3-bar Shock Explosion Proof Summary

Jacob Tubing components have been tested and certified for shock explosion ratings up to 3-bar (43psi). Tests were performed by two different, independent institutes, which specialized in system safety. Certificates are available upon request.

PART, 100-300mm dia.	THK.	NOTES
Tubes	2mm	50-2000mm lg.
Segments	2mm	5° to 45°
Elbows	2mm	30° to 90°
Laterals	1.5, 2mm	30° to 45°
Conical laterals	1.5mm	30°
T-pieces	1.5mm	
Y-branch, Symmetrical	2mm	60° to 90°
Y-branch, Conical	1.5mm	60°
Cone adaptor	1.5, 2mm	
Inspection sections		With bolted cover design (per drawing 4/78699)
Transition - square (rectangle) to round	2mm	With 8mm thk. flange (per drawing 4/79709)
Non-return valve		For 80-200mm , for housing only
Throttle valve without seal	1.5, 2mm	
Throttle valve with seal	2mm	With special duty inner disc as (per drawing 4/7892a)

PART, 350-630mm dia.	THK.	NOTES
Tubes	2mm	50-2000mm lg.
Segments	2mm	5° to 45°
Elbows	2mm	30° to 90°
Laterals	2, 3mm	30° to 45°
Conical laterals	2mm	30°
T-pieces	2, 3mm	
Y-branch, Symmetrical	2, 3mm	60° to 90°
Y-branch, Conical	2mm	60°
Cone adaptor	2mm	
Inspection parts	2, 3mm	(per drawing 21DSF 018)

Tubing components with 80mm dia. with 1mm (19 ga.) wall thickness are not rated for 3-bar (45psi) over pressure. However, sample parts were subjected to an in-house 10-bar (145psi) water pressure test, which concluded these parts can be used for 3-bar (45-psi) applications.

To guarantee 3-bar (43psi) application, the following requirements must be maintained:

1. A new u-shaped gasket must be used at each connection when the components are to be re-assembled.
2. The bolts of the pull-rings/flanges have to be tightened with a torque wrench as follows:

FOR PULL-RINGS:	FOR LOOSE DIN FLANGE CONNECTIONS
Bolted style = 25Nm (18.4 lb-ft)	10mm bolts = 40Nm (29.5 lb-ft)
Quick connect style = 10Nm (7.4 lb-ft)	12mm bolts = 60Nm (44.3 lb-ft)

1. Cleaning sections, slip tubes and air regulating gates cannot be delivered with this rating.
2. Although segments with diameter 140mm and 224mm, including elbows in stainless steel, are only available in 1.5mm (16 ga.) wall thickness and can not be certified with the 3-bar (43psi) shock explosion proof rating, testing conduct in-house show that these components did hold up to the 3 bar (43psi) requirements.