

## **SERIES 5000 EPRV**



### **Features**

- Direct-acting automatic reset emergency pressure relief vent.
- Compound lever design on larger sizes reduces vent weight.
- Standard eFKM seals exceeds API 2000 leak requirements.
- Available in 8" Gauge hatch and 20" & 24" manway sizes.
- Most configurations stocked for quick delivery.

## FEATURES

### Direct Acting High Flow Vent

- The Series 5000 EPRV provides high relieving flow rates suitable for emergency venting applications in a robust and reliable direct acting design.
- Self resetting action ensures continued leak-free performance after venting activity without operator intervention.

### Compound Lever Design

- The compound lever of the 20 and 24" EPRVs reduces total vent weight, and provides a compact operating envelope.
- Compound-lever EPRVs achieve full-lift at a lower overpressure than comparable single-lever designs.

### Wide array of set pressures

- Standard relief pressures from 1 to 32 ozsi, in 1 ozsi increments.



## SPECIFICATIONS

Function	Emergency Pressure Relief Vent
Temperature Range <sup>1</sup>	- 26°C to 204°C [-15°F to 400 °F] (FKM)
Pressure Relief Type	Direct-acting, deadweight
Pressure Relief Range	1 to 32 ozsi (20 & 24 API & ANSI) 1 to 16 ozsi (8 API)
Tank Connection	8" API (Fig 1 API 12F) 20" API 650 / ANSI B16.5 150# 24" API 650 / ANSI B16.5 150#

<sup>1</sup>Temperatures provided are continuous service temperatures for the indicated seal materials. Powercoated items may lose coatings at 100°C[212°F]. S

### Composite eFKM seals

- The standard high performance composite seal provides bubble-tight sealing to over 90% of set pressure, exceeding API 2000 leak test requirements.
- The Series 5000 is ready for sour service out of the box with eFKM Seals.
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### Manway Access

- The covers of the 20 and 24" EPRV's can be locked open to provide manway access.

### Stocked

- Standard EPRVs in all sizes and bolt patterns are stocked for quick delivery.



## LEAK TESTING

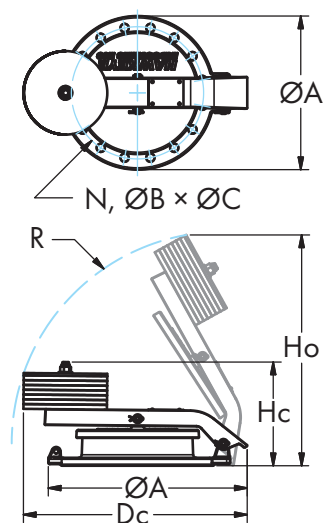
Series 5000 EPRVs are tested before shipment for relief setting accuracy and leak-rates in accordance with API 2000 7th Ed. Section 5.4.2.

Items passing the quality control measures are marked with the labels at right.

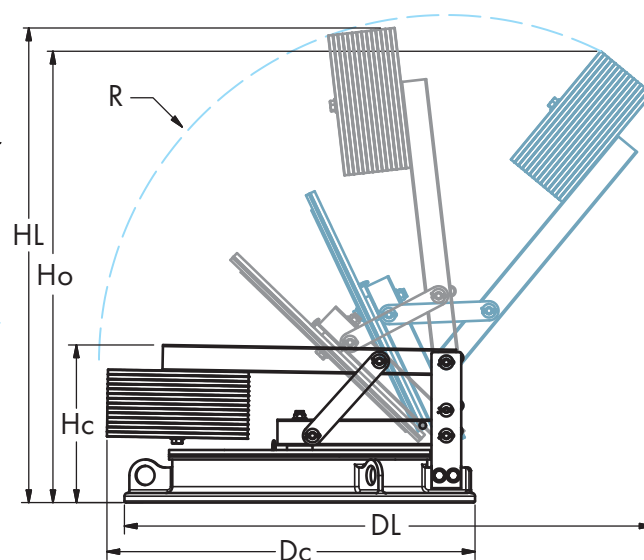
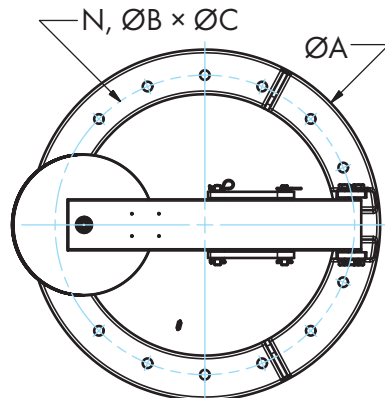


## DIMENSIONS

### 8 API



### 20 - 24 API & ANSI



CLOSED    MAX LIFT    LOCKED OPEN

Dimension		Value									
Connection Size		8 API 12F		20 API 650		20 ANSI 150#		24 API 650		24 ANSI 150#	
		[in.]	[mm]	[in.]	[mm]	[in.]	[mm]	[in.]	[mm]	[in.]	[mm]
A	Flange Diameter			27.5	699	27.5	699	32	813	32	813
N	Number of Bolts	16		20		16		20		20	
B	Bolt Hole Diameter	5/8	16	3/4	19	1-1/4	32	3/4	19	1-3/8	35
C	Bolt Circle	10.375	264	23.5	597	25	635	27.5	699	29.5	749
Hc	Height - Closed	8.2	208	12	305	12	305	13	330	13	330
Ho	Height - Max Lift	18	457	37	940	37	940	43.5	1105	43.5	1105
HL	Height - Locked open	n/a	n/a	35	889	35	889	40	1016	40	1016
DC	Depth - Closed	17.5	445	29	737	29	737	34	864	34	864
DL	Depth - Locked open	n/a	n/a	42	1067	42	1067	49	1245	49	1245
R	Swing Radius	16.6	422	27.5	699	27.5	699	32.5	826	32.5	826
W	Device Weight <sup>1 2</sup>	10-37 lb	4.5-16.8 kg	57-252 lb	26-114 kg	57-252 lb	26-114 kg	74-337 lb	34-153 kg	74-336 lb	34-153 kg
Bolt Quantity & Size		16×1/2-13UNC		20×5/8-11UNC		16×1-1/8-7UNC		20×5/8-11UNC		20×1-1/4-7UNC	

<sup>1</sup> Devices vary in weight due to set relieving pressure.

<sup>2</sup> Weight excludes mounting hardware, gaskets and packaging. Estimate an additional 40-70 lb [18-32 kg] for total package weight for 20" and 24" sizes, and 5-15 lbs [2.3-6.8 kg] for 8" sizes.

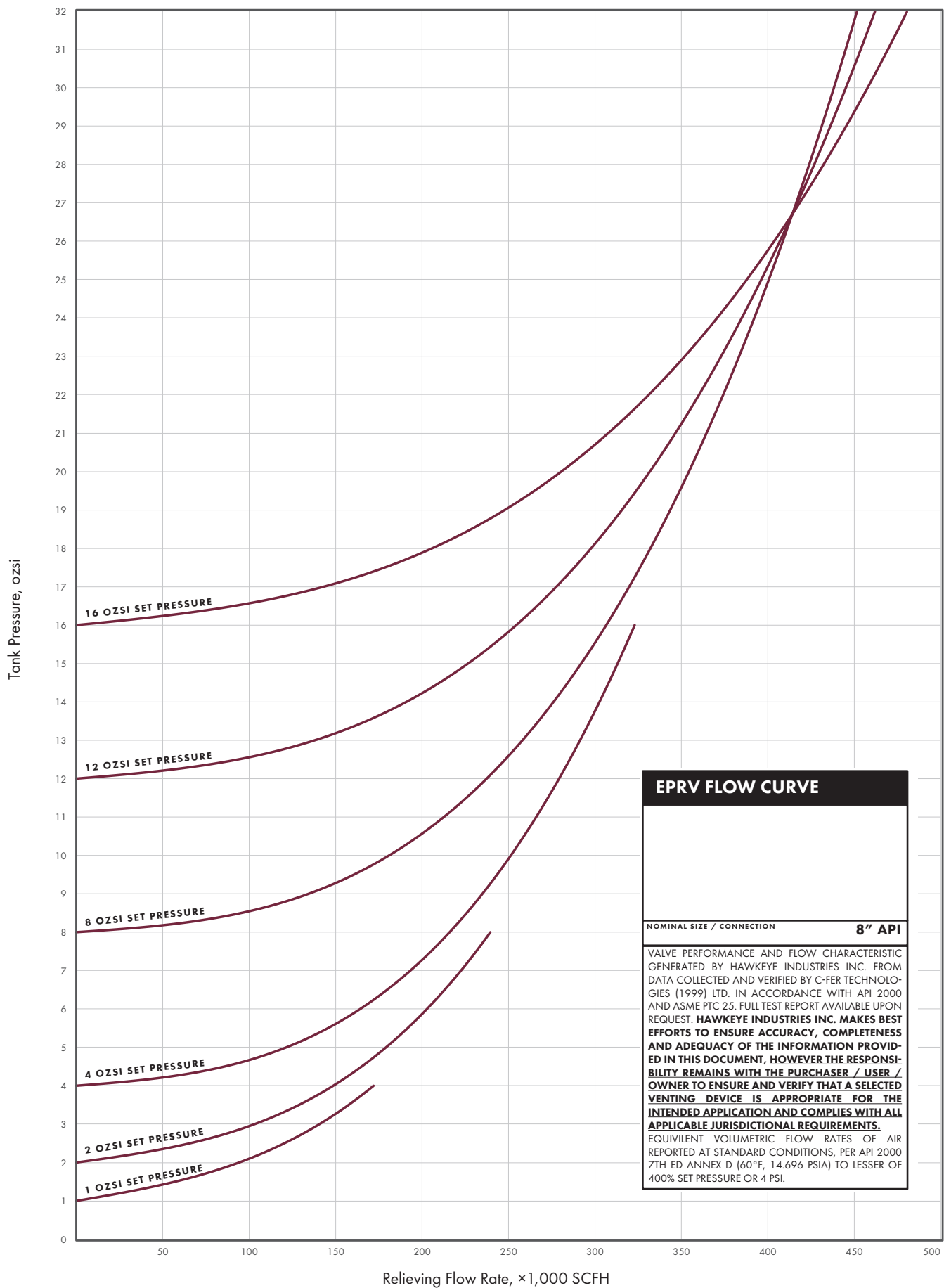
## FLOW CHARACTERISTIC

All Series 5000 EPRV have flow characteristic information available for sizing purposes.

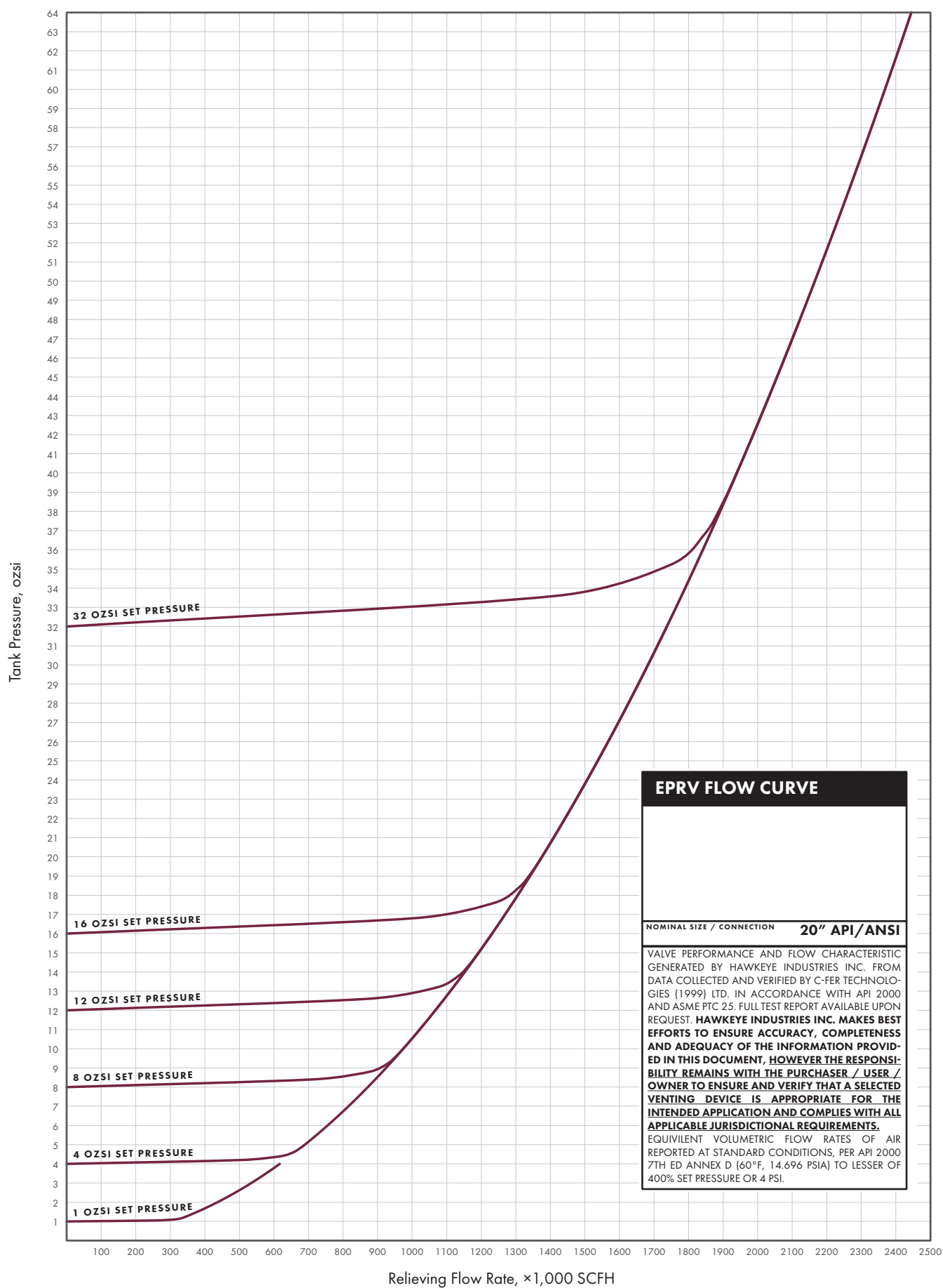
Where applicable, relieving rates and behavior determined empirically in accordance with a test regime in consideration of API 2000 7th Ed from data collected and verified by C-FER Technologies (1999) Inc. Their third-party test report outlining the apparatus, procedure, error propagation and other experimental considerations available upon request.

Analysis of the data and presentation of relief rates and behavior is the product of Hawkeye Industries Inc., based on API 2000 7th Ed section 5.3.2.1.

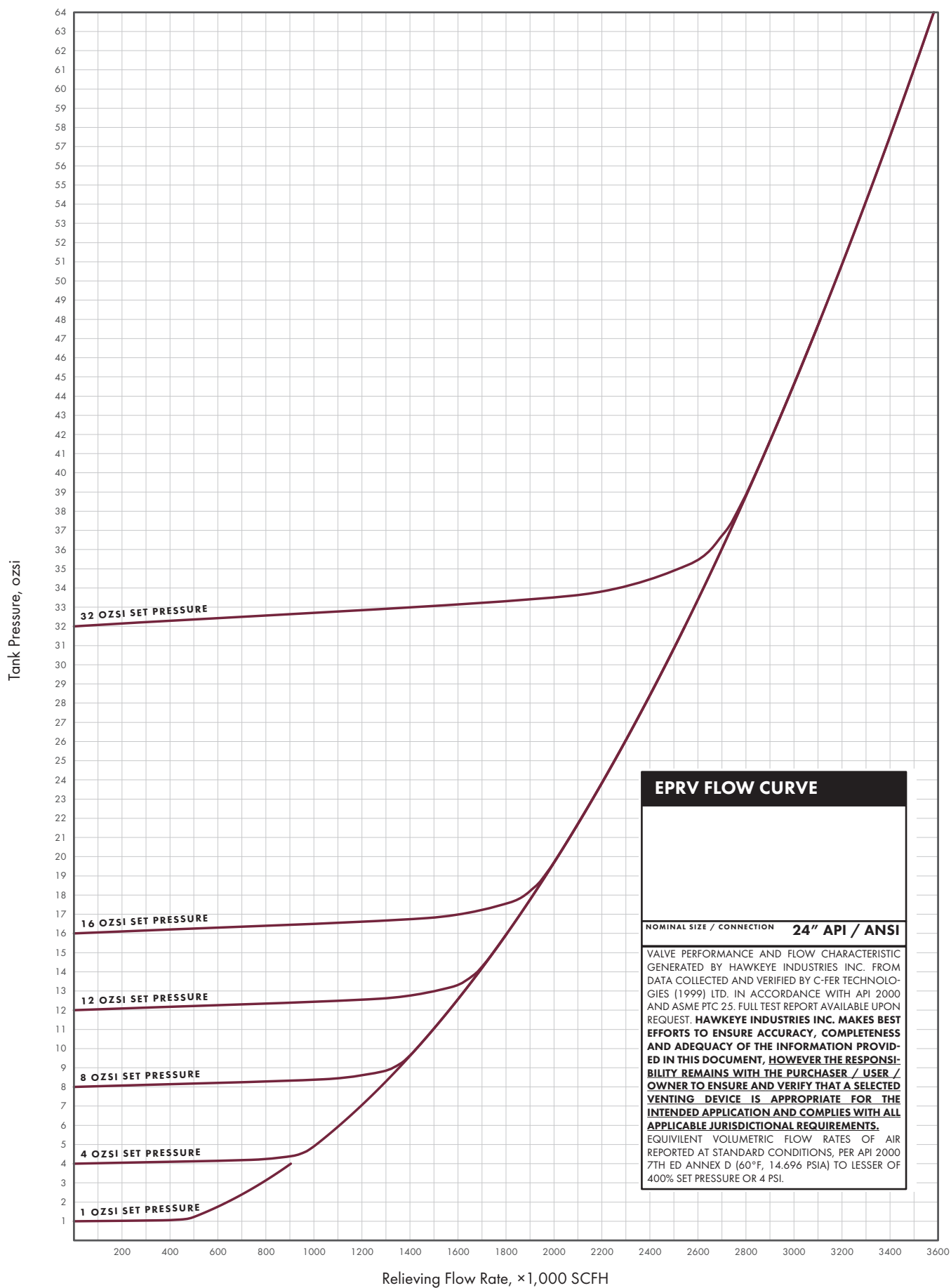
## FLOW CHARACTERISTIC (CONT'D)



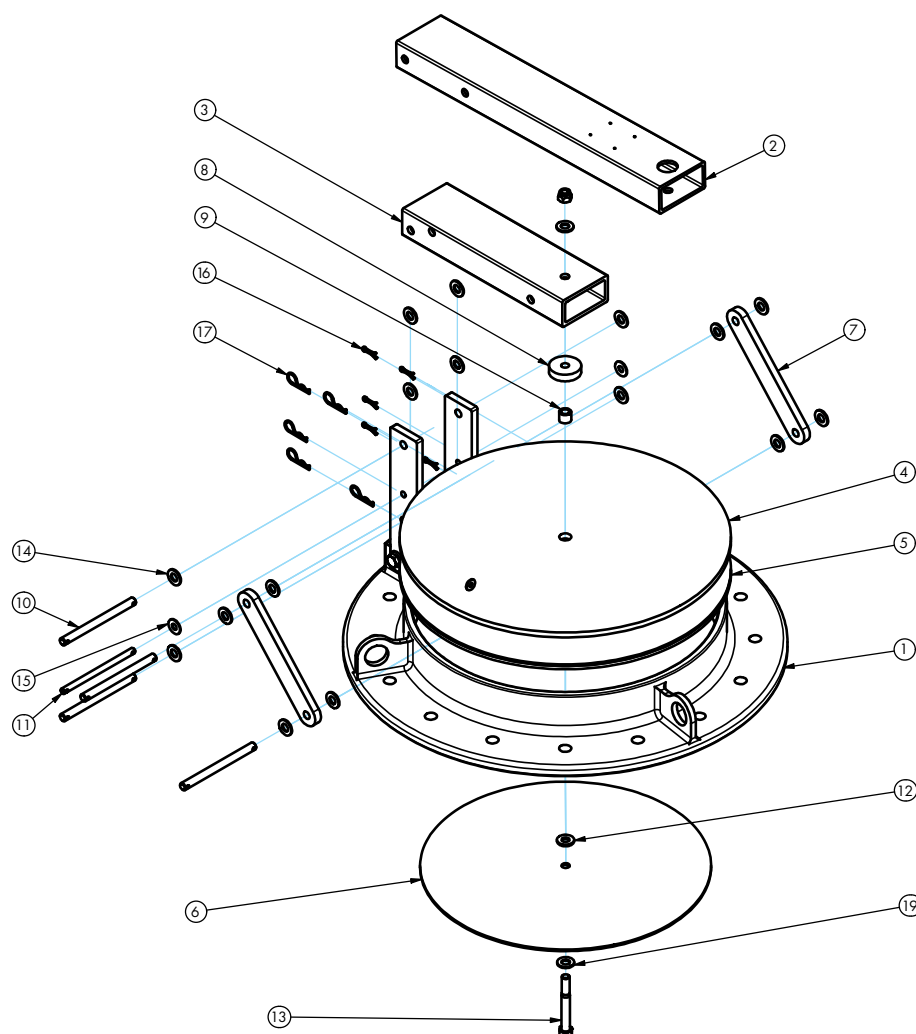
## FLOW CHARACTERISTIC (CONT'D)



## FLOW CHARACTERISTIC (CONT'D)



## PARTS LIST & MATERIALS OF CONSTRUCTION



Item	Part Name	Std. Mate- rial	Opt. Mate- rial
1	Base	A356 AL	
2	Weight Arm	44W	6061 AL
3	Lever Arm	44W	
4	Pallet	44W	6061 AL
5	Gasket	FKM + eFKM (Sponge +Std Viton)	
6	Gasket Disc	5052 AL	
7	Link Arm	44W	
8	Bumper	CR (Neoprene)	
9	Seal	CR (Neoprene)	
10	Pin-Clevis 1/2	CS ZP	
11	Pin-Clevis 3/8	CS ZP	
12	Washer-seal	FKM (Viton)	
13	Cap Screw-Hex	18-8 SS	
14	Washer-1/2	CS ZP	
15	Washer-3/8	CS ZP	
16	Pin-Cotter	CS ZP	
17	Pin-Hair	CS ZP	
18	Nut_Hex Nylok	CS ZP	
19	Washer-1/2	18-8 SS	

Not shown: Dead Weights used to set relief pressure. These are 44W ZP.

## VENT MARKING

Series 5000 EPRVs are tagged permanently with the the information illustrated on the tag below, per API 2000 7th Ed, Section 6.

# HAWKEYE INDUSTRIES INC.

PROUDLY CANADIAN

MODEL

CONNECTION SIZE & TYPE

PART NUMBER

SERIAL NUMBER

MANUFACTURE DATE

## PRESSURE RELIEF

SET PRESS.

RELIEF CAPACITY

\*1000 SCFH  
AIR@100%  
OVER SET

VALVE TYPE

SEAL MATERIAL

1/2  
3/4  
1  
1 1/2  
2  
3  
4  
6  
8  
10  
12  
16  
20  
24  
30  
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## SEVERE SOUR COATING OPTIONS

For situations demanding the highest corrosion resistance, consider the Severe Sour Service coating.

The components of the Series 5000 EPRV are coated with a red Fusion Bond Epoxy (FBE) for resistance mineral acids, (including sulphuric and hydrochloric acids up to 15%) high-chloride ion solutions (including aluminum chloride, potassium chloride and brine) as well as many other sour petrochemicals.



## ORDERING INFORMATION

Most Series 5000 EPRV configurations are near-stock, and we endeavor to ship in 2 - 4 business days ARO. Other configurations are typically build-to-order and available in about two weeks. Configure your desired Series 5000 EPRV using the part number legend below. Coatings, seals and bolt & gasket materials in bold are standard items and have fastest lead times. For project quantities, or configurations not listed here, contact your Hawkeye sales rep for more information.

**EPRV** — **5** **A** **A** **B** — **Sp** **Sp** — **E** **F** **G**

**[A] Size Code**

Nominal Size	Flag
8"	08
10"	10
12"	12
16"	16
20"	20
24"	24

AVAILABLE 2020

**[B] Bolt Pattern**

Bolt Pattern	Flag
API <small>8" ONLY AVAIL IN API 12B/F 20" &amp; 24" API 650</small>	0
ANSI <small>B16.5 150# ONLY AVAIL ON 20" &amp; 24"</small>	1

**Set Pressure**

Setting (ozsi)	Flag
1	01
2	02
3	03
4	04
⋮	⋮
31	31
32	32

**[E] Coatings**

Coating	Flag
<b>Standard</b>	<b>0</b>
Severe Sour FBE	1

**[F] Seal Material**

Seal Material	Flag
<b>Standard FKM</b>	<b>0</b>

**[G] Reserved**

	Flag
	<b>0</b>

Set Pressures under 4 ozsi for the 20 and 24" API and ANSI EPRVs will not have the compound lever design.

**Accessories Bolting Kit**

**VCBK** — **A** **A** **B** **C**

**[A] Size**

Nominal	Flag
8"	08
20"	20
24"	24

**[B] Pattern**

Bolt Pattern	Flag
API	0
ANSI	1

**[C] Material**

Grade	Flag
<b>Gr. 5</b>	<b>5</b>
Gr. 8	8
18-8 S.S	G

Bolt kits include:  
- Hex Cap Screws  
- Nuts  
- Washers  
and are sized per the relevant standard and have length to accommodate a standard thickness mounting flange and gasket. Contact us for non-standard lengths.

**Tank Gasket**

**VCGA** — **A** **A** **B** **C**

**[A] Size**

Nominal	Flag
8"	08
20"	20
24"	24

**[B] Pattern**

Bolt Pattern	Flag
API	0
ANSI	1

**[C] Material**

Grade	Flag
<b>CR (Neoprene)</b>	<b>0</b>
FKM (Viton)	1
Thick FKM (Viton)	2
FEPM (Aflas)	3

Tank gaskets are flat-face and sized to match the relevant standard. All gaskets are nominally 1/8" thick, and thick variants are 1/4" thick.

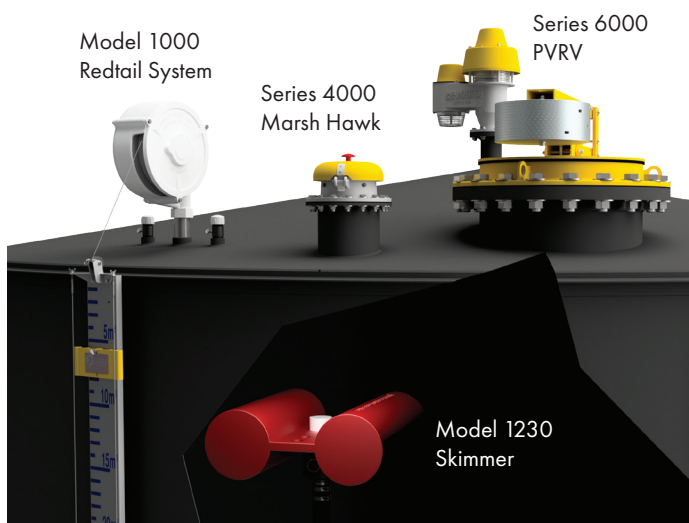
**Examples**

Series 5000 EPRV, 8" API 12B/F, 16 ozsi Relief, Composite Viton Seals, Standard Coating  
w/ Gr 5 Bolt Kit and Neoprene Tank Gasket  
**EPRV-5080-16-000 & VCBK-0805 + VCGA-0800**

Series 5000 EPRV, 20" ANSI B16.5 150#, 8 ozsi Relief, Composite Viton Seals, Severe Service Coating  
w/ Gr 8 Bolt Kit and Viton Tank Gasket  
**EPRV-5201-08-100 & VCBK-2018 + VCGA-2011**

Series 5000 EPRV, 24" API 650, 32 ozsi Relief, Composite Viton Seals, Standard Coating  
w/ Gr 8 Bolt Kit and Thick Viton Tank Gasket  
**EPRV-5240-32-000 & VCBK-2408 + VCGA-2402**

## RELATED PRODUCTS



The Series 5000 EPRV is just one line, which also includes:

### Vapor Control

Series 4000 Marsh Hawk TRV

Series 6000 PVRV

### Mechanical Level Indication

Model 1000 Redtail Dry Seal Zero Emission Level Gauging Systems

Model 1230 Floating Skimmer