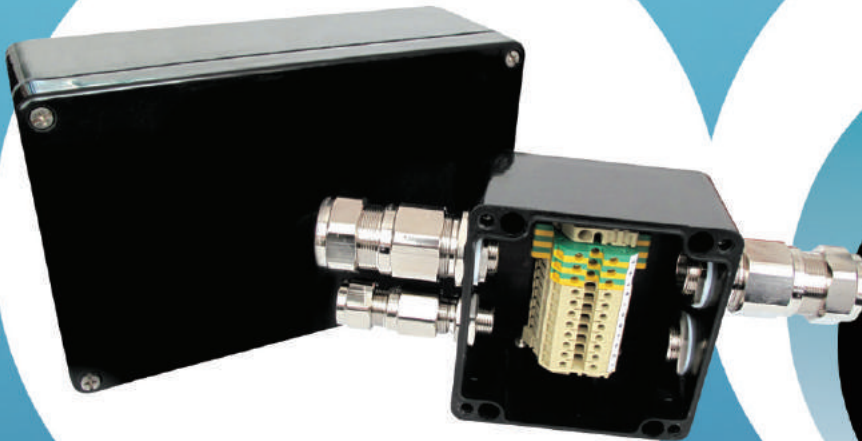
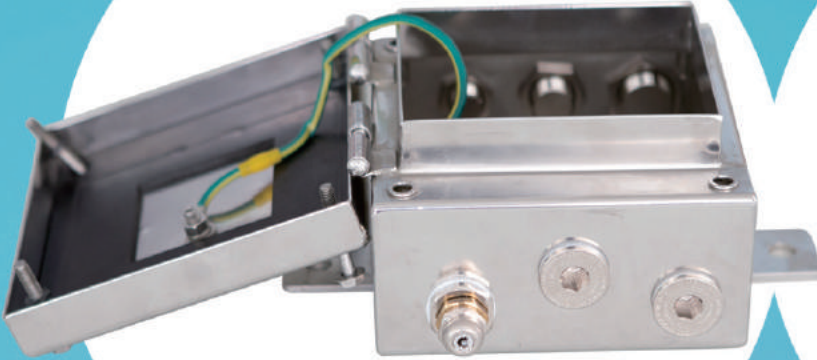




# OSCG

Cable Gland / Junction Box  
hazardous & industrial area



OSCG



CE

ATEX IECEx CU-TR DNV RMRS KCS ISO OHSAS

# OSCG

## CABLE GLAND / JUNCTION BOX

OSCG Since November 1983.

OSCG Co., Ltd. has a long history company since 1983, and is specialized in the Ex cable gland and junction box. We supply our cable gland and junction box to many different kind of clients all over the world. We acquired ISO 9001, 14001 and OHSAS 18001 to qualify our products, environment and HSE requirement in 1999. As the products we manufacture are explosion proof, these products are certified by ATEX, IECEX, CU TR and KCs certifications, and DNV and RMRS classifications in accordance with its standards, EN and IEC. We are committed to enhancing customer satisfaction through continuous technology innovation and quality improvement.

## Main Products

- Explosion proof type Exd & Exe CABLE GLAND : Certified by IECEX, ATEX, CU TR, KCs, DNV, RMRS
- Explosion proof type Exd & Exe STOPPING PLUG : Certified by IECEX, ATEX, CU TR, KCs, DNV, RMRS
- Explosion proof type Exd & Exe REDUCER / ADAPTOR : Certified by IECEX, ATEX, CU TR, KCs, DNV, RMRS
- Watertight CABLE GLAND : Certified by KOMERI
- JIS, DIN type CABLE GLAND and Flexible Connectors
- Special cable connector for Vessels, Power Plants, On & Offshore Projects
- JUNCTION BOX : Certified by IECEX, ATEX, KOMERI



# 1983

1983

Established Oh-Sung Company in Busan

1997

Moved to present location at 1242 street, Nakdongdaero Sasang-Gu, Busan, Korea

2000 OSCG

Changed the Company name to "OSCG, Co.,Ltd"

2000 NEMKO

Certified by NEMKO for Exd type Cable Gland and Stopping Plug

2001 SHELL

Approved by SHELL international exploration and production B.V for BONGA PJT.

2002 MOQ

Certified by MOQ for Exd CABLE GLAND of PLATFORMS

2003 ATEX

Certified by NEMKO ATEX for Exd type & Exe CABLE GLAND and Stopping Plug

2003 SHELL

Approved by Shell for Exd & Exe CABLE GLAND for BTIP Project

2003 TOTAL

Approved by TOTAL E&P for Exd & Exe CABLE GLAND for DALIA Project

2004 AGIP

Approved by AGIP GAS BV for Exd & Exe CABLE GLAND for SABRATHA Project

2004 GOST-R/FSETAN

Certified by GOST R/FSETAN for Exd & Exe CABLE GLAND, REDUCER ADAPTOR, STOPPING PLUG

2005 EXXON

Approved by Exxon for Exd & Exe CABLE GLAND for SAKHALIN OPF Project

2006 TATAL E&F

Approved by T.E.F for Exd & Exe CABLE GLAND for AKPO FPSO Project

2006 TOTAL

Approved by TOTAL for Exd & Exe CABLE GLAND for MOHO FPU Project

2006 SMEDVIG

Approved by SMEDVIG for Exd & Exe CABLE GLAND for WEST E-DRILL RIG Project

2007 ODFJELL

Approved by ODFJELL for Exd & Exe CABLE GLANDS for D-RIG Project

2007 TRANS OCEAN

Approved by TRANS-OCEAN for Exd & Exe CABLE GLANDS for D-SHIP Project

# OSCG Co.,Ltd.

OSCG Company was established in 1983 as a Cable Gland maker and has been providing the best quality products for onshore and Offshore Projects. We always try our best to meet the requirement.



Head Office



Factory



Dynasty



Seoul Branch



Busan Branch



Ulsan Branch



Gangseo Branch

# 2016

- |                             |  |
|-----------------------------|--|
| <b>2007</b> TOTAL           | Approved by TOTAL for Exd & Exe CABLE GLANDS for YADANA PLATFORM Project                   |
| <b>2007</b> SEA-DRILL       | Approved by SEA-DRILL for Exd & Exe CABLE GLANDS for D-RIG Project                         |
| <b>2008</b> ISO 14001, ROHS | Certified ISO 14001, Approved ROHS   |
| <b>2009</b> IECEX SCHEME    | Certified IECEX Scheme by KOSHA for Exd & Exe CABLE GLAND, Reducer, Adaptor, Stopping Plug |
| <b>2009</b> TOTAL E&F       | Certified by TOTAL for Exd & Exe CABLE GLANDS of PAZFLOR FPSO Project                      |
| <b>2011</b> GRP J/B         | Certified by ATEX INERIS / IECEX   |
| <b>2011</b> ISO             | ISO 9001:2008 and ISO 14001:2004 Review  |
| <b>2012</b> ATWOOD          | Approved by ATWOOD for Exd & Exe CABLE GLANDS for D-SHIP Project                           |
| <b>2012</b> TRANS OCEAN     | Approved by TRANS OCEAN for Exd & Exe CABLE GLANDS for D-SHIP Project                      |
| <b>2013</b> SHELL           | Approved by SHELL for Exd & Exe CABLE GLANDS for SHELL FLNG Project                        |
| <b>2013</b> SMBA            | A Promising Export Firm by the Small & Medium Business Administration, Republic of Korea   |
| <b>2013</b> PETRONAS        | Approved by PETRONAS for Exd & Exe CABLE GLANDS of PETRONAS FLNG Project                   |
| <b>2014</b> ATEX/IECEX      | ATEX/IECEX Review  |
| <b>2015</b> KCs             | KCs certification approval   |
| <b>2015</b> DNV             | DNV type approval  |
| <b>2015</b> RMRS            | RMRS type approval   |
| <b>2016</b> ATEX/IECEX      | Renewal Certificates   |
| <b>2017</b> UL/CSA          | UL/CSA Certifications in progress  |

# Certificate

**Certificate No. AQ-13B053/1**

OSCG Co., Ltd.

1242, Nakdong-dong, Samnalk-Gong, Sasang-Gu, Busan, Korea

ISO 9001:2008 / KS Q ISO 9001:2009

The Design, Development, Manufacture and Service of General Cable Glands, Flameproof Cable Glands, Flexible Connector and Junction Box

Original Date of Certification: 02 FEB 2015  
Date of Issue: 25 JUN 2016  
Date of Expiry: 14 SEP 2016

*Kim Byung Cheol*  
APPROVED BY

**Certificate No. AE-13B053/1**

OSCG Co., Ltd.

1242, Nakdong-dong, Samnalk-Gong, Sasang-Gu, Busan, Republic of Korea

ISO 14001:2004 / KS I ISO 14001:2009

The Design, Development, Manufacture and Service of General Cable Glands, Flameproof Cable Glands, Flexible Connector and Junction Box

Original Date of Certification: 05 FEB 2015  
Date of Issue: 25 JUN 2016  
Date of Expiry: 14 SEP 2016

*Kim Byung Cheol*  
APPROVED BY

**Certificate of Registration**

This is to certify that the Occupational Health & Safety Management System of

**OSCG Co., Ltd.**

1242, Nakdong-dong, Samnalk-Gong, Sasang-Gu, Busan, KOREA

The Design, Development, Manufacture and Service of General Cable Glands, Flameproof Cable Glands, Flexible Connector and Junction Box

Has been assessed by ACE Registrar and complies with Occupational Health and Safety Assessment Series Requirements of

**OHSAS 18001:2007**

Original Date of Certification: 02 DEC 2014  
Date of Issue: 02 DEC 2014  
Date of Expiry: 02 DEC 2017  
Certificate No: AS-16131

*Signature*  
APPROVED BY

**ACE REGISTRAR Co., Ltd.**  
F-1102, Digital Empire Bldg., 116, Deogyung-ro, Yuseong-gu, Daejeon, Gyeonggi-do, KOREA  
Tel: 82-31-303-4504-5 Fax: 82-31-303-4596 www.acecert.com

**IECEx Certificate of Conformity**

INTERNATIONAL ELECTROTECHNICAL COMMISSION  
IEC Certification Scheme for Explosive Atmospheres

Certificate No. IECEx 1002.01.0108 Issue No. 1 Certificate Validity: 2015.01.01 to 2017.01.01

Manufacturer: OSG Co., Ltd.  
Address: 1242, Samnalk-Gong, Sasang-Gu, Busan (61570), Korea, Republic of Korea

Product: Flameproof enclosures "D", increased safety "Y", Protection by enclosures "P"

Marking: Ex d I C IP65/67  
Ex e I IP65/67  
Ex e I A21 IP65/67

Approved for issue on behalf of the IECEx Certification Body: *Bank Hun Ki*  
Date: 2015.01.01

KOSHA

**Nemko**

**II) EC-TYPE EXAMINATION CERTIFICATE**  
II) Equipment or Protective System Intended for use in Potentially Explosive Atmospheres

(1) EC-Type Examination Certificate Number: Nemko 024525M3 Issue No. 3

(2) Equipment or Protective System: Cable Entry with a Changing Device

(3) Applicant / Manufacturer: OSG Co., Ltd.  
Address: 1242, Samnalk-Gong, Sasang-Gu, Busan, Korea

(4) This equipment or protective system and any applicable variation thereof is specified in the schedule in this certificate and the descriptive documents referred to.

(5) Compliance with the Essential Health and Safety Requirements has been assessed by compliance with:  
EN 60741-6: 2004, IEC 60741-6: 2004, EN 60741-6: 2004, IEC 60741-6: 2004, EN 60741-7: 2007, IEC 60741-7: 2006, EN 60741-8: 2006, IEC 60741-8: 2006, EN 60741-9: 2004, IEC 60741-9: 2004

(6) The marking of the equipment or protective system shall include the following:  
II 2 G Ex d I IC  
Ex e II  
II 2 D Ex d I A21

On: 2015-01-01  
*Signature*  
Karl Brad  
Certificate Manager, Ex-products

**INERIS**

**EC-TYPE EXAMINATION CERTIFICATE**

(1) Equipment and protective systems intended for use in potentially explosive atmospheres  
Directive 94/9/EC.

(2) Number of the EC type examination certificate: INERIS 11ATEX0047

(3) Equipment or protective system: TERMINAL ENCLOSURES TYPE OSGP...

(4) Manufacturer: OSG Co., Ltd.  
Address: 1242, Samnalk-Gong, Sasang-Gu, Busan, KOREA

(5) This equipment or protective system and any other acceptable alternative of this one are described in the scope of this certificate and the descriptive documents quoted in this annex.

(6) INERIS, notified body and identified under number 0003, in accordance with article 9 of Council Directive 94/9/EC of the 23<sup>rd</sup> March 1994, certifies that this equipment or protective system fulfills the Essential Health and Safety Requirements referred to in the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, described in article 1 of the Directive.

(7) The examination and the tests are designed in report No. 022003/15.

(8) The impact of the Essential Health and Safety Requirements is assessed by:

- conformity with:
  - EN 60079-0 : 2009
  - EN 60079-7 : 2007
  - EN 61241-0 : 2006
  - EN 61241-1 : 2004
- type of indicators assigned by the manufacturer to meet the Essential Health and Safety Requirements described in the descriptive documents.

Only for use in documents including processes not covered by ATEX 94/9/EC. Date: 2015-01-01  
Page 1 of 4



# Major Clients



# OSCG CABLE GLAND

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### Ex Cable Gland

01. Wire armoured cable gland	E1WF	12
02. Lead sheath wire armoured cable gland	E1WF / LS	13
03. Braid armoured cable gland	E1XF	14
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### Non Ex (weatherproof) Cable Gland

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### Ex Junction Box

29. Stainless steel junction box	Win Series	40
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### Non Ex (Weatherproof) Junction Box

31. GRP junction box	OSIGP Series(1~10)	46
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### Accessories

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40. Terminal block		62

# Instruction for Installation

## E1WF / E1XF Cable Gland

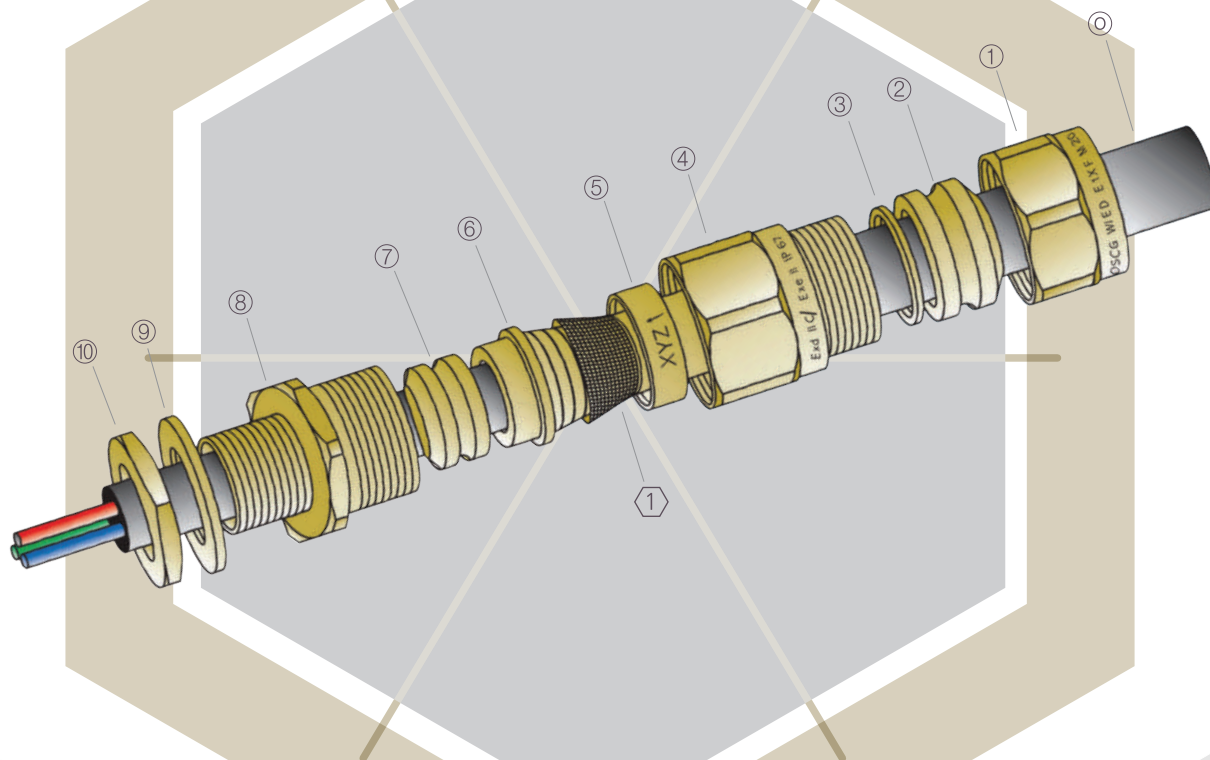
**ATEX / IECEx / KCs / CU TR Certificates ;**

**E1XF**

⊕ II 2GD Exd IIC / Exe II IP66/67

**E1WF**

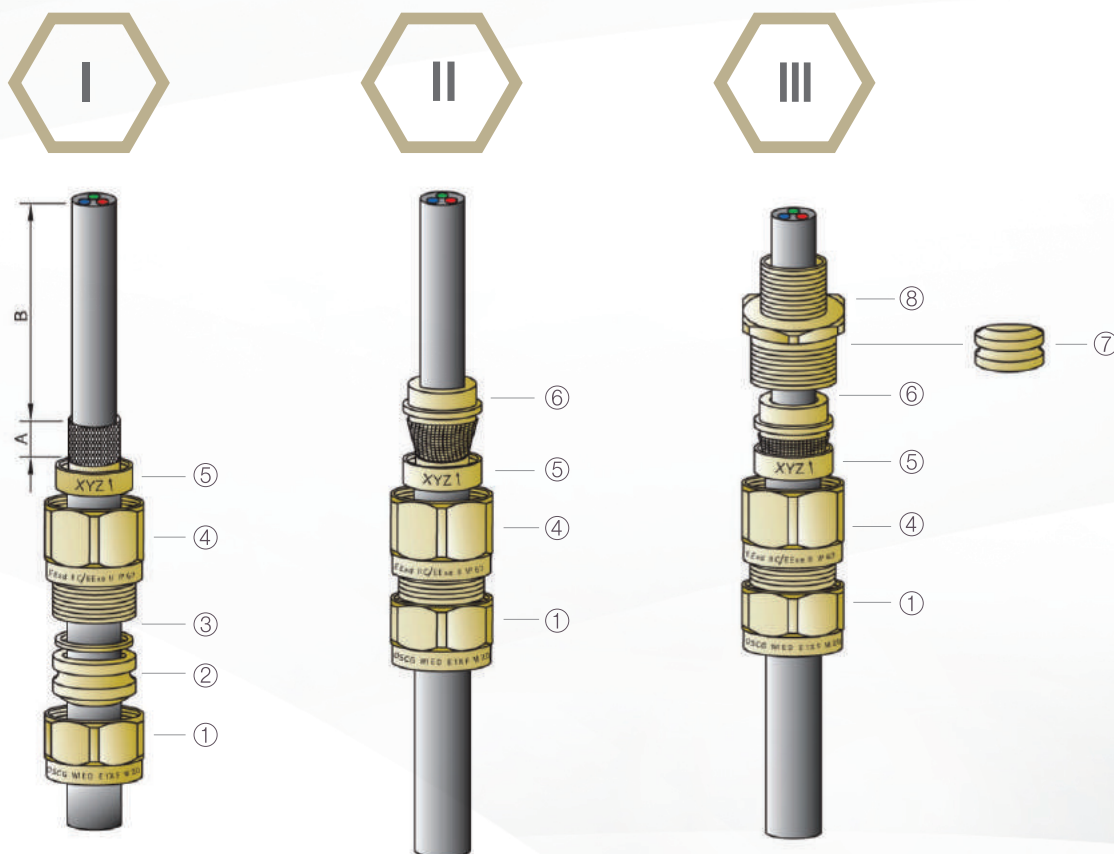
⊕ II 2GD Exd IIC / Exe II IP66/67



- ⑩ Cable
- ① Coupler nut
- ② Outer packing
- ③ Washer
- ④ Middle body
- ⑤ -Insert
- ⑥ +Insert
- ⑦ Inner packing
- ⑧ Hub body
- ⑨ Teflon washer
- ⑩ Lock nut
- ① Wire Armoured / Wire Braided



# Instruction for Installation



I

Prepare gland components as Image I. Strip cable to fit +insert through the cable.  
 A: 20mm for cable gland size 16 to 32  
 A: 25~32mm for cable gland size 40 to 100  
 B: To suit other components

II

Put the +insert through the cable, spread cable armour on the + insert as Image II.

III

Adjust all gland components to tighten (8-4)(4-1)  
 \*If (8-4) do not meet due to the thickness of armour, recommend putting out (7) and tighten without (7).  
 Then, untighten, put in (7), and tighten with (7) again.

IV

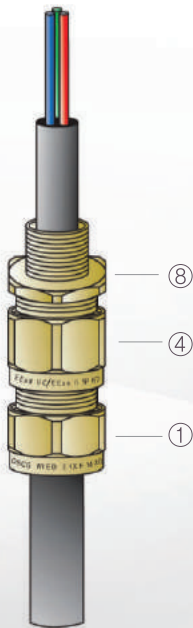
Make sure to prevent from twisting of cable while tightening gland.  
 Tighten middle body (4), coupler nut (1) and lock nut inside the box by a spanner/wrench.

V

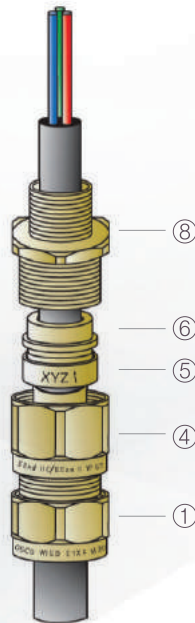
Untighten the middle body (4) and visually inspect that the armour/braid has been successfully clamped between the +Insert (6) and the -Insert (5).  
 If armour/braid not clamped, follow the instruction again.

# Instruction for Installation

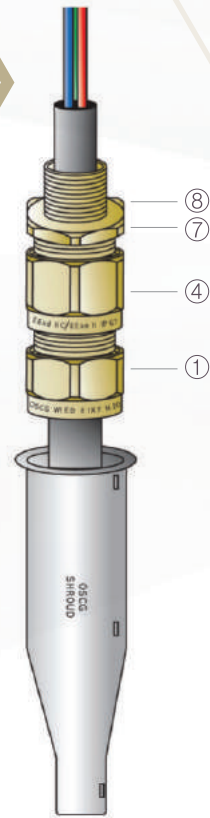
IV



V



VI



(Unit: mm)

Thread of Middle body & Coupler nut	Coupler nut Tightening Guide(Cable O.D)																		
	Gland Size																		
	16A	16B	20A	20B	25A	25B	32A	32B	40A	40B	50A	50B	63A	63B	63C	75A	75B	75C	75D
1	8									35.1									
1.5	9	12								36									
2	10	13							30	37	38	43							
2.5	11	14							31	38	39	44							
3	12.9	15	13	16	17.5	21			32	39	40	45							
3.5			15	17	18	22			33	40	41	46							
4			15	18	19	23	22	27	34		42	47							
4.5			17.5	19.5	20	24	23	28	35		43	48	48	51	55				
5					21	25	24	29			44	49	49	52	56				
5.5					22	26	25.5	31			45	50	50	53	57				68
6							27	32					51	54	58				69
6.5							28						52	55	59			66.1	70
7													53	56	60			67	71
7.5																56	62.1	68	72
8																57	63	69	73
8.5																58	64	70	74
9																59	65		75
9.5																60	66		
10																61			
10.5																62			

# Cable Gland Selection Chart

Application Area	Cable type	Armoured Type	Sealing (compression)	IP	Remarks	Model	Page	Standard Thread		
Hazardous	Armoured	Wire	Double	66/67	N/A	E1WF	12p	Metric, NPT		
		Lead sheath cable		66/67	Lead sheath washer	E1WF/LS	13p			
		Braid	Double	66/67	N/A	E1XF	14p	PF, NPT		
		Clamping	Single	66/67	Use with pipe	OSXP-F	20P			
	Non Armoured	N/A	Single	66/67	N/A	OSNJ-A2F	15p	Metric, NPT		
		N/A	Single	66/67	Male and female type	OSNJ-A2FF	16P			
N/A		Double	66/67	N/A	OSNJ-A2FD	17P				
Industrial	Armoured	Wire/Braid	Single	66/67	N/A	OSNJ-CW	25P	Metric, NPT		
		Wire	Double	66	N/A	E1W	26p			
				66	Lead sheath washer	E1W/LS	27p			
		Braid	Double	66	N/A	E1X	28p		Metric, NPT	
		Braided OutJacket	Single	66	N/A	OSD1	33P			
	Clamping	Single	N/A	Use with Cable	OSXP-M	35P				
			N/A	Use with flexible fitting	OSXP	35P				
			N/A	OSXP+One touch	OSXP-W	35P				
	Non Armoured	N/A	Single	66/67	N/A	OSNU	29p	Metric, NPT		
				66/67	N/A	OSNJ	30p			
				66/67	Male and female type	OSNJ-F	31p			
		N/A	Double	66/67	N/A	OSNJ-D	32P	Metric, NPT		
				66	JIS Standard type	OSCG	34p			
				N/A	Single	N/A	JIS, Welding Type		OSWD-L	36p
						N/A	OSWD-L+Hole insert type		OSWD	36p
				N/A	66	Round feature nipple	OSPG-R		37p	
	N/A	N/A	Plastic type OSPG-R	OSPGR-P	38p					
	N/A	N/A	DIN 89280 W Type	OSPGM	39p	Metric, PG				
Armoured	Braid	Single	N/A	DIN 89280 Z Type	OSPGM-Z		39p			
Hazardous	N/A	N/A	N/A	66/67	Changing thread size to smaller	OSAJ	21p	Metric, NPT		
				66/67	Insulated Adaptor	OSAJ(I)	61P			
				66/67	Changing thread size to bigger	OSRA	22p			
				66/67	To block entries for maintenance	OSSP	23p			
				66/67	90° Changing direction	OSAE	24p			
				66	Breather Drains	OSBD	61p			
Hazardous	N/A	N/A	N/A	N/A	Flexible fitting	OSEP	18p	NPT, PT, PF		
Hazardous	N/A	N/A	Single	N/A	OSEP+One touch	OSEP-W	19p			

## Required Ordering Information(example)

Part No.	Thread	Material	Q'ty	Accessories	Note
E1WF 20A	M20	Stainless Steel	200	Teflon Washer, Lock Nut, Earth Tag	None
OSAJ 25	M16(M) x NPT 3/4"(F)	Brass	200	Teflon Washer, Lock Nut	None
OSSP 16(H)	M16	Nickel Plated Brass	300	Teflon Washer, Lock Nut	Thread 30mm

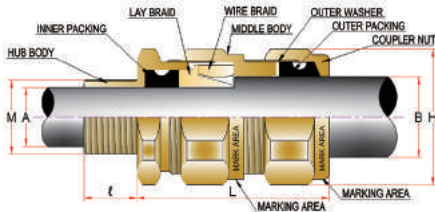
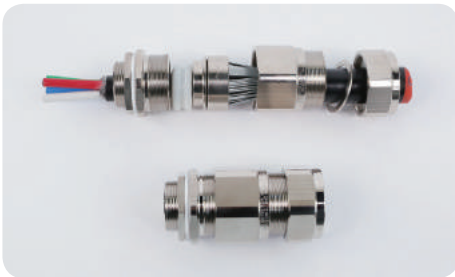
\* Optional Thread Length : ≥15mm.  
\* Material must be indicated.

▷ Hazardous > Armoured > Double Compression > E1WF

# Hazardous Cable Gland Type:E1WF



## E1WF Type



### Application : Wire Armoured Cable Gland

- \* For use with all types of steel & aluminum wire cable
- \* Outdoor & Indoor use
- \* Flameproof & Increased Safety
- \* EMC Cable Gland.(360° contact)
- \* Double Compression
- \* Reduce The Effect of Coldflow Characteristics

Design Specification	BS 6121, IEC 62444, EN 50262
Compliance Standard	IEC/EN 60079-0, 1, 7, 31
ATEX Certification	02ATEX500X
IECEX Certification	IECEX KOS 09.0018X
CU TR Certification(-60°C~130°C)	TC RU C-KR.ГБ06.В.00061
KCS Certification	15-AV2BO-0136~38
Classification	DNV, RMRS
Code of Protection	II2G Ex e II, Ex d IIC, II2D Ex tD A21
Operating Temperature	-20°C ~ 120°C
Regulation	Zone 1 & 2, Gas Group IIA, IIB and IIC
Ingress Protection	IP 66 / 67
Applicable Cable Specification	All types of steel & aluminum wire (SWA) Armoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag,Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
E1WF 20A	M20	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag, Serrated Washer, Shroud
E1WF 20A	NPT 3/4"	Brass	
E1WF 20A	NPT 1/2"	Stainless steel	

- \* Optional Thread Length : ≥15mm (Standard : M16 ~ M63 Length 15mm, M75 Length 20mm, M90~M100 Length 25mm)
- \* Material for accessories is required

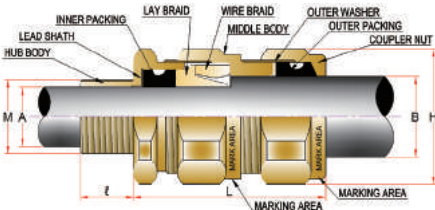
(\* in mm)

Part No.	Entry Thread Size(M)		Cable Dia		Thread Length(ℓ)		Entry Hole Size		Armour Size	Hexagon Dimensions (H)	Weight (g)	Length (L)
	Metric	NPT	Inner'A'	Outer'B'	Metric	NPT	Metric	NPT				
E1WF 16A	M16 / M20	1/2"	5 ~ 11	8 ~ 13	15	15	17 / 21	22	0.9 / 1.25	H25*27	150	67
E1WF 16B	M16 / M20	1/2"	5 ~ 11	12 ~ 15.1	15	15	17 / 21	22	0.9 / 1.25	H25*27	150	67
E1WF 20A	M20	1/2" / 3/4"	8 ~ 15.1	13 ~ 17.5	15	15 / 16	21	22 / 27	0.9 / 1.25	H31*34	235	74
E1WF 20B	M20	1/2" / 3/4"	8 ~ 15.1	16 ~ 19.5	15	15 / 16	21	22 / 27	0.9 / 1.25	H31*34	235	74
E1WF 25A	M25	3/4" / 1"	13 ~ 19.5	17.5 ~ 22	15	16 / 18	26	27 / 34	1.25/1.6	H36*39	290	79
E1WF 25B	M25	3/4" / 1"	13 ~ 19.5	21 ~ 26	15	16 / 18	26	27 / 34	1.25/1.6	H36*39	290	79
E1WF 32A	M32	1" / 1-1/4"	17.5 ~ 26	22 ~ 28	15	18 / 19	33	34 / 43	1.6/2.0	H45*49	490	86
E1WF 32B	M32	1" / 1-1/4"	17.5 ~ 26	27 ~ 32	15	18 / 19	33	34 / 43	1.6/2.0	H45*49	490	86
E1WF 40A	M40	1-1/4" / 1-1/2"	22 ~ 32	30 ~ 35	15	19 / 21	41	43 / 50	1.6/2.0	H55*59	850	94
E1WF 40B	M40	1-1/4" / 1-1/2"	22 ~ 32	35.1 ~ 40	15	19 / 21	41	43 / 50	1.6/2.0	H55*59	850	94
E1WF 50A	M50	1-1/2" / 2"	30 ~ 41.5	38 ~ 45	15	21 / 24	51	50 / 62	1.8/2.5	H68*73	1390	100
E1WF 50B	M50	1-1/2" / 2"	30 ~ 41.5	43 ~ 50	15	21 / 24	51	50 / 62	1.8/2.5	H68*73	1390	100
E1WF 63A	M63	2" / 2-1/2"	38 ~ 54	48 ~ 53	15	24 / 27	64	62 / 74	1.8/2.5	H82*88	2070	108
E1WF 63B	M63	2" / 2-1/2"	38 ~ 54	51 ~ 56	15	24 / 27	64	62 / 74	1.8/2.5	H82*88	2070	108
E1WF 63C	M63	2" / 2-1/2"	38 ~ 54	55 ~ 60	15	24 / 27	64	62 / 74	1.8/2.5	H82*88	2070	108
E1WF 75A	M75	2-1/2" / 3"	49 ~ 63	56 ~ 62	20	27 / 30	76	74 / 90	1.8/2.5	H98*106	3270	125
E1WF 75B	M75	2-1/2" / 3"	49 ~ 63	62.1 ~ 66	20	27 / 30	76	74 / 90	1.8/2.5	H98*106	3270	125
E1WF 75C	M75	2-1/2" / 3"	49 ~ 63	66.1 ~ 70	20	27 / 30	76	74 / 90	1.8/2.5	H98*106	3270	125
E1WF 75D	M75	2-1/2" / 3"	49 ~ 63	68 ~ 75	20	27 / 30	76	74 / 90	1.8/2.5	H98*106	3270	125
E1WF 90A	M90	3" / 3-1/2"	63 ~ 77	74 ~ 83	25	30 / 32	91	90 / 102	1.8/3.0	H110*120	4600	132
E1WF 90B	M90	3" / 3-1/2"	63 ~ 77	82 ~ 90	25	30 / 32	91	90 / 102	1.8/3.0	H110*120	4600	132
E1WF 100A	M100	3-1/2" / 4"	73.1 ~ 85	89 ~ 94	25	32	101	102 / 116	1.8/3.0	H120*130	5500	144
E1WF 100B	M100	3-1/2" / 4"	73.1 ~ 85	93 ~ 98	25	32	101	102 / 116	1.8/3.0	H120*130	5500	144

# Hazardous Cable Gland Type: E1WF/LS



## E1WF/LS Type



### Application : Wire Armoured Cable Gland

- \* For use with lead sheath steel & aluminum cable
- \* Outdoor & Indoor use
- \* Flameproof & Increased Safety
- \* EMC Cable Gland.(360° contact)
- \* Double Compression
- \* Reduce The Effect of Coldflow Characteristics

Design Specification	BS 6121, IEC 62444, EN 50262
Compliance Standard	IEC/EN 60079-0, 1, 7, 31
ATEX Certification	02ATEX500X
IECEX Certification	IECEX KOS 09.0018X
CU TR Certification(-60°C~130°C)	TC RU C-KR.ГБ06.В.00061
KCS Certification	15-AV2BO-0136~38
Classification	DNV, RMRS
Code of Protection	II2G Ex e II, Ex d IIC, II2D Ex tD A21
Operating Temperature	-20°C ~ 120°C
Regulation	Zone 1 & 2, Gas Group IIA, IIB and IIC
Ingress Protection	IP 66 / 67
Applicable Cable Specification	All lead sheath types of steel & aluminum wire (SWA) Armoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
E1WF/LS 20A	M20	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag, Serrated Washer, Shroud
E1WF/LS 20A	NPT 3/4"	Brass	
E1WF/LS 20A	NPT 1/2"	Stainless steel	

- \* Optional Thread Length : ≥15mm ( Standard : M16 ~ M63 Length 15mm, M75 Length 20mm, M90~M100 Length 25mm)
- \* Material for accessories is required

(\* in mm)

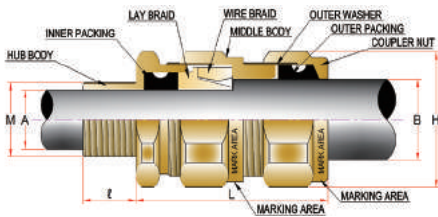
Part No.	Entry Thread Size(M)		Cable Dia		Thread Length(ℓ)		Entry Hole Size		Armour Size	Hexagon Dimensions (H)	Weight (g)	Length (L)
	Metric	NPT	Inner'A'	Outer'B'	Metric	NPT	Metric	NPT				
E1WF/LS 16A	M16 / M20	1/2"	5 ~ 11	8 ~ 13	15	15	17 / 21	22	0.9 / 1.25	H25*27	150	67
E1WF/LS 16B	M16 / M20	1/2"	5 ~ 11	12 ~ 15.1	15	15	17 / 21	22	0.9 / 1.25	H25*27	150	67
E1WF/LS 20A	M20	1/2" / 3/4"	8 ~ 15.1	13 ~ 17.5	15	15 / 16	21	22 / 27	0.9 / 1.25	H31*34	235	74
E1WF/LS 20B	M20	1/2" / 3/4"	8 ~ 15.1	16 ~ 19.5	15	15 / 16	21	22 / 27	0.9 / 1.25	H31*34	235	74
E1WF/LS 25A	M25	3/4" / 1"	13 ~ 19.5	17.5 ~ 22	15	16 / 18	26	27 / 34	1.25 / 1.6	H36*39	290	79
E1WF/LS 25B	M25	3/4" / 1"	13 ~ 19.5	21 ~ 26	15	16 / 18	26	27 / 34	1.25 / 1.6	H36*39	290	79
E1WF/LS 32A	M32	1" / 1-1/4"	17.5 ~ 26	22 ~ 28	15	18 / 19	33	34 / 43	1.6 / 2.0	H45*49	490	86
E1WF/LS 32B	M32	1" / 1-1/4"	17.5 ~ 26	27 ~ 32	15	18 / 19	33	34 / 43	1.6 / 2.0	H45*49	490	86
E1WF/LS 40A	M40	1-1/4" / 1-1/2"	22 ~ 32	30 ~ 35	15	19 / 21	41	43 / 50	1.6 / 2.0	H55*59	850	94
E1WF/LS 40B	M40	1-1/4" / 1-1/2"	22 ~ 32	35.1 ~ 40	15	19 / 21	41	43 / 50	1.6 / 2.0	H55*59	850	94
E1WF/LS 50A	M50	1-1/2" / 2"	30 ~ 41.5	38 ~ 45	15	21 / 24	51	50 / 62	1.8 / 2.5	H68*73	1390	100
E1WF/LS 50B	M50	1-1/2" / 2"	30 ~ 41.5	43 ~ 50	15	21 / 24	51	50 / 62	1.8 / 2.5	H68*73	1390	100
E1WF/LS 63A	M63	2" / 2-1/2"	38 ~ 54	48 ~ 53	15	24 / 27	64	62 / 74	1.8 / 2.5	H82*88	2070	108
E1WF/LS 63B	M63	2" / 2-1/2"	38 ~ 54	51 ~ 56	15	24 / 27	64	62 / 74	1.8 / 2.5	H82*88	2070	108
E1WF/LS 63C	M63	2" / 2-1/2"	38 ~ 54	55 ~ 60	15	24 / 27	64	62 / 74	1.8 / 2.5	H82*88	2070	108
E1WF/LS 75A	M75	2-1/2" / 3"	49 ~ 63	56 ~ 62	20	27 / 30	76	74 / 90	1.8 / 2.5	H98*106	3270	125
E1WF/LS 75B	M75	2-1/2" / 3"	49 ~ 63	62.1 ~ 66	20	27 / 30	76	74 / 90	1.8 / 2.5	H98*106	3270	125
E1WF/LS 75C	M75	2-1/2" / 3"	49 ~ 63	66.1 ~ 70	20	27 / 30	76	74 / 90	1.8 / 2.5	H98*106	3270	125
E1WF/LS 75D	M75	2-1/2" / 3"	49 ~ 63	68 ~ 75	20	27 / 30	76	74 / 90	1.8 / 2.5	H98*106	3270	125
E1WF/LS 90A	M90	3" / 3-1/2"	63 ~ 77	74 ~ 83	25	30 / 32	91	90 / 102	1.8 / 3.0	H110*120	4600	132
E1WF/LS 90B	M90	3" / 3-1/2"	63 ~ 77	82 ~ 90	25	30 / 32	91	90 / 102	1.8 / 3.0	H110*120	4600	132
E1WF/LS 100A	M100	3-1/2" / 4"	73.1 ~ 85	89 ~ 94	25	32	101	102 / 116	1.8 / 3.0	H120*130	5500	144
E1WF/LS 100B	M100	3-1/2" / 4"	73.1 ~ 85	93 ~ 98	25	32	101	102 / 116	1.8 / 3.0	H120*130	5500	144

▷ Hazardous > Armoured > Double Compression > E1XF

# Hazardous Cable Gland Type: E1XF



## E1XF Type



### Application : Braided Armoured Cable Gland

- \* For use with all types of braided armoured cable
- \* Outdoor & Indoor use
- \* Flameproof & Increased Safety
- \* EMC Cable Gland.(360° contact)
- \* Double Compression
- \* Reduce The Effect of Coldflow Characteristics

Design Specification	BS 6121, IEC 62444, EN 50262
Compliance Standard	IEC/EN 60079-0, 1, 7, 31
ATEX Certification	02ATEX501X
IECEX Certification	IECEX KOS 09.0016X
CU TR Certification(-60°C~130°C)	TC RU C-KR.ГБ06.B.00061
KCS Certification	15-AV2BO-0133 ~35
Classification	DNV, RMRS
Code of Protection	II2G Ex e II, Ex d IIC, II2D Ex tD A21
Operating Temperature	-20°C ~ 120°C
Regulation	Zone 1 & 2, Gas Group IIA, IIB and IIC
Ingress Protection	IP 66 / 67
Applicable Cable Specification	All types of braided armoured cable Steel tape Armoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
E1XF 20A	M20	Nickel plated brass	Lock Nut Sealing Washer, Earth Tag, Serrated Washer, Shroud
E1XF 20A	NPT 3/4"	Brass	
E1XF 20A	NPT 1/2"	Stainless steel	

- \* Optional Thread Length : ≥15mm ( Standard : M16 ~ M63 Length 15mm, M75 Length 20mm, M90~M100 Length 20mm)
- \* Material for accessories is required

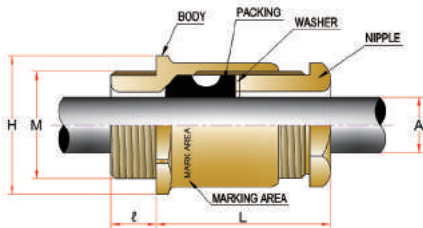
(\* in mm)

Part No.	Entry Thread Size(M)		Cable Dia		Thread Length(ℓ)		Entry Hole Size		Armour Size	Hexagon Dimensions (H)	Weight (g)	Length (L)
	Metric	NPT	Inner'A'	Outer'B'	Metric	NPT	Metric	NPT				
E1XF 16A	M16 / M20	1/2"	5 ~ 11	8 ~ 13	15	15	17 / 21	22	0.05/0.8	H25*27	150	67
E1XF 16B	M16 / M20	1/2"	5 ~ 11	12 ~ 15.1	15	15	17 / 21	22	0.05/0.8	H25*27	150	67
E1XF 20A	M20	1/2" / 3/4"	8 ~ 15.1	13 ~ 17.5	15	15 / 16	21	22 / 27	0.05/0.8	H31*34	235	74
E1XF 20B	M20	1/2" / 3/4"	8 ~ 15.1	16 ~ 19.5	15	15 / 16	21	22 / 27	0.05/0.8	H31*34	235	74
E1XF 25A	M25	3/4" / 1"	13 ~ 19.5	17.5 ~ 22	15	16 / 18	26	27 / 34	0.05/0.8	H36*39	290	79
E1XF 25B	M25	3/4" / 1"	13 ~ 19.5	21 ~ 26	15	16 / 18	26	27 / 34	0.05/1.2	H36*39	290	79
E1XF 32A	M32	1" / 1-1/4"	17.5 ~ 26	22 ~ 28	15	18 / 19	33	34 / 43	0.05/1.2	H45*49	490	86
E1XF 32B	M32	1" / 1-1/4"	17.5 ~ 26	27 ~ 32	15	18 / 19	33	34 / 43	0.05/1.2	H45*49	490	86
E1XF 40A	M40	1-1/4" / 1-1/2"	22 ~ 32	30 ~ 35	15	19 / 21	41	43 / 50	0.05/1.2	H55*59	850	94
E1XF 40B	M40	1-1/4" / 1-1/2"	22 ~ 32	35.1 ~ 40	15	19 / 21	41	43 / 50	0.05/1.2	H55*59	850	94
E1XF 50A	M50	1-1/2" / 2"	30 ~ 41.5	38 ~ 45	15	21 / 24	51	50 / 62	0.05/1.2	H68*73	1390	100
E1XF 50B	M50	1-1/2" / 2"	30 ~ 41.5	43 ~ 50	15	21 / 24	51	50 / 62	0.05/1.2	H68*73	1390	100
E1XF 63A	M63	2" / 2-1/2"	38 ~ 54	48 ~ 53	15	24 / 27	64	62 / 74	0.05/1.2	H82*88	2070	108
E1XF 63B	M63	2" / 2-1/2"	38 ~ 54	51 ~ 56	15	24 / 27	64	62 / 74	0.05/1.2	H82*88	2070	108
E1XF 63C	M63	2" / 2-1/2"	38 ~ 54	55 ~ 60	15	24 / 27	64	62 / 74	0.05/1.2	H82*88	2070	108
E1XF 75A	M75	2-1/2" / 3"	49 ~ 63	56 ~ 62	20	27 / 30	76	74 / 90	0.05/1.2	H98*106	3270	125
E1XF 75B	M75	2-1/2" / 3"	49 ~ 63	62.1 ~ 66	20	27 / 30	76	74 / 90	0.05/1.2	H98*106	3270	125
E1XF 75C	M75	2-1/2" / 3"	49 ~ 63	66.1 ~ 70	20	27 / 30	76	74 / 90	0.05/1.2	H98*106	3270	125
E1XF 75D	M75	2-1/2" / 3"	49 ~ 63	68 ~ 75	20	27 / 30	76	74 / 90	0.05/1.2	H98*106	3270	125
E1XF 90A	M90	3" / 3-1/2"	63 ~ 77	74 ~ 83	25	30 / 32	91	90 / 102	0.05/1.6	H110*120	4600	132
E1XF 90B	M90	3" / 3-1/2"	63 ~ 77	82 ~ 90	25	30 / 32	91	90 / 102	0.05/1.6	H110*120	4600	132
E1XF 100A	M100	3-1/2" / 4"	73.1 ~ 85	89 ~ 94	25	32	101	102 / 116	0.05/1.6	H120*130	5500	144
E1XF 100B	M100	3-1/2" / 4"	73.1 ~ 85	93 ~ 98	25	32	101	102 / 116	0.05/1.6	H120*130	5500	144

# Hazardous Cable Gland Type: OSNJ-A2F



## OSNJ-A2F Type



### Application : Non Armoured Cable Gland

- \* For use with braided armoured & non armoured cable
- \* Flameproof & Increased Safety
- \* Single Compression

Design Specification	BS 6121, IEC 62444, EN 50262
Compliance Standard	IEC/EN 60079-0, 1, 7, 31
ATEX Certification	03ATEX1460X
IECEX Certification	IECEX KOS 09.0017X
CU TR Certification(-60°C~130°C)	TC RU C-KR.ГБ06.B.00061
KCS Certification	15-AV2BO-0108 ~ 10
Classification	DNV, RMRS
Code of Protection	II2G Ex e II, Ex d IIC, II2D Ex tD A21
Operating Temperature	-20°C ~ 110°C
Regulation	Zone 1 & 2, Gas Group IIA, IIB and IIC
Ingress Protection	IP 66 / 67
Applicable Cable Specification	Braided armoured cable Unarmoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer
Only Ex e certified Available	Product Code : OSNJ-A2FE

### Order Example

Part No.	Thread	Material	Accessories
OSNJ-A2F 20A	M20	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag,
OSNJ-A2F 20A	NPT 3/4"	Brass	Serrated Washer, Shroud
OSNJ-A2F 20A	NPT 1/2"	Stainless steel	

- \* Optional Thread Length : ≥15mm (Standard : M16~M75 Lenth 15mm, M90~M100 Length 20mm)
- \* Material for accessories is required

(\* in mm)

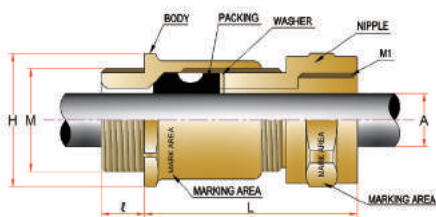
Part No.	Entry Thread Size(M)		Cable Dia Outer'A'	Thread Length(ℓ)		Entry Hole Size		Hexagon Dimensions (H)	Weight (g)	Length (L)
	Metric	NPT		Metric	NPT	Metric	NPT			
OSNJ-A2F 16A	M16 / M20	1/2"	3 ~ 7.5	15	15	17 / 21	22	H24*26	79/95	31
OSNJ-A2F 16B	M16 / M20	1/2"	6.1 ~ 10	15	15	17 / 21	22	H24*26	79/95	31
OSNJ-A2F 20A	M20	1/2" / 3/4"	10.1 ~ 13	15	15 / 16	21	22 / 27	H27*29	95	33
OSNJ-A2F 20B	M20	1/2" / 3/4"	13.1 ~ 15	15	15 / 16	21	22 / 27	H27*29	85	33
OSNJ-A2F 25A	M25	3/4" / 1"	14 ~ 17.5	15	16 / 18	26	27 / 34	H32*34	125	34
OSNJ-A2F 25B	M25	3/4" / 1"	16.1 ~ 19.5	15	16 / 18	26	27 / 34	H32*34	115	34
OSNJ-A2F 32A	M32	1" / 1-1/4"	18.1 ~ 22	15	18 / 19	33	34 / 43	H39*41.5	195	38
OSNJ-A2F 32B	M32	1" / 1-1/4"	21 ~ 26	15	18 / 19	33	34 / 43	H39*41.5	175	38
OSNJ-A2F 40A	M40	1-1/4" / 1-1/2"	24 ~ 28	15	19 / 21	41	43 / 50	H48*51	300	40
OSNJ-A2F 40B	M40	1-1/4" / 1-1/2"	27 ~ 32	15	19 / 21	41	43 / 50	H48*51	265	40
OSNJ-A2F 50A	M50	1-1/2" / 2"	32.1 ~ 34	15	21 / 24	51	50 / 62	H58*62	425	42
OSNJ-A2F 50B	M50	1-1/2" / 2"	34.1 ~ 40	15	21 / 24	51	50 / 62	H58*62	360	42
OSNJ-A2F 63A	M63	2" / 2-1/2"	38 ~ 44	15	24 / 27	64	62 / 74	H73*78	680	46
OSNJ-A2F 63B	M63	2" / 2-1/2"	43 ~ 50	15	24 / 27	64	62 / 74	H73*78	575	46
OSNJ-A2F 63C	M63	2" / 2-1/2"	49 ~ 54	15	24 / 27	64	62 / 74	H73*78	575	46
OSNJ-A2F 75A	M75	2-1/2" / 3"	52 ~ 56	15	27 / 30	76	74 / 90	H85*90	875	52
OSNJ-A2F 75B	M75	2-1/2" / 3"	55 ~ 60	15	27 / 30	76	74 / 90	H85*90	860	52
OSNJ-A2F 75C	M75	2-1/2" / 3"	59 ~ 62	15	27 / 30	76	74 / 90	H85*90	750	52
OSNJ-A2F 75D	M75	2-1/2" / 3"	62.1 ~ 66	15	27 / 30	76	74 / 90	H85*90	725	52
OSNJ-A2F 90A	M90	3" / 3-1/2"	63 ~ 70	20	30 / 32	91	90 / 102	H100*106	1690	60
OSNJ-A2F 90B	M90	3" / 3-1/2"	68 ~ 76	20	30 / 32	91	90 / 102	H100*106	1480	60
OSNJ-A2F 100A	M100	3-1/2" / 4"	76.1 ~ 81	20	32	101	102 / 116	H112*120	2250	69
OSNJ-A2F 100B	M100	3-1/2" / 4"	81.1 ~ 85	20	32	101	102 / 116	H112*120	2005	69

▷ Hazardous > Non Armoured > Single Compression > OSNJ-A2FF

# Hazardous Cable Gland Type:OSNJ-A2FF



## OSNJ-A2FF Type



### Application : Non Armoured Cable Gland

- \* For use with braided armoured & non armoured cable / male and female threads type
- \* Flameproof & Increased Safety
- \* Single Compression

Design Specification	BS 6121, IEC 62444, EN 50262
Compliance Standard	IEC/EN 60079-0, 1, 7, 31
ATEX Certification	14ATEX5680X
IECEX Certification	IECEX PRE 14.0041X
Code of Protection	II2G Ex e II, Ex d IIC, II2D Ex tD A21
Operating Temperature	-55°C ~ 100°C
Regulation	Zone 1&2, Gas Group IIA, IIB and IIC
Ingress Protection	IP 66/67
Applicable Cable Specification	Braided armoured & unarmoured cable, Male and female thread type
Gland Material	Nickel Plated Brass(Standard), Brass(Only),Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
OSNJ-A2FF 20A	M20(M)*M20(F)	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag, Serrated Washer, Shroud
OSNJ-A2FF 20A	NPT 3/4(M) * 3/4(F)	Brass	
OSNJ-A2FF 20A	NPT 1/2(M) * 1/2(F)	Stainless steel	

\* Optional Thread Length : ≥15mm (Standard : M16~M75 Length 15mm, M90~M100 Length 20mm)  
 \* Material for accessories is required

(\* in mm)

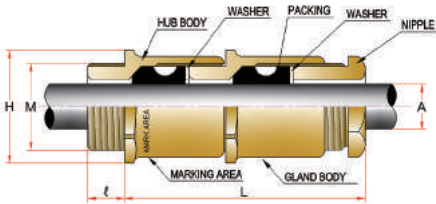
Part No.	Entry Thread Size (M * M1)		Cable Dia Outer'A'	Thread Length(ℓ)		Entry Hole Size		Hexagon Dimensions (H)	Length (L)
	Metric	NPT		Metric	NPT	Metric	NPT		
OSNJ-A2FF 16A	M16 / M20	1/2"	5 ~ 7.5	15	15	17 / 21	22	H24*26	44
OSNJ-A2FF 16B	M16 / M20	1/2"	7.5 ~ 10	15	15	17 / 21	22	H24*26	44
OSNJ-A2FF 20A	M20	1/2" / 3/4"	10 ~ 13	15	15 / 16	21	22 / 27	H27*29	49
OSNJ-A2FF 20B	M20	1/2" / 3/4"	13 ~ 15	15	15 / 16	21	22 / 27	H27*29	49
OSNJ-A2FF 25A	M25	3/4" / 1"	15 ~ 17.5	15	16 / 18	26	27 / 34	H32*34	52
OSNJ-A2FF 25B	M25	3/4" / 1"	17.5 ~ 19.5	15	16 / 18	26	27 / 34	H32*34	52
OSNJ-A2FF 32A	M32	1" / 1-1/4"	19.5 ~ 22	15	18 / 19	33	34 / 43	H39*41.5	54
OSNJ-A2FF 32B	M32	1" / 1-1/4"	22 ~ 26	15	18 / 19	33	34 / 43	H39*41.5	54
OSNJ-A2FF 40A	M40	1-1/4" / 1-1/2"	26 ~ 28	15	19 / 21	41	43 / 50	H48*51	55
OSNJ-A2FF 40B	M40	1-1/4" / 1-1/2"	28 ~ 32	15	19 / 21	41	43 / 50	H48*51	55
OSNJ-A2FF 50A	M50	1-1/2" / 2"	32 ~ 36	15	21 / 24	51	50 / 62	H58*62	62
OSNJ-A2FF 50B	M50	1-1/2" / 2"	36 ~ 40	15	21 / 24	51	50 / 62	H58*62	62
OSNJ-A2FF 63A	M63	2" / 2-1/2"	40 ~ 44	15	24 / 27	64	62 / 74	H73*78	68
OSNJ-A2FF 63B	M63	2" / 2-1/2"	44 ~ 50	15	24 / 27	64	62 / 74	H73*78	68
OSNJ-A2FF 63C	M63	2" / 2-1/2"	50 ~ 54	15	24 / 27	64	62 / 74	H73*78	68
OSNJ-A2FF 75A	M75	2-1/2" / 3"	54 ~ 56	15	27 / 30	76	74 / 90	H85*90	78
OSNJ-A2FF 75B	M75	2-1/2" / 3"	56 ~ 60	15	27 / 30	76	74 / 90	H85*90	78
OSNJ-A2FF 75C	M75	2-1/2" / 3"	60 ~ 62	15	27 / 30	76	74 / 90	H85*90	78
OSNJ-A2FF 75D	M75	2-1/2" / 3"	62 ~ 66	15	27 / 30	76	74 / 90	H85*90	78
OSNJ-A2FF 90A	M90	3" / 3-1/2"	66 ~ 70	20	30 / 32	91	90 / 102	H100*106	92
OSNJ-A2FF 90B	M90	3" / 3-1/2"	70 ~ 76	20	30 / 32	91	90 / 102	H100*106	92
OSNJ-A2FF 100A	M100	3-1/2" / 4"	76 ~ 81	20	32	101	102 / 116	H112*120	109
OSNJ-A2FF 100B	M100	3-1/2" / 4"	81 ~ 85	20	32	101	102 / 116	H112*120	109



# Hazardous Cable Gland Type: OSNJ-A2FD



## OSNJ-A2FD Type



### Application : Non Armoured Cable Gland

- \* For use with braided armoured & non armoured cable
- \* Flameproof & Increased Safety
- \* Double Compression

Design Specification	BS 6121, IEC 62444, EN 50262
Compliance Standard	IEC/EN 60079-0, 1, 7, 31
ATEX Certification	03ATEX1460X
IECEX Certification	IECEX PRE 14.0041X
CU TR Certification(-60°C~130°C)	TC RU C-KR.ГБ06.В.00061
Code of Protection	II2G Ex e II, Ex d IIC, II2D Ex tD A21
Operating Temperature	-20°C ~ 110°C
Regulation	Zone 1 & 2, Gas Group IIA, IIB and IIC
Ingress Protection	IP 66 / 67
Applicable Cable Specification	Braided armoured & unarmoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
OSNJ-A2FD 20A	M20(M)*M20(F)	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag, Serrated Washer, Shroud
OSNJ-A2FD 20A	NPT 3/4(M)" * 3/4(F)	Brass	
OSNJ-A2FD 20A	NPT 1/2"(M) * 1/2(F)	Stainless steel	

- \* Optional Thread Length : ≥15mm (Standard : M16~M75 Lenth 15mm, M90~M100 Length 20mm)
- \* Material for accessories is required

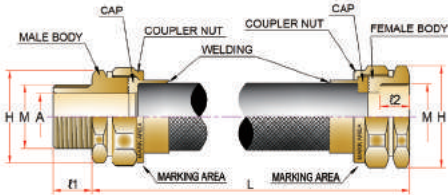
(\* in mm)

Part No.	Entry Thread Size(M)		Cable Dia Outer'A'	Thread Length(ℓ)		Entry Hole Size		Hexagon Dimensions (H)	Length (L)
	Metric	NPT		Metric	NPT	Metric	NPT		
OSNJ-A2FD 16A	M16 / M20	1/2"	3 ~ 7.5	15	15	17 / 21	22	H24*26	51
OSNJ-A2FD 16B	M16 / M20	1/2"	6.1 ~ 10	15	15	17 / 21	22	H24*26	51
OSNJ-A2FD 20A	M20	1/2" / 3/4"	10.1 ~ 13	15	15 / 16	21	22 / 27	H27*29	55
OSNJ-A2FD 20B	M20	1/2" / 3/4"	13.1 ~ 15	15	15 / 16	21	22 / 27	H27*29	55
OSNJ-A2FD 25A	M25	3/4" / 1"	14 ~ 17.5	15	16 / 18	26	27 / 34	H32*34	58
OSNJ-A2FD 25B	M25	3/4" / 1"	16.1 ~ 19.5	15	16 / 18	26	27 / 34	H32*34	58
OSNJ-A2FD 32A	M32	1" / 1-1/4"	18.1 ~ 22	15	18 / 19	33	34 / 43	H39*41.5	63
OSNJ-A2FD 32B	M32	1" / 1-1/4"	21 ~ 26	15	18 / 19	33	34 / 43	H39*41.5	63
OSNJ-A2FD 40A	M40	1-1/4" / 1-1/2"	24 ~ 28	15	19 / 21	41	43 / 50	H48*51	67
OSNJ-A2FD 40B	M40	1-1/4" / 1-1/2"	27 ~ 32	15	19 / 21	41	43 / 50	H48*51	67
OSNJ-A2FD 50A	M50	1-1/2" / 2"	32.1 ~ 34	15	21 / 24	51	50 / 62	H58*62	71
OSNJ-A2FD 50B	M50	1-1/2" / 2"	34.1 ~ 40	15	21 / 24	51	50 / 62	H58*62	71
OSNJ-A2FD 63A	M63	2" / 2-1/2"	38 ~ 44	15	24 / 27	64	62 / 74	H73*78	77
OSNJ-A2FF 63B	M63	2" / 2-1/2"	43 ~ 50	15	24 / 27	64	62 / 74	H73*78	77
OSNJ-A2FF 63C	M63	2" / 2-1/2"	49 ~ 54	15	24 / 27	64	62 / 74	H73*78	77
OSNJ-A2FF 75A	M75	2-1/2" / 3"	52 ~ 56	15	27 / 30	76	74 / 90	H85*90	87
OSNJ-A2FF 75B	M75	2-1/2" / 3"	55 ~ 60	15	27 / 30	76	74 / 90	H85*90	87
OSNJ-A2FF 75C	M75	2-1/2" / 3"	59 ~ 62	15	27 / 30	76	74 / 90	H85*90	87
OSNJ-A2FF 75D	M75	2-1/2" / 3"	62.1 ~ 66	15	27 / 30	76	74 / 90	H85*90	87
OSNJ-A2FF 90A	M90	3" / 3-1/2"	63 ~ 70	20	30 / 32	91	90 / 102	H100*106	102
OSNJ-A2FF 90B	M90	3" / 3-1/2"	68 ~ 76	20	30 / 32	91	90 / 102	H100*106	102
OSNJ-A2FF 100A	M100	3-1/2" / 4"	76.1 ~ 81	20	32	101	102 / 116	H112*120	119
OSNJ-A2FF 100B	M100	3-1/2" / 4"	81.1 ~ 85	20	32	101	102 / 116	H112*120	119

▷ Hazardous > Flexible (Metal Hose) > OSEP

# Hazardous Flexible Fittings Type:OSEP

## OSEP Type



### Application : Explosion Proof Flexible Fittings

\* used in narrow space or complicated area which requires flexibility

Code of Protection	Ex d
Thread Available	Male and Female thread type, Male and Male type, Female and Female type
Gland Material	SUS 304/ SUS316L For Flexible Part, Nickel Plated Brass/ SUS 304/ SUS 316L For Gland Part(Standard)

### Order Example

Part No.	Thread	Material
OSEP-16	NPT 1/2"(M) x NPT 1/2"(F)	(Gland : Nickel Plated Brass, Flexible(1.2m) : Stainless Steel 304)
OSEP-16	PF 1/2"(M) x PF 1/2"(F)	(Gland : Nickel Plated Brass, Flexible(1.2m) : Stainless Steel 304)
OSEP-22	NPT 3/4"(M) x NPT 3/4"(F)	(Gland : Nickel Plated Brass, Flexible(1.2m) : Stainless Steel 316L )

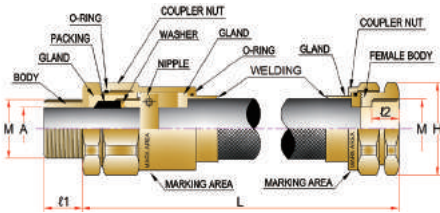
\* Material for tube and gland is required

(\* in mm)

Part No.	Entry Thread Size(M)	Cable Dia (A)	I1	I2	Hexagon Dimension (H)	Length (L)
	NPT/PF/PT					
OSEP - 16	1/2"	6 ~ 13.5	17	16	H32 X 34	300mm
OSEP - 22	3/4"	14 ~ 18	18	17	H38 X 40	
OSEP - 28	1"	19 ~ 22	21	19	H45 X 48	
OSEP - 36	1-1/4"	23 ~ 29	26	24	H57 X 60	~
OSEP - 42	1-1/2"	30 ~ 35	26	24	H64 X 67	
OSEP - 54	2"	36 ~ 46	26	24	H76 X 80	
OSEP - 70	2-1/2"	47 ~ 56	30	26	H90 X 95	3000mm
OSEP - 82	3"	57 ~ 74	32	28	H102 X 109	
OSEP - 104	4"	75 ~ 88	32	29	H135 X 142	

# Hazardous One Touch OSEP Type:OSEP-W

## OSEP-W Type



### Application : One Touch Flexible Fittings

- \* For use with cable for the factory electrical equipment or machine
- \* High performance flexibility of seamless tube provides easy workability in the narrow space or complicated area

Design Specification	JIS B 0202 Thread
Thread Available	Male and Female thread type, Male and Male type, Female and Female type
Gland Material	SUS 304/ SUS316L For Flexible Part, Nickel Plated Brass/ SUS 304/ SUS 316L For Gland Part(Standard)

### Order Example

Part No.	Thread	Material
OSEP-W-16	NPT 1/2"(M) x NPT 1/2"(F)	(Gland : Nickel Plated Brass, Flexible(1.2m) : Stainless Steel 304)
OSEP-W-16	PF 1/2"(M) x PF 1/2"(F)	(Gland : Nickel Plated Brass, Flexible(1.2m) : Stainless Steel 304)
OSEP-W-22	NPT 3/4"(M) x NPT 3/4"(F)	(Gland : Nickel Plated Brass, Flexible(1.2m) : Stainless Steel 316L )

\* Material for tube and gland is required

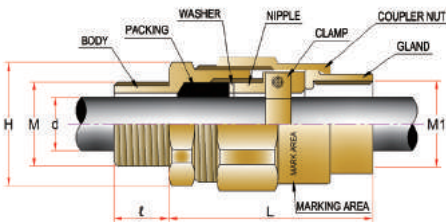
(\* in mm)

Part No.	Entry Thread Size(M)	Cable Dia (A)	L1	L2	Hexagon Dimension (H)	Length (L)
	NPT/PF/PT					
OSEP - W - 16	1/2"	7 ~ 12	17	16	H32 X 34	300mm
OSEP - W - 22	3/4"	12 ~ 16	18	17	H38 X 40	
OSEP - W - 28	1"	16 ~ 20	21	19	H45 X 48	
OSEP - W - 36	1-1/4"	20 ~ 25	26	24	H57 X 60	3000mm
OSEP - W - 42	1-1/2"	25 ~ 29	26	24	H64 X 67	
OSEP - W - 54	2"	29 ~ 37	26	24	H76 X 80	
OSEP - W - 70	2-1/2"	37 ~ 47	30	26	H90 X 95	

# Hazardous Cable Gland Type:OSXP-F



## OSXP-F Type



### Application : Packing Type Cable Gland

- \* For use with pipe connection or machine
- \* Flameproof & Increased Safety
- \* Single Compression
- \* Male and Female Type

Design Specification	N/A
Compliance Standard	IEC/EN 60079-0, 1, 7, 31
KCS Certification	10-AV2B0-0416X, 10-AV2B0-0417X, 10-AV2B0-0479X
Code of Protection	Ex e, Ex d (Dual Certified)
Ingress Protection	IP 66 / 67
Thread Available	Male and female thread type
Gland Material	Nickel Plated Brass(Standard), Stainless Steel
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer, Reducer, Adaptor

### Order Example

Part No.	Thread	Material	Accessories
OSXP-F 16	NPT 1/2"	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag
OSXP-F 16	PF 1/2"	Stainless steel	
OSXP-F 22	PF 3/4"	Stainless steel	

\* Material for accessories is required

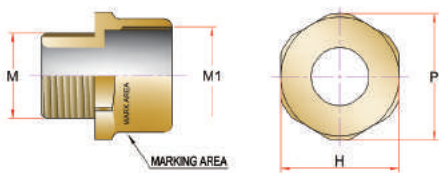
(\* in mm)

Part No.	Entry Thread M.M1	Thread Length(l)	Cable Dia (d)	Hexagon Dimension (H)	Length (L)
	NPT/PF/PT	NPT/PF/PT			
OSXP-F 16	1/2"	16	6 ~ 14	H32 X 34	65
OSXP-F 22	3/4"	17	14 ~ 18	H38 X 41	71
OSXP-F 28	1"	18	18 ~ 22	H45 X 48	74
OSXP-F 36	1-1/4"	20	22 ~ 29	H53 X 57	82
OSXP-F 42	1-1/2"	22	29 ~ 35	H60 X 64	84
OSXP-F 54	2"	24	35 ~ 46	H73 X 78	90
OSXP-F 70	2-1/2"	26	46 ~ 56	H90 X 96	100
OSXP-F 82	3"	31	56 ~ 74	H102 X 109	108
OSXP-F 104	4"	33	74 ~ 88	H127 X 135	112

# Hazardous Cable Gland Type: OSAJ



## OSAJ Type



### Application : Adaptor

\* Provides a means of thread conversion

Design Specification	BS 6121, IEC 62444, EN 50262
Compliance Standard	IEC/EN 60079-0, 1, 7, 31
ATEX Certification	03ATEX1459X
IECEX Certification	IECEX KOS 09.0002X
CU TR Certification(-60°C~130°C)	TC RU C-KR.ГБ06.В.00061
KCS Certification	15-AV2BO-0140~42
Classification	DNV, RMRS
Code of Protection	II2G Ex e II, Ex d IIC, II2D Ex tD A21
Operating Temperature	-20°C ~ 110°C
Ingress Protection	IP 66 / 67
Applicable Cable Specification	Braided armoured & unarmoured Cable Male and female thread type
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Accessories	Lock Nut, Sealing Washer

### Order Example

Part No.	Thread	Material	Accessories
OSAJ 01	M16 X M20	Nickel plated brass	Lock Nut, Sealing Washer
OSAJ 102	M20 X NPT 3/4"	Brass	
OSAJ 0306	NPT 1" X NPT 2"	Stainless steel	

\* Part No Example : OSAJ 20(OSAJ, NPT 3" x NPT 3-1/2") => Please refer to the below table

\* Material for accessories is required

\* PF and PG Thread are available on Ex 'e' only

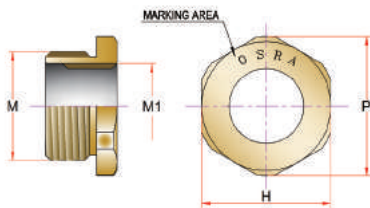
(\* in mm)

OSAJ		FEMALE THREAD SIZE(M1)																							
		METRIC(A-M)									NPT(A-N)														
		M16	M20	M25	M32	M40	M50	M63	M75	M90	M100	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"			
METRIC(A-M)	M16	00	01	02	03							000	001	002	003										
	M20		11	12	13	14							101	102	103	104									
	M25			22	23	24	25							202	203	204	205								
	M32				33	34	35	36							303	304	305	306							
	M40					44	45	46	47							404	405	406	407						
	M50						55	56	57	58						504	505	506	507	508					
	M63							66	67	68	69						605	606	607	608	609				
	M75								77	78	79							706	707	708	709	710			
	M90									88	89								807	808	809	810			
	M100										99									908	909	910			
NPT(A-N)	3/8"	000	001	002	003							0000	0001	0002	0003										
	1/2"		011	012	013	014							0101	0102	0103	0104									
	3/4"			022	023	024	025							0202	0203	0204	0205								
	1"				033	034	035	036							0303	0304	0305	0306							
	1-1/4"					044	045	046	047							0404	0405	0406	0407						
	1-1/2"						055	056	057	058							0505	0506	0507	0508					
	2"							066	067	068	069							0606	0607	0608	0609				
	2-1/2"								077	078	079								0707	0708	0709	0710			
	3"									088	089									0808	0809	0810			
	3-1/2"										099										0909	0910			
4"											109												1010		

# Hazardous Cable Gland Type: OSRA



## OSRA Type



### Application : Reducer

\* Provides a means of thread conversion

Design Specification	BS 6121, IEC 62444, EN 50262
Compliance Standard	IEC/EN 60079-0, 1, 7, 31
ATEX Certification	03ATEX1458X
IECEX Certification	IECEX KOS 09.0003X
CU TR Certification(-60°C~130°C)	TC RU C-KR.ГБ06.B.00061
KCS Certification	15-AV2BO-0147~49
Classification	DNV, RMRS
Code of Protection	II2G Ex e II, Ex d IIC, II2D Ex tD A21
Operating Temperature	-20°C ~ 110°C
Ingress Protection	IP 66 / 67
Applicable Cable Specification	Braided armoured & unarmoured Cable Male and female thread type
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Accessories	Lock Nut, Sealing Washer

### Order Example

Part No.	Thread	Material	Accessories
OSRA 21	M25 X M20	Nickel plated brass	Lock Nut, Sealing Washer
OSRA 402	M40 X NPT 3/4"	Brass	
OSRA 0603	NPT 2" X NPT 1"	Stainless steel	

\* Part No Example : OSAJ 20(OSAJ, NPT 3" x NPT 3-1/2") => Please refer to the below table

\* Material for accessories is required

\* PF and PG Thread are available on Ex 'e' only

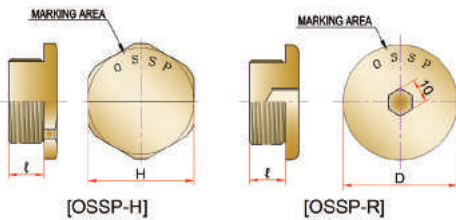
(\* in mm)

OSRA	FEMALE THREAD SIZE(M1)																				
	METRIC(R-M)										NPT(R-N)										
	M16	M20	M25	M32	M40	M50	M63	M75	M90	M100	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	3-1/2"	4"
M16																					
M20	10										100										
M25	20	21									200	201									
M32	30	31	32								300	301	302								
M40	40	41	42	43							400	401	402	403							
M50	50	51	52	53	54						500	501	502	503	504						
M63	60	61	62	63	64	65					600	601	602	603	604	605					
M75		71	72	73	74	75	76					701	702	703	704	705	706				
M90			82	83	84	85	86	87					802	803	804	805	806	807			
M100				93	94	95	96	97	98					903	904	905	906	907	908		
3/8"																					
1/2"	010										0100										
3/4"	020	021									0200	0201									
1"	030	031	032								0300	0301	0302								
1-1/4"	040	041	042	043							0400	0401	0402	0403							
1-1/2"	050	051	052	053	054						0500	0501	0502	0503	0504						
2"	060	061	062	063	064	065					0600	0601	0602	0603	0604	0605					
2-1/2"		071	072	073	074	075	076					0701	0702	0703	0704	0705	0706				
3"			082	083	084	085	086	087					0802	0803	0804	0805	0806	0807			
3-1/2"				093	094	095	096	097	098					0903	0904	0905	0906	0907	0908		
4"					104	105	106	107	108	109					1004	1005	1005	1006	1006	1007	

# Hazardous Cable Gland Type:OSSP



## OSSP Type



### Application : Stopping Plug

\* Provides a means of blanking unused or spare entries

Design Specification	BS 6121, IEC 62444, EN 50262
Compliance Standard	IEC/EN 60079-0, 1, 7, 31
ATEX Certification	02ATEX502X
IECEX Certification	IECEX KOS 09.0005X
CU TR Certification(-60°C~130°C)	TC RU C-KR.ГБ06.В.00061
KCS Certification	15-AV2BO-0144~46
Classification	DNV, RMRS
Code of Protection	II2G Ex e II, Ex d IIC, II2D Ex tD A21
Operating Temperature	-20°C ~ 110°C
Ingress Protection	IP 66 / 67
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Accessories	Lock Nut, Sealing Washer

### Order Example

Part No.	Thread	Material	Accessories
OSSP - H16	M16	Nickel plated brass	Lock Nut, Sealing Washer
OSSP - H25	NPT 3/4"	Brass	
OSSP - R32	PF 1"	Stainless steel	

\* Optional Thread Length : ≥15mm (Standard : M16~M75 Lenth 15mm, M90~M100 Length 25mm)

\* Material for accessories is required

\* PF and PG Thread are available on Ex 'e' only

(\* in mm)

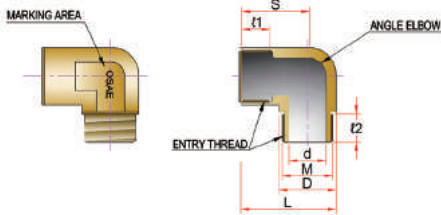
Stopping plug Type / Size		Entry Thread		Thread Length[ℓ]		Dimension[H/D]		Weight(g)	
OSSP-H	OSSP-R	Metric	NPT/PF	Metric	NPT/PF	Metric	NPT/PF	OSSP-H	OSSP-R
OSSP-H 16	OSSP-R 16	M16	-	15	-	24/24	-	50	35
OSSP-H 20	OSSP-R 20	M20	1/2"	15	15	27/28	27/28	75	55
OSSP-H 25	OSSP-R 25	M25	3/4"	15	16	31/32	31/32	100	90
OSSP-H 32	OSSP-R 32	M32	1"	15	18	38/40	38/40	120	155
OSSP-H 40	OSSP-R 40	M40	1-1/4"	15	19	46/48	48/50	195	250
OSSP-H 50	OSSP-R 50	M50	1-1/2"	15	21	57/58	57/55	310	410
OSSP-H 63	OSSP-R 63	M63	2"	15	24	70/71	70/70	475	655
OSSP-H 75	OSSP-R 75	M75	2-1/2"	15	27	82/83	82/84	730	890
OSSP-H 90	OSSP-R 90	M90	3"	20	30	98/98	98/97	950	1150
OSSP-H 100	OSSP-R 100	M100	3-1/2"	20	32	112/108	112/112	1285	1550

▷ Hazardous > OSAE

# Hazardous Cable Gland Type:OSAE



## OSAE Type



### Application : Elbow(90°)

\* Provides a means of bending due to crawlspace

Design Specification	BS 6121, IEC 62444, EN 50262
Compliance Standard	IEC/EN 60079-0, 1, 7, 31
ATEX Certification	10ATEX1177U
IECEX Certification	IECEX KOS 09.0004X
CU TR Certification(-60°C~130°C)	TC RU C-KR.ГБ06.B.00061
KCS Certification	15-AV2BO-0150~52
Classification	DNV, RMRS
Code of Protection	II2GD Ex d IIC, Ex e II, Ex tD A21
Operating Temperature	-20°C ~ 110°C
Ingress Protection	IP 66 / 67
Applicable Cable Specification	Braided armoured & unarmoured Cable Male and female thread type
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Accessories optional	Lock Nut, Sealing Washer

### Order Example

Part No.	Thread	Material	Accessories
OSAE - 16	M16 X M16	Nickel plated brass	Lock Nut, Sealing Washer
OSAE - 20	M20 X NPT 1/2"	Brass	
OSAE - 25	NPT 3/4" X NPT 3/4"	Stainless steel	

\* Part No Example : OSAJ 20(OSAJ, NPT 3" x NPT 3-1/2") => Please refer to the below table  
 \* Material for accessories is required  
 \* Only Metric and NPT Thread

(\* in mm)

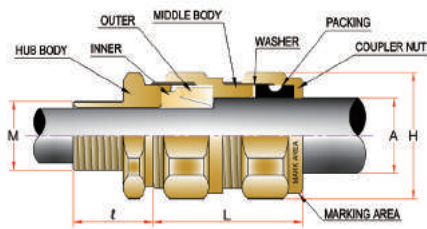
Part No.	Entry Thread Size[M]		D	d	S	ℓ1	ℓ2	Length[L]
	Metric	NPT						
OSAE 16	M16	1/2"	24	10.3	32	16	15	43
OSAE 20	M20	1/2"	27	15.2	34.5	16	15	43
OSAE 25	M25	3/4"	32	19.8	37	17	15	50
OSAE 32	M32	1"	39	26	43	18	15	62
OSAE 40	M40	1-1/4"	48	33	50	18	15	73
OSAE 50	M50	1-1/2"	58	43	57	18	15	85
OSAE 63	M63	2"	73	55	70	18	15	107
OSAE 75	M75	2-1/2"	85	68	76	22	15	118



# Industrial Cable Gland Type: OSNJ-CW



## OSNJ-CW Type



### Application : Armoured Cable Gland with Single Compression

- \* For use with all types of armoured cable
- \* Outdoor & Indoor use
- \* EMC Cable Gland. (360° contact)
- \* Weatherproof & Waterproof
- \* Single Compression
- \* Reduce The Effect of Coldflow Characteristic

Design Specification	BS 6121, IEC 62444, EN/IEC 60529
KOMERI Certification(KAS)	KOMERI-2014-01
Ingress Protection	IP 66 / 67
Applicable Cable Specification	All types of steel & aluminum wire Armoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
OSNJ-CW 20A	M20	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag, Serrated Washer, Shroud
OSNJ-CW 20A	NPT 3/4"	Brass	
OSNJ-CW 20A	NPT 1/2"	Stainless steel	

\* Optional Thread Length : ≥15mm ( Standard : M16 ~ M63 Length 15mm, M75 Length 20mm, M90~M100 Length 25mm)

\* Material for accessories is required

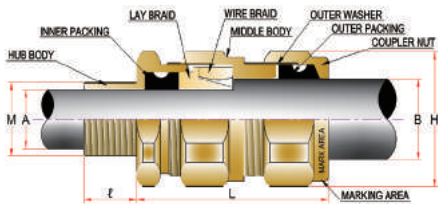
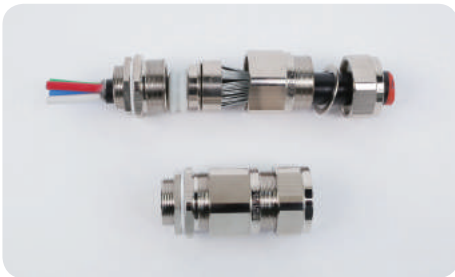
(\* in mm)

Part No.	Entry Thread Size(M)		Cable Dia Outer'A'	Thread Length(ℓ)		Entry Hole Size		Armour Size	Braid Size	Hexagon Dimensions (H)	Weight (g)	Length (L)
	Metric	NPT		Metric	NPT	Metric	NPT					
OSNJ-CW 16A	M16 / M20	1/2"	8 ~ 13	15	15	17 / 21	22	0.9 / 1.25	0.05/0.8	H25*27	150	59
OSNJ-CW 16B	M16 / M20	1/2"	12 ~ 15.1	15	15	17 / 21	22	0.9 / 1.25	0.05/0.8	H25*27	150	59
OSNJ-CW 20A	M20	1/2" / 3/4"	13 ~ 17.5	15	15 / 16	21	22 / 27	0.9 / 1.25	0.05/0.8	H31*34	235	65
OSNJ-CW 20B	M20	1/2" / 3/4"	16 ~ 19.5	15	15 / 16	21	22 / 27	0.9 / 1.25	0.05/0.8	H31*34	235	65
OSNJ-CW 25A	M25	3/4" / 1"	17.5 ~ 22	15	16 / 18	26	27 / 34	1.25/1.6	0.05/0.8	H36*39	290	70
OSNJ-CW 25B	M25	3/4" / 1"	21 ~ 26	15	16 / 18	26	27 / 34	1.25/1.6	0.05/0.8	H36*39	290	70
OSNJ-CW 32A	M32	1" / 1-1/4"	22 ~ 28	15	18 / 19	33	34 / 43	1.6/2.0	0.05/1.2	H45*49	490	74
OSNJ-CW 32B	M32	1" / 1-1/4"	27 ~ 32	15	18 / 19	33	34 / 43	1.6/2.0	0.05/1.2	H45*49	490	74
OSNJ-CW 40A	M40	1-1/4" / 1-1/2"	30 ~ 35	15	19 / 21	41	43 / 50	1.6/2.0	0.05/1.2	H55*59	850	82
OSNJ-CW 40B	M40	1-1/4" / 1-1/2"	35.1 ~ 40	15	19 / 21	41	43 / 50	1.6/2.0	0.05/1.2	H55*59	850	82
OSNJ-CW 50A	M50	1-1/2" / 2"	38 ~ 45	15	21 / 24	51	50 / 62	1.8/2.5	0.05/1.2	H68*73	1390	88
OSNJ-CW 50B	M50	1-1/2" / 2"	43 ~ 50	15	21 / 24	51	50 / 62	1.8/2.5	0.05/1.2	H68*73	1390	88
OSNJ-CW 63A	M63	2" / 2-1/2"	48 ~ 53	15	24 / 27	64	62 / 74	1.8/2.5	0.05/1.2	H82*88	2070	100
OSNJ-CW 63B	M63	2" / 2-1/2"	51 ~ 56	15	24 / 27	64	62 / 74	1.8/2.5	0.05/1.2	H82*88	2070	100
OSNJ-CW 63C	M63	2" / 2-1/2"	55 ~ 60	15	24 / 27	64	62 / 74	1.8/2.5	0.05/1.2	H82*88	2070	100
OSNJ-CW 75A	M75	2-1/2" / 3"	56 ~ 62	20	27 / 30	76	74 / 90	1.8/2.5	0.05/1.2	H98*106	3270	121
OSNJ-CW 75B	M75	2-1/2" / 3"	62.1 ~ 66	20	27 / 30	76	74 / 90	1.8/2.5	0.05/1.2	H98*106	3270	121
OSNJ-CW 75C	M75	2-1/2" / 3"	66.1 ~ 70	20	27 / 30	76	74 / 90	1.8/2.5	0.05/1.2	H98*106	3270	121
OSNJ-CW 75D	M75	2-1/2" / 3"	68 ~ 75	20	27 / 30	76	74 / 90	1.8/2.5	0.05/1.2	H98*106	3270	121
OSNJ-CW 90A	M90	3" / 3-1/2"	74 ~ 83	25	30 / 32	91	90 / 102	1.8/3.0	0.05/1.6	H110*120	4600	133
OSNJ-CW 90B	M90	3" / 3-1/2"	82 ~ 90	25	30 / 32	91	90 / 102	1.8/3.0	0.05/1.6	H110*120	4600	133
OSNJ-CW 100A	M100	3-1/2" / 4"	89 ~ 94	25	32	101	102 / 116	1.8/3.0	0.05/1.6	H120*130	5500	145
OSNJ-CW 100B	M100	3-1/2" / 4"	93 ~ 98	25	32	101	102 / 116	1.8/3.0	0.05/1.6	H120*130	5500	145

# Industrial Cable Gland Type:E1W



## E1W Type



### Application : Wire Armoured Cable Gland

- \* For use with all types of steel & aluminum wire cable
- \* Outdoor & Indoor use
- \* EMC Cable Gland.(360° contact)
- \* Weatherproof & Waterproof
- \* Double Compression
- \* Reduce The Effect of Coldflow Characteristic

Design Specification	BS 6121, IEC 62444, EN/IEC 60529
KOMERI Certification	KOMERI-2014-02
Ingress Protection	IP 66
Applicable Cable Specification	All types of steel & aluminum wire Armoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
E1W 20A	M20	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag, Serrated Washer, Shroud
E1W 20A	NPT 3/4"	Brass	
E1W 20A	NPT 1/2"	Stainless steel	

\* Optional Thread Length : ≥15mm (Standard : M16 ~ M63 Length 15mm, M75 Length 20mm, M90~M100Length 25mm)

\* Material for accessories is required

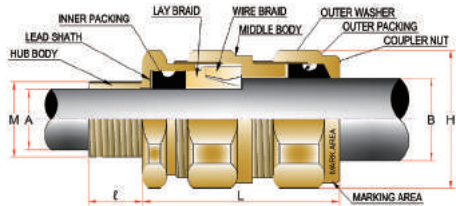
(\* in mm)

Part No.	Entry Thread Size(M)		Cable Dia		Thread Length(ℓ)		Entry Hole Size		Armour Size	Hexagon Dimensions (H)	Weight (g)	Length (L)
	Metric	NPT	Inner'A'	Outer'B'	Metric	NPT	Metric	NPT				
E1W 16A	M16 / M20	1/2"	5 ~ 11	8 ~ 13	15	15	17 / 21	22	0.9 / 1.25	H25*27	150	67
E1W 16B	M16 / M20	1/2"	5 ~ 11	12 ~ 15.1	15	15	17 / 21	22	0.9 / 1.25	H25*27	150	67
E1W 20A	M20	1/2" / 3/4"	8 ~ 15.1	13 ~ 17.5	15	15 / 16	21	22 / 27	0.9 / 1.25	H31*34	235	74
E1W 20B	M20	1/2" / 3/4"	8 ~ 15.1	16 ~ 19.5	15	15 / 16	21	22 / 27	0.9 / 1.25	H31*34	235	74
E1W 25A	M25	3/4" / 1"	13 ~ 19.5	17.5 ~ 22	15	16 / 18	26	27 / 34	1.25/1.6	H36*39	290	79
E1W 25B	M25	3/4" / 1"	13 ~ 19.5	21 ~ 26	15	16 / 18	26	27 / 34	1.25/1.6	H36*39	290	79
E1W 32A	M32	1" / 1-1/4"	17.5 ~ 26	22 ~ 28	15	18 / 19	33	34 / 43	1.6/2.0	H45*49	490	86
E1W 32B	M32	1" / 1-1/4"	17.5 ~ 26	27 ~ 32	15	18 / 19	33	34 / 43	1.6/2.0	H45*49	490	86
E1W 40A	M40	1-1/4" / 1-1/2"	22 ~ 32	30 ~ 35	15	19 / 21	41	43 / 50	1.6/2.0	H55*59	850	94
E1W 40B	M40	1-1/4" / 1-1/2"	22 ~ 32	35.1 ~ 40	15	19 / 21	41	43 / 50	1.6/2.0	H55*59	850	94
E1W 50A	M50	1-1/2" / 2"	30 ~ 41.5	38 ~ 45	15	21 / 24	51	50 / 62	1.8/2.5	H68*73	1390	100
E1W 50B	M50	1-1/2" / 2"	30 ~ 41.5	43 ~ 50	15	21 / 24	51	50 / 62	1.8/2.5	H68*73	1390	100
E1W 63A	M63	2" / 2-1/2"	38 ~ 54	48 ~ 53	15	24 / 27	64	62 / 74	1.8/2.5	H82*88	2070	108
E1W 63B	M63	2" / 2-1/2"	38 ~ 54	51 ~ 56	15	24 / 27	64	62 / 74	1.8/2.5	H82*88	2070	108
E1W 63C	M63	2" / 2-1/2"	38 ~ 54	55 ~ 60	15	24 / 27	64	62 / 74	1.8/2.5	H82*88	2070	108
E1W 75A	M75	2-1/2" / 3"	49 ~ 63	56 ~ 62	20	27 / 30	76	74 / 90	1.8/2.5	H98*106	3270	125
E1W 75B	M75	2-1/2" / 3"	49 ~ 63	62.1 ~ 66	20	27 / 30	76	74 / 90	1.8/2.5	H98*106	3270	125
E1W 75C	M75	2-1/2" / 3"	49 ~ 63	66.1 ~ 70	20	27 / 30	76	74 / 90	1.8/2.5	H98*106	3270	125
E1W 75D	M75	2-1/2" / 3"	49 ~ 63	68 ~ 75	20	27 / 30	76	74 / 90	1.8/2.5	H98*106	3270	125
E1W 90A	M90	3" / 3-1/2"	63 ~ 77	74 ~ 83	25	30 / 32	91	90 / 102	1.8/3.0	H110*120	4600	132
E1W 90B	M90	3" / 3-1/2"	63 ~ 77	82 ~ 90	25	30 / 32	91	90 / 102	1.8/3.0	H110*120	4600	132
E1W 100A	M100	3-1/2" / 4"	73.1 ~ 85	89 ~ 94	25	32	101	102 / 116	1.8/3.0	H120*130	5500	144
E1W 100B	M100	3-1/2" / 4"	73.1 ~ 85	93 ~ 98	25	32	101	102 / 116	1.8/3.0	H120*130	5500	144

# Industrial Cable Gland Type: E1W/LS



## E1W/LS Type



### Application : Wire Armoured Cable Gland

- \* For use with lead sheath steel & aluminum cable
- \* Outdoor & Indoor use
- \* EMC Cable Gland.(360° contact)
- \* Weatherproof & Waterproof
- \* Double Compression
- \* Reduce The Effect of Coldflow Characteristic

Design Specification	BS 6121, IEC 62444, EN/IEC 60529
Ingress Protection	IP 66
Applicable Cable Specification	All lead sheath types of steel & aluminum wire Armoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
E1W/LS 20A	M20	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag, Serrated Washer, Shroud
E1W/LS 20A	NPT 3/4"	Brass	
E1W/LS 20A	NPT 1/2"	Stainless steel	

\* Optional Thread Length : ≥15mm ( Standard : M16 ~ M63 Length 15mm, M75 Length 20mm, M90~M100Length 25mm) 로 수정  
 \* Material for accessories is required

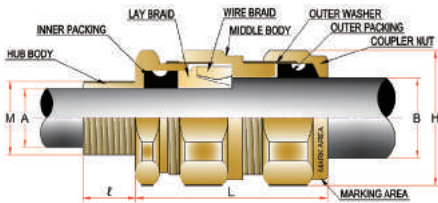
(\* in mm)

Part No.	Entry Thread Size(M)		Cable Dia		Thread Length(ℓ)		Entry Hole Size		Armour Size	Hexagon Dimensions (H)	Weight (g)	Length (L)
	Metric	NPT	Inner'A'	Outer'B'	Metric	NPT	Metric	NPT				
E1W/LS 16A	M16 / M20	1/2"	5 ~ 11	8 ~ 13	15	15	17 / 21	22	0.9 / 1.25	H25*27	150	67
E1W/LS 16B	M16 / M20	1/2"	5 ~ 11	12 ~ 15.1	15	15	17 / 21	22	0.9 / 1.25	H25*27	150	67
E1W/LS 20A	M20	1/2" / 3/4"	8 ~ 15.1	13 ~ 17.5	15	15 / 16	21	22 / 27	0.9 / 1.25	H31*34	235	74
E1W/LS 20B	M20	1/2" / 3/4"	8 ~ 15.1	16 ~ 19.5	15	15 / 16	21	22 / 27	0.9 / 1.25	H31*34	235	74
E1W/LS 25A	M25	3/4" / 1"	13 ~ 19.5	17.5 ~ 22	15	16 / 18	26	27 / 34	1.25/1.6	H36*39	290	79
E1W/LS 25B	M25	3/4" / 1"	13 ~ 19.5	21 ~ 26	15	16 / 18	26	27 / 34	1.25/1.6	H36*39	290	79
E1W/LS 32A	M32	1" / 1-1/4"	17.5 ~ 26	22 ~ 28	15	18 / 19	33	34 / 43	1.6/2.0	H45*49	490	86
E1W/LS 32B	M32	1" / 1-1/4"	17.5 ~ 26	27 ~ 32	15	18 / 19	33	34 / 43	1.6/2.0	H45*49	490	86
E1W/LS 40A	M40	1-1/4" / 1-1/2"	22 ~ 32	30 ~ 35	15	19 / 21	41	43 / 50	1.6/2.0	H55*59	850	94
E1W/LS 40B	M40	1-1/4" / 1-1/2"	22 ~ 32	35.1 ~ 40	15	19 / 21	41	43 / 50	1.6/2.0	H55*59	850	94
E1W/LS 50A	M50	1-1/2" / 2"	30 ~ 41.5	38 ~ 45	15	21 / 24	51	50 / 62	1.8/2.5	H68*73	1390	100
E1W/LS 50B	M50	1-1/2" / 2"	30 ~ 41.5	43 ~ 50	15	21 / 24	51	50 / 62	1.8/2.5	H68*73	1390	100
E1W/LS 63A	M63	2" / 2-1/2"	38 ~ 54	48 ~ 53	15	24 / 27	64	62 / 74	1.8/2.5	H82*88	2070	108
E1W/LS 63B	M63	2" / 2-1/2"	38 ~ 54	51 ~ 56	15	24 / 27	64	62 / 74	1.8/2.5	H82*88	2070	108
E1W/LS 63C	M63	2" / 2-1/2"	38 ~ 54	55 ~ 60	15	24 / 27	64	62 / 74	1.8/2.5	H82*88	2070	108
E1W/LS 75A	M75	2-1/2" / 3"	49 ~ 63	56 ~ 62	20	27 / 30	76	74 / 90	1.8/2.5	H98*106	3270	125
E1W/LS 75B	M75	2-1/2" / 3"	49 ~ 63	62.1 ~ 66	20	27 / 30	76	74 / 90	1.8/2.5	H98*106	3270	125
E1W/LS 75C	M75	2-1/2" / 3"	49 ~ 63	66.1 ~ 70	20	27 / 30	76	74 / 90	1.8/2.5	H98*106	3270	125
E1W/LS 75D	M75	2-1/2" / 3"	49 ~ 63	68 ~ 75	20	27 / 30	76	74 / 90	1.8/2.5	H98*106	3270	125
E1W/LS 90A	M90	3" / 3-1/2"	63 ~ 77	74 ~ 83	25	30 / 32	91	90 / 102	1.8/3.0	H110*120	4600	132
E1W/LS 90B	M90	3" / 3-1/2"	63 ~ 77	82 ~ 90	25	30 / 32	91	90 / 102	1.8/3.0	H110*120	4600	132
E1W/LS 100A	M100	3-1/2" / 4"	73.1 ~ 85	89 ~ 94	25	32	101	102 / 116	1.8/3.0	H120*130	5500	144
E1W/LS 100B	M100	3-1/2" / 4"	73.1 ~ 85	93 ~ 98	25	32	101	102 / 116	1.8/3.0	H120*130	5500	144

# Industrial Cable Gland Type:E1X



## E1X Type



### Application : Braided Armoured Cable Gland

- \* For use with all types of braided armoured cable
- \* Outdoor & Indoor use
- \* EMC Cable Gland.(360° contact)
- \* Weatherproof & Waterproof
- \* Double Compression
- \* Reduce The Effect of Coldflow Characteristic

Design Specification	BS 6121, IEC 62444, EN/IEC 60529
KOMERI Certification	KOMERI-2014-03
Ingress Protection	IP 66
Applicable Cable Specification	braided armoured / Steel tape armoured cable
Gland Material	Nickel plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
E1X 20A	M20	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag, Serrated Washer, Shroud
E1X 20A	NPT 3/4"	Brass	
E1X 20A	NPT 1/2"	Stainless steel	

\* Optional Thread Length : ≥15mm (Standard : M16 ~ M63 Length 15mm, M75 Length 20mm, M90~M100 Length 25mm)

\* Material for accessories is required

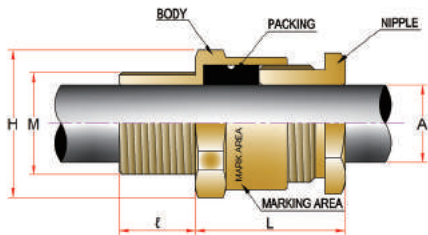
(\* in mm)

Part No.	Entry Thread Size(M)		Cable Dia		Thread Length(ℓ)		Entry Hole Size		Armour Size	Hexagon Dimensions (H)	Weight (g)	Length (L)
	Metric	NPT	Inner'A'	Outer'B'	Metric	NPT	Metric	NPT				
E1X 16A	M16 / M20	1/2"	5 ~ 11	8 ~ 13	15	15	17 / 21	22	0.05/0.8	H25*27	150	67
E1X 16B	M16 / M20	1/2"	5 ~ 11	12 ~ 15.1	15	15	17 / 21	22	0.05/0.8	H25*27	150	67
E1X 20A	M20	1/2" / 3/4"	8 ~ 15.1	13 ~ 17.5	15	15 / 16	21	22 / 27	0.05/0.8	H31*34	235	74
E1X 20B	M20	1/2" / 3/4"	8 ~ 15.1	16 ~ 19.5	15	15 / 16	21	22 / 27	0.05/0.8	H31*34	235	74
E1X 25A	M25	3/4" / 1"	13 ~ 19.5	17.5 ~ 22	15	16 / 18	26	27 / 34	0.05/0.8	H36*39	290	79
E1X 25B	M25	3/4" / 1"	13 ~ 19.5	21 ~ 26	15	16 / 18	26	27 / 34	0.05/0.8	H36*39	290	79
E1X 32A	M32	1" / 1-1/4"	17.5 ~ 26	22 ~ 28	15	18 / 19	33	34 / 43	0.05/1.2	H45*49	490	86
E1X 32B	M32	1" / 1-1/4"	17.5 ~ 26	27 ~ 32	15	18 / 19	33	34 / 43	0.05/1.2	H45*49	490	86
E1X 40A	M40	1-1/4" / 1-1/2"	22 ~ 32	30 ~ 35	15	19 / 21	41	43 / 50	0.05/1.2	H55*59	850	94
E1X 40B	M40	1-1/4" / 1-1/2"	22 ~ 32	35.1 ~ 40	15	19 / 21	41	43 / 50	0.05/1.2	H55*59	850	94
E1X 50A	M50	1-1/2" / 2"	30 ~ 41.5	38 ~ 45	15	21 / 24	51	50 / 62	0.05/1.2	H68*73	1390	100
E1X 50B	M50	1-1/2" / 2"	30 ~ 41.5	43 ~ 50	15	21 / 24	51	50 / 62	0.05/1.2	H68*73	1390	100
E1X 63A	M63	2" / 2-1/2"	38 ~ 54	48 ~ 53	15	24 / 27	64	62 / 74	0.05/1.2	H82*88	2070	108
E1X 63B	M63	2" / 2-1/2"	38 ~ 54	51 ~ 56	15	24 / 27	64	62 / 74	0.05/1.2	H82*88	2070	108
E1X 63C	M63	2" / 2-1/2"	38 ~ 54	55 ~ 60	15	24 / 27	64	62 / 74	0.05/1.2	H82*88	2070	108
E1X 75A	M75	2-1/2" / 3"	49 ~ 63	56 ~ 62	20	27 / 30	76	74 / 90	0.05/1.2	H98*106	3270	125
E1X 75B	M75	2-1/2" / 3"	49 ~ 63	62.1 ~ 66	20	27 / 30	76	74 / 90	0.05/1.2	H98*106	3270	125
E1X 75C	M75	2-1/2" / 3"	49 ~ 63	66.1 ~ 70	20	27 / 30	76	74 / 90	0.05/1.2	H98*106	3270	125
E1X 75D	M75	2-1/2" / 3"	49 ~ 63	68 ~ 75	20	27 / 30	76	74 / 90	0.05/1.2	H98*106	3270	125
E1X 90A	M90	3" / 3-1/2"	63 ~ 77	74 ~ 83	25	30 / 32	91	90 / 102	0.05/1.6	H110*120	4600	132
E1X 90B	M90	3" / 3-1/2"	63 ~ 77	82 ~ 90	25	30 / 32	91	90 / 102	0.05/1.6	H110*120	4600	132
E1X 100A	M100	3-1/2" / 4"	73.1 ~ 85	89 ~ 94	25	32	101	102 / 116	0.05/1.6	H120*130	5500	144
E1X 100B	M100	3-1/2" / 4"	73.1 ~ 85	93 ~ 98	25	32	101	102 / 116	0.05/1.6	H120*130	5500	144

# Industrial Cable Gland Type:OSNU



## OSNU Type



### Application : Non Armoured Cable Gland

- \* For use with braided armoured & non armoured cable
- \* Weatherproof & Waterproof
- \* Single Compression

Design Specification	BS 6121, IEC 62444, EN/IEC 60529
KOMERI Certification(KAS)	KOMERI-2016-06
Ingress Protection	IP 66 / 67
Applicable Cable Specification	Braided armoured cable Unarmoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
OSNU 20	M20	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag, Serrated Washer, Shroud
OSNU 20	NPT 3/4"	Brass	
OSNU 40	NPT 1-1/2"	Stainless steel	

\* Optional Thread Length : ≥15mm ( Standard : M16 ~ M63 Length 15mm, M75 Length 20mm, M90~M100 Length 25mm)

\* Material for accessories is required

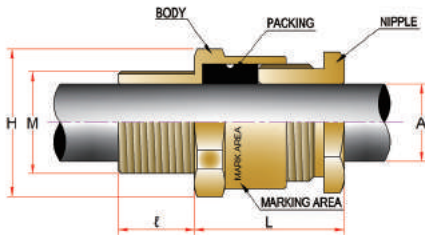
(\* in mm)

Part No.	Entry Thread Size(M)		Cable Dia Outer'B'	Thread Length(ℓ)		Entry Hole Size		Hexagon Dimensions (H)	Weight (g)	Length (L)
	Metric	NPT		Metric	NPT	Metric	NPT			
OSNU 16	M16 / M20	1/2"	3 ~ 10.3	15	20.0	17 / 21	22	H24*26	79/95	33
OSNU 20	M20 / M25	1/2" / 3/4"	9 ~ 15.3	15	20.0 / 20.2	21	22 / 27	H27*29	95	35
OSNU 25	M25	3/4" / 1"	13 ~ 20.0	15	20.2 / 25.2	26	27 / 34	H32*34	125	37
OSNU 32	M32	1" / 1-1/4"	17 ~ 26.5	15	25.2 / 25.8	33	34 / 43	H39*41.5	195	40
OSNU 40	M40	1-1/4" / 1-1/2"	22 ~ 32	15	25.8 / 26.2	41	43 / 50	H48*51	300	42
OSNU 50	M50	1-1/2" / 2"	30 ~ 42	15	26.2 / 27.0	51	50 / 62	H58*62	425	45
OSNU 63	M63	2" / 2-1/2"	39 ~ 51	15	27.0 / 40.0	64	62 / 74	H73*78	680	48
OSNU 63X	M63	2-1/2"	45 ~ 55	15	40.0	64	62 / 74	H73*78	575	48
OSNU 75	M75	2-1/2" / 3"	54 ~ 61	20	40.0 / 41.6	76	74 / 90	H85*90	875	54
OSNU 75X	M75	3"	58 ~ 68	20	41.6	76	74 / 90	H94*99	860	54
OSNU 90	M90	3" / 3-1/2"	66 ~ 78	25	41.6 / 43.0	91	90 / 102	H103*109	1690	62
OSNU 100	M100	3-1/2" / 4"	75~ 89	25	43.0 / 44.1	101	102 / 116	H112*120	2250	70
OSNU 115	M115	4"	86 ~ 101	25	44.1	101	102 / 116	H123*133	2005	70

# Industrial Cable Gland Type:OSNJ



## OSNJ Type



### Application : Non Armoured Cable Gland

- \* For use with braided armoured & non armoured cable
- \* Weatherproof & Waterproof
- \* Single Compression

Design Specification	BS 6121, IEC 62444, EN/IEC 60529
Classification	Class NK
Ingress Protection	IP 66 / 67
Applicable Cable Specification	Braided armoured cable Unarmoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
OSNJ 20A	M20	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag, Serrated Washer, Shroud
OSNJ 20A	NPT 3/4"	Brass	
OSNJ 20A	NPT 1/2"	Stainless steel	

\* Optional Thread Length : ≥15mm (Standard : M16~M75 Length 15mm, M90~M100 Length 20mm)  
\* Material for accessories is required

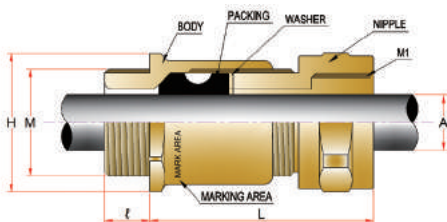
(\* in mm)

Part No.	Entry Thread Size(M)		Cable Dia Outer'A'	Thread Length(ℓ)		Entry Hole Size		Hexagon Dimensions (H)	Weight (g)	Length (L)
	Metric	NPT		Metric	NPT	Metric	NPT			
OSNJ 16A	M16 / M20	1/2"	3 ~ 7.5	15	15	17 / 21	22	H24*26	79/95	31
OSNJ 16B	M16 / M20	1/2"	6.1 ~ 10	15	15	17 / 21	22	H24*26	79/95	31
OSNJ 20A	M20	1/2" / 3/4"	10.1 ~ 13	15	15 / 16	21	22 / 27	H27*29	95	33
OSNJ20B	M20	1/2" / 3/4"	13.1 ~ 15	15	15 / 16	21	22 / 27	H27*29	85	33
OSNJ 25A	M25	3/4" / 1"	14 ~ 17.5	15	16 / 18	26	27 / 34	H32*34	125	34
OSNJ 25B	M25	3/4" / 1"	16.1 ~ 19.5	15	16 / 18	26	27 / 34	H32*34	115	34
OSNJ 32A	M32	1" / 1-1/4"	18.1 ~ 22	15	18 / 19	33	34 / 43	H39*41.5	195	38
OSNJ 32B	M32	1" / 1-1/4"	21 ~ 26	15	18 / 19	33	34 / 43	H39*41.5	175	38
OSNJ 40A	M40	1-1/4" / 1-1/2"	24 ~ 28	15	19 / 21	41	43 / 50	H48*51	300	40
OSNJ 40B	M40	1-1/4" / 1-1/2"	27 ~ 32	15	19 / 21	41	43 / 50	H48*51	265	40
OSNJ 50A	M50	1-1/2" / 2"	32.1 ~ 34	15	21 / 24	51	50 / 62	H58*62	425	42
OSNJ 50B	M50	1-1/2" / 2"	34.1 ~ 40	15	21 / 24	51	50 / 62	H58*62	360	42
OSNJ 63A	M63	2" / 2-1/2"	38 ~ 44	15	24 / 27	64	62 / 74	H73*78	680	46
OSNJ 63B	M63	2" / 2-1/2"	43 ~ 50	15	24 / 27	64	62 / 74	H73*78	575	46
OSNJ 63C	M63	2" / 2-1/2"	49 ~ 54	15	24 / 27	64	62 / 74	H73*78	575	46
OSNJ 75A	M75	2-1/2" / 3"	52 ~ 56	15	27 / 30	76	74 / 90	H85*90	875	52
OSNJ 75B	M75	2-1/2" / 3"	55 ~ 60	15	27 / 30	76	74 / 90	H85*90	860	52
OSNJ 75C	M75	2-1/2" / 3"	59 ~ 62	15	27 / 30	76	74 / 90	H85*90	750	52
OSNJ 75D	M75	2-1/2" / 3"	62.1 ~ 66	15	27 / 30	76	74 / 90	H85*90	725	52
OSNJ 90A	M90	3" / 3-1/2"	63 ~ 70	20	30 / 32	91	90 / 102	H103*113	1690	60
OSNJ 90B	M90	3" / 3-1/2"	68 ~ 76	20	30 / 32	91	90 / 102	H103*113	1480	60
OSNJ 100A	M100	3-1/2" / 4"	76.1 ~ 81	20	32	101	102 / 116	H112*120	2250	69
OSNJ 100B	M100	3-1/2" / 4"	81.1 ~ 85	20	32	101	102 / 116	H112*120	2005	69

# Industrial Cable Gland Type: OSNJ-F



## OSNJ-F Type



### Application : Non Armoured Cable Gland

- \* For use with braided armoured & non armoured cable / male and female threads type
- \* Weatherproof & Waterproof
- \* Single Compression

Design Specification	BS 6121, IEC 62444, EN/IEC 60529
Ingress Protection	IP 66 / 67
Applicable Cable Specification	Braided armoured & unarmoured Cable Male and female thread type
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
OSNJ-F 20A	M20(M)xM20(F)	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag, Serrated Washer, Shroud
OSNJ-F 20A	NPT 3/4(M)"x 3/4"(F)	Brass	
OSNJ-F 20A	NPT 1/2"(M) x 1/2"(F)	Stainless steel	

- \* Optional Thread Length :  $\geq 15$ mm (Standard : M16~M75 Length 15mm, M90~M100 Length 20mm)
- \* Material for accessories is required

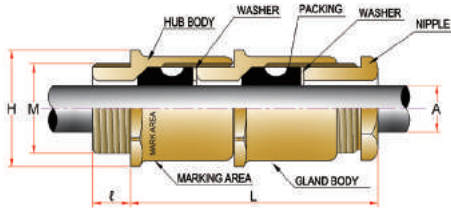
(\* in mm)

Part No.	Entry Thread Size(M*M1)		Cable Dia Outer' A'	Thread Length( $\ell$ )		Entry Hole Size		Hexagon Dimensions (H)	Length (L)
	Metric	NPT		Metric	NPT	Metric	NPT		
OSNJ-F 16A	M16 / M20	1/2"	5 ~ 7.5	15	15	17 / 21	22	H24*26	44
OSNJ-F 16B	M16 / M20	1/2"	7.5 ~ 10	15	15	17 / 21	22	H24*26	44
OSNJ-F 20A	M20	1/2" / 3/4"	10 ~ 13	15	15 / 16	21	22 / 27	H27*29	49
OSNJ-F 20B	M20	1/2" / 3/4"	13 ~ 15	15	15 / 16	21	22 / 27	H27*29	49
OSNJ-F 25A	M25	3/4" / 1"	15 ~ 17.5	15	16 / 18	26	27 / 34	H32*34	52
OSNJ-F 25B	M25	3/4" / 1"	17.5 ~ 19.5	15	16 / 18	26	27 / 34	H32*34	52
OSNJ-F 32A	M32	1" / 1-1/4"	19.5 ~ 22	15	18 / 19	33	34 / 43	H39*41.5	54
OSNJ-F 32B	M32	1" / 1-1/4"	22 ~ 26	15	18 / 19	33	34 / 43	H39*41.5	54
OSNJ-F 40A	M40	1-1/4" / 1-1/2"	26 ~ 28	15	19 / 21	41	43 / 50	H48*51	55
OSNJ-F 40B	M40	1-1/4" / 1-1/2"	28 ~ 32	15	19 / 21	41	43 / 50	H48*51	55
OSNJ-F 50A	M50	1-1/2" / 2"	32 ~ 36	15	21 / 24	51	50 / 62	H58*62	62
OSNJ-F 50B	M50	1-1/2" / 2"	36 ~ 40	15	21 / 24	51	50 / 62	H58*62	62
OSNJ-F 63A	M63	2" / 2-1/2"	40 ~ 44	15	24 / 27	64	62 / 74	H73*78	68
OSNJ-F 63B	M63	2" / 2-1/2"	44 ~ 50	15	24 / 27	64	62 / 74	H73*78	68
OSNJ-F 63C	M63	2" / 2-1/2"	50 ~ 54	15	24 / 27	64	62 / 74	H73*78	68
OSNJ-F 75A	M75	2-1/2" / 3"	54 ~ 56	15	27 / 30	76	74 / 90	H85*90	78
OSNJ-F 75B	M75	2-1/2" / 3"	56 ~ 60	15	27 / 30	76	74 / 90	H85*90	78
OSNJ-F 75C	M75	2-1/2" / 3"	60 ~ 62	15	27 / 30	76	74 / 90	H85*90	78
OSNJ-F 75D	M75	2-1/2" / 3"	62 ~ 66	15	27 / 30	76	74 / 90	H85*90	78
OSNJ-F 90A	M90	3" / 3-1/2"	66 ~ 70	20	30 / 32	91	90 / 102	H100*106	92
OSNJ-F 90B	M90	3" / 3-1/2"	70 ~ 76	20	30 / 32	91	90 / 102	H100*106	92
OSNJ-F 100A	M100	3-1/2" / 4"	76 ~ 81	20	32	101	102 / 116	H112*120	109
OSNJ-F 100B	M100	3-1/2" / 4"	81 ~ 85	20	32	101	102 / 116	H112*120	109

# Industrial Cable Gland Type:OSNJ-D



## OSNJ-D Type



### Application : Non Armoured Cable Gland

- \* For use with armoured & non armoured cable
- \* Weatherproof & Waterproof
- \* Double Compression

Design Specification	BS 6121, IEC 62444, EN/IEC 60529
Ingress Protection	IP 66 / 67
Applicable Cable Specification	Braided armoured & unarmoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
OSNJ-D 20A	M20(M)xM20(F)	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag, Serrated Washer, Shroud
OSNJ-D 20A	NPT 3/4(M)"x 3/4"(F)	Brass	
OSNJ-D 20A	NPT 1/2"(M) x 1/2"(F)	Stainless steel	

- \* Optional Thread Length : ≥15mm (Standard : M16~M75 Length 15mm, M90~M100 Length 20mm)
- \* Material for accessories is required

(\* in mm)

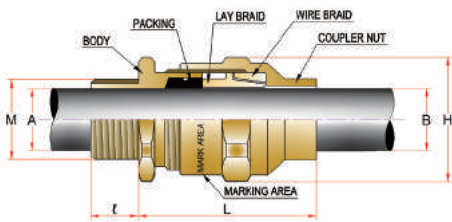
Part No.	Entry Thread Size(M)		Cable Dia Outer'A'	Thread Length(ℓ)		Entry Hole Size		Hexagon Dimensions (H)	Length (L)
	Metric	NPT		Metric	NPT	Metric	NPT		
OSNJ-D 16A	M16 / M20	1/2"	3 ~ 7.5	15	15	17 / 21	22	H24*26	51
OSNJ-D 16B	M16 / M20	1/2"	6.1 ~ 10	15	15	17 / 21	22	H24*26	51
OSNJ-D 20A	M20	1/2" / 3/4"	10.1 ~ 13	15	15 / 16	21	22 / 27	H27*29	55
OSNJ-D 20B	M20	1/2" / 3/4"	13.1 ~ 15	15	15 / 16	21	22 / 27	H27*29	55
OSNJ-D 25A	M25	3/4" / 1"	14 ~ 17.5	15	16 / 18	26	27 / 34	H32*34	58
OSNJ-D 25B	M25	3/4" / 1"	16.1 ~ 19.5	15	16 / 18	26	27 / 34	H32*34	58
OSNJ-D 32A	M32	1" / 1-1/4"	18.1 ~ 22	15	18 / 19	33	34 / 43	H39*41.5	63
OSNJ-D 32B	M32	1" / 1-1/4"	21 ~ 26	15	18 / 19	33	34 / 43	H39*41.5	63
OSNJ-D 40A	M40	1-1/4" / 1-1/2"	24 ~ 28	15	19 / 21	41	43 / 50	H48*51	67
OSNJ-D 40B	M40	1-1/4" / 1-1/2"	27 ~ 32	15	19 / 21	41	43 / 50	H48*51	67
OSNJ-D 50A	M50	1-1/2" / 2"	32.1 ~ 34	15	21 / 24	51	50 / 62	H58*62	71
OSNJ-D 50B	M50	1-1/2" / 2"	34.1 ~ 40	15	21 / 24	51	50 / 62	H58*62	71
OSNJ-D 63A	M63	2" / 2-1/2"	38 ~ 44	15	24 / 27	64	62 / 74	H73*78	77
OSNJ-D 63B	M63	2" / 2-1/2"	43 ~ 50	15	24 / 27	64	62 / 74	H73*78	77
OSNJ-D 63C	M63	2" / 2-1/2"	49 ~ 54	15	24 / 27	64	62 / 74	H73*78	77
OSNJ-D 75A	M75	2-1/2" / 3"	52 ~ 56	15	27 / 30	76	74 / 90	H85*90	87
OSNJ-D 75B	M75	2-1/2" / 3"	55 ~ 60	15	27 / 30	76	74 / 90	H85*90	87
OSNJ-D 75C	M75	2-1/2" / 3"	59 ~ 62	15	27 / 30	76	74 / 90	H85*90	87
OSNJ-D 75D	M75	2-1/2" / 3"	62.1 ~ 66	15	27 / 30	76	74 / 90	H85*90	87
OSNJ-D 90A	M90	3" / 3-1/2"	63 ~ 70	20	30 / 32	91	90 / 102	H100*106	102
OSNJ-D 90B	M90	3" / 3-1/2"	68 ~ 76	20	30 / 32	91	90 / 102	H100*106	102
OSNJ-D 100A	M100	3-1/2" / 4"	76.1 ~ 81	20	32	101	102 / 116	H112*120	119
OSNJ-D 100B	M100	3-1/2" / 4"	81.1 ~ 85	20	32	101	102 / 116	H112*120	119



# Industrial Cable Gland Type:OSD1



## OSD1 Type



### Application : Braided outjacket cable gland

- \* For use with braided out jacket armoured & Steel tape armoured covered cable
- \* Outdoor & Indoor use
- \* Single Compression
- \* Weatherproof & Waterproof
- \* Inspectable armoured clamping cable gland

Design Specification	BS 6121, IEC 62444, EN/IEC 60529
Classification	Class NK
Ingress Protection	IP 66
Applicable Cable Specification	All types of steel & aluminum wire Armoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
OSD1 16A	M20	Nickel plated brass	Lock Nut, Sealing Washer, Earth Tag, Serrated Washer, Shroud
OSD1 20A	NPT 3/4"	Brass	
OSD1 32B	NPT 1-1/4"	Stainless steel	

\* Optional Thread Length : ≥15mm ( Standard : M16 ~ M63 Length 15mm, M75 Length 20mm, M90~M100 Length 25mm)

\* Material for accessories is required

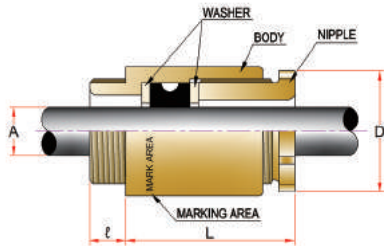
(\* in mm)

Part No.	Entry Thread Size(M)		Cable Dia		Thread Length(ℓ)		Entry Hole Size		Armour Size	Hexagon Dimensions (H)	Length (L)
	Metric	NPT	Inner'A'	Outer'B'	Metric	NPT	Metric	NPT			
OSD1 16A	M16 / M20	1/2"	3.0 ~ 7.5	3.0 ~ 9.5	15	15	17 / 21	22	0.05 / 0.5	H25*27	52
OSD1 16B	M16 / M20	1/2"	6.1 ~ 10	6.1 ~ 12.0	15	15	17 / 21	22	0.05 / 0.5	H25*27	52
OSD1 20A	M20	1/2" / 3/4"	8.0 ~ 13	8.0 ~ 15.4	15	15 / 16	21	22 / 27	0.05 / 0.6	H31*34	57
OSD1 20B	M20	1/2" / 3/4"	12 ~ 15.1	12.0 ~ 17.5	15	15 / 16	21	22 / 27	0.05 / 0.6	H31*34	57
OSD1 25A	M25	3/4" / 1"	13 ~ 17.5	13.0 ~ 20.3	15	16 / 18	26	27 / 34	0.05 / 0.7	H36*39	60
OSD1 25B	M25	3/4" / 1"	16.1 ~ 19.5	16.1 ~ 22.3	15	16 / 18	26	27 / 34	0.05 / 0.7	H36*39	60
OSD1 32A	M32	1" / 1-1/4"	17.5 ~ 22.0	17.5 ~ 26	15	18 / 19	33	34 / 43	0.05 / 1.0	H45*49	66
OSD1 32B	M32	1" / 1-1/4"	21 ~ 26	21 ~ 30	15	18 / 19	33	34 / 43	0.05 / 1.0	H45*49	66
OSD1 40A	M40	1-1/4" / 1-1/2"	22 ~ 28	22 ~ 32.8	15	19 / 21	41	43 / 50	0.05 / 1.2	H55*59	72
OSD1 40B	M40	1-1/4" / 1-1/2"	27 ~ 32	27 ~ 36.8	15	19 / 21	41	43 / 50	0.05 / 1.2	H55*59	72
OSD1 50A	M50	1-1/2" / 2"	30 ~ 34	30 ~ 38.8	15	21 / 24	51	50 / 62	0.05 / 1.2	H68*73	75
OSD1 50B	M50	1-1/2" / 2"	34 ~ 40	34 ~ 44.8	15	21 / 24	51	50 / 62	0.05 / 1.2	H68*73	75
OSD1 63A	M63	2" / 2-1/2"	38 ~ 44	38 ~ 51.6	15	24 / 27	64	62 / 74	0.05 / 1.9	H82*88	86
OSD1 63B	M63	2" / 2-1/2"	43 ~ 50	43 ~ 57.6	15	24 / 27	64	62 / 74	0.05 / 1.9	H82*88	86
OSD1 63C	M63	2" / 2-1/2"	49 ~ 54	49 ~ 61.6	15	24 / 27	64	62 / 74	0.05 / 1.9	H82*88	86
OSD1 75A	M75	2-1/2" / 3"	52 ~ 56	52 ~ 63.6	20	27 / 30	76	74 / 90	0.05 / 1.9	H98*106	101
OSD1 75B	M75	2-1/2" / 3"	55 ~ 60	55 ~ 67.6	20	27 / 30	76	74 / 90	0.05 / 1.9	H98*106	101
OSD1 75C	M75	2-1/2" / 3"	59 ~ 62	59 ~ 69.6	20	27 / 30	76	74 / 90	0.05 / 1.9	H98*106	101
OSD1 75D	M75	2-1/2" / 3"	62 ~ 66	62 ~ 73.6	20	27 / 30	76	74 / 90	0.05 / 1.9	H98*106	101
OSD1 90A	M90	3" / 3-1/2"	63 ~ 70	63 ~ 78	25	30 / 32	91	90 / 102	0.05 / 2.0	H110*120	128
OSD1 90B	M90	3" / 3-1/2"	68 ~ 76	68 ~ 84	25	30 / 32	91	90 / 102	0.05 / 2.0	H110*120	128
OSD1 100A	M100	3-1/2" / 4"	73.1 ~ 81	73.1 ~ 89	25	32	101	102 / 116	0.05 / 2.0	H110*120	137
OSD1 100B	M100	3-1/2" / 4"	81 ~ 85	81 ~ 93	25	32	101	102 / 116	0.05 / 2.0	H110*120	137

# Industrial Cable Gland Type:OSCG



## OSCG Type



### Application : Jis Standard Cable Gland

- \* For use with Non armoured cable
- \* Weatherproof & Waterproof
- \* Single Compression

Design Specification	JIS F8801 H - "A" Type Gland
KOMERI Certification	KOMERI-2016-02
Ingress Protection	IP 66
Applicable Cable Specification	Unarmoured Cable
Gland Material	Chrome(Standard) and Nickel Plated Brass, Brass(only), Stainless Steel(316L), Aluminum
Gasket (washer)	NBR
Sealing	EPDM
Accessories	Sealing Washer, Lock Nut, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
OSCG - 20A	PF 3/4"	Chrome Plated Brass	With Lock Nut, Sealing Washer
OSCG - 30C	PF 1-1/4"	Brass	
OSCG - 70B	PF 3"	Aluminum	

(\* in mm)

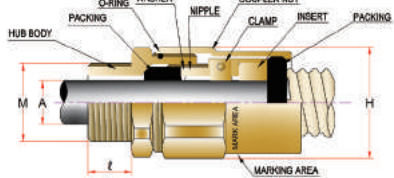
Part No.	Entry Thread Size(M)	Cable Dia Outer 'A'	Packing Inner Dia			Thread Length( $\ell$ )	Entry Hole Size	D	Length (L)
	PF		A	B	C				
OSCG - 10	3/8"	6 ~ 8	7	8		11	18	22	33
OSCG - 15	1/2"	7.5~11	9	10	11	11	22	28	36
OSCG - 20	3/4"	11~15	12	13	15	11	27	34	41
OSCG - 25	1"	15~20	16	18	20	11	34	42	47
OSCG - 30	1-1/4"	19.5~26	22	24	26	12	43	50	52
OSCG - 35	1-1/2"	26~30	28	30		12	49	56	54
OSCG - 40	1-1/2"	30~34	32	34		12	49	56	54
OSCG - 45	2"	34~40	36	38	40	12	61	70	60
OSCG - 50	2"	38~44	42	44		12	61	70	64
OSCG - 55	2-1/2"	43~50	46	48	50	12	76	86	73
OSCG - 60	2-1/2"	49~57	52	54	57	12	76	86	73
OSCG - 65	3"	56~60	58	60		14	89	100	85
OSCG - 70	3"	60~64	62	64		14	89		
OSCG - 75	3"	64~71	66	68	71	14	89		
OSCG - 80	3-1/2"	70~74	72	74		14	101	110	90
OSCG - 85	3-1/2"	74~78	76	78		14	101		
OSCG - 90	4"	78~82	80	82		16	114	130	94
OSCG - 95	4"	82~86	84	86		16	114		
OSCG - 100	4"	86~93	88	93		16	114		

# Industrial Cable Gland Type: OSXP & OSXP-W

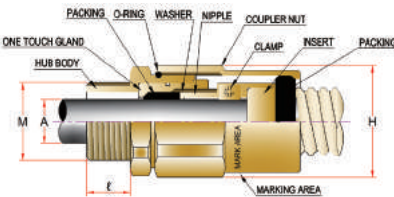
## OSXP & OSXP-W Type



OSXP TYPE



OSXP-W TYPE



### Application : Flexible Packing Type cable gland

- \* For use with cable or flexible fitting for electrical equipment or machine
- \* Outdoor & Indoor use
- \* Weatherproof & Waterproof

Design Specification	JIS B 0202 thread
Applicable Cable Specification	Unarmoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Earth Tag, Serrated Washer

### Order Example

Part No.	Thread	Material	Accessories
OSXP 16	NPT 1/2"	Nickel plated brass	Sealing Washer, Lock Nut, Shroud, Earth Tag
OSXP-W 16	PF 1/2"	Stainless steel(316L)	
OSXP-W 16	NPT 1/2"	Stainless steel(316L)	

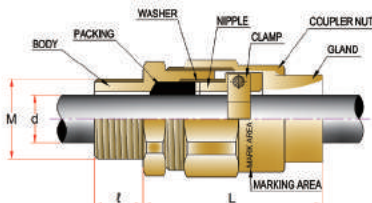
\* Material for accessories is required

(\* in mm)

Part No.		Entry Thread Size(M)	Thread Length(ℓ)	Cable Dia (d)	Hexagon Dimensions (H)
		NPT/PF/PT	NPT/PF/PT		
OSXP 16	OSXP - W 16	1/2"	16	6~13	H30 X 33
OSXP 22	OSXP - W 22	3/4"	17	13~18	H35 X 38
OSXP 28	OSXP - W 28	1"	18	18~22	H40 X 44
OSXP 36	OSXP - W 36	1-1/4"	20	22~29	H50 X 54
OSXP 42	OSXP - W 42	1-1/2"	22	29~35	H57 X 61
OSXP 54	OSXP - W 54	2"	24	36~46	H70 X 75
OSXP 70	OSXP - W 70	2-1/2"	26	46~56	H85 X 91

# Industrial Cable Gland Type: OSXP-M

## OSXP-M Type



### Application : Packing Type Cable Gland

- \* For use with cable for electrical equipment or machine
- \* Outdoor & Indoor use
- \* Weatherproof & Waterproof

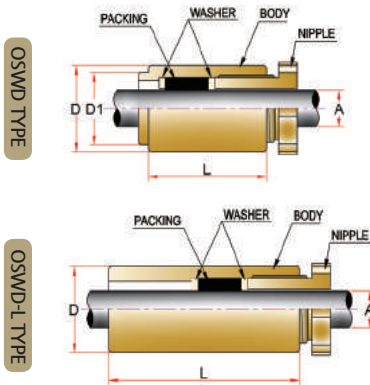
Design Specification	IEC62444
Applicable Cable Specification	Unarmoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Shroud, Earth Tag, Serrated Washer

(\* in mm)

Part No.	Entry Thread Size(M)	Thread Length(ℓ)	Cable Dia (d)	Hexagon Dimensions (H)	Length(L)
	NPT/PF/PT	NPT/PF/PT			
OSXP-M 16	1/2"	16	6~14	H32 X 34	65
OSXP-M 22	3/4"	17	14~18	H38 X 41	71
OSXP-M 28	1"	18	18~22	H45 X 48	74
OSXP-M 36	1-1/4"	20	22~29	H53 X 57	82
OSXP-M 42	1-1/2"	22	29~35	H60 X 64	84
OSXP-M 54	2"	24	35~46	H73 X 78	90
OSXP-M 70	2-1/2"	26	46~56	H90 X 96	100
OSXP-M 82	3"	31	56~74	H102 X 109	108
OSXP-M 104	4"	33	74~88	H127 X 135	112

# Industrial Cable Gland Type :OSWD & OSWD-L

## OSWD & OSWD-L Type



### Application : Welding Type Cable Gland

- \* For use with Non armoured cable
- \* This cable gland conforms to JIS standard

Design Specification	JIS F8801 H - "C" Type Gland
Applicable Cable Specification	Unarmoured Cable
Gland Material	Steel(Standard), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	N/A

### Order Example

Part No.	Hole / Pipe Size	Material
OSWD - 10A	PF 3/8"	Nickel plated brass
OSWD - L - 10A	PF 3/8"	Brass
OSWD - 60B	PF 2-1/2"	Stainless steel

\* Material for accessories is required

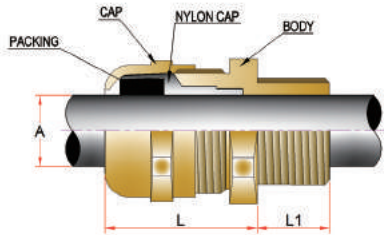
(\* in mm)

Part No.		Pipe Size PF	Cable Dia(d) Outer 'A'	Packing Size			Entry Hole Size		[D]	[D1]	Length[L]	
				A	B	C	OSWD	OSWD-L			OSWD	OSWD-L
OSWD - 10	OSWD - L - 10	3/8"	6~8	7	8		18	23	23	16	21	50
OSWD - 15	OSWD - L - 15	1/2"	8~11	9	10	11	22	29	29	20	24	
OSWD - 20	OSWD - L - 20	3/4"	11~15	12	13	15	27	35	35	26	27	
OSWD - 25	OSWD - L - 25	1"	15~20	16	18	20	34	43	43	33	31	
OSWD - 30	OSWD - L - 30	1-1/4"	21~26	22	24	26	43	51	51	41	33	
OSWD - 35	OSWD - L - 35	1-1/2"	27~30	28	30		49	57	57	47	35	
OSWD - 40	OSWD - L - 40	1-1/2"	31~34	32	34		49	57	57	47	35	
OSWD - 45	OSWD - L - 45	2"	35~40	36	38	40	61	71	71	59	40	
OSWD - 50	OSWD - L - 50	2"	41~44	42	44		61	71	71	59	40	
OSWD - 55	OSWD - L - 55	2-1/2"	45~50	46	48	50	76	87	86	75	47	
OSWD - 60	OSWD - L - 60	2-1/2"	51~56	52	54	56	76	87	86	75	47	300
OSWD - 65	OSWD - L - 65	3"	57~60	58	60		89	101	101	87	60	
OSWD - 70	OSWD - L - 70	3"	61~64	62	64	66	89	101	101	87	60	
OSWD - 75	OSWD - L - 75	3"	65~70	66	68	70	89	101	101	87	60	
OSWD - 80	OSWD - L - 80	3-1/2"	71~74	72	74		101	114	114	99	60	
OSWD - 85	OSWD - L - 85	3-1/2"	75~78	76	78		101	114	114	99	60	
OSWD - 90	OSWD - L - 90	4"	79~82	80	82		114	131	131	112	60	
OSWD - 95	OSWD - L - 95	4"	83~86	84	86		114	131	131	112	60	
OSWD - 100	OSWD - L - 100	4"	86~93	88	93		114	131	131	112	60	

# Industrial Cable Gland Type:OSPG-R



## OSPG-R Type



### Application : Normal Round Type Cable Gland

- \* For use with armoured & non armoured cable
- \* Weatherproof & Waterproof
- \* Single Compression

Design Specification	DIN Thread (DIN 40430), ISO Metric Thread
KOMERI Certification	KOMERI-2016-01
Ingress Protection	IP 66
Applicable Cable Specification	Unarmoured Cable
Gland Material	Nickel Plated Brass(Standard), Brass(Only),
Gasket (washer)	PTFE(Teflon), EPDM, NBR
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut

### Order Example

Part No.	Thread	Material	Accessories
OSPG - R 13.5	PG 13.5	Nickel Plated Brass	Lock Nut, Sealing Washer
OSPG - R M12	M12 X 1.5	Brass	
OSPG-R 16	PG 16	Stainless Steel	

### ● OSPG-R PG Thread Type

(\* in mm)

Part No.	Entry Thread Size(M)	Cable Dia[A]	Thread Length[L1]	Entry Hole Size	[L]
OSPG-R 7	PG 7	2~6.5	5.0	13.0	19
OSPG-R 9	PG 9	4~8	6.0	15.5	22
OSPG-R 11	PG 11	5~10	6.0	19.0	24
OSPG-R 13.5	PG 13.5	6~12	6.5	21.0	25
OSPG-R 16	PG 16	10~14	6.5	23.0	26
OSPG-R 21	PG 21	13~18	7.0	29.0	31
OSPG-R 29	PG 29	18~25	8.0	37.5	39
OSPG-R 36	PG 36	22~32	10.0	47.5	45
OSPG-R 42	PG 42	30~38	10.0	54.5	47
OSPG-R 48	PG 48	34~44	10.0	60.5	53

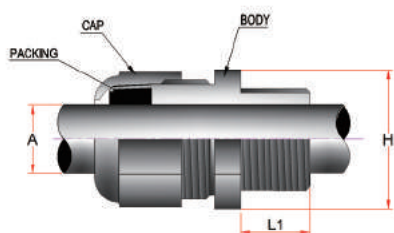
### ● OSPG-R Metric Thread Type

(\* in mm)

Part No.	Entry Thread Size(M)	Cable Dia[A]	Thread Length[L1]	Entry Hole Size	[L]
OSPG-R M12	M12 X 1.5	4~8	6.5	13.0	21.0
OSPG-R M16	M16 X 1.5	5~10	7	17.0	25.0
OSPG-R M20	M20 X 1.5	9~14	8	21.0	27.0
OSPG-R M25	M25 X 1.5	13~18	9	26.0	29.0
OSPG-R M32	M32 X 1.5	13~22	9	33.0	33.0
OSPG-R M40	M40 X 1.5	20~29	9	41.0	40.0
OSPG-R M50	M50 X 1.5	27~36	10	51.0	42.0
OSPG-R M63	M63 X 1.5	34~45	15	64.0	46.0

# Industrial Cable Gland Type:OSPGR-P

## OSPGR-P Type



### Application : Round Type Plastic Cable Gland

- \* For use with non armoured cable
- \* Weatherproof & Waterproof
- \* Single Compression

Design Specification	DIN Thread (DIN 40430), ISO Metric Thread
Ingress Protection	IP 68
Applicable Cable Specification	Unarmoured Cable
Gland Material	Plastic(Nylon - PA6)
Gasket (O-Ring)	EPDM
Sealing	NBR
Accessories	Lock Nut
Color	PG : Silver Gray(RAL 7001), Metric : Black(RAL 9005)

### Order Example

Part No.	Thread	Material	Accessories
OSPGR - P 13.5	PG 13.5	Plastic	Lock Nut
OSPGR - P M12	M12 X 1.5	Plastic	
OSPGR - P 16	PG 16	Plastic	

### ● OSPGR-P PG Thread Type

(\* in mm)

Part No.	Entry Thread Size(M)	Cable Dia[A]	Thread Length[L1]	Entry Hole Size	[H]
OSPGR-P 7	PG 7	3 ~ 6.5	8	13.0	15
OSPGR-P 9	PG 9	4 ~ 8	8	15.5	19
OSPGR-P 11	PG 11	5 ~ 10	8	19.0	22
OSPGR-P 13.5	PG 13.5	6 ~ 12	9	21.0	24
OSPGR-P 16	PG 16	10 ~ 14	10	23.0	27
OSPGR-P 21	PG 21	13 ~ 18	11	29.0	33
OSPGR-P 29	PG 29	18 ~ 25	11	37.5	42
OSPGR-P 36	PG 36	22 ~ 32	13	47.5	52
OSPGR-P 42	PG 42	32 ~ 38	14	54.5	60
OSPGR-P 48	PG 48	37 ~ 44	15	60.5	65

### ● OSPGR-P Metric Thread Type

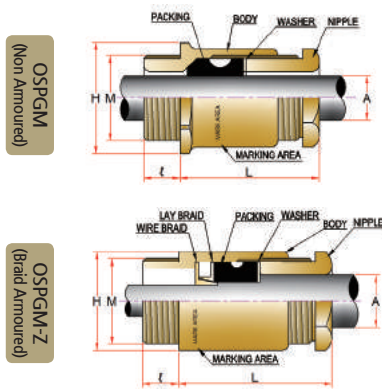
(\* in mm)

Part No.	Entry Thread Size(M)	Cable Dia[A]	Thread Length[L1]	Entry Hole Size	[H]
OSPGR-P M12	M12 X 1.5	3 ~ 6.5	8	13	15
OSPGR-P M16	M16 X 1.5	4 ~ 8	8	17	19
OSPGR-P M20	M20 X 1.5	6 ~ 12	9	21	24
OSPGR-P M25	M25 X 1.5	13 ~ 18	11	26	33
OSPGR-P M32	M32 X 1.5	18 ~ 25	11	33	42
OSPGR-P M40	M40 X 1.2	22 ~ 32	13	41	52
OSPGR-P M50	M50 X 1.5	32 ~ 38	14	51	60
OSPGR-P M63	M63 X 1.5	37 ~ 44	15	64	65

# Industrial Cable Gland Type :OSPGM & OSPGM-Z



## OSPGM & OSPGM-Z Type



### Application : DIN 89280 Type Cable Gland

- \* For use with pannel of battle ship and other military vessels
- \* Hexagon nipple and lock nut

Design Specification	DIN 89280 Type Gland
Applicable Cable Specification	OSPGM : Unarmoured Cable OSPGM-Z : Braided Armoured Cable
Gland Material	Chrome(Standard) and Nickel Plated Brass, Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon), EPDM, NBR
Sealing	Silicone
Accessories	Sealing Washer, Lock Nut, Earth Tag, Serrated Washer

### Order Example

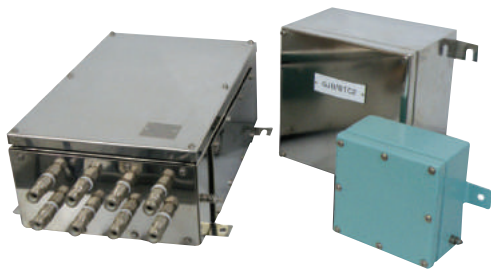
Part No.	Thread	Material	Accessories
OSPGM 18A	M18 X 1.5	Chrome plated Brass	Lock Nut, Sealing Washer
OSPGM-Z 18A	M18 X 1.5	Brass	
OSPGM-Z 36C	M36 X 2.0	Stainless Steel	


\* Material for accessories is required

(\* in mm)

Part No.		Entry Thread Size [M]	Cable Dia [A]	Packing Inner Dia	Thread Length [ℓ]	Hexagon Dimension [H]	OSPGM [L]	OSPGM-Z [L]																																																																													
OSPGM 18	OSPGM-Z 18	M18 X 1.5	7 ~ 10	A	8	10	32	40																																																																													
				B	10				OSPGM 24	OSPGM-Z 24	M24 x 1.5	7 ~ 17	A	8	11	36	43	B	10	C	12	D	14	E	16	F	17	OSPGM 30	OSPGM-Z 30	M30 X 2.0	17 ~ 20	A	18	12	40	48	B	20	OSPGM 36	OSPGM-Z 36	M36 X 2.0	21 ~ 26	A	22	13	44	51	B	24	C	26	OSPGM 45	OSPGM-Z 45	M45 X 2.0	27 ~ 32	A	28	14	47	55	B	30	C	32	OSPGM 56	OSPGM-Z 56	M56 X 2.0	34 ~ 41	A	35	15	52	59	B	38	C	41	OSPGM 72	OSPGM-Z 72	M72 X 2.0	43 ~ 56	A	44	16	56
OSPGM 24	OSPGM-Z 24	M24 x 1.5	7 ~ 17	A	8	11	36	43																																																																													
				B	10																																																																																
				C	12																																																																																
				D	14																																																																																
				E	16																																																																																
				F	17																																																																																
OSPGM 30	OSPGM-Z 30	M30 X 2.0	17 ~ 20	A	18	12	40	48																																																																													
				B	20																																																																																
OSPGM 36	OSPGM-Z 36	M36 X 2.0	21 ~ 26	A	22	13	44	51																																																																													
				B	24																																																																																
				C	26																																																																																
OSPGM 45	OSPGM-Z 45	M45 X 2.0	27 ~ 32	A	28	14	47	55																																																																													
				B	30																																																																																
				C	32																																																																																
OSPGM 56	OSPGM-Z 56	M56 X 2.0	34 ~ 41	A	35	15	52	59																																																																													
				B	38																																																																																
				C	41																																																																																
OSPGM 72	OSPGM-Z 72	M72 X 2.0	43 ~ 56	A	44	16	56	64																																																																													
				B	48																																																																																
				C	52																																																																																
				D	56																																																																																

## **Win Series stainless steel Terminal Enclosure & Junction Box**



Material	Hazardous	Body & Lib	1.5/2.0mm 316,316L Stainless steel
		Gland plates	3.0mm 316,316L Stainless steel
	Outdoor /Indoor	Body & Lib	1.5/2.0mm 316,316L Stainless steel or Sheet steel
		Gland plates	3.0mm 316,316L Stainless steel
Finish		DOT hairline(standard) / Electro-polishing / Painting(special colors) accrding to customer specifications	
Gasket		Lid & Gland plates Neoprene	
Lid Fixing		Fully detachable hinged lid with Flat handle or M6 hexagonal head captive screws	
Earthing		M8 Internal/External earth stud	
Box mounting		4-external lugs with 12mm clearance holes/ slot or self standing	
Equipment mounting		Stand off pillars M6	
Protection		Exe IIC T5/T6 Gb Ex tD A21 IP66 T85°C/T100°C	
Approval		 <b>ATEX</b> IECEx KCs	

The Win Series of enclosures available in stainless steel of finish material have been designed to accommodate rail mounted terminals or other electrical components.

Stainless steel are recommended to give maximum protection for components in indoor/ outdoor and Hazardous / aggressive environments. Features of this range includes sixteen basic sizes in many kinds of depths. Fully removable hinged lid, concealed hinges provides 180° opening.

Lid fixing, stainless captive screws and handle device locked on side, on complex spacers. Lip on upstand increases gasket contact area, ensuring high degree of ingress protection. Earth stud located on lower left hand side.

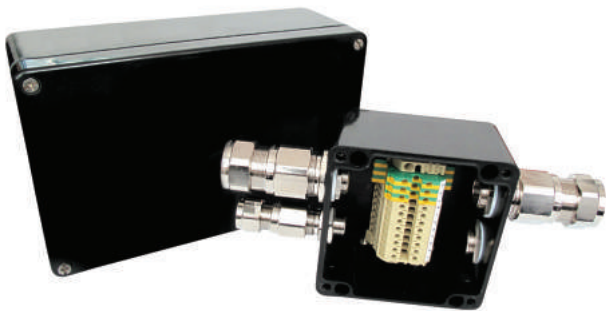
Permits unobtrusive earthing of terminal or wire looping to lid. Option of gland plates on 1 or 4 sides.

One piece gasket on lid and gland plates.

Nominal Type	Overall Dimension			Mounting Dimension		Physically Max. number of Terminal block				Max.apower consumption
	Width	Height	Depth	W1	H1	2,5SQ	4,0SQ	6,0SQ	10SQ	
WIN 701	150	150	100 / 120	200	-	1 × 10	1 × 8	1 × 6	1 × 5	4.83W
WIN 702	200	200	120 / 160	250	-	1 × 16	1 × 13	1 × 10	1 × 8	6.30W
WIN 703	260	260	160 / 200	310	160	1 × 20	1 × 16	1 × 13	1 × 10	10.04W
WIN 704	300	300	160 / 200	350	200	1 × 32	1 × 32	1 × 20	1 × 16	11.27W
WIN 705	260	380	160 / 200	310	280	1 × 48	1 × 48	1 × 40	1 × 30	11.89W
WIN 706	400	400	160 / 200	450	300	2 × 52	2 × 52	2 × 43	2 × 32	16.93W
WIN 707	350	500	160 / 200 / 250	400	400	2 × 72	2 × 72	2 × 60	2 × 45	18.33W
WIN 708	500	500	160 / 200 / 250	550	400	3 × 72	3 × 72	3 × 60	3 × 45	24.32W
WIN 709	450	620	160 / 200 / 250	500	520	3 × 96	3 × 96	3 × 80	3 × 60	25.98W
WIN 710	550	740	200 / 250 / 300	600	640	4 × 120	4 × 120	4 × 100	4 × 75	31.61W
WIN 711	640	860	200 / 250 / 300	690	760	5 × 115	5 × 115	5 × 96	5 × 72	35.62W
WIN 712	750	1000	200 / 250 / 300	800	900	5 × 168	5 × 168	5 × 140	5 × 105	41.02W
WIN 713	1000	1000	200 / 250 / 300	1050	900	6 × 168	6 × 168	6 × 140	6 × 105	45.86W
WIN 714	800	1200	300 / 400 / 500	850	1100	6 × 212	6 × 212	6 × 176	6 × 132	48.38W
WIN 715	1000	1200	300 / 400 / 500	1050	1100	6 × 252	6 × 252	6 × 210	6 × 157	66.77W
WIN 716	1000	1400	300 / 400 / 500	1050	1300	6 × 252	6 × 292	6 × 256	6 × 178	66.77W



# Ex OSGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box



## Application

OSGP GRP Junction boxes have been proved by many sectors of industries. These OSGP GRP enclosure comprises of 4 different sizes enclosure made of Glass Fibre Reinforced Polyester. This material is highly resistant to contamination from oils, fats, aliphatic and also is suitable for LSOH (low smoke zero halogen) applications. Polyester gives excellent mechanical strength and life expectancy. The OSGP enclosures are suitable for use with in hazardous areas and can be supplied certificates, such as ATEX and IECEx.

## Technical Information / Specifications

**Material :** Glass Fibre Reinforced Plastic(GRP)  
**Area Classification :** Zone1, Zone2, Zone21 and Zone22  
**Ingress Protection :** IP66, IP67 -EN/IEC 60529  
**Wide Operating Temperature :** -20°C ~ +100°C  
**Certificate :** ATEX, IECEx (Ex "e")  
**Impact Resistance :** 7Nm(EN50014)  
**Color :** RAL9005 Black  
**Toxicity :** Low Smoke Halogen-Free V-0 Self Extinguishing, UL94  
**Gasket :** Silicon rubber  
**Mounting :** Integral 6mm clearance holes moulded into the body  
**Earthing :** Optional M6 internal/external earth stud, brass or stainless steel  
**Surface Insulation Resistance :** 10<sup>9</sup>Ohm ≤black ≤10<sup>10</sup>Ohm UV Protection  
**Ex Code :** Ex e IIC T5/T6 Gb, Ex tD A21 T85°C/100°C  
**Ambient Temperature :** -20°C to +40°C for T6, -20°C to +55°C for T5

## Model Type

Type	W(Width) x H(Height) x D(Depth)			Weight (empty)
	W	H	D	
OSGP1	122	120	90	750g
OSGP2	160	160	90	1060g
OSGP3	260	160	90	1170g
OSGP4	360	160	90	2150g

## A Guide to Physical Terminal Capacity

Entry	OSGP1	OSGP2	OSGP3	OSGP4
WDU 2.5	12	19	39	58
WDU 4	10	16	32	48
WDU 6	8	12	25	37
WDU 10	6	10	20	30
WDU 16	4	8	16	24
WDU 35	3	5	12	18

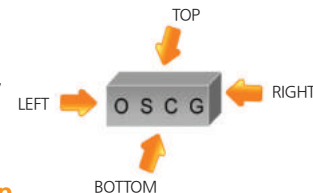
(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacities

Entry Thread size(M)	OSGP1		OSGP2		OSGP3		OSGP4	
	Metric	NPT	T/B	L/R	T/B	L/R	T/B	L/R
M16	1/2"		2	1	3	3	7	3
M20	1/2"	3/4"	2	1	3	2	5	2
M25	3/4"	1"	2	1	2	2	4	2
M32	1"	1-1/4"	1	1	2	1	4	1
M40	1-1/4"	1-1/2"	0	0	2	1	3	1
M50	1-1/2"	2"	0	0	0	0	0	0
M63	2"	2-1/2"	0	0	0	0	0	0
M75	2-1/2"	3"	0	0	0	0	0	0
M90	3"	3-1/2"	0	0	0	0	0	0
M100	3-1/2"	4"	0	0	0	0	0	0

## Certificate

IECEx KTL 11.0004  
 INERIS 11ATEX 0047



## Type Designation

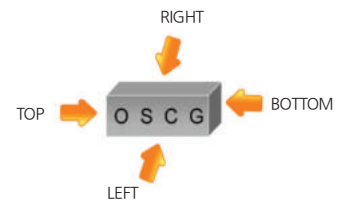
The COMPLETE MODEL No is as follows:

OSGP	4	M	O	T	1
①	②	③	④	⑤	⑥

No	Description	Symbol	Detail
①	BASIC MODEL	OSGP1	122 x 120 x 90(mm)
		OSGP2	160 x 160 x 90(mm)
		OSGP3	260 x 160 x 90(mm)
		OSGP4	360 x 160 x 90(mm)
②	TB SIZE(SQ)	2.5	2.5SQ
		04	4SQ
		06	6SQ
		10	10SQ
		16	16SQ
		35	35SQ
③	ENTRY THREAD TYPE	M	METRIC
		NPT	NPT
④	ENTRY SIZE	0	M16 or NPT 1/2"
		1	M20 or NPT 1/2"
		2	M25 or NPT 3/4"
		3	M32 or NPT 1"
⑤	ENTRY SIDE	T	TOP SIDE
		B	BOTTOM SIDE
		L	LEFT SIDE
		R	RIGHT SIDE
⑥	Q'TY OF ENTRY(EA)	01	1EA
		02	2EA
		03	3EA
		-	-
		-	-
		52	52EA

# OSGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box

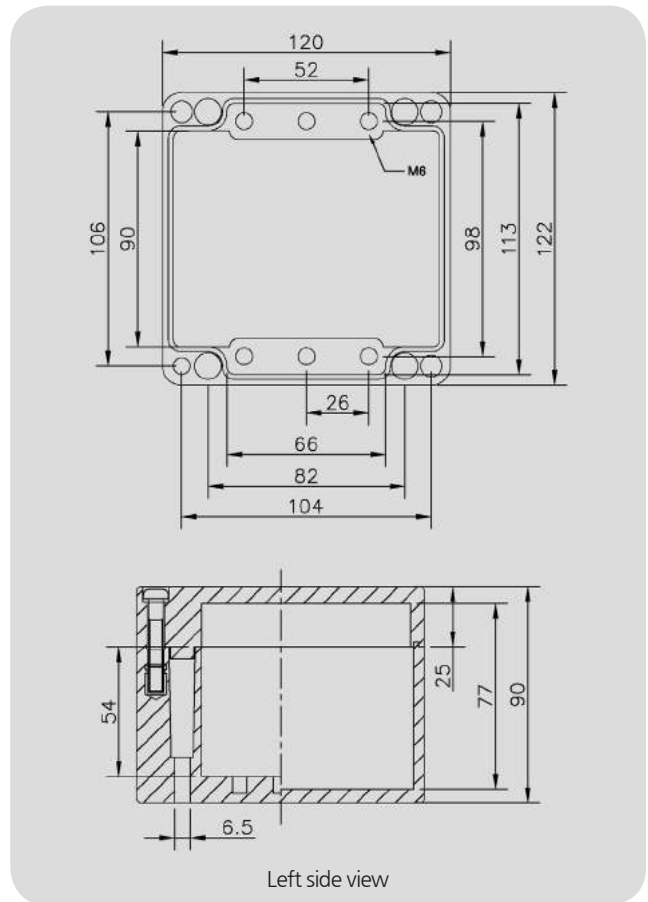
OSGP 1 - 122mm x 120mm x 90mm



## OSGP 1 Specification

Width(mm)	122mm
Length(mm)	120mm
Depth(mm)	90mm
Weight(g)	750g
Material	Glass Fibre Reinforced Polyester(GRP)
Area Classification	Zone 1 and Zone2 Zone 21 and Zone 22
Ingress Protection	IP66, IP67 -EN/IEC 60529
Wide Operating Temperature	-20°C - +100°C
Impact Resistance	7Nm(EN50014)
Color	RAL9005 Black
Surface Insulation Resistance	10 <sup>6</sup> Ohm ≤black ≤10 <sup>9</sup> Ohm
Toxicity	Low Smoke Halogen-Free
Gasket	Silicon rubber
Finish	Moulded self color black
Earthing	Optional M6 internal/external earth stud, brass or stainless steel
Mounting	Integral 6mm clearnace holes moulded into the body
Certificate No.	IECEX KTL 11.0004 INERIS 11ATEX 0047
Ex Code	Ex e IIC T5/T6 Gb, Ex tD A21 T85°C/100°C
Ambient Temperature	-20°C to +40°C for T6, -20°C to +55°C for T5

## Drawing



Left side view

## A Guide to Physical Terminal Capacity

WD U 2.5	WDU 4	WDU 6	WDU 10	WDU 16	WDU 35
1 X 12	1 X 10	1 X 8	1 X 6	1 X 5	1 X 4

(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacity

SIDE	M16	M20	M25	M32
T/B	2	2	2	1
L/R	1	1	1	1

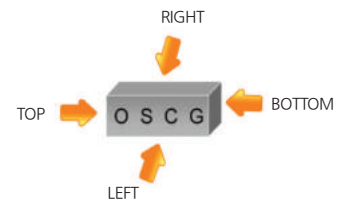
(\*T/B : Top/Bottom, L/R : Left/Right)

## Used Terminal Block / Power Rating / Temperature Grade

TB Type	Max.current/cond (A/mm <sup>2</sup> )	Rated Voltage (V)	Rated current (A)	Tightening torque (Nm)	Stripping length (mm)
2.5SQ	23/2.5	550	21	0.4~0.8(M2.5)	10
4SQ	41/6	690	28	0.5~1.0(M3)	10
6SQ	57/10	550	36	0.8~1.6(M3.5)	12
10SQ	76/16	550	50	1.2~2.4(M4)	12
16SQ	101/25	690	66	3.0~4.0(M5)	16
35SQ	150/50	690	109	4.5~5.0(M6)	18

# OSGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box

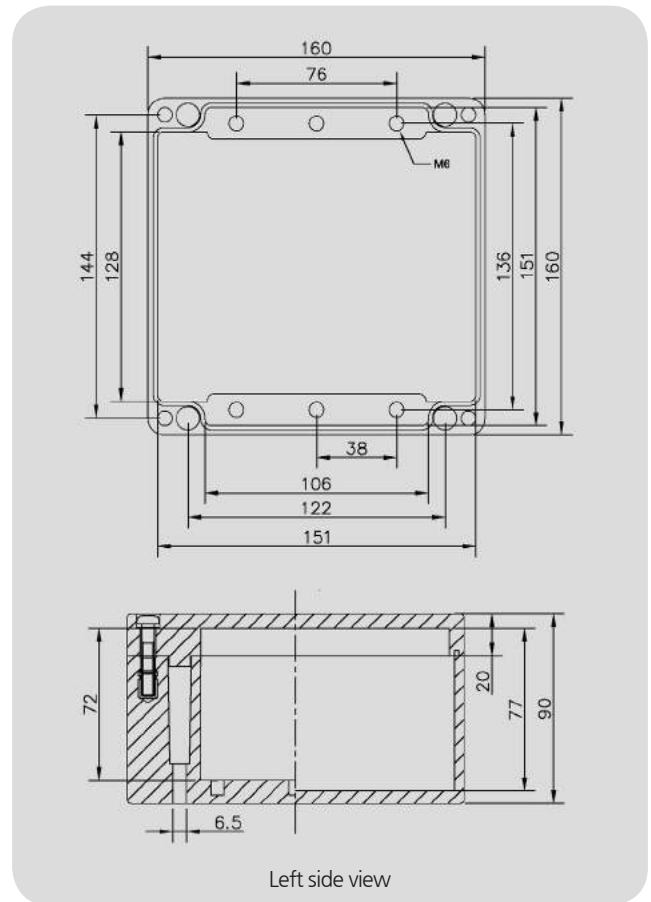
OSGP 2 - 160mm x 160mm x 90mm



## OSGP 2 Specification

Width(mm)	160mm
Length(mm)	160mm
Depth(mm)	90mm
Weight(g)	1100g
Material	Glass Fibre Reinforced Polyester(GRP)
Area Classification	Zone 1 and Zone2 Zone 21 and Zone 22
Ingress Protection	IP66, IP67 -EN/IEC 60529
Wide Operating Temperature	-20°C - +100°C
Impact Resistance	7Nm(EN50014)
Color	RAL9005 Black
Surface Insulation Resistance	10°Ohm ≤black ≤10°Ohm
Toxicity	Low Smoke Halogen-Free
Gasket	Silicon rubber
Finish	Moulded self color black
Earthing	Optional M6 internal/external earth stud, brass or stainless steel
Mounting	Integral 6mm clearnace holes moulded into the body
Certificate No.	IECEX KTL 11.0004 INERIS 11ATEX 0047
Ex Code	Ex e IIC T5/T6 Gb, Ex tD A21 T85°C/100°C
Ambient Temperature	-20°C to +40°C for T6, -20°C to +55°C for T5

## Drawing



## A Guide to Physical Terminal Capacity

WDU 2.5	WDU 4	WDU 6	WDU 10	WDU 16	WDU 35
1 X 19	1 X 16	1 X 12	1 X 10	1 X 8	1 X 5

(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacity

SIDE	M16	M20	M25	M32	M40
T/B	3	3	2	2	2
L/R	3	2	2	1	1

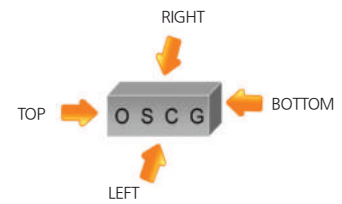
(\*T/B : Top/Bottom, L/R : Left/Right)

## Used Terminal Block / Power Rating / Temperature Grade

TB Type	Max.current/cond (A/mm <sup>2</sup> )	Rated Voltage (V)	Rated current (A)	Tightening torque (Nm)	Stripping length (mm)
2.5SQ	23/2.5	550	21	0.4~0.8(M2.5)	10
4SQ	41/6	690	28	0.5~1.0(M3)	10
6SQ	57/10	550	36	0.8~1.6(M3.5)	12
10SQ	76/16	550	50	1.2~2.4(M4)	12
16SQ	101/25	690	66	3.0~4.0(M5)	16
35SQ	150/50	690	109	4.5~5.0(M6)	18

# OSGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box

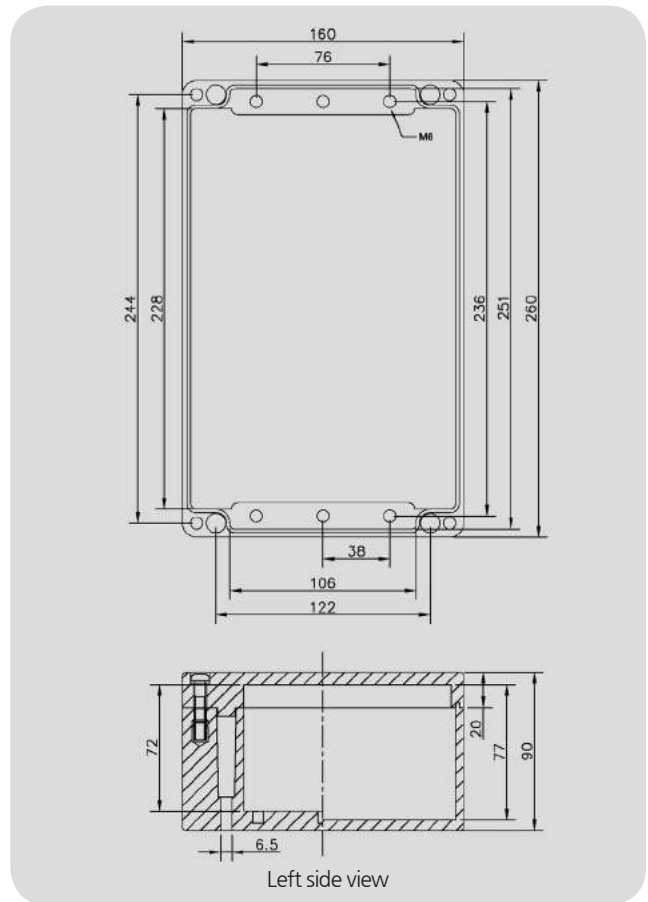
OSGP 3 - 260mm x 160mm x 90mm



## OSGP 3 Specification

Width(mm)	260mm
Length(mm)	160mm
Depth(mm)	90mm
Weight(g)	1700g
Material	Glass Fibre Reinforced Polyester(GRP)
Area Classification	Zone 1 and Zone2 Zone 21 and Zone 22
Ingress Protection	IP66, IP67 -EN/IEC 60529
Wide Operating Temperature	-20°C - +100°C
Impact Resistance	7Nm(EN50014)
Color	RAL9005 Black
Surface Insulation Resistance	10 <sup>6</sup> Ohm ≤black ≤10 <sup>9</sup> Ohm
Toxicity	Low Smoke Halogen-Free
Gasket	Silicon rubber
Finish	Moulded self color black
Earthing	Optional M6 internal/external earth stud, brass or stainless steel
Mounting	Integral 6mm clearnace holes moulded into the body
Certificate No.	IECEX KTL 11.0004 INERIS 11ATEX 0047
Ex Code	Ex e IIC T5/T6 Gb, Ex tD A21 T85°C/100°C
Ambient Temperature	-20°C to +40°C for T6, -20°C to +55°C for T5

## Drawing



## A Guide to Physical Terminal Capacity

WD U 2.5	WDU 4	WDU 6	WDU 10	WDU 16	WDU 35
1 X 39	1 X 32	1 X 25	1 X 20	1 X 16	1 X 12

(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacity

SIDE	M16	M20	M25	M32	M40
T/B	7	5	4	4	3
L/R	3	2	2	1	1

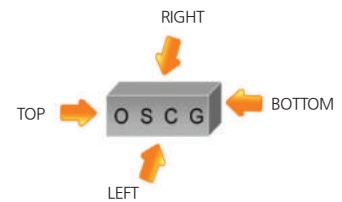
(\*T/B : Top/Bottom, L/R : Left/Right)

## Used Terminal Block / Power Rating / Temperature Grade

TB Type	Max.current/cond (A/mm <sup>2</sup> )	Rated Voltage (V)	Rated current (A)	Tightening torque (Nm)	Stripping length (mm)
2.5SQ	23/2.5	550	21	0.4~0.8(M2.5)	10
4SQ	41/6	690	28	0.5~1.0(M3)	10
6SQ	57/10	550	36	0.8~1.6(M3.5)	12
10SQ	76/16	550	50	1.2~2.4(M4)	12
16SQ	101/25	690	66	3.0~4.0(M5)	16
35SQ	150/50	690	109	4.5~5.0(M6)	18

# OSGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box

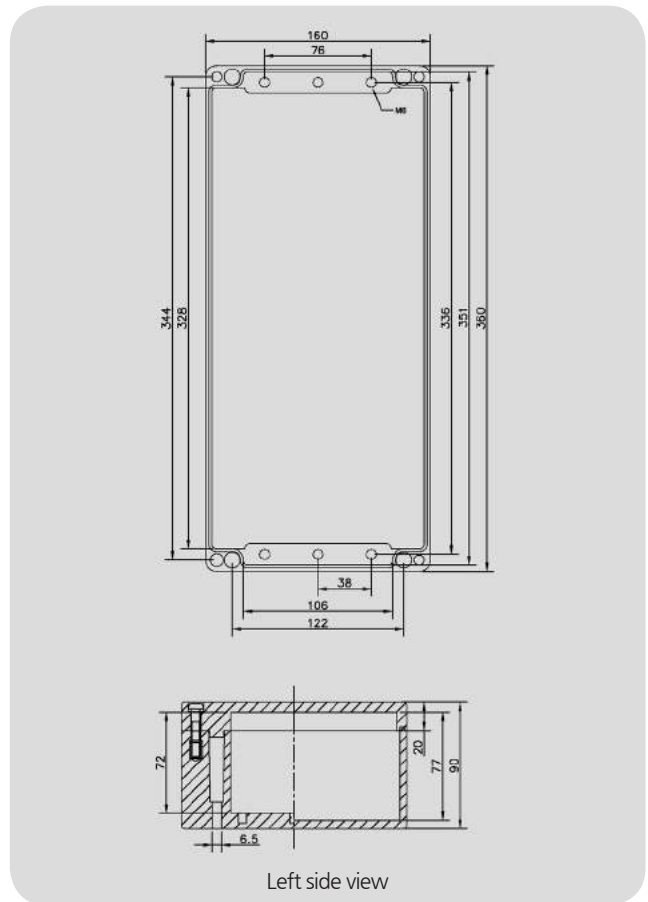
OSGP 4 - 360mm x 160mm x 90mm



## OSGP 4 Specification

Width(mm)	360mm
Length(mm)	160mm
Depth(mm)	90mm
Weight(g)	2150g
Material	Glass Fibre Reinforced Polyester(GRP)
Area Classification	Zone 1 and Zone2 Zone 21 and Zone 22
Ingress Protection	IP66, IP67 -EN/IEC 60529
Wide Operating Temperature	-20°C - +100°C
Impact Resistance	7Nm(EN50014)
Color	RAL9005 Black
Surface Insulation Resistance	10 <sup>9</sup> Ohm ≤black ≤10 <sup>10</sup> Ohm
Toxicity	Low Smoke Halogen-Free
Gasket	Silicon rubber
Finish	Moulded self color black
Earthing	Optional M6 internal/external earth stud, brass or stainless steel
Mounting	Integral 6mm clearance holes moulded into the body
Certificate No.	IECEX KTL 11.0004 INERIS 11ATEX 0047
Ex Code	Ex e IIC T5/T6 Gb, Ex tD A21 T85°C/100°C
Ambient Temperature	-20°C to +40°C for T6, -20°C to +55°C for T5

## Drawing



## A Guide to Physical Terminal Capacity

WDU 2.5	WDU 4	WDU 6	WDU 10	WDU 16	WDU 35
1 X 58	1 X 48	1 X 37	1 X 30	1 X 24	1 X 18

(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacity

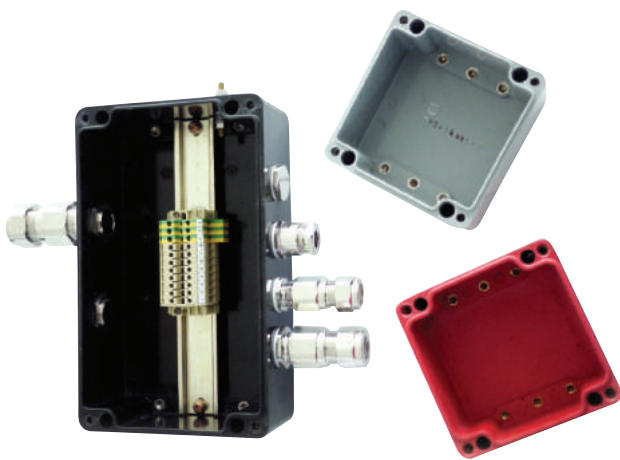
SIDE	M16	M20	M25	M32	M40
T/B	11	8	7	5	4
L/R	3	3	2	1	1

(\*T/B : Top/Bottom, L/R : Left/Right)

## Used Terminal Block / Power Rating / Temperature Grade

TB Type	Max.current/cond (A/mm <sup>2</sup> )	Rated Voltage (V)	Rated current (A)	Tightening torque (Nm)	Stripping length (mm)
2.5SQ	23/2.5	550	21	0.4~0.8(M2.5)	10
4SQ	41/6	690	28	0.5~1.0(M3)	10
6SQ	57/10	550	36	0.8~1.6(M3.5)	12
10SQ	76/16	550	50	1.2~2.4(M4)	12
16SQ	101/25	690	66	3.0~4.0(M5)	16
35SQ	150/50	690	109	4.5~5.0(M6)	18

# OSIGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box



## Application

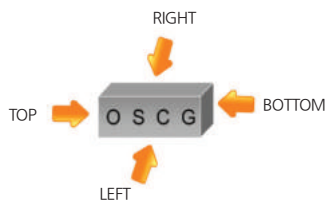
The OSIGP GRP junction boxes have proven their use in many sectors of industry. The OSIGP GRP enclosure comprise 10 sizes of enclosure manufactured in Glass Fibre Reinforced Polyester (GRP). This material is highly resistant to contamination from oils, fats, aliphatic. Polyester gives excellent mechanical strength and life expectancy.

## Technical Information / Specifications

- Material** : Glass Fibre Reinforced Plastic (GRP)
- Ingress Protection** : IP66, IP67 -EN/IEC 60529
- Wide Operating Temperature** : -20°C ~ +100°C
- Impact Resistance** : 7Nm (EN50014)
- Color** : RAL9005 Black / RAL7001 Grey / RAL3001 Red
- Toxicity** : V-0 Self Extinguishing, UL94
- Gasket** : Silicon rubber
- Mounting** : Integral 6mm clearance holes moulded into the body
- Earthing** : Optional M6 internal/external earth stud, brass or stainless steel

## Certificate

KOMERI-0306-11T1322 ~ 25  
KOMERI-0306-12T1067 ~ 70



## Model Type

Type	W(Width) x H(Height) x D(Depth)			Empty
	W	H	D	
OSIGP1	122	120	90	750g
OSIGP2	160	160	90	1060g
OSIGP3	260	160	90	1170g
OSIGP4	360	160	90	2150g
OSIGP5	255	250	120	2996g
OSIGP6	255	250	160	3482g
OSIGP7	400	250	120	4346g
OSIGP8	400	250	160	4910g
OSIGP9	405	400	120	5914g
OSIGP10	405	400	160	6542g

## Type Designation

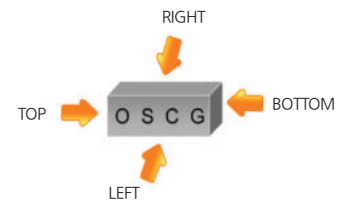
The COMPLETE MODEL No is as follows:

OSIGP1	4	M	O	T	1
①	②	③	④	⑤	⑥

No	Description	Symbol	Detail
①	BASIC MODEL	OSIGP1	122 x 120 x 90(mm)
		OSIGP2	160 x 160 x 90(mm)
		OSIGP3	260 x 160 x 90(mm)
		OSIGP4	360 x 160 x 90(mm)
②	TB SIZE (SQ)	2.5	2.5SQ
		04	4SQ
		06	6SQ
		10	10SQ
		16	16SQ
③	ENTRY THREAD TYPE	M	METRIC
		NPT	NPT
④	ENTRY SIZE	0	M16 or NPT 1/2"
		1	M20 or NPT 1/2"
		2	M25 or NPT 3/4"
		3	M32 or NPT 1"
⑤	ENTRY SIDE	T	TOP SIDE
		B	BOTTOM SIDE
		L	LEFT SIDE
		R	RIGHT SIDE
⑥	Q'TY OF ENTRY (EA)	01	1EA
		02	2EA
		03	3EA
		-	-
		52	52EA
0	0		

# OSIGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box

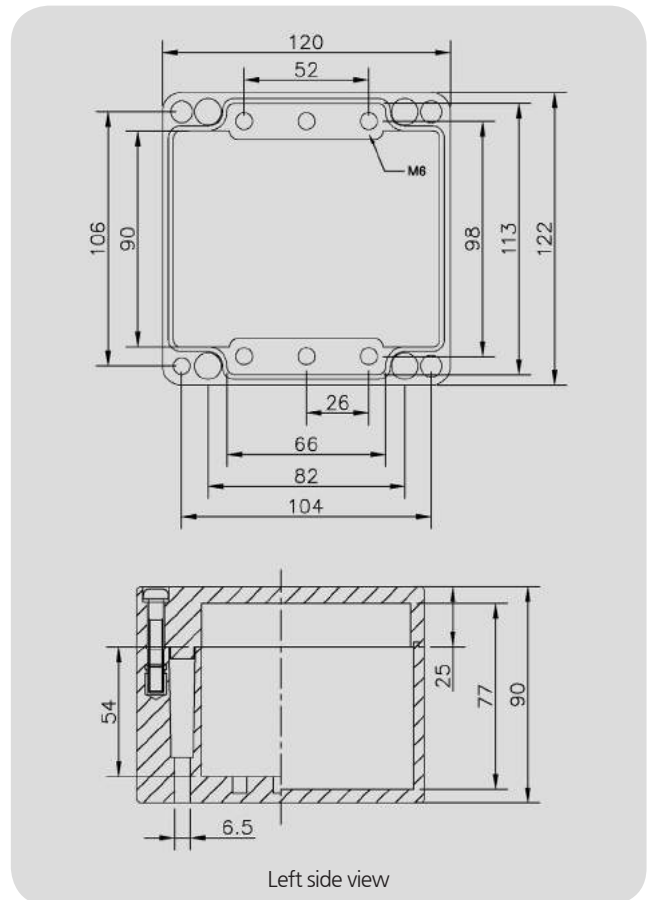
OSIGP 1 - 122mm x 120mm x 90mm



## OSIGP 1 Specification

Width(mm)	122mm
Length(mm)	120mm
Depth(mm)	90mm
Weight(g)	750g
Material	Glass Fibre Reinforced Polyester(GRP)
Ingress Protection	IP66, IP67 -EN/IEC 60529
Wide Operating Temperature	-20°C - +100°C
Impact Resistance	7Nm(EN50014)
Color	RAL9005 Black, RAL7001 Grey, RAL3001 Red
Toxicity	Low Smoke Halogen-Free
Gasket	Silicon rubber
Finish	Moulded self color black
Earthing	Optional M6 internal/external earth stud, brass or stainless steel
Mounting	Integral 6mm clearace holes moulded into the body
Certificate No.	KOMERI-0306-11T1322,23

## Drawing



## A Guide to Physical Terminal Capacity

WDU 2.5	WDU 4	WDU 6	WDU 10	WDU 16	WDU 35
1 X 12	1 X 10	1 X 8	1 X 6	1 X 5	1 X 4

(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacity

SIDE	M16	M20	M25	M32	M40
T/B	2	2	2	1	2
L/R	1	1	1	1	1

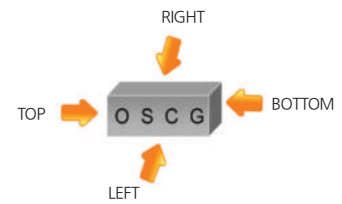
(\*T/B : Top/Bottom, L/R : Left/Right)

## Used Terminal Block / Power Rating / Temperature Grade

TB Type	Max.current/cond (A/mm <sup>2</sup> )	Rated Voltage (V)	Rated current (A)	Tightening torque (Nm)	Stripping length (mm)
2.5SQ	23/2.5	550	21	0.4~0.8(M2.5)	10
4SQ	41/6	690	28	0.5~1.0(M3)	10
6SQ	57/10	550	36	0.8~1.6(M3.5)	12
10SQ	76/16	550	50	1.2~2.4(M4)	12
16SQ	101/25	690	66	3.0~4.0(M5)	16
35SQ	150/50	690	109	4.5~5.0(M6)	18

# OSIGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box

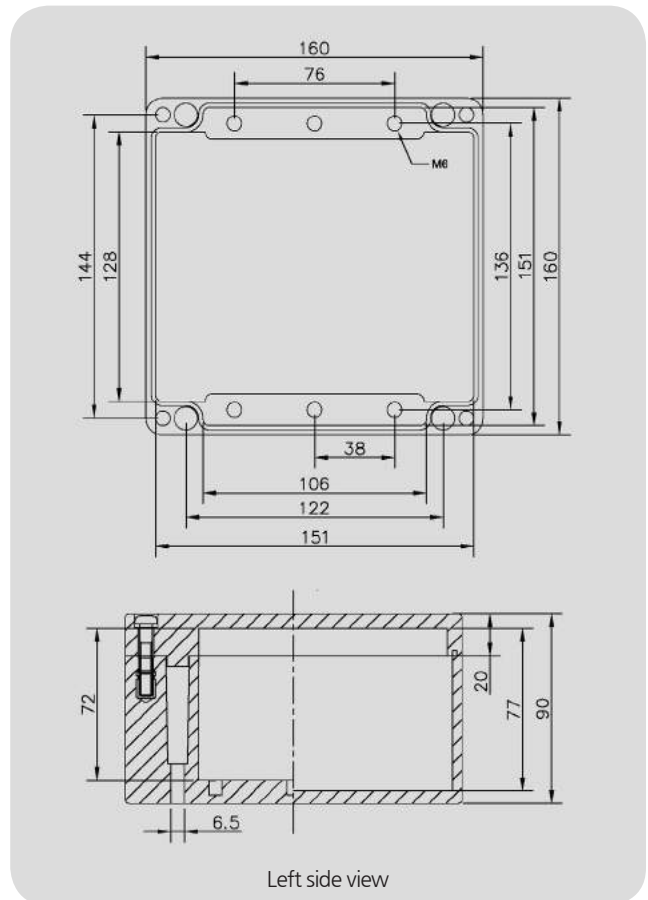
OSIGP 2 - 160mm x 160mm x 90mm



## OSIGP 2 Specification

Width(mm)	160mm
Length(mm)	160mm
Depth(mm)	90mm
Weight(g)	1100g
Material	Glass Fibre Reinforced Polyester(GRP)
Ingress Protection	IP66, IP67 -EN/IEC 60529
Wide Operating Temperature	-20°C - +100°C
Impact Resistance	7Nm(EN50014)
Color	RAL9005 Black, RAL7001 Grey, RAL3001 Red
Toxicity	Low Smoke Halogen-Free
Gasket	Silicon rubber
Finish	Moulded self color black
Earthing	Optional M6 internal/external earth stud, brass or stainless steel
Mounting	Integral 6mm clearnace holes moulded into the body
Certificate No.	KOMERI-0306-11T1324,25

## Drawing



Left side view

## A Guide to Physical Terminal Capacity

WD U 2.5	WDU 4	WDU 6	WDU 10	WDU 16	WDU 35
1 X 19	1 X 16	1 X 12	1 X 10	1 X 8	1 X 5

(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacity

SIDE	M16	M20	M25	M32	M40
T/B	3	3	2	2	2
L/R	3	2	2	1	1

(\*T/B : Top/Bottom, L/R : Left/Right)

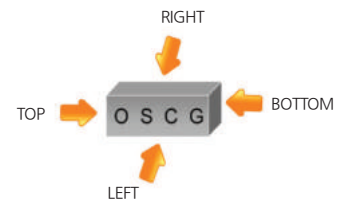
## Used Terminal Block / Power Rating / Temperature Grade

TB Type	Max.current/cond (A/mm <sup>2</sup> )	Rated Voltage (V)	Rated current (A)	Tightening torque (Nm)	Stripping length (mm)
2.5SQ	23/2.5	550	21	0.4~0.8(M2.5)	10
4SQ	41/6	690	28	0.5~1.0(M3)	10
6SQ	57/10	550	36	0.8~1.6(M3.5)	12
10SQ	76/16	550	50	1.2~2.4(M4)	12
16SQ	101/25	690	66	3.0~4.0(M5)	16
35SQ	150/50	690	109	4.5~5.0(M6)	18



# OSIGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box

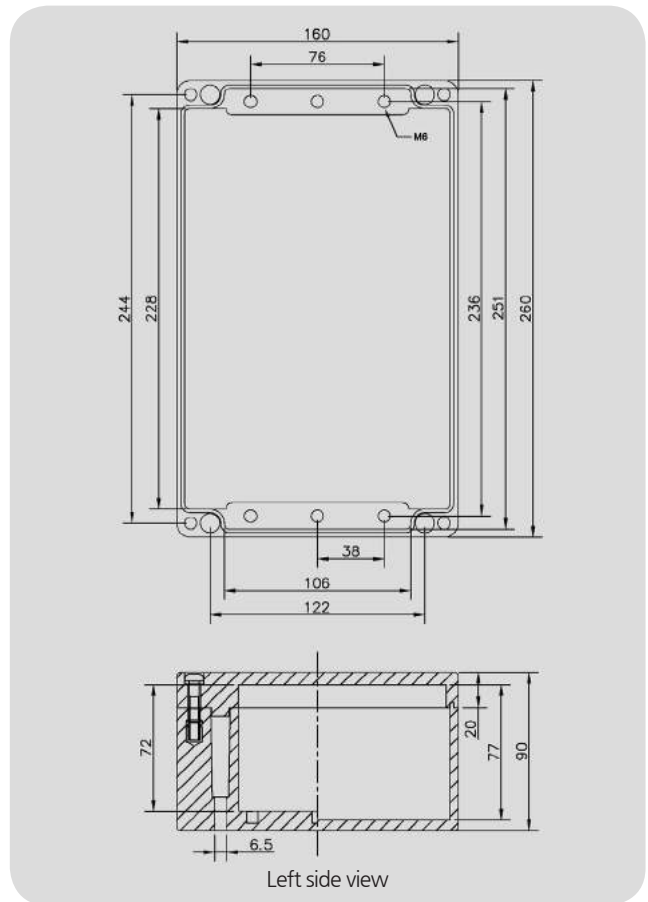
OSIGP 3 - 260mm x 160mm x 90mm



## OSIGP 3 Specification

Width(mm)	260mm
Length(mm)	160mm
Depth(mm)	90mm
Weight(g)	1700g
Material	Glass Fibre Reinforced Polyester(GRP)
Ingress Protection	IP66, IP67 -EN/IEC 60529
Wide Operating Temperature	-20°C - +100°C
Impact Resistance	7Nm(EN50014)
Color	RAL9005 Black, RAL7001 Grey, RAL3001 Red
Gasket	Silicon rubber
Finish	Moulded self color black
Earthing	Optional M6 internal/external earth stud, brass or stainless steel
Mounting	Integral 4.5mm clearance holes moulded into the body
Certificate No.	KOMERI-0306-12T1067,68

## Drawing



## A Guide to Physical Terminal Capacity

WDU 2.5	WDU 4	WDU 6	WDU 10	WDU 16	WDU 35
1 X 39	1 X 32	1 X 25	1 X 20	1 X 16	1 X 12

(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacity

SIDE	M16	M20	M25	M32	M40
T/B	7	5	4	4	3
L/R	3	2	2	1	1

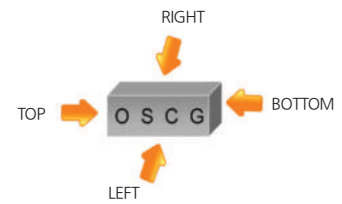
(\*T/B : Top/Bottom, L/R : Left/Right)

## Used Terminal Block / Power Rating / Temperature Grade

TB Type	Max.current/cond (A/mm <sup>2</sup> )	Rated Voltage (V)	Rated current (A)	Tightening torque (Nm)	Stripping length (mm)
2.5SQ	23/2.5	550	21	0.4~0.8(M2.5)	10
4SQ	41/6	690	28	0.5~1.0(M3)	10
6SQ	57/10	550	36	0.8~1.6(M3.5)	12
10SQ	76/16	550	50	1.2~2.4(M4)	12
16SQ	101/25	690	66	3.0~4.0(M5)	16
35SQ	150/50	690	109	4.5~5.0(M6)	18

# OSIGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box

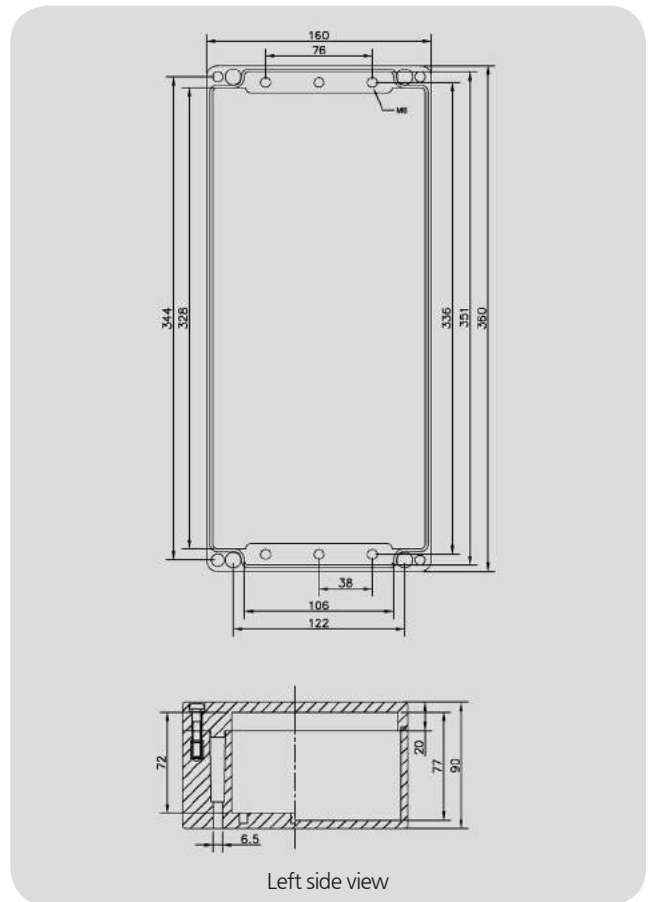
OSIGP 4 - 360mm x 160mm x 90mm



## OSIGP 4 Specification

Width(mm)	360mm
Length(mm)	160mm
Depth(mm)	90mm
Weight(g)	2150g
Material	Glass Fibre Reinforced Polyester(GRP)
Ingress Protection	IP66, IP67 -EN/IEC 60529
Wide Operating Temperature	-20°C - +100°C
Impact Resistance	7Nm(EN50014)
Color	RAL9005 Black, RAL7001 Grey, RAL3001 Red
Toxicity	Low Smoke Halogen-Free
Gasket	Silicon rubber
Finish	Moulded self color black
Earthing	Optional M6 internal/external earth stud, brass or stainless steel
Mounting	Integral 6mm clearnace holes moulded into the body
Certificate No.	KOMERI-0306-12T10069,70

## Drawing



## A Guide to Physical Terminal Capacity

WD U 2.5	WDU 4	WDU 6	WDU 10	WDU 16	WDU 35
1 X 58	1 X 48	1 X 37	1 X 30	1 X 24	1 X 18

(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacity

SIDE	M16	M20	M25	M32	M40
T/B	11	8	7	5	4
L/R	3	3	2	1	1

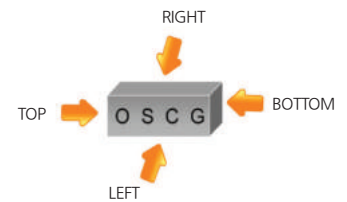
(\*T/B : Top/Bottom, L/R : Left/Right)

## Used Terminal Block / Power Rating / Temperature Grade

TB Type	Max.current/cond (A/mm <sup>2</sup> )	Rated Voltage (V)	Rated current (A)	Tightening torque (Nm)	Stripping length (mm)
2.5SQ	23/2.5	550	21	0.4~0.8(M2.5)	10
4SQ	41/6	690	28	0.5~1.0(M3)	10
6SQ	57/10	550	36	0.8~1.6(M3.5)	12
10SQ	76/16	550	50	1.2~2.4(M4)	12
16SQ	101/25	690	66	3.0~4.0(M5)	16
35SQ	150/50	690	109	4.5~5.0(M6)	18

# OSIGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box

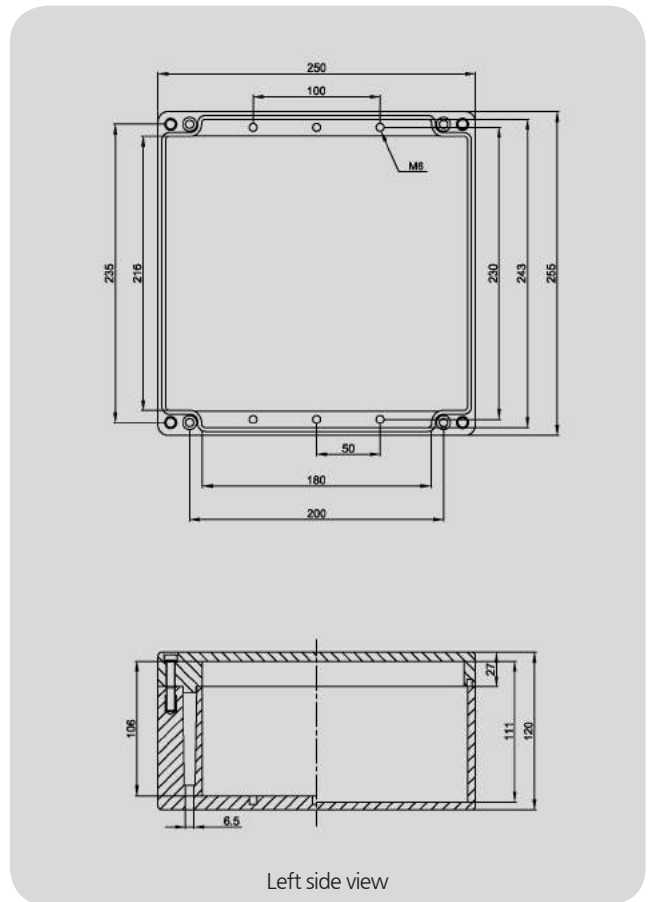
OSIGP 5 - 255mm x 250mm x 120mm



## OSIGP 5 Specification

Width(mm)	255mm
Length(mm)	250mm
Depth(mm)	120mm
Weight(g)	2996g
Material	Glass Fibre Reinforced Polyester(GRP)
Ingress Protection	IP66, IP67 -EN/IEC 60529
Wide Operating Temperature	-60°C - +130°C
Impact Resistance	7Nm(EN50014)
Color	RAL9005 Black, RAL7001 Grey, RAL3001 Red
Toxicity	Low Smoke Halogen-Free
Gasket	Silicon rubber
Finish	Moulded self color black
Earthing	Optional M6 internal/external earth stud, brass or stainless steel
Mounting	Integral 6mm clearnce holes moulded into the body
Certificate No.	In progress

## Drawing



## A Guide to Physical Terminal Capacity

WDU 2.5	WDU 4	WDU 6	WDU 10	WDU 16	WDU 35
2 x 38	2 x 32	2 x 25	2 x 20	2 x 16	2 x 12

(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacity

SIDE	M16	M20	M25	M32	M40
T/B	14	10	8	4	3
L/R	2	8	8	3	2

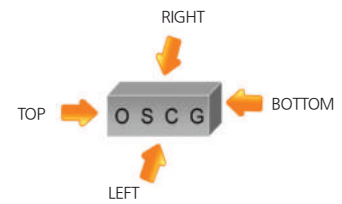
(\*T/B : Top/Bottom, L/R : Left/Right)

## Used Terminal Block / Power Rating / Temperature Grade

TB Type	Max.current/cond (A/mm <sup>2</sup> )	Rated Voltage (V)	Rated current (A)	Tightening torque (Nm)	Stripping length (mm)
2.5SQ	23/2.5	550	21	0.4~0.8(M2.5)	10
4SQ	41/6	690	28	0.5~1.0(M3)	10
6SQ	57/10	550	36	0.8~1.6(M3.5)	12
10SQ	76/16	550	50	1.2~2.4(M4)	12
16SQ	101/25	690	66	3.0~4.0(M5)	16
35SQ	150/50	690	109	4.5~5.0(M6)	18

# OSIGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box

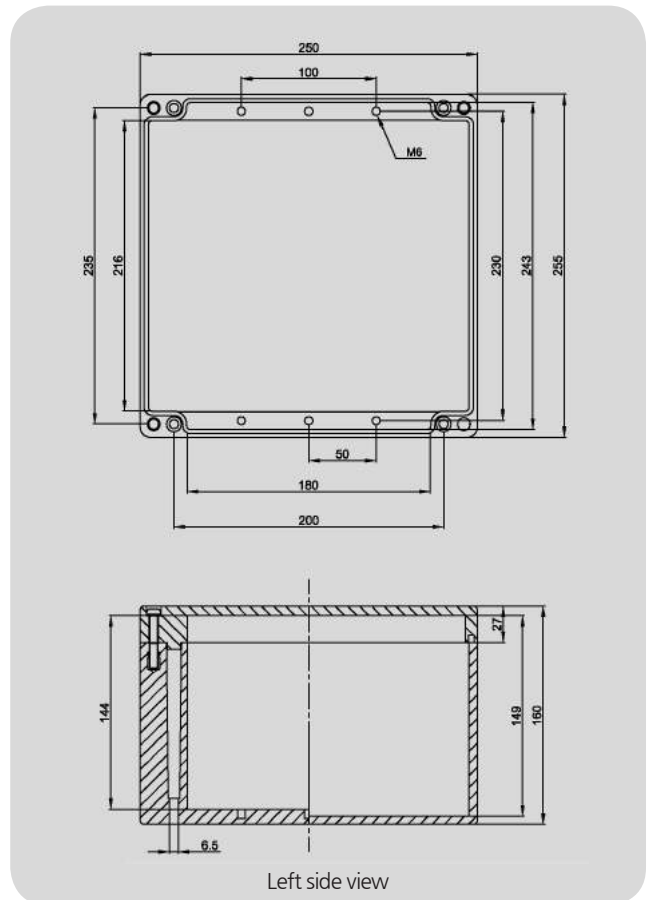
OSIGP 6 - 255mm x 250mm x 160mm



## OSIGP 6 Specification

Width(mm)	255mm
Length(mm)	250mm
Depth(mm)	160mm
Weight(g)	3482g
Material	Glass Fibre Reinforced Polyester(GRP)
Ingress Protection	IP66, IP67 -EN/IEC 60529
Wide Operating Temperature	-60°C - +130°C
Impact Resistance	7Nm(EN50014)
Color	RAL9005 Black, RAL7001 Grey, RAL3001 Red
Toxicity	Low Smoke Halogen-Free
Gasket	Silicon rubber
Finish	Moulded self color black
Earthing	Optional M6 internal/external earth stud, brass or stainless steel
Mounting	Integral 6mm clearnace holes moulded into the body
Certificate No.	In progress

## Drawing



## A Guide to Physical Terminal Capacity

WD U 2.5	WDU 4	WDU 6	WDU 10	WDU 16	WDU 35
2 x 38	2 x 32	2 x 25	2 x 20	2 x 16	2 x 12

(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacity

SIDE	M16	M20	M25	M32	M40
T/B	21	15	8	8	6
L/R	18	12	8	6	4

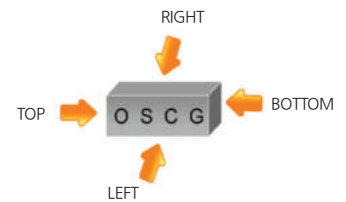
(\*T/B : Top/Bottom, L/R : Left/Right)

## Used Terminal Block / Power Rating / Temperature Grade

TB Type	Max.current/cond (A/mm <sup>2</sup> )	Rated Voltage (V)	Rated current (A)	Tightening torque (Nm)	Stripping length (mm)
2.5SQ	23/2.5	550	21	0.4~0.8(M2.5)	10
4SQ	41/6	690	28	0.5~1.0(M3)	10
6SQ	57/10	550	36	0.8~1.6(M3.5)	12
10SQ	76/16	550	50	1.2~2.4(M4)	12
16SQ	101/25	690	66	3.0~4.0(M5)	16
35SQ	150/50	690	109	4.5~5.0(M6)	18

# OSIGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box

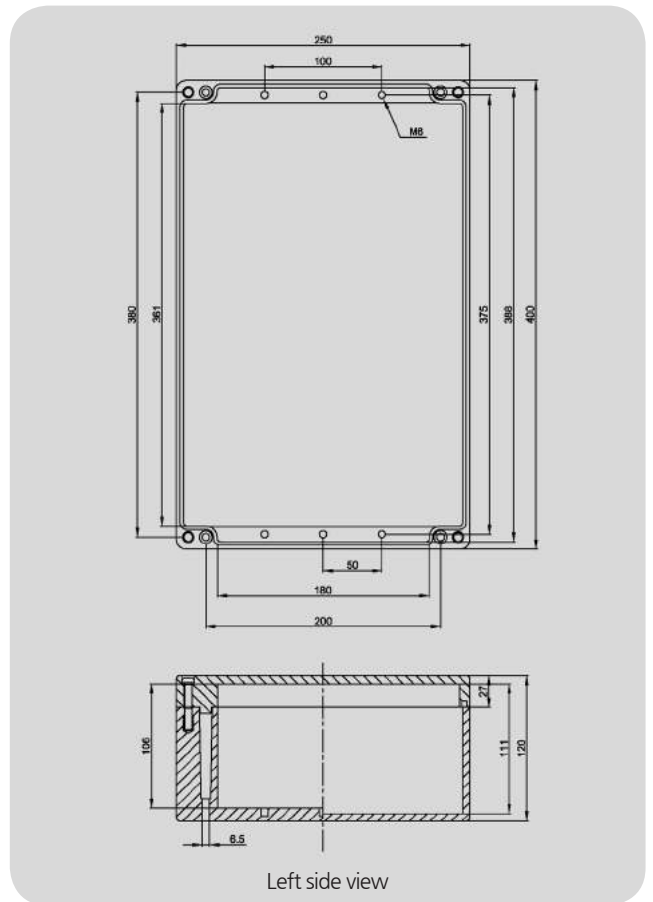
OSIGP 7 - 400mm x 250mm x 120mm



## OSIGP 7 Specification

Width(mm)	400mm
Length(mm)	250mm
Depth(mm)	120mm
Weight(g)	4346g
Material	Glass Fibre Reinforced Polyester(GRP)
Ingress Protection	IP66, IP67 -EN/IEC 60529
Wide Operating Temperature	-60°C - +130°C
Impact Resistance	7Nm(EN50014)
Color	RAL9005 Black, RAL7001 Grey, RAL3001 Red
Gasket	Silicon rubber
Finish	Moulded self color black
Earthing	Optional M6 internal/external earth stud, brass or stainless steel
Mounting	Integral 4.5mm clearance holes moulded into the body
Certificate No.	In progress

## Drawing



## A Guide to Physical Terminal Capacity

WDU 2.5	WDU 4	WDU 6	WDU 10	WDU 16	WDU 35
2 x 66	2 x 55	2 x 43	2 x 34	2 x 28	2 x 21

(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacity

SIDE	M16	M20	M25	M32	M40
T/B	24	20	16	6	5
L/R	12	8	8	3	2

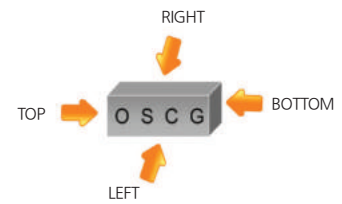
(\*T/B : Top/Bottom, L/R : Left/Right)

## Used Terminal Block / Power Rating / Temperature Grade

TB Type	Max.current/cond (A/mm <sup>2</sup> )	Rated Voltage (V)	Rated current (A)	Tightening torque (Nm)	Stripping length (mm)
2.5SQ	23/2.5	550	21	0.4~0.8(M2.5)	10
4SQ	41/6	690	28	0.5~1.0(M3)	10
6SQ	57/10	550	36	0.8~1.6(M3.5)	12
10SQ	76/16	550	50	1.2~2.4(M4)	12
16SQ	101/25	690	66	3.0~4.0(M5)	16
35SQ	150/50	690	109	4.5~5.0(M6)	18

# OSIGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box

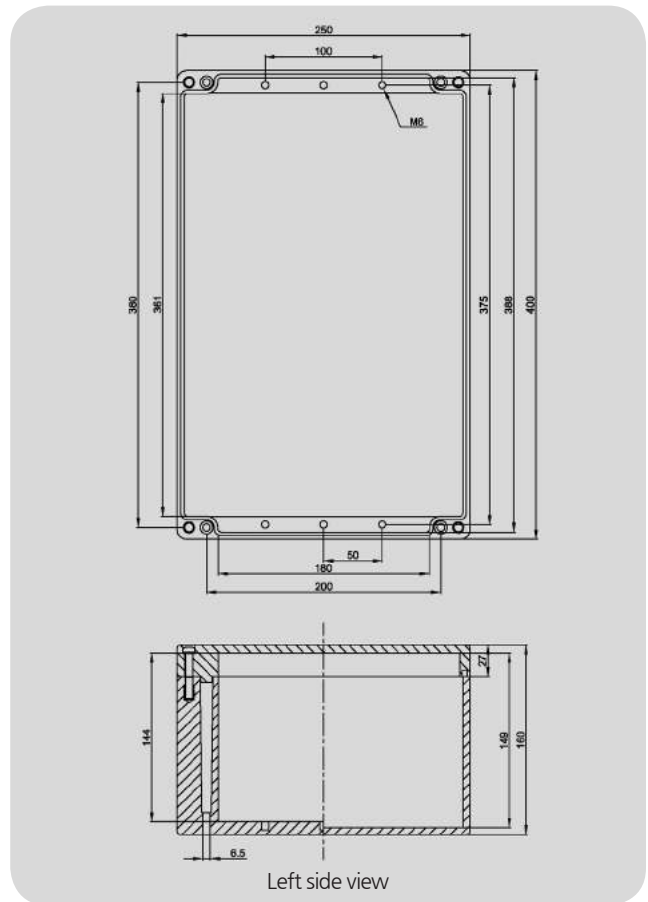
OSIGP 8 - 400mm x 250mm x 160mm



## OSIGP 8 Specification

Width(mm)	400mm
Length(mm)	250mm
Depth(mm)	160mm
Weight(g)	4910g
Material	Glass Fibre Reinforced Polyester(GRP)
Ingress Protection	IP66, IP67 -EN/IEC 60529
Wide Operating Temperature	-60°C - +130°C
Impact Resistance	7Nm(EN50014)
Color	RAL9005 Black, RAL7001 Grey, RAL3001 Red
Toxicity	Low Smoke Halogen-Free
Gasket	Silicon rubber
Finish	Moulded self color black
Earthing	Optional M6 internal/external earth stud, brass or stainless steel
Mounting	Integral 6mm clearnace holes moulded into the body
Certificate No.	In progress

## Drawing



## A Guide to Physical Terminal Capacity

WD U 2,5	WDU 4	WDU 6	WDU 10	WDU 16	WDU 35
2 x 66	2 x 55	2 x 43	2 x 34	2 x 28	2 x 21

(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacity

SIDE	M16	M20	M25	M32	M40
T/B	36	30	16	12	10
L/R	18	12	8	6	4

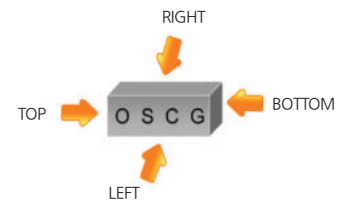
(\*T/B : Top/Bottom, L/R : Left/Right)

## Used Terminal Block / Power Rating / Temperature Grade

TB Type	Max.current/cond (A/mm <sup>2</sup> )	Rated Voltage (V)	Rated current (A)	Tightening torque (Nm)	Stripping length (mm)
2.5SQ	23/2.5	550	21	0.4~0.8(M2.5)	10
4SQ	41/6	690	28	0.5~1.0(M3)	10
6SQ	57/10	550	36	0.8~1.6(M3.5)	12
10SQ	76/16	550	50	1.2~2.4(M4)	12
16SQ	101/25	690	66	3.0~4.0(M5)	16
35SQ	150/50	690	109	4.5~5.0(M6)	18

# OSIGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box

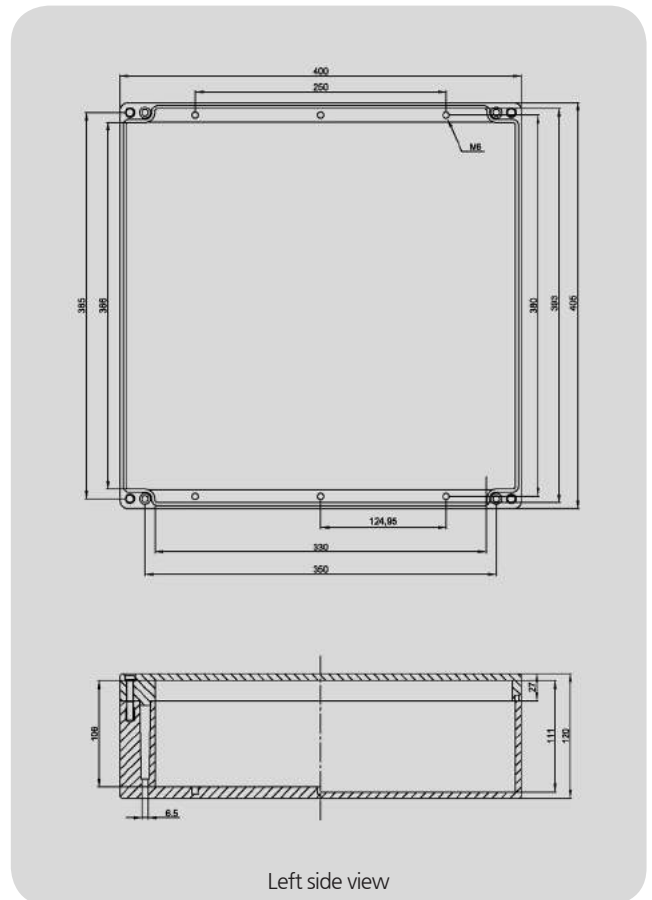
OSIGP 9 - 405mm x 400mm x 120mm



## OSIGP 9 Specification

Width(mm)	405mm
Length(mm)	400mm
Depth(mm)	120mm
Weight(g)	5914g
Material	Glass Fibre Reinforced Polyester(GRP)
Ingress Protection	IP66, IP67 -EN/IEC 60529
Wide Operating Temperature	-60°C - +130°C
Impact Resistance	7Nm(EN50014)
Color	RAL9005 Black, RAL7001 Grey, RAL3001 Red
Gasket	Silicon rubber
Finish	Moulded self color black
Earthing	Optional M6 internal/external earth stud, brass or stainless steel
Mounting	Integral 4.5mm clearance holes moulded into the body
Certificate No.	In progress

## Drawing



## A Guide to Physical Terminal Capacity

WDU 2.5	WDU 4	WDU 6	WDU 10	WDU 16	WDU 35
3 x 67	3 x 56	2 x 43	2 x 35	2 x 28	2 x 21

(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacity

SIDE	M16	M20	M25	M32	M40
T/B	24	20	16	6	5
L/R	22	18	14	6	5

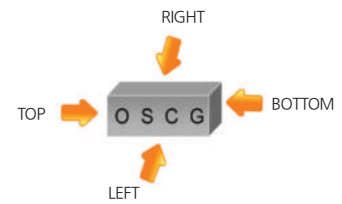
(\*T/B : Top/Bottom, L/R : Left/Right)

## Used Terminal Block / Power Rating / Temperature Grade

TB Type	Max.current/cond (A/mm <sup>2</sup> )	Rated Voltage (V)	Rated current (A)	Tightening torque (Nm)	Stripping length (mm)
2.5SQ	23/2.5	550	21	0.4~0.8(M2.5)	10
4SQ	41/6	690	28	0.5~1.0(M3)	10
6SQ	57/10	550	36	0.8~1.6(M3.5)	12
10SQ	76/16	550	50	1.2~2.4(M4)	12
16SQ	101/25	690	66	3.0~4.0(M5)	16
35SQ	150/50	690	109	4.5~5.0(M6)	18

# OSIGP Series Glass Fibre Reinforced Polyester Terminal Enclosure & Junction Box

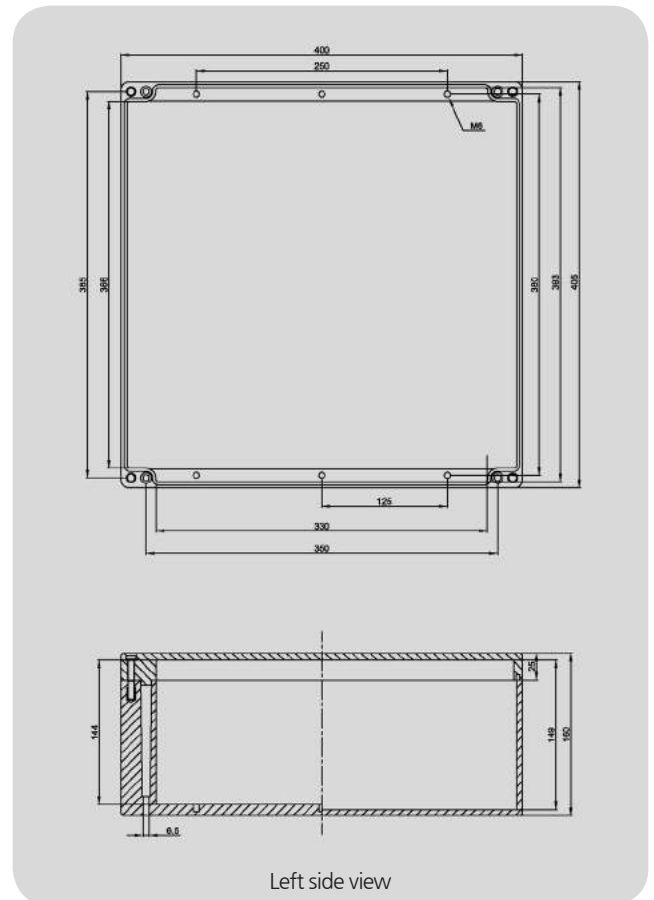
OSIGP 10 - 405mm x 400mm x 160mm



## OSIGP 10 Specification

Width(mm)	405mm
Length(mm)	400mm
Depth(mm)	160mm
Weight(g)	6542g
Material	Glass Fibre Reinforced Polyester(GRP)
Ingress Protection	IP66, IP67 -EN/IEC 60529
Wide Operating Temperature	-60°C - +130°C
Impact Resistance	7Nm(EN50014)
Color	RAL9005 Black, RAL7001 Grey, RAL3001 Red
Toxicity	Low Smoke Halogen-Free
Gasket	Silicon rubber
Finish	Moulded self color black
Earthing	Optional M6 internal/external earth stud, brass or stainless steel
Mounting	Integral 6mm clearnace holes moulded into the body
Certificate No.	In progress

## Drawing



## OSIGP 10 Specification

WD U 2.5	WDU 4	WDU 6	WDU 10	WDU 16	WDU 35
3 x 67	3 x 56	2 x 43	2 x 35	2 x 28	2 x 21

(\* Terminal block is WDU series or equivalent products.)

## A Guide to Entry Capacity

SIDE	M16	M20	M25	M32	M40
T/B	36	30	16	12	10
L/R	33	27	14	12	10

(\*T/B : Top/Bottom, L/R : Left/Right)

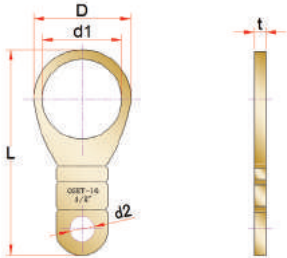
## Used Terminal Block / Power Rating / Temperature Grade

TB Type	Max.current/cond (A/mm <sup>2</sup> )	Rated Voltage (V)	Rated current (A)	Tightening torque (Nm)	Stripping length (mm)
2.5SQ	23/2.5	550	21	0.4~0.8(M2.5)	10
4SQ	41/6	690	28	0.5~1.0(M3)	10
6SQ	57/10	550	36	0.8~1.6(M3.5)	12
10SQ	76/16	550	50	1.2~2.4(M4)	12
16SQ	101/25	690	66	3.0~4.0(M5)	16
35SQ	150/50	690	109	4.5~5.0(M6)	18



# Accessories Type:OSET

## OSET Type



### Application : Earth Tag

- \* Provides an earth bonding
- \* Material : Nickel plated brass(standard), Brass(only), Stainless steel(316L)

#### Order Example

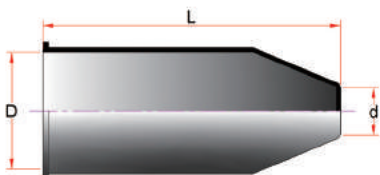
Part No.	Material
OSET 16	Nickel plated Brass
OSET 32	Brass
OSET 100	Stainless steel(316L)

(\* in mm)

Part No.	Entry Thread Size(M)	Thread Length( $\ell$ )	D	d1	d2	t	L
	NPT/PF/PT	NPT/PF/PT					
OSET 16	M16		24	17.5	7	1.5	59
OSET 20	M20	1/2"	30	21.5	7	1.5	72
OSET 25	M25	3/4"	35	27	7	1.5	82.4
OSET 32	M32	1"	44	33.4	8.6	1.5	99
OSET 40	M40	1-1/4"	54	42.4	8.6	1.5	112
OSET 50	M50	1-1/2"	67	50.5	8.6	1.5	125
OSET 63	M63	2"	80	64	8.6	1.5	154
OSET 75	M75	2-1/2"	97	76	14	1.5	163
OSET 90	M90	3"	110	91	14	1.5	178
OSET 100	M100	3-1/2"	120	103	14	1.5	195
OSET 115	M115	4"	130	116	14	1.5	208

# Accessories Type:OSSH

## OSSH Type



### Application : Shroud

- \* Provide means of protection from impurity on the gland body and addition to IP grade
- \* Material : PCP(CR70) or PVC

#### Order Example

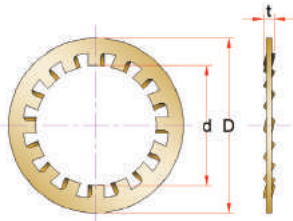
Part No.	Cable Gland Type	Material
OSSH 16	A	PCP
OSSH 20	B	PVC
OSSH 32	C	PCP

(\* in mm)

Part No.	A [XF / WF]			B [NJ]			C [NJ-D]		
	D	d	L	D	d	L	D	d	L
OSSH 16	28	6	93	24	4	52	25	4	93
OSSH 20	35	10	98	28	7	55	28	6	93
OSSH 25	40	14	102	32	12	59	35	10	98
OSSH 32	50	18	115	40	15	65	40	14	102
OSSH 40	60	24	124	50	21	71	50	18	115
OSSH 50	74	30	132	60	28	79	60	24	124
OSSH 63	89	38	152	74	30	132	74	30	132
OSSH 75	107	53	171	89	38	152	89	38	152
OSSH 90	121	72	175	107	53	171	107	53	171
OSSH 100	131	86	190	121	72	175	121	82	175

# Accessories Type:OSTW

## OSTW Type



### Application : Serrated Washer / Teeth Washer

- \* To reduce vibrations of the cable gland/ equipment assembly which may loosen the cable gland or lock nut
- \* Material : Stainless steel 304(standard), stainless steel(316L)

#### Order Example

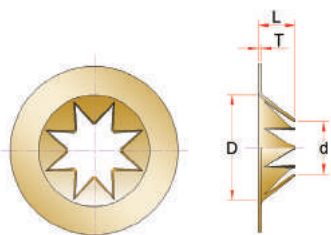
Part No.	Material
OSTW-M16	Stainless Steel
OSTW-NPT1/2"	Stainless Steel
OSTW-M63	Stainless Steel

(\* in mm)

Metric Thread				NPT Thread			
Part No.	D	d	t	Part No.	D	d	t
OSTW-M16	25.5	16.5	2.0	OSTW-NPT1/2"	34.8	23.6	2.0
OSTW-M20	31.5	21.3	2.5	OSTW-NPT3/4"	40.3	27.8	2.5
OSTW-M25	37.5	25.2	2.5	OSTW-NPT1"	48.0	33.5	3.0
OSTW-M32	48.0	33.5	3.0	OSTW-NPT1-1/4"	55.8	42.8	3.5
OSTW-M40	55.5	40	3.0	OSTW-NPT1-1/2"	75.8	52.0	3.5
OSTW-M50	75.5	52	3.5	OSTW-NPT2"	89.7	65.2	3.5
OSTW-M63	89.5	65	3.5	OSTW-NPT2-1/2"	97.5	77.0	4.0
OSTW-M75	97.5	77	4.0	OSTW-NPT3"	112.0	90.0	4.0
OSTW-M90	112.0	90	4.0	OSTW-NPT3-1/2"	120.0	102.0	4.0
OSTW-M100	120.0	102	4.0	OSTW-NPT4"	135.0	112.0	4.0

# Accessories Type:OSLS

## OSLS Type



### Application : Lead Sheath Washer

- \* For use of lead sheathed cable
- \* Material : Nickel plated brass

#### Order Example

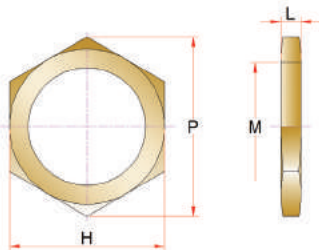
Part No.	Material	Use
OSLS-M16	Nickel plated brass	OSNJ-A2F
OSLS-M20	Nickel plated brass	E1WF
OSLS-M50	Nickel plated brass	OSNJ-D

(\* in mm)

Part No.	D	d	L	T
OSLS-M16	10	6	3.5	0.2
OSLS-M20	14	6	4.5	0.35
OSLS-M25	18	11	7	0.35
OSLS-M32	25	16	10.5	0.35
OSLS-M40	31	21	12	0.5
OSLS-M50	40	27	13	0.5
OSLS-M63	53	38	16	0.5
OSLS-M75	61	47	18	0.5
OSLS-M90	70	57	18	0.6
OSLS-M100	83	64	19	0.7

# Accessories Type:OSLN

## OSLN Type



### Application : Lock Nut

- \* Secure a cable gland in position of the equipment
- \* Material : Brass, Nickel plated brass(Standard), Stainless steel

### Order Example

Model	Thread size	Material
OSLN	M16	Nickel Plated Brass
OSLN	NPT 1/2"	Nickel Plated Brass
OSLN	PF 1-1/4"	Stainless Steel

### Metric & PG Type

(\* in mm)

Metric Thread				OSPG-R Thread							
Part No.	H	P	L	Part No.	H	P	L	Part No.	H	P	L
OSLN - M16	22	25	4	OSLN - PG7	15	16.5	3	OSLN - PG M12	14	15	3
OSLN - M20	27	31	4	OSLN - PG9	18	20	3	OSLN - PG M16	18	20	3
OSLN - M25	32	36.5	4	OSLN - PG11	21	23.5	3	OSLN - PG M20	22	24.5	3
OSLN - M32	39	44.5	5	OSLN - PG13.5	23	25.5	3	OSLN - PG M25	27	29.5	4
OSLN - M40	48	55	5	OSLN - PG16	26	29	3	OSLN - PG M32	36	39.5	4
OSLN - M50	60	69	5	OSLN - PG21	32	35.5	4	OSLN - PG M40	45	50	5
OSLN - M63	73	84	6	OSLN - PG29	41	45	4	OSLN - PG M50	54	59	5
OSLN - M75	85	98	6	OSLN - PG36	51	56	5	OSLN - PG M63	67	73	6
OSLN - M90	102	117	10	OSLN - PG42	60	65	5	Note. For OSPG-R metric thread type.			
OSLN - M100	112	128	12	OSLN - PG48	66	73	6				

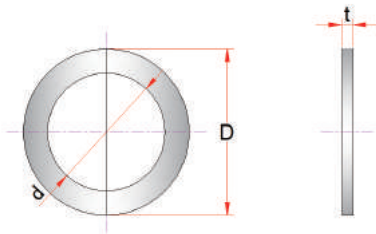
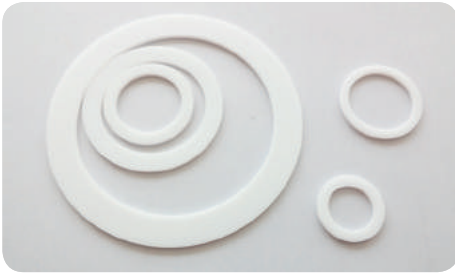
### NPT & PF Type

(\* in mm)

NPT Thread				PF Thread			
Type	H	P	L	Type	H	P	L
Part No.	H	P	L	Part No.	H	P	L
OSLN - 1/2"	27	31	4	OSLN - 1/2"	27	31	4
OSLN - 3/4"	32	36	4	OSLN - 3/4"	32	36	4
OSLN - 1"	39	45	5	OSLN - 1"	39	45	5
OSLN - 1-1/4"	48	55.5	5	OSLN - 1-1/4"	48	55.5	5
OSLN - 1-1/2"	58	67	6	OSLN - 1-1/2"	58	67	6
OSLN - 2"	73	84	6	OSLN - 2"	73	84	6
OSLN - 2-1/2"	85	98	6	OSLN - 2-1/2"	85	99	6
OSLN - 3"	102	119	10	OSLN - 3"	102	119	10
OSLN - 3-1/2"	112	126	12	OSLN - 3-1/2"	112	128	12
OSLN - 4"	125	144	12	OSLN - 4"	125	144	12

# Accessories Type:OSSR

## OSSR Type



### Application : Sealing Washer

- \* Sealing for IP Grade
- \* Material : Teflon(PTFE)
- \* This item is impossible for individual purchase  
(It is only part of cable gland package)

### Order Example

Model	Type	Size
OSSR	E1WF	M16
OSSR	OSNJ	NPT 1/2"

### ● Armour Type & Non Armour Type

(\* in mm)

TYPE Part No.	Armour Type			Non Armour Type		
	D	d	t	D	d	t
OSSR M16	26	16	2	24	16	2
OSSR M20	30	20	2	27	20	2
OSSR M25	35	25	2	32	25	2
OSSR M32	44	32	2	40	32	2
OSSR M40	53	40	2	48	40	2
OSSR M50	66	50	2	58	50	2
OSSR M63	81	64	2	73	64	2
OSSR M75	97	75	2	85	75	2
OSSR M90	110	90	2	100	90	2
OSSR M100	119	100	2	112	100	2

### ● NPT & PF Thread

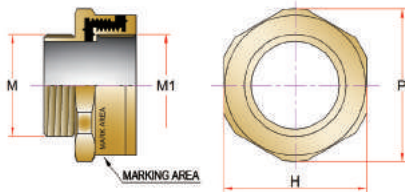
(\* in mm)

Type Part No.	NPT Thread			PF Thread		
	D	d	t	D	d	t
OSSR 1/2"	24	16	2	24	16	2
OSSR 3/4"	30	22	2	30	22	2
OSSR 1"	35	27	2	35	27	2
OSSR 1-1/4"	44	34	2	54	43	2
OSSR 1-1/2"	54	43	2	58	48	2
OSSR 2"	67	49	2	70	60	2
OSSR 2-1/2"	86	73	2	85	75	2
OSSR 3"	110	90	2	105	87	2
OSSR 3-1/2"	119	100	2	119	100	2
OSSR 4"	126	114	2	125	114	2

# Hazardous Accessories Type:OSAJ(I)



## OSAJ(I) Type



### Application : Insulated Adaptor

- \* Flameproof & Increased Safety
- \* Usage : Exd insulated adaptors provide a means to isolate the earth of the supply cable from the load equipment thus reducing the risk of damage to electronic equipment within the enclosure in the event of a short circuit to ground through the enclosure

Design Specification	BS 6121, IEC 62444, EN/IEC 60529
Compliance Standard	IEC/EN 60079-0, 1, 7, 31
ATEX Certification	16ATEX9168X
IECEX Certification	IECEX PRE 16.0093X
Code of Protection	II2G Ex db IIC Gb / Ex eb IIC Gb / II2D Ex tb IIIC Db
Operating Temperature	-20°C ~ 110°C
Ingress Protection	IP 66 / 67
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Sealing	Silicone
Accessories	Lock Nut, Sealing Washer

### Order Example

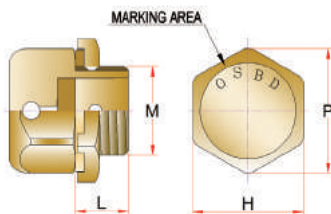
Part No.	Thread	Material	Accessories
OSAJ(I)	M50 x M50	Nickel plated brass	Sealing Washer, Lock Nut
OSAJ(I)	M50 x M50	Stainless steel(316L)	

Part No.	Entry Thread Size		Hexagon Dimension [H]
	M(Male)	M1(Female)	
OSAJ(I)	M50 X 1.5	M50 X 1.5	H70 X 75

# Hazardous Accessories Type:OSBD



## OSBD Type



### Application : Breather Drains

- \* Increased Safety
- \* Breather Drains provide a method of preventing moisture blind-up within a hazardous area approved enclosure whilst ensuring the integrity and Ex approval of the installation is maintained

Design Specification	BS 6121, IEC 62444, EN/IEC 60529
Compliance Standard	IEC/EN 60079-0, 7, 31
ATEX Certification	16ATEX9111U
IECEX Certification	IECEX PRE 16.0091U
Code of Protection	II2G Ex eb IIC Gb / II2D Ex tb IIIC Db
Operating Temperature	-60°C ~ 110°C
Ingress Protection	IP 66
Gland Material	Nickel Plated Brass(Standard), Brass(Only), Stainless Steel(316L)
Gasket (washer)	PTFE(Teflon)
Filter	Copper compressed metallic sinter
Accessories	Lock Nut, Sealing Washer

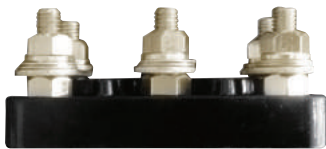
### Order Example

Part No.	Thread	Material	Accessories
OSBD	M20 X 1.5	Nickel plated brass	Sealing Washer, Lock Nut
OSBD	NPT 3/4"	Stainless steel(316L)	

Part No.	Entry Thread Size		Hexagon Dimension [H]
	Metric	NPT	
OSBD	M 20 X 1.5	NPT 1/2"	H25 X 28
	M 25 X 1.5	NPT 3/4"	

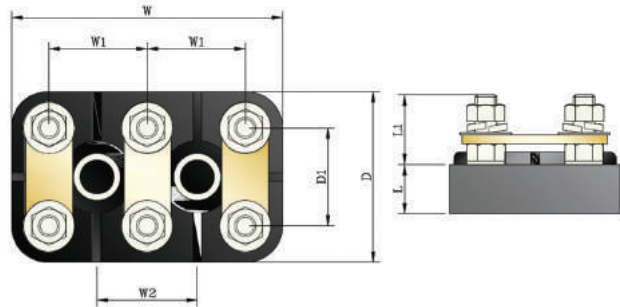
# OSCG TERMINAL BLOCK

## TERMINAL BLOCK Type



### Application

For wires connection  
Terminal block is safe because it is made of PHENOLIC which has not only excellent electrical insulating properties but also flame-retardant properties



Normal Type	A (ampere)	V (voltage)	W	W1	W2	D	D1	L	L1	PLATE SIZE
OSGT - TB 1	27.2	690	63.5	23	23.5	40	23	11.5	15	2T*35*11
OSGT - TB 2	102.9	690	95	35	35	60	35	15	25	2T*53*18
OSGT - TB 3	500	690	133	54	54	69	43.5	19	42	4T*68*25

### Materials

Description	Q'ty	Material
BODY	1	PHENOLIC
BOLT	6	BRASS
PLATE	3	COPPER
HEX NUT	12	BRASS
SPRING WASHER	6	BRASS
PLAIN WASHER	12	BRASS

### Electric Rating

OSGT-TB 1 : 690V 27.2A  
OSGT-TB 2 : 690V 102.9A  
OSGT-TB 3 : 690V 500A

### Certificates

OSGT-TB 1 ( KERI 2013DC00031)  
OSGT-TB 2 ( KERI 2013DC00032)  
OSGT-TB 3 ( KERI 2013DC00033)

## BS 6121 TYPE OF GLAND

Type A1	For unarmoured cable with an elastomer or plastics outer sheath, where the function of the gland is to secure the outer sheath of the cable.
Type E1	As type A1, but with an IP66 seal between the outer sheath and gland.
Type C	For armoured or wire braided cable, where the function of the gland is to secure the armour or metallic braid and to provide electrical continuity between such armour or braid and the threaded fixing component of the gland.
Type B	For armoured or wire braided cable with elastomeric or plastics outer sheath. As type B but with an IP66 seal between the outer sheath and gland.
Type A2	For armoured or wire braided cable with an extruded elastomeric or plastics inner sheath and elastomeric or plastics outer sheath and gland and between the inner sheath and threaded fixing component.

The suffix for each type of protection shall be as follows.

Single wire armoured	W
Pliable wire armoured flexible	T
Wire braided	X

Aluminium strip armoured	Y
Double steel tape armoured	Z

## TYPE TESTS

### Proof torque test

Test one gland of each size and type. The gland shall be clean, new and without lubricant. Screw the threaded fixing component of the gland into a suitably tapped hole in a substantial block of steel. The thickness of the block shall be greater than the length of the thread on the component, and the hole pass right through the block. Assemble the gland with a short piece of the appropriate kind of cable of any diameter within the range of the gland. Tighten the gland with a manually operated torque spanner to the appropriate proof torque given in tables 1 to 6(BS 6121) ; apply the spanner first to the main body of the gland and then to each successive hexagonal component. Dismantle the gland and examine it. Ignore any seal distortion.

### Load test for type A glands.

Test one gland of each size and type. The gland shall be clean, new and without lubricant. Mount the gland as shown in figure 1. Secure a cylindrical low carbon steel mandrel, of the diameter specified in table 1(BS 6121) and any convenient length, in the gland; do this by tightening the gland with a torque spanner to a torque equal to 50% of the proof torque specified in table 1(BS 6121). The mandrel, which shall be clean, dry and polished, shall carry a platform on which weights may be placed. Mark the mandrel so that any movement relative to the gland can easily be detected. Load the mandrel with weights until the total tensile load of the mandrel, platform and weights is in accordance with table 1(BS 6121). Maintain the load for 6 hrs. Measure at the end of this period, the distance, if any, through which the mandrel has moved relative to the gland.

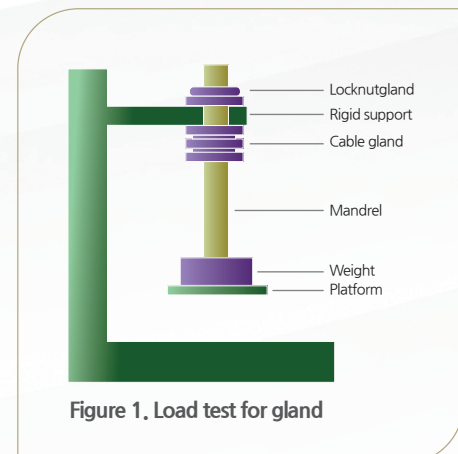


Figure 1. Load test for gland

# TECHNICAL

## RADIAL LOAD TEST

Test one insulated adaptor of each size.

Mount the adaptor in a suitable gland plate as shown in figure 2. Tighten a suitable gland into the adaptor to enable the radial torque to be applied. Insert into the gland a mandrel of appropriate size, ensuring that the mandrel does not enter the adaptor. Make arrangements to suspend weights from the mandrel. When calculating the radial torque to be applied assume that the weight of the mandrel itself acts halfway along its length. Apply the load for not less than 5 min. Finally, dismantle the assembly and inspect the insulated adaptor for signs of damage.

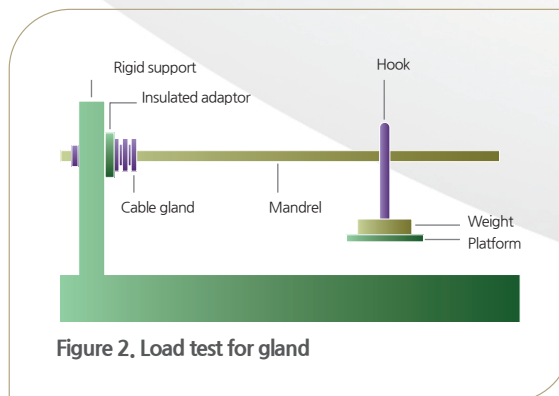


Figure 2. Load test for gland

## TEMPERATURE CLASSIFICATION & GAS GROUPINGS

Flammable mixtures can be classified under two main characteristics in respect of explosion protection; temperature of ignition by hot surfaces and the spark energy required to ignite the mixture. The spark energy of the ignition is also related to the intensity of the explosion. Classification of maximum surface temperatures in both North America and Europe are similar but vary slightly in the nomenclature used. The temperature classification is important to ensure that the correct equipment is matched to the flammable atmosphere that could potentially exist in an area. This will take into account such things as maximum ambient temperature and maximum operating voltage with a + 10% over voltage or an overload condition applied. In some types of protection such as Ex 'd' or 'nR' the temperature classification is based on the outside temperature of the enclosure whereas in other types of protection such as Ex 'e' or 'nA' the temperature classification is based on the temperature of the internal components.

## TEMPERATURE CLASSIFICATION

(Unless otherwise specified on the rating plate it is assumed that the operating ambient temperature is in the range -20oC to + 40oC in accordance with European standards) All gases are grouped according to their physical properties and details of their grouping can be found in either National or International codes of practice. Some examples of Gas Groups are shown below.

Maximum surface Temperature	US(NEC 505) IEC CENELEC	US(NEC 500)
450°C	T1	T1
300°C		T2
280°C	T2	T2A
260°C		T2B
230°C		T2C
215°C		T2D
200°C		T3

Maximum surface Temperature	US(NEC 505) IEC CENELEC	US(NEC 500)
180°C	T3	T3A
165°C		T3B
160°C		T3C
135°C	T4	T4
120°C		T4A
100°C	T5	T5
85°C	T6	T6





## GAS GROUPING FOR ELECTRICAL APPARATUS(EN 50014)

GROUP	GAS
I(Mining)	Methane(firedamp)
IIA	Industrial methane, propane, petrol & most industrial gases.
IIB	Ethylene, Town gas & other industrial gases
IIC	Hydrogen, Acetylene & Carbon Di-sulphide

### Ambient Temperature

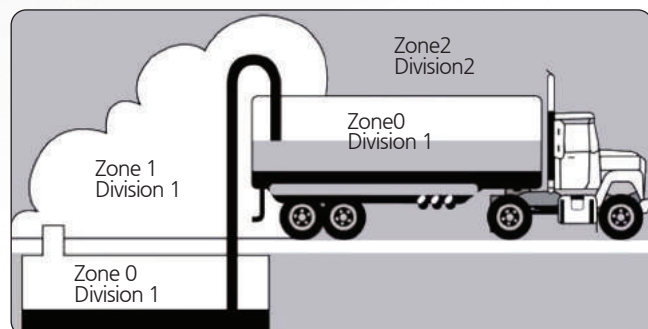
The ambient temperature is the surrounding temperature of the environment in which the equipment is installed, whether indoors or outdoors. For electrical equipment certified in Europe it is assumed that the ambient temperature in which the equipment may be operated is between -20°C to + 40°C. Some types of equipment are certified for operation outside this range and if so must be stated on the equipment label or certificate.

### ATEX DIRECTIVE

The ATEX directive came into force in April 1994 and was enacted into UK law in March 1996. It became a mandatory requirement in July 2003. Most of the products in this catalogue have an EC type examination certificate to the ATEX directive. ATEX covers both electrical and mechanical ignition hazards. Apparatus are divided into equipment groups (I for mining and II non-mining), source of ignition Gas(G) and Dust(D) and Categories 1, 2 and 3. The categories provide respectively, very high, high and normal levels of protection against ignition. The categories deliver the level of protection which is currently obtained by applying the existing protection techniques(Ex 'd', Ex 'e' etc) and they also take into account other protection concepts proposed by manufacturers and considered by the notified(certification) bodies who produce EC type examination(ATEX) Certificates. The categories in practice are equated to suitability for Zones. The actual category of apparatus specified for a Zone depends on the overall risk assessment for a Zone. The zoning considers only the probability of the existence of an explosive atmosphere. It does not consider the consequential effects of an ignition taking place. Apparatus are marked with the grouping and category in addition to the marking required by the individual protection standards.

### NORTH AMERICAN STANDARDS

Although this code change permits the use of products that have a Zonal classification, in a similar way to European practice, mixing of different forms of equipment approval across zones or divisions is not acceptable. e. g. products approved for Zone 1 do not necessarily meet the requirements of Division 1, which also encompasses Zone 0. Although no direct equivalents exist between European/IEC and American codes of protection and Area Classification there are similarities and there is a developing acceptance of European/IEC methods in North America and vice versa. The following table shows the basic relationships between the North American and European classifications.



# TECHNICAL



## EQUIVALENT DIVISION / ZONE

	Flammable gas always present → 1000 hrs/year	Flammable gas normally present → 10-1000 hrs/year	Flammable gas not normally present → 10 hrs/year
CENELEC/IEC	Zone 0 (Zone 20 dust)	Zone 1 (Zone 21 dust)	Zone 2 (Zone 22 dust)
ATEX	Category 1G Category 1D	Category 2G Category 2GAS	Category 3G Category 3D
US-NEC 505	Zone 0	Zone 1	Zone 2
US-NEC 500	Division 1	Division 1	Division 2















As can be seen from the table above, Division I covers both the European/IEC Zones 0 & 1. Therefore, care must be taken when using zone classified equipment in a Division 1 area as to the suitability of the protection employed. Underwriters Laboratory (UL) and Factory Mutual Inc (FM) are two main certification bodies in North America and in some cases, electrical equipment may also need to meet certain Marine Standards, and be separately approved by the US Coast Guards, before it can be used e.g. on an offshore oil rig.

## PROTECTION CONCEPTS

Method of Protection	Symbol	Permitted Zone	ATEX Category	CENELEC Standard	IEC Standard	Protection Principle
Flameproof	Exd	1 & 2	2 & 3	EN 50018	60079-1	Contain the explosion and prevent transmission
Enclosed Break	Ex nC	2	3	EN 50021	60079-15	
Powder Filled	Ex q	1 & 2	2 & 3	EN 50017	60079-5	No Arcs, sparks of hot surfaces or components
Increased Safety	Ex e	1 & 2	2 & 3	EN 50019	60079-7	
Non Sparking	Ex nA	2	3	EN 50021	60079-15	Limit energy of sparks and limit temperature of hot surfaces or components
Intrinsic Safety	Ex ia	0, 1 & 2	1, 2 & 3	EN 50020	60079-11	
	Ex ib	1 & 2	2 & 3	EN 50020	60079-11	
Energy Limitation	Ex nL	2	3	EN 50021	60079-15	Prevent flammable gas coming into contact with hot surfaces and ignition capable equipment
Pressurised	Ex p	1 & 2	2 & 3	EN 50016	60079-2	
Encapsulation	Ex m	1 & 2	2 & 3	EN 50028	60079-18	Prevent flammable gas coming into contact with hot surfaces and ignition capable equipment
Oil Immersion	Ex o	1 & 2	2 & 3	EN 50015	60079-6	
Restricted Breathing	Ex nR	2	3	EN 50021	60079-15	Any proven method
Special	Ex s	0, 1 & 2	1, 2 & 3	EHSR		

## INGRESS PROTECTION

A major secondary protection parameter is the ingress protection of the electrical equipment. Moisture or dust if allowed to come into contact with electrical circuits could lead to either sparking or physical breakdown of the components and interfere with the protection method being used. In some cases the IP ratings for products in this catalogue have been carried out in accordance with EN 60529 (IEC 529) and have been witness tested by independent test laboratories. It will be noted that some products have both IP66 and IP67 ratings and this is because in some instances the IP66 requirement is more onerous than the IP67 requirement. This is one of the most onerous water ingress tests and we designed specifically for electrical equipment which would be subject to deluge conditions, e.g. Ships decks, fire deluge areas. The following table shows the criterion for IP requirement to EN/IEC 60529.

First Digit		Degree of Protection	First Digit		Degree of Protection
0		No protection	0		No protection
1		Protection against ingress of large solid particles	1		Protection against ingress of vertically dripping water
2		Protection against ingress of medium sized solid particles	2		Protection against ingress of water dripping at an angle of 75° to 90°
3		Protection against ingress of medium solid particles greater in thickness than 2.5mm	3		Protected against drops of water falling at up to 60° from the vertical
4		Protection against ingress of small solid foreign bodies greater in thickness than 1mm	4		Protected against projections of water from all directions
5		Protection against ingress of dust in an amount sufficient to interfere with enclosed equipment.	5		Protection against ingress of water jets
6		Complete Protection against ingress of dust	6		Protection against ingress of water in heavy water
			7		Protection against effects of temporary immersion
			8		Protection against effects of indefinite immersion

## IP TEST METHOD

IP X6 : Spraying 100 liters of water per minute through 12.5mm nozzle from 3m away for 3minutes.

IP X7 : Immersing in the depth of less than 1m for 30min.

IP X8 : According to the conditions requested by the manufacturer.

## IEC INTRODUCTION


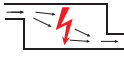



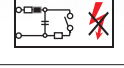

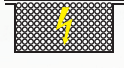
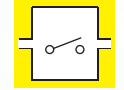
The IECEx is a single global certification framework to facilitate international trade in equipment and services for use in explosive atmosphere based on the IEC(International Electrotechnical Commission)'s international standard while maintaining the required level of safety:

- Reduced testing and certification costs to manufacturer
- Reduced time to market
- International confidence in the product assessment process
- One international database listing

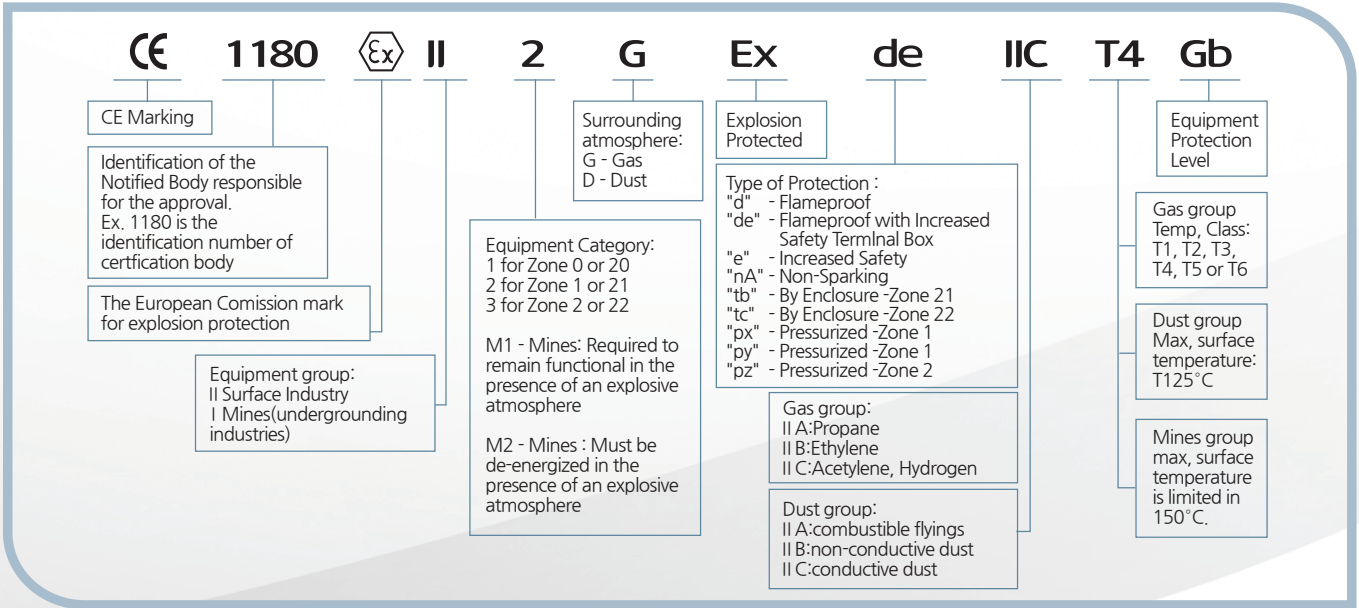
The goal is to help manufacturers reduce costs and time while developing and maintaining uniform product evaluation to protect users against products that are not in line with the required level of safety. So it should help industry to open up new markets from different conformity assessment criteria in various countries. The aim of the IECEx Scheme and its programs is to ease international trade of explosion protected equipment (termed Ex equipment) by eliminating the need for duplication of testing and certification while preserving safety. IECEx accepts the participation of Ex certification bodies and Ex test laboratories only after successful completion for the IECEx Assessment Process which also includes on-going surveillance each Ex candidate certification body and testing laboratory is subjected to the same IECEx assessment process utilizing the internationally established ISO/IEC standards and guides on conformity assessment supplemented with the IECEx technical guidance documents with world experts in the field of explosion-protection being appointed as IECEx Assessors.



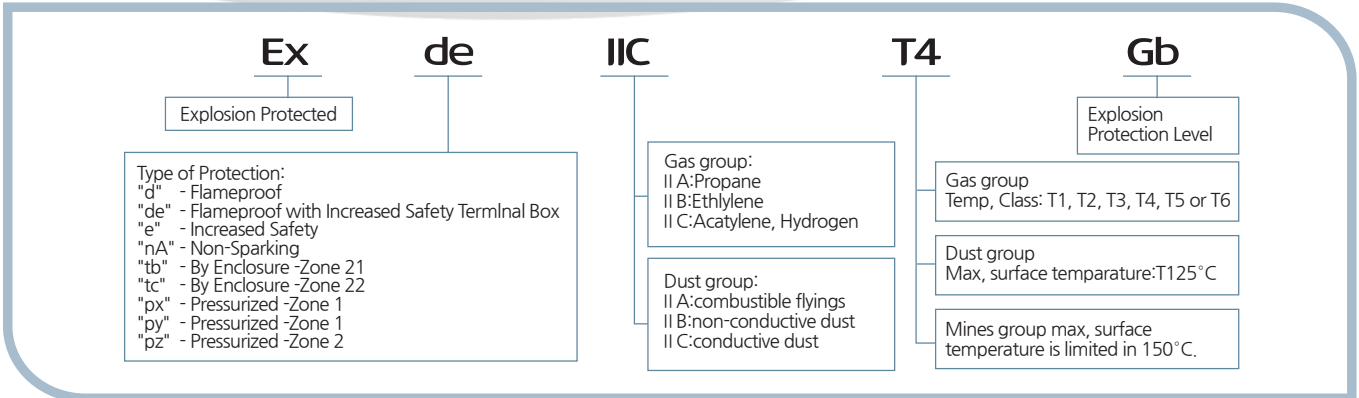
## TYPE OF ENCLOSURE

Type of Enclosure	Basic Principle	Schematic	IEC Standard
Flame proof Enclosure d	A type of protection of electrical apparatus in which the enclosure will withstand an internal explosion of a flammable mixture which has penetrated into the interior, without suffering damage and without causing ignition, through any joints or structural openings in the enclosure, of an external explosive atmosphere consisting of one or more the gases or vapours for which it is designed.		IEC 60079-1
Pressurized Enclosure d	A type of protection in which the entry of a surrounding atmosphere into the enclosure of the electrical apparatus is prevented by maintaining inside the said enclosure a protective gas at a higher pressure than that of the surrounding atmosphere.		IEC 60079-2
Powder Filling q	A type of protection in which the enclosure of electrical apparatus is filled with a material in a finely granulated state so that, in the intended conditions of service, any arc occurring within the enclosure of an electrical apparatus will not ignite the surrounding atmosphere.		IEC 60079-5
Oil Immersion o	A type of protection in which the electrical apparatus or parts of the electrical apparatus are immersed in oil in such a way that an explosive atmosphere, which may be above the oil or outside the enclosure cannot be ignited.		IEC 60079-6
Increased Safety e	A type of protection applied to electrical apparatus that does not produce arcs or sparks in normal service, in which additional measures are applied so as to give increased security against the possibility of excessive temperatures and of the occurrence of arcs and sparks.		IEC 60079-7
Intrinsic Safety i	A type of protection in which the electrical apparatus contains intrinsically safe circuits, which are incapable of causing an explosion in the surrounding atmosphere.		IEC 60079-11
Non-Sparking Structure n	A type of protection where electrical equipment, in normal operation, is not capable of igniting a surrounding explosive gas atmosphere and a fault capable of causing ignition is not likely to occur.		IEC 60079-15
Encapsulation m	A type of protection in which the parts which can ignite an explosive atmosphere are enclosed in a resin sufficiently resistant to environmental influences in such a way that this explosive atmosphere cannot be ignited by either sparking or heating, which may occur within the encapsulation.		IEC 60079-18
Dust Ignition Protection DIP	An enclosure that will exclude ignitable amounts of dusts that might affect performance or rating and that, when installed and protected in accordance with the original design intent, will not permit arcs, sparks, or heats otherwise generated or liberated inside the enclosure to cause ignition of exterior accumulations or atmospheric suspensions of a specified dust.		

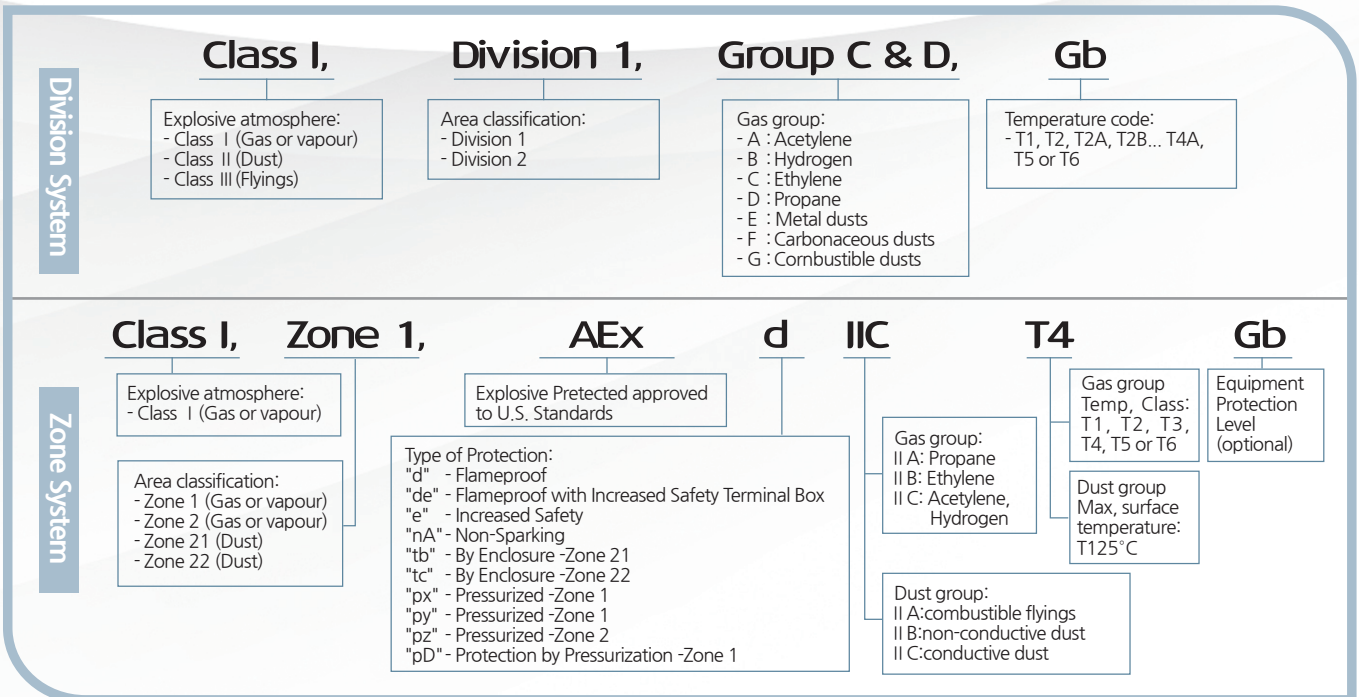
# ATEX MARKING(EUROPEAN)



# IECEX MARKING(GLOBAL)



# NORTH AMERICAN MARKING



(1) For Dust environments (Zone 21 or 22) the Class of the hazard (Class II) shall not be mentioned in the marking. e.g. Zone 21, AEx tb III C T125°C Db  
 (2) For Canadian Standards letter "A" shall not be mentioned in the marking. e.g. Class I, Zone I, Ex d IIC T4 Gb  
 (3) Certificates emitted according to the new standards versions require the EPL marking close to protection type. e.g. Ex db eb (Old: Ex de)

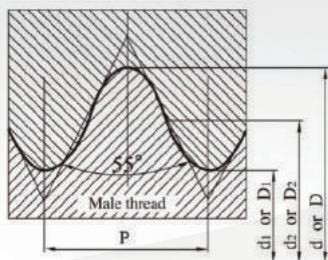
# THE TYPE OF THREAD ON CABLE GLAND



- 01 JIS B0202 Standard ——— PF(=G) thread
- 02 JIS B0203 Standard ——— PT thread
- 03 ANSI/ASME-B 1201 Standard — NPT thread
- 04 DIN 40430 Standard ——— PG thread
- 05 ISO 965-1&3 Standard ——— ISO Metric thread

## PF(=G) thread (Pipe straight thread)

Units : mm

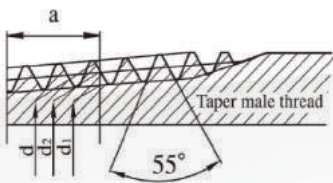


JIS B0202

Nominal size	Number of threads per inch	Pitch p (Ref.)	Depth of threads h	Crest/root radius r	Male thread		
					O.D d	Effective diameter d2	Diameter at root d1
					Female thread		
					Diameter at root D	Effective diameter d2	I.D D1
PF 1/2"	14	1.8143	1.162	0.25	20.955	19.793	18.631
PF 3/4"	14	1.8143	1.162	0.25	26.441	25.279	24.117
PF 1"	11	2.3091	1.479	0.32	33.249	31.770	30.291
PF 1-1/4"	11	2.3091	1.479	0.32	41.910	40.431	38.952
PF 1-1/2"	11	2.3091	1.479	0.32	47.803	46.324	44.845
PF 2"	11	2.3091	1.479	0.32	59.614	58.135	56.656
PF 2-1/2"	11	2.3091	1.479	0.32	75.184	73.705	72.226
PF 3"	11	2.3091	1.479	0.32	87.884	86.405	84.926
PF 3-1/2"	11	2.3091	1.479	0.32	100.330	98.851	97.372
PF 4"	11	2.3091	1.479	0.32	113.030	111.551	110.072

## PT thread (Pipe Taper thread)

Units : mm

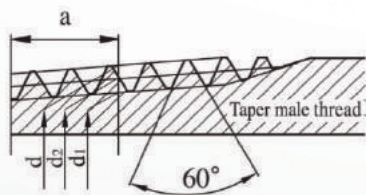


JIS B0203

Nominal size	Thread			Length a	Basic diameters		
	Number of threads per inch	Pitch p	Depth of threads h		O.D d	Effective diameter d2	Diameter at root d1
PF 1/2"	14	1.814	1.162	8.16	20.955	19.793	18.631
PF 3/4"	14	1.814	1.162	9.53	26.441	25.279	24.117
PF 1"	11	2.309	1.479	10.39	33.249	31.77	30.291
PF 1-1/4"	11	2.309	1.479	12.70	41.91	40.431	38.952
PF 1-1/2"	11	2.309	1.479	12.70	47.803	46.324	44.845
PF 2"	11	2.309	1.479	15.88	59.614	58.135	56.656
PF 2-1/2"	11	2.309	1.479	17.46	75.184	73.705	72.226
PF 3"	11	2.309	1.479	20.64	87.884	86.405	84.926
PF 3-1/2"	11	2.309	1.479	22.23	100.330	98.851	97.372
PF 4"	11	2.309	1.479	25.40	113.03	111.551	110.072

## NPT thread (American taper thread)

Units : mm

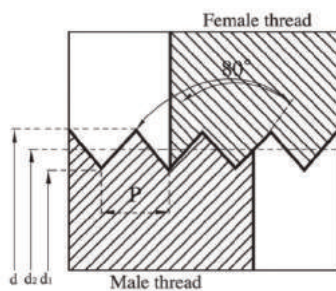


ANSI / ASME-B 1201

Nominal size	Thread			Basic diameters			
	Number of threads per inch	Pitch p	Depth of threads h	Length a	O.D d	Effective diameter d2	Diameter at root d1
NPT 1/2"	14	1.814	1.451	8.128	21.223	19.772	18.321
NPT 3/4"	14	1.814	1.451	8.61	25.117	23.666	20.764
NPT 1"	11.5	2.208	1.766	10.16	33.227	31.461	29.695
NPT 1-1/4"	11.5	2.208	1.766	10.668	41.983	40.217	38.451
NPT 1-1/2"	11.5	2.208	1.766	10.668	48.053	46.287	44.521
NPT 2"	11.5	2.208	1.766	11.074	60.091	58.325	56.55
NPT 2-1/2"	8	3.175	2.54	17.322	72.698	70.158	67.61
NPT 3"	8	3.175	2.54	19.456	88.607	86.067	83.52
NPT 3-1/2"	8	3.175	2.54	20.853	101.6	98.776	97.473
NPT 4"	8	3.175	2.54	21.437	113.972	111.432	108.892

## PG thread (German pipe thread)

Units : mm

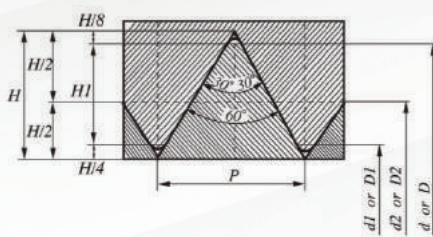


DIN 40430

Nominal size	Number of threads per inch	Pitch p (Ref.)	Height of contiguous surface H1	Male thread			Minimum diameter of mounting hole in box
				O.D d	Effective diameter d2	Diameter at root d1	
				Female thread			
				Diameter at root D	Effective diameter d2	I.D D1	
PG 7	20	1.270	0.61	12.5	11.89	11.28	13
PG 9	18	1.411	0.67	15.2	14.53	13.86	16
PG 11	18	1.411	0.67	18.6	17.93	17.36	19
PG 13.5	18	1.411	0.67	20.4	19.73	19.06	21
PG 16	18	1.411	0.67	22.5	21.83	21.16	23
PG 21	16	1.588	0.76	28.3	27.54	26.78	29
PG 29	16	1.588	0.76	37	36.24	35.48	38
PG 36	16	1.588	0.76	47	46.24	45.48	48
PG 42	16	1.588	0.7	54	53.24	52.48	55
PG 48	16	1.588	0.76	59.3	58.54	57.78	60

## ISO Metric Thread

Units : mm



$$H = 0.866025 P \quad d_2 = d - 0.649519 P$$

$$H = 0.541266 P \quad d_1 = d - 1.082532 P$$

$$D = d \quad D_2 = d_2 \quad D_1 = d_1$$

$$KS B 0204-86 \quad JIS B 0207-1982$$

Nominal size	Pith P	Diameter D	Effektiv Diameter d2	Diameter at root d1
M16	1.5	16	15.026	14.376
M20	1.5	20	19.026	18.376
M24	1.5	24	23.026	22.376
M25	1.5	25	24.026	23.376
M27	1.5	27	26.026	25.376
M30	1.5	30	29.026	28.376
M32	1.5	32	31.026	30.376
M36	1.5	36	35.026	34.376
M40	1.5	40	39.026	38.376
M42	1.5	42	41.026	40.376
M45	1.5	45	44.026	43.376
M50	1.5	50	49.026	48.376
M55	1.5	55	54.026	53.376
M56	1.5	56	55.026	54.376
M60	1.5	60	59.026	58.376
M63	1.5	63	62.026	61.376
M65	1.5	65	64.026	63.376
M70	1.5	70	69.026	68.376
	2.0	70	68.701	67.835
M72	1.5	72	71.026	70.376
	2.0	72	70.701	69.835
M75	1.5	75	72.026	73.376
	2.0	75	73.701	72.835
M90	2.0	90	88.701	87.835
M100	2.0	100	98.701	97.835

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-  **AUSTRALIA** - KABEX AUSTRALIA PTY LDT. TEL : +61-02-9675-7616 / FAX : +61-2-9625-2750
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-  **OMAN** - AL-IBRAM LLC TEL : +968-24495253 / FAX : +968-2449-5243
-  **PAKISTAN** - SAGE OILFIELD SERVICES TEL : +92-21-34386844 / FAX : +92-21-34386791
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**OSCG JAPAN(TOKYO JAPAN) 일본 도쿄지사**  
TEL : 81-3-3263-2031 / FAX : 81-3-3263-2034

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**KOREA ELECTRICS CO.,LTD. 한국전기상사**  
TEL : 82-52-266-0900 / FAX : 82-55-266-0902

**MJ TECH CO.,LTD. (주)엠제이테크**  
TEL : 82-51-245-0511 / FAX : 82-51-241-2367

**PROCESS CONTROLS CO.,LTD. 프로세스컨트롤즈(주)**  
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**SUNWOO CO.,LTD. 선우(주)**  
TEL : 82-61-462-0345~6 / FAX : 82-61-462-0348

**SECHANG CORP. 세창상사**  
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Honam Agency  
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Ulsan Branch  
**OSCG ULSAN**

Ulsan Agency  
KOREA ELECTRIC CO.,LTD.

Busan Branch  
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**DYNASTY SOLUTION CO.,LTD.**

Busan Agency  
E.E.C WORLD  
MJ TECH CO.,LTD.  
SECHANG CORP.



OSCG CO., LTD. was founded in Nov. 1983.

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