

UNION

Ex db, Ex eb, Ex ta, Ex nR, IP65/66/68

for General Industrial and Hazardous Area Installations



Features and Benefits

- Precision manufactured from high quality brass (Marine Grade Electroless Nickel Plated™), aluminium or stainless steel 316/316L. (Note: Aluminium not suitable for Group I applications).
- Converts mismatching threads to the required thread.



Technical Data

Type:	Union
Material:	Brass (Marine Grade Electroless Nickel Plated™), Aluminium, Stainless Steel 316/316L
Note:	The installer should check that the materials are suitable for the installation environment

Standards and Certifications

Equipment Protection Levels:	IECEX/INMETRO: Ex db I Mb / Ex eb I Mb / Ex db IIC Gb / Ex eb IIC Gb / Ex ta IIIC Da / Ex nR IIC ATEX/UKEX: Ex I M2 Ex db I Mb / Ex eb I Mb, Ex II 2G 1D Ex db IIC Gb / Ex eb IIC Gb / Ex ta IIIC Da TR CU: Ex d IIC Gb X / PB Ex d I Mb X / 1Ex e IIC Gb X / PFI Ex e I Mc X / Ex tb IIIC Db X CCC: Ex d IIC Gb, Ex d I Mb, Ex e IIC Gb, Ex e I Mb, Ex tD A21 IP65/66/67/68	
Conformance:	Standard:	Certificate:
IECEX	IEC 60079 Part 0, 1, 7, 15, 31 IEC 60079 Part 0, 1, 7, 31	IECEX CML 16.0062X IECEX ITA 13.0005X
ATEX	EN 60079 Part 0, 1, 7, 31	CML 15ATEX1040X
UKEX	BS EN 60079 Part 0, 1, 7, 31	CML 21UKEX1014X
INMETRO (Brazil)	ABNT NBR IEC 60079 Part 0, 1, 7, 31	TÜV 15.0485X
TR CU (Russia)	ГОСТ Р МЭК 60079-0, 7, 31 ГОСТ IEC 60079-1	TC RU C-ZA.ME92.B.00695
CCC / CNEEx (Chinese)	GB/T3836.1-2021, GB/T3836.2-2021, GB/T3836.3-2021, GB/T3836.31-2021	CNEEx 21.3391X CCC 2021312313000391
SANS	SANS/IEC 60079 Part 0, 1, 7, 31 SANS/IEC 60529	MASC MS/13-594X
IP66/68 2m - Parallel IP65/66 - Tapered	IEC 60529 IEC 60529	CML15Y728
Deluge Protection	DTS-01	CML 14CA370-2
Corrosion Protection	ASTM B117-11, BS EN ISO 3231	EXOVA N968667
Marine ABS	IEC 60079 Part 0, 1, 7, 15, 31 and IEC 60529	ABS 20-SG1952706-1-PDA
DNV-GL	IEC 60079 Part 0, 1, 7 and IEC 60529	DNV-GL TAE0000010
London Underground Approval	BS EN 62444	LU 3043, LU 3044



Conditions and limitations for Safe Use - X

- An IP rating of IP66/68 is maintained for units with parallel threads when used with a CCG sealing gasket and for units with tapered thread when thread sealant is conducted as indicated in IEC 60079-14. Alternatively an IP65 rating is applicable.
- Operating temperature range -60°C to +95°C (HDPE gasket), -60°C to +100°C (nylon gasket) or -60°C to +160°C (PTFE gasket) is applicable if the gaskets are utilized to maintain an IP rating IP65/66/68 2m continued.
- A blanking element may not be installed on a Union.

METRIC TO METRIC

Product Code	Size Metric "A" x Metric "B"	Thread Length Min "C"	Thread Length Min "D"	Overall Length Min "E"	Dimension Min A/F
UM016M016	M16 x M16	15	15	30	24
UM020M016	M20 x M16	15	15	30	27
UM020M020	M20 x M20	15	15	30	27
UM025M016	M25 x M16	15	15	30	32
UM025M020	M25 x M20	15	15	30	32
UM025M025	M25 x M25	15	15	30	32
UM032M016	M32 x M16	15	15	30	38
UM032M020	M32 x M20	15	15	30	38
UM032M025	M32 x M25	15	15	30	38
UM032M032	M32 x M32	15	15	30	38
UM040M016	M40 x M16	15	15	30	45
UM040M020	M40 x M20	15	15	30	45
UM040M025	M40 x M25	15	15	30	45
UM040M032	M40 x M32	15	15	30	45
UM040M040	M40 x M40	15	15	30	45
UM050M020	M50 x M20	15	15	30	60
UM050M025	M50 x M25	15	15	30	60
UM050M032	M50 x M32	15	15	30	60
UM050M040	M50 x M40	15	15	30	60
UM050M050	M50 x M50	15	15	30	60
UM063M025	M63 x M25	15	15	30	80
UM063M032	M63 x M32	15	15	30	80
UM063M040	M63 x M40	15	15	30	80
UM063M050	M63 x M50	15	15	30	80
UM063M063	M63 x M63	15	15	30	80
UM075M032	M75 x M32	15	15	30	80
UM075M040	M75 x M40	15	15	30	80
UM075M050	M75 x M50	15	15	30	80
UM075M063	M75 x M63	15	15	30	80
UM075M075	M75 x M75	15	15	30	80
UM080M040	M80 x M40	20	15	35	96
UM080M050	M80 x M50	20	15	35	96
UM080M063	M80 x M63	20	15	35	96
UM080M075	M80 x M75	20	15	35	96
UM080M080	M80 x M80	20	20	40	96
UM090M050	M90 x M50	20	15	35	96
UM090M063	M90 x M63	20	15	35	96
UM090M075	M90 x M75	20	15	35	96
UM090M080	M90 x M80	20	20	40	96
UM090M090	M90 x M90	20	20	40	96
UM100M063	M100 x M63	20	20	40	111
UM100M075	M100 x M75	20	20	40	111
UM100M080	M100 x M80	20	20	40	111
UM100M090	M100 x M90	20	20	40	111
UM100M100	M100 x M100	20	20	40	111

All dimensions are in mm.

NPT TO BSP

Product Code	Size NPT "A" x BSP "B"	Thread Length Min "C"	Thread Length Min "D"	Overall Length Min "E"	Dimension Min A/F
UN012B012	½ NPT x ½ BSP	15	16	31	27
UN034B012	¾ NPT x ½ BSP	15	16	31	32
UN034B034	¾ NPT x ¾ BSP	15	16	31	32
UN001B012	1 NPT x ½ BSP	18	16	35	42
UN001B034	1 NPT x ¾ BSP	18	16	35	45
UN001B001	1 NPT x 1 BSP	18	18	37	45
UN114B012	1¼ NPT x ½ BSP	19	16	35	47
UN114B034	1¼ NPT x ¾ BSP	19	16	35	47
UN114B001	1¼ NPT x 1 BSP	19	18	37	47
UN114B114	1¼ NPT x 1¼ BSP	19	18	37	47
UN112B012	1½ NPT x ½ BSP	19	16	37	55
UN112B034	1½ NPT x ¾ BSP	19	16	37	55
UN112B001	1½ NPT x 1 BSP	19	18	39	55
UN112B114	1½ NPT x 1¼ BSP	19	18	39	55
UN112B112	1½ NPT x 1½ BSP	19	18	39	55
UN002B034	2 NPT x ¾ BSP	19	16	37	65
UN002B001	2 NPT x 1 BSP	19	18	39	65
UN002B114	2 NPT x 1¼ BSP	19	18	39	65
UN002B112	2 NPT x 1½ BSP	19	18	39	65
UN002B002	2 NPT x 2 BSP	19	18	39	65
UN212B001	2½ NPT x 1 BSP	25	18	48	80
UN212B114	2½ NPT x 1¼ BSP	25	18	48	80
UN212B112	2½ NPT x 1½ BSP	25	18	48	80
UN212B002	2½ NPT x 2 BSP	25	18	48	80
UN212B212	2½ NPT x 2½ BSP	25	18	48	80
UN003B114	3 NPT x 1¼ BSP	27	18	50	96
UN003B112	3 NPT x 1½ BSP	27	18	50	96
UN003B002	3 NPT x 2 BSP	27	18	50	96
UN003B212	3 NPT x 2½ BSP	27	18	50	96
UN003B003	3 NPT x 3 BSP	27	18	50	96
UN312B112	3½ NPT x 1½ BSP	29	18	51	111
UN312B002	3½ NPT x 2 BSP	29	18	51	111
UN312B212	3½ NPT x 2½ BSP	29	18	51	111
UN312B003	3½ NPT x 3 BSP	29	18	51	111
UN312B312	3½ NPT x 3½ BSP	29	18	51	111
UN004N002	4 NPT x 2 BSP	29	18	52	125
UN004N212	4 NPT x 2½ BSP	29	18	52	125
UN004N003	4 NPT x 3 BSP	29	18	52	125
UN004N312	4 NPT x 3½ BSP	29	18	52	125
UN004N004	4 NPT x 4 BSP	29	18	52	125

All dimensions except NPT and BSP are in mm.

BSP TO NPT

Product Code	Size BSP "A" x NPT "B"	Thread Length Min "C"	Thread Length Min "D"	Overall Length Min "E"	Dimension Min A/F
UB012N012	½ BSP x ½ NPT	16	15	31	27
UB034N012	¾ BSP x ½ NPT	16	15	31	32
UB034N034	¾ BSP x ¾ NPT	16	15	31	32
UB001N012	1 BSP x ½ NPT	18	15	33	40
UB001N034	1 BSP x ¾ NPT	18	15	33	40
UB001N001	1 BSP x 1 NPT	18	18	37	40
UB114N012	1¼ BSP x ½ NPT	18	15	33	47
UB114N034	1¼ BSP x ¾ NPT	18	15	33	47
UB114N001	1¼ BSP x 1 NPT	18	18	37	47
UB114N114	1¼ BSP x 1¼ NPT	18	19	37	47
UB112N012	1½ BSP x ½ NPT	18	15	33	55
UB112N034	1½ BSP x ¾ NPT	18	15	33	55
UB112N001	1½ BSP x 1 NPT	18	18	37	55
UB112N114	1½ BSP x 1¼ NPT	18	19	37	52
UB112N112	1½ BSP x 1½ NPT	18	19	39	55
UB002N034	2 BSP x ¾ NPT	18	15	33	65
UB002N001	2 BSP x 1 NPT	18	18	37	65
UB002N114	2 BSP x 1¼ NPT	18	19	37	65
UB002N112	2 BSP x 1½ NPT	18	19	39	65
UB002N002	2 BSP x 2 NPT	18	19	39	65
UB212N001	2½ BSP x 1 NPT	18	18	37	80
UB212N114	2½ BSP x 1¼ NPT	18	19	37	80
UB212N112	2½ BSP x 1½ NPT	18	19	39	80
UB212N002	2½ BSP x 2 NPT	18	19	39	80
UB212N212	2½ BSP x 2½ NPT	18	25	48	80
UB003N114	3 BSP x 1¼ NPT	18	19	37	96
UB003N112	3 BSP x 1½ NPT	18	19	39	96
UB003N002	3 BSP x 2 NPT	18	19	39	96
UB003N212	3 BSP x 2½ NPT	18	25	48	96
UB003N003	3 BSP x 3 NPT	18	27	50	96
UB312N112	3½ BSP x 1¼ NPT	18	19	39	111
UB312N002	3½ BSP x 2 NPT	18	19	39	111
UB312N212	3½ BSP x 2½ NPT	18	25	48	111
UB312N003	3½ BSP x 3 NPT	18	27	50	111
UB312N312	3½ BSP x 3½ NPT	18	29	51	111
UB004N002	4 BSP x 2 NPT	18	19	39	125
UB004N212	4 BSP x 2½ NPT	18	25	48	125
UB004N312	4 BSP x 3 NPT	18	27	50	125
UB004N312	4 BSP x 3½ NPT	18	29	51	125
UB004N004	4 BSP x 4 NPT	18	29	52	125

All dimensions except BSP and NPT are in mm.

NPT TO NPT

Product Code	Size NPT "A" x NPT "B"	Thread Length Min "C"	Thread Length Min "D"	Overall Length Min "E"	Dimension Min A/F
UN012N012	½ NPT x ½ NPT	15	15	30	25
UN034N012	¾ NPT x ½ NPT	15	15	30	32
UN034N034	¾ NPT x ¾ NPT	15	15	30	32
UN001N012	1 NPT x ½ NPT	18	15	34	38
UN001N034	1 NPT x ¾ NPT	18	15	34	38
UN001N001	1 NPT x 1 NPT	18	18	38	38
UN114N012	1¼ NPT x ½ NPT	19	15	34	47
UN114N034	1¼ NPT x ¾ NPT	19	15	34	47
UN114N001	1¼ NPT x 1 NPT	19	18	38	47
UN114N114	1¼ NPT x 1¼ NPT	19	19	38	47
UN112N012	1½ NPT x ½ NPT	19	15	36	52
UN112N034	1½ NPT x ¾ NPT	19	15	36	52
UN112N001	1½ NPT x 1 NPT	19	18	40	52
UN112N114	1½ NPT x 1¼ NPT	19	19	40	52
UN112N112	1½ NPT x 1½ NPT	19	19	42	52
UN002N034	2 NPT x ¾ NPT	19	15	36	65
UN002N001	2 NPT x 1 NPT	19	18	40	65
UN002N114	2 NPT x 1¼ NPT	19	19	40	65
UN002N112	2 NPT x 1½ NPT	19	19	42	65
UN002N002	2 NPT x 2 NPT	19	19	42	65
UN212N001	2½ NPT x 1 NPT	25	18	49	80
UN212N114	2½ NPT x 1¼ NPT	25	19	49	80
UN212N112	2½ NPT x 1½ NPT	25	19	51	80
UN212N002	2½ NPT x 2 NPT	25	19	51	80
UN212N212	2½ NPT x 2½ NPT	25	25	60	80
UN003N114	3 NPT x 1¼ NPT	27	19	51	96
UN003N112	3 NPT x 1½ NPT	27	19	53	96
UN003N002	3 NPT x 2 NPT	27	19	53	96
UN003N212	3 NPT x 2½ NPT	27	25	62	96
UN003N003	3 NPT x 3 NPT	27	27	64	96
UN312N112	3½ NPT x 1¼ NPT	29	19	54	111
UN312N002	3½ NPT x 2 NPT	29	19	54	111
UN312N212	3½ NPT x 2½ NPT	29	25	63	111
UN312N003	3½ NPT x 3 NPT	29	27	65	111
UN312N312	3½ NPT x 3½ NPT	29	29	66	111
UN004N002	4 NPT x 2 NPT	29	19	55	125
UN004N212	4 NPT x 2½ NPT	29	25	64	125
UN004N003	4 NPT x 3 NPT	29	27	66	125
UN004N312	4 NPT x 3½ NPT	29	29	67	125
UN004N004	4 NPT x 4 NPT	29	29	68	125

All dimensions except NPT are in mm.

PRODUCT CODE STRUCTURE

1st Character denotes the type, U = Union	2nd Character denotes the female thread - Metric, NPT or BSP	3rd to 5th Character denotes the size of the female thread	6th Character denotes the female thread - Metric, NPT or BSP	7th to 9th Character denotes the size of female thread	10th Character denotes the classification - Conduit (S) or Ex (E)	Example Product Code
U	B	004	N	312	E	UB004N312E

UNION SELECTION CHART

BSP/NPT TO METRIC UNION SELECTION CHART

MALE FEMALE	METRIC										
	M16	M20	M25	M32	M40	M50	M63	M75	M80	M90	M100
½"BSP/½"NPT	UN	UN	UN	UN	UN						
¾"BSP/¾"NPT	UN	UN	UN	UN	UN	UN					
1"BSP/1"NPT	UN	UN	UN	UN	UN	UN	UN				
1¼"BSP/1¼"NPT	UN	UN	UN	UN	UN	UN	UN	UN			
1½"BSP/1½"NPT		UN	UN	UN	UN	UN	UN	UN	UN		
2"BSP/2"NPT			UN	UN	UN	UN	UN	UN	UN	UN	
2½"BSP/2½"NPT				UN	UN	UN	UN	UN	UN	UN	UN
3"BSP/3"NPT					UN	UN	UN	UN	UN	UN	UN
3½"BSP/3½"NPT						UN	UN	UN	UN	UN	UN
4"BSP/4"NPT							UN	UN	UN	UN	UN

BSP/NPT TO BSP/NPT UNION SELECTION CHART

MALE FEMALE	BSP / NPT									
	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"
½"BSP/½"NPT	UN									
¾"BSP/¾"NPT	UN	UN								
1"BSP/1"NPT	UN	UN	UN							
1¼"BSP/1¼"NPT	UN	UN	UN	UN						
1½"BSP/1½"NPT	UN	UN	UN	UN	UN					
2"BSP/2"NPT		UN	UN	UN	UN	UN				
2½"BSP/2½"NPT			UN	UN	UN	UN	UN			
3"BSP/3"NPT				UN	UN	UN	UN	UN		
3½"BSP/3½"NPT					UN	UN	UN	UN	UN	
4"BSP/4"NPT						UN	UN	UN	UN	UN

METRIC TO METRIC UNION SELECTION CHART

MALE FEMALE	METRIC										
	M16	M20	M25	M32	M40	M50	M63	M75	M80	M90	M100
M16	UN										
M20	UN	UN									
M25	UN	UN	UN								
M32	UN	UN	UN	UN							
M40	UN	UN	UN	UN	UN						
M50		UN	UN	UN	UN	UN					
M63			UN	UN	UN	UN	UN				
M75				UN	UN	UN	UN	UN			
M80					UN	UN	UN	UN	UN		
M90						UN	UN	UN	UN	UN	
M100							UN	UN	UN	UN	UN

METRIC TO BSP/NPT UNION SELECTION CHART

MALE FEMALE	BSP / NPT									
	½"	¾"	1"	1¼"	1½"	2"	2½"	3"	3½"	4"
M16	UN	UN	UN	UN						
M20	UN	UN	UN	UN	UN					
M25	UN	UN	UN	UN	UN	UN				
M32	UN	UN	UN	UN	UN	UN	UN			
M40	UN	UN	UN	UN	UN	UN	UN	UN		
M50		UN	UN	UN	UN	UN	UN	UN	UN	
M63			UN	UN	UN	UN	UN	UN	UN	UN
M75				UN	UN	UN	UN	UN	UN	UN
M80					UN	UN	UN	UN	UN	UN
M90						UN	UN	UN	UN	UN
M100							UN	UN	UN	UN

SIZE REFERENCE

Metric Size Reference	NPT Size Reference	BSP Size Reference
M16 x 1.5	-	-
M20 x 1.5	½ / ¾	½ / ¾
M25 x 1.5	¾ / 1	¾ / 1
M32 x 1.5	1 / 1¼	1 / 1¼
M40 x 1.5	1¼ / 1½	1¼ / 1½
M50 x 1.5	1½ / 2	1½ / 2
M63 x 1.5	2 / 2½	2 / 2½
M63 x 1.5	2 / 2½	2 / 2½
M75 x 1.5	2½ / 3	2½ / 3
M75 x 1.5	2½ / 3	2½ / 3
M80 x 2.0	3	3
M90 x 2.0	3 / 3½	3 / 3½
M100 x 2.0	3½ / 4	3½ / 4
M115 x 2.0	4	4
M120 x 2.0	-	-