



CIRCLEX

Rugged Multi-Port Quick Disconnect

- **Cablerange range of rugged pneumatic quick-disconnects.**
- **Quick, reliable connection of 30 pneumatic lines.**
- **Available with fittings for 1/8, 1/16, 2mm and 4mm flexible or stainless steel pipe.**
- **Blanks and parking plates available.**
- **Locking feature to ensure reliable connection - even in high vibration environments.**
- **Now features the AS613 range of rugged free ends suitable for umbilicals.**



The Chell Circlex range of quick disconnects are a well established range of pneumatic connectors which were manufactured by Cablerange Ltd. This product range was taken over by Chell in June 2010.

The Circlex range gives the user the ability to connect up to 30 pneumatic lines simultaneously in a rugged package.

The Circlex connector range are well known in the test cell environment where they form an ideal way of making multiple connections in test pressure lines.

The Circlex range incorporates a bulkhead plate (AS378) into which the tubing is fixed and a free (removable) plate (AS375/B) with which it mates and locks into position.

Also available is a parking plate which can be substituted for the fixed plate (AS376), and a blank which can be substituted for the free (removable) end (AS607).

For producing a robust umbilical, the AS613 can be used to in place of the AS375. This features a remote release (with lock to prevent accidental release) and a gland plate for a variety of gland sizes. Chell can also produce pre-made umbilicals with PTFE, Nylon or stainless tubing sheathed in reinforced hose or fibreglass.

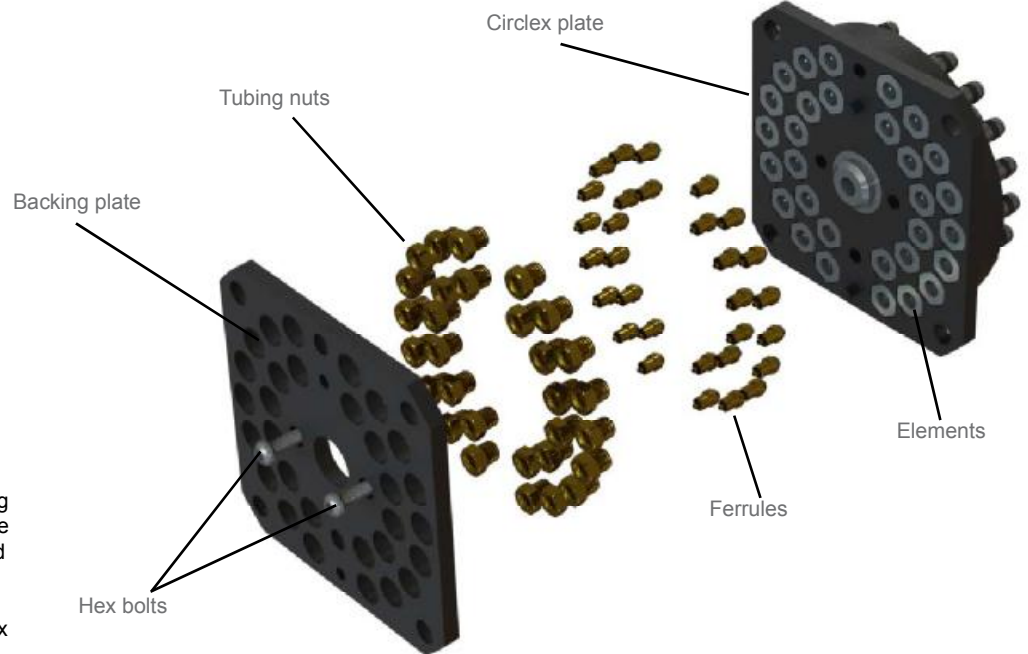


AS378 Bulkhead (fixed plate)



The AS378 series fixed plate mates with the AS375, AS383 and the AS613 series. It is usually retained on a panel or similar. The pneumatic connections are made to each element within the Circlex plate via tubing nuts and ferrules. Access to the elements is through the back of the Circlex plate.

The AS378 series has four $\varnothing 7.0\text{mm}$ Mounting holes on a PCD of 102mm.



Fitting the tubing:

- Remove the two hex bolts that hold the backing plate onto the Circlex plate. Remove the backing plate.

- Feed the tubing through the backing plate and the tubing nut. Insert the tubing into the ferrule and tighten the tubing nut into the element (the element can be removed from the Circlex plate and held on its hex).

- Refit the backing plate and the two hex bolts.

Ordering codes

	1/16", 1/8" and 2mm tubing	4mm tubing
Nitrile 'O' ring	AS378/N	AS381/N
Viton®* 'O' ring	AS378/V	AS381/V

NOTE : The AS378 and AS381 come complete with the elements but NOT the tubing nuts or ferrules. Please see page 5 to select the correct tubing nuts and ferrules.

AS375/B Removable (free) plate



The AS375 and AS383 are the free Circlex plates that mate with the AS378 series. It features a central sprung-loaded lock that automatically engages when the free plate is mated with fixed.

Two handles are provided for withdrawing the AS375 from the fixed plate.

Fitting the tubing:

- No disassembly is required to fit the tubes.
- Feed the tubing through the tubing nut and insert the tubing into the ferrule.
- Tighten the tubing nut

Ordering codes

	1/16", 1/8" and 2mm tubing	4mm tubing
Ordering Code	AS375/B	AS383/B

NOTE : The AS375 and AS383 are NOT supplied with the tubing nuts or ferrules. Please see page 5 to select the correct tubing nuts and ferrules.

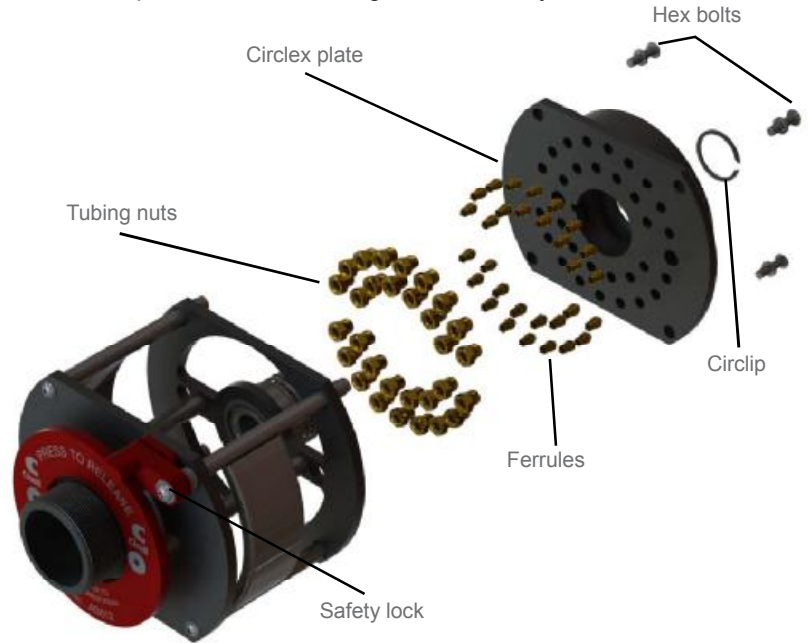
AS613 Removable free umbilical plate



The AS613 series is a rugged free end with support for the pneumatic pipe-work coming out of the back of the assembly. It features a locking ring with integral safety lock which prevents accidental operation and indicate that the Circlex plates are locked together correctly.

Fitting the tubing:

- Remove the 4 hex bolts holding the Circlex plate onto the AS613.
- Remove the circlip that locates the locking shaft into the Circlex plate and remove the AS613 from the Circlex plate.
- Feed the tubing through the relevant aperture and the tubing nut. Insert the tubing into the ferrule and tighten the tubing nut.
- Refit the AS613 assembly into the Circlex plate and refit the circlip and hex bolts.



Ordering codes

	1/16", 1/8" and 2mm tubing	4mm tubing
With G 1 1/4" Gland plate	AS613	AS615
With M24 Gland plate	AS614	AS616

NOTE : The AS613 series are NOT supplied with the tubing nuts or ferrules. Please see page 5 to select the correct tubing nuts and ferrules.

AS376 parking plate



The AS376 is a parking plate this is used to locate a free end while not in use. It does not form a seal with the free end.

It has four counter-sunk mounting holes $\varnothing 7.0\text{mm}$ on a PCD of 111.0 mm.

It is compatible with the AS375, AS383, AS613, AS614, AS615, AS616 and the AS607.

AS607 free blanking plates



The AS607 is a blank for the fixed plates.

It does form a pressure seal with the fixed plate and has the same locking feature.

It is compatible with the AS378 and AS381.

Circlex Specifications		
Options		
Number of ports	30	
Fitting types	Compression fitting for 1/16", 1/8", 2mm and 4mm tubing.	
Seal type	Nitrile as standard, Viton®* as an option.	
Dimensions	Fixed Bulkhead plate (AS378) : 89 x 89 x 50 (mm approx) Removable Free plate (AS375/B) : 90 x 90 x 80 (mm approx) Removable Free plate (AS375/B) with quick release extension (AS612) : 90 x 90 x 150 (mm approx) (3D models available for all models)	
Pressure Performance		
Pressure	The Circlex series of couplings are rated to 100 bar.	
Temperature Performance (static mated pair)		
	Minimum Temperature	Maximum Temperature
Nitrile	-25°C	120°C Max, working temperature 100°C
Viton®*	-15°C	200°C Max, working temperature 150°C
Temperature Performance (for mating and seperation)		
	Minimum Temperature	Maximum Temperature
Nitrile	0°C	60°C Max
Viton®*	0°C	60°C Max,
* Viton is a registered trade mark of the DuPont Performance Elastomers L.L.C..		

Using the Circlex Connectors

- To fit the individual tube fittings, please refer to the relevant sections below.
- When the individual halves have been assembled, ensure that they are both lubricated with a suitable 'O'ring lubricant. The fixed end should be located in a panel.
- When using the AS375 or AS383, push in a rotate the locking ring so that it is in the unlocked position.
- When using the AS613-616, release the security lock and push down the red locking ring.
- Use the locating pins to align the two halves and then push the free end onto the bulkhead (fixed end).
- Ensure that the locking rings click back into their locked position.
- Pull back on the free end to ensure that the lock is engaged.
- To remove the free end, release the locks and pull the free end from the fixed.
- Use caps or blanks to prevent dirt ingress onto uncoupled fixed or free ends.



Warning:

- ***DO NOT remove the free end when the Circlex is under pressure. Doing so may result in personal injury.***
- ***Ensure Circlex plates are locked before applying pressure.***
- ***Ensure any tubing used with the product is suitable and rated for the expected pressures and temperatures.***

Ciclex Tubing Fittings

1/16 Inch Stainless Steel Tube (AS211)



Stainless Steel Olive and compression nut fitting.
Stainless Steel Olive Tubing nut - P/N CR.F.2580/SS
Brass Olive - P/N CR.F.2581

1/16 Inch Flexible Tube (AS 212)



Brass Olive and compression nut fitting.
Brass Olive Tubing nut - P/N CR.F.2322
Brass Olive - P/N CR.F.2581

1/8 Inch Flexible Tube (AS 213)



Brass Ferrule and compression nut fitting.
Brass Ferrule Tubing nut - P/N CR.F.1724
Brass Ferrule for 1/8 inch OD tube and 0.055 to 0.060 inch i/d - P/N CR.F.1725.055
Brass Ferrule for 1/8 inch OD tube and 0.062 to 0.064 inch i/d - P/N CR.F.1725.062
Brass Ferrule for 1/8 inch OD tube and 0.075 to 0.080 inch i/d - P/N CR.F.1725.075

2mm Stainless Steel Tube (AS 214)



Brass Olive and compression nut fitting.
Stainless Steel Olive Tubing nut - P/N CR.F.2580/SS-2.1
Brass Olive - P/N CR.F.2581-2.1

4mm Stainless Steel Tube (AS 215)



NOTE : The 4mm tube fittings do not use the standard Nitex 1/4" UNF but a larger 5/16 UNF. Please order the AS380/N in place of the AS378/N and the AS381/B in place of the AS375/B.

Brass Olive and compression nut fitting.
Brass Olive Tubing nut - P/N 701807
Brass Olive - P/N 701808

Please specify tubing sizes at order placement.



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