



it's cool to be safe
explosion proof solution for the global market



RA - PL

The adaptors and plugs are normally used in the chemical and petrochemical plants, off-shore platforms, refineries and any other industry where hazardous atmospheres (gas and combustible dust) are potentially present.



Use

The plugs are normally installed on Ex d and Ex e enclosures to protect the internal equipment by the penetration of liquids and dust before the installation of the conduit fittings and cable glands. They also allow the presence of spare hubs on the enclosure to be used in case of future expansions.

The adaptors are used to resolve all the problems connected to the conduit installation as joints and direct connections of equipment with different sizes of threads and/or different types of thread.

The adaptors and plugs with cylindrical threads are equipped with O-ring to grant an IP 66/68 protection to the enclosure.

Construction

The materials used to manufacture the adaptors and plugs have been studied to grant the maximum protection against the highly corrosive agents present in these industries.

They are available in:

- brass
- nickel-plated brass
- galvanized steel
- stainless steel AISI 316

The O-ring are made of neoprene and, for low and high temperature environments, of silicone.

The design of all the adaptors and plugs includes the presence of a hexagon shape to facilitate the installation and to grant the correct tightening level.

All the equipment have the double marking for Ex d and Ex e installations with the sole exception of the components threaded with PG – DIN 40430 that are available only for Ex e installations.

Material	
Code	Description
B	Brass
N	Nickel-Plated Brass
S	Stainless Steel
G	Galvanized Steel


Ordering Codes

In the product pages there are indicated, as standard solutions, only the components threaded with NPT or Metric pitch 1.5 and the ordering codes of the tables show all the possible combinations.

Upon request, there are available other types of thread for any special purpose.

Ordering tables with all possible combinations are listed on pages 54 and 55 of this catalogue.

Protection

certificate number:	IMQ 12 ATEX 007U	TC RU C-IT.AA87.B.00509
marking:	 II 2GD Ex d IIC Gb - Ex e IIC Gb - Ex tb IIIC Db	
ambient temperature:	-40°C +80°C	
degree of protection:	IP66 / IP68	
conformity:	Directive ATEX 2014/34/EU	TP TC 012/2011
standards:	IEC-EN60079-0 IEC-EN60079-1 IEC-EN60079-7 IEC-EN60079-31	ГОСТ 31610.0 ГОСТ IEC 60079-1 ГОСТ P МЭК 60079-7 ГОСТ P МЭК 60079-31
category:	suitable for Zone 1 - 21 (gas) and Zone 2 - 22 (dust)	



RAN series
male - male nipples & adaptors

The RAN nipples are used to convert a female hub into an equivalent or reduced or increased male hub.

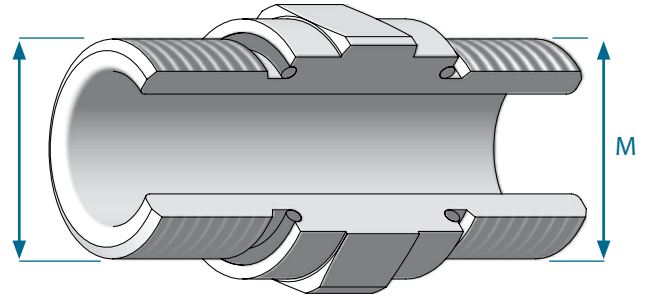
The RAN fittings with same diameter size and thread type on both side are used to connect equipment with female threaded hubs.

The adaptors (reducers / enlargers) are used to provide means of connection between same or dissimilar thread forms (e.g. NPT to Metric).

Nipples RAN

RAN		MALE thread - NPT ANSI ASME B1.20.1										
		1/4"	3/8"	1/2"	3/4"	1"	1" 1/4	1" 1/2	2"	2" 1/2	3"	4"
MALE thread - NPT ANSI ASME B1.20.1	1/4"	02N02N										
	3/8"	01N02N	01N01N									
	1/2"	1N02N	1N01N	1N1N								
	3/4"	2N02N	2N01N	2N1N	2N2N							
	1"	3N02N	3N01N	3N1N	3N2N	3N3N						
	1" 1/4	4N02N	4N01N	4N1N	4N2N	4N3N	4N4N					
	1" 1/2	5N02N	5N01N	5N1N	5N2N	5N3N	5N4N	5N5N				
	2"	6N02N	6N01N	6N1N	6N2N	6N3N	6N4N	6N5N	6N6N			
	2" 1/2	7N02N	7N01N	7N1N	7N2N	7N3N	7N4N	7N5N	7N6N	7N7N		
	3"	8N02N	8N01N	8N1N	8N2N	8N3N	8N4N	8N5N	8N6N	8N7N	8N8N	
4"	10N02N	10N01N	10N1N	10N2N	10N3N	10N4N	10N5N	10N6N	10N7N	10N8N	10N10N	

RAN		MALE thread - Metric Pitch 1.5 - ISO 262										
		12	16	20	25	32	40	50	63	75	90	110
MALE thread - Metric Pitch 1.5 - ISO 262	12	02M02M										
	16	0102M	01M01M									
	20	1M02M	1M01M	1M1M								
	25	2M02M	2M01M	2M1M	2M2M							
	32	3M02M	3M01M	3M1M	3M2M	3M3M						
	40	4M02M	4M01M	4M1M	4M2M	4M3M	4M4M					
	50	5M02M	5M01M	5M1M	5M2M	5M3M	5M4M	5M5M				
	63	6M02M	6M01M	6M1M	6M2M	6M3M	6M4M	6M5M	6M6M			
	75	7M02M	7M01M	7M1M	7M2M	7M3M	7M4M	7M5M	7M6M	7M7M		
	90	8M02M	8M01M	8M1M	8M2M	8M3M	8M4M	8M5M	8M6M	8M7M	8M8M	
110	10M02M	10M01M	10M1M	10M2M	10M3M	10M4M	10M5M	10M6M	10M7M	10M8M	10M10M	



Adaptors RAN

RAN	MALE thread - Metric Pitch 1.5 - ISO 262											
	12	16	20	25	32	40	50	63	75	90	110	
MALE thread - NPT ANSI ASME B1.20.1	1/4"	02N02M										
	3/8"	01N02M	01N01M									
	1/2"	1N02M	1N01M	1N01M								
	3/4"	2N02M	2N01M	2N1M	2N2M							
	1"	3N02M	3N01M	3N1M	3N2M	3N3M						
	1" 1/4	4N02M	4N01M	4N1M	4N2M	4N3M	4N4M					
	1" 1/2	5N02M	5N01M	5N1M	5N2M	5N3M	5N4M	5N5M				
	2"	6N02M	6N01M	6N1M	6N2M	6N3M	6N4M	6N5M	6N6M			
	2" 1/2	7N02M	7N01M	7N1M	7N2M	7N3M	7N4M	7N5M	7N6M	7N7M		
	3"	8N02M	8N01M	8N1M	8N2M	8N3M	8N4M	8N5M	8N6M	8N7M	8N8M	
4"	10N02M	10N01M	10N1M	10N2M	10N3M	10N4M	10N5M	10N6M	10N7M	10N8M	10N10M	

RAN	MALE thread - NPT ANSI ASME B1.20.1											
	1/4"	3/8"	1/2"	3/4"	1"	1" 1/4	1" 1/2	2"	2" 1/2	3"	4"	
MALE thread - Metric Pitch 1.5 - ISO 262	12	02M02N										
	16	01M02N	01M01N									
	20	1M02N	1M01N	1M1N								
	25	2M02N	2M01N	2M1N	2M2N							
	32	3M02N	3M01N	3M1N	3M2N	3M3N						
	40	4M02N	4M01N	4M1N	4M2N	4M3N	4M4N					
	50	5M02N	5M01N	5M1N	5M2N	5M3N	5M4N	5M5N				
	63	6M02N	6M01N	6M1N	6M2N	6M3N	6M4N	6M5N	6M6N			
	75	7M02N	7M01N	7M1N	7M2N	7M3N	7M4N	7M5N	7M6N	7M7N		
	90	8MALE02N	8M01N	8M1N	8M2N	8M3N	8M4N	8M5N	8M6N	8M7N	8M8N	
110	10M02N	10M01N	10M1N	10M2N	10M3N	10M4N	10M5N	10M6N	10M7N	10M8N	10M10N	



Ordering Tables

Thread Type	N	M	P	BP	BT	G
02	1/4"	12	-	1/4"	1/4"	1/4"
01	3/8"	16	-	3/8"	3/8"	3/8"
1	1/2"	20	7	1/2"	1/2"	1/2"
2	3/4"	25	9	3/4"	3/4"	3/4"
Thread Size	3	1"	32	11	1"	1"
	4	1"1/4	40	13,5	1"1/4	1"1/4
	5	1"1/2	50	16	1"1/2	1"1/2
	6	2"	63	21	2"	2"
	7	2"1/2	75	29	2"1/2	2"1/2
	8	3"	90	36	3"	3"
	9	-	-	42	-	-
10	4"	110	48	4"	4"	

Thread Type	Code	Description
	N	NPT - ANSI ASME B1.20.1
	M	Metric Pitch 1.5 - ISO 262
	P	PG - DIN 40430
	BP	BSPP - ISO 228/1
	BT	BSPT - ISO 228/1
	G	GAS ISO 7/1

Material	Code	Description
	B	Brass
	N	Nickel-Plated Brass
	P	Polyamide
	G	Galvanized Steel
	S	Stainless Steel

