



ENCLOSURE OPTIONS

KB DRAINS / BREATHERS

ATEX/IEC Ex Certified



KB1-4X



KB1BCEN



KB1DCEN

Class I, Div. 1 & 2, Groups B^①, C, D
Class I, Zones 1 & 2, Groups IIB + H2^①
Class II, Div. 1 & 2, Groups E, F, G
Class III, Enclosure Type 3, 4 & 4X^③
II 2 G Ex d IIB IIC^② T226°C Gb IP44
Ta = -50°C to +60°C

UL Listed - File E10514
cSP US Certified - File LR11716
FM Approved Certified File 25215
IEC Ex CSA 10.0007U
SIRA 10ATEX1351U



- ① See chart below for suitability
② Warning – not for use in acetylene atmosphere
③ Enclosure Type 4 & 4X for KB1-4X and KB1-4XS6 only

Applications

When installed in the top of an enclosure, these fittings act as breathers which allows air flow through the enclosure. Bottom installations permit water from condensation to drain from the enclosure continuously. The drains and breathers are offered in a variety of hub sizes, 1/4, 3/8 & 1/2 inch NPT and metric M16 & M20.

Body Material

Aluminum with optional stainless steel or brass available for special orders.

For use in enclosures with a maximum internal volume to 9526 cubic inches or 160 liters.

Volume

CATALOG NUMBER	THREAD SIZE	BODY MATERIAL	THIRD PARTY	SUITABILITY USA	THIRD PARTY	SUITABILITY CANADA	THIRD PARTY	SUITABILITY ATEX/IEC Ex
KB1BCEN BREATHER KB1DCEN DRAIN KB1M20BCEN BREATHER KB1M20DCEN DRAIN	1/2 NPT 1/2 NPT M20 M20	ALUMINUM ALUMINUM ALUMINUM ALUMINUM	CSAus CSAus CSAus CSAus	CLASS I GROUPS B, C & D CLASS I, ZONES 1 & 2 GR IIB+H2 CLASS II GROUPS E, F, & G CLASS III ENCL TYPE 3	c CSA c CSA c CSA c CSA	CLASS I GROUPS C & D CLASS I, ZONES 1 & 2 GR IIB CLASS II GROUPS E, F & G CLASS III ENCL TYPE 3	SIRA/CSA SIRA/CSA SIRA/CSA SIRA/CSA	II 2 G Ex d IIC T226°C Gb IP44 ^②
KB1-4X KB1-4XS6	1/2 NPT 1/2 NPT	ALUMINUM 316SS	UL CSAus UL CSAus	CLASS I GROUPS B, C & D CLASS I, ZONES 1 & 2 GR IIB+H2 CLASS II GROUPS E, F, & G CLASS III ENCL TYPE 3 TYPE 3, 4 & 4X	c CSA c CSA	CLASS I GROUPS C & D CLASS I, ZONES 1 & 2 GR IIB CLASS II GROUPS E, F & G CLASS III ENCL TYPE 3 TYPE 3, 4 & 4X	N/A	N/A

Note: See Fitting Section for dimensions

KDE SERIES DRAIN BREATHER

Applications

When installed in the bottom of a thin wall enclosure the KDE allows water from condensation to drain continuously out of the enclosure. The drain breathers are installed through clearance holes and held secured with a internal locknut. The silicone external o ring makes a hose down tight seal.



KDEGF0M20



KDES60M20

Class I, Div. 2, Groups A, B, C, D
Class I, Zone 1 & 2, Ex e / AEx e IIC,
A/Ex tb
Class II, Div. 1^① & 2, Groups E, F, G
Class III, Ambient Temperature Range
-55°C to +80°C
Enclosure Type 3, 4 & 4X^② IP66

Ex II 2 G D
Ex e IIC Gb
Ex tb IIIC Db IP66
Ta = -55°C to +80°C

2714851
CML 15ATEX3028X
IECEx QPS 15.0002X
IEC 15.0154X INMETRO



- ① Class II Div. 1 Canada only, Div. 2 in the US
② Type 4X in 316 & 304 SS, Aluminum & Nylon Materials

Features

- Sealing o-ring supplied as standard and suitable for use in a -55°C to +80°C temperature range.
- Variety of thread sizes 1/2 & 3/4 NPT, 1/2 & 3/4 NPSM, M20 & M25.
- Available in 300 series stainless steel, 316 stainless steel, aluminum and 30% glass filled nylon.
- Internal 316 stainless steel locknut supplied as standard. When tighten to the proper torque the joint makes a hose down tight seal for type 4, 4X & IP66 application.

- 303 or 304 stainless steel, 316 stainless steel, brass, aluminum or 30% glass filled nylon.
- Internal locknut 316 stainless steel.
- High temp silicone o-ring

Materials

MATERIAL / CATALOG NUMBER					
ENTRY THREAD SIZE & TYPE	GLASS FILLED PA6 NYLON	ALUMINUM	316 STAINLESS STEEL	BRASS	NICKEL PLATED BRASS
M20	KDEGF0M20	KDEAL0M20	KDES60M20	KDEBR0M20	KDEBR1M20
M25	KDEGF0M25	KDEAL0M25	KDES60M25	KDEBR0M25	KDEBR1M25
1/2" NPT	KDEGF0050	KDEAL0050	KDES60050	KDEBR0050	KDEBR1050
3/4" NPT	KDEGF0075	KDEAL0075	KDES60075	KDEBR0075	KDEBR1075

Note: Other thread forms and materials available upon request.



KB SERIES FLAME ARRESTOR

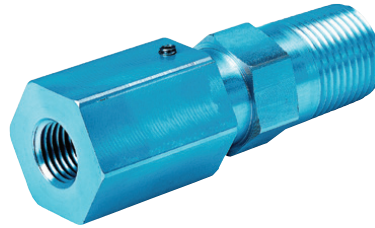
FEATURES-SPECIFICATIONS

Applications

The flame arrestor provides a means to connect gas analysis equipment and electro pneumatic devices' pipe or tubing system through the wall of an explosion-proof enclosure.

Body Material: 6061-T6 series aluminum provided as standard. Optional stainless steel or brass for special orders.

ATEX/IEC Ex Certified



Class I, Div. 1 & 2, Groups B^①, C, D
 Class I, Zones 1 & 2, Groups IIB + H2^①
 Class II, Div. 1 & 2, Groups E, F, G
 Class III, NEMA Type 3, 4^①
 II 2 G Ex d IIB IIC^② T3 Gb IP66^①
 Ex tb IIB IP65/IP66^②
 Ta = -50°C to +60°C



Certified - File LR11716

IEC Ex CSA 10.0007U

SIRA 10ATEX1351U

① See chart below for suitability

② Warning - not for use in acetylene atmospheres

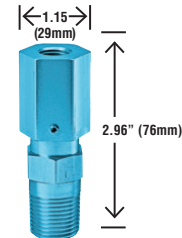
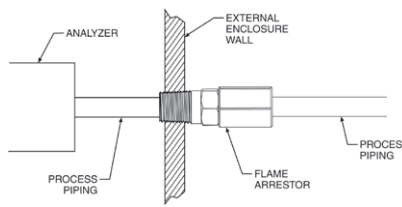


CATALOG NUMBER	EXTERNAL THREAD SIZE	INTERNAL THREAD SIZE	THIRD PARTY	SUITABILITY USA	THIRD PARTY	SUITABILITY CANADA	THIRD PARTY	SUITABILITY ATEX/IEC Ex
KB1FA25	1/2 NPT	1/4 NPT	CSAus	CLASS I GROUPS B, C & D CLASS I, ZONES 1 & 2 GR IIB+H2 CLASS II GROUPS E, F, & G CLASS III TYPE 3 & 4	c CSA c CSA	CLASS I GROUPS C & D CLASS I, ZONES 1 & 2 GR IIB CLASS II GROUPS E, F & G CLASS III TYPE 3 & 4	SIRA/CSA	II 2 G Ex d IIC ^② T3 Gb IP66
KB1FAM16 KBM20FA25 KBM20FA16	1/2 NPT M20 M20	M16 1/4 NPT M16	CSAus CSAus CSAus	CLASS I GROUPS B, C & D CLASS I ZONES 1 & 2 GR IIB+H2 CLASS II GROUPS E, F & G CLASS III TYPE 3	c CSA c CSA c CSA	CLASS I GROUPS C & D CLASS I, ZONES 1 & 2 GR IIB CLASS II GROUPS E, F & G CLASS III TYPE 3	SIRA/CSA SIRA/CSA SIRA/CSA	II 2 G Ex d IIC T3 Gb IP65

Specifications

Air flow = 83 + 15 / -25 SCFH at 5PSI
 Pressure drop = 1.3 PSI at 100 PSI
 Maximum flow pressure = 800 PSI
 Volume = For use in enclosures with a maximum internal volume of 9526 cubic inches or 160 liters.

TYPICAL INSTALLATION



EXH SERIES CIRCUIT BREAKER HANDLES

FEATURES-SPECIFICATIONS

Applications

EXH Series circuit breaker handles are for use with the following Series of Killark enclosures: EXB, DB, B7E

- Used to activate circuit breakers and motor circuit protectors from front cover
- Factory or field installed in a 3/4" NPSM opening for EXH1 & EXH2 and a 1-1/4" NPSM for EXH3
- Has provision for Lock-On and Lock-Off with up to three padlocks
- Consists of an external handle mechanism with through-the-enclosure shaft and internal toggle mechanism and breaker pan

Materials

- Copper free aluminum with 316 stainless steel shaft and screens
- O-ring 70 durometer nitrile



EXH

Class I, Div. 1 & 2, Groups B,C,D
 Class I, Zones 1 & 2, Groups IIB+H₂, IIA
 Class II, Div. 1 & 2, Groups E, F, G
 Class III, Encl. Type 3, 4 & 4X
 NEMA 3, 4, 4X, 7 (B,C,D) 9 (E,F,G)



- File E150827



Certified - File LR11714

EXH CIRCUIT BREAKER HANDLE WITH SHAFT AND PAN				
CATALOG NUMBER			BREAKER MANUFACTURER	BREAKER FRAMES TO OPERATE
6" DEEP BOX	8" DEEP BOX	10" DEEP BOX		
EXH1A6	EXH1A8	EXH1A10	GE	TEB-TED-THED-TEL
			ITE/Siemens	ED2-ED4-ED6-HED4-HED6
			Square D	FAL-FHL-FCL
			Cutler Hammer	EHD-FDB-FD-HFD-FDC-HMCP
N/A	EXH1B8	EXH1B10	GE	TFJ-TFK-THFK-TFL
			Square D	KAL-KHL-KCL
			Cutler Hammer	JDB-JD-HJD-JDC
N/A	EXH2C8	EXH2C10	Cutler Hammer	DK-KDB-KD-HKD-KDC
			GE	TJJ-TJK4-TJK6-THJK4-THJK6
			ITE/Siemens	FXD6-FD6-HFD6-CFD6
N/A	EXH3D8	EXH3D10	ITE/Siemens	JXD2-JXD6-JD6-HJD6-HHJD6-CJD6
			ITE/Siemens	LXD6-LD6-HKD6-HHLD6-CLD6
			Square D	LAL-LHL
			Cutler Hammer	LDB-LD-HLD-LDC
N/A	N/A	EXH3E10	GE	TKM8-THKM8-TKM12-THKM12
			ITE/Siemens	MXD6-MD6-HMXD6-HMD6-CMD6
			ITE/Siemens	NXD6-ND6-HNXD6-HND6-CND6
			Square D	LCL
			Square D	MAL-MHL
			Cutler Hammer	ND-HND-NDC

Submit sketch showing the desired location of internal breaker for factory location of handle mechanism.
 Order as separate option with enclosure for factory installation or by Catalog Number for field installation.
 Consult factory for handle mechanism for fused and non-fused disconnect switches.