

FK 5-1-12 CYLINDER

CLEAN AGENT FIRE EXTINGUISHING SYSTEM

Seamless Cylinder Set 42/50 Bar

In 42 Bar FK-5-1-12 System, clean agent is stored as liquid in seamless cylinder designed specifically for the application and charged to a fill density of between 0.48 kg/ltr. (30.2lb/ft³) and 1.12 kg/ltr. (70.0 lb/ft³). To ensure optimal performance, each cylinder is super pressurized with dry nitrogen to 42 bar at 21°C (610psi @ 70°F).

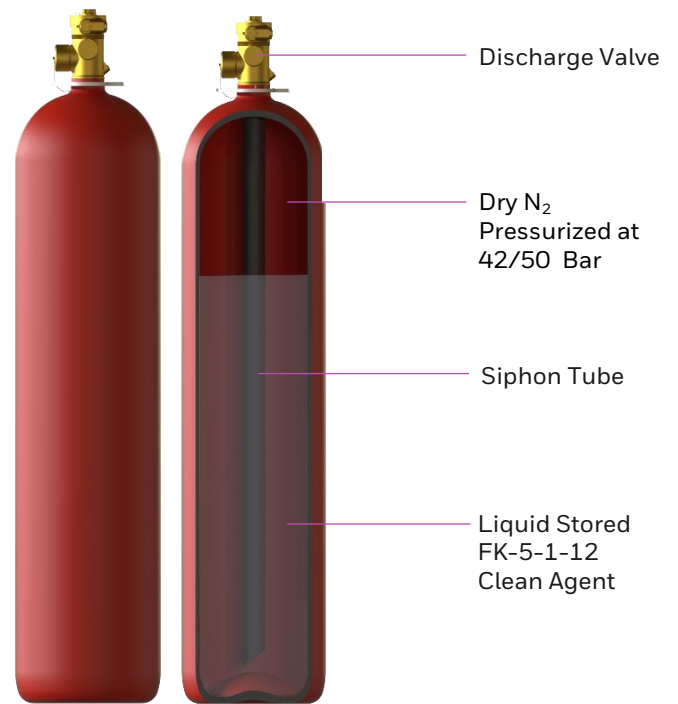
In 50 Bar FK-5-1-12 System, clean agent is stored as liquid in seamless cylinder designed specifically for the application and charged to a fill density of between 0.48 kg/ltr. (30.2lb/ft³) and 1.05 kg/ltr. (65.5 lb/ft³). To ensure optimal performance, each cylinder is super pressurized with dry nitrogen to 50 bar at 21°C (725 psi at 70 °F). An identification label is affixed to the cylinder body indicating the fill quantity of FK-5-1-12, charging pressure and date of fill. Many variations in cylinder capacities (Refer Table 2.1.) to select the best as per project requirement.

Fire extinguishing systems utilizing FK-5-1-12 clean agent are designed to be discharged within 6-10 seconds into a room, area, or enclosure with the structural integrity to retain the agent. The FK-5-1-12 clean agent uniformly mixes throughout the protected area achieving a minimum concentration level in accordance with EN15004-2.

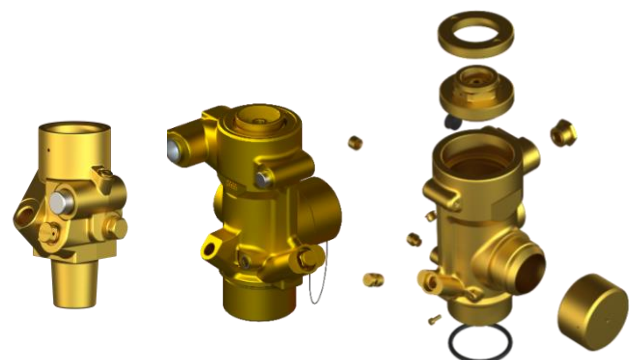
Valve Assembly

The automatic release of FK-5-1-12 clean agent is controlled by a forged brass, differential pressure operated cylinder valve connected to the neck of the cylinder. Each cylinder and valve assembly are provided with a safety cap and a protection cap which is a safety feature to prevent uncontrolled, accidental discharge. Discharge valve assembly is available in three sizes DN12, DN33 and DN50.

Approval



Typical seamless cylinder & valve assembly



General Arrangement of Discharge Valves

42/50 Bar FK-5-1-12 Clean Agent Seamless Cylinders

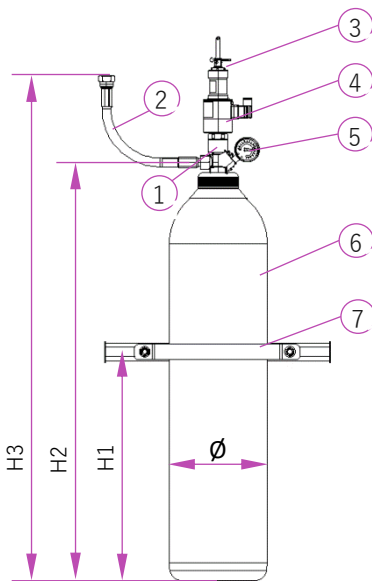
Part Number	Valve Size mm	Cylinder Volume liter	Cylinder Diameter mm**	Empty Weight kg***	System Pressure bar	Filling Range kg	System Pressure bar	Filling Range kg
HSN-FK-EU-SM-013-1	12*	13.4	203	18	42	6.4-15.4	50	6.4-14.1
HSN-FK-EU-SM-026-1		26.8	219	31		12.8-30.3		12.8-28.1
HSN-FK-EU-SM-040-1	33	40	219	44		19.2-46.0		19.2-42.0
HSN-FK-EU-SM-067-1		67	267	69		32.1-77.0		32.1-70.3
HSN-FK-EU-SM-080-1		80	267	79		38.4-92.0		38.4-84.0
HSN-FK-EU-SM-120-1		120	356	126		57.6-138.0		57.6-126.0
HSN-FK-EU-SM-150-1		150	356	150		72.0-172.5		72.0-157.5
HSN-FK-EU-SM-180-1	50	180	406	175		86.4-207.0		86.4-189.0
HSN-FK-EU-SM-220-1		220	420	222		105.6-253.0		105.6-231.0

* 12mm valve is suitable only with 13.4L and 26.8L cylinders for single container configuration. **

Cylinder diameters have tolerance +/- 1% according to cylinder manufacturer.

*** Cylinder weights are approximately.

FK-5-1-12 clean agent fire extinguishing system equipment's are designed for an operating temperature range of 0°C to 50°C (32°F to 122°F).



Hardware for 13.4L & 26.8L Cylinders

No.	Description	Part Number
1	DN12 Discharge Valve	HSN-VLV-EU-012
2	Discharge Hose, L:400mm, 16mm	HSN-DH-12-400
3	Manual Actuator	HSN-ACT-M01
4	Solenoid Actuator, 24V DC	HSN-ACT-S01
5.1	0-100 Bar Pressure gauge without low pressure switch	HSN-PGV-NPS-100
5.2	0-100 Bar Pressure gauge with low pressure switch 38bar (NO)	HSN-PGV-NOC-100
5.3	0-100 Bar Pressure gauge with low pressure switch 38bar (NC)	HSN-PGV-NCC-100
5.4	0-100 Bar Pressure gauge with low pressure switch 45bar (NO)	HSN-PGV-NOC-200
5.5	0-100 Bar Pressure gauge with low pressure switch 45bar (NC)	HSN-PGV-NCC-200
6.1	13.4L Seamless Cylinder, TPED	HSN-FK-EU-SM-013-1
6.2	26.8L Seamless Cylinder, TPED	HSN-FK-EU-SM-026-1
7.1	13.4L Seamless Cylinder Strap	HSN-STP-EU-SM-013
7.2	26.8L Seamless Cylinder Strap	HSN-STP-EU-SM-026

General Arrangement of Assembly of 13.4 & 26.8L System (single container configuration)

Dimensions for 13.4L & 26.8L Cylinders

Type	H1 (mm)	H2 (mm)	H3 (mm)	Ø (mm)
13.4L	353	593	788	203
26.8L	513	937	1132	219

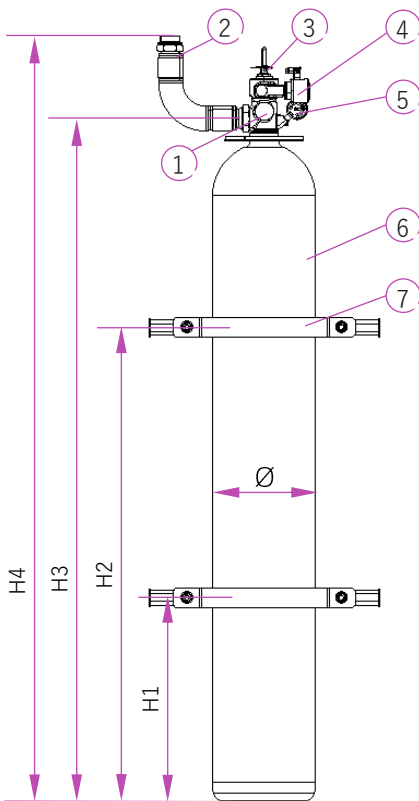


FK 5-1-12 CYLINDER - PAGE:4

General View of 13.4L & 26.8L System

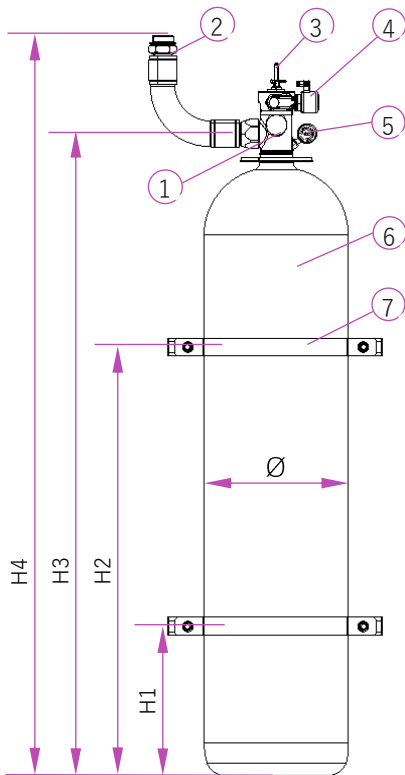
Hardware for 40, 67, 80, 120 & 150L Cylinders

No.	Description	Part Number
1	DN33 Discharge Valve	HSN-VLV-EU-033
2	Discharge Hose DN33, L:400mm	HSN-DH-33-400
3	Manual Actuator	HSN-ACT-M01
4	Solenoid Actuator, 24V DC	HSN-ACT-S02
5.1	0-100 Bar Pressure gauge without low pressure switch	HSN-PGV-NPS-100
5.2	0-100 Bar Pressure gauge with low pressure switch 38bar (NO)	HSN-PGV-NOC-100
5.3	0-100 Bar Pressure gauge with low pressure switch 38bar (NC)	HSN-PGV-NCC-100
5.4	0-100 Bar Pressure gauge with low pressure switch 45bar (NO)	HSN-PGV-NOC-200
5.5	0-100 Bar Pressure gauge with low pressure switch 45bar (NC)	HSN-PGV-NCC-200
6.1	40L Seamless Cylinder, TPED	HSN-FK-EU-SM-040-1
6.2	67L Seamless Cylinder, TPED	HSN-FK-EU-SM-067-1
6.3	80L Seamless Cylinder, TPED	HSN-FK-EU-SM-080-1
6.4	120L Seamless Cylinder, TPED	HSN-FK-EU-SM-120-1
6.5	150L Seamless Cylinder, TPED	HSN-FK-EU-SM-150-1
7.1	40L Seamless Cylinder Strap	HSN-STP-EU-SM-040
7.2	67L Seamless Cylinder Strap	HSN-STP-EU-SM-067
7.3	80L Seamless Cylinder Strap	HSN-STP-EU-SM-080
7.4	120L Seamless Cylinder Strap	HSN-STP-EU-SM-120
7.5	150L Seamless Cylinder Strap	HSN-STP-EU-SM-150



General Arrangement of Assembly of 40, 67, 80, 120L & 150L System

Dimensions for 40, 67, 80, 120 & 150L Cylinders					
Type	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	Ø (mm)
40L	300	1000	1332	1550	219
67L	395	1095	1522	1740	267
80L	515	1215	1762	1980	267
120L	400	1100	1532	1750	356
150L	565	1275	1862	2080	356



Hardware for 180L & 220L Cylinders		
No.	Description	Part Number
1	DN50 Discharge Valve	HSN-VLV-EU-050
2	Discharge Hose DN50, L:400mm	HSN-DH-50-400
3	Manual Actuator	HSN-ACT-M01
4	Solenoid Actuator, 24V DC	HSN-ACT-S02
5.1	0-100 Bar Pressure gauge without low pressure switch	HSN-PGV-NPS-100
5.2	0-100 Bar Pressure gauge with low pressure switch 38bar (NO)	HSN-PGV-NOC-100
5.3	0-100 Bar Pressure gauge with low pressure switch 38bar (NC)	HSN-PGV-NCC-100
5.4	0-100 Bar Pressure gauge with low pressure switch 45bar (NO)	HSN-PGV-NOC-200
5.5	0-100 Bar Pressure gauge with low pressure switch 45bar (NC)	HSN-PGV-NCC-200
6.1	180L Seamless Cylinder, TPED	HSN-FK-EU-SM-180-1
6.2	220L Seamless Cylinder, TPED	HSN-FK-EU-SM-220-1
7.1	180L Seamless Cylinder Strap	HSN-STP-EU-SM-180
7.2	220L Seamless Cylinder Strap	HSN-STP-EU-SM-220

General Arrangement of Assembly of 180L & 220L System

Dimensions for 180L & 220L Cylinders					
Type	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	Ø (mm)
180L	415	1185	1792	2066	406
220L	525	1295	2012	2286	420

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FK 5-1-12 CYLINDER PAGE:4

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