

Helical Beam Shaft Coupling



→ Helical Shaft Couplings

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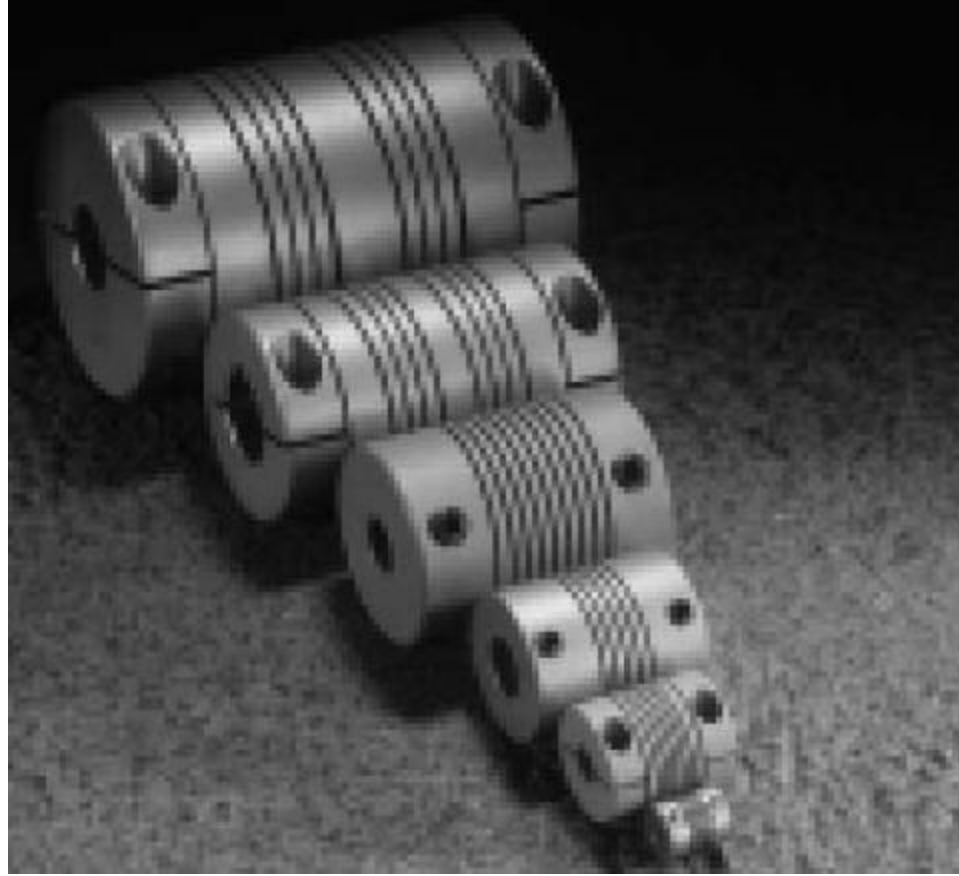
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HELI-CAL BEAM & SLOT COUPLINGS





HELICAL BEAM SHAFT COUPLINGS

A single piece construction, zero backlash, constant velocity shaft coupling that simultaneously compensates for angular, parallel and skewed shaft misalignments.

Available in Stainless Steel or Aluminium as standard with both metric and imperial bores sizes stocked ready to be delivered.

Coil Width



By varying the thickness of the coils, a Flexure can accommodate increasing amounts of torque and radial loads. The designer may specify torsional stiffness and compression spring rates independent of other factors.

Coil configuration

The individual performance capability of each Flexure is determined by: coil width, inside diameter, number of coils, number of starts and material. Altering any one of these factors changes the performance characteristics of the "Flexure". For example, the helical flexures illustrated display identical outside diameters and lengths. The effects of their variable characteristics - such as coil width, inside diameter, number of coils and starts are explained in the adjacent pictures.

Coil widths and inside diameters

As the coil width or inside diameter are changed such aspects as torque...angular misalignment (bending moment)...parallel offset (radial load)...torsional stiffness... and compression spring rate, are altered.

Number of coils

As the number of coils is changed, all of the characteristics except the torque capacity are affected.

Inside Diameter



When the inside diameter changes, so does the torque capacity, torsional stiffness and axial spring rates.

Number of coil starts

1. A single start design has one continuous coil.
2. A double start has a second coil starting 180 degrees from the first.
3. A triple start has three interwound coils, each spaced 120 degrees apart. When a multi-start helix is used (double or), the effect is to increase the torque capacity and torsional stiffness while reducing misalignment capabilities (angular and parallel).

Material

The proper material used in the manufacture of any helical flexure affects much more than just torque capacity. Factors such as elasticity, fatigue, corrosion resistance, mass, magnetic permeability, operating temperature, availability and cost also play important roles. High strength materials such as 17- 4PH CRES*, 15-5PH, C300, BETA C Titanium and 7075-T6 Aluminium, are just a few of the common choices for meeting design and performance needs.



HELICAL BEAM SHAFT COUPLINGS

Number of Coils



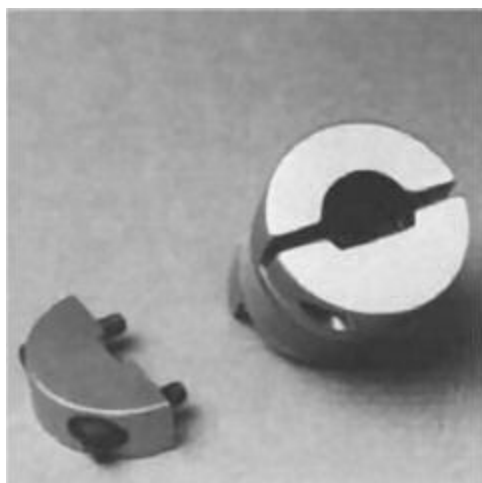
When the number of coils is changed the torque capability remains unaffected. All of the other characteristics change.

Attachments

In addition to being able to alter the characteristics of the flexure, you may have your attachment method integrated into the final product.

Typical attachment options might include:

- integral clamps
- set screws
- set screw at one end and an integral clamp at the other
- pins
- slotted hubs
- flanges
- gears
- removable caps
- threaded bores with a wrench flat
- or ... whatever your design requires



Number of Coil Starts



Multiple, (typically two) helical beams provide high torsional stiffness. Shown: single, double and triple start.

Bore variety

Flexures may be engineered to include a variety of bore configurations. These variations include round, threaded, single or double-D, spline, keyway, tapered or ... your choice!

The flexible coil section of the coupling can be custom designed and manufactured to your specifications. Whether your considerations include high torque, angular or parallel misalignment, critical torsional stiffness, precise compression spring rates, or special end connections, chances are excellent that the flexure will meet or exceed your particular design requirements.

DESIGN BENEFITS OF THE FLEXURE

More than a coupling

The flexure concept brings enormous design flexibility to your applications. Depending on your needs, the flexure can serve as a flexible shaft coupling, universal joint, machined spring or your own specialised component.

Adaptability

The flexure's ability to accommodate various performance characteristics and its ability to integrate attachments directly enhances your freedom to design.

One-piece integrity

Not only does the flexure integrate multiple functions and parts into a single compact unit - no moving parts, no maintenance and no backlash - it can incorporate complex attachments.

State-of-the-art

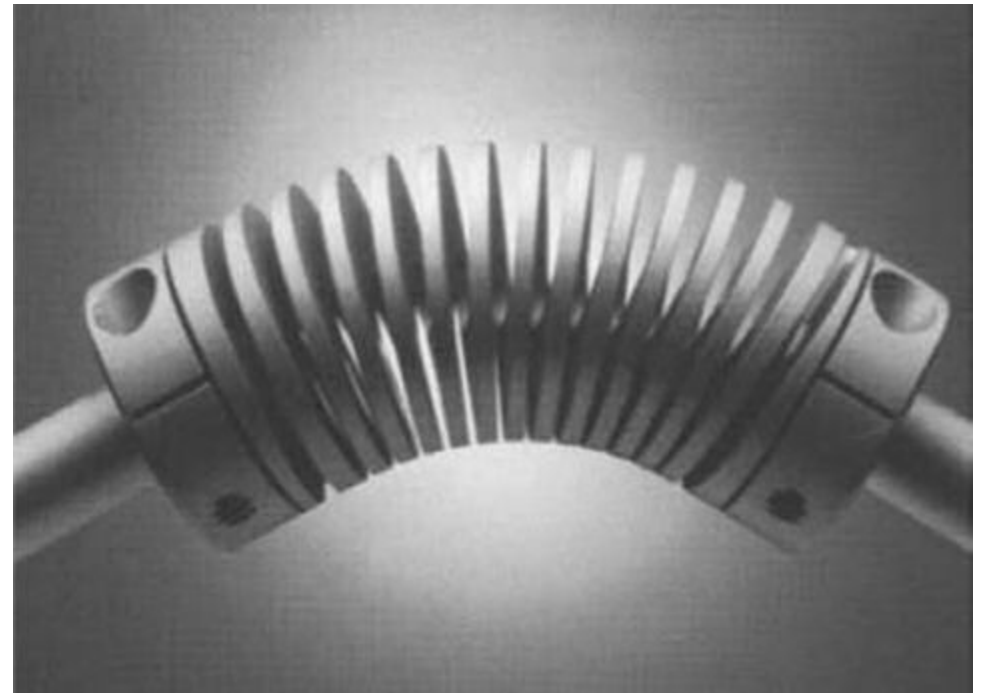
High quality performance is achieved with magnetic or non-magnetic corrosion-resistant stainless steel, as well as aluminium alloys. Flexures are also successfully manufactured using various materials such as Delrin™ and titanium.

Operating Characteristic

Misalignment compensation

The flexing capacity of the flexure can compensate for a variety of misalignments, including parallel, angular and skewed (three-dimensional misalignment). The Flexure solutions for these misalignment situations are shown in the adjacent photographs.

Angular



Angular misalignment is the easiest form of misalignment for most couplings to accept, and thus one of the most practical applications of a flexible coupling. Allowing only enough space between coils to partially close the gap during bending, the flexure can accept an angular misalignment of 20 degrees or more (and even up to 90 degrees in special ujoint applications).

Optimised torque capacity

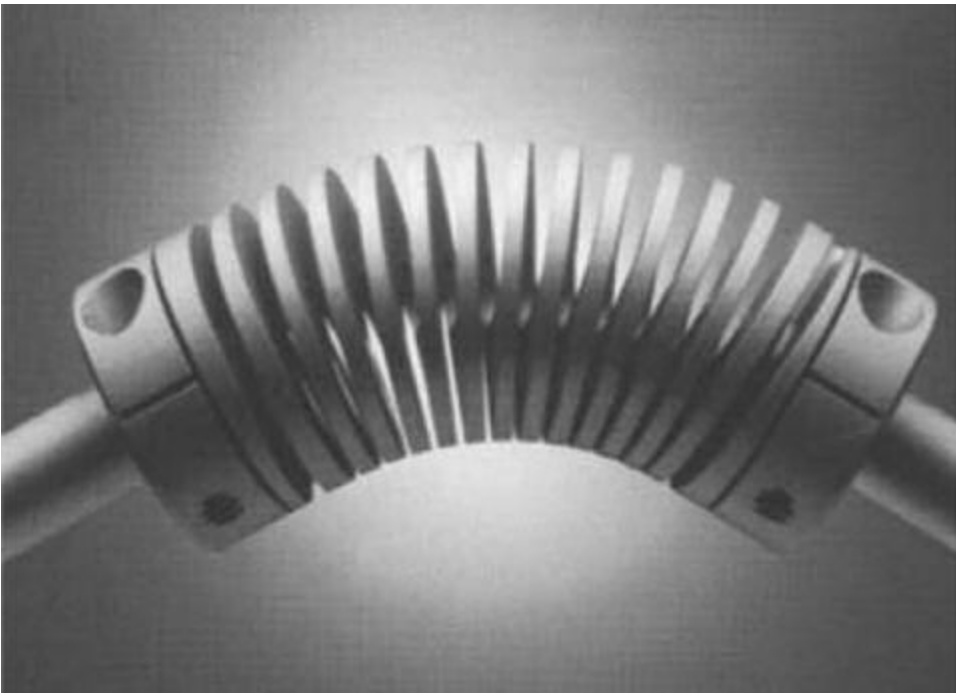
The basic requirement of a flexible coupling is to transmit torque loads without permanent distortion or damage and without imposing undue bending or radial load upon the driver or driven components. Once the working torque rating of a flexure coupling is established - based on misalignment and design criteria, material specifications and service factors supplied during the design process - its operational life is virtually unlimited.

Configurable torsional stiffness

Every flexible shaft coupling has some torsional flexibility. Torsional flexibility reflects the amount of twist in a system; torsional stiffness the degrees of resistance against twist. The flexure can be configured (with thicker coils, for example), to provide the exact amount of torsional flexibility required in an application.

DESIGN BENEFITS OF THE FLEXURE

Parallel



Parallel misalignment is the most difficult form of misalignment for couplings to compensate for. It can also be the most damaging to shafts, bearings and motors. The flexure, through lateral displacement, transforms an application's parallel misalignment problems into angular displacement within the coupling. The centre coils of the flexure can become an intermediate shaft that can allow 10, 20 or 30 thousandths of an inch of parallel offset or more.

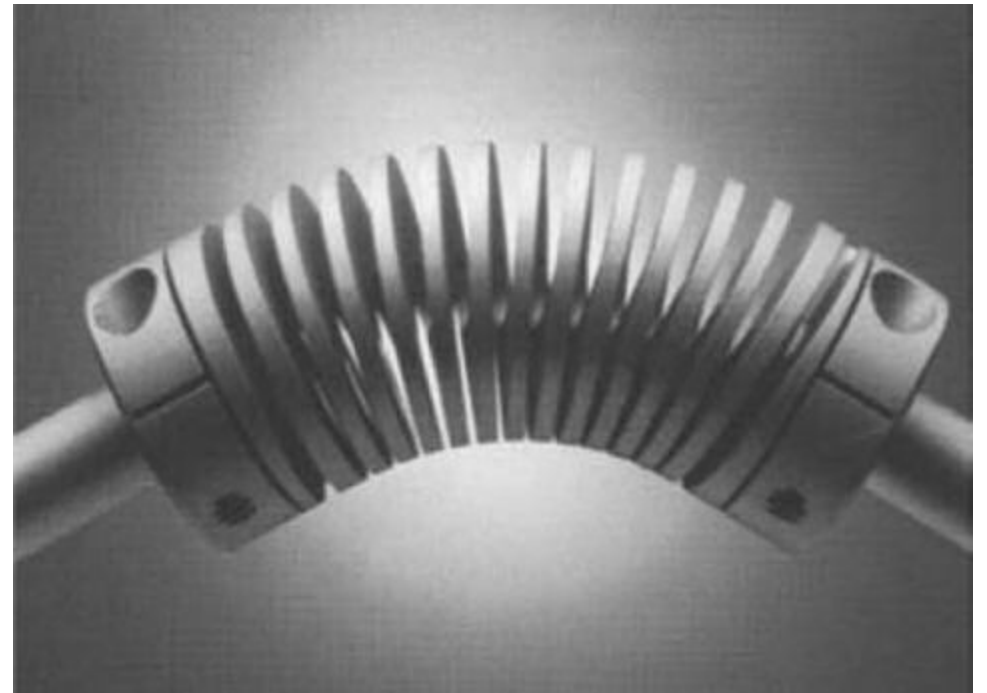
Smooth bearing loads

Bearing loads are primarily generated by a couplings natural resistance to bending, and can be very destructive forces to an apparatus and its rotational components. The flexure maintains a very constant radial and bending load at all points of rotation, providing exceptionally uniform bearing loads.

Constant velocity

In a rotating system, constant velocity refers to the relative rotational speed of the input and output shafts. In a constant velocity system the driven end of the coupling turns exactly the same rate as the driver end. When operating under a uniform load the flexure design provides constant velocity and alleviates:








Skewed



When shafts are not in the same plane (skewed), the flexure's abilities to compensate are the same as with either parallel or angular misalignment - but in the third dimension. A flexure designed with more coils in a series can compensate for as much three dimensional misalignment as your applications requires.

- Backlash: the flexure has zero backlash, because of its one-piece construction.
- Angular misalignment, which can induce large fluctuations in rotational velocity in many coupling designs, is corrected by the flexure's constant spring rate at all points of rotation.
- Torsional variations, which can induce differences in hub-to-hub velocity when subjected to dynamic loading, are minimal in steady-state applications of the flexure.
- Concentricity, when there is a lack of it - particularly in the case of couplings with backlash or where production variation is difficult to prevent - the flexure's one-piece integrity minimises sinusoidal variations.

BASIC PRODUCT SUMMARY

A Series	H Series	DS Series	MCA Series	MC7 Series	W Series	W Series
Aluminium 7075-T6	Stainless Steel 17-4PH	Aluminium 7075-T6	Aluminium 7075-T6	Stainless Steel 17-4PH	Aluminium 7075-T6	Stainless Steel 17-4PH
						
Description						
General purpose, light to medium duty. An economical, maintenance free coupling, used in a variety of applications. Helical's most popular coupling/coupler	Stainless steel version of "A" series, with higher torque capacity and torsional stiffness. Increased fatigue resistance.	Low inertia, high performance, aluminium coupling, using Helical double start technology. Torsionally stiffer and higher torque capacity than the "A" series. Lighter with lower inertia than the "H" series.	A general purpose aluminium coupling, used where more parallel misalignment is required. Has a large range of shaft sizes, with optional keyways	Stainless steel version of "MCA(C)" series, with higher torque capacity and torsional stiffness. Increased fatigue resistance.	Metric dimensioned coupling, with metric fasteners. A light to medium duty coupling for those preferring to work strictly in the metric system. A general purpose coupling.	Stainless steel version of the "WA(C)" series, with higher torque capacity and torsional stiffness. Increased fatigue resistance with all metric dimensions and fasteners.
Typical Applications						
Used for encoder/resolver applications, low torque pump, lead screw and various other applications.	For situations requiring a heavy duty coupling such as pumps, lead screws, and positioning systems; also for process equipment in industrial situations. Anywhere a rugged, tough, long-lasting coupling is needed.	For high speed motion control systems, where fast response time is important. E.g., lead and ball screws, encoders/resolvers, and anywhere high torsional stiffness is required.	Good for encoder/resolver applications, moderate torque pump, lead screw, and various other applications.	Good for pump, conveyor systems, and industrial processing equipment, where absolute reliability is required. Anywhere a rugged, tough, long-lasting coupling is needed.	Used for encoder/resolver applications, low torque pump, lead screw and various other applications.	For situations requiring a heavy duty coupling for pump, lead screws, and positioning systems; also for process equipment in industrial situations. Anywhere a rugged, tough, long-lasting coupling is needed.
Misalignment Compensation						
5° angular, .010 inch parallel offset, .010 inch axial motion	5° angular, .010 inch parallel offset, .010 inch axial motion	3° angular, .010 inch parallel offset, .008 inch axial motion	5° angular, .030 inch parallel offset, .010 inch axial motion	5° angular, .030 inch parallel offset, .010 inch axial motion	5° angular, .25mm parallel offset, 25mm axial motion	5° angular, .25mm parallel offset, 25mm axial motion
Torque Range						
1.2-51 lbin	2.4-100 lbin	12-234 lbin	20-286 lbin	40-556 lbin	59-20 Nm	1.2-39 Nm
Standard Bores (inch and or metric bores available in all couplings)						
0.059-0.750 inch 1.5-19.05mm	0.059-0.750 inch 1.5-19.05mm	0.188-0.750 inch 4.78-19.05mm	0.250-.875 inch 6.35-22.23mm	0.250-1.000 inch 6.35-25.40mm	3mm-38.1mm	3mm-38.1mm
Attachment						
Clamp or set screw	Clamp or set screw	Clamp	Clamp or set screw Keyways optional	Clamp or set screw Keyways optional	Clamp or set screw	Clamp or set screw
Operating Temperatures						
Up to 200°F	Up to 600°F	Up to 200°F	Up to 200°F	Up to 600°F	Up to 100°F	Up to 300°F
Speed (in the wind up direction)						
10,000 rpm	10,000 rpm	10,000 rpm	3,600 rpm	3,600 rpm	10,000 rpm	10,000 rpm



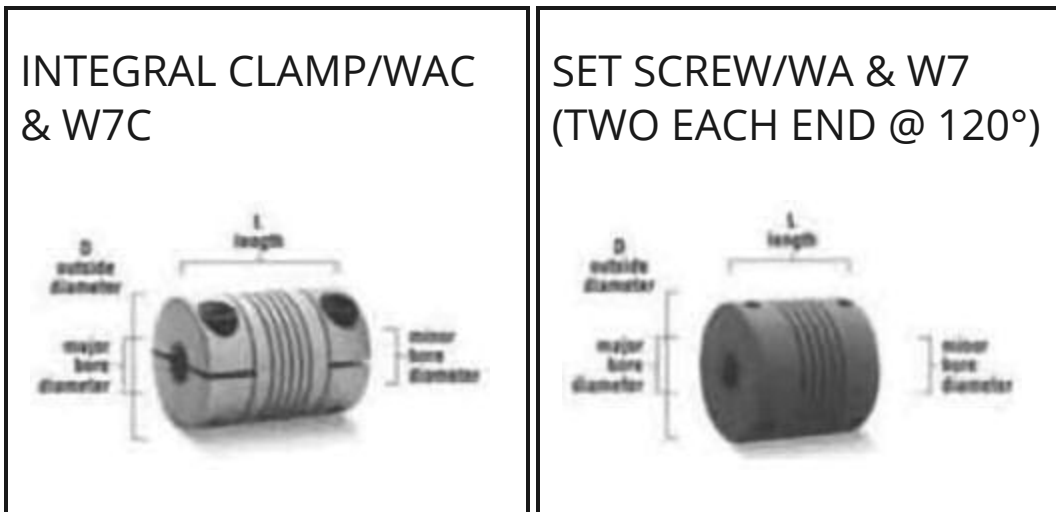
W SERIES ALUMINIUM AND STAINLESS STEEL



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

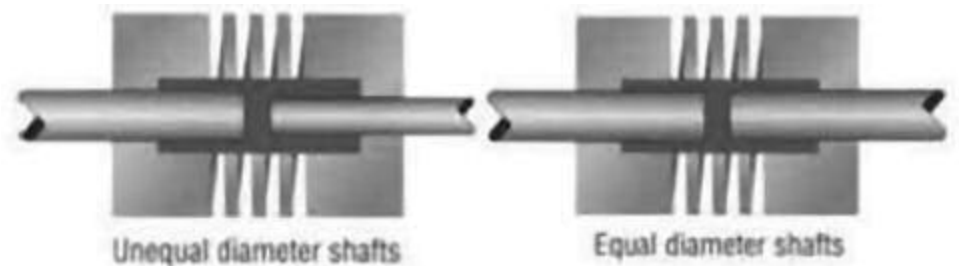
The W Series can be used in a wide range of applications from driving components with light torque requirements, such as encoders and tachometers (aluminium), to lead screws and pumps requiring greater torque (stainless steel).

Attachment Methods



Internal Configuration - Relief*

Major and minor diameter shafts may enter flexure area during operation.

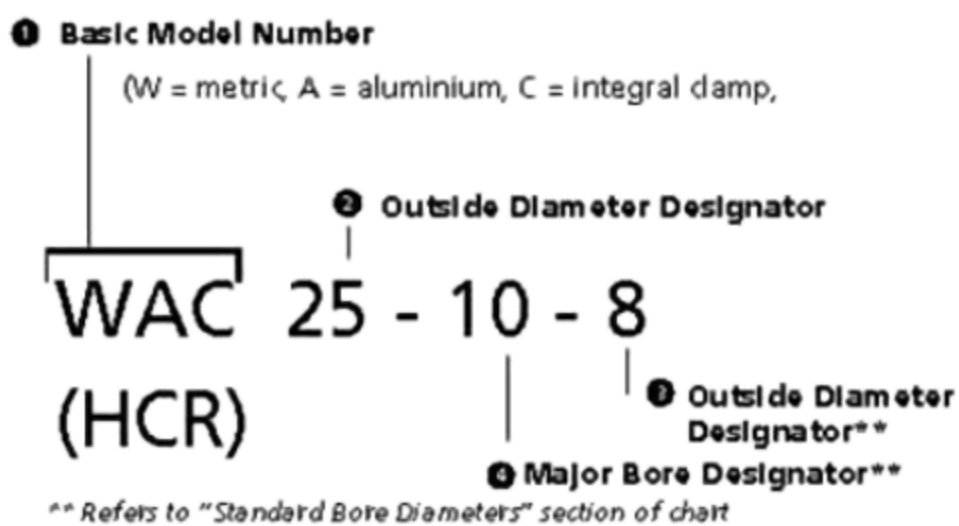


* Dark area indicates relief within the coupling interior

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



- 1 Basic Model Number:** Choose material and attachment method.
WAC = Aluminium, Integral Clamp
WA = Aluminium, Set Screw

W7C = Stainless Steel, Integral Clamp
W7 = Stainless Steel, Set Screw

- 2 Outside Diameter Designator:** This three-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.
- 3 Major Bore Designator:** The larger of the two bores, its diameter is expressed in either 32nds of an inch (-8 equals 1/4 inch) or in millimetres (6mm). 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.
- 4 Minor Bore Designator:** The smaller of the two bores is expressed the same as the Major Bore Designator. Either bore can be inch or mm.



W SERIES ALUMINIUM, TECHNICAL DATA

Attachment Screw

Basic Model No.			Dimensional Information		Standard Bore Diameters		Performance Data		Inertia	Screw Size		Seating Torque	Centre 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)	x 10 ⁻⁴ (Kgcmmsec ²) Note 6	Integral Clamp	Set Screw	(Nm)	(mm)
					Size mm	Bore Designator							
WAC	WA	15	15mm	22	3.00	3mm	0.71	5.1	0.028	M2x.4		0.5	2.5
				20	4.00	4mm	0.66	7.2				M3x.5	1
WAC	WA	20	20mm	28	4.00	4mm	1.3	2.7	0.11	M3x.5		2	3.8
				20	5.00	5mm	1.2	3.5				M3x.5	1
WAC	WA	25	25mm	30	6.00	6mm	2.9	1.5	0.30	M3x.5		2	3.8
				24	7.00	7mm	2.8	1.8					
WAC	WA	30	30mm	38	8.00	8mm	2.6	2.2	0.24		M4x.7	2.1	3
				30	9.00	9mm	2.4	2.8					
WAC	WA	30	30mm	38	10.00	10mm	4.9	1.1	0.78	M4x.7		4.7	5
				30	11.00	11mm	4.6	1.3					
WAC	WA	40	40mm	50	12.00	12mm	4.3	1.6	0.60		M5x.8	4.7	3.5
				50	13.00	13mm	4.0	1.9					
WAC	WA	40	40mm	50	14.00	14mm	12	0.45	3.3	M5x.8		9.5	5.8
				50	15.00	15mm	11	0.51					
WAC	WA	50	50mm	54	16.00	16mm	11	0.59	3.3		M6x1	7.7	6.7
				54	17.00	17mm	10	0.67					
WAC	WA	50	50mm	54	18.00	18mm	9.7	0.78	7.6	M6x1		16	6.7
				54	19.00	19mm	19	0.25					
WAC	WA	50	50mm	54	20.00	20mm	18	0.31	7.6		M6x1	7.7	7.5
				54	17.00	17mm	17	0.39					
WAC	WA	50	50mm	54	19.00	19mm	16	0.43	7.6		M6x1	7.7	7.5
				54	20.00	20mm	15	0.49					

* Refer to note 8

Notes

- Shaft misalignments:
Angular 5 degrees
Parallel Offset .010 in. (.020 in. T.I.R.)
Axial Motion ± .010 in.
- 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 aluminium alloy used for WAC/WA series.
Finish: clear anodise *or*
Material: 17-4 PH high strength stainless steel used for W7C/W7 series. Finish: natural
- Metric fasteners available on request.
- Manufacturing dimensional tolerances unless otherwise specified are:
fraction ± 5mm
x.xx ± .25mm
- Inertia is based on smallest standard bore diameter.
- With integral clamp attachments only, this bore sizes requires an operating clearance diameter greater than coupling outside diameter.



W SERIES STAINLESS STEEL, TECHNICAL DATA

Basic Model No.			Dimensional Information		Standard Bore Diameters		Performance Data		Inertia	Screw Size		Seating Torque	Centre 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)	x 10 ⁻⁴ (Kgcmsec ²) Note 6	Integral Clamp	Set Screw	(Nm)	(mm)
					Size mm	Bore Designator							
W7C	W7	15	15mm	22	3.00	3mm	1.4	1.9	0.078	M2x.4		0.5	2.5
				20	4.00	4mm	1.3	2.6	0.07		M3x.5	1	2.5
W7C	W7	20	20mm	28	4.00	4mm	2.6	1.9	0.32	M3x.5		2	3.8
				20	5.00	5mm	2.5	2.6	0.22		M3x.5	1	2.5
W7C	W7	25	25mm	30	6.00	6mm	5.7	0.54	0.84	M3x.5		2	3.8
				24	7.00	7mm	5.5	0.66	0.66		M4x.7	2.1	3
W7C	W7	30	30mm	38	8.00	8mm	5.1	0.82					
				30	9.00	9mm	4.7	1.0	0.66		M4x.7	4.7	5
W7C	W7	30	30mm	38	10.00	10mm	9.5	0.40	2.2	M4x.7		4.7	5
				30	11.00	11mm	8.9	0.48	1.7		M5x.8	4.7	3.5
W7C	W7	40	40mm	50	12.00	12mm	23	0.16	9.2	M5x.8		9.5	5.8
				50	13.00	13mm	22	0.19	9.2		M6x1	7.7	6.7
W7C	W7	50	50mm	54	14.00	14mm	21	0.21					
				54	15.00	15mm	20	0.24	9.2		M6x1	16	6.7
W7C	W7	50	50mm	54	16.00	16mm	19	0.28	21	M6x1		7.7	7.5
				54	18.00	18mm	37	0.092	21		M6x1	16	6.7
W7C	W7	50	50mm	54	19.00	19mm	35	0.11	21	M6x1		7.7	7.5
				54	20.00	20mm	33	0.14	21		M6x1	7.7	7.5

* Refer to note 8

Notes

- Shaft misalignments:
Angular 5 degrees
Parallel Offset .010 in. (.020 in. T.I.R.)
Axial Motion ± .010 in.
- 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 aluminium alloy used for WAC/WA series.
Finish: clear anodise *or*
Material: 17-4 PH high strength stainless steel used for W7C/W7 series. Finish: natural
- Metric fasteners available on request.
- Manufacturing dimensional tolerances unless otherwise specified are:
fraction ± 5mm
x.xx ± .25mm
- Inertia is based on smallest standard bore diameter.
- With integral clamp attachments only, this bore sizes requires an operating clearance diameter greater than coupling outside diameter.



A SERIES, ALUMINIUM AND H SERIES, STAINLESS STEEL



- Light to medium duty
- Non-magnetic
- Economical
- No maintenance



H Series

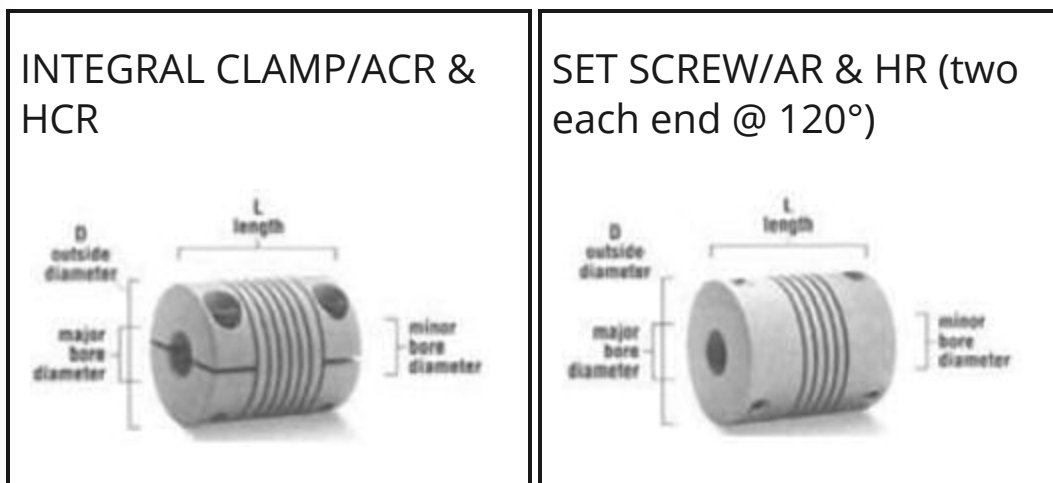
- High torque capacity
- High fatigue resistance
- Corrosion resistant steel (cres)

The A Series coupling meets performance demands over a wide range of applications, including drive systems for encoders, instrumentation, lead screws, small pumps, feed rollers and anywhere a light to medium duty, torsionally flexible coupling is required. High strength, excellent fatigue resistance and high torsional stiffness is called for in your application. The H Series, premium performance capability is designed for applications requiring a heavy-duty coupling, such as drive systems, small pumps and gear boxes.

Integral Clamp / ACR & HCR

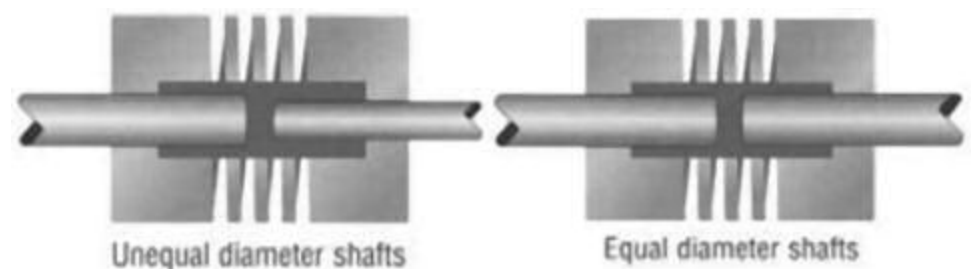
An array of options, in a variety of diameter sizes, allows you to tailor the A or H Series to your specific applications. A and H Series options include set screw or integral clamp attachments and inch or metric bores.

Attachment Methods



Internal Configuration - Relief*

Major and minor diameter shafts may enter flexure area during operation.



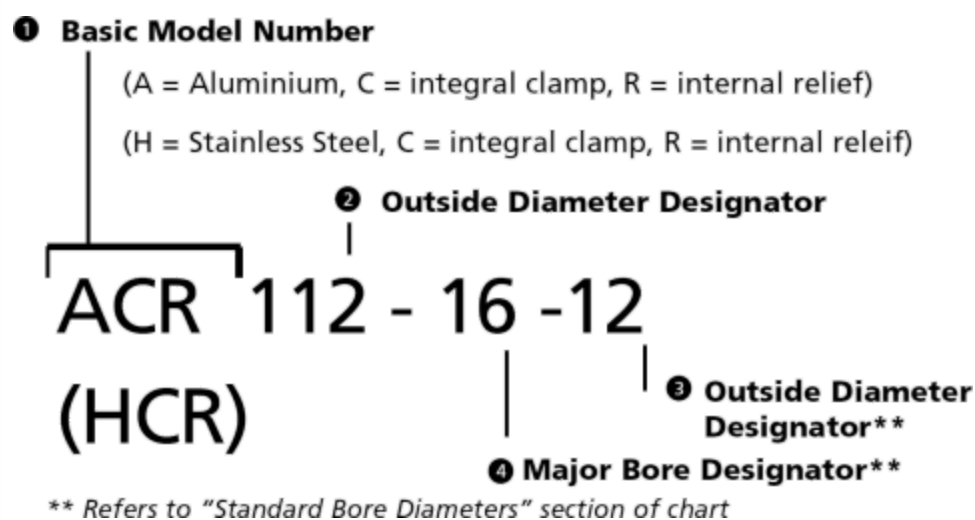
*Dark area indicates relief within the coupling interior

HCR = Stainless Steel, Integral Clamp
HR = Stainless Steel, Set Screw

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



1 Basic Model Number: Choose material and attachment method.

ACR = Aluminium, Integral Clamp
AR = Aluminium, Set Screw

2 Outside Diameter Designator: This three-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.

3 Major Bore Designator: The larger of the two bores, its diameter is expressed in either 32nds of an inch (-8 equals 1/4 inch) or in millimetres (6mm). 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.

4 Minor Bore Designator: The smaller of the two bores is expressed the same as the Major Bore Designator. Either bore can be inch or mm.



A SERIES ALUMINIUM, TECHNICAL DATA

Attachment Screw

Basic Model No.			Dimensional Information		Standard Bore Diameters		Performance Data		Inertia	Screw Size		Seating Torque	Centre Line
Integral Clamp Attachment	Set Screw Attachment	Outside diameter Designator	D Outside Diameter in. (mm)	L Length in. (mm)	(+.002in/-.000in) Note 6		Momentary Dynamic Torque Note 2 (lbin)	Torsional Rate (degree/lbin)	x 10 ⁵ (lbinsec ²) Note 7	Integral Clamp Note 4	Set Screw Note 4	(lbin)	(in.)
					Size in. (mm)	Bore Designator (1/32 in.)							
ACR		050	1/2 (12.7)	0.75 (19.05)	0.094 (2.39)	3	3.7	0.98	0.11	1-72		4	.09
	AR			0.50 (12.7)	0.125 (3.18)	4	3.5	1.3	0.069	2-56	1.3	.06	
ACR		062	5/8 (15.88)	0.80 (20.40)	0.125 (3.18)	4	7.1	0.51	0.28	2-56		4.5	.1
	AR			0.62 (15.75)	0.157 (3.99)	5	6.7	0.66	0.21	4-40	4.3	.07	
ACR		075	3/4 (19.05)	0.90 (22.75)	0.125 (3.18)	4	10	0.29	0.66	4-40		10	.12
	AR			0.75 (19.05)	0.157 (3.99)	5	10	0.36	0.54	6-32	8	.09	
ACR		087	7/8 (22.22)	1.06 (26.98)	0.188 (4.78)	6	19	0.20	1.5	6-32		19	.15
	AR			0.87 (22.22)	0.250 (6.35)	8	17	0.28	1.2	6-32	8	.1	
ACR		100	1 (25.4)	1.25 (31.75)	0.250 (6.35)	8	27	0.17	3	6-32		19	.15
	AR			1.00 (25.4)	0.313 (7.95)	10	24	0.24	2.3	10-24	25	.15	
ACR		112	1 1/8 (28.75)	1.50 (38.1)	0.250 (6.35)	8	43	0.094	5.6	6-32		19	.15
	AR			1.12 (28.5)	0.313 (7.95)	10	40	0.12	4.1	10-24	25	.14	
ACR		125	1 1/4 (31.75)	1.62 (41.27)	0.375 (9.53)	12	48	0.11	9.3	10-24		50	.22
	AR			1.25 (31.75)	0.500 (12.70)	16*	39	0.20	6.9	¼-20	65	.16	
					0.625 (15.88)	20*	29	0.37					

* Refer to note 8

Notes

- Shaft misalignments:
Angular 5 degrees
Parallel Offset .010 in. (.020 in. T.I.R.)
Axial Motion ± .010 in.
- 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 aluminium alloy used for ACR/AR series.
Finish: clear anodise *or*
Material: 17-4 PH high strength stainless steel used for HCR/HR series. Finish: natural
- Metric fasteners available on request.
- Manufacturing dimensional tolerances unless otherwise specified are:
fraction ± 1/64
x.xx ± .01 in.
- Inertia is based on smallest standard bore diameter.
- With integral clamp attachments only, this bore sizes requires an operating clearance diameter greater than coupling outside diameter.



H SERIES ALUMINIUM, TECHNICAL DATA

Attachment Screw

Basic Model No.			Dimensional Information		Standard Bore Diameters		Performance Data		Inertia	Screw Size		Seating Torque	Centre Line
Integral Clamp Attachment	Set Screw Attachment	Outside diameter Designator	D Outside Diameter in. (mm)	L Length in. (mm)	(+.002in/-.000in) Note 6		Momentary Dynamic Torque Note 2 (lbin)	Torsional Rate (degree/lbin)	x 10 ⁵ (lbinsec ²) Note 7	Integral Clamp Note 4	Set Screw Note 4	(lbin)	(in.)
					Size in. (mm)	Bore Designator (1/32 in.)							
HCR		50	1/2 (12.7)	075 (19.05)	0.094 (2.39)	3	7.5	0.36	0.31	1-72		4	.09
	HR			0.50 (12.7)	0.125 (3.18)	4	7.0	0.48	0.19		2-56	1.3	.06
HCR		62	5/8 (15.88)	0.80 (20.40)	0.125 (3.18)	4	14	0.19	0.78	2-56		4.5	.10
	HR			0.62 (15.75)	0.157 (3.99)	5	13	0.24			4-40	4.3	.07
						0.188 (4.78)	6	12	0.31	0.58			
HCR		75	3/4 (19.05)	0.90 (22.75)	0.125 (3.18)	4	21	0.11	1.8	4-40		10	.12
	HR				0.157 (3.99)	5	20	0.13					
					.75 (19.05)	0.188 (4.78)	6	20	0.16	1.5		6-32	8
HCR		87	7/8 (22.22)	1.06 (26.98)	0.188 (4.78)	6	37	0.072	4.1	6-32		19	.15
	HR				0.250 (6.35)	8	34	0.10					
					0.87 (22.22)	0.313 (7.95)	10*	30	0.15	3.3		6-32	8
HCR		100	1 (25.4)	1.25 (31.75)	0.250 (6.35)	8	52	0.062	8.3	6-32		19	.15
	HR			1.00 (25.4)	0.313 (7.95)	10	47	0.86					
					0.375 (9.53)	12	42	0.12	6.5		10-32	25	.15
HCR		112	1 1/8 (28.75)	1.50 (38.1)	0.250 (6.35)	8	83	0.035	15.6	6-32		19	.15
	HR				0.313 (7.95)	10	78	0.045					
				1.12 (28.5)	0.375 (9.53)	12	71	0.061	11.3		10-32	25	.14
				0.500 (12.70)	0.500 (12.70)	16	55	0.12					
HCR		125	1 1/4 (31.75)	1.62 (41.27)	0.375 (9.53)	12	95	0.041	26	10-32		50	.22
	HR				0.500 (12.70)	16*	77	0.071					
				1.25 (31.75)	0.625 (15.88)	20*	57	0.13	19.4		1/4-28	65	.16

* Refer to note 8

Notes

- Shaft misalignments:
Angular 5 degrees
Parallel Offset .010 in. (.020 in. T.I.R.)
Axial Motion ± .010 in.
- 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 aluminium alloy used for ACR/AR series.
Finish: clear anodise *or*
Material: 17-4 PH high strength stainless steel used for HCR/HR series. Finish: natural
- Metric fasteners available on request.
- Manufacturing dimensional tolerances unless otherwise specified are:
fraction ± 1/64
x.xx ± .01 in.
- Inertia is based on smallest standard bore diameter.
- With integral clamp attachments only, this bore sizes requires an operating clearance diameter greater than coupling outside diameter.

MC SERIES, ALUMINIUM AND STAINLESS STEEL

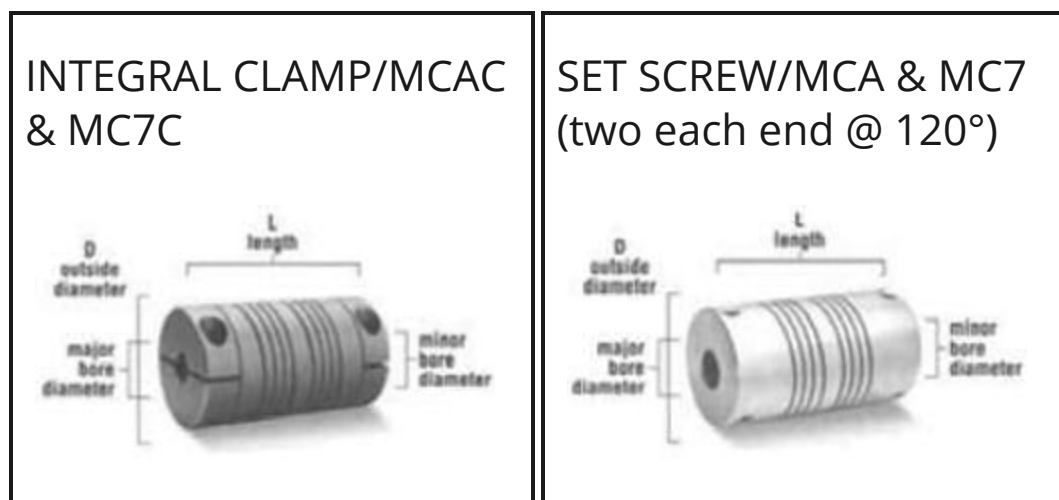


- Metric dimensions and fasteners
- Available in 7075-T6 aluminium alloy or 17-4 PH corrosion resistant steel
- General purpose

This versatile series of couplings provides you with a full range of torque capacities and bore sizes, with 1/32-inch parallel misalignment capability. These couplings attach to shafts with your choice integral clamps or set screws. Combine this with optional keyways and the MC Series is tailor-made your application.

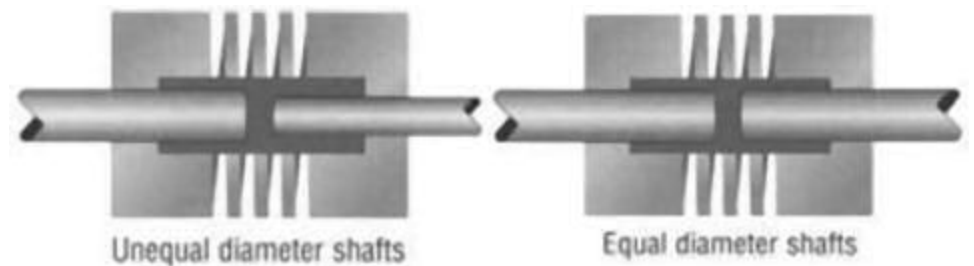
From medium-duty (aluminium) to heavy-duty (stainless steel), this series provides for a wide range applications. From pumps and lead screws to conveyors, chances are an MC Series coupling will your needs. Available in 7075-T6 aluminium alloy or 17-4 PH corrosion resistant steel (CRES).

Attachment Methods



Internal Configuration - Relief*

Major and minor diameter shafts may enter flexure area during operation.



*Dark area indicates relief within the coupling interior

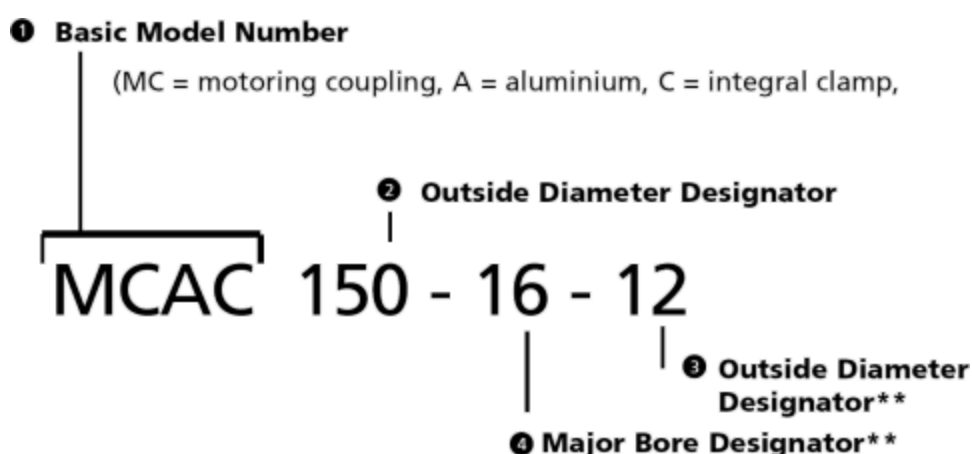
MC7C = Stainless Steel, Integral Clamp

MC7 = Stainless Steel, Set Screw

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



① **Basic Model Number:** Choose material and attachment method.

MCAC = Aluminium, Integral Clamp

MCA = Aluminium, Set Screw

② **Outside Diameter Designator:** This three-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.

③ **Major Bore Designator:** The larger of the two bores, its diameter is expressed in either 32nds of an inch (-8 equals 1/4 inch) or in millimetres (6mm). 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.

④ **Minor Bore Designator:** The smaller of the two bores is expressed the same as the Major Bore Designator. Either bore can be inch or mm.



MC SERIES ALUMINIUM, TECHNICAL DATA

Attachment Screw

Basic Model No.			Dimensional Information		Standard Bore Diameters		Performance Data		Inertia	Screw Size		Seating Torque	Centre Line
Integral Clamp Attachment	Set Screw Attachment	Outside diameter Designator	D Outside Diameter in. (mm)	L Length in. (mm)	(+.002in/-.000in) Note 6		Momentary Dynamic Torque Note 2 (lbin)	Torsional Rate (degree/lbin)	x 10 ⁵ (lbinsec ²) Note 7	Integral Clamp Note 4	Set Screw Note 4	(lbin)	(in.)
					Size in. (mm)	Bore Designator (1/32 in.)							
MCAC		100	1 (25.4)	1.75 (44.75)	0.250 (6.35)	8	26	0.98	0.41	6-32		19	.15
	MCA				0.313 (7.95)	10	23	1.3			10-24	25	.15
MCAC		125	1 1/4 (31.75)	2.37 (60.32)	0.313 (7.95)	10	51	0.51	1.3	10-24		50	.22
	MCA				0.375 (9.53)	12	47	0.66			1/4-20	65	.20
MCAC		150	1 1/2 (38.10)	2.62 (66.67)	0.375 (9.53)	12	100	0.065	3.1	10-24		50	.22
	MCA				0.500 (12.70)	16	88	0.100			1/4-20	65	.20
MCAC		200	2 (50.8)	3.00 (76.20)	0.500 (12.70)	16	178	0.035	11.4	1/4-20		120	.26
	MCA				0.625 (15.88)	20	164	0.049			1/4-20	65	.30
MCAC		225	2 1/4 (57.15)	3.50 (88.90)	0.625 (15.88)	20	286	0.024	21.5	1/4-20		120	.26
	MCA				0.750 (19.05)	24	262	0.032			1/4-20	65	.40
					0.875 (22.53)	28	233	0.044					

* Refer to note 8

Notes

- Shaft misalignments:
Angular 5 degrees
Parallel Offset .030 in. (.060 in. T.I.R.)
Axial Motion ± .010 in.
- 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 aluminium alloy used for MCAC/MCA series.
Finish: clear anodise *or*
Material: 17-4 PH high strength stainless steel. Finish: natural
- Metric fasteners available on request.
- Manufacturing dimensional tolerances unless otherwise specified are:
fraction ± 1/64mm
x.xx ± .01in
- Inertia is based on smallest standard bore diameter.
- With integral clamp attachments only, this bore sizes requires an operating clearance diameter greater than coupling outside diameter.
- Inch and metric keyways available.



MC SERIES STAINLESS STEEL, TECHNICAL DATA

Attachment Screw

Basic Model No.			Dimensional Information		Standard Bore Diameters		Performance Data		Inertia	Screw Size		Seating Torque	Centre Line
Integral Clamp Attachment	Set Screw Attachment	Outside diameter Designator	D Outside Diameter in. (mm)	L Length in. (mm)	(+.002in/-.000in) Note 6		Momentary Dynamic Torque Note 2 (lbin)	Torsional Rate (degree/lbin)	x 10 ⁵ (lbinsec ²) Note 7	Integral Clamp Note 4	Set Screw Note 4	(lbin)	(in.)
					Size in. (mm)	Bore Designator (1/32 in.)							
MC7C		100	1 (25.4)	1.75 (44.75)	0.250 (6.35)	8	51	0.098	1.1	6-32		19	0.15
	MC7				0.313 (7.95)	10	46	0.140			10-32	25	0.15
MC7C		125	1 1/4 (31.75)	2.37 (60.32)	0.313 (7.95)	10	98	0.048	3.8	10-32		56	0.22
	MC7				0.375 (9.53)	12	91	0.062			1/4-28	65	0.2
MC7C		150	1 1/2 (38.10)	2.62 (66.67)	0.500 (12.70)	16*	74	0.110	8.7	10-32		56	0.22
	MC7				0.625 (15.88)	20*	54	0.210			1/4-28	65	0.2
MC7C		200	2 (50.8)	3.00 (76.20)	0.375 (9.53)	12	194	0.024	31.9	1/4-28		56	0.22
	MC7				0.500 (12.70)	16	170	0.037			1/4-28	65	0.2
MC7C		200	2 (50.8)	3.00 (76.20)	0.625 (15.88)	20	347	0.013	31.9	1/4-28		135	0.26
	MC7				0.750 (19.05)	20	319	0.018			1/4-28	65	0.3
MC7C		225	2 1/4 (57.15)	3.50 (88.90)	0.625 (15.88)	20	556	0.009	60	1/4-28		135	0.26
	MC7				0.750 (19.05)	24	510	0.012			1/4-28	65	0.4
					0.875 (22.53)	28	454	0.016					
					1.000 (25.40)	32	392	0.023					

* Refer to note 8

Notes

- Shaft misalignments:
Angular 5 degrees
Parallel Offset .030 in. (.060 in. T.I.R.)
Axial Motion ± .010 in.
- 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 aluminium alloy used for MCAC/MCA series.
Finish: clear anodise *or*
Material: 17-4 PH high strength stainless steel. Finish: natural
- Metric fasteners available on request.
- Manufacturing dimensional tolerances unless otherwise specified are:
fraction ± 1/64mm
x.xx ± .01in
- Inertia is based on smallest standard bore diameter.
- With integral clamp attachments only, this bore sizes requires an operating clearance diameter greater than coupling outside diameter.
- Inch and metric keyways available.



DS SERIES, ALUMINIUM

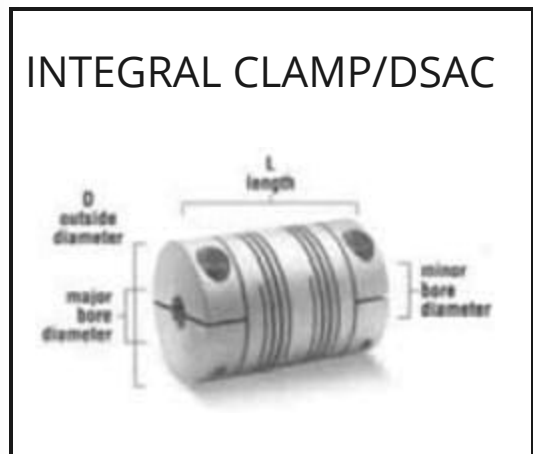


- High torsional stiffness
- Low radial loads
- Parallel misalignment capability
- Low inertia

The DS Series was designed for today's high performance motion control systems. This Series incorporates two helical beams in each of two separate Heli-Cal Flexures, combining greater end-to-end rotational accuracy with radial flexibility in one design. Available only with integral clamp attachments, the DS Series provides the high torsional stiffness and low inertia necessary for positioning devices, servo motors and lead screws.

The DS Series also provides you with substantial .010-inch parallel offset capability, reducing the need for high-precision alignment during assembly operations. It's your ticket to greater system accuracy and reliability. Available only in 7075-T6 aluminium.

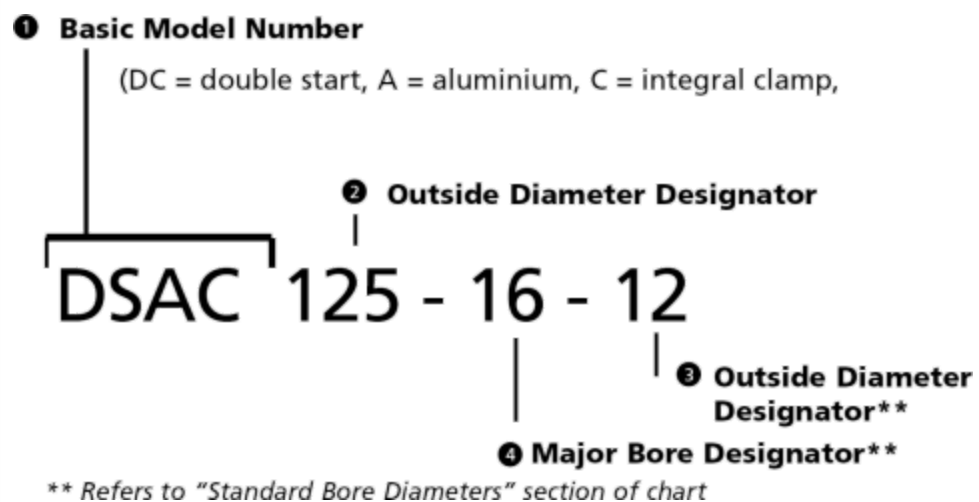
Attachment Methods



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.

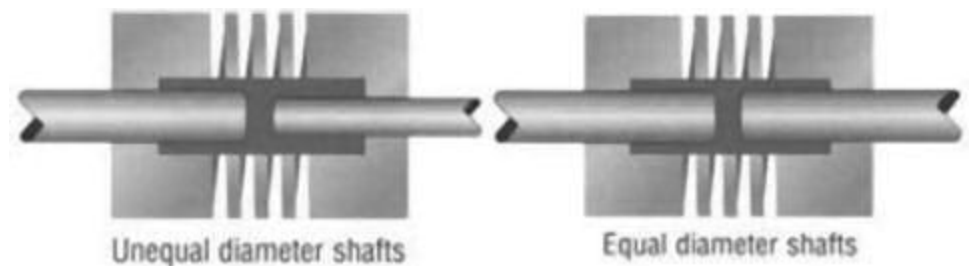
Example



1 Basic Model Number: DSAC = Aluminium, Integral Clamp

Internal Configuration - Relief*

Major and minor diameter shafts may enter flexure area during operation.



*Dark area indicates relief within the coupling interior

2 Outside Diameter Designator: This three-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.

3 Major Bore Designator: The larger of the two bores, its diameter is expressed in either 32nds of an inch (-8 equals 1/4 inch) or in millimetres (6mm). 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.

4 Minor Bore Designator: The smaller of the two bores is expressed the same as the Major Bore Designator. Either bore can be inch or mm.



DS SERIES, ALUMINIUM, TECHNICAL DATA

Attachment Screw

Basic Model No.		Dimensional Information		Standard Bore Diameters		Performance Data		Inertia	Screw Size	Seating Torque	Centre Line
Integral Clamp Attachment	Outside diameter Designator	D Outside Diameter in. (mm)	L Length in. (mm)	(+.002in/-.000in) Note 6		Momentary Dynamic Torque Note 2 (lbin)	Torsional Rate (degree/lbin)	x 10 ⁵ (lbinsec ²) Note 7	Integral Clamp Note 4	(lbin)	(in.)
				Size in. (mm)	Bore Designator (1/32 in.)						
DSAC	075	3/4 (19.05)	1.25 (31.75)	0.188 (4.78)	6	14	0.30	0.091	4-40	10	0.12
				0.250 (6.35)	8	12	0.40				
DSAC	100	1 (25.4)	1.50 (38.10)	0.250 (6.35)	8	31	0.13	0.35	6-32	19	0.15
				0.313 (7.95)	10	29	0.16				
				0.375 (9.53)	12	25	0.19				
DSAC	125	1 1/4 (31.75)	1.75 (44.75)	0.313 (7.95)	10	61	0.062	0.98	10-24	50	0.22
				0.375 (9.53)	12	58	0.080				
				0.500 (12.70)	16*	47	0.12				
				0.625 (15.88)	20*	35	0.19				
DSAC	150	1 1/2 (38.10)	2.25 (57.15)	0.375 (9.53)	6	130	0.030	2.7	10-24	50	0.22
				0.500 (12.70)	8	115	0.042				
				0.625 (15.88)	10*	94	0.062				
DSAC	200	2 (50.8)	2.50 (63.50)	0.500 (12.70)	16	235	0.016	9.5	1/4-20	120	0.26
				0.625 (15.88)	20	215	0.020				
				0.750 (19.05)	24	190	0.026				

* Refer to note 8

Notes

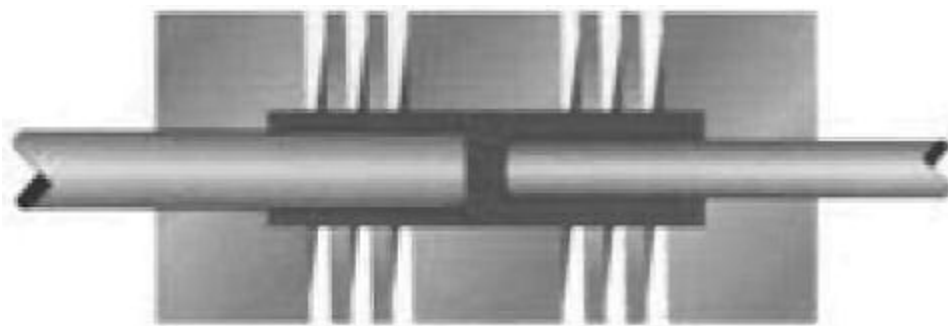
1. Shaft misalignments:
Angular 5 degrees
Parallel Offset .010 in. (.020 in. T.I.R.)
Axial Motion ± .008 in.
2. Dynamic torque ratings are momentary values. For non-reversing applications, divide by 2. Divide by 4 for reversing applications. Should the torque ratings be marginal for your application, contact us for analysis.
3. Material: 7075-T6 aluminium alloy used for DSAC series.
Finish: clear anodise
4. Metric fasteners available on request.
5. Manufacturing dimensional tolerances unless otherwise specified are:
fraction ± 1/64mm
x.xx ± .01in
6. Inertia is based on smallest standard bore diameter.
7. With integral clamp attachments only, this bore sizes requires an operating clearance diameter greater than coupling outside diameter.
8. Inch and metric keyways available.



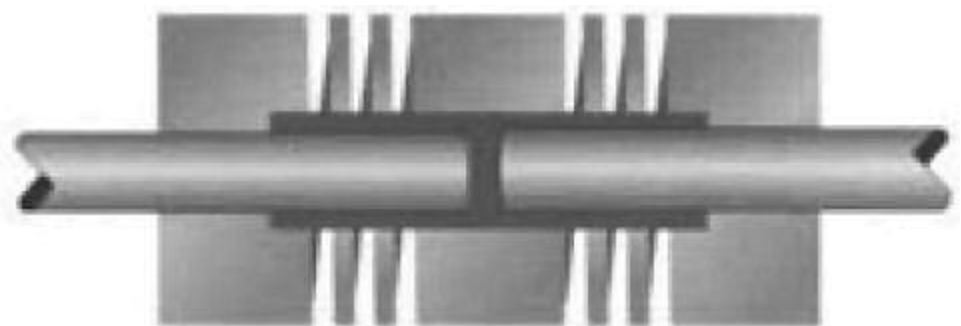
SPECIAL BORE CONFIGURATIONS

W Series

Basic Model No.		Outside Diameter		Standard Bore Diameters			
Integral Clamp Attachment	Set Screw Attachment	Outside Diameter Designator	D Outside Diameter	With Relief		Restricted Bore Configurations	
				Maximum Size mm	Minimum Size mm	Maximum Size mm	Bore Depth mm
W7C/WAC		15	15mm	3.00	5.00	7.30	6.00
	W7/WA			3.00	5.00	9.00	4.85
W7C/WAC		20	20mm	4.00	6.35	9.81	8.55
	W7/WA			4.00	6.35	14.00	4.85
W7C/WAC		25	25mm	6.00	10.00	14.56	8.55
	W7/WA			6.00	10.00	17.00	5.85
W7C/WAC		30	30mm	9.00	12.70	17.30	11.00
	W7/WA			9.00	12.70	20.00	6.85
W7C/WAC		40	40mm	12.00	16.00	24.80	15.50
	W7/WA			12.00	16.00	25.40	17.00
W7C/WAC		50	50mm	14.00	20.00	32.11	15.50
	W7/WA			14.00	20.00	38.10	17.00



Unequal diameter shafts



Equal diameter shafts



SPECIAL BORE CONFIGURATIONS

A and H Series

Basic Model No.		Outside Diameter		Standard Bore Diameters							
Integral Clamp Attachment	Set Screw Attachment	Outside Diameter Designator	D Outside Diameter (in.)	With Relief				Restricted Bore Configurations*			
				Maximum Size		Minimum Size		Maximum Size		Bore Depth	
ACR/HCR	AR/HR	050	1/2	0.09	2.29	0.125	3.18	0.236	6	0.19	4.83
				0.09	2.29	0.125	3.18	0.315	8	0.12	3.05
ACR/HCR	AR/HR	062	5/8	0.09	2.29	0.197	5	0.325	8.26	0.20	5.08
				0.09	2.29	0.197	5	0.375	9.53	0.14	3.56
ACR/HCR	AR/HR	075	3/4	0.118	3	0.25	6.35	0.39	9.9	0.25	6.35
				0.118	3	0.25	6.35	0.512	13	0.18	4.57
ACR/HCR	AR/HR	087	7/8	0.138	3.5	0.315	8	0.444	11.27	0.31	7.87
				0.138	3.5	0.315	8	0.63	16	0.20	5.08
ACR/HCR	AR/HR	100	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	0.63	16	0.26	6.6
ACR/HCR	AR/HR	112	1 1/8	0.188	4.78	0.512	13	0.684	17.38	0.45	11.43
				0.188	4.78	0.512	13	0.63	16	0.27	6.86
ACR/HCR	AR/HR	125	1 1/4	0.313	4.94	0.625	15.88	0.669	17	0.51	12.95
				0.313	4.94	0.625	15.88	0.75	19.05	0.32	8.13





SPECIAL BORE CONFIGURATIONS

MC Series

Basic Model No.				Outside Diameter		Standard Bore Diameters						
Integral Clamp Attachment	Set Screw Attachment	Outside Diameter Designator	D Outside Diameter (in.)	With Relief				Restricted Bore Configurations				
				Maximum Size in. & (mm)	Minimum Size in. & (mm)	Maximum Size in. & (mm)	Bore Depth in. & (mm)					
MC7C				100	1	0.156	3.96	0.394	10	0.563	14.3	0.37 (9.40)
	MCAC					0.156	3.96	0.394	10	0.563	14.3	
		MC7				0.156	3.96	0.394	10	0.63	16	
			MCA			0.156	3.96	0.394	10	0.63	16	
MC7C				125	1 ¼	0.313	7.95	0.63	16	0.668	16.98	0.51 (12.95)
	MCAC					0.313	7.95	0.512	13	0.668	16.98	
		MC7				0.313	7.95	0.63	16	0.75	19.05	
			MCA			0.313	7.95	0.512	13	0.75	19.05	
MC7C				150	1 ½	0.313	7.95	0.63	16	0.908	23.07	0.66 (16.76)
	MCAC					0.313	7.95	0.512	13	0.908	23.07	
		MC7				0.313	7.95	0.63	16	1	25.4	
			MCA			0.313	7.95	0.512	13	1	25.4	
MC7C				200	2	0.375	9.53	0.75	19.05	1.28	32.5	0.75 (19.05)
	MCAC					0.375	9.53	0.63	16	1.28	32.5	
		MC7				0.375	9.53	0.75	19.05	1.5	38.1	
			MCA			0.375	9.53	0.63	16	1.5	38.1	
MC7C				225	2 ¼	0.375	9.53	1	25.4	1.525	38.73	0.86 (21.84)
	MCAC					0.375	9.53	0.875	22.23	1.525	38.73	
		MC7				0.375	9.53	1	25.4	1.75	44.45	
			MCA			0.375	9.53	0.875	22.23	1.75	44.45	



SPECIAL BORE CONFIGURATIONS

DS Series

Basic Model No.	Outside Diameter		Standard Bore Diameters							
	Outside Diameter Designator	D Outside Diameter (in.)	With Relief				Restricted Bore Configurations*			
			Maximum Size in. & (mm)		Minimum Size in. & (mm)		Maximum Size in. & (mm)		Bore Depth in. & (mm)	
DSAC	075	¾	0.188	4.78	0.25	6.35	0.39	9.9	0.25	6.35
DSAC	100	1	0.25	6.35	0.394	10	0.563	14.31	0.38	9.65
DSAC	125	1 ¼	0.313	7.95	0.63	16	0.668	16.98	0.44	11.18
DSAC	150	1 ½	0.375	9.53	0.63	16	0.908	23.07	0.57	14.48
DSAC	200	2	0.5	12.7	0.75	19.05	1.28	32.5	0.68	17.27

* Restricted Bore Configuration

Notes

- Bore Sizes are placed into the part number with leading dashes after the basic model number. Standard bore dimensions are noted in the 32nds of an inch, such as 8/32 or 3/32in. The respective dash numbers would be -8 and -3. Any bore dimensions that are not an integer number of 32nds should be converted to their millimeter equivalent with "mm" after the numerical designation, e.g. .315in. = 8mm.
- When specifying part numbers, metric bore diameters are specified without trailing zero after the decimal point, e.g. .315in. = 8.00mm, but the bore designation is -8mm. This is only for simplicity in ordering and does not affect the tolerances of the actual bore dimensions. Bore tolerances are specified on the Engineering Proposal Form at the end of the catalogue.
- Manufacturing dimensional tolerances unless otherwise specified are:
- A complete line of speciality OEM and end user products is available; please refer to the Engineering Proposal and/or contact our Engineering Department.
- A chart showing our standard line of instrumentation couplings with precision bore tolerancing is available upon request.
- All parts are available with metric or inch fasteners to be compatible with the fastener system used in your designs.
- Bore diameters less than minimum listed may be possible for one bore only. Contact our Engineering Department.

frac	x.xx	x.xxx	angle
±1/64	±0.010	±0.005	±2°
frac	x.x	x.xx	angle
±0.5	±0.25	±0.15	±2°

X-SERIES, RADIAL (CROSS) SLOT, FLEXIBLE COUPLINGS



- **Torsionally Stiff**
- **Zero Backlash**
- **No Maintenance**

The new X-Series is a high performance, easy to use, durable, full featured, radial (cross) slot flexible coupling with high torque capacity and exceptional torsional stiffness. It is offered in six different outside diameters and a wide range of bore sizes. It features the reliable, user friendly, integral clamp attachment.

Design Considerations

The integral clamp fasteners are located inline, on either side of the radial-slot flexing element. This provides the easiest assembly for most applications, where just moving the hex wrench across the flexing element is all it takes to tighten both fasteners.

Along with high torsional stiffness and torque capacity, the X-Series couplings are completely machined from a solid piece of material. This one piece integrity ensures that there is never a worry about wear, looseness and backlash, as found in multi-piece assemblies.

To make component assembly as easy and compact as possible, the X-Series features a bore relief. This allows shafts to be inserted into the centre of the coupling without affecting the misalignment capability of the coupling. By making the centre flexible section with a slightly larger ID than either shaft size, the shafts can be inserted into this area without contacting the flexible element ID during operation. 7075-T6 aluminium is the material of choice for the X-Series.

Test results

X-Series couplings have been subjected to rigorous reliability testing. During durability tests, couplings are subjected to parallel offsets of up to five times their rated value and tested to failure. The XSeries couplings were tested for tens of millions of cycles at these exaggerated offsets and exhibited an exceptional premium performance capability.

In brief

Available in six outside diameter sizes, from 15mm to 50mm and any bore combination between the listed minimum and maximum. Couplings can be ordered with bores that are either millimetre, inch or combination of the two.



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STANDARD CONDITIONS OF SALE

1. Interpretation
 - 1.1 In these Conditions:
"Buyer" means the person who accepts a quotation of the Seller for the sale of the Goods or whose order for the Goods is accepted by the Seller
"Goods" means the goods (including any instalment of the goods or any parts for them) which the Seller is to supply in accordance with these Conditions
"Seller" means ABSSAC LIMITED a company incorporated in England and whose registered number is 1677177.
"Conditions" means the standard terms and conditions of sale set out in this document and (unless the context otherwise requires) includes any special terms and conditions agreed in writing between the Buyer and the Seller
"Contract" means the Contract for the purchase and sale of the Goods
"Writing" includes telex, cable, facsimile transmission, E-Mail and comparable means of communication
 - 1.2 Any reference in these Conditions to any provision of a statute shall be construed as a reference to that provision as amended, re-enacted or extended at the relevant time
 - 1.3 The headings in these Conditions are for convenience only and shall not affect their interpretation
2. Basis of the sale
 - 2.1 Subject to Condition 3 below, the Seller shall sell and the Buyer shall purchase the Goods in accordance with any oral or written order of the Buyer which is accepted by the Seller, or any written quotation of the Seller which is accepted by the Buyer, subject to these Conditions which shall govern the Contract to the exclusion of any other terms and conditions subject to which any such quotation is accepted or purported to be accepted, or any such order is made or purported to be made, by the Buyer
 - 2.2 No variation, addition or waiver of any of these Conditions shall be effective unless it is in Writing and signed by a duly authorised representative of both the Seller and the Buyer
 - 2.3 The Seller's employees or agents are not authorised to make any representations concerning the Goods unless confirmed by the Seller in Writing. In entering into the Contract the Buyer acknowledges that it does not rely on any such representations which are not so confirmed
 - 2.4 Samples supplied and advice or recommendations as to storage, application or use of the Goods given by the Seller or its employees or agents to the Buyer or its employees or agents are for guidance only and any such matter which is not confirmed in Writing by the Seller is followed or acted upon entirely at the Buyer's own risk and accordingly the Seller shall not be liable for any such advice or recommendation which is not so confirmed then the Buyer should depend on their accuracy only after obtaining specific written confirmation to that effect from the Seller
 - 2.5 Any typographical, clerical or other error or omission in any sales literature, quotation, price list, acceptance of offer, invoice or other document or information issued by the Seller shall be subject to correction without any liability on the part of the Seller
3. Quotations and acceptance of orders
 - 3.1 Quotations issued by the Seller are invitations to order Goods from the Seller. No Contract will exist until the Seller has accepted the Buyer's order in accordance with condition 3.3.
 - 3.2 Subject to condition 3.1 the price in the quotation should be valid for a period of 30 days from the date of the quotation unless otherwise advised by the Seller in Writing
 - 3.3 The Seller shall not be bound by any order submitted by the Buyer unless and until confirmed by the Seller in Writing
 - 3.4 Scheduled call off purchase orders made by the Buyer with the Seller are for twelve month periods only, or until 19th December of that year, depending which comes first unless otherwise agreed in Writing by the Seller
 - 3.5 The Buyer is committed to purchasing any remaining amount of products on his purchase order if the Buyer decides to cancel the order mid schedule unless otherwise agreed in Writing by the Seller
- 3.6 No order which has been accepted by the Seller may be cancelled by the Buyer except with the agreement in Writing of the Seller on the terms that the Buyer shall indemnify the Seller in full against all loss (including loss of profit), costs (including the costs of all labour and materials used), damages, charges and expenses incurred by the Seller as a result of cancellation.
- 3.7 Compliance with United States Export Regulations
It is Absac's policy to request, if applicable, the end use and end user details in all sales and repairs of USA origin products and in all transfers of technical data or software to ensure compliance with applicable u.s. export control laws and regulations. Because the products you are purchasing may be used outside of the United States, we will need confirmation of the following from the (buyer). It is on the onus of the buyer to ensure that Absac is informed of the following information.
 - 1.1 (Buyer) will not export or re-export any USA origin products, technology or software to Cuba, Iran, Iraq, Libya, North Korea, Sudan, or Syria, unless otherwise authorized by the United States Government.
 - 2.1 (Buyer) will not sell, transfer, export or re-export any USA origin products for use in activities which involve the development, production, use or stockpiling of nuclear, chemical or biological weapons or missiles, nor use USA origin products in any facilities which are engaged in activities relating to such weapons.
 - 3.1 (Buyer) acknowledge that u.s. law prohibits the sale, transfer, export or re-export or other participation in any export transaction involving USA origin products with individuals or companies listed in the u.s. Commerce Department's Table of Denial Orders, the u.s. Treasury Department's list of Specially Designated Nationals or the u.s. Department of State's list of individuals debarred from receiving Munitions List items.
 - 4.1 (Buyer) will abide by all applicable u.s. export control laws and regulations for any products purchased from USA origin products, software or technology.
 - 5.1 (Buyer) agree that the export control requirements in No. 1-4 above shall survive the completion, early termination, cancellation or expiration of the applicable purchase order, agreement or contract.
4. Specifications
 - 4.1 The Buyer shall be responsible to the Seller for ensuring the accuracy of the terms of any order (including any applicable specification) submitted by the Buyer, and for giving the Seller any necessary information relating to the Goods within a sufficient time to enable the Seller to perform the Contract in accordance with its terms
 - 4.2 The quantity, quality and description of any specification for the Goods shall be those set out in the Seller's quotation (if accepted by the Buyer) or the Buyer's order (if accepted by the Seller)
 - 4.3 If Goods are supplied in accordance with the Buyer's specifications the Buyer shall be solely responsible for the specifications and ensuring that they are accurate
 - 4.4 If any technical calculations are made by the Seller using information supplied by the Buyer the Buyer accepts that they are responsible for supplying accurate technical information and accordingly the Seller is not liable in respect of calculations based on incorrect information given
 - 4.5 If Goods are to be manufactured or any process is to be applied to the Goods by the Seller in accordance with a specification or request submitted by the Buyer or should any change be made to the Goods at the request of the Buyer the Buyer shall indemnify the Seller against all loss damages costs and expenses awarded against or incurred by the Seller in connection with or paid or agreed to be paid by the Seller in settlement of any claims for infringement of any patent, copy right, design, trade mark or other industrial or intellectual property rights of any person which results from the Seller's use of the Buyers specification

- 4.6 The Seller reserves the rights to make any changes in the specification of the Goods which are required to conform with any applicable statutory or EC requirements or, where the Goods are to be supplied to the Seller's specification, which do not materially affect their quality or performance
- 4.7 At all times the buyer has the responsibility to adequately guard and maintain the product supplied in accordance with relevant operation manuals, service factors and health and safety legislation applicable for any product supplied by ABSSAC Limited.
- 4.8 The seller (Abszac Limited) shall not in any event be liable for any consequential damages, secondary charges, expenses for installing or disconnecting, or losses or injuries to persons or property resulting from any alleged defect in the product or any use of the product, and in manner that exceeds its design, duty cycle and or ability.
- 4.9 It remains the responsibility of the buyer to test any samples or other products that the seller will provide for fatigue, stress and general ability in the application. All products that the seller provides and are used in both real and test situations are considered by Abszac Ltd to have been thoroughly tested to meet and exceed the anticipated life and duty requirement of the product in its application by the buyer. It remains the responsibility of the buyer to give all technical information to the seller and all buyers are responsible for meeting health and safety measures and adequately guarding users and all associated parties against all and any possible failures in line with the health and safety requirements.
Other Where recommended guidelines of serviceable or replaceable parts and maintenance/inspection requirements are exceeded or ignored by the user and/or buyer, no warranty or other claim can or will exist. Where minimum or maximum values/sizes/limits/dimensions/fitting instructions and technical data of parts are ignored/abused/extended/not applied/not actioned or used in excess of the design or standard parameters of the product by the user and/or buyer then no warranty claim or other claim can exist.
No warranty or other claim can exist or be made by the user or buyer or other to the seller or its agent or other for any part used in motor sport, military or aviation. No warranty is given to this type of application.
All or any secondary or further processes/disassembly/machining/ heating/drying/coating or any other additional process the originally supplied product or associated part/product after dispatch from the seller or its agent voids any warranty claim or other claim.
It remains the responsibility of the buyer or user to advise us the seller of any and all certification/test/traceable certification requirement.
Conversations may be recorded as part of our ongoing customer service program.
5. Packaging
- 5.1 Packaging for the Goods shall be at the discretion of the Seller which has the right to pack the Goods in such a manner and with such materials and in such quantities as in his absolute discretion thinks fit unless detailed packaging instructions are received from the Buyer prior to agreeing a price for the Goods which the Seller agrees to in Writing
6. Price of the Goods
- 6.1 Price of the Goods shall be the Seller's quoted price or, where no price has been quoted (or a quoted price is no longer valid) the price listed in the Seller's published price list current at the date of acceptance of this order. Where the Goods are supplied for export from the United Kingdom, the Seller's published export price list shall apply. All prices quoted are valid for 30 days only or until earlier acceptance by the Buyer, after which time they may be altered by the Seller without given giving written notice to the Buyer
- 6.2 The price is exclusive of any applicable value added tax, which the Buyer shall be additionally liable to pay to the Seller
- 6.3 All prices stated shall be subject to variation at the sole discretion of the Seller at any time without prior notice and the Seller shall notify the Buyer of any variation before delivery of the Goods
7. Payment
- 7.1 Liability for payment for the Goods supplied to customers who have a trading account with the Seller shall arise on delivery and payment in cash is due 30 days from the date of the invoice or as otherwise specifically agreed in Writing by the Seller. Payment shall be due and the company shall be entitled to sue for the price whether or not property in the Goods has passed by virtue of condition 10 and notwithstanding the delivery may not have taken place as a result of the Buyer's wrongful or refusal to accept delivery. The time of payment of the price shall be of the essence of the Contract
- 7.2 Liability for payment for the Goods supplied on a proforma invoice basis for customers who do not have a trading account with the Seller shall be prior to delivery of the Goods. The time of payment of the price shall be of the essence of the Contract. It is the Buyer's responsibility to give written notice to the Seller of any payment under proforma invoice arrangements
- 7.3 Sums paid after the due date shall pay interest until the day payment is received at the rate of 5% per annum above the base rate from time to time of National Westminster Bank Plc occurring from day to day from the date of delivery until the date of payment in full
- 7.4 If the recovery of sums outstanding from the Buyer is passed to a debt collection agency the Buyer shall pay the Seller's costs in instructing the said debt collection agency and all ancillary legal costs
- 7.5 Without prejudice to any other rights or remedies of the Seller any in default of the Buyer in making payment on the due date shall entitle the Seller to suspend deliveries under the Contract or any other Contract so long as the default continues and break the Contract as repudiated by the Buyer and determined if the Buyer has not within 14 days of receiving written notice from the Seller paid all sums due to the Seller.
8. Delivery
- 8.1 Delivery shall take place when the Goods are unloaded at or delivered to the Buyer's premises or other delivery location agreed between the Seller and the Buyer except that if the Buyer collects or arranges collection of the Goods from the Seller's premises, or nominates a carrier for the Goods delivery shall take place when the Goods are loaded on the collection or carriers vehicle
- 8.2 Any dates quoted for delivery of the Goods are approximate only and the Seller will not be liable for any delay in delivery of the Goods however so caused. Time for delivery shall not be of the essence of the Contract unless previously agreed by the Seller in Writing. The Goods may be delivered by the Seller in advance of the quoted delivery date upon giving responsible notice to the Buyer
- 8.3 The Buyer shall accept immediate delivery or arrange to collect the Goods or arrange suitable storage, failing which the company may either:
- 8.3.1 effect delivery by whatever means they think most appropriate; or
- 8.3.2 arrange storage at the Buyer's risk and expense pending delivery; or
- 8.3.3 re-sell or otherwise dispose of the Goods without prejudice to any other rights the Seller may have against the Buyer for breach of Contract or otherwise
- 8.4 Where the agreement provides for delivery by instalments each delivery shall constitute a separate Contract and failure by the Seller to deliver any one or more of the instalments in accordance with these Conditions or any claim by the Buyer in respect of any one or more instalments shall not entitle the Buyer to treat the Contract as a whole as repudiated
- 8.5 The Buyer shall not be entitled to reject the Goods by reason only of short delivery

- 8.6 The quantity of the Goods delivered under the Contract shall be recorded by the Seller upon dispatch from the Seller's factory or warehouse and the Seller's records shall be accepted by the Buyer as conclusive evidence of the quantity delivered.
- 8.7 It is the Buyer's responsibility to notify the seller if Goods have not been received by the Buyer within seven days of the date of receipt of the Seller's invoice, therefore, if no notification is made the Buyer shall be deemed to have received the Goods.
- 8.8 If the Seller fails to deliver the Goods (or any instalment) for any reason other than any cause beyond the Seller's reasonable control or the Buyer's fault, and the Seller is accordingly liable to the Buyer, the Seller's liability shall be limited to the excess (if any) of the cost to the Buyer (in the cheapest available market) of similar Goods to replace those not delivered over the price of the Goods. The seller is under no obligation or liability in respect of failure to complete or delay or failure to deliver the goods comprised in any order or contract caused directly or indirectly by act of war or terrorism, strikes, lockouts, labour troubles, breakdowns, delays in transport, accidents, delay in obtaining material, fire, government prohibition, delivery of necessary fuel requirements, any and all problems or other restrictions relating to design or other manufacturing difficulties that arise during an order.
- 8.9 If the Buyer fails to take delivery of the Goods or fails to give the Seller adequate delivery instructions at the time stated for delivery (otherwise than by reason of any cause beyond the Buyer's reasonable control or by reason of the Seller's fault) then, with out prejudice to any other right or remedy available to the Seller, the Seller may:
- 8.9.1 store the Goods until actual delivery and charge the Buyer for the reasonable costs (including insurance) of storage;
or
- 8.9.2 sell the Goods at the best price readily obtainable and (after deducting all reasonable storage and selling expenses) account to the Buyer for the excess over the price under the Contract or charge the Buyer for any shortfall below the price under the Contract
9. Examinations and claims
- 9.1 The Buyer shall upon delivery examine the Goods and shall promptly (but in any event within seven working days of delivery) notify in Writing the Seller and the carrier, where relevant, of any apparent damage defect or shortage.
- 9.2 The Buyer shall comply with the carriers rules, regulations and requirements so as, when appropriate, to the Seller to make a claim against the carrier in respect of any damage or loss in transit.
- 9.3 Claims in respect of damage defects or shortage not apparent on examination and under clause 9.1 must be notified in Writing to the Seller within 7 days of the date of delivery
- 9.4 Notification under clauses 9.1 to 9.3 above shall be first made by telephone then by notice in Writing delivered by facsimile transmission or by first class recorded delivery mail and addressed to Abssac Limited Units 19/20 Bond Industrial Estate Wickhamford Evesham Worcs WR11 7RH.
- 9.5 In default of such notification the seller shall be deemed conclusively to have properly preformed its obligations under the Contract.
10. Property and risk
- 10.1 All risk including that of dam age to or loss of the Goods shall pass to the Buyer:
- 10.1.1 at the time when the Seller notifies the Buyer that the Goods are available for collection the case of Goods to be supplied at the Seller's premises
or
- 10.1.2 at the time of delivery but prior to unloading or if the Buyer wrongfully fails to take delivery of the Goods at the time when the Seller has tendered to delivery of the Goods in the case of Goods to be supplied otherwise than at the Seller's premises
or;
- 10.1.3 at the time of delivery of the Goods to a carrier for delivery to the Buyer in the case of Goods to be supplied in a manner otherwise than as set out in Conditions 10.1.1 or 10.1.2 above
- 10.2 The Buyer shall fully insure the Goods against all risks from the times stipulated forthe passing of risk in condition 10.1 above up to the time when the proprietary rights in such Goods pass to the Buyer
- 10.3 Property (both legal and beneficial) in the Goods shall remain in the company until all sums owing to the Seller whether under the Contract or any other Contract at any time between the Seller and the Buyer made prior to the date of the Contract ("the Indebtedness) shall have been paid in full, until such time the Buyer shall hold the Goods as bailee for the Seller
- 10.4 The Buyer shall not be entitled to pledge or in any way charge by way of security for any indebtedness any of the Goods which remain the property of the Seller, but if the Buyer does so all moneys owing by the Buyer to the Seller shall (without prejudice to any other right or remedy of the Seller) forthwith become due and payable
- 10.5 The Buyer until otherwise notified by the Seller or on the happening of any of the event specified in Condition 10.7 ("the Events") may in the ordinary course of business sell the Goods and pass property in them ("the Re-Sale") subject to the stipulations ("the Stipulations") imposed in Condition 1 0.5
- 10.6 The Stipulations are that until the Indebtedness has been fully discharged;
- 10.6.1 the Goods shall not be converted into any other product or mixed with any other Goods to make another product ("the New Product") nor will the Buyer sell the New Product and property in it ("the Sale") but if the Buyer in breach of the above provision does convert or mix the Goods property in the New Product shall atthe earliest moment that such vesting is possible, vest and remain in the Seller whether or not property in the Goods is at the moment extinguished
- 10.6.2 the Re-Sale shall be for the account of the Seller and, unless the Seller by written notice requires the paymentto it of the proceeds ofthe Re-Sale ("the Proceeds") to the extent of the Indebtedness, in which case the Buyer shall forthwith on receipt of such notice or as soon as thereafter as it shall receive the Proceeds makes its payment, the Buyer shall retain the Proceeds in a separate bank accountto the order of the Seller and not mix them with any other monies
- 10.6.3 in the event of a breach by the Buyer of its obligations under additions 10.6.1 the Seller shall have the right to trace the Proceeds in to any other moneys which may have been mixed and the Buyer shall indemnify the Seller on a full indemnity basis against loss, damage, costs or expenses incurred in such tracing
- 10.6.4 until the Re-Sale the Seller has have the right to repossess the Goods or take possession of the New Product at any time and for this purpose shall have the right to enter on to any premises or land in the ownership or possession of the Buyer and remove the Goods and/or the New Product not withstanding that they are affixed to such premises or land and the Buyer shall indemnifythe Seller on a full indemnity basis against all loss, damage, costs or expenses so arising including loss, damage, costs or expenses in respect of third party claims. Such taking of possession re delivery shall be without prejudice in the obligation of the Buyer to purchase Goods
- 10.6.5 the Goods and the New Product shall until their Re-Sale or Sale be stored separately, protected and insured and identified and clearly marked as the Seller's property
- 10.7 The Events are;
- 10.7.1 The giving of any notice to the Buyer that a receiver, manager, administrative receiver, supervisor, nominee or administrator is to be or has been appointed over any of the property or assets of the Buyer or that a petition to wind up the Buyer is to be or has been presented or that an application for an administration order is to be or has been made or any notice of a resolution to wind up the Buyer (say for the purposes of bona fide reconstruction or amalgamation)
- 10.7.2 A decision by the Buyer that the Buyer intends to make any arrangement or composition with its creditors generally.
- 10.7.3 Where the Buyer pursuant to section 123 or 268 of the Insolvency Act 1986 appears to be unable to pay a debt or appears to have no reasonable prospects of being able to pay a debt

- 10.7.4 any distress or execution levied as threatened to be levied on any property or assets of the Buyer
- 10.7.5 the inability of the Buyer to pay its debts as they fall due
- 10.7.6 on receipt of notification from the company under Condition 10.5 or on the happening of any of the Events the Buyer shall immediately deliver the Goods and the New Product property in which the Product is reserved to or is vested in the Seller to such address as the Seller shall specify in default of which or in the alternative, the Seller shall have the right to enter on any premises or land in the ownership or possession of the Buyer in order to recover the Goods and the New Product and the Buyer shall indemnify the Seller on a full indemnity basis against all loss, damage, costs or expenses as arising including loss, damage, cost or expenses in respect of third party claims
11. Breach by or insolvency by the Buyer
- 11.1 if the Buyer shall not comply with any of its obligations to the Seller or upon the occurrence of any of the Events referred to in clause 10.7 the Seller shall have the right forthwith to terminate the Contract but without affecting any other claim right or remedy of the Seller against the Buyer and without any liability to the Buyer, and if the Goods have been delivered but not paid for the price shall become immediately due and payable notwithstanding any previous agreement or arrangement to the contrary
12. Export Terms
- 12.1 In these Conditions "Incoterms" mean the international rules for the interpretation of trade terms of the International Chambers of Commerce as in force at the date when the Contract is made. Unless the Context otherwise requires, any term or expression which is defined in or given a particular meaning by the provisions Incoterms shall have the same meaning in these Conditions, but if there is any conflict between the provisions of Incoterms and these Conditions, the latter shall prevail
- 12.2 Where the Goods are supplied for export from the United Kingdom, the provisions of this clause 12 shall (subject to any special terms agreed in Writing between the Buyer and the Seller) apply notwithstanding any other provision of these Conditions
- 12.3 The Buyer shall be responsible for complying with any legislation or regulations governing the importation of the Goods in to the country or destination and for the payment of any duties on them
- 12.4 Unless otherwise agreed in Writing between the Buyer and the Seller, the Goods shall be delivered fob the air or sea port of shipment and the Sellers shall be under no obligation to give notice under section 32(3) of the Sale Of Goods Act 1979
- 12.5 The Buyer shall be responsible for arranging for testing and inspection of the Goods at the Sellers premises before shipment. The Seller shall have no liability for any claim in respect of any defect in the Goods which would be apparent on inspection and which is made after shipment, or in respect of any damage during transit
- 12.6 Payment of all amounts due to the Seller shall be made by irrevocable letter of credit opened by the Buyer in favour of the Seller and confirmed by a bank acceptable by the Seller, or by telegraphic transfer in to the Sellers aforementioned bank account or if the Seller agrees in Writing on or before acceptance of the Buyer order to waive this requirement, by acceptance by the Buyer and delivery to the Seller of a bill of exchange drawn on the Buyer payable 60 days after sight of the order to the Seller at such branch of National Westminster Bank in England as may be specified in the bill of exchange
- 12.7 Unless otherwise specifically agreed between the Seller and the Buyer all Exports sales shall be made by delivery to the Buyer's premises and the Seller's prices shall be increased to cover the Seller's costs in making such deliveries
- 12.8 The Buyer warrants that if an import licence or permit is required for the importation of the Goods into the county or destination then such import licence or permit has been obtained or would be obtain prior to shipment
13. Cancellation, suspension and termination
- 13.1 If the Buyer shall purport to cancel the whole or any part of the Contract the Seller may by notice in Writing to the Buyer elect to treat the Contract as repudiated and the Buyers shall thereupon be liable to pay the Seller by way of liquidated damages a sum equal to all the expenses incurred by the Seller in connection with the Contract including an appropriate amount in respect of administration overheads, costs and loss of profit. The Sellers reasonable estimate of the expenses incurred shall be final and binding on the parties
- 13.2 If for any cause whatsoever beyond its control the Seller is unable to make any delivery on the applicable delivery date or preform any of its obligations under the Contract the Seller may be notice in Writing to the Seller terminate the Contract or suspend the Contract without liability of any loss or damage thereby occurred by the Buyer
14. Intellectual property
- 14.1 The Buyer shall not infringe any patent, trade name, registered design, copyright industrial or other intellectual property right belonging to the Seller in relation to the Goods or any other goods or matters supplied by the Seller with or in relation to the Goods
- 14.2 The Buyer shall promptly report to the Seller particulars of any use by any person of a patent, trade name, registered design, trade mark or get up of Goods which might amount to infringement of any patent, trade mark, registered design, copy right, industrial or other intellectual property right attaching to the Goods or to unfair competition on passing off
- 14.3 In the event that it comes to the notice of the Buyer that any person alleges that a patent, trade name, registered design, copy right, industrial or other intellectual property right is invalid or that they infringe any rights of that person or that they are open to any form of attack the Buyer shall not make any omissions but shall promptly report the matter to the Seller
- 14.4 The Seller shall have conduct of all proceedings relating to any patent, trade name, registered design, copy right, industrial or other intellectual property right attaching to the Goods
15. Force majeure
- 15.1 In so far as the performance of the Contract by the Seller may be affected by any strike, any lack of available, shipping or transport or materials, any restriction regulation or decree by any local or municipal authority or government department or by any cause beyond the Seller's reasonable control (which shall be construed without reference to the proceeding causes) the Seller may elect at its absolute discretion either;
- 15.1.1 to terminate the Contract or;
- 15.1.2 to proceed to preform or continue performance under the Contract within a reasonable time after the termination of such events of circumstance
- 15.2 In the event that the Seller makes an election under clause 15.1 the Buyer shall accept the Goods or such part of them as are delivered to it notwithstanding any delay
16. Exclusion of Contract (rights of the third party) Act 1999
- 16.1 Nothing in these Conditions will confer on any third party any benefit or the right to enforce any terms of these Conditions
17. Proper law
- 17.1 The Contract is and shall be deemed to be made in England and shall in all respects be governed by English Law and shall be subject to the non-exclusive jurisdiction of the English Court General
18. General
- 18.1 Any notice required or permitted to be given by either party to the other under these Conditions shall be in Writing and addressed to that other party at its registered office or principal place of business or such other address as may at the relevant time having been notified pursuant to this provision to the party giving the notice

- 18.2 No waiver by the Seller of any breach of the Contract by the Buyer shall be considered as a waiver of any subsequent breach of the same or any other provision
- 18.3 If any provision of these Conditions is held by any competent authority to be invalided or unenforceable in whole or in part the validity of the other provisions of these Conditions and the remainder of the provision in question shall not be affected
- 18.4 No liability, warranty or any other claim can or will exist for any product(s) during or as a consequence of or any consequence whatsoever resulting directly or indirectly from or in connection with any of the following regardless of any other contributory cause or event from :
Terrorism Terrorism is defined as any act or acts including and not limited to the use or threat of force/violence/harm or damage to life or property or the threat of such harm or damage including harm or damage by nuclear and or chemical and or biological and or radiological means. Caused or occasioned by any persons or groups or so claimed in whole or in part for political religious ideological or similar purposes. Or, any action taken in controlling preventing suppressing or in anyway relating to the above.
War War or invasion, act of foreign enemy hostilities of a warlike operation or operations (whether war be declared or not) civil war rebellion revolution insurrection civil commotion assuming the proportions of or amounting to an uprising military or usurped power. Or any action taken in controlling preventing suppressing or in any way relating to any of the above.
- 18.5 Any dispute arising under or in connection with these Conditions or the sale of the Goods shall be referred to arbitration by a single arbitrator appointed by agreement or (in default) nominated on the application of either party by the president for the time being of the Law Society.
Absac Limited may make changes to the contents/ improvements and/or changes in the product(s) or service(s) described in this publication at any time.

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