### **PNA** Cable glands for unarmoured cables

Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts) Classification: Group II - Category 2G 2D

#### Ex Cable Glands







#### **REFERENCE STANDARDS**

	Directive 94/9/EC (until April 19th, 2016) and Directive 2014/34/EU (from April 20th, 2016)
EXECUTION	© II 2 G Ex d / Exe / Exia IIC Gb © II 2 D Ex tb IIIC Db
RULES OF COMPLIANCE	EN/IEC 60079-0; EN/IEC 60079-1; EN/IEC 60079-7; EN/IEC 60079-31
EC Type-Examination Certificate	INERIS 09 ATEX 0028X
PROTECTION DEGREE	IP66 or IP66/68
AMBIENT TEMPERATURE	-40°C ÷ +90°C (Rubber rings EPDM-60) -60°C ÷ +180°C (Rubber rings SILICON)
OTHER AVAILABLE CERTIFICATES	IECEx: IECEx INE 11.0017X
	INMETRO: CEPEL 12.2175X
	ЕАС: TC RU C-IT.ГБ08.В 01624 (-75°C ÷ +180°C)
	RINA: ELE18111CS_016
	RUSSIAN MARINE CERTIFICATE (RMRS): 13.03518.315
	Kc (Korean certification):14-KB4B0-0455X

#### Mechanical characteristics

Body / cap	OT-58 marine brass (ON) - AISI-316L stainless steel (IX)
Finishes	full nickel plating threatment (brass material only)
Rubber rings	EPDM rubber- 50-60 shore hardness - Silicon rubber - 60 shore hardness
O-ring	silicon rubber - 60 shore hardness
Skid washer	nylon 6.0
Chamber for sealing	OT-58 marine brass ("R" version only)

#### Applications

For unarmoured cables only

Single compression type suitable for indoor and outdoor use

Single compression - on cable (inner sealing)

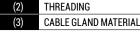
Sealing with proper resin into "chamber of sealing" (on barrier type version "R" only)

#### **On Request Accessories:**

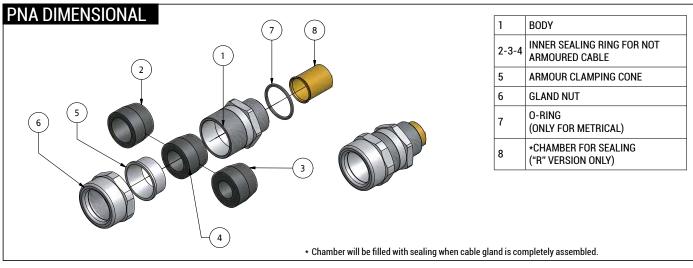
• Locknuts, Gaskets, PVC Shrouds, Earthing Tags, Sealing (See DL-NW-PTD-ET bulletin)

### PNA Cable gland selection table

CODE	SIZE		E	NTRY THREAD	SIZE			INNER SI	HEATH DIA.	HEXAGON	MATERIAL	
(1)		METRIC	(2)	NPT	(2)	UNI ISO 228 (2)		min [mm]	max [mm]	[mm]		(3)
PNA#								4,0	7,0		NICKEL PL.BRASS	ON
PNA-R#	00*	ISO-M20	м	1/2"NPT	N	1/2"	G	7,0	10,0	- 24,0	STAINLESS STEEL	IX
					-			5,5	8,0			
PNA#	01	ISO-M20	м	1/2"NPT	N	1/2"	G	8.0	10,5	32,0	NICKEL PL.BRASS	ON
PNA-R#				.,			Ū	10,5	13,0		STAINLESS STEEL	IX
								10,5	13,0		NICKEL PL.BRASS	ON
PNA#	02	ISO-M25	м	3/4"NPT	N	3/4"	G	13,0	15,5		NICKEL PL.BRASS	UN
PNA-R#								15,5	18,0	_ `	STAINLESS STEEL	IX
								15,0	18,0		NICKEL PL.BRASS	ON
PNA# PNA-R#	03	ISO-M32	м	1"NPT	Ν	1″	G	18,0	21,0	45,0		
rna-n#								21,0	24,0	_	STAINLESS STEEL	IX
								21,0	24,0		NICKEL PL.BRASS	ON
PNA# PNA-R#	04	ISO-M40	м	1 1/4"NPT	N	1 1/4"	G	24,0	27,0	- 53,0	NICKEL FL.BRASS	
rina-n#								27,0	30,0	_	STAINLESS STEEL	IX
								24,0	27,0			
PNA#	05	100 1150		1.1 (011)07		1 1 (0)	~	27,0	30,0	61.0	NICKEL PL.BRASS	ON
PNA-R#	05	ISO-M50	м	1 1/2"NPT	N	1 1/2"	G	30,0	33,0	61,0	STAINLESS STEEL	
								33,0	36,0			IX
								36,0	39,0		NICKEL PL.BRASS	ON
PNA# PNA-R#	06	ISO-M63	м	2"NPT	N	2"	G	39,0	42,0	71,0		
								42,0	45,0		STAINLESS STEEL	IX
								42,0	45,0	NICKEL PL BRASS	NICKEL PL.BRASS	ON
PNA# PNA-R#	07	ISO-M75	М	2 1/2"NPT	Ν	2 1/2"	G	45,0 48,0	48,0 51,0	84,0		
								51,0	54,0	-	STAINLESS STEEL	IX
								52,0	56,0		NICKEL PL.BRASS	ON
PNA#	08	ISO-M90	м	3"NPT	N	3"	G	56,0 59,0	59,0 62,0	101,0	NICKEL PL.DRASS	
PNA-R#							-	62,0	65,0		STAINLESS STEEL	IX
PNA#										_	NICKEL PL.BRASS	ON
	09	ISO-M100	м	4"NPT	Ν	4"	G			126,0	STAINI ESS STEEL	
										-		IX
PNA# PNA-R#	09	ISO-M100	М	4"NPT	N	4"	G	65,0 68,0 74,0 80,0 86,0 *NOTE: 00 SIZE WI	68,0 74,0 80,0 86,0 92,0 TH ISO-M16 OR 3/8''	- - 126,0 	STAINLESS STEEL	
ABLE GLA	ND ORE	DERING 🕴			•					11 I - 370 130-220	DODT, ON HEQUEUT	
XAMPLES	5	PNA#		01	Μ	ON =		#01MON (NON D				·uр )
								пñ.)				
PNA# 03 N IX = PNA#03NIX (NON-BARRIER CABLE GLAND STAINLESS STEEL 1/2"NPT THR.)												
EGEND												
(1) CA	BLE GLAN	D TYPE/MODFI		PNA# = NON	I-BARF	RIER CABI F	GLA	ND - <b>PNA-R</b> # = BA	RRIER CABLE GLAN	ID		
(1) CA	(I) CABLE GLAND TYPE/MODEL <b>PNA# = NON-BARRIER CABLE GLAND - PNA-R# = BARRIER CABLE GLAND</b>											



(2)



M = ISO METRIC pitch 1,5mm - N = NPT (ANSI/ASME B1.20.1) - G = UNI ISO-228

ON = NICKEL PLATED MARINE BRASS - IX = AISI-316L STAINLESS STEEL

#### REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.

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Ex Cable Glands

# **PNAF** Cable glands for unarmoured cables

Installation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts) Classification: Group II - Category 2G 2D









#### REFERENCE STANDARDS

	Directive 94/9/EC (until April 19th, 2016) and Directive 2014/34/EU (from April 20th, 2016)				
EXECUTION	© II 2 G Ex d / Exe / Exia IIC Gb © II 2 D Ex tb IIIC Db				
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AMBIENT TEMPERATURE	-40°C ÷ +90°C (Rubber rings EPDM-60) -60°C ÷ +180°C (Rubber rings SILICON)				
OTHER AVAILABLE CERTIFICATES	IECEx: IECEX INE 11.0017X				
	INMETRO: CEPEL 12.2175X				
	EAC: TC RU C-IT.ГБ08.В 01624 (-75°C ÷ +180°C)				
	RINA: ELE18111CS_016				
	RUSSIAN MARINE CERTIFICATE (RMRS): 13.03518.315				
	Kc (Korean certification):14-KB4B0-0455X				

#### **Mechanical characteristics**

Body / cap	OT-58 marine brass (ON) - AISI-316L stainless steel (IX)
Finishes	full nickel plating threatment (brass material only)
Rubber rings	EPDM rubber- 50-60 shore hardness - Silicon rubber - 60 shore hardness
O-ring	silicon rubber - 60 shore hardness
Skid washer	nylon 6.0
Chamber for sealing	OT-58 marine brass ("R" version only)

#### Applications

For unarmoured cables only

Suitable for flexible conduit coupling connection by threaded cap (uni iso 228)

Single compression type suitable for indoor and outdoor use

Single compression - on cable (inner sealing)

Sealing with proper resin into "chamber of sealing" ( on barrier type version "R" only )

#### **On Request Accessories:**

· Locknuts, Gaskets, PVC Shrouds, Earthing Tags, Sealing (See DL-NW-PTD-ET bulletin)

### **PNAF** Cable gland selection table

CODE	SIZE	ENTRY THREAD SIZE					INN SHEAT		FEMALE THREAD	EXAG.	MATERIAL			
(1)		METRIC	(2)	NPT (2)		UNI ISO 2	28 (2)	min [mm]	max [mm]	UNI ISO 228 (4)	[mm]		(3)	
PNAF#								5,5	8,0			NICKEL PL.BRASS	ON	
PNAF-R#	01	ISO-M20	м	1/2"NPT r	N	1/2"	G	8,0	10,5	1/2"	32,0	STAINLESS STEEL	IX	
								10,5 10,5	13,0					
PNAF#	02	ISO-M25	м	3/4"NPT	v	3/4"	G	13,0	15,5	3/4"	36,0	NICKEL PL.BRASS	ON	
PNAF-R#	02	100 1020		3/4 IVI 1		5/4	Ŭ	15,5	18,0	5/4	00,0	STAINLESS STEEL	IX	
								15,0	18,0					
PNAF#	03	ISO-M32	м	1"NPT	J.	1″	G	18,0	21,0	1″	45,0	NICKEL PL.BRASS	ON	
PNAF-R#								21,0	24,0	•	,.	STAINLESS STEEL	IX	
								21,0	24,0			NICKEL PL.BRASS		
PNAF# PNAF-R#	04	ISO-M40	м	1 1/4"NPT	N.	1 1/4"	G	24,0	27,0	1 1/4"	53,0		ON	
PNAF-R#								27,0	30,0			STAINLESS STEEL	IX	
								24,0	27,0				ON	
PNAF#	05	ISO-M50 M	м	1 1/2"NPT	J	11/2"	1 1/2" G	27,0	30,0	1 1/2"	61,0	NICKEL PL.BRASS		
PNAF-R#	05			1 1/2 NFT 1		1 1/2		30,0	33,0	1 1/2	01,0	STAINLESS STEEL	IX	
			_					33,0	36,0					
PNAF#							-	36,0	39,0			NICKEL PL.BRASS	ON	
PNAF-R#	06	ISO-M63	м	2"NPT	4	2"	G	39,0	42,0	2"	71,0	STAINLESS STEEL		
					_			42,0	45,0			STAINLESS STEEL	IX	
PNAF#							~	42,0	45,0 48,0			NICKEL PL.BRASS	ON	
PNAF-R#	07	ISO-M75	м	2 1/2"NPT	v	2 1/2"	G	48,0	51,0	2 1/2"	1/2" 84,0	84,0 Staini ess ste	STAINLESS STEEL	
			-		-			51,0 52,0	54,0 56,0				IX	
PNAF#								56,0	59,0			NICKEL PL.BRASS	ON	
PNAF-R#	08	ISO-M90	м	3"NPT	4	3″	3" <b>G</b>	59,0 62,0	62,0 65,0	3"	101,0	STAINLESS STEEL		
								65,0	68,0				STAINELSS STELL	IX
								68,0	74,0				ON	
PNAF#	09	ISO-M100	м	4"NPT r	A" C 14,0 80,0 A" 126.0	4" 126,0	NICKEL PL.BRASS							
PNAF-R#								80,0	86,0		0,0	STAINLESS STEEL	IX	
								86,0	92,0					

**CABLE GLAND ORDERING EXAMPLES** 

PNAF#

PNAF#

01

03

М

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ON

IX

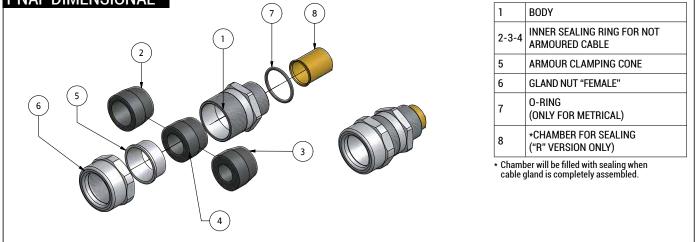
\*NOTE: 00 SIZE WITH ISO-M16 OR 3/8"NPT - 3/8"ISO-228 BODY, ON REQUEST

= PNAF#01MON (NON-BARRIER CABLE GLAND NICKEL PLATED BRASS ISO-M20 THR.) = PNAF#03NIX (NON-BARRIER CABLE GLAND STAINLESS STEEL 1/2"NPT THR.)

#### LEGENDA

(1)	CABLE GLAND TYPE/MODEL	PNAF# = NON-BARRIER CABLE GLAND - PNAF-R# = BARRIER CABLE GLAND
(2)	THREADING	M = ISO METRIC pitch 1,5mm - N = NPT (ANSI/ASME B1.20.1) - G = UNI ISO-228
(3)	CABLE GLAND MATERIAL	<b>ON</b> = NICKEL PLATED MARINE BRASS - IX = AISI-316L STAINLESS STEEL
(4)	FEMALE THREAD	UNI ISO-228 FEMALE THREAD SUITABLE FOR FLEXIBLE CONDUIT COUPLING

#### PNAF DIMENSIONAL



#### REMARK:

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.

## DL-NW-PTD-ET

### Cable glands accesories

IInstallation: hazardous areas - Zone 1 / 2 (Gases) - Zone 21 / 22 (Dusts) Classification: Group II - Category 2G 2D

DL-NW-PTD-ET







#### **Mechanical characteristics**

nylon 6.0

stainless steel

LOCKNUTS	LOCKNUTS							
Material	nichel plated brass							
Finishes	full nickel plating threatment (brass material only)							
SHORUDS	SHORUDS							
Material	PVC							
GASKETS								

#### Material

EARTH TAGS

Material

#### Applications

Locknuts	Are preffered items used in securing cable glands to the gland plate especially to plastic junction boxes
Shoruds	For all tipe of glands application where additional protection is required
Silicone sealant	Is provided for submission of barrier cable glands type-R
Gaskets	Are used to mantain the ip rating across the interface between the equipment and relevant cable gland
Earth tags	Are used to ensure earth continuity and grounding of cable armour

### **DL-NW-PTD-ET** Cable glands accessories

### **Technical Features**

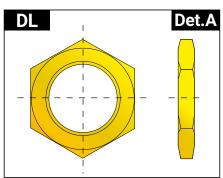
	LOCKNUTS						
DETAIL A	THREADS / SIZE						
TYPE	NPT	UNI-228	ISO				
DLO	3/8"	3/8"	M16				
DL1	1/2"	1/2"	M20				
DL2	3/4"	3/4"	M25				
DL3	1"	1"	M32				
DL4	1-1/4"	1-1/4"	M40				
DL5	1-1/2"	1-1/2"	M50				
DL6	2"	2"	M63				
DL7	2-1/2"	2-1/2"	M75				
DL8	3"	3"	M90				
DL9	4"	4"	M100				

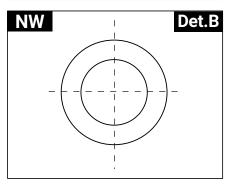
DL-NW-PTD-ET

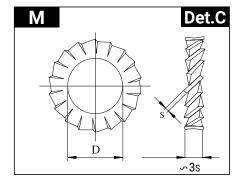
	GASKETS							
DETAIL B		THREADS / SIZ	Έ					
TYPE	NPT	UNI-228	ISO					
NW0	3/8"	3/8"	M16					
NW1	1/2"	1/2"	M20					
NW2	3/4"	3/4"	M25					
NW3	1"	1"	M32					
NW4	1-1/4"	1-1/4"	M40					
NW5	1-1/2"	1-1/2"	M50					
NW6	2"	2"	M63					
NW7	2-1/2"	2-1/2"	M75					
NW8	3"	3"	M90					
NW9	4"	4"	M100					

- - - - - - - - -

WASHERS						
ØD [mm]	DETAIL					
20	С					
25	С					
32	С					
40	С					
50	С					
63	С					
	ØD [mm] 20 25 32 40 50					



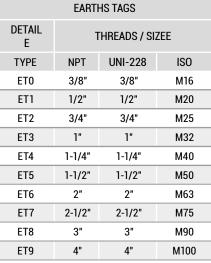




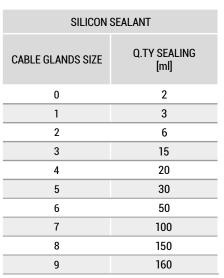
SHROUDS				
THREADS / SIZE				DETAIL E
NPT	UNI-228	ISO		TYPE
3/8"	3/8"	M16		ET0
1/2"	1/2"	M20		ET1
3/4"	3/4"	M25		ET2
1"	1"	M32		ET3
1-1/4"	1-1/4"	M40		ET4
1-1/2"	1-1/2"	M50		ET5
2"	2"	M63		ET6
2-1/2"	2-1/2"	M75		ET7
3"	3"	M90		ET8
4"	4"	M100		ET9

Det.D

EΤ



Det.E





#### REMARK:

DETAIL

D

TYPE

PTD0

PTD1

PTD2

PTD3

PTD4

PTD5

PTD6

PTD7

PTD8

PTD9

PTD

Due to the development of the national and international specifications and of the technology, the above technical characteristics showed on this bulletin can be considered as binding on our confirmation only.