

# Increased safety (Exe) breather drains (metallic) - DP-E Series



Type DP-E

Redapt DP-E series of Exe breather drains provide a method of preventing moisture build-up within a hazardous area approved enclosure whilst ensuring the integrity and Ex approval of the installation is maintained.

They allow for air within an enclosure to breathe with the surrounding atmosphere helping to prevent condensation and any potential damage to sensitive electric/electronic equipment housed within. All whilst maintaining an IP66 rating of the enclosure it is installed in.

Designed for hazardous area applications, Redapt's DP-E series of breather drains are certified to protection concept Exe "Increased Safety" for use in Zone 1 and Zone 2 applications. Also certified Ex tb "dust tight" for use in Zone 21 & 22 applications.

## Materials

- Brass CZ121
- 316 stainless steel
- Aluminium

## Threadforms

- Metric
- NPT

## Plating options

- Electroless nickel
- Zinc
- Others on application

## Dimensions

Size	A/F	Overall length (A)	Thread length (B)
M20	28.60	23.00 (min.)	10.00 (min.)
M25	34.90	23.00 (min.)	10.00 (min.)
M32	41.30	23.00 (min.)	10.00 (min.)
½" NPT	28.60	28.00 (min.)	15.00 (min.)
¾" NPT	34.90	28.00 (min.)	15.00 (min.)
1" NPT	41.30	28.00 (min.)	15.00 (min.)

For M16 dimensions please contact our customer service team.

## Technical specifications

### Code of protection categories

ATEX: I M2/II 2 GD, Ex e I/II Mb Gb, Ex tb IIIC Db

IECEX: Ex e I/II Mb/Gb, Ex tb IIIC Db

CSA: Ex eb IIC Gb IP66 Cl I Zn 1 AEx eb IIC Gb Enclosure Type 4X (NEMA 4X)

### Compliance standards

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

IECEX: IEC 60079-0, IEC 60079-7, IEC 60079-31

CSA: C22.2 No. 0-10, CAN/CSA C22.2 NO. 18.3-12, CAN/CSA C22.2 No. 60079-0, CAN/CSA C22.2 No. 60079-7, CAN/CSA C22.2 NO. 94-M91 ANSI/UL 514B, ANSI/UL 60079-0 ANSI/UL 60079-7, ANSI/UL 50

### Certificate details

ATEX: ITS16ATEX101338X

IECEX: IECEX ITS 16.0014X

EAC: RU C-GB.M1062.B.06227

CSA: CSA00CA1033919X

INMETRO: NCC 18.0165 X

### Temperature

Dependent on filter and O-ring seal

Metallic body: -60°C to +200°C, without an O-ring seal

### Filter options:

HDPE filter: -50°C to 85°C

Metal filter: dependent on interface material

### Interface O-ring Material options:

Nitrile: -30°C to +80°C (supplied as standard with HDPE filter version)

EPDM: -50°C to +100°C

Neoprene: -40°C to +80°C

Viton: -20°C to +180°C

Silicone: -60°C to +180°C

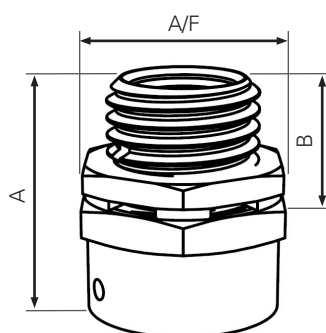
Fluorosilicone: -60°C to +130°C

### Ingress protection (IP):

IP66 when fitted in accordance to manufacturer's instructions.

### Part number:

Please refer to part numbering system below



[Download certificates and documents here](#)

# Increased safety (Exe) breather drains (metallic) - Product coding

Product	Digits 1 & 2
Increased Safety BREATHER DRAIN	<b>DP</b>

Certification	Digit 3
<b>E</b>	Exe I and IIC

Material	Digit 4
1	Brass
<b>3</b>	Stainless steel
5	Aluminium

Plating	Digit 5
<b>0</b>	Unplated
1	Electroless nickel
2	Zinc

Digits 6 & 7
Thread type
<b>04</b> M20
05 M25
06 M32
29 1/2" NPT
30 3/4" NPT
31 1" NPT

Digits 8 & 9		
Thread length	Hole position	Castellated I/nut
<b>S1</b> - HDPE filter 10mm	2 Holes	With
S2 - HDPE filter 10mm	2 Holes	Without
S3 - HDPE filter 15 mm	3 Holes	With
S4 - HDPE filter 15mm	3 Holes	Without
M1 - Metallic filter 10mm	2 Holes	With
M2 - Metallic filter 10mm	2 Holes	Without
M3 - Metallic filter 15 mm	3 Holes	With
M4 - Metallic filter 15mm	3 Holes	Without

## Example

Digits 1 & 2	Digit 3	Digit 4	Digit 5	Digits 6&7	Digits 8 & 9
<b>DP</b>	<b>- E</b>	<b>- 3</b>	<b>- 0</b>	<b>- 04</b>	<b>- S1</b>
Breather drain	Exe I and IIC	Stainless steel	Unplated	M20	10mm

### Notes:

- NPT threaded breather drains are only available in S3 and S4 options
- Default option is S3

# Thread dimension chart

## ISO metric

### BS 3643 1.5mm pitch

Size	Major dia.	TPI
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
1/2"	21.34	14.00
3/4"	26.67	14.00
1"	33.40	11.50
1 1/4"	42.16	11.50
1 1/2"	48.26	11.50
2"	60.33	11.50
2 1/2"	73.03	8.00
3"	88.90	8.00
3 1/2"	101.60	8.00
4"	114.30	8.00

## PG

### BS 3643 1.5mm pitch

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

### BS 3643 1.5mm pitch

UK	<b>BSP</b> Parallel or Taper BS2279 (BS21)
Europe	<b>G</b> (Parallel) <b>GK</b> (Taper) <b>R</b> (Parallel) <b>RK</b> (Taper)
Japan	<b>PF</b> (Parallel) JIS B 303
CIS	<b>K mpy</b> (Taper)

## BSP ISO pipe thread

### ISO R/7; UNI 6125

Size	Pipe Dia.	TPI
3/8"	16.66	19.00
1/2"	20.96	14.00
3/4"	26.44	14.00
1"	33.25	11.00
1 1/4"	41.91	11.00
1 1/2"	47.80	11.00
2"	59.61	11.00
2 1/2"	75.18	11.00
3"	87.88	11.00

## ET imperial conduit

### BS31

Size	Major dia.	TPI
5/8"	15.88	18.00
3/4"	19.05	16.00
1"	25.40	16.00
1 1/4"	31.75	16.00
1 1/2"	38.10	14.00
2"	50.80	14.00
2 1/2"	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	-	5/8"
M20	1/2"	11, 13.5	1/2"	3/4"
M25	3/4"	16	3/4"	1"
M32	1"	21	1"	1 1/4"
M40	1 1/4"	29	1 1/4"	1 1/2"
M50	1 1/2"	36	1 1/2"	2"
M63	2"	42, 48	2"	2 1/2"
M75	2 1/2"	-	2 1/2"	3"
M90 x 2.0	3"	-	3"	-
M100 x 2.0	3 1/2"	-	-	-
M110 x 2.0	-	-	-	-
M120 x 2.0	-	-	-	-

# Part numbering system

## Codes

Page No.	Product	Digits 1 & 2
<b>Adaptors and reducers</b>		
14-17	<b>AD</b>	Adaptor
14-17	RD	Reducer
18	TA	Swivel - in-line male to female
18	TC	Swivel - in-line female to female
18	TD	Swivel - in-line male to male
18	TP	Swivel - 90° male to female
18	TQ	Swivel - 90° female to female
18	TR	Swivel - 90° male to male
19	AY	'Y' adaptor
20	AT	'T' adaptor
21	AR	90° adaptor
22	AM	Male to male adaptor
23	AF	Female to female adaptor
24-25	DB	Insulated adaptor
<b>Stopping Plugs</b>		
26-27	PD	Dome head plug
28	PA	Type A plug
28	PB	Type B plug
<b>Breather Drains</b>		
31	DP	Breather drain (Exe)
32	BD	Breather drain (Exde)
<b>Other products</b>		
34	UN	Union - male to female
34	UF	Union - female to female
35	AE	Earth lead adaptor

Certification	Digit 3
<b>U</b>	Exd I and IIC & Exe I and IIC
D	Exd I and IIC
E	Exe I and IIC
F	Industrial (marked product)

Material	Digit 4
<b>1</b>	Brass
2	Mild steel
3	Stainless steel
4	Glass filled nylon
5	Aluminium
6	Nylon 6
7	Red fibre

Plating	Digit 5
0	Unplated
<b>1</b>	Electroless nickel
2	Zinc
6	Chromated

## Example

Digits 1 & 2	Digit 3	Digit 4	Digit 5	Digits 6 & 7	Digits 8 & 9
<b>AD</b>	<b>- U</b>	<b>- 1</b>	<b>- 1</b>	<b>- 29</b>	<b>- 04</b>
Adaptor	Exd/e certified	Brass	Nickel-plated	1/2" NPT (male)	M20 (female)

Always quote male thread first.