

Stainless Steel Quick Disconnects

- **Quick and reliable method a making a number of pneumatic connections.**
- **8, 16, 19, 24 and 32 port stainless steel quick disconnects.**
- **Available with 1/16" and 0.040" (1mm) compression fittings and bulged tubulations.**
- **Available with Silicon and Perlast® 'O' rings.**
- **Fitted with locking device for vibration resistance (tested to D0160F)**
- **Male and female blanks and pipe-work guides available.**
- **Temperature range of -55 to 325°C**



Chell has developed a range of high-temperature quick disconnects suitable for use in a range of harsh environments. The SQDC's allow for quick and simple connection if multiple pneumatic lines primarily designed for pressure instrumentation.

The SQDC has been designed, and extensively tested, to perform in high temperature / high vibration environments

They are constructed from stainless steel and feature 1/16" and 0.040" (1mm) compression fittings (with double ferrules) for direct and reliable connection to stainless steel tubing. The SQDC range can also be ordered with bulged tubulations for flexible tube (either 1.0 or 1.5mm i/d) and can also act as an adapter between each type.

The SQDC is available with two different seal types, Perlast® or silicon which have different temperature performances (see specification table). The SQDC is also fitted with an anti-vibration cam which makes it suitable for extreme vibration environments.

The SQDC range is extensive. It can be ordered for 8,16,19,24 or 32 ways with blanks of either gender available. There are two seal configurations and a range of accessories to complete the range.

The SQDC range compliments Chell's other pneumatic connector series such as the Cablerange AS and Circlex connectors and the PSI high density quick disconnects.



SQDC Specifications		
Options		
Number of ports	16 or 19	
Fitting types	Double ferrule compression fitting for 1/16 inch stainless steel tubing or bulged tubulations (1.0 and 1.5mm).	
Seal type	Silicon (S70X), Perlast Perflouroelastomer (G75B)	
Standard / reversed seal	The SQDC is available with standard seals (seals in the bulkhead half) or reversed seals (seals in the removable half).	
Pressure Performance		
Pressure	All SQDC components are tested to a pressure of 70 bar (1015 psi) at 20°C. Please see temperature section for pressure limits at high / low temperatures. All the SQDC components have been tested to these pressures with a leak rate no greater than 9×10^{-3} mbar x l/s.	
Vacuum	All SQDC components are tested to a vacuum of 8×10^{-3} mbar at 20°C. Please see temperature section for pressure limits at high / low temperatures. All the SQDC components have been tested to this vacuum level with a leak rate no greater than 9×10^{-8} mbar x l/s.	
Temperature Performance		
The SQDC has been thoroughly tested through its temperature range. This tests were performed at 60 Bar (870 psi) and vacuum ($<8 \times 10^{-3}$ mbar). The results for the different seal / fitting types are as follows:		
Perlast Seals / Compression Fittings		
	Minimum Temperature	Maximum Temperature ¹
Pressure (60 bar)	-20°C	325°C Max, working temperature 280°C
Vacuum ($<8 \times 10^{-3}$ mbar)	-40°C	325°C Max, working temperature 280°C
Silicon Seals / Compression Fittings		
	Minimum Temperature	Maximum Temperature ¹
Pressure (60 bar)	-55°C	250°C Max, working temperature 200°C
Vacuum ($<8 \times 10^{-3}$ mbar)	-55°C	250°C Max, working temperature 200°C
Bulged Tubulations (All Seals)		
	Minimum Temperature	Maximum Temperature ¹
Pressure (60 bar)	-55°C	120°C
Vacuum ($<8 \times 10^{-3}$ mbar)	-55°C	120°C
NOTE (1) : After prolonged use at high temperature, the seals may require replacement when the SQDC is separated.		
Vibration Performance		
Tested for vibration to EUROCAE ED-14E Section 8 wrt D0160F		
Material		
SQDC	All Stainless steel 316 with the exception of the anti-vibration locking cam which is Phosphor Bronze. The SQDC nut is silver plated to prevent any fauling of the thread.	
Pipe-work guide and aluminium blank	NS4 Anodised aluminium	

SQDC Part Number
SQDC-A-NN-BC-D
A = Seal Configuration
S = Standard (seals in bulkhead half)
R = Reversed (seals in removable half)
NN= Number of ways
8, 16, 19, 24 and 32
B = Bulkhead Half Configuration
0 = Not present
1 = 1/16" with no fittings
2 = 1/16" complete with Gyrolok® double ferrule and compression nut
3 = 1mm bulged tubulation
4 = 1.5mm bulged tubulation
5 = Blank, stainless steel, all ports sealed
6 = Plastic cap
7 = 0.040" (1mm) double ferrule and compression nut
D = Bulkhead to bulkhead connector
C = Removable Half Configuration
0 = Not present
1 = 1/16" with no fittings
2 = 1/16" complete with Gyrolok® double ferrule and compression nut
3 = 1mm bulged tubulation
4 = 1.5mm bulged tubulation
5 = Blank, stainless steel, all ports sealed
6 = Cap, anodised aluminium overall seal with Perlast® fluid seal.
7 = 0.040" (1mm) double ferrule and compression nut
D = Seal Type
S = Silicon (S70X) seals
P = Perlast® seals
SF = Silicon seals (S70X) with incorporated Perlast® fluid seal to keep contaminants from silicon seal.

SQDC-S-19-22-S

19 way pair, Standard seal configuration, compression fittings and ferrules for 1/16 inch tubing. Silicon seals.



SQDC-R-16-22-P

16 way pair, Reversed seal configuration, compression fittings and ferrules for 1/16 inch tubing. Perlast seals.



SQDC Accessories	
Pipe-Work Guides	
SQDC-800585	Pipe work guide for bulkhead half (16 way or 19 way) - secures onto bulkhead via 4 mounting bolts. Brings tubing down to 1 inch diameter barbed fitting.
SQDC-800584	Pipe work guide for removable half (16 way or 19 way) - secures onto removable half in place of the circlip. Brings tubing down to 1 inch diameter barbed fitting.
SQDC Tools	
SQDC-701039	Tubing spanner for compression fittings and anti-vibration cam
STP2	Tubing pliers for use with bulged tubulations
Spare Compression Fittings (for 1/16" and 0.04" - 1mm tubing)	
SQDC-800506	Compression ferrules (Gyrolok®) double ferrules
SQDC-701024	Compression nuts
SQDC-701059	Compression fitting blank
Bulged Tubulation Fittings	
12-90-2540	Retention springs for 1.0mm i/d tubing
12-90-2562	Retention springs for 1.5mm i/d tubing
Spare Seals	
SQDC-540196	Perlast 'O' rings (each)
SQDC-540201	Silicon 'O' rings (each)
SQDC-540212	Perlast 'O' rings for fluid seal (SF)

Example SQDC Order Codes



SQDC-S-19-20-S

19 way bulkhead half, Standard seal configuration, compression fittings and ferrules for 1/16 inch tubing. Silicon seals



SQDC-S-19-02

19 way removable half, Standard seal configuration, compression fittings and ferrules for 1/16 inch tubing.



SQDC-S-19-05

19 way removable half blank, Standard seal configuration. All ports sealed.



SQDC-S-19-03

19 way removable half, Standard seal configuration, bulged tubulations for 1.0mm i/d tubing.

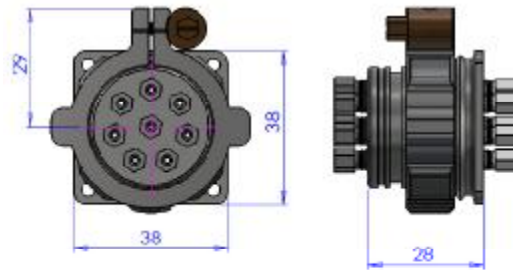


SQDC-800584

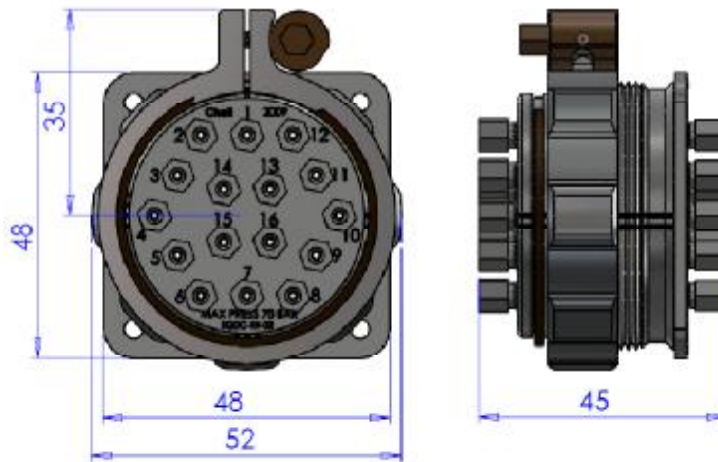
Pipe work guide for removable half.

SQDC Dimensions

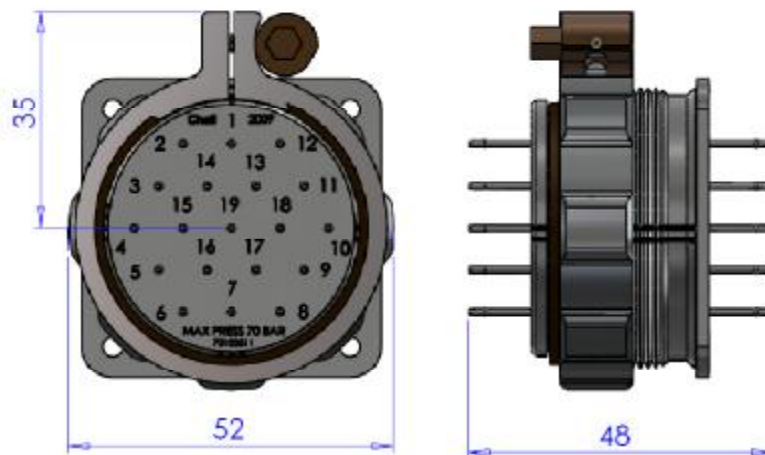
SQDC 8 way 0.04" (1mm) pair (SQDC-A-8-77)



SQDC 16 way 1/16" pair (SQDC-A-16-22)

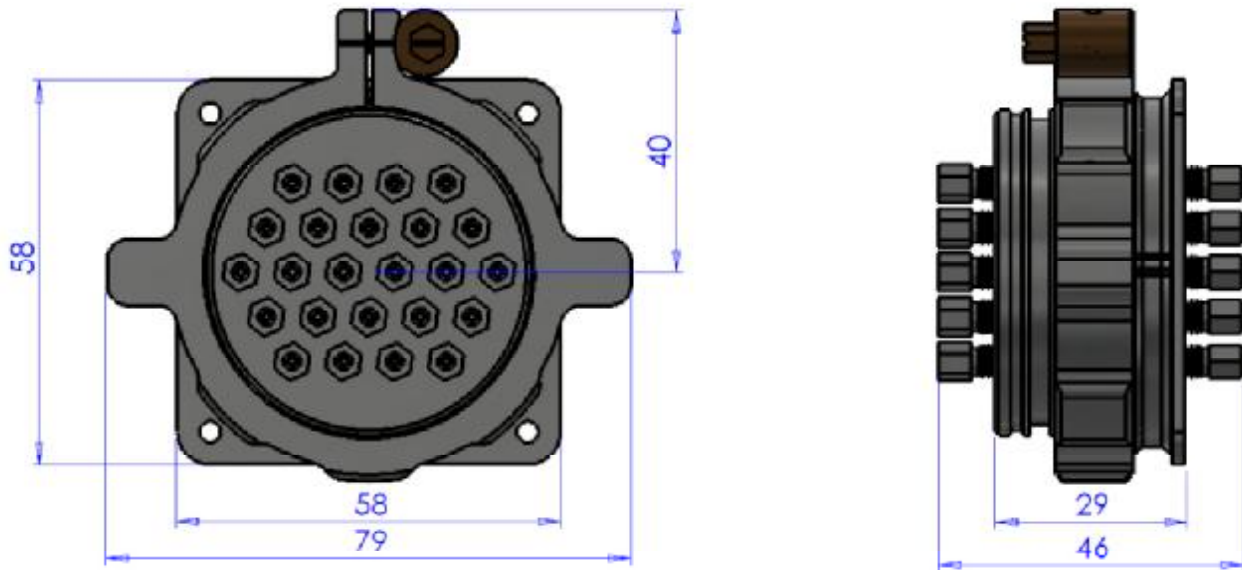


SQDC 19 way bulged tubulations (1.0mm) pair (SQDC-A-19-33)

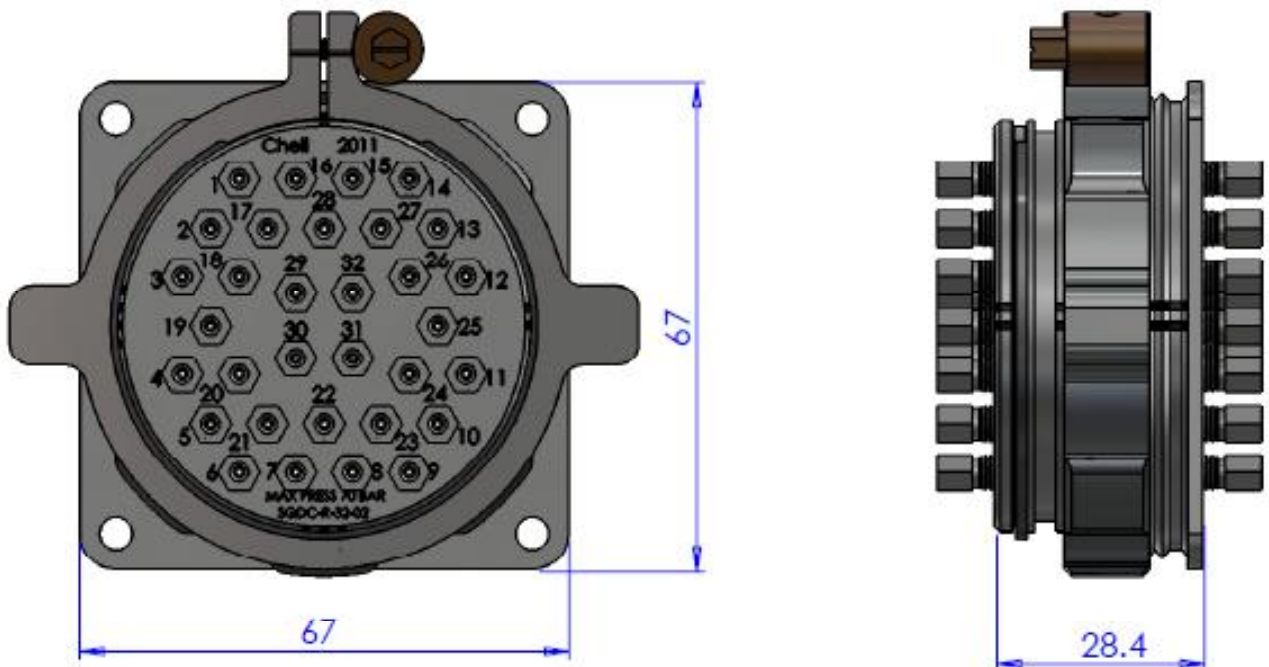


SQDC Dimensions

SQDC 24 way 0.04" (1mm) pair (SQDC-A-24-77)



SQDC 32 way 0.04" (1mm) pair (SQDC-A-32-77)



Example SQDC Order Codes



SQDC-A-NN-60
Bulkhead half plastic cap.

SQDC-R-16-D
16 way bulkhead to bulkhead connector.

SQDC-R-16-20
16 way bulkhead half, Reversed seal configuration. Compression fittings and ferrules for 1/16 inch tubing.

SQDC-R-16-03
19 way removable half, Standard seal configuration. Compression fittings and ferrules for 1/16 inch tubing. Perlast seals.

SQDC-R-16-05
19 way removable half blank, Standard seal configuration. All ports sealed. Perlast seals.

SQDC-R-16-06
19 way removable half blank, Standard seal configuration. Overall Perlast seal.

SQDC Looms

Chell can provide a range of looms combining the SQDC range our other range of fittings such as the AS quick-disconnect shown here. All looms are supplied tested and leak checked.



SQDC Compatible Tubing Sizes

1/16" Compression Fittings

Stainless Steel	Wall thickness 0.25 to 0.5mm, o/d 1.6mm, i/d 0.6 to 1.1mm
Nimonic 75	Wall thickness 0.25 to 0.5mm, o/d 1.6mm, i/d 0.6 to 1.1mm

Bulged Tubulations

1.0 mm	Nylon and polyurethane, o/d 1.8mm ¹ , i/d 1.0mm
1.5 mm	Nylon and polyurethane, o/d 2.3 to 2.4mm ¹ , i/d 1.6mm

NOTE (1) : The o/d is only a consideration if retention springs are used.



Chell Instruments Ltd
Folgate House
Folgate Road
North Walsham
Norfolk NR28 0AJ
England

Tel.: +44 (0)1692 500555
Fax: +44 (0)1692 500088

E-mail : sales@chell.co.uk

Web site : www.chell.co.uk