

Filling of Cylinder Assemblies - Multiple Parts Numbers

Charge Pressure bar	Cylinder Valve Part Number	Burst Disc Pressure (bar)	Pressure Gauge Connection	Pilot Connection	Inlet/cylinder Connection	Outlet Connection	TPED	LPCB
200	NF311202	270	M10 x 1	G 1/8"	W28,8	W21,8 1/14"	π0029	1222d/03
300	NF311203	450	M10 x 1	G 1/8"	W28,8	W21,8 1/14"	π0029	1222d/03

Discharge Valve Specification	
Through cross-section	113 mm ²
Valve seat diameter	Ø 12 mm
Flow	Kv = 2,66 / Cv = 3,09
Leak rate with helium maximum	10 ⁻⁴ mbar l / s
Type of valve according to EN 12094-4 §3.12	Type 2
Operating temperature range	-20°C to 50°C
Valve body and internals	Brass/Steel

Filling Instructions IG-01, IG-100, IG-55, IG-541:

1. Ensure that the cylinder is safely restrained before removing the transport cap.
2. Ensure all actuators/tripping devices are removed from the top of the discharge valve.
3. Remove the pressure gauge plug (4 mm A/F hexagon key) and retained for reuse.
4. Ensure that the cylinder is completely empty by screwing in a pressure gauge without its sealing O Rings fitted so that any pressure is released past the pressure gauge.
5. Ensure that the Slave Actuation/Pilot Connection plug on the side of the discharge valve is fitted and tight.
6. Fill the cylinder by connecting onto the valve outlet (W21.8 x 1/14" DIN 477). Gas mixtures need to be filled by weight, pressure or by premixing. The accuracy of the filled cylinder mix is specified in ISO 14520 and EN 15004. Generally the cylinder will be hot after filling which makes accurate filling pressure difficult. The filling may need to be topped up once the temperature has stabilised.
7. The discharge valve closes automatically (if the Actuators are NOT fitted) when the filling line is vented via the vent valve on the filling rig. As soon as the pressure has been removed from the filling line the valve should close immediately.
8. Refit the pressure gauge plug (to avoid loss of gas through the small internal check valve).
9. Refit the valve outlet cap loosely (to allow any leaking gas from the valve outlet to escape through the small side hole in the cap).
10. Using leak detection fluid check for leaks:
 - a. Around cylinder connection
 - b. Bleed hole in valve outlet cap
 - c. Pressure gauge plug
 - d. Rupture disc holder
 - e. Actuation connections/pins (top of valve)
 - f. Remove leak detection fluid by blowing out with compressed air.
11. Allow the temperature of the cylinder to stabilise (at least 24 hours) and remove the pressure gauge plug and check the pressure. Pressure against temperature information is available in ISO 14520 and EN 15004.

Do not fill super-cooled gases as Super-cool filling can cause the valves to leak