

COUPLING



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LOCKNUT



- | | |
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LOCKING ELEMENT



- | | | | |
|-------------|------------|------------|-----------|
| 064 DR200 | 072 DR110 | 077 DR133B | 083 MAD |
| 068 DR300 | 073 DR120 | 078 DR134S | 084 MAS |
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GRINDING LOCKNUT



- | | | |
|----------|-----------|-----------|
| 110 ZMG | 116 UZMG | 122 UBN-A |
| 111 ZMVG | 117 UZMVG | 123 UBN-B |
| 112 ZMFG | 118 UZMFG | 125 UBN-C |
| | 119 UKANG | 126 UBN-D |
| | | 127 UBN-E |



COUPLING Technical data

COUPLING Technical data

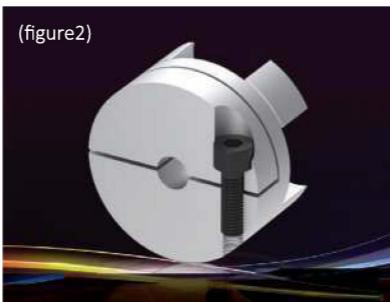
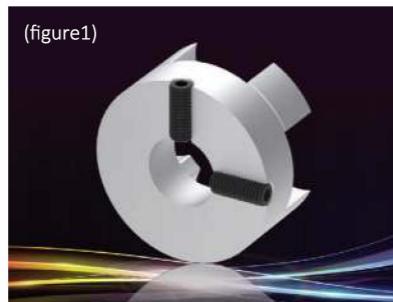
Features

The coupling is used to transfer some power by connecting the drive shaft with the driven shaft.
It consists of corrosion-resistant aluminum alloy(Duralumin) with light weight and high stiffness, so a revolution system with a small inertia can be driven..
It includes DRB, DRBS, DOH, DOHS, DJC, DJCS, DRJT, DRG, DRGL and etc.
Other than DRN, DRJ and DRP.

How to fix the axis

The coupling has a choice of ways to lock the axle. You can choose the best type for your application and environment.
Based on which type can be optimized, different types or the diameter can be chosen depending on the shaft where the input and output are located.
All the type can supply key way except taper type.

Set screw type (figure1)
One bolt side clamp type (figure2)



Two bolt side clamp type (figure3)
Taper type (figure4)



How to select the coupling

Verify usage

There are features and advantages for each type of coupling, so please select it according to your application.
Type of motor : Servo Motor, Stepping Motor, General wide use Motor, Encoder
For special conditions and special environment : Clean room, Anti-corrosive, High temperature

Select Size : Torque check

The following functional expression is required in having the coupling selected.
- $T(\text{torque}) [\text{N}\cdot\text{m}] = 9550 \times P(\text{power}) [\text{kW}] / \text{Rev. N} [\text{min}^{-1}]$

Selection coefficient K by a fluctuation in the power

In case there is a fluctuation in the power transmitted, according to its type, the coupling must be selected with a larger capacity of transfer torque than the value by multiplied by coefficient K.

- No fluctuation to Less fluctuation: $K=1.0 \sim 1.5$
- Intermediate fluctuation to More fluctuation $K=2.0 \sim 2.3$

COUPLING Technical data

How to select the coupling

Power conversion efficiency, transmission efficiency η

More power is required on the supplied side according to the efficiency when the power is recognized on the consumed side.

The selected power contributes to the choice of the coupling with a larger capacity of transfer torque than the power on the supplied side.

For example, in case of the conventional gear driving, larger power can be required due to the low efficiency in transmission.

$$\text{- Power Output(PO) [kW]} = \text{Coefficient K} \times \text{Power Consumption (PS) [kW]} / \text{Efficiency } \eta$$

Efficiency $\eta : \eta < 1.0$

The coupling can be generally chosen as torque value specified in the common transfer torque > The supplied power.

However, when the servo motor generates much larger torque values to accelerate or decelerate during starting or stopping, the coupling can be selected as a maximum transfer torque larger than the maximum startup torque multiplied by 1.5 on the motor.

- The maximum transfer torque on the coupling > The maximum startup torque on the servo motor $\times 1.5$

※ The coupling can be selected as a larger value between the common transfer torque and the maximum transferring torque given.

Other requirements

How to select the Inner Diameter

Check the size of the shaft if it is within the standard inner diameter range. For non-standard inner diameter, please contact the office.

Coupling should be selected in consideration of various other conditions.

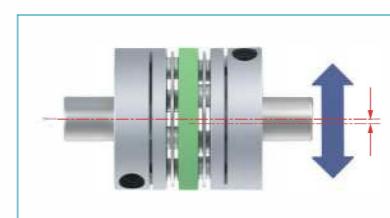
Revolutions

It is recommended that the rev. be applied lower than the maximum rev. as described in the table showing the model No. of each page on the catalog.

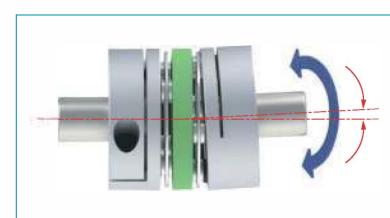
Adjustment of alignment

The coupling permits misalignment, but if it exceeds the allowable value, vibration and noise will occur and the lifetime will be reduced. For eccentricity, declination and endplay(axial variation), in the catalog

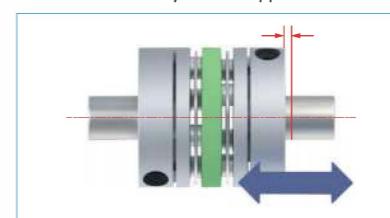
※ Caution, especially when used in areas requiring high speed rotation.



2-axis eccentricity - Less than the maximum allowable eccentricity must be applied



2-declination - Less than the maximum allowable declination must be applied



axial fluctuations - Less than the maximum allowable fluctuations must be applied

※ Be sure that there is any coupling type which will not meet above requirements.

COUPLING Technical data

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COUPLING Technical data

Other requirements

Torsional rigidity(the spring constant)

No. of frequency division for a feed screw can be calculated with the rigidity both on the coupling and the shaft.

Rigid kt coupled with the axis on a feed screw connected in Series.

$$-1/k_t = 1/k_s + 1/k_c \quad k_s : \text{Rigidity on the axis of a screw[N·m/rad]}$$

k_c : Rigidity on the coupling[N·m/rad]

J_i : Inertia on the input axis[N·m²]

J_o : Inertia on the axial force[N·m²]

No. of frequency division (F_d) can be calculated from this k_t and, J_i and J_o on the input and output axes as the following steps.

$$- F_d = 0.5 \cdot (1/\pi) \cdot (9.8 \cdot k_t \cdot (1/J_i + 1/J_o))^2$$

Moment of Inertia

Moment of Inertia, a kind of inertia of revolving body, indicates the levels of difficulty when a moving torque(T) is loaded

On the revolving body.

Most of the DURI couplings are designed with a light-weighted compact body, so a value mentioned can be ignored in the process of power transmission, but be sure that values must be checked as described in the table showing each type on the catalog when calculating startup torques for multiple usage or the entire precise vibrations.

If the coupling is subjected to a strong impact from the outside, the assembly accuracy can not be maintained and there is a possibility of damage during use.

Attach

Check that the Tightening screw and set screw are loosened and remove foreign matter and oil on the inner surface of the shaft and coupling. (Wipe out the oil using a degreasing agent and use it.)

When inserting the coupling into the shaft, the length at which the shaft is inserted into the coupling is up to the length of the hub. If it is short or long, it may cause slip and interference. In particular, be careful when attaching the coupling to the motor shaft and then inserting the coupling on the opposite shaft, which may inadvertently apply excessive compressive force. Make sure that the coupling smoothly moves in the axial and rotational directions with the tightening screw or set screw loosened. If it does not move smoothly, adjust the centering of the two axes again. This method is recommended as a simple confirmation method of the left and right concentricity. However, if this is not possible, check the degree of assembly by controlling the machine parts quality and other methods.

Check the action of force such as compression or tension in the axial direction and tighten the tightening screw or set screw.

When tightening the tightening screw or set screw, tighten it within the specified torque range with a calibrated torque wrench.

Disassemble

Make sure that no torque and axial loads are applied to the coupling. Torque may be applied to the coupling, especially when the safety brake device is in operation. Please check before disassemble it.

Loosen all tightening screw or set screws.

The fastening to the shaft will not be released until it is fully loosened.

COUPLING Technical data

For key way machining

key way machining is available upon request. However, basically, it is designed to transmit torque by frictional engagement by clamping mechanism. Therefore, do not exceed the allowable torque of coupling.

Also, please note the following points before applying them.

The key must be used less than or equal to the key way width. If the key is pressed in, it may be damaged during attachment or operation.

Please contact the office if you need the position of the key way

When applying a JS9 tolerance, it is possible to compress the coupling when attaching it to the shaft by means of a tight fit. Be careful not to apply compression.

When applying a JS9 tolerance, it is possible to compress the coupling when attaching it to the shaft by means of a tight fit. Be careful not to apply compression.

If a fixing screw is added on the key way, the clamp function will be lowered, and there is a danger that the fixing screw will loosen in the torque range to be used and in the reverse operation. Also, it is not recommended because the structure of the hub may deteriorate in strength and the coupling may be damaged.

Key way size

Shaft diameter (ϕ)D	Key way		$b \times h$
	b (mm)	t (mm)	
6 ~ 8	2	± 0.0125	1.0
8 ~ 10	3		1.4
10 ~ 12	4		1.8
12 ~ 17	5	± 0.0150	2.3
17 ~ 22	6		2.8
22 ~ 30	8	± 0.0180	3.3
30 ~ 38	10		10 × 8
38 ~ 44	12		12 × 8
44 ~ 50	14	± 0.0215	3.8
50 ~ 58	16		0
58 ~ 65	18		14 × 9
			16 × 10
			18 × 11

Offering Options

Many of the DURI couplings are custom-built and offer a wide range of optional services to provide a wide range of specifications.

- Key way processing
- Additional machining of inner diameter
- Bolt material change
- Body material change
- Specification of total length
- Hub section tap processing
- Change both hub combinations
- Combination of options
- Special orders can be made

COUPLING

DRB Series

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Features

- Completely integrated coupling with slit type and Zero backlash.
- Forward and reverse are the same features and torsional rigidity is outstanding.
- Outstanding Oil-resistance and Anti-chemical.
- The plate spring formed with slit absorbs Eccentricity, declination and end play.
- using aluminum alloy with high stiffness(Duralumin).

Structure (fastening type) and material

DRB Standard



DRBS-Compact type



- Body : Aluminum alloy with high stiffness
- Body Surface treatment : Alumite process
- Set screw : SCM435
- Tightening Screw : SCM435

Structure (fastening type) and material

DRB-SUS Standard

Applicable to special environments where water resistance and corrosion resistance are required.

Set screw type



Clamp Type



Set screw type



Clamp Type



DRBS-SUS Compact type

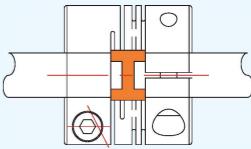
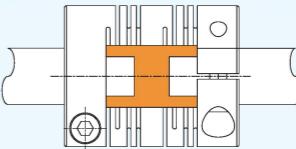
Applicable to special environments where water resistance and corrosion resistance are required.

Structure (fastening type) and material

- Body : Stainless steel
- Set screw : Stainless steel
- Tightening screw : Stainless steel

Relief Type

It is easy to assemble with a structure that is not affected by shaft by processing the inside wide.



Usage

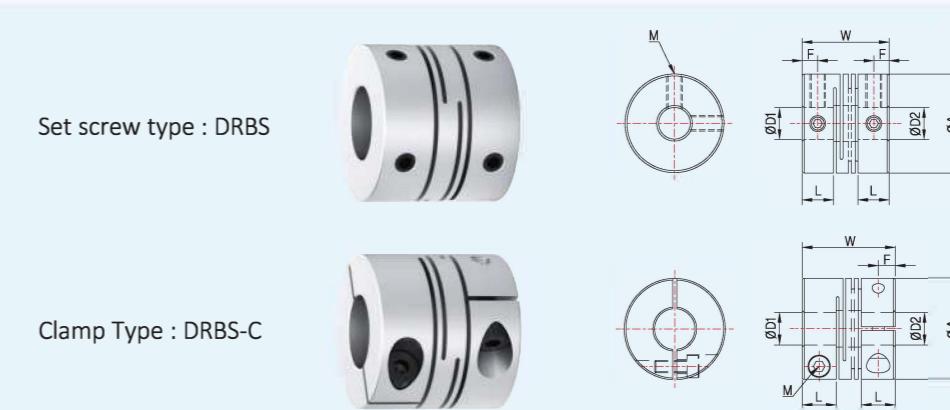
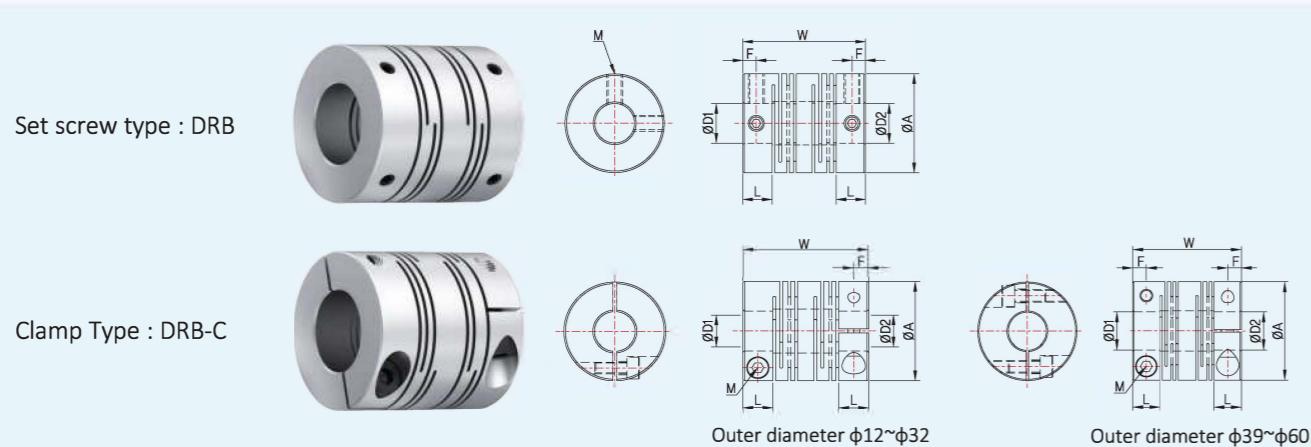
- Servo Motor
- Stepping Motor
- General wide use Motor
- Encoder
- Others

Order Method (Order Example)

DRB	25	C	8	10
Product NO	Size	Fastening type	Inner diameter : D1	Inner diameter : D2

DRB	25	C	SUS	8	10
Product NO	Size	Fastening type	Material	Inner diameter : D1	Inner diameter : D2

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Product NO.	Dimension(mm)				Tightening Screw		Rated. Torque	Max. Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Angle	Paralle	End play	Mass
	A	L	W	F	M	N·m	N·m	min ⁻¹	kg·m ²	N·m/rad	°	mm	± mm	g	
DRB-8	8	3.5	14	1.7	M2	0.3	0.1	0.2	78,000	1.2×10^{-8}	25	2.5	0.10	0.2	1.4
DRB-12	12	4.5	19	1.9	M2.5	0.5	0.4	0.8	52,000	8.8×10^{-8}	45	2.5	0.10	0.3	3.7
DRB-16	16	6.1	22	2.3	M3	0.7	0.5	1	39,000	2.8×10^{-7}	80	2.5	0.15	0.4	8
DRB-19	19	6.1	23	2.8	M3	0.7	1	2	31,000	6.5×10^{-7}	170	2.5	0.15	0.4	11
DRB-22	22	7.2	26	3.25	M4	1.7	1.5	3	27,000	1.4×10^{-6}	220	2.5	0.15	0.4	18
DRB-25	25	7.4	31	3.4	M4	1.7	2	4	25,000	3.4×10^{-6}	380	2.5	0.2	0.5	27
DRB-32	32	9.4	39	4.7	M5	4	4	8	19,000	9.4×10^{-6}	500	2.5	0.25	0.5	55
DRB-39	39	16	56	6.8	M5	4	8	16	15,000	2.8×10^{-5}	700	2.5	0.25	0.5	130
DRB-49	49	20	70	9.5	M6	7	16	32	12,000	1.0×10^{-4}	1,800	2.5	0.25	0.5	280
DRB-60	60	19	88	9	M8	15	32	64	10,000	3.0×10^{-4}	3,100	2.5	0.3	0.5	480
DRB-12C	12	5	19	2.5	M2	0.5	0.4	0.8	52,000	7.8×10^{-8}	45	2.5	0.1	0.3	4
DRB-16C	16	6.1	22	3.05	M2.5	1	0.5	1	39,000	3.1×10^{-7}	80	2.5	0.15	0.4	8.5
DRB-19C	19	6.1	23	3.05	M2.5	1	1	2	31,000	6.5×10^{-7}	170	2.5	0.15	0.4	12
DRB-22C	22	7.2	26	3.6	M3	2	1.5	3	27,000	1.4×10^{-6}	220	2.5	0.15	0.4	19
DRB-25C	25	7.4	31	3.7	M3	2	2	4	25,000	3.4×10^{-6}	380	2.5	0.2	0.5	28
DRB-32C	32	9.4	39	4.7	M4	4	4	8	19,000	9.1×10^{-6}	500	2.5	0.25	0.5	58
DRB-39C	39	10.8	43	5.4	M5	8	8	16	15,000	2.1×10^{-5}	700	2.5	0.25	0.5	100
DRB-49C	49	13.6	56	6.8	M5	8	8	16	13,000	3.1×10^{-5}	700	2.5	0.25	0.5	140
DRB-60C	60	19	76	9.35	M8	30	32	64	10,000	2.5×10^{-4}	3,100	2.5	0.3	0.5	410
DRB-49C	49	15	63	7.5	M6	13	16	32	12,000	9.4×10^{-5}	1,800	2.5	0.25	0.5	240
DRB-60C	60	19	70	7.5	M6	13	16	32	11,000	1.0×10^{-4}	1,800	2.5	0.25	0.5	260
DRB-32C	32	9.4	44	4.7	M4	4	4	8	17,000	1.1×10^{-5}	500	2.5	0.25	0.5	75
DRB-39C	39	10.8	43	5.4	M5	8	8	16	15,000	2.1×10^{-5}	700	2.5	0.25	0.5	100
DRB-49C	49	13.6	56	6.8	M5	8	8	16	13,000	3.1×10^{-5}	700	2.5	0.25	0.5	140
DRB-60C	60	19	76	9.35	M8	30	32	64	7,000	3.0×10^{-4}	3,100	2.5	0.3	0.5	490

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'.

* The Max. RPM did not take into account the dynamic balance.

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Standard Inner Diameter(D1,D2)(mm)																		
	2	3	4	5	6	6.35	8	9.525	10	11	12	14	15	16	18	19	20	22	24
DRB-8	●	●																	
DRB-12□	●	●	●	●															
DRB-16□	●	●	●	●	●														
DRB-19□	●	●	●	●	●	●													
DRB-22□	●	●	●	●	●	●	●												
DRB-25□	●	●	●	●	●	●	●	●											
DRB-32□	●	●	●	●	●	●	●	●	●										
DRB-39□									●	●	●	●	●	●	●	●	●	●	●
DRB-49□									●	●	●	●	●	●	●	●	●	●	●
DRB-60□									●	●	●	●	●	●	●	●	●	●	●

* We encourage h7 for tolerance of attachment axis.

* The inner diameter of ● marked is the standard diameter.

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can supply with Key way.

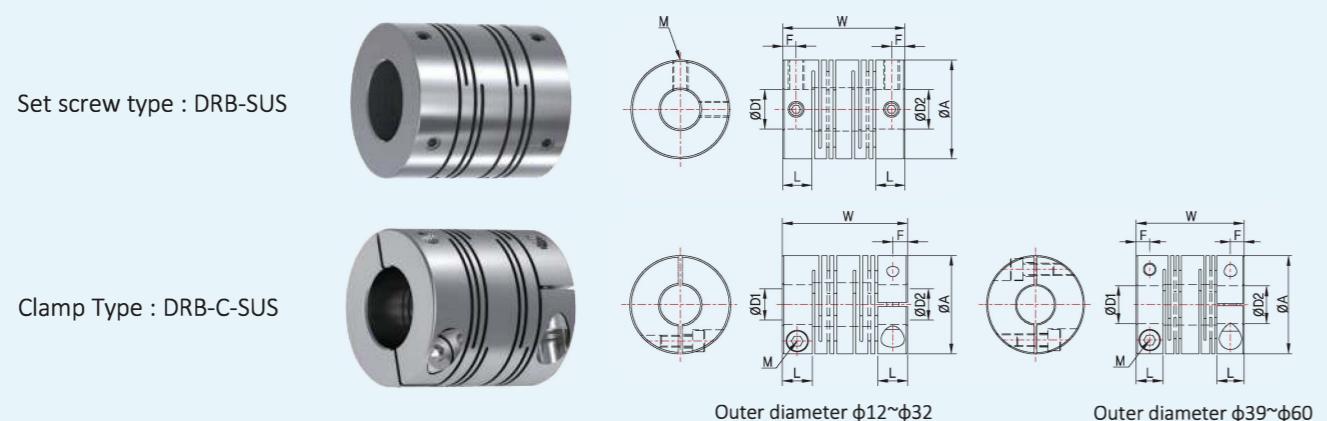
Product NO.	Dimension(mm)				Tightening Screw		Rated. Torque	Max. Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Angle	Paralle	End play	Mass
	A	L	W	F	M	N·m	N·m	min ⁻¹	kg·m ²	N·m/rad	°	mm	± mm	g	
DRBS															

DRB-SUS Stainless steel type

DRBS-SUS Stainless steel type / Compact type

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Product NO.	Dimension(mm)				Tightening Screw		Rated. Torque	Max. Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Angle	Paralle	End play	Mass
					Size	Torque									
	A	L	W	F	M	N · m	N · m	N · m	min⁻¹	kg · m²	N · m/rad	°	mm	± mm	g
DRB-8 SUS	8	3.5	14	1.7	M2	0.3	0.2	0.4	78,000	3.1 × 10⁻⁸	50	2.5	0.10	0.2	4
DRB-12 SUS	12	4.5	19	1.9	M2.5	0.5	0.3	0.6	52,000	2.1 × 10⁻⁷	65	2.5	0.10	0.3	12
DRB-16 SUS	16	6.1	22	2.3	M3	0.7	0.5	1	39,000	8.4 × 10⁻⁷	85	2.5	0.15	0.3	21
DRB-19 SUS	19	6.1	23	2.8	M3	0.7	1	2	31,000	2.4 × 10⁻⁶	250	2.5	0.15	0.3	38
DRB-22 SUS	22	7.2	26	3.25	M4	1.7	1.6	3.2	27,000	3.8 × 10⁻⁶	300	2.5	0.15	0.4	50
DRB-25 SUS	25	7.4	31	3.4	M4	1.7	2.1	4.2	25,000	6.8 × 10⁻⁶	350	2.5	0.2	0.4	71
DRB-32 SUS	32	9.4	39	4.7	M5	4	3.8	7.6	19,000	2.6 × 10⁻⁵	850	2.5	0.25	0.5	160
DRB-39 SUS	39	16	56	6.8	M5	4	8	16	15,000	8.7 × 10⁻⁵	1,000	2.5	0.25	0.5	350
DRB-49 SUS	49	20	70	9.5	M6	7	16	32	12,000	2.7 × 10⁻⁴	1,400	2.5	0.25	0.5	700
DRB-60 SUS	60	19	88	9	M8	15	35	70	10,000	8.4 × 10⁻⁴	1,800	2.5	0.3	0.5	1,300
DRB-12C SUS	12	5	19	2.5	M2	0.5	0.3	0.6	52,000	2.2 × 10⁻⁷	65	2.5	0.1	0.2	12
DRB-16C SUS	16	6.1	22	3.05	M2.5	1	0.5	1	39,000	9.0 × 10⁻⁷	85	2.5	0.15	0.3	25
DRB-19C SUS	19	6.1	23	3.05	M2.5	1	1	2	31,000	2.5 × 10⁻⁶	250	2.5	0.15	0.3	32
DRB-22C SUS	22	7.2	26	3.6	M3	1.5	1.6	3.2	27,000	3.8 × 10⁻⁶	300	2.5	0.15	0.4	43
DRB-25C SUS	25	7.4	31	3.7	M3	1.5	2.1	4.2	25,000	7.1 × 10⁻⁶	350	2.5	0.2	0.4	78
DRB-32C SUS	32	9.4	39	4.7	M4	2.5	3.8	7.6	19,000	2.7 × 10⁻⁵	850	2.5	0.25	0.5	170
DRB-39C SUS	39	10.8	43	5.4	M5	4	8	16	15,000	6.1 × 10⁻⁵	1,200	2.5	0.25	0.5	280
DRBL-39C SUS	39	13.6	56	6.8	M5	4	8	16	13,000	9.0 × 10⁻⁵	1,000	2.5	0.25	0.5	370
DRB-49C SUS	49	15	63	7.5	M6	8	16	32	12,000	2.7 × 10⁻⁵	1,600	2.5	0.25	0.5	670
DRBL-49C SUS	49	15	70	7.5	M6	8	16	32	11,000	2.8 × 10⁻⁴	1,400	2.5	0.25	0.5	750
DRB-60C SUS	60	19	76	9.35	M8	16	35	70	10,000	7.2 × 10⁻⁴	2,000	2.5	0.3	0.5	1,150
DRBL-60C SUS	60	19	88	9.35	M8	16	35	70	7,000	8.8 × 10⁻⁴	1,800	2.5	0.3	0.5	1,400

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'.

* The Max. RPM did not take into account the dynamic balance.

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

* We encourage h7 for tolerance of attachment axis.

* The inner diameter of ● marked is the standard diameter.

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can supply with Key way.



Product NO.	Dimension(mm)				Tightening Screw		Rated. Torque	Max. Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Angle	Paralle	End play	Mass
	A	L	W	F	Size	Torque									
DRBS-8 SUS	8	3.4	10	1.7	M2	0.3	0.2	0.4	78,000	2.4 × 10 ⁻⁸	49	1	0	0.1	2.7
DRBS-12 SUS	12.7	4.5	13	2.2	M2.5	0.5	0.3	0.6	52,000	1.8 × 10 ⁻⁷	140	1	0	0.1	7.8
DRBS-16 SUS	16	5.0	14	2.5	M3	0.7	0.5	1	39,000	7.2 × 10 ⁻⁷	240	1	0	1	18
DRBS-19 SUS	19	6.31	17	3.1	M3	0.7	0.9	1.8	31,000	2.1 × 10 ⁻⁷	300	1	0	0.1	30
DRBS-22 SUS	22	6.9	19	3.4	M4	1.7	1.6	3.2	27,000	2.0 × 10 ⁻⁶	350	1	0	0.1	39
DRBS-25 SUS	25	7.9	22	3.9	M4	1.7	2	4	25,000	6.1 × 10 ⁻⁶	720	1	0	0.2	63
DRBS-32 SUS	32	10.5	29	5.2	M5	4	3.8	7.6	19,000	2.1 × 10 ⁻⁵	1,300	1	0	0.2	130
DRBS-12C SUS	12.7	5	14	2.5	M2	0.5	0.3	0.6	52,000	1.8 × 10 ⁻⁷	140	1	0	0.1	10
DRBS-16C SUS	16	6	16	3.0	M2.5	1	0.5	1	39,000	7.8 × 10 ⁻⁷	240	1	0	0.1	20
DRBS-19C SUS	19	6.31	17	3.1	M2.5	1	0.9	1.8	31,000	1.5 × 10 ⁻⁶	300	1	0	0.1	32
DRBS-22C SUS	22	7.4	20	3.7	M3	1.5	1.6	3.2	27,000	2.1 × 10 ⁻⁶	350	1	0	0.1	40
DRBS-25C SUS	25	8.4	23	4.2	M3	1.5	2.1	4.2	25,000	6.3 × 10 ⁻⁶	720	1	0	0.2	70
DRBS-32C SUS	32	11	30	5.5	M4	2.5	3.8	7.6	19,000	2.2 × 10 ⁻⁵	1,300	1	0	0.2	140

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'

* The Max. RPM did not take into account the dynamic balance.

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances

* We encourage b7 for tolerance of attachment axis

* The inner diameter of ● marked is the standard diameter

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can supply with Keyway



Features

- Bigger eccentricity and declination allowed as hub and space are slipped.
- Less shaft load caused by misalignment, so reduce to force to the shaft.
- Absorbs the angularity which is easy for spacer Protrusion.
- It absorbs vibration and has electrical insulation.
- It is easy to assemble. (easy replacement)
- Usable temperature is -20°C~80°C.

Structure (fastening type) and material

Set screw type : Each has a wide range of choices, depending on the total length

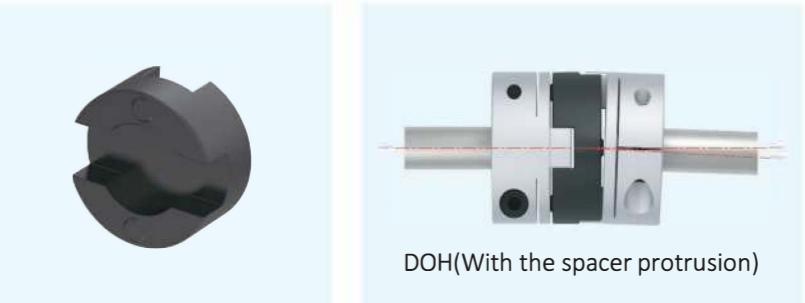


- Hub : Aluminum alloy with high stiffness
- Hub surface treatment: Alumite process
- Set Screw : SCM435
- Tightening screw : SCM435
- Spacer : Polyactel

Advantage of Spacer

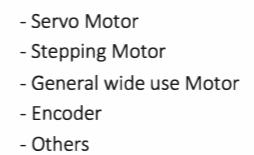
Spacer protrusion

As the existing time Oldham type coupling without the spacer protrusion interferes outside diameter by spacer and hub, the error of angularity is less and a bending moment is occurred in the shaft. However, DOH type absorbs the angularity which is easy as protrusion and has no bending moment. It lessens the shaft load allowing the error of angularity with large protrusion of the space without problem.



DOH(With the spacer protrusion)

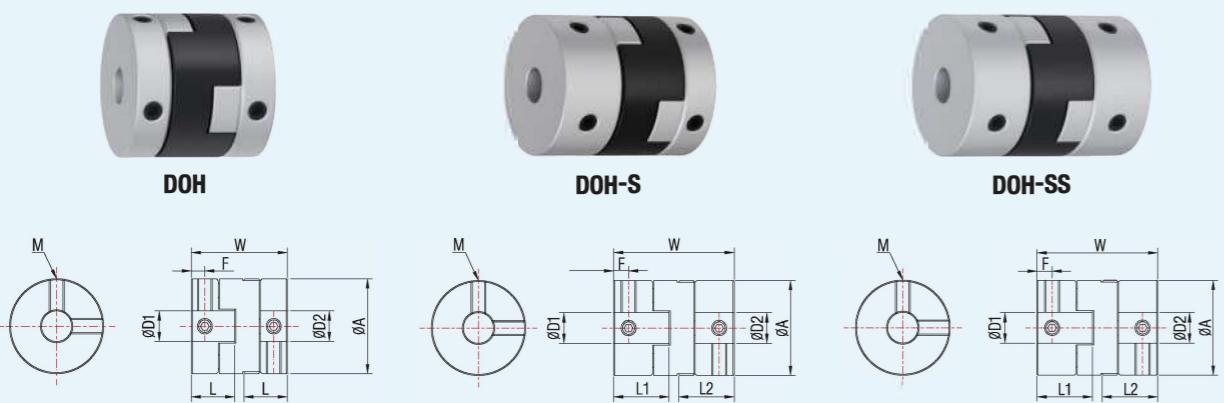
Usage

Order Method
(Order Example)

DOH	25	C	8	10
Product NO	Size	Fastening type	Inner diameter : D1	Inner diameter : D2

DOH Set screw type

COUPLING



DOH Clamp type

COUPLING



Product NO.	Dimension(mm)				Tightening Screw		Rated. Torque	Max. Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Angle	Paralle	End play	Mass	
	A	L	L1	L2	W	F	M	N·m	N·m	min⁻¹	kg·m²	N·m/rad	°	mm	mm	g
DOH-16	16	8.1	18	2.5	M3	0.7	1	2	39,000	2.4×10^{-7}	65	2	1	0.1	8	
DOH-20	20	9	20	2.7	M4	1.7	1.5	3	31,000	8.1×10^{-7}	120	2	1.5	0.1	14	
DOH-25	25	11.5	25.5	3.6	M4	1.7	2.5	5	25,000	1.8×10^{-6}	200	2	2	0.1	27	
DOH-32	32	14.5	32	4	M5	4	7	14	19,000	3.0×10^{-6}	620	2	2.5	0.2	48	
DOH-43	43	24	52	8.25	M5	4	15	30	15,000	3.9×10^{-5}	1,200	2	3	0.2	140	
DOH-53	53	27	58	9.75	M6	7	25	50	12,000	6.7×10^{-5}	1,400	2	3.5	0.2	250	
DOH-57	57	36	77	13.5	M8	15	36	72	10,000	2.2×10^{-4}	2,600	2	4	0.2	350	
DOH-70	73	37	77	12.5	M8	15	65	130	7,000	4.5×10^{-4}	4,800	2	4	0.2	550	
DOH-16S	16	8.1	10.9	20.8	2.5/3.9	M3	0.7	1	2	39,000	2.7×10^{-7}	65	2	1	0.1	10
DOH-20S	20	9	11.7	22.8	2.7/4	M4	1.7	1.5	3	31,000	9.0×10^{-7}	120	2	1.5	0.1	14
DOH-25S	25	11.5	14.7	28.8	3.6/5.2	M4	1.7	2.5	5	25,000	2.6×10^{-6}	200	2	2	0.1	23
DOH-32S	32	14.5	21	38.5	4/7.25	M5	4	7	14	19,000	1.1×10^{-5}	620	2	2.5	0.2	41
DOH-16SS	16	10.9	23.6	3.9	M3	0.7	1	2	39,000	2.3×10^{-7}	65	2	1	0.1	8	
DOH-20SS	20	11.7	25.5	4	M4	1.7	1.5	3	31,000	8.9×10^{-7}	120	2	1.5	0.1	14	
DOH-25SS	25	14.7	32	5.2	M4	1.7	2.5	5	25,000	1.8×10^{-6}	200	2	2	0.1	23	
DOH-32SS	32	21	45	7.25	M5	4	7	14	19,000	9.5×10^{-6}	620	2	2.5	0.2	41	

* DOH16 has one set screw in the hub.

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'.

* The Max. RPM did not take into account the dynamic balance.

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Standard Inner Diameter(D1,D2)(mm)																						
	3	4	5	6	6.35	8	9.525	10	12	14	15	16	18	20	22	24	25	28	30	32	34	35	40
DOH-16□	●	●	●	●																			
DOH-20□	●	●	●	●	●																		
DOH-25□	●	●	●	●	●	●																	
DOH-32□	●	●	●	●	●	●	●	●															
DOH-43□		●	●	●	●	●	●	●	●	●	●												
DOH-53□			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
DOH-57□				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
DOH-70□					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	

* We encourage h7 for tolerance of attachment axis

* The inner diameter of ● and ○ marked box is the standard diameter.

* The inner diameter of ○ marked box can not penetrate through the shaft.

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can penetrate into spacer.

* We can supply with Key way

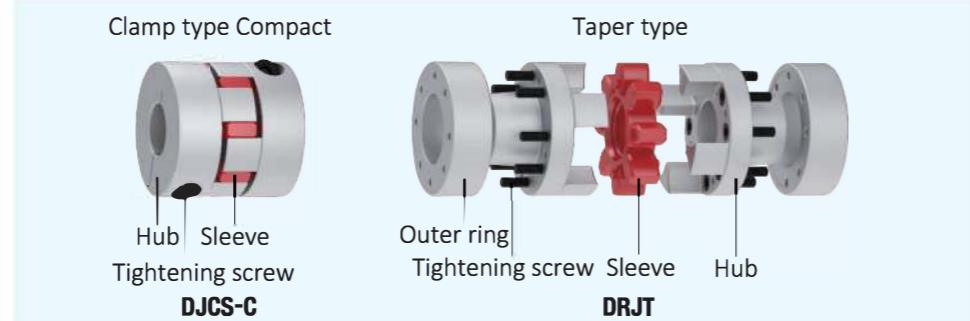
Product NO.	Dimension(mm)				Tightening Screw		Rated. Torque	Max. Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Angle	Paralle	End play	Mass
	A	L	L1	L2	W	F	M	N·m	N·m	min⁻¹	kg·m²	N·m/rad	°	mm	mm
DOH-16C	16	10.9	23.6	2.9	M2.5	1	1	2	39,000	3.7×10^{-7}	65	2	1	0.1	9
DOH-20C	20	11.7	25.5	3.2	M2.5	1	1.5	3	31,000	9.3×10^{-7}	120	2	1.5	0.1	16
DOH-25C	25	14.7	32	4	M3	2	2.5	5	25,000	3.3×10^{-6}	200	2	2	0.1	30
DOH-32C	32	21	45	5.4	M4	4	7	14	19,000	1.4×10^{-5}	620	2	2.5	0.2	60
DOH-43C	43	24	52	6.2	M5	8	15	30	15,000	4.3×10^{-5}	1,200	2	3	0.2	150
DOH-53C	53	27	58	7	M6	13	36	72	12,000	1.2×10^{-4}	1,400	2	3.5	0.2	250
DOH-57C	57	36	77	7.9	M6	13	36	72	10,000	1.8×10^{-4}	2,600	2	3.5	0.2	315
DOH-70C	73	28	83	10	M8	30	65	130	7,000	5.4×10^{-4}	4,800	2	4	0	



Features

- Unique structure as sleeve is pressed into both Hubs.
- Zero backlash available in low torque.
- Outstanding absorbing eccentricity, Declination, Torsional vibration.
- Oil-resistance and electric insulation.
- Forward and reverse are the same.

Structure (fastening type) and material



- Hub : Aluminum alloy with high stiffness
- Hub surface treatment : Alumite process
- Outer ring : Aluminum alloy with high stiffness
- Outer ring surface treatment : Alumite process
- Set screw : SCM435
- Tightening screw : SCM 435
- Sleeve : Polyurethane

Sleeve design



Sleeve type

Type	Standard	Penetrate	Shore	Material	Sustainable temperature	Feature
RD			98-A	Polyurethane	-30~+90	High torque High responsiveness
YL			92-A	Polyurethane	-30~+90	Flexible and responsive balance type
GR			64-D	Hytrex	-50~+120	High responsiveness High load Heat resistance

* Although the sleeve has water resistance and oil resistance, please avoid the extreme attachment because it is a factor of deformation.

* Use and storage under direct sunlight may shorten the life of the sleeve.

Usage

- Servo Motor
- Stepping Motor
- General wide use Motor
- Encoder
- Others

Others

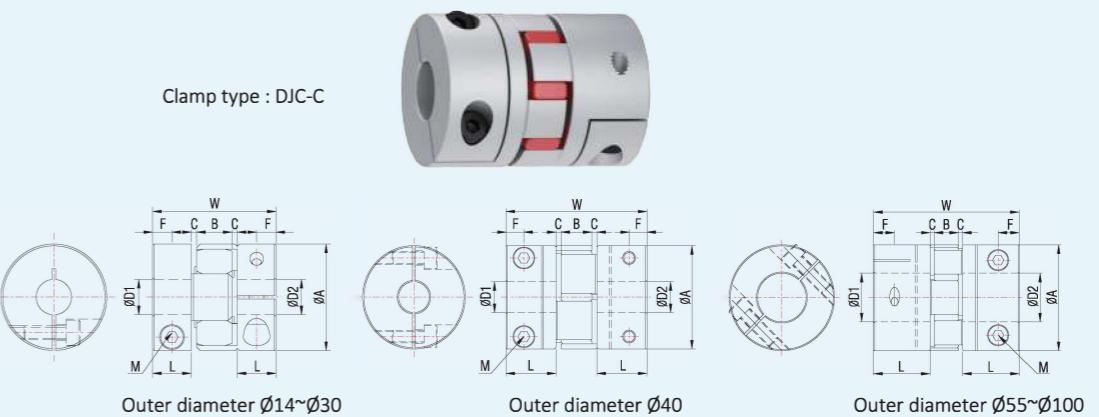
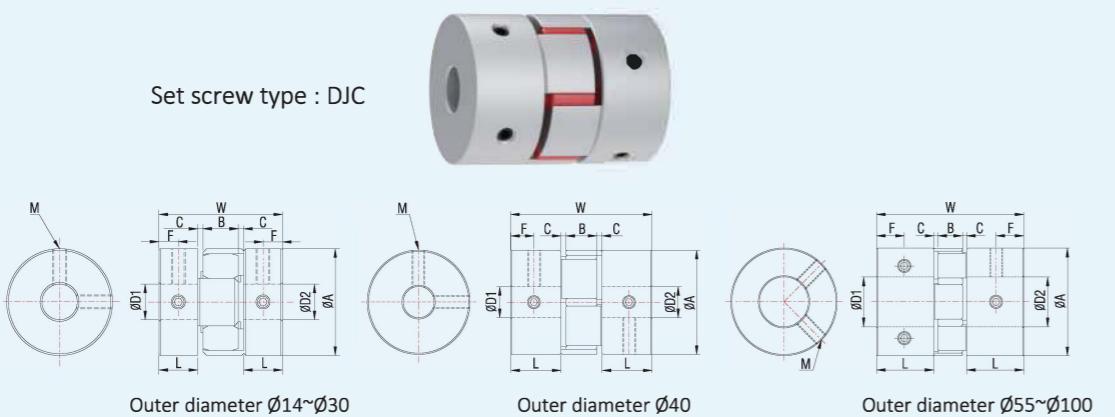
- You can order claps on one side and set screw on the other side.
- Clamp type DJCL-30CRD or bigger size can be ordered Clamp split type.

Order Method (Order Example)

DJC	25	C	RD	8	10
Product NO	Size	Fastening type	Sleeve type	Inner diameter : D1	Inner diameter : D2

DJCS	25	C	RD	8	10
Product NO	Size	Fastening type	Sleeve type	Inner diameter : D1	Inner diameter : D2

DRJT	55	A	RD	15	20
Product NO	Size	Material	Sleeve type	Inner diameter : D1	Inner diameter : D2



Product NO.	Dimension(mm)						Tightening Screw		Rated. Torque	Max. Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Angle	Paralle	End play	Mass
	Size		Torque														
	A	L	W	B	C	F	M	N·m	N·m	N·m	min ⁻¹	kg·m ²	N·m/rad	°	mm	mm	g
DJC-14RD	14	7	22	6	1	3.5	M3	0.7	2	4	45,000	2.1×10 ⁻⁷	30	1	0.1	+0.6 ₀	7
DJC-20RD	20	10	30	8	1	5	M3	0.7	5	10	31,000	1.0×10 ⁻⁶	65	1	0.1	+0.8 ₀	18
DJC-25RD	25	10	31.5	9	1.25	5	M4	1.7	10	20	25,000	2.4×10 ⁻⁶	220	1	0.1	+1.0 ₀	25
DJC-30RD	30	11	35	10	1.5	5.5	M4	1.7	14	28	21,000	5.9×10 ⁻⁶	220	1	0.1	+1.0 ₀	46
DJCL-30RD	30	15.5	44	10	1.5	7.75	M4	1.7	14	28	20,000	7.2×10 ⁻⁶	220	1	0.1	+1.0 ₀	53
DJC-40RD	40	19.5	55	12	2	9.75	M5	4	18	36	15,000	3.1×10 ⁻⁵	2,000	1	0.1	+1.0 ₀	125
DJCL-40RD	40	25	66	12	2	11.5	M5	4	18	36	14,000	4.0×10 ⁻⁵	2,000	1	0.1	+1.0 ₀	150
DJC-55RD	55	30	78	14	2	15	M6	7	60	120	11,000	1.7×10 ⁻⁴	4,000	1	0.1	+1.4 ₀	320
DJC-65RD	65	35	90	15	2.5	17.5	M8	15	160	320	9,000	3.9×10 ⁻⁴	8,000	1	0.1	+1.5 ₀	550
DJC-80RD	80	45	114	18	3	22.5	M8	15	325	650	7,000	1.1×10 ⁻³	20,000	1	0.1	+1.5 ₀	1,000
DJC-95RD	95	50	126	20	3	25	M8	15	450	900	6,000	2.3×10 ⁻³	30,000	1	0.1	+2.0 ₀	1,500
DJC-100RD	104	56	140	21	3.5	28	M10	25	600	1,200	6,000	4.8×10 ⁻³	40,000	1	0.1	+2.0 ₀	2,550

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'

* The Max. RPM did not take into account the dynamic balance.

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances

* We encourage h7 for tolerance of attachment axis

* The inner diameter of ● marked is the standard diameter

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can penetrate the sleeve

* We can supply with Key way

Product NO.	Dimension(mm)						Tightening Screw		Rated.	Max.	Max. RPM	Moment of inertia	Torsional Stiffness	Angle	Paralle	End play	Mass
							Size	Torque	Torque	Torque							
	A	L	W	B	C	F	M	N·m	N·m	N·m	min⁻¹	kg·m²	N·m/rad	°	mm	mm	g
DJC-14CRD	14	7	22	6	1	3.5	M2	0.5	2	4	45,000	1.6×10⁻⁷	30	1	0.1	+0.6⁰	6
DJC-20CRD	20	10	30	8	1	5	M2.5	1	5	10	31,000	1.1×10⁻⁶	65	1	0.1	+0.8⁰	19
DJC-25CRD	25	10	31.5	9	1.25	5	M3	2	10	20	25,000	2.4×10⁻⁸	220	1	0.1	+1.0⁰	25
DJC-30CRD	30	11	35	10	1.5	5.5	M4	4	14	28	21,000	6.2×10⁻⁶	220	1	0.1	+1.0⁰	50
DJCL-30CRD	30	15.5	44	10	1.5	5.5	M4	4	14	28	20,000	7.5×10⁻⁶	220	1	0.1	+1.0⁰	55
DJC-40CRD	40	19.5	55	12	2	7	M5	8	18	36	15,000	3.1×10⁻⁵	2,000	1	0.1	+1.0⁰	135
DJCL-40CRD	40	25	66	12	2	8.5	M5	8	18	36	14,000	3.9×10⁻⁵	2,000	1	0.1	+1.0⁰	160
DJC-55CRD	55	30	78	14	2	10.5	M6	13	60	120	11,000	1.6×10⁻⁴	4,000	1	0.1	+1.4⁰	330
DJC-65CRD	65	35	90	15	2.5	13	M8	30	160	320	9,000	3.8×10⁻⁴	8,000	1	0.1	+1.5⁰	560
DJC-80CRD	80	45	114	18	3	15	M10	50	325	650	7,000	1.1×10⁻³	20,000	1	0.1	+1.5⁰	1,050
DJC-95CRD	95	50	126	20	3	18	M10	50	450	900	6,000	2.3×10⁻³	30,000	1	0.1	+2.0⁰	1,600
DJC-100CRD	104	56	140	21	3.5	20	M12	90	600	1,200	6,000	4.6×10⁻³	40,000	1	0.1	+2.0⁰	2,550

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'.

* The Max. RPM did not take into account the dynamic balance.

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

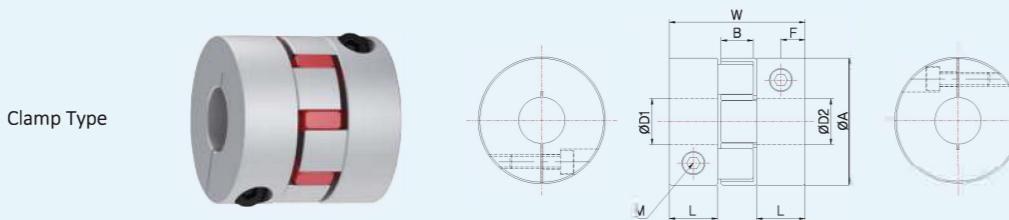
* We encourage h7 for tolerance of attachment axis

* The inner diameter of ● marked is the standard diameter

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can penetrate the sleeve

* We can supply with key way



Product NO.	Dimension(mm)					Tightening Screw		Rated Torque	Max. Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Angle	Paralle	End play	Mass
						Size	Torque									
	A	L	W	B	F	M	N·m	N·m	N·m	min⁻¹	kg·m²	N·m/rad	°	mm	± mm	g
DJCS-55CRD	55	20.5	59	14	10.5	M6	13	60	120	11,000	1.3 ×10⁻⁴	4,000	1	0.1	+1.4₀	280
DJCS-65CRD	65	22	64	15	11	M8	30	160	320	9,000	2.6 ×10⁻⁴	8,000	1	0.1	+1.5₀	400
DJCS-80CRD	80	32	88	18	16	M10	50	320	640	7,000	8.7 ×10⁻⁴	20,000	1	0.1	+1.5₀	860
DJCS-95CRD	95	33	92	20	16.5	M10	50	450	900	6,000	1.68×10⁻³	30,000	1	0.1	+2.0₀	1,190
DJCS-100CRD	104	34	96	21	17.5	M12	90	600	1,200	5,000	3.1 ×10⁻³	40,000	1	0.1	+2.0₀	1,700

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'

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* Please contact us for other dimension allowances

* We encourage h7 for tolerance of attachment axis

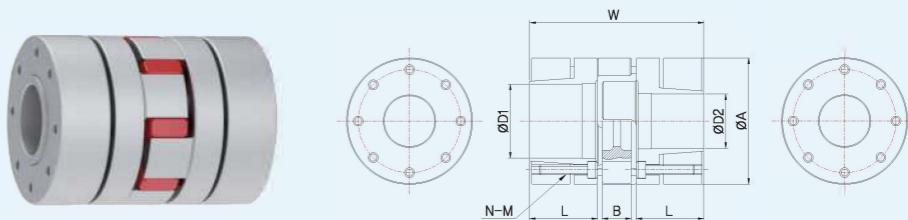
* The inner diameter of • marked is the standard diameter.

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can penetrate the sleeve

- * We can penetrate the sleeve.

* We can supply with key way.



Features

- It is outstanding in transferring high torques, and optimized for spindling machines.
 - Low moment of inertia due to high rigidity aluminum material.
 - Excellent for high speed rotation with small moment of inertia.
 - It also absorbs vibration generated by eccentricity and declination when rotating.
 - It has excellent balancing and electric insulation.

Usage

- Machine tool main axis and feed axis, Spindle

Product NO.	Dimension(mm)						Tightening Screw			Sleeve type	Sleeve torque		Max. RPM	Moment of inertia	Torsional Stiffness	Angle	Parallel	End play	Mass
							Size	Torque	Quantity		Rated. Torque	Max. Torque							
	D1(Mm)	D2(Mm)	A	L	W	B	M	N·m	Qty		N·m	N·m	min⁻¹	kg·m²	N·m/rad	mm	°	mm	kg
DRJT-30A	6	14	30	18.5	50	10	M3	1.34	4	RD	12.5	25	32,000	0.85×10⁻⁵	171.9	0.09	0.9	■1.0-0.5	0.069
DRJT-40A	10	20	40	25	66	12	M4	3	6	RD	21	42	24,000	3.94×10⁻⁵	1,512	0.06	0.9	+1.2-0.5	0.161
DRJT-55A	14	28	55	30	78	14	M5	6	4	RD	60	120	17,000	1.63×10⁻⁴	3,640	0.10	0.9	+1.4-0.5	0.344
DRJT-65A	16	38	65	35	90	15	M5	6	8	RD	160	320	15,000	3.55×10⁻⁴	6,410	0.11	0.9	+1.5-0.7	0.510
DRJT-80A	20	48	80	45	114	18	M6	10	8	RD	325	650	12,000	1.07×10⁻³	11,800	0.12	0.9	+1.8-0.7	1.030
DRJT-95A	28	50	95	50	126	20	M8	25	4	RD	450	900	10,000	2.32×10⁻³	21,594	0.14	0.9	+2.0-1.0	1.630
DRJT-100A	30	55	104	56	140	21	M10	49	4	RD	525	1,050	9,100	3.90×10⁻³	25,759	0.16	0.9	+2.0-1.0	2.222

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'.

* The Max. RPM did not take into account the dynamic balance.

* Mass and moment of inertia are calculated based on maximum inner diameter

* Please contact us for other dimension allowances

* We encourage b7 for tolerance of attachment axis

* The inner diameter of • marked is the standard diameter.

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.



Features

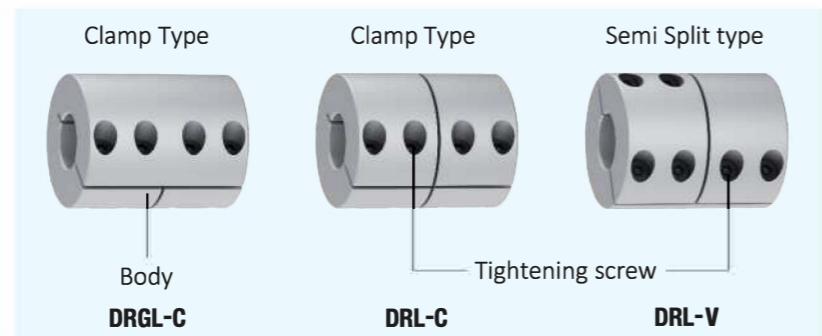
- Rigid coupling.
- Light weight, extremely low inertia, high responsiveness.
- Zero Backlash.
- Outstanding Oil-resistance and Anti-chemical.
- Do not allow eccentricity, Declination and End play.

Structure (fastening type) and material

Standard type



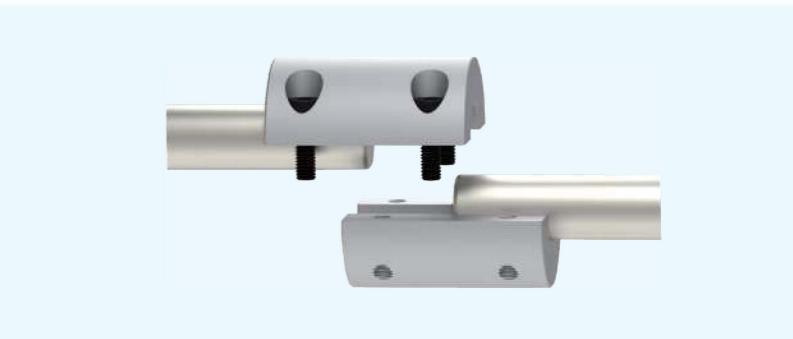
Long type



- Body : Aluminum alloy with high stiffness
- Body surface treatment : Alumite process
- Set screw : SCM435
- Tightening Screw : SCM435

DRG-W type(Split type)

- DRG-W is fully separated type, making it easier to attach or disassemble the shaft.



DRL-V type(Semi-split type)

- Because DRL-V is semi-split type, it is easy to attach and disassemble the shaft.



Usage

- Servo Motor
- Stepping Motor
- General wide use Motor
- Encoder
- Others

Others

- Bolt material can be changed
- Body material can be changed. (Can be changed stainless steel)
- Tap processing is possible on the section.



Stainless steel products

Order Method (Order Example)

DRG	25	C	5	8
Product NO	Size	Fastening type	Inner diameter : D1	Inner diameter : D2

DRG | DRG-C | DRG-W

COUPLING

Set screw type : DRG



Clamp type : DRG-C



Split type : DRG-W



DRGL-C | DRL-C | DRL-V

COUPLING

Clamp type : DRGL-C



Clamp type : DRL-C



Semi split type : DRL-V



Product NO.	Dimension(mm)					Tightening Screw		Rated. Torque	Max. RPM	Max. Moment of inertia	Mass
	A	L	W	F	E	M	N·m				
DRG-16	16	10.5	23	5.25	2	M3	0.7	1	2	39,000	4.4×10 ⁻⁷ 11
DRG-20	20	11	24	5.5	2	M3	0.7	1.5	3	31,000	9.7×10 ⁻⁷ 20
DRG-20L	20	14	30	7	2	M3	0.7	2.5	5	31,000	1.3×10 ⁻⁶ 23
DRG-25	25	16.5	35	8.25	2	M4	1.7	4.5	9	25,000	3.9×10 ⁻⁶ 40
DRG-32	32	19	40	9.5	2	M5	4	10	20	19,000	1.2×10 ⁻⁵ 71
DRG-40	40	21	44	10.5	2	M5	4	20	40	15,000	2.8×10 ⁻⁵ 120
DRG-43	43	25	52	12.5	2	M6	7	23	46	13,000	4.6×10 ⁻⁵ 170
DRG-50	50	25.5	53	12	2	M6	7	25	70	12,000	8.4×10 ⁻⁵ 214
DRG-53	53	32	66	16	2	M8	15	28	56	10,000	1.4×10 ⁻⁴ 360
DRG-65	65	31.5	65	12	2	M8	15	35	70	9,000	2.9×10 ⁻⁴ 450
DRG-16C	16	7	16	3.5	2	M2.5	1	1	2	39,000	3.0×10 ⁻⁷ 8
DRG-20C	20	9	20	4.5	2	M2.5	1	2.5	5	31,000	8.7×10 ⁻⁷ 15
DRG-25C	25	11.5	25	5.75	2	M3	2	4.5	9	25,000	2.7×10 ⁻⁶ 29
DRG-32C	32	15	32	7.5	2	M4	4	10	20	19,000	7.1×10 ⁻⁶ 50
DRG-40C	40	21	44	10.5	2	M5	8	20	40	15,000	2.4×10 ⁻⁵ 120
DRG-43C	43	19.5	41	9.75	2	M5	8	23	46	13,000	3.3×10 ⁻⁵ 130
DRG-50C	50	26.5	55	13.25	2	M6	13	25	50	12,000	7.0×10 ⁻⁵ 140
DRG-53C	53	24.5	51	12.25	2	M6	13	28	56	10,000	9.2×10 ⁻⁷ 260
DRG-65C	65	31.5	65	16	2	M8	16	35	70	9,000	2.8×10 ⁻⁴ 446
DRG-16W	16	-	16	4	-	M2.5	1	1	2	39,000	3.2×10 ⁻⁷ 8.8
DRG-20W	20	-	20	5	-	M2.5	1	2.5	5	31,000	8.7×10 ⁻⁷ 15
DRG-25W	25	-	25	6	-	M3	2	4.5	9	25,000	2.7×10 ⁻⁶ 29
DRG-32W	32	-	32	8	-	M4	4	10	20	19,000	9.3×10 ⁻⁶ 61
DRG-40W	40	-	40	9.5	-	M5	8	20	40	15,000	2.3×10 ⁻⁵ 100
DRG-50W	50	-	50	12	-	M6	13	25	50	12,000	7.1×10 ⁻⁵ 190
DRG-65W	65	-	65	16	-	M8	16	35	70	9,000	2.7×10 ⁻⁴ 430

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'.

* The Max. RPM did not take into account the dynamic balance.

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Standard Inner Diameter(D1,D2)(mm)														
	3	4	5	6	8	10	11	12	14	15	16	18	20	22	24
DRG-16	●	●	●	●											
DRG-20		●	●	●	●	●	●								
DRG-25			●	●	●	●	●	●							
DRG-32			●	●	●	●	●	●	●						
DRG-40			●	●	●	●	●	●	●	●					
DRG-43			●	●	●	●	●	●	●	●	●				
DRG-50															
DRG-53															
DRG-65															
DRG-16W	●	●													
DRG-20W		●	●												
DRG-25W			●	●											
DRG-32W			●	●											
DRG-40W				●	●										
DRG-50W					●	●	●								
DRG-65W						●	●	●	●	●	●	●	●	●	●

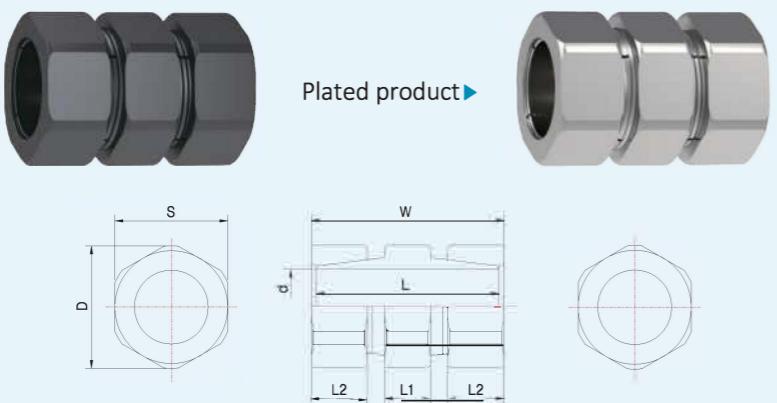
* We encourage h7 for tolerance of attachment axis

* The inner diameter of ● marked is the standard diameter.

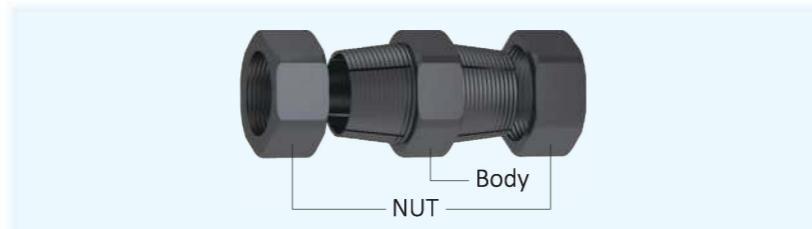
* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can supply with Key way.

Product NO.	Dimension(mm)						Tightening Screw		Rated. Torque	Max. RPM	Max. Moment of inertia	Mass
	A	L	W	F1	F2	E	M	N·m	min ⁻¹	kg·m ²	g	
DRGL-16C	16	10.25	22.5	3	5.4	2	M2.5	1	1	2	39,000	3.4×10 ⁻⁷ 10
DRGL-20C	20	11	24	3.1	5.6	2	M2.5	1	2.5	5	31,000	9.2×10 ⁻⁷ 18
DRGL-25C	25	16.5	35	4.7	7.6	2	M3	2	4.5	9	25,000	3.4×10 ⁻⁶ 38
DRGL-32C	32	19	40	5.3	9.1	2	M4	4	10	20	19,000	1.0×10 ⁻⁵ 70
DRGL-43C	43	25	52	7	11.5	2	M5	8	23	46	13,000	4.2×10 ⁻⁵ 160
DRGL-53C	53	32	66	9	14.5	2	M6	13	28	56	10,000	1.2×10 ⁻⁴ 300
DRL-1												

**Features**

- Rigid coupling with simple tightening according to nut tightening.
- It is a coupling of high transmission torque and high thrust load.
- Plated products reduce torque or allowable load by 30%.

Structure (fastening type) and material

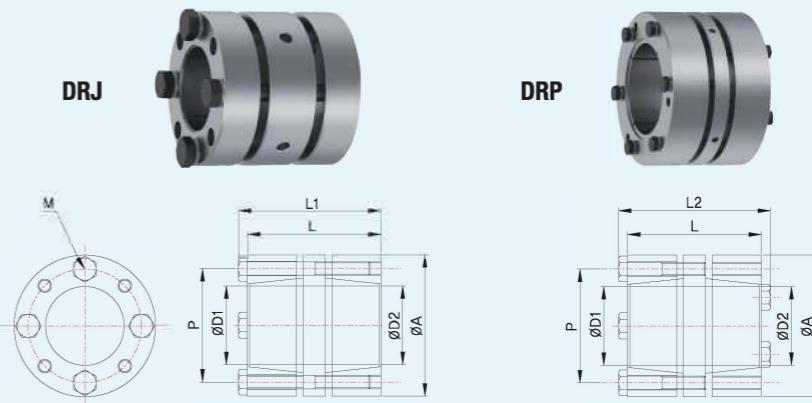
- Body : S45C, SUS304(Special order production type)
- Body surface treatment : Phosphate Manganese coatings, Electroless nickel plating, Special order production type.

**Order Method
(Order Example)**

DRN		10					
Product NO				Inner diameter : d			

Product NO.	Dimension(mm)						Allowable Torque N·m	Allowable Thrust N	Tightening torque N·m	Moment of inertia kg·m ²	Mass g
	d	S	D	L1	L2	L					
DRN-6	12	13	5.5	5.5	20.5	21.5	7.8	833	11.8	4.24×10^{-8}	13
DRN-7	14	15	5.5	5.5	20.5	21.9	8.8	981	12.7	5.25×10^{-7}	17.5
DRN-8	14	15	6	6	21	23	9.8	1,128	13.7	8.25×10^{-7}	18
DRN-9	17	18.5	6.5	7	23.5	25.5	11.8	1,520	15.7	1.98×10^{-6}	30
DRN-10	17	18.5	7	7.5	25.4	27.4	15.7	1,804	19.6	2.08×10^{-6}	30
DRN-11	19	21	8	9	29	31	19.6	1,912	24.5	3.75×10^{-6}	43
DRN-12	19	21	8	9	30	32	37.3	2,010	29.4	3.75×10^{-6}	41
DRN-14	22	24.6	9	10	34	36	41.2	2,442	34.3	7.50×10^{-6}	60
DRN-15	23	25	9.5	11.5	37.5	39.5	49	2,942	39.2	1.00×10^{-6}	75
DRN-16	24	26	10	12	39	41	54.9	3,275	49	1.45×10^{-5}	100
DRN-17	26	28.5	11	12.5	41	43	60.8	3,687	53.9	1.93×10^{-5}	115
DRN-18	27	30	12	12.5	43	45	68.6	3,942	58.8	2.48×10^{-5}	130
DRN-19	29	32	12	13.5	45	47	75.5	4,364	63.7	3.25×10^{-5}	150
DRN-20	30	32.5	13	14.5	48	50	88.2	4,952	68.6	3.50×10^{-5}	160
DRN-22	32	35	14	15	50	52	103	5,491	78.4	5.00×10^{-5}	190
DRN-24	35	38.5	14	16	52	54	123	6,080	83.3	7.25×10^{-5}	230
DRN-25	36	40	15	17	55	57	157	7,159	88.2	9.00×10^{-5}	260
DRN-30	41	45	17	17	63	65	177	11,768	127	8.75×10^{-5}	350
DRN-35	46	51	19	19	69	71	206	11,768	167	1.55×10^{-4}	480

* Please contact us for other dimension allowances.

**Features**

- High stiffness rigid coupling.
- High torque, high-response coupling.
- Suitable for servo motor.
- Excellent torsional rigidity.
- It is friction-tight with only tightening screw, so no key is needed.

Structure (fastening type) and material

- Body : S45C
- Side ring : S45C
- Tightening screw : SCM435

**Order Method
(Order Example)**

DRJ/DRP		63		30		30	
Product NO				Size		Inner diameter : D1	

Product NO.	Dimension(mm)							Torque N·m	Thrust kN	Moment of inertia kg·m ²	Tightening Screw		Max. RPM min ⁻¹	Mass kg
	A	D1	D1	L	L1	L2	P				N·M	N·m		
53-16-16		16						78.5		3.08×10^{-4}			0.80	
53-20-16		20						98.1		3.05×10^{-4}			0.76	
53-20-20		20								2.90×10^{-4}			0.77	
53-22-20		22						118						0.72
58-25-20		20						98.2		4.18×10^{-4}			0.87	
58-25-22		22						118		4.13×10^{-4}			0.86	
58-25-25		25						127					0.84	
63-30-25		25						157		6.18×10^{-4}			1.05	
63-30-30		30						186		6.10×10^{-4}			1.01	
68-35-25		25						157		8.70×10^{-4}			1.14	
68-35-28		28						177		8.75×10^{-4}			1.11	
68-35-30		30						186		8.78×10^{-4}			1.17	
68-35-32		32						206					1.15	
68-35-35		35						226		8.80×10^{-4}			1.12	
73-35-38		38						226		1.40×10^{-3}			1.51	
73-38-42		42						245		1.40×10^{-3}			1.53	
73-42-42		42						275		1.66×10^{-3}			1.41	
78-48-48	78	48	48	70	74	78	66	461	18.7	1.85×10^{-3}	6×M6	17.7	8,000	1.50

* The Max. RPM did not take into account the dynamic balance.

* Please contact us for other dimension allowances.

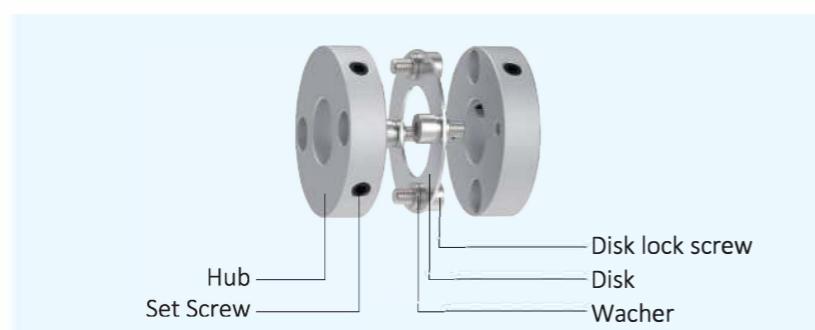


Features

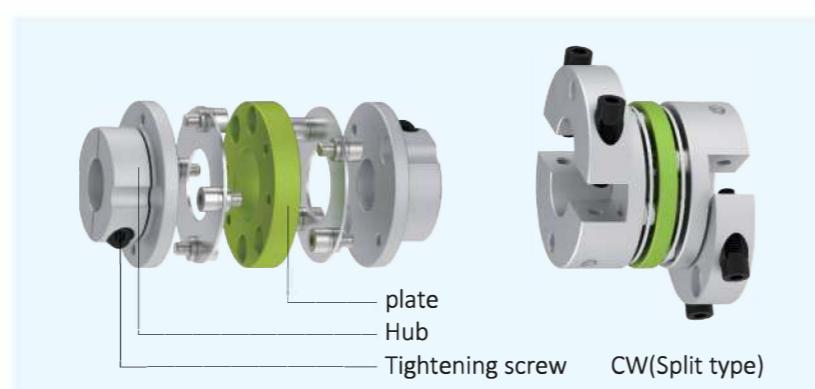
- Disk type flexible coupling.
- Zero Backlash
- Stainless disks allow eccentricity, declination and end play.
- Forward and reverse are the same features.
- Outstanding Oil-resistance and Anti-chemical.
- A variety of sizes are available.

Structure (fastening type) and material

Set screw type



Clamp type



- Hub : Aluminum alloy with high stiffness
- Hub surface treatment of hub : Alumite process
- Set screw : SCM435
- Tightening screw : SCM435
- Disk : Stainless steel
- Wacher : Stainless steel
- Plate : Aluminum alloy with high stiffness
- Plate surface treatment of plate : Alumite process
- Disk lock screw : SCM435

Circular disk application

- Apply circular disk pack for high responsiveness and low noise.



Coupling combination system

Type	Shape		Feature
DRS	(one disk)	(two disks)	<ul style="list-style-type: none"> - One single disk pack type - Excellent torsional rigidity and excellent response - Ideal for high-speed and high-precision positional environment.
DRW	(one disk)	(two disks)	<ul style="list-style-type: none"> - Two disk packs type with plate. - Allow greater eccentricity, declination and endplay than single type. - High flexible function
DRA	(one disk)	(two disks)	<ul style="list-style-type: none"> - Two disk packs with plate, double type for distance. - Plate is longer than DRW type so it can transmit power at distant point.

Usage

- Servo Motor
- Stepping Motor
- General wide use Motor
- Encoder
- Others

Others

- Do not re-assemble after disassemble randomly.
- You can order different types of hubs.
- You can specify the number of disks.

Order Method (Order Example)

DRW	31	C	8	10
Product NO	Size	Fastening type	Inner diameter : D1	Inner diameter : D2

DRS | DRW | DRA Set screw type

COUPLING



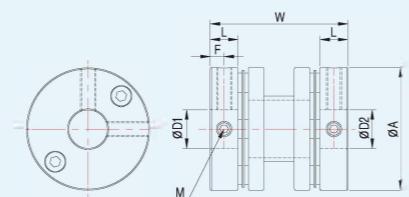
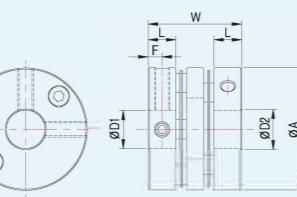
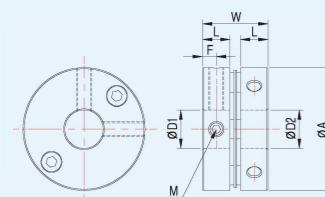
DRS



DRW



DRA



DRS | DRW | DRA Clamp type

COUPLING



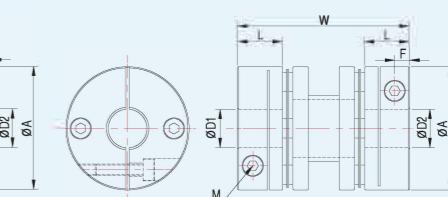
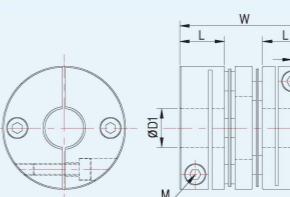
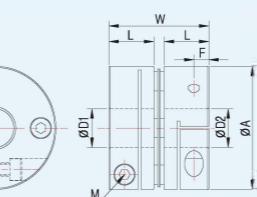
DRS-C



DRW-C



DRA-C



Product NO.	Dimension(mm)				Tightening Screw		Rated. Torque	Max. Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Angle	Paralle	End play	Mass
	A	L	W	F	Size	Torque	N · m	N · m	min⁻¹	kg · m²	N · m/rad	°	mm	± mm	g
DRS-16	16	5.1	11.9	2.55	M2.5	0.5	0.6	1.2	30,000	1.8 × 10⁻⁷	270	0.5	0.02	0.1	5
DRW-16	16	5.1	15.6	2.55	M2.5	0.5	0.6	1.2	30,000	2.2 × 10⁻⁷	200	2	0.05	0.2	6
DRWL-16	16	5.1	17.6	2.55	M2.5	0.5	0.6	1.2	30,000	2.6 × 10⁻⁷	200	2	0.05	0.2	7
DRS-19	19	6.1	13.9	3.05	M3	0.7	1	2	20,000	3.0 × 10⁻⁷	600	1	0.02	0.1	6
DRW-19	19	6.1	17.8	3.05	M3	0.7	1	2	20,000	5.3 × 10⁻⁷	450	2	0.05	0.2	10
DRWL-19	19	6.1	20.8	3.05	M3	0.7	1	2	20,000	5.8 × 10⁻⁷	450	2	0.05	0.2	11
DRS-22	22	6.2	14.8	3.1	M4	1.7	1.3	2.6	20,000	6.9 × 10⁻⁷	600	1	0.02	0.2	10
DRW-22	22	6.2	19.9	3.1	M4	1.7	1.3	2.6	20,000	1.0 × 10⁻⁶	500	2	0.12	0.2	16
DRWL-22	22	6.2	21.5	3.1	M4	1.7	1.3	2.6	20,000	1.1 × 10⁻⁶	500	2	0.12	0.2	17
DRA-22	22	6.2	27.5	3.65	M4	1.7	1.3	2.6	20,000	1.3 × 10⁻⁶	500	2	0.12	0.2	18
DRS-26	26	7.3	17	3.65	M4	1.7	2	4	20,000	2.0 × 10⁻⁶	1,300	1	0.02	0.2	20
DRW-26	26	7.3	25.3	3.65	M4	1.7	2	4	20,000	2.3 × 10⁻⁶	800	2	0.15	0.2	28
DRA-26	26	7.3	31.2	3.65	M4	1.7	2	4	20,000	3.2 × 10⁻⁶	800	2	0.15	0.2	32
DRS-31	31.8	7.2	17.1	3.6	M4	1.7	3	6	15,000	4.4 × 10⁻⁶	1,700	1	0.02	0.2	30
DRW-31	31.8	7.2	24.2	3.6	M4	1.7	3	6	15,000	4.3 × 10⁻⁶	1,300	2	0.15	0.2	30
DRWL-31	31.8	7.2	29.2	3.6	M4	1.7	3	6	15,000	5.5 × 10⁻⁶	1,300	2	0.15	0.2	38
DRA-31	31.8	7.2	35.7	3.6	M4	1.7	3	6	15,000	5.5 × 10⁻⁶	1,300	2	0.15	0.2	38

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'.

* The Max. RPM did not take into account the dynamic balance.

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Standard Inner Diameter(D1,D2)(mm)															
	3	4	4.5	5	6	6.35	7	8	9	9.525	10	11	12	12.7	14	15
DR□-16	●	●	●	●	●											
DR□-19	●	●	●	●	●	●										
DR□-22	●	●	●	●	●	●	●	●	●	●						
DR□-26	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DR□-31	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○

* We encourage h7 for tolerance of attachment axis

* The inner diameter of ● marked is the standard diameter.

* The axis penetration is impossible on the ○ marked because of the inner diameter of the disk.

* Inner diameter 8 of DRA26 is not allowed to pass through the shaft.

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can supply with Key way.

Product NO.	Dimension(mm)				Tightening Screw		Rated. Torque	Max. Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Angle	Paralle	End play	Mass
	A	L	W	F	Size	Torque	N · m	N · m	min⁻¹	kg · m²	N · m/rad	°	mm	± mm	g
DRS-16C	16	7.8	17.3	2.65	M2	0.5	0.6	1.2	30,000	2.6 × 10⁻⁷	270	0.5	0.02	0.1	7
DRW-16C	16	7.8	21	2.65	M2	0.5	0.6	1.2	30,000	3.3 × 10⁻⁷	200	2	0.05	0.2	9
DRWL-16C	16	7.8	23	2.65	M2	0.5	0.6	1.2	30,000	3.7 × 10⁻⁷	200	2	0.05	0.2	10
DRS-19C	19	8.7	19.1	3.05	M2.5	1	1	2	20,000	4.0 × 10⁻⁷	600	1	0.02	0.1	8
DRW-19C	19	8.7	23	3.05	M2.5	1	1	2	20,000	7.4 × 10⁻⁷	450	2	0.05	0.2	14
DRWL-19C	19	8.7	26	3.05	M2.5	1	1	2	20,000	7.9 × 10⁻⁷	450	2	0.05	0.2	15
DRS-22C	22	8.7	19.8	2.9	M2.5	1	1.3	2.6	20,000	1.0 × 10⁻⁶	600	1	0.02	0.2	15
DRW-22C	22	8.7	24.9	2.9	M2.5	1	1.3	2.6	20,000	1.3 × 10⁻⁶	500	2	0.12	0.2	18
DRWL-22C	22	8.7	26.5	2.9	M2.5	1	1.3	2.6	20,000	1.4 × 10⁻⁶	500	2	0.12	0.2	19

DRS | DRW | DRA Set screw type

COUPLING



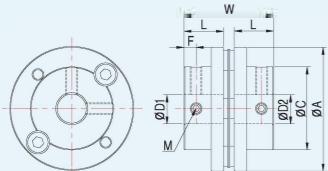
DRS



DRW



DRA



Dimension(mm)

Tightening Screw
Size

Rated.
Torque

Max.
Torque

Max.
RPM

Moment
of inertia

Torsional
Stiffness

Angle

Paralle

End
play

Mass

A

C

L

W

F

M

N·m

N·m

min⁻¹

kg·m²

N·m/rad

°

mm

± mm

g

Product NO.	Dimension(mm)					Tightening Screw Size	Rated. Torque	Max. Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Angle	Paralle	End play	Mass	
	A	C	L	W	F											
DRS-42	42.5	28.5	13.5	30.7	4.15	M4	1.7	8	16	10,000	1.7×10 ⁻⁵	6,000	1	0.02	0.3	65
DRWA-42	42.5	28.5	13.5	38.4	4.15	M4	1.7	8	16	10,000	2.1×10 ⁻⁵	3,500	2	0.3	0.6	84
DRWB-42	42.5	28.5	13.5	44.9	4.15	M4	1.7	8	16	10,000	2.4×10 ⁻⁵	3,500	2	0.3	0.6	94
DRAA-42	42.5	28.5	13.5	49.3	4.15	M4	1.7	8	16	10,000	2.7×10 ⁻⁵	3,500	2	0.3	0.6	105
DRAB-42	42.5	28.5	13.5	57.7	4.15	M4	1.7	8	16	10,000	2.8×10 ⁻⁵	3,500	2	0.3	0.6	110
DRAC-42	42.5	28.5	13.5	67.1	4.15	M4	1.7	8	16	10,000	2.9×10 ⁻⁵	3,500	2	0.3	0.6	115
DRS-47	47	32.3	14	32	4.6	M5	4	13	26	10,000	2.7×10 ⁻⁵	6,000	1	0.02	0.3	91
DRWA-47	47	32.3	14	40	4.6	M5	4	13	26	10,000	3.4×10 ⁻⁵	4,000	2	0.3	0.6	115
DRWB-47	47	32.3	14	44.1	4.6	M5	4	13	26	10,000	3.6×10 ⁻⁵	4,000	2	0.3	0.6	120
DRAA-47	47	32.3	14	57	4.6	M5	4	13	26	10,000	4.2×10 ⁻⁵	4,000	2	0.3	0.6	140
DRAB-47	47	32.3	14	83	4.6	M5	4	13	26	10,000	4.7×10 ⁻⁵	4,000	2	0.3	0.6	160
DRS-54	54	38	19	42.6	6.5	M5	4	23	46	10,000	4.9×10 ⁻⁵	13,000	1	0.02	0.3	130
DRW-54	54	38	19	55.1	6.5	M5	4	23	46	10,000	6.7×10 ⁻⁵	9,000	2	0.3	0.8	177
DRAA-54	54	38	19	70	6.5	M5	4	23	46	10,000	9.0×10 ⁻⁵	9,000	2	0.3	0.8	230
DRAB-54	54	38	19	84	6.5	M5	4	23	46	10,000	1.1×10 ⁻⁴	9,000	2	0.3	0.8	250
DRS-64	64	47.5	26	56.9	8.8	M8	15	32	64	10,000	1.8×10 ⁻⁴	20,000	1	0.02	0.4	292
DRW-64	64	47.5	26	74	8.8	M8	15	32	64	10,000	2.2×10 ⁻⁴	13,000	2	0.3	0.8	373
DRA-64	64	47.5	26	89.2	8.8	M8	15	32	64	10,000	2.7×10 ⁻⁴	13,000	2	0.3	0.8	450

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'.

* The Max. RPM did not take into account the dynamic balance.

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Standard Inner Diameter(D1,D2)(mm)																					
	6	6.35	7	8	9	9.525	10	11	12	12.7	14	15	15.875	16	18	19	20	21	22	24	25	26
DR□-42	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DR□-47	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DR□-54	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DR□-64	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○

* We encourage h7 for tolerance of attachment axis

* The inner diameter of ● marked is the standard diameter.

* The axis penetration is impossible on the ○ marked because of the inner diameter of the disk.

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can supply with Key way.

DRS | DRW | DRA Clamp type

COUPLING



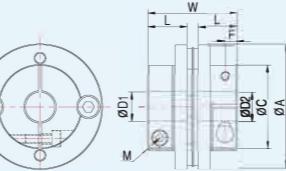
DRS-C



DRW-C



DRA-C



Dimension(mm)

Tightening Screw
Size

Rated.
Torque

Max.
Torque

Max.
RPM

Moment
of inertia

Torsional
Stiffness

Angle

Paralle

End
play

Mass

A

C

L

W

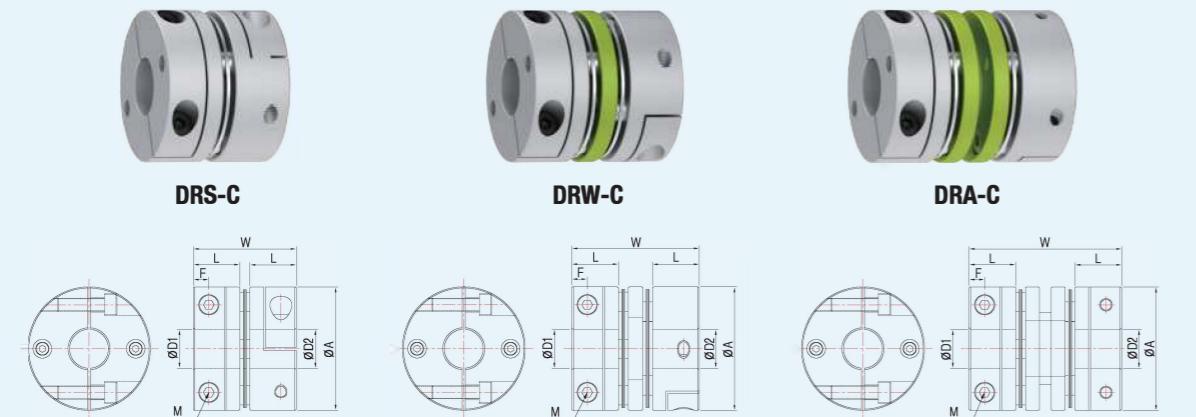
F

M

N·m

N·m

min^{-1</sup}



Product NO.	Dimension(mm)				Tightening Screw		Rated. Torque	Max. Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Angle	Paralle	End play	Mass
	A	L	W	F	Size	N·m	N·m	N·m	min ⁻¹	kg·m ²	N·m/rad	°	mm	± mm	g
DRSC-54C	54	19	42.6	6	M5	8	23	46	10,000	9.8 × 10 ⁻⁵	11,000	1	0.02	0.8	200
DRWB-54C	54	19	52.1	6	M5	8	23	46	10,000	1.1 × 10 ⁻⁴	9,000	2	0.3	0.8	250
DRWC-54C	54	19	58	6	M5	8	23	46	10,000	1.2 × 10 ⁻⁴	9,000	2	0.3	0.8	280
DRSC-64C	64	26	56.84	7.8	M6	13	32	64	10,000	2.3 × 10 ⁻⁴	20,000	1	0.02	0.4	368
DRWB-64C	64	26	74	7.8	M6	13	32	64	10,000	3.0 × 10 ⁻⁴	13,000	2	0.3	0.8	478
DRWC-64C	64	26	84	7.8	M6	13	32	64	10,000	3.5 × 10 ⁻⁴	13,000	2	0.3	0.8	546
DRS-80C	79	30	66.4	10	M8	30	75	150	10,000	7.5 × 10 ⁻⁴	40,000	1	0.02	1.2	800
DRW-80C	79	30	82	10	M8	30	75	150	10,000	8.4 × 10 ⁻⁴	34,000	2	0.5	1.2	900
DRA-80C	79	30	98	10	M8	30	75	150	10,000	8.5 × 10 ⁻⁴	34,000	2	0.5	1.2	1,000
DRS-90C	94.5	30.4	68.2	9.3	M8	30	150	300	10,000	1.2 × 10 ⁻³	60,000	1	0.02	1.4	930
DRW-90C	94.5	30.4	98	9.3	M8	30	150	300	10,000	1.8 × 10 ⁻³	38,000	2	0.5	1.4	1,350
DRS-100C	104.5	30.6	71	9.5	M8	30	220	440	10,000	2.2 × 10 ⁻³	70,000	1	0.02	1.4	1,300
DRW-100C	104.5	30.6	102.5	9.5	M8	30	220	440	10,000	2.9 × 10 ⁻³	50,000	2	0.5	1.4	1,700

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'.

* The Max. RPM did not take into account the dynamic balance.

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Standard Inner Diameter(D1,D2)(mm)																						
	10	11	12	12.7	14	15	15.875	16	18	19	20	21	22	24	25	26	28	30	32	35	40	42	45
DR□-54C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○					
DR□-64C		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	○	○		
DR□-80C			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
DR□-90C										●	●	●	●	●	●	●	●	●	●	●	●	●	●
DR□-100C										●	●	●	●	●	●	●	●	●	●	●	●	●	●

* We encourage h7 for tolerance of attachment axis

* The inner diameter of ● marked is the standard diameter.

* The axis penetration is impossible on the ○ marked because of the inner diameter of the disk.

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

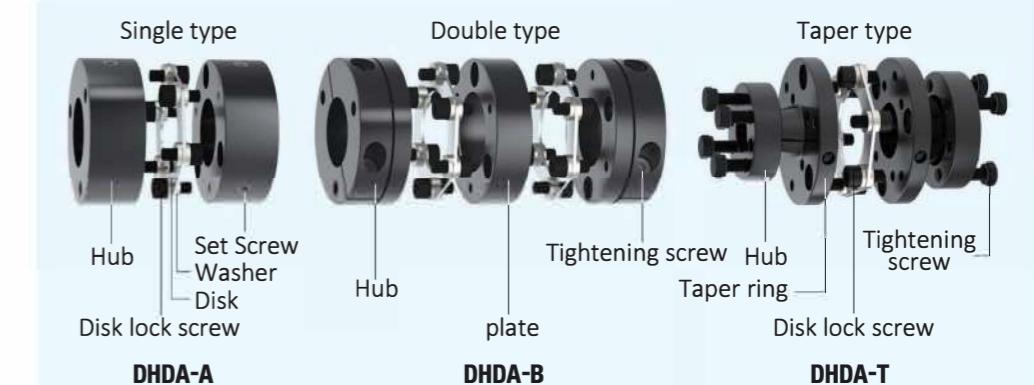
* We can supply with Key way.



Features

- High-rigidity power coupling with hexagonal disk pack.
- High-rigidity aluminum material, low inertia and zero backlash.
- Suitable for high speed rotation.
- It is assembled by using exclusive jig so it ensures high concentricity.
- It is possible to specify the entire length, and offers various options such as key way processing.

Structure (fastening type) and material



Usage

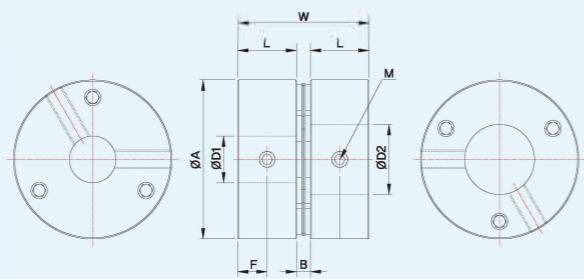
- Hub : Aluminum alloy with high stiffness
- Tightening screw : SCM435
- Disk: Stainless steel
- Disk lock screw : SCM435
- Plate & Taper ring Surface treatment of plate : Alumite process
- CNC Lathes
- Machining center
- Robot
- Semiconductor manufacturing equipment
- Others
- Hub surface treatment of hub : Alumite process
- Set screw : SCM435
- Washer : Steel
- Plate & Taper ring : Aluminum alloy with high stiffness

Order Method (Order Example)

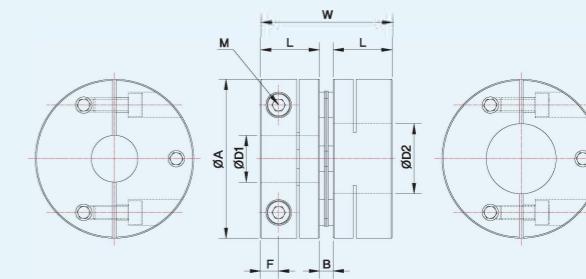
DHDA	58	A	S	S	14	15
Product NO	Size	Connection type	Hub fastening type : D1	Hub fastening type : D2	Inner diameter : D1	Inner diameter : D2

DHDA-A Single type

Set screw type



Clamp type



Product NO.	Dimension(mm)					Tightening Screw		Allowable Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Paralle	Angle	End play	Mass	
	A	L	W	B	F	Size	Torque	M	N·m	N·m	min ⁻¹	kg·m ²	N·m/rad	mm	°	± mm
DHDA-58A-S	58	19.4	44.2	5.4	9.7	M6	7	60	10,000	0.13×10 ⁻³	104,000	0.02	1	0.3	258	
DHDA-68A-S	68	25.3	56.5	5.9	12.65	M8	15	90	10,000	0.31×10 ⁻³	240,000	0.02	1	0.5	445	
DHDA-78A-S	78	30	67.7	7.7	15	M8	15	200	10,000	0.67×10 ⁻³	310,000	0.02	1	0.5	736	
DHDA-88A-S	88	30.8	69.9	8.3	15.4	M8	15	250	10,000	1.08×10 ⁻³	520,000	0.02	1	0.6	895	
DHDA-98A-S	98	32.65	75.5	10.2	16.3	M10	30	450	10,000	1.86×10 ⁻³	740,000	0.02	1	0.65	1,255	
DHDA-108A-S	108	33.75	77.7	10.2	16.85	M10	30	500	10,000	2.68×10 ⁻³	860,000	0.02	1	0.7	1,423	

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Standard Inner Diameter(D1,D2)(mm)																				
	10	12	14	15	16	18	20	22	24	25	26	28	30	32	35	40	42	45	48	50	55
DHDA-58A-S	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DHDA-68A-S		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DHDA-78A-S			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DHDA-88A-S			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DHDA-98A-S				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DHDA-108A-S					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

* We encourage h7 for tolerance of attachment axis

* The inner diameter of • marked is the standard diameter.

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can supply with Key way

* You can order with one side is clamp type and another side is Set screw type.

Product NO.	Dimension(mm)					Tightening Screw		Allowable Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Paralle	Angle	End play	Mass	
	A	L	W	B	F	Size	Torque	M	N·m	N·m	min ⁻¹	kg·m ²	N·m/rad	mm	°	± mm
DHDA-58A-C	58	19.4	44.2	5.4	6.5	M6	13	60	10,000	0.12×10 ⁻³	104,000	0.02	1	0.3	246	
DHDA-68A-C	68	25.3	56.5	5.9	7.75	M6	13	90	10,000	0.29×10 ⁻³	240,000	0.02	1	0.5	415	
DHDA-78A-C	78	30	67.7	7.7	9.5	M8	30	200	10,000	0.64×10 ⁻³	310,000	0.02	1	0.5	703	
DHDA-88A-C	88	30.8	69.9	8.3	9.5	M8	30	250	10,000	1.02×10 ⁻³	520,000	0.02	1	0.6	859	
DHDA-98A-C	98	32.65	75.5	10.2	10	M10	50	450	10,000	1.79×10 ⁻³	740,000	0.02	1	0.65	1,233	
DHDA-108A-C	108	33.75	77.7	10.2	10.5	M10	50	500	10,000	2.56×10 ⁻³	860,000	0.02	1	0.7	1,377	

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Standard Inner Diameter(D1,D2)(mm)																				
	10	12	14	15	16	18	20	22	24	25	26	28	30	32	35	40	42	45	48	50	55
DHDA-58A-C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DHDA-68A-C		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DHDA-78A-C			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DHDA-88A-C			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DHDA-98A-C				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DHDA-108A-C					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

* We encourage h7 for tolerance of attachment axis

* The inner diameter marked with • are supported as the standard diameter.

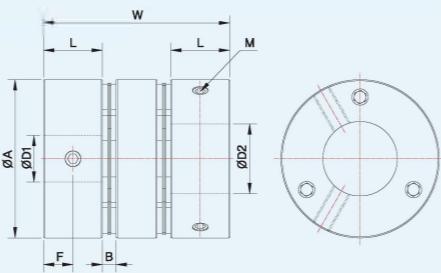
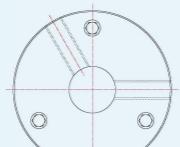
* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can supply with Key way

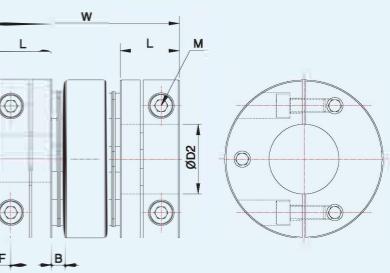
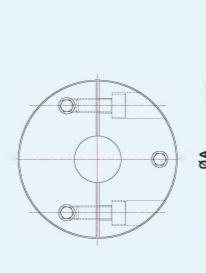
* You can order with one side is clamp type and another side is Set screw type.

DHDA-B Double type

Set screw type



Clamp type



Product NO.	Dimension(mm)					Tightening Screw		Allowable Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Paralle	Angle	End play	Mass	
	A	L	W	B	F	Size	Torque	M	N·m	N·m	min ⁻¹	kg·m ²	N·m/rad	mm	°	± mm
DHDA-58B-S	58	19.4	62	5.4	9.7	M6	7	60	10,000	0.18×10 ⁻³	52,000	0.2	2	0.6	356	
DHDA-68B-S	68	25.3	80	5.9	12.65	M8	15	90	10,000	0.43×10 ⁻³	120,000	0.25	2	1	615	
DHDA-78B-S	78	30	94	7.7	15	M8	15	200	10,000	0.94×10 ⁻³	155,000	0.31	2	1	1,025	
DHDA-88B-S	88	30.8	99.8	8.3	15.4	M8	15	250	10,000	1.55×10 ⁻³	260,000	0.32	2	1.2	1,271	
DHDA-98B-S	98	32.65	108.5	10.2	16.3	M10	30	450	10,000	2.71×10 ⁻³	370,000	0.32	2	1.31	1,824	
DHDA-108B-S	108	33.75	111	10.2	16.85	M10	30	500	10,000	3.89×10 ⁻³	430,000	0.34	2	1.4	2,067	

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Dimension(mm)					Tightening Screw		Allowable Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Paralle	Angle	End play	Mass	
	A	L	W	B	F	Size	Torque	M	N·m	N·m	min ⁻¹	kg·m ²	N·m/rad	mm	°	± mm
DHDA-58B-C	58	19.4	62	5.4	6.5	M6	13	60	10,000	0.17×10 ⁻³	52,000	0.2	2	0.6	344	
DHDA-68B-C	68	25.3	80	5.9	7.75	M6	13	90	10,000	0.41×10 ⁻³	120,000	0.25	2	1	587	
DHDA-78B-C	78	30	94	7.7	9.5	M8	30	200	10,000	0.90×10 ⁻³	155,000	0.31	2	1	992	
DHDA-88B-C	88	30.8	99.8	8.3	9.5	M8	30	250	10,000	1.50×10 ⁻³	260,000	0.32	2	1.2	1,235	
DHDA-98B-C	98	32.65	108.5	10.2	10	M10	50	450	10,000	2.65×10 ⁻³	370,000	0.32	2	1.3	1,803	
DHDA-108B-C	108	33.75	111	10.2	10.5	M10	50	500	10,000	3.76×10 ⁻³	430,000	0.34	2	1.4	2,021	

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Standard Inner Diameter(D1,D2)(mm)																
	10	12	14	15	16	18	20	22	24	25	26	28	30	32	35	40	42
DHDA-58B-S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-68B-S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-78B-S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-88B-S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-98B-S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-108B-S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

* We encourage h7 for tolerance of attachment axis

* The inner diameter marked with ● are supported as the standard diameter.

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can supply with Key way

* You can order with one side is clamp type and another side is Set screw type.

Product NO.	Standard Inner Diameter(D1,D2)(mm)																
	10	12	14	15	16	18	20	22	24	25	26	28	30	32	35	40	42
DHDA-58B-C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-68B-C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-78B-C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-88B-C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-98B-C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-108B-C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

* We encourage h7 for tolerance of attachment axis

* The inner diameter marked with ● are supported as the standard diameter.

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can supply with Key way

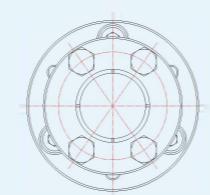
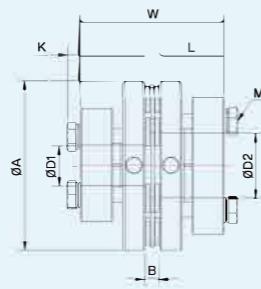
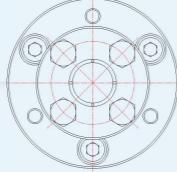
* You can order with one side is clamp type and another side is Set screw type.

DHDA-T Taper type

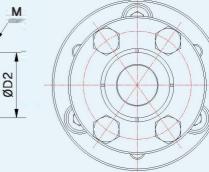
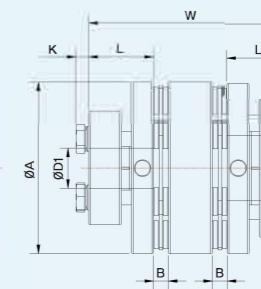
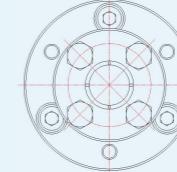
COUPLING

COUPLING

Single type



Double type



Product NO.	Dimension(mm)					Tightening Screw		Allowable Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Paralle	Angle	End play	Mass	
	A	L	W	B	K	Size	Torque	M	N·m	N·m	min ⁻¹	kg·m ²	N·m/rad	mm	°	± mm
DHDA-58A-T	58	20.1	45.6	5.4	4.6	M5	8	60	15,000	0.11×10 ⁻³	104,000	0.02	1	0.3	236	
DHDA-68A-T	68	25.8	57.5	5.9	5.2	M6	13	90	15,000	0.28×10 ⁻³	240,000	0.02	1	0.5	419	
DHDA-78A-T	78	30.8	69.3	7.7	5.2	M6	13	200	14,000	0.50×10 ⁻³	310,000	0.02	1	0.5	618	
DHDA-88A-T	88	30.8	69.9	8.3	5.2	M6	13	250	14,000	1.81×10 ⁻³	520,000	0.02	1	0.6	733	
DHDA-98A-T	98	30.8	71.8	10.2	5.2	M6	13	450	13,000	1.37×10 ⁻³	740,000	0.02	1	0.65	1,030	
DHDA-108A-T	108	30.8	71.8	10.2	5.2	M6	13	500	13,000	2.09×10 ⁻³	860,000	0.02	1	0.7	1,184	

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Standard Inner Diameter(D1,D2)(mm)																					
	10	12	14	15	16	18	20	22	24	25	26	28	30	32	35	36	40	42	45	48	50	55
DHDA-58A-T	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-68A-T		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-78A-T			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-88A-T			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-98A-T			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-108A-T					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

* We encourage h7 for tolerance of attachment axis

* The inner diameter marked with ● are supported as the standard diameter.

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* You can order with one side is clamp type and another side is Set screw type.

Product NO.	Dimension(mm)					Tightening Screw		Allowable Torque	Max. RPM	Moment of inertia	Torsional Stiffness	Paralle	Angle	End play	Mass	
	A	L	W	B	K	Size	Torque	M	N·m	N·m	min ⁻¹	kg·m ²	N·m/rad	mm	°	± mm
DHDA-58B-T	58	20.1	63.4	5.4	4.6	M5	8	60	15,000	0.16×10 ⁻³	52,000	0.2	2	0.6	333	
DHDA-68B-T	68	25.8	81	5.9	5.2	M6	13	90	15,000	0.40×10 ⁻³	120,000	0.25	2	1	591	
DHDA-78B-T	78	30.8	95.6	7.7	5.2	M6	13	200	14,000	0.77×10 ⁻³	155,000	0.31	2	1	908	
DHDA-88B-T	88	30.8	99.8	8.3	5.2	M6	13	250	14,000	1.28×10 ⁻³	260,000	0.32	2	1.2	1,110	
DHDA-98B-T	98	30.8	104.8	10.2	5.2	M6	13	450	13,000	2.23×10 ⁻³	370,000	0.38	2	1.3	1,610	
DHDA-108B-T	108	30.8	105.1	10.2	5.2	M6	13	500	13,000	3.29×10 ⁻³	430,000	0.38	2	1.4	1,826	

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Standard Inner Diameter(D1,D2)(mm)																					
	10	12	14	15	16	18	20	22	24	25	26	28	30	32	35	36	40	42	45	48	50	55
DHDA-58B-T	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-68B-T		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-78B-T			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-88B-T			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-98B-T			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
DHDA-108B-T				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

* We encourage h7 for tolerance of attachment axis

DISK COUPLING Technical data

COUPLING

DISK COUPLING Technology Data

Precautions when using

The concentricity of the left and right internal diameters of the coupling is precisely assembled using a dedicated jig. If strong impact is applied to the coupling from outside, assembly precision may not be maintained and there is a possibility of damage during use. Please pay enough attention.

- 1) The operating temperature range is -30°C ~ +100°C. Although it has water resistance and oil resistance, use at extreme temperature is a factor of deformation and please avoid.
- 2) Since the disk is made of thin stainless steel plate, handle it carefully to avoid damage.
- 3) Be sure to observe the tolerances of parallel, angular and axial.
- 4) Be sure to fasten the clamping bolt or set screw with the specified torque.

Mounting

- 1) Make sure that the clamping bolt or set screw is loosened and remove foreign matter and oil on the inner surface of the shaft and coupling. (Please wipe off the oil component by using degreasing agent etc.)
- 2) Compressed to disk pack when inserting coupling. Do not apply excessive force such as tensile. Be especially careful when inserting a coupling on the motor side and then inserting the coupling on the mating shaft, which may result in inadequate compressive force.
- 3) Make sure that the coupling smoothly moves in the axial and rotational directions with the clamping bolt or set screw loosened. If it does not move smoothly, adjust the centering of the two axes again. Although this method is recommended as a simple confirmation method of the left and right concentricity, if the confirmation method like this is not possible, check the degree of assembly by the management of the machine parts quality and other methods.
- 4) The relative use axis is a circular axis principle, but when using a key shape axis other than a circular axis, pay attention to the axis attachment position as shown below. Depending on the mounting position of the shaft, the coupling body may be damaged and shaft gripping force may be reduced. To meet the coupling performance sufficiently, we recommend using it on a circular shaft. (Figures 2 and 3)
- 5) The length at which the shaft is inserted into the coupling is up to the length of the hub (dimension table L). Do not interfere with the Disk plate and other axes.
- 6) After confirming the action of force such as compression or tension in the axial direction, tighten the tightening screw or set screw. When fastening the tightening screw or set screw, tighten it within the specified torque range with a calibrated torque wrench.



Figure1



Figure2(The wrong method)



Figure3(The Correct method)

DISK COUPLING Technology Data

Precautions when using

The key way machining

The keyway machining is available upon request. It is designed to transmit the torque by the frictional engagement by the clamp mechanism, the allowable torque of the coupling. Do not use it in excess. Please also note the following points before using

- 1) The key must be less than or equal to the keyway width. When the key is used as a press-in, when attaching or during operation. It may be damaged.
- 2) Please contact us for the position of the keyway machining.
- 3) When adopting Js9 class tolerance, it is possible to tighten the coupling when assembling to the shaft. Be careful not to apply compression.
- 4) If the fitting of the key and the keyway is set too loosely, rattling may occur and dust may be generated. Also, be careful not to lose the key.
- 5) If a set screw is added to the keyway, the clamp function will be lowered. There is a risk of loose set screws. Also, it is not recommended because the structure of the hub may deteriorate and the coupling may be damaged.



Circular disk pack



Rectangle disk pack



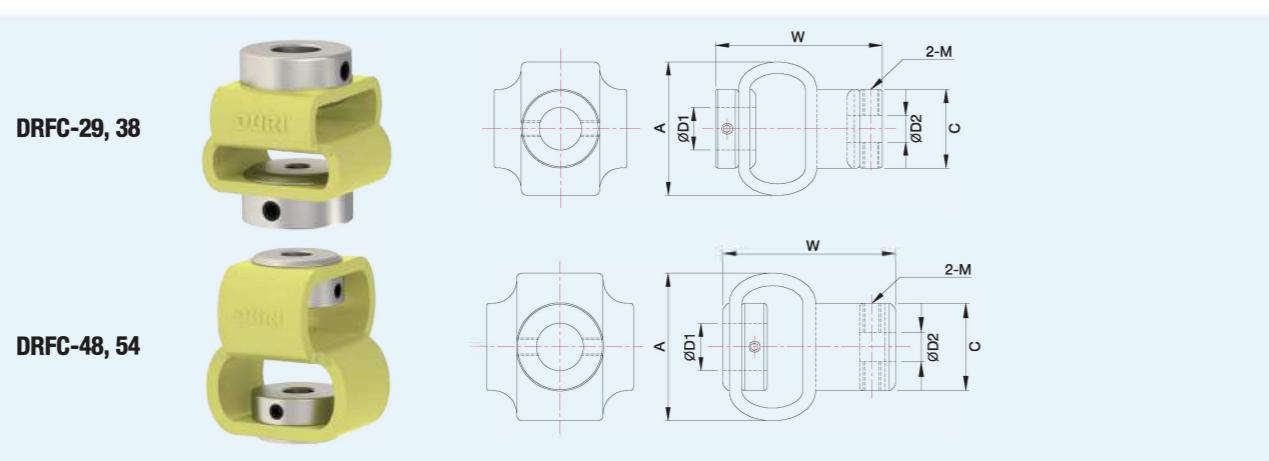
Hexagon disk pack

Precautions for ball screw system

The servo motor may oscillate according to the gain adjustment of the servo motor. The oscillation of the servomotor is mainly caused by the natural frequency of the entire ball screw system and the problem of the electric control system. This problem is caused by adjustment of the whole system such as torsional stiffness and inertia of coupling and ball screw, and by adjusting the torsional natural frequency of the mechanical system or adjusting it by the electric control tuning function of the servo motor (filter function).

Difference in rigidity according to disk shape

DURI disk coupling has a circular shape, a square shape, and a hexagon shape. The DHDA Series employs hexagonal disks. Since the hub coupling is coupled to the disk via disk, the hexagonal disks that deliver the torque with six bolts are used to provide high torsional rigidity, while the flexibility is somewhat higher. Please refer to the selection.

**Features**

- Integrated flexible coupling
- Absorbs excellently large eccentricity, declination and end play
- Absorbs shock and vibration.
- Low moment of inertia.

Structure (fastening type) and material

- Hub : S45C
- Hub surface treatment : nickel plating
- Spacer : Polyurethane

**Order Method
(Order Example)**

DRFC	38	8	12
Product NO	Size	Inner diameter : D1	Inner diameter : D2

Product NO.	Dimension(mm)			Tightening Screw		Max. RPM	Allowable Torque	Angle	Paralle	End play	Mass
	A	W	C	Size	Torque						
DRFC-29	25	28	18	M4	1.7	3,000	0.35	10	2	1.5	20
DRFC-38	32	35	22.5	M4	1.7	3,000	1.35	10	2.5	2	40
DRFC-48	43	50	26	M5	4	3,000	1.8	12	2.5	2	60
DRFC-54	50	59	29.5	M6	7	3,000	4.5	12	3	2	140

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'.

* The Max. RPM did not take into account the dynamic balance.

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Standard Inner Diameter(D1,D2)(mm)								
	4	5	6	8	10	12	14	15	16
DRFC-29	•	•	•	•	•				
DRFC-38		•	•	•	•	•			
DRFC-48		•		•	•	•	•		
DRFC-54				•	•	•	•	•	•

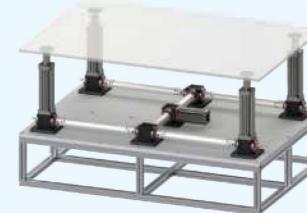
* We encourage h7 for tolerance of attachment axis

* The inner diameter of • marked is the standard diameter.

CONNECTING SHAFT**CONNECTING SHAFT COUPLING****Features**

- The balancing is excellent.
- Increase the convenience and save the cost through the use this shaft.
- In case of clamp type, it is possible to supply split type.
- In case of split type, it is easy to assemble and disassemble.
- There are many kinds such as Disk or Jaw.
- We can supply it with the length which client request.

※ Please ask to our company about delivery time.

Application

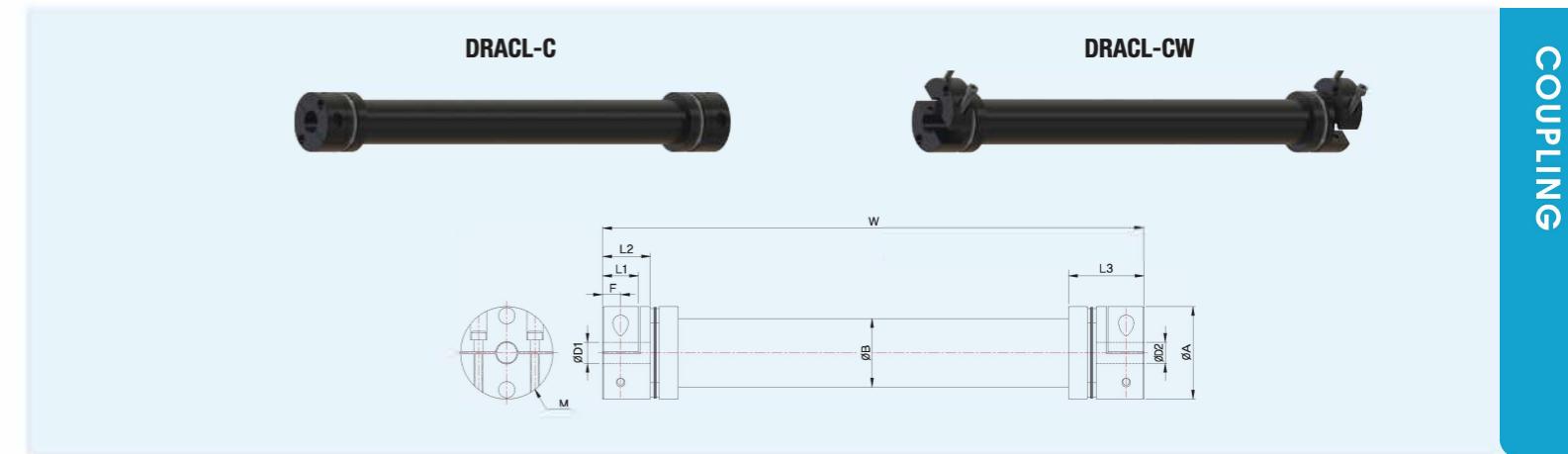
**Features**

- Due to aluminum alloy with high stiffness, moment of inertia is low.
- Increase the convenience and save cost through the use this shaft.
- In case of clamp type, it is possible to supply as split type
- In case of split type, it is easy to assemble and disassemble.
- We can supply it with the length which client request.

Structure (fastening type) and material**Order Method
(Order Example)**

DRACL	54	C	15	20	W1,000
Product NO	Size	Fastening type	Inner diameter : D1	Inner diameter : D2	Total length

- Hub : Aluminum alloy with high stiffness
- Connecting shaft : Aluminum alloy with high stiffness
- Hub & Connecting shaft surface treatment : Alumite process
- Disk : Stainless steel
- Washer : Stainless steel
- Tightening screw : SCM435



Product NO.	Dimension(mm)						W	Tightening Screw	Rated Torque	Max. Torque	Max. RPM	Moment of inertia		Torsional Stiffness	Angle	Parallel	End play			
	A	B	F	L1	L2	L3	mm	mm	M	N·m	N·m	min⁻¹	kg·m²	kg·m²	N·m/rad	N·m/rad	mm/m	mm		
DRACL-31C□	31.8	30	5.5	11	15.5	27.78	88	2,000	M4	4	4	8	1,500	8.8×10⁻⁶	1.36×10⁻⁴	1,300	1,380	2	0.15	0.2
DRACL-42C□	42.5	40	8.5	17	24	38.3	113	2,000	M5	8	10	20	1,500	2.9×10⁻⁵	3.43×10⁻⁴	3,500	3,800	2	0.3	0.6
DRACL-54C□	54	40	10.5	21	28	44.14	131	2,000	M6	13	30	60	1,500	9.8×10⁻⁵	3.43×10⁻⁴	11,000	3,800	2	0.5	1.2
DRACL-64C□	64	55	13	26	35	52.44	154	2,000	M8	30	42	84	1,500	1.1×10⁻⁴	1.23×10⁻³	13,000	11,150	2	0.5	1.6
DRACL-80C□	79	55	15	30	40	61	175	2,000	M10	50	98	196	1,500	8.5×10⁻⁴	1.23×10⁻³	34,000	11,150	2	0.5	2.0
DRACL-90C□	94.5	78	18	36	48.5	72.7	202	1,400	M10	50	200	400	1,500	1.8×10⁻³	5.07×10⁻³	38,000	37,840	2	0.5	2.0
DRACL-100C□	104.5	78	20	40	51.6	78	217	1,400	M10	50	265	530	1,500	2.9×10⁻³	5.07×10⁻²	50,000	37,840	2	0.5	2.0

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'.

* The Max. RPM did not take into account the dynamic balance.

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Standard Inner Diameter(D1,D2)(mm)																																
	5	6	6.35	7	8	9	9.525	10	11	12	12.7	14	15	15.875	16	17	18	19	20	22	24	25	26	28	30	32	35	40	42	45	50		
DRACL-31C□	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
DRACL-42C□	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•			
DRACL-54C□								•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
DRACL-64C□								•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
DRACL-80C□								•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
DRACL-90C□																																	
DRACL-100C□																																	

* We encourage h7 for tolerance of attachment axis

* The inner diameter of ● marked is the standard diameter.

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

* We can supply with Key way.

**Features**

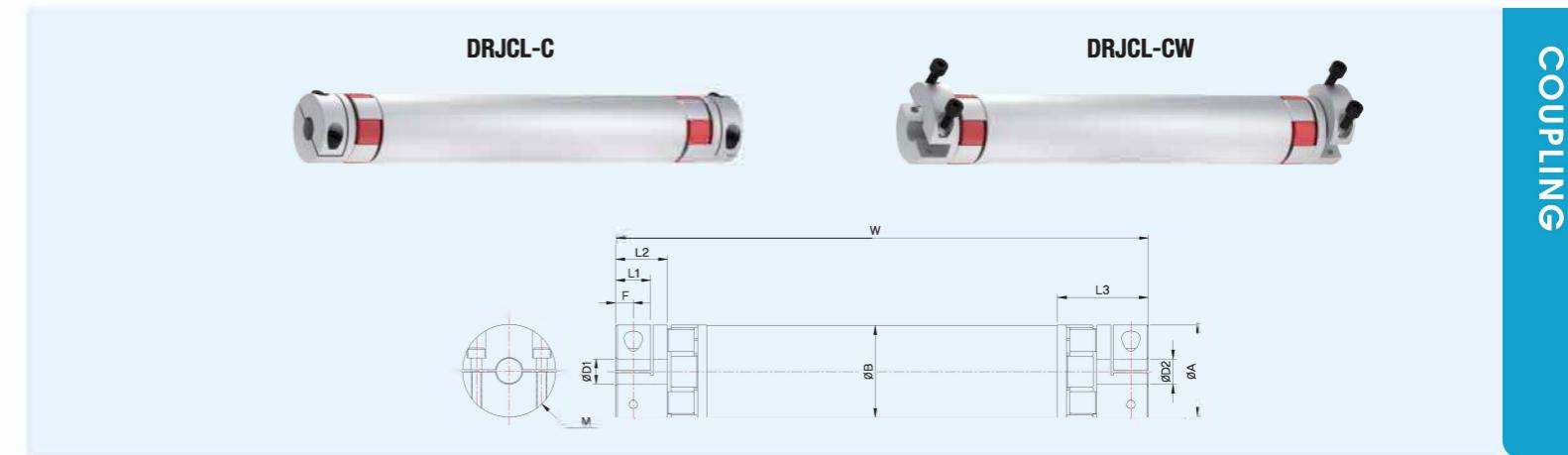
- Due to aluminum alloy with high stiffness, moment of inertia is low.
- Increase the convenience and save cost through the use this shaft.
- In case of clamp type, it is possible to supply as split type
- In case of split type, it is easy to assemble and disassemble.
- We can supply it with the length which client request.

Structure (fastening type) and material

- Hub: Aluminum alloy with high stiffness
- Connecting shaft : Aluminum alloy with high stiffness
- Hub & Connecting shaft surface treatment: Alumite process
- Sleeve : Polyurethane
- Tightening screw : SCM435

Order Method (Order Example)

DRJCL	55	C	RD	15	20	W1,000
Product NO	Size	Fastening type	Sleeve type	Inner diameter : D1	Inner diameter : D2	Total length



Product NO.	Dimension(mm)						W	Tightening Screw	Rated Torque	Max. Torque	Max. RPM	Moment of inertia		Torsional Stiffness		Angle	Parallel	End play		
	A	B	F	L1	L2	L3						mm	mm	M	N·m	N·m	min⁻¹	kg·m²	kg·m²	N·m/rad
DRJCL-30C□RD	30	30	5.5	11	15.5	33	98	2,000	M4	4	14	28	1,500	7.5×10⁻⁶	1.36×10⁻⁴	220	1,380	2	5	±1.0
DRJCL-40C□RD	40	40	8.5	17	25	47	130	2,000	M5	8	18	36	1,500	3.9×10⁻⁵	3.43×10⁻⁴	2,000	3,800	2	5	±1.0
DRJCL-55C□RD	55	55	10.5	21	30	54	175	2,000	M6	13	60	120	1,500	1.6×10⁻⁴	1.23×10⁻³	4,000	11,150	2	5	±1.0
DRJCL-65C□RD	65	55	13	26	35	63	200	2,000	M8	30	180	360	1,500	3.8×10⁻⁴	1.23×10⁻³	8,000	11,150	2	5	±1.0
DRJCL-80C□RD	80	55	15	30	40	84	245	2,000	M10	50	325	650	1,500	1.0×10⁻³	1.23×10⁻³	20,000	11,150	2	5	±1.0
DRJCL-95C□RD	95	78	18	36	50	92	270	1,400	M10	50	450	900	1,500	2.8×10⁻³	5.07×10⁻³	30,000	37,840	2	5	±1.0
DRJCL-100C□RD	104	78	20	40	56	101	300	1,400	M12	90	600	1,200	1,500	4.6×10⁻³	5.07×10⁻²	40,000	37,840	2	5	±1.0

* The coupling torque may be limited by the retention force of the shaft fastening part, so check the 'Standard inner diameter'.

* The Max. RPM did not take into account the dynamic balance.

* Mass and moment of inertia are calculated based on maximum inner diameter.

* Please contact us for other dimension allowances.

Product NO.	Standard Inner Diameter(D1,D2)(mm)																							
	7	8	9.525	10	11	12	14	15	16	18	19	20	22	24	25	26	28	30	32	35	40	45	50	55
DRJCL-30C□RD	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DRJCL-40C□RD	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DRJCL-55C□RD					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DRJCL-65C□RD					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DRJCL-80C□RD													•	•	•	•	•	•	•	•	•	•	•	•
DRJCL-95C□RD													•	•	•	•	•	•	•	•	•	•	•	•
DRJCL-100C□RD													•	•	•	•	•	•	•	•	•	•	•	•

* We encourage h7 for tolerance of attachment axis

* The inner diameter of • marked is the standard diameter.

* For non-standard inner diameters other than the above table, it is available separately. Please contact us.

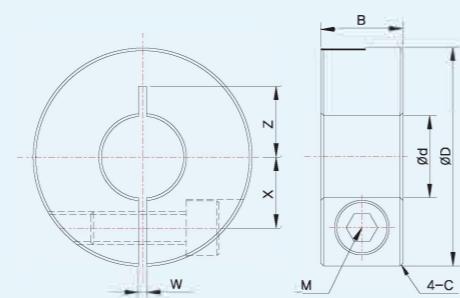
* We can supply with Key way.

DRSS -Set Collars

COUPLING



Slit type



Structure (fastening type) and material

Product NO.	Material	Surface treatment
DRSS	Aluminum alloy with high stiffness	White Alumite Process
DRSS-B	Aluminum alloy with high stiffness	Black Alumite Process
DRSS-S	S45C	Black Phosphate Coating
DRSS-N	S45C	Electroless Nickel Plating
DRSS-SUS	SUS304	

Order Method
(Order Example)

DRSS	10	12
Product NO	d	B

Product NO.	Dimension(mm)						Tightening screw
	d	D	B	W	X	Z	
DRSS	4	18	8	1	5	3.5	M3
DRSS	5	20	8	1	6	6	M3
DRSS	6	20	8	1	6	6.5	M3
DRSS	8	25	10	1.5	8	9	M4
DRSS	10	35	15	1.5	10	12	M6
DRSS	12	35	15	1.5	11	12	M6
DRSS	13	35	15	1.5	11.5	12	M6
DRSS-B	15	40	15	1.5	13	13	M6
DRSS-S	16	40	15	1.5	13	13	M6
DRSS-N	17	40	15	1.5	13	13	M6
DRSS-SUS	18	45	15	1.5	15	15	M6
	20	45	15	1.5	15	15	M6
	25	50	15	1.5	18	18	M6
	30	55	15	1.5	20	18	M6
	35	60	15	2	23	21	M6
	40	70	18	2	26	23	M8
	50	85	22	3	32	28	M10

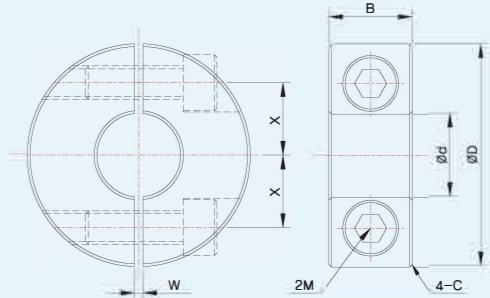
* Please contact us for other dimension allowances.

DRSD -Set Collars

COUPLING



Split type



Structure (fastening type) and material

Product NO.	Material	Surface treatment
DRSD	Aluminum alloy with high stiffness	White Alumite Process
DRSD-B	Aluminum alloy with high stiffness	Black Alumite Process
DRSD-S	S45C	Black Phosphate Coating
DRSD-N	S45C	Electroless Nickel Plating
DRSD-SUS	SUS304	

Order Method
(Order Example)

DRSD	10	12
Product NO	d	B

Product NO.	Dimension(mm)						Tightening screw
	d	D	B	W	X	Z	
DRSD	4	18	8	1	5	3.5	M3
DRSD	5	20	8	1	6	6	M3
DRSD	6	20	8	1	6	6.5	M3
DRSD	8	25	10	1.5	8	9	M4
DRSD	10	35	15	1.5	10	12	M6
DRSD	12	35	15	1.5	11	12	M6
DRSD	13	35	15	1.5	11.5	12	M6
DRSD-B	15	40	15	1.5	13	13	M6
DRSD-S	16	40	15	1.5	13	13	M6
DRSD-N	17	40	15	1.5	13	13	M6
DRSD-SUS	18	45	15	1.5	15	15	M6
	20	45	15	1.5	15	15	M6
	25	50	15	1.5	18	18	M6
	30	55	15	1.5	20	18	M6
	35	60	15	2	23	21	M6
	40	70	18	2	26	23	M8
	50	85	22	3	32	28	M10

* Please contact us for other dimension allowances.

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Calculating the minimum diameter on the hub

- Be sure that the outer diameter must be larger than the value above calculated.

$$\text{Min. diameter on the hub} > D \cdot \sqrt{\frac{\sigma_{0.2} + (C \cdot P_h)}{\sigma_{0.2} - (C \cdot P_h)}} + d_{\text{bolt}} [\text{mm}]$$

- $\sigma_{0.2}$: the yield point by which the material is selected

- P_h : Pressure on the hub

- C : Application constant

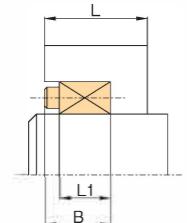
- d_{bolt} : the nominal diameter of a bolt

※ Note) if there is any hole on the bolt of a hub, d_{bolt} is applied. If not, d_{bolt} is equal to 0.

Application constant

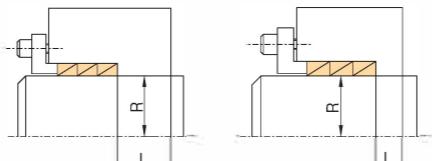
2-type shape can be illustrated based on the following condition.

If a single row is required

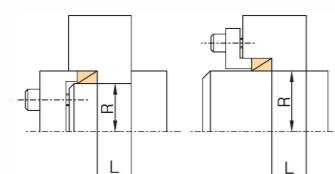


$$B \leq L \leq 2 \cdot L_1$$

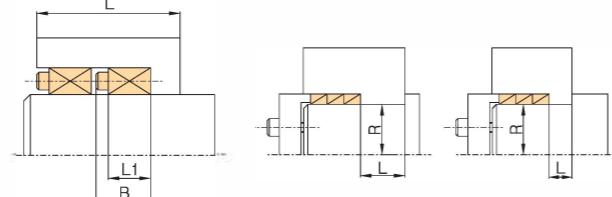
If a multi row is required



$$C = 1.0$$

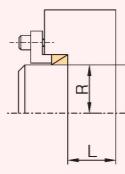


$$L < n \cdot b + L_1$$

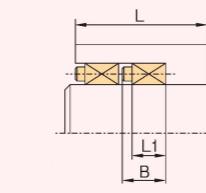


$$n: \text{Singular max 3}$$

$$C = 0.8$$

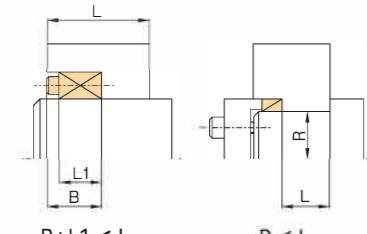


$$R \leq L$$

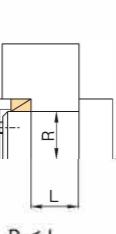


$$n \cdot b + L_1 \leq L$$

$$C = 0.6$$



$$B + L_1 \leq L$$



$$R \leq L$$

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The yield point (yield strength) is set to $\sigma_{0.2}$.

	The yield point $\sigma_{0.2}$.		Material symbol	Designation
	Mpa[N/mm²]	Kgf/mm²		
100~200	119	12	FC200	Standard material
	147	15	FC250	Standard material
	175	18	FC300	Standard material
	196	20	SC360	Carbon cast steel
			SS330	Rolled steel for general
200~300	203	21	A2017-T4	Duralumin
	205	21	FC350	Standard material
	206	21	SC410	Carbon cast steel
	225	23	SUS304	Stainless
	245	25	S10C	Standard material
	265	27	SS400	Carbon steel for machine structure use
	274	28	SC450	Rolled steel for general
	280	29	FCD400	Carbon steel for machine structure use
	290	30	S15C	Carbon steel for machine structure use
	320	33	FCD500	Nodular graphite cast iron
300~400	325	33	S20C	Standard material
	343	35	SC480	Carbon cast steel
	365	37	SS490	Rolled steel for general
	370	38	S35C	Carbon steel for machine structure use
	400~	420	S50C	Carbon steel for machine structure use
400~	420	43	FCD600	Nodular graphite cast iron
			S55C	Standard material
	420	43	FCD700	Carbon steel for machine structure use
				Nodular graphite cast iron

The materials can be selected based on the point by which each pressure on the side is bearable by checking the pressure given to the shaft and hub by transmission power and torques.

This value can be applied to calculate the minimum diameter on the hub and the maximum diameter on the axis hole.

SS400, S15C~S55C are written in bold type.

Standard materials listed in the table show that the materials used are not treated with heat.

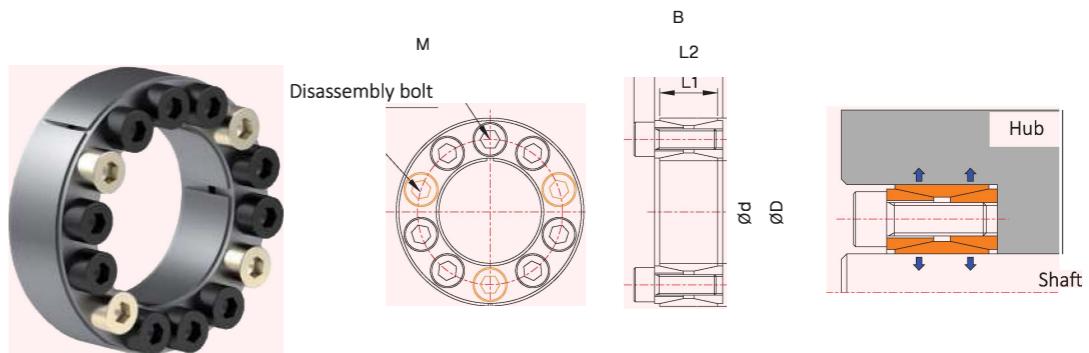
Be careful not to have some metals with low yield strength even in the process of heat or surface treatment.

The products made of cast iron have no yield strength with them, so 70% of their tensile strength can be replaced with what a diameter on the hub has been calculated.

Duralumin extension (-T4), Treated with heat, has hardened for 4days, stored at room temperature.

Possible actions for bolt clamping and torques (DIN912 excluded)

Strength class (Size X Pitch)	Max tightening force			Max tightening Torque		
	8.8	10.9	12.9	8.8	10.9	12.9
M2.5 × 0.45	1,500	2,140	2,570	0.7	1.0	1.2
M3 × 0.5	2,230	3,180	3,820	1.3	1.8	2.2
M4 × 0.7	3,900	5,450	6,550	2.9	4.1	4.9
M5 × 0.8	6,350	8,950	10,700	6.0	8.5	10
M6 × 1	9,000	12,600	15,100	10	14	17
M8 × 1.25	16,500	23,200	27,900	25	35	41
M10 × 1.5	26,200	36,900	44,300	49	69	83
M12 × 1.75	38,300	54,000	64,500	86	120	145
M14 × 2	52,500	74,000	88,500	135	190	230
M16 × 2	73,000	102,000	123,000	210	295	355
M18 × 2.5	88,000	124,000	148,000	290	405	485
M20 × 2.5	114,000	160,000	192,000	410	580	690



Features	The product has a potential for high torque transmission. It has a hub stationary on the axis when assembled. It is easy to mount and disassemble in adjusting its axial direction. It can be disassembled by slightly loosening the bolts, but special bolts can facilitate the disassembly when there is some rust on the surface.
	15×42
	17×44
	19×47
Specifications	Surface roughness : Rt max 16μm Processing tolerance(Max) : Shaft h11, Hub H11
	20×47
Usage	It can be widely used. Pulley, Gear, Flywheel, Lever, Cam etc.
	22×47
How to use	24×50
	25×50
Cautions	28×55
	30×55
Order Method (Order Example)	32×60
	35×60
Order Method (Order Example)	38×65
	40×65
Order Method (Order Example)	42×75
	45×75
Order Method (Order Example)	48×80
	50×80
Order Method (Order Example)	55×85
	60×90
Order Method (Order Example)	65×95
	70×110
Order Method (Order Example)	75×115
	80×120
Order Method (Order Example)	85×125
	90×130
Order Method (Order Example)	95×135
	100×145

	Dimension(mm)			Tightening screw(DIN912/12.9)			Transfer		Surface pressure		Mass
	L1 mm	L2 mm	B mm	Size M	Qty	Tightening torque N·m	Thrust kN	Torque N·m	Shaft Mpa	Hub Mpa	
15×42	17	20	26	M6	8	15	25	250	200	85	0.18
17×44	17	20	26	M6	8	15	25	250	200	85	0.18
19×47	17	20	26	M6	8	15	29	270	225	95	0.20
20×47	17	20	26	M6	8	15	29	280	225	95	0.20
22×47	17	20	26	M6	8	15	29	310	210	95	0.20
24×50	17	20	26	M6	9	15	32	370	210	100	0.21
25×50	17	20	26	M6	9	15	32	400	200	100	0.21
28×55	17	20	26	M6	10	15	36	500	200	100	0.25
30×55	17	20	26	M6	10	15	36	530	185	100	0.25
32×60	17	20	26	M6	12	15	42	680	205	110	0.29
35×60	17	20	26	M6	12	15	43	750	190	110	0.28
38×65	17	20	26	M6	14	15	49	930	200	115	0.31
40×65	17	20	26	M6	14	15	49	980	190	115	0.31
42×75	20	24	32	M8	12	37	75	1,580	235	130	0.53
45×75	20	24	32	M8	12	37	76	1,700	220	130	0.52
48×80	20	24	32	M8	12	37	74	1,790	210	120	0.56
50×80	20	24	32	M8	12	37	75	1,870	200	120	0.55
55×85	20	24	32	M8	14	37	88	2,390	210	135	0.59
60×90	20	24	32	M8	14	37	88	2,610	190	125	0.63
65×95	20	24	32	M8	16	37	98	3,210	200	135	0.68
70×110	24	28	38	M10	14	70	135	4,709	266	168	1.22
75×115	24	28	38	M10	14	70	135	5,003	247	164	1.27
80×120	24	28	38	M10	14	70	135	5,298	240	160	1.34
85×125	24	28	38	M10	16	70	154	6,475	252	172	1.42
90×130	24	28	38	M10	16	70	154	6,867	238	164	1.49
95×135	24	28	38	M10	18	70	174	8,143	252	178	1.52
100×145	26	33	45	M12	14	127	196	9,750	252	174	2.1

Product NO	Inner diameter : d	Outer Diameter : D
20	47	

* DR200 : Standard product
 * DR200N : Electroless nickel plating product.
 * DR200B : Black oxide film product

DR300 (Slits not found) & DR300C (Slits found)

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Features

Absence of key grooves on the hub and shaft helps improve more strength on its parts. This can save energy and space for high torque transmission. Much more transmission can be obtained regardless of how large the product is. Easy adjustment of axial direction can improve operator's work efficiency. DR300& DR300C have common types compatible with other products. DR300F can be used without any flange designed. If DR300(C) is combined on a multi row, DR300EF type (adjustable) can be recommended.

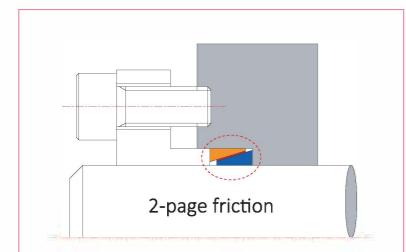
Specifications

Surface roughness : Rt max 16 μm
Processing tolerance(Max) : d 40mm below, Shaft h6, hub H7
d 42mm Above, Shaft h8, Hub H8

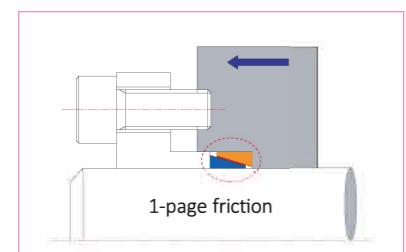
Usage

Pump, Cam, Sprocket, Pulley, etc.

Cautions



Transmission is applied the same as on the catalog. the hub unmovable(Feature 1)



the hub movable(Feature 2)

DR300F



Features

DR300F is a DR300type(DR300, DR300C) and optimized standard coupling. It need not be designed again when using a DR300 type. The diameter on the other side $\phi 10 \sim \phi 100$ Tolerance for diameters on the axis and the hub can be set depending on each type.

Specifications

Surface roughness : Rt max 16 μm
Processing tolerance(Max) : d 40mm below, Shaft h6, hub H7
d 42mm Above, Shaft h8, Hub H8

DR300EF



Features

DR300EF is suitable for thin parts with a narrow outer diameter on the hub. It can have space-saving, high torque transmission and adjustable attributes. With its inner race integrated with the flange and its bolts annexed, the product has the same inner and outer diameters with DR300C. The outer diameter on the hub can apply to the DR300 and 300C. Unlike them, it has an adjustable attribute, so the boss can apply to thin parts. It has a good capacity of transmission, and DR300 being compatible with R300C in the inner and outer diameter offers DR300EF another usage on a multi row.

Specifications

Surface roughness : Rt max 16 μm
Processing tolerance : Shaft h8, Hub H8

Usage

Pump, Cam, Sprocket, Pulley, etc.

Cautions

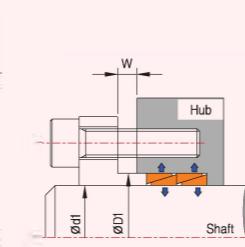
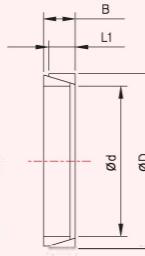
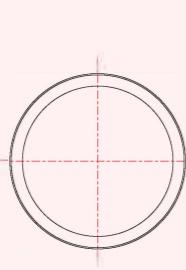
the hub is movable despite its space-saving, high torque transmission and adjustable attributes.

How to use

if you want to know how to assemble and disassemble the product properly, refer to the relevant pages.

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DR300 (Slits not found)



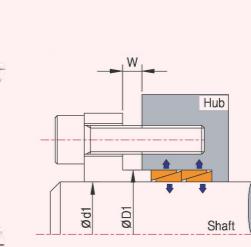
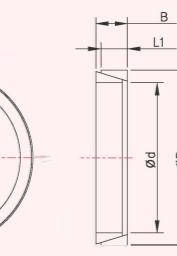
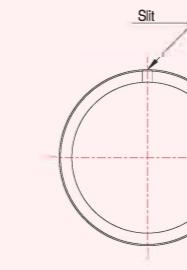
Features

DR300 has a sealing effect because there are no slits found. Absence of slits requires initial clamping force until interlocked with the hub.

Order Method (Order Example)

DR300	20	25
Product NO	Inner diameter : d	Outer Diameter : D

DR300C (Slits found)



Features

DR300C has any slit found, so initial clamping force is not required and its bolts are clamped.

Order Method (Order Example)

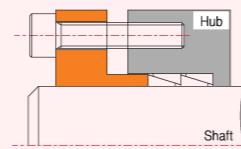
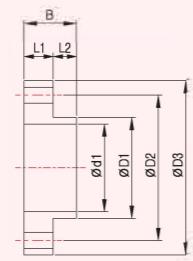
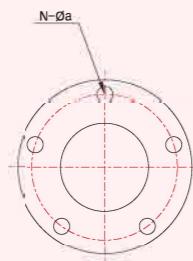
DR300C	20	25
Product NO	Inner diameter : d	Outer Diameter : D

DR300/DR300C (d x D) mm	Dimension(mm)		Mass kg	Scale when using multi W(Gap) when using multi Dimension				
	x1.0			x1.55	x1.85	x2.02		
	L1 mm	B mm		Row1 mm	Row2 mm	Row3 mm	Row4 mm	
5×8	3.7	4.5	0.002	2.5	2.5	3.0	4.0	
6×9	3.7	4.5	0.002	2.5	2.5	3.0	4.0	
7×10	3.7	4.5	0.002	2.5	2.5	3.0	4.0	
8×11	3.7	4.5	0.002	2.5	2.5	3.0	4.0	
9×12	3.7	4.5	0.002	2.5	2.5	3.0	4.0	
10×13	3.7	4.5	0.002	2.5	2.5	3.0	4.0	
11×14	3.7	4.5	0.002	2.5	2.5	3.0	4.0	
12×15	3.7	4.5	0.002	2.5	2.5	3.0	4.0	
13×16	3.7	4.5	0.002	2.5	2.5	3.0	4.0	
14×18	5.3	6.3	0.005	3.5	3.5	4.5	5.5	
15×19	5.3	6.3	0.005	3.5	3.5	4.5	5.5	
16×20	5.3	6.3	0.006	3.5	3.5	4.5	5.5	
17×21	5.3	6.3	0.006	3.5	3.5	4.5	5.5	
18×22	5.3	6.3	0.007	3.5	3.5	4.5	5.5	
19×24	5.3	6.3	0.007	3.5	3.5	4.5	5.5	
20×25	5.3	6.3	0.009	3.5	3.5	4.5	5.5	
22×26	5.3	6.3	0.007	3.5	3.5	4.5	5.5	
24×28	5.3	6.3	0.008	3.5	3.5	4.5	5.5	
25×30	5.3	6.3	0.009	3.5	3.5	4.5	5.5	
28×32	5.3	6.3	0.010	3.5	3.5	4.5	5.5	
30×35	5.3	6.3	0.011	3.5	3.5	4.5	5.5	
32×36	5.3	6.3	0.011	3.5	3.5	4.5	5.5	
35×40	6.0	7.0	0.016	3.5	3.5	4.5	5.5	
36×42	6.0	7.0	0.019	3.5	3.5	4.5	5.5	
38×44	6.0	7.0	0.021	3.5	3.5	4.5	5.5	
40×45	6.6	8.0	0.021	3.5	4.5	5.5	6.5	
42×48	6.6	8.0	0.026	3.5	4.5	5.5	6.5	
45×52	8.6	10.0	0.045	3.5	4.5	5.5	6.5	
48×55	8.6	10.0	0.043	3.5	4.5	5.5	6.5	
50×57	8.6	10.0	0.045	3.5	4.5	5.5	6.5	
55×62	8.6	10.0	0.049	3.5	4.5	5.5	6.5	
56×64	10.4	12.0	0.070	3.5	4.5	5.5	7.0	
60×68	10.4	12.0	0.070	3.5	4.5	5.5	7.0	
63×71	10.4	12.0	0.080	3.5	4.5	5.5	7.0	
65×73	10.4	12.0	0.090	3.5	4.5	5.5	7.0	
70×79	12.2	14.0	0.115	3.5	5.0	6.5	7.5	
71×80	12.2	14.0	0.11	3.5	5.0	6.5	7.5	
75×84	12.2	14.0	0.12	3.5	5.0	6.5	7.5	
80×91	15.0	17.0	0.21	4.0	6.0	6.5	8.0	
85×96	15.0	17.0	0.21	4.0	6.0	6.5	8.0	
90×101	15.0	17.0	0.22	4.0	6.0	6.5	8.0	
95×106	15.0	17.0	0.23	4.0	6.0	6.5	8.0	
100×114	18.7	21.0	0.39	5.0	6.0	7.0	9.0	

DR300/DR300C (d x D) mm	DR300				DR300C			
	Pre load force N	Tightening torque N·m	Transfer		Surface pressure Shaft Hub Mpa	Tightening torque N·m	Transfer	
			Thrust kN	Torque N·m			Thrust kN	Torque N·m
5×8	9,780	2.5	0.8	2	113	71	1.0	1.2
6×9	8,910	2.5	1.0	3	117	78	1.0	1.2
7×10	8,310	2.5	1.1	4	114	80	1.2	1.4
8×11	8,040	2.5	1.2	5	105	76	1.2	1.4
9×12	7,650	3	1.8	8	147	110	2.0	2.4
10×13	7,000	3	2.0	10	142	110	2.0	2.4
11×14	7,000	3	2.0	11	130	102	2.0	2.4
12×15	7,000	3	2.0	12	119	95	2.0	2.4
13×16	6,500	3	2.1	14	116	94	2.5	2.9
14×18	11,000	6	3.2	23	115	90	4.1	3.9
15×19	10,800	6	3.3	25	109	86	4.1	3.9
16×20	10,000	6	3.4	28	108	86	4.1	3.9
17×21	9,600	6	3.5	30	104	84	4.1	3.9
18×22	9,150	6	3.6	33	101	83	4.1	3.9
19×24	12,500	10	5.2	50	138	109	9	7.0
20×25	12,000	10	5.3	53	133	107	9	7.0
22×26	9,000	10	6.0	66	136	115	9	7.0
24×28	8,400	10	6.1	73	128	109	9	7.0
25×30	10,000	10	5.8	72	116	96	9	7.0
28×32	7,500	10	6.3	88	113	99	9	7.0
30×35	8,600	10	6.1	91	101	87	9	7.0
32×36	7,900	10	8.2	132	129	114	9	8.8
35×40	10,000	10	9.8	171	123	108	9	11
36×42	11,700	10	9.4	169	115	99	9	11
38×44	11,000	10						

DR300F

LOCKING ELEMENT



Features No need extra design because of the standardized product. Specifications.

Specifications Surface roughness : Rt max 16 μm
Processing tolerance(Max) : d 40mm below, Shaft h6, hub H7
d 42mm Above, Shaft h8, Hub H8

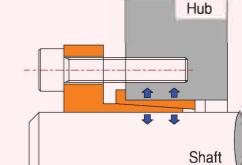
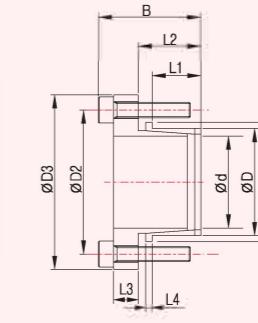
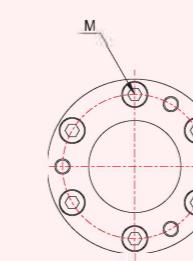
Usage Applicable to DR300 and DR300C type.

Order Method (Order Example)

DR300F	20	25
Product NO	Inner diameter : d	Outer Diameter : D

DR300EF

LOCKING ELEMENT



Features Same inside and outside diameter as that of DR300 and DR300C type.
Centering function is available.

Specifications Surface roughness : Rt max 16 μm
Processing tolerance : Shaft h8, Hub H8

Usage Pump, Cam, Sprocket, Pulley, etc.

Order Method (Order Example)

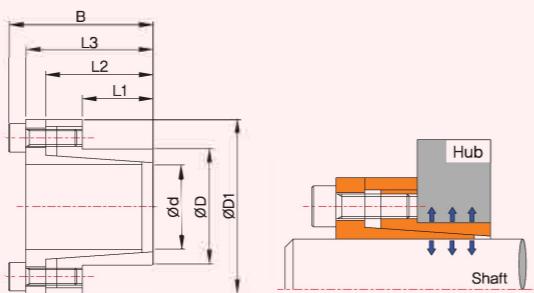
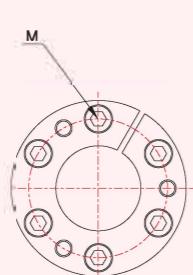
DR300EF	20	25
Product NO	Inner diameter : d	Outer Diameter : D

DR300F(d x D)	Application DR300/DR300C (d x D)	Dimension(mm)										Tightening screw(DIN912/12.9)			Mass
		d1	D1	D2	D3	L1	L2	B	N- φ a	Size	Quantity	M	Qty	kg	
mm	mm	mm	mm	mm	mm	mm	mm	N	mm	M	Qty				mm
10×13	10×13	10.2	12.8	28	36	8	5	13	3	4.4	M4	3	0.06		
11×14	11×14	11.2	13.8	28	36	8	5	13	3	4.4	M4	3	0.06		
12×15	12×15	12.2	14.8	28	36	8	5	13	3	4.4	M4	3	0.06		
13×16	13×16	13.2	15.8	28	36	8	5	13	3	4.4	M4	3	0.06		
14×18	14×18	14.2	17.8	35	45	10	8	18	3	5.5	M5	3	0.12		
15×19	15×19	15.2	18.8	35	45	10	8	18	3	5.5	M5	3	0.12		
16×20	16×20	16.2	19.8	35	45	10	8	18	3	5.5	M5	3	0.12		
17×21	17×21	17.2	20.8	35	45	10	8	18	3	5.5	M5	3	0.12		
18×22	18×22	18.2	21.8	35	45	10	8	18	3	5.5	M5	3	0.12		
19×24	19×24	19.2	23.8	40	50	10	8	18	4	5.5	M5	4	0.14		
20×25	20×25	20.2	24.8	40	50	10	8	18	4	5.5	M5	4	0.14		
22×26	22×26	22.2	25.8	40	50	10	8	18	4	5.5	M5	4	0.14		
24×28	24×28	24.2	27.8	45	55	10	8	18	4	5.5	M5	4	0.16		
25×30	25×30	25.2	29.8	45	55	10	8	18	4	5.5	M5	4	0.16		
28×32	28×32	28.2	31.8	45	55	10	8	18	4	5.5	M5	4	0.18		
30×35	30×35	30.2	34.8	50	60	10	8	18	5	5.5	M5	5	0.18		
32×36	32×36	32.2	35.8	50	60	10	8	18	5	5.5	M5	5	0.19		
35×40	35×40	35.2	39.8	58	68	10	8	18	6	5.5	M5	6	0.23		
36×42	36×42	36.2	41.8	58	68	10	8	18	6	5.5	M5	6	0.23		
38×44	38×44	38.2	43.8	58	68	10	8	18	6	5.5	M5	6	0.27		
40×45	40×45	40.2	44.8	62	74	12	10	22	6	6.6	M6	6	0.31		
42×48	42×48	42.2	47.8	62	74	12	10	22	6	6.6	M6	6	0.35		
45×52	45×52	45.2	51.8	70	82	12	10	22	8	6.6	M6	8	0.36		
48×55	48×55	48.2	54.8	70	82	12	10	22	8	6.6	M6	8	0.37		
50×57	50×57	50.2	56.8	70	82	12	10	22	8	8.8	M8	8	0.38		
55×62	55×62	55.2	61.8	78	90	12	10	22	8	8.8	M8	8	0.42		
56×64	56×64	56.2	63.8	86	102	16	10	26	6	8.8	M8	6	0.73		
60×68	60×68	60.2	67.8	86	102	16	10	26	6	8.8	M8	6	0.77		
63×71	63×71	63.2	70.8	92	108	16	10	26	6	8.8	M8	6	0.82		
65×73	65×73	65.2	72.8	92	108	16	10	26	6	8.8	M8	6	0.85		
70×79	70×79	70.3	78.7	98	114	16	12	28	8	8.8	M8	8	0.90		
71×80	71×80	71.3	79.7	98	114	16	12	28	8	8.8	M8	8	0.90		
75×84	75×84	75.3	83.7	104	120	16	12	28	8	8.8	M8	8	0.96		
80×91	80×91	80.3	90.7	110	130	20	12	32	10	11	M10	10	1.45		
85×96	85×96	85.3	95.7	116	136	20	12	32	12	11	M10	12	1.53		
90×101	90×101	90.3	100.7	120	140	20	12	32	12	11	M10	12	1.56		
95×106	95×106	95.3	105.7	126	146	20	12	32	12	11	M10	12	1.7		
100×114	100×114	100.3	113.7	134	154	20	12	32	12	13	M12	12	1.9		

DR300EF(d x D)	Dimension(mm)								Tightening screw(DIN912/12.9)			Transfer		Surface pressure		Mass
	D1	D2	D3	L1	L2	L3	L4	B	Size	Quantity	Torque	Thrust	Torque	Shaft	Hub	
mm	mm	mm	mm	mm	mm	mm	mm	M	Qty	N·m	kN	N·m	Mpa	Mpa	kg	mm
5×8	8	15	21.5	7	9.5	4	-	16.5	M3	3	1.9	1.69	5	200	134	0.013
6×9	9	16	22.5	7	9.5	4	-	16.5	M3	3	1.9	1.87	6	195	132	0.015
8×11	11	18	24.5	7	9.5	4	-	16.5	M3	3	1.9	2.12	9	190	123</	

DR110

LOCKING ELEMENT



Features

Small diameter hub can be fitted.
Centering function is available.
It has a hub stationary on the axis when assembled.

Specifications

Surface roughness : Rt max 16 μm
Processing tolerance : Shaft h8, Hub H8

Usage

Pulley with small hub outer diameter, Sprocket, Gear etc.

Order Method (Order Example)

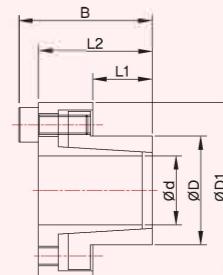
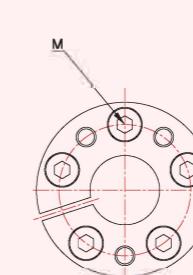
DR110	20	28
Product NO	Inner diameter : d	Outer Diameter : D

* DR110 : Standard product
* DR110N : Electroless nickel plating product

DR110(d x D)	Dimension(mm)					Tightening screw(DIN912/12.9)			Transfer		Surface pressure		Mass
	D1	L1	L2	L3	B	Size	Quantity	Torque	Thrust	Torque	Shaft	Hub	
mm	mm	mm	mm	mm	M	Qty	N · m	kN	N · m	Mpa	Mpa	kg	
6×14	25	10	18.5	21	24	M3	3	2	4	12	185	80	0.04
7×15	27	12	22	25	29	M4	3	5	7	25	235	110	0.06
8×15	27	12	22	25	29	M4	3	5	7	29	205	110	0.05
9×16	28	14	23	26	30	M4	4	5	10	44	205	115	0.06
10×16	28	14	23	26	30	M4	4	5	10	49	185	115	0.06
11×18	32	14	23	26	30	M4	4	5	10	53	170	105	0.07
12×18	32	14	23	26	30	M4	4	5	10	58	160	105	0.07
13×23	38	14	23	26	30	M4	4	5	10	63	140	80	0.11
14×23	38	14	23	26	30	M4	4	5	10	68	130	80	0.11
15×24	45	16	29	36	42	M6	3	17	17	127	185	115	0.22
16×24	45	16	29	36	42	M6	3	17	17	136	175	115	0.22
17×26	47	18	31	38	44	M6	4	17	22	180	190	125	0.25
18×26	47	18	31	38	44	M6	4	17	22	200	180	125	0.24
19×27	49	18	31	38	44	M6	4	17	22	210	170	120	0.26
20×28	50	18	31	38	44	M6	4	17	22	220	160	115	0.27
22×32	54	25	38	45	51	M6	4	17	22	250	115	80	0.34
24×34	56	25	38	45	51	M6	4	17	22	270	105	75	0.36
25×34	56	25	38	45	51	M6	4	17	22	280	100	75	0.35
28×39	61	25	38	45	51	M6	6	17	33	465	135	97	0.48
30×41	62	25	38	45	51	M6	6	17	33	510	127	90	0.48
32×43	65	25	38	45	51	M6	6	17	33	540	120	90	0.47
35×47	69	32	45	52	58	M6	8	17	45	790	105	80	0.58
38×50	72	32	45	52	58	M6	8	17	45	860	100	75	0.61
40×53	75	32	45	52	58	M6	8	17	45	900	95	70	0.68
42×55	78	32	45	52	58	M6	8	17	45	950	90	70	0.78
45×59	86	45	62	70	78	M8	8	41	84	1,890	110	85	1.20
48×62	87	45	62	70	78	M8	8	41	84	2,010	105	82	1.20
50×65	92	45	62	70	78	M8	8	41	84	2,100	100	75	1.40
55×71	98	55	72	80	88	M8	9	41	91	2,600	85	65	1.60
60×77	104	55	72	80	88	M8	9	41	91	2,840	75	60	1.80
65×84	111	55	72	80	88	M8	9	41	91	3,070	70	55	2.10
70×90	119	65	86	96	106	M10	9	83	150	5,250	90	70	3.00
75×95	126	65	86	96	106	M10	9	83	150	5,600	80	65	3.00
80×100	131	65	86	96	106	M10	12	83	200	8,020	100	80	3.50
85×106	137	65	86	96	106	M10	12	83	200	8,500	95	75	3.60
90×112	144	65	86	96	106	M10	12	83	200	9,000	90	75	3.90
95×120	149	65	86	96	106	M10	14	83	230	11,000	100	80	4.40
100×125	154	65	86	96	106	M10	18	83	300	15,000	120	95	4.6

DR120

LOCKING ELEMENT



Features

Unlike the DR110, The inner ring and the spacer are integrated. It has centering function and there is no axial movement of the hub. Simple installation.

Specifications

Surface roughness : Rt max 16 μm
Processing tolerance : Shaft h8, Hub H8

Usage

Pulley with small hub outer diameter, Sprocket, Gear etc.

Order Method (Order Example)

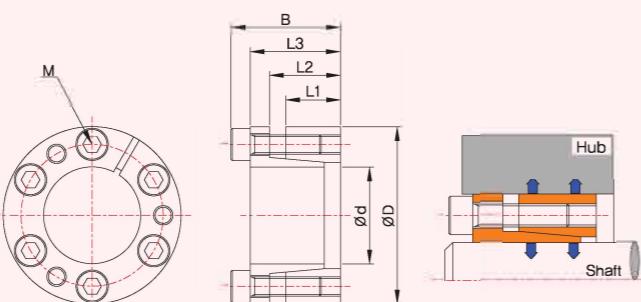
DR120	20	28
Product NO	Inner diameter : d	Outer Diameter : D

* DR120 : Standard product
* DR120N : Electroless nickel plating product

DR120(d x D)	Dimension(mm)					Tightening screw(DIN912/12.9)			Torque		Surface pressure		Mass
	D1	L1	L2	B	Size	Quantity	Tightening torque	Thrust	Torque	Shaft	Hub	Mpa	
mm	mm	mm	mm	M	Qty	N · m	kN	N · m	Mpa	Mpa	kg		
5×12	23	10	19	22	M3	4	1.7	3.45	9	188	99	0.036	
6×12	23	10	19	22	M3	4	1.7	3.45	11	156	99	0.034	
8×15	28	12	23	27	M4								

DR132

LOCKING ELEMENT



Features
It has a shaft on the hub movable when assembled.
It has a good capacity of transmission.
Centering function is available

Specifications
Surface roughness : Rt max 16 μ m
Processing tolerance : Shaft h8, Hub H8

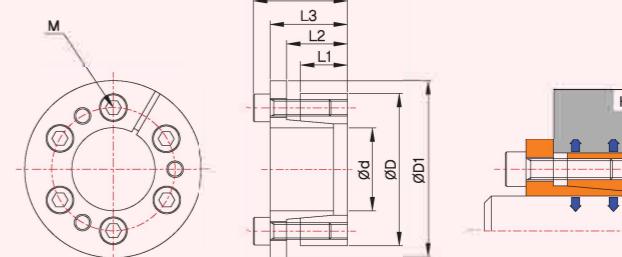
Usage
Pump, Cam, Sprocket, Pulley, etc.

Order Method (Order Example)			DR132	25	50
	Product NO		Inner diameter : d	Outer Diameter : D	

DR132/DR133 (d x D)	Dimension(mm)					Tightening screw(DIN912/12.9)				
	D1(DR133 Only)	L1	L2	L3	B	Size	Quantity	DR132 Tightening torque	DR133 Tightening torque	
mm	mm	mm	mm	mm	M	Qty	N · m	N · m		
18×47	56	17	22	28	34	M6	5	14	17	
19×47	56	17	22	28	34	M6	5	14	17	
20×47	56	17	22	28	34	M6	5	14	17	
22×47	56	17	22	28	34	M6	5	14	17	
24×50	59	17	22	28	34	M6	5	14	17	
25×50	59	17	22	28	34	M6	6	14	17	
28×55	64	17	22	28	34	M6	6	14	17	
30×55	64	17	22	28	34	M6	6	14	17	
32×60	69	17	22	28	34	M6	8	14	17	
35×60	69	17	22	28	34	M6	8	14	17	
38×65	74	17	22	28	34	M6	8	14	17	
40×65	74	17	22	28	34	M6	8	14	17	
42×75	84	20	25	33	41	M8	7	35	41	
45×75	84	20	25	33	41	M8	7	35	41	
48×80	89	20	25	33	41	M8	7	35	41	
50×80	89	20	25	33	41	M8	7	35	41	
55×85	94	20	25	33	41	M8	8	35	41	
60×90	99	20	25	33	41	M8	8	35	41	
65×95	104	20	25	33	41	M8	9	35	41	
70×110	119	24	30	40	50	M10	8	70	83	
75×115	124	24	30	40	50	M10	8	70	83	
80×120	129	24	30	40	50	M10	8	70	83	
85×125	134	24	30	40	50	M10	9	70	83	
90×130	139	24	30	40	50	M10	9	70	83	
95×135	144	24	30	40	50	M10	10	70	83	
100×145	154	26	32	44	56	M12	8	125	145	

DR133

LOCKING ELEMENT



Features
It has a shaft on the hub unmovable when assembled.
It has a good capacity of transmission.
Centering function is available

Specifications
Surface roughness : Rt max 16 μ m
Processing tolerance : Shaft h8, Hub H8

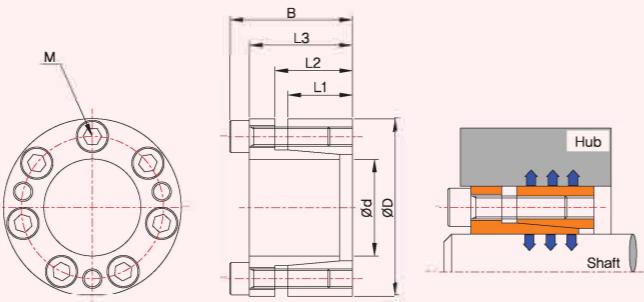
Usage
Pump, Cam, Sprocket, Pulley, etc.

Order Method (Order Example)			DR133	25	50
	Product NO		Inner diameter : d	Outer Diameter : D	

DR132/DR133 (d x D)	Dimension(mm)					DR132					DR133				
	mm	kN	Transfer Thrust	Transfer Torque	Surface pressure Shaft	Mpa	kg	kN	Transfer Thrust	Transfer Torque	Surface pressure Hub	Mpa	kg	mm	
18×47	38	380	295	125	0.3	28	280	220	95	0.3	46	630	255	130	0.4
19×47	38	380	295	125	0.3	28	280	220	95	0.3	570	285	140	0.3	34
20×47	38	380	295	125	0.3	28	280	220	95	0.3	60	970	295	155	0.4
22×47	38	410	270	125	0.3	28	300	200	95	0.3	450	245	120	0.3	28
24×50	38	450	270	120	0.3	28	330	180	90	0.3	60	1,060	270	155	0.4
25×50	46	570	285	140	0.3	34	420	210	105	0.3	1,150	250	145	0.4	45
28×55	46	660	235	130	0.3	34	500	175	95	0.4	1,210	235	145	0.4	45
30×55	46	970	295	155	0.4	45	720	220	115	0.4	2,200	290	170	0.6	73
32×60	60	1,060	270	155	0.4	45	790	200	115	0.4	1,150	250	145	0.4	45
35×60	60	1,150	250	165	0.8	83	2,510	185	125	0.9	1,210	235	145	0.8	73
38×65	60	1,210	235	165	0.8	83	3,060	190	130	1.0	2,200	290	170	0.6	73
40×65	60	1,210	235	165	0.8	83	3,600	245	165	0.8	2,450	260	160	0.8	73
42×75	98	1,050	300	170	0.8	73	1,530	225	125	0.8	2,350	270	160	0.8	73
45×75	98	2,200	290	170	0.6	73	1,650	215	125	0.7	2,450	260	160	0.8	73
48×80	98	2,350	270	160	0.8	73	1,760	200	120	0.8	3,060	190	130	1.0	73
50×80	98	2,450	260	160	0.8	73	1,830	195	120	0.8	3,600	245	165	0.8	73
55×85	112	3,080	270	175	0.8	83	2,300	200	130	0.9	3,360	245	165	0.8	83
60×90	112	3,360	245	165	0.8	83	2,510	185	125	0.9	4,090	255	175	0.9	94
65×95	126	4,090	255	175	0.9	94	3,060	190	130	1.0	4,670	280	180	1.8	133
70×110	179	6,300	280	180	1.8	133	4,670	210	135	1.9	6,700	260	170	1.8	133
75×115	179	6,700	260	170	1.8	133	5,000	195	125	2.0	7,150	250	170	1.8	133
80×120	179	7,150	250	170	1.8	133	5,300	185	125	2.0	8,500	260	180	2	148
85×125	200	9,100													

DR132A

LOCKING ELEMENT



Features

Available when the hub is moved to the shaft direction to some extent.
Centering function is available.

Specifications

Surface roughness : Rt max 16 μm
Processing tolerance : Shaft h9, Hub H9

Usage

Pump, Cam, Sprocket, Pulley, etc.

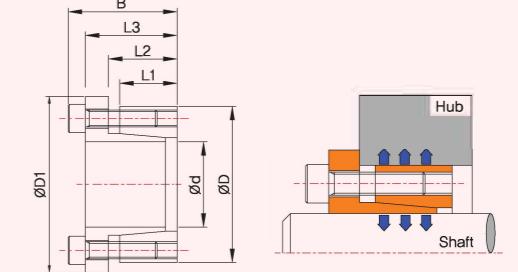
Order Method (Order Example)

DR132A	25		50	
	Product NO	Inner diameter : d	Outer Diameter : D	

DR132A(d x D)	Dimension(mm)				Tightening screw(DIN912/12.9)			Transfer		Surface pressure		Mass
	L1	L2	L3	B	Size	Quantity	Tightening torque	Thrust	Torque	Shaft	Hub	
mm	mm	mm	mm	M	Qty	N · m	kN	N · m	Mpa	Mpa	kg	
18×47	20	24	32	38	M6	6	16	31	295	299	97	0.33
19×47	20	24	32	38	M6	6	16	31	295	299	97	0.33
20×47	20	24	32	38	M6	6	16	31	305	283	97	0.32
22×47	20	24	32	38	M6	6	16	31	334	257	97	0.30
24×50	20	24	32	38	M6	7	16	39	461	295	113	0.35
25×50	20	24	32	38	M6	7	16	39	481	283	113	0.35
28×55	20	24	32	38	M6	7	16	39	540	253	103	0.40
30×55	20	24	32	38	M6	7	16	39	579	236	103	0.38
32×60	20	24	32	38	M6	9	16	46	736	265	113	0.45
35×60	20	24	32	38	M6	9	16	46	805	243	113	0.44
38×65	20	24	32	38	M6	9	16	46	873	223	104	0.50
40×65	20	24	32	38	M6	9	16	46	913	212	104	0.47
42×75	24	29	40	48	M8	9	39	85	1,776	313	140	0.90
45×75	24	29	40	48	M8	9	39	85	1,933	293	140	0.80
48×80	24	29	40	48	M8	9	39	85	2,031	274	131	0.90
50×80	24	29	40	48	M8	9	39	85	2,119	263	131	0.90
55×85	24	29	40	48	M8	10	39	99	2,718	279	144	0.90
60×90	24	29	40	48	M8	10	39	99	2,963	256	136	1.00
65×95	24	29	40	48	M8	12	39	113	3,669	270	147	1.10
70×110	30	37	52	62	M10	10	74	155	5,435	285	140	2.00
75×115	30	37	52	62	M10	10	74	155	5,828	265	133	2.20
80×120	30	37	52	62	M10	10	74	155	6,210	250	128	2.30
85×125	30	37	52	62	M10	12	74	177	7,544	268	141	2.40
90×130	30	37	52	62	M10	12	74	177	7,986	254	135	2.50
95×135	30	37	52	62	M10	14	74	246	10,536	300	162	2.70
100×145	39	46	64	74	M10	15	74	246	11,086	206	116	4.00

DR133B

LOCKING ELEMENT



Features

Precise position can be decided as the hub is not moved to the shaft direction.
Centering function is available.

Specifications

Surface roughness : Rt max 16 μm
Processing tolerance : Shaft h9, Hub H9

Usage

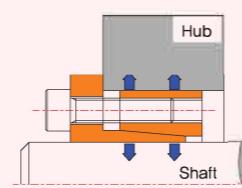
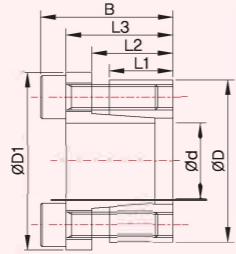
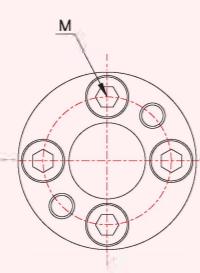
Pump, Cam, Sprocket, Pulley, etc.

Order Method (Order Example)

DR133B	Dimension(mm)				Tightening screw(DIN912/12.9)			Transfer		Surface pressure		Mass	
	D1	L1	L2	L3	B	Size	Quantity	Tightening torque	Thrust	Torque	Shaft	Hub	
mm	mm	mm	mm	mm	M	Qty	N · m	kN	N · m	Mpa	Mpa	kg	
19×47	53	20	24	32	38	M6	6	16	30	285	285	93	0.36
20×47	53	20	24	32	38	M6	6	16	30	295	270	93	0.36
22×47	53	20	24	32	38	M6	6	16	30	324	246	93	0.34
24×50	56	20	24	32	38	M6	7	16	34	412	262	101	0.38
25×50	56	20	24	32	38	M6	7	16	34	432	253	101	0.37
28×55	62	20	24	32	38	M6	7	16	34	471	225	93	0.44
30×55	62	20	24	32	38	M6	7	16	34	511	210	93	0.43
32×60	68	20	24	32	38	M6	9	16	44	697	253	108	0.51
35×60	68	20	24	32	38	M6	9	16	44	766	232	108	0.48
38×65	73	20	24	32	38	M6	9	16	44	834	213	98	0.55
40×65	73	20	24	32	38	M6	9	16	44	883	202	100	0.52
42×75	83	24	29	40	48	M8	9	39	81	1,698	299	133	0.96
45×75	83	24	29	40	48	M8	9	39	81	1,815	279	133	0.90
48×80	88	24	29	40	48	M8	9	39	81	1,943	262	125	1.01
50×80	88	24	29	40	48	M8	9	39	81	2,021	252	125	0.95
55×85	94	24	29	40	48	M8	10	39	90	2,473	253	130	1.06
60×90	99	24	29	40	48	M8	10	39	90	2,698	233	123	1.13
65×95	104	24	29	40	48	M8	12	39	108	3,503	258	140	1.22
70×110	119	30	37	52	62	M10	10	74	142	4,945	259	127	2.28
75×115	124	30	37	52	62	M10	10						

DR134S

LOCKING ELEMENT



Features

Light weight and compact size
Centering function is available.
Fitting and disassembly is easy

Specifications

Surface roughness : Rt max 16 μm
Processing tolerance : Shaft h8, Hub H8

Usage

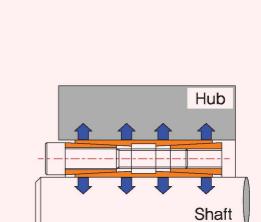
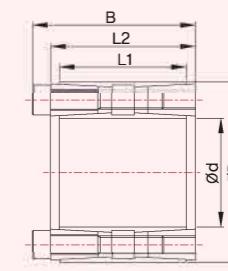
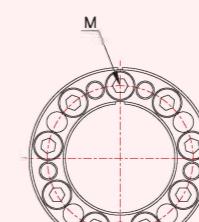
Pump, Cam, Sprocket, Pulley, etc.

Order Method (Order Example)

DR134S	13	27
Product NO	Inner diameter : d	Outer Diameter : D

DR400

LOCKING ELEMENT



Features

It is a kind of power lock with high transmission torque.
It has the same inner and outer dimension with DR200 type.
It can be replaced when using 2 DR200 types in a row.
Centering function is available
It has a shaft on the hub unmovable when assembled.

Specifications

Surface roughness : Rt max 16 μm
Processing tolerance : Shaft h8, Hub H8

Order Method (Order Example)

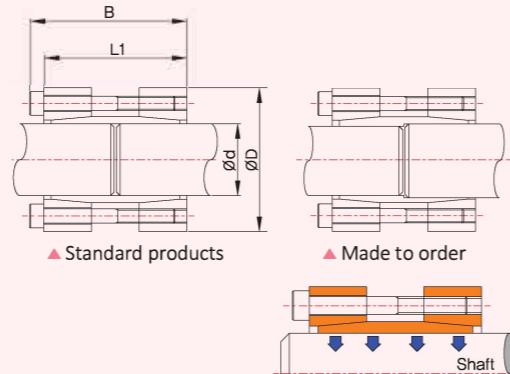
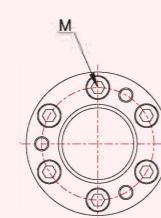
DR400	50	80
Product NO	Inner diameter : d	Outer Diameter : D

DR134S(d x D)	Dimension(mm)				Tightening screw(DIN912/12.9)			Transfer		Surface pressure		Mass	
	D1	L1	L2	L3	B	Size	Quantity	Tightening torque	Thrust	Torque	Shaft	Hub	
mm	mm	mm	mm	mm	mm	M	Qty	N·m	kN	N·m	Mpa	Mpa	kg
8×22	25	10	13	17	21	M4	3	4	5	18	274	70	0.05
9×23	26	10	13	17	21	M4	3	4	5	21	244	67	0.05
10×24	27	10	13	17	21	M4	4	4	6	30	295	86	0.05
11×25	28	10	13	17	21	M4	4	4	6	34	265	83	0.06
12×26	29	10	13	17	21	M4	5	4	8	47	304	99	0.06
13×27	30	10	13	17	21	M4	5	4	8	50	281	96	0.06
14×31	34	12.5	16	21	26	M5	4	8	10	69	261	86	0.10
15×32	35	12.5	16	21	26	M5	4	8	10	74	243	83	0.11
16×33	36	12.5	16	21	26	M5	4	8	10	79	228	80	0.11
17×34	37	12.5	16	21	26	M5	5	8	13	104	268	98	0.12
18×35	38	12.5	16	21	26	M5	5	8	13	108	253	95	0.12
19×35	38	12.5	16	21	26	M5	5	8	13	108	253	95	0.12

DR400(d x D)	Dimension(mm)			Tightening screw(DIN912/12.9)			Transfer		Surface pressure		Mass
	L1	L2	B	Size	Quantity	Tightening torque	Thrust	Torque	Shaft	Hub	
mm	mm	mm	M	Qty	N·m	kN	N·m	Mpa	Mpa	kg	
19×47	39	45	51	M6	6	17	41	496	185	110	0.40
20×47	39	45	51	M6	6	17	41	522	185	110	0.40
22×47	39	45	51	M6	6	17	41	339	185	110	0.40
24×50	39	45	51	M6	6	17	55	841	185	110	0.50
25×50	39	45	51	M6	6	17	54	900	185	110	0.50
28×55	39	45	51	M6	8	17	55	1,000	185	110	0.60
30×55	39	45	51	M6	8	17	53	1,100	185	110	0.60
32×60	39	45	51	M6	8	17	80	1,350	185	110	0.60
35×60	39	45	51	M6	8	17	80	1,600	185	110	0.60
38×65	39	45	51	M6	8	17	90	2,171	185	110	0.70
40×65	39	45	51	M6	8	17	120	2,400	185	110	0.70
42×75	39	45	53	M8	8	41	155	3,250	185	110	1.00
45×75	39	45	53	M8	8	41	174	3,900	183	110	0.90
45×75L	56	64	72	M8	8	41	174	4,150	185	105	1.30
48×80	56	64	72	M8	8	41	174	4,150	170	105	1.50
50×80	56	64	72	M8	8	41	174	4,300	165	105	1.40
55×85	56	64	72	M8	8	41	174	4,800	150	95	1.50
60×90	56	64	72	M8	10	41	213	6,400	170	110	1.50
65×95	56	64	72	M8	10	41	213	6,900	155	105	1.60
70×110	70	78	88	M10	10	83	338	11,800	185	115	3.00
75×115	70	78	88	M10	10	83	338	12,700	170	110	3.10
80×120	70	78	88	M10	12	83	369	14,700	172	115	3.50
85×125	70	78	88	M10	12	83	400	15,700	165	110	3.50
90×130	70	78	88	M10	12	83	400	18,100	170	115	3.80
95×135	70	78	88	M10	12	83	400	19,000	160	110	4.00
100×145	90	100	112	M12	12	145	538	26,900	160	110	5.96

DR500

LOCKING ELEMENT



Features
Fitting and disassembly is easy.
It has a high transmission and transfer torque.
One diameter can be interlocked with another diameter. (Customized)

Specifications
Surface roughness : Rt max 16 μm
Processing tolerance(Max): Shaft h8

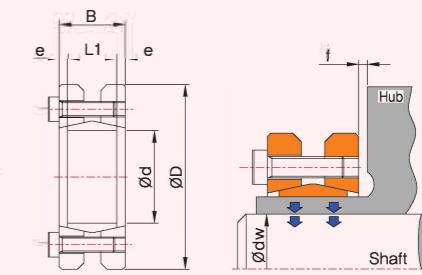
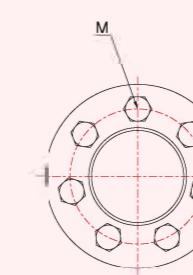
Usage
It is available as rigid coupling for connecting both shaft.

Order Method (Order Example)	DR500	50	90
	Product NO	Inner diameter : d	Outer Diameter : D

DR500(d x D)	Dimension(mm)		Tightening screw(DIN912/12.9)			Transfer		Mass
	L1	B	Size	Quantity	Tightening torque	Thrust	Torque	
mm	mm	mm	M	Qty	N · m	kN	N · m	kg
15×45	50	56	M6	4	17	23	180	0.4
16×45	50	56	M6	4	17	23	190	0.4
17×45	50	56	M6	4	17	24	200	0.4
18×50	50	56	M6	4	17	24	220	0.5
19×50	50	56	M6	4	17	24	230	0.5
20×50	50	56	M6	4	17	24	240	0.5
22×55	60	66	M6	4	17	24	260	0.7
24×55	60	66	M6	4	17	24	290	0.7
25×55	60	66	M6	6	17	36	450	0.8
28×60	60	66	M6	6	17	36	510	0.9
30×60	60	66	M6	6	17	36	550	0.8
32×65	60	66	M6	6	17	36	580	0.8
35×75	75	83	M8	4	41	45	790	1.3
38×75	75	83	M8	4	41	45	850	1.3
40×75	75	83	M8	4	41	45	900	1.3
42×78	75	83	M8	4	41	45	950	1.4
45×85	85	93	M8	6	41	67	1,520	2.3
48×90	85	93	M8	6	41	67	1,620	2.3
50×90	85	93	M8	6	41	67	1,690	2.5
55×95	85	93	M8	8	41	90	2,470	2.4
60×100	85	93	M8	8	41	90	2,710	3.0
65×105	85	93	M8	8	41	90	2,930	3.3
70×115	100	110	M10	6	83	107	3,370	4.1
75×120	100	110	M10	6	83	107	4,030	4.8
80×125	100	110	M10	8	83	107	4,300	5.2
85×130	100	110	M10	8	84	120	4,500	5.5
90×135	100	110	M10	8	84	120	4,900	7.0
95×140	120	132	M10	8	84	120	5,200	7.5
100×150	120	132	M12	8	145	120	5,530	7.8

DR603

LOCKING ELEMENT



Features
Large transmissible torque is available.
Fitting and disassembly is easy.
Assemble to the outer diameter of the hub.

Specifications
Surface roughness: Rt max 16 μm
Processing tolerance(Max): shaft Od h6, Hub Id H7, Hub Od H6

Order Method (Order Example)	DR603	Product NO		Inner diameter : d		Outer Diameter : D		Surface pressure	Mass	dw	B	L1	e	f	Size	Quantity	Tightening torque	Thrust	Torque
		dw	B	L1	e	f	Size	Quantity	Tightening torque	Thrust	Torque	Surface pressure	Mass						
mm	mm	mm	mm	mm	mm	mm	M	Qty	N · m	kN	N · m	Mpa	kg						
14×38	11	11.0	7	2.00	2		M5	4	4	6	30	186	0.1						
16×41	12	13	11	2.00	2		M5	5	4	10	70	200	0.1						
24×50	19	15.0	14	2.75	3		M5	6	4	27	210	286	0.2						
30×60	20	19.5	14	2.75	3		M5	7	4	31	340	330	0.3						
36×72	21	21.5	16	2.75	4		M6	5	12	58	570	307	0.4						
44×80	24	25.5	20	2.75	5		M6	7	12	74	780	317	0.6						
50×90	25	23.5	18	2.75	4		M6	8	12	86	1,160	289	0.8						
55×100	26	25.5	22	2.75	5		M6	8	12	92	1,380	252	1.1						
62×110	28	30.5	23	3.75	6		M6	10	12	111	2,200	279	1.3						
68×115	30	30.5	23	3.75	6		M6	10	12	120	3,150	255	1.4						
75×138	31	32.5	25	3.75	8		M8	7	30	137	3,200	273	1.7						
80×145	32	32.5	25	3.75	8		M8	7	30	140	3,900	256	1.9						
85×155	35	39.0	30	4.50	8		M8	10	30	155	6,100	285	3.5						
90×155	36	39.0	30	4.50	10		M8	10	30	166	7,400	216	3.3						
100×170	37	44.0	34	5.00	10		M8	12	30	170	4,750	240	4.7						

MAD, MAS, MASUS, DRAP, DRMC Series

LOCKING ELEMENT

Features

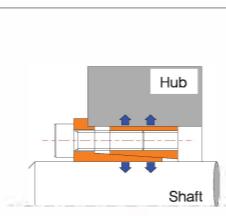
MAD Series is equipped with a small and compact size. In particular, the moment of inertia is small, so it is suitable for high-speed rotating body.
 MAS, MASUS, DRAP type is same shape as MAD which standard type.
 MAS is the type which the electroless nickel plating treatment to body and rust-inhibitive type.
 MASUS is ideal for machine requiring waterproofness, anti-corrosive and food machine because it employs all stainless bolts as body and bolts.
 DRAP's the body was used aluminum alloy.
 DRMC type has the boss which can be pressed directly bearing inner ring, so it can be reduced part quantity and enables the assembly process.



MAD

- Body material No. : S45C
- Size range : 5 X 16~85 X 112
- Centering function is available.
- Surface roughness : Rt max 16/ μ m
- Processing tolerance (Max) : Shaft h7, hub H7

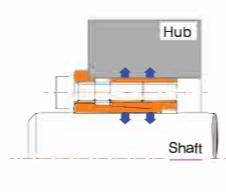
- Bolt material: SCM435
- Transfer torque range : 7~4,400 N·m
- It has a hub stationary on the axis when assembled.



MAS

- Body material No. : MAD type which plated.
- Size range : 5 X 16~50 X 72
- Centering function is available.
- Surface roughness : Rt max 16/ μ m
- Processing tolerance (Max) : Shaft h7, Hub H7

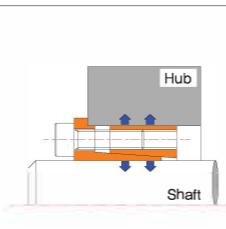
- Bolt material: SCM 435 which plated
- Transfer torque range : 5~1,362 N·m
- It has a hub stationary on the axis when assembled.



MASUS

- Body material No. : MAD Type which all Stainless steel.
- Size range : 5 x 16~50 x 72
- Centering function is available.
- Surface roughness : Rt max 16/ μ m
- Processing tolerance (Max) : Shaft h7, hub H7

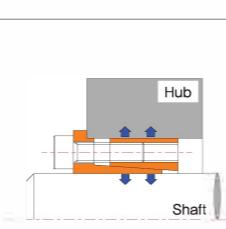
- Bolt material: SUS304
- Transfer torque range : 2~754 N·m
- It has a hub stationary on the axis when assembled.



DRAP

- Body material No. : MAD Type which Aluminum alloy.
- Size range : 5 X 16~35 X 57
- Centering function is available.
- Surface roughness : Rt max 16/ μ m
- Processing tolerance (Max) : shaft h7, Hub H7

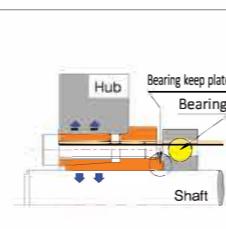
- Bolt material: SCM435
- Transfer torque range : 5~548 N·m
- It has a hub stationary on the axis when assembled.



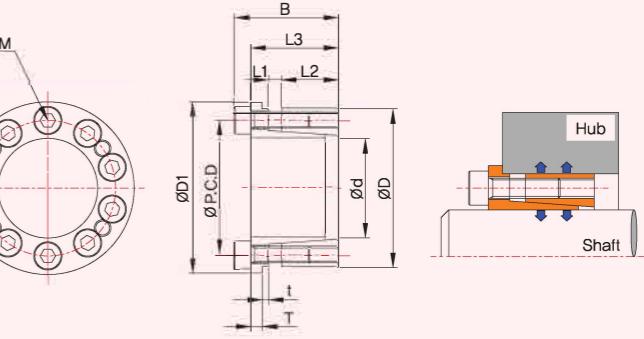
DRMC

- It can be assembled with being pressed directly bearing inner ring, so it can be - reduced the assembly process time.
- Body material No. : Aluminum alloy.
- Size range : 4 X 15~35X56
- Centering function is available.
- Surface roughness : Rt max 16/ μ m

- Bolt material: SCM435
- Transfer torque range: 2~230 N·m
- It has hub stationary on the axis when assembled.
- Processing tolerance (Max) : Shaft h7, Hub H7



MAD



Features

MAD is available for the shaft with a narrow diameter
 Centering function is available.
 Decision on position is free.
 It has a shaft on the hub unmovable when assembled.
 Safe and precise fitting system

Surface roughness : Rt max 16/ μ m
 Processing tolerance(Max) : Shaft h7, Hub H7

Pump, Cam, Sprocket, Pulley, etc.

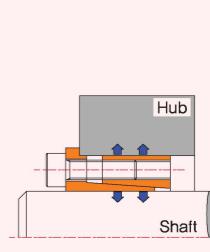
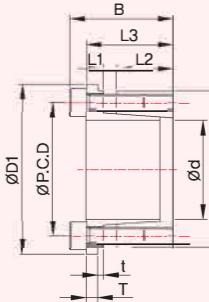
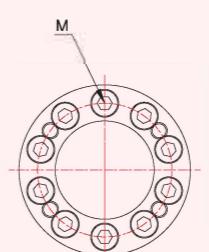
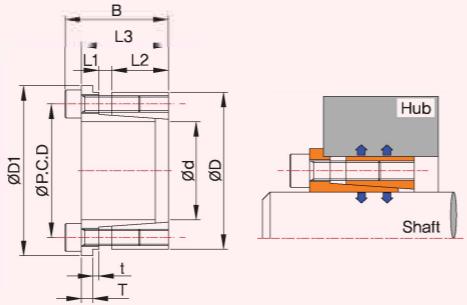
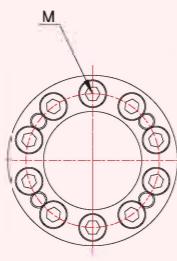
Order Method (Order Example)

MAD	25	43
Product NO	Inner diameter : d	Outer Diameter : D

MAD(d x D) mm	Dimension(mm)							Tightening screw(DIN912/12.9)			Transfer		Surface pressure		Mass kg	Moment of inertia kg · m ²	
	D1 mm	P.C.D mm	t mm	T mm	L1 mm	L2 mm	L3 mm	B mm	Size M	Quantity Qty	Tightening torque N · m	Thrust kN	Torque N · m	Shaft Mpa	Hub Mpa		
5×16	18.5	11.7	1.2	1.8	2.0	8.0	13.0	16.0	M3	4	1.9	2.80	7	249	81	0.018	6.27 × 10 ⁻⁷
6×19	21.5	14.0	1.3	2.0	2.0	9.0	14.3	18.3	M4	4	3.9	4.67	14	318	102	0.026	1.36 × 10 ⁻⁶
6.35×20	22.5	14.35	1.3	2.0	2.0	9.0	14.3	18.3	M4	4	3.9	4.67	14	301	97	0.029	1.66 × 10 ⁻⁶
8×21	23.5	15.40	1.3	2.0	2.0	9.3	14.6	18.6	M4	4	3.9	5.60	22	239	107	0.035	2.03 × 10 ⁻⁶
10×23	25.5	17.50	1.3	2.0	2.0	9.5	14.8	18.8	M4	4	3.9	5.60	25	186	96	0.040	2.92 × 10 ⁻⁶
11×24	26.5	18.40	1.3	2.0	3.0	9.5	15.8	19.8	M4	4	3.9	5.60	30	170	92	0.045	3.45 × 10 ⁻⁶
12×26	28.5	20.20	1.5	2.5	3.5	10.5	18.0	22.0	M4	6	3.9	8.41	50	233	115	0.053	5.37 × 10 ⁻⁶
14×28	30.5	22.20	1.5	2.5	3.5	10.5	18.0	22.0	M4	6	3.9	9.46	65	225	120	0.061	7.07 × 10 ⁻⁶
15×29	31.5	23.20	1.5	2.5	3.5	11.5	19.0	23.0	M4	6	3.9	9.46	70	186	106	0.066	8.58 × 10 ⁻⁶
16×30	33.0	24.20	1.6	2.5	3.5	12.0	19.6	23.6	M4	6	3.9	9.46	75	166	98	0.075	1.02 × 10 ⁻⁵
17×31	33.5	25.20	1.6	2.5	3.5	12.5	20.1	24.1	M4	8	3.9	12.60	110	197	121	0.075	1.17 × 10 ⁻⁵
18×32	34.5	26.20	1.6	2.5	3.5	12.5	20.1	24.1	M4	8	3.9	12.60	115	186	118	0.080	1.31 × 10 ⁻⁵
19×33	35.5	27.20	1.6	2.5	3.5	12.5	20.1	24.1	M4	8	3.9	12.60	120	177	114	0.081	1.46 × 10 ⁻⁵
20×38	42.0	30.80	1.8	3.0	4.0	15.3	24.1	29.1	M5	8	8.8	21.60	220	234	139	0.144	3.70 × 10 ⁻⁵
22×40	44.0	32.80	1.8	3.0	4.0	15.3	24.1	29.1	M5	8	8.8	26.00	290	256	159	0.165	4.42 × 10 ⁻⁵
24×42	46.0	34.80	1.8	3.0	4.0	16.3	25.1	30.1	M5	8	8.8	26.00	320	217	142	0.180	5.46 × 10 ⁻⁵
25×43	47.0	35.80	1.8	3.0	4.0	17.3	26.1	31.1	M5	8	8.8	27.20	350	216	137	0.188	6.15 × 10 ⁻⁵
28×46	50.0	38.80	1.8	3.5	4.0	17.3	26.6	31.6	M5	10	8.8	27.00	380	192	127	0.195	8.15 × 10 ⁻⁵
30×48	52.0	40.80	1.8	3.5	4.0	17.3	26.6	31.6	M5	10	8.8	27.00	410	179	122	0.208	9.45 × 10 ⁻⁵
32×50	54.0	42.80	1.8	3.5	4.0	18.3	27.6	32.6	M5	10	8.8	27.00	440	156	110	0.219	1.14 × 10 ⁻⁴
35×57	62.0	48.40	2.0	4.0	4.5	19.5	30.0	36.0	M6	8	15.7	41.10	720	204	138	0.325	2.12 × 10 ⁻⁴
38×60	65.0	51.40	2.0	4.0	4.5	20.0	30.5	36.5	M6	10	15.7	40.20	770	178	125	0.362	2.62 × 10 ⁻⁴
40×62	67.0	53.40	2.0	4.0	4.5	20.5	31.0	37.0	M6	10	15.7	40.20	810	164	118	0.380	3.00 × 10 ⁻⁴
42×64	69.0	55.40	2.0	4.0	4.5	20.5	31.0	37.0	M6	10	15.7	40.20	850	156	114	0.405	3.32 × 10 ⁻⁴
45×67	72.0	58.40	2.0	4.0	4.5	21.0	31.5	37.5	M6	10	15.7	52.90	1,200	186	140	0.435	3.95 × 10 ⁻⁴
48×70	75.0	61.40	2.0	4.5	4.5	21.0	32.0	38.0	M6	12	15.7	48.20	1				

LOCKING ELEMENT

LOCKING ELEMENT



Features	MAS is available for the shaft with a narrow diameter Type of rust protection as plated body and bolt Centering function is available. Decision on position is free. It has a shaft on the hub unmovable when assembled. Safe and precise fitting system
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Specifications	Surface roughness : Rt max 16 μ m Processing tolerance(Max) : Shaft h7, Hub H7
Usage	Pump, Cam, Sprocket, Pulley, etc.

Order Method (Order Example)	MAS	25	43
	Product NO	Inner diameter : d	Outer Diameter : D

MAS(d x D)	Dimension(mm)							Tightening screw			Transfer		Surface pressure		Mass	Moment of inertia	
	D1	P.C.D	t	T	L1	L2	L3	B	Size	Quantity	Tightening torque	Thrust	Torque	Shaft	Hub		
mm	mm	mm	mm	mm	mm	mm	mm	M	Qty	N · m	kN	N · m	Mpa	Mpa	kg	kg · m²	
5×16	18.5	11.7	1.2	1.8	2.0	8.0	13.0	16.0	M3	4	1.9	2.1	5	254	67	0.018	6.27 × 10⁻⁷
6×19	21.5	14.0	1.3	2.0	2.0	9.0	14.3	18.3	M4	4	3.9	3.5	10	323	84	0.026	1.36 × 10⁻⁶
6.35×20	22.5	14.35	1.3	2.0	2.0	9.0	14.3	18.3	M4	4	3.9	3.5	10	307	79	0.029	1.66 × 10⁻⁶
8×21	23.5	15.40	1.3	2.0	2.0	9.3	14.6	18.6	M4	4	3.9	4.1	17	244	92	0.035	2.03 × 10⁻⁶
10×23	25.5	17.50	1.3	2.0	2.0	9.5	14.8	18.8	M4	4	3.9	3.9	20	192	77	0.040	2.92 × 10⁻⁶
11×24	26.5	18.40	1.3	2.0	3.0	9.5	15.8	19.8	M4	4	3.9	4.0	23	174	73	0.045	3.45 × 10⁻⁶
12×26	28.5	20.20	1.5	2.5	3.5	10.5	18.0	22.0	M4	6	3.9	5.9	37	239	91	0.053	5.37 × 10⁻⁶
14×28	30.5	22.20	1.5	2.5	3.5	10.5	18.0	22.0	M4	6	3.9	7.2	51	204	84	0.061	7.07 × 10⁻⁶
15×29	31.5	23.20	1.5	2.5	3.5	11.5	19.0	23.0	M4	6	3.9	7.2	55	205	90	0.066	8.58 × 10⁻⁶
16×30	33.0	24.20	1.6	2.5	3.5	12.0	19.6	23.6	M4	6	3.9	7.3	59	193	87	0.075	1.02 × 10⁻⁵
17×31	33.5	25.20	1.6	2.5	3.5	12.5	20.1	24.1	M4	8	3.9	8.9	77	205	97	0.075	1.17 × 10⁻⁵
18×32	34.5	26.20	1.6	2.5	3.5	12.5	20.1	24.1	M4	8	3.9	8.9	81	166	93	0.080	1.31 × 10⁻⁵
19×33	35.5	27.20	1.6	2.5	3.5	12.5	20.1	24.1	M4	8	3.9	8.9	86	184	91	0.081	1.46 × 10⁻⁵
20×38	42.0	30.80	1.8	3.0	4.0	15.3	24.1	29.1	M5	8	8.8	18.3	183	213	97	0.144	3.70 × 10⁻⁵
22×40	44.0	32.80	1.8	3.0	4.0	15.3	24.1	29.1	M5	8	8.8	18.3	201	193	92	0.165	4.42 × 10⁻⁵
24×42	46.0	34.80	1.8	3.0	4.0	16.3	25.1	30.1	M5	8	8.8	21.0	252	121	105	0.180	5.46 × 10⁻⁵
25×43	47.0	35.80	1.8	3.0	4.0	17.3	26.1	31.1	M5	8	8.8	21.1	264	212	102	0.188	6.15 × 10⁻⁵
28×46	50.0	38.80	1.8	3.5	4.0	17.3	26.6	31.6	M5	10	8.8	21.1	295	212	107	0.195	8.15 × 10⁻⁵
30×48	52.0	40.80	1.8	3.5	4.0	17.3	26.6	31.6	M5	10	8.8	26.4	396	198	102	0.208	9.45 × 10⁻⁵
32×50	54.0	42.80	1.8	3.5	4.0	18.3	27.6	32.6	M5	10	8.8	26.4	423	192	103	0.219	1.14 × 10⁻⁴
35×57	62.0	48.40	2.0	4.0	4.5	19.5	30.0	36.0	M6	8	15.7	31.3	548	207	105	0.325	2.12 × 10⁻⁴
38×60	65.0	51.40	2.0	4.0	4.5	20.0	30.5	36.5	M6	10	15.7	39.0	741	208	110	0.362	2.62 × 10⁻⁴
40×62	67.0	53.40	2.0	4.0	4.5	20.5	31.0	37.0	M6	10	15.7	39.0	779	202	110	0.380	3.00 × 10⁻⁴
42×64	69.0	55.40	2.0	4.0	4.5	20.5	31.0	37.0	M6	10	15.7	39.2	823	192	106	0.405	3.32 × 10⁻⁴
45×67	72.0	58.40	2.0	4.0	4.5	21.0	31.5	37.5	M6	10	15.7	39.2	882	184	104	0.435	3.95 × 10⁻⁴
48×70	75.0	61.40	2.0	4.5	4.5	21.0	32.0	38.0	M6	12	15.7	46.5	1,117	206	118	0.460	4.75 × 10⁻⁴
50×72	77.0	63.40	2.0	4.5	4.5	21.5	32.5	38.5	M6	14	15.7	54.4	1,362	202	119	0.485	5.35 × 10⁻⁴

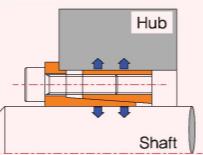
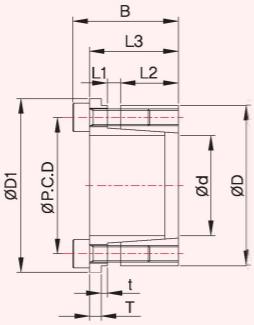
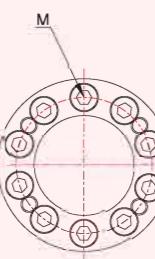
Features	The standard models from Ø5 to Ø50. All stainless for clean room and vacuum environment. Prevent the off centering of outer ring by centering function. Self-locking function by narrow slope design It has a hub stationary on the axis when assembled
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Order Method (Order Example)	MASUS	25	43
	Product NO	Inner diameter : d	Outer Diameter : D

MASUS(d x D)	Dimension(mm)								Tightening screw(DIN912/12.9)			Transfer		Surface pressure		Mass	Moment of inertia
	D1	P.C.D	t	T	L1	L2	L3	B	Size	Quantity	Tightening torque	Thrust	Torque	Shaft	Hub		
mm	mm	mm	mm	mm	mm	mm	mm	M	Qty	N·m	kN	N·m	Mpa	Mpa	kg	kg · m ²	
5×16	18.5	11.7	1.2	1.8	2.0	8.0	13.0	16.0	M3 × 10	4	0.9	1.2	2.8	204	42	0.018	6.27 × 10 ⁻⁷
6×19	21.5	14.0	1.3	2.0	2.0	9.0	14.3	18.3	M4 × 12	4	2.7	2.6	7.8	260	58	0.026	1.36 × 10 ⁻⁶
6.35×20	22.5	14.35	1.3	2.0	2.0	9.0	14.3	18.3	M4 × 12	4	2.7	2.6	7.8	240	53	0.029	1.66 × 10 ⁻⁶
8×21	23.5	15.40	1.3	2.0	2.0	9.3	14.6	18.6	M4 × 12	4	2.7	2.7	10.7	196	62.6	0.035	2.03 × 10 ⁻⁶
10×23	25.5	17.50	1.3	2.0	2.0	9.5	14.8	18.8	M4 × 12	4	2.7	2.6	12.7	153	55.9	0.040	2.92 × 10 ⁻⁶
11×24	26.5	18.40	1.3	2.0	3.0	9.5	15.8	19.8	M4 × 12	4	2.7	2.7	14.7	139	53.6	0.045	3.45 × 10 ⁻⁶
12×26	28.5	20.20	1.5	2.5	3.5	10.5	18.0	22.0	M4 × 15	6	2.7	4	24.5	191	67.1	0.053	5.37 × 10 ⁻⁶
14×28	30.5	22.20	1.5	2.5	3.5	10.5	18.0	22.0	M4 × 15	6	2.7	4	28.4	164	62.3	0.061	7.07 × 10 ⁻⁶
15×29	31.5	23.20	1.5	2.5	3.5	11.5	19.0	23.0	M4 × 15	6	2.7	4	30.4	136	55.0	0.066	8.58 × 10 ⁻⁶
16×30	33.0	24.20	1.6	2.5	3.5	12.0	19.6	23.6	M4 × 15	6	2.7	4	32.3	121	50.9	0.075	1.02 × 10 ⁻⁵
17×31	33.5	25.20	1.6	2.5	3.5	12.5	20.1	24.1	M4 × 15	8	2.7	5.4	46.1	144	63.1	0.075	1.17 × 10 ⁻⁵
18×32	34.5	26.20	1.6	2.5	3.5	12.5	20.1	24.1	M4 × 15	8	2.7	5.4	49	136	61.2	0.080	1.31 × 10 ⁻⁵
19×33	35.5	27.20	1.6	2.5	3.5	12.5	20.1	24.1	M4 × 15	8	2.7	5.4	51.9	129	59.2	0.081	1.46 × 10 ⁻⁵
20×38	42.0	30.80	1.8	3.0	4.0	15.3	24.1	29.1	M5 × 18	8	5.6	12.2	121.6	165	69.8	0.144	3.70 × 10 ⁻⁵
22×40	44.0	32.80	1.8	3.0	4.0	15.3	24.1	29.1	M5 × 18	8	5.6	12.1	133.4	150	66.3	0.165	4.42 × 10 ⁻⁵
24×42	46.0	34.80	1.8	3.0	4.0	16.3	25.1	30.1	M5 × 18	8	5.6	12.2	146.1	128	59.2	0.180	5.46 × 10 ⁻⁵
25×43	47.0	35.80	1.8	3.0	4.0	17.3	26.1	31.1	M5 × 18	8	5.6	12.2	153	122	54.5	0.188	6.15 × 10 ⁻⁵
28×46	50.0	38.80	1.8	3.5	4.0	17.3	26.6	31.6	M5 × 18	10	5.6	15.2	213.8	136	63.7	0.195	8.15 × 10 ⁻⁵
30×48	52.0	40.80	1.8	3.5	4.0	17.3	26.6	31.6	M5 × 18	10	5.6	15.3	229.5	127	61.1	0.208	9.45 × 10 ⁻⁵
32×50	54.0	42.80	1.8	3.5	4.0	18.3	27.6	32.6	M5 × 18	10	5.6	15.2	244.2	110	55.4	0.219	1.14 × 10 ⁻⁴
35×57	62.0	48.40	2.0	4.0	4.5	19.5	30.0	36.0	M6 × 20	8	9.6	17.2	301.1	107	51.4	0.325	2.12 × 10 ⁻⁴
38×60	65.0	51.40	2.0	4.0	4.5	20.0	30.5	36.5	M6 × 20	10	9.6	21.5	409	119	59.5	0.362	2.62 × 10 ⁻⁴
40×62	67.0	53.40	2.0	4.0	4.5	20.5	31.0	37.0	M6 × 20	10	9.6	21.5	430.6	110	56.2	0.380	3.00 × 10 ⁻⁴
42×64	69.0	55.40	2.0	4.0	4.5	20.5	31.0	37.0	M6 × 20	10	9.6	21.5	452.2	105	54.4	0.405	3.32 × 10 ⁻⁴
45×67	72.0	58.40	2.0	4.0	4.5	21.0	31.5	37.5	M6 × 20	10	9.6	21.5	484.6	95	50.8	0.435	3.95 × 10 ⁻⁴
48×70	75.0	61.40	2.0	4.5	4.5	21.0	32.0	38.0	M6 × 20	12	9.6	25.8	620.9	107	58.4	0.460	4.75 × 10 ⁻⁴
50×72	77.0	63.40	2.0	4.5	4.5	21.5	32.5	38.5	M6 × 20	14	9.6	30.1	754.3	116	64.6	0.485	5.35 × 10 ⁻⁴

DRAP (Aluminum)

LOCKING ELEMENT



Features

DRAP is available for the shaft with a narrow diameter
Material is aluminum
High-speed use as low inertia
It has a shaft on the hub unmovable when assembled.
Centering function is available.
It has a small bearing pressure, but a large transmission.

Usage

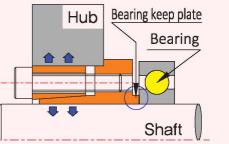
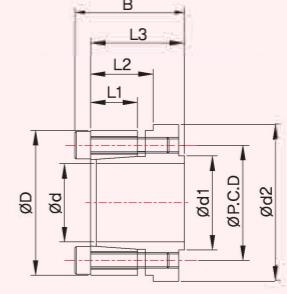
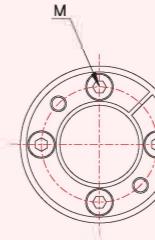
Aluminum pulley, aluminum timing belt, resins gear, etc

Specifications

Surface roughness : Rt max 16 μm
Processing tolerance(Max) : Shaft h7, Hub H7

DRMC (Aluminum)

LOCKING ELEMENT



Features

DRMC is available for the shaft with a narrow diameter
Material is aluminum
High-speed use as low inertia
Decision on position is free.
It has a shaft on the hub unmovable when assembled.
As fewer bolts, desorption time is shortened.
Bearing pressure plate is designed on the body
The surface pressure is small, but it has a large transfer force.
Centering function is available.

Specifications

Surface roughness : Rt max 16 μm
Processing tolerance(Max) : Shaft h7, Hub H7

Usage

Aluminum pulley, aluminum timing belt, resins gear, etc

Cautions

If the bearing needs initial clamping force, another tool is required.

Order Method (Order Example)

DRAP	25	43
Product NO	Inner diameter : d	Outer Diameter : D

Order Method (Order Example)

DRMC	25	42
Product NO	Inner diameter : d	Outer Diameter : D

DRAP(d x D)	Dimension(mm)								Tightening screw		Transfer		Surface pressure		Mass	Moment of inertia	
	D1	P.C.D.	t	T	L1	L2	L3	B	Size	Quantity	Tightening torque	Thrust	Torque	Shaft	Hub		
mm	mm	mm	mm	mm	mm	mm	mm	M	Qty	N·m	kN	N·m	Mpa	Mpa	kg	kg·m²	
5×16	18.5	11.7	1.2	1.8	2.0	8.0	13.0	16.0	M3	4	1.9	2.1	5	210	58	0.007	2.63×10⁻⁷
6×19	21.5	14	1.3	2.0	2.0	9.0	14.3	18.3	M4	4	3.9	3.5	10	275	77	0.010	6.13×10⁻⁷
6.35×20	22.5	14.35	1.3	2.0	2.0	9.0	14.3	18.3	M4	4	3.9	3.5	10	260	73	0.011	6.16×10⁻⁷
8×21	23.5	15.4	1.3	2.0	2.0	9.3	14.6	18.6	M4	4	3.9	4.1	17	213	72	0.013	8.74×10⁻⁷
10×23	25.5	17.5	1.3	2.0	2.0	9.5	14.8	18.8	M4	4	3.9	3.9	20	166	65	0.015	1.23×10⁻⁶
11×24	26.5	18.4	1.3	2.0	3.0	9.5	15.8	19.8	M4	4	3.9	4.0	23	151	62	0.017	1.44×10⁻⁶
12×26	28.5	20.2	1.5	2.5	3.5	10.5	18.0	22.0	M4	6	3.9	5.9	37	186	78	0.020	2.38×10⁻⁶
14×28	30.5	22.2	1.5	2.5	3.5	10.5	18.0	22.0	M4	6	3.9	7.2	51	159	72	0.023	3.08×10⁻⁶
15×29	31.5	23.2	1.5	2.5	3.5	11.5	19.0	23.0	M4	6	3.9	7.2	55	135	64	0.025	3.66×10⁻⁶
16×30	33.0	24.2	1.6	2.5	3.5	12.0	19.6	23.6	M4	6	3.9	7.3	59	120	59	0.028	4.28×10⁻⁶
17×31	33.5	25.2	1.6	2.5	3.5	12.5	20.1	24.1	M4	8	3.9	8.9	77	145	73	0.028	5.13×10⁻⁶
18×32	34.5	26.2	1.6	2.5	3.5	12.5	20.1	24.1	M4	8	3.9	8.9	81	136	71	0.030	5.71×10⁻⁶
19×33	35.5	27.2	1.6	2.5	3.5	12.5	20.1	24.1	M4	8	3.9	8.9	86	129	68	0.031	7.20×10⁻⁶
20×38	42.0	30.8	1.8	3.0	4.0	15.3	24.1	29.1	M5	8	8.8	18.3	183	194	95	0.053	1.55×10⁻⁵
22×40	44.0	32.8	1.8	3.0	4.0	15.3	24.1	29.1	M5	8	8.8	18.3	201	179	92	0.060	1.84×10⁻⁵
24×42	46.0	34.8	1.8	3.0	4.0	16.3	25.1	30.1	M5	8	8.8	21.0	252	155	83	0.065	2.23×10⁻⁵
25×43	47.0	35.8	1.8	3.0	4.0	17.3	26.1	31.1	M5	8	8.8	21.1	264	136	74	0.068	2.49×10⁻⁵
28×46	50.0	38.8	1.8	3.5	4.0	17.3	26.6	31.6	M5	10	8.8	21.1	295	152	87	0.071	3.36×10⁻⁵
30×48	52.0	40.8	1.8	3.5	4.0	17.3	26.6	31.6	M5	10	8.8	26.4	396	142	83	0.076	3.86×10⁻⁵
32×50	54.0	42.8	1.8	3.5	4.0	18.3	27.6	32.6	M5	10	8.8	26.4	423	125	76	0.080	4.60×10⁻⁵
35×57	62.0	48.4	2.0	4.0	4.5	19.5	30.0	36.0	M6	8	15.7	31.3	548	136	79	0.117	8.46×10⁻⁵

DRMC(d x D)	Dimension(mm)								Tightening screw		Transfer		Surface pressure		Mass	Moment of inertia
	d1	d2	P.C.D.	L1	L2	L3	B	Size	Quantity	Tightening torque	Thrust	Torque	Shaft	Hub		
mm	mm	mm	mm	mm	mm	mm	M	Qty	N·m	kN	N·m	Mpa	Mpa	kg	kg·m²	
4×15	6.5	17.5	10.1	6.5	9	13	15.5	M2.5×12	4	0.9	1.00	2.0	151	37	0.006	1.99×10⁻⁷
4.5×16	7.5	19	11.1	6.5	9	13	15.5	M2.5×12	4	0.9	1.00	2.2	134	35	0.006	1.99×10⁻⁷
5×16	7.5	19	11.1	6.5	9	13	15.5	M2.5×12	4	0.9	1.00	2.5	121	35	0.007	2.65×10⁻⁷
6×17	8.5	20	12.1	6.5	9	13	15.5	M2.5×12	4	0.9	1.33	4.0				

LOCKNUT Technical data

LOCKNUT

LOCKNUT Technical data

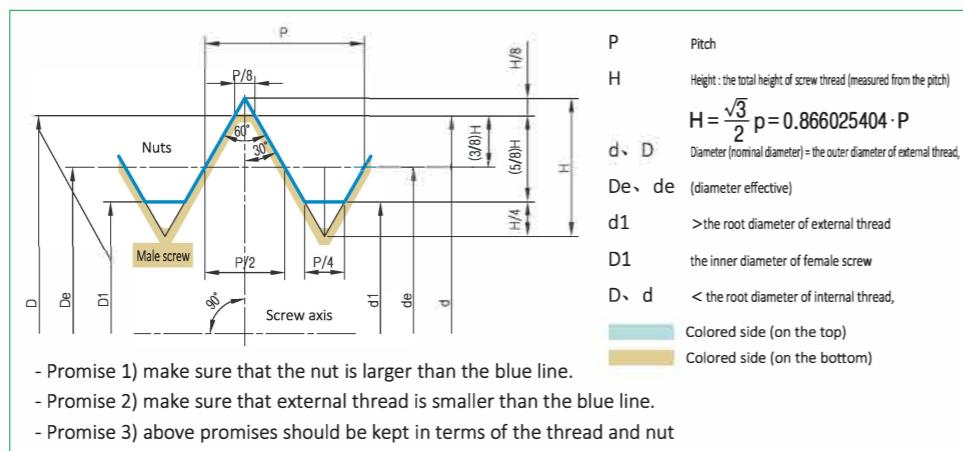
Features

It can be used to clamp the main axis for the machine tool, and the ball screw support bearing for high precision, compatible with other common nuts.
Our product can be safely used against green procurements such as RoHS and JIG24, which have fully met the standard. Also, Lock Nut can be produced in the process of checking precision on each product for improved quality control.

Loose stopping nut(KAN) has a high precision and a good vibration proof.

- Material : brass pin : C3604(environmentally supplied), - Main body : S45C, - Set screw : SCM435
- Hardness : HRC 22~28, - Surface process : black oxide coating, - Thread Accuracy : ISO 4H
- perpendicularity: 0.002~0.007mm
- ※ Any product has no set screw with it.

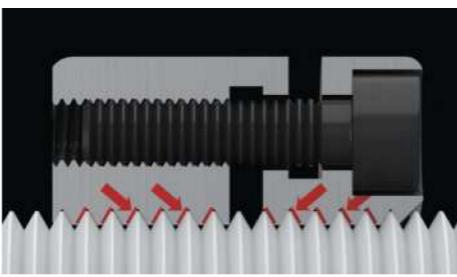
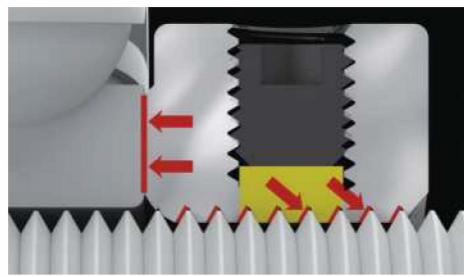
Duri Locknut has been produced according to the ISO standard.
The shape, dimensions and shape of the threads are automatically determined by the pitch of the screw, not by the nominal diameter.



Usage

Type of Nut can be selected according to where it is used, how it is and what is surrounded.

※ — part is action part of friction against loosening



About self-locking effect

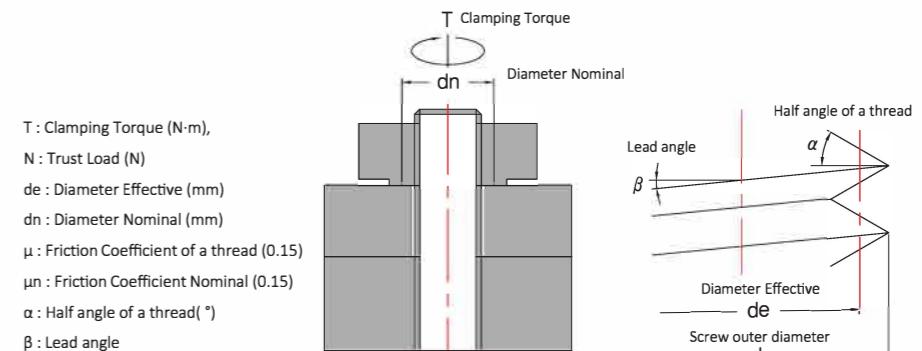
Once the nut is clamped, the material tends to break down. This leads to the loss of its elasticity, or the slits caused by mechanical vibrations result in both weak tension and friction. That's how the loose stopper happens. It's important that the tension is always made to work on the thread for the screw to be tightened.

LOCKNUT Technical data

How to calculate clamping torque and thrust load

The following expression can be applied to calculate the clamping torque and thrust load for the screw

$$T=N \left\{ \frac{de}{2} \left(\frac{\mu}{\cos\alpha} + \tan\beta \right) + \mu_n \cdot \frac{dn}{2} \right\} \cdot 10^{-3} [\text{N}\cdot\text{m}]$$



Clamp a spacer or the minimum bearing area on the inner race with the axial force which can generate an internal force of 10~15MPa.

Clamping force = the minimum area x 10~15MPa

Note : When the heat shrink fitting is applied, the product can be clamped with a force of 20MP, kept cool at room temperature and then clamped again with the standard torque after being loosened.

What makes clamping force in fixing precision bearings

About functions of Set Screw

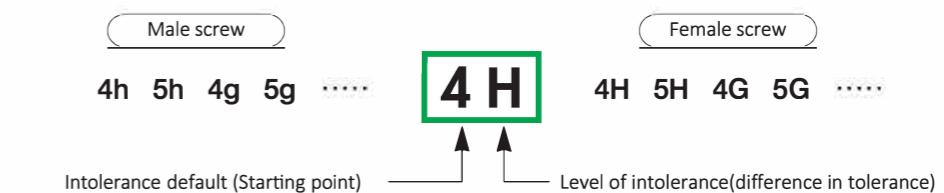
It cannot be replaced with any gauge

Duri Lock Nut has a high precision in designing, but cannot be replaced with any gauge due to its low rigidity and a large wear on the nut. Several replacements may result in a deviation in the diameter effective from the standard.

About Precision Level

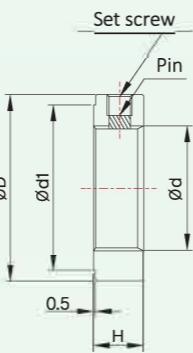
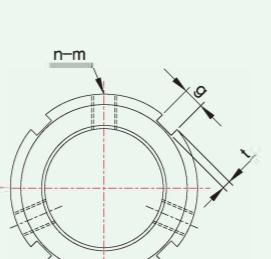
The level describes "any slit" between an external thread and a nut, as well as the shape and dimensions. The combined thread with narrow slits in it can have a good level in the precision. A good example includes a combination of external thread 5g and nut 5H, external 4H and Nut 4H.

Note: combination of 4H and 4H has the smallest slit (or the highest precision level)



Effective diameter	If the slit is 0 <<< If there are slits found
Grade of Male screw	h g
Grade of Nut	H G

※ A sampling confirmation has been conducted in terms of the level of pitch.
(Referred to as the deviation precision for each thread)



Usage

- Main Axis of a machine tool, Ball Screw Support
- Bearing Precise spindle, Precise test machine

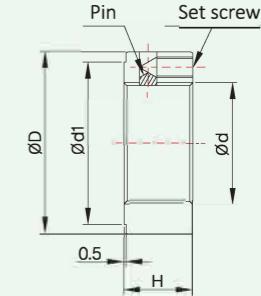
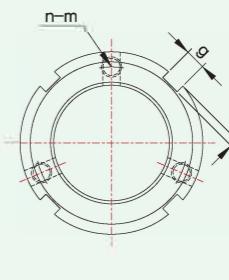
Specifications

- Material : S45C
- Hardness : HRC 22 - 28
- Surface treatment: Black phosphated coating
- Thread Accuracy : ISO4H
- Perpendicularity : 0.002 ~ 0.007

**Order Method
(Order Example)**

KZM	30	1.5
Product NO	d	Pitch

Product NO.	Dimension(mm)					Set Screw	Mass	
	D	H	g	t	d1			
d X pitch	mm	mm	mm	mm	mm	n-m	N·m	g
KZM8×0.75	16	8	3	2	11	2-M4	2	4
KZM10×0.75	18	8	3	2	13	2-M4	2	8
KZM10×1	18	8	3	2	13	2-M4	2	8
KZM12×1	22	8	3	2	16	2-M4	2	14
KZM15×1	25	8	3	2	20	2-M4	2	18
KZM17×1	28	10	4	2	23	2-M5	4.5	28
KZM20×1	32	10	4	2	26	3-M5	4.5	34
KZM22×1	38	10	4	3	27	3-M4	2	52
KZM25×1.5	38	12	5	2	32	3-M6	8	58
KZM30×1.5	45	12	5	2	39	3-M6	8	78
KZM35×1.5	52	12	5	2	46	3-M6	8	104
KZM40×1.5	58	14	6	2.5	51	3-M6	8	148
KZM45×1.5	65	14	6	2.5	58	3-M6	8	184
KZM50×1.5	70	14	6	2.5	63	3-M6	8	200
KZM55×2	75	16	7	3	67	3-M8	18	246
KZM60×2	80	16	7	3	72	3-M8	18	270
KZM65×2	85	16	7	3	77	3-M8	18	290
KZM70×2	92	18	8	3.5	83	3-M8	18	398
KZM75×2	98	18	8	3.5	89	3-M8	18	434
KZM80×2	105	18	8	3.5	96	3-M8	18	504
KZM85×2	110	18	8	3.5	101	3-M8	18	532
KZM90×2	120	20	10	4	108	3-M8	18	762
KZM95×2	125	20	10	4	113	3-M8	18	796
KZM100×2	130	20	10	4	118	3-M8	18	836
KZM105×2	140	22	12	5	125	3-M8	18	1,130
KZM110×2	145	22	12	5	132	3-M8	18	1,172
KZM115×2	150	22	12	5	137	3-M8	18	1,270
KZM120×2	155	24	12	5	142	3-M8	18	1,390
KZM125×2	160	24	12	5	147	3-M8	18	1,450
KZM130×2	165	24	12	5	152	3-M8	18	1,500
KZM135×2	175	26	14	6	160	3-M10	35	1,930
KZM140×2	180	26	14	6	165	3-M10	35	1,950
KZM145×2	190	26	14	6	175	3-M10	35	2,380
KZM150×2	195	26	14	6	180	3-M10	35	2,440
KZM155×3	200	28	16	7	180	3-M10	35	2,760
KZM160×3	210	28	16	7	190	3-M10	35	3,160
KZM165×3	210	28	16	7	190	3-M10	35	3,300
KZM170×3	220	28	16	7	200	3-M10	35	3,315
KZM180×3	230	30	18	8	205	3-M12	60	3,690
KZM190×3	240	30	18	8	215	3-M12	60	3,880
KZM200×3	250	32	18	8	225	3-M12	60	4,370



Features

- Set screw can be fitted at the shaft direction.

Specifications

- Material : S45C
- Hardness : HRC 22 - 28
- Surface treatment: Black phosphated coating
- Thread Accuracy : ISO4H
- Perpendicularity : 0.002 ~ 0.007

Usage

- Main Axis of a machine tool, Ball Screw Support
- Bearing Precise spindle, Precise test machine

**Order Method
(Order Example)**

KZMV	30	1.5
Product NO	d	Pitch

Product NO.	Dimension(mm)					Set Screw	Mass	
	D	H	g	t	d1			
d X pitch	mm	mm	mm	mm	mm	n-m	N·m	g
KZMV17×1	28	15	4	2	23	2-M4	2	40
KZMV20×1	32	15	4	2	26	3-M4	2	56
KZMV25×1.5	38	17	5	2	32	3-M5	4.5	80
KZMV30×1.5	45	17	5	2	39	3-M5	4.5	130
KZMV35×1.5	52	17	5	2	46	3-M5	4.5	170
KZMV40×1.5	58	19	6	2.5	51	3-M6	8	220
KZMV45×1.5	65	19	6	2.5	58	3-M6	8	270
KZMV50×1.5	70	19	6	2.5	63	3-M6	8	310
KZMV55×2	75	21	7	3	67	3-M6	8	340
KZMV60×2	80	21	7	3	72	3-M6	8	390
KZMV65×2	85	21	7	3	77	3-M6	8	430
KZMV70×2	92	23	8	3.5	83	3-M8	18	550
KZMV75×2	98	23	8	3.5	89	3-M8	18	620
KZMV80×2	105	23	8	3.5	96	3-M8	18	710
KZMV85×2	110	23	8	3.5	101	3-M8	18	740
KZMV90×2	120	25	10	4	108	3-M8	18	1,020
KZMV95×2	125	25	10	4	113	3-M8	18	1,080
KZMV100×2	130	25	10	4	118	3-M8	18	1,100
KZMV105×2	140	27	12	5	125	3-M10	35	1,480
KZMV110×2	145	27	12	5	132	3-M10	35	1,570
KZMV115×2	150	27	12	5	137	3-M10	35	1,600
KZMV120×2	155	29	12	5	142	3-M10	35	1,760
KZMV125×2	160	29	12	5	147	3-M10	35	1,820
KZMV130×2	165	29	12	5	152	3-M10	35	1,890
KZMV135×2	175	31	14	6	160	3-M12	60	2,400
KZMV140×2	180	31	14	6	165	3-M12	60	2,470
KZMV145×2	190	31	14	6	175	3-M12	60	2,960
KZMV150×2	195	31	14	6	180	3-M12	60	3,020
KZMV155×3	200	33	16	7	180	3-M12	60	3,320
KZMV160×3	210	33	16	7	190	3-M12	60	3,880
KZMV165×3	210	33	16	7	190	3-M12	60	3,960
KZMV170×3	2							

**Features**

Preload and tension can be adjusted.
Most endurable to vibration. Accuracy can be adjusted. Powerful fitting.

Usage

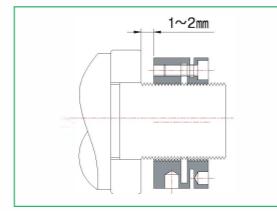
General, precise Bearing, Ball Screw Support Bearing

Specifications

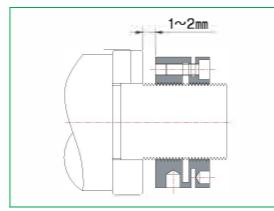
- Material : S45C
- Tightening screw : SCM435
- Hardness : HRC 22 - 28
- Surface treatment : Black phosphated coating
- Thread Accuracy : ISO4H
- Perpendicularity: 0.002 ~ 0.007

Follow the steps to clamp the KAN Nut

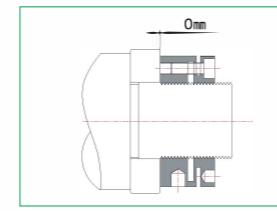
1. Clean up the screw of the shaft
 2. Loosen up each bolt.
 3. Put the KAN nut into the screw and tighten it to the space of 1~2mm against the other section [see the figure 1]
 4. Tighten the bolt in the sequence of diagonal uniformly to get rid of any slit between shaft and nut. [see the figure 2]
 5. Assemble provisionally at the axial force of 3~5 times the actually required axial force. This processing is very important for initial adoption of the nut.
 6. Tighten the bolts in the sequence of diagonal uniformly with them loosen and then get rid of the space until the nut can be turned.
 7. Tighten the nut with required axial force.
 8. Tighten all the bolts with the standard torque in the sequence of diagonal uniformly and then fix them on the shaft. [see the figure 3]
 9. The shaft cannot be vibrated by adjusting the bolts if necessary. Don't make the bolt too loosened for dimensioning the shaft. Ensure that all the bolts must have a tension when closing the work.
- Note : the centrifugal force on the moving shaft results in the KAN nut being loosened.



(Figure 1)



(Figure 2)



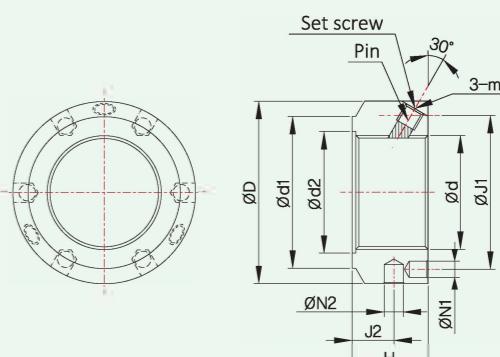
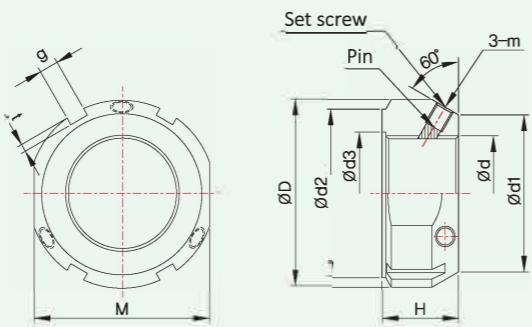
(Figure 3)

**Order Method
(Order Example)**

KAN	30	1.5
Product NO	d	Pitch



Product NO.	Dimension(mm)						Holes	Tightening screw			Mass
	D	d1	d2	d3	H	C		m	n	N·m	
KAN16×1.5	34	4	24.5	4.5	18	5	4	M4 × 12	4	3	80
KAN18×1.5	36	4	26.5	4.5	18	5	4	M4 × 12	4	3	87
KAN20×1.5	40	4	30.5	4.5	18	5	4	M4 × 12	4	3	107
KAN22×1.5	40	4	30.5	4.5	18	5	4	M4 × 12	4	3	100
KAN24×1.5	42	4	32.5	4.5	18	5	4	M4 × 12	4	3	107
KAN25×1.5	45	5	36.5	4.5	20	6.5	4	M4 × 12	4	3	137
KAN28×1.5	46	5	38.5	4.5	20	6.5	4	M4 × 12	4	3	136
KAN30×1.5	48	5	40.5	4.5	20	6.5	4	M4 × 12	4	3	141
KAN32×1.5	50	5	42.5	4.5	22	7	4	M4 × 16	4	3	163
KAN35×1.5	53	5	45.5	4.5	22	7	4	M4 × 16	4	3	175
KAN38×1.5	58	5	48.5	4.5	22	7	4	M4 × 16	4	3	212
KAN40×1.5	58	5	50.5	4.5	22	7	4	M4 × 16	4	3	195
KAN42×1.5	60	5	52.5	4.5	22	7	4	M4 × 16	4	3	204
KAN45×1.5	68	6	58	4.5	22	6.5	6	M4 × 16	6	3	288
KAN48×1.5	68	6	59.5	4.5	25	9	6	M4 × 18	6	3	294
KAN50×1.5	70	6	61.5	4.5	25	9	6	M4 × 18	6	3	303
KAN52×1.5	72	6	63.5	4.5	25	9	6	M4 × 18	6	3	314
KAN55×1.5	75	6	66.5	4.5	25	9	6	M4 × 18	6	3	327
KAN58×1.5	82	6	72.5	5.5	26	9	6	M5 × 18	6	6	446
KAN60×1.5	84	6	74.5	5.5	26	9	6	M5 × 18	6	6	479
KAN62×1.5	86	6	76.5	5.5	28	10.5	6	M5 × 20	6	6	505
KAN65×1.5	88	6	78.5	5.5	28	10.5	6	M5 × 20	6	6	500
KAN68×1.5	95	8	83	5.5	28	9.5	6	M5 × 20	6	6	625
KAN70×1.5	95	8	85	5.5	28	9.5	6	M5 × 20	6	6	536
KAN72×1.5	98	8	86	6.5	28	8.5	6	M6 × 20	6	10	626
KAN75×1.5	100	8	88	6.5	28	8.5	6	M6 × 20	6	10	623
KAN80×2.0	110	8	95	6.5	32	11	6	M6 × 22	6	10	890
KAN85×2.0	115	8	100	6.5	32	11	6	M6 × 22	6	10	963
KAN90×2.0	120	8	108	6.5	32	11	6	M6 × 22	6	10	1,020
KAN95×2.0	125	8	113	6.5	32	11	6	M6 × 22	6	10	1,050
KAN100×2.0	130	8	118	6.5	32	11	6	M6 × 22	6	10	1,100
KAN105×2.0	135	8	123	6.5	32	11	6	M6 × 22	6	10	1,150
KAN110×2.0	140	8	128	6.5	32	11	6	M6 × 22	6	10	1,210
KAN115×2.0	145	8	133	6.5	36	12	6	M6 × 25	6	10	1,430
KAN120×2.0	155	8	140	6.5	36	12	6	M6 × 25	6	10	1,740
KAN125×2.0	160	8	148	6.5	36	12	6	M6 × 25	6	10	1,820
KAN130×3.0	165	8	153	6.5	36	12	6	M6 × 25	6	10	1,940
KAN140×3.0	180	10	160	10	38	10	8	M6 × 25	8	10	2,335
KAN150×3.0	190	10	170	10	38	10	8	M6 × 25	8	10	2,480
KAN160×3.0	205	10	178	10	40	12	8	M8 × 30	8	25	3,380
KAN170×3.0	215	10	193	10	40	12	8	M8 × 30	8	25	3,580
KAN180×3.0	230	10	210	10	40	14	8	M8 × 30	8	25	4,110
KAN190×3.0	240	10	224	10	40	14	8	M8 × 30	8	25	4,330
KAN200×3.0	245	10	229	10	40	14	8	M8 × 30	8	25	4,410



Features

- KSN can be clamped on each side.

Usage

- Main Axis of a machine tool, Ball Screw Support Bearing, Precise spindle, Precise test machine

Specifications

- Material : S45C
- Hardness : HRC 22 - 28
- Surface treatment: Black phosphated coating
- Thread Accuracy : ISO4H
- Perpendicularly : 0.002 ~ 0.007

Order Method (Order Example)

KSNA6	30	1.5
Product NO	d	Pitch

Product NO.	d X pitch	Dimension(mm)									Set Screw		Mass
		m	m	mm	mm	mm	mm	mm	m	N·m			
KSN0	M10×0.75	28	21	23	11	14	4	2	24	M5	4.5	45	
KSN1	M12×1	30	23	25	13	14	4	2	27	M5	4.5	50	
KSN2	M15×1	33	26	28	16	16	4	2	30	M5	4.5	75	
KSN3	M17×1	37	29	32	18	18	5	2	34	M6	8	100	
KSN4	M20×1	40	32	35	21	18	5	2	36	M6	8	110	
KSN5	M25×1.5	44	36	39	26	20	5	2	41	M6	8	130	
KSN6	M30×1.5	49	41	44	32	20	5	2	46	M6	8	160	
KSN7	M35×1.5	54	46	49	38	22	5	2	50	M6	8	190	
KSN8	M40×1.5	65	56	59	42	22	6	2.5	60	M8	18	300	
KSN9	M45×1.5	70	61	64	48	22	6	2.5	65	M8	18	330	
KSN10	M50×1.5	75	65	68	52	25	7	3	70	M8	18	400	
KSN11	M55×2	85	74	78	58	25	7	3	80	M8	18	540	
KSN12	M60×2	90	78	82	62	26	8	3.5	85	M8	18	610	
KSN13	M65×2	95	83	87	68	28	8	3.5	90	M8	18	710	
KSN14	M70×2	100	88	92	72	28	8	3.5	95	M8	18	750	
KSN15	M75×2	105	93	97	77	28	8	3.5	100	M8	18	800	
KSN16	M80×2	110	98	100	83	32	8	3.5	100	M8	18	900	
KSN17	M85×2	120	107	110	88	32	10	4	-	M10	35	1,150	
KSN18	M90×2	125	112	115	93	32	10	4	-	M10	35	1,200	
KSN19	M95×2	130	117	120	98	32	10	4	-	M10	35	1,250	
KSN20	M100×2	135	122	125	103	32	10	4	-	M10	35	1,300	
KSN22	M110×2	145	132	134	112	32	10	4	-	M10	35	1,450	
KSN24	M120×2	155	142	144	122	32	10	4	-	M10	35	1,600	
KSN26	M130×2	165	152	154	132	32	12	5	-	M10	35	1,700	
KSN28	M140×2	175	162	160	142	32	14	6	-	M10	35	1,800	
KSN30	M150×2	185	172	170	152	32	14	6	-	M10	35	1,950	
KSN32	M160×3	195	182	180	162	32	14	6	-	M10	35	2,100	
KSN34	M170×3	205	192	190	172	32	14	6	-	M10	35	2,200	
KSN36	M180×3	215	200	200	182	32	16	7	-	M10	35	2,300	
KSN38	M190×3	225	210	210	192	32	16	7	-	M10	35	2,400	
KSN40	M200×3	235	220	220	202	32	18	8	-	M10	35	2,500	

Usage

- Main Axis of a machine tool, Ball Screw Support Bearing, Precise spindle, Precise test machine

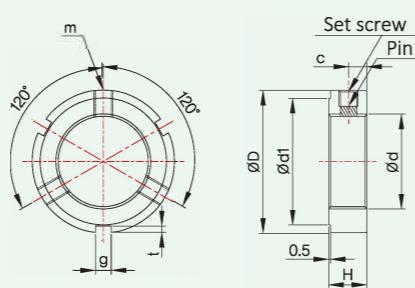
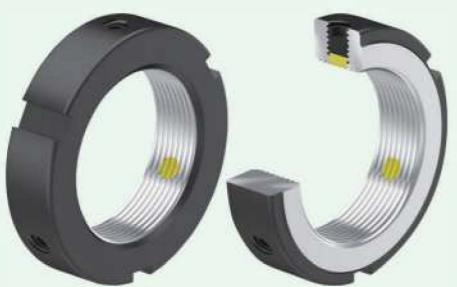
Specifications

- Material : S45C
- Hardness : HRC 22 - 28
- Surface treatment: Black phosphated coating
- Thread Accuracy : ISO4H
- Perpendicularly : 0.002 ~ 0.007

Order Method (Order Example)

KSNA6	30	1.5
Product NO	d	Pitch

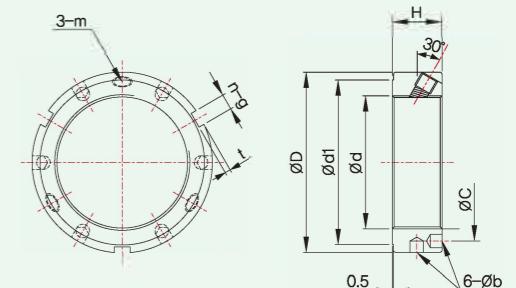
Product NO.	d X pitch	Dimension(mm)									Set Screw		Mass
		m	m	mm	mm	mm	mm	m	mm	N·m			
KSNA4	M20×1.0	38	30	21	18	29	10	4.3	4	M6	8	100	
KSNA5	M25×1.5	42	35	26	20	32.5	11	4.3	4	M6	8	120	
KSNA6	M30×1.5	48	40	32	20	40.5	11	4.3	5	M6	8	150	
KSNA7	M35×1.5	53	47	38	20	45.5	11	4.3	5	M6	8	180	
KSNA8	M40×1.5	58	52	42	22	50.5	12	4.3	5	M6	8	210	
KSNA9	M45×1.5	68	58	48	22	58	12	4.3	6	M6	8	300	
KSNA10	M50×1.5	70	63	52	24	61.5	13	4.3	6	M6	8	310	
KSNA11	M55×1.5	75	70	58	24	66.5	13	4.3	6	M6	8	350	
KSNA12	M60×1.5	84	75	62	24	74.5	13	5.3	6	M8	18	450	
KSNA13	M65×1.5	88	80	68	25	78.5	13	5.3	6	M8	18	480	
KSNA14	M70×1.5	95	86	72	26	85	14	5.3	8	M8	18	570	
KSNA15	M75×1.5	100	91	77	26	88	13	6.4	8	M8	18	610	
KSNA16	M80×2	110	97	83	30	95	16	6.4	8	M8	18	910	
KSNA17	M85×2	115	102	88	32	100	17	6.4	8	M10	35	1,050	
KSNA18	M90×2	120	110	93	32	108	17	6.4	8	M10	35	1,100	
KSNA19	M95×2	125	114	98	32	113	17	6.4	8	M10	35	1,150	
KSNA20	M100×2	130	120	103	32	118	17	6.4	8	M10	35	1,200	
KSNA22	M110×2	140	132	112	32	128	17	6.4	8	M10	35	1,350	
KSNA24	M120×2	155	142	122	32	140	17	6.4	8	M10	35	1,700	
KSNA26	M130×3	165	156	132	32	153	17	6.4	8	M10	35	1,900	
KSNA28	M140×3	180	166	142	32	165	17	6.4	10	M10	35	2,250	
KSNA30	M150×3	190	180	152	32	175	17	6.4	10	M10	35	2,450</td	



- Specifications**
- Material : S45C
 - Hardness : HRC 22 - 28
 - Surface treatment: Black phosphated coating
 - Thread Accuracy : ISO4H
 - Perpendicularity : 0.002 ~ 0.007

**Order Method
(Order Example)**

KZMT	30	1.5
Product NO	d	Pitch



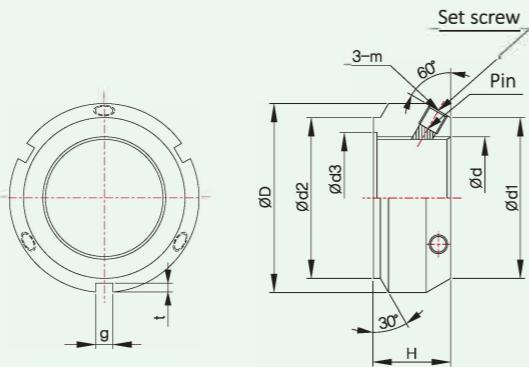
- Specifications**
- Material : S45C
 - Hardness : HRC 22 - 28
 - Surface treatment: Black phosphated coating
 - Thread Accuracy : ISO4H
 - Perpendicularity : 0.002 ~ 0.007

**Order Method
(Order Example)**

KZMF	30	1.5
Product NO	d	Pitch

Product NO.	Dimension(mm)						Set Screw	Mass	
	D	H	g	t	d1	C			
d X pitch	mm	mm	mm	mm	mm	mm	m	N·m	g
KZMT10×1	18	8	3	2	13	4	M4	2	10
KZMT12×1	22	8	3	2	16	4	M4	2	14
KZMT15×1	25	8	3	2	20	4	M4	2	16
KZMT17×1	28	10	4	2	23	5	M5	4.5	24
KZMT20×1	32	10	4	2	26	5	M5	4.5	34
KZMT25×1.5	38	12	5	2	32	6	M6	8	54
KZMT30×1.5	45	12	5	2	39	6	M6	8	76
KZMT35×1.5	52	12	5	2	46	6	M6	8	102
KZMT40×1.5	58	14	6	2.5	51	7	M6	8	144
KZMT45×1.5	65	14	6	2.5	58	7	M6	8	180
KZMT50×1.5	70	14	6	2.5	63	7	M6	8	196
KZMT55×2	75	16	7	3	67	8	M8	18	240
KZMT60×2	80	16	7	3	72	8	M8	18	262
KZMT65×2	85	16	7	3	77	8	M8	18	282
KZMT70×2	92	18	8	3.5	83	9	M8	18	378
KZMT75×2	98	18	8	3.5	89	9	M8	18	422
KZMT80×2	105	18	8	3.5	96	9	M8	18	492
KZMT85×2	110	18	8	3.5	101	9	M8	18	524
KZMT90×2	120	20	10	4	108	10	M8	18	750
KZMT95×2	125	20	10	4	113	10	M8	18	782
KZMT100×2	130	20	10	4	118	10	M8	18	826
KZMT105×2	140	22	12	5	125	11	M8	18	1,108
KZMT110×2	145	22	12	5	132	11	M8	18	1,164
KZMT120×2	155	24	12	5	142	12	M8	18	1,378
KZMT130×2	165	24	12	5	152	12	M8	18	1,480
KZMT140×2	180	26	14	6	165	13	M10	35	1,958
KZMT150×2	195	26	14	6	180	13	M10	35	2,404
KZMT160×3	210	28	16	7	190	14	M10	35	3,080
KZMT170×3	220	28	16	7	200	14	M10	35	3,256
KZMT180×3	230	30	18	8	205	15	M12	60	3,628
KZMT190×3	240	30	18	8	215	15	M12	60	3,928
KZMT200×3	250	32	18	8	225	16	M12	60	4,330

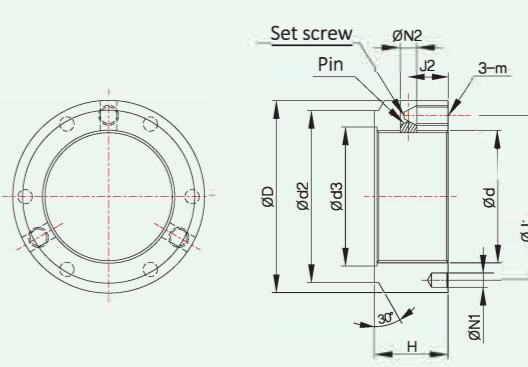
Product NO.	d X pitch	Dimension(mm)							Set Screw	Mass	
		D	d1	H	n-g	b	t	c			
mm	mm	mm	mm	mm	mm	mm	mm	mm	m	N·m	g
KZMF20	M20×1	38	33	16	3-4	-	2	-	M6	4.5	110
KZMF25	M25×1.5	38	33	18	3-5	-	2	-	M6	8	120
KZMF30	M30×1.5	45	40	18	3-5	-	2	-	M6	8	140
KZMF35	M35×1.5	52	47	18	3-5	-	2	-	M8	18	170
KZMF40	M40×1.5	58	52	20	3-6	-	2.5	-	M8	18	210
KZMF45	M45×1.5	65	59	20	3-6	-	2.5	-	M8	18	300
KZMF50	M50×1.5	70	64	20	3-6	-	2.5	-	M8	18	310
KZMF55	M55×2	75	68	22	3-7	6	3	65	M8	18	350
KZMF60	M60×2	80	73	22	3-7	6	3	70	M8	18	430
KZMF65	M65×2	85	78	22	3-7	6	3	75	M8	18	450
KZMF70	M70×2	92	84	24	3-8	6	3.5	81	M8	18	550
KZMF75	M75×2	98	90	24	3-8	6	3.5	87	M8	18	590
KZMF80	M80×2	105	96	24	3-8	7	3.5	93	M8	18	810
KZMF85	M85×2	110	102	24	6-8	7	3.5	98	M8	18	900
KZMF90	M90×2	120	108	26	6-10	7	4	105	M8	18	1,100
KZMF95	M95×2	125	113	26	6-10	7	4	110	M8	18	1,150
KZMF100	M100×2	130	118	26	6-10	7	4	115	M8	18	1,200
KZMF110	M110×2	145	132	28	6-10	7	4	128	M10	35	1,350
KZMF120	M120×2	155	142	30	6-12	7	5	138	M10	35	1,600
KZMF130	M130×2	165	152	30	6-12	7	5	148	M10	35	1,850
KZMF140	M140×2	180	165	32	6-12	7	5	160	M10	35	2,450
KZMF150	M150×2	195	180	32	6-12	7	5	173	M10	35	2,800
KZMF160	M160×3	210	190	34	6-14	8	6	185	M10	35	3,400
KZMF170	M170×3	220	200	34	6-14	8	6	195	M10	35	3,500
KZMF180	M180×3	230	205	36	6-16	8	7	205	M12	60	3,650
KZMF190	M190×3	240	215	36	6-16	8	7	215	M12	60	3,900
KZMF200	M200×3	250	225	38	6-16	8	7	225	M12	60	4,400



- Specifications**
- Material : S45C
 - Hardness : HRC 22 ~ 28
 - Surface treatment: Black phosphated coating
 - Thread Accuracy : ISO4H
 - Perpendicularity : 0.002 ~ 0.007

**Order Method
(Order Example)**

KSNT6	30	1.5
Product NO	d	Pitch



- Features**
- Set screw can be fitted at the shaft direction.

Specifications

- Material : S45C
- Hardness : HRC 22 ~ 28
- Surface treatment: Black phosphated coating
- Thread Accuracy : ISO4H
- Perpendicularity : 0.002 ~ 0.007

**Order Method
(Order Example)**

ZMVT6	30	1.5
Product NO	d	Pitch

Product NO.	d X pitch	Dimension(mm)							Set Screw		Mass
		mm	mm	mm	mm	mm	mm	mm	N·m	g	
KSNT2	M15×1	33	26	25	16	16	4	2.5	M5	4.5	85
KSNT3	M17×1	37	29	30	18	18	5	2.5	M6	8	110
KSNT4	M20×1	40	32	32	21	18	5	2.5	M6	8	120
KSNT5	M25×1.5	44	36	36	26	20	5	2.5	M6	8	140
KSNT6	M30×1.5	49	41	41	32	20	5	2.5	M6	8	180
KSNT7	M35×1.5	54	46	46	38	22	5	2.5	M6	8	210
KSNT8	M40×1.5	65	56	56	42	22	6	3	M8	18	330
KSNT9	M45×1.5	70	61	61	48	22	6	3	M8	18	370
KSNT10	M50×1.5	75	65	65	52	25	7	3	M8	18	450
KSNT11	M55×2	85	74	75	58	25	7	3	M8	18	590
KSNT12	M60×2	90	78	79	62	26	8	4	M8	18	670
KSNT13	M65×2	95	83	84	68	28	8	4	M8	18	780
KSNT14	M70×2	100	88	89	72	28	8	4	M8	18	830
KSNT15	M75×2	105	93	94	77	28	8	4	M8	18	880
KSNT16	M80×2	110	98	96	83	32	8	4	M8	18	990
KSNT17	M85×2	120	107	106	88	32	10	4	M10	35	1,270
KSNT18	M90×2	125	112	111	93	32	10	4	M10	35	1,320
KSNT19	M95×2	130	117	116	98	32	10	4	M10	35	1,380
KSNT20	M100×2	135	122	121	103	32	10	4	M10	35	1,430
KSNT22	M110×2	145	132	130	112	32	10	4	M10	35	1,600
KSNT24	M120×2	155	142	140	122	32	10	4	M10	35	1,760
KSNT26	M130×2	165	152	150	132	32	12	5	M10	35	1,870
KSNT28	M140×2	175	162	160	142	32	14	6	M10	35	1,980
KSNT30	M150×2	185	172	170	152	32	14	6	M10	35	2,150
KSNT32	M160×2	195	182	180	162	32	14	6	M10	35	2,350
KSNT34	M170×2	205	192	190	172	32	14	6	M10	35	2,550
KSNT36	M180×2	215	200	200	182	32	16	7	M10	35	2,640
KSNT38	M190×2	225	210	210	192	32	16	7	M10	35	2,750
KSNT40	M200×2	235	220	220	202	32	18	8	M10	35	2,850

Product NO.	d X pitch	Dimension(mm)										Set Screw			Mass
		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	m	N·m	g	
ZMVT5	M25×1.5	42	33.5	35	26	20	32.5	11	4.3	5	M6	8	120		
ZMVT6	M30×1.5	48	39	40	32	20	40.5	11	4.3	5	M6	8	150		
ZMVT7	M35×1.5	53	44	47	38	20	45.5	11	4.3	5	M6	8	180		
ZMVT8	M40×1.5	58	49	52	42	22	50.5	12	4.3	5	M6	8	210		
ZMVT9	M45×1.5	68	56.5	58	48	22	58	12	4.3	5	M6	8	300		
ZMVT10	M50×1.5	70	60	63	52	24	61.5	12	4.3	5	M6	8	310		
ZMVT11	M55×1.5	75	65	70	58	24	66.5	13	4.3	5	M6	8	350		
ZMVT12	M60×1.5	84	72	75	62	24	74.5	13	5.3	5	M6	8	450		
ZMVT13	M65×1.5	88	76	80	68	25	78.5	13	5.3	5	M6	8	480		
ZMVT14	M70×1.5	95	83	86	72	26	85	14	5.3	7.9	M10	35	570		
ZMVT15	M75×1.5	100	88	91	77	26	88	13	6.4	7.9	M10	35	610		
ZMVT16	M80×2	110	96	97	83	30	95	16	6.4	7.9	M10	35	910		
ZMVT17	M85×2	115	100	102	88	32	100	17	6.4	9.6	M12	60	1,050		
ZMVT18	M90×2	120	105	110	93	32	108	17	6.4	9.6	M12	60	1,100		
ZMVT19	M95×2	125	110	114	98	32	113	17	6.4	9.6	M12	60	1,150		
ZMVT20	M100×2	130	115	120	103	32	118	17	6.4	9.6	M12	60	1,200		
ZMVT22	M110×2	140	128	132	112	32	125	17	6.4	9.6	M12	60	1,350		
ZMVT24	M120×2	155	138	142	122	32	140	17	6.4	9.6	M12	60	1,700		
ZMVT26	M130×3	165	148	156	132	32	153	17	6.4	9.6	M12	60	1,900		
ZMVT28	M140×3	180	160	166	142	32	165	17	6.4	9.6	M12	60	2,250		
ZMVT30	M150×3	195	173	180	152	32	175	17	6.4	9.6	M12	60	2,450		
ZMVT32	M160×3	205	182	190	162	32	185	17	8.4						



Features

Prevailing Torque of DCN is higher than existing Locknut. Install and Removal of Locknut body is easier than existing Locknut. Especially, DCN has excellent self-locking feature under vibration and high-speed rotation.

DCN can get a relatively large thrust load.

It is easy to adjust the run-out.

The choice is wide due to the two kinds of thickness.

Specifications

- Material : S45C
- Hardness : HRC 22-28
- Thread Accuracy: ISO 4H
- Set screw Material : SCM435
- Surface treatment : Black phosphated coating
- Perpendicularity : 0.002mm~0.007mm

Usage

Comparison

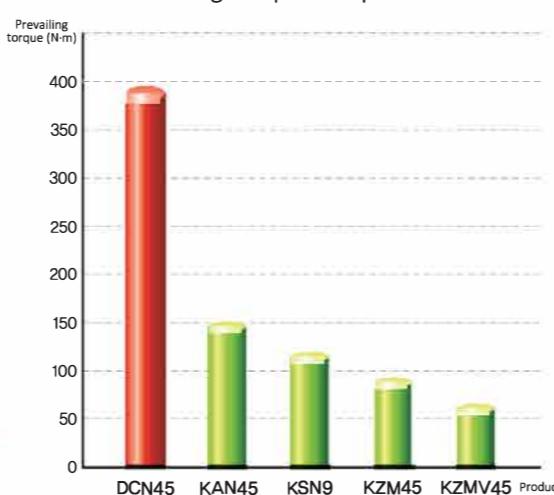
▼ DCN45X1.5 Prevailing Torque Comparison

Product NO.	Tightening torque(N·m)	Set screw	Prevailing torque (N·m)
DCN45(M45×1.5P)	8	3-M6	384
KAN45(M45×1.5P)	3	6-M4	153
KSN9(M45×1.5P)	8	3-M6	123
KZM45(M45×1.5P)	8	3-M6	83
KZMV45(M45×1.5P)	8	3-M6	65

※ KAN is tightened with hexagon wrench bolt.

Measuring instrument

▼ Prevailing Torque Comparison

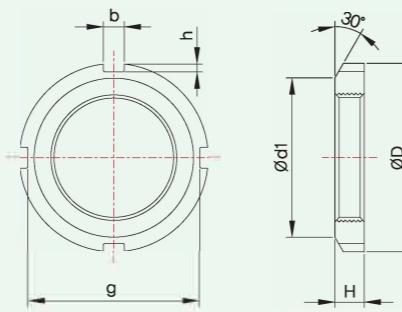
Order Method
(Order Example)

DCN(L)	30	1.5
Product NO	d	Pitch



Product NO.	Dimension(mm)						Set Screw		Mass		
	d X pitch	D	H1	H2	g	t	d1	n-m	N·m	DCN	DCNL
DCN(L)20×1		32	10	18	4	2	26	3-M5	4.5	34	110
DCN(L)25×1.5		38	12	20	5	2	32	3-M5	4.5	58	130
DCN(L)30×1.5		45	12	20	5	2	39	3-M5	4.5	78	160
DCN(L)35×1.5		52	12	22	5	2	46	3-M6	8	104	190
DCN(L)40×1.5		58	14	22	6	2.5	51	3-M6	8	148	300
DCN(L)45×1.5		65	14	22	6	2.5	58	3-M6	8	184	330
DCN(L)50×1.5		70	14	25	6	2.5	63	3-M6	8	200	400
DCN(L)55×2		75	16	25	7	3	67	3-M6	8	246	540
DCN(L)60×2		80	16	26	7	3	72	3-M6	8	270	610
DCN(L)65×2		85	16	28	7	3	77	3-M6	8	290	710
DCN(L)70×2		92	18	28	8	3.5	83	3-M8	18	398	750
DCN(L)75×2		98	18	28	8	3.5	89	3-M8	18	434	800
DCN(L)80×2		105	18	32	8	3.5	96	3-M8	18	504	900
DCN(L)85×2		110	18	32	8	3.5	101	3-M8	18	532	1,150
DCN(L)90×2		120	20	32	10	4	108	3-M8	18	762	1,200
DCN(L)95×2		125	20	32	10	4	113	3-M8	18	796	1,250
DCN(L)100×2		130	20	32	10	4	118	3-M8	18	836	1,300
DCN(L)105×2		140	22	32	12	5	125	3-M10	35	1,130	1,375
DCN(L)110×2		145	22	32	12	5	132	3-M10	35	1,172	1,450
DCN(L)115×2		150	22	32	12	5	137	3-M10	35	1,270	1,525
DCN(L)120×2		155	24	32	12	5	142	3-M10	35	1,390	1,600
DCN(L)125×2		160	24	32	12	5	147	3-M10	35	1,450	1,650
DCN(L)130×2		165	24	32	12	5	152	3-M10	35	1,500	1,700
DCN(L)135×2		175	26	32	14	6	160	3-M12	60	1,930	1,750
DCN(L)140×2		180	26	32	14	6	165	3-M12	60	1,950	1,800
DCN(L)145×2		190	26	32	14	6	175	3-M12	60	2,380	1,875
DCN(L)150×2		195	26	32	14	6	180	3-M12	60	2,440	1,950
DCN(L)155×3		200	28	32	16	7	180	3-M12	60	2,760	2,025
DCN(L)160×3		210	28	32	16	7	190	3-M12	60	3,160	2,100
DCN(L)165×3		210	28	32	16	7	190	3-M12	60	3,300	2,150
DCN(L)170×3		220	28	32	16	7	200	3-M12	60	3,315	2,200
DCN(L)180×3		230	30	32	18	8	205	3-M12	60	3,690	2,300
DCN(L)190×3		240	30	32	18	8	215	3-M12	60	3,880	2,400
DCN(L)200×3		250	32	32	18	8	225	3-M12	60	4,370	2,500

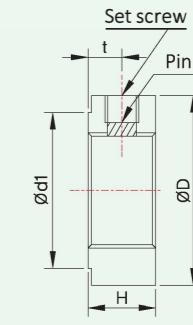
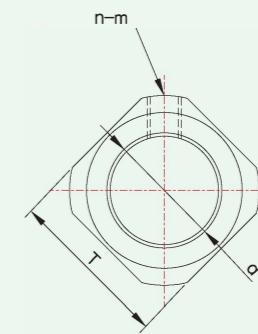
* From DCN 105×2, it will be produced after order. So please ask to our company about delivery time.



- Specifications**
- Material : S45C
 - Hardness : HRC 22 - 28
 - Surface treatment: Black phosphated coating
 - Thread Accuracy : ISO4H
 - Perpendicularity : 0.002 ~ 0.007

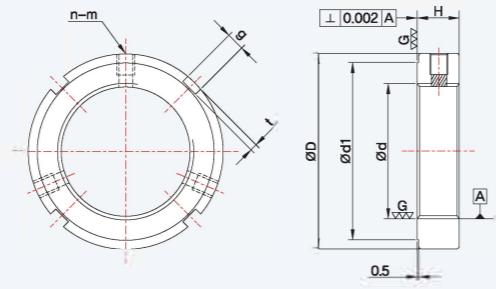
**Order Method
(Order Example)**

AN6	30	1.5
Product NO	d	Pitch



Product NO.	d X pitch	Dimension(mm)						Adapter sleeve	washer
		D mm	d1 mm	g mm	b mm	h mm	H mm		
AN02	M15×1	25	21	21	4	2	5	-	AW02
AN03	M17×1	28	24	24	4	2	5	-	AW03
AN04	M20×1	32	26	28	4	2	6	04	AW04
AN05	M25×1.5	38	32	34	5	2	7	05	AW05
AN06	M30×1.5	45	38	41	5	2	7	06	AW06
AN07	M35×1.5	52	44	48	5	2	8	07	AW07
AN08	M40×1.5	58	50	53	6	2.5	9	08	AW08
AN09	M45×1.5	65	56	60	6	2.5	10	09	AW09
AN10	M50×1.5	70	61	65	6	2.5	11	10	AW10
AN11	M55×2	75	67	69	7	3	11	11	AW11
AN12	M60×2	80	73	74	7	3	11	12	AW12
AN13	M65×2	85	79	79	7	3	12	13	AW13
AN14	M70×2	92	85	85	8	3.5	12	14	AW14
AN15	M75×2	98	90	91	8	3.5	13	15	AW15
AN16	M80×2	105	95	98	8	3.5	15	16	AW16
AN17	M85×2	110	102	103	8	3.5	16	17	AW17
AN18	M90×2	120	108	112	10	4	16	18	AW18
AN19	M95×2	125	113	117	10	4	17	19	AW19
AN20	M100×2	130	120	122	10	4	18	20	AW20
AN21	M105×2	140	126	130	12	5	18	21	AW21
AN22	M110×2	145	133	135	12	5	19	22	AW22
AN23	M115×2	150	137	140	12	5	19	-	AW23
AN24	M120×2	155	138	145	12	5	20	24	AW24
AN25	M125×2	160	148	150	12	5	21	-	AW25
AN26	M130×2	165	149	155	12	5	21	26	AW26
AN27	M135×2	175	160	163	14	6	22	-	AW27
AN28	M140×2	180	160	168	14	6	22	28	AW28
AN29	M145×2	190	172	178	14	6	24	-	AW29
AN30	M150×2	195	171	183	14	6	24	30	AW30
AN31	M155×3	200	182	186	16	7	25	-	-
AN32	M160×3	210	182	196	16	7	25	32	AW32
AN33	M165×3	210	193	196	16	7	26	-	-
AN34	M170×3	220	193	206	16	7	26	34	AW34
AN36	M180×3	230	203	214	18	8	27	36	AW36
AN38	M190×3	240	214	224	18	8	28	38	AW38
AN40	M200×3	250	226	234	18	8	29	40	AW40

Product NO.	d X pitch	Dimension(mm)						Set screw	Mass g
		D mm	d1 mm	T mm	t mm	H mm	n-m		
DN4	M4×0.5	11.5	8	10	2.8	5	M3	0.9	2
DN5	M5×0.5	13.5	9	11	2.8	5	M3	0.9	3
DN6	M6×0.75	14.5	10	12	3.1	5.5	M3	0.9	4
DN8	M8×1	16	13	14	3.9	7.0	M3	0.9	8
DN8	M8×0.75	16	13	14	3.9	7.0	M3	0.9	8
DN10	M10×1	20	16	17	4.5	8.0	M4	2	12
DN10	M10×0.75	20	16	17	4.5	8.0	M4	2	12
DN10-S	M10×1	20	16	17	4.5	8.0	2-M4	2	12
DN12	M12×1	22	18	19	4.5	8.0	M4	2	14
DN12-S	M12×1	22	18	19	4.5	8.0	2-M4	2	14
DN15	M15×1	25	21	22	4.5	8.0	2-M4	2	16
DN17	M17×1	28	23	24	5.4	10	2-M5	4.5	24
DN17-S	M17×1	30	25	24	9	13	2-M5	4.5	34
DN20	M20×1	32	27	28	5.4	10	2-M5	4.5	32
DN20-S	M20×1	35	26	29.3	7	11	2-M5	4.5	42
DN25	M25×1.5	38	33	34	6.5	12	2-M6	8	52
DN30	M30×1.5	45	40	41	6.5	12	2-M6	8	74
DN35	M35×1.5	52	47	48	6.5	12	2-M6	8	100
DN40	M40×1.5	58	52	53	8	14	2-M6	8	134

**Features**

Due to the thickness comparatively thinner than other types, this type is especially applicable when there are space restrictions.

This type is a grinding locknut that its clamping face and thread are finely grinded at the same time and the perpendicularity is well managed.

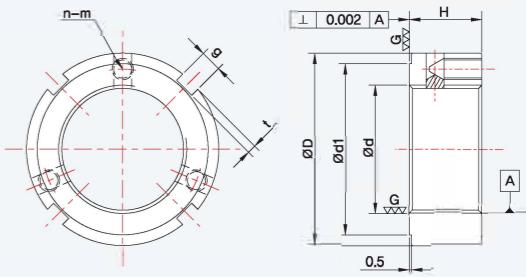
Specifications

- Material : SCM440(42CrMo4) - Hardness : HRC 28~32 - Thread Accuracy : ISO 4H
- Perpendicularity: 0.002mm - Manufacturing Method : High Precision Grinding

**Order Method
(Order Example)**

ZMG	30	1.5
Product NO	d	Pitch

Product NO. d x pitch	D mm	H mm	g mm	t mm	d1 mm	n-m	MAX. N·m
ZMG8×0.75	16	8	3	2	11	2-M4	2.0
ZMG10×0.75	18	8	3	2	13	2-M4	2.0
ZMG10×1	18	8	3	2	13	2-M4	2.0
ZMG12×1	22	8	3	2	16	2-M4	2.0
ZMG15×1	25	8	3	2	20	2-M4	2.0
ZMG17×1	28	10	4	2	23	2-M5	4.5
ZMG20×1	32	10	4	2	26	3-M5	4.5
ZMG25×1.5	38	12	5	2	32	3-M6	8.0
ZMG30×1.5	45	12	5	2	39	3-M6	8.0
ZMG35×1.5	52	12	5	2	46	3-M6	8.0
ZMG40×1.5	58	14	6	2.5	51	3-M6	8.0
ZMG45×1.5	65	14	6	2.5	58	3-M6	8.0
ZMG50×1.5	70	14	6	2.5	63	3-M6	8.0
ZMG55×2	75	16	7	3	67	3-M8	18.0
ZMG60×2	80	16	7	3	72	3-M8	18.0
ZMG65×2	85	16	7	3	77	3-M8	18.0
ZMG70×2	92	18	8	3.5	83	3-M8	18.0
ZMG75×2	98	18	8	3.5	89	3-M8	18.0
ZMG80×2	105	18	8	3.5	96	3-M8	18.0
ZMG85×2	110	18	8	3.5	101	3-M8	18.0
ZMG90×2	120	20	10	4	108	3-M8	18.0
ZMG95×2	125	20	10	4	113	3-M8	18.0
ZMG100×2	130	20	10	4	118	3-M8	18.0
ZMG105×2	140	22	12	5	125	3-M8	18.0
ZMG110×2	145	22	12	5	132	3-M8	18.0
ZMG115×2	150	22	12	5	137	3-M8	18.0
ZMG120×2	155	24	12	5	142	3-M8	18.0
ZMG125×2	160	24	12	5	147	3-M8	18.0
ZMG130×2	165	24	12	5	152	3-M8	18.0
ZMG135×2	175	26	14	6	160	3-M10	35.0
ZMG140×2	180	26	14	6	165	3-M10	35.0
ZMG145×2	190	26	14	6	175	3-M10	35.0
ZMG150×2	195	26	14	6	180	3-M10	35.0
ZMG155×3	200	28	16	7	180	3-M10	35.0
ZMG160×3	210	28	16	7	190	3-M10	35.0
ZMG165×3	210	28	16	7	190	3-M10	35.0
ZMG170×3	220	28	16	7	200	3-M10	35.0

**Features**

This type locks set screws from the axial direction. It is applicable when there are restrictions of side space. This type is a grinding locknut that its clamping face and thread are finely grinded at the same time and the perpendicularity is well managed.

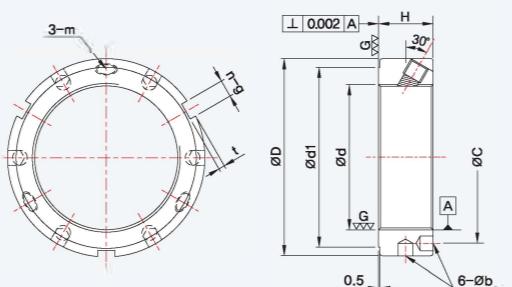
Specifications

- Material : SCM440(42CrMo4) - Hardness : HRC 28~32 - Thread Accuracy : ISO 4H
- Perpendicularity: 0.002mm - Manufacturing Method : High Precision Grinding

**Order Method
(Order Example)**

ZMVG	30	1.5
Product NO	d	Pitch

Product NO. d x pitch	D mm	H mm	g mm	t mm	d1 mm	n-m	MAX. N·m
ZMVG17×1	28	15	4	2	23	2-M4	2.0
ZMVG20×1	32	15	4	2	26	3-M4	2.0
ZMVG25×1.5	38	17	5	2	32	3-M5	4.5
ZMVG30×1.5	45	17	5	2	39	3-M5	4.5
ZMVG35×1.5	52	17	5	2	46	3-M5	4.5
ZMVG40×1.5	58	19	6	2.5	51	3-M6	8.0
ZMVG45×1.5	65	19	6	2.5	58	3-M6	8.0
ZMVG50×1.5	70	19	6	2.5	63	3-M6	8.0
ZMVG55×2	75	21	7	3	67	3-M6	8.0
ZMVG60×2	80	21	7	3	72	3-M6	8.0
ZMVG65×2	85	21	7	3	77	3-M6	8.0
ZMVG70×2	92	23	8	3.5	83	3-M8	18.0
ZMVG75×2	98	23	8	3.5	89	3-M8	18.0
ZMVG80×2	105	23	8	3.5	96	3-M8	18.0
ZMVG85×2	110	23	8	3.5	101	3-M8	18.0
ZMVG90×2	120	25	10	4	108	3-M8	18.0
ZMVG95×2	125	25	10	4	113	3-M8	18.0
ZMVG100×2	130	25	10	4	118	3-M8	18.0
ZMVG105×2	140	27	12	5	125	3-M10	35.0
ZMVG110×2	145	27	12	5	132	3-M10	35.0
ZMVG115×2	150	27	12	5	137	3-M10	35.0
ZMVG120×2	155	29	12	5	142	3-M10	35.0
ZMVG125×2	160	29	12	5	147	3-M10	35.0
ZMVG130×2	165	29	12	5	152	3-M10	35.0
ZMVG135×2	175	31	14	6	160	3-M12	60.0
ZMVG140×2	180	31	14	6	165	3-M12	60.0
ZMVG145×2	190	31	14	6	175	3-M12	60.0
ZMVG150×2	195	31	14	6	180	3-M12	60.0
ZMVG155×3	200	33	16	7	180	3-M12	60.0
ZMVG160×3	210	33	16	7	190	3-M12	60.0
ZMVG165×3	210	33	16	7	190	3-M12	60.0
ZMVG170×3	220	33	16	7	200	3-M12	60.0



Features

This type locks set-screws from the diagonal direction. Placing set-screws 60° relative to the radial plane, this type provides stable locking force by preventing loosening. By using the set-screws, it is easy for fitting the concentric. This type is a grinding locknut that its clamping face and thread are finely grinded at the same time and the perpendicularity is well managed.

Specifications

- Material : SCM440(42CrMo4)
- Hardness : HRC 28~32
- Thread Accuracy : ISO 4H
- Perpendicularity: 0.002mm
- Manufacturing Method : High Precision Grinding

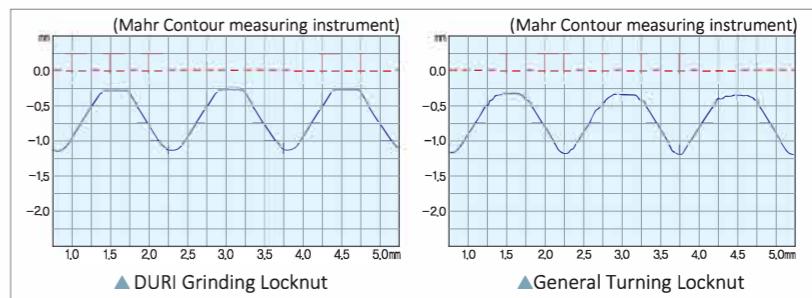
Order Method (Order Example)

ZMFG	30	1.5
Product NO	d	Pitch

Product NO.	D	H	d1	n-g	b	t	c	m	MAX. N·m
d X pitch	mm	mm	mm	mm	mm	mm	mm		
ZMFG20×1	38	16	33	3-4	-	2	-	M6	4.5
ZMFG25×1.5	38	18	33	3-5	-	2	-	M6	8.0
ZMFG30×1.5	45	18	40	3-5	-	2	-	M6	8.0
ZMFG35×1.5	52	18	47	3-5	-	2	-	M8	18.0
ZMFG40×1.5	58	20	52	3-6	-	2.5	-	M8	18.0
ZMFG45×1.5	65	20	59	3-6	-	2.5	-	M8	18.0
ZMFG50×1.5	70	20	64	3-6	-	2.5	-	M8	18.0
ZMFG55×2	75	22	68	3-7	6	3	65	M8	18.0
ZMFG60×2	80	22	73	3-7	6	3	70	M8	18.0
ZMFG65×2	85	22	78	3-7	6	3	75	M8	18.0
ZMFG70×2	92	24	84	3-8	6	3.5	81	M8	18.0
ZMFG75×2	98	24	90	3-8	6	3.5	87	M8	18.0
ZMFG80×2	105	24	96	3-8	7	3.5	93	M8	18.0
ZMFG85×2	110	24	102	6-8	7	3.5	98	M8	18.0
ZMFG90×2	120	26	108	6-10	7	4	105	M8	18.0
ZMFG95×2	125	26	113	6-10	7	4	110	M8	18.0
ZMFG100×2	130	26	118	6-10	7	4	115	M8	18.0
ZMFG105×2	140	28	125	6-10	7	4	123	M10	35.0
ZMFG110×2	145	28	132	6-10	7	4	128	M10	35.0
ZMFG115×2	150	28	137	6-10	7	4	133	M10	35.0
ZMFG120×2	155	30	142	6-12	7	5	138	M10	35.0
ZMFG130×2	160	30	147	6-12	7	5	143	M10	35.0
ZMFG135×2	165	30	152	6-12	7	5	148	M10	35.0
ZMFG140×2	175	32	160	6-12	7	5	155	M10	35.0
ZMFG145×2	180	32	165	6-12	7	5	160	M10	35.0
ZMFG150×2	190	32	175	6-12	7	5	168	M10	35.0
ZMFG155×2	195	32	180	6-12	7	5	173	M10	35.0
ZMFG160×3	200	34	180	6-14	8	6	178	M10	35.0
ZMFG165×3	210	34	190	6-14	8	6	185	M10	35.0
ZMFG170×3	210	34	190	6-14	8	6	188	M10	35.0

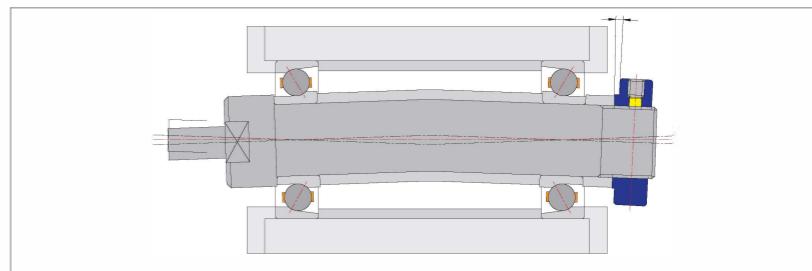
Comparison figure of thread cutting section between General Turning Locknut and DURI Grinding Locknut

DURI Grinding Locknuts are manufactured by finely grinding both threads and clamping face at the same time, thereby preventing the bur of the threads, its clamping face providing excellent surface roughness, perpendicularity and flatness. Therefore, it is suitable where high precision is required.



Shaft Vibration due to Locknut Squareness

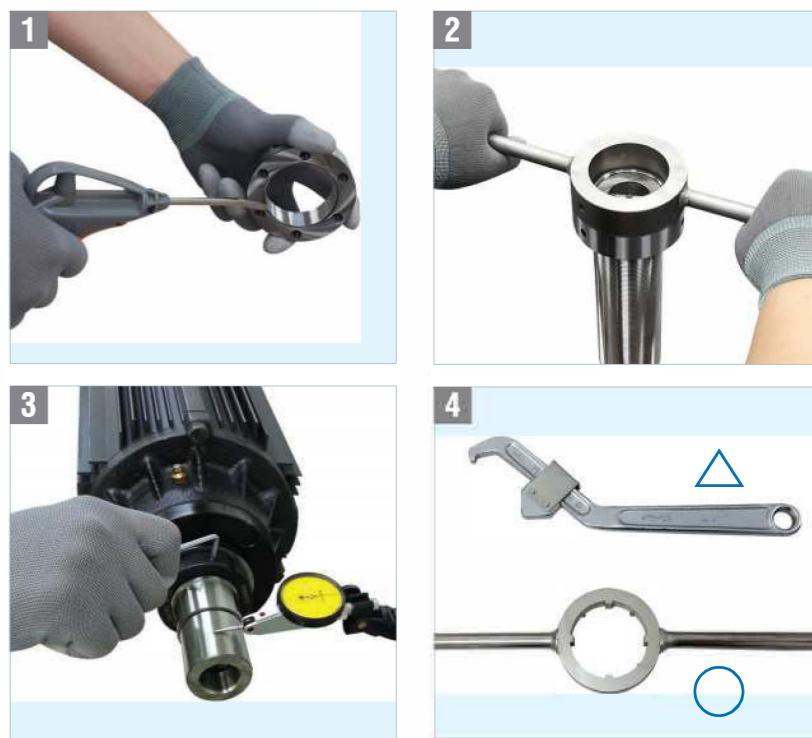
The perpendicularity of clamping face against the locknut center is very important. The shaking of the shaft end occurs by the slope of the locknut clamping face. Bearing could be slanted by locknut. When the slant is 0.005mm, the load carrying capacity of the bearing decreases -10%, the radial stiffness -45% and its lifespan Product No. -30%, respectively.

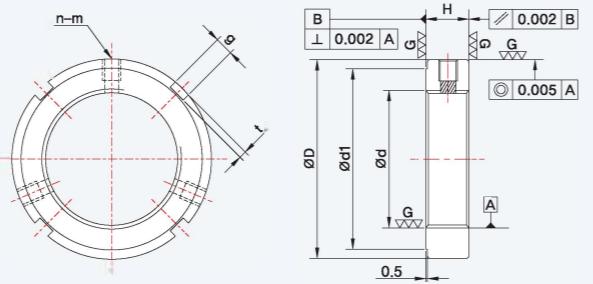
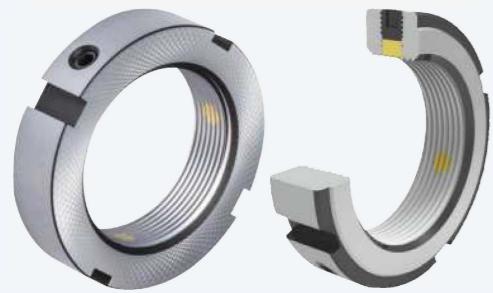


Why use DURI Grinding Locknut

Notes on installation

- 1 Clean the nut and the male screw by an air blow gun. Confirm that the screw part does not have any damage. Apply a little lubricant to the nut and the male screw.
- 2 Using an assembly tool, mount nuts by applying the suitable torque equally to the direction of axis. It can be precisely mounted when clamped by a spinning tool with two levers, as shown in the photograph.
- 3 Tighten all set-screws with the torque less than specified on the catalogue, checking the runout tolerance by applying a gauge at the shaft end. Tighten the nut by the suitable torque again. The suitable torque can be calculated from the load conditions required by each application. For any technical assistance, please contact our service team.
- 4 Please use the correct tool.



**Features**

Thickness is comparatively thinner than other products, so this type is especially applicable for use when other types are not usable due to space restrictions.

Thread area, Clamping face, trailing rims and outer skirts were precision ground to satisfy high precision during high speed rotation.

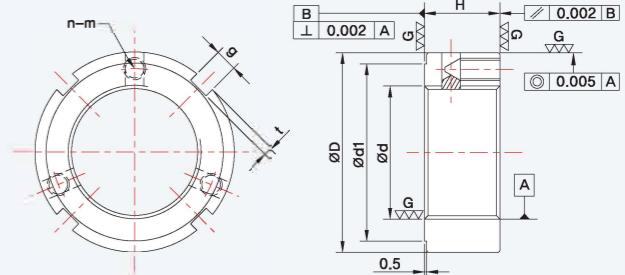
Specifications

- Material : SCM440(42CrMo4)
- Hardness : HRC 28~32
- Thread Accuracy : ISO 4H
- Perpendicularity : 0.002mm
- Parallelism : 0.002mm
- Concentricity : 0.005mm

**Order Method
(Order Example)**

UZMG	30	1.5
Product NO	d	Pitch

Product NO.	D	H	g	t	d1	n-m	MAX. N·m
d X pitch	mm	mm	mm	mm	mm		
UZMG8×0.75	16	8	3	2	11	2-M4	2.0
UZMG10×0.75	18	8	3	2	13	2-M4	2.0
UZMG10×1	18	8	3	2	13	2-M4	2.0
UZMG12×1	22	8	3	2	16	2-M4	2.0
UZMG15×1	25	8	3	2	20	2-M4	2.0
UZMG17×1	28	10	4	2	23	2-M5	4.5
UZMG20×1	32	10	4	2	26	3-M5	4.5
UZMG25×1.5	38	12	5	2	32	3-M6	8.0
UZMG30×1.5	45	12	5	2	39	3-M6	8.0
UZMG35×1.5	52	12	5	2	46	3-M6	8.0
UZMG40×1.5	58	14	6	2.5	51	3-M6	8.0
UZMG45×1.5	65	14	6	2.5	58	3-M6	8.0
UZMG50×1.5	70	14	6	2.5	63	3-M6	8.0
UZMG55×2	75	16	7	3	67	3-M8	18.0
UZMG60×2	80	16	7	3	72	3-M8	18.0
UZMG65×2	85	16	7	3	77	3-M8	18.0
UZMG70×2	92	18	8	3.5	83	3-M8	18.0
UZMG75×2	98	18	8	3.5	89	3-M8	18.0
UZMG80×2	105	18	8	3.5	96	3-M8	18.0
UZMG85×2	110	18	8	3.5	101	3-M8	18.0
UZMG90×2	120	20	10	4	108	3-M8	18.0
UZMG95×2	125	20	10	4	113	3-M8	18.0
UZMG100×2	130	20	10	4	118	3-M8	18.0
UZMG105×2	140	22	12	5	125	3-M8	18.0
UZMG110×2	145	22	12	5	132	3-M8	18.0
UZMG115×2	150	22	12	5	137	3-M8	18.0
UZMG120×2	155	24	12	5	142	3-M8	18.0
UZMG125×2	160	24	12	5	147	3-M8	18.0
UZMG130×2	165	24	12	5	152	3-M8	18.0
UZMG135×2	175	26	14	6	160	3-M10	35.0
UZMG140×2	180	26	14	6	165	3-M10	35.0
UZMG145×2	190	26	14	6	175	3-M10	35.0
UZMG150×2	195	26	14	6	180	3-M10	35.0
UZMG155×3	200	28	16	7	180	3-M10	35.0
UZMG160×3	210	28	16	7	190	3-M10	35.0
UZMG165×3	210	28	16	7	190	3-M10	35.0
UZMG170×3	220	28	16	7	200	3-M10	35.0

**Features**

Locking the set screw in the axial direction.

This type is applicable for use where there are restrictions of side space.

Thread area, Clamping face, trailing rims and outer skirts were precision ground to satisfy high precision during high speed rotation.

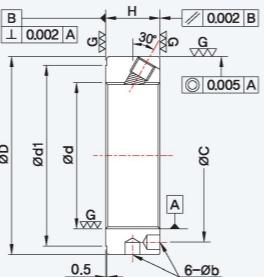
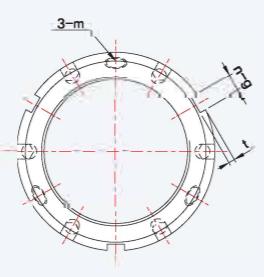
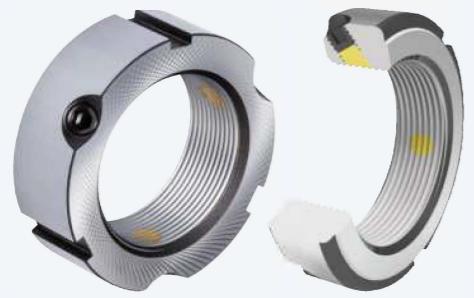
Specifications

- Material : SCM440(42CrMo4)
- Hardness : HRC 28~32
- Thread Accuracy : ISO 4H
- Perpendicularity : 0.002mm
- Parallelism : 0.002mm
- Concentricity : 0.005mm

**Order Method
(Order Example)**

UZMVG	30	1.5
Product NO	d	Pitch

Product NO.	D	H	g	t	d1	n-m	MAX. N·m
d X pitch	mm	mm	mm	mm	mm		
UZMVG17×1	28	15	4	2	23	2-M4	2.0
UZMVG20×1	32	15	4	2	26	3-M4	2.0
UZMVG25×1.5	38	17	5	2	32	3-M5	4.5
UZMVG30×1.5	45	17	5	2	39	3-M5	4.5
UZMVG35×1.5	52	17	5	2	46	3-M5	4.5
UZMVG40×1.5	58	19	6	2.5	51	3-M6	8.0
UZMVG45×1.5	65	19	6	2.5	58	3-M6	8.0
UZMVG50×1.5	70	19	6	2.5	63	3-M6	8.0
UZMVG55×2	75	21	7	3	67	3-M6	8.0
UZMVG60×2	80	21	7	3	72	3-M6	8.0
UZMVG65×2	85	21	7	3	77	3-M6	8.0
UZMVG70×2	92	23	8	3.5	83	3-M8	18.0
UZMVG75×2	98	23	8	3.5	89	3-M8	18.0
UZMVG80×2	105	23	8	3.5	96	3-M8	18.0
UZMVG85×2	110	23	8	3.5	101	3-M8	18.0
UZMVG90×2	120	25	10	4	108	3-M8	18.0
UZMVG95×2	125	25	10	4	113	3-M8	18.0
UZMVG100×2	130	25	10	4	118	3-M8	18.0
UZMVG105×2	140	27	12	5	125	3-M10	35.0
UZMVG110×2	145	27	12	5	132	3-M10	35.0
UZMVG115×2	150	27	12	5	137	3-M10	35.0
UZMVG120×2	155	29	12	5	142	3-M10	35.0
UZMVG125×2	160	29	12	5	147	3-M10	35.0
UZMVG130×2	165	29	12	5	152	3-M10	35.0
UZMVG135×2	175	31	14	6	160	3-M12	60.0
UZMVG140×2	180	31	14	6	165	3-M12	60.0
UZMVG145×2	190	31	14	6	175	3-M12	60.0
UZMVG150×2	195	31	14	6	180	3-M12	60.0
UZMVG155×3	200	33	16	7	180	3-M12	60.0
UZMVG160×3	210	33	16	7	190	3-M12	60.0
UZMVG165×3	210	33	16	7	190	3-M12	60.0
UZMVG170×3	220	33	16	7	200	3-M12	60.0

**Features**

Locking the set screw in diagonal side.

Designed with a set screw 60° relative to an axis, so you can get a stable locking force to prevent loosening.

Using the set screw, it is easy for fitting the concentric.

Thread area, Clamping face, trailing rims and outer skirts were precision ground to satisfy high precision during high speed rotation.

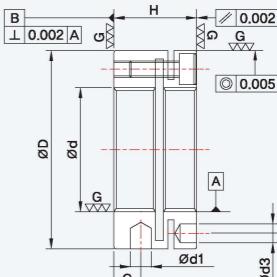
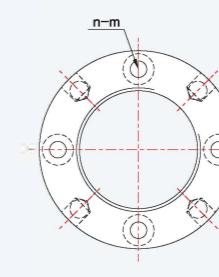
Specifications

- Material : SCM440(42CrMo4)
- Hardness : HRC 28~32
- Thread Accuracy : ISO 4H
- Perpendicularity : 0.002mm
- Parallelism : 0.002mm
- Concentricity : 0.005mm

**Order Method
(Order Example)**

Product NO.	UZMFG	30	1.5
D	Product NO	d	Pitch

Product NO. d X pitch	D mm	H mm	d1 mm	n-g mm	b mm	t mm	c mm	m	MAX. N·m
UZMFG20×1	38	16	33	3-4	-	2	-	M6	4.5
UZMFG25×1.5	38	18	33	3-5	-	2	-	M6	8.0
UZMFG30×1.5	45	18	40	3-5	-	2	-	M6	8.0
UZMFG35×1.5	52	18	47	3-5	-	2	-	M8	18.0
UZMFG40×1.5	58	20	52	3-6	-	2.5	-	M8	18.0
UZMFG45×1.5	65	20	59	3-6	-	2.5	-	M8	18.0
UZMFG50×1.5	70	20	64	3-6	-	2.5	-	M8	18.0
UZMFG55×2	75	22	68	3-7	6	3	65	M8	18.0
UZMFG60×2	80	22	73	3-7	6	3	70	M8	18.0
UZMFG65×2	85	22	78	3-7	6	3	75	M8	18.0
UZMFG70×2	92	24	84	3-8	6	3.5	81	M8	18.0
UZMFG75×2	98	24	90	3-8	6	3.5	87	M8	18.0
UZMFG80×2	105	24	96	3-8	7	3.5	93	M8	18.0
UZMFG85×2	110	24	102	6-8	7	3.5	98	M8	18.0
UZMFG90×2	120	26	108	6-10	7	4	105	M8	18.0
UZMFG95×2	125	26	113	6-10	7	4	110	M8	18.0
UZMFG100×2	130	26	118	6-10	7	4	115	M8	18.0
UZMFG105×2	140	28	125	6-10	7	4	123	M10	35.0
UZMFG110×2	145	28	132	6-10	7	4	128	M10	35.0
UZMFG115×2	150	28	137	6-10	7	4	133	M10	35.0
UZMFG120×2	155	30	142	6-12	7	5	138	M10	35.0
UZMFG125×2	160	30	147	6-12	7	5	143	M10	35.0
UZMFG130×2	165	30	152	6-12	7	5	148	M10	35.0
UZMFG135×2	175	32	160	6-12	7	5	155	M10	35.0
UZMFG140×2	180	32	165	6-12	7	5	160	M10	35.0
UZMFG145×2	190	32	175	6-12	7	5	168	M10	35.0
UZMFG150×2	195	32	180	6-12	7	5	173	M10	35.0
UZMFG155×3	200	34	180	6-14	8	6	178	M10	35.0
UZMFG160×3	210	34	190	6-14	8	6	185	M10	35.0
UZMFG165×3	210	34	190	6-14	8	6	188	M10	35.0
UZMFG170×3	220	34	200	6-14	8	6	195	M10	35.0

**Features**

The locking force of this type is higher than other products due to locking male thread using the elasticity of the nut main body by force.

Highly resistant to vibration and it also can be locked by neutral.

Accuracy is very good and it is easy to fitting the concentric.

Thread area, Clamping face, trailing rims and outer skirts were precision ground to satisfy high precision during high speed rotation.

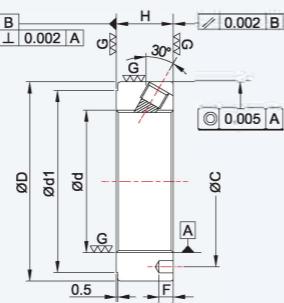
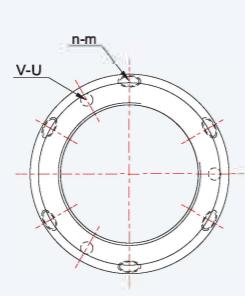
Specifications

- Material : SCM440(42CrMo4)
- Hardness : HRC 28~32
- Thread Accuracy : ISO 4H
- Perpendicularity : 0.002mm
- Parallelism : 0.002mm
- Concentricity : 0.005mm

**Order Method
(Order Example)**

UKANG	30	1.5
Product NO	d	Pitch

Product NO. d X pitch	D mm	H mm	d1 mm	d2 mm	d3 mm	c mm	Holes	n-m	MAX. N·m
UKANG20×1.5	40	18	4	30.5	4.5	5	4	4-M4×12	3.0
UKANG22×1.5	40	18	4	30.5	4.5	5	4	4-M4×12	3.0
UKANG24×1.5	42	18	4	32.5	4.5	5	4	4-M4×12	3.0
UKANG25×1.5	45	20	5	36.5	4.5	6.5	4	4-M4×12	3.0
UKANG28×1.5	46	20	5	38.5	4.5	6.5	4	4-M4×12	3.0
UKANG30×1.5	48	20	5	40.5	4.5	6.5	4	4-M4×12	3.0
UKANG32×1.5	50	22	5	42.5	4.5	7	4	4-M4×16	3.0
UKANG35×1.5	53	22	5	45.5	4.5	7	4	4-M4×16	3.0
UKANG38×1.5	58	22	5	48.5	4.5	7	4	4-M4×16	3.0
UKANG40×1.5	58	22	5	50.5	4.5	7	4	4-M4×16	3.0
UKANG42×1.5	60	22	5	52.5	4.5	7	4	4-M4×16	3.0
UKANG45×1.5	68	22	6	58	4.5	6.5	6	6-M4×16	3.0
UKANG48×1.5	68	25	6	59.5	4.5	9	6	6-M4×18	3.0
UKANG50×1.5	70	25	6	61.5	4.5	9	6	6-M4×18	3.0
UKANG52×1.5	72	25	6	63.5	4.5	9	6	6-M4×18	3.0
UKANG55×1.5	75	25	6	66.5	4.5	9	6	6-M4×18	3.0
UKANG58×1.5	82	26	6	72.5	5.5	9	6	6-M5×18	6.0
UKANG60×1.5	84	26	6	74.5	5.5	9	6	6-M5×18	6.0
UKANG62×1.5	86	28	6	76.5	5.5	10.5	6	6-M5×20	6.0
UKANG65×1.5	88	28	6	78.5	5.5	10.5	6	6-M5×20	6.0
UKANG68×1.5	95	28	8	83	5.5	9.5	6	6-M5×20	6.0
UKANG70×1.5	95	28	8	85	5.5	9.5	6	6-M5×20	6.0
UKANG72×1.5	98	28	8	86	6.5	8.5	6	6-M6×20	10.0
UKANG75×1.5	100	28	8	88	6.5	8.5	6	6-M6×20	10.0
UKANG80×2	110	32	8	95	6.5	11	6	6-M6×22	10.0
UKANG85×2	115	32	8	100	6.5	11	6	6-M6×22	10.0
UKANG90×2	120	32	8	108	6.5	11	6	6-M6×22	10.0
UKANG95×2	125	32							

UBGN-A**Features**

Designed with a set screw 60° relative to an axis, so it is easy to fit concentric. Due to the 6 set screw, loosening torque is superior to the existing locknut with only 3 set screws. Inner threads, outer skirts, Clamping face and trailing rims are all precision ground, so enhanced accuracy.

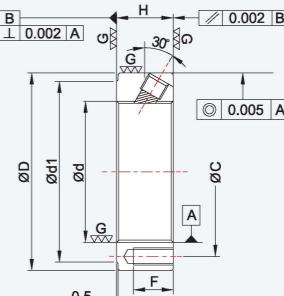
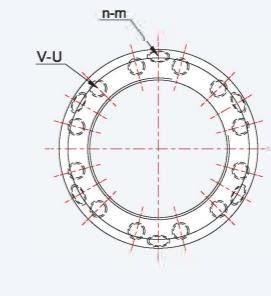
Specifications

- Material : SCM440(42CrMo4)
- Hardness : HRC 48~52
- Thread Accuracy : ISO 4H
- Perpendicularity : 0.002mm
- Parallelism : 0.002mm
- Concentricity : 0.005mm

**Order Method
(Order Example)**

Product NO	UBGN-A	30	1.5
d			
Pitch			

Product NO. d X pitch	D mm	H mm	d1 mm	V-U	C mm	F mm	n-m	MAX. N·m
UBGN-A 20×1	38	16	33	3-Ø 4.3	26	5	6-M5	4.5
UBGN-A 20×1.5	38	16	33	3-Ø 4.3	26	5	6-M6	8.0
UBGN-A 25×1.5	38	18	33	3-Ø 4.3	32	5	6-M6	8.0
UBGN-A 30×1.5	45	18	40	3-Ø 4.3	38	5	6-M6	8.0
UBGN-A 35×1.5	52	18	47	3-Ø 4.3	44	5	6-M8	18.0
UBGN-A 40×1.5	58	20	52	3-Ø 4.3	50	5	6-M8	18.0
UBGN-A 45×1.5	65	20	59	3-Ø 4.3	56	5	6-M8	18.0
UBGN-A 50×1.5	70	20	64	3-Ø 4.3	60	5	6-M8	18.0
UBGN-A 55×2	75	22	68	3-Ø 4.3	66	5	6-M8	18.0
UBGN-A 60×2	80	22	73	3-Ø 5.3	70	6	6-M8	18.0
UBGN-A 65×2	85	22	78	3-Ø 5.3	76	6	6-M8	18.0
UBGN-A 70×2	92	24	84	3-Ø 5.3	82	6	6-M8	18.0
UBGN-A 75×2	98	24	90	3-Ø 5.3	86	6	6-M8	18.0
UBGN-A 80×2	105	24	96	3-Ø 5.3	92	6	6-M8	18.0
UBGN-A 85×2	110	24	102	3-Ø 6.4	98	7	6-M8	18.0
UBGN-A 90×2	120	26	108	3-Ø 6.4	106	7	6-M8	18.0
UBGN-A 95×2	125	26	113	3-Ø 6.4	110	7	6-M8	18.0
UBGN-A 100×2	130	26	118	3-Ø 6.4	116	7	6-M8	18.0
UBGN-A 105×2	140	28	125	3-Ø 6.4	122	7	6-M10	35.0
UBGN-A 110×2	145	28	132	3-Ø 6.4	128	7	6-M10	35.0
UBGN-A 115×2	150	28	137	3-Ø 6.4	132	7	6-M10	35.0
UBGN-A 120×2	155	30	142	3-Ø 6.4	138	7	6-M10	35.0
UBGN-A 125×2	160	30	147	3-Ø 6.4	142	7	6-M10	35.0
UBGN-A 130×2	165	30	152	3-Ø 6.4	148	7	6-M10	35.0
UBGN-A 135×2	175	32	160	3-Ø 6.4	156	7	6-M10	35.0
UBGN-A 140×2	180	32	165	3-Ø 6.4	160	7	6-M10	35.0
UBGN-A 145×2	190	32	175	3-Ø 6.4	168	7	6-M10	35.0
UBGN-A 150×2	195	32	180	3-Ø 6.4	172	7	6-M10	35.0

UBGN-B**Features**

Designed with a set screw 60° relative to an axis, so it is easy to fit concentric and loosening torque is relatively superior. In case of this type, balancing adjustment tap-hole was placed on the back of locknut to axle direction. Inner threads, outer skirts, Clamping face and trailing rims are all precision ground, so enhanced accuracy.

Specifications

- Material : SCM440(42CrMo4)
- Hardness : HRC 48~52
- Thread Accuracy : ISO 4H
- Perpendicularity : 0.002mm
- Parallelism : 0.002mm
- Concentricity : 0.005mm

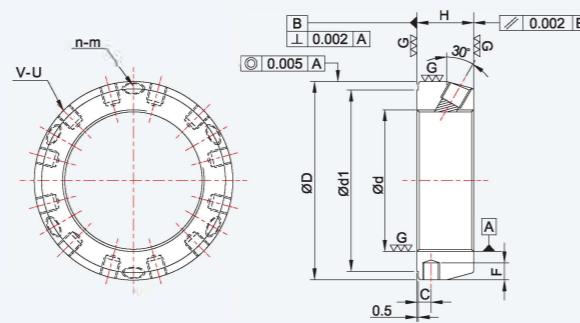
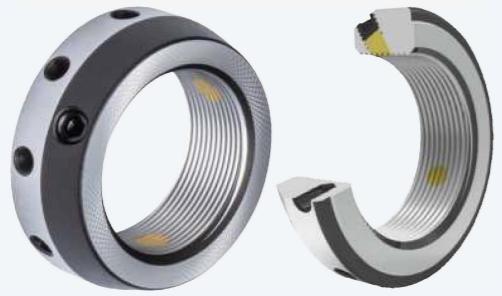
**Order Method
(Order Example)**

Product NO	UBGN-B	30	1.5
d			
Pitch			

Product NO. d X pitch	D mm	H mm	d1 mm	V-U	C mm	F mm	n-m	MAX. N·m
UBGN-B 20×1	38	16	33	6-M4	26	10	3-M5	4.5
UBGN-B 20×1.5	38	16	33	6-M4	26	10	3-M6	8.0
UBGN-B 25×1.5	38	18	33	6-M4	32	12	3-M6	8.0
UBGN-B 30×1.5	45	18	40	9-M4	38	12	3-M6	8.0
UBGN-B 35×1.5	52	18	47	9-M4	44	12	3-M8	18.0
UBGN-B 40×1.5	58	20	52	9-M5	50	14	3-M8	18.0
UBGN-B 45×1.5	65	20	59	9-M5	56	14	3-M8	18.0
UBGN-B 50×1.5	70	20	64	12-M5	60	14	6-M8	18.0
UBGN-B 55×2	75	22	68	12-M5	66	16	6-M8	18.0
UBGN-B 60×2	80	22	73	12-M5	70	16	6-M8	18.0
UBGN-B 65×2	85	22	78	12-M5	76	16	6-M8	18.0
UBGN-B 70×2	92	24	84	12-M5	82	18	6-M8	18.0
UBGN-B 75×2	98	24	90	12-M5	86	18	6-M8	18.0
UBGN-B 80×2	105	24	96	12-M5	92	18	6-M8	18.0
UBGN-B 85×2	110	24	102	12-M5	98	18	6-M8	18.0
UBGN-B 90×2	120	26	108	12-M5	106	20	6-M8	18.0
UBGN-B 95×2	125	26	113	12-M5	110	20	6-M8	18.0
UBGN-B 100×2	130	26	118	12-M6	116	20	6-M8	18.0
UBGN-B 105×2	140	28	125	12-M6	122	22	6-M10	35.0
UBGN-B 110×2	145	28	132	12-M6	128	22	6-M10	35.0
UBGN-B 115×2	150	28	137	12-M6	132	22	6-M10	35.0
UBGN-B 120×2	155	30	142	12-M6	138	24	6-M10	35.0
UBGN-B 125×2	160	30	147	12-M6	142	24	6-M10	35.0
UBGN-B 130×2	165	30	152	12-M6	148	24	6-M10	35.0
UBGN-B 135×2	175	32	160	12-M6	156	26	6-M10	35.0
UBGN-B 140×2	180	32	165	12-M6	160	26	6-M10	35.0
UBGN-B 145×2	190	32	175	12-M6	168	26	6-M10	35.0
UBGN-B 150×2	195	32	180	12-M6	172	26	6-M10	35.0

UBGN-C

GRINDING LOCKNUT



Features

Designed with a set screw 60° relative to an axis, so it is easy to fit concentric and loosening torque is relatively superior. In case of this type, balancing adjustment tap-hole was placed on the outer skirts of locknut to axle direction. Inner threads, outer skirts, Clamping face and trailing rims are all precision ground, so enhanced accuracy.

Specifications

- Material : SCM440(42CrMo4)
- Hardness : HRC 48~52
- Thread Accuracy : ISO 4H
- Perpendicularity : 0.002mm
- Parallelism : 0.002mm
- Concentricity : 0.005mm

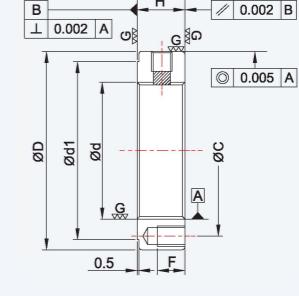
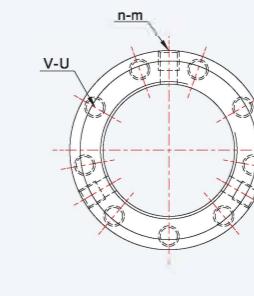
Order Method (Order Example)

UBGN-C	30	1.5
Product NO	d	Pitch

Product NO. d X pitch	D mm	H mm	d1 mm	v-u	C mm	F mm	n-m	MAX. N·m
UBGN-C 20×1	38	16	33	6-M4	4	5	3-M5	4.5
UBGN-C 20×1.5	38	16	33	6-M4	4	5	3-M6	8.0
UBGN-C 25×1.5	38	18	33	6-M4	4.5	4	3-M6	8.0
UBGN-C 30×1.5	45	18	40	9-M4	4.5	5	3-M6	8.0
UBGN-C 35×1.5	52	18	47	9-M4	4.5	5	3-M8	18.0
UBGN-C 40×1.5	58	20	52	9-M5	5	5	3-M8	18.0
UBGN-C 45×1.5	65	20	59	9-M5	5	6	3-M8	18.0
UBGN-C 50×1.5	70	20	64	12-M5	5	6	6-M8	18.0
UBGN-C 55×2	75	22	68	12-M5	5.5	6	6-M8	18.0
UBGN-C 60×2	80	22	73	12-M5	5.5	6	6-M8	18.0
UBGN-C 65×2	85	22	78	12-M5	5.5	6	6-M8	18.0
UBGN-C 70×2	92	24	84	12-M5	6	7	6-M8	18.0
UBGN-C 75×2	98	24	90	12-M5	6	7	6-M8	18.0
UBGN-C 80×2	105	24	96	12-M5	6	8	6-M8	18.0
UBGN-C 85×2	110	24	102	12-M5	6	8	6-M8	18.0
UBGN-C 90×2	120	26	108	12-M5	6.5	9	6-M8	18.0
UBGN-C 95×2	125	26	113	12-M5	6.5	9	6-M8	18.0
UBGN-C 100×2	130	26	118	12-M6	6.5	9	6-M8	18.0
UBGN-C 105×2	140	28	125	12-M6	7	11	6-M10	35.0
UBGN-C 110×2	145	28	132	12-M6	7	11	6-M10	35.0
UBGN-C 115×2	150	28	137	12-M6	7	11	6-M10	35.0
UBGN-C 120×2	155	30	142	12-M6	7.5	11	6-M10	35.0
UBGN-C 125×2	160	30	147	12-M6	7.5	11	6-M10	35.0
UBGN-C 130×2	165	30	152	12-M6	7.5	11	6-M10	35.0
UBGN-C 135×2	175	32	160	12-M6	8	14	6-M10	35.0
UBGN-C 140×2	180	32	165	12-M6	8	14	6-M10	35.0
UBGN-C 145×2	190	32	175	12-M6	8	16	6-M10	35.0
UBGN-C 150×2	195	32	180	12-M6	8	16	6-M10	35.0

UBGN-D

GRINDING LOCKNUT



Features

This type is suitable for assembly with restricted or narrow space due to be thinner than A, B and C type. In case of this type, balancing adjustment tap-hole was placed on the back of locknut to axle direction. Inner threads, outer skirts, Clamping face and trailing rims are all precision ground, so enhanced accuracy.

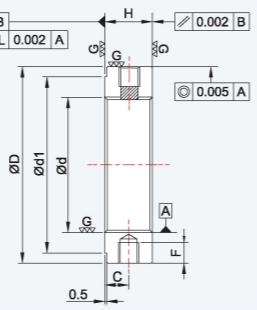
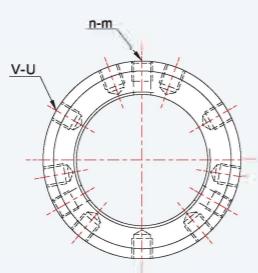
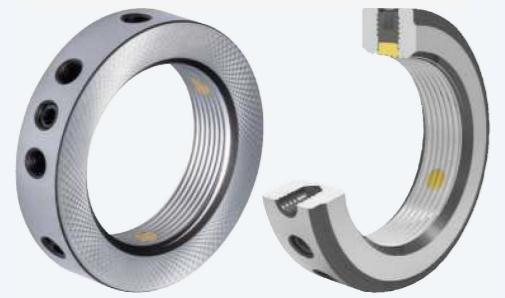
Specifications

- Material : SCM440(42CrMo4)
- Hardness : HRC 48~52
- Thread Accuracy : ISO 4H
- Perpendicularity : 0.002mm
- Parallelism : 0.002mm
- Concentricity : 0.005mm

Order Method (Order Example)

UBGN-D	30	1.5
Product NO	d	Pitch

Product NO. d X pitch	D mm	H mm	d1 mm	v-u	C mm	F mm	n-m	MAX. N·m
UBGN-D 20×1	32	10	27	6-M4	26	5	3-M5	4.5
UBGN-D 20×1.5	32	10	27	6-M4	26	5	3-M5	4.5
UBGN-D 25×1.5	38	12	33	6-M4	32	6	3-M6	8.0
UBGN-D 30×1.5	45	12	40	9-M4	38	6	3-M6	8.0
UBGN-D 35×1.5	52	12	47	9-M4	44	6	3-M6	8.0
UBGN-D 40×1.5	58	14	52	9-M5	50	8	3-M6	8.0
UBGN-D 45×1.5	65	14	59	9-M5	56	8	3-M6	8.0
UBGN-D 50×1.5	70	14	64	12-M5	60	8	6-M8	18.0
UBGN-D 55×2	75	16	68	12-M5	66	10	6-M8	18.0
UBGN-D 60×2	80	16	73	12-M5	70	10	6-M8	18.0
UBGN-D 65×2	85	16	78	12-M5	76	10	6-M8	18.0
UBGN-D 70×2	92	18	84	12-M5	82	12	6-M8	18.0
UBGN-D 75×2	98	18	90	12-M5	86	12	6-M8	18.0
UBGN-D 80×2	105	18	96	12-M5	92	12	6-M8	18.0
UBGN-D 85×2	110	18	102	12-M5	98	12	6-M8	18.0
UBGN-D 90×2	120	20	108	12-M5	106	14	6-M8	18.0
UBGN-D 95×2	125	20	113	12-M5	110	14	6-M8	18.0
UBGN-D 100×2	130	20	118	12-M6	116	14	6-M8	18.0
UBGN-D 105×2	140	22	125	12-M6	122	16	6-M8	18.0
UBGN-D 110×2	145	22	132	12-M6	128	16	6-M8	18.0
UBGN-D 115×2	150	22	137	12-M6	132	16	6-M8	18.0
UBGN-D 120×2	155	24	142	12-M6	138	18	6-M8	18.0
UBGN-D 125×2	160	24	147	12-M6	142	18	6-M8	18.0
UBGN-D 130×2	165	24	152	12-M6	148	18	6-M8	18.0
UBGN-D 135×2	175	26	160	12-M6	156	20	6-M10	35.0
UBGN-D 140×2	180	26	165	12-M6	160	20	6-M10	35.0
UBGN-D 145×2	190	26	175	12-M6	168	20	6-M10	35.0
UBGN-D 150×2	195	26	180	12-M6	172	20	6-M10	35.0



Features

This type is suitable for assembly with restricted or narrow space due to be thinner than A, B and C type. In case of this type, balancing adjustment tap-hole was placed on the outer skirts of locknut to axle direction. Inner threads, outer skirts, Clamping face and trailing rims are all precision ground, so enhanced accuracy.

Specifications

- Material : SCM440(42CrMo4)
- Hardness : HRC 48~52
- Perpendicularity : 0.002mm
- Parallelism : 0.002mm
- Thread Accuracy : ISO 4H
- Concentricity : 0.005mm

Order Method
(Order Example)

UBGN-E	30	1.5
Product NO	d	Pitch

Product NO. d X pitch	D mm	H mm	d1 mm	V-U	C mm	F mm	n-m	MAX. N·m
UBGN-E 20×1	32	10	27	6-M4	5	3	3-M5	4.5
UBGN-E 20×1.5	32	10	27	6-M4	5	3	3-M5	4.5
UBGN-E 25×1.5	38	12	33	6-M4	6	3	3-M6	8.0
UBGN-E 30×1.5	45	12	40	6-M4	6	4	3-M6	8.0
UBGN-E 35×1.5	52	12	47	9-M4	6	4	3-M6	8.0
UBGN-E 40×1.5	58	14	52	9-M5	7	5	3-M6	8.0
UBGN-E 45×1.5	65	14	59	9-M5	7	6	3-M6	8.0
UBGN-E 50×1.5	70	14	64	12-M5	7	6	6-M8	18.0
UBGN-E 55×2	75	16	68	12-M5	8	6	6-M8	18.0
UBGN-E 60×2	80	16	73	12-M5	8	6	6-M8	18.0
UBGN-E 65×2	85	16	78	12-M5	8	6	6-M8	18.0
UBGN-E 70×2	92	18	84	12-M5	9	6	6-M8	18.0
UBGN-E 75×2	98	18	90	12-M5	9	6	6-M8	18.0
UBGN-E 80×2	105	18	96	12-M5	9	8	6-M8	18.0
UBGN-E 85×2	110	18	102	12-M5	9	8	6-M8	18.0
UBGN-E 90×2	120	20	108	12-M5	10	9	6-M8	18.0
UBGN-E 95×2	125	20	113	12-M5	10	9	6-M8	18.0
UBGN-E 100×2	130	20	118	12-M6	10	9	6-M8	18.0
UBGN-E 105×2	140	22	125	12-M6	11	11	6-M8	18.0
UBGN-E 110×2	145	22	132	12-M6	11	11	6-M8	18.0
UBGN-E 115×2	150	22	137	12-M6	11	11	6-M8	18.0
UBGN-E 120×2	155	24	142	12-M6	12	11	6-M8	18.0
UBGN-E 125×2	160	24	147	12-M6	12	11	6-M8	18.0
UBGN-E 130×2	165	24	152	12-M6	12	11	6-M8	18.0
UBGN-E 135×2	175	26	160	12-M6	13	14	6-M10	35.0
UBGN-E 140×2	180	26	165	12-M6	13	14	6-M10	35.0
UBGN-E 145×2	190	26	175	12-M6	13	16	6-M10	35.0
UBGN-E 150×2	195	26	180	12-M6	13	16	6-M10	35.0



ULTRA BALANCING GRINDING LOCKNUT Technical data

