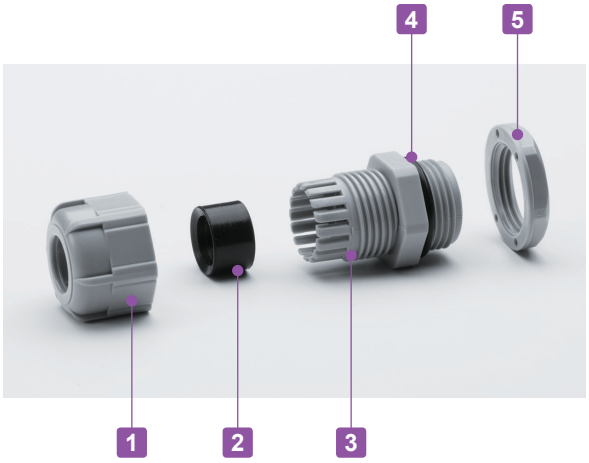
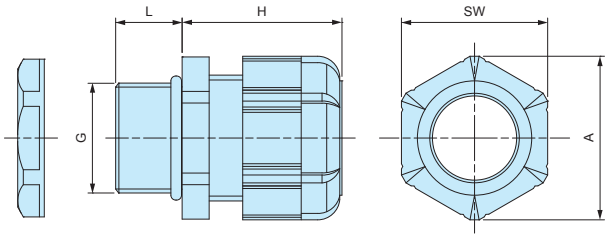
RPG SERIES POLYAMIDE CABLE GLAND



- Inexpensive cable glands made from polyamide material with PG threading.
- High oil resistant NBR rubber sealing and O-ring.
- IP67 protection class.

RPG dimensions



- DXF/DWG/PDF drawings available on our website.

Components

- PA = Polyamide

No.	Part name	Material
1	Cap	PA66 UL94V-2
2	Sealing insert	NBR
3	Connector	PA66 UL94V-2
4	O-Ring	NBR
5	Lock-nut	PA66 UL94V-2

Technical Data

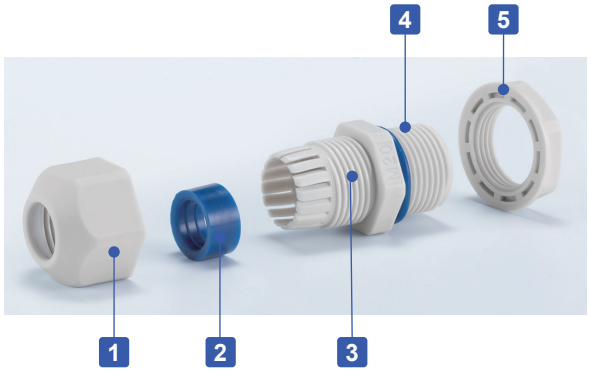
Protection class: IP67
Operating temperature: -20°C ~ +80°C

Product no. / Dimensions

Product no.		G			Cable range		L	H Max	SW	A	Pack of
● Black	● Gray	Thread size	Thread dia.	Mounting hole	Min	Max					
RPG7-7B	RPG7-7G	PG7	12.5	Φ12.7	3	7	9	20.5	16	17.7	1
RPG9-8B	RPG9-8G	PG9	15.2	Φ15.4	4	8	9	23.5	19	21	1
RPG11-10B	RPG11-10G	PG11	18.6	Φ18.8	5	10	9	26	22	24	1
RPG13.5-11B	RPG13.5-11G	PG13.5	20.4	Φ20.6	6	11	10	29	24	26.4	1
RPG16-14B	RPG16-14G	PG16	22.5	Φ22.7	8	14	10	30	26.7	29.5	1
RPG21-18B	RPG21-18G	PG21	28.3	Φ28.5	13	18	12	35	33	36.5	1
RPG29-25B	RPG29-25G	PG29	37	Φ37.2	18	25	12	41.5	42	46.5	1

RMW series WEATHERPROOF CABLE GLAND

IP67



- Weatherproof cable gland equipped with high ultraviolet and degradation resistant silicone sealing insert and O-ring.
- Recommended to use outdoors where waterproofing is critical.
- Protection class equivalent to IP67.

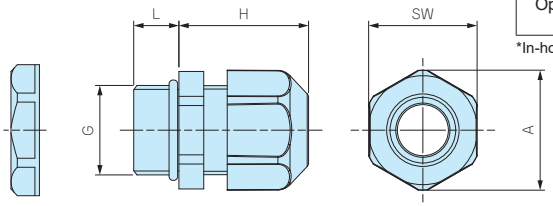
Components

■ PA = Polyamide

No.	Part name	Material
1	Cap	PA66 UL94V-2
2	Sealing insert	Silicone
3	Connector	PA66 UL94V-2
4	O-ring	Silicone
5	Lock nut	PA66 UL94V-2

RMW dimensions

- DXF/DWG/PDF drawings available on our website.



Technical Data
Protection class : Equivalent to IP67*
Operating temperature : -20°C ~ +80°C

*In-house test

- Lock nut is not included for RMW10S-6.
  Please drill a proper thread hole into the enclosure for installation.

Cap design varies by size

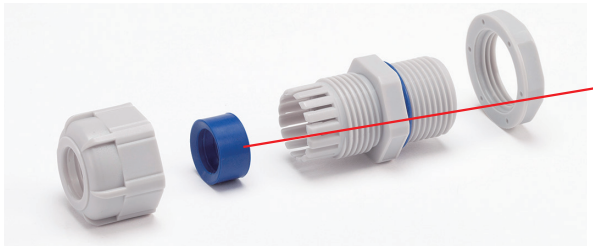
RMW40 or smaller | RMW50

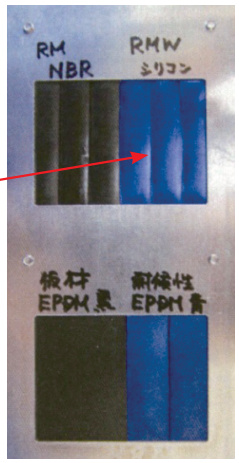
Product no. / Details

Product no.		G		Cable range		L	H Max	SW	A	Pack of
● Black	● Light gray	Thread size	Mounting hole	Min	Max					
RMW8L-2.5B	RMW8L-2.5S	M8×1.25	Φ8.2	1	2.5	13	19.5	12	13.6	1
RMW8L-4B	RMW8L-4S	M8×1.25	Φ8.2	2.5	4	13	19.5	12	13.6	1
RMW10S-6B	RMW10S-6S	M10×1.5	—	3	6	8	20.5	13	14.6	1
RMW10L-6B	RMW10L-6S	M10×1.5	Φ10.2	3	6	13	20.5	13	14.6	1
RMW12S-7B	RMW12S-7S	M12×1.5	Φ12.2	3.5	7	9	20.5	16	17.7	1
RMW12L-7B	RMW12L-7S	M12×1.5	Φ12.2	3.5	7	14.5	20.5	16	17.7	1
RMW16S-8B	RMW16S-8S	M16×1.5	Φ16.2	4	8	9	23.5	19.2	21.3	1
RMW16L-8B	RMW16L-8S	M16×1.5	Φ16.2	4	8	15	24	19.2	21.3	1
RMW20S-12B	RMW20S-12S	M20×1.5	Φ20.2	6	12	10	29	24.3	26.8	1
RMW20L-12B	RMW20L-12S	M20×1.5	Φ20.2	6	12	15	28.5	24.3	26.8	1
RMW25L-17B	RMW25L-17S	M25×1.5	Φ25.2	11	17	15	35	33.3	36.8	1
RMW32L-21B	RMW32L-21S	M32×1.5	Φ32.3	13	21	15	38	36.1	39.8	1
RMW40L-27B	RMW40L-27S	M40×1.5	Φ40.3	18	27	18	43.5	46.1	51.2	1
RMW50L-38B	RMW50L-38S	M50×1.5	Φ50.4	27	38	20	50.5	60	66.5	1
RMW10L-6B-P	RMW10L-6S-P	M10×1.5	Φ10.2	3	6	13	20.5	13	14.6	100
RMW12S-7B-P	RMW12S-7S-P	M12×1.5	Φ12.2	3.5	7	9	20.5	16	17.7	100
RMW12L-7B-P	RMW12L-7S-P	M12×1.5	Φ12.2	3.5	7	14.5	20.5	16	17.7	100
RMW16S-8B-P	RMW16S-8S-P	M16×1.5	Φ16.2	4	8	9	23.5	19.2	21.3	100
RMW16L-8B-P	RMW16L-8S-P	M16×1.5	Φ16.2	4	8	15	24	19.2	21.3	100
RMW20S-12B-P	RMW20S-12S-P	M20×1.5	Φ20.2	6	12	10	29	24.3	26.8	100
RMW20L-12B-P	RMW20L-12S-P	M20×1.5	Φ20.2	6	12	15	28.5	24.3	26.8	100

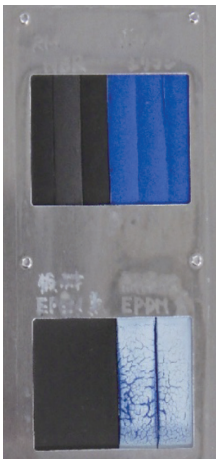
RMW series silicone sealing insert weatherproof test report

Object: Cut into a piece of the silicone sealing insert from RMW series and attach it onto an aluminium plate.
For comparison, NBR sealing insert from our RM and EPDM sealing insert from another manufacturer is also attached.





Before



After

Testing conditions

Equipment : 7.5kW Super Xenon Weather Meter SX75 (Suga Test Instruments Co., Ltd.- http://www.sugatest.co.jp/english/)

Conditions : JIS B7754 : 1991
Testing with an authorized Xenon arc lamp weathering test equipment under the conditions denoted below.
Irradiance : 180W/m^2 at 300-400nm
Black Panel Temperature : 63±3°C Humidity Range : 50±10%
Cycle Conditions : 120 minutes cycle (18 minutes irradiation + water spray - 102 minutes irradiation)

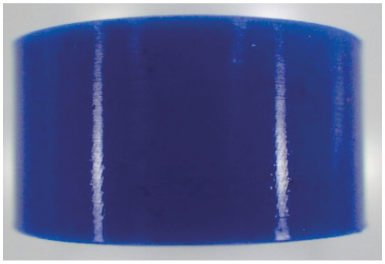
Time period : 2,000 hours (equivalent to a period of 4 years under natural conditions)

Total radiant exposure : 1296MJ/m^2

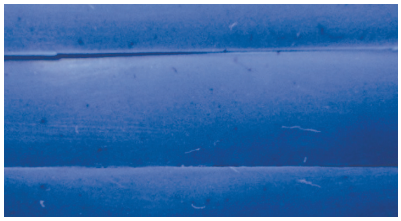
Test result (visual / touch inspection)

Silicone sealing insert material : No cracks, no gloss transition, no powder - no appearance change at all. Flexibility remains unchanged.

Before



After



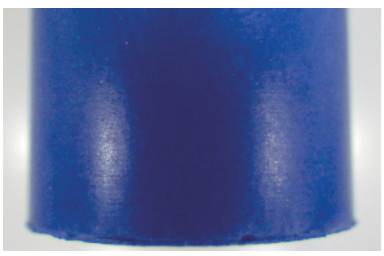
NBR material from our RM series : Lost glossiness on the surface and material is stiffened.

Before

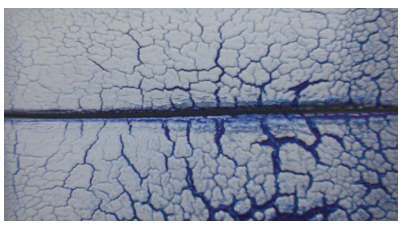
After

EPDM material from weatherproof cable gland of another manufacturer : Cracked, color drastically faded and powder appeared on the surface.

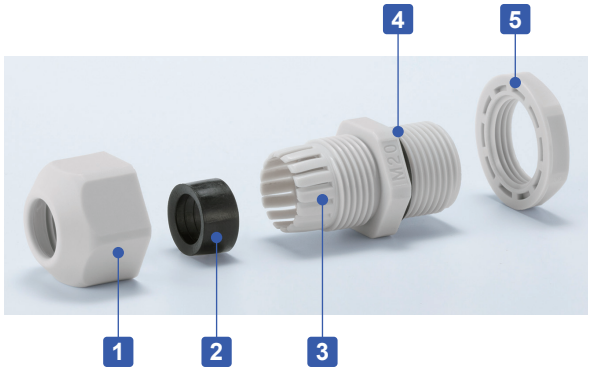
Before



After



RM series POLYAMIDE CABLE GLAND



- Low cost cable glands made from polyamide material.
- Wide selection, for M8 ~ M63, suitable for Φ1mm ~ Φ44 mm cable.
- High oil resistant NBR rubber sealing and O-ring.
- Protection class equivalent to IP67.

Technical Data
Protection class : Equivalent to IP67* Operating temperature : -20°C ~ +80°C

*In-house test

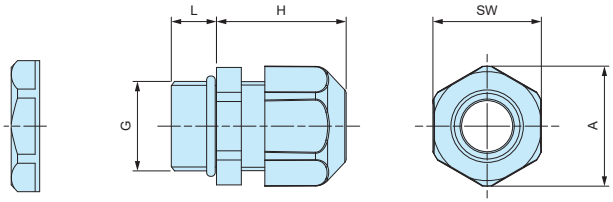
Components

■ PA = Polyamide

No.	Part name	Material
1	Cap	PA66 UL94V-2
2	Sealing insert	NBR
3	Connector	PA66 UL94V-2
4	O-ring	NBR
5	Lock nut	PA66 UL94V-2

RM dimensions

■ DXF/DWG/PDF drawings available on our website.



■ Lock nut is not included for RM8S-2.5, 8S-4, and 10S-6 models.
Please drill an appropriate thread hole into the enclosure for installation.

Cap design varies by size

RM40 or smaller | RM50 or larger

Product no. / Details

Product no.		G		Cable range		L	H Max	SW	A	Pack of
● Black	● Light gray	Thread size	Mounting hole	Min	Max					
RM8S-2.5B	RM8S-2.5S	M8×1.25	—	1	2.5	7.5	19.5	12	13.6	1
RM8L-2.5B	RM8L-2.5S	M8×1.25	Φ8.2	1	2.5	13	19.5	12	13.6	1
RM8S-4B	RM8S-4S	M8×1.25	—	2.5	4	7.5	19.5	12	13.6	1
RM8L-4B	RM8L-4S	M8×1.25	Φ8.2	2.5	4	13	19.5	12	13.6	1
RM10S-6B	RM10S-6S	M10×1.5	—	3	6	8	20.5	13	14.6	1
RM10L-6B	RM10L-6S	M10×1.5	Φ10.2	3	6	13	20.5	13	14.6	1
RM12S-7B	RM12S-7S	M12×1.5	Φ12.2	3.5	7	9	20.5	16	17.7	1
RM12L-7B	RM12L-7S	M12×1.5	Φ12.2	3.5	7	14.5	20.5	16	17.7	1
RM16S-8B	RM16S-8S	M16×1.5	Φ16.2	4	8	9	23.5	19.2	21.3	1
RM16L-8B	RM16L-8S	M16×1.5	Φ16.2	4	8	15	24	19.2	21.3	1
RM20S-12B	RM20S-12S	M20×1.5	Φ20.2	6	12	10	29	24.3	26.8	1
RM20L-12B	RM20L-12S	M20×1.5	Φ20.2	6	12	15	28.5	24.3	26.8	1
RM25L-17B	RM25L-17S	M25×1.5	Φ25.2	11	17	15	35	33.3	36.8	1
RM32L-21B	RM32L-21S	M32×1.5	Φ32.3	13	21	15	38	36.1	39.8	1
RM40L-27B	RM40L-27S	M40×1.5	Φ40.3	18	27	18	43.5	46.1	51.2	1
RM50L-38B	RM50L-38S	M50×1.5	Φ50.4	27	38	20	50.5	60	66.5	1
RM63L-44B	RM63L-44S	M63×1.5	Φ63.4	37	44	20	53	68	75.5	1
RM10L-6B-P	RM10L-6S-P	M10×1.5	Φ10.2	3	6	13	20.5	13	14.6	100
RM12S-7B-P	RM12S-7S-P	M12×1.5	Φ12.2	3.5	7	9	20.5	16	17.7	100
RM12L-7B-P	RM12L-7S-P	M12×1.5	Φ12.2	3.5	7	14.5	20.5	16	17.7	100
RM16S-8B-P	RM16S-8S-P	M16×1.5	Φ16.2	4	8	9	23.5	19.2	21.3	100
RM16L-8B-P	RM16L-8S-P	M16×1.5	Φ16.2	4	8	15	24	19.2	21.3	100
RM20S-12B-P	RM20S-12S-P	M20×1.5	Φ20.2	6	12	10	29	24.3	26.8	100
RM20L-12B-P	RM20L-12S-P	M20×1.5	Φ20.2	6	12	15	28.5	24.3	26.8	100
RM25L-17B-P	RM25L-17S-P	M25×1.5	Φ25.2	11	17	15	35	33.3	36.8	100

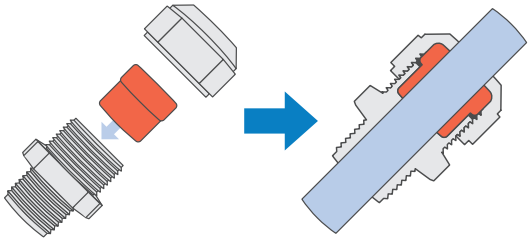
AG series HIGH WATER PROTECTION CABLE GLAND

- High water protection IP68 (1bar / 30min) polyamide cable gland.
- Wide selection, for M8 ~ M50, suitable for Φ2.5mm ~ Φ42 mm cable.
- Super tough and superior heat resistant PA6GF (glass fiber filled PA6) material on cap and connector.
- Safer halogen free, eco-friendly product.

Technical Data
Protection class : IP68 1bar / 30min Operating temperature : -20°C ~ +100°C Compliant with EN50262 Ver. A

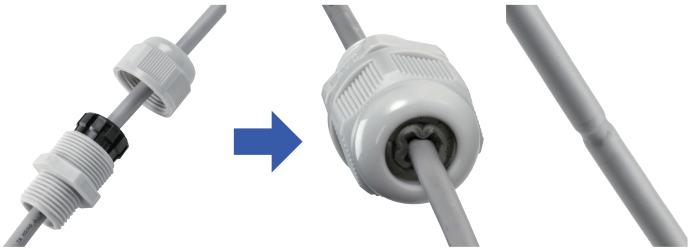
AG series

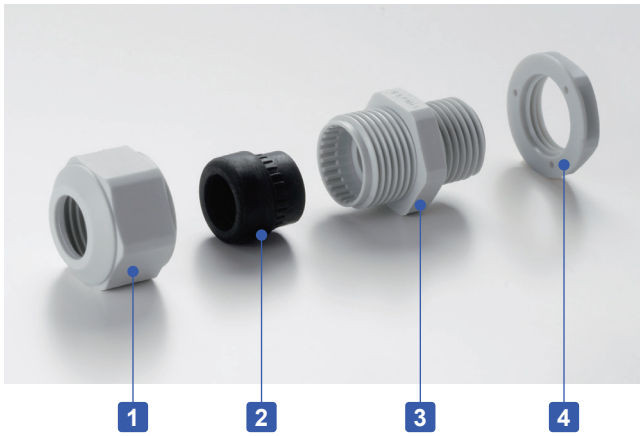
Thicker sealing insert evenly hold a cable by having a larger holding area. Remains durable even after repeated tightening / loosening.



Lamellar insert type

If over-tightened, it can cause the rubber bush or cable to deform, which can allow water to seep in.





Components

■ PA6GF = Polyamide6 Glass Fiber Filled

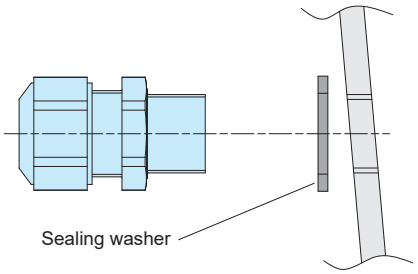
No.	Part name	Material
1	Cap	PA6GF
2	Sealing insert	TPE
3	Connector	PA6GF
4	Lock nut	PA6

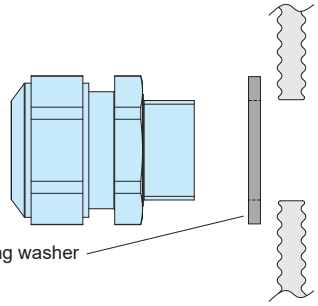
■ Lock nut is not included for M8 and M10 sizes.
Please drill an appropriate thread hole into the enclosure for installation.

■ Appropriate tightening torque varies by each cable diameter. Tighten the cap until top of the sealing insert forms a small bead between the cap and the cable.

■ No optional sealing washer is required when installing on an even surface because of the built-in waterproof rib.

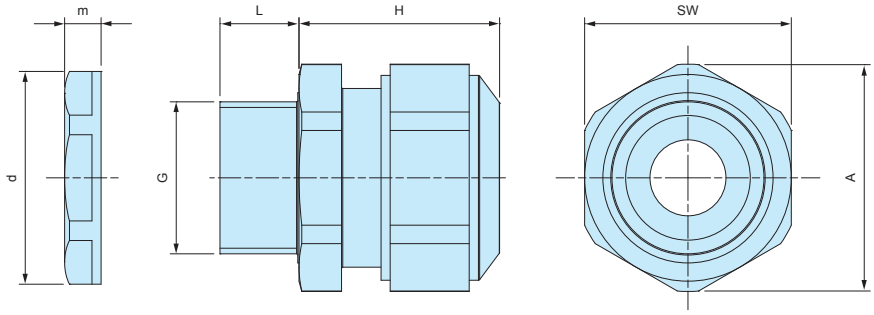
■ An optional sealing washer is required when installing on an uneven surface. (See website for more information on the optional sealing washer AGP series)





AG dimensions

■ DXF/DWG/PDF drawings available on our website.

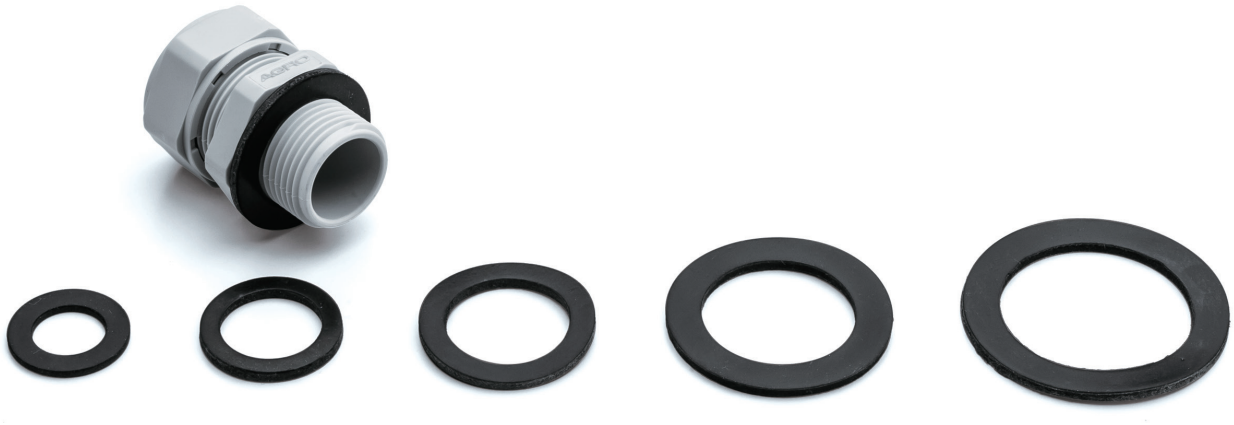


■ Lock nut is not included for M8 and M10 sizes.
Please drill an appropriate thread hole into the enclosure for installation.

Product no. / Details

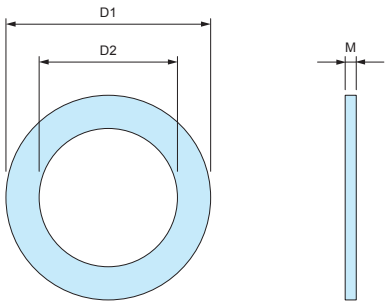
Product no.		G		Cable range		L	H Max	SW	A	d	m	Pack of
● Black	● Light gray	Thread size	Mounting hole	Min	Max							
AG8-3.5B	AG8-3.5S	M8×1.0	—	2.5	3.5	10	17	12	13.2	—	—	1
AG8-5B	AG8-5S	M8×1.0	—	3.5	4.7	10	17	12	13.2	—	—	1
AG10-6B	AG10-6S	M10×1.0	—	4	6	10	19	15	16.5	—	—	1
AG12-5B	AG12-5S	M12×1.5	Φ12.2	3.5	4.7	12	23.5	17	18.7	18.8	5	1
AG12-6.5B	AG12-6.5S	M12×1.5	Φ12.2	5	6.5	12	23	17	18.7	18.8	5	1
AG12-8B	AG12-8S	M12×1.5	Φ12.2	6.5	7.8	12	23	17	18.7	18.8	5	1
AG16-10B	AG16-10S	M16×1.5	Φ16.2	8	10	12	26	21	23.1	24.3	5	1
AG20-15B	AG20-15S	M20×1.5	Φ20.2	11	15	13	27	27	29.7	29	6	1
AG25-16B	AG25-16S	M25×1.5	Φ25.2	12.5	16	13	34	34	37.4	36	6.7	1
AG25-20B	AG25-20S	M25×1.5	Φ25.2	16	20	13	34	34	37.4	36	6.7	1
AG32-25.5B	AG32-25.5S	M32×1.5	Φ32.3	21	25.5	15	36	41	45.6	46	8	1
AG40-28.5B	AG40-28.5S	M40×1.5	Φ40.3	24	28.5	15	41	50	55.4	53.5	9	1
AG40-33B	AG40-33S	M40×1.5	Φ40.3	28.5	33	15	41	50	55.4	53.5	9	1
AG50-37B	AG50-37S	M50×1.5	Φ50.4	33	37	16	45	60	65.5	66	9.6	1
AG50-42B	AG50-42S	M50×1.5	Φ50.4	37	42	16	45	60	65.5	66	9.6	1

AGP SERIES SEALING WASHER for AG • AGSP

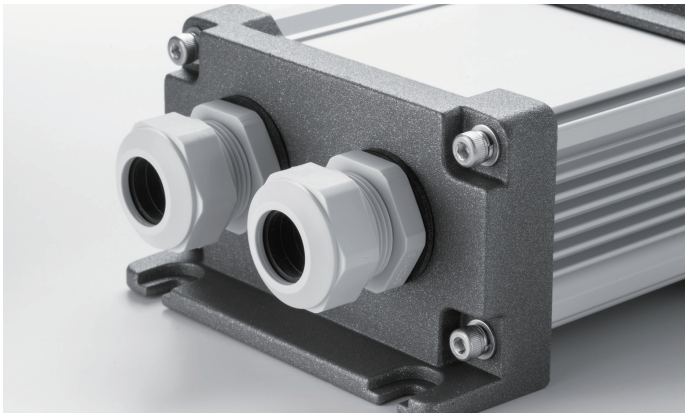


- Sealing washer for AG series.
- Made from oil resistant NBR material.
- Use in the case of installation on a rough or uneven surfaces.
- Selectable in 7 sizes (from M12 to M50)
- Sealing washer is not necessary for installation on flat surfaces.

AGP Dimensions



- Material : NBR



Product no. / Dimensions

Product no.	D1	D2	M	Suitable cable gland	Pack of
AGP-12	20	12	1.6	AG12	10
AGP-16	23.5	16.5	2.0	AG16	10
AGP-20	29	20	2.0	AG20	10
AGP-25	37	25	2.0	AG25	10
AGP-32	44	32	2.2	AG32	5
AGP-40	52	40	2.2	AG40	5
AGP-50	64	50	3.1	AG50	5

TWH series INTERCHANGEABLE HEAD TORQUE WRENCH NEW

- Torque wrench with interchangeable head.
- Suitable for the tightening of cable glands requiring a specific torque.
- Open end interchangeable head (spanner head) TWE series available separately.
- Spanner head is not included.

Product no. / Details

Product no.	Length	Torque range (N • m)	Increments (N • m)
TWH0.5-5	215	0.5 ~ 5.0	0.05

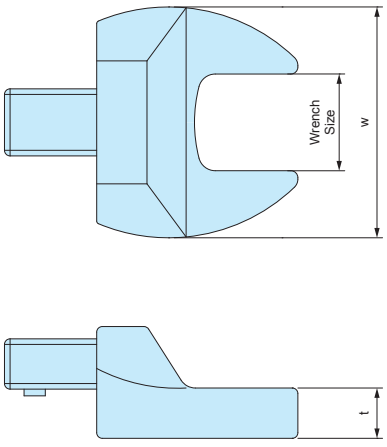
Notes

The torque wrench is not subject to RoHS regulations.
Since it is an OEM product and not a JIS-compliant product, no calibration services or inspection reports, etc. are provided.

When tightening, proceed first with a low value (half of the reference) of the recommended torque,
and set the appropriate tightening torque for the cable and mounting part that will be tightened thereafter.

Please read the operation manual (refer to TAKACHI website) before use to ensure correct and safe usage of the product.

TWE series OPEN END INTERCHANGEABLE HEAD NEW



- Dedicated open end interchangeable head for TWH series.
- Various interchangeable heads are available to fit a range of cable gland sizes.

Product no. / Details

Product no.	Wrench size	w	t
TWE- 8	8	27	6
TWE- 9	9	27	6
TWE-11	11	27	6
TWE-12	12	30	6
TWE-13	13	31	6
TWE-15	15	40	9
TWE-16	16	40	9
TWE-17	17	41	9
TWE-18	18	42	9
TWE-19	19	42	10
TWE-21	21	47	10

Product no.	Wrench size	w	t
TWE-22	22	52	10
TWE-23	23	53	11
TWE-24	24	55	11
TWE-27	27	58	13
TWE-29	29	58	13
TWE-30	30	65	14
TWE-32	32	65	14
TWE-33	33	65	14
TWE-34	34	70	15
TWE-36	36	72	15

Note: These open end head is not subject to RoHS regulations.

Suitable TWE model

RM • RMW series

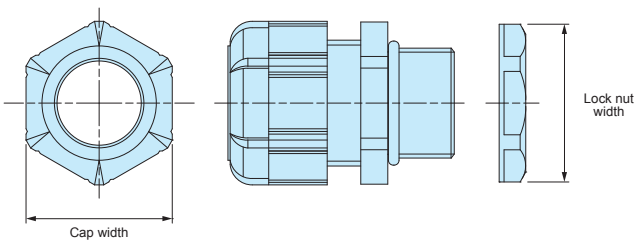
Product no.	Cap width	Suitable model	Lock nut width	Suitable model
RM8S-2.5	11.8	TWE-12	–	n/a
RM • RMW8L-2.5	11.8	TWE-12	12.6	TWE-13
RM8S-4	11.8	TWE-12	–	n/a
RM • RMW8L-4	11.8	TWE-12	12.6	TWE-13
RM • RMW10S-6	13	TWE-13	–	n/a
RM • RMW10L-6	13	TWE-13	14.8	TWE-15
RM • RMW12S-7	16	TWE-16	17	TWE-17
RM • RMW12L-7	16	TWE-16	17	TWE-17
RM • RMW16S-8	19	TWE-19	22	TWE-22
RM • RMW16L-8	19	TWE-19	22	TWE-22
RM • RMW20S-12	24	TWE-24	26.2	n/a
RM • RMW20L-12	24	TWE-24	26.2	n/a
RM • RMW25L-17	33	TWE-33	32.6	n/a
RM • RMW32L-21	36	TWE-36	40.3	n/a
RM • RMW40L-27	45.7	n/a	51	n/a
RM • RMW50L-38	60	n/a	61.2	n/a
RM63L-44	68	n/a	73.4	n/a

RPG series

Product no.	Cap width	Suitable model	Lock nut width	Suitable model
RPG7-7	16	TWE-16	18.7	TWE-19
RPG9-8	19	TWE-19	21.8	TWE-22
RPG11-10	22	TWE-22	23.7	TWE-24
RPG13.5-11	24	TWE-24	27	TWE-27
RPG16-14	26.7	TWE-27	29.8	TWE-30
RPG21-18	33	n/a	35.8	TWE-36
RPG29-25	42	n/a	45.8	n/a

RSP series

Product no.	Cap width	Suitable model	Lock nut width	Suitable model
RSP12-6	16	TWE-16	17	TWE-17
RSP16-8	19.5	n/a	22	TWE-22
RSP20-11	24	TWE-24	26.2	n/a
RSP25-16	33	TWE-33	32.6	n/a



Note 1) ""n/a"" indicates no suitable spanner head size and torque value available.
Note 2) Dimensions of Cap and Lock nut width are in mm.

AG series

Product no.	Cap width	Suitable model	Lock nut width	Suitable model
AG8-3.5	12	TWE-12	–	n/a
AG8-5	12	TWE-12	–	n/a
AG10-6	15	TWE-15	–	n/a
AG12-5	17	TWE-17	17	TWE-17
AG12-6.5	17	TWE-17	17	TWE-17
AG12-8	17	TWE-17	17	TWE-17
AG16-10	21	TWE-21	22	TWE-22
AG20-15	27	TWE-27	27	TWE-27
AG25-16	34	TWE-34	33	TWE-33
AG25-20	34	TWE-34	33	TWE-33
AG32-25.5	41	n/a	42	n/a
AG40-28.5	50	n/a	48	n/a
AG40-33	50	n/a	48	n/a
AG50-37	60	n/a	59	n/a
AG50-42	60	n/a	59	n/a

AGM series

Product no.	Cap width	Suitable model	Lock nut width	Suitable model
AGM6-2.5	8	TWE-8	9	TWE- 9
AGM6-3	8	TWE-8	9	TWE- 9
AGM6-3.5	8	TWE-8	9	TWE- 9
AGM8-5	11	TWE-11	11	TWE-11
AGM10-6	13	TWE-13	13	TWE-13
AGM12-8	15	TWE-15	15	TWE-15
AGM16-10.5	18	TWE-18	19	TWE-19
AGM20-15	24	TWE-24	24	TWE-24
AGM25-20	30	TWE-30	30	TWE-30
AGM32-25.5	36	TWE-36	36	TWE-36
AGM40-28.5	46	n/a	51	n/a
AGM40-33	46	n/a	51	n/a
AGM50-37	55	n/a	60	n/a
AGM50-42	55	n/a	60	n/a

AGE series

Product no.	Cap width	Suitable model	Lock nut width	Suitable model
AGE12-5	15	TWE-15	15	TWE-15
AGE12-6.5	15	TWE-15	15	TWE-15
AGE16-10.5	18	TWE-18	19	TWE-19
AGE20-15	24	TWE-24	24	TWE-24
AGE25-20	30	TWE-30	30	TWE-30
AGE32-25	36	n/a	36	n/a

AGH series

Product no.	Cap width	Suitable model	Lock nut width	Suitable model
AGH10-6	13	TWE-13	13	TWE-13
AGH12-8	15	TWE-15	15	TWE-15
AGH16-10.5	18	TWE-18	19	TWE-19
AGH20-15	24	TWE-24	24	TWE-24
AGH25-20	30	TWE-30	30	TWE-30
AGH32-25.5	36	TWE-36	36	TWE-36

TWH0.5-5 Torque Wrench Operation Manual

1 For Safety Use

Safety Precautions

Please read this manual carefully before use while following operation instructions. The manufacturer / retailer etc. will not be are not liable for any personal injuries, damage to the product, or other property damage, etc. caused by improper use.

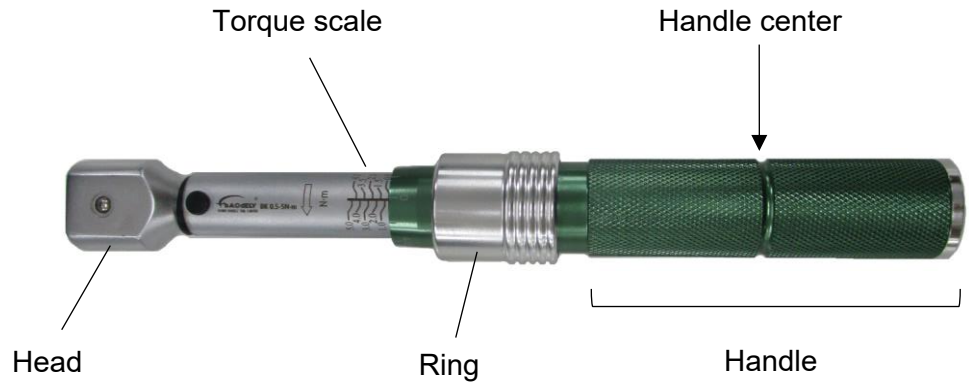
Warnings

- **Do not use beyond the maximum torque value. This may cause damage and injury.**
- **Do not use the torque wrench as a hammer or lever, or applying strong impact.**
- **Do not modify or disassemble the torque wrench. These may cause strength or accuracy problems, which may lead to accidents and injuries.**
- **Before use, check for damage, cracks, rust, or deformation. These may cause damage and injury.**
- **Do not use the torque wrench to loosen nuts or caps as it is a precision instrument.**
- **Do not operate the torque wrench with oily or greasy hands. This may cause your hands to slip while tightening, leading to accidents or injuries.**
- **Wear safety glasses or other eye protection while using.**
- **Be careful not to hit your hands or elbows on surrounding objects when working with a torque wrench.**
- **Do not use the torque wrench underwater or in the sea.**
- **When working on elevated platforms, take measures to prevent torque wrenches from falling.**

Cautions

- **Set the torque before each use.**
- **Do not lower the scale below the minimum.**
- **Do not use it outside of the torque scale range.**
- **Every time before setting the torque, ensure that the handle lock is in the unlock position first before rotating the handle.**
- **Grip the center of the handle to tighten. Gripping the edge of the handle may cause incorrect torque value.**
- **Tighten slowly while applying minimal force. Otherwise applied torque value may be incorrect.**
- **Stop tightening after hearing, or feeling a clicking sound or sensation. Further tightening may result in overtorque.**
- **Do not use parts such as a pipe to extend the handle.**
- **Do not drop the torque wrench or apply strong impact.**
- **Do not use in high temperature and humid environments.**
- **After use, set the torque wrench to the minimum value.**
- **After use, remove dirt, dust, mud, oil, water, etc. before storing.**
- **Store in a dry place when not in use for an extended period of time.**

2 Components



3 How to use

① Push and hold the ring down to unlock.	② Turn the handle.
	 ・Turn the handle while the ring is in the unlock position.
③ Adjust to required torque.	**④ Release the ring.**
	 ・The ring will spring back to its original (lock) position.

TAKACHI ELECTRONICS ENCLOSURE CO., LTD.
TEL. +81-48-222-5409
https://www.takachi-enclosure.com/

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