

## Model ES-660-HF Thief Hatch

ENARDO's Model ES-660-HF high-performance thief hatch is an evolutionary step in high-performance thief hatches, engineered to provide higher flow capacity and designed with ENARDO's maximum sealing technology to provide the highest level of protection against thief hatch product leakage and fugitive emissions.

In the event of an upset condition that produces excessive pressure and flow, the ES-660-HF provides extra venting capacity to quickly relieve pressure build-up in atmospheric and low-pressure storage tanks. Unlike other high-capacity thief hatches, the ES-660-HF offers ultra-tight sealing for applications that require maximum emissions control.

The Model ES-660-HF is spring-loaded with a round base and cover, and can replace any standard API 8-inch thief hatch. It is intended for use on steel and fiberglass tanks which require a tighter seal for reduced vapor loss and a higher volume of venting than offered by standard thief hatches.

**Model ES-660-HF**



Patent Pending

### Valve Setting Range

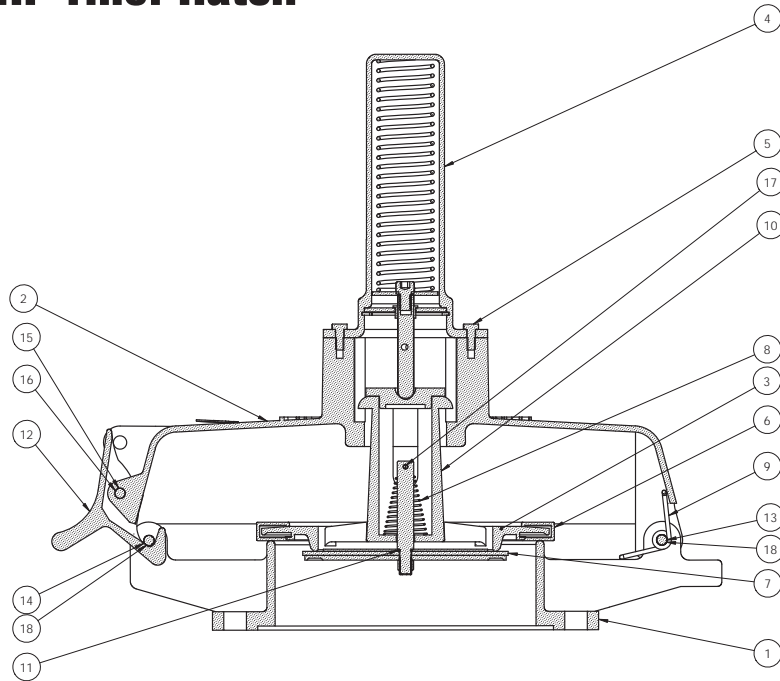
Model	Bolt Pattern	Pressure	Vacuum
Model ES-660-HF	8" API	4, 6, 8, 12 and 16 oz/sq. in.	0.4, 0.9 and 3.5 oz/sq. in.

### Materials of Construction

Model	Construction	Pressure Gasket	Vacuum Gasket	Optional Equipment	Shipping Weight
Model ES-660-HF	Aluminum (non-sparking)	HNBR (standard) Viton	Fluorosilicone (standard) Viton Teflon	Base Gasket, Bolt Set, Non-Corrosive Coating	29 lbs. (approx.)



# Model ES-660-HF Thief Hatch



## MODEL ES-660-HF

Ref.	Model	Part No.	Part Name	Material
1		4507303	Base	Cast Alumn.
2		4522001	Lid	Cast Alumn.
3		4539400	Center Assembly 0.4 oz. Vacuum*	HNBR/ Fluorosilicone
3		4539401	Center Assembly 0.4 oz. Vacuum*	HNBR/Teflon
3		4539407	Center Assembly 0.4 oz. Vacuum*	Viton/Sponge Viton
3		4539406	Center Assembly 0.4 oz. Vacuum*	Viton/Viton
3		4539409	Center Assembly 0.4 oz. Vacuum*	Viton/Fabric Viton
4		4556200	Spring Capsule Assembly 4 oz.	
4		4556201	Spring Capsule Assembly 6 oz.	
4		4556202	Spring Capsule Assembly 8 oz.	
4		4556203	Spring Capsule Assembly 12 oz.	
4		4556204	Spring Capsule Assembly 16 oz.	
5		2035901	Spring Capsule Bolt 4 Required	
6	70-H	4504601	Pressure Gasket	ENV #70-HH HBNR
6		4504603	Pressure Gasket	ENV #70-HV Blue Viton

## MODEL ES-660-HF

Ref.	Model	Part No.	Part Name	Material
7	VAC ES-660	4504705	Vacuum Gasket	Fluorosilicone
7		4504706	Vacuum Gasket	Teflon
7		4504707	Vacuum Gasket	Sponge Viton
7		4504708	Vacuum Gasket	Blue Viton
7		4504709	Vacuum Gasket	Black Fabric Viton
8	660-VS- 1/2	4503700	Vacuum Spring 0.4 oz.	Galvanized Steel
8	660-VS- 1/2 I	4503800	Vacuum Spring 0.4 oz.	Inconel
9		4504005	Hinge Spring	
10		4506000	Center	
11		2012710	Vacuum Pallet O-Ring	
12		4524100	Latch	
13	5-0	4505112	Clevis Pin 5/16 x 3-1/2	
14	5-F	4505110	Clevis Pin 5/16 x 2-1/2	
15	5-C	4505103	Latch Pin	
16	HPC-148	2027100	Hinge Pin Clip	
17	347	2022101	Cotter Pin 1/8 x 1	304 SS
18		2000703	Cotter Pin 1/8 x 1/2	

\*Center Assemblies are not supplied with pressure springs.

