



Threaded Internal Valves

Emerson offers the widest variety of threaded internal valves in the industry. While their most frequent use is in the liquid and vapor openings of bobtail and transport trucks, the valves can also be used in stationary storage tanks, complying with NFPA 58 requirements. Designed as primary shutoff valves, the units are designed with several features that help control product discharge.

All UL-listed internal valves are suitable for LPG or Anhydrous Ammonia (NH₃) service. Special construction is available for other compressed gases. All threaded internal valves have a compact, one-piece body design. They can be actuated manually, by cable control or with an air cylinder.

C407-10 Series (1-1/4 in. / DN 32 Body Size) – An excellent valve for vapor return lines on bobtail trucks. Other applications include use as a main valve on small capacity pumping systems, Anhydrous Ammonia (NH₃) nurse tanks and in-line installations.

C477 Series (Straight-Through Body) – Available in 2 and 3 in. end connections. The most compact and economical unit in the Series, the C477 Series has one bottom outlet. The C477 Series can be used on bobtail, transport, stationary tank and in-line installations.

C471 Series (Tee Body) – Available in 2 and 3 in. end connections. This unit is designed with two outlets, bottom and side. The side outlet permits installing horizontal piping immediately adjacent to the tank without the need for extra pipe fittings. Either connection can be used for truck filling or withdrawal. The C471 Series is used primarily on bobtails and transport trucks.

C486 Series (Flange-by-NPT) – Available in 3 in. end connections. This unit was designed with an integrally cast inlet flange to quickly bolt to existing installations that historically required a valve to be threaded into a flange. Outlet is standard 3 in. FNPT.

UL® Approved C400 Series Internal Valves

CONNECTION INLET X OUTLET	TYPE		CLOSING FLOW (PROPANE) ⁽²⁾				VAPOR CAPACITY (PROPANE) ⁽²⁾				CLOSING FLOW (NH ₃) ²	
	Straight Body	Tee Body	Half Coupling		Full Coupling		25 psig / 1.7 bar Inlet		100 psig / 6.9 bar Inlet		Half Coupling	
			GPM	l/min	GPM	l/min	SCFH	SCMH	SCFH	SCMH	GPM	l/min
1-1/4 in. MNPT x 1-1/4 in. FNPT	C407-10-04	----	40	152	25	95	7400	210	12,700	360	36	136
	C407-10-05	----	50	189	35	133	9600	272	16,400	464	45	170
	C407-10-08 ⁽¹⁾	----	80	303	65	246	15,800	447	27,600	781	72	272
2 in. MNPT x 2 in. FNPT	C477-16-10	C471-16-10	105	397	60	227	26,100	739	45,000	1274	95	360
	C477-16-15	C471-16-15	150	568	80	303	39,400	1116	69,000	1954	136	515
	C477-16-25	C471-16-25	250	946	130	492	----	----	----	----	227	859
3 in. MNPT x 3 in. FNPT	C477-24-16	C471-24-16	160	606	120	454	41,100	1164	71,000	2011	145	549
	C477-24-26	C471-24-26	265	1003	230	871	71,800	2033	127,000	3596	239	905
	C477-24-37	C471-24-37	375	1419	320	1211	99,000	2803	178,000	5040	339	1283
	C477-24-46	C471-24-46	460	1741	380	1438	----	----	----	----	415	1571
3 in. CL300 RF x 3 in. FNPT	C486-24-16	----	160	606	120	454	41,100	1164	71,000	2011	145	549
	C486-24-26	----	265	1003	230	871	71,800	2033	127,000	3596	240	908
	C486-24-37	----	375	1419	320	1211	99,000	2803	178,000	5040	340	1287
	C486-24-46	----	460	1741	380	1438	----	----	----	----	418	1582

NOTE: Includes a factory installed Type P340 / P341 latch.

1. LPG Vapor exceeds UL differential requirement of 15 psid / 1.03 bar d.

2. Closing Flows and Vapor Capacities listed are with valve in "bottom of tank" position. See product bulletins for additional data.