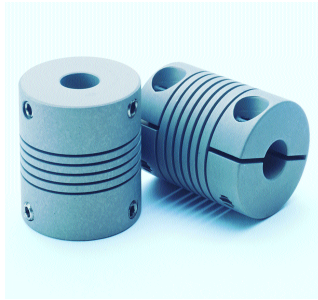


Features



W SERIES  
(aluminum shown)

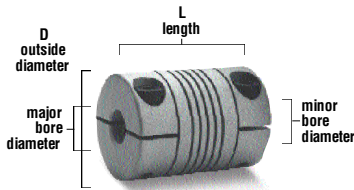
- Metric dimensions and fasteners
- Available in 7075-T6 aluminum alloy or 17-4 PH corrosion-resistant steel
- General purpose

If you are working in the *metric* world, the W Series is for you. It combines the best features of the A Series and the H Series, with the convenience of metric dimensions

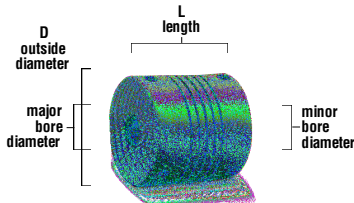
and fasteners for your metric based designs. The W Series can be used in a wide range of applications from driving components with light torque requirements, such as encoders and tachometers (aluminum), to lead screws and pumps requiring greater torque (stainless steel).

Attachment Methods

Integral Clamp / WAC & W7C



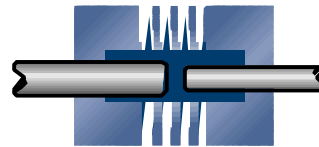
Set Screw / WA & W7  
(two each end @ 120°)



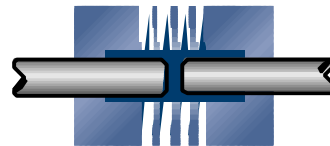
Internal Configuration

Relief \*

Major and minor diameter shafts may enter flexure area during operation



Unequal diameter shafts



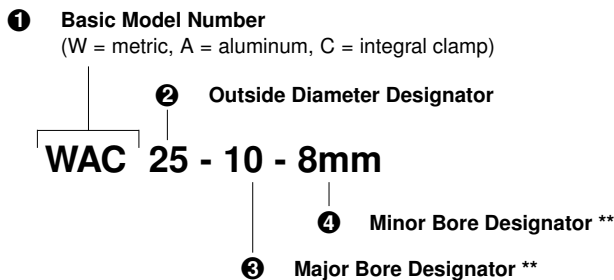
Equal diameter shafts

\* Dark areas indicate relief within the coupling interior

How To Order

Coupling part numbers consist of four sections. To determine the correct numbers/letters for each section of a specific coupling part number, please refer to the charts on the following pages.

Example



\*\* Refer to "Standard Bore Diameters" section of chart

- Basic Model Number:**  
 Choose material and attachment method.  
**WAC** = Aluminum, Integral Clamp  
**WA** = Aluminum, Set Screw  
**W7C** = Stainless Steel, Integral Clamp  
**W7** = Stainless Steel, Set Screw
- Outside Diameter Designator:** This two-digit number represents the coupling outside diameter. Based on the Performance Data in the middle of the chart, select the Outside Diameter Designator by moving left to the appropriate diameter.
- Major Bore Designator:** The larger of the two bores, its diameter is expressed in either millimeters (6mm) or in 32nds of an inch (-8 equals 1/4 inch). Please review your selection to determine if both bores can be made in the size coupling you have selected in **2**. It is important that the larger bore be stated first.
- Minor Bore Designator:** The smaller of the two bores is expressed the same as the Major Bore Designator. Either bore can be mm or inch. Please specify mm when metric.

## HELICAL W SERIES, Aluminum, Technical Data

①		②		③ & ④			Attachment Screw						
Basic Model Number			Dimensional Information		Standard Bore Diameters		Performance Data		Inertia	Screw Size		Seating Torque	Center Line
Integral Clamp Attachment	Set Screw Attachment	Outside Diameter Designator	D Outside Diameter	L Length (mm)	(+0.05mm / -0.00mm) Note 5		Momentary Dynamic Torque Note 2 (Nm)	Torsional Rate (degree/Nm)	$\times 10^{-4}$ (kgcmsec <sup>2</sup> ) Note 6	Integral Clamp	Set Screw	(Nm)	(mm)
					Size (mm)	Bore Designator							
WAC		15	15mm	22	3.00	3mm	0.71	5.1	0.028	M2x.4		0.5	2.5
	WA			20	4.00	4mm	0.66	7.2	0.025		M3x.5	1.0	2.5
WAC		20	20mm	28	4.00	4mm	1.3	2.7	0.11	M3x.5		2.0	3.8
	WA			20	5.00	5mm	1.2	3.5	0.079		M3x.5	1.0	2.5
WAC		25	25mm	30	6.00	6mm	2.9	1.5	0.30	M3x.5		2.0	3.8
	WA			24	7.00	7mm	2.8	1.8	0.24		M4x.7	2.1	3.0
WAC		30	30mm	38	9.00	9mm	4.9	1.1	0.78	M4x.7		4.7	5.0
	WA			30	10.00	10mm	4.6	1.3	0.60		M5x.8	4.7	3.5
WAC		40	40mm	50	12.00	12mm	12	0.45	3.3	M5x.8		9.5	5.8
	WA			50	13.00	13mm	11	0.51	3.3		M6x1	7.7	6.7
WAC		50	50mm	54	14.00	14mm	19	0.25	7.6	M6x1		16	6.7
	WA			54	16.00	16mm	18	0.31	7.6		M6x1	7.7	7.5

### Notes

- Shaft misalignments:
  - Angular 5 degrees
  - Parallel Offset .25 mm (.50 mm T.I.R.)
  - Axial Motion  $\pm$  .25 mm
- Dynamic torque ratings are momentary values. For non-reversing applications, divide by 2. Divide by 4 for reversing applications. Should the torque ratings be marginal for your application, contact us for analysis.
- Material : 7075-T6 aluminum alloy  
Finish: clear anodize  
or Material: 17-4 PH high-strength stainless steel.  
Finish: natural
- Manufacturing dimensional tolerances unless otherwise specified are:
  - x  $\pm$  .5 mm
  - x.x  $\pm$  .25 mm
- Please refer to page 19 for other available bore dimensions.
- Inertia is based on smallest standard bore diameter.
- Keyways available on the 40 mm and 50 mm OD only.

## HELICAL W SERIES, Stainless Steel, Technical Data

①		②		③ & ④			Attachment Screw						
Basic Model Number			Dimensional Information		Standard Bore Diameters		Performance Data		Inertia	Screw Size		Seating Torque	Center Line
Integral Clamp Attachment	Set Screw Attachment	Outside Diameter Designator	D Outside Diameter	L Length (mm)	(+0.05mm / -0.00mm) Note 5		Momentary Dynamic Torque Note 2 (Nm)	Torsional Rate (degree/Nm)	$\times 10^{-4}$ (kgcmsec <sup>2</sup> ) Note 6	Integral Clamp	Set Screw	(Nm)	(mm)
					Size (mm)	Bore Designator							
W7C		15	15mm	22	3.00	3mm	1.4	1.9	0.078	M2x.4		0.5	2.5
	W7			20	4.00	4mm	1.3	2.6	0.070		M3x.5	1.0	2.5
W7C		20	20mm	28	4.00	4mm	2.6	0.99	0.32	M3x.5		2.0	3.8
	W7			20	5.00	5mm	2.5	1.3	0.22		M3x.5	1.0	2.5
W7C		25	25mm	30	6.00	6mm	5.7	0.54	0.84	M3x.5		2.0	3.8
	W7			24	7.00	7mm	5.5	0.66	0.66		M4x.7	2.1	3.0
W7C		30	30mm	38	9.00	9mm	9.5	0.40	2.2	M4x.7		4.7	5.0
	W7			30	10.00	10mm	8.9	0.48	1.7		M5x.8	4.7	3.5
W7C		40	40mm	50	12.00	12mm	23	0.16	9.2	M5x.8		9.5	5.8
	W7			50	13.00	13mm	22	0.19	9.2		M6x1	7.7	6.7
W7C		50	50mm	54	14.00	14mm	37	0.092	21	M6x1		16	6.7
	W7			54	16.00	16mm	35	0.11	21		M6x1	7.7	7.5

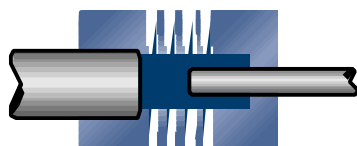
**HELICAL A and H SERIES / pages 10 - 11**

Basic Model Number		Outside Diameter		Special Bore Diameters			
Integral Clamp Attachment	Set Screw Attachment	Outside Diameter Designator	D Outside Diameter (in.)	With Relief		Restricted Bore Configurations*	
				Minimum Size in. & (mm)	Maximum Size in. & (mm)	Maximum Size in. & (mm)	Bore Depth in. & (mm)
ACR/HCR	AR/HR	<b>050</b>	1/2	0.090 (2.29)	0.125 (3.18)	0.236 (6.00)	0.19 (4.83)
				0.090 (2.29)	0.125 (3.18)	0.315 (8.00)	0.12 (3.05)
ACR/HCR	AR/HR	<b>062</b>	5/8	0.090 (2.29)	0.197 (5.00)	0.325 (8.26)	0.20 (5.08)
				0.090 (2.29)	0.197 (5.00)	0.375 (9.53)	0.14 (3.56)
ACR/HCR	AR/HR	<b>075</b>	3/4	0.118 (3.00)	0.250 (6.35)	0.390 (9.90)	0.25 (6.35)
				0.118 (3.00)	0.250 (6.35)	0.512 (13.00)	0.18 (4.57)
ACR/HCR	AR/HR	<b>087</b>	7/8	0.138 (3.50)	0.315 (8.00)	0.444 (11.27)	0.31 (7.87)
				0.118 (3.00)	0.315 (8.00)	0.630 (16.00)	0.20 (5.08)
ACR/HCR	AR/HR	<b>100</b>	1	0.156 (3.96)	0.375 (9.53)	0.563 (14.31)	0.31 (7.87)
				0.156 (3.96)	0.375 (9.53)	0.630 (16.00)	0.26 (6.60)
ACR/HCR	AR/HR	<b>112</b>	1 1/8	0.188 (4.78)	0.512 (13.00)	0.684 (17.38)	0.45 (11.43)
				0.188 (4.78)	0.512 (13.00)	0.630 (16.00)	0.27 (6.86)
ACR/HCR	AR/HR	<b>125</b>	1 1/4	0.313 (7.94)	0.625 (15.88)	0.669 (17.00)	0.51 (12.95)
				0.313 (7.94)	0.625 (15.88)	0.750 (19.05)	0.32 (8.13)

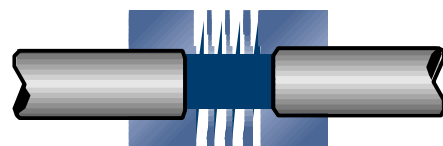
**HELICAL DS SERIES / pages 12 - 13**

Basic Model Number		Outside Diameter		Special Bore Diameters			
Integral Clamp Attachment	Outside Diameter Designator	D Outside Diameter (in.)	With Relief		Restricted Bore Configurations*		
			Minimum Size in. & (mm)	Maximum Size in. & (mm)	Maximum Size in. & (mm)	Bore Depth in. & (mm)	
DSAC	<b>075</b>	3/4	0.188 (4.78)	0.250 (6.35)	0.390 (9.90)	0.25 (6.35)	
DSAC	<b>100</b>	1	0.250 (6.35)	0.394 (10.00)	0.563 (14.31)	0.38 (9.65)	
DSAC	<b>125</b>	1 1/4	0.313 (7.95)	0.630 (16.00)	0.668 (16.98)	0.44 (11.18)	
DSAC	<b>150</b>	1 1/2	0.375 (9.53)	0.630 (16.00)	0.908 (23.07)	0.57 (14.48)	
DSAC	<b>200</b>	2	0.500 (12.70)	0.750 (19.05)	1.280 (32.50)	0.68 (17.27)	

\*Restricted Bore Configuration



Unequal diameter shafts



Equal diameter shafts