1 7/8-12	2 1/4	2.37	1.312	1.312

ProtecSB-SL

Flare tube end / Straight thread O-ring

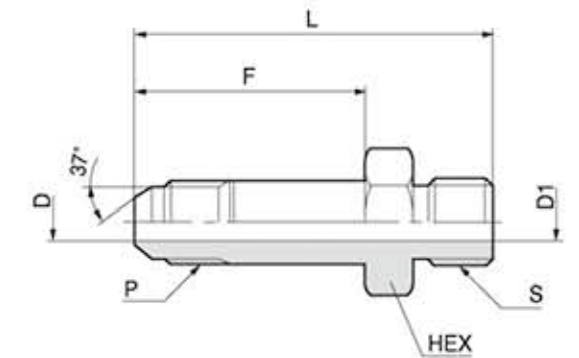
SAE 070122

MS51526

Part Number Information

Body with O-ring

All dimensions are in inches



PART NO	P (UNF/UN)	S (UNF/UN)	HEX	L	F	D	D1
ProtecSB-SL-04-04	7/16-20	7/16-20	9/16	2.08	1.39	0.172	0.172
ProtecSB-SL-06-06	9/16-18	9/16-18	11/16	2.31	1.56	0.297	0.297
ProtecSB-SL-08-08	3/4-16	3/4-16	7/8	2.7	1.88	0.391	0.391
ProtecSB-SL-10-10	7/8-14	7/8-14	1	3.04	2.09	0.484	0.484
ProtecSB-SL-12-12	1 1/16-12	1 1/16-12	1 1/4	3.61	2.5	0.609	0.609
ProtecSB-SL-16-16	1 5/16-12	1 5/16-12	1 1/2	3.98	2.84	0.844	0.844
ProtecSB-SL-20-20	1 5/8-12	1 5/8-12	1 7/8	4.69	3.47	1.078	1.078

ProtecSN-90

Flare tube end/ Male pipe end

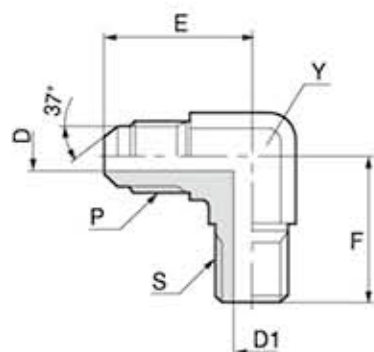
SAE 070202

MS51504

Part Number Information

Body only

All dimensions are in inches



PART NO	P (UNF/UN)	S (PT/NPT)	E	F	D	D1	Y
ProtecSN-90-04-02	7/16-20	1/8-27	0.89	0.78	0.172	0.188	7/16
ProtecSN-90-04-04	7/16-20	1/4-18	1.05	1.09	0.172	0.281	9/16
ProtecSN-90-04-06	7/16-21	3/8-18	1.13	1.22	0.172	0.406	3/4
ProtecSN-90-05-02	1/2-20	1/8-27	0.95	0.78	0.234	0.188	9/16
ProtecSN-90-05-04	1/2-20	1/4-18	1.06	1.09	0.234	0.281	9/16
ProtecSN-90-06-04	9/16-18	1/4-18	1.06	1.09	0.297	0.281	9/16
ProtecSN-90-06-06	9/16-18	3/8-18	1.14	1.22	0.297	0.406	3/4
ProtecSN-90-06-08	9/16-18	1/2-14	1.22	1.44	0.297	0.531	7/8
ProtecSN-90-08-04	3/4-16	1/4-18	1.25	1.16	0.391	0.281	3/4
ProtecSN-90-08-06	3/4-16	3/8-18	1.25	1.22	0.391	0.406	3/4
ProtecSN-90-08-08	3/4-16	1/2-14	1.33	1.47	0.391	0.531	7/8
ProtecSN-90-08-12	3/4-16	3/4-14	1.42	1.59	0.391	0.719	1 1/16
ProtecSN-90-10-06	7/8-14	3/8-14	1.45	1.3	0.484	0.406	7/8
ProtecSN-90-10-08	7/8-14	1/2-14	1.45	1.47	0.484	0.531	7/8
ProtecSN-90-10-12	7/8-14	3/4-14	1.53	1.59	0.484	0.719	1 1/16
ProtecSN-90-12-08	1 1/16-12	1/2-14	1.66	1.59	0.609	0.531	1 1/16
ProtecSN-90-12-12	1 1/16-12	3/4-14	1.66	1.59	0.609	0.719	1 1/16
ProtecSN-90-12-16	1 1/16-12	1-11 1/2	1.76	1.97	0.609	0.938	1 5/16
ProtecSN-90-14-12	1 3/16-12	3/4-12	1.8	1.69	0.719	0.719	1 5/16
ProtecSN-90-16-12	1 5/16-12	3/4-14	1.81	1.72	0.844	0.719	1 5/16
ProtecSN-90-16-16	1 5/16-12	1-11 1/2	1.81	1.97	0.844	0.938	1 5/16
ProtecSN-90-16-20	1 5/16-12	1 1/4-11 1/2	2.13	2.38	0.844	1.25	1 5/8
ProtecSN-90-20-16	1 5/8-12	1-11 1/2	2.06	2.06	1.078	0.938	1 5/8
ProtecSN-90-20-20	1 5/8-12	1 1/4-11 1/2	2.06	2.38	1.078	1.25	1 5/8
ProtecSN-90-24-24	1 7/8-12	1 1/2-11 1/2	2.33	2.64	1.312	1.5	1 7/8

ProtecSN-45

Flare tube end / Male pipe end

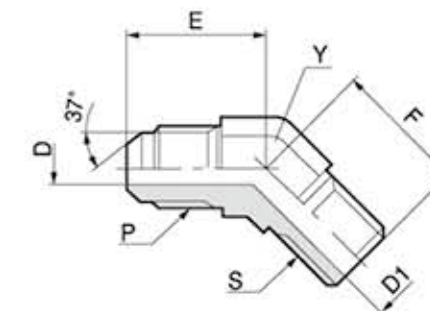
SAE 070302

MS51508

Part Number Information

Body only

All dimensions are in inches

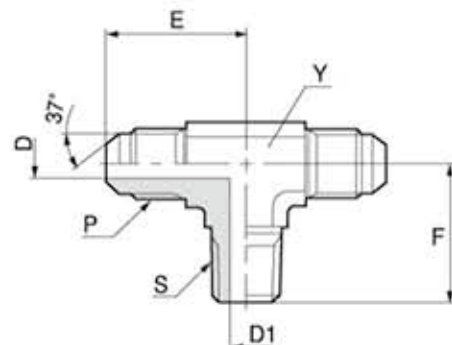


PART NO	P (UNF/UN)	S (NPT)	E	F	D	D1	Y
ProtecSN-45-04-02	7/16-20	1/8-27	0.72	0.64	0.172	0.188	7/16
ProtecSN-45-04-04	7/16-20	1/4-18	0.82	0.86	0.172	0.281	9/16
ProtecSN-45-05-02	1/2-20	1/8-27	0.77	0.64	0.234	0.188	9/16
ProtecSN-45-05-04	1/2-20	1/4-18	0.82	0.86	0.234	0.281	9/16
ProtecSN-45-06-04	9/16-18	1/4-18	0.83	0.86	0.297	0.281	9/16
ProtecSN-45-06-06	9/16-18	3/8-18	0.87	0.95	0.297	0.406	3/4
ProtecSN-45-06-08	9/16-18	1/2-14	1.06	1.17	0.297	0.531	7/8
ProtecSN-45-08-04	3/4-16	1/4-18	0.98	0.95	0.391	0.281	3/4
ProtecSN-45-08-06	3/4-16	3/8-18	0.98	0.95	0.391	0.406	3/4
ProtecSN-45-08-08	3/4-16	1/2-14	0.99	1.17	0.391	0.531	7/8
ProtecSN-45-08-12	3/4-16	3/4-14	1.18	1.2	0.391	0.719	1 1/16
ProtecSN-45-10-06	7/8-14	3/8-14	1.11	0.98	0.484	0.406	7/8
ProtecSN-45-10-10	7/8-14	1/2-14	1.11	1.17	0.484	0.531	7/8
ProtecSN-45-10-12	7/8-14	3/4-14	1.28	1.2	0.484	0.719	1 1/16
ProtecSN-45-12-08	1 1/16-12	1/2-14	1.28	1.2	0.609	0.531	1 1/16
ProtecSN-45-12-12	1 1/16-12	3/4-14	1.28	1.2	0.609	0.719	1 1/16
ProtecSN-45-12-16	1 1/16-12	1-11 1/2	1.42	1.48	0.609	0.938	1 5/16
ProtecSN-45-14-12	1 3/16-12	3/4-14	1.45	1.3	0.719	0.719	1 5/16
ProtecSN-45-16-12	1 5/16-12	3/4-14	1.47	1.29	0.844	0.719	1 5/16
ProtecSN-45-16-16	1 5/16-12	1-11 1/2	1.47	1.48	0.844	0.938	1 5/16
ProtecSN-45-20-20	1 5/8-12	1 1/4-11 1/2	1.59	1.67	1.078	1.25	1 5/8
ProtecSN-45-24-24	1 7/8-12	1 1/2-11 1/2	1.78	1.77	1.312	1.5	1 7/8

ProtecSN-TC

Flare tube ends/ Male pipe end

SAE 070425
MS51512
Part Number Information
Body only
All dimensions are in inches

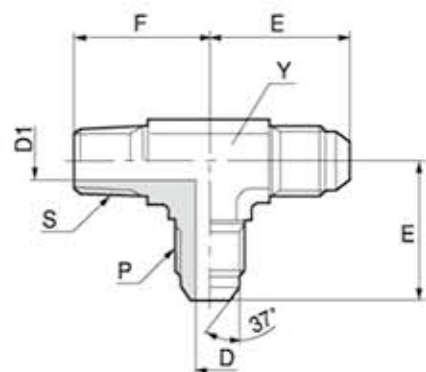


PART NO	P (UNF/UN)	S (NPTF)	E	F	D	D1	Y
ProtecSN-TC-04-04-02	7/16-20	1/8-27	0.89	0.78	0.172	0.188	7/16
ProtecSN-TC-04-04-04	7/16-20	1/4-18	1.05	1.09	0.172	0.281	9/16
ProtecSN-TC-06-06-06	9/16-18	3/8-18	1.14	1.22	0.297	0.406	3/4
ProtecSN-TC-08-08-06	3/4-16	3/8-18	1.25	1.22	0.391	0.406	3/4
ProtecSN-TC-08-08-08	3/4-16	1/2-14	1.34	1.47	0.391	0.531	7/8
ProtecSN-TC-10-10-08	7/8-14	1/2-14	1.45	1.47	0.484	0.531	7/8
ProtecSN-TC-12-12-12	1 1/16-12	3/4-14	1.66	1.59	0.609	0.719	1 1/16
ProtecSN-TC-14-14-12	1 3/16-12	3/4-14	1.8	1.69	0.719	0.719	1 5/16
ProtecSN-TC-16-16-16	1 5/16-12	1-11 1/2	1.81	1.97	0.844	0.938	1 5/16
ProtecSN-TC-20-20-20	1 5/8-12	1 1/4-11 1/1	2.06	2.38	1.078	1.25	1 5/8

ProtecSN-TR

Flare tube ends/ Male pipe end

SAE 070424
MS51511
Part Number Information
Body only
All dimensions are in inches

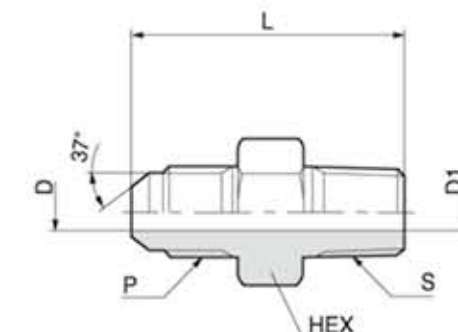


PART NO	P (UNF/UN)	S (NPTF)	E	F	D	D1	Y
ProtecSN-TR-04-02-04	7/16-20	1/8-27	0.89	0.78	0.172	0.188	7/16
ProtecSN-TR-04-04-04	7/16-20	1/4-18	1.05	1.09	0.172	0.281	9/16
ProtecSN-TR-06-06-06	9/16-18	3/8-18	1.14	1.22	0.297	0.406	3/4
ProtecSN-TR-08-06-08	3/4-16	3/8-18	1.25	1.22	0.391	0.406	3/4
ProtecSN-TR-08-08-08	3/4-16	1/2-14	1.34	1.47	0.391	0.531	7/8
ProtecSN-TR-10-08-10	7/8-14	1/2-14	1.45	1.47	0.484	0.531	7/8
ProtecSN-TR-12-12-12	1 1/16-12	3/4-14	1.66	1.59	0.609	0.719	1 1/16
ProtecSN-TR-14-12-14	1 3/16-12	3/4-14	1.8	1.69	0.719	0.719	1 5/16
ProtecSN-TR-16-16-16	1 5/16-12	1-11 1/2	1.81	1.97	0.844	0.938	1 5/16
ProtecSN-TR-20-20-20	1 5/8-12	1 1/4-11 1/2	2.06	2.38	1.078	1.25	1 5/8

ProtecSN

Flare tube end / Male pipe end

SAE 070102
MS51500
Part Number Information
Body only
All dimensions are in inches

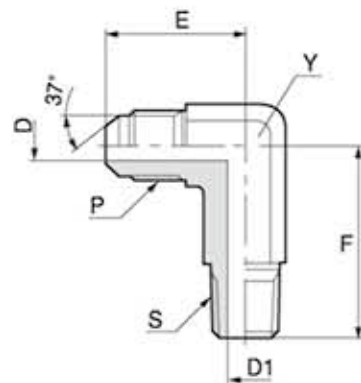


PART NO	P (UNF/UN)	S (NPTF)	HEX	L	D	D1
ProtecSN-04-02	7/16-20	1/8-27	1/2	1.22	0.172	0.188
ProtecSN-04-04	7/16-20	1/4-18	9/16	1.42	0.172	0.281
ProtecSN-04-06	7/16-20	3/8-18	3/4	1.44	0.172	0.406
ProtecSN-05-02	1/2-20	1/8-27	9/16	1.22	0.234	0.188
ProtecSN-05-04	1/2-20	1/4-18	5/8	1.42	0.234	0.281
ProtecSN-06-04	9/16-18	1/4-18	5/8	1.43	0.297	0.281
ProtecSN-06-06	9/16-18	3/8-18	3/4	1.44	0.297	0.406
ProtecSN-06-08	9/16-18	1/2-14	7/8	1.69	0.297	0.531
ProtecSN-08-04	3/4-16	1/4-18	13/16	1.53	0.391	0.281
ProtecSN-08-06	3/4-16	3/8-18	13/16	1.53	0.391	0.406
ProtecSN-08-08	3/4-16	1/2-14	15/16	1.78	0.391	0.531
ProtecSN-08-12	3/4-16	3/4-14	1 1/8	1.85	0.391	0.719
ProtecSN-10-06	7/8-14	3/8-14	15/16	1.70	0.484	0.406
ProtecSN-10-08	7/8-14	1/2-14	15/16	1.89	0.484	0.531
ProtecSN-10-12	7/8-14	3/4-14	1 1/8	1.95	0.484	0.719
ProtecSN-12-08	1 1/16-12	1/2-14	1 1/8	2.06	0.609	0.531
ProtecSN-12-12	1 1/16-12	3/4-14	1 1/8	2.06	0.609	0.719
ProtecSN-12-16	1 1/16-12	1-11 1/2	1 3/8	2.25	0.609	0.938
ProtecSN-14-12	1 3/16-12	3/4-14	1 1/4	2.09	0.719	0.719
ProtecSN-16-12	1 5/16-12	3/4-14	1 3/8	2.11	0.844	0.719
ProtecSN-16-16	1 5/16-12	1-11 1/2	1 3/8	2.30	0.844	0.938
ProtecSN-20-16	1 5/8-12	1-11 1/2	1 11/16	2.42	1.078	0.938
ProtecSN-20-20	1 5/8-12	1 1/4-11 1/2	1 11/16	2.45	1.078	1.250
ProtecSN-24-24	1 7/8-12	1 1/2-11 1/2	2	2.67	1.312	1.500

ProtecSN-9L

Flare tube end/ Long male pipe end

SAE 071502
 Part Number Information
 Body only
 All dimensions are in Inches

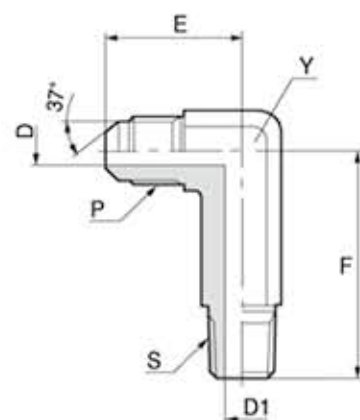


PART NO	P (UNF/UN)	S (NPTF)	E	F	D	D1	Y
ProtecSN-9L-04-02	7/16-20	1/8-27	0.89	1.17	0.172	0.188	7/16
ProtecSN-9L-04-04	7/16-20	1/4-18	1.05	1.56	0.172	0.281	9/16
ProtecSN-9L-05-02	1/2-20	1/8-27	0.95	1.22	0.234	0.188	9/16
ProtecSN-9L-06-04	9/16-18	1/4-18	1.06	1.56	0.297	0.281	9/16
ProtecSN-9L-08-06	3/4-16	3/8-18	1.25	1.78	0.391	0.406	3/4
ProtecSN-9L-08-08	3/4-16	1/2-14	1.34	2.16	0.391	0.531	7/8
ProtecSN-9L-10-08	7/8-14	1/2-14	1.45	2.16	0.484	0.531	7/8
ProtecSN-9L-12-12	1 1/16-12	3/4-14	1.66	2.41	0.609	0.719	1 1/16
ProtecSN-9L-16-16	1 5/16-12	1-11 1/2	1.81	2.97	0.844	0.938	1 5/16
ProtecSN-9L-20-20	1 5/8-12	1 1/4-11 1/2	2.06	3.66	1.078	1.25	1 5/8

ProtecSN-LL

Flare tube end/ Extra long male pipe end

SAE 071602
 Part Number Information
 Body only
 All dimensions are in Inches

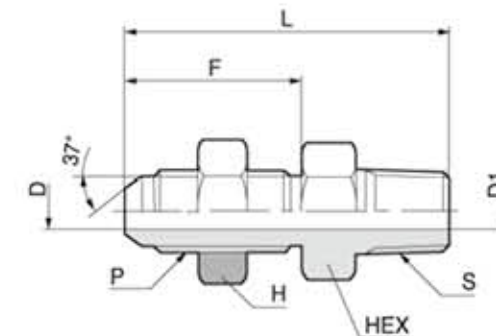


PART NO	P (UNF/UN)	S (NPTF)	E	F	D	D1	Y
ProtecSN-LL-04-02	7/16-20	1/8-27	0.89	1.56	0.172	0.188	7/16
ProtecSN-LL-04-04	7/16-20	1/4-18	1.05	2.07	0.172	0.281	9/16
ProtecSN-LL-05-02	1/2-20	1/8-27	0.97	1.63	0.234	0.188	9/16
ProtecSN-LL-06-04	9/16-18	1/4-18	1.06	1.63	0.297	0.281	9/16
ProtecSN-LL-08-06	3/4-16	3/8-18	1.25	2.34	0.391	0.406	3/4
ProtecSN-LL-08-08	3/4-16	1/2-14	1.34	2.84	0.391	0.531	7/8
ProtecSN-LL-10-08	7/8-14	1/2-14	1.45	2.84	0.484	0.531	7/8
ProtecSN-LL-12-12	1 1/16-12	3/4-14	1.66	3.22	0.609	0.719	1 1/16
ProtecSN-LL-16-16	1 5/16-12	1-11 1/2	1.81	3.97	0.844	0.938	1 5/16
ProtecSN-LL-20-20	1 5/8-12	1 1/4-11 1/2	2.06	4.94	1.078	1.25	1 5/8

ProtecSH-NL

Flare tube end / Male pipe end

Part Number Information
 Body with locknut
 All dimensions are in Inches

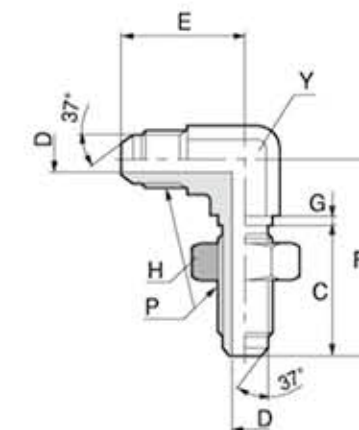


PART NO	P (UNF/UN)	S (NPTF)	HEX	L	F	D	D1	H
ProtecSH-NL-04-02	7/16-20	1/8-27	11/16	1.88	1.2	0.172	0.172	11/16
ProtecSH-NL-04-04	7/16-20	1/4-18	1/2	2.07	1.2	0.172	0.281	11/16
ProtecSH-NL-06-04	9/16-18	1/4-18	13/16	2.15	1.28	0.297	0.281	13/16
ProtecSH-NL-08-06	3/4-16	3/8-18	1	2.31	1.44	0.391	0.406	1
ProtecSH-NL-08-08	3/4-16	1/2-14	1	2.56	1.44	0.391	0.531	1
ProtecSH-NL-10-08	7/8-14	1/2-14	1 1/8	2.71	1.58	0.484	0.531	1 1/8
ProtecSH-NL-12-12	1 1/16-12	3/4-14	1 1/8	2.95	1.75	0.609	0.719	1 3/8
ProtecSH-NL-16-16	1 5/16-12	1-11 1/2	1 5/8	3.14	1.75	0.844	0.938	1 5/8

ProtecSH-90

Flare tube end/ Flare tube end

SAE 070701
 Part Number Information
 Body with locknut
 All dimensions are in Inches

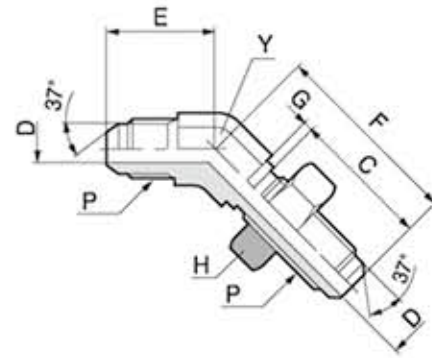


PART NO	P (UNF/UN)	E	F	D	C	G	H	Y
ProtecSH-90-04-04	7/16-20	0.97	1.59	0.172	1.02	0.09	11/16	7/16
ProtecSH-90-05-05	1/2-20	1.04	1.72	0.234	1.02	0.09	3/4	9/16
ProtecSH-90-06-06	9/16-18	1.09	1.81	0.297	1.09	0.09	13/16	9/16
ProtecSH-90-08-08	3/4-16	1.36	2.11	0.391	1.25	0.13	1	3/4
ProtecSH-90-10-10	7/8-14	1.56	2.39	0.484	1.39	0.13	1 1/8	7/8
ProtecSH-90-12-12	1 1/16-12	1.78	2.67	0.609	1.56	0.13	1 3/8	1 1/16
ProtecSH-90-14-14	1 3/16-12	1.92	2.80	0.719	1.56	0.13	1 1/2	1 5/16
ProtecSH-90-16-16	1 5/16-12	1.94	2.80	0.844	1.56	0.13	1 5/8	1 5/16
ProtecSH-90-20-20	1 5/8-12	2.17	3.13	1.078	1.61	0.13	1 7/8	1 5/8

ProtecSH-45

Flare tube end / Flare tube end

SAE 070801
Part Number Information
Body with locknut
All dimensions are in inches

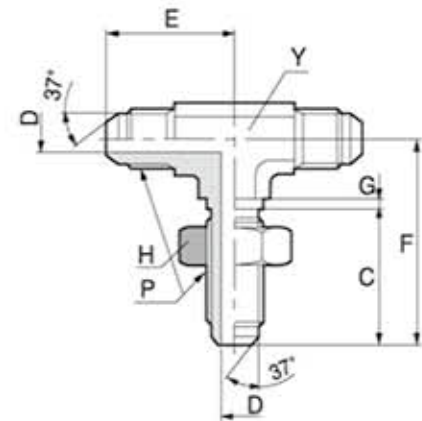


PART NO	P (UNF/UN)	E	F	D	C	G	H	Y
ProtecSH-45-04-04	7/16-20	0.72	1.53	0.172	1.02	0.09	11/16	7/16
ProtecSH-45-06-06	9/16-18	0.83	1.67	0.297	1.09	0.09	13/16	9/16
ProtecSH-45-08-08	3/4-16	0.98	1.94	0.391	1.25	0.13	1	3/4
ProtecSH-45-10-10	7/8-14	1.11	2.17	0.484	1.39	0.13	1 1/8	7/8
ProtecSH-45-12-12	1 1/16-12	1.28	2.44	0.609	1.56	0.13	1 3/8	1 1/16
ProtecSH-45-16-16	1 5/16-12	1.47	2.56	0.844	1.56	0.13	1 5/8	1 5/16

ProtecSH-TC

Flare tube end (all three ends)

SAE 070959
Part Number Information
Body with locknut
All dimensions are in inches

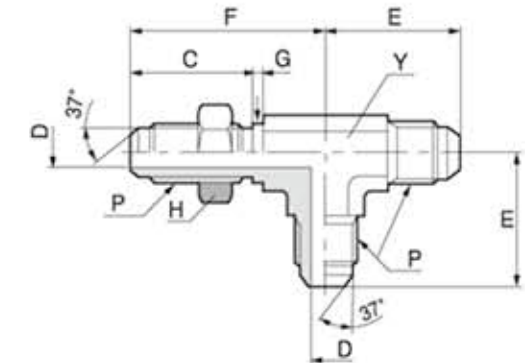


PART NO	P (UNF/UN)	E	F	D	C	G	H	Y
ProtecSH-TR-04-04-04	7/16-20	0.97	1.59	0.172	1.02	0.09	11/16	7/16
ProtecSH-TR-06-06-06	9/16-18	1.09	1.81	0.297	1.09	0.09	13/16	9/16
ProtecSH-TR-08-08-08	3/4-16	1.36	2.11	0.391	1.25	0.13	1	3/4
ProtecSH-TR-10-10-10	7/8-14	1.56	2.39	0.484	1.39	0.13	1 1/8	7/8
ProtecSH-TR-12-12-12	1 1/16-12	1.78	2.67	0.609	1.56	0.13	1 3/8	1 1/16

ProtecSH-TR

Flare tube end (all three ends)

SAE 070958
Part Number Information
Body with locknut
All dimensions are in inches

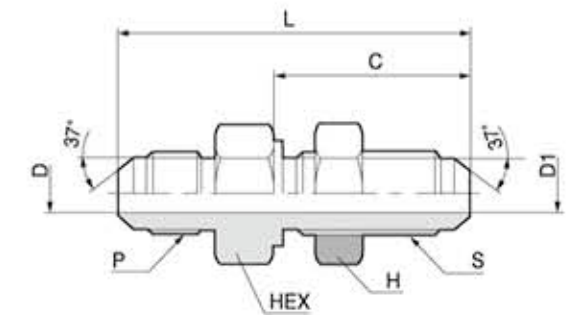


PART NO	P (UNF/UN)	E	F	D	C	G	H	Y
ProtecSH-TR-04-04-04	7/16-20	0.97	1.59	0.172	1.02	0.09	11/16	7/16
ProtecSH-TR-06-06-06	9/16-18	1.09	1.81	0.297	1.09	0.09	13/16	9/16
ProtecSH-TR-08-08-08	3/4-16	1.36	2.11	0.391	1.25	0.13	1	3/4
ProtecSH-TR-10-10-10	7/8-14	1.56	2.39	0.484	1.39	0.13	1 1/8	7/8
ProtecSH-TR-12-12-12	1 1/16-12	1.78	2.67	0.609	1.56	0.13	1 3/8	1 1/16

ProtecSH

Flare tube end / Flare tube end

SAE 070601
MS51520
Part Number Information
Body with locknut
All dimensions are in inches

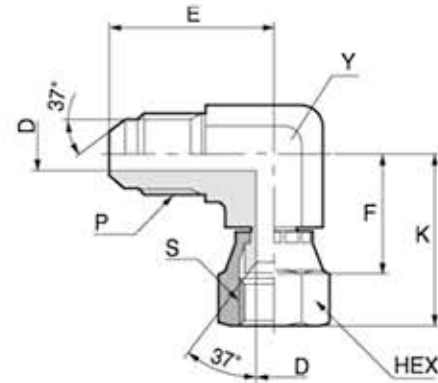


PART NO	P/S (UNF/UN)	HEX	L	F	D	H
ProtecSH-04-04	7/16-20	11/16	2.07	1.2	0.172	11/16
ProtecSH-05-05	1/2-20	3/4	2.07	1.2	0.234	3/4
ProtecSH-06-06	9/16-18	13/16	2.18	1.28	0.297	13/16
ProtecSH-08-08	3/4-16	1	2.44	1.44	0.391	1
ProtecSH-10-10	7/8-14	1 1/8	2.74	1.58	0.484	1 1/8
ProtecSH-12-12	1 1/16-12	1 3/8	3.09	1.75	0.609	1 3/8
ProtecSH-14-14	1 3/16-12	1 1/2	3.12	1.75	0.718	1 1/2
ProtecSH-16-16	1 5/16-12	1 5/8	3.14	1.75	0.844	1 5/8
ProtecSH-20-20	1 5/8-12	2	3.31	1.8	1.078	2
ProtecSH-24-24	1 7/8-12	2 3/8	3.52	1.81	1.312	2 3/8

ProtecSV-90

Flare tube end/ Swivel nut end

SAE 070221
MS51521
Part Number Information
Body with swivelnut
All dimensions are in inches

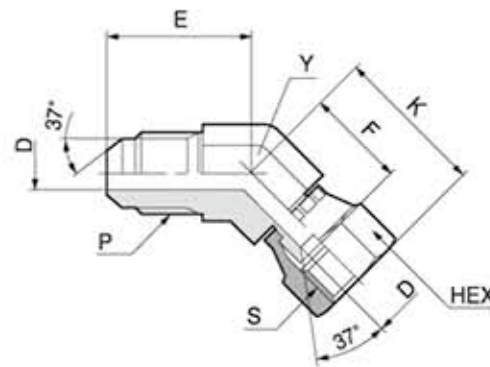


PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	K	HEX	Y
ProtecSV-90-04-04	7/16-20	7/16-20	0.89	0.66	0.172	1	9/16	7/16
ProtecSV-90-05-05	1/2-20	1/2-20	0.95	0.78	0.234	1.06	5/8	9/16
ProtecSV-90-06-06	9/16-18	9/16-18	1.06	0.88	0.297	1.25	11/16	9/16
ProtecSV-90-08-08	3/4-16	3/4-16	1.25	0.95	0.391	1.38	7/8	3/4
ProtecSV-90-10-10	7/8-14	7/8-14	1.45	1.13	0.484	1.62	1	7/8
ProtecSV-90-12-12	1 1/16-12	1 1/16-12	1.66	1.19	0.609	1.75	1 1/4	1 1/16
ProtecSV-90-14-14	1 3/16-12	1 3/16-12	1.8	1.33	0.718	1.78	1 3/8	1 5/16
ProtecSV-90-16-16	1 5/16-12	1 5/16-12	1.81	1.41	0.844	2	1 1/2	1 5/16
ProtecSV-90-20-20	1 5/8-12	1 5/8-12	2.06	1.69	1.078	2.31	2	1 5/8
ProtecSV-90-24-24	1 5/8-12	1 5/8-12	2.33	1.86	1.312	2.59	2 1/4	1 7/8

ProtecSV-45

Flare tube end/ Swivel nut end

SAE 070321
MS51522
Part Number Information
Body with swivelnut
All dimensions are in inches

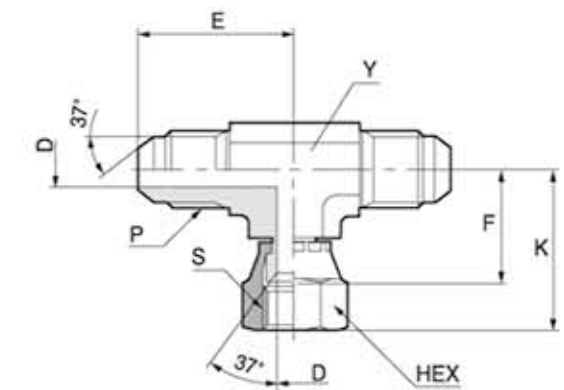


PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	K	HEX	Y
ProtecSV-45-04-04	7/16-20	7/16-20	0.72	0.59	0.172	0.94	9/16	7/16
ProtecSV-45-05-05	1/2-20	1/2-20	0.77	0.63	0.234	1	5/8	9/16
ProtecSV-45-06-06	9/16-18	9/16-18	0.83	0.75	0.297	1.12	11/16	9/16
ProtecSV-45-08-08	3/4-16	3/4-16	0.98	0.86	0.391	1.28	7/8	3/4
ProtecSV-45-10-10	7/8-14	7/8-14	1.11	0.94	0.484	1.44	1	7/8
ProtecSV-45-12-12	1 1/16-12	1 1/16-12	1.28	0.94	0.609	1.5	1 1/4	1 1/16
ProtecSV-45-14-14	1 3/16-12	1 3/16-12	1.45	1.09	0.718	1.62	1 3/8	1 5/16
ProtecSV-45-16-16	1 5/16-12	1 5/16-12	1.47	1.16	0.844	1.75	1 1/2	1 5/16
ProtecSV-45-20-20	1 5/8-12	1 5/8-12	1.59	1.41	1.078	2.03	2	1 5/8
ProtecSV-45-24-24	1 5/8-12	1 5/8-12	1.78	1.52	1.312	2.25	2 1/4	1 7/8

ProtecSV-TC

Flare tube ends/ Swivel nut end

SAE 070433
MS51524
Part Number Information
Body with swivelnut
All dimensions are in inches

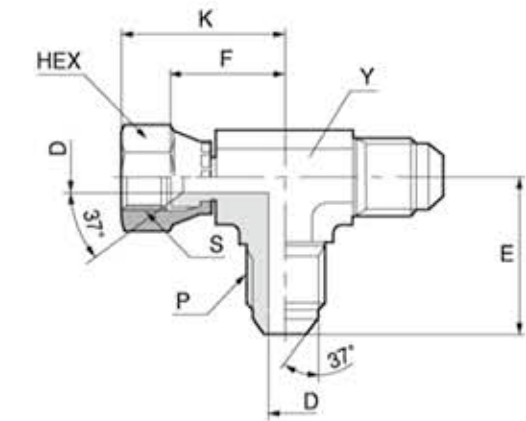


PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	K	HEX	Y
ProtecSV-TC-04-04-04	7/16-20	7/16-20	0.89	0.66	0.172	1	9/16	7/16
ProtecSV-TC-05-05-05	1/2-20	1/2-20	0.95	0.78	0.234	1.06	5/8	9/16
ProtecSV-TC-06-06-06	9/16-18	9/16-18	1.06	0.88	0.297	1.25	11/16	9/16
ProtecSV-TC-08-08-08	3/4-16	3/4-16	1.25	0.95	0.391	1.38	7/8	3/4
ProtecSV-TC-10-10-10	7/8-14	7/8-14	1.45	1.13	0.484	1.62	1	7/8
ProtecSV-TC-12-12-12	1 1/16-12	1 1/16-12	1.66	1.19	0.609	1.75	1 1/4	1 1/16
ProtecSV-TC-14-14-14	1 3/16-12	1 3/16-12	1.8	1.33	0.718	1.78	1 3/8	1 5/16
ProtecSV-TC-16-16-16	1 5/16-12	1 5/16-12	1.81	1.41	0.844	2	1 1/2	1 5/16
ProtecSV-TC-20-20-20	1 5/8-12	1 5/8-12	2.06	1.69	1.078	2.31	2	1 5/8

ProtecSV-TR

Flare tube ends/ Swivel nut end

SAE 070432
MS51523
Part Number Information
Body with swivelnut
All dimensions are in inches

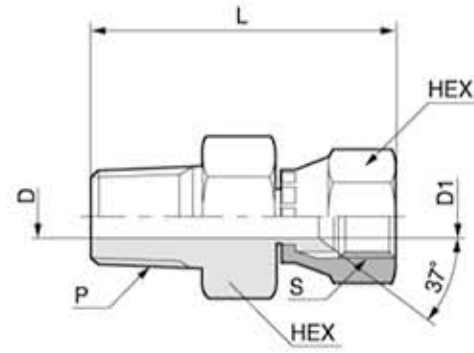


PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	K	HEX	Y
ProtecSV-TR-04-04-04	7/16-20	7/16-20	0.89	0.66	0.172	1	9/16	7/16
ProtecSV-TR-05-05-05	1/2-20	1/2-20	0.95	0.78	0.234	1.06	5/8	9/16
ProtecSV-TR-06-06-06	9/16-18	9/16-18	1.06	0.88	0.297	1.25	11/16	9/16
ProtecSV-TR-08-08-08	3/4-16	3/4-16	1.25	0.95	0.391	1.38	7/8	3/4
ProtecSV-TR-10-10-10	7/8-14	7/8-14	1.45	1.13	0.484	1.62	1	7/8
ProtecSV-TR-12-12-12	1 1/16-12	1 1/16-12	1.66	1.19	0.609	1.75	1 1/4	1 1/16
ProtecSV-TR-14-14-14	1 3/16-12	1 3/16-12	1.8	1.33	0.718	1.78	1 3/8	1 5/16
ProtecSV-TR-16-16-16	1 5/16-12	1 5/16-12	1.81	1.41	0.844	2	1 1/2	1 5/16
ProtecSV-TR-20-20-20	1 5/8-12	1 5/8-12	2.06	1.69	1.078	2.31	2	1 5/8

ProtecNV

Flare tube ends/ Male pipe end

Part Number Information
 Body with swivel nut
 All dimensions are in inches

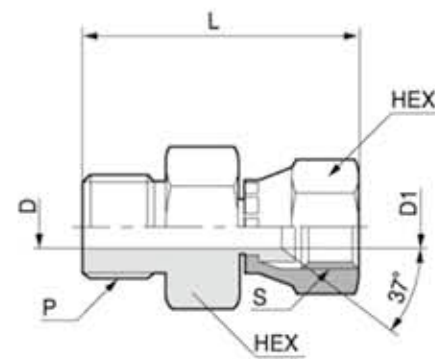


PART NO	S (UNF/UN)	P (NPTF)	HEX	L	D	D1
ProtecNV-04-04	7/16-20	1/4-18	9/16	1.46	0.172	0.172
ProtecNV-05-04	1/2-20	1/4-18	5/8	1.57	0.234	0.281
ProtecNV-06-04	9/16-18	1/4-18	11/16	1.59	0.297	0.297
ProtecNV-06-06	9/16-18	3/8-18	11/16	1.59	0.281	0.281
ProtecNV-08-06	3/4-16	3/8-18	7/8	1.69	0.391	0.391
ProtecNV-10-08	7/8-14	1/2-14	1	2.05	0.484	0.484
ProtecNV-10-06	7/8-14	3/8-14	1	1.87	0.484	0.406
ProtecNV-12-12	1 1/16-12	3/4-14	1 1/4	2.15	0.609	0.609
ProtecNV-16-16	1 5/16-12	1-11 1/2	1 1/2	2.50	0.844	0.844
ProtecNV-20-20	1 5/8-12	11/4-11 1/2	2	2.76	1.078	1.078

ProtecBV

Flare tube ends/ Straight thread O-ring

Part Number Information
 Body with swivel nut
 All dimensions are in inches

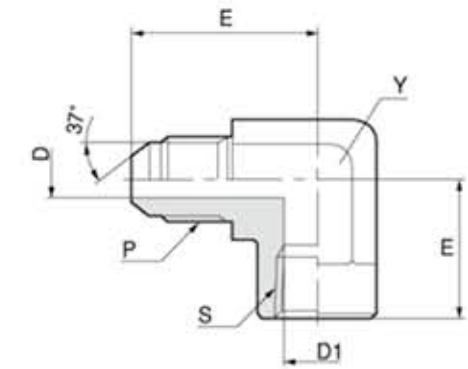


PART NO	P (UNF/UN)	S (UNF/UN)	HEX	L	D	H
ProtecBV-06-06	9/16-18	9/16-18	11/16	1.43	0.297	11/16
ProtecBV-08-08	3/4-16	3/4-16	7/8	1.61	0.391	7/8
ProtecBV-10-10	7/8-14	7/8-14	1 1/16	1.84	0.484	1
ProtecBV-12-12	11/16-12	1 1/16-12	1 1/4	2.07	0.609	1 1/4

ProtecSFN-90

Flare tube end / Female pipe end

SAE 070203
 MS51506
 Part Number Information
 Body only
 All dimensions are in inches

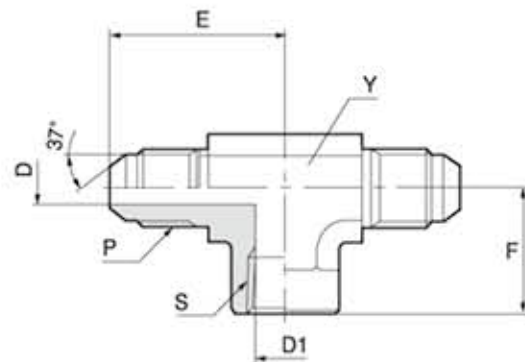


PART NO	P (UNF/UN)	S (NPTF)	E	F	D	D1	Y
ProtecS FN-90-04-02	7/16-20	1/8-27	1.08	0.66	0.172	0.328	9/16
ProtecS FN-90-04-04	7/16-20	1/4-18	1.22	0.88	0.172	0.422	3/4
ProtecS FN-90-05-02	1/2-20	1/8-27	1.08	0.66	0.234	0.328	9/16
ProtecS FN-90-05-04	1/2-20	1/4-18	1.22	0.88	0.234	0.422	3/4
ProtecS FN-90-06-04	9/16-18	1/4-18	1.23	0.88	0.297	0.422	3/4
ProtecS FN-90-06-06	9/16-18	3/8-18	1.31	1.02	0.297	0.563	7/8
ProtecS FN-90-08-06	3/4-16	3/8-18	1.42	1.02	0.391	0.563	7/8
ProtecS FN-90-08-08	3/4-16	1/2-14	1.52	1.23	0.391	0.688	1 1/16
ProtecS FN-90-10-08	7/8-14	1/2-14	1.64	1.23	0.484	0.688	1 1/16
ProtecS FN-90-12-12	1 1/16-12	3/4-14	1.89	1.36	0.609	0.891	1 5/16
ProtecS FN-90-14-12	1 3/16-12	3/4-14	1.86	1.42	0.718	0.891	1 5/16
ProtecS FN-90-16-16	1 5/16-12	1-11 1/2	2.17	1.62	0.844	1.125	1 5/8
ProtecSFN-90-20-20	1 5/8-12	1 1/4-11 1/2	2.33	1.7	1.078	1.469	1 7/8
ProtecSFN-90-24-24	1 7/8-12	1 1/2-11 1/2	2.89	2.08	1.312	1.703	2 1/2

ProtecSFN-TC

Flare tube ends/ Female pipe end

SAE 070427
MS51513
Part Number Information
Body only
All dimensions are in inches

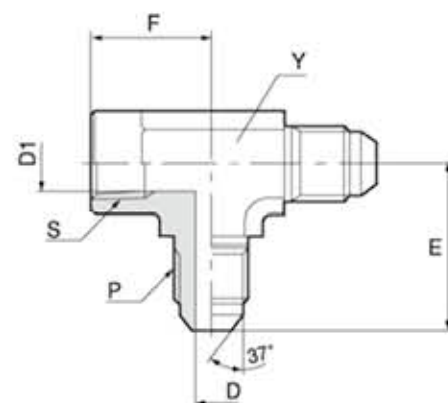


PART NO	P (UNF/UN)	S (NPTF)	E	F	D	D1	Y
ProtecSFN-TC-04-04-02	7/16-20	1/8-27	1.08	0.66	0.172	0.328	9/16
ProtecSFN-TC-04-04-04	7/16-20	1/4-18	1.13	0.88	0.172	0.422	3/4
ProtecSFN-TC-05-05-02	1/2-20	1/8-27	1.08	0.66	0.234	0.328	9/16
ProtecSFN-TC-06-06-04	9/16-18	1/4-18	1.23	0.88	0.234	0.422	3/4
ProtecSFN-TC-08-08-06	3/4-16	3/8-18	1.42	1.02	0.297	0.422	3/4
ProtecSFN-TC-10-10-08	7/8-14	1/2-14	1.64	1.23	0.297	0.563	7/8
ProtecSFN-TC-12-12-12	1 1/16-12	3/4-14	1.89	1.02	0.391	0.563	7/8
ProtecSFN-TC-14-14-12	1 3/16-12	3/4-14	1.86	1.23	0.391	0.688	1 1/16
ProtecSFN-TC-16-16-16	1 5/16-12	1-11 1/2	2.17	1.23	0.484	0.688	1 1/16
ProtecSFN-TC-20-20-20	1 5/8-12	1 1/4-11 1/2	2.33	1.36	0.609	0.891	1 5/16
ProtecSFN-TC-24-24-24	1 7/8-12	1 1/2-11 1/2	2.89	1.42	0.718	0.891	1 5/16

ProtecSFN-TR

Flare tube ends/ Female pipe end

SAE 070426
MS51514
Part Number Information
Body only
All dimensions are in inches

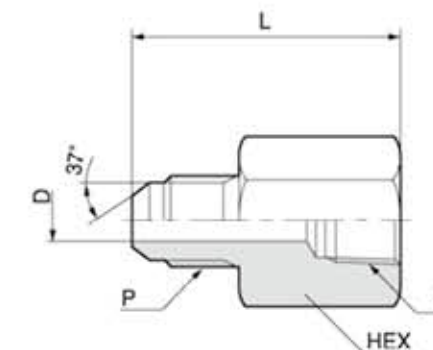


PART NO	P (UNF/UN)	S (NPTF)	E	F	D	D1	Y
ProtecSFN-TR-04-02-04	7/16-20	1/8-27	1.08	0.66	0.172	0.328	9/16
ProtecSFN-TR-04-04-04	7/16-20	1/4-18	1.13	0.88	0.172	0.422	3/4
ProtecSFN-TR-05-02-05	1/2-20	1/8-27	1.08	0.66	0.234	0.328	9/16
ProtecSFN-TR-06-04-06	9/16-18	1/4-18	1.23	0.88	0.297	0.422	3/4
ProtecSFN-TR-08-06-08	3/4-16	3/8-18	1.42	1.02	0.391	0.563	7/8
ProtecSFN-TR-10-08-10	7/8-14	1/2-14	1.64	1.23	0.484	0.688	1 1/16
ProtecSFN-TR-12-12-12	1 1/16-12	3/4-14	1.89	1.36	0.609	0.891	1 5/16
ProtecSFN-TR-14-12-14	1 3/16-12	3/4-14	1.86	1.42	0.718	0.891	1 5/16
ProtecSFN-TR-16-16-16	1 5/16-12	1-11 1/2	2.17	1.62	0.844	1.125	1 5/8
ProtecSFN-TR-20-20-20	1 5/8-12	1 1/4-11 1/2	2.33	1.7	1.078	1.469	1 7/8
ProtecSFN-TR-24-24-24	1 7/8-12	1 1/2-11 1/2	2.89	2.08	1.312	1.703	2 1/2

ProtecSFN

Flare tube end / Female pipe end

SAE 070103
MS51503
Part Number Information
Body only
All dimensions are in inches

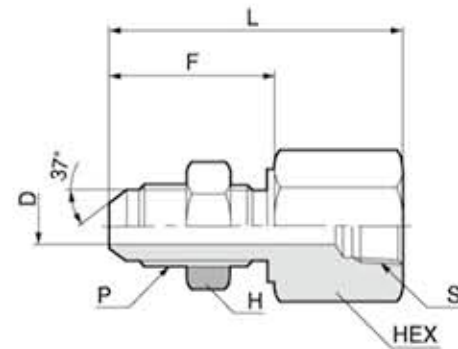


PART NO	P (UNF/UN)	S (NPTF)	HEX	L	D
ProtecSFN-04-02	7/16-20	1/8-27	9/16	1.19	0.172
ProtecSFN-04-04	7/16-20	1/4-18	3/4	1.39	0.172
ProtecSFN-05-02	1/2-20	1/8-27	9/16	1.17	0.234
ProtecSFN-05-04	1/2-20	1/4-18	3/4	1.39	0.234
ProtecSFN-06-04	9/16-18	1/4-18	3/4	1.40	0.297
ProtecSFN-06-06	9/16-18	3/8-18	7/8	1.47	0.297
ProtecSFN-08-06	3/4-16	3/8-18	7/8	1.56	0.391
ProtecSFN-08-08	3/4-16	1/2-14	1 1/8	1.79	0.391
ProtecSFN-10-08	7/8-14	1/2-14	1 1/8	1.89	0.484
ProtecSFN-12-08	1 1/16-12	1/2-14	1 1/8	1.91	0.609
ProtecSFN-12-12	1 1/16-12	3/4-14	1 3/8	2.06	0.609
ProtecSFN-14-12	1 3/16-12	3/4-14	1 3/8	2.06	0.718
ProtecSFN-16-16	1 5/16-12	1-11 1/2	1 5/8	2.35	0.844
ProtecSFN-20-20	1 5/8-12	1 1/4-11 1/2	2	2.49	1.078
ProtecSFN-24-24	1 7/8-12	1 1/2-11 1/2	2 3/8	2.62	1.312

ProtecSH-FN

Flare tube ends/ Female pipe end

SAE 070427
MS51513
Part Number Information
Body only
All dimensions are in inches

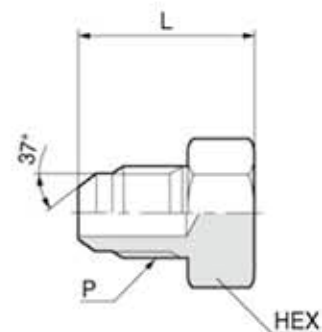


PART NO	P (UNF/UN)	S (NPT)	L	F	D	H	HEX
ProtecSH-FN-04-04	7/16-20	1/4-18	2.11 1.33	2.11 1.33	0.172	3/4	3/4
ProtecSH-FN-06-04	9/16-18	1/4-18	2.12 1.28	2.12 1.28	0.297	13/16	13/16
ProtecSH-FN-08-06	3/4-16	3/8-18	2.34 1.44	2.34 1.44	0.391	1	1
ProtecSH-FN-10-08	7/8-14	1/2-14	2.71 1.58	2.71 1.58	0.484	1 1/8	1 1/8
ProtecSH-FN-12-12	1 1/16-12	3/4-14	2.95 1.75	2.95 1.75	0.609	1 3/8	1 3/8
ProtecSH-FN-14-12	1 3/16-12	3/4-14	2.92 1.75	2.92 1.75	0.718	1 1/2	1 1/2
ProtecSH-FN-16-16	1 5/16-12	1-11 12	3.19 1.75	3.19 1.75	0.844	1 5/8	1 5/8

ProtecPS

Flare tube end

SAE 070109
MS51518
Part Number Information
ProtecPS Plug
All dimensions are in inches

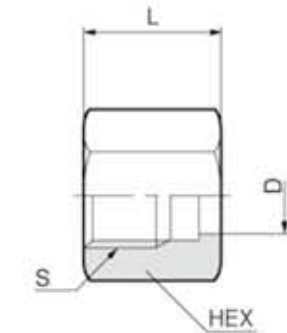


PART NO	P (UNF/UN)	HEX	L
ProtecPS-04	7/16-20	1/2	0.80
ProtecPS-05	1/2-20	9/16	0.80
ProtecPS-06	9/16-18	5/8	0.84
ProtecPS-08	3/4-16	13/16	0.94
ProtecPS-10	7/8-14	15/16	1.10
ProtecPS-12	1 1/16-12	1 1/8	1.28
ProtecPS-14	1 3/16-12	1 1/4	1.31
ProtecPS-16	1 5/16-12	1 3/8	1.33
ProtecPS-20	1 5/8-12	1 11/16	1.45
ProtecPS-24	1 7/8-12	2	1.66

ProtecFNUT

Flare tube end nut

SAE 070110
MS51531
Part Number Information
ProtecFNUT Nut
All dimensions are in inches

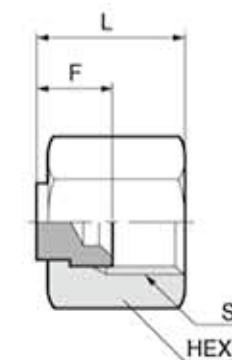


PART NO	S (UNF/UN)	HEX	L	D
ProtecFNUT-04	7/16-20	9/16	0.62	0.31
ProtecFNUT-05	1/2-20	5/8	0.68	0.38
ProtecFNUT-06	9/16-18	11/16	0.73	0.44
ProtecFNUT-08	3/4-16	7/8	0.85	0.57
ProtecFNUT-10	7/8-14	1	0.98	0.70
ProtecFNUT-12	1 1/16-12	1 1/4	1.03	0.84
ProtecFNUT-14	1 3/16-12	1 3/8	1.09	0.96
ProtecFNUT-16	1 5/16-12	1 1/2	1.13	1.09
ProtecFNUT-20	1 5/8-12	2	1.23	1.35
ProtecFNUT-24	1 7/8-12	2 1/4	1.42	1.62

ProtecFCAP

Flare tube end cap

SAE 070112
MS51532
Part Number Information
ProtecFCAP Cap
All dimensions are in inches



PART NO	S (UNF/UN)	HEX	L	F
ProtecFCAP-04	7/16-20	9/16	0.67	0.34
ProtecFCAP-05	1/2-20	5/8	0.77	0.41
ProtecFCAP-06	9/16-18	11/16	0.81	0.47
ProtecFCAP-08	3/4-16	7/8	0.94	0.53
ProtecFCAP-10	7/8-14	1	1.07	0.53
ProtecFCAP-12	1 1/16-12	1 1/4	1.24	0.66
ProtecFCAP-14	1 3/16-12	1 3/8	1.26	0.63
ProtecFCAP-16	1 5/16-12	1 1/2	1.29	0.63
ProtecFCAP-20	1 5/8-12	2	1.39	0.75
ProtecFCAP-24	1 7/8-12	2 1/4	1.70	0.94

ProtecUN

Bulkhead fitting lock nut

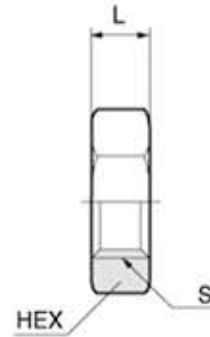
SAE 070118

MS51860

Part Number Information

ProtecUN Bulkhead locknut

All dimensions are in inches



PART NO	S (UNF/UN)	HEX	L
ProtecUN-04	7/16-20	11/16	0.25
ProtecUN-05	1/20-20	3/4	0.25
ProtecUN-06	9/16-18	13/16	0.27
ProtecUN-08	3/4-16	1	0.31
ProtecUN-10	7/8-14	1 1/8	0.36
ProtecUN-12	1 1/16-12	1 3/8	0.41
ProtecUN-14	1 3/16-12	1 1/2	0.41
ProtecUN-16	1 5/16-12	1 5/8	0.41
ProtecUN-20	1 5/8-12	1 7/8	0.41
ProtecUN-24	1 7/8-12	2 1/2	0.41



30° Face Tube Fittings

Part. 02

Specifications

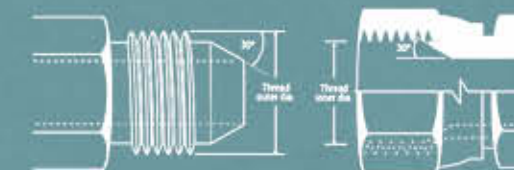
JIS fittings are typically used as hose adapters on equipment designed and/or manufactured in Japan and Korea.

JIS adapters are designed with 30° flare and 60°

cone connections and typically incorporate BSP threads.

Features

- Size Range: 1/8" to 2"
- Design Standard: BS 5200/JIS B8363
- Material: Steel/Stainless / Brass



30° Face Tube Fittings Index

ProtecS3-SN • P.35	ProtecS3-SL • P.35	ProtecS3S • P.36	ProtecS3F • P.36	ProtecVN • P.37
ProtecS3-SB • P.37	ProtecS3-N9 • P.38	ProtecS3-N4 • P.39	ProtecS3-W9 • P.40	ProtecU3-W9 • P.40
ProtecS3-W4 • P.41	ProtecU3-W4 • P.41	ProtecH3-HN • P.42	ProtecH3H • P.43	ProtecH3-HB • P.43
ProtecH3-N9 • P.44	ProtecH3-N4 • P.45	ProtecH3-W9 • P.45	ProtecHU-W9 • P.46	ProtecH3-W4 • P.46
ProtecHU-W4 • P.47	ProtecOG • P.47	ProtecPNUT • P.48		

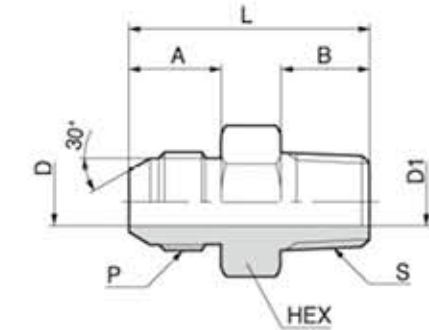
ProtecS3-SN

Flare tube end / Male pipe end

Part Number Information

Body only

All dimensions are in millimeters



PART NO	P (FF)	S (FT)	HEX	L	A	B	D	D1
ProtecS3-SN-02-02	1/8-28	1/8-28	14	30	12	10	3	3
ProtecS3-SN-02-04	1/8-28	1/4-19	17	33	12	13	3	5
ProtecS3-SN-04-02	1/4-19	1/8-28	19	32	14	10	5	3
ProtecS3-SN-04-04	1/4-19	1/4-19	19	35	14	13	5	5
ProtecS3-SN-04-06	1/4-19	3/8-19	22	38	14	15	5	8
ProtecS3-SN-06-04	3/8-19	1/4-19	22	38	16	13	8	5
ProtecS3-SN-06-06	3/8-19	3/8-19	22	40	16	15	8	8
ProtecS3-SN-06-08	3/8-19	1/2-14	27	44	16	18	8	11
ProtecS3-SN-08-06	1/2-14	3/8-19	27	44	19	15	11	8
ProtecS3-SN-08-08	1/2-14	1/2-14	27	47	19	18	11	11
ProtecS3-SN-08-12	1/2-14	3/4-14	36	51	19	20	11	16
ProtecS3-SN-12-08	3/4-14	1/2-14	36	51	21	18	16	11
ProtecS3-SN-12-12	3/4-14	3/4-14	36	53	21	20	16	16
ProtecS3-SN-12-16	3/4-14	1-11	41	56	21	22	16	22
ProtecS3-SN-16-12	1-11	3/4-14	41	56	23	20	22	16
ProtecS3-SN-16-16	1-11	1-11	41	58	23	22	22	22
ProtecS3-SN-20-20	1 1/4-11	1 1/4-11	46	66	27	25	28	28
ProtecS3-SN-24-24	1 1/2-11	1 1/2-11	50	67	27	25	34	34

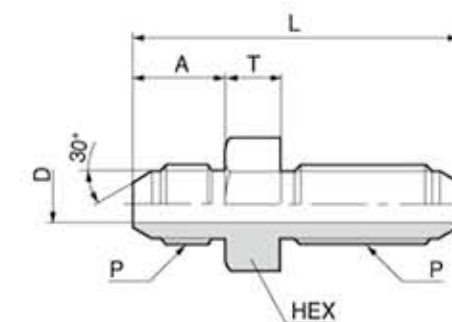
ProtecS3-SL

Flare tube end / Flare tube end

Part Number Information

Body only

All dimensions are in millimeters



PART NO	P (FF)	HEX	L	D	A	T
ProtecS3-SL-04-04	1/4-19	22	55	5	14	9
ProtecS3-SL-06-06	3/8-19	24	60	8	16	11
ProtecS3-SL-08-08	1/2-14	30	71	11	19	12
ProtecS3-SL-12-12	3/4-14	41	79	16	21	17
ProtecS3-SL-16-16	1-11	46	87	22	23	19

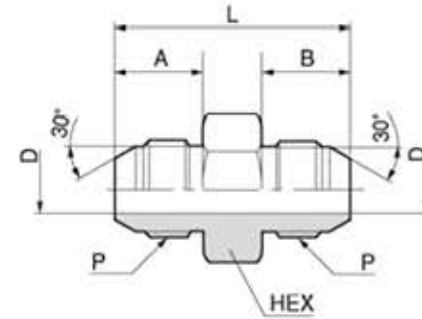
ProtecS3S

Flare tube end/ Flare tube end

Part Number Information

Body only

All dimensions are in millimeters



PART NO	P (PF)	HEX	L	D	A, B
ProtecS3S-02-02	1/8-28	14	30.5	3	12
ProtecS3S-04-04	1/4-19	19	36	5	14
ProtecS3S-06-06	3/8-19	22	42	8	16
ProtecS3S-08-08	1/2-14	27	48	11	19
ProtecS3S-12-12	3/4-14	36	54	16	21
ProtecS3S-16-16	1-11	41	59	22	23
ProtecS3S-20-20	1 1/4-11	46	68	28	27
ProtecS3S-24-24	1 1/2-11	50	70	34	27

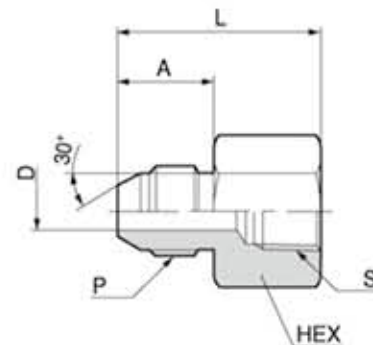
ProtecS3F

Flare tube end/ Female pipe end

Part Number Information

Body only

All dimensions are in millimeters



PART NO	P (PF)	S (FT)	HEX	L	D	A
ProtecS3F-02-02	1/8-28	1/8-28	14	27	3	12
ProtecS3F-04-04	1/4-19	1/4-19	19	29	5	14
ProtecS3F-06-06	3/8-19	3/8-19	22	35	8	16
ProtecS3F-08-08	1/2-14	1/2-14	27	41	11	19
ProtecS3F-12-12	3/4-14	3/4-14	36	46	16	21
ProtecS3F-16-16	1-11	1-11	41	51	22	23

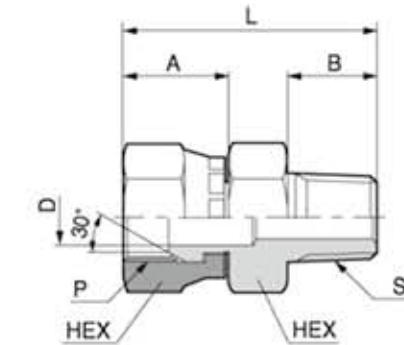
ProtecVN

Swivel nut end/ Female pipe end

Part Number Information

Body with swivelnut

All dimensions are in millimeters



PART NO	P (PF)	S (PT)	HEX	L	D	A	B
ProtecVN-02-02	1/8-28	1/8-28	14	34	3	16	10
ProtecVN-04-04	1/4-19	1/4-19	19	39	5	17.5	13
ProtecVN-06-06	3/8-19	3/8-19	22	44	8	19.5	15
ProtecVN-08-08	1/2-14	1/2-14	27	51.5	11	23.5	18
ProtecVN-12-12	3/4-14	3/4-14	36	55.5	16	24	20
ProtecVN-16-16	1-11	1-11	41	62	22	27	22

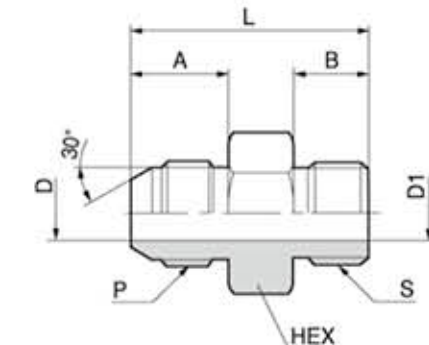
ProtecS3-SB

Flare tube end | Straight thread O-ring

Part Number Information

Body with O-ring

All dimensions are in millimeters



PART NO	P (PF)	S (PT)	HEX	L	D	D1	A	B
ProtecS3-SB-04-04	1/4-19	1/4-19	19	33	5	5	14	11
ProtecS3-SB-04-06	1/4-19	3/8-19	22	33	5	5	14	11
ProtecS3-SB-06-06	3/8-19	3/8-19	22	35	8	8	16	11
ProtecS3-SB-06-08	3/8-19	1/2-14	27	42	8	8	16	15
ProtecS3-SB-08-08	1/2-14	1/2-14	27	44	11	11	19	15
ProtecS3-SB-08-12	1/2-14	3/4-14	32	45	11	11	19	16
ProtecS3-SB-12-12	3/4-14	3/4-14	32	47	16	16	21	16
ProtecS3-SB-12-16	3/4-14	1-11	41	53	16	16	21	20
ProtecS3-SB-16-16	1-11	1-11	46	55	22	22	23	20
ProtecS3-SB-16-20	1-11	1/4-11	50	57	22	28	23	20
ProtecS3-SB-20-20	1 1/4-11	1 1/4-11	50	62	28	28	27	20
ProtecS3-SB-24-24	1 1/2-11	1 1/2-11	60	62	34	34	27	20

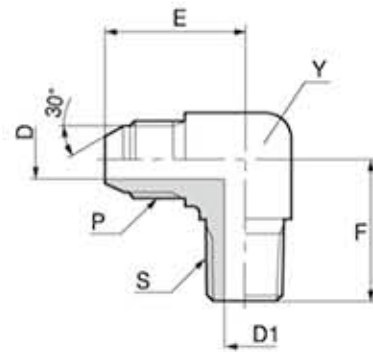
ProtecS3-N9

Flare tube end/ Male pipe end

Part Number Information

Body only

All dimensions are in millimeters



PART NO	P (PF)	S (PT)	E	F	D	D1	Y
ProtecS3-N9-02-02	1/8-28	1/8-28	21.5	22	3	3	14
ProtecS3-N9-02-04	1/8-28	1/4-19	23	26.5	3	5	17
ProtecS3-N9-04-02	1/4-19	1/8-28	24	22.5	5	3	17
ProtecS3-N9-04-04	1/4-19	1/4-19	24	26.5	5	5	17
ProtecS3-N9-04-06	1/4-19	3/8-19	29	30	5	8	19
ProtecS3-N9-06-04	3/8-19	1/4-19	29	26.5	8	5	19
ProtecS3-N9-06-06	3/8-19	3/8-19	29	30	8	8	19
ProtecS3-N9-06-08	3/8-19	1/2-14	29	38	8	11	24
ProtecS3-N9-08-06	1/2-14	3/8-19	32.5	30	11	8	24
ProtecS3-N9-08-08	1/2-14	1/2-14	32.5	38	11	11	24
ProtecS3-N9-08-12	1/2-14	3/4-14	36	43	11	16	30
ProtecS3-N9-12-08	3/4-14	1/2-14	36	38	16	11	30
ProtecS3-N9-12-12	3/4-14	3/4-14	36	43	16	16	30
ProtecS3-N9-12-16	3/4-14	1-11	42	46	16	22	36
ProtecS3-N9-16-12	1-11	3/4-14	42	43	22	16	36
ProtecS3-N9-16-16	1-11	1-11	42	46	22	22	36
ProtecS3-N9-20-20	1 1/4-11	1 1/4-11	50	58	28	28	46
ProtecS3-N9-24-24	1 1/2-11	1 1/2-11	52	53	34	34	50

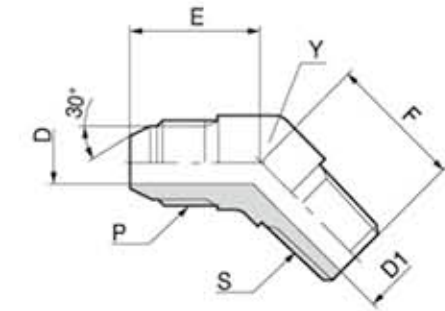
ProtecS3-N4

Flare tube end / Male pipe end

Part Number Information

Body only

All dimensions are in millimeters

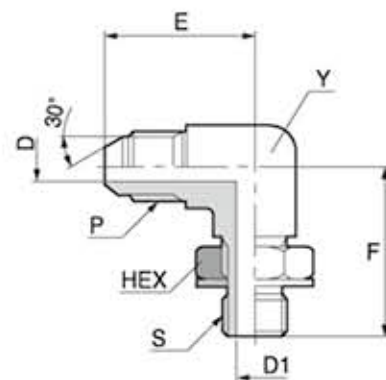


PART NO	P (PF)	S (FF)	E	F	D	D1	Y
ProtecS3-N4-02-02	1/8-28	1/8-28	18	18	3	3	14
ProtecS3-N4-02-04	1/8-28	1/4-19	20	20	3	5	17
ProtecS3-N4-04-02	1/4-19	1/8-28	22	18	5	3	17
ProtecS3-N4-04-04	1/4-19	1/4-19	22	20	5	5	17
ProtecS3-N4-04-06	1/4-19	3/8-19	22	24	5	8	19
ProtecS3-N4-06-04	3/8-19	1/4-19	24	20	8	5	19
ProtecS3-N4-06-06	3/8-19	3/8-19	24	24	8	8	19
ProtecS3-N4-06-08	3/8-19	1/2-14	24	27	8	11	24
ProtecS3-N4-08-06	1/2-14	3/8-19	27	24	11	8	24
ProtecS3-N4-08-08	1/2-14	1/2-14	27	27	11	11	24
ProtecS3-N4-08-12	1/2-14	3/4-14	27	32	11	16	30
ProtecS3-N4-12-08	3/4-14	1/2-14	32	27	16	11	30
ProtecS3-N4-12-12	3/4-14	3/4-14	32	32	16	16	30
ProtecS3-N4-12-16	3/4-14	1-11	32	34	16	22	36
ProtecS3-N4-16-12	1-11	3/4-14	35	32	22	16	36
ProtecS3-N4-16-16	1-11	1-11	35	34	22	22	36
ProtecS3-N4-20-20	1 1/4-11	1 1/4-11	42	40	28	28	46
ProtecS3-N4-24-24	1 1/2-11	1 1/2-11	43	41	34	34	50

ProtecS3-W9

Flare tube end/ Straight thread O-ring

Part Number Information
 Body with locknut, washer and O-ring
 All dimensions are in millimeters

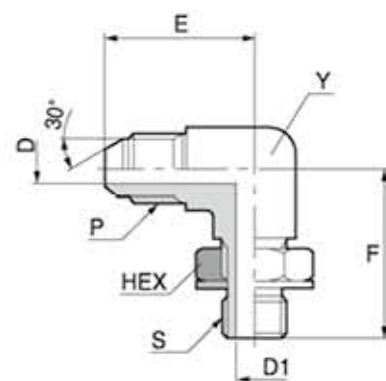


PART NO	P (FF)	S (FF)	E	F	D	D1	HEX	Y
ProtecS3-W9-04-04	1/4-19	1/4-19	27	32	5	5	19	14
ProtecS3-W9-04-06	1/4-19	3/8-19	32	37	5	8	22	19
ProtecS3-W9-06-04	3/8-19	1/4-19	32	37	8	5	19	19
ProtecS3-W9-06-06	3/8-19	3/8-19	32	37	8	8	22	19
ProtecS3-W9-06-08	3/8-19	1/2-14	37	43	8	11	27	22
ProtecS3-W9-08-06	1/2-14	3/8-19	37	43	11	8	22	22
ProtecS3-W9-08-08	1/2-14	1/2-14	37	43	11	11	27	22
ProtecS3-W9-08-12	1/2-14	3/4-14	42	49	11	16	32	27
ProtecS3-W9-12-08	3/4-14	1/2-14	42	49	16	11	27	27
ProtecS3-W9-12-12	3/4-14	3/4-14	42	49	16	16	32	27
ProtecS3-W9-12-16	3/4-14	1-11	46	52	16	22	41	33
ProtecS3-W9-16-12	1-11	3/4-11	46	52	22	16	32	33
ProtecS3-W9-16-16	1-11	1-11	46	52	22	22	41	33
ProtecS3-W9-20-20	1 1/4-11	1 1/4-11	52	65	28	28	50	46

ProtecU3-W9

Flare tube end/ Straight thread O-ring

Part Number Information
 Body with locknut, washer and O-ring
 All dimensions are in millimeters

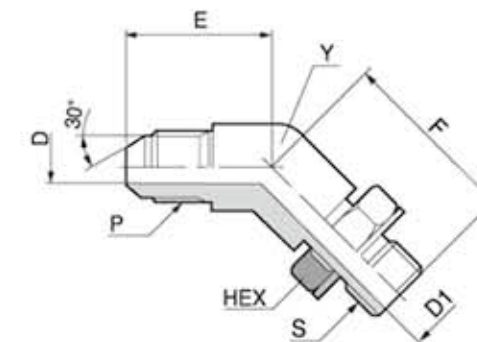


PART NO	P (FF)	S (UNF)	E	F	D	D1	HEX	Y
ProtecU3-W9-04-06	1/4-19	9/16-18	27	32	5	7.5	17.5	14
ProtecU3-W9-06-08	3/8-19	3/4-16	32	37	8	9.9	22.2	19
Protec U3-W9-08-10	1/2-14	7/8-14	37	43	11	12.3	25.4	22
ProtecU3-W9-12-12	3/4-14	1 1/16-12	42	49	16	15.5	31.8	27
ProtecU3-W9-16-16	1-11	1 5/16-12	46	52	22	21	38.1	33
ProtecU3-W9-20-20	1 1/4-11	1 5/8-12	50	57	28	27	47.6	46

ProtecS3-W4

Flare tube end/ Straight thread O-ring

Part Number Information
 Body with locknut, washer and O-ring
 All dimensions are in millimeters

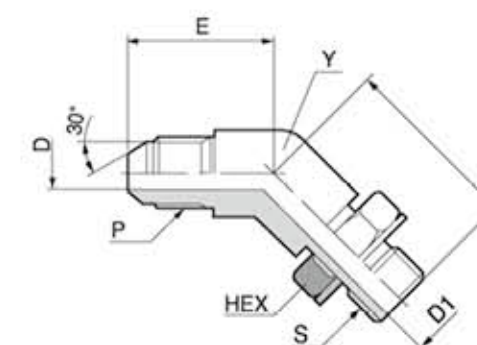


PART NO	P (FF)	S (PF)	E	F	D	D1	HEX	Y
ProtecS3-W4-04-04	1/4-19	1/4-19	21	29	5	5	19	14
ProtecS3-W4-04-06	1/4-19	3/8-19	25	33	5	8	22	19
ProtecS3-W4-06-04	3/8-19	1/4-19	25	33	8	5	19	19
ProtecS3-W4-06-06	3/8-19	3/8-19	25	33	8	8	22	19
ProtecS3-W4-06-08	3/8-19	1/2-14	28	39	8	11	27	22
ProtecS3-W4-08-06	1/2-14	3/8-19	28	39	11	8	22	22
ProtecS3-W4-08-08	1/2-14	1/2-14	28	39	11	11	27	22
ProtecS3-W4-08-12	1/2-14	3/4-14	33	44	11	16	32	27
ProtecS3-W4-12-08	3/4-14	1/2-14	33	44	16	11	27	27
ProtecS3-W4-12-12	3/4-14	3/4-14	33	44	16	16	32	27
ProtecS3-W4-12-16	3/4-14	1-11	37	47	16	22	41	33
ProtecS3-W4-16-12	1-11	3/4-11	37	47	22	16	32	33
ProtecS3-W4-16-16	1-11	1-11	37	47	22	22	41	33
ProtecS3-W4-20-20	1 1/4-11	1 1/4-11	42	49	28	28	50	46

ProtecU3-W4

Flare tube end/ Straight thread O-ring

Part Number Information
 Body with locknut, washer and O-ring
 All dimensions are in millimeters



PART NO	P (FF)	S (UNF)	E	F	D	D1	HEX	Y
ProtecU3-W4-04-06	1/4-19	9/16-18	21	29	5	7.5	17.5	14
ProtecU3-W4-06-08	3/8-19	3/4-16	25	33	8	9.9	22.2	19
ProtecU3-W4-08-10	1/2-14	7/8-14	28	39	11	12.3	25.4	22
ProtecU3-W4-12-12	3/4-14	1 1/16-12	33	44	16	15.5	31.8	27
ProtecU3-W4-16-16	1-11	1 5/16-12	37	47	22	21	38.1	33
ProtecU3-W4-20-20	1 1/4-11	1 5/8-12	42	49	28	27	47.6	46

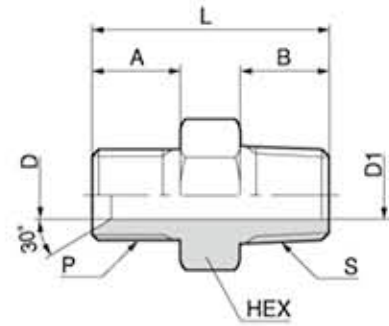
Protech3-HN

Flare tube end/ Male pipe end

Part Number Information

Body only

All dimensions are in millimeters



PART NO	P (PF)	S (PT)	HEX	L	A	B	D	D1
Protec H3-HN-02-02	1/8-28	1/8-28	14	28	10	10	3	3
Protec H3-HN-02-04	1/8-28	1/4-19	17	31	10	13	3	5
Protec H3-HN-04-02	1/4-19	1/8-28	19	31	13	10	5	3
Protec H3-HN-04-04	1/4-19	1/4-19	19	34	13	13	5	5
Protec H3-HN-04-06	1/4-19	3/8-19	22	36	13	15	5	8
Protec H3-HN-06-04	3/8-19	1/4-19	22	36	15	13	8	5
Protec H3-HN-06-06	3/8-19	3/8-19	22	38	15	15	8	8
Protec H3-HN-06-08	3/8-19	1/2-14	27	43	15	18	8	11
Protec H3-HN-08-06	1/2-14	3/8-19	27	43	18	15	11	8
Protec H3-HN-08-08	1/2-14	1/2-14	27	46	18	18	11	11
Protech3-HN-08-12	1/2-14	3/4-14	36	50	18	20	11	16
Protech3-HN-12-08	3/4-14	1/2-14	36	50	20	18	16	11
Protech3-HN-12-12	3/4-14	3/4-14	36	52	20	20	16	16
Protech3-HN-12-16	3/4-14	1-11	41	56	20	22	16	22
Protech3-HN-16-12	1-11	3/4-14	41	56	22	20	22	16
Protech3-HN-16-16	1-11	1-11	41	58	22	22	22	22
Protech3-HN-20-20	1 1/4-11	1 1/4-11	46	64	25	25	28	28
Protech3-HN-24-24	1 1/2-11	1 1/2-11	50	65	25	25	34	34

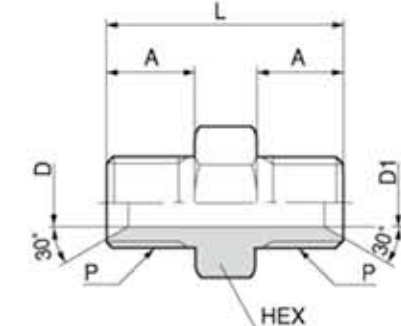
Protech3H

Flare tube end / Flare tube end

Part Number Information

Body only

All dimensions are in millimeters



PART NO	P (PF)	HEX	L	D	A
Protech3H-04-04	1/4-19	19	34	5	13
Protech3H-06-06	3/8-19	22	38	8	15
Protech3H-08-08	1/2-14	27	46	11	18
Protech3H-12-12	3/4-14	36	52	16	20
Protech3H-16-16	1-11	41	58	22	22
Protech3H-20-20	1 1/4-11	46	64	28	25
Protech3H-24-24	1 1/2-11	50	65	34	25

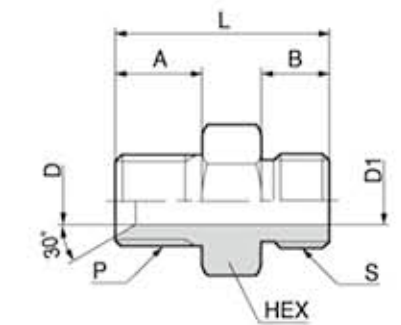
Protech3-HB

Flare tube end / Straight thread O-ring

Part Number Information

Body with O-ring

All dimensions are in millimeters



PART NO	P (PF)	S (PT)	HEX	L	D	D1	A	B
Protech3-H B-04-04	1/4-19	1/4-19	19	33	5	5	13	11
Protech3-H B-04-06	1/4-19	3/8-19	22	33	5	5	13	11
Protech3-H B-06-06	3/8-19	3/8-19	22	37	8	8	15	11
Protech3-H B-06-08	3/8-19	1/2-14	27	40	8	8	15	15
Protech3-H B-08-08	1/2-14	1/2-14	27	43	11	11	18	16
Protech3-HB-08-12	1/2-14	3/4-14	32	44	11	11	18	16
Protech3-HB-12-12	3/4-14	3/4-14	32	49	16	16	20	20
Protech3-HB-12-16	3/4-14	1-11	41	50	16	16	20	20
Protech3-HB-16-16	1-11	1-11	41	56	22	22	22	20
Protech3-H B-16-20	1-11	1 1/4-11	50	57	22	28	22	20
Protech3-H B-20-20	1 1/4-11	1 1/4-11	50	60	28	28	25	20
Protech3-H B-24-24	1 1/2-11	1 1/2-11	60	60	34	34	25	20

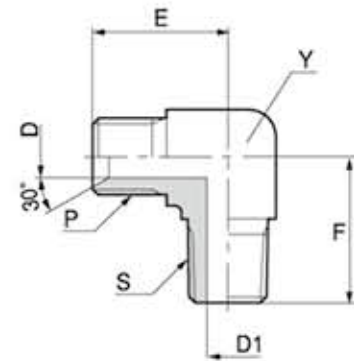
Protech3-N9

Flare tube end/ Male pipe end

Part Number Information

Body only

All dimensions are in millimeters



PART NO	P (FF)	S (FT)	E	F	D	D1	Y
Protech3-N9-02-02	1/8-28	1/8-28	17.5	22	3	3	14
Protech3-N9-02-04	1/8-28	1/4-19	20	26.5	3	5	17
Protech3-N9-04-02	1/4-19	1/8-28	24.5	19.5	5	3	17
Protech3-N9-04-04	1/4-19	1/4-19	23	26.5	5	5	17
Protech3-N9-04-06	1/4-19	3/8-19	25	30	5	8	19
Protech3-N9-06-04	3/8-19	1/4-19	27	28	8	5	19
Protech3-N9-06-06	3/8-19	3/8-19	27	30	8	8	19
Protech3-N9-06-08	3/8-19	1/2-14	27.5	38	8	11	24
Protech3-N9-08-06	1/2-14	3/8-19	31	32	11	8	24
Protech3-N9-08-08	1/2-14	1/2-14	30.5	38	11	11	24
Protech3-N9-08-12	1/2-14	3/4-14	34	43	11	16	30
Protech3-N9-12-08	3/4-14	1/2-14	36	41	16	11	30
Protech3-N9-12-12	3/4-14	3/4-14	36	43	16	16	30
Protech3-N9-12-16	3/4-14	1-11	42	46	16	22	36
Protech3-N9-16-12	1-11	3/4-14	42	43	22	16	36
Protech3-N9-16-16	1-11	1-11	42	46	22	22	36
Protec H3-N9-20-20	1 1/4-11	1 1/4-11	48	58	28	28	46
Protech3-N9-24-24	1 1/2-11	1 1/2-11	50	63	34	34	50

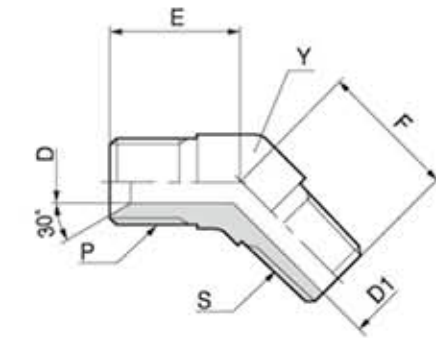
Protech3-N4

Flare tube end / Male pipe end

Part Number Information

Body only

All dimensions are in millimeters



PART NO	P (FF)	S (FT)	E	F	D	Y
Protech3-N4-02-02	1/8-28	1/8-28	18	18	3	14
Protech3-N4-04-04	1/4-19	1/4-19	19	20	5	17
Protech3-N4-06-06	3/8-19	3/8-19	23	24	8	19
Protech3-N4-08-08	1/2-14	1/2-14	26	27	11	24
Protech3-N4-12-12	3/4-14	3/4-14	32	32	16	30
Protech3-N4-16-16	1-11	1-11	35	34	22	36
Protech3-N4-20-20	1 1/4-11	1 1/4-11	40	40	28	46
Protech3-N4-24-24	1 1/2-11	1 1/2-11	41	41	34	50

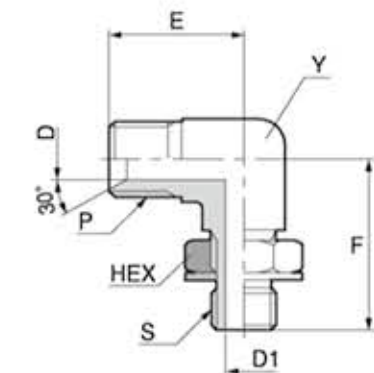
Protech3-W9

Flare tube end/ Straight thread O-ring

Part Number Information

Body with locknut, washer and O-ring

All dimensions are in millimeters

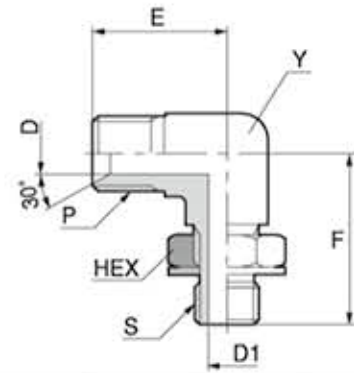


PART NO	P (FF)	S (PF)	E	F	D	D1	HEX	Y
Protech3-W9-04-04	1/4-19	1/4-19	23	32	5	5	19	14
Protech3-W9-04-06	1/4-19	3/8-19	26	37	5	8	22	19
Protech3-W9-06-04	3/8-19	1/4-19	29	37	8	5	19	19
Protech3-W9-06-06	3/8-19	3/8-19	29	37	8	8	22	19
Protech3-W9-06-08	3/8-19	1/2-14	29	43	8	11	27	22
Protech3-W9-08-06	1/2-14	3/8-19	34	43	11	8	22	22
Protech3-W9-08-08	1/2-14	1/2-14	34	43	11	11	27	22
Protech3-W9-08-12	1/2-14	3/4-14	35	49	11	16	32	27
Protech3-W9-12-08	3/4-14	1/2-14	36	49	16	11	27	27
Protech3-W9-12-12	3/4-14	3/4-14	36	49	16	16	32	27
Protech3-W9-12-16	3/4-14	1-11	40	52	16	22	41	33
Protech3-W9-16-12	1-11	3/4-11	40	52	22	16	32	33
Protech3-W9-16-16	1-11	1-11	40	52	22	22	41	33
Protech3-W9-20-20	1 1/4-11	1 1/4-11	48	65	28	28	50	46

ProtecHU-W9

Flare tube end/ Straight thread O-ring

Part Number Information
 Body with locknut, washer and O-ring
 All dimensions are in millimeters

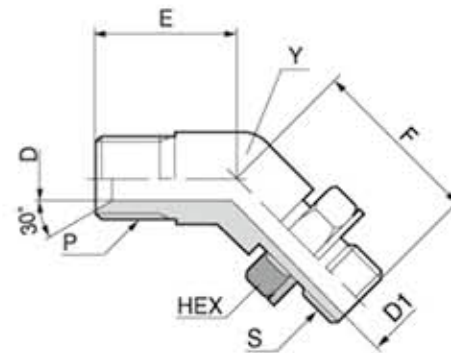


PART NO	P (PF)	S (UNF)	E	F	D	D1	HEX	Y
ProtecHU-W9-04-06	1/4-19	9/16-18	23	32	5	7.5	17.5	14
ProtecHU-W9-06-08	3/8-19	3/4-16	29	37	8	9.9	22.2	19
ProtecHU-W9-08-10	1/2-14	7/8-14	34	43	11	12.3	25.4	22
ProtecHU-W9-12-12	3/4-14	1 1/16-12	36	49	16	15.5	31.8	27
ProtecHU-W9-16-16	1-11	1 5/16-12	40	52	22	21	38.1	33
ProtecHU-W9-20-20	1 1/4-11	1 5/8-12	48	57	28	27	47.6	46

ProtecH3-W4

Flare tube end/ Straight thread O-ring

Part Number Information
 Body with locknut, washer and O-ring
 All dimensions are in millimeters

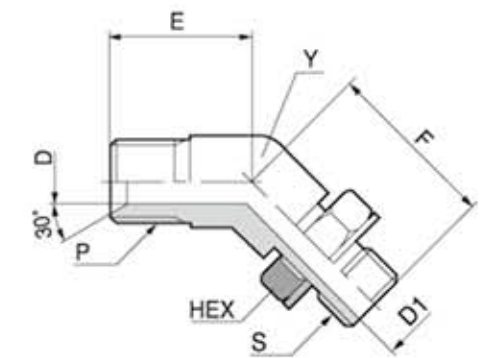


PART NO	P (PF)	S (UNF)	E	F	D	D1	HEX	Y
ProtecH3-W4-04-04	1/4-19	1/4-19	19	29	5	5	19	14
ProtecH3-W4-04-06	1/4-19	3/8-19	24	33	5	8	22	19
ProtecH3-W4-06-04	3/8-19	1/4-19	24	33	8	5	19	19
ProtecH3-W4-06-06	3/8-19	3/8-19	24	33	8	8	22	19
ProtecH3-W4-06-08	3/8-19	1/2-14	28	39	8	11	27	22
ProtecH3-W4-08-06	1/2-14	3/8-19	28	39	11	8	22	22
ProtecH3-W4-08-08	1/2-14	1/2-14	28	39	11	11	27	22
ProtecH3-W4-08-12	1/2-14	3/4-14	32	39	11	16	32	27
ProtecH3-W4-12-08	3/4-14	1/2-14	32	44	16	11	27	27
ProtecH3-W4-12-12	3/4-14	3/4-14	32	44	16	16	32	27
ProtecH3-W4-12-16	3/4-14	1-11	37	44	16	22	41	33
ProtecH3-W4-16-12	1-11	3/4-11	37	47	22	16	32	33
ProtecH3-W4-16-16	1-11	1-11	37	47	22	22	41	33
Protec H3-W4-20-20	1 1/4-11	1 1/4-11	40	49	28	28	50	46

ProtecHU-W4

Flare tube end / Straight thread O-ring

Part Number Information
 Body with locknut, washer and O-ring
 All dimensions are in millimeters

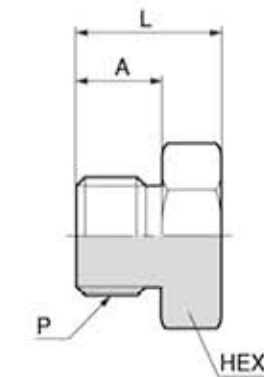


PART NO	P (PF)	S (UNF)	E	F	D	D1	HEX	Y
ProtecH U-W4-04-06	1/4-19	9/16-18	19	29	5	7.5	17.5	14
ProtecH U-W4-06-08	3/8-19	3/4-16	24	33	8	9.9	22.2	19
ProtecHU-W4-08-10	1/2-14	7/8-14	28	38.6	11	12.3	25.4	22
ProtecHU-W4-12-12	3/4-14	1 1/16-12	32	43.9	16	15.5	31.8	27
ProtecHU-W4-16-16	1-11	1 5/16-12	37	47.2	22	21	38.1	33
ProtecHU-W4-20-20	1 1/4-11	1 5/8-12	40	49	28	27	47.6	46

ProtecOG

Straight thread O-ring

Part Number Information
 Body with and O-ring
 All dimensions are in millimeters

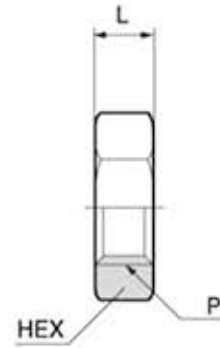


PART NO	P (PF)	HEX	L	A
ProtecOG-04	1/4-19	17	20	11
ProtecOG-06	3/8-19	22	21	11
ProtecOG-08	1/2-14	27	27.3	15
ProtecOG-12	3/4-14	32	30	16
ProtecOG-16	1-11	41	32	20
ProtecOG-20	1 1/4-11	50	35	20
ProtecOG-24	1 1/2-11	60	35	20

ProtecPNUT

Fitting lock nut

All dimensions are in millimeters



PART NO	P (PF)	HEX	L
ProtecPNUT-02	1/8-28	14	6
ProtecPNUT-04	1/4-19	19	7
ProtecPNUT-06	3/8-19	22	8
ProtecPNUT-08	1/2-14	27	9
ProtecPNUT-12	3/4-14	36	10.2
ProtecPNUT-16	1-11	41	10.4
ProtecPNUT-20	1 1/4-11	50	10.4
ProtecPNUT-24	1 1/2-11	55	12.2



ORFS Tube Fittings

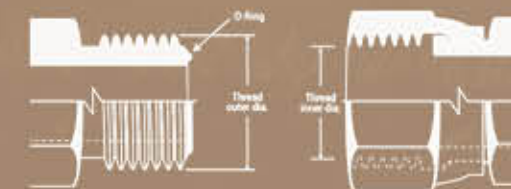
Part. 03

Specifications

Designed for higher pressure fluid power applications, these O-Ring Face Seal (ORFS) Hydraulic Fittings meet or exceed SAE J1453 and ISO 8434-3 standards. The ORFS style fitting provides a connection between steel tubing, and SAE J1926 / ISO 11926-10-Ring Ports.

Features

- Size Range: 9/16" to 2"
- Design Standard: SAE J1453/ISO 8434-3
- Material: Steel/Stainless/Brass



ORFS Tube Fittings Index

ProtecOW-90 • P.52	ProtecOW-45 • P.53	ProtecOW-TC • P.54	ProtecOW-TR • P.54	ProtecOB • P.55
ProtecOW-9L • P.56	ProtecOB-OL • P.56	ProtecON-90 • P.57	ProtecON • P.58	ProtecOV-90 • P.59
ProtecOV-TC • P.59	ProtecOV-TR • P.60	ProtecOV • P.60	ProtecBVO • P.61	ProtecVW-90 • P.61
ProtecOO-90 • P.62	ProtecOO-T3 • P.62	ProtecOO-C4 • P.63	ProtecOO • P.63	ProtecOH-90 • P.64

ProtecOH-45 • P.64	ProtecOH-TR • P.65	ProtecOH • P.65	ProtecBH • P.66	ProtecSO • P.66
ProtecOD • P.67	ProtecOP • P.67	ProtecOVN • P.68	ProtecONU • P.68	ProtecOCA • P.69
ProtecOLN • P.69	ProtecUV • P.70			

ProtecOW-90

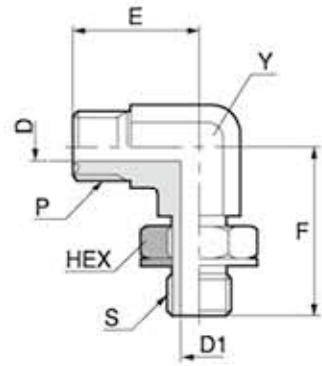
ORFS tube end / Straight thread O-ring

SAE 520220

Part Number Information

Body with O-rings

All dimensions are in inches



PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	D1	HEX	Y
ProtecOW-90-04-04	9/16-18	7/16-20	0.85	1.29	0.172	0.172	5/8	9/16
ProtecOW-90-04-06	9/16-18	9/16-18	0.93	1.45	0.172	0.264	3/4	9/16
ProtecOW-90-06-04	11/16-16	7/16-20	0.98	1.37	0.264	0.172	5/8	3/4
ProtecOW-90-06-06	11/16-16	9/16-18	0.98	1.45	0.264	0.264	3/4	3/4
ProtecOW-90-06-08	11/16-16	3/4-16	1.04	1.6	0.264	0.378	15/16	3/4
ProtecOW-90-06-10	11/16-16	7/8-14	1.15	1.97	0.264	0.484	1 1/16	7/8
ProtecOW-90-08-06	13/16-16	9/16-18	1.1	1.44	0.378	0.264	3/4	3/4
ProtecOW-90-08-08	13/16-16	3/4-16	1.1	1.6	0.378	0.378	15/16	3/4
ProtecOW-90-08-10	13/16-16	7/8-14	1.23	1.97	0.378	0.484	1 1/16	7/8
ProtecOW-90-08-12	13/16-16	1 1/16-12	1.32	2.17	0.378	0.609	1 3/8	1 3/16
ProtecOW-90-10-08	1-14	3/4-16	1.31	1.8	0.484	0.378	15/16	1 1/16
ProtecOW-90-10-10	1-14	7/8-14	1.31	1.97	0.484	0.484	1 1/16	1 1/16
ProtecOW-90-10-12	1-14	1 1/16-12	1.41	2.17	0.484	0.609	1 3/8	1 3/16
ProtecOW-90-12-08	1 3/16-12	3/4-16	1.47	1.84	0.609	0.378	3/4	1 3/16
ProtecOW-90-12-10	1 3/16-12	7/8-14	1.47	2.03	0.609	0.484	1 1/16	1 3/16
ProtecOW-90-12-12	1 3/16-12	1 1/16-12	1.47	2.17	0.609	0.609	1 3/8	1 3/16
ProtecOW-90-12-16	1 3/16-12	1 5/16-12	1.62	2.35	0.609	0.812	1 5/8	1 7/16
ProtecOW-90-16-16	1 7/16-12	1 5/16-12	1.64	2.35	0.812	0.812	1 5/8	1 7/16
ProtecOW-90-16-20	1 7/16-12	1 5/8-12	1.76	2.45	0.812	1.024	1 7/8	1 5/8
ProtecOW-90-20-20	1 11/16-12	1 5/8-12	1.76	2.45	1.024	1.024	1 7/8	1 5/8
ProtecOW-90-24-24	2-12	1 7/8-12	1.92	2.59	1.26	1.26	2 1/8	1 7/8

ProtecOW-45

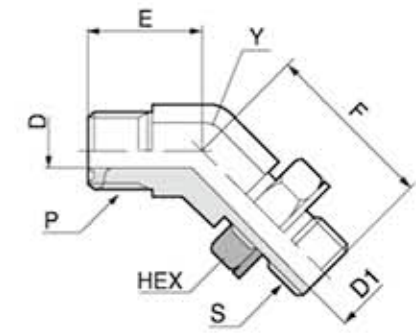
ORFS tube end / Straight thread O-ring

SAE 520320

Part Number Information

Body with O-rings

All dimensions are in inches

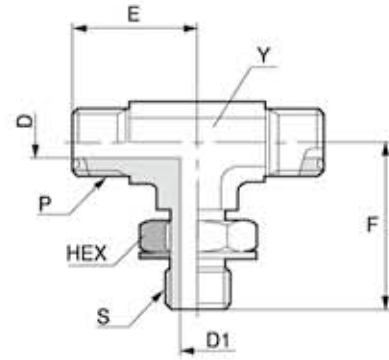


PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	D1	HEX	Y
ProtecOW-45-04-04	9/16-18	7/16-20	0.63	1.18	0.172	0.172	5/8	9/16
ProtecOW-45-04-06	9/16-18	9/16-18	0.69	1.3	0.172	0.264	3/4	3/4
ProtecOW-45-06-04	11/16-16	7/16-20	0.74	1.22	0.264	0.172	5/8	3/4
ProtecOW-45-06-06	11/16-16	9/16-18	0.74	1.3	0.264	0.264	3/4	3/4
ProtecOW-45-06-08	11/16-16	3/4-16	0.74	1.45	0.264	0.378	15/16	3/4
ProtecOW-45-08-06	13/16-16	9/16-18	0.8	1.27	0.378	0.264	3/4	3/4
ProtecOW-45-08-08	13/16-16	3/4-16	0.8	1.43	0.378	0.378	15/16	3/4
ProtecOW-45-08-10	13/16-16	7/8-14	0.84	1.76	0.378	0.484	1 1/16	3/4
ProtecOW-45-10-08	1-14	3/4-16	0.92	1.59	0.484	0.378	15/16	1 1/16
ProtecOW-45-10-10	1-14	7/8-14	0.92	1.76	0.484	0.484	1 1/16	1 1/16
ProtecOW-45-10-12	1-14	1 1/16-12	0.98	1.97	0.484	0.609	1 3/8	1 3/16
ProtecOW-45-12-10	1 3/16-12	7/8-14	1.02	1.81	0.609	0.484	1 1/16	1 3/16
ProtecOW-45-12-12	1 3/16-12	1 1/16-12	1.02	1.97	0.609	0.609	1 3/8	1 3/16
ProtecOW-45-12-16	1 3/16-12	1 5/16-12	1.02	2.06	0.609	0.812	1 5/8	1 7/16
ProtecOW-45-16-16	1 7/16-12	1 5/16-12	1.18	2.06	0.812	0.812	1 5/8	1 7/16
ProtecOW-45-16-20	1 7/16-12	1 5/8-12	1.26	2.25	0.812	1.024	1 7/8	1 5/8
ProtecOW-45-20-20	1 11/16-12	1 5/8-12	1.26	2.11	1.024	1.024	1 7/8	1 5/8
ProtecOW-45-24-24	2-12	1 7/8-12	1.45	2.11	1.26	1.26	2 1/8	1 7/8

ProtecOW-TC

ORFS tube ends / Straight thread O-ring

SAE 520429
 Part Number Information
 Body with O-rings
 All dimensions are in inches

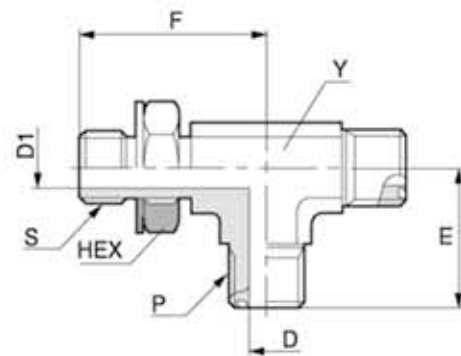


PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	D1	HEX	Y
ProtecOW-TC-04-04-04	9/16-18	7/16-20	0.85	1.29	0.172	0.172	5/8	9/16
ProtecOW-TC-06-06-06	11/16-16	9/16-18	0.98	1.45	0.264	0.264	3/4	3/4
ProtecOW-TC-08-08-08	13/16-16	3/4-16	1.1	1.6	0.378	0.378	15/16	3/4
ProtecOW-TC-10-10-10	1-14	7/8-14	1.31	1.97	0.484	0.484	1 1/16	1 1/16
ProtecOW-TC-12-12-12	1 3/16-12	1 1/16-12	1.47	2.17	0.609	0.609	1 3/8	1 3/16
ProtecOW-TC-16-16-16	1 7/16-12	1 5/16-12	1.64	2.35	0.812	0.812	1 5/8	1 7/16
ProtecOW-TC-20-20-20	1 11/16-12	1 5/8-12	1.76	2.45	1.024	1.024	1 7/8	1 5/8
ProtecOW-TC-24-24-24	2-12	1 7/8-12	1.92	2.59	1.26	1.26	2 1/8	1 7/8

ProtecOW-TR

ORFS tube ends / Straight thread O-ring

SAE 520428
 Part Number Information
 Body with O-rings
 All dimensions are in inches

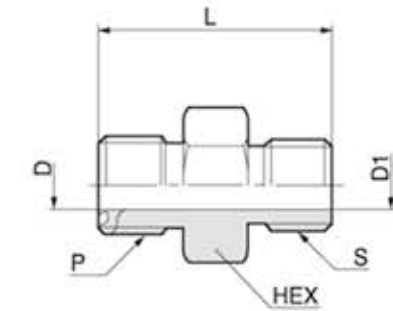


PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	D1	HEX	Y
ProtecOW-TR-04-04-04	9/16-18	7/16-20	0.85	1.29	0.172	0.172	5/8	9/16
ProtecOW-TR-06-06-06	11/16-16	9/16-18	0.98	1.45	0.264	0.264	3/4	3/4
ProtecOW-TR-08-08-08	13/16-16	3/4-16	1.1	1.6	0.378	0.378	15/16	3/4
ProtecOW-TR-10-10-10	1-14	7/8-14	1.31	1.97	0.484	0.484	1 1/16	1 1/16
ProtecOW-TR-12-12-12	1 3/16-12	1 1/16-12	1.47	2.17	0.609	0.609	1 3/8	1 3/16
ProtecOW-TR-16-16-16	1 7/16-12	1 5/16-12	1.64	2.35	0.812	0.812	1 5/8	1 7/16
ProtecOW-TR-20-20-20	1 11/16-12	1 5/8-12	1.76	2.45	1.024	1.024	1 7/8	1 5/8
ProtecOW-TR-24-24-24	2-12	1 7/8-12	1.92	2.59	1.26	1.26	2 1/8	1 7/8

ProtecOB

ORFS tube end / Straight thread O-ring

SAE 520120
 Part Number Information
 Body with O-rings
 All dimensions are in inches



PART NO	P (UNF/UN)	S (UNF/UN)	HEX	L	D	D1
ProtecOB-04-04	9/16-18	7/16-20	5/8	1.13	0.172	0.172
ProtecOB-04-06	9/16-18	9/16-18	3/4	1.20	0.172	0.264
ProtecOB-06-04	11/16-16	7/16-20	3/4	1.37	0.264	0.172
ProtecOB-06-06	11/16-16	9/16-18	3/4	1.26	0.264	0.264
ProtecOB-06-08	11/16-16	3/4-16	7/8	1.38	0.264	0.264
ProtecOB-06-10	11/16-16	7/8-14	1	1.53	0.264	0.484
ProtecOB-08-06	13/16-16	9/16-18	7/8	1.52	0.378	0.264
ProtecOB-08-08	13/16-16	3/4-16	7/8	1.44	0.378	0.378
ProtecOB-08-10	13/16-16	7/8-14	1	1.59	0.378	0.484
ProtecOB-08-12	13/16-16	1 1/16-12	1 1/4	1.75	0.378	0.609
ProtecOB-10-08	1-14	3/4-16	1 1/16	1.78	0.484	0.378
ProtecOB-10-10	1-14	7/8-14	1 1/16	1.70	0.484	0.484
ProtecOB-10-12	1-14	1 1/16-12	1 1/4	1.85	0.484	0.484
ProtecOB-12-08	1 3/16-12	3/4-16	1 1/4	1.91	0.609	0.378
ProtecOB-12-10	1 3/16-12	7/8-14	1 1/4	1.99	0.609	0.484
ProtecOB-12-12	1 3/16-12	1 1/16-12	1 1/4	1.91	0.609	0.609
ProtecOB-12-16	1 3/16-12	1 5/16-12	1 1/2	1.96	0.609	0.609
ProtecOB-16-16	1 7/16-12	1 5/16-12	1 1/2	1.98	0.812	0.812
ProtecOB-16-20	1 7/16-12	1 5/8-12	1 7/8	2.06	0.812	1.024
ProtecOB-20-20	1 11/16-12	1 5/8-12	1 7/8	2.06	1.024	1.024
ProtecOB-24-24	2-12	1 7/8-12	2 1/8	2.13	1.260	1.260

ProtecOW-9L

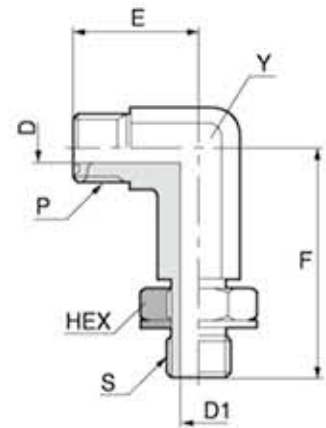
ORFS tube end / Straight thread O-ring

SAE 520520

Part Number Information

Body with O-rings

All dimensions are in inches



PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	D1	HEX	Y
ProtecOW-9L-04-04	9/16-18	7/16-20	0.85	2.23	0.172	0.172	5/8	9/16
ProtecOW-9L-06-06	11/16-16	9/16-18	0.98	2.61	0.264	0.264	3/4	3/4
ProtecOW-9L-08-08	13/16-16	3/4-16	1.1	2.95	0.378	0.378	15/16	3/4
ProtecOW-9L-10-10	1-14	7/8-14	1.31	3.51	0.484	0.484	1 1/16	1 1/16
ProtecOW-9L-12-12	1 3/16-12	1 1/16-12	1.47	3.97	0.609	0.609	1 3/8	1 3/16
ProtecOW-9L-16-16	1 7/16-12	1 5/16-12	1.64	4.51	0.812	0.812	1 5/8	1 7/16

ProtecOB-OL

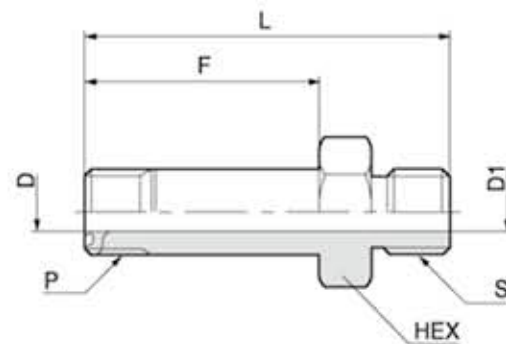
ORFS tube end / Straight thread O-ring

SAE 520122

Part Number Information

OL Body with O-rings

All dimensions are in inches



PART NO	P (UNF/UN)	S (UNF/UN)	HEX	L	F	D	D1
ProtecOB-OL-04-04	9/16-18	7/16-20	5/8	2.07	1.33	0.172	0.172
ProtecOB-OL-06-06	11/16-16	9/16-18	3/4	2.27	1.45	0.264	0.264
ProtecOB-OL-08-08	13/16-16	3/4-16	7/8	2.68	1.74	0.378	0.378
ProtecOB-OL-10-10	1-14	7/8-14	1 1/16	3.13	2.04	0.484	0.484
ProtecOB-OL-12-12	1 3/16-12	1 1/16-12	1 5/16	3.76	2.05	0.609	0.609
ProtecOB-OL-16-16	1 7/16-12	1 5/16-12	1 5/8	4.14	2.85	0.812	0.812
ProtecOB-OL-20-20	1 11/16-12	1 5/8-12	1 7/8	4.76	3.39	1.024	1.024

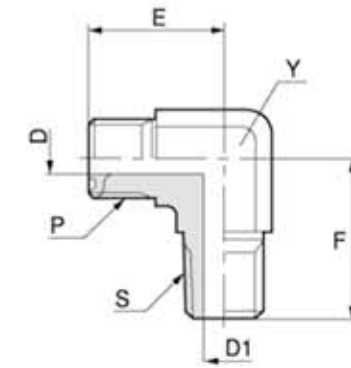
ProtecON-90

ORFS tube end / Male pipe end

Part Number Information

Body with O-rings

All dimensions are in inches

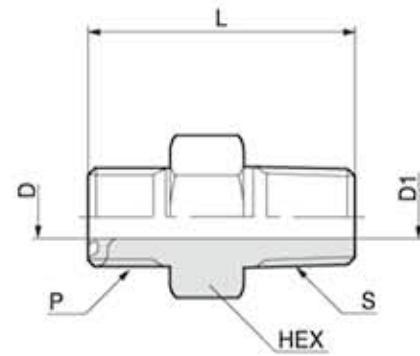


PART NO	P (UNF/UN)	S (PT/NPT)	E	F	D	D1	Y
ProtecON-90-04-02	9/16-18	1/8-27	0.85	0.8	0.172	0.188	9/16
ProtecON-90-04-04	9/16-18	1/4-18	0.85	1.12	0.172	0.281	9/16
ProtecON-90-04-06	9/16-18	3/8-18	0.97	1.22	0.172	0.406	3/4
ProtecON-90-06-06	11/16-16	3/8-18	0.98	1.22	0.264	0.406	3/4
ProtecON-90-06-08	11/16-16	1/2-14	1.15	1.47	0.264	0.531	7/8
ProtecON-90-08-06	13/16-16	3/8-18	1.10	1.22	0.378	0.406	3/4
ProtecON-90-08-08	13/16-16	1/2-14	1.10	1.47	0.378	0.531	7/8
ProtecON-90-10-08	1-14	1/2-14	1.31	1.47	0.484	0.531	1 1/16
ProtecON-90-10-12	1-14	3/4-14	1.41	1.59	0.484	0.719	1 3/16
ProtecON-90-12-12	1 3/16-12	3/4-14	1.47	1.59	0.609	0.719	1 3/16
ProtecON-90-12-16	1 3/16-12	1-11 1/2	1.62	1.97	0.609	0.938	1 5/16
ProtecON-90-16-12	1 7/16-12	3/4-14	1.64	1.78	0.812	0.719	1 7/16
ProtecON-90-16-16	1 7/16-12	1-11 1/2	1.64	1.97	0.812	0.938	1 7/16
ProtecON-90-20-20	1 11/16-12	1 1/4-11 1/2	1.76	2.38	1.024	1.25	1 5/8
ProtecON-90-24-24	2-12	1 1/2-11 1/2	1.92	2.64	1.26	1.5	1 7/8

ProtecON

ORFS tube end / Male pipe end

Part Number Information
 Body with O-rings
 All dimensions are in inches

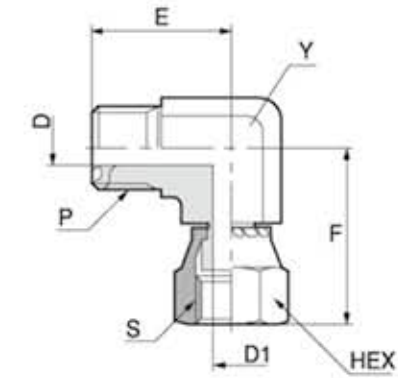


PART NO	P (UNF/UN)	S (NPTF)	HEX	L	D	D1
ProtecON-04-02	9/16-18	1/8-27	5/8	1.07	0.172	0.188
ProtecON-04-04	9/16-18	1/4-18	5/8	1.26	0.172	0.281
ProtecON-04-06	9/16-18	3/8-18	3/4	1.32	0.172	0.172
ProtecON-06-06	11/16-16	3/8-18	3/4	1.34	0.264	0.406
ProtecON-06-08	11/16-16	1/2-14	7/8	1.55	0.264	0.531
ProtecON-08-06	13/16-16	3/8-18	7/8	1.48	0.378	0.406
ProtecON-08-08	13/16-16	1/2-14	7/8	1.64	0.378	0.531
ProtecON-10-08	1-14	1/2-14	1 1/16	1.82	0.484	0.531
ProtecON-10-12	1-14	3/4-14	1 1/8	1.82	0.484	0.719
ProtecON-12-12	1 3/16-12	3/4-14	1 1/4	1.93	0.609	0.719
ProtecON-12-16	1 3/16-12	1-11 1/2	1 3/8	2.13	0.609	0.938
ProtecON-16-12	1 7/16-12	3/4-14	1 1/2	2	0.812	0.719
ProtecON-16-16	1 7/16-12	1-11 1/2	1 1/2	2.19	0.812	0.938
ProtecON-20-20	1 11/16-12	1 1/4-11 1/2	1 7/8	2.3	1.024	1.25
ProtecON-24-24	2-12	1 1/2-11 1/2	2 1/8	2.4	1.26	1.5

ProtecOV-90

ORFS swivel / ORFS tube ends

SAE 520221
 Part Number Information
 Body with O-rings
 All dimensions are in inches

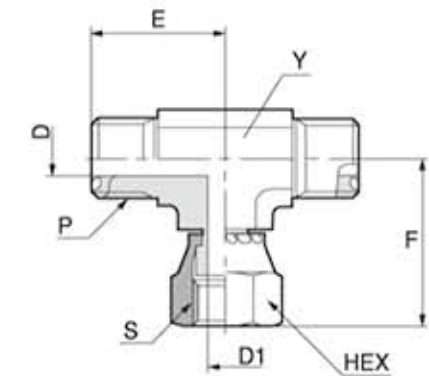


PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	D1	HEX	Y
ProtecOV-90-04-04-04	9/16-18	9/16-18	0.85	1.07	0.172	0.166	11/16	9/16
ProtecOV-90-06-06-06	11/16-16	11/16-16	0.98	1.17	0.264	0.264	13/16	3/4
ProtecOV-90-08-08-08	13/16-16	13/16-16	1.1	1.49	0.378	0.358	15/16	3/4
ProtecOV-90-10-10-10	1-14	1-14	1.31	1.65	0.484	0.453	1 1/8	1 1/16
ProtecOV-90-12-12-12	1 3/16-12	1 3/16-12	1.47	1.82	0.609	0.547	1 3/8	1 3/16
ProtecOV-90-16-16-16	1 7/16-12	1 7/16-12	1.64	2.1	0.812	0.781	1 5/8	1 7/16
ProtecOV-90-20-20-20	1 11/16-12	1 11/16-12	1.76	2.29	1.024	1.024	1 7/8	1 5/8
ProtecOV-90-24-24-24	2-12	2-12	1.92	2.41	1.26	1.26	2 1/4	1 7/8

ProtecOV-TC

ORFS swivel / ORFS tube ends

SAE 520433
 Part Number Information
 Body with O-rings
 All dimensions are in inches

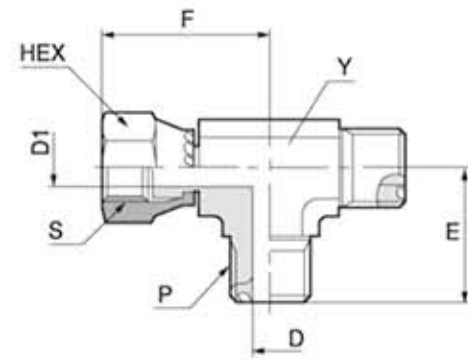


PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	D1	HEX	Y
ProtecOV-TC-04-04-04	9/16-18	9/16-18	0.85	1.07	0.172	0.166	11/16	9/16
ProtecOV-TC-06-06-06	11/16-16	11/16-16	0.98	1.17	0.264	0.264	13/16	3/4
ProtecOV-TC-08-08-08	13/16-16	13/16-16	1.1	1.49	0.378	0.358	15/16	3/4
ProtecOV-TC-10-10-10	1-14	1-14	1.31	1.65	0.484	0.453	1 1/8	1 1/16
ProtecOV-TC-12-12-12	1 3/16-12	1 3/16-12	1.47	1.82	0.609	0.547	1 3/8	1 3/16
ProtecOV-TC-16-16-16	1 7/16-12	1 7/16-12	1.64	2.1	0.812	0.781	1 5/8	1 7/16
ProtecOV-TC-20-20-20	1 11/16-12	1 11/16-12	1.76	2.29	1.024	1.024	1 7/8	1 5/8
ProtecOV-TC-24-24-24	2-12	2-12	1.92	2.41	1.26	1.26	2 1/4	1 7/8

ProtecOV-TR

ORFS swivel / ORFS tube ends

SAE 520432
 Part Number Information
 Body with O-rings
 All dimensions are in Inches

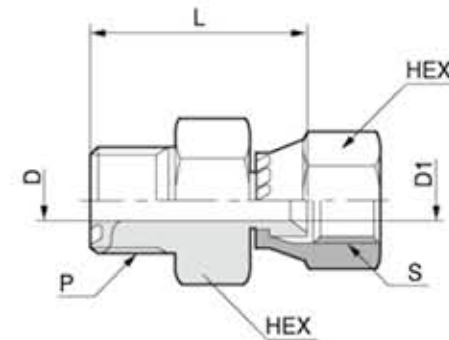


PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	D1	HEX	Y
ProtecOV-TR-04-04-04	9/16-18	9/16-18	0.85	1.07	0.172	0.166	11/16	9/16
ProtecOV-TR-06-06-06	11/16-16	11/16-16	0.98	1.17	0.264	0.264	13/16	3/4
ProtecOV-TR-08-08-08	13/16-16	13/16-16	1.1	1.49	0.378	0.358	15/16	3/4
ProtecOV-TR-10-10-10	1-14	1-14	1.31	1.65	0.484	0.453	1 1/8	1 1/16
ProtecOV-TR-12-12-12	1 3/16-12	1 3/16-12	1.47	1.82	0.609	0.547	1 3/8	1 3/16
ProtecOV-TR-16-16-16	1 7/16-12	1 7/16-12	1.64	2.1	0.812	0.781	1 5/8	1 7/16
ProtecOV-TR-20-20-20	1 11/16-12	1 11/16-12	1.76	2.29	1.024	1.024	1 7/8	1 5/8
ProtecOV-TR-24-24-24	2-12	2-12	1.92	2.41	1.26	1.26	2 1/4	1 7/8

ProtecOV

37° swivel / ORFS tube ends

Part Number Information
 Body with O-rings
 All dimensions are in Inches

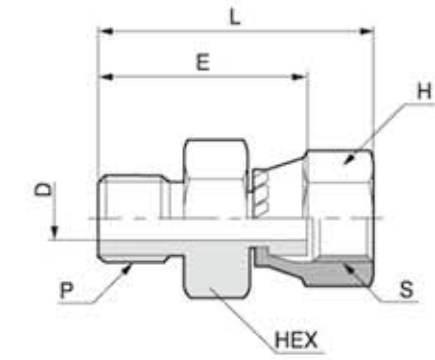


PART NO	P (UNF/UN)	S (UNF/UN)	HEX	L	D	D1
ProtecOV-04-04	9/16-18	7/16-20	5/8	1.04	0.172	0.172
ProtecOV-06-06	11/16-16	9/16-18	3/4	1.14	0.264	0.264
ProtecOV-08-08	13/16-16	3/4-16	7/8	1.32	0.378	0.378
ProtecOV-10-10	1-14	7/8-14	1 1/16	1.52	0.484	0.484
ProtecOV-12-12	1 3/16-12	1 1/16-12	1 1/4	1.63	0.609	0.609
ProtecOV-16-16	1 7/16-12	1 5/16-12	1 1/2	1.79	0.812	0.812

ProtecBVO

ORFS swivel / straight thread O-ring

SAE 520181
 Part Number Information
 Body with O-rings
 All dimensions are in Inches

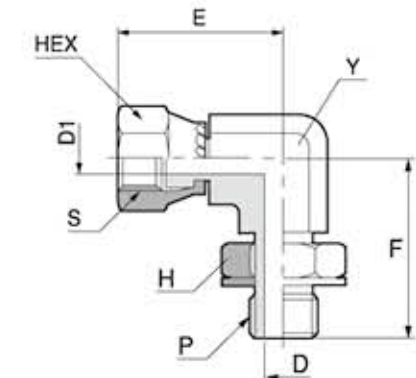


PART NO	P (UNF/UN)	S (UNF/UN)	HEX	L	F	D	H
ProtecBVO-04-04	7/16-20	9/16-18	5/8	1.46	1.03	0.172	11/16
ProtecBVO-06-06	9/16-18	11/16-16	3/4	1.58	1.11	0.264	13/16
ProtecBVO-08-08	3/4-16	13/16-16	7/8	1.95	1.39	0.378	15/16
ProtecBVO-10-10	7/8-14	1-14	1 1/16	2.13	1.49	0.484	1 1/8
ProtecBVO-12-12	1 1/16-12	1 3/16-12	1 1/4	2.34	1.62	0.609	1 3/8
ProtecBVO-16-16	1 5/16-12	1 7/16-12	1 1/2	2.66	1.93	0.812	1 5/8

ProtecVW-90

ORFS swivel / straight thread O-ring

SAE 520281
 Part Number Information
 Body with O-rings
 All dimensions are in Inches

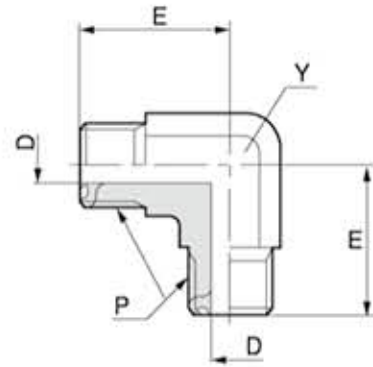


PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D	D1	HEX	H	Y
ProtecVW-90-04-04	7/16-20	9/16-18	1.07	1.29	0.172	0.166	11/16	5/8	9/16
ProtecVW-90-06-06	9/16-18	11/16-16	1.17	1.45	0.264	0.264	13/16	3/4	3/4
ProtecVW-90-08-08	3/4-16	13/16-16	1.49	1.6	0.378	0.358	15/16	15/16	3/4
ProtecVW-90-10-10	7/8-14	1-14	1.65	1.97	0.484	0.453	1 1/8	1 1/16	1 1/16
ProtecVW-90-12-12	1 1/16-12	1 3/16-12	1.82	2.17	0.609	0.547	1 3/8	1 3/8	1 3/16
ProtecVW-90-16-16	1 5/16-12	1 7/16-12	2.1	2.35	0.812	0.783	1 5/8	1 5/8	1 7/16
ProtecVW-90-20-20	1 5/8-12	1 11/16-12	2.29	2.45	1.024	1.024	1 7/8	1 7/8	1 5/8
ProtecVW-90-24-24	1 7/8-12	2-12	2.41	2.59	1.26	1.26	2 1/4	2 1/8	1 7/8

ProtecOO-90

ORFS tube end / ORFS tube ends

SAE 520201
 Part Number Information
 Body with O-rings
 All dimensions are in Inches

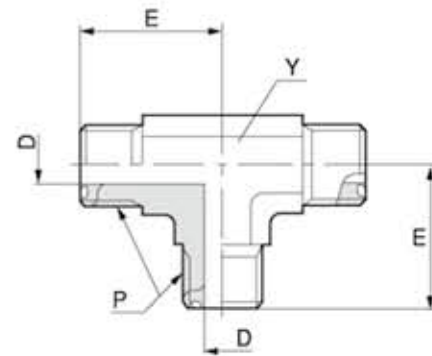


PART NO	P (UNF/UN)	E	D	Y
ProtecOO-90-04-04	9/16-18	0.85	0.172	9/16
ProtecOO-90-06-06	11/16-16	0.98	0.264	3/4
ProtecOO-90-08-08	13/16-16	1.10	0.378	3/4
ProtecOO-90-10-10	1-14	1.31	0.484	1 1/16
ProtecOO-90-12-12	1 3/16-12	1.47	0.609	1 3/16
ProtecOO-90-16-16	1 7/16-12	1.64	0.812	1 7/16
ProtecOO-90-20-20	1 11/16-12	1.76	1.024	1 5/8
ProtecOO-90-24-24	2-12	1.92	1.260	1 7/8

ProtecOO-T3

ORFS tube end (all three ends)

SAE 520401
 Part Number Information
 Body with O-rings
 All dimensions are in Inches

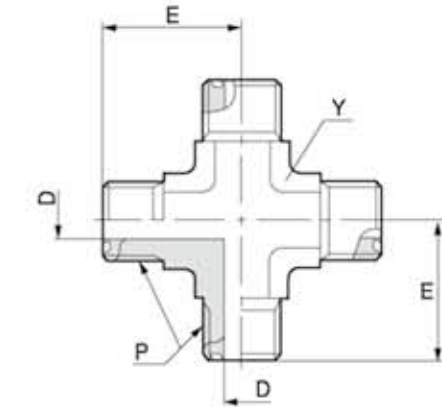


PART NO	P (UNF/UN)	E	D	Y
ProtecOO-T3-04-04-04	9/16-18	0.85	0.172	9/16
ProtecOO-T3-06-06-06	11/16-16	0.98	0.264	3/4
ProtecOO-T3-08-08-08	13/16-16	1.10	0.378	3/4
ProtecOO-T3-10-10-10	1-14	1.31	0.484	1 1/16
ProtecOO-T3-12-12-12	1 3/16-12	1.47	0.609	1 3/16
ProtecOO-T3-16-16-16	1 7/16-12	1.64	0.812	1 7/16
ProtecOO-T3-20-20-20	1 11/16-12	1.76	1.024	1 5/8
ProtecOO-T3-24-24-24	2-12	1.92	1.260	1 7/8

ProtecOO-C4

ORFS tube end (all four ends)

SAE 520501
 Part Number Information
 Body with O-rings
 All dimensions are in Inches

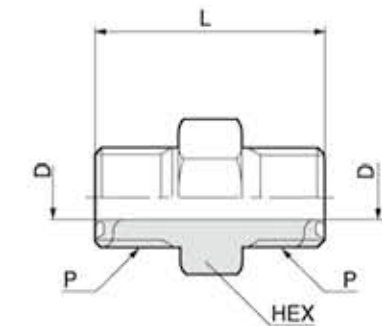


PART NO	P (UNF/UN)	E	D	Y
ProtecOO-C4-04-04-04-04	9/16-18	0.85	0.172	9/16
ProtecOO-C4-06-06-06-06	11/16-16	0.98	0.264	3/4
ProtecOO-C4-08-08-08-08	13/16-16	1.10	0.378	3/4
ProtecOO-C4-10-10-10-10	1-14	1.31	0.484	1 1/16
ProtecOO-C4-12-12-12-12	1 3/16-12	1.47	0.609	1 3/16
ProtecOO-C4-16-16-16-16	1 7/16-12	1.64	0.812	1 7/16
ProtecOO-C4-20-20-20-20	1 11/16-12	1.76	1.024	1 5/8

ProtecOO

ORFS tube end / ORFS tube end

SAE 520101
 Part Number Information
 Body with O-rings
 All dimensions are in Inches

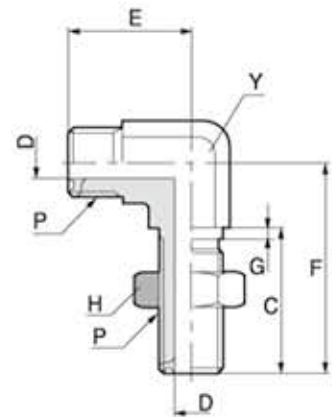


PART NO	P (UNF/UN)	HEX	L	D
ProtecOO-04-04	9/16-18	5/8	1.08	0.172
ProtecOO-06-06	11/16-16	3/4	1.22	0.264
ProtecOO-08-08	13/16-16	7/8	1.39	0.378
ProtecOO-10-10	1-14	1 1/16	1.68	0.484
ProtecOO-12-12	1 3/16-12	1 1/4	1.85	0.608
ProtecOO-16-16	1 7/16-12	1 1/2	1.94	0.812
ProtecOO-20-20	1 11/16-12	1 3/4	2.02	1.024
ProtecOO-24-24	2-12	2 1/8	2.09	1.260

ProtecOH-90

ORFS tube end/ ORFS tube end

SAE 520701
 Part Number Information
 Body with O-rings and locknut
 All dimensions are in Inches

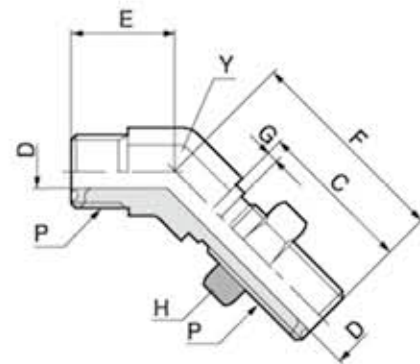


PART NO	P (UNF/UN)	E	F	D	C	G	H	Y
ProtecOH-90-04-04	9/16-18	0.89	1.85	0.172	1.24	0.06	13/16	9/16
ProtecOH-90-06-06	11/16-16	1.02	2.05	0.264	1.34	0.06	1	3/4
ProtecOH-90-08-08	13/16-16	1.14	2.18	0.378	1.44	0.06	1.125	3/4
ProtecOH-90-10-10	1-14	1.36	2.48	0.484	1.6	0.06	1 5/16	1 1/16
ProtecOH-90-12-12	1 3/16-12	1.52	2.65	0.609	1.64	0.06	1.5	1 3/16
ProtecOH-90-16-16	1 7/16-12	1.67	2.80	0.812	1.66	0.06	1.75	1 7/16
ProtecOH-90-20-20	1 11/16-12	1.79	2.97	1.024	1.66	0.06	2	1 5/8
ProtecOH-90-24-24	2-12	1.95	3.13	1.26	1.66	0.06	2 3/8	1 7/8

ProtecOH-45

ORFS tube end/ ORFS tube end

SAE 520701
 Part Number Information
 Body with O-rings and locknut
 All dimensions are in Inches

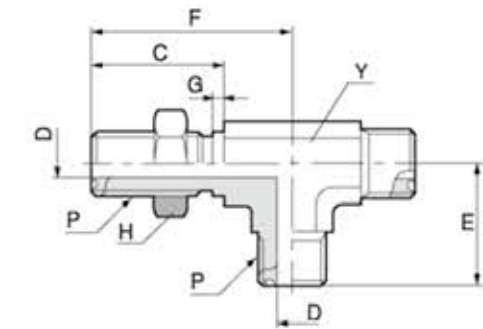


PART NO	P (UNF/UN)	E	F	D	C	G	H	Y
ProtecOH-90-04-04	9/16-18	0.89	1.85	0.172	1.24	0.06	13/16	9/16
ProtecOH-90-06-06	11/16-16	1.02	2.05	0.264	1.34	0.06	1	3/4
ProtecOH-90-08-08	13/16-16	1.14	2.18	0.378	1.44	0.06	1.125	3/4
ProtecOH-90-10-10	1-14	1.36	2.48	0.484	1.6	0.06	1 5/16	1 1/16
ProtecOH-90-12-12	1 3/16-12	1.52	2.65	0.609	1.64	0.06	1.5	1 3/16
ProtecOH-90-16-16	1 7/16-12	1.67	2.80	0.812	1.66	0.06	1.75	1 7/16
ProtecOH-90-20-20	1 11/16-12	1.79	2.97	1.024	1.66	0.06	2	1 5/8
ProtecOH-90-24-24	2-12	1.95	3.13	1.26	1.66	0.06	2 3/8	1 7/8

ProtecOH-TR

ORFS tube end (all three ends)

SAE 520958
 Part Number Information
 Body with O-rings and locknut
 All dimensions are in Inches

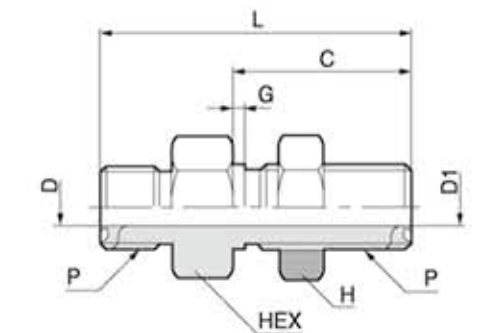


PART NO	P (UNF/UN)	E	F	D	C	G	H	Y
ProtecOH-TR-04-04-04	9/16-18	0.89	1.85	0.172	1.24	0.06	13/16	9/16
ProtecOH-TR-06-06-06	11/16-16	1.02	2.05	0.264	1.34	0.06	1	3/4
ProtecOH-TR-08-08-08	13/16-16	1.14	2.18	0.378	1.44	0.06	1.125	3/4
ProtecOH-TA-10-10-10	1-14	1.36	2.48	0.484	1.6	0.06	1 5/16	1 1/16
ProtecOH-TA-12-12-12	1 3/16-12	1.52	2.65	0.609	1.64	0.06	1.5	1 3/16
ProtecOH-TA-16-16-16	1 7/16-12	1.67	2.80	0.812	1.66	0.06	1.75	1 7/16
ProtecOH-TA-20-20-20	1 11/16-12	1.79	2.97	1.024	1.66	0.06	2	1 5/8
ProtecOH-TA-24-24-24	2-12	1.95	3.13	1.26	1.66	0.06	2 3/8	1 7/8

ProtecOH

ORFS tube end / ORFS tube end

SAE 520601
 Part Number Information
 Body with O-rings and locknut
 All dimensions are in Inches

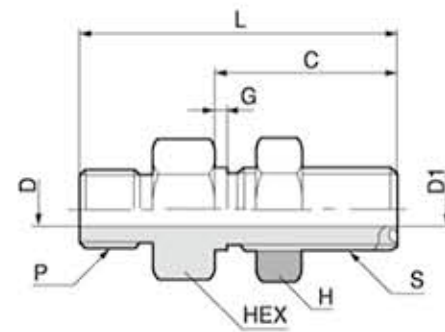


PART NO	P (UNF/UN)	HEX	L	D	C	G	H
ProtecOH-04-04	9/16-18	13/16	1.90	0.172	1.24	0.06	13/16
ProtecOH-06-06	11/16-16	1	2.09	0.264	1.34	0.06	1
ProtecOH-08-08	13/16-16	1 1/8	2.30	0.378	1.44	0.06	1.125
ProtecOH-10-10	1-14	1 5/16	2.62	0.484	1.6	0.06	1 5/16
ProtecOH-12-12	1 3/16-12	1 1/2	2.72	0.609	1.64	0.06	1.5
ProtecOH-16-16	1 7/16-12	1 3/4	2.76	0.812	1.66	0.06	1.75
ProtecOH-20-20	1 11/16-12	2	2.76	1.024	1.66	0.06	2
ProtecOH-24-24	2-12	2 3/8	2.76	1.26	1.66	0.06	2 3/8

ProtecBH

ORFS tube end / Straight thread O-ring

Part Number Information
 Body with O-rings and locknut
 All dimensions are in inches

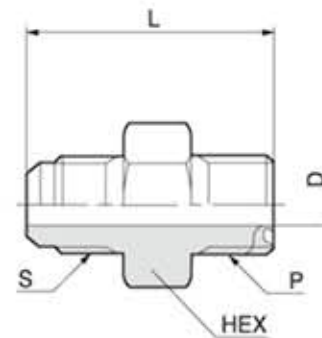


PART NO	P (UNF/UN)	S (UNF/UN)	HEX	L	D	D1	C	G	H
ProtecBH-06-04	9/16-18	9/16-18	13/16	2.18	0.172	0.297	1.24	0.06	13/16
ProtecBH-06-06	9/16-18	11/16-16	1	2.28	0.264	0.297	1.34	0.06	1
ProtecBH-08-08	3/4-16	13/16-16	1 1/8	2.57	0.378	0.391	1.44	0.06	1 1/8

ProtecSO

37°tube end/ ORFS tube end

Part Number Information
 Body with O-rings
 All dimensions are in inches

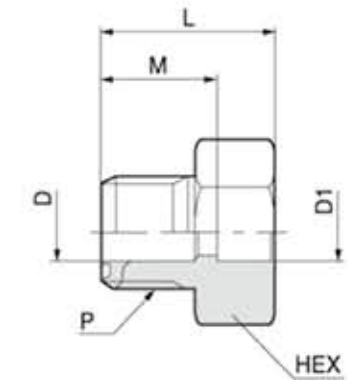


PART NO	P (UNF/UN)	S (UNF/UN)	HEX	L	D
ProtecSO-04-04	9/16-18	7/16-20	5/8	1.25	0.172
ProtecSO-06-06	11/16-16	9/16-18	3/4	1.34	0.264
ProtecSO-08-08	13/16-16	3/4-16	7/8	1.55	0.378
ProtecSO-10-10	1-14	7/8-14	1 1/16	1.83	0.484
ProtecSO-12-12	1 3/16-16	1 1/16-12	1 1/4	2.05	0.609
ProtecSO-16-16	1 7/16-12	1 5/16-12	1 1/2	2.16	0.812
ProtecSO-20-20	1 11/16-12	1 5/8-12	1 3/4	2.29	1.024
ProtecSO-24-24	2-12	1 7/8-12	2 1/8	2.48	1.26

ProtecOD

ORFS tube end / Silver braze socket

SAE 520104
 Part Number Information
 Body with O-rings
 All dimensions are in inches

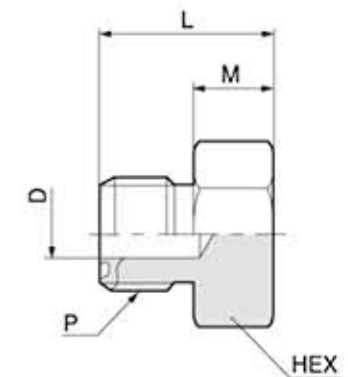


PART NO	P (UNF/UN)	HEX	L	M	D	D1
ProtecOD-04-04	9/16-18	5/8	0.86	0.52	0.172	0.26
ProtecOD-06-06	11/16-16	3/4	0.90	0.56	0.264	0.38
ProtecOD-08-08	13/16-16	7/8	0.97	0.63	0.378	0.51
ProtecOD-10-10	1-14	1 1/16	1.07	0.73	0.484	0.63
ProtecOD-12-12	1 3/16-12	1 1/4	1.32	0.83	0.609	0.76
ProtecOD-16-16	1 7/16-12	1 1/2	1.52	0.97	0.812	1.01
ProtecOD-20-20	1 11/16-12	1 3/4	1.52	0.97	1.024	1.26
ProtecOD-24-24	2-11 1/2	2 1/8	1.52	0.97	1.260	1.51

ProtecOP

ORFS tube end plug

SAE 520109
 Part Number Information
 Body with O-rings
 All dimensions are in inches



PART NO	P (UNF/UN)	HEX	L	M	D
ProtecOP-04	9/16-18	5/8	0.66	0.20	0.172
ProtecOP-06	11/16-16	3/4	0.76	0.32	0.264
ProtecOP-08	13/16-16	7/8	0.86	0.35	0.378
ProtecOP-10	1-14	1 1/16	1.02	0.41	0.484
ProtecOP-12	1 3/16-12	1 1/4	1.08	0.41	0.609
ProtecOP-16	1 7/16-12	1 1/2	1.10	0.41	0.812
ProtecOP-20	1 11/16-12	1 3/4	1.10	0.41	1.024
ProtecOP-24	2-12	2 1/8	1.10	0.41	1.260

ProtecOVN

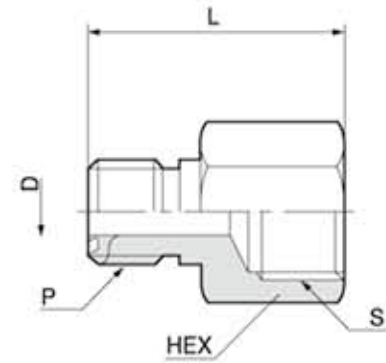
ORFS swivel / ORFS tube end

SAE 520123

Part Number Information

Body with O-rings and cap nut

All dimensions are in Inches



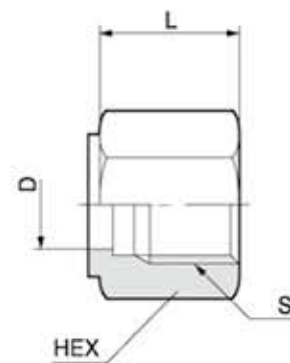
PART NO	P (UNF/UN)	S (UNF/UN)	L	D	HEX
ProtecOVN-04-06	9/16-18	11/16-16	0.77	0.172	13/16
ProtecOVN-04-08	9/16-18	13/16-16	0.86	0.172	15/16
ProtecOVN-06-08	11/16-16	13/16-16	0.88	0.264	15/16
ProtecOVN-06-10	11/16-16	1-14	0.95	0.264	1 1/8
ProtecOVN-08-10	13/16-16	1-14	1.02	0.378	1 1/8
ProtecOVN-08-12	13/16-16	1 3/16-12	1.09	0.378	1 3/8
ProtecOVN-10-12	1-14	1 3/16-12	1.16	0.484	1 3/8
ProtecOVN-10-16	1-14	1 7/16-12	1.26	0.484	1 5/8
ProtecOVN-12-16	1 3/16-12	1 7/16-12	1.30	0.609	1 5/8
ProtecOVN-12-20	1 3/16-12	1 11/16-12	1.32	0.609	1 7/8
ProtecOVN-16-20	1 7/16-12	1 11/16-12	1.51	0.812	1 7/8
ProtecOVN-16-24	1 7/16-12	2-12	1.23	0.812	2 1/4
ProtecOVN-20-24	1 11/16-12	2-12	1.35	1.024	2 1/4

ProtecONU

ORFS tube nut

SAE 520110

All dimensions are in Inches



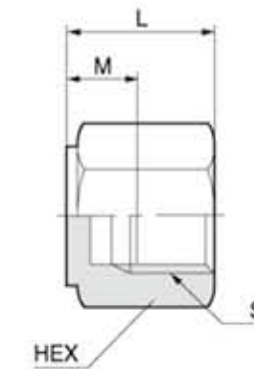
PART NO	P (UNF/UN)	HEX	L	D
ProtecONUT-04	9/16-18	11/16	0.58	0.41
ProtecONUT-06	11/16-16	13/16	0.67	0.53
ProtecONUT-08	13/16-16	15/16	0.83	0.65
ProtecONUT-10	1-14	1 1/8	0.93	0.83
ProtecONUT-12	1 3/16-12	1 3/8	1.02	0.95
ProtecONUT-16	1 7/16-12	1 5/8	1.10	1.14
ProtecONUT-20	1 11/16-12	1 7/8	1.10	1.42
ProtecONUT-24	2-12	2 1/4	1.10	1.73

ProtecOCA

ORFS tube end cap

SAE 520112

All dimensions are in Inches



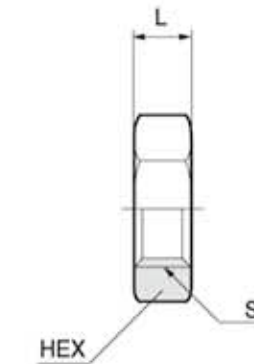
PART NO	S (UNF/UN)	HEX	L	M
ProtecOCAP-04	9/16-18	11/16	0.65	0.34
ProtecOCAP-06	11/16-16	13/16	0.74	0.37
ProtecOCAP-08	13/16-16	15/16	0.90	0.47
ProtecOCAP-10	1-14	1 1/8	1.00	0.47
ProtecOCAP-12	1 3/16-12	1 3/8	1.10	0.53
ProtecOCAP-16	1 7/16-12	1 5/8	1.16	0.59
ProtecOCAP-20	1 11/16-12	1 7/8	1.16	0.59
ProtecOCAP-24	2-12	2 1/4	1.16	0.59

ProtecOLN

Bulkhead fitting lock nut

SAE 520118

All dimensions are in Inches

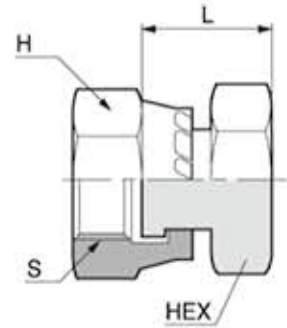


PART NO	S (UNF/UN)	HEX	L
ProtecOLN-04	9/16-18	13/16	0.27
ProtecOLN-06	11/16-16	1	0.32
ProtecOLN-08	13/16-16	1 1/8	0.35
ProtecOLN-10	1-14	1 5/16	0.41
ProtecOLN-12	1 3/16-12	1 1/2	0.41
ProtecOLN-16	1 7/16-12	1 3/4	0.41
ProtecOLN-20	1 11/16-12	2	0.41
ProtecOLN-24	2-12	2 3/8	0.41

ProtecUV

Fitting swivel nut

All dimensions are in millimeters



PART NO	S (UNF/UN)	HEX	L	H
ProtecUV-04	9/16-18	19	16.5	19
ProtecUV-06	11/16-16	22	18	22
ProtecUV-08	13/16-16	27	21.5	27
ProtecUV-12	1 3/16-12	36	23	36
ProtecUV-16	1 7/16-12	41	24.5	41.3



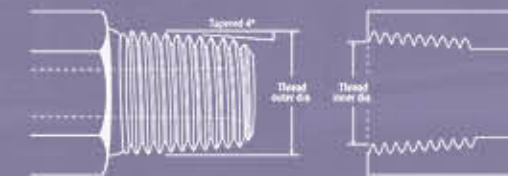
Industrial Pipe Fittings

Part. 04

I Specifications

NPT connections are used to seal pipes for the transfer of fluids and gases. These fittings come in materials like iron and brass for low-pressure applications, while carbon and stainless steel are used for higher pressure environments. To identify the nominal pipe size, you can measure the thread diameter and subtract 1/4 inch. NPT, which stands for National Pipe Taper, is a U.S. standard that has been commonly used on pipes and fittings for over a century.

NPT connections create a seal through thread deformation, where the threads of the connectors interlock to form a tight seal. This design is suitable for single-use assembly but is not recommended for repeated assembly and disassembly, as the thread deformation can cause wear over time.



ORFS Tube Fittings Index

ProtecNN-90 • P.74	ProtecNN-T3 • P.74	ProtecNN • P.75	ProtecNN-LL • P.76	ProtecFN-90 • P.77
ProtecFN-45 • P.77	ProtecFN-T3 • P.78	ProtecFN-C4 • P.78	ProtecFN-N9 • P.78	ProtecFN-N4 • P.79
ProtecFN-TC • P.80	ProtecFN-TR • P.80	ProtecFN-W9 • P.81	ProtecFN-9L • P.81	ProtecPW-90 • P.82
ProtecPW-TC • P.82	ProtecPW-TR • P.83	ProtecPO-T3 • P.83	ProtecPOO • P.84	ProtecBW • P.85

ProtecNP • P.86	ProtecPO • P.86	ProtecMN-90 • P.87	ProtecMN-45 • P.87	ProtecMN • P.88
ProtecFM • P.89	ProtecFM-90 • P.89	ProtecBM • P.90	ProtecMW-90 • P.91	ProtecMW-45 • P.91
ProtecSPN • P.92	ProtecSUN • P.92	ProtecSNN • P.93		

ProtecNN-90

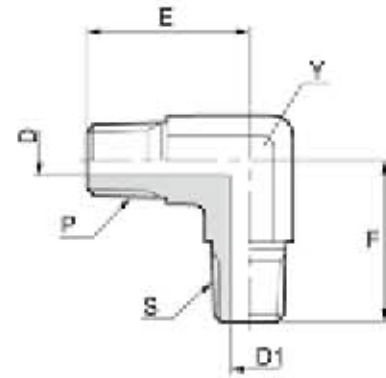
Male pipe thread | Male pipe thread

SAE 140237

Part Number Information

Body only

All dimensions are in inches



PART NO	P (NPTF)	S (NPTF)	E	F	D	D1	Y
ProtecN N-90-02-02	1/8-27	1/8-27	0.78	0.78	0.188	0.188	7/16
ProtecN N-90-04-04	1/4-18	1/4-18	1.09	1.09	0.281	0.281	9/16
ProtecN N-90-06-04	3/8-18	1/4-18	1.22	1.22	0.406	0.281	3/4
ProtecN N-90-06-06	3/8-18	3/8-18	1.22	1.22	0.406	0.406	3/4
ProtecN N-90-08-06	1/2-14	3/8-18	1.47	1.28	0.531	0.406	7/8
ProtecN N-90-08-08	1/2-14	1/2-14	1.47	1.47	0.531	0.531	7/8
ProtecNN-90-12-08	3/4-14	1/2-14	1.59	1.47	0.719	0.531	1 1/16
ProtecNN-90-12-12	3/4-14	3/4-14	1.59	1.59	0.719	0.719	1 1/16
ProtecNN-90-16-16	1-11 1/2	1-11 1/2	1.97	1.97	0.938	0.938	1 5/8

ProtecNN-T3

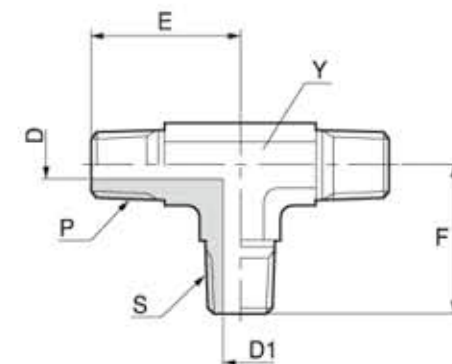
Male pipe thread (all three ends)

SAE 140237

Part Number Information

Body only

All dimensions are in inches



PART NO	P (NPTF)	S (NPTF)	E	F	D	D1	Y
ProtecNN-T3-02-02-02	1/8-27	1/8-27	0.78	0.78	0.188	0.188	7/16
ProtecNN-T3-04-04-04	1/4-18	1/4-18	1.09	1.09	0.281	0.281	9/16
ProtecNN-T3-06-06-06	3/8-18	3/8-18	1.22	1.22	0.406	0.406	3/4
ProtecNN-T3-08-08-08	1/2-14	1/2-14	1.47	1.47	0.531	0.531	7/8

ProtecNN

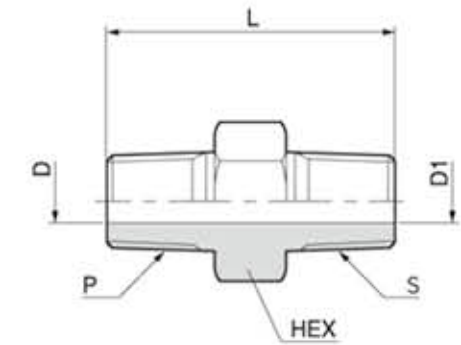
Male pipe thread / Male pipe thread

SAE 140137

Part Number Information

Body only

All dimensions are in inches



PART NO	P (NPTF)	S (NPTF)	HEX	L	D	D1
ProtecNN-02-02	1/8-27	1/8-27	7/16	1.06	0.188	0.188
ProtecNN-04-02	1/4-18	1/8-27	5/8	1.25	0.281	0.188
ProtecNN-04-04	1/4-18	1/4-18	5/8	1.45	0.281	0.281
ProtecNN-06-04	3/8-18	1/4-18	3/4	1.45	0.406	0.281
ProtecNN-06-06	3/8-18	3/8-18	3/4	1.45	0.406	0.406
ProtecNN-08-04	1/2-14	1/4-18	7/8	1.70	0.531	0.281
ProtecNN-08-06	1/2-14	3/8-18	7/8	1.70	0.531	0.406
ProtecNN-08-08	1/2-14	1/2-14	7/8	1.89	0.531	0.531
ProtecNN-12-08	3/4-14	1/2-14	1 1/8	1.96	0.719	0.531
ProtecNN-12-12	3/4-14	3/4-14	1 1/8	1.96	0.719	0.719
ProtecNN-16-12	1-11 1/2	3/4-14	1 3/8	2.09	0.938	0.719
ProtecNN-16-16	1-11 1/2	1-11 1/2	1 3/8	2.34	0.938	0.938
ProtecNN-20-16	1 1/4-11 1/2	1-11 1/2	1 3/4	2.45	1.250	0.938
ProtecNN-20-20	1 1/4-11 1/2	1 1/4-11 1/2	1 3/4	2.48	1.250	1.250
ProtecNN-24-24	1 1/2-11 1/2	1 1/2-11 1/2	2	2.61	1.500	1.500

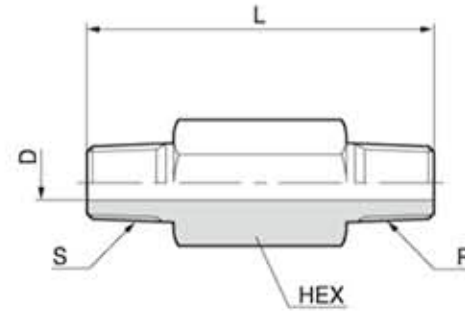
ProtecNN-LL

Male pipe thread/ Male pipe thread

Part Number Information

Body only

All dimensions are in inches



PART NO	S-P (NPTF)	HEX	L	D
ProtecNN-LL-02-02	1/8-27	7/16	1.50	0.188
ProtecNN-LL-02-02	1/8-27	"	2.00	0.188
ProtecNN-LL-02-02	1/8-27	7/16	2.50	0.188
ProtecNN-LL-02-02	1/8-27	7/16	3.00	0.188
ProtecNN-LL-04-04	1/4-18	5/8	1.50	0.281
ProtecNN-LL-04-04	1/4-18	5/8	2.00	0.281
ProtecNN-LL-04-04	1/4-18	5/8	2.50	0.281
ProtecNN-LL-04-04	1/4-18	5/8	3.00	0.281
ProtecNN-LL-04-04	1/4-18	5/8	4.00	0.281
ProtecNN-LL-08-08	1/2-14	7/8	2.00	0.531
ProtecNN-LL-08-08	1/2-14	7/8	3.00	0.531

ProtecFN-90

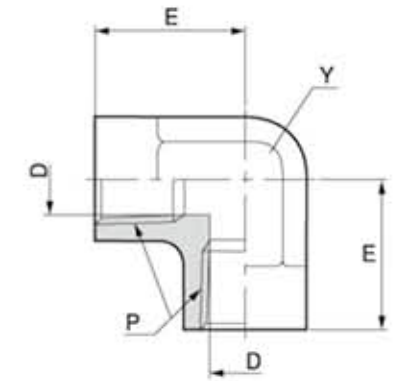
Female pipe thread/ Female pipe thread

SAE 140238

Part Number Information

Body only

All dimensions are in inches



PART NO	P (NPTF)	E	D	Y
ProtecFN-90-02	1/8-27	0.66	0.328	9/16
ProtecFN-90-04	1/4-18	0.88	0.422	3/4
ProtecFN-90-06	3/8-18	1.02	0.563	7/8
ProtecFN-90-08	1/2-14	1.23	0.688	1 1/16
ProtecFN-90-12	3/4-14	1.36	0.891	1 5/16
ProtecFN-90-16	1-11 1/2	1.62	1.125	1 5/8
ProtecFN-90-20	1 1/4-11 1/2	1.70	1.469	1 7/8
ProtecFN-90-24	1 1/2-11 1/2	2.08	1.703	2 1/2

ProtecFN-45

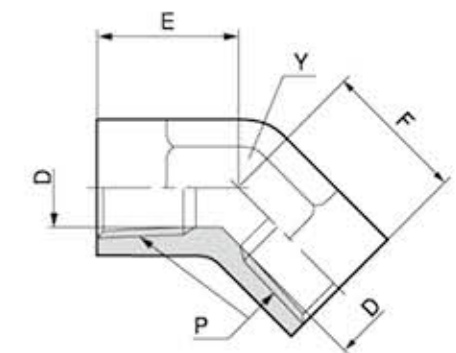
Female pipe thread/ Female pipe thread

SAE 140338

Part Number Information

Body only

All dimensions are in inches

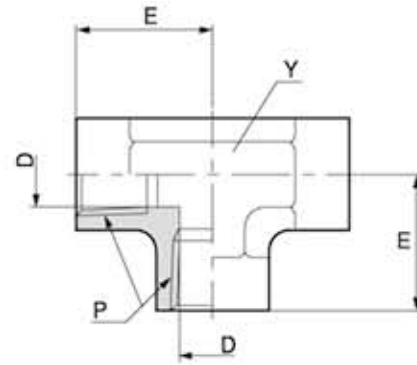


PART NO	P (NPTF)	E	D	Y
ProtecFN-45-04	1/4-18	0.69	0.422	3/4
ProtecFN-45-06	3/8-18	0.75	0.563	7/8
ProtecFN-45-08	1/2-14	0.94	0.688	1 1/16
ProtecFN-45-12	3/4-14	1.00	0.891	1 5/16
ProtecFN-45-16	1-11 1/2	1.19	1.125	1 5/8

ProtecFN-T3

Female pipe thread (all three ends)

SAE 140438
Part Number Information
Body only
All dimensions are in inches

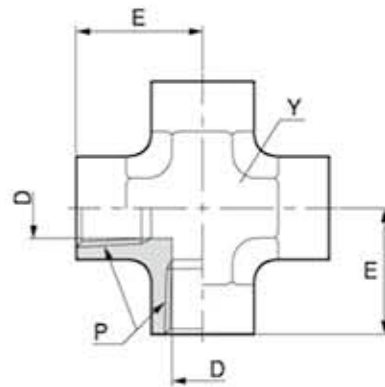


PART NO	P (NPTF)	E	D	Y
ProtecFN-T3-02	1/8-27	0.66	0.328	9/16
ProtecFN-T3-04	1/4-18	0.88	0.422	3/4
ProtecFN-T3-06	3/8-18	1.02	0.563	7/8
ProtecFN-T3-08	1/2-14	1.23	0.688	1 1/16
ProtecFN-T3-12	3/4-14	1.36	0.891	1 5/16
ProtecFN-T3-16	1-11 1/2	1.62	1.125	1 5/8
ProtecFN-T3-20	1 1/4-11 1/2	1.70	1.469	1 7/8
ProtecFN-T3-24	1 1/2-11 1/2	2.08	1.703	2 1/2

ProtecFN-C4

Female pipe thread (all four ends)

SAE 140538
Part Number Information
Body only
All dimensions are in inches

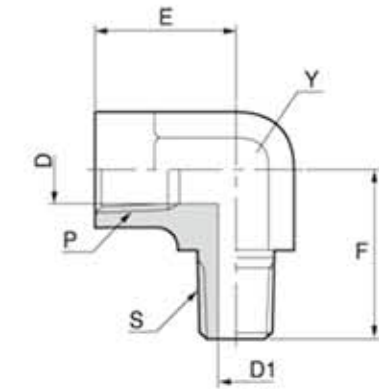


PART NO	P (NPTF)	E	D	Y
ProtecFN-C4-02	1/8-27	0.66	0.328	9/16
ProtecFN-C4-04	1/4-18	0.88	0.422	3/4
ProtecFN-C4-06	3/8-18	1.02	0.563	7/8
ProtecFN-C4-08	1/2-14	1.23	0.688	1 1/16
ProtecFN-C4-12	3/4-14	1.36	0.891	1 5/16
ProtecFN-C4-16	1-11 1/2	1.62	1.125	1 5/8

ProtecFN-N9

Male pipe thread/ Female pipe thread

SAE 140239
Part Number Information
Body only
All dimensions are in inches

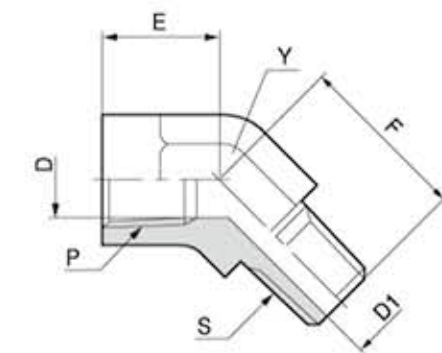


PART NO	S (NPTF)	P (NPTF)	E	F	D	D1	Y
ProtecFN-N9-02-02	1/8-27	1/8-27	0.66	0.78	0.328	0.188	9/16
ProtecFN-N9-04-04	1/4-18	1/4-18	0.88	1.09	0.422	0.281	3/4
ProtecFN-N9-04-02	1/4-18	1/8-27	0.66	1.09	0.422	0.281	9/16
ProtecFN-N9-06-04	3/8-18	1/4-18	0.88	1.22	0.563	0.406	3/4
ProtecFN-N9-06-06	3/8-18	3/8-18	1.02	1.22	0.563	0.406	7/8
ProtecFN-N9-06-08	3/8-18	1/2-14	1.23	1.28	0.563	0.406	1 1/16
ProtecFN-N9-08-06	1/2-14	3/8-18	1.25	1.48	0.688	0.531	7/8
ProtecFN-N9-08-08	1/2-14	1/2-14	1.23	1.47	0.688	0.531	1 1/16
ProtecFN-N9-08-12	1/2-14	3/4-14	1.36	1.59	0.688	0.531	1 5/16
ProtecFN-N9-12-08	3/4-14	1/2-14	1.23	1.59	0.891	0.719	1 1/16
ProtecFN-N9-12-12	3/4-14	3/4-14	1.36	1.59	0.891	0.719	1 5/16
ProtecFN-N9-16-16	1-11 1/2	1-11 1/2	1.62	1.97	1.125	0.938	1 5/8
ProtecFN-N9-20-20	1 1/4-11 1/2	1 1/4-11 1/2	1.70	2.38	1.469	1.250	1 7/8
ProtecFN-N9-24-24	1 1/2-11 1/2	1 1/2-11 1/2	2.08	2.64	1.703	1.500	2 1/2

ProtecFN-N4

Male pipe thread/ Female pipe thread

SAE 140339
Part Number Information
Body only
All dimensions are in inches



PART NO	S (NPTF)	P (NPTF)	E	F	D	D1	Y
ProtecFN-N4-02-02	1/8-27	1/8-27	0.47	0.72	0.328	0.188	9/16
ProtecFN-N4-04-04	1/4-18	1/4-18	0.62	1.05	0.422	0.281	3/4
ProtecFN-N4-06-06	3/8-18	3/8-18	0.72	1.06	0.563	0.406	7/8
ProtecFN-N4-08-08	1/2-14	1/2-14	0.91	1.34	0.688	0.531	1 1/16
ProtecFN-N4-12-12	3/4-14	3/4-14	0.97	1.38	0.891	0.719	1 5/16
ProtecFN-N4-16-16	1-11 1/2	1-11 1/2	1.12	1.72	1.125	0.938	1 5/8

ProtecFN-TC

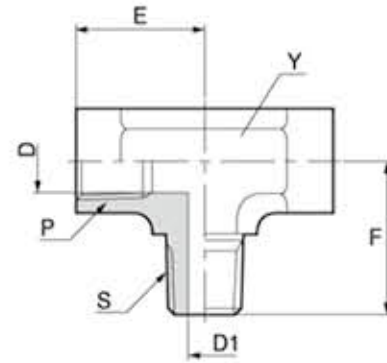
Male pipe thread / Female pipe threads

SAE 140425

Part Number Information

Body only

All dimensions are in inches



PART NO	S (NPTF)	P (NPTF)	E	F	D	D1	Y
ProtecFN-TC-02	1/8-27	1/8-27	0.66	0.78	0.188	0.328	9/16
ProtecFN-TC-04	1/4-18	1/4-18	0.88	1.09	0.281	0.422	3/4
ProtecFN-TC-06	3/8-18	3/8-18	1.02	1.22	0.406	0.563	7/8
ProtecFN-TC-08	1/2-14	1/2-14	1.23	1.47	0.531	0.688	1 1/16
ProtecFN-TC-12	3/4-14	3/4-14	1.36	1.59	0.719	0.891	1 5/16
ProtecFN-TC-16	1-11 1/2	1-11 1/2	1.62	1.97	0.938	1.125	1 5/8

ProtecFN-TR

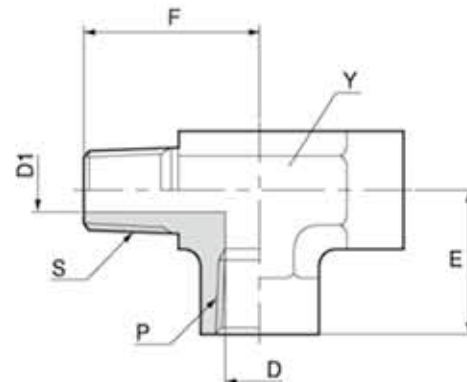
Male pipe thread / Female pipe threads

SAE 140424

Part Number Information

Body only

All dimensions are in inches



PART NO	S (NPTF)	P (NPTF)	E	F	D	D1	Y
ProtecFN-TR-02	1/8-27	1/8-27	0.66	0.78	0.188	0.328	9/16
ProtecFN-TR-04	1/4-18	1/4-18	0.88	1.09	0.281	0.422	3/4
ProtecFN-TR-06	3/8-18	3/8-18	1.02	1.22	0.406	0.563	7/8
ProtecFN-TR-08	1/2-14	1/2-14	1.23	1.47	0.531	0.688	1 1/16
ProtecFN-TR-12	3/4-14	3/4-14	1.36	1.59	0.719	0.891	1 5/16
ProtecFN-TR-16	1-11 1/2	1-11 1/2	1.62	1.97	0.938	1.125	1 5/8

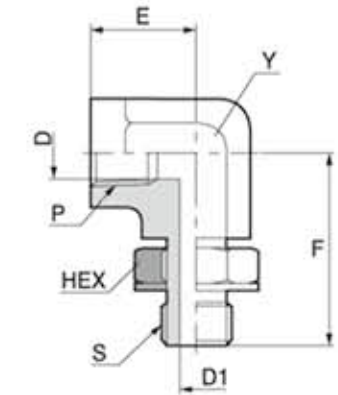
ProtecFN-W9

Straight thread O-ring / Female pipe thread

Part Number Information

Body with locknut, washer and O-ring

All dimensions are in inches



PART NO	S (UNF/UNF)	P (NPTF)	E	F	D	D1	HEX	Y
ProtecFN-W9-06-08	3/4-16	3/8-18	0.63	1.47	0.406	0.391	7/8	7/8
ProtecFN-W9-08-10	7/8-14	1/2-14	0.75	1.81	0.531	0.484	1	1 1/16
ProtecFN-W9-12-12	1 1/16-12	3/4-14	0.81	2	0.719	0.609	1 1/4	1 5/16
ProtecFN-W9-16-16	1 5/16-12	1-11 1/2	1	2.25	0.938	0.844	1 1/2	1 5/8

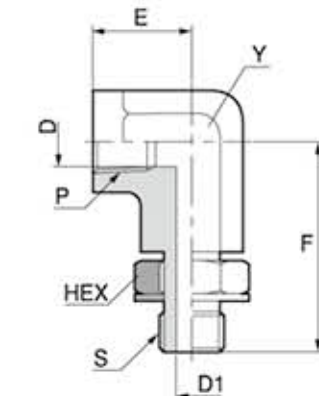
ProtecFN-9L

Straight thread O-ring / Female pipe thread

Part Number Information

Body with locknut, washer and O-ring

All dimensions are in inches

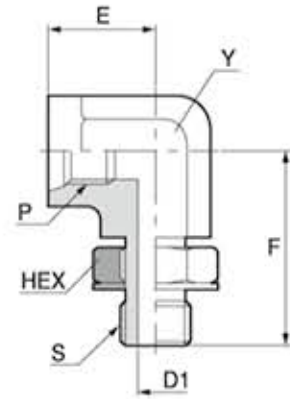


PART NO	S (UNF/UNF)	P (NPTF)	E	F	D	D1	HEX	Y
ProtecFN-9L-06-08	3/4-16	3/8-18	0.63	2.94	0.406	0.391	7/8	7/8
ProtecFN-9L-08-10	3	1/2-14	0.75	3.56	0.531	0.484	1	1 1/16
ProtecFN-9L-12-12	1 1/16-12	3/4-14	0.81	4.06	0.719	0.609	1 1/4	1 5/16
ProtecFN-9L-16-16	1 5/16-12	1-11 1/2	1	4.63	0.938	0.844	1 1/2	1 5/8

ProtecPW-90

Straight thread O-ring / Female SAE straight thread

Part Number Information
 Body with locknut, washer and O-ring
 All dimensions are in inches

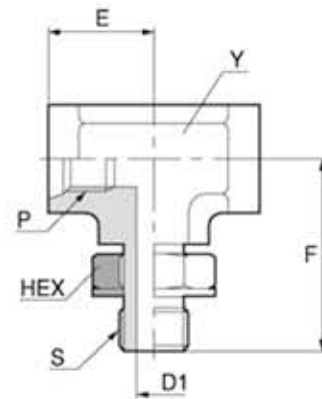


PART NO	S (UNF/UN)	P (UNF/UN)	E	F	D1	HEX	Y
ProtecPW-90-04-04	7/16-20	7/16-20	0.63	1.23	0.172	9/16	3/4
ProtecPW-90-06-06	9/16-18	9/16-18	0.75	1.38	0.297	11/16	7/8
ProtecPW-90-08-08	3/4-16	3/4-16	0.88	1.59	0.391	7/8	1 1/16
ProtecPW-90-10-10	7/8-14	7/8-14	1.02	1.81	0.484	1	1 1/16
ProtecPW-90-12-12	1 1/16-12	1 1/16-12	1.21	2	0.609	1 1/4	1 5/16
ProtecPW-90-16-16	1 5/16-12	1 5/16-12	1.33	2.26	0.844	1 1/2	1 5/8

ProtecPW-TC

Straight thread O-ring / Female SAE straight threads

Part Number Information
 Body with locknut, washer and O-ring
 All dimensions are in inches

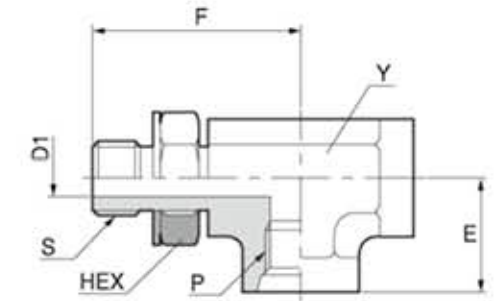


PART NO	S (UNF/UN)	P (UNF/UN)	E	F	D1	HEX	Y
ProtecPW-TC-04-04	7/16-20	7/16-20	0.63	1.23	0.172	9/16	3/4
ProtecPW-TC-06-06	9/16-18	9/16-18	0.75	1.38	0.297	11/16	7/8
ProtecPW-TC-08-08	3/4-16	3/4-16	0.88	1.59	0.391	7/8	1 1/16
ProtecPW-TC-10-10	7/8-14	7/8-14	1.02	1.81	0.484	1	1 1/16
ProtecPW-TC-12-12	1 1/16-12	1 1/16-12	1.21	2	0.609	1 1/4	1 5/16
ProtecPW-TC-16-16	1 5/16-12	1 5/16-12	1.33	2.26	0.844	1 1/2	1 5/8

ProtecPW-TR

Straight thread O-ring / Female SAE straight thread

Part Number Information
 Body with locknut, washer and O-ring
 All dimensions are in inches

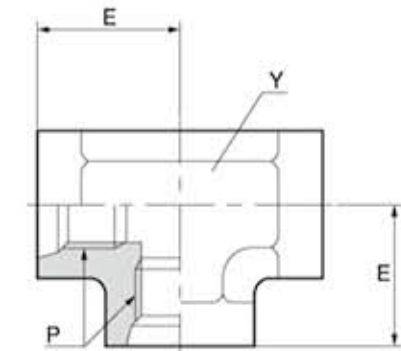


PART NO	P (UNF/UN)	S (UNF/UN)	E	F	D1	HEX	Y
ProtecPW-TR-04-04	7/16-20	7/16-20	0.74	1.23	0.172	9/16	3/4
ProtecPW-TR-06-06	9/16-18	9/16-18	0.86	1.38	0.297	11/16	7/8
ProtecPW-TR-08-08	3/4-16	3/4-16	1.03	1.59	0.391	7/8	1 1/16
ProtecPW-TR-10-10	7/8-14	7/8-14	1.18	1.81	0.484	1	1 1/16
ProtecPW-TR-12-12	1 1/16-12	1 1/16-12	1.39	2	0.609	1 1/4	1 5/16
ProtecPW-TR-16-16	1 5/16-12	1 5/16-12	1.52	2.26	0.844	1 1/2	1 5/8

ProtecPO-T3

Female SAE straight thread (all three ends)

Part Number Information
 Body only
 All dimensions are in inches



PART NO	P (UNF/UN)	E	Y
ProtecPO-T3-04	7/16-20	0.74	3/4
ProtecPO-T3-06	9/16-18	0.86	7/8
ProtecPO-T3-08	3/4-16	1.03	1 1/16
ProtecPO-T3-10	7/8-14	1.18	1 1/16
ProtecPO-T3-12	1 1/16-12	1.39	1 5/16
ProtecPO-T3-16	1 5/16-12	1.52	1 5/8

ProtecPOO

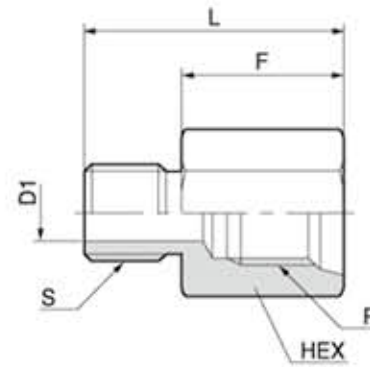
Straight thread O-ring / Female straight thread O-ring boss

SAE 090136

Part Number Information

Body with O-ring

All dimensions are in inches



PART NO	P (UNF/UN)	S (UNF/UN)	HEX	L	F	D
ProtecPOO-04-06	7/16-20	9/16-18	11/16	1.03	0.64	0.297
ProtecPOO-06-04	9/16-18	7/16-20	13/16	1.16	0.80	0.172
ProtecPOO-06-08	9/16-18	3/4-16	7/8	1.13	0.69	0.438
ProtecPOO-06-10	9/16-18	7/8-14	1	0.81	0.31	0.484
ProtecPOO-08-06	3/4-16	9/16-18	1 1/16	1.38	0.99	0.297
ProtecPOO-08-10	3/4-16	7/8-14	1	1.31	0.81	0.563
ProtecPOO-08-12	3/4-16	1 1/16-12	1 1/4	1.00	0.41	0.625
ProtecPOO-08-16	3/4-16	1 5/16-12	1 1/2	1.00	0.41	0.750
ProtecPOO-10-08	7/8-14	3/4-16	1 1/8	1.56	1.12	0.391
ProtecPOO-10-12	7/8-14	1 1/16-12	1 1/4	1.53	0.94	0.625
ProtecPOO-12-10	1 1/16-12	7/8-14	1 3/8	1.69	1.19	0.484
ProtecPOO-12-16	1 1/16-12	1 5/16-12	1 1/2	1.75	1.16	0.750
ProtecPOO-12-20	1 1/16-12	1 5/8-12	1 7/8	1.00	0.41	1.063
ProtecPOO-12-24	1 1/16-12	1 7/8-12	2 1/8	1.00	0.41	1.250
ProtecPOO-16-20	1 5/16-12	1 5/8-12	1 7/8	1.00	0.41	1.063
ProtecPOO-16-24	1 5/16-12	1 7/8-12	2 1/8	1.00	0.41	1.250
ProtecPOO-20-24	1 5/8-12	1 7/8-12	2 1/8	1.75	1.16	1.250

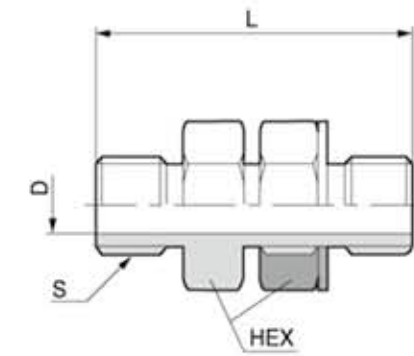
ProtecBW

Straight thread O-ring / Female straight thread O-ring boss

Part Number Information

Body with locknut, washer and O-ring

All dimensions are in inches

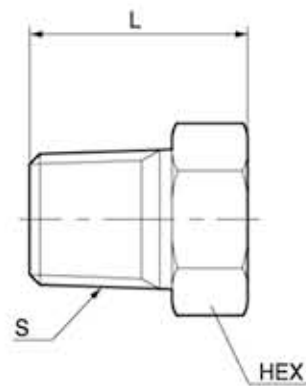


PART NO	P (UNF/UN)	HEX	L	D
ProtecBW-04	7/16-20	9/16	1.22	0.203
ProtecBW-06	9/16-18	11/16	1.41	0.297
ProtecBW-08	3/4-16	7/8	1.56	0.422
ProtecBW-10	7/8-14	1	1.81	0.484
ProtecBW-12	1 1/16-12	1 1/4	2.13	0.656
ProtecBW-16	1 5/16-12	1 1/2	2.13	0.875
ProtecBW-20	1 5/8-12	1 7/8	2.13	1.078
ProtecBW-24	1 7/8-12	2 1/8	2.13	1.344

ProtecNP

Male pipe thread

SAE 130109E
 Part Number Information
 Body only
 All dimensions are in Inches

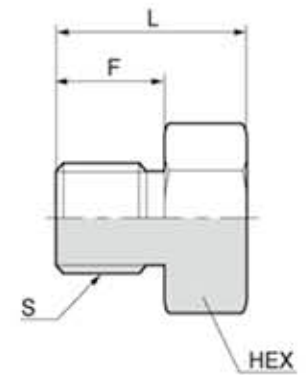


PART NO	S (NPTF)	HEX	L
ProtecNP-02	1/8-27	7/16	0.56
ProtecNP-04	1/4-18	9/16	0.75
ProtecNP-06	3/8-18	11/16	0.78
ProtecNP-08	1/2-14	7/8	0.97
ProtecNP-12	3/4-14	1 1/16	1.06
ProtecNP-16	1-11 1/2	1 5/16	1.25

ProtecPO

Straight thread O-ring

SAE 090109A
 Part Number Information
 Body with O-ring
 All dimensions are in Inches

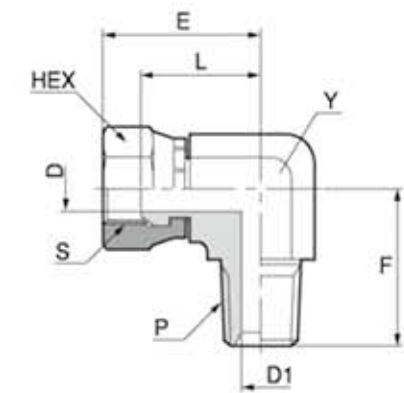


PART NO	S (UNF/UN)	HEX	L	F
ProtecPO-04	7/16-20	9/16	0.67	0.36
ProtecPO-05	1/2-20	5/8	0.67	0.36
ProtecPO-06	9/16-18	11/16	0.73	0.39
ProtecPO-08	3/4-16	7/8	0.80	0.44
ProtecPO-10	7/8-14	1	0.93	0.50
ProtecPO-12	1 1/16-12	1 1/4	1.09	0.59
ProtecPO-14	1 3/16-12	1 3/8	1.09	0.59
ProtecPO-16	1 5/16-12	1 1/2	1.12	0.59
ProtecPO-20	1 5/8-12	1 7/8	1.20	0.59
ProtecPO-24	1 7/8-12	2 1/8	1.27	0.59

ProtecMN-90

NPSM swivel / male pipe thread

SAE 140230
 Part Number Information
 Body with swivelnut
 All dimensions are in Inches

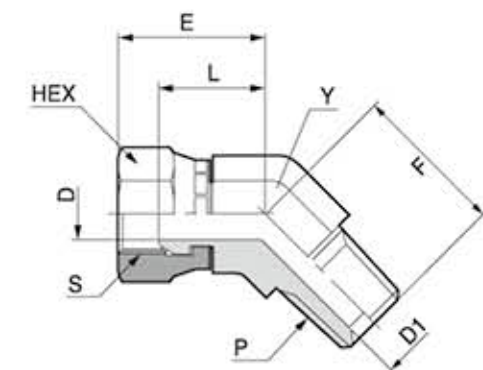


PART NO	P (NPTF)	S (NPSM)	E	F	L	D	D1	HEX	Y
ProtecMN-90-02-02	1/8-27	1/8-27	0.85	0.72	0.7	0.156	0.188	9/16	7/16
ProtecMN-90-04-04	1/4-18	1/4-18	1.06	1.09	0.88	0.219	0.281	11/16	9/16
ProtecMN-90-06-06	3/8-18	3/8-18	1.28	1.22	0.99	0.344	0.406	7/8	3/4
ProtecMN-90-08-08	1/2-14	1/2-14	1.4	1.47	1.11	0.469	0.531	1	7/8
ProtecMN-90-08-12	1/2-14	3/4-14	1.65	1.47	1.3	0.641	0.531	1 1/4	1 1/16
ProtecMN-90-12-08	3/4-14	1/2-14	1.53	1.59	1.24	0.469	0.719	1	1 1/16
ProtecMN-90-12-12	3/4-14	3/4-14	1.65	1.59	1.3	0.641	0.719	1 1/4	1 1/16
ProtecMN-90-16-16	1-11 1/2	1-11 1/2	1.91	1.97	1.54	0.844	0.938	1 1/2	1 5/16
ProtecMN-90-20-20	1 1/4-11 1/2	1 1/4-11 1/2	2.11	2.38	1.73	1.141	1.250	1 7/8	1 5/8
ProtecMN-90-24-24	1 1/2-11 1/2	1 1/2-11 1/2	2.31	2.64	1.89	1.359	1.500	2 1/8	1 7/8

ProtecMN-45

NPSM swivel / male pipe thread

SAE 140330
 Part Number Information
 Body with swivelnut
 All dimensions are in Inches

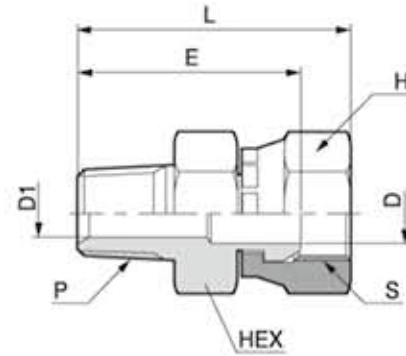


PART NO	P (NPTF)	S (NPSM)	E	F	L	D	D1	HEX	Y
ProtecMN-45-02-02	1/8-27	1/8-27	0.77	0.52	0.62	0.156	0.188	9/16	7/16
ProtecMN-45-04-04	1/4-18	1/4-18	0.91	0.86	0.73	0.219	0.281	11/16	9/16
ProtecMN-45-06-06	3/8-18	3/8-18	1.1	1.95	0.81	0.344	0.406	7/8	3/4
ProtecMN-45-08-08	1/2-14	1/2-14	1.17	1.17	0.88	0.469	0.531	1	7/8
ProtecMN-45-08-12	1/2-14	3/4-14	1.23	1.2	0.94	0.469	0.719	1	1 1/16
ProtecMN-45-12-08	3/4-14	1/2-14	1.22	1.2	0.87	0.641	0.531	1 1/4	1 1/16
ProtecMN-45-12-12	3/4-14	3/4-14	1.37	1.2	1.02	0.641	0.719	1 1/4	1 1/16
ProtecMN-45-16-16	1-11 1/2	1-11 1/2	1.52	1.48	1.15	0.844	0.938	1 1/2	1 5/16
ProtecMN-45-20-20	1 1/4-11 1/2	1 1/4-11 1/2	1.61	1.67	1.23	1.141	1.250	1 7/8	1 5/8
ProtecMN-45-24-24	1 1/2-11 1/2	1 1/2-11 1/2	1.77	1.77	1.35	1.359	1.500	2 1/8	1 7/8

ProtecMN

NPSM swivel/ male pipe thread

SAE 140130
 Part Number Information
 Body with swivel nut
 All dimensions are in Inches

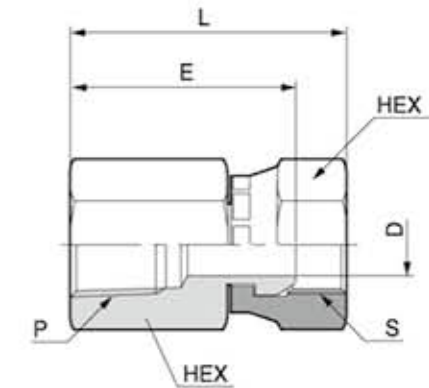


PART NO	P (NPTF)	S (NPSM)	HEX	L	E	D	D1	H
ProtecMN-02-02	1/8-27	1/8-27	9/16	1.09	0.94	0.156	0.188	9/16
ProtecMN-04-04	1/4-18	1/4-18	11/16	1.43	1.25	0.219	0.281	11/16
ProtecMN-04-06	1/4-18	3/8-18	13/16	1.45	1.25	0.344	0.281	7/8
ProtecMN-06-04	3/8-18	1/4-18	11/16	1.49	1.31	0.219	0.406	11/16
ProtecMN-06-06	3/8-18	3/8-18	7/8	1.51	1.31	0.344	0.406	7/8
ProtecMN-06-08	3/8-18	1/2-14	15/16	1.73	1.44	0.469	0.406	1
ProtecMN-08-06	1/2-14	3/8-18	7/8	1.7	1.5	0.344	0.531	7/8
ProtecMN-08-08	1/2-14	1/2-14	1	1.91	1.62	0.469	0.531	1
ProtecMN-08-12	1/2-14	3/4-14	1 1/4	2.04	1.69	0.641	0.531	1 1/4
ProtecMN-12-08	3/4-14	1/2-14	1 1/8	1.91	1.62	0.469	0.719	1
ProtecMN-12-12	3/4-14	3/4-14	1 1/4	2.04	1.69	0.641	0.719	1 1/4
ProtecMN-12-16	3/4-14	1-11 1/2	1 1/2	2.17	1.8	0.844	0.719	1 1/2
ProtecMN-16-12	1-11 1/2	3/4-14	1 3/8	2.29	1.94	0.641	0.938	1 1/2
ProtecMN-16-16	1-11 1/2	1-11 1/2	1 1/2	2.37	2	0.844	0.938	1 1/2
ProtecMN-20-20	1 1/4-11 1/2	1 1/4-11 1/2	1 7/8	2.47	2.09	1.141	1.250	1 7/8
ProtecMN-24-24	1 1/2-11 1/2	1 1/2-11 1/2	2 1/8	2.61	2.19	1.359	1.500	2 1/8

ProtecFM

NPSM swivel/ Female pipe thread

SAE 140131
 Part Number Information
 Body with swivel nut
 All dimensions are in Inches

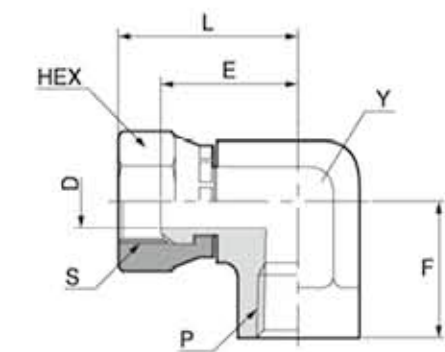


PART NO	P (NPTF)	S (NPSM)	HEX	L	E	D
ProtecFM-02-02	1/8-27	1/8-27	9/16	1.02	0.87	0.156
ProtecFM-04-04	1/4-18	1/4-18	11/16	1.43	1.25	0.219
ProtecFM-06-06	3/8-18	3/8-18	7/8	1.51	1.31	0.344
ProtecFM-08-08	1/2-14	1/2-14	1	1.79	1.50	0.469
ProtecFM-12-12	3/4-14	3/4-14	1 1/4	1.97	1.62	0.641
ProtecFM-16-16	1-11 1/2	1-11 1/2	1 1/2	2.37	2.00	0.844
ProtecFM-20-20	1 1/4-11 1/2	1 1/4-11 1/2	1 7/8	2.38	2.00	1.141
ProtecFM-24-24	1 1/2-11 1/2	1 1/2-11 1/2	2 1/8	2.42	2.00	1.359

ProtecFM-90

NPSM swivel/ Female pipe thread

SAE 140231
 Part Number Information
 Body with swivel nut
 All dimensions are in Inches



PART NO	P (NPTF)	S (NPSM)	L	F	E	D	HEX	Y
ProtecFM-90-02-02	1/8-27	1/8-27	0.95	0.66	0.8	0.156	9/16	9/16
ProtecFM-90-04-04	1/4-18	1/4-18	1.17	0.88	0.99	0.219	11/16	3/4
ProtecFM-90-06-06	3/8-18	3/8-18	1.26	1.02	1.06	0.344	7/8	7/8
ProtecFM-90-08-08	1/2-14	1/2-14	1.53	1.23	1.24	0.469	1	1 1/16
ProtecFM-90-12-12	3/4-14	3/4-14	1.82	1.36	1.47	0.641	1 1/4	1 5/16
ProtecFM-90-16-16	1-11 1/2	1-11 1/2	2.10	1.62	1.73	0.844	1 1/2	1 5/8
ProtecFM-90-20-20	1 1/4-11 1/2	1 1/4-11 1/2	2.21	1.7	1.83	1.141	1 7/8	1 7/8
ProtecFM-90-24-24	1 1/2-11 1/2	1 1/2-11 1/2	2.83	2.08	2.41	1.359	2 1/8	2 1/2

ProtecBM

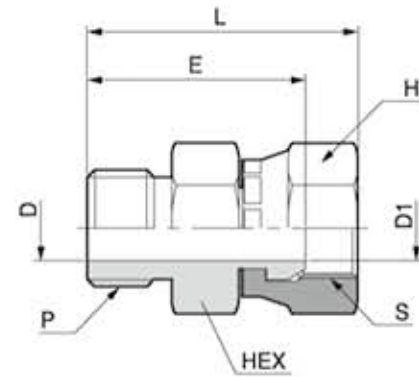
NPSM swivel/ SAE O-ring boss

SAE 140157

Part Number Information

Body with swivel nut and O-ring

All dimensions are in inches



PART NO	P (UNF/UN)	S (NPSM)	HEX	L	E	D	D1	H
ProtecBM-04-04	7/16-20	1/4-18	9/16	1.32	1.14	0.219	0.219	11/16
ProtecBM-06-04	9/16-18	1/4-18	11/16	1.35	1.17	0.219	0.219	11/16
ProtecBM-06-06	9/16-18	3/8-18	11/16	1.37	1.17	0.344	0.344	7/8
ProtecBM-06-08	9/16-18	1/2-14	3/4	1.57	1.28	0.297	0.297	1
ProtecBM-08-06	3/4-16	3/8-18	7/8	1.45	1.25	0.344	0.344	7/8
ProtecBM-08-08	3/4-16	1/2-14	7/8	1.56	1.27	0.391	0.391	1
ProtecBM-10-08	7/8-14	1/2-14	1	1.73	1.44	0.469	0.469	1
ProtecBM-12-08	1 1/16-12	1/2-14	1 1/4	1.88	1.59	0.469	0.469	1
ProtecBM-12-12	1 1/16-12	3/4-14	1 1/4	1.97	1.62	0.641	0.641	1 1/4
ProtecBM-16-16	1 5/16-12	1-11 1/2	1 1/2	2.12	1.75	0.844	0.844	1 1/2
ProtecBM-20-20	1 5/8-12	1 1/4-11 1/2	1 7/8	2.21	1.83	1.078	1.078	1 7/8
ProtecBM-24-24	1 7/8-12	1 1/2-11 1/2	2 1/8	2.39	1.97	1.312	1.312	2 1/8

ProtecMW-90

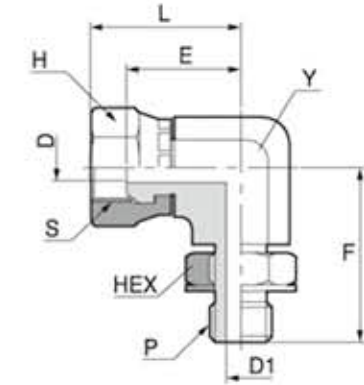
Straight thread O-ring I NPSM swivel

SAE 140257

Part Number Information

Body with locknut, washer, O-ring and swivel

All dimensions are in inches



PART NO	P (UNF/UN)	S (NPSM)	L	F	E	D	D1	HEX	H	Y
ProtecMW-90-04-04	7/16-20	1/4-18	0.97	1.03	0.79	0.219	0.172	9/16	11/16	7/16
ProtecMW-90-06-04	9/16-18	1/4-18	1.06	1.25	0.88	0.219	0.297	11/16	11/16	9/16
ProtecMW-90-06-06	9/16-18	3/8-18	1.10	1.25	0.9	0.344	0.297	11/16	7/8	9/16
ProtecMW-90-06-08	9/16-18	1/2-14	1.33	1.36	1.04	0.469	0.297	11/16	1	9/16
ProtecMW-90-08-06	3/4-16	3/8-18	1.19	1.45	0.99	0.344	0.391	7/8	7/8	3/4
ProtecMW-90-08-08	3/4-16	1/2-14	1.33	1.45	1.04	0.469	0.391	7/8	1	3/4
ProtecMW-90-08-12	3/4-16	3/4-14	1.65	1.62	1.3	0.641	0.391	7/8	1 1/4	3/4
ProtecMW-90-10-06	7/8-14	3/8-18	1.26	1.7	1.06	0.344	0.484	1	7/8	7/8
ProtecMW-90-10-08	7/8-14	1/2-14	1.40	1.7	1.11	0.469	0.484	1	1	7/8
ProtecMW-90-10-12	7/8-14	3/4-14	1.62	1.78	1.27	0.641	0.484	1	1 1/4	7/8
ProtecMW-90-12-08	1 1/16-12	1/2-14	1.50	1.94	1.21	0.469	0.609	1 1/4	1	1 1/16
ProtecMW-90-12-12	1 1/16-12	3/4-14	1.65	1.94	1.3	0.641	0.609	1 1/4	1 1/4	1 1/16
ProtecMW-90-16-16	1 5/16-12	1-11 1/2	1.91	2.05	1.54	0.844	0.844	1 1/2	1 1/2	1 5/16
ProtecMW-90-20-20	1 5/8-12	1 1/4-11 1/2	2.16	2.25	1.78	1.141	1.078	1 7/8	1 7/8	1 5/8
ProtecMW-90-24-24	1 7/8-12	1 1/2-11 1/2	2.31	2.39	1.89	1.359	1.312	2 1/8	2 1/8	1 7/8

ProtecMW-45

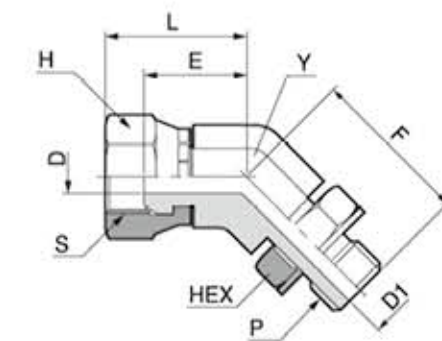
Straight thread O-ring I NPSM swivel

SAE 140357

Part Number Information

Body with locknut, washer, O-ring and swivel

All dimensions are in inches

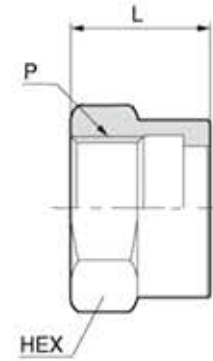


PART NO	P (UNF/UN)	S (NPSM)	L	F	E	D	D1	HEX	H	Y
ProtecMW-45-04-04	7/16-20	1/4-18	0.79	1.05	0.61	0.219	0.172	9/16	11/16	7/16
ProtecMW-45-06-06	9/16-18	3/8-18	1.03	1.14	0.83	0.344	0.297	11/16	7/8	9/16
ProtecMW-45-06-08	3/4-16	3/8-18	1.02	1.3	0.82	0.344	0.391	7/8	7/8	3/4
ProtecMW-45-08-08	3/4-16	1/2-14	1.18	1.3	0.89	0.469	0.391	7/8	1	3/4
ProtecMW-45-08-12	3/4-16	3/4-14	1.37	1.41	1.02	0.641	0.391	7/8	1 1/4	3/4
ProtecMW-45-10-08	7/8-14	1/2-14	1.17	1.52	0.88	0.469	0.484	1	1	7/8
ProtecMW-45-12-12	1 1/16-12	3/4-14	1.37	1.73	1.02	0.641	0.609	1 1/4	1 1/4	1 1/16
ProtecMW-45-16-16	1 5/16-12	1-11 1/2	1.52	1.86	1.15	0.844	0.844	1 1/2	1 1/2	1 5/16

ProtecSPN

Fitting swivel nut

All dimensions are in millimeters

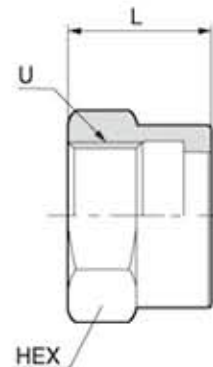


PART NO	P (PF)	HEX	L
ProtecSPN-04	1/4-19	19	16.5
ProtecSPN-06	3/8-19	22	18.5
ProtecSPN-08	1/2-14	27	21.0
ProtecSPN-10	5/8-14	30	22.0
ProtecSPN-12	3/4-14	36	24.0
ProtecSPN-16	1-11	41	27.0
ProtecSPN-20	1 1/4-11	50	30.0
ProtecSPN-24	1 1/2-11	55	31.0

ProtecSUN

Fitting swivel nut

All dimensions are in millimeters

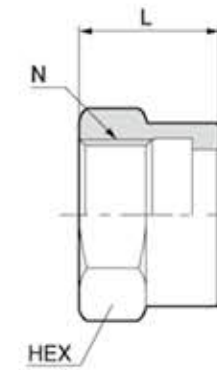


PART NO	P (UNF)	HEX	L
ProtecSUN-04	7/16-20	14.3	16.1
ProtecSUN-05	1/2-20	15.88	17.6
ProtecSUN-06	9/16-18	17.46	15.3
ProtecSUN-08	3/4-16	22.2	21.4
ProtecSUN-10	7/8-14	25.4	24.4
ProtecSUN-12	1 1/16-12	31.75	26.7
ProtecSUN-16	1 5/16-12	38.1	29.2

ProtecSNN

Fitting swivel nut

All dimensions are in millimeters



PART NO	N (NPSM)	HEX	L
ProtecSNN-02	1/8-27	14	11.4
ProtecSNN-04	1/4-18	19	16.5
ProtecSNN-06	3/8-18	22	18.5
ProtecSNN-08	1/2-14	27	20.2
ProtecSNN-12	3/4-14	32	25.0
ProtecSNN-16	1-11 1/2	41	28.0
ProtecSNN-20	1 1/4-11 1/2	50	31.0
ProtecSNN-24	1 1/2-11 1/2	55	34.0

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