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## PED Categories & Classifications

Blacoh products are classified as pressure accessories and categorized under Category I and SEP in accordance with Pressure Equipment Directive 2014/68/EU. Working fluids are classified under PED into 2 groups. Group 1 consists of dangerous fluids (flammable, toxic and/or oxidizing). Group 2 consists of all other fluids (non-dangerous) not covered in Group 1. Vapor pressure of the working fluid at the maximum operating temperature of the equipment is also taken into consideration when categorizing equipment.

In accordance with PED guidelines, Blacoh pulsation and surge suppressors can be used with both Group 1 and Group 2 fluids for specific applications within the EEA. Blacoh products can be classified within the PED directive as either Category I (bearing the CE Mark) or SEP (not allowed to bear CE Mark). See **Table A** for specific PED category criteria.

**Table A.** PED Categories for Group 1 & 2 Fluids

Category	CE Mark	Group 1 Fluids with $V_p > 0.5$ Bar	Group 1 Fluids with $V_p \leq 0.5$ Bar and Group 2 Fluids
<b>SEP</b>	no	If $V \leq 1$ liter, $PS \leq 200$ bar If $V > 1$ liter, $PS \times V < 25$ B*L	If $V \leq 1$ liter, $PS \leq 1000$ bar If $V > 1$ liter, $PS \times V \leq 50$ B*L
<b>I</b>	yes	For $V > 1$ liter, $25$ B*L $> PS \times V < 50$ B*L	For $V > 1$ liter, $50$ B*L $> PS \times V \leq 200$ B*L

Product Index =  $PS \times V$  = Pressure (PS) x Volume (V) = \_\_\_\_ B\*L (bar x liter)

**Table B** shows PED classification for Blacoh pulsation dampeners, surge suppressors and Tef-Guard models.

Note that limiting factors are in **bold** face type. For pressures:

- if "max psi" is in bold, the pressure rating is limited to BFC design;
- if "max bar" is in bold, the pressure rating is PED limited.

**Table B.** Blacoh Products with PED Classification

				Group 1 Fluids with Vp > 0.5 Bar				Group 1 Fluids with Vp ≤ 0.5 Bar or Group 2 Fluids				
Model	Type	in <sup>3</sup>	liter	max psi	max bar	bar*liter	Category	max psi	max bar	bar*liter	Category	
METAL	SENTRY I	Dome Top	370	6.06	120	<b>8.2</b>	49.7	I	478	<b>33</b>	200.0	I
		Flat Top	175	2.87	250	<b>17.2</b>	49.4	I	<b>1000</b>	69	198.0	I
	SENTRY II	Dome Top	85	1.39	478	<b>33</b>	45.9	I	<b>1000</b>	69	95.9	I
		Flat Top	36	0.59	<b>1000</b>	69	40.7	SEP	<b>1000</b>	69	40.7	SEP
	SENTRY III	Dome Top	10	0.16	<b>1000</b>	69	11.0	SEP	<b>1000</b>	69	11.0	SEP
		Flat Top	4	0.07	<b>1000</b>	69	4.8	SEP	<b>1000</b>	69	4.8	SEP
	SENTRY IV	5 Gallon	1155	18.93	40	<b>2.7</b>	51.1	I	150	<b>10.3</b>	195.0	I
	SENTRY V	10 Gallon	2310	37.85	20	<b>1.3</b>	49.2	I	75	<b>5.2</b>	196.8	I
	XPA	8 in <sup>3</sup>	8	0.13	2900	<b>200</b>	26.0	SEP	<b>4000</b>	275.7	35.8	SEP
		12 in <sup>3</sup>	12	0.2	2900	<b>200</b>	40.0	SEP	<b>7500</b>	517.1	103.4	SEP
		24 in <sup>3</sup>	24	0.39	2900	<b>200</b>	78.0	SEP	<b>7500</b>	517.1	201.7	SEP
	XPX	8 in <sup>3</sup>	8	0.13	2900	<b>200</b>	26.0	SEP	<b>10000</b>	689.4	89.6	SEP
		12 in <sup>3</sup>	12	0.2	2900	<b>200</b>	40.0	SEP	<b>10000</b>	689.4	137.9	SEP
		24 in <sup>3</sup>	24	0.39	2900	<b>200</b>	78.0	SEP	<b>10000</b>	689.4	268.9	SEP
	XPB	8 in <sup>3</sup>	8	0.13	2900	<b>200</b>	26.0	SEP	<b>7500</b>	517.1	67.2	SEP
		12 in <sup>3</sup>	12	0.2	2900	<b>200</b>	40.0	SEP	<b>7500</b>	517.1	103.4	SEP
		24 in <sup>3</sup>	24	0.39	2900	<b>200</b>	78.0	SEP	<b>7500</b>	517.1	201.7	SEP
	XPB Dual Cap	36 in <sup>3</sup>	36	0.59	2900	<b>200</b>	118.0	SEP	<b>5800</b>	399.8	235.9	SEP
		60 in <sup>3</sup>	60	0.98	2900	<b>200</b>	196.0	SEP	<b>5800</b>	399.8	391.8	SEP
		91 in <sup>3</sup>	91	1.49	478	<b>33</b>	49.2	I	1900	<b>134.2</b>	200.0	I
122 in <sup>3</sup>		122	2	1450	<b>25</b>	50.0	I	1450	<b>100</b>	200.0	I	
Tef-Guard		12	0.2	<b>2000</b>	138	27.6	SEP	<b>2000</b>	138	27.6	SEP	
PLASTIC	SENTRY I	Dome Top	370	6.06	115	<b>8</b>	48.5	I	<b>150</b>	10.3	62.4	I
		Flat Top	175	2.87	<b>150</b>	10.3	29.6	I	<b>150</b>	10.3	29.6	SEP
	SENTRY II	Dome Top	85	1.39	<b>150</b>	10.3	14.3	SEP	<b>150</b>	10.3	14.3	SEP
		Flat Top	36	0.59	<b>150</b>	10.3	6.1	SEP	<b>150</b>	10.3	6.1	SEP
	SENTRY III	Dome Top	10	0.16	<b>150</b>	10.3	1.6	SEP	<b>150</b>	10.3	1.6	SEP
		Flat Top	4	0.07	<b>150</b>	10.3	0.7	SEP	<b>150</b>	10.3	0.7	SEP
PVDF	SENTRY I	Dome Top	370	6.06	120	<b>8.2</b>	49.7	I	<b>150</b>	10.3	62.4	I
		Flat Top	175	2.87	<b>150</b>	10.3	29.6	I	<b>150</b>	10.3	29.6	SEP
	SENTRY II	Dome Top	85	1.39	<b>250</b>	17.2	23.9	SEP	<b>250</b>	17.2	23.9	SEP
		Flat Top	36	0.59	<b>150</b>	10.3	6.1	SEP	<b>150</b>	10.3	6.1	SEP
	SENTRY III	Dome Top	10	0.16	<b>200</b>	13.7	2.2	SEP	<b>200</b>	13.7	2.2	SEP
		Flat Top	4	0.07	<b>200</b>	13.7	1.0	SEP	<b>200</b>	13.7	1.0	SEP

Notes:

- End user is responsible for determining either Group 1 or Group 2 fluid category
- Consult Blacoh for flange models
- Blacoh offers only SEP and Category I classifications at this time

For additional information, refer to:

- Blacoh certifications at <https://www.blacoh.com/certifications.aspx>
- <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0068&from=EN>

For more information or assistance, call Blacoh at 951.342.3100 or email [Sales@Blacoh.com](mailto:Sales@Blacoh.com). We sincerely appreciate your business and look forward to serving you.