XRP-C Rigid Couplings

Zero Backlash　High Rigidity

GOOD DESIGN

Structure

● Clamping Type

XRP-C ➡ P.xxxx

● Material/Finish

RoHS

	XRP-C
Main Body	A7075
Hex Socket Head Cap Screw	SCM435 Ferrosoferric Oxide Film (Black)

● Applicable motors

	XRP-C
Servomotor	◎
Stepping Motor	◎
General-purpose Motor	●

◎: Excellent ●: Available

● Property

	XRP-C
Zero Backlash	◎
High Torque	○
High Torsional Stiffness	◎

◎: Excellent ○: Very good

- This is a high precision rigid coupling.
- Coaxiality, bore diameter, and run out have been pursued to the ultimate level.
- An inspection report is attached to all products before shipment.
- Light weight and ultra small moment of inertia. High response. High response.
- This is a shaft fastening structure with consideration of rotational balance and unbalance is ultra small.
- Extra super duralumin (A7075) featuring the highest strength among aluminum alloy is adopted.

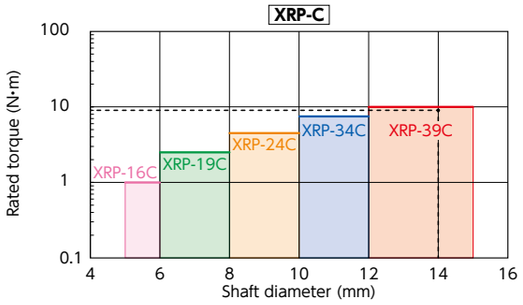
● Application

High precision measurement device / High precision XY stage / Encoder

Selection

● Selection Based on Shaft Diameter and Rated Torque

The area bounded by the shaft diameter and rated torque indicates the selection size.



● Selection Example

In case of selected parameters of shaft diameter of ϕ 14 and load torque of 9 N・m, the selected size is **XRP-39C**.

● Part number specification

XRP - 19C - 6 - 8

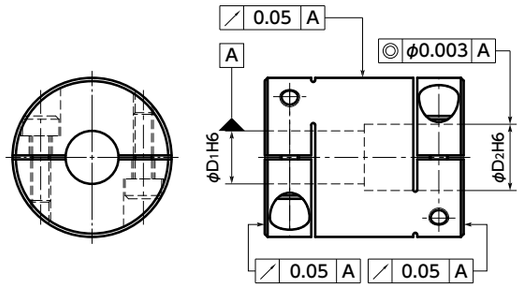
Product Code　Size　Bore Diameter

Please refer to dimensional table for part number specification.

Additional Keyway at Shaft Hole ➡ P.xxxx	Cleanroom Wash & Packaging ➡ P.xxxx	Change to Stainless Steel Screw ➡ P.xxxx
Please feel free to contact us	Please combine with Stainless Steel Screw Alteration Service	Available / Add'l charge

● Commitment to high precision

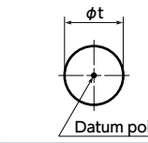
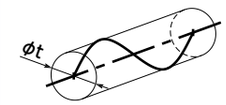
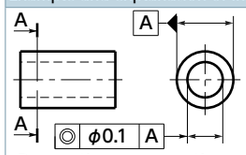
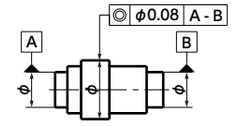
- The coaxiality of both bores is not more than 3 μm.
- Bore diameter tolerance is H6.
- Radial run out and run out of end face against bore are not more than 50μm.



● Precision assurance by total inspection

- Inspection item:
  Bore diameters D_1 and D_2
  Coaxiality of bores D_1 and D_2
  Radial run out and run out of end face against bore

● Concentricity tolerance and coaxiality tolerance

Property Symbol	Definition of Tolerance Zone	
◎		If the symbol ϕ is attached to the tolerance value, the tolerance zone is regulated by a circle of diameter t. The center of circular tolerance zone coincides with datum A.
		If the symbol ϕ is attached to the tolerance value, the tolerance zone is regulated by a cylinder of diameter t. The axis line of cylindrical tolerance zone coincides with datum A.
	Example and explanation of instruction method	
		The actual (reproduced) center of the outside circle must be within the circle concentric with datum circle A and of 0.1 in diameter.
		The actual (reproduced) shaft line of inside cylinder must be within a cylindrical tolerance area coaxial with common datum axis line A-B and of 0.08 in diameter.

● Excerpt from JIS B 0021

● Shaft Insertion Length

The shaft insertion length should be not less than L_1 (clamp portion) and not more than L.
The insertion length of a shaft to maintain the high precision should be L dimension if possible.
However, be careful so that both shaft ends do not interfere with each other.
If the shaft insertion length is less than L_1, it may derange the coaxiality or generate vibration when fastening the shaft.