

# REDUCER

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:	Reducer
Material:	Brass (Marine Grade Electroless Nickel Plated™), Aluminium, Stainless Steel 316/316L
Gasket material:	Standard HDPE or Extreme Temp. PTFE
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 / P I 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 31610-0, 15, ГОСТ IEC 60079-1 ГОСТ Р МЭК 60079-7, 31	EAЭC RU C-ZA.HA91.B.00244/21
CCC / CNEEx (Chinese)	GB/T3836.1-2021, GB/T3836.2-2021, GB/T3836.3-2021, GB/T3836.31-2021	CNEEx 21.3391X CCC 2021312313000391
KCS (Korea)	Notification of Ministry of Labour No. 2013-54	16-AV4BO-0439-42X
SANS	SANS/IEC 60079 Part 0, 1, 7, 31 SANS/IEC 60529	MASC MS/13-594X
IP66/68 2m - Parallel	IEC 60529	CML15Y728
IP65/66 - Tapered	IEC 60529	
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, IEC 60529	ABS 20-SG1952706-1-PDA
DNV-GL	IEC 60079 Part 0, 1, 7, IEC 60529	DNV-GL TAE0000010
ClassNK	IEC 60079 Part 0, 1, 7, 15, 31	TA20272M
London Underground Approval	BS EN 62444	LU 3043, LU 3044



## Conditions and limitations for Safe Use - X

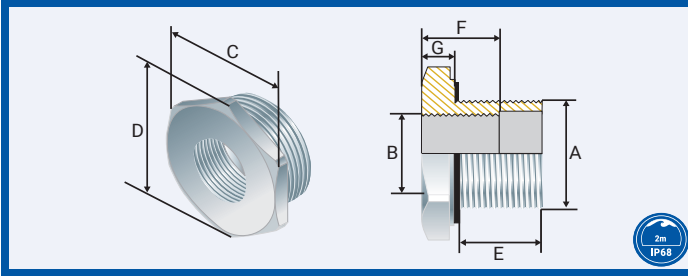
- An IP rating of IP66/68 is maintained for units with parallel threads when used with the supplied washer and for units with tapered thread when thread sealant is conducted as indicated in IEC 60079-14. Alternatively an IP65 rating is applicable.
- Operating temperature range -60°C to +95°C (HDPE gasket), -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 an Reducer.
- When the equipment with metric male thread and with the sealing washer fitted is intended for use / interface in threaded holes in a flame-proof enclosure the applicable thread engagement must be achieved after the washer has been fitted. Thread engagement shall be at least five full threads.



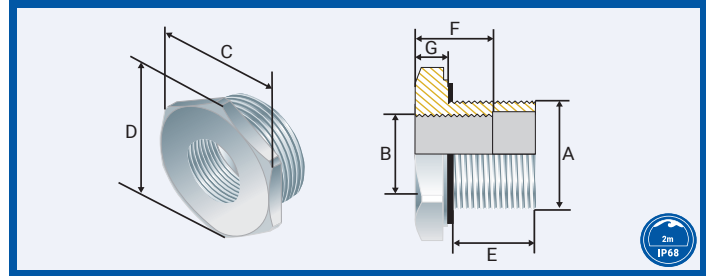




## METRIC IP REDUCER



## CONDUIT REDUCER



Product Code	Male Metric Thread "A"	Female Metric Thread "B"	Hex Across Flats Min "C"	Hex Across Corners Min "D"	Male Thread Depth Min "E"	Female Thread Depth Min "F"	Hex Length Min "G"
RM020M016IP	M20	M16	27.0	30.4	12.0	10.0	6.0
RM025M016IP	M25	M16	32.0	36.0	12.0	10.0	6.0
RM025M020IP	M25	M20	32.0	36.0	12.0	15.0	6.0
RM032M016IP	M32	M16	38.0	42.8	12.0	15.0	6.0
RM032M020IP	M32	M20	38.0	42.8	12.0	15.0	6.0
RM032M025IP	M32	M25	38.0	42.8	12.0	15.0	6.0
RM040M016IP	M40	M16	47.0	52.9	12.0	15.0	6.0
RM040M020IP	M40	M20	47.0	52.9	12.0	15.0	6.0
RM040M025IP	M40	M25	47.0	52.9	12.0	15.0	6.0
RM040M032IP	M40	M32	47.0	52.9	12.0	15.0	6.0
RM050M016IP	M50	M16	60.0	67.5	12.0	15.0	6.0
RM050M020IP	M50	M20	60.0	67.5	12.0	15.0	6.0
RM050M025IP	M50	M25	60.0	67.5	12.0	15.0	6.0
RM050M032IP	M50	M32	60.0	67.5	12.0	15.0	6.0
RM050M040IP	M50	M40	60.0	67.5	12.0	15.0	6.0
RM063M016IP	M63	M16	70.0	78.8	12.0	15.0	6.0
RM063M020IP	M63	M20	70.0	78.8	12.0	15.0	6.0
RM063M025IP	M63	M25	70.0	78.8	12.0	15.0	6.0
RM063M032IP	M63	M32	70.0	78.8	12.0	15.0	6.0
RM063M040IP	M63	M40	70.0	78.8	12.0	15.0	6.0
RM063M050IP	M63	M50	70.0	78.8	12.0	15.0	6.0
RM075M016IP	M75	M16	85.0	95.6	12.0	15.0	6.0
RM075M020IP	M75	M20	85.0	95.6	12.0	15.0	6.0
RM075M025IP	M75	M25	85.0	95.6	12.0	15.0	6.0
RM075M032IP	M75	M32	85.0	95.6	12.0	15.0	6.0
RM075M040IP	M75	M40	85.0	95.6	12.0	15.0	6.0
RM075M050IP	M75	M50	85.0	95.6	12.0	15.0	6.0
RM075M063IP	M75	M63	85.0	95.6	12.0	15.0	6.0
RM080M016IP	M80	M16	90.0	101.3	16.0	15.0	6.0
RM080M020IP	M80	M20	90.0	101.3	16.0	15.0	6.0
RM080M025IP	M80	M25	90.0	101.3	16.0	15.0	6.0
RM080M032IP	M80	M32	90.0	101.3	16.0	15.0	6.0
RM080M040IP	M80	M40	90.0	101.3	16.0	15.0	6.0
RM080M050IP	M80	M50	90.0	101.3	16.0	15.0	6.0
RM080M063IP	M80	M63	90.0	101.3	16.0	15.0	6.0
RM080M075IP	M80	M75	90.0	101.3	16.0	15.0	6.0
RM090M016IP	M90	M16	96.0	108.0	16.0	15.0	6.0
RM090M020IP	M90	M20	96.0	108.0	16.0	15.0	6.0
RM090M025IP	M90	M25	96.0	108.0	16.0	15.0	6.0
RM090M032IP	M90	M32	96.0	108.0	16.0	15.0	6.0
RM090M040IP	M90	M40	96.0	108.0	16.0	15.0	6.0
RM090M050IP	M90	M50	96.0	108.0	16.0	15.0	6.0
RM090M063IP	M90	M63	96.0	108.0	16.0	15.0	6.0
RM090M075IP	M90	M75	96.0	108.0	16.0	15.0	6.0
RM090M080IP	M90	M80	96.0	108.0	16.0	20.0	6.0
RM100M016IP	M100	M16	111.0	124.9	16.0	15.0	6.0
RM100M020IP	M100	M20	111.0	124.9	16.0	15.0	6.0
RM100M025IP	M100	M25	111.0	124.9	16.0	15.0	6.0
RM100M032IP	M100	M32	111.0	124.9	16.0	15.0	6.0
RM100M040IP	M100	M40	111.0	124.9	16.0	15.0	6.0
RM100M050IP	M100	M50	111.0	124.9	16.0	15.0	6.0
RM100M063IP	M100	M63	111.0	124.9	16.0	15.0	6.0
RM100M075IP	M100	M75	111.0	124.9	16.0	15.0	6.0
RM100M080IP	M100	M80	111.0	124.9	16.0	20.0	6.0
RM100M090IP	M100	M90	111.0	124.9	16.0	20.0	6.0

All dimensions are in mm.

Product Code	Male Metric Thread "A"	Female Metric Thread "B"	Hex Across Flats Min "C"	Hex Across Corners Min "D"	Male Thread Depth Min "E"	Female Thread Depth Min "F"	Hex Length Min "G"
RM020M016S	M20	M16	24.0	27.0	10.0	8.0	5.0
RM025M016S	M25	M16	27.0	30.4	10.0	8.0	5.0
RM025M020S	M25	M20	27.0	30.4	10.0	8.0	5.0
RM032M016S	M32	M16	32.0	36.0	10.0	8.0	5.0
RM032M020S	M32	M20	32.0	36.0	10.0	8.0	5.0
RM032M025S	M32	M25	32.0	36.0	10.0	8.0	5.0
RM040M016S	M40	M16	42.0	47.3	10.0	8.0	6.0
RM040M020S	M40	M20	42.0	47.3	10.0	8.0	6.0
RM040M025S	M40	M25	42.0	47.3	10.0	8.0	6.0
RM040M032S	M40	M32	42.0	47.3	10.0	8.0	6.0
RM050M016S	M50	M16	50.0	56.3	10.0	8.0	6.0
RM050M020S	M50	M20	50.0	56.3	10.0	8.0	6.0
RM050M025S	M50	M25	50.0	56.3	10.0	8.0	6.0
RM050M032S	M50	M32	50.0	56.3	10.0	8.0	6.0
RM050M040S	M50	M40	50.0	56.3	10.0	8.0	6.0
RM063M016S	M63	M16	65.0	73.1	10.0	8.0	6.0
RM063M020S	M63	M20	65.0	73.1	10.0	8.0	6.0
RM063M025S	M63	M25	65.0	73.1	10.0	8.0	6.0
RM063M032S	M63	M32	65.0	73.1	10.0	8.0	6.0
RM063M040S	M63	M40	65.0	73.1	10.0	8.0	6.0
RM063M050S	M63	M50	65.0	73.1	10.0	8.0	6.0
RM075M016S	M75	M16	80.0	90.0	10.0	8.0	8.0
RM075M020S	M75	M20	80.0	90.0	10.0	8.0	8.0
RM075M025S	M75	M25	80.0	90.0	10.0	8.0	8.0
RM075M032S	M75	M32	80.0	90.0	10.0	8.0	8.0
RM075M040S	M75	M40	80.0	90.0	10.0	8.0	8.0
RM075M050S	M75	M50	80.0	90.0	10.0	8.0	8.0
RM075M063S	M75	M63	80.0	90.0	10.0	8.0	8.0
RM080M016S	M80	M16	85.0	95.6	14.0	8.0	8.0
RM080M020S	M80	M20	85.0	95.6	14.0	8.0	8.0
RM080M025S	M80	M25	85.0	95.6	14.0	8.0	8.0
RM080M032S	M80	M32	85.0	95.6	14.0	8.0	8.0
RM080M040S	M80	M40	85.0	95.6	14.0	8.0	8.0
RM080M050S	M80	M50	85.0	95.6	14.0	8.0	8.0
RM080M063S	M80	M63	85.0	95.6	14.0	8.0	8.0
RM080M075S	M80	M75	85.0	95.6	14.0	8.0	8.0
RM090M016S	M90	M16	96.0	108.0	14.0	8.0	8.0
RM090M020S	M90	M20	96.0	108.0	14.0	8.0	8.0
RM090M025S	M90	M25	96.0	108.0	14.0	8.0	8.0
RM090M032S	M90	M32	96.0	108.0	14.0	8.0	8.0
RM090M040S	M90	M40	96.0	108.0	14.0	8.0	8.0
RM090M050S	M90	M50	96.0	108.0	14.0	8.0	8.0
RM090M063S	M90	M63	96.0	108.0	14.0	8.0	8.0
RM090M075S	M90	M75	96.0	108.0	14.0	8.0	8.0
RM090M080S	M90	M80	96.0	108.0	14.0	14.0	8.0
RM100M016S	M100	M16	111.0	124.9	14.0	8.0	8.0
RM100M020S	M100	M20	111.0	124.9	14.0	8.0	8.0
RM100M025S	M100	M25	111.0	124.9	14.0	8.0	8.0
RM100M032S	M100	M32	111.0	124.9	14.0	8.0	8.0
RM100M040S	M100	M40	111.0	124.9	14.0	8.0	8.0
RM100M050S	M100	M50	111.0	124.9	14.0	8.0	8.0
RM100M063S	M100	M63	111.0	124.9	14.0	8.0	8.0
RM100M075S	M100	M75	111.0	124.9	14.0	8.0	8.0
RM100M080S	M100	M80	111.0	124.9	14.0	14.0	8.0
RM100M090S	M100	M90	111.0	124.9	14.0	14.0	8.0

All dimensions are in mm.

## PRODUCT CODE STRUCTURE

1st Character denotes the type, R = REDUCER	2nd Character denotes the male thread - Metric, NPT or BSP	3rd to 5th Character denotes the size of the male 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), Ingress Protection (IP) or Ex (E)	Example Product Code
R	M	090	M	020	IP	RM090M020IP

## METRIC TO METRIC, BSP/NPT REDUCER SELECTION CHART

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

## BSP/NPT TO METRIC, BSP/NPT REDUCER SELECTION CHART

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

## 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	-	-