



**SEACON**  
DEUTSCH | Rochester Cable

# DEUTSCH 9316 SERIES

FOR MARINE AND OFFSHORE APPLICATIONS

Harsh Environment, Flameproof Connectors  
for Rugged Reliability and Safety



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Designed to help withstand severe environments in marine and offshore applications to depths down to 7500 meters, TE Connectivity (TE)'s DEUTSCH 9316 series connector was designed for easy handling and rugged application in challenging environments.

**TE Components . . . TE Technology . . . TE Know-how . . .**  
 AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem | Rochester | DEUTSCH  
 SEACON Phoenix | LL ROWE | Phoenix Optix | AFP | SEACON

Empower Engineers to Solve Problems, Moving the World Forward.

# DEUTSCH 9316 SERIES

Flameproof, hermetically sealed

## DEEPWATER CAPABLE

- Down to 7500 meter depths

## WITHSTAND RUGGED CONDITIONS

- Mechanical stresses
- Polluted environments
- Explosive areas (vapours, gas and dusts) requiring flameproof devices

## SURVIVABILITY IN HARSH ENVIRONMENTS

- Stainless steel shells
- Glass-to-metal sealing
- Fluid resistant thermoset elastomer FKM/NBR o-rings

## EASY TO USE

- Scoop proof interface for reliable mating
- Keying to ensure proper circuit connections

## RANGE OF CONTACTS FOR

- Signal and control
- High frequency
- Medium and high power

## APPLICATION-MATCHED VERSIONS

- Topsides
- Subsea
- Flameproof (topside and subsea)
- Hermetic

## TYPICAL APPLICATIONS

- Underwater control systems
- Wellheads
- Submarines
- Offshore platforms and loading buoys
- Motors and compressors

## Specifications

### Materials

**Shell:** Stainless steel AISI 316L passivated

**Coupling Ring:** Marine bronze

**Insert (Plug/In-Line Receptacle):** Thermosetting resin, silicone elastomer

Meets requirements of MIL-H-5606

**Insert (Hermetic Receptacle):** Glass

### Hermeticity

**Individual Helium Test:** Leakage less than  $1.10^{-6}$  atm.cm<sup>3</sup>/s at 1 bar differential pressure

### Temperature Range

**Standard Connectors:** -55°C to +125°C

**Flameproof Connectors:** -20°C to +100°C\*

\*The in-service temperature of the connector shall not exceed this value to guarantee the flameproof properties.

### Mechanical

**Durability:** 500 mating cycles

### Working Pressure

up to 750 bars (10,875psi) for version sizes 07, 12, 19

up to 150 bars (2715psi) for version sizes 27, 37, 61, 121

### Electrical

#### Dielectric Withstanding Voltage (At Sea Level)

Service 1: 1500 VAC (Test Voltage)

Service 2: 2300 VAC (Test Voltage)

**Power:** Refer to specific ratings of power arrangements (see page 7)

**Insulation Resistance:** 5000 MΩ Min. at 25°C and 65% relative humidity

### ATEX-Certified Flameproof Connectors

Meet EN 60079-0 and EN 60079-1

ATEX Certificate: LCIE 08 ATEX 0010 U

Protection Mode: flameproof enclosures "d" of EN 60079-1

Environment: Gas (G)

Gas Group: Group II B Gb

### Contacts

#### Plug/In-Line Receptacle Contact

Crimp type: Size 20, 16, 12 AWG and coax

Rear insertion and front extraction

Crimp and Solder Type: Size 8 AWG

Crimp, Solder or Terminal Type: Size 4 AWG, 0 AWG - 150 mm<sup>2</sup>, 300 mm<sup>2</sup>

#### Hermetic Receptacle Contact

Solder or Terminal: Iron nickel (or copper, mode A810 for sizes 0, 150 mm<sup>2</sup>), plated gold over nickel

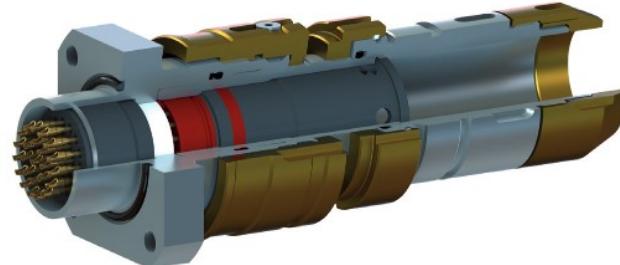
#### Current Rating per Contact (Max.)

Size 20: 5 Amps      Size 4: 60/100 Amps

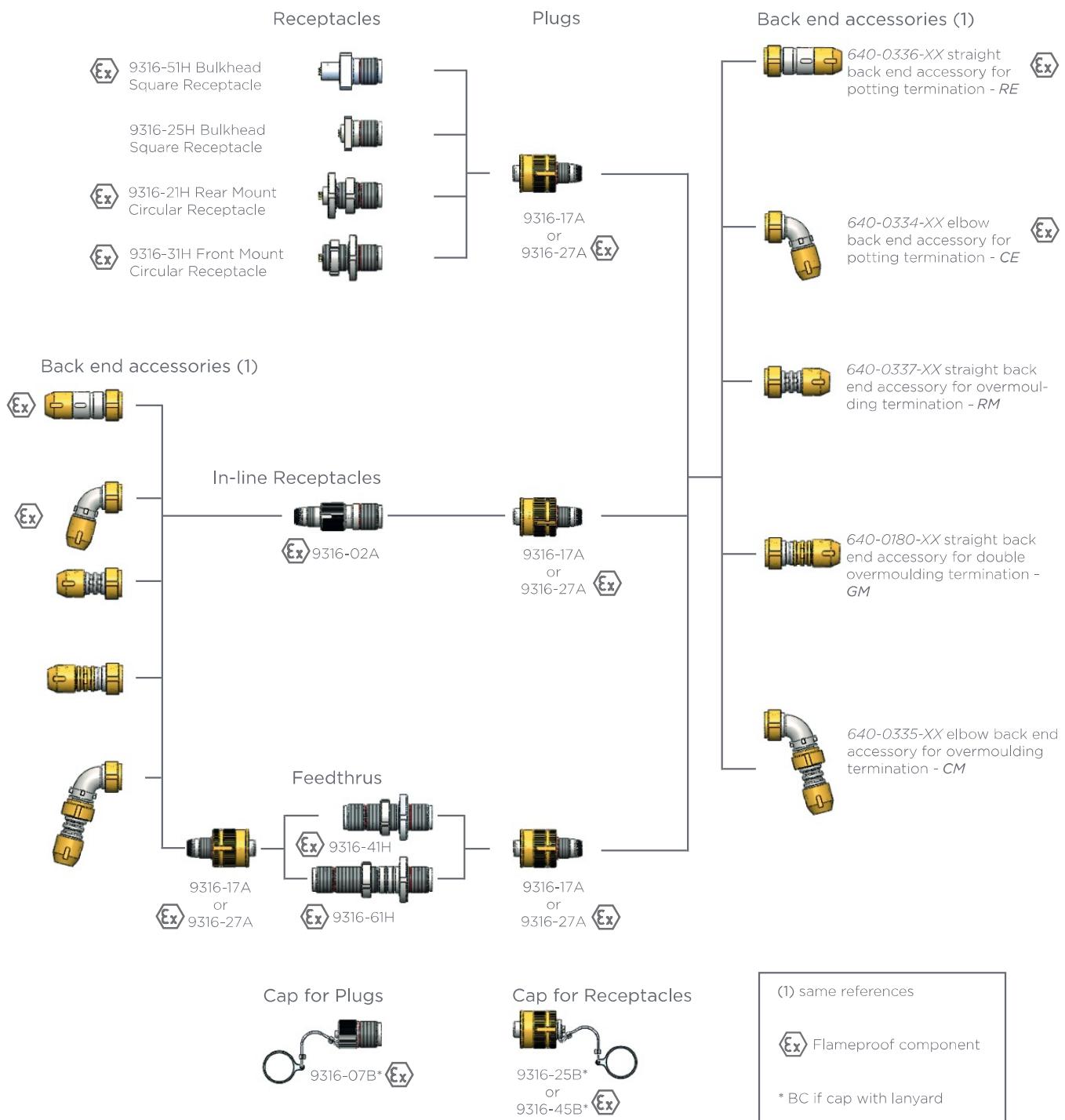
Size 16: 10 Amps      Size 0: 120/200 Amps

Size 12: 17 Amps      150 mm<sup>2</sup>: 400 Amps

Size 8: 33 Amps      300 mm<sup>2</sup>: 600 Amps



9316 27A plug with straight back accessory mated with 9316 51H receptacle





## PART NUMBERING SYSTEM

**93 16 - 27 A 19 - 12 P N \*** \*\*\*\*

## Product Range

## Shell Types

- 02** In Line Receptacle Ex d
- 17** Plug
- 21** Rear Mount Circular Receptacle Ex d
- 25** Square Flange Receptacle
- 27** Plug Ex d
- 31** Front Mount Circular Receptacle Ex d
- 41** Feedthru Ex d
- 51** Square Flange Receptacle Ex d
- 61** Feedthru Ex d

## Sealed Version

- A** 02, 17, 27, 51\*

## Hermetic Version

- H** 21, 25, 31, 41, 51, 61
- Other Hermetic Versions Available on Request

## Shell Size

- 07, 12, 19** 750 bars (10,875 psi)
- 27, 37, 61, 121** 150 bars (2175 psi)

## Arrangements

See Pages 6 and 7

## Contact Types

- P** Pin Contact (for 21H, 31H, 51H, 71H, 02A)
- S** Socket Contact (for 17A, 27A)
- PP** Pin Contact Each Side (for 41H, 61H)

## Keyway

- N** Normal
- T, U, V, W, X, Y, Z** Special Position

## Suffix for Contact (For Arrangements with Size 8 Contacts Only (19-93, 37-19, 61-21))

- 8** Power Contacts
- \* Coax Contacts (Contact TE)
- 87** Specific Crimped Contacts
- 090** Without Contacts (For all Arrangements)
- A810** Hermetic Receptacle, Copper Contact (Availability See Page 7)

## Modification Number

- 1A** Without Accessory (Types 02, 17, 27)
- A108** Plug Inserts Mirror Marking (Mandatory for Hermetic Feedthru)
- A5743** 1A + A108
- 563** Fluoroelastomer Seal
- A338** Embedding resin at the bottom of receptacle contacts

\* Arrangements 121-901, 121-903 & 121-905 are available only in sealed versions (02A, 17A, 27A, 51A)



## DEUTSCH 9316 Series

### SIGNAL ARRANGEMENTS

Front view of male insert receptacle or female insert plug - wiring side view

**07-0** 7 contacts **20 AWG**  
Service Voltage : 250 VAC



**07-93** 3 contacts **16 AWG**  
Service Voltage : 650 VAC



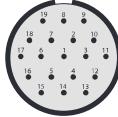
**12-0** 12 contacts **20 AWG**  
Service Voltage : 250 VAC



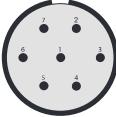
**12-93** 3 contacts **12 AWG  
Or Optical**  
Service Voltage : 650 VAC



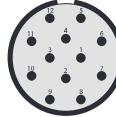
**19-0** 19 contacts **20 AWG**  
Service Voltage : 250 VAC



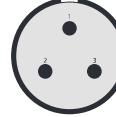
**19-7** 7 contacts **12 AWG**  
Service Voltage : 650 VAC



**19-12** 12 contacts **16 AWG**  
Service Voltage : 250 VAC



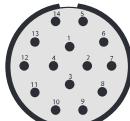
**19-93** 3 contacts **8 AWG  
Or Coax**  
Service Voltage : 650 VAC



**27-0** 27 contacts **20 AWG**  
Service Voltage : 250 VAC



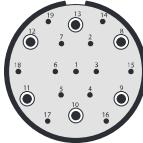
**27-2** 14 contacts **16 AWG**  
Service Voltage : 650 VAC



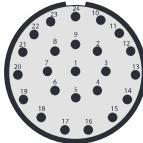
**37-0** 37 contacts **20 AWG**  
Service Voltage : 250 VAC



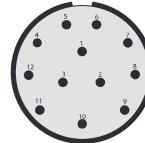
**37-19** 13 contacts **20 AWG**  
+ 6 contacts **8 AWG  
Or Coax**  
Service Voltage : 250 VAC



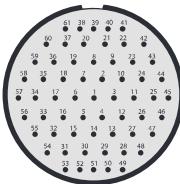
**37-2** 24 contacts **16 AWG**  
Service Voltage : 250 VAC



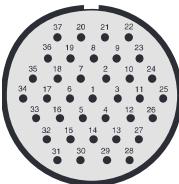
**37-3** 12 contacts **12 AWG  
Or Optical**  
Service Voltage : 250 VAC



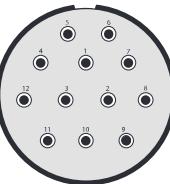
**61-0** 61 contacts **20 AWG**  
Service Voltage : 250 VAC



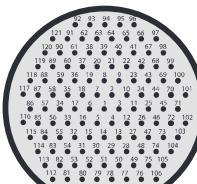
**61-14** 37 contacts **16 AWG**  
Service Voltage : 250 VAC



**61-21** 12 contacts **8 AWG  
Or Coax**  
Service Voltage : 250 VAC



**121-0** 121 contacts **20 AWG**  
Service Voltage : 250 VAC



**AWG 8 :** Power or Coax Contacts

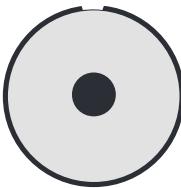
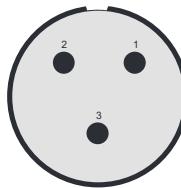
**AWG 12 :** Electrical or Optical Contacts

Arrangements 19-4, 37-27, 37-30, 61-5 are specific. Consult TE Technical Support (refer to back cover information)



## POWER ARRANGEMENTS

Front view of male insert receptacle or female insert plug - wiring side view

**27-901** 1 contact **0 AWG****61-901** 1 x 150 mm<sup>2</sup>**61-903** 3 contacts **4 AWG****61-904** 4 contacts **4 AWG**

Version	Test Voltage	Service Voltage	Max. Rated Current
A Sealed	3500 VAC	1250 VAC	200 A
H Hermetic	3500 VAC	1250 VAC	120 A
H... A810 Hermetic	2500 VAC	750 VAC	200 A

Modification A810 (Hermetic, copper contact) available

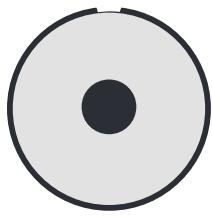
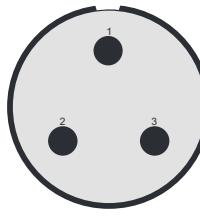
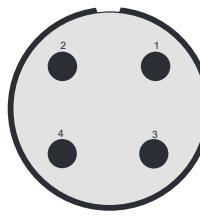
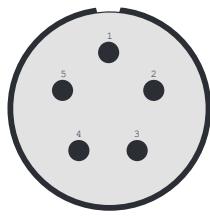
Version	Test Voltage	Service Voltage	Max. Rated Current
A Sealed	5000 VAC	2000 VAC	400 A
H Hermetic		Not available	
H... A810 Hermetic	5000 VAC	2000 VAC	400 A

Modification A810 (Hermetic, copper contact) only available

Version	Test Voltage	Service Voltage	Max. Rated Current
A Sealed	3500 VAC	1250 VAC	100 A
H Hermetic	3500 VAC	1250 VAC	60 A
H... A810 Hermetic	2500 VAC	750 VAC	100 A

Modification A810 (Hermetic, copper contact) available

Version	Test Voltage	Service Voltage	Max. Rated Current
A Sealed	3500 VAC	1250 VAC	100 A
H Hermetic	3500 VAC	1250 VAC	60 A
H... A810 Hermetic		Not available	

**121-901** 1 x 300 mm<sup>2</sup>**121-903** 3 contacts **0 AWG****121-904** 4 contacts **0 AWG****121-905** 5 contacts **4 AWG**

Version	Test Voltage	Service Voltage	Max. Rated Current
A Sealed	5000 VAC	2000 VAC	600 A
H Hermetic		Not available	
H... A810 Hermetic		Not available	

Hermetic receptacles not available

Version	Test Voltage	Service Voltage	Max. Rated Current
A Sealed	3500 VAC	1250 VAC	200 A
H Hermetic		Not available	
H... A810 Hermetic		Not available	

Hermetic receptacles not available

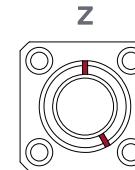
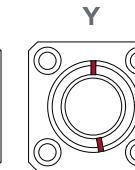
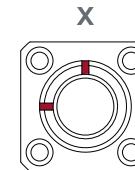
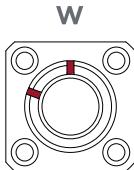
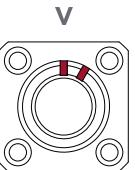
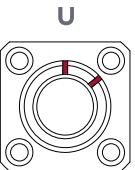
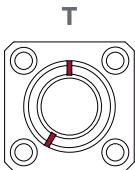
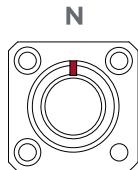
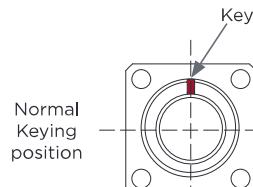
Version	Test Voltage	Service Voltage	Max. Rated Current
A Sealed	3500 VAC	1250 VAC	200 A
H Hermetic		Not available	
H... A810 Hermetic	2500 VAC	750 VAC	200 A

Modification A810 (Hermetic, copper contact) available

Version	Test Voltage	Service Voltage	Max. Rated Current
A Sealed	3000 VAC	1000 VAC	100 A
H Hermetic		Not available	
H... A810 Hermetic		Not available	

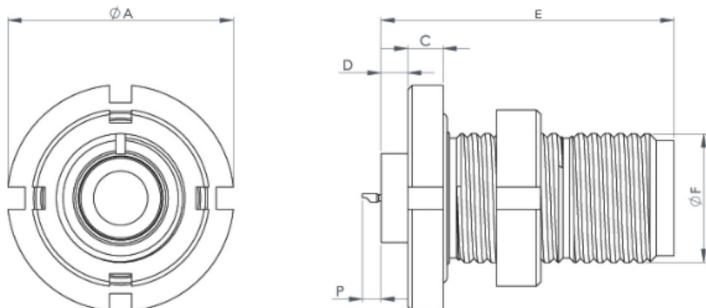
Hermetic receptacles not available

## Keying System - Receptacle Front View

Note : Caps 07B and 07BC for plugs: Standard configuration for N and X  
UZ configuration for N, U, V, W, Y, Z



## HERMETIC RECEPTACLES

Rear Mount Circular Receptacle - 21H 

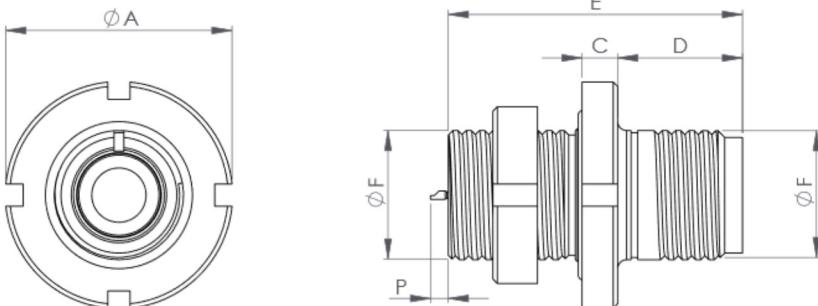
Part Number	ØA Max.	C Max.	D Max.	E Max.	ØF
9316-21H 07-**P*	51 (2.007)	8.1 (0.318)	6.3 (0.248)	66.1 (2.602)	29 (1.142)
9316-21H 12-**P*	52 (2.047)	8.1 (0.318)	6.3 (0.248)	66.1 (2.602)	31 (1.220)
9316-21H 19-**P*	55 (2.165)	8.1 (0.318)	6.3 (0.248)	66.1 (2.602)	34 (1.338)
9316-21H 27-**P*	69 (2.716)	8.1 (0.318)	6.3 (0.248)	66.1 (2.602)	41 (1.614)
9316-21H 37-**P*	74 (2.913)	8.1 (0.318)	6.3 (0.248)	66.1 (2.602)	46 (1.811)
9316-21H 61-**P*	80 (3.149)	8.1 (0.318)	6.3 (0.248)	66.1 (2.602)	53 (2.086)
9316-21H 121-**P*		Consult us			

## P (Contact over passing)

AWG 20	4.20 (0.165)
AWG 16	6.23 (0.245)
AWG 12	6.48 (0.255)
AWG 8	9.50 (0.374)
Coax	Contact us
Power Contacts	Contact us

mm / (inch)

mm / (inch)

Front Mount Circular Receptacle - 31H 

Part Number	ØA Max.	C Max.	D Max.	E Max.	ØF
9316-31H 07-**P*	51 (2.007)	8.10 (0.318)	28.10 (1.106)	66.10 (2.602)	29 (1.142)
9316-31H 12-**P*	52 (2.047)	8.10 (0.318)	28.10 (1.106)	66.10 (2.602)	31 (1.220)
9316-31H 19-**P*	55 (2.165)	8.10 (0.318)	28.10 (1.106)	66.10 (2.602)	34 (1.338)
9316-31H 27-**P*	69 (2.716)	8.10 (0.318)	28.10 (1.106)	66.10 (2.602)	41 (1.614)
9316-31H 37-**P*	74 (2.913)	8.10 (0.318)	28.10 (1.106)	66.10 (2.602)	46 (1.811)
9316-31H 61-**P*	80 (3.149)	8.10 (0.318)	28.10 (1.106)	66.10 (2.602)	53 (2.086)
9316-31H 121-**P*	95 (3.740)	10.10 (0.397)	41.10 (1.618)	81.10 (3.192)	67 (2.637)

## P (Contact over passing)

AWG 20	4.20 (0.165)
AWG 16	6.23 (0.245)
AWG 12	6.48 (0.255)
AWG 8	9.50 (0.374)
Coax	Contact us
Power Contacts	Contact us

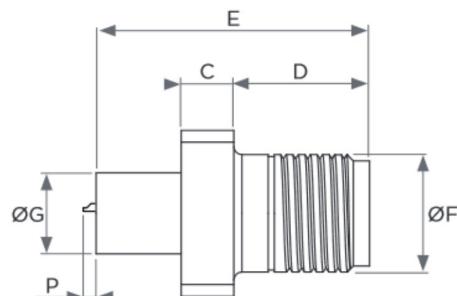
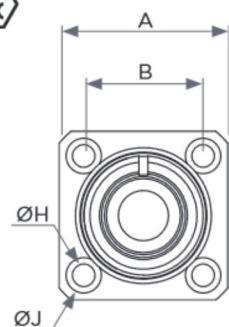
mm / (inch)

mm / (inch)



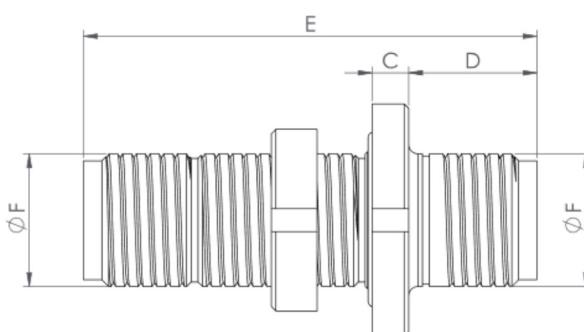
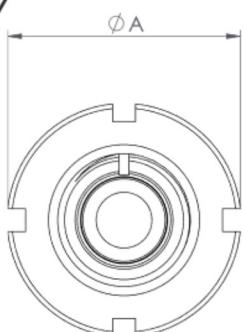
## HERMETIC RECEPTACLES

Square Flange - 51H



Part Number	A Max.	B	C Max.	D Max.	E Max.	ØF	ØG Max.	ØH Max.	ØJ Max.	P (Contact over passing)
9316-51H 07-**P*	41.50 (1.633)	29 (1.141)	13.10 (0.515)	33.60 (1.322)	67.70 (2.665)	29 (1.142)	20 (0.787)	5.60 (0.220)	8.60 (0.338)	AWG 20 2.70 (0.106)
9316-51H 12-**P*	42.50 (1.673)	30 (1.181)	13.10 (0.515)	33.60 (1.322)	67.70 (2.665)	31 (1.220)	23 (0.905)	5.60 (0.220)	8.60 (0.338)	AWG 16 4.73 (0.186)
9316-51H 19-**P*	44.50 (1.751)	32 (1.259)	13.10 (0.515)	33.60 (1.322)	67.70 (2.665)	34 (1.338)	26 (1.024)	5.60 (0.220)	8.60 (0.338)	AWG 12 4.98 (0.196)
9316-51H 27-**P*	56.50 (2.224)	40 (1.574)	13.10 (0.515)	33.60 (1.322)	67.70 (2.665)	41 (1.614)	30 (1.181)	6.60 (0.220)	10.60 (0.417)	AWG 8 8.00 (0.315)
9316-51H 37-**P*	60.50 (2.381)	44 (1.732)	13.10 (0.515)	33.60 (1.322)	67.70 (2.665)	46 (1.811)	34.5 (1.358)	6.60 (0.220)	10.60 (0.417)	Coax Contact us
9316-51H 61-**P*	65.50 (2.578)	49 (1.929)	13.10 (0.515)	33.60 (1.322)	67.70 (2.665)	53 (2.086)	43.5 (1.712)	6.60 (0.220)	10.60 (0.417)	Power Contacts Contact us
9316-51H 121-**P*	73.50 (2.893)	60 (2.362)	13.10 (0.515)	48.60 (1.913)	82.60 (3.251)	67 (2.637)	55 (2.165)	6.60 (0.259)	10.60 (0.417)	mm / (inch)

Feedthru - 41H



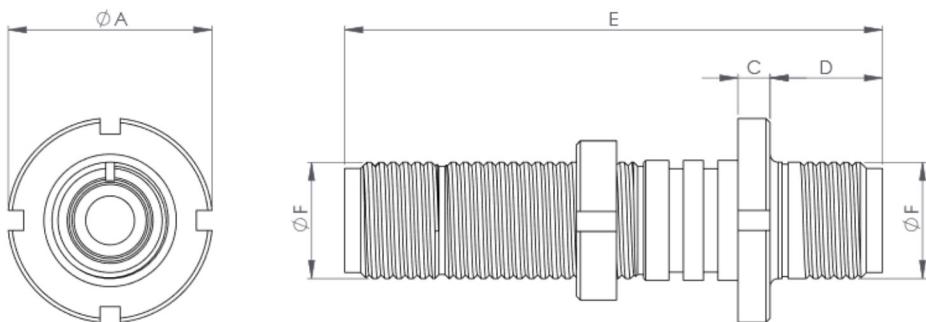
Part Number	ØA Max.	C Max.	D Max.	E Max.	ØF
9316-41H 07-**P*	51 (2.007)	8.1 (0.318)	28.1 (1.106)	99 (3.897)	29 (1.142)
9316-41H 12-**P*	52 (2.047)	8.1 (0.318)	28.1 (1.106)	99 (3.897)	31 (1.220)
9316-41H 19-**P*	55 (2.165)	8.1 (0.318)	28.1 (1.106)	99 (3.897)	34 (1.338)
9316-41H 27-**P*	69 (2.716)	8.1 (0.318)	28.1 (1.106)	99 (3.897)	41 (1.614)
9316-41H 37-**P*	74 (2.913)	8.1 (0.318)	28.1 (1.106)	99 (3.897)	46 (1.811)
9316-41H 61-**P*	80 (3.149)	8.1 (0.318)	28.1 (1.106)	99 (3.897)	53 (2.086)
9316-41H 121-**P*	Consult us				

mm / (inch)



## HERMETIC RECEPTACLES

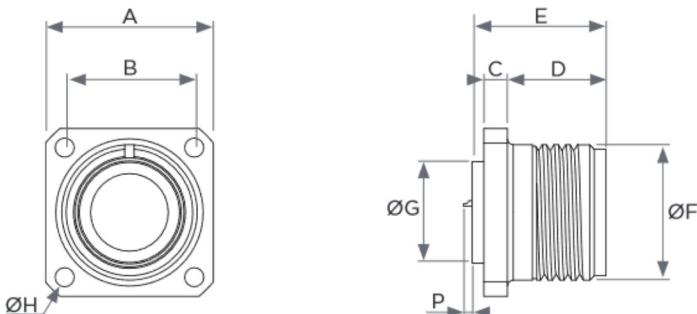
Feedthru - 61H



Part Number	ØA Max.	C Max.	D Max.	E Max.	ØF
9316-61H 07--PP*	51 (2.007)	8.10 (0.318)	28.10 (1.106)	134 (5.275)	29 (1.142)
9316-61H 12--PP*	52 (2.047)	8.10 (0.318)	28.10 (1.106)	134 (5.275)	31 (1.220)
9316-61H 19--PP*	55 (2.165)	8.10 (0.318)	28.10 (1.106)	134 (5.275)	34 (1.338)
9316-61H 27--PP*	69 (2.716)	8.10 (0.318)	28.10 (1.106)	134 (5.275)	41 (1.614)
9316-61H 37--PP*	74 (2.913)	8.10 (0.318)	28.10 (1.106)	134 (5.275)	46 (1.811)
9316-61H 61--PP*	80 (3.149)	8.10 (0.318)	28.10 (1.106)	134 (5.275)	53 (2.086)
9316-61H 121--PP*	95 (3.740)	10.10 (0.397)	41.10 (1.618)	134 (5.275)	67 (2.637)

mm / (inch)

## Square Flange - 25H



Part Number	A Max.	B	C Max.	D Max.	E Max.	ØF	ØG Max.	Ø H
9316-25H 07--P*	38.50 (1.515)	29 (1.141)	8.10 (0.319)	33.60 (1.324)	45.60 (1.795)	29 (1.142)	20 (0.787)	5.50 (0.216)
9316-25H 12--P*	39.50 (1.555)	30 (1.181)	8.10 (0.319)	33.60 (1.324)	45.60 (1.795)	31 (1.220)	23 (0.905)	5.50 (0.216)
9316-25H 19--P*	41.50 (1.633)	32 (1.259)	8.10 (0.319)	33.60 (1.324)	45.60 (1.795)	34 (1.338)	26 (1.024)	5.50 (0.216)
9316-25H 27--P*	53.50 (2.106)	40 (1.574)	8.10 (0.319)	33.60 (1.324)	45.60 (1.795)	41 (1.614)	30 (1.181)	6.50 (0.256)
9316-25H 37--P*	57.50 (2.264)	44 (1.732)	8.10 (0.319)	33.60 (1.324)	45.60 (1.795)	46 (1.811)	34.5 (1.358)	6.50 (0.256)
9316-25H 61--P*	62.50 (2.460)	49 (1.929)	8.10 (0.319)	33.60 (1.324)	45.60 (1.795)	53 (2.086)	43.5 (1.712)	6.50 (0.256)
9316-25H 121--P*	73.50 (2.893)	60 (2.362)	10.10 (0.398)	48.60 (1.913)	62.60 (2.464)	67 (2.637)	55 (2.165)	6.50 (0.256)

mm / (inch)

## P (Contact over passing)

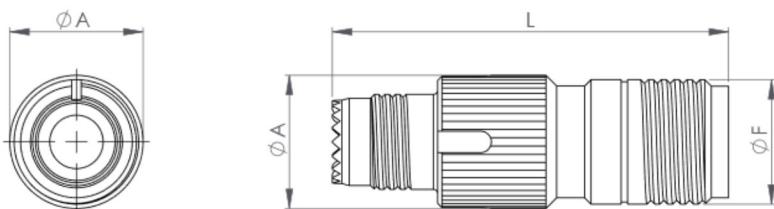
AWG 20	2.85 (0.112)
AWG 16	4.83 (0.190)
AWG 12	3.68 (0.145)
AWG 8	8.50 (0.335)
Coax	Contact us
Power Contacts	Contact us

mm / (inch)



## IN LINE RECEPTACLES / PLUGS

## In line receptacle - 02A

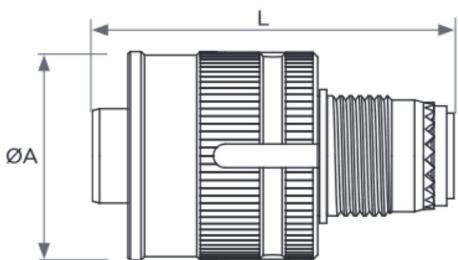


Part Number	ØA Max.	L Max.	ØF
9316-02 A 07-**P* 1A	31.20 (1.228)	92.50 (3.641)	29 (1.142)
9316-02 A 12-**P* 1A	33.20 (1.307)	92.50 (3.641)	31 (1.220)
9316-02 A 19-**P* 1A	36.20 (1.425)	92.50 (3.641)	34 (1.338)
9316-02 A 27-**P* 1A	43.20 (1.700)	92.50 (3.641)	41 (1.614)
9316-02 A 37-**P* 1A	48.20 (1.897)	92.50 (3.641)	46 (1.811)
9316-02 A 61-**P* 1A	55.20 (2.173)	92.50 (3.641)	53 (2.086)
9316-02 A 121-**P* 1A	69.20 (2.724)	122.50 (4.822)	67 (2.638)

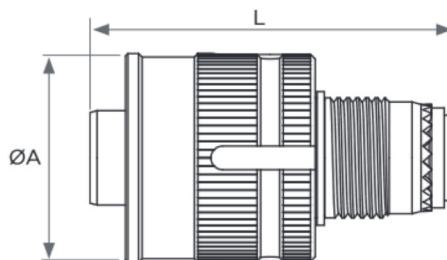
mm / (inch)

## Plugs - 17A - 27A

## 17A STANDARD



## 27A FLAMEPROOF



Part Number	ØA Max.	L Max.
9316-** A 07-**S* 1A	42.20 (1.661)	72.20 (2.842)
9316-** A 12-**S* 1A	44.20 (1.740)	72.20 (2.842)
9316-** A 19-**S* 1A	47.20 (1.858)	72.20 (2.842)
9316-** A 27-**S* 1A	54.20 (2.134)	72.20 (2.842)
9316-** A 37-**S* 1A	59.20 (2.330)	72.20 (2.842)
9316-** A 61-**S* 1A	66.20 (2.606)	72.20 (2.842)
9316-** A 121-**S* 1A	80.20 (3.157)	87.20 (3.433)

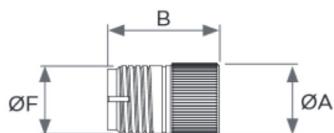
mm / (inch)



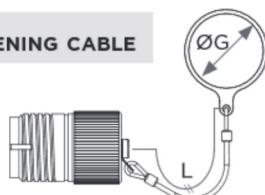
## PROTECTION CAPS

## Cap for Plug - Types 07B - 07BC

## 07B WITHOUT FASTENING CABLE



## 07BC WITH FASTENING CABLE

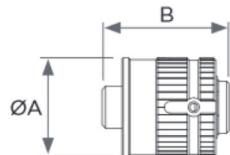


Part Number	ØA Max.	B Max.	ØF	ØG Min.	L Max.
9316-07 * 07	31.20 (1.228)	48.20 (1.897)	29 (1.141)	22.50 (0.885)	200 (7.873)
9316-07 * 12	33.20 (1.307)	48.20 (1.897)	31 (1.220)	25.50 (1.003)	200 (7.873)
9316-07 * 19	36.20 (1.425)	48.20 (1.897)	34 (1.338)	28.90 (1.137)	200 (7.873)
9316-07 * 27	43.20 (1.700)	48.20 (1.897)	41 (1.614)	33.70 (1.326)	200 (7.873)
9316-07 * 37	48.20 (1.897)	48.20 (1.897)	46 (1.811)	36.80 (1.448)	200 (7.873)
9316-07 * 61	55.20 (2.173)	48.20 (1.897)	53 (2.086)	44.50 (1.751)	200 (7.873)
9316-07 * 121	69.20 (2.272)	63.20 (2.488)	67 (2.637)	58.10 (2.287)	200 (7.873)

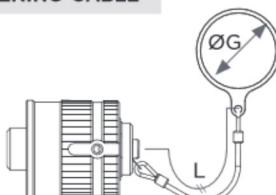
\* B or BC mm / (inch)

## Cap for Receptacle - Types 25B - 25BC

## 25B WITHOUT FASTENING CABLE



## 25BC WITH FASTENING CABLE

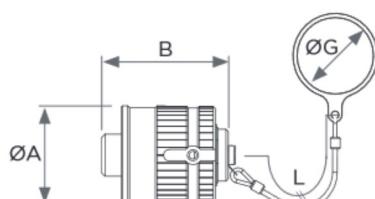


Part Number	ØA Max.	B Max.	ØG Min.	L Max.
9316-25 * 07	42.20 (1.661)	54 (2.125)	30.40 (1.196)	200 (7.873)
9316-25 * 12	44.20 (1.740)	54 (2.125)	32.00 (1.259)	200 (7.873)
9316-25 * 19	47.20 (1.858)	54 (2.125)	34.80 (1.370)	200 (7.873)
9316-25 * 27	54.20 (2.133)	54 (2.125)	41.60 (1.637)	200 (7.873)
9316-25 * 37	59.20 (2.330)	54 (2.125)	47.80 (1.881)	200 (7.873)
9316-25 * 61	66.20 (2.606)	54 (2.125)	55.40 (2.181)	200 (7.873)
9316-25 * 121	80.20 (3.157)	69 (2.716)	71.20 (2.803)	200 (7.873)

\* B or BC mm / (inch)

## Flameproof Cap for Receptacle - Type 45BC

## 45BC WITH FASTENING CABLE



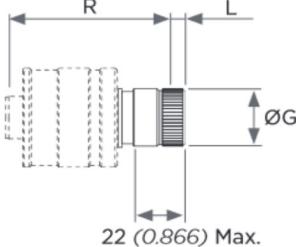
Part Number	ØA Max.	B Max.	ØG Min.	L Max.
9316-45 BC 07	42.20 (1.661)	54 (2.125)	30.40 (1.196)	200 (7.873)
9316-45 BC 12	44.20 (1.740)	54 (2.125)	32.00 (1.259)	200 (7.873)
9316-45 BC 19	47.20 (1.858)	54 (2.125)	34.80 (1.370)	200 (7.873)
9316-45 BC 27	54.20 (2.133)	54 (2.125)	41.60 (1.637)	200 (7.873)
9316-45 BC 37	59.20 (2.330)	54 (2.125)	47.80 (1.881)	200 (7.873)
9316-45 BC 61	66.20 (2.606)	54 (2.125)	55.40 (2.181)	200 (7.873)
9316-45 BC 121	80.20 (3.157)	69 (2.716)	71.20 (2.803)	200 (7.873)

mm / (inch)



## BACK END ACCESSORIES FOR TOPSIDE AND/OR ATEX APPLICATIONS

## Backnut

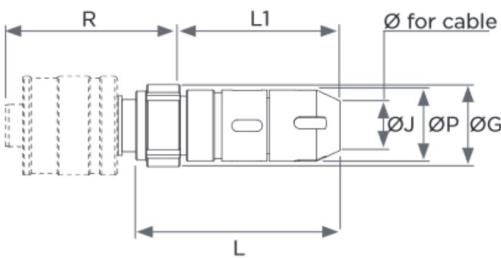


Part Number	ØG Max.	L Min.	R Max.	Tightening Torque*
<b>087-0004-07</b>	24.50 (0.964)	4.50 (0.177)	72.20 (2.842)	20 Nm
<b>087-0004-12</b>	27.10 (1.066)	4.50 (0.177)	72.20 (2.842)	22 Nm
<b>087-0004-19</b>	30.80 (1.212)	4.50 (0.177)	72.20 (2.842)	25 Nm
<b>087-0004-27</b>	35.55 (1.399)	4.50 (0.177)	72.20 (2.842)	28 Nm
<b>087-0004-37</b>	38.70 (1.523)	4.50 (0.177)	72.20 (2.842)	32 Nm
<b>087-0004-61</b>	45.90 (1.807)	4.50 (0.177)	72.20 (2.842)	37 Nm
<b>087-0004-95*</b>	56.90 (2.240)	4.50 (0.177)	87.20 (3.433)	45 Nm

\* 087-0004-95 accessory for shell size 121 mm / (inch)

\* Valid for all types, all nuts

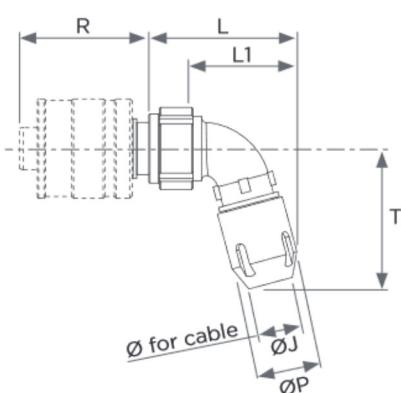
## Straight for Braid Termination and Heat-Shrink Boot RE



Part Number	ØG Max.	ØJ Max.	L Max.	L1 Max.	ØP Max.	R Max.
<b>640-0336-07</b>	34.90 (1.374)	16.45 (0.647)	88.70 (3.492)	70.95 (2.793)	30.45 (1.198)	72.20 (2.842)
<b>640-0336-12</b>	37.80 (1.488)	19.25 (0.757)	88.70 (3.492)	70.95 (2.793)	33.45 (1.316)	72.20 (2.842)
<b>640-0336-19</b>	42.60 (1.677)	22.25 (0.875)	88.70 (3.492)	70.95 (2.793)	36.95 (1.454)	72.20 (2.842)
<b>640-0336-27</b>	45.80 (1.803)	27.75 (1.092)	91.90 (3.618)	73.95 (2.911)	41.85 (1.647)	72.20 (2.842)
<b>640-0336-37</b>	53.80 (2.118)	31.05 (1.222)	91.90 (3.618)	73.95 (2.911)	45.15 (1.777)	72.20 (2.842)
<b>640-0336-61</b>	57.40 (2.259)	38.45 (1.513)	95.00 (3.740)	77.05 (3.033)	53.15 (2.092)	72.20 (2.842)
<b>640-0336-95*</b>	69.70 (2.744)	45.30 (1.783)	115.00 (4.527)	96.15 (3.780)	60.60 (2.385)	87.20 (3.433)

\* 640-0336-95 accessory for shell size 121 mm / (inch)

## Elbow for Braid Termination and Heat-Shrink Boot CE



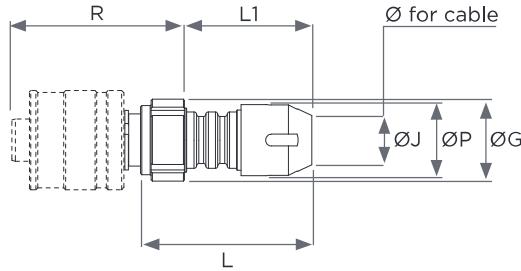
Part Number	ØG Max.	ØJ Max.	L Max.	L1 Max.	ØP Max.	R Max.	T Max.
<b>640-0334-07</b>	34.90 (1.374)	15.75 (0.620)	63.50 (2.499)	45.75 (1.801)	28.40 (1.118)	72.20 (2.842)	61.15 (2.407)
<b>640-0334-12</b>	37.80 (1.488)	18.55 (0.730)	66.20 (2.606)	48.45 (1.907)	31.20 (1.228)	72.20 (2.842)	62.20 (2.448)
<b>640-0334-19</b>	42.60 (1.677)	22.35 (0.879)	69.80 (2.748)	52.05 (2.049)	34.30 (1.350)	72.20 (2.842)	65.35 (2.572)
<b>640-0334-27</b>	45.80 (1.803)	24.90 (0.980)	74.80 (2.944)	57.05 (2.246)	38.30 (1.507)	72.20 (2.842)	67.55 (2.659)
<b>640-0334-37</b>	53.80 (2.118)	29.50 (1.161)	78.10 (3.074)	60.35 (2.375)	42.30 (1.665)	72.20 (2.842)	68.00 (2.677)
<b>640-0334-61</b>	57.40 (2.259)	37.40 (1.472)	85.35 (3.360)	67.60 (2.661)	49.40 (1.944)	72.20 (2.842)	72.10 (2.838)

mm / (inch)



## BACK END ACCESSORIES FOR OVERMOULDING

## Straight for Braid Termination and Overmoulding RM

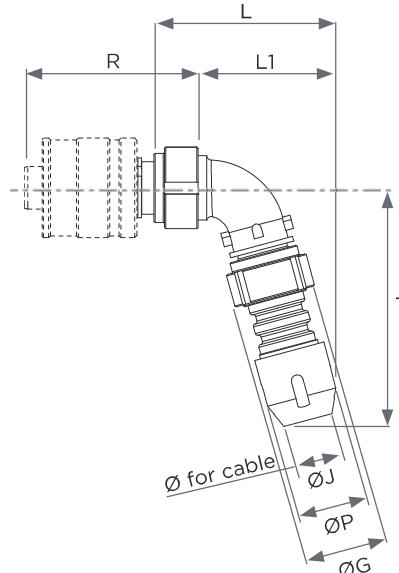


Part Number	ØG Max.	ØJ Max.	L Max.	L1 Max.	ØP Max.	R Max.
<b>640-0337-07</b>	34.90 (1.374)	16.45 (0.647)	72.20 (2.842)	54.25 (2.135)	30.30 (1.192)	72.20 (2.842)
<b>640-0337-12</b>	37.80 (1.488)	19.25 (0.757)	72.20 (2.842)	54.25 (2.135)	33.30 (1.311)	72.20 (2.842)
<b>640-0337-19</b>	42.60 (1.677)	22.25 (0.875)	72.20 (2.842)	54.25 (2.135)	36.80 (1.449)	72.20 (2.842)
<b>640-0337-27</b>	45.80 (1.803)	27.75 (1.092)	72.20 (2.842)	54.25 (2.135)	41.70 (1.641)	72.20 (2.842)
<b>640-0337-37</b>	53.80 (2.118)	31.05 (1.222)	72.20 (2.842)	54.25 (2.135)	45.00 (1.771)	72.20 (2.842)
<b>640-0337-61</b>	57.40 (2.259)	38.45 (1.513)	72.20 (2.842)	54.25 (2.135)	53.00 (2.086)	72.20 (2.842)
<b>640-0337-95*</b>	69.70 (2.744)	45.30 (1.783)	86.00 (3.385)	67.00 (2.637)	60.60 (2.385)	87.20 (3.433)

\* 640-0337-95 accessory for shell size 121

mm / (inch)

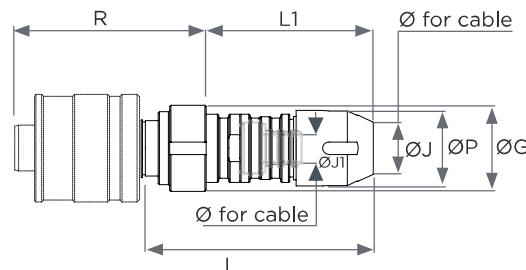
## Elbow for Braid Termination and Overmoulding CM



Part Number	ØG Max.	ØJ Max.	L Max.	L1 Max.	ØP Max.	R Max.	T Max.
<b>640-0335-07</b>	34.90 (1.374)	16.45 (0.647)	73.45 (2.891)	56.00 (2.204)	30.30 (1.192)	72.20 (2.842)	96.50 (3.799)
<b>640-0335-12</b>	37.80 (1.488)	19.25 (0.757)	76.40 (3.007)	58.95 (2.320)	33.30 (1.311)	72.20 (2.842)	98.05 (3.860)
<b>640-0335-19</b>	42.60 (1.677)	22.25 (0.875)	79.80 (3.141)	62.35 (2.454)	36.80 (1.449)	72.20 (2.842)	99.80 (3.929)
<b>640-0335-27</b>	45.80 (1.803)	27.75 (1.092)	85.45 (3.364)	67.80 (2.669)	41.70 (1.641)	72.20 (2.842)	102.95 (4.053)
<b>640-0335-37</b>	53.80 (2.118)	31.05 (1.222)	88.65 (3.490)	71.00 (2.795)	45.00 (1.771)	72.20 (2.842)	106.60 (4.196)
<b>640-0335-61</b>	57.40 (2.259)	38.45 (1.513)	96.35 (3.793)	78.70 (3.098)	53.00 (2.086)	72.20 (2.842)	108.60 (4.275)

mm / (inch)

## Straight for Braid Termination and Double Overmoulding GM



Part Number	ØG Max.	ØJ Max.	ØJ1 Max.	L Max.	L1 Max.	ØP Max.	R Max.
<b>640-0180-07</b>	34.90 (1.374)	16.45 (0.647)	10.80 (0.425)	85.20 (3.354)	67.25 (2.647)	30.30 (1.192)	72.20 (2.842)
<b>640-0180-12</b>	37.80 (1.488)	19.25 (0.757)	12.80 (0.503)	85.20 (3.354)	67.25 (2.647)	33.30 (1.311)	72.20 (2.842)
<b>640-0180-19</b>	42.60 (1.677)	22.25 (0.875)	14.80 (0.582)	85.20 (3.354)	67.25 (2.647)	36.80 (1.448)	72.20 (2.842)
<b>640-0180-27</b>	45.80 (1.803)	27.75 (1.092)	17.80 (0.7)	85.20 (3.354)	67.45 (2.655)	41.70 (1.641)	72.20 (2.842)
<b>640-0180-37</b>	53.80 (2.118)	31.05 (1.222)	19.80 (0.779)	85.20 (3.354)	67.45 (2.655)	45.00 (1.771)	72.20 (2.842)
<b>640-0180-61</b>	57.40 (2.259)	38.45 (1.513)	22.80 (0.897)	85.20 (3.354)	67.45 (2.655)	53.00 (2.086)	72.20 (2.842)

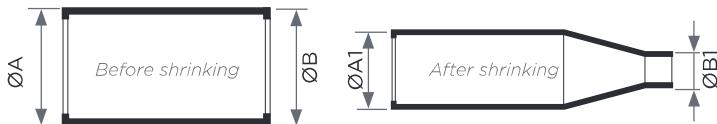
mm / (inch)



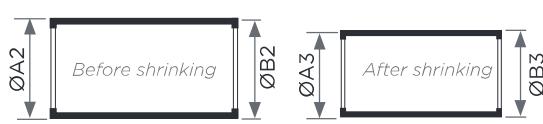
## ACCESSORIES

## Heat-Shrink Sleeves

## Standard Version



## Fluorocarbon Version



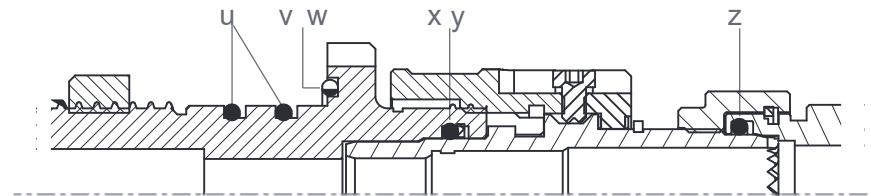
Sizes	Part Number	ØA Min.	ØB Min.	ØA1 Max.	ØB1 Max.
07	V366-0073-06	43 (7.692)	43 (7.692)	28 (1.102)	10 (0.393)
12	V366-0073-06	43 (7.692)	43 (7.692)	28 (1.102)	10 (0.393)
19	V366-0073-06	43 (7.692)	43 (7.692)	28 (1.102)	10 (0.393)
27	V366-0073-07	60 (2.362)	60 (2.362)	35 (1.377)	16 (0.629)
37	V366-0073-07	60 (2.362)	60 (2.362)	35 (1.377)	16 (0.629)
61	V366-0073-08	66 (2.598)	66 (2.598)	45 (1.771)	17 (0.669)
121	V366-0073-08	66 (2.598)	66 (2.598)	45 (1.771)	17 (0.669)

mm / (inch)

Sizes	Part Number	ØA2 Min.	ØB2 Min.	ØA3 Max.	ØB3 Max.
07	366-0011-06	38 (7.496)	38 (7.496)	19 (0.748)	19 (0.748)
12	366-0011-06	38 (7.496)	38 (7.496)	19 (0.748)	19 (0.748)
19	366-0011-06	38 (7.496)	38 (7.496)	19 (0.748)	19 (0.748)
27	366-0011-07	51 (2.007)	51 (2.007)	25.4 (0.999)	25.4 (0.999)
37	366-0011-07	51 (2.007)	51 (2.007)	25.4 (0.999)	25.4 (0.999)
61	366-0011-08	76 (2.992)	76 (2.992)	38 (1.496)	38 (1.496)

mm / (inch)

## Gaskets and Counter-Gaskets for Shells and Accessories



U                    V                    W                    X                    Y                    Z

Sizes	O-Ring for Type 61H	O-Ring for Type 31-61H	O-Ring for Type 25H	O-Ring for Type 51H
07	363-0262-20-**-000	363-0262-25-**-000	363-0262-19-**-000	363-0262-19-**-000
12	363-0262-21-**-000	363-0262-26-**-000	363-0262-20-**-000	363-0262-20-**-000
19	363-0262-23-**-000	363-0262-28-**-000	363-0262-22-**-000	363-0262-22-**-000
27	363-0262-28-**-000	363-0262-34-**-000	363-0262-25-**-000	363-0262-25-**-000
37	363-0262-31-**-000	363-0262-37-**-000	363-0262-27-**-000	363-0262-27-**-000
61	363-0262-35-**-000	363-0262-41-**-000	363-0262-33-**-000	363-0262-33-**-000
121	363-0262-44-**-000	363-0262-50-**-000	363-0262-42-**-000	363-0262-42-**-000

\*\* = 26 for 9316 (standard); 04 for 563 mode

X                    Y                    Z

Sizes	Counter-Gasket for Receptacles	O-Ring for Receptacle	O-Ring for Accessory (Stainless)
07	363-7262-16-00-000	363-0262-16-**-000	363-0262-17-**-000
12	363-7262-17-00-000	363-0262-17-**-000	363-0262-19-**-000
19	363-7262-19-00-000	363-0262-19-**-000	363-0262-21-**-000
27	363-7262-23-00-000	363-0262-23-**-000	363-0262-24-**-000
37	363-7262-26-00-000	363-0262-26-**-000	363-0262-26-**-000
61	363-7262-30-00-000	363-0262-30-**-000	363-0262-31-**-000
121	363-7262-38-00-000	363-0262-38-**-000	363-0262-38-**-000

\*\* = 26 for 9316 (standard); 04 for 563 mode



## CONTACTS &amp; TOOLING

Contact Size (AWG)	Index	Part Number	Type	Crimp barrel Ø Min. (mm)	Cable			Filler Plugs	Crimping Tool		Insertion Tool	Extraction Tool	Contact Retention Tool	
					AWG wire	Section (mm²)	Ø sheath (mm)		Tool	Locator	Rear insertion tool	Front insertion tool		
20	Without	047-0894-20 047-0893-20	P S	1.30	18 to 24	0.22 to 0.93	1.52 to 2.54	006-0893-20	057-0461-11	057-0503-21	057-0473-60	057-0479-60	382-0038-20	
	.	047-1022-20 047-1023-20	P S	0.49	26 to 30	0.055 to 0.15			057-0463-12	057-0591-32	057-0473-60			
	.	047-1024-20 047-1025-20	P S	2.50	16 to 18	0.93 to 1.34			057-0461-11	057-0503-21	057-0472-60			
16	Without	047-0894-16 047-0893-16	P S	1.68	16 to 18	0.93 to 1.34	2.66 to 3.42	092-1057-16	057-0461-11	057-0503-21	057-0472-60	057-0478-60	382-0037-16	
	.	047-1022-16 047-1023-16	P S	1.30	18 to 24	0.22 to 0.93					057-0473-60			
	.	047-1024-16 047-1025-16	P S	2.17	12 to 14	1.91 to 3.18					057-0471-60			
12	Without	047-0894-12 047-0893-12	P S	2.52	12 to 14	1.91 to 3.18	3.80 to 4.95	092-1056-12	057-0461-11	057-0503-21	057-0471-60	057-0477-60	382-0036-12	
	.	047-1022-12 047-1023-12	P S	1.30	18 to 24	0.22 to 0.93					057-0473-60			
	.	047-1024-12 047-1025-12	P S	1.96	14 to 18	0.93 to 1.91					057-0472-60			
8	8	047-1325-08 047-1326-08	P S	4.52	8	8.98	4.30 to 5.50	047-1052-08	382-0039-08		057-0474-60	057-0480-60	382-0023-08	
	87	047-1329-08 047-1330-08	P S	3.46	10	5.30								

● Standard contacts supplied with the connector

\* Special contacts to be ordered separately

Please contact us for coaxial contacts and tooling

**Additional Tools:**

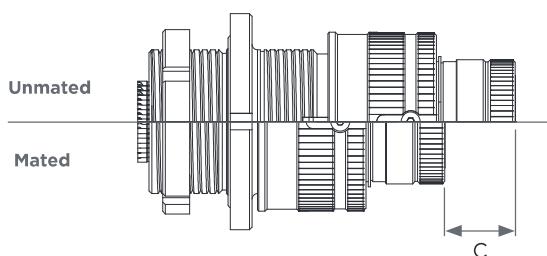
Pin wrench for torque wrench: 370-0964-01 (interface 20mm x 7mm)

**Services:**

Connector termination and testing can be performed on-site or at TE facilities.



## MATING &amp; UNMATING - MOUNTING STYLE

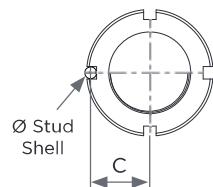


Shell Size	C	Tightening Torque
<b>07</b>	33.20 (.1.307)	50 Nm
<b>12</b>	33.20 (.1.307)	55 Nm
<b>19</b>	33.20 (.1.307)	60 Nm
<b>27</b>	33.20 (.1.307)	60 Nm
<b>37</b>	33.20 (.1.307)	70 Nm
<b>61</b>	33.20 (.1.307)	80 Nm
<b>121</b>	48.20 (.1.897)	110 Nm

mm / (inch)

## Circular Receptacles - Types 21H - 31H - 41H - 61H

**21H**    **31H**    **41H**    **61H**



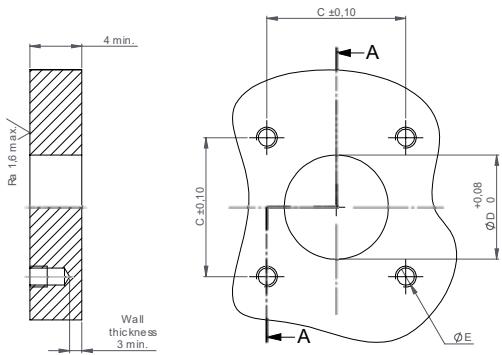
Shell Size	C	Ø Stud Shell	Tightening Torque
<b>07</b>	24.50 (0.964)	4.8 (0.188)	70 Nm
<b>12</b>	25.00 (0.984)	4.8 (0.188)	75 Nm
<b>19</b>	26.50 (1.043)	4.8 (0.188)	80 Nm
<b>27</b>	33.00 (1.299)	5.8 (0.228)	90 Nm
<b>37</b>	35.50 (1.397)	5.8 (0.228)	100 Nm
<b>61</b>	38.50 (1.515)	5.8 (0.228)	120 Nm
<b>121</b>	46.00 (1.811)	5.8 (0.228)	145 Nm

mm / (inch)

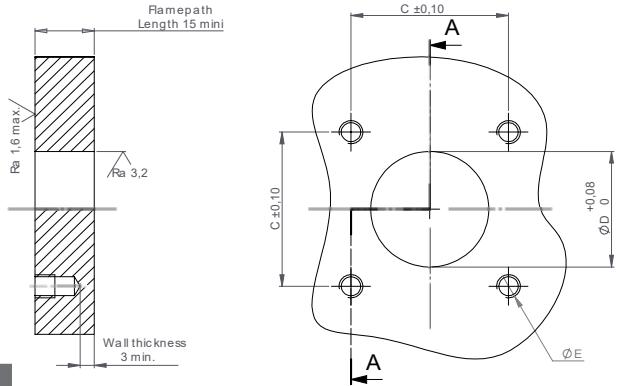


## INTERFACES

25H



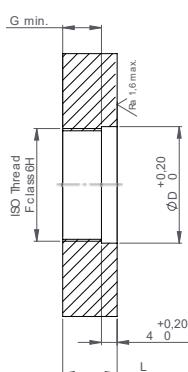
51H



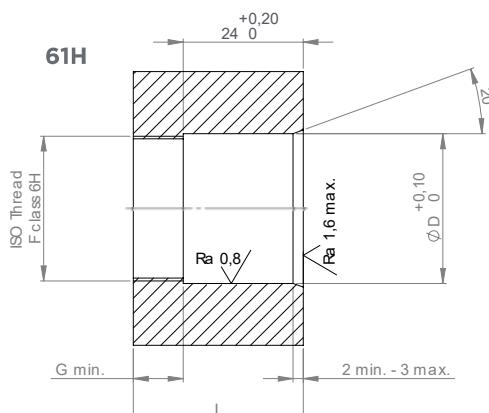
Shell Size	C	ØD	E
07	29 (1.141)	20 (0.787)	M5
12	30 (1.181)	23 (0.905)	M5
19	32 (1.259)	26 (1.023)	M5
27	40 (1.574)	30 (1.181)	M6
37	44 (1.732)	34.5 (1.358)	M6
61	49 (1.929)	43.5 (1.712)	M6
121	60 (2.362)	55 (2.165)	M6

mm / (inch)

21H - 31H - 41H



61H



Shell Size	ØD	G Min.	F	9316-21H		9316-31H		9316-41H		9316-61H	
			Thread	Pitch	L (without nut / with nut)						
07	30 (1.181)	8 (0.393)	29	150	24 Max. / 14 Max.	30 Max. / 20 Max.	35 Max. / 25 Max.	70 Max. / 60 Max.			
12	32 (1.259)	8 (0.393)	31	150	24 Max. / 14 Max.	30 Max. / 20 Max.	35 Max. / 25 Max.	70 Max. / 60 Max.			
19	35 (1.377)	8 (0.393)	34	150	24 Max. / 14 Max.	30 Max. / 20 Max.	35 Max. / 25 Max.	70 Max. / 60 Max.			
27	42 (1.653)	10 (0.393)	41	200	24 Max. / NA	30 Max. / 20 Max.	35 Max. / 25 Max.	70 Max. / 60 Max.			
37	47 (1.850)	10 (0.393)	46	200	24 Max. / NA	30 Max. / 20 Max.	35 Max. / 25 Max.	70 Max. / 60 Max.			
61	54 (2.125)	10 (0.393)	53	200	24 Max. / NA	30 Max. / 20 Max.	35 Max. / 25 Max.	70 Max. / 60 Max.			
121	68 (2.677)	13 (0.511)	67	250	24 Max. / NA	30 Max. / 20 Max.	35 Max. / 25 Max.	70 Max. / 60 Max.			

mm / (inch)



## Technical Support

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[te.com/deutsch9316](http://te.com/deutsch9316)

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MARINE OIL AND GAS /// 9316 SERIES

