

VALVES AND RELIEF VALVES

H120 Series and H100 Family Small External Relief Valves

FISHER

Introduction

The H120 Series direct-operated relief valves have a present and pinned spring retainer. The inlet pressure registers directly on a spring-opposed poppet assembly, which includes a Nitrile (NBR) disk. When the inlet pressure increases above the spring setting, the poppet and disk assembly is pushed away from the metal seat.

The H120 Series direct-operated relief valves may be used where venting to the atmosphere is acceptable and where some pressure-relieving tolerance is acceptable.

An optional protective cap, Type P206, can be provided over the outlet to help protect the relief valve from trash and debris.

Inlet Connection Size and Style

1/4, 1/2, and 3/4-inch threaded NPT

Maximum Allowable Relief (Inlet) Pressure

420 psig (29 bar)

Fixed Relief Pressures

35 to 350 psig (2,4 to 24,1 bar) with nine fixed settings
See Table 2

Temperature Capabilities

-20° to 160°F (-29° to 71°C)

Approximate Weights

H110 and H120 Series: 0.2 pound (0,09 kg)
All Others: 0.4 pound (0,18 kg)

Additional Technical Data

For more technical information, contact your local LP-Gas Equipment Distributor or log on to: www.emersonprocess.com/regulators/lp



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TYPE H120

Figure 1. Type H120 and Selected H100 Series Small External Relief Valves

Features

- Space-Saving Construction
- Economical
- Durable
- UL Listed

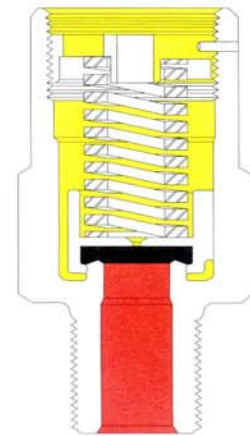
Table 1. Construction Materials

BODY, POPPET, AND SPRING RETAINER	DISK	SPRING AND RETAINER PIN
Brass	Nitrile (NBR)	Stainless steel

Table 2. H120 Series Capacities

TYPE NUMBER	FIXED RELIEF PRESSURE SETTING ⁽¹⁾ , PSIG (bar)	BUILDUP OVER RELIEF PRESSURE SETTING, PSIG (bar)	CAPACITY IN SCFH (SCMH) OF PROPANE
H120-35	35 (2,4)	25 (1,7)	3750 (106)
H120-60	60 (4,1)	25 (1,7)	5109 (145)
H120-120	120 (8,3)	25 (1,7)	8016 (227)
H120-150	150 (10,3)	30 (2,1)	9306 (264)
H120-175	175 (12,1)	35 (2,4)	10 875 (308)
H120-200	200 (13,8)	40 (2,8)	12 719 (360)
H120-225	225 (15,5)	45 (3,1)	13 594 (385)
H120-275	275 (19,0)	55 (3,8)	14 703 (416)
H120-350	350 (24,1)	70 (4,8)	21 600 (612)

1. This is the initial leak point (the point at which the relief valve begins to discharge).



INLET PRESSURE
ATMOSPHERIC PRESSURE

M1052

Figure 2. Type H120 Operational Schematic



H120 Series and H100 Family Small External Relief Valves

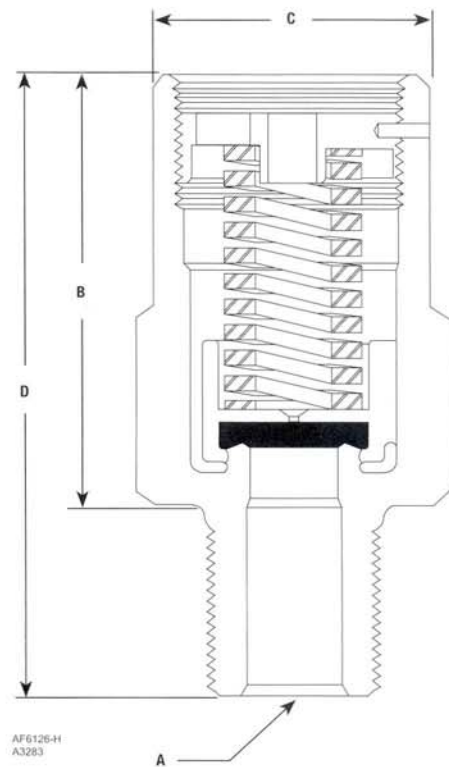
Table 3. Capacities for Other External Small Relief Valves

TYPE NUMBER	START-TO-DISCHARGE SETTINGS, PSIG (bar)	FLOW CAPACITY, SCFM (SCMH) OF AIR
H110-250	250 (17,24)	310 (527)
H135-250		594 (1009)
H160-250		605 (1028)
H185-250		2223 (3777)
H185-275	275 (18,96)	2456 (4173)
H110-312	312 (21,51)	390 (663)
H135-312		765 (1300)
H160-312		765 (1300)
H148	375 (25,86)	903 (1534) ⁽¹⁾
H173		903 (1534) ⁽¹⁾
H123		----
H124	450 (31,03)	----
H144		----
H174		----

1. DOT cylinder water capacity 500 pounds (227 kg), approved by Bureau of Explosives and CGA.

Table 4. Dimension for Type H120

TYPE NUMBER	A, BODY SIZE	DIMENSIONS, INCHES (mm)		
		B	C	D
H110	1/4-inch NPT	1.36 (34,5)	0.84 (21,3)	1.93 (49,0)
H120				
H123				
H124				
H135	1/2-inch NPT	2.55 (64,8)	1.11 (28,2)	2.55 (64,8)
H144				
H148				
H160	3/4-inch NPT	2.55 (64,8)	1.11 (28,2)	2.55 (64,8)
H173				
H174				
H185	3/4-inch NPT	2.90 (73,7)	1.68 (42,7)	3.69 (93,7)



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Figure 3. Typical Dimension for Type H120

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Ordering Guide

Ordering Information		
H120 SERIES		
Type Number	Container Type	Container Connection
H120-35	Hydrostatic Relief	1/4-inch MNPT
H120-60		
H120-120		
H120-150		
H120-175		
H120-200		
H120-225		
H120-275		
H120-350		
H100 SERIES SMALL RELIEF VALVES		
Type Number	Container Type	Container Connection
H110-250 ⁽¹⁾	ASME	1/4-inch MNPT
H135-250 ⁽¹⁾		1/2-inch MNPT
H160-250 ⁽¹⁾		3/4-inch MNPT
H185-250		3/4-inch MNPT
H185-275		3/4-inch MNPT
H110-312 ⁽¹⁾		1/4-inch MNPT
H135-312 ⁽¹⁾		1/2-inch MNPT
H160-312		3/4-inch MNPT
H148		DOT and Hydrostatic Relief
H173	3/4-inch MNPT	
H123	1/4-inch MNPT	
H124	Hydrostatic Relief	1/4-inch MNPT
H144		1/2-inch MNPT
H174		3/4-inch MNPT

1. UL listed.

To order, refer to the Ordering Information table above and specify the type number that satisfies your requirement. Then, contact or visit your local LP-Gas Equipment Distributor for availability.