Female to female unions (Exde) - UF-U Series

Type UF-U



Technical specifications

Code of protection categories
ATEX: I M2/II 2 GD
IECEx: Ex db I/IIC Mb/Gb, Ex eb I/IIC Mb/Gb, Ex tb IIIC Db (Aluminium not mining)
CSA: Ex db / Ex eb IIC Gb IP54 Cl I Div1 Gr ABCD Cl II Gr EFG Cl III; Type 3
Compliance standards
ATEX: EN 60079-0, EN 60079-1, EN 60079-31
IECEx: IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 60079-31
CSA: CAN/CSA C22.2 No. 60079-0, No. 60079-1, No. 60079-7, ANSI/UL 60079-0, 60079-1, 60079-7, UL1203
Certificate details
ATEX: ITS16ATEX101339X
IECEx: IECEx ITS 16.0013X
EAC: TC RU C-GB.MIO62.B.06225
CSA: CSA01CA1248014X
INMETRO: NCC 18.0133 X
Temperature
-60°C to +200°C
Ingress protection (IP):
IP64 when fitted without sealing washer. IP66/IP68 when fitted with Oring or thread sealant according to manufacturer's instructions.
Part number:
Please refer to part numbering system below

Redapt's range of Unions provides a method of matching electrical thread forms on hazardous area approved equipment whilst ensuring the integrity and Ex approval of the installation is maintained.

Manufactured as a three-piece assembly to facilitate easy in-line installation, Redapt's Unions provide a running joining whilst eliminating exposed threads and are particularly suitable for use where a coupler would impractical.
Designed for hazardous area applications and the range is certified to protection concepts Ex d "Flameproof" and Ex e "Increased Safety" for use in Zone 1 and Zone 2 applications. Also certified Ex tb "dust tight" for use in Zone 21 & 22 applications.

Download certificates and documents here

Materials

- Brass CZ121
- Mild steel
- 316 stainless steel
- Aluminium

Threadforms

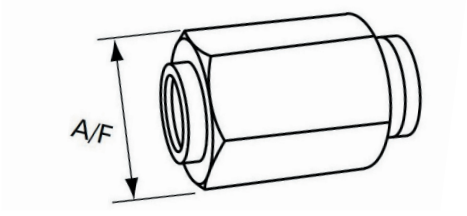
- Metric
- NPT
- PG
- ISO pipe (BSP)
- ET

Plating options

- Electroless nickel
- Zinc
- Chromated
- Others on application

Dimensions

Female to female unions (UF-U)	
Size	**A/F**
M20	37.59
M25	42.42
M32	55.88
M40	55.88
M50	80.01
M63	90.17
M75	114.30



Female to female unions (Exde) - Product coding

Product	Digits 1 & 2
Female to female UNION	**UF**

Certification	Digit 3
U	Exd I and IIC & Exe I and IIC

Material	Digit 4
1	Brass
2	Mild steel
3	Stainless steel
5	Aluminium

Plating	Digit 5
0	Unplated
1	Electroless nickel
2	Zinc
6	Chromated

Digits 6 & 7, Male thread – Digits 8 & 9, Female thread

Metric	ET imperial conduit	NPT	NPSM	ISO pipe parallel (BSPP)	ISO pipe taper (BSPT)	PG
02 M12						
03 M16	17 5/8" ET	**29 ½" NPT**	42 ½" NPSM	55 ½" BSPP	68 ½" BSPT	79 PG7
04 M20	18 ¾" ET	30 ¾" NPT	43 ¾" NPSM	56 ¾" BSPP	69 ¾" BSPT	80 PG9
05 M25	19 1" ET	31 1" NPT	44 1" NPSM	57 1" BSPP	70 1" BSPT	81 PG11
06 M32	20 1¼" ET	32 1¼" NPT	45 1¼ " NPSM	58 1¼" BSPP	71 1¼" BSPT	82 PG13.5
07 M40	21 1½" ET	33 1½" NPT	46 1½" NPSM	59 1½" BSPP	72 1½" BSPT	83 PG16
08 M50	22 2" ET	34 2" NPT	47 2" NPSM	60 2" BSPP	73 2" BSPT	84 PG21
09 M63	23 2½" ET	35 2½" NPT	48 2½" NPSM	61 2½" BSPP	74 2½" BSPT	85 PG29
10 M75	24 3" ET	36 3" NPT	49 3" NPSM	62 3" BSPP	75 3" BSPT	86 PG36
11 M80 x 2.0	ET Special	37 3½" NPT	50 3½" NPSM	63 3½" BSPP	76 3½" BSPT	87 PG42
12 M85 x 2.0		38 4" NPT	51 4" NPSM	64 4" BSPP	77 4" BSPT	88 PG48
13 M90 x 2.0		NT Special	NS Special	BP Special	BT Special	PG Special
14 M100 x 2.0						
15 M110 x 2.0						
BZ M120 x 2.0						

Example

Digits 1 & 2		Digit 3		Digit 4		Digit 5		Digits 6 & 7		Digits 8 & 9
UF	-	**U**	-	**1**	-	**1**	-	**29**	-	**04**
Union		Exd/e certified		Brass		Nickel-plated		1/2" NPT (male)		M20 (female)

Notes:
- Always quote male thread first.
- Threadform codes below to be used for both male and female threads.

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 P**arallel 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	–	–	–	–

Part numbering system

Codes

Page No.	Product	Digits 1 & 2
Adaptors and reducers		
14-17	**AD**	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
Stopping Plugs		
26-27	PD	Dome head plug
28	PA	Type A plug
28	PB	Type B plug
Breather Drains		
31	DP	Breather drain (Exe)
32	BD	Breather drain (Exde)
Other products		
34	UN	Union - male to female
34	UF	Union - female to female
35	AE	Earth lead adaptor

Certification	Digit 3
U	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
1	Brass
2	Mild steel
3	Stainless steel
4	Glass filled nylon
5	Aluminium
6	Nylon 6
7	Red fibre

Plating	Digit 5
0	Unplated
1	Electroless nickel
2	Zinc
6	Chromated

Example

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

Always quote male thread first.

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