Low pressure fittings

Our low pressure fittings are ideally suited for flow injection analysis, low pressure liquid chromatography, and stream sampling devices. They may be safely used at pressures up to 500 psi and temperatures to 50°C.

Low pressure polymeric fittings index

Nuts, ferrules, and washers for 1/4-28 flat-bottom fitting details
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Peristaltic tubing adapter set4 Connect soft tubing to PTFE

and PTFE-like tubing with this

biocompatible adapter set, which

works with peristaltic tubing up to

FITTING DESIGNS

VICI Jour offers two types of low pressure fittings for 1/4-28 flat-bottomed fitting details:

- Flangeless connections utilize several ferrule designs. The ferrule grips the tubing as the fitting is tightened, without significantly reducing the tubing ID.
- Flanged tube end fittings are retained on polymeric tubing by a flange formed around a polypropylene washer. The washer never comes in contact with the mobile phase.

DISCLAIMER

The maximum holding pressure for any type of connections involving tubing and a ferrule varies considerably with the tubing material the ferrule material, the clearance between tubing OD and ferrule ID, and the shape of the fitting detail.



4.50 mm OD.

- Economically priced alternative to PEEK
- Excellent chemical resistance
- For 1/16" or 1/8" OD tubing
- Fingertight when used with Color-Sleeve adapters

24.0 mm

Our PPS 1/4-28 fitting series offers excellent chemical and pressure resistance. Three different sealing options are available.

PPS hex-head nuts and collapsible ferrules (flangeless)

Patented* collapsible ferrules are not included. Order separately.

Material Tubing OD

PPS

CTFE

PFFK

Ferrules are not included. Order separately.

1/16"

1/8"

1/16"

1/8"

1/16"

* Patent No. 6,575,501

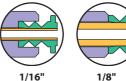
Description

Nut for use with

collapsible ferrule

Collapsible ferrules





Qty/pkg

10

10

10

10

10

١
/

Product No.

JR-55050-10

JR-55051-10

JR-CFL-CB1KF

JR-CFL-CB2KF

JR-CFL-CB1PK

- For 1/16" and 1/8" OD tubing
- Threads: 1/4-28 ■ Pressure rating:
- **OD Bar Psi** 1/16" 105 1500 1/8" 35 500 (Varies with tubing material and ID)
- * Patent No. 6,575,501

HIGH PRESSURE 1/4-28 NUTS AND **FERRULES**

A PPS nut, PEEK ferrule, and stainless steel bushing allow a high pressure connection in a 1/4-28 flat-bottomed fitting detail......25



TECH TIP

Color-Sleeve adapters turn PPS nuts into fingertight fittings and color-code different solvent lines. 17



CHEMICAL RESISTANCE OF PPS

A = suitable B = marginal

C = not recommended					
Chemical class	Resistan				
Acids, organic	Α				
Acids, inorganic	B/C*				
Aldehydes	Α				
Alcohols	Α				
Bases	В				
Esters	Α				
Halogenated org.	A/B				
Hydrocarbons	Α				
Ketones	Α				
* Concentrated ha	alogen acio				
See detailed ch	emical				
resistance chart	96-9				

MORE INFORMATION

About polymers ...99-100

PPS hex-head nuts and inverted ferrules (flangeless)





	SPECS
1	■ For 1/
	tubing
	■ Threa
•	■ Pressu

tubing Threads: 1/4-28

For 1/32"-1/8"OD

1/4-28

Pressure rating: OD Bar Psi 1/16" 105 1500 1/8" 35 500 (Varies with tubing material and ID)

,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	***********			
Description	Material	Tubing OD	Qty/pkg	Product No.
Nut for use with				
inverted ferrule	PPS	1/32"	10	JR-55073-10
		1/16"	10	JR-55070-10
		1/8"	10	JR-55071-10
		1.0 mm	10	JR-55073-10
		2.0 mm	10	JR-55072-10
Inverted ferrules	ETFE	1/32" N	IEW 10	JR-032-10
		1/16"	10	JR-041-10
		1/8"	10	JR-051-10
A	1	1.0 mm /	IEW 10	JR-031-10

PPS hex-head nuts and washers (flanged connections)

2.0 mm **NEW** 10

3.0 mm **NEW** 10

Washers are not included. Order separately.

1.0 mm



2.0 mm

3.0 mm

Description Nut for flange/	Material	Tubing OD	Qty/pkg	Product No.
washer connection	PPS	1/16" 1/8"	10 10	JR-55060-10 JR-55061-10
Washer	PP	1/16" 1/8"	10 10	JR-201926-10 JR-201928-10

JR-042-10

JR-049-10

SPECS ■ For 1/16" and 1/8" OD tubing

1/4-28

- Threads: 1/4-28
- Pressure rating: OD Bar Psi 1/16" 105 1500 35 500 (Varies with tubing material and ID)



Easy-Flange kit (see page 85)

Importers & Manufacurers www.chromtech.net.au

JR-201540



au E-mail : info@chromtech.net.au Tel: 03 9762 2034 . . . in AUSTRALIA

PEEK fingertight nuts (flangeless)

1/4-28

SPECS

- For 1/16" and 1/8" OD tubing
- Materials PPS Nut: Ferrules: ETFE
- 1/4-28 threads
- Pressure rating: OD Bar Psi 1/16" 105 1500 1/8" 35 500 (Varies with tubing material and ID)



- Compatible with all 1/4-28 flat-bottom ports
- Excellent chemical resistance
- For 1/16" or 1/8" OD tubing
- True fingertight no tools required

PEEK flangeless nuts in combination with our inverted ferrule do not a require flanging tool. A hand-tightening procedure makes leak-free seals.

With this fitting system, the inert ETFE ferrule is the only part besides the tubing which comes into contact with the fluid stream - the nut is never in contact.

Ferrules are not included. Order separately.

Tubing OD: Description	Material	Qty/pkg	1/16" Product No.	1/8" Product No.
Nut for use with inverted ferrule	PEEK	10	JR-20124-10	JR-20116-10
Inverted ferrules	ETFE	10	JR-041-10	JR-051-10









Color-coded fingertight nuts (flangeless)

1/4-28

SPECS

- For 1/16" and 1/8" OD tubing
- Materials Nut: Polyacetal Ferrules: ETFE
- 1/4-28 threads
- Pressure rating: Bar Psi OD 70 1000 1/16" 1/8" 35 500 (Varies with tubing material and ID)

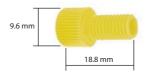


- Polyacetal economical alternative to PEEK
- Compatible with all 1/4-28 flat-bottom ports
- For 1/16" or 1/8" OD tubing
- True fingertight no tools required

Polyacetal flangeless nuts in combination with the inverted ferrule do not require a flanging tool. A hand-tightening procedure makes leak-free seals. With this fitting system, the inert ETFE ferrule is the only part besides the tubing which comes into contact with the fluid stream - the nut is never in contact. Six colors are available.

Tubing OD:			1/16"	1/8"
Description	Color	Qty/pkg	Product No.	Product No.
Nuts	Green	10	JR-040GR-10	JR-050GR-10
	Blue	10	JR-040BL-10	JR-050BL-10
	Yellow	10	JR-040YL-10	JR-050YL-10
	Red	10	JR-040RE-10	JR-050RE-10
	White	10	JR-040WH-10	JR-050WH-10
	Black	10	JR-040BK-10	JR-050BK-10
1" long nuts	White	10	JR-040WL-10	JR-050WL-10
Inverted ETFE ferrules		10	JR-041-10	JR-051-10





TECH TIP

The inert ETFE ferrule used with these nuts is the only part besides the tubing which is in contact with the fluid stream.







Color-coded fingertight nuts (flanged connections)

- For flanged connections
- Compatible with all 1/4-28 flat-bottom ports
- For 1/16" or 1/8" OD tubing
- Fiberglass-reinforced PP with PP washers

For those systems requiring or preferring flanged connections, use these fiberglass-reinforced fittings with our Easy-Flange flanging tool and polypropylene washers to make a clean connection. The flange on the tubing ensures that the washer never comes in contact with the mobile phase.

Six colors are available.					
Tubing OD : Description	:	Color	Qty/pkg	1/16" Product No.	1/8" Product No.
Nuts		Green	10	JR-202123-10	JR-202143-10
		Blue	10	JR-202122-10	JR-202142-10
		Yellow	10	JR-202124-10	JR-202144-10



1/4-28

SPECS

■ Material:

■ For 1/16" and

Fiberglassreinforced

1/8" OD tubing

polypropylene

■ 1/4-28 threads

■ Pressure rating: <30 bar

(435 psi)

(Varies with

tubing material and ID)

Nuts	Green	10	JR-202123-10	JR-202143-10
	Blue	10	JR-202122-10	JR-202142-10
	Yellow	10	JR-202124-10	JR-202144-10
	Red	10	JR-202125-10	JR-202145-10
	White	10	JR-201094WH-10	JR-201580WH-10
	Black	10	JR-201094BK-10	JR-201580BK-10
1" long nuts	White Black	10 10	JR-202120-10 JR-202118-10	JR-202119-10 JR-202121-10
Polypropylene washer		10	JR-201926-10	JR-201928-10



TECH TIP Use our Easy-Flange kit for forming flanges on tubing85



Union body for flanged connections

- Through bore low pressure union
- For flanged 1/4-28 flat-bottom connections
- For 1/16" or 1/8" OD tubing
- Completely inert and biocompatible

Flanged fittings are not included.

Order PPS hex-head flanged nuts or color-coded fingertight flanged nuts separately.

Description Qty/pkg Product No. Union body, polyamide JR-060-5





- For 1/16" and 1/8" OD tubing
- Material: Polyamide
- 1/4-28 threads







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1/4-28

PEEK unions

SPECS

■ For 1/16" and 1/8" OD tubing

- Materials Body: PEEK Nut: PPS Ferrules: ETFE
- 1/4-28 threads
- Pressure rating: OD Bar Psi 1/16" 105 1500 1/8" 35 500 (Varies with tubing material and ID)



■ For easy connection of low pressure solvent lines

1/4-28

- Low dead volume
- For 1/16" or 1/8" OD tubing
- Flat-bottomed 1/4-28 fitting details
- Completely inert and biocompatible

These unions facilitate the quick and reliable connection of two pieces of 1/16" or 1/8" OD tubing. Use with colorcoded adapters for easy solvent line identification.

These are available as the body only, or complete with fittings.

A union with fittings includes:

- PEEK low pressure union
- 2 PPS flangeless hex-head nuts
- ETFE inverted ferrules
- Color-Sleeve adapters

	Bore (mm)	Tubing OD	Qty/pkg	Product No.
Union,	0.50	1/16"	1	JR-1064
with fittings	0.75	1/8"	1	JR-1068
	1.30	1/8"	1	JR-1065
Body only	0.50	1/16"	1	JR-064
	0.75	1/8"	1	JR-068 ^{9.}
	1.30	1/8"	1	JR-065
Spare parts		Tubing OD	Qty/pkg	Product No.
PPS flangele	ss nuts	1/16"	10	JR-55070-10
		1/8"	10	JR-55071-10
Inverted ETF	E ferrules	1/16"	10	JR-041-10
		1/8"	10	JR-051-10



16.7 mm 5/16" wrench flat 16.7 mm

PEEK bulkhead unions

SPECS

■ For 1/16" and

■ 1/4-28 threads ■ Pressure rating:

(Varies with

and ID)

tubing material

OD Bar Psi 1/16" 105 1500

■ Materials

Body:

Nut:

1/8" OD tubing

PEEK

PPS Ferrules: ETFE

35 500

- Panel mounting (10 mm hole required, max 9 mm thick) ■ For easy connection of low pressure solvent lines
- Low dead volume
- For 1/16" or 1/8" OD tubing
- Completely inert and biocompatible

Bulkhead unions are designed to be mounted through an instrument panel or on a bracket.

They are sold complete with fittings, and include:

- 2 PPS flangeless hex-head nuts
- 2 ETFE inverted ferrules
- 2 Color-Sleeve adapters



1/4-28



В	ore (mm) Tubing OD	Qty/pkg	Product No.
Bulkhead union, with fittings	0.75 1.50	1/16" 1/8"	1 1	JR-CBUMPK JR-CBULPK
Spare parts		Tubing OD	Qty/pkg	Product No.
PPS flangeless nu	ts	1/16"	10	JR-55070-10
		1/8"	10	JR-55071-10
Inverted ETFE ferr	ules	1/16"	10	JR-041-10
		1/8"	10	JR-051-10

TECH TIP

While our PEEK unions are typically used with inverted ferrules, collapsible ferrules or flanged connections can also be used.







TECH TIP

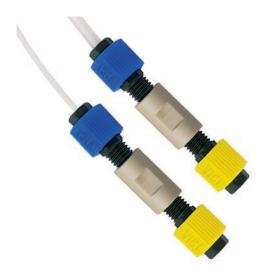
Use our impermeable tubing to avoid gas diffusion in the solvent lines13

RELATED PRODUCTS

Color-coded fingertight
flanged nuts43
Color-Sleeve adapters,
in 12 colors 17
High pressure
PEEK unions 26
PPS hex-head
flanged nuts41







PEEK reducing unions

NEW

Imperial to metric, 1/4-28

- Connects 1/16", 1/8", 1 mm, 2 mm, and 3 mm OD polymeric tubing
- Completely inert and biocompatible

With these new reducing unions, metric tubing can be connected to imperial fittings on valves and LC systems.

A reducing union with fittings includes:

- PEEK low pressure reducing union
- 1 PPS flangeless hex-head nut, imperial size noted
- 1 PPS flangeless hex-head nut, metric size noted
- ETFE inverted ferrules
- Color-Sleeve adapters

Tubing OD	Bore (mm)	Qty/pkg	Product No.
Reducing union, with fitting 1/32" to 1 mm 1/16" to 2 mm 1/8" to 3 mm	0.50 0.75 1.30	1 1 1	JR-0640 JR-0680 JR-0650
Spare parts	Tubing OD	Qty/pkg	Product No.
PPS flangeless nuts	1/16" 1/8"	10 10	JR-55070-10 JR-55071-10
	1.0 mm/ 1/32 2.0 mm	2" 10 10	JR-55073-10 JR-55072-10
Inverted ETFE ferrules	1/32" 1/16" 1/8"	10 10 10	JR-032-10 JR-041-10 JR-051-10
	1.0 mm 2.0 mm 3.0 mm	10 10 10	JR-031-10 JR-042-10 JR-049-10
		0	0
	3.0 mm	2.0 mm	1.0 mm

SPECS

- For 1/32"-1/8"OD tubing, flangeless connections
- Materials PEEK Body: Nuts: **PPS** ETFE Ferrules:
- 1/4-28 threads
- Pressure rating: ≤48 bar (700 psi) (Varies with tubing material and ID)



Metric ferrules

PEEK reducing unions

■ Connects 1/4" and 1/8" OD tubing

- Low dead volume
- Completely inert and biocompatible

PEEK reducing unions are sold complete with fittings, and include:

- One 1/8" flangeless nut, white polypropylene
- One 1/8" ferrule, CTFE
- One 1/4" flangeless nut, polyacetal
- One 1/4" ferrule, CTFE

	Bore (mm)	Tubing OD	Qty/pkg	Product No.
Reducing unior with fittings	n 1.5	1/4" to 1/8"	1	JR-CU4LPK
Spare parts Tubing OD De	scription		Qty/pkg	Product No.

Flangeless nut, white propylene 1

Flangeless nut, polyacetal

19.1 mm

TECH TIP

also be used.

While our PEEK bulkhead

unions are typically used

flanged connections can

RELATED PRODUCTS

in 12 colors 17

Color-Sleeve adapters,

with inverted ferrules,

collapsible ferrules or

22.9 mm

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Ferrule, CTFE

Ferrule, CTFE

1/8"

1/4"



JR-CFL-2W-S

JR-CFL-4D

JR-CFL-CB2KF-S

JR-CFL-CB4KF-S

■ For 1/4" to 1/8" OD tubing, flangeless connections

Imperial, 1/2-20 to 1/4-28

SPECS

- Materials PFFK Body: Nuts: 1/8" 1/4" Polyacetal Ferrules:
- Threads: 1/2-20 to 1/4-28
- Pressure rating: <35 bar (500 psi) (Varies with tubing material and ID)

PEEK tees, crosses, and manifolds

1/4-28

SPECS

- For 1/16" and 1/8" OD tubing
- Materials Body: PEEK PPS Nut: Ferrules: ETFE
- 1/4-28 threads
- Body sizes: see chart below
- Pressure rating: Bar Psi OD 1/16" 105 1500 1/8" 35 500 (Varies with tubing material and ID)



- For 1/16" or 1/8" OD tubing
- Flat-bottomed 1/4-28 fitting details
- Completely inert and biocompatible

These VICI Jour connectors for low pressure applications are machined from PEEK. The bodies have 1/4-28 female ports which accept any flanged or flangeless fittings for 1/8" or 1/16" OD tubing.

Choose smaller through-holes for applications where low flowrate or low dead volume is required. Fittings with 1.50 mm through-holes are preferred for high flowrate applications.

These are available as the body only, or complete with fittings.

The appropriate number of the following are included when fittings are ordered:

- PPS flangeless hex-head nuts
- ETFE inverted ferrules
- Color-Sleeve adapters

Sold individually.

	,					
		Tubing OD	Bore (mm)	With fittings Product No.	Body only <i>Product No.</i>	
Tees		1/16"	0.50	JR-6029	JR-6034	8
			0.80	JR-6030	JR-6032	
		1/8"	1.50	JR-6031	JR-6033	
Crosses		1/16"	0.50	JR-6039	JR-6044	
			0.80	JR-6040	JR-6042	
		1/8"	1.50	JR-6041	JR-6043	
Manifolds	5 ports	1/16"	0.75	JR-C5M1PK	JR-B-C5M1PK	
		1/8"	1.50	JR-C5M2PK	JR-B-C5M2PK	
	9 ports	1/16"	0.75	JR-C9M1PK	JR-B-C9M1PK	
		1/8"	1.50	JR-C9M2PK	JR-B-C9M2PK	
Spare part	s	Tubing OD	Qty/pkg	Product No		
PPS flangeless nuts		1/16"	10	JR-55070-10		
		1/8"	10	JR-55071-10		
Inverted ETFE ferrules		s 1/16"	10	JR-041-10		
		1/8"	10	JR-051-10		



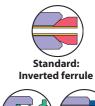


BODY SIZES

	Diameter	inickness
Tees	25.0 mm	17.1 mm
Crosses	25.0 mm	17.1 mm
Manifolds		
5 ports	25.0 mm	17.1 mm
9 ports	25.0 mm	28.6 mm

TECH TIP

While our PEEK tees and crosses are typically used with inverted ferrules, collapsible ferrules or flanged connections can also be used.







TECH TIP

Use our impermeable tubing to avoid gas diffusion in the solvent lines13

RELATED PRODUCTS

Color-Sleeve adapters,
in 12 colors 17
High pressure
PEEK tees28
PPS hex-head
flanged nuts41

1/4-28

LOW PRESSURE FITTINGS ■ **POLYMERIC**



PEEK mixing tees

■ For 1/16" or 1/8" OD tubing

- Mountable
- Completely inert and biocompatible

A unique mixing results from the the turbulence created by the introduction angle of the solvents. The mixing is much more thorough than with a conventional tee.

Typically our inverted ferrules are used in these fittings, but the 1/4-28 flat-bottomed details will also accept collapsible ferrule or flanged fittings.

These are available as the body only, or complete with fittings. A mixing tee with fittings includes:

- 3 PPS flangeless hex-head nuts
- 3 ETFE inverted ferrules
- 3 Color-Sleeve adapters

Sold individually.

	Tubing OD	Bore (mm)	Product No
Mixing tee,	1/16"	0.75	JR-CM1XPK
with fittings	1/8"	1.50	JR-CM2XPK
Body only	1/16"	0.75	JR-B-CM1XPI
	1/8"	1.50	JR-B-CM2XPI
Spare parts	Tubing OD	Qty/pkg	Product No
PPS flangeless nuts	1/16"	10	JR-55070-10
	1/8"	10	JR-55071-10
Inverted ETFE ferrule	s 1/16"	10	JR-041-10
	1/8"	10	JR-051-10

SPECS

- For 1/16" and 1/8" OD tubing
- Materials

 Body: PEEK

 Nut: PPS

 Ferrules: ETFE
- 1/4-28 threads
- Pressure rating:
 OD Bar Psi
 1/16" 105 1500
 1/8" 35 500
 (Varies with
 tubing material
 and ID)
- Mixing volume Bore Volume 0.75 mm 25 µl 1.50 mm 100 µl





Polypropylene plugs

1/4-28 or 10-32

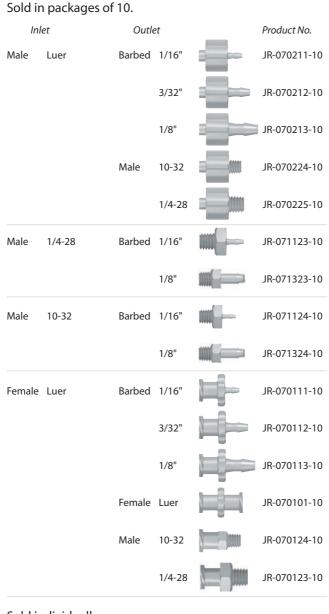
SPECS

- Material: Polypropylene
- 10-32 or 1/4-28 threads

Sold in packages of 10. Description Product No. 10-32 male JR-072450-10 1/4-28 male JR-072350-10 1/4-28 male, flat bottom JR-201999-10

Polypropylene adapters

SPECS ■ Material: Polypropylene



Sold individually.

Barbed 1/8" ID JR-075013 Flat bottom 1/4-28

RELATED PRODUCTS

High pressure PEEK adapters 29 High pressure plugs ... 24







Micro valves for GC and LC

■ Compact 1" design

- Convenient panel mount, hole diameter 8 mm (0.3125"), 6 mm maximum thickness
- Biocompatible and inert
- Variety of configurations

Simplify your liquid or gas handling application with a VICI Jour sampling micro valve. The unique design of the fitting detail allows a leak-free seal with no potential for rotor damage from overtightening. Internal parts are PEEK and PTFE.



SPECS

■ For 1/16" and 1/8" OD tubing

1/4-28

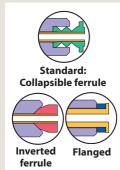
- Materials Wetted PEEK, parts: PTFE Body: POM
- Nuts: PPS Ferrules: CTFE
- 1/4-28 threads ■ 1.50 mm bore
- Pressure rating: see notes at left

MICRO VALVE PRESSURE RATINGS

- 200 psi gas Tested with helium using 1/16" OD x 0.84 mm ID PTFE tubing with PEEK collapsible ferrules
- 500 psi liquid Tested with isopropanol using 1/8" OD x 0.75 mm ID PTFE tubing with CTFE collapsible ferrules

TECHTIP

While micro valves are typically used with collapsible ferrules, inverted ferrules or flanged connections can also be used.



TECH TIP

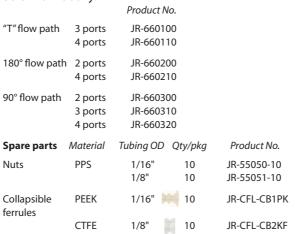
Use our impermeable tubing to avoid gas diffusion in the solvent

RELATED PRODUCTS Color-Sleeve adapters,



High pressure PEEK tees......28 PPS hex-head flanged nuts.....41

Includes flangeless PPS fittings and CTFE collapsible ferrules for 1/8" OD tubing. Sold individually.



"T" flow path











90° flow path







Peristaltic tubing adapter set

■ For connecting soft tubing to PTFE and PTFE-like tubing

- Works with peristaltic tubing up to 4.50 mm OD
- For 1/16" and 1/8" PTFE and PTFE-like tubing
- Biocompatible
- Low dead volume

This "one-fits-all" set consists of everything needed to connect 1/16" or 1/8" OD PTFE and PTFE-like tubing to soft tubing (such as silicone), up to 4.5 mm in OD, minimum 0.5 mm ID.

The adapter includes:

- 3 different bushings (for the different soft tubing ODs)
- 2 PPS nuts (one each for 1/16" and 1/8" OD tubing)
- 2 ETFE inverted ferrules (one each for 1/16" and 1/8" OD tubing)
- 2 Color-Sleeve adapters

Sold individually.

Product No.

JR-PTAS









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1/4-28

SPECS ■ For 1/16" and

1/8" OD tubing Materials

Body: **PFFK** Bushings: PPS Nut: **PPS**

- Ferrules: ETFE ■ 1/4-28 threads
- 1.50 mm bore
- Body size: 28 mm long 12 mm diameter.

