Flameproof (Exd/Exe) breather drains – BD-U Series

Technical specification

Redapt BD-U series of Exd “Flameproof” and Exe “Increased Safety” breather drains has a primary function of effectively draining any water present within the enclosure.

Alongside draining water, it also allows air in the enclosure to breathe with the surrounding atmosphere, minimizing moisture build-up; preventing condensation and potential damage to sensitive electric/electronic equipment housed within.
Approved to the latest international standards, Redapt explosion-proof breather drains can be supplied with ATEX and IECEx hazardous area certificates.

Type BD-U

Certifications and compliances

Code of protection categories

ATEX: I M2, II 2 GD, Ex e I/IIC Mb Gb, Ex d I/IIB+H2 Mb Gb, Ex tb IIIC Db

IECEx: Ex e I/IIC Mb/Gb, Ex d I/IIB+H2 Mb/Gb, Ex tb IIIC Db

Compliance standards

ATEX: EN 60079-0, EN 60079-1, EN 60079-7, EN 60079-31

IECEx: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 60079-31

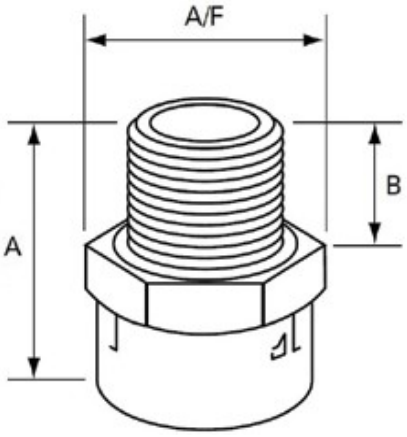
Certificate details

ATEX: ITS16ATEX101338X

IECEx: IECEx ITS 16.0014X

EAC: RU C-GB.МЮ62.B.06227

INMETRO: NCC 18.0165 X



Ingress protection (IP):

IP66 when fitted in accordance to manufacturer’s instructions.

Plating options

Electroless nickel
Zinc
Others on application

Threadforms

Metric
NPT

Note: remove O-ring for NPT thread to thread engagement

Temperature

Temperature range dependent on O-ring used (supplied on metric only)

Nitrile: -30°C to +80°C
EPDM: -50°C to +100°C
Neoprene: -40°C to +80°C
Viton: -20°C to +180°C
Silicone: -60°C to +180°C (supplied as standard)
Fluorosilicone: -60°C to +130°C

The maximum temperature is limited to +150°C for Group I applications.

Dimensions

Size	Hex A/F	Overall length (A)	Male thread length (B)
M20	27.00	31.00	16.00
M25	31.75	31.00	16.00
½" NPT	27.00	35.00	20.00
¾" NPT	31.75	35.00	20.00

Flameproof (Exd/Exe) breather drains – Product coding

Product	DIGITS 1 & 2
Flameproof BREATHER DRAIN	**BD**

Certification	DIGIT 3
U	Exd I and IIB +H2 and Exe I and IIC

Material	DIGIT 4
1	Brass
3	Stainless steel

Plating	DIGIT 5
0	Unplated
1	Electroless nickel
2	Zinc

DIGITS 6&7
Thread type
04 M20
05 M25
29 1/2" NPT
30 3/4" NPT

DIGITS 8 &9
O-ring
D0 no O-ring
D1 Silicone
D2 Fluorosilicone
D3 Viton
D4 EPDM
D5 Neoprene
D6 Nitrile

Example

Digits 1&2		Digit 3		Digit 4		Digit 5		Digits 6&7		Digits 8&9
BD	-	**U**	-	**3**	-	**0**	-	**04**	-	**D1**
Breather drain		Exd I and IIC and Exe I and IIC		Stainless steel		Unplated		M20		Silicone O-ring

Thread dimension chart

ISO metric

BS 3643 1.5mm pitch

Size	Major dia.	TPI
M12	11.97	16.93
M16	15.97	16.93
M20	19.97	16.93
M25	24.97	16.93
M32	31.97	16.93
M40	39.97	16.93
M50	49.97	16.93
M63	62.97	16.93
M75	74.97	16.93
2.0mm pitch		
M80	79.97	12.70
M85	84.97	12.70
M90	89.97	12.70
M100	99.97	12.70
M110	109.97	12.70
M120	119.97	12.70

NPT

ANSI.ASME B1.20.1

Size	Pipe dia.	TPI
½"	21.34	14.00
¾"	26.67	14.00
1"	33.40	11.50
1¼"	42.16	11.50
1½"	48.26	11.50
2"	60.33	11.50
2½"	73.03	8.00
3"	88.90	8.00
3½"	101.60	8.00
4"	114.30	8.00

PG

DIN 40430

Size	Major dia.	TPI
PG7	12.50	20.00
PG9	15.20	18.00
PG11	18.60	18.00
PG13.5	20.40	18.00
PG16	22.50	18.00
PG21	28.30	16.00
PG29	37.00	16.00
PG36	47.00	16.00
PG42	54.00	16.00
PG48	59.30	16.00

Alternate ISO pipe thread designations

UK	**BSP** Parallel or **T**aper BS2279 (BS21)
Europe	**G** (Parallel) **GK** (Taper) **R** (Parallel) **RK** (Taper)
Japan	**PF** (Parallel) JIS B 303
CIS	**K mpy** (Taper)

BSP ISO pipe thread

ISO R/7; UNI 6125

Size	Pipe Dia.	TPI
⅜"	16.66	19.00
½"	20.96	14.00
¾"	26.44	14.00
1"	33.25	11.00
1¼"	41.91	11.00
1½"	47.80	11.00
2"	59.61	11.00
2½"	75.18	11.00
3"	87.88	11.00

ET imperial conduit

BS31

Size	Major dia.	TPI
⅝"	15.88	18.00
¾"	19.05	16.00
1"	25.40	16.00
1¼"	31.75	16.00
1½"	38.10	14.00
2"	50.80	14.00
2½"	63.50	14.00
3"	76.20	14.00

Thread dimension substitution chart

Metric	NPT (or NPS)	PG	BSP ISO Pipe	ET
M16	–	7, 9	–	⅝"
M20	½"	11, 13.5	½"	¾"
M25	¾"	16	¾"	1"
M32	1"	21	1"	1¼"
M40	1¼"	29	1¼"	1½"
M50	1½"	36	1½"	2"
M63	2"	42, 48	2"	2½"
M75	2½"	–	2½"	3"
M90 x 2.0	3"	–	3"	–
M100 x 2.0	3½"	–	–	–
M110 x 2.0	–	–	–	–
M120 x 2.0	–	–	–	–