

Stainless Steel Quick Disconnects

- **Quick and reliable method a making a number of pneumatic connections.**
- **8, 16 and 32 port stainless steel quick disconnects.**
- **Available with 1/16" and 0.040" (1mm) compression fittings and bulged tubulations.**
- **Available with Silicone 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 silicone 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 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-R-32-77-S (32 way SQDC for 1mm SS tubing with silicone seals)



SQDC-R-8-77-S (8 way SQDC for 1mm SS tubing with silicone seals)

SQDC Specifications		
Options		
Number of ports	8, 16 and 32	
Fitting types	Double ferrule compression fitting for 1/16 inch and 0.040" inch (1mm) stainless steel tubing or bulged tubulations (1.0 and 1.5mm) for flexible tubing.	
Seal type	Silicone (S70X), Perlast Perfluoroelastomer (G75B)	
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
Silicone 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-EF-G	
A = Seal Configuration	
R = Reversed (seals in removable half)	
NN= Number of ways	
8, 16 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 (mates with removable half), stainless steel, all ports sealed	
6 = Plastic cap (mates with removable half).	
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 (mates with bulkhead half), stainless steel, all ports sealed	
6 = Cap (mates with bulkhead half), anodised aluminium overall seal with Perlast® fluid seal.	
7 = 0.040" (1mm) double ferrule and compression nut	
8 = Plastic cap (mates with bulkhead half).	
D = Seal Type	
S =Silicone (S70X) seals	
P = Perlast® seals	
SF = Silicone seals (S70X) with incorporated Perlast® fluid seal to keep contaminants from silicon seal.	
Pipe-work Guides	
E = Bulkhead Half Pipe-work guide	F = Removable Half Pipe-work guide
9 = Not present	9 = Not present
0 = Straight	0 = Straight
1 = 45 Degree	1 = 45 Degree
2 = 90 Degree	2 = 90 Degree
3 = Omit pipe-work guide retention feature (bulkhead half only)	
Bulkhead Mounting Options (bulkhead half only)	
0 = 3.2mm diameter mounting hole	
1 = 4-40 UNC locking thread insert.	

SQDC Accessories	
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 1/6" and 0.040" - 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	Silicone 'O' rings (each)
SQDC-540212	Perlast 'O' rings for fluid seal (SF)

Example SQDC Order Codes



SQDC-R-32-77-S (32 way SQDC for 1mm SS tubing with silicone seals)



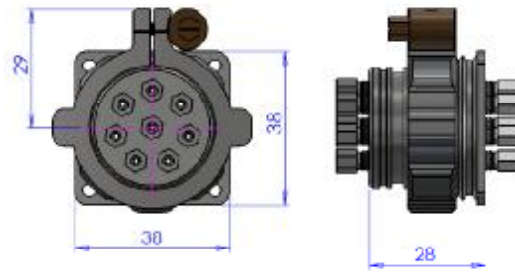
SQDC-R-16-22-P
16 way pair, Reversed seal configuration, compression fittings and ferrules for 1/16 inch tubing. Perlast seals.



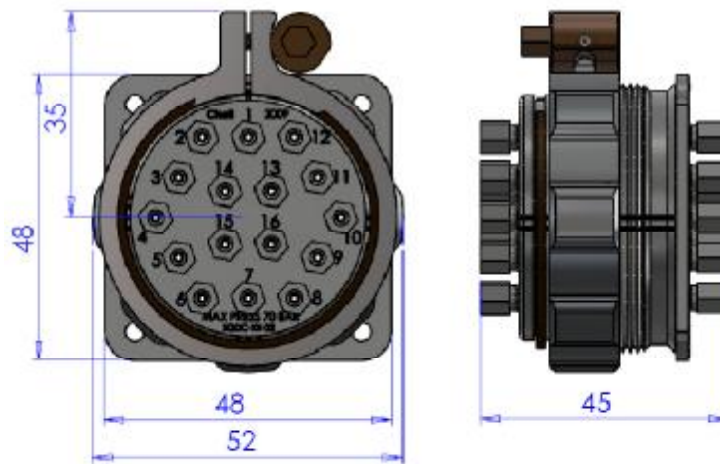
SQDC-R-8-77-S (8 way SQDC for 1mm SS tubing with silicone seals)

SQDC Dimensions

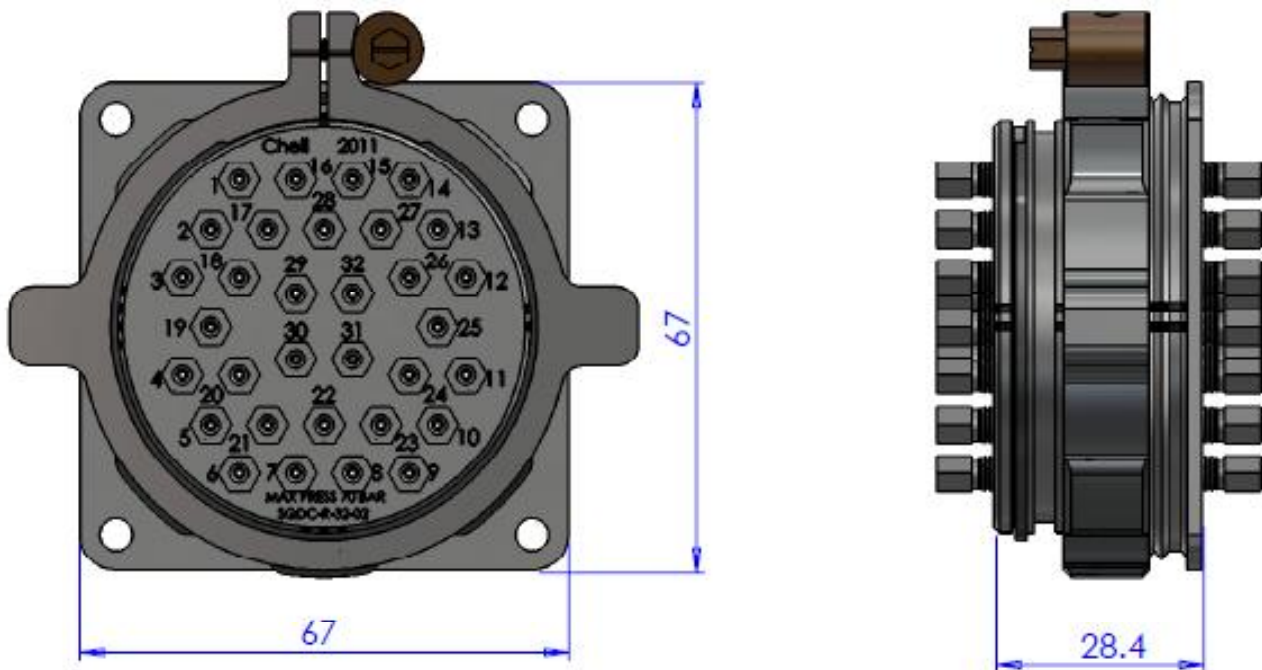
SQDC 8 way 0.04" (1mm) pair (SQDC-A-8-77)



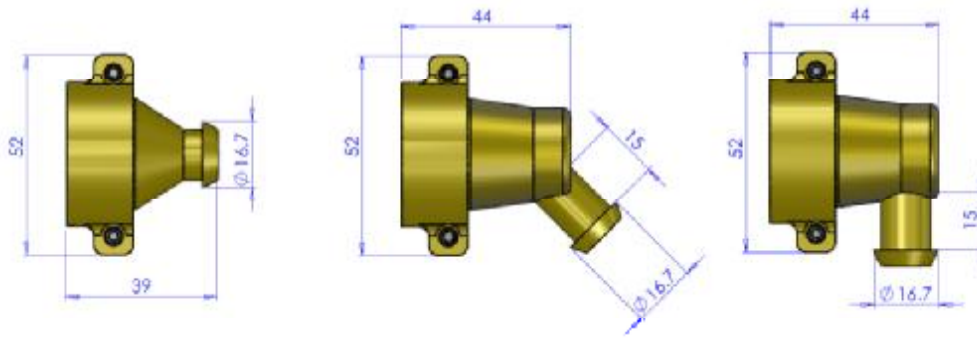
SQDC 16 way 1/16" pair (SQDC-A-16-22)



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

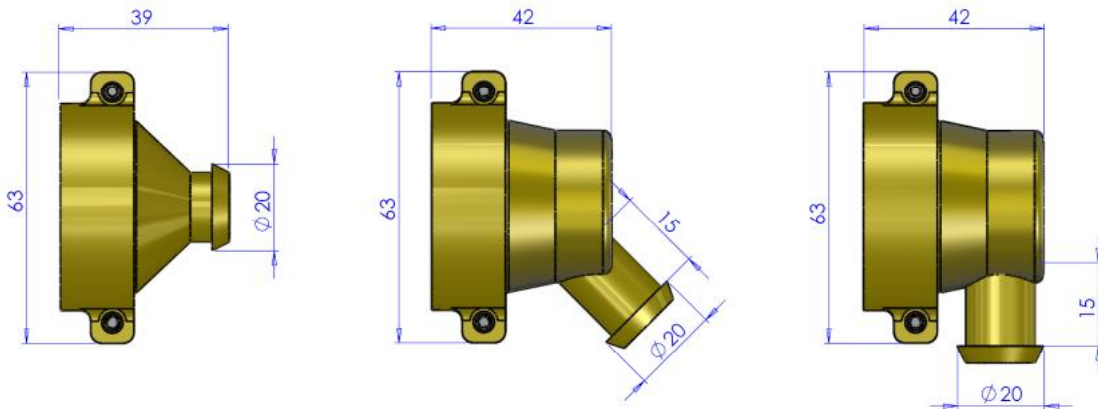


SQDC 8 way



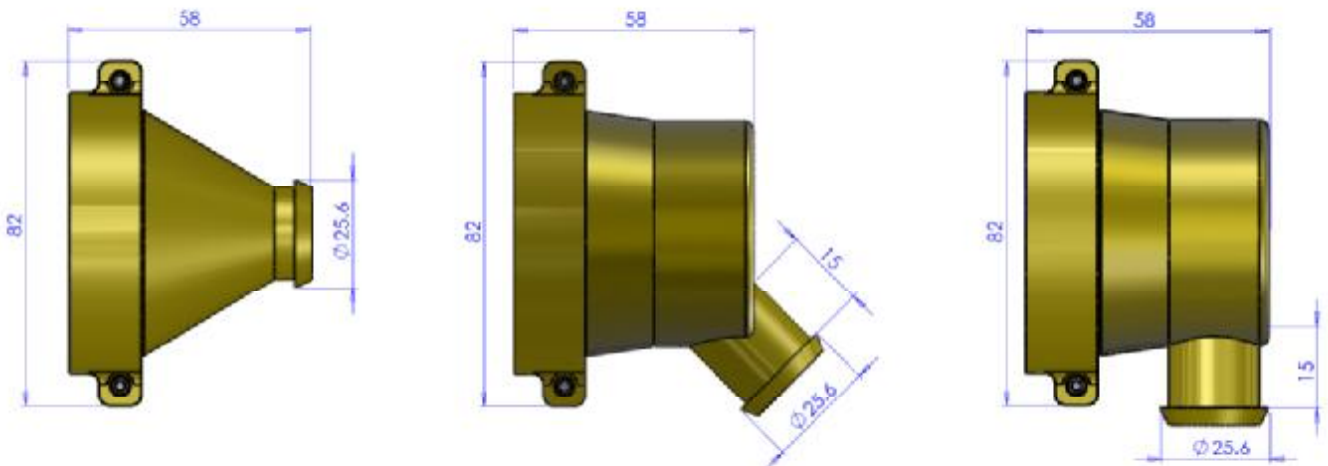
Stand alone part number	SQDC-PW-8-0	SQDC-PW-8-1	SQDC-PW-8-2
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SQDC 16 way



Stand alone part number	SQDC-PW-16-0	SQDC-PW-16-1	SQDC-PW-16-2
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SQDC 32 way



Stand alone part number	SQDC-PW-32-0	SQDC-PW-32-1	SQDC-PW-32-2
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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.



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