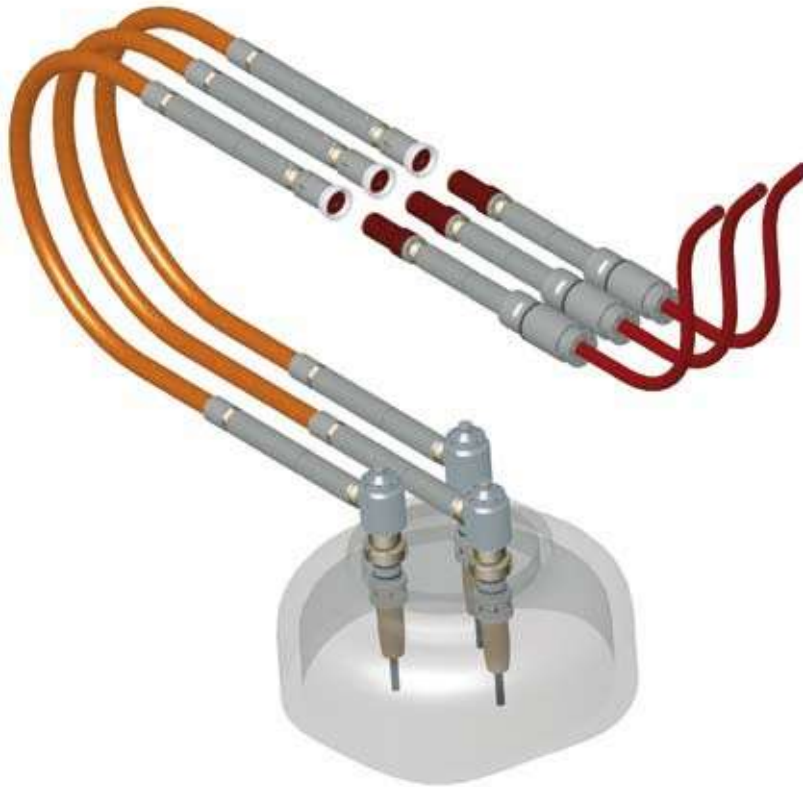




SCM

Systèmes et Connectique du Mans



Power series

P6-SW 400

MPP Multiphase Pump System

Wet Mate Connectors



Cable Termination



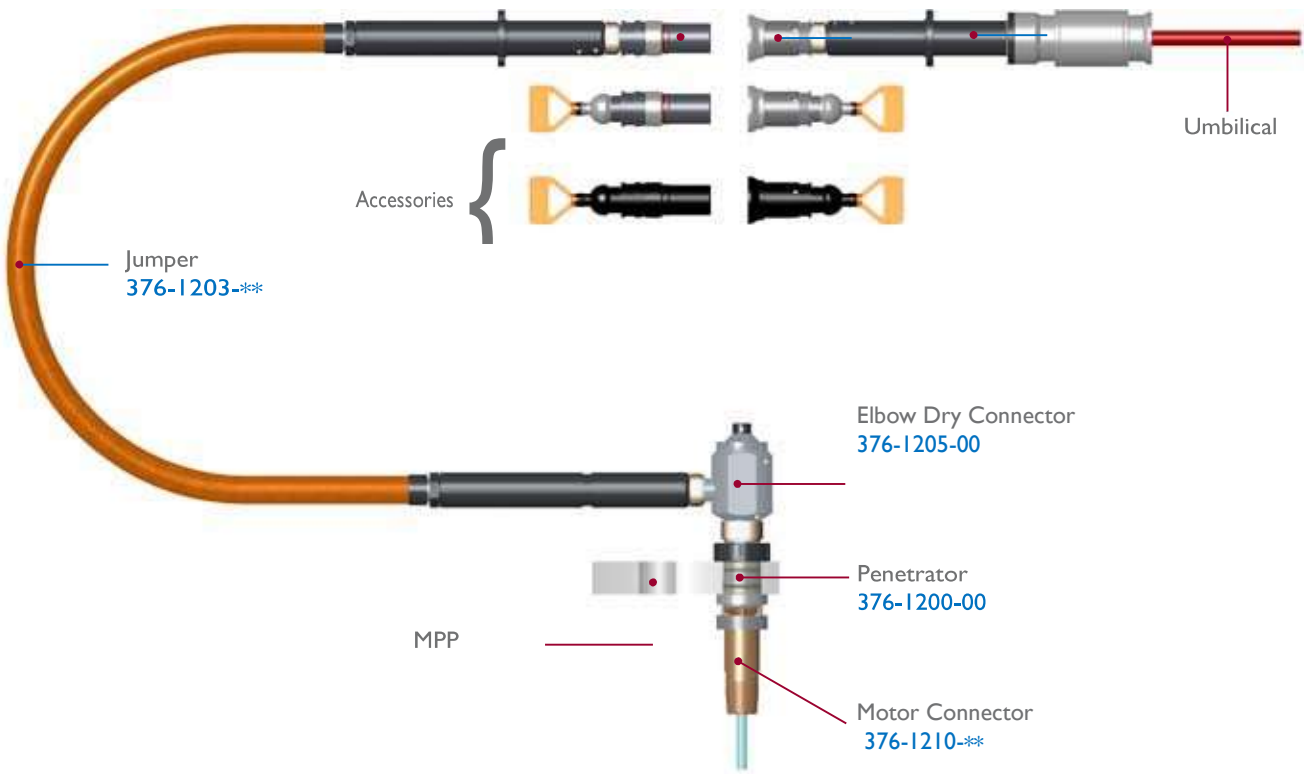
Penetrator



Female Wet Mate Connector
376-1202-00

Male Wet Mate Connector
376-1201-00

Cable Termination
376-1204-**



- **Characteristics**

Electrical

Number of Contact : 1
Rated Voltage : 6 / 10 (12) kV
Rated Current : 400 A
Insulation Strength : > 10 GΩ at 5000 V
Contact Resistance : < 0,5 mΩ

Operational Environment

Rated Temperature : -5°C to 30°C (23°F to 86°F)
Storage Temperature : -10°C to 40°C (14°F to 104°F)
Rated Pressure : 300 bar (4,350 psi)
Max Operative Temperature inside Motor : 80°C (176°F)
Rated Motor Internal Pressure (penetrator) : 345 bar (5,000 psi)

Materials

Housing : Super Duplex
Contacts : Silver Plated Copper Alloy
Insulators : PEEK
O'rings : Viton®
Membranes : Fluorinated Silicone

Standards

TIOR-REP-00023, rev 2 : Specification for high voltage
Wet & Dry mateable connector assemblies
59-NS0000-79, rev C :
MPP subsea connection TQP functional requirements
59-NS0000-43, rev D :
Subsea WIP connection TQP functional requirements

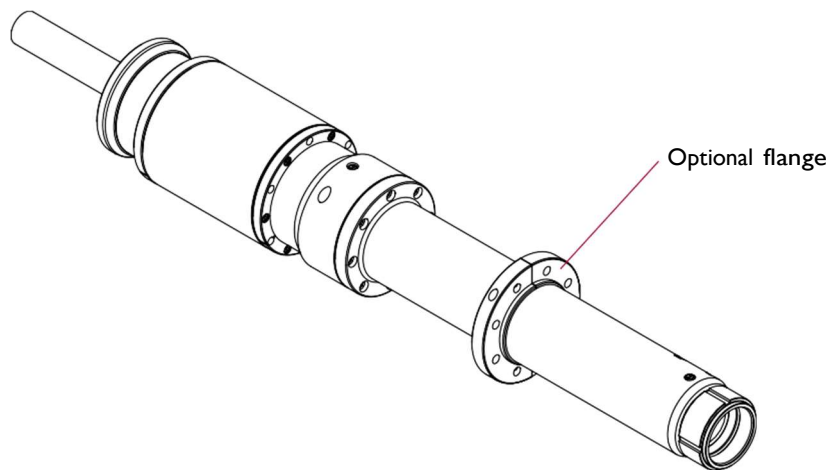
Contacts and cables

Termination : solder contact
The system is designed to allow cable from 50 mm² up to 300 mm²

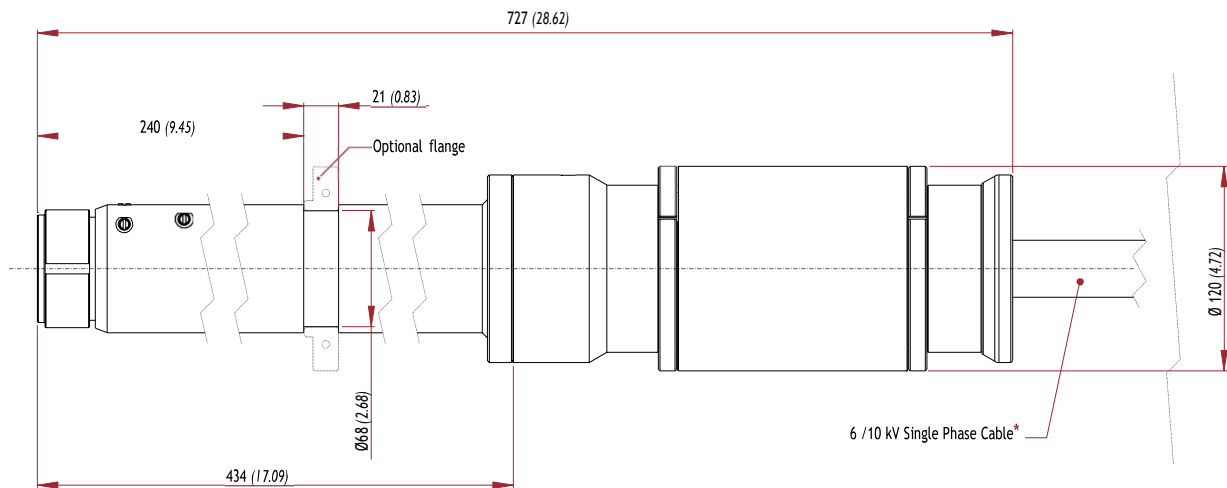
Interfaces

Please contact us for interface data sheets including tolerances

- Part Numbers : 376-1204-**



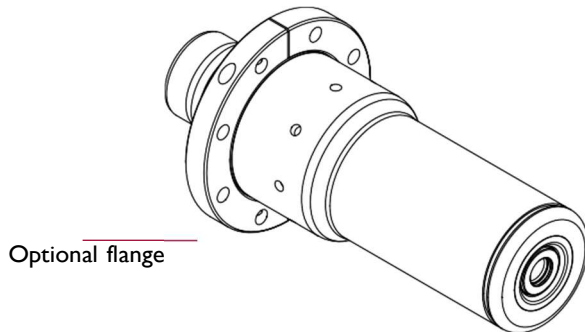
- Overall Dimensions - mm (inch)



*

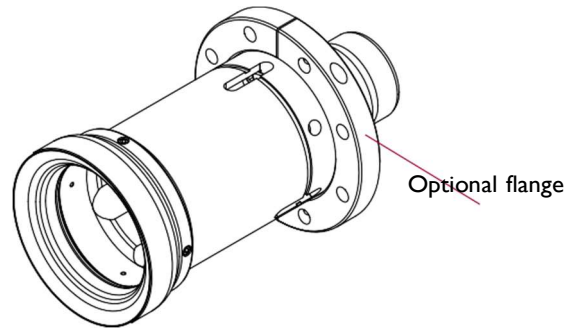
	Cable section (mm ²)	Conductor diameter (mm)	Insulation diameter (mm)	Overall diameter (mm)
00	50		To be designed	
01	70		To be designed	
02	95		To be designed	
03	120		To be designed	
04	150		To be designed	
05	185		To be designed	
06	240	18,1 ± 0,5	26,5 ± 0,5	33,5 ± 1,0
07	300		To be designed	

- Part Numbers : 376-1202-** (plug) & 376-1201-** (receptacle)



Optional flange

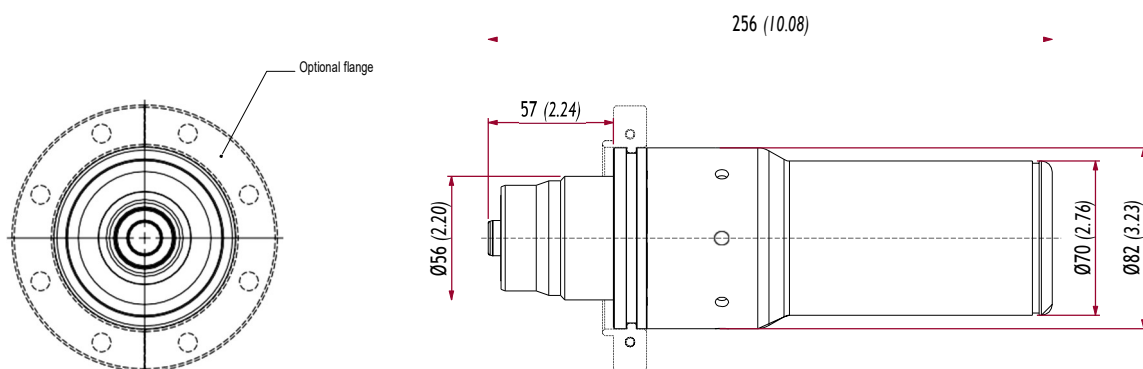
Plug



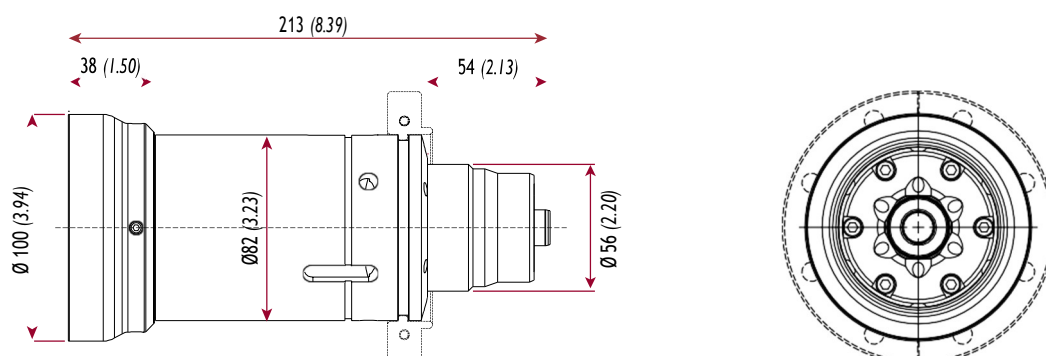
Optional flange

Receptacle

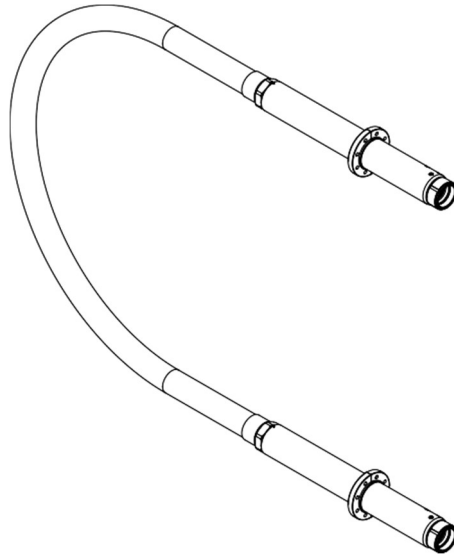
- Plug - mm (*inch*)



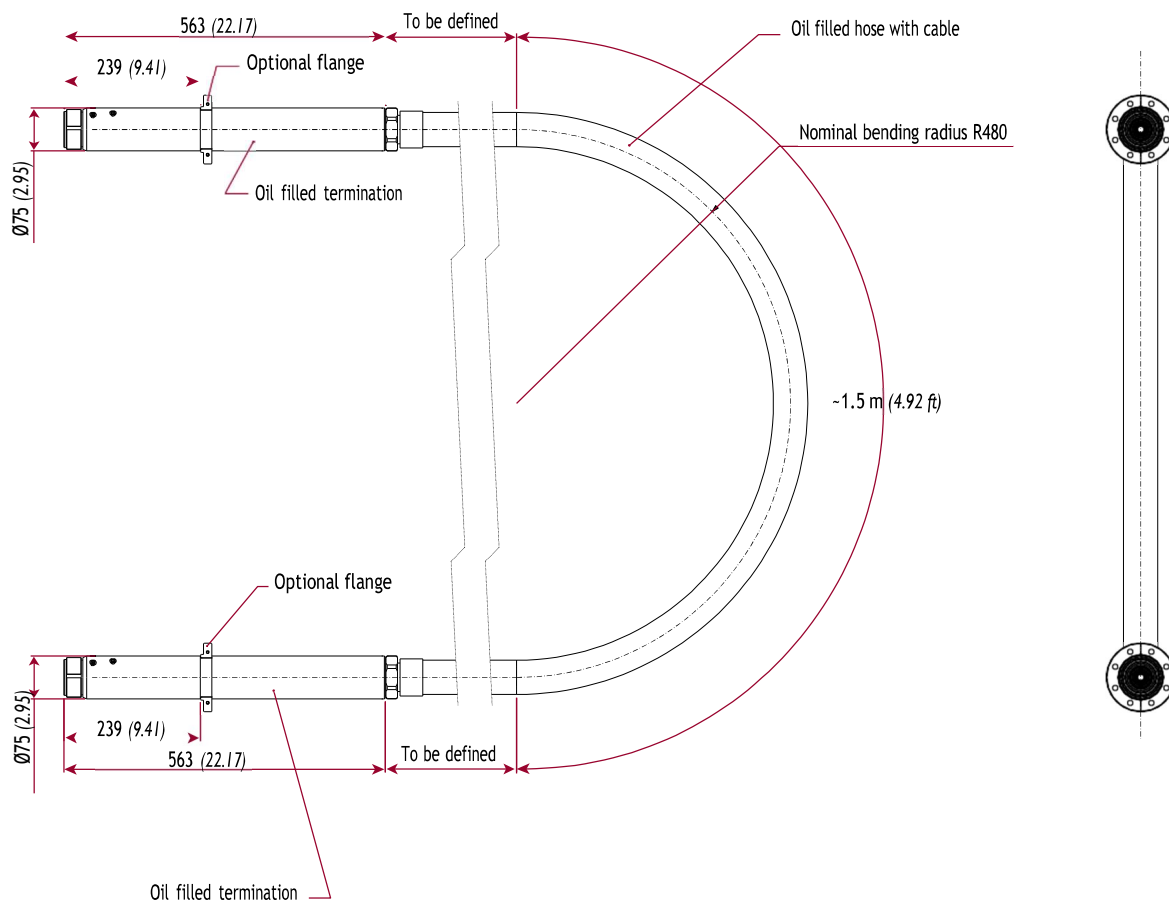
- Receptacle - mm (*inch*)



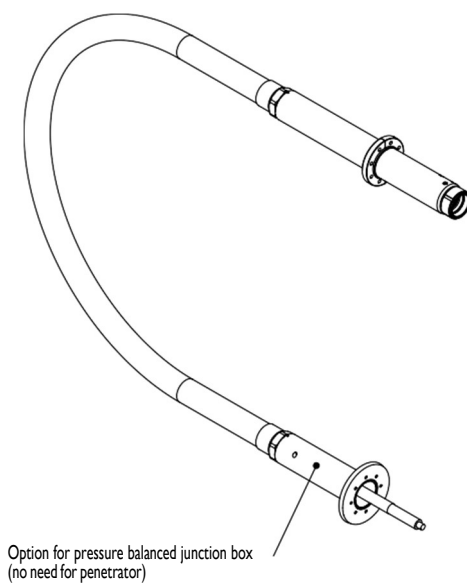
- Part Numbers : 376-1203-**



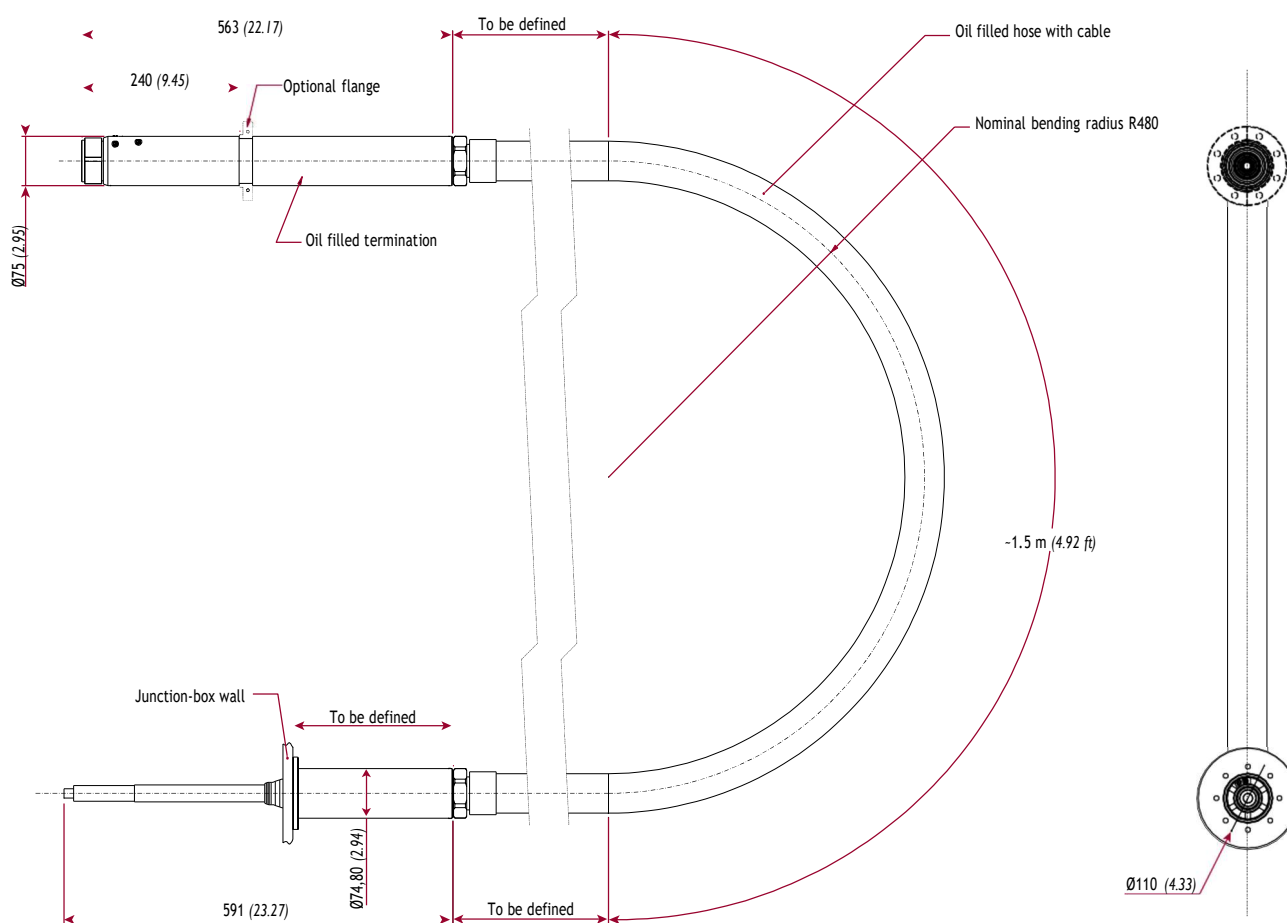
- Dimensions mm (inch)



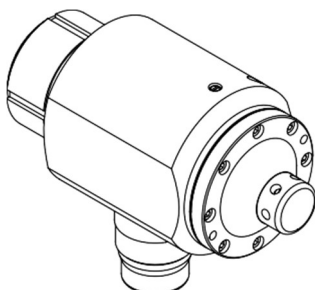
- Part Numbers : 376-1211-**



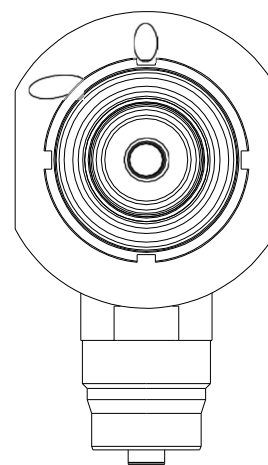
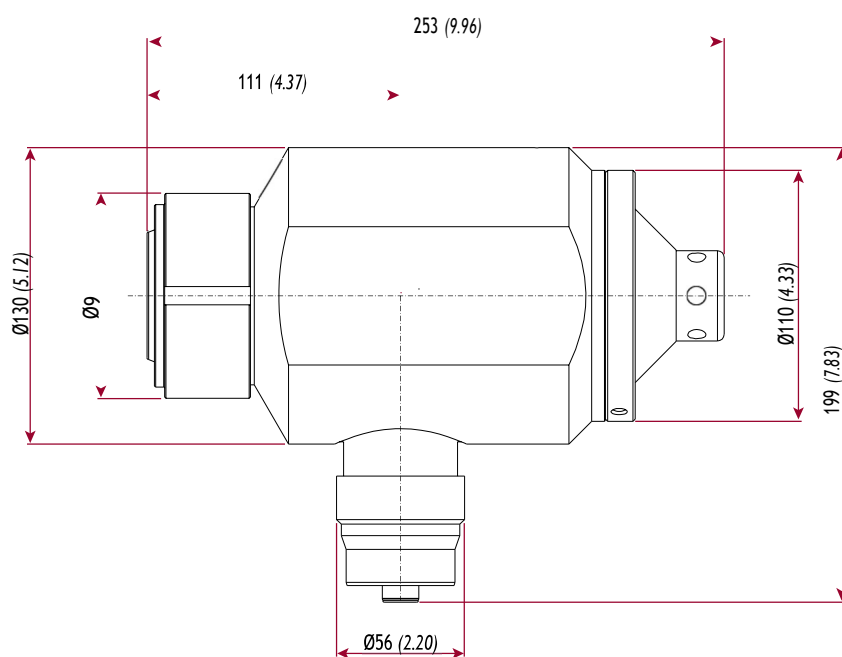
- Dimensions - mm (*inch*)



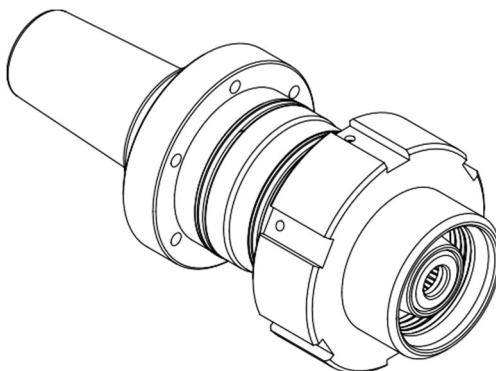
- Part Number : 376-1205-**



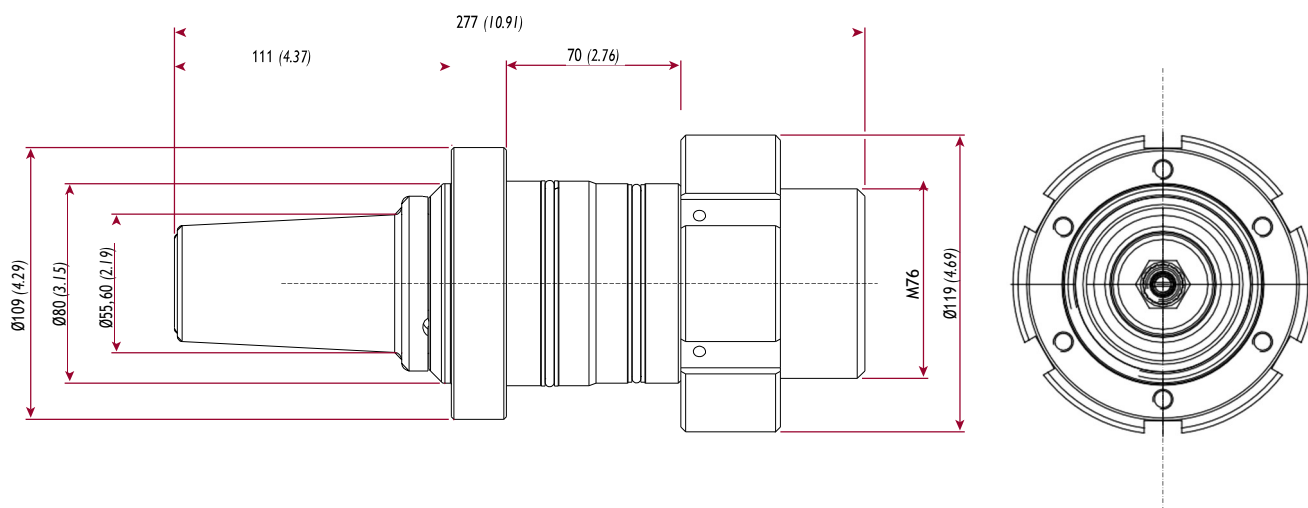
- Dimensions - mm (*inch*)



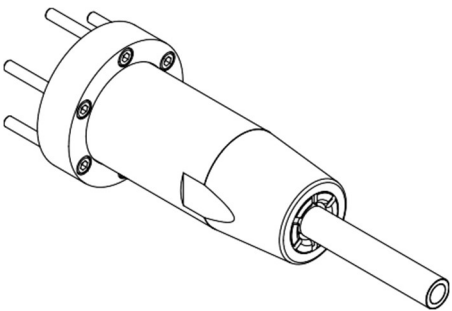
- Part Number : 376-1200-**



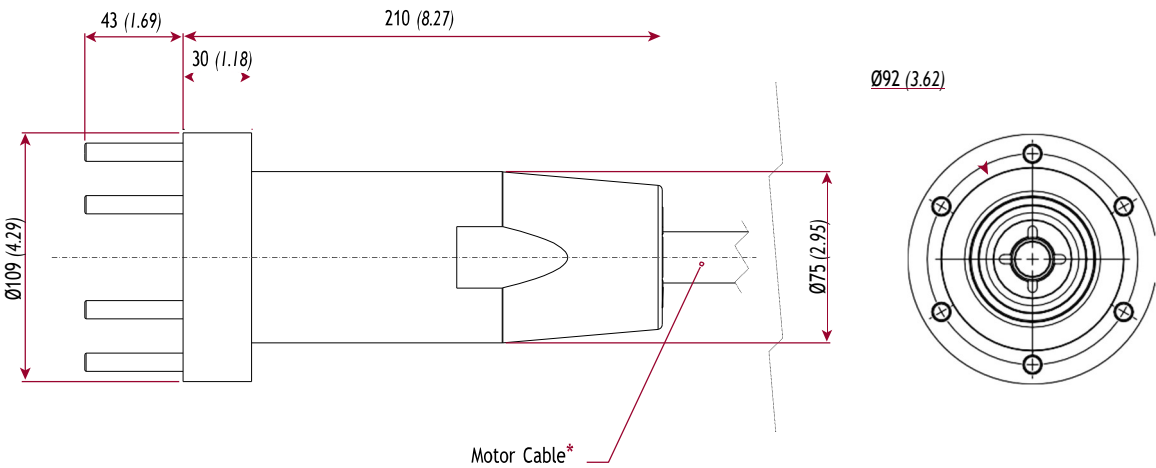
- Dimensions - mm (*inch*)



- Part Number : 376-1210-**

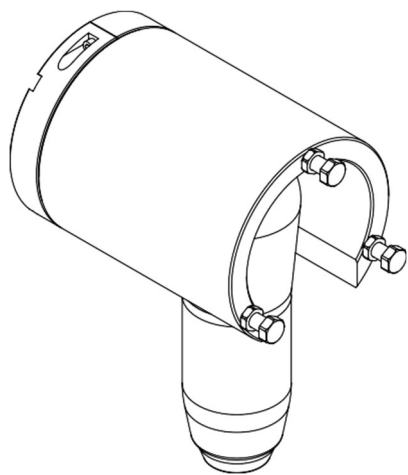


- Dimensions - mm (inch)

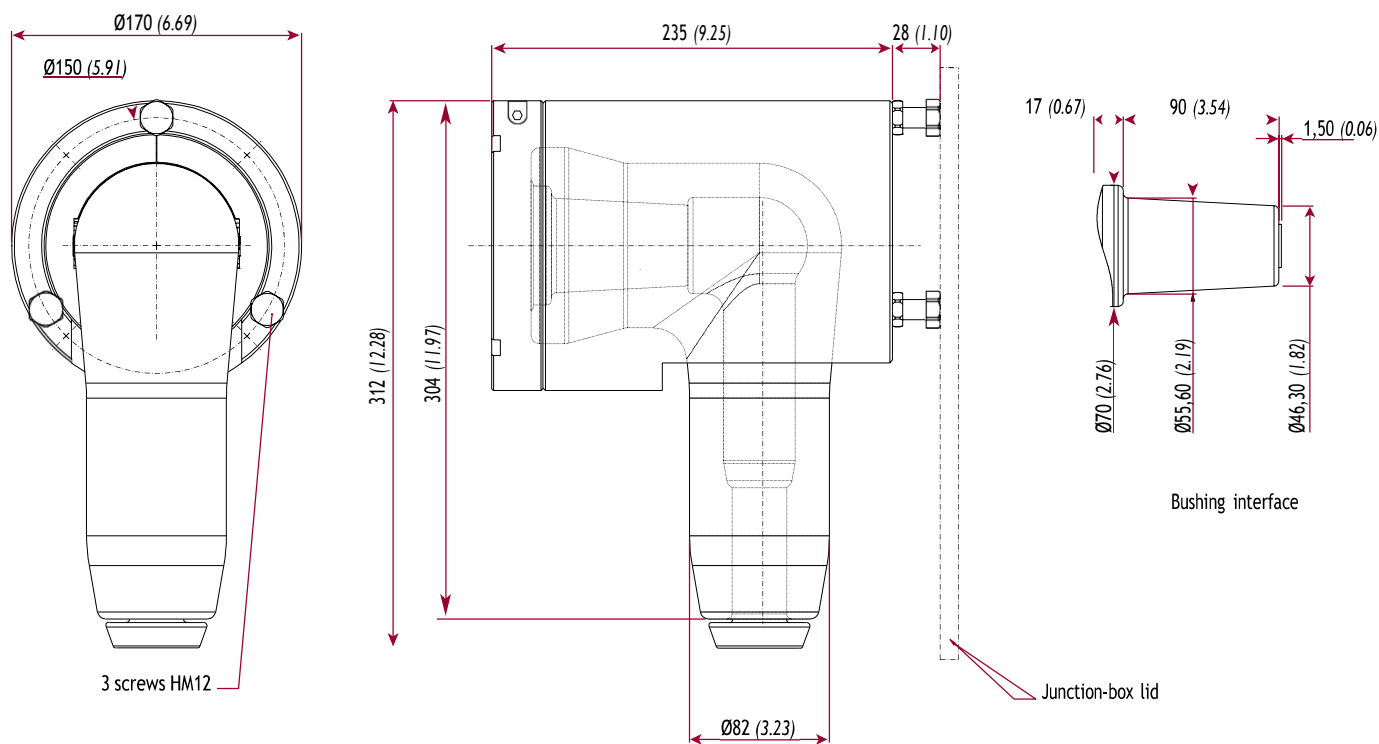


*	Size	Cable section (mm ²)	Conductor diameter (mm)	Insulation diameter (mm)	Overall diameter (mm)
	00	50	10,8 ± 0,1	18 ± 0,2	19 ± 0,3
	01	70	To be designed		
	02	95	Design for qualification		
	03	120	To be designed		

- Part Number : 376-1208-**



- Dimensions - mm (inch)



Test Type	Qualification Tests	Standards	Test conditions Acceptance criteria
Visual Inspection	Dimension & tolerance check		Compliant with drawing
	Interface check		Compliant with drawing
	Verification of markings		Compliant with drawing
	Weight measurement		Compliant with drawing
Electrical Tests	Contact resistance	IEC 61238-1	<0.1 mΩ per contact
	Partial discharge	IEC 60270 & IEC60885-2	<200 pC at 15 kV ac and <10 pC at 10.4 kV ac
	Insulation resistance		>10 GΩ (at 5 kV dc – 1 min)
	High Voltage ac Withstanding	IEC 61442 & IEC60060-1	24 kV ac applied for 1 hour : no breakdown, no flashover
	Shell continuity	IEC 61238-1	<5mΩ per contact
	Screen continuity	IEC 61238-1	<5mΩ per contact
	Temperature rise test in air	IEC 60694	<50°K on the conductor / 450 A applied
	Thermal cycles x 15 without hyperbaric pressure	IEC 60502-4 & IEC 61442	450 A / 8 hours cycle : no degradation or damage
	Thermal cycles x 15 with hyperbaric pressure	IEC 60502-4 & IEC 61442	450 A / 8 hours cycle at 450 bar : no degradation or damage
	Thermal short circuit	IEC 60502-4 & IEC 61442	7.2 kA / ΔT=65°C within 5s : no degradation or damage
	Dynamic short circuit	IEC 60502-4 & IEC 61442	Non Applicable
	Helium leak test		≤ 1.10-6 atm.cm³/s
Mechanical Tests	Thermal shock test		60°C – 0°C x 3 cycles -25°C – 0°C x 3 cycles : no degradation or damage
	Impact / shock test		3000 N perpendicular to the connector axis.
	Drop test		1 Meter above floor : no degradation or damage
	Vibration test		5 Hz to 25 Hz : ± 2.5 mm displacement 25 Hz to 150 Hz : 5g acceleration : no degradation or damage
	Mating force in air		Mating force = 800 N (to be confirmed) Unmating force = to be defined
	Cleaning and spillage test		No degradation or damage
	Hyperbaric qualification test		30 cycles - 0/450 bar 30 mating cycles : no degradation or damage
Hyperbaric Pressure Tests	Hyperbaric long term qualification test		Ageing at 80°C for 21 days Pressure test at 450 bar for 19 days 10 mating cycles : no degradation or damage
	Flooded back end test		30 cycles / 0-450 bar 10 mating cycles : electrical performances remain within specification
	500 bar reverse pressure test on penetrator		50 pressure cycles from 0 to 500 bar : no damage or degradation
	Vertical wet mating test in turbid water		30 pressure cycles – 0 to 60 bar 30 mating cycles at 60 bar : no degradation or damage

Systèmes et Connectique du Mans

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- P / N : F P - B C O - 0 9 / 0 4 / 0 8 - 1 8 c

SCM reserves the right to alter the specifications of the products described in this brochure without prior notice.
Overall dimensions and specifications are given for guidance only. For further details, please contact us.