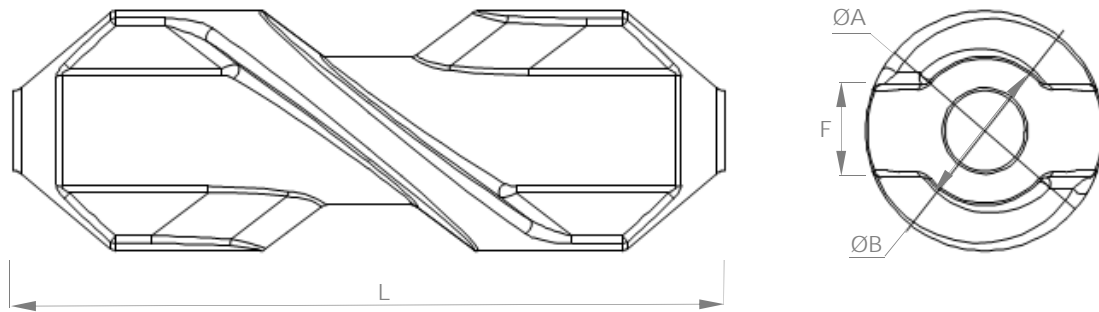


Helical Sucker Rod Guide

Helical injected molded guides for PCP.

Dimensions:



Nominal size Tubing	Dimension [mm]				Rod size
	L	A	B	F	
2 7/8"	170	35.0	57.0	22.0	3/4"
2 7/8"	170	32.2	57.0	22.0	7/8"
2 7/8"	170	35.4	57.0	22.0	1"
3 1/2"	170	32.2	57.0	22.0	7/8"
3 1/2"	170	35.4	57.0	22.0	1"
3 1/2"	170	40.0	69.0	22.0	1 1/8"

* Actual sizes may differ according to rod size.

Materials:

Polyphenylene sulfide (PPS). 40% glass reinforced.

Property	Typical values**	Test Standard
Density	1.65 g/cm ³	ISO 1183
Tensile strength	195 MPa	ISO 527-2/1A
Elongation at break	1.9 %	ISO 527-2/1A
Tensile Modulus	14700 MPa	ISO 527-2/1A
Unnotched Charpy impact strength @23°C	53 kJ/m ²	ISO 179/1eU
Unnotched Charpy impact strength @-40°C	53 kJ/m ²	ISO 179/1eU
Notched Charpy impact strength @23°C	10 kJ/m ²	ISO 180/1eA
Notched Charpy impact strength @-40°C	10 kJ/m ²	ISO 179/1eA

Polyphtalamide polymer (PPA). 33% glass reinforced.

Property	Typical values**	Test Standar
Density	1.44 g/cm ³	ISO 1183
Tensile strength	193 MPa	ASTM D638
Elongation at break	2.1 %	ASTM D638
Tensile Modulus	13100 MPa	ASTM D638

** Values shown have been taken from a reduced number of tests and shall not be used to establish specifications.

Rod guide properties:

Property	PPS	PPA
Color	White	Black
Maximum Service Temperature*	200°C	165°C
Dynamic Friction Coefficient	0.3	0.25
Fiberglass Component	40%	33%

*Maximum temperature limitation is dependent on well conditions.

Please contact Tenaris' Technical Sales Representative for further assistance.