

#### TECHNICAL BULLETIN



## MODEL 6K00 Pressure / Vacuum Vent with Flame Arrestor

## **OBJECTIVE**

The Model 6K00 Pressure / Vacuum Vent with Flame Arrestor is designed for use on atmospheric and low-pressure storage tanks where pressure and vacuum relief is required. The design include a deflagration flame arrestor consisting of a crimped SST metal element which allows the flow of gases or vapor of flammable liquids but prevent the flame-transmission from the outside. It provides an extinguishing barrier to the ignited vapor mixture by absorbing heat from the flame. The model 6K00 is used as an independent safety system to ensure explosion protection.

### **TECHNIQUE**

Weight loaded pallets in the vent housing allow the intake of air and the escape of vapors as the tank breathes due to thermal changes and product movement in and out of the tank. The pallets open and close to permit in breathing and out breathing necessary to maintain the tank pressure within permissible limits to avoid damage to the tank.

#### **CONSTRUCTION**

**Housing Material:** Available in carbon steel, stainless steel, in sizes DN50 (2") through DN300 (12").

**Seat Rings:** Press-fitted metal seat rings in stainless steel 1.4581.

**Pallets Assemblies:** Replaceable stainless steel pallet assemblies are standard for all vents.

**Pallet Diaphragms:** Standard diaphragm material is FEP film.

#### **SPECIAL FEATURES**

The Model 6K00 is designed, manufactured and tested according to Directive 2014/34/EU (ATEX114) and ISO 16852.

**Maintains Accurate Settings:** Standard settings for pressure are +5 mbar to +50 mbar and for vacuum -2,5 to -50 mbar. Other settings are available upon request.

All vents are tested to Cashco high standards for both leakage and set point prior to shipment. A certified test certificate is included with each vent verifying the accuracy of both the pressure and vacuum setting and leakage. Seat leakage meets or exceeds international standards (ISO 28300, API 2000).

**Condensate Drainage:** Self-draining body and specially designed seat ring keeps condensate away from seating surfaces, preventing freezing, binding, and clogging.

**Air-Cushioned Seating:** Air-cushion seating provides tight sealing to reduce evaporation losses and the release of toxic vapors. The pallets have center guiding stem to provide self alignment and tight seating.

**Sizes:** Available in sizes DN50 (2"), DN80 (3"), DN100 (4"), DN150 (6"), DN200 (8"), DN250 (10") and DN300 (12"). All vents have a raised face connection flange. Standard flanged bolt patterns are available to mate with DIN PN10 or ASME Class 150 flanged connections.





# **DIMENSIONS & WEIGHTS**



Metric Units	DN50 (2")	DN80 (3")	DN100 (4")	DN150 (6")	DN200 (8")	DN250 (10")	DN300 (12")
A [mm]	344	416	470	546	630	750	870
Ø B [mm]	180	232	290	320	410	480	570
C [mm]	138	165	203	232	276	318	403
Weight * [kg]	23	31	46	73	120	180	250

English Units	DN50 (2")	DN80 (3")	DN100 (4")	DN150 (6")	DN200 (8")	DN250 (10")	DN300 (12")
A [in]	13.5	16.4	18.5	21.5	24.8	29.5	34.3
Ø B [in]	7.1	9.1	11.4	12.6	16.1	18.9	22.4
C [in]	5.4	6.5	8.0	9.1	10.9	12.5	15.9
Weight * [lbs]	51	68	101	161	264	397	551

\* Without additional setting weights

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#### **6K00 Series PRODUCT CODE** 07/01/22

POSITION 3 & 4 Size / Explosion Group		
Size	IIB3	
5120	Code	
2" (DN50)	F9	
3" (DN80)	FS	
4" (DN100)	G0	
6" (DN150)	G8	
8" (DN200)	GG	
10" (DN250)	GR	
12" (DN300)	GS	

POSITION 5 Operating Condition			
P <sub>max</sub> absolute in kPa (psi)	T <sub>max</sub> in °C (⁰F)	Code	
110 (16)	≤ 60 (140)	1	

**POSITION 15 & 16** Set Vacuum

Code

02

03

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49

50

Set Point

- 2.5 mbar

- 3 mbar

...

- 49 mbar

- 50 mbar

 $(1 \text{ mbar} = 0,402 \text{ in } H_2O)$ 

POSITION 7 Element / Rim Material		
Material	Code	
Stainless Steel (1.4571)	2	

POSITION 8 Hood Material		
Material	Code	
Carbon Steel	1*	
Stainless Steel (1.4571) 2		
* Available for sizes > DN100 (4")		

POSITION 9 & 10				
DIN PN10 ASME 150 RF				
Material	Code			
Carbon Steel 1.0619	37	39		
Stainless Steel 1.4581	97	99		

POSITION 13 & 14 Set Pressure		
Set Point	Code	
+ 5 mbar	05	
+ 6 mbar	06	
+ 49 mbar	49	
+ 50 mbar	50	
$(1 \text{ mbar} = 0,402 \text{ in } H_2 \text{O})$		

	O-Ring Material		
	Material	Code	
	NBR	1	
	FKM	2	
	EPDM	3	
	FKM/FEP Covered	4	
7	POS	ITION 17	

**POSITION 11** 

POSITION 17 Nameplate	
Material / Language	Code
Stainless Steel / German	1
Stainless Steel / English	2

POSITION 12 Weight Material		
Material	Code	
Carbon Steel, Zinc Plated	1	
Stainless Steel (1.4571) 2		

POSITION 18 Surface Coating		
Paint	Code	
No Paint	0	
Epoxy Signal Blue (RAL5005)	1	

Consult factory for different version.

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