AISCO
INDUSTRIAL COUPLINGS

HIGH PERFORMANCE UNIVERSAL JOINT DRIVESHAFTS

AISCO Industrial Couplings • 701 Ralph Lemorande Dr. • Oconto Falls, WI 54154 • Ph:920-336-5111 Fax:920-336-2690
www.aiscoinc.com • sales@aiscoinc.com

AISCO Products

Universal Joints / Spindles

Closed and Split Eyes designs
Diameter Sizes from 25mm to over 1000mm
Long travel designs

Gear Couplings

AGMA standard sizes 1 to 20
Carbon steel, heat treated alloy steels and nitride
Balanced standards and high speed (CIII)
Specials e.g. transportation, disconnect and gearbox type couplings

Supporting Products Devices

Elastomeric eg. Reich, Hi-Tec, Vibra-damp
Overload protection Voith Safeset, Shear Devices

Custom Design and Manufacturing

Full Service Repair Facility

Servicing all Brands; GWB, Voith, GKN, Elbe, Dana Spicer, Rockford, Ameridrives
Balance capabilities up 264 inches length and 6000 rpm

AISCO Advantage

Experienced Staff

2 key engineers with over 50 years of combined coupling and industrial design experience
Pool of trained operators with coupling manufacturing experience
Knowledgeable coupling engineers

Low Overhead Lean Organization

Working partners directly involved in the business
Multifunctional team members by necessity
Made to order business with critical stock on hand

Focused Business

Flexible couplings are all we do
No large corporate structure to support

Technology

SolidWorks 3D CAD
Rapid design to drawing to production
Easy data exchange with customers
#1 CAD package taught in the USA
Ready pool of designers as work expands

Flexible manufacturing model

In-house manufacturing of critical operations
Out-source commodities and low risk operations
Redundant sourcing

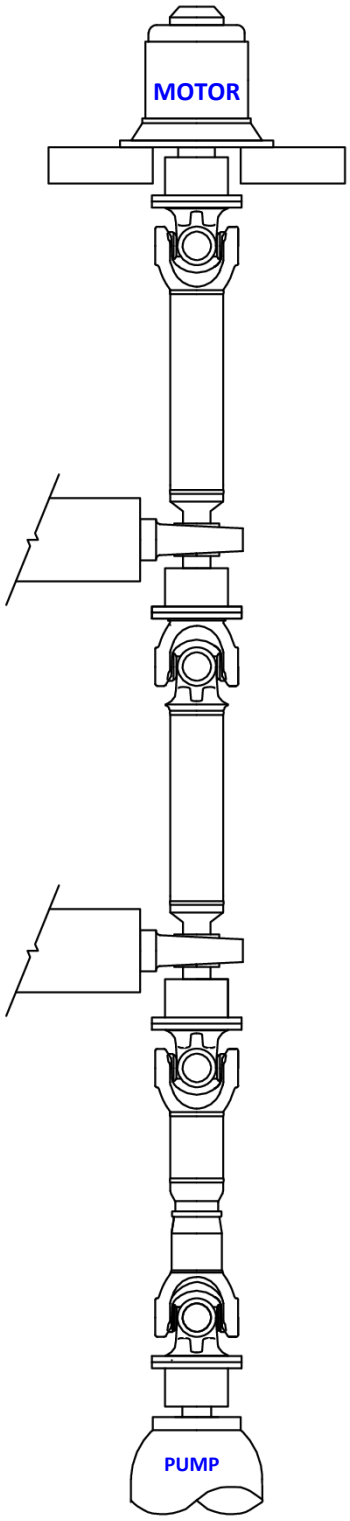
Quality

In-process records for both in-house and out-sourced operations
Incoming inspection
Material and Process Certification3
Final Assembly Inspection

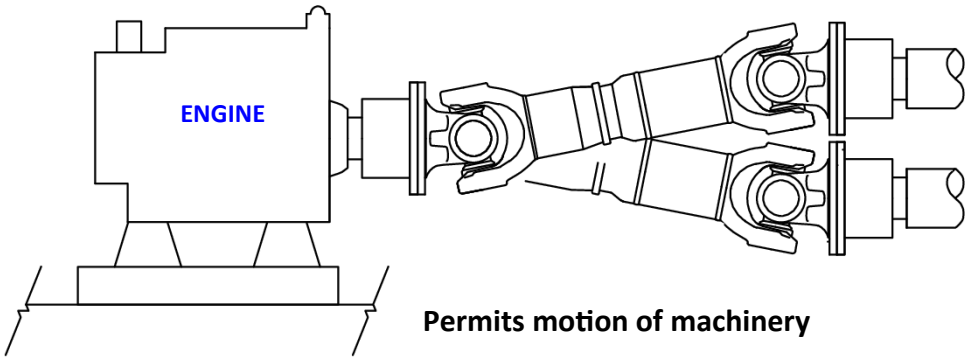
Table of Contents

Why Universal Joint Driveshafts?

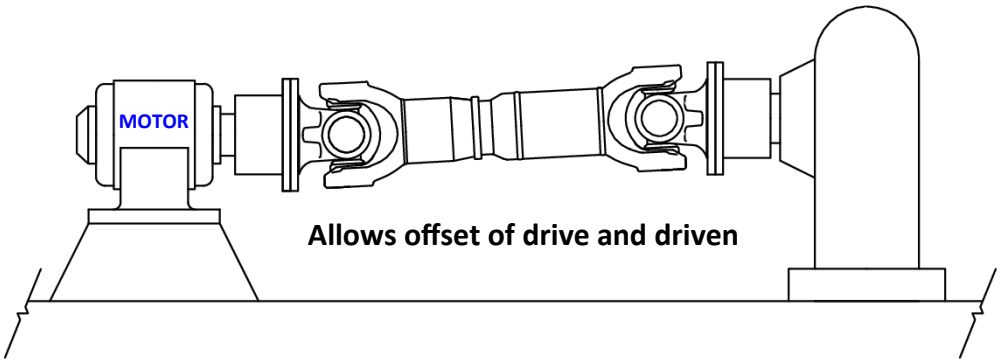
Universal joint driveshafts provide a cost effective means to transmit power from the power source to the driven machine. Installation time is reduced as the need for critical alignment tolerances required by other types of couplings is eliminated. The telescopic feature eliminates the need for movement of machinery for installation or maintenance removal. The telescopic feature also allows motion during operation or no-load conditions.



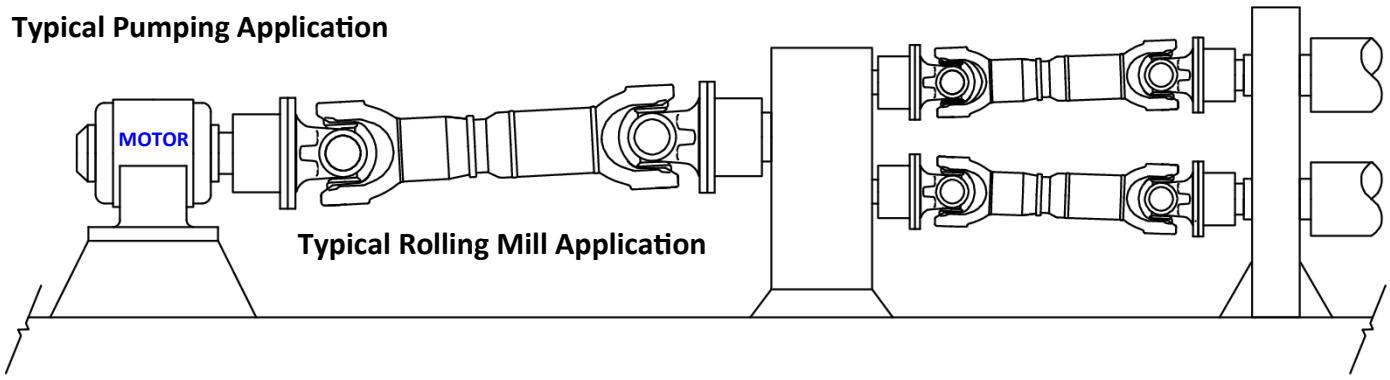
Typical Pumping Application



Permits motion of machinery



Allows offset of drive and driven



Typical Rolling Mill Application

Applications

Metals Industry

(Steel, Aluminum, Copper And Brass)
Bar and Rod Mills
Cold Reduction
Continuous Casters
Hot Strip Mills
Levelers
Payoff Reels
– Pinch Rolls
– Coilers
– Brush Rolls
– Bridles
– Flatteners
– Slitters
Pipe Mills
Run-out Tables
– Piercers
– Transfer Cars
– Structural Mills
Scale Breakers
Shears
Shredders
Side Trimmers
Straighteners
Temper Mills
Tension Reels
Tube Mills
Vertical Edgers

Typical Applications

Agitators
Balancing Machines
Blowers and Fans
Bottling
Canning
Compressors
Conveyors
Cooling Tower Fans
Cranes and Hoists
Crushers
Energy Systems
Farming Equipment
Fire Pump
Food Processing
Generator Sets
Glass Manufacturing
Irrigation
Lumber Mills
Material Handling
Marine Propulsion
- Certified ABS & Lloyds
Mining Equipment
Oil and Gas
– Drilling
– Pumps
Packaging
Paper Mills
– Calendar Drives
– Sizing and Press
Rolls
– Couch Rolls
– Process Pumps
Plastic Manufacturing
– Melt Pumps
Printing Presses
Pumps
– Irrigation
– Lift
– Sewage
Railway Drives
Rubber Processing
– Mixers
– Calendars
Shredders

Selection Procedure

Shaft Torque Ratings

Peak torque (Tp) is the maximum allowable torque based on the yield strength capacity of the joint.

Endurance torque (Te) is the normal rating for fully reversing torque based on material strength.

Endurance torque (Tow) is the normal rating for pulsating one way torque based on material strength.

Life torque (TL) is the bearing life rating of the universal joint. This torque is based on the B-10 life of the universal joint bearings. The life torque values listed are based on 5000 hours B-10 bearing life at 3° misalignment and 100 RPM. B-10 life is defined as the minimum life expectancy for a 90% probability of survival. Typically the average actual operating life of the bearings is 5X the calculated B-10 life.

The torque ratings are based on material strength. When approaching these limits the capacity of the desired flange connection should be verified. When the selection torque (**Ts**) approaches the endurance torque (**Te**) or when the maximum torque approaches the peak torque capacity (**Tp**) of the universal joint, integral face pads are recommended. The number of pads and bolts are customized on a per application basis. Hirth radial teeth are also available on a per application basis.

Ratings for each shaft type can be found on pages (8-25)

Universal Joint Selection

I. Calculate application torque (**Ta**) and selection torque (**Ts**).
Ta = HP x 63024 / n = **Ta** (in x lb)
-or-
Ta = KW x 9550 / n = **Ta** (Nm)
n = Speed (RPM)

Ts = Selection Torque
Ts = Ta x Service Factor (Table 3)
Ts must be less than **Te** for reversing torque applications or **Tow** for pulsating torque applications.

II. Check to see if life is sufficient.

$$Lh = \frac{1.5 \times 10^6}{(A \times n)} \times \left[\frac{TL}{Ta}\right]^{(10/3)}$$

Where:
Lh = B-10 Life in Hours
A = Operating Angle in Degrees
n = Speed (RPM)
TL = Life Torque
Ta = Application Torque

III. Duty Cycle: In applications where the torque, speed and operating angle vary predictably during a typical load cycle or operational sequence, a duty cycle can be determined. First the load cycle must be analyzed and divided into groups of fixed combinations of torque, speed and operating angle. These groups represent percentages of the total operating time of the load cycle. Life expectancy can then be calculated using Miner's Theory, which takes into account the cumulative effect resulting from operating at varying conditions.
The total life expectancy can be calculated using the following equation:
Le = Total Life Expectancy

$$Le = \frac{1}{\frac{R1}{L1} + \frac{R2}{L2} + \frac{R3}{L3} + \ldots \frac{Rm}{Lm}}$$

Where:
R1 = fraction of total, time at operating condition 1
L1 = life expectancy at operating condition 1 (hours)
m = total number of operating conditions

IV. Determine Peak Torque conditions. Tp must exceed the maximum operating torque.

V. Other considerations:
There are many other items that can determine the size of a universal joint. These include:
1. Diameter and length limitations.
2. Bore size (see page xx).
3. Equipment restrictions on forces and moments.
4. Speed limits (see Tables 1 and 2)
   a. due to mass acceleration as a function of misalignment
   b. critical speed of center shaft

It is important and necessary to understand the operational characteristics of universal joints before making a selection. If you have any questions about your application, please contact AISCO Engineering.

Selection Example:

Reversing cold mill with a 1400 HP motor at 350 RPM and a 2:1 reducer ratio with a 50% torque split requires two universal joints to operate at the following conditions:

1500 HP per universal joint
3500 RPM
3° Misalignment
1.5 Service Factor
12.5" Maximum O.D.
7.50" Pinion and Roll Shafts
60" Shaft Separation
250% Peak Torque Factor
5000 hour minimum

Step I: Calculate Application Torque (Ta)

$$T = \frac{1400 \times 63{,}024}{350} = 252{,}096 \text{ inxlbs}$$

Apply Gear Reduction and Torque Split

Ta = 252,096 x 2/1 x .50 = 252,096 in x lbs

Find Te > Ta

(Te = 318,600 in x lbs— Ref. Page 19)

Preliminary Selection: AISCO 3065

Step II. Check Life

$$\mathbf{Lh = \frac{1.5 \times 10^6}{(3 \times 350)} \times \left[\frac{296{,}090}{252{,}096}\right]^{(10/3)}}$$

Lh = 2442 hours (does not meet requirement of 5,000 hours, select next size 3070)

$$\mathbf{Lh = \frac{1.5 \times 10^6}{(3 \times 350)} \times \left[\frac{370{,}590}{252{,}096}\right]^{(10/3)}}$$

Lh = 5160 hours (meets requirement)

Step III. Duty Cycle - not applicable.

Step IV: Peak Torque

Calculate Ts Service Factor Torque

Ts = 252,096 x 2.5 = 630,240 in x lbs

Series 3070 has a peak rating (Tp)

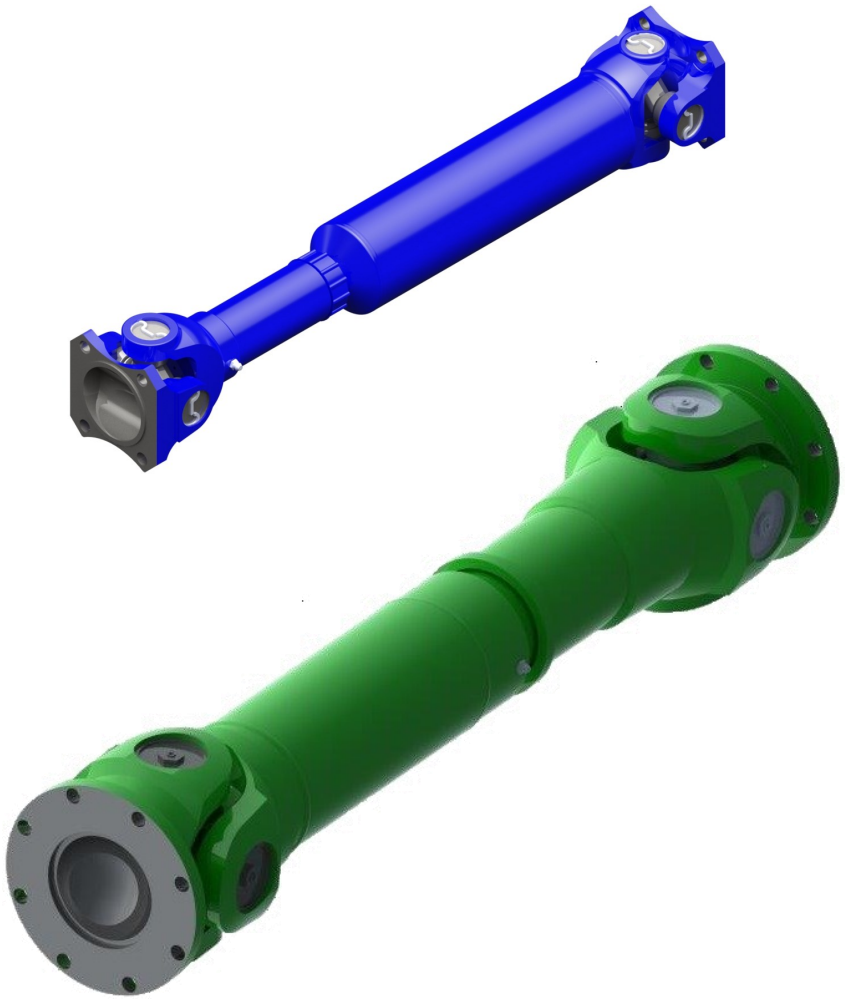
Tp=1,265,550 in x lbs

Passes requirement of 2.5 Service Factor

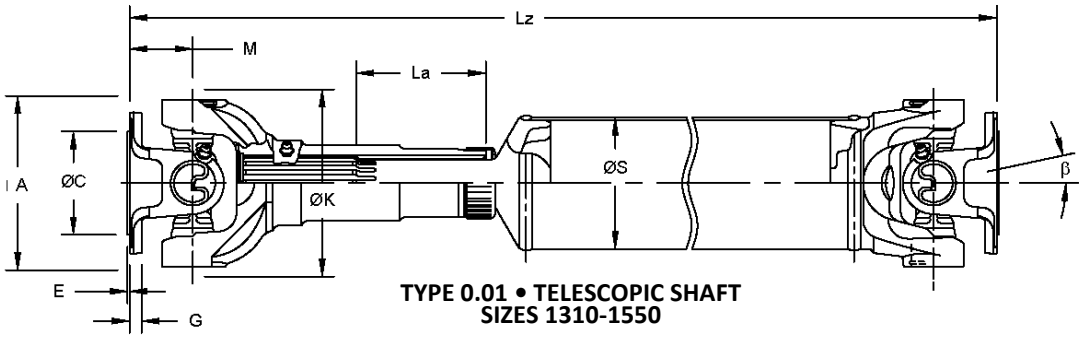
Step V: Check diameter limits, bore size, and speed limits.

Selection: Series 3070 12.38" O.D. design 2 flange adaptors.

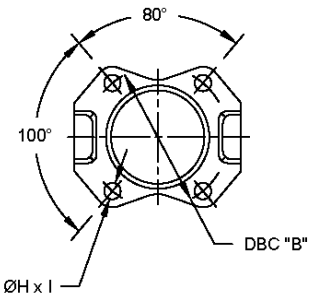
Telescopic splines are available on 0.01 and 9.01 designs. The splined axial travel sections are required to accommodate movement of the driven end such as a roll position change or axle jounce. SF and FF shaft are properly selected for applications where the roll end has relatively small movements of the driven side along with a clearance or slip fit roll end connection. The amount of required axial movement can be calculated by multiplying the centerline to centerline of the universal joint yokes by 1 minus the cosine of the operating angle for each position. Nitrided or coated splines are available on request. Longer or shorter travel is available. Consult AISCO Engineering for further information.

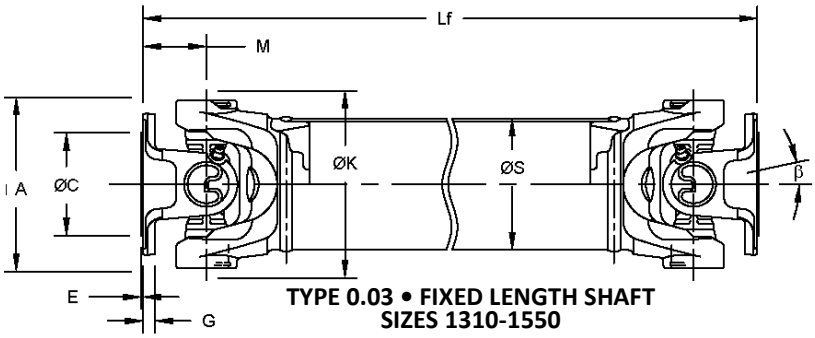


Engineering Data

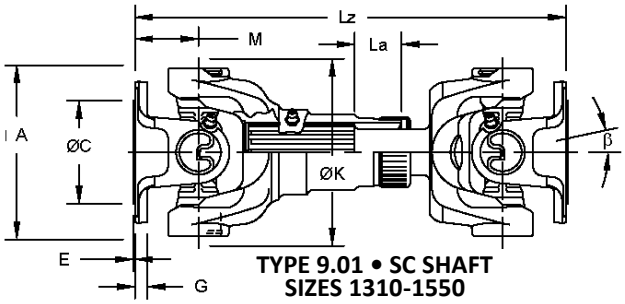


TYPE 0.01 • TELESCOPIC SHAFT
SIZES 1310-1550





TYPE 0.03 • FIXED LENGTH SHAFT
SIZES 1310-1550



TYPE 9.01 • SC SHAFT
SIZES 1310-1550

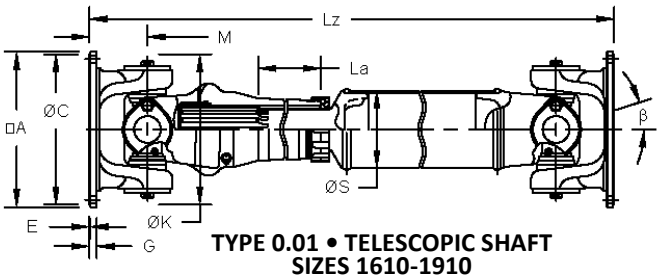
Series	1310		1350		1410		1480		1550	
Torque Ratings										
	in-lb	**Nm**	**in-lb**	**Nm**	**in-lb**	**Nm**	**in-lb**	**Nm**	**in-lb**	**Nm**
Te	9,429	1,065	13,543	1,530	13,543	1,530	15,429	1,743	19,543	2,208
Tow	13,200	1,492	18,960	2,142	18,960	2,142	21,600	2,441	27,360	3,092
Tl	5,592	632	8,484	959	10,212	1,154	13,428	1,517	16,812	1,900
Tp	19,200	2,169	27,120	3,064	32,400	3,661	39,960	4,515	52,800	5,966
Dimensional Data (inches and millimeters except where noted)										
β	20°		20°		20°		22°		22°	
β 9.01 (SC)	15°		8°		8°		8°		5°	
	in	**mm**	**in**	**mm**	**in**	**mm**	**in**	**mm**	**in**	**mm**
A ***	3.88	98.6	4.62	117.3	4.62	117.3	5.88	149.4	5.88	149.4
K	3.75	95.3	4.25	108.0	4.69	119.1	4.81	122.2	5.63	143.0
B	3.12	79.2	3.75	95.3	3.75	95.3	4.75	120.7	4.75	120.7
C	2.38	60.5	2.75	69.9	2.75	69.9	3.75	95.3	3.75	95.3
E	0.06	1.5	0.06	1.5	0.06	1.5	0.06	1.5	0.06	1.5
G	0.38	9.7	0.38	9.7	0.38	9.7	0.38	9.7	0.38	9.7
H	0.38	9.7	0.44	11.2	0.44	11.2	0.50	12.7	0.50	12.7
I	4	4	4	4	4	4	4	4	4	4
M	1.38	35.1	1.56	39.6	1.69	42.9	2.00	50.8	2.00	50.8
S *	0.38	9.7	0.44	11.2	0.44	11.2	0.50	12.7	0.50	12.7
Minimum Length Lz / Length Compensation La										
	in	**mm**	**in**	**mm**	**in**	**mm**	**in**	**mm**	**in**	**mm**
0.01 ** **Lz**	13.00	330.2	14.88	378.0	14.62	371.3	15.50	393.7	15.62	396.7
La	3.12	79.2	3.62	91.9	2.50	63.5	2.50	63.5	2.63	66.8
0.03 Lf	7.67	194.8	8.50	215.9	9.03	229.4	9.47	240.5	9.75	247.7
9.01 Lz	8.88	225.6	9.50	241.3	9.50	241.3	8.50	215.9	9.75	247.7
La	1.25	31.8	0.75	19.1	0.75	19.1	1.00	25.4	1.00	25.4

* Special tube diameters available upon request

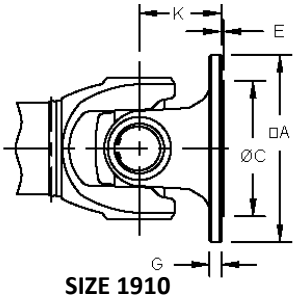
** Lz is the minimum length at the compressed shaft position, La is the axial travel allowable, Lf is the fixed length of the assembly. Other lengths available for 0.01, 9.01, 9.03 design, please contact AISCO engineering

*** Standard flange yoke configurations shown, other designs available upon request

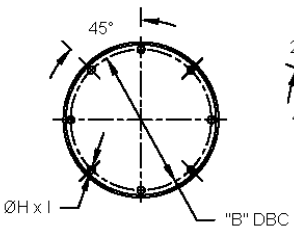
Engineering Data



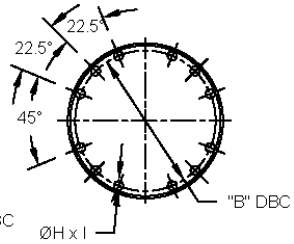
TYPE 0.01 • TELESCOPIC SHAFT
SIZES 1610-1910



SIZE 1910



SIZES 1610-1710



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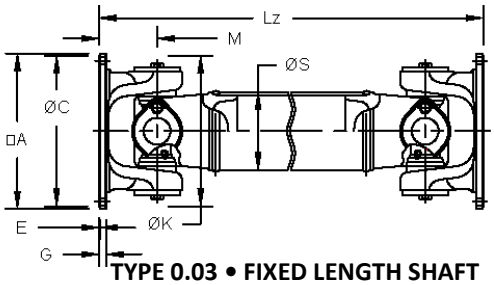
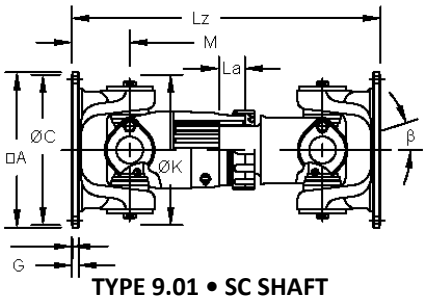
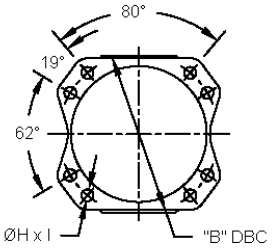


TYPE 0.03 • FIXED LENGTH SHAFT
SIZES 1610-1910



TYPE 9.01 • SC SHAFT
SIZES 1310-1550



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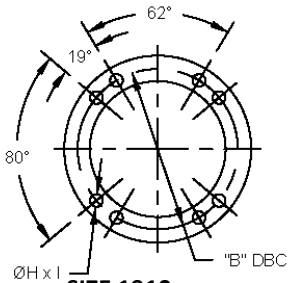


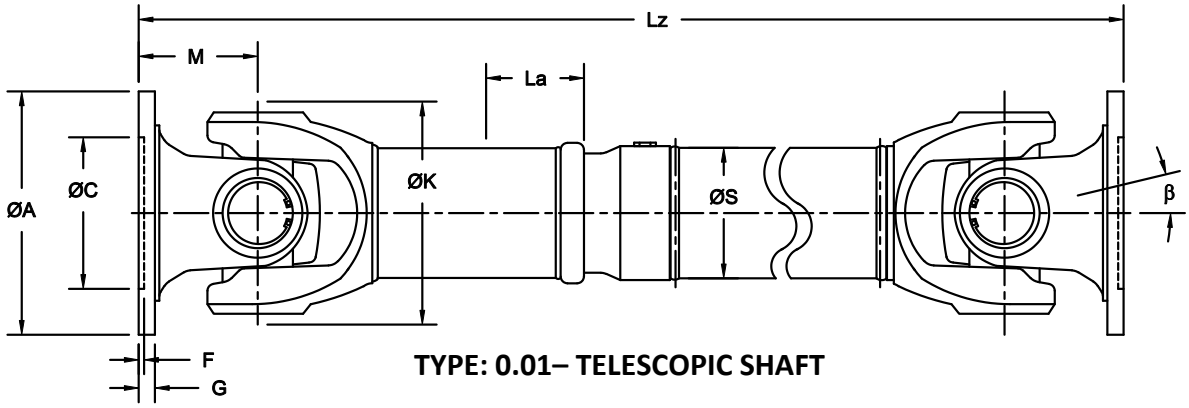
SIZE 1910

Series	1610		1710		1810		1880		1910	
Torque Ratings										
	in-lb	**Nm**	**in-lb**	**Nm**	**in-lb**	**Nm**	**in-lb**	**Nm**	**in-lb**	**Nm**
Te	29,571	3,341	39,171	4,426	50,143	5,666	88,971	10,053	133,100	15,040
Tow	41,400	4,678	54,840	6,197	70,200	7,932	124,560	14,075	186,340	21,055
Tl	28,320	3,200	38,112	4,306	49,728	5,619	58,104	6,565	124,100	14,023
Tp	78,000	8,814	96,000	10,847	144,000	16,271	192,000	21,695	243,300	27,492
Dimensional Data (inches and millimeters except where noted)										
β	26°		22°		30°		22°		25°	
β 9.01 (SC)	8°		8°		12°		8°		25°	
	in	**mm**	**in**	**mm**	**in**	**mm**	**in**	**mm**	**in**	**mm**
A ***	6.88	174.8	8.00	203.2	8.00	203.2	9.63	244.6	9.63	244.6
K	7.00	177.8	7.75	196.9	9.13	231.9	9.88	251.0	8.03	204.0
B	6.13	155.7	7.25	184.2	7.25	184.2	8.25	209.6	8.25	209.6
C	6.62	168.1	7.75	196.9	7.75	196.9	7.00	177.8	7.00	177.8
E	0.06	1.5	0.06	1.5	0.06	1.5	0.09	2.3	0.09	2.3
G	0.38	9.7	0.38	9.7	0.38	9.7	0.63	16.0	0.59	15.0
H	0.38	9.7	0.38	9.7	0.44	11.2	0.63	16.0	0.63	16.0
I	8	8	8	8	12	12	8	8	8	8
M	2.75	69.9	3.00	76.2	3.38	85.9	3.50	88.9	3.94	100
S *	3.50	88.9	4.00	101.6	4.50	114.3	4.50	114.3	5.63	143.0
Minimum Length Lz / Length Compensation La										
	in	**mm**	**in**	**mm**	**in**	**mm**	**in**	**mm**	**in**	**mm**
0.01 ** Lz	22.87	581	22.31	567	24.75	629	25.69	653	30.50	775
La	4.88	124	3.88	99	3.38	86	3.50	89	4.33	110
0.03 Lf	13.81	351	14.37	365	16.30	414	19.31	490	21.43	544
9.01 Lz	9.12	232	10.62	270	13.40	340	13.62	346	21.46	545
La	0.75	19	0.75	19	1.12	28	1.00	25	1.56	40

* Special tube diameters available upon request

** Lz is the minimum length at the compressed shaft position, La is the axial travel allowable, Lf is the fixed length of the assembly. Other lengths available for 0.01, 9.01, 9.03 design, please contact AISCO engineering

*** Standard flange yoke configurations shown, other designs available upon request



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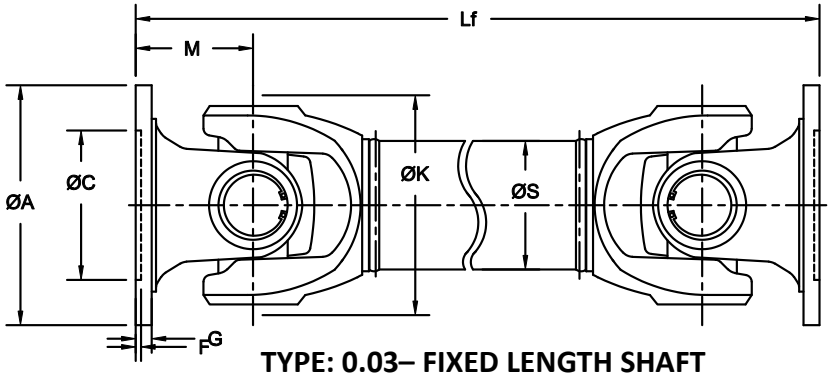

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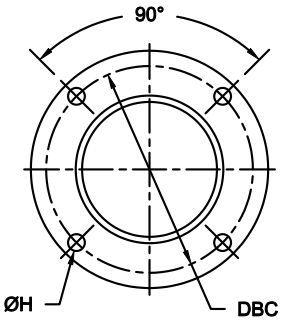
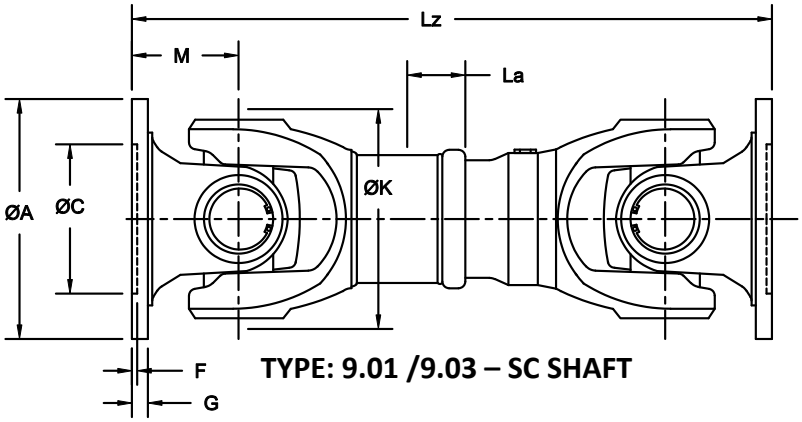


4 BOLT FLANGE



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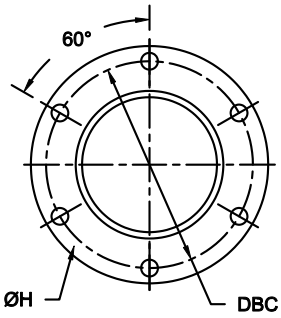
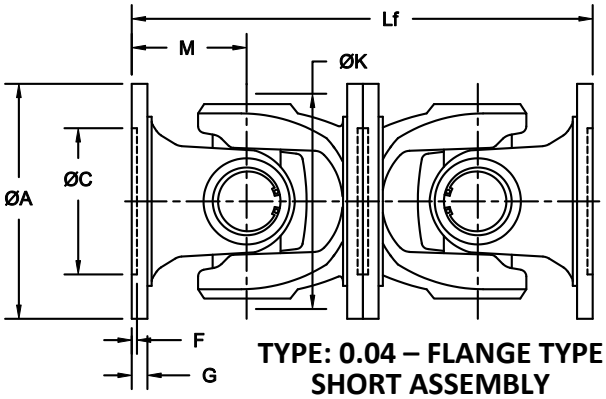


6 BOLT FLANGE



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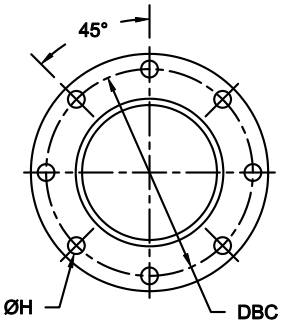


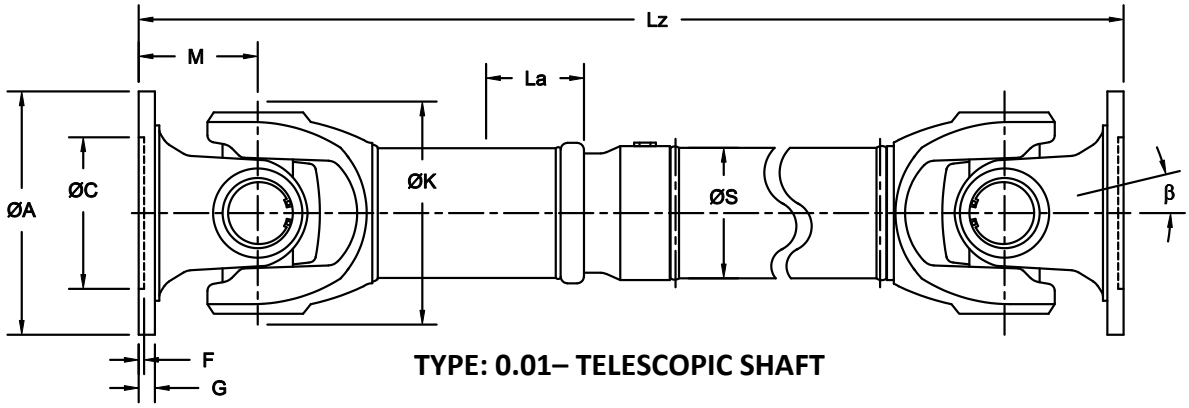
8 BOLT FLANGE

Engineering Data

Compact Series Metric 2000-2024

Series	2000		2002		2005	
Torque Ratings	in-lb	Nm	in-lb	Nm	in-lb	Nm
Te	1,382	156	2,852	322	4,593	519
Tow	1,935	219	3,993	451	6,430	727
Tl	2,053	232	3,478	393	5,682	642
Tp	4,602	520	10,620	1,200	19,470	2,200
Dimensional Data (inches and millimeters except as noted)						
	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm
β	30°	25°	30°	18°	30°	18°
A ***	2.56 / 65	2.95 / 75	2.95 / 75	3.54 / 90	3.54 / 90	3.94 / 100
K	2.36 / 60	2.36 / 60	2.76 / 70	2.76 / 70	3.39 / 86	3.39 / 86
B	2.05 / 52	2.44 / 62	2.44 / 62	2.93 / 74.5	2.93 / 74.5	3.89 / 84
C (H7)	1.12 / 35	1.25 / 42	1.25 / 42	1.56 / 47	1.56 / 47	2.24 / 57
F	0.07 / 1.7	0.08 / 2	0.09 / 2.2	0.10 / 2.5	0.10 / 2.5	0.10 / 2.5
G	0.16 / 4	0.22 / 5.5	0.22 / 5.5	0.24 / 6	0.24 / 6	0.28 / 7
H	0.24 / 6	0.24 / 6	0.24 / 6	0.31 / 8	0.31 / 8	0.31 / 8
I	4 / 4	6 / 6	6 / 6	4 / 4	4 / 4	6 / 6
M	1.26 / 32	1.26 / 32	1.41 / 36	1.42 / 36	1.65 / 42	1.65 / 42
S *	1.31 / 33	1.31 / 33	1.62 / 41	1.62 / 41	2.00 / 51	2 / 51
Minimum Length Lz / Length Compensation La						
	in	mm	in	mm	in	mm
0.01 ** Lz	10.23 / 11.42	260 / 290	11.82 / 14.17	300 / 360	11.81 / 15.47	348 / 393
La	1.18 / 2.36	30 / 60	1.37 / 2.75	35 / 70	1.57 / 3.15	40 / 80
0.03 Lf	6.50	165	7.87	200	8.50	216
9.01 Lz / La	7.09 / .79	180 / 20	7.87 / 1.00	200 / 25	8.86 / 1.00	225 / 25
9.03 Lz / La	8.66 / 1.18	220 / 30	9.84 / 1.37	250 / 35	11.02 / 1.57	280 / 40
9.04 Lf	5.04	128	5.67	144	6.61	168

Series	2010		2020		2024	
Torque Ratings	in-lb	Nm	in-lb	Nm	in-lb	Nm
Te	6,483	733	8,850	1,000	11,543	1,304
Tow	9,076	1026	12,390	1,400	16,160	1,826
Tl	9,080	1026	12,990	1,468	16,381	1,851
Tp	26,550	3,000	30,974	3,500	38,495	4,350
Dimensional Data (inches and millimeters except as noted)						
	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm
β	20°	18°	25°	25°	20°	18°
A ***	3.94 / 100	4.72 / 120	3.94 / 100	4.72 / 120	4.72 / 120	5.91 / 150
K	3.86 / 98	3.86 / 98	3.86 / 98	3.86 / 98	4.53 / 115	4.53 / 115
B	3.89 / 84	3.89 / 101.5	3.89 / 84	3.89 / 101.5	4.00 / 101.5	5.12 / 130
C (H7)	2.24 / 57	2.95 / 75	2.24 / 57	2.95 / 75	2.35 / 75	2.35 / 90
F	0.10 / 2.5	0.10 / 2.5	0.10 / 2.5	0.10 / 2.5	0.10 / 2.5	0.12 / 3
G	0.28 / 7	0.31 / 8	0.28 / 7	0.31 / 8	0.31 / 8	0.35 / 9
H	0.31 / 8	0.31 / 8	0.31 / 8	0.39 / 10	0.31 / 8	0.39 / 10
I	6 / 6	8 / 8	6 / 6	8 / 8	8 / 8	8 / 8
M	1.81 / 46	1.81 / 46	2.13 / 54	2.13 / 54	2.36 / 60	2.36 / 60
S *	2.00 / 51	2.00 / 51	3.00 / 76	3.00 / 76	2.37 / 60	2.37 / 60
Minimum Length Lz / Length Compensation La						
	in	mm	in	mm	in	mm
0.01 ** Lz	14.72 / 18.27	374 / 464	15.91	404	18.62 / 20.59	473 / 523
La	1.57 / 3.94	40 / 100	2.76	70	2.36 / 4.72	60 / 120
0.03 Lf	9.84	250	10.04 / 1.18	239	11.81	300
9.01 Lz / La	10.04 / 1.18	255 / 30	11.02 / 1.57	274 / 27	12.80 / 1.37	325 / 35
9.03 Lz / La	12.20 / 1.57	310 / 40	12.20 / 1.57	317 / 70	15.75 / 2.36	400 / 60
9.04 Lf	7.24	184	8.50	216	9.45	240



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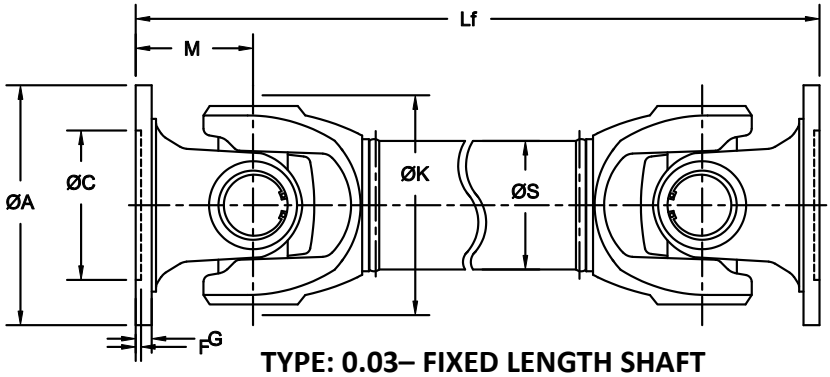

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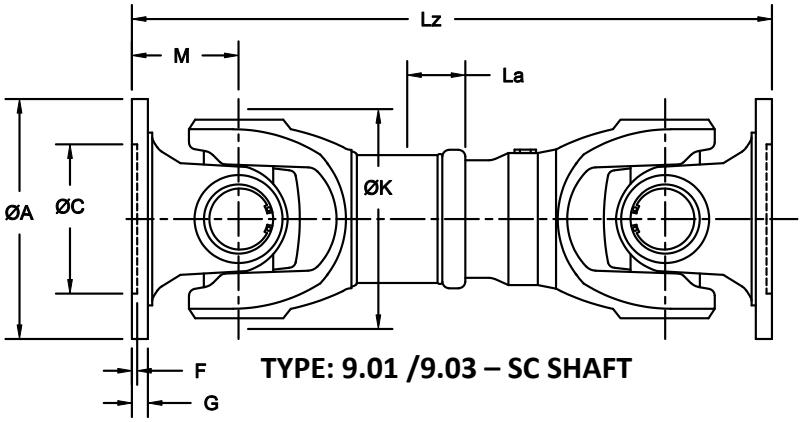

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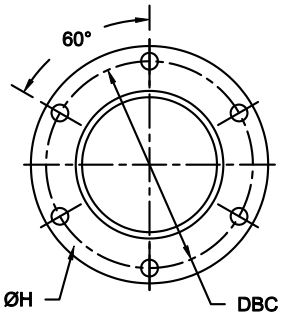
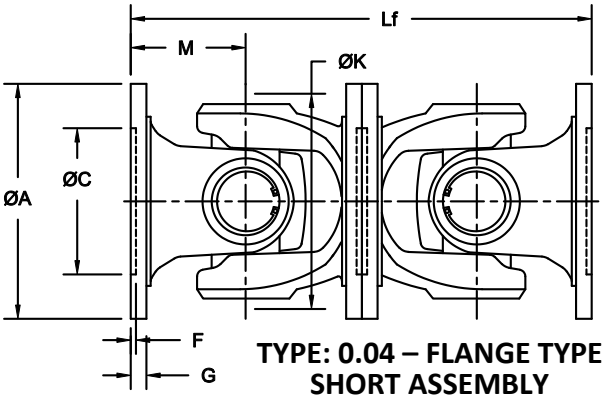


6 BOLT FLANGE



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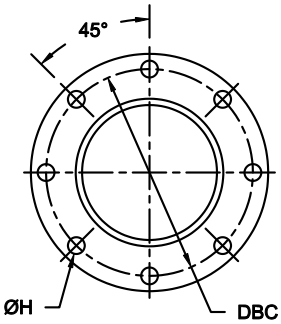


8 BOLT FLANGE

Engineering Data

Compact Series Metric 2025-2037

Series	2025		2026		2030	
Torque Ratings	in-lb	Nm	in-lb	Nm	in-lb	Nm
Te	14,160	1,600	16,880	1,907	16,815	1,900
Tow	19,824	2,240	23,632	2,670	23,541	2,660
Tl	18,620	2,104	22,037	2,490	20,800	2,350
Tp	44,250	5,000	47,350	5,350	57,525	6,500

Dimensional Data (inches and millimeters except where noted)

	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
β	35°		35°		20°		18°		25°		25°	
A ***	4.72	120	4.72	120	4.72	120	5.91	150	4.72	120	5.91	150
K	2.95	75	2.95	75	4.92	125	4.92	125	5.00	127	5.00	127
B	4.00	101.5	4.00	101.5	4.00	101.5	5.12	130	4.00	101.5	5.12	130
C (H7)	2.75	75	2.75	75	2.75	75	2.75	90	2.75	75	2.75	90
F	0.10	2.5	0.10	2.5	0.10	2.5	0.12	3.0	0.10	2.5	0.12	3
G	0.31	8	0.31	8	0.35	9	0.35	9	0.31	8	0.39	10
H	0.31	8	0.39	10	0.39	10	0.39	10	0.39	10	0.39	10
I	8	8	8	8	8	8	8	8	8	8	8	8
M	2.75	70	2.75	70	2.36	60	2.36	60	2.83	72	3.07	78
S *	2.75	70	2.75	70	2.75	70	2.75	70	3.50	89	3.50	89

Minimum Length Lz / Length Compensation La

	in	mm	in	mm	in	mm
0.01 ** Lz	13.98	355	19.33 / 21.89	491 / 556	19.88	505
La	4.72	120	2.36 / 4.33	60 / 110	4.33	110
0.03 Lf	12.40	315	12.09	307	13.31	338
9.01 Lz/La	--	--	13.58 / 1.37	345/ 35	13.03 / 1.15	331 / 29
9.03 Lz/La	--	--	16.53 / 2.36	420 / 60	14.92 / 1.42	379 / 36
9.04 Lf	11.02	280	9.45	240	12.28	312

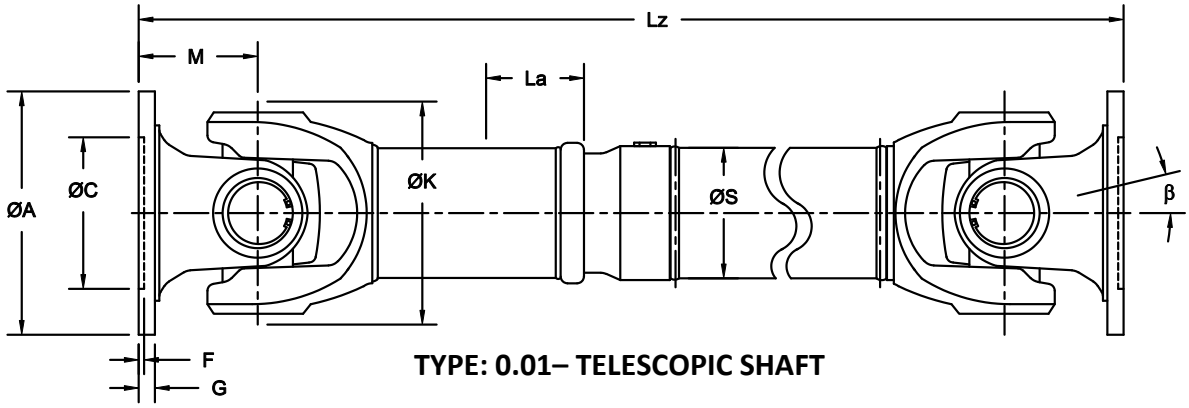
Series	2033		2035		2037	
Torque Ratings	in-lb	Nm	in-lb	Nm	in-lb	Nm
Te	22,814	2,578	25,665	2,900	29,366	3,318
Tow	31,940	3,609	35,931	4,060	41,112	4,645
Tl	30,842	3,485	33,595	3,796	40,462	4,572
Tp	62,395	7,050	88,500	10,000	94,250	10,650

Dimensional Data (inches and millimeters except where noted)

	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
β	20°		20°		25°		25°		20° / 35°		20° / 35°	
A ***	5.91	150	7.09	180	5.91	150	7.09	180	5.91	150	7.09	180
K	5.43	138	5.43	138	5.67	144	5.67	144	5.91	150	5.91	150
B	5.12	130	6.12	155.5	5.12	130	6.12	155.5	5.12	130	6.12	155.5
C (H7)	6.50	90	6.50	110	6.50	90	6.50	110	6.50	90	6.50	110
F	0.12	3	0.14	3.6	0.12	3	0.14	3.6	0.12	3	0.14	3.6
G	0.35	9	0.39	10	0.39	10	0.47	12	0.47	12	0.47	12
H	0.39	10	0.47	12	0.47	12	0.55	14	0.47	12	0.55	14
I	8	8	8	8	8	8	8	8	8	8	8	8
M	2.56	65	2.56	65	3.74	95	3.54	90	2.95/3.54	75/90	2.95/3.54	75/90
S *	3.12	79.2	3.12	79.2	4.00	101.6	4.00	101.6	3.62	91.9	3.62	91.9

Minimum Length Lz / Length Compensation La

	in	mm	in	mm	in	mm
0.01 ** Lz	21.65	550	22.91	582	28.0 / 29.25	710 / 742
La	4.33	110	4.33	110.00	4.33	110
0.03 Lf	13.58	345	14.76	375	16.73 / 17.91	425 / 455
9.01 Lz/La	14.17 / 1.57	360 / 40	16.50 / 1.77	419 / 45	15.75 / 1.77	400 / 45
9.03 Lz/La	18.12 / 3.15	460 / 80	20.07 / 2.75	510 / 70	21.46 / 1.77	545 / 45
9.04 Lf	10.24	260	14.96	380	11.81 / 14.17	300 / 360



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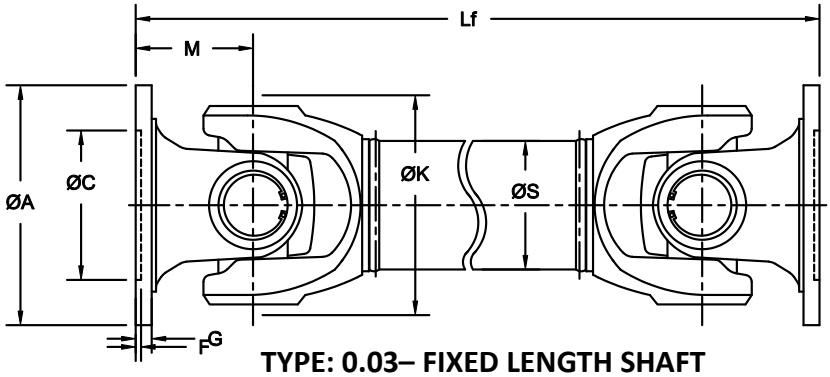

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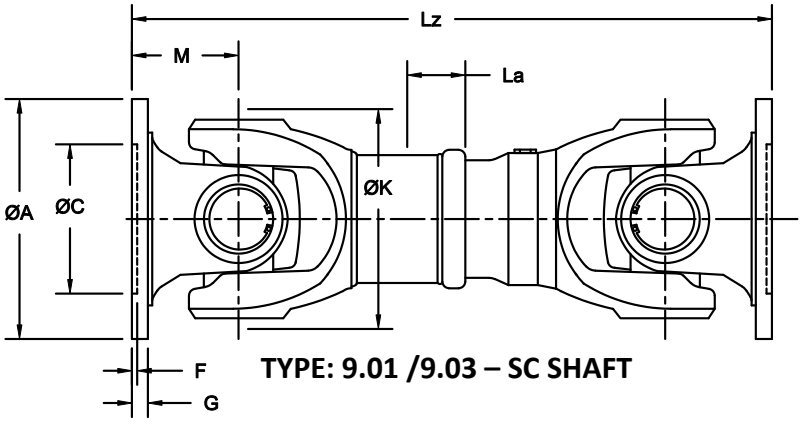

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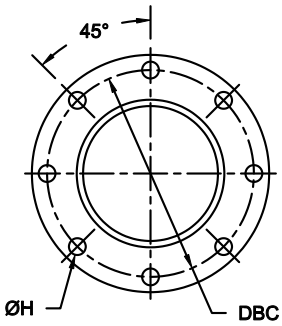
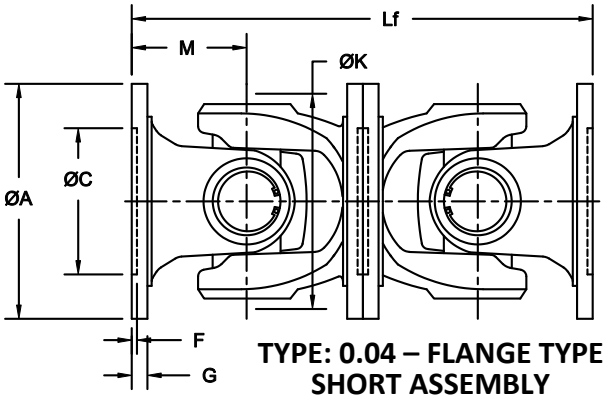


8 BOLT FLANGE



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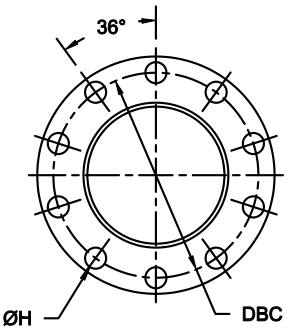


10 BOLT FLANGE

Engineering Data

Compact Series Metric 2040-2070

Series	2040		2044		2045	
Torque Ratings	in-lb	Nm	in-lb	Nm	in-lb	Nm
Te	38,940	4,400	44,560	5,035	45,135	5,100
Tow	54,516	6,160	62,384	7,049	63,189	7,140
Tl	48,050	5,429	51,600	5,831	62,980	7,116
Tp	123,900	14,000	115,050	13,000	150,450	17,000

Dimensional Data (inches and millimeters except as noted)

	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
β	25°		25°		30°		30°		37°		25°	
A ***	5.91	150	7.09	180	6.50	165	7.09	180	5.91	150 KV	7.09	180 KV
K	6.30	160	6.30	160	6.22	158	6.22	158	6.85	174	6.85	174
B	5.12	130	6.12	155.5	5.51	140	6.12	155.5	5.12	130	5.91	150
C (H7)	6.50	90	6.50	110	6.50	95	6.50	110	--	--	--	--
F	0.12	3	0.14	3.6	0.12	3	0.14	3.6	--	--	--	--
G	0.39	10	0.47	12	0.47	12	0.47	12	0.61	15.5	0.71	18
H	0.47	12	0.63	16	0.63	16	0.63	16	0.51	13	0.59	15
I	8	8	8	8	8	8	8	8	4	4	4	4
M	3.74	95	3.70	94	3.39	86	3.39	86	2.05	52	2.05	52
S *	4.75	120.7	4.75	120.7	4.00	101.6	4.00	101.6	4.75	121	4.75	121
X	--	--	--	--	--	--	--	--	--	--	--	--
Y	--	--	--	--	--	--	--	--	--	--	--	--

Minimum Length Lz / Length Compensation La

		in	mm	in	mm	in	mm
0.01 **	**Lz**	22.52	572	25.98	660	23.43	595
	La	4.33	110	4.33	110	4.33	110
0.03	**Lf**	15.94	405	16.93	430	16.73	425
9.01	**Lz**	17.36	441	15.75	400	17.60	447
	La	1.77	45	1.57	40	1.97	50
9.04	**Lf**	14.96	380	11.97 / 13.54	304 / 344	15.75	400

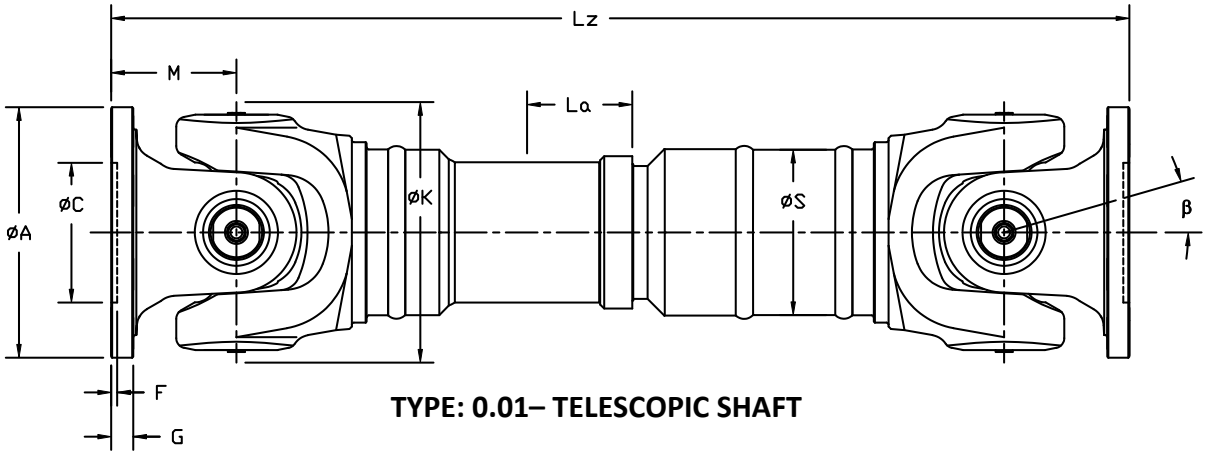
Series	2055		2065		2070	
Torque Ratings	in-lb	Nm	in-lb	Nm	in-lb	Nm
Te	64,605	7,300	133,100	15,040	110,625	12,500
Tow	90,447	10,220	186,340	21,055	154,875	17,500
Tl	80,537	8,092	124,100	14,023	154,700	17,480
Tp	221,250	21,900	309,750	35,000	247,800	28,000

Dimensional Data (inches and millimeters except as noted)

	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
β	30°		30°		30°		30°		22°		22°	
A ***	7.09	180	8.86	225	7.09	180	8.86	225	8.86	225	9.84	250
K	8.03	204	8.03	204	8.03	204	8.03	204	8.03	204	8.03	204
B	6.12	155.5	7.72	196	6.12	155.5	7.72	196	7.72	196	8.58	218
C (H7)	4.33	110	5.51	140	4.33	110	5.51	140	10.50	140	10.50	140
F	0.14	4	0.20	5	0.14	4	0.20	5	0.18	5	0.20	5
G	0.59	15	0.59	15	0.59	15	0.59	15	0.63	16	0.71	18
H	0.63	16	0.63	16	0.63	16	0.63	16	0.63	16	0.71	18
I	10	10	8	8	10	10	8	8	8	8	8	8
M	3.78	96	3.78	96	4.33	110	4.33	110	4.72	120	4.72	120
S *	4.37	111.0	4.37	111.0	4.75	120.7	4.75	120.7	5.63	143.0	5.63	143.0
X	--	--	--	--	--	--	--	--	--	--	--	--
Y	--	--	--	--	--	--	--	--	--	--	--	--

Minimum Length Lz / Length Compensation La

		in	mm	in	mm	in	mm
0.01 **	**Lz**	29.13	740	32.68	830	31.50	800
	La	4.33	110	5.51	140	4.33	110
0.03	**Lf**	18.31	465	20.47	520	22.05	560
9.01	**Lz**	18.50	470	21.65	550	25.59	650
	La	2.17	55	1.57	40	3.15	80
9.04	**Lf**	13.54 / 15.12	344 / 384	15.75 / 17.32	400 / 440	18.90	480



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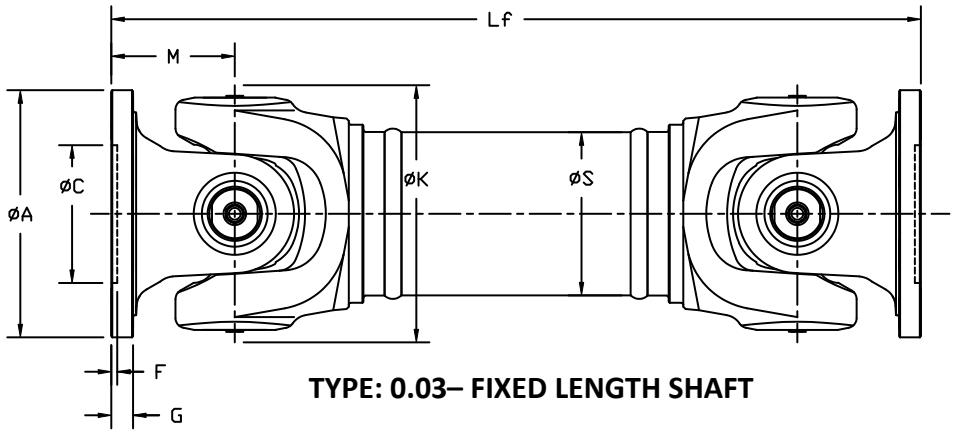

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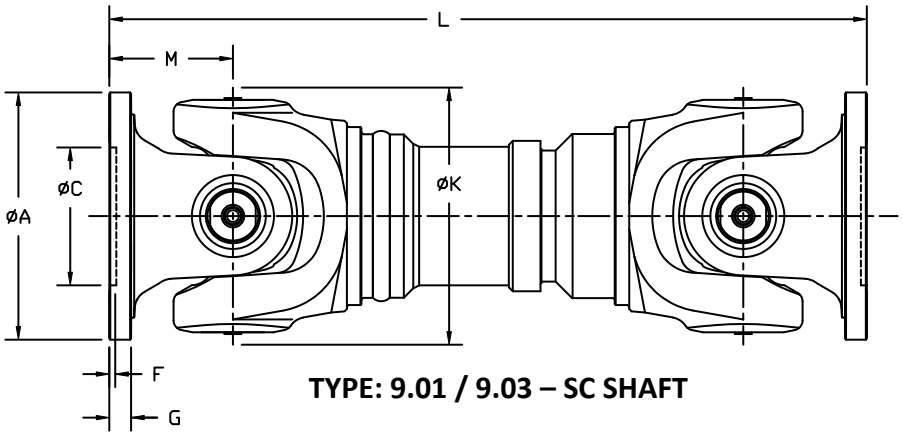

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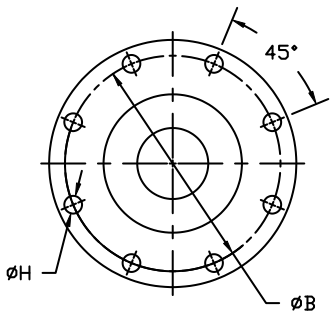
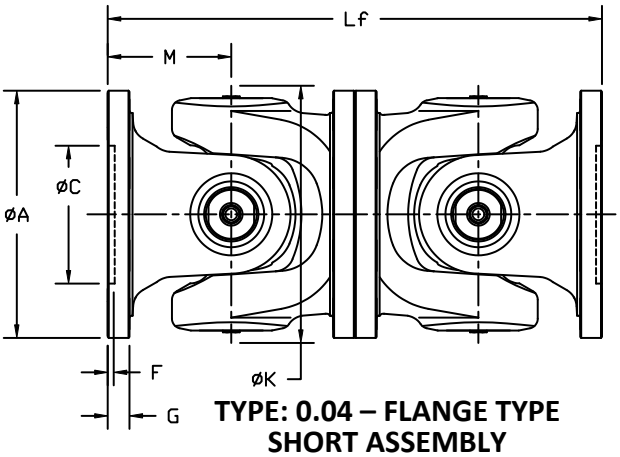
8 BOLT FLANGE





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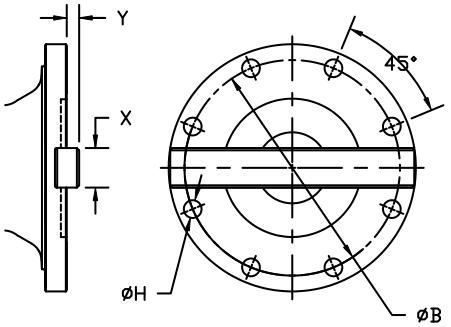
8 BOLT FLANGE DRIVE KEY



Engineering Data

Series	3050		3052		3054	
Torque Ratings	in-lb	kNm	in-lb	kNm	in-lb	kNm
Te	115,050	13,000.0	132,750	15.0	177,000	20.0
Tow	161,070	18,200.0	185,850	21.0	247,800	28.0
Tl	147,155	16,627.7	137,280	15.5	170,097	19.2
Tp	380,550	43,000.0	371,700	42.0	486,750	55.0

Dimensional Data (inches and millimeters except where noted)

									in	mm	in	mm
β	24°		24°		18°		18°		18°		18°	
A ***	8.86	225	9.84	250	8.86	225	9.84	250	8.86	225	9.84	250
K	8.46	215	8.46	215	8.86	225	8.86	225	8.86	225	8.86	225
B	7.72	196	8.58	218	7.72	196	8.58	218	7.72	196	8.58	218
C (H7)	10.50	140	10.50	140	6.00	105	6.50	140	6.00	105	6.50	140
F	0.20	5	0.24	6	0.20	5	0.24	6	0.20	5	0.24	6
G	0.59	15	0.71	18	0.79	20	0.71	18	0.79	20	0.71	18
H	0.63	16	0.71	18	0.67	17	0.71	18	0.67	17	0.71	18
I	8	8	8	8	8	8	8	8	8	8	8	8
M	4.33	110	4.25	108	4.92	125	4.92	125	4.92	125	4.92	125
S *	5.63	143.0	5.63	143.0	6.00	152.4	6.00	152.4	6.50	165.1	6.50	165.1
X	--	--	--	--	1.26	32	--	--	1.26	32	--	--
Y	--	--	--	--	0.35	9	--	--	0.35	9	--	--

Minimum Length Lz / Length Compensation La

		in	mm	in	mm	in	mm
0.01 **	**Lz**	28.94	735	35.43	900	36.02	915
	La	4.33	110	5.51	140	5.51	140
0.03	**Lf**	22.05	560	22.44	570	21.46	545
9.01	**Lz**	22.05	560	19.09	485	22.83	580
	La	1.18	30	1.18	30	1.97	50
9.04	**Lf**	17.01	432	19.69	500	19.69	500

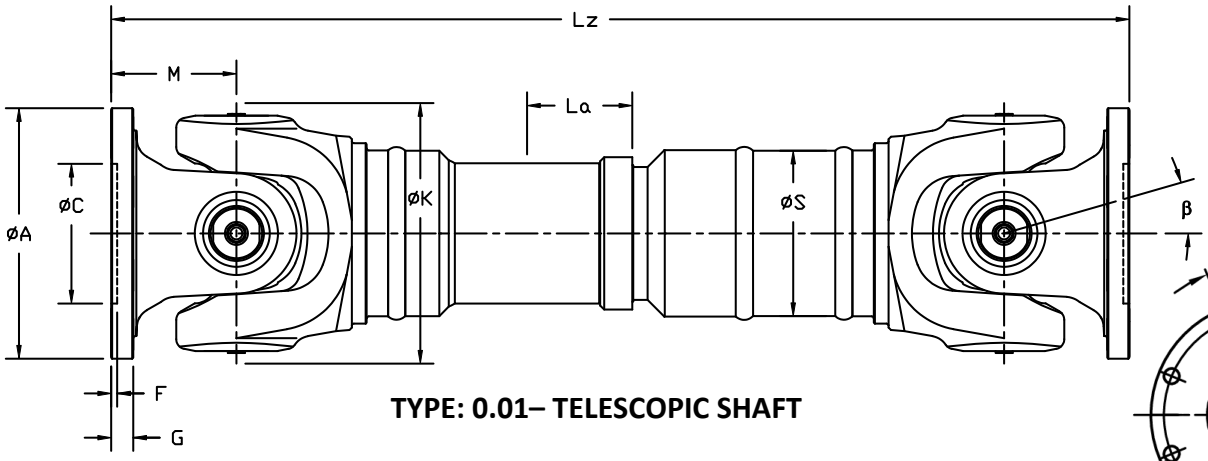
Series	3055		3060		3062	
Torque Ratings	in-lb	kNm	in-lb	kNm	in-lb	kNm
Te	159,300	18.0	203,550	23.0	203,550	23.0
Tow	223,020	25.2	284,970	32.2	284,970	32.2
Tl	228,200	25.8	325,430	36.8	210,117	23.7
Tp	460,200	52.0	504,450	57.0	575,250	65.0

Dimensional Data (inches and millimeters except where noted)

	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
β	20°		20°		20°		20°		18°		18°	
A ***	9.84	250	11.22	285	11.22	285	12.40	315	9.84	250	11.22	285
K	9.84	250	9.84	250	10.43	265	10.43	265	9.84	250	9.84	250
B	8.58	218	9.65	245	9.65	245	11.02	280	8.58	218	9.65	245
C (H7)	6.50	140	6.50	175	6.89	175	6.89	175	6.50	105	6.50	175
F	0.24	6	0.28	7	0.28	7	0.24	6	0.24	6	0.28	7
G	0.71	18	0.79	20	0.79	20	0.87	22	0.98	25	0.79	20
H	0.71	18	0.79	20	0.79	20	0.87	22	0.75	19	0.79	20
I	8	8	8	8	8	8	8	8	8	8	8	8
M	4.92	125	4.92	125	5.31	135	5.31	135	5.12	130	5.12	130
S *	6.50	165.1	6.50	165.1	6.50	165	6.50	165	6.50	165.1	6.50	165.1
X	--	--	--	--	--	--	--	--	1.57	40	--	--
Y	--	--	--	--	--	--	--	--	0.49	12.5	--	--

Minimum Length Lz / Length Compensation La

		in	mm	in	mm	in	mm
0.01 **	**Lz**	33.86	860	46.06	1170	36.81	935
	La	4.33	110	5.51	140	5.51	140
0.03	**Lf**	24.02	610	27.95	710	24.61	625
9.01	**Lz**	27.56	700	33.86	860	31.50	800
	La	2.36	60	3.74	95	1.77	45
9.04	**Lf**	19.69	500	25.20	640	20.47	520



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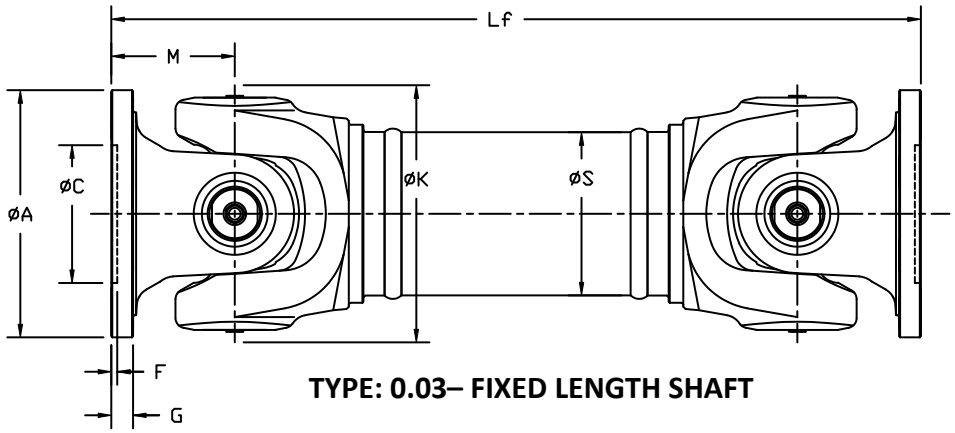

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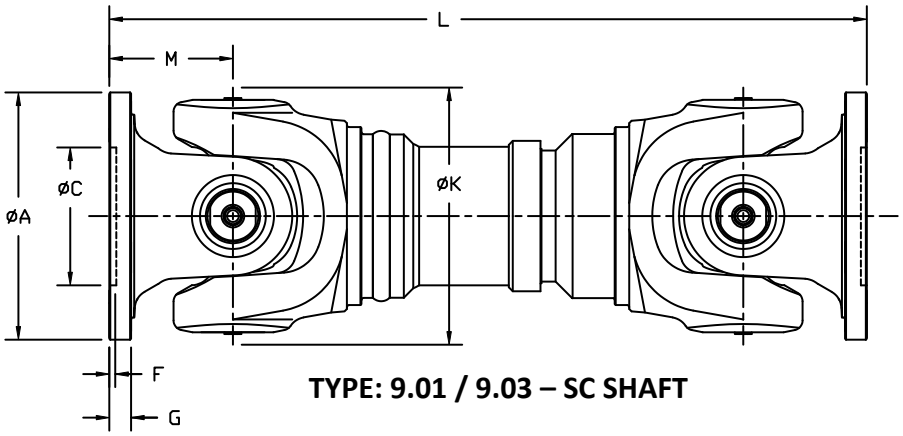

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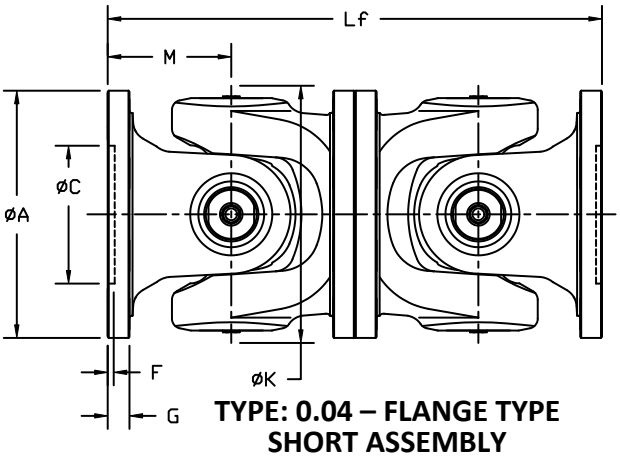
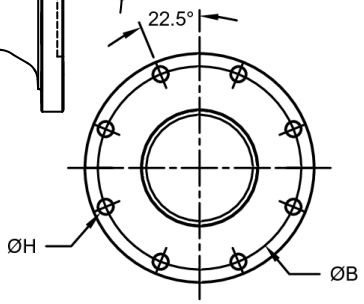
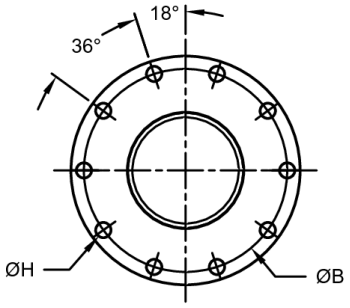


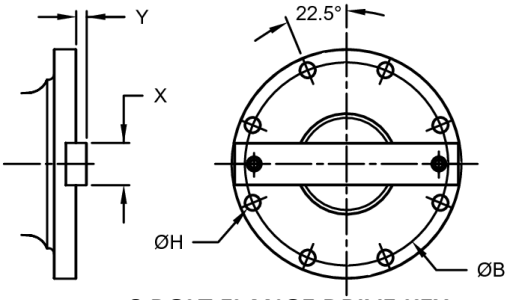
TYPE: 0.04 – FLANGE TYPE SHORT ASSEMBLY



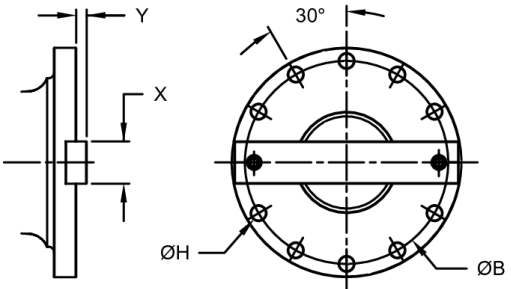
8 BOLT FLANGE



10 BOLT FLANGE



8 BOLT FLANGE DRIVE KEY



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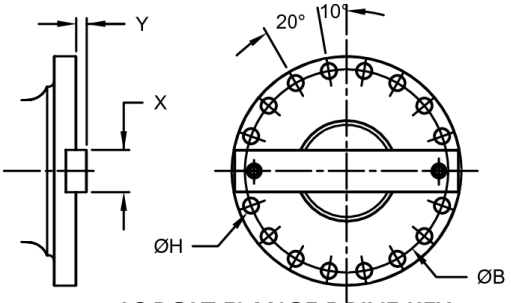


16 BOLT FLANGE DRIVE KEY

Series	3065		3070		3075	
Torque Ratings	in-lb	kNm	in-lb	kNm	in-lb	kNm
Te	318,600	36.0	442,500	50.0	708,000	80.0
Tow	446,040	50.4	619,500	70.0	973,500	110.0
Tl	296,090	33.5	370,590	41.9	555,603	62.8
Tp	920,400	104.0	1,265,550	143.0	1,991,250	225.0

Dimensional Data (inches and millimeters except where noted)

	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
β	22°		22°		15°		15°		20°		20°	
A ***	11.22	285	12.40	315	12.40	315	13.78	350	13.78	350	15.35	390
K	11.22	285	11.22	285	12.40	315	12.40	315	13.98	355	13.98	355
B	9.65	245	11.02	280	11.02	280	12.20	310	12.20	310	13.58	345
C (H7)	7.50	191	7.50	191	8.75	130	8.75	220	6.10	155	9.84	250
F	0.28	7	0.28	7.0	0.31	8	0.31	8	0.31	8	0.31	8
G	1.06	27	0.87	22	1.26	32	0.98	25	1.38	35	1.10	28
H	0.83	21	0.87	22	0.91	23	0.87	22	0.91	23	0.94	24
I	8	8	8	8	8	8	10	10	10	10	10	10
M	5.91	150	5.51	140	7.09	180	7.09	180	11.42	290	11.42	290
S *	0.83	21	0.87	22	7.75	196.9	7.75	196.9	10.00	254	10.00	254
X	1.57	40	--	--	1.57	40	--	--	1.97	50	--	--
Y	0.59	15	--	--	0.59	15	--	--	0.63	16	--	--

Minimum Length Lz / Length Compensation La

		in	mm	in	mm	in	mm
0.01 **	**Lz**	46.06	1170	48.62	1235	35.43	900
	La	5.51	140	5.51	140	4.33	110
0.03	**Lf**	27.95	710	32.87	835	25.20	640
9.01	**Lz**	33.86	860	38.58	980	28.94	735
	La	3.74	95	36.22	920	4.33	110
9.04	**Lf**	25.20	640	28.35	720	21.26	540

Series	3078		3080		3085	
Torque Ratings	in-lb	kNm	in-lb	kNm	in-lb	kNm
Te	1,400,000	158.2	2,382,000	269.0	3,170,000	358.0
Tow	2,100,000	237.3	3,573,000	404.0	4,755,000	537.0
Tl	989,500	111.8	1,665,000	188.0	2,126,000	240.0
Tp	2,750,000	310.7	4,890,000	553.0	7,180,000	811.0

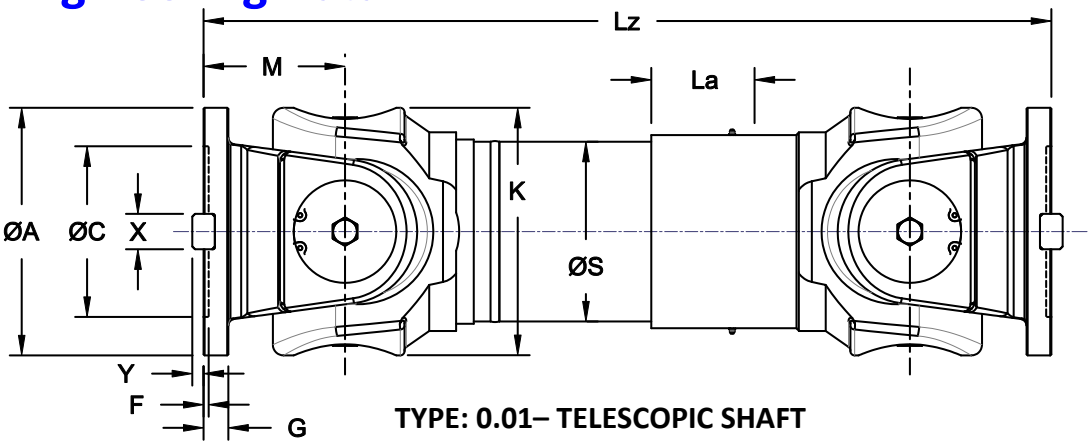
Dimensional Data (inches and millimeters except where noted)

	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
β	15°		15°		15°		15°		15°		15°	
A ***	15.35	390	17.13	435	17.32	440	18.90	480	-	-	18.90	480
K	15.35	390	15.35	390	17.32	440	17.32	440	-	-	19.29	490
B	13.58	345	15.16	385	15.16	385	16.73	425	-	-	16.73	425
C (H7)	6.69	170	11.02	280	8.75	190	8.75	220	-	-	8.75	220
F	0.31	8	0.35	9	0.39	10	0.47	12.0	-	-	0.47	12
G	1.57	40	1.26	32	1.65	42	1.85	47	-	-	1.85	47
H	0.98	25	1.06	27	1.10	28	1.22	31	-	-	1.22	31
I	10	10	10	10	16	16	16	16	-	-	16	16
M	8.46	215	8.46	215	10.24	260	10.24	260	-	-	11.42	290
S *	10.75	273	10.75	273	12.75	324	12.75	324	-	-	14.00	356
X	2.76	70	--	--	3.15	80	3.54	90	-	-	3.54	90
Y	0.71	18.0	--	--	0.79	20	0.89	23	-	-	0.89	23

Minimum Length Lz / Length Compensation La

		in	mm	in	mm	in	mm
0.01 **	**Lz**	56.75	1441	67.75	1721	78.10	1984
	La	6.69	170	6.69	170	9.50	241
0.03	**Lf**	37.60	955	44.46	1129	42.50	1080
9.01	**Lz**	51.50	1308	62.44	1586	69.80	1773
	La	3.50	89	3.50	89	4.00	102
9.04	**Lf**	33.84	860	40.96	1040	42.52	1080

Engineering Data



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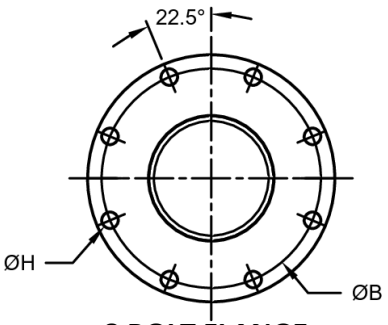
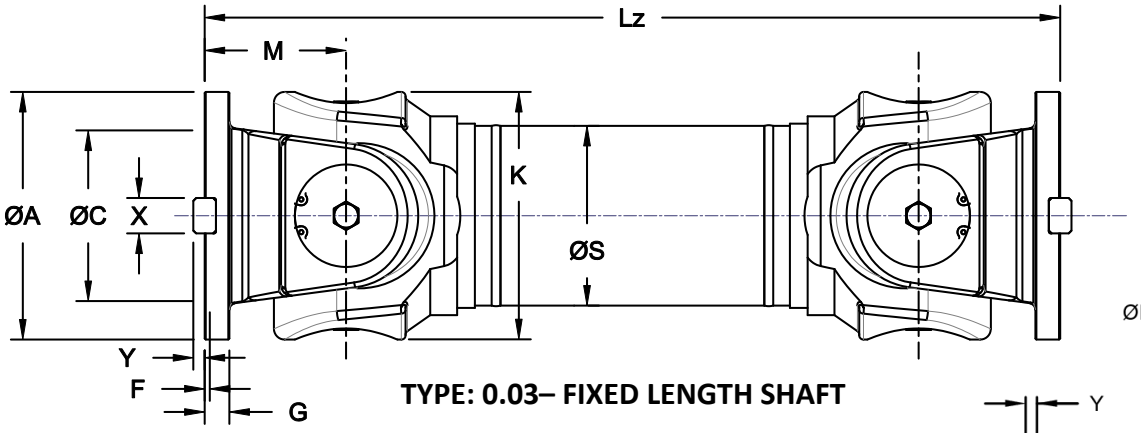


8 BOLT FLANGE



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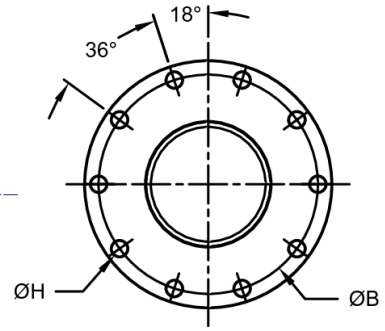
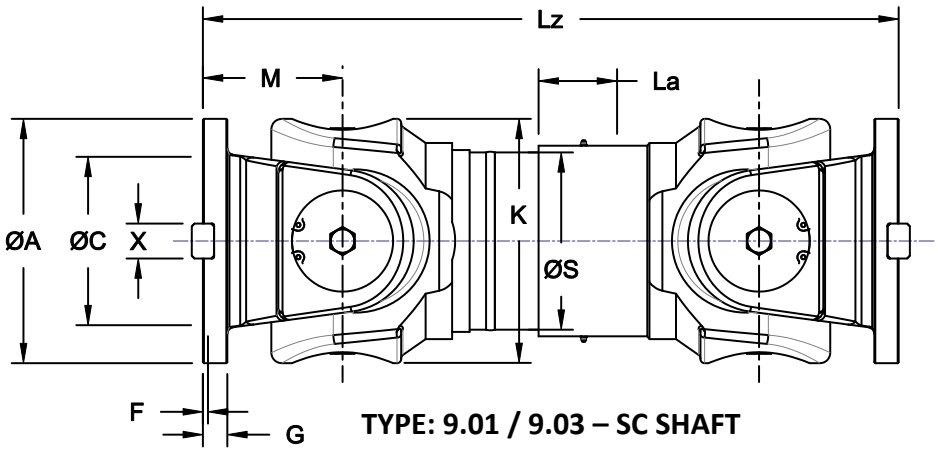


10 BOLT FLANGE



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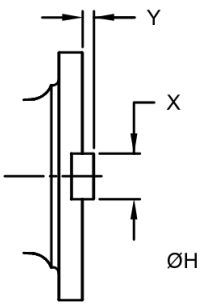
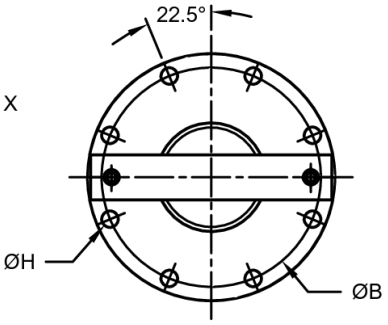
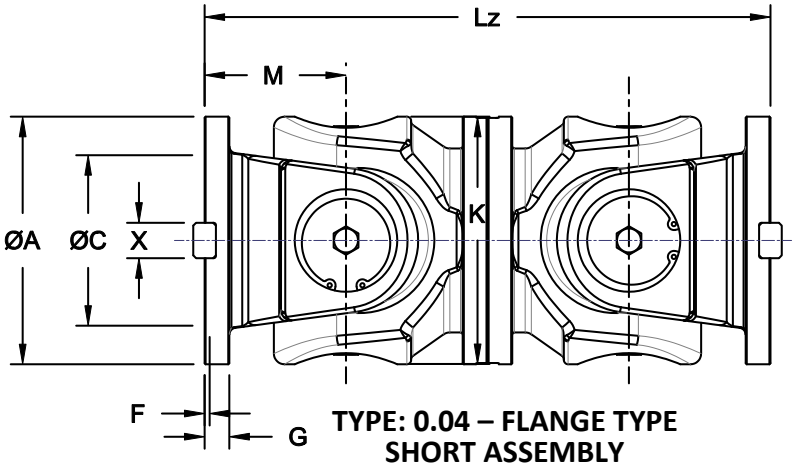




8 BOLT FLANGE DRIVE KEY



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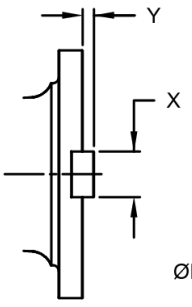
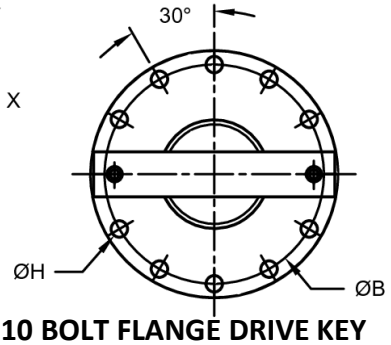
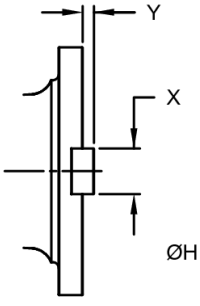
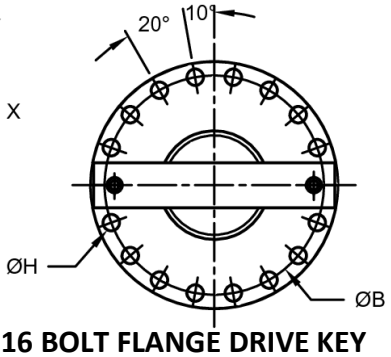




10 BOLT FLANGE DRIVE KEY





16 BOLT FLANGE DRIVE KEY

Engineering Data

Series	4045		4050		4055	
Torque Ratings	in-lb	kNm	in-lb	kNm	in-lb	kNm
Te	177,000	20.0	247,800	28.0	354,000	40.0
Tow	247,800	28.0	346,920	39.2	495,600	56.0
Tl	139,416	15.8	230,115	26.0	326,991	36.9
Tp	354,000	40.0	495,600	56.0	708,000	80.0

Dimensional Data (inches and millimeters except where noted)

	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
β	15°		15°		15°		15°		15°		15°	
A ***	7.09	180	8.86	225	8.86	225	9.84	250	9.84	250	11.22	285
K	8.03	204	8.03	204	8.86	225	8.86	225	9.84	250	9.84	250
B	6.12	156	7.72	196	7.72	196	8.58	218	8.58	218	9.65	245
C (H7)	4.33	110	5.51	140	6.00	105	6.50	140	6.50	105	6.50	175
F	0.18	5	0.17	4.4	0.18	5	0.22	6	0.20	5	0.24	6
G	0.79	20	0.59	15	0.79	20	0.71	18	0.98	25	0.79	20
H	0.67	17	0.63	16	0.67	17	0.71	18	0.75	19	0.79	20
I	8	8	8	8	8	8	8	8	8	8	8	8
M	4.49	114	4.49	114	4.92	125	4.92	125	5.51	140	5.51	140
S *	5.50	140	5.50	140	6.25	158.8	6.25	158.8	7.25	184.15	7.25	184.1
X	1.26	25	--	--	1.26	32	--	--	1.57	40	--	--
Y	0.35	6	--	--	0.35	9	--	--	0.49	13	--	--

Minimum Length Lz / Length Compensation La

		in	mm	in	mm	in	mm
0.01 **	**Lz**	35.24	895	39.57	1005	41.73	1060
	La	5.91	150	5.91	150	5.91	150
0.03	**Lf**	23.23	590	25.20	640	28.74	730
9.01	**Lz**	29.33	745	33.66	855	35.24	895
	La	2.17	55	2.56	65	2.95	75
9.04	**Lf**	17.32	440	28.35	720	30.71	780

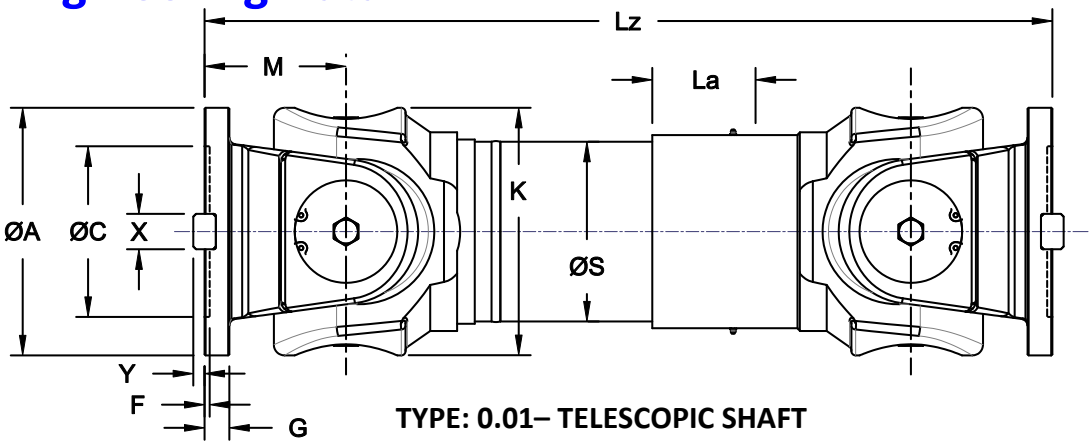
Series	4060		4065		4070	
Torque Ratings	in-lb	kNm	in-lb	kNm	in-lb	kNm
Te	513,300	58.0	708,000	80.0	973,500	110.0
Tow	718,620	81.2	991,200	112.0	1,362,900	154.0
Tl	467,224	52.8	672,662	76.0	902,792	102.0
Tp	1,062,000	120.0	1,416,000	160.0	1,991,250	225.0

Dimensional Data (inches and millimeters except where noted)

	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
β	15°		15°		15°		15°		15°		15°	
A ***	11.22	285	12.40	315	12.40	315	13.78	350	13.78	350	15.35	390
K	11.22	285	11.22	285	12.40	315	12.40	315	13.78	350	13.78	350
B	9.65	245	11.02	280	11.02	280	12.20	310	12.20	310	13.58	345
C (H7)	7.50	125	7.50	175	8.75	130	8.75	220	6.50	155	6.50	250
F	0.24	6	0.24	6	0.28	7	0.28	7.0	0.28	7	0.28	7
G	0.83	21	0.87	22	1.26	32	0.98	25	1.38	35	1.10	28
H	1.06	27	0.87	22	0.91	23	0.87	22	0.91	23	0.94	24
I	8	8	8	8	8	10	10	10	10.00	10	10	10
M	6.30	160	6.30	160	7.09	180	7.09	180	7.68	195	7.68	195
S *	8.00	203.2	8.00	203.2	9.00	229	9.00	229	10.00	254	10.00	254
X	1.57	40	--	--	1.57	40	--	--	1.97	50	--	--
Y	0.59	15.0	--	--	0.59	15	--	--	0.63	16	--	--

Minimum Length Lz / Length Compensation La

		in	mm	in	mm	in	mm
0.01 **	**Lz**	46.85	1190	52.17	1325	61.42	1560
	La	7.09	180	7.09	180	7.48	190
0.03	**Lf**	33.07	840	36.61	930	39.37	1000
9.01	**Lz**	39.76	1010	45.08	1145	53.94	1370
	La	3.54	90	3.54	90	4.33	110
9.04	**Lf**	35.43	900	32.28	820	37.01	940



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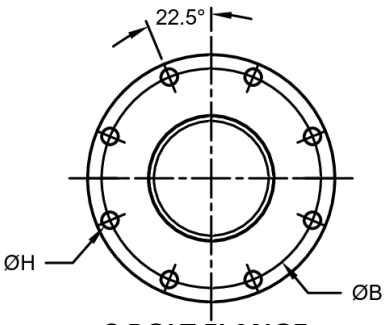
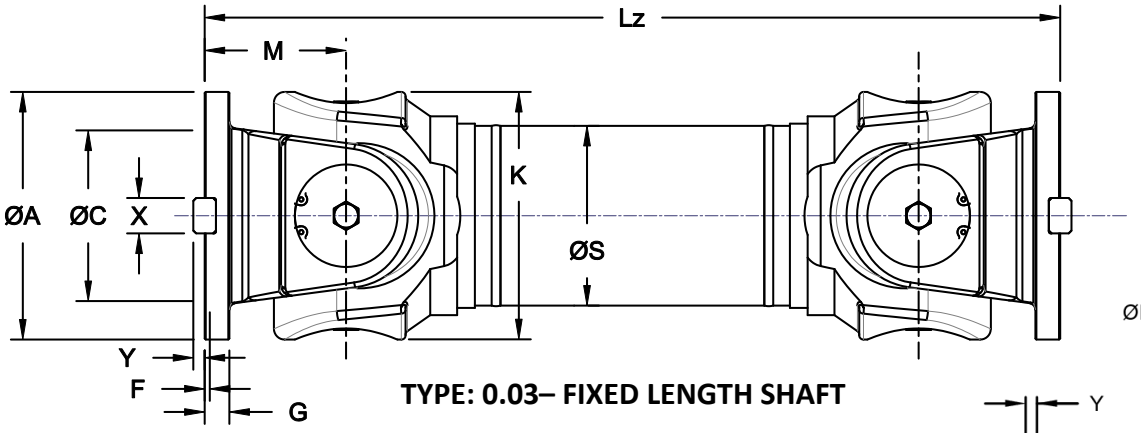
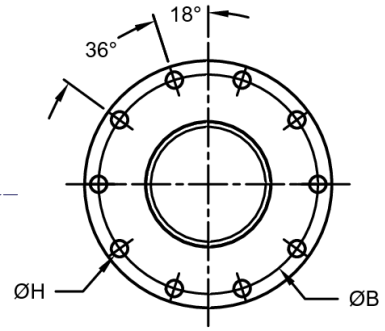


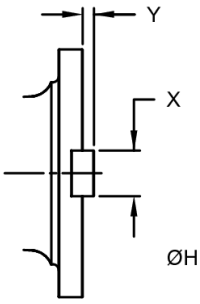
8 BOLT FLANGE

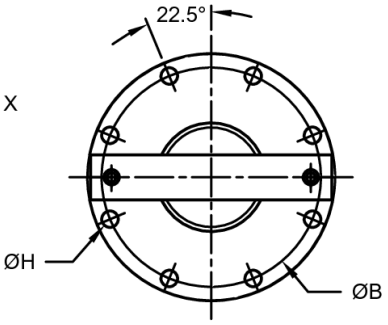


TYPE: 0.03– FIXED LENGTH SHAFT

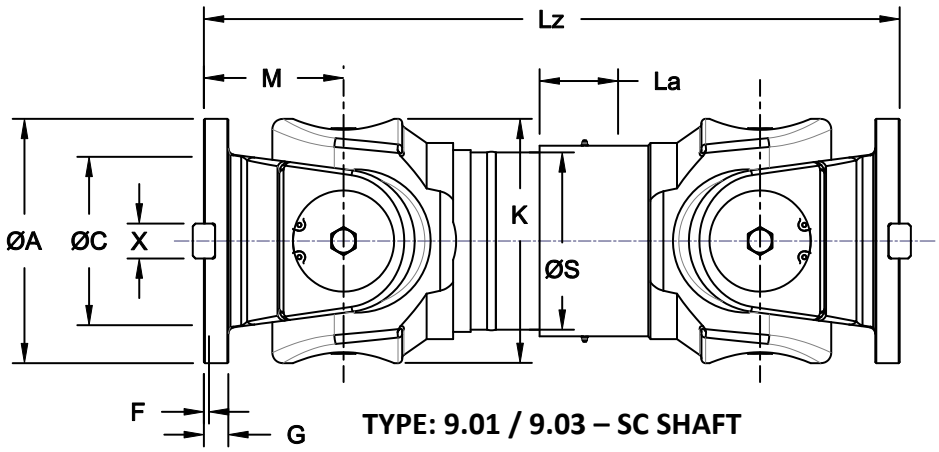


10 BOLT FLANGE

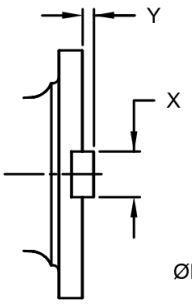


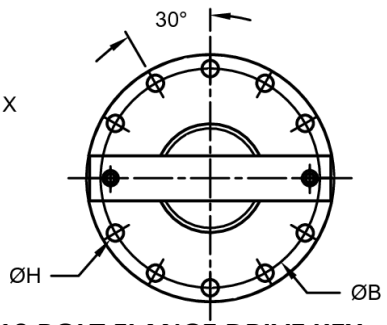


8 BOLT FLANGE DRIVE KEY

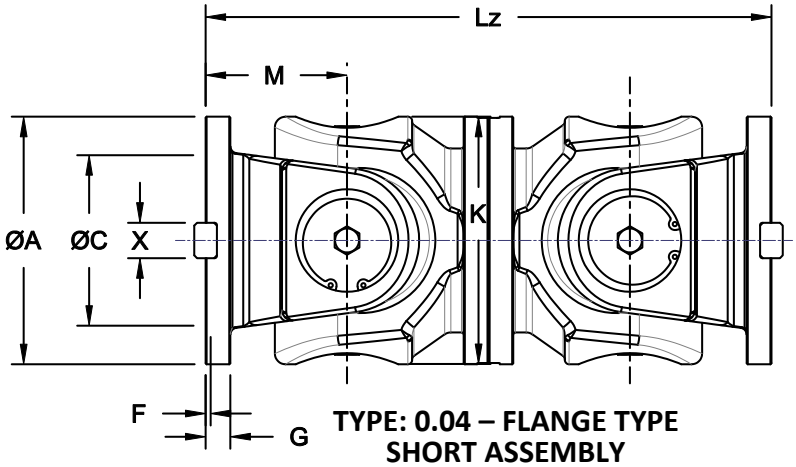


TYPE: 9.01 / 9.03 – SC SHAFT

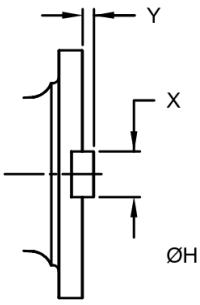


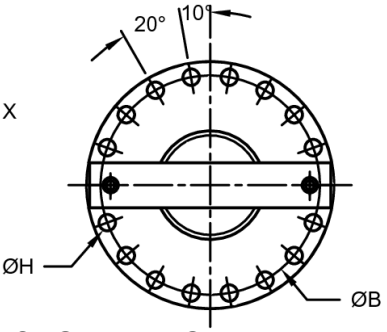


10 BOLT FLANGE DRIVE KEY



TYPE: 0.04 – FLANGE TYPE SHORT ASSEMBLY

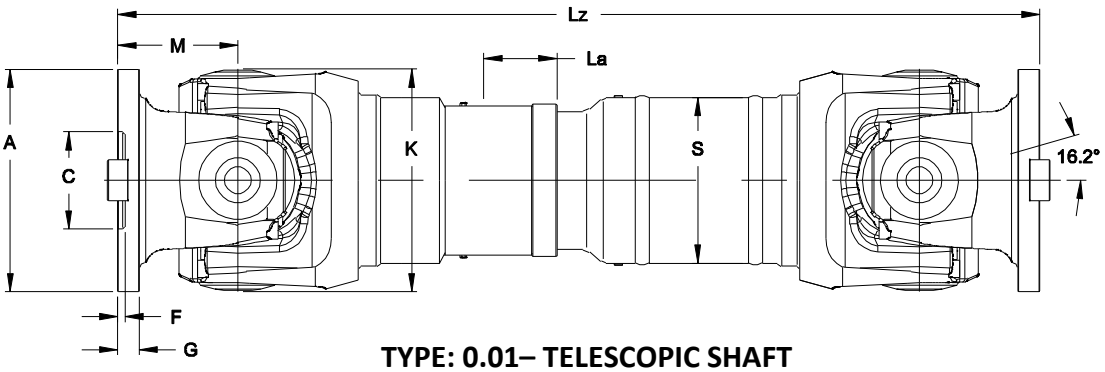




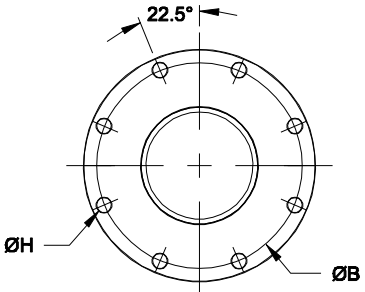
16 BOLT FLANGE DRIVE KEY

Series	4075		4080		4085	
Torque Ratings	in-lb	kNm	in-lb	kNm	in-lb	kNm
Te	1,416,000	160	2,212,500	250	3,097,500	350
Tow	1,982,400	224	3,097,500	350	4,336,500	490
Tl	1,188,420	134.3	1,858,027	209.9	2,474,823	279.6
Tp	2,832,000	320	4,425,000	500	6,195,000	700
Dimensional Data (inches and millimeters except where noted)						
	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm
β	15°	15°	15°	15°	15°	15°
A ***	15.35 / 390	17.13 / 435	17.13 / 435	18.90 / 480	-- / --	18.90 / 480
K	15.35 / 390	15.35 / 390	17.13 / 435	17.13 / 435	-- / --	19.29 / 490
B	13.58 / 345	15.16 / 385	15.16 / 385	16.73 / 425	-- / --	16.73 / 425
C (H7)	6.69 / 170	11.02 / 280	8.75 / 190	8.75 / 220	-- / --	8.75 / 220
F	0.31 / 8	0.35 / 9	0.39 / 10	0.47 / 12	-- / --	0.47 / 12
G	1.57 / 40	1.26 / 32	1.65 / 42	1.85 / 47	-- / --	1.85 / 47
H	0.98 / 25	1.06 / 27	1.10 / 28	1.22 / 31	-- / --	1.22 / 31
I	10 / 10	10 / 10	16 / 16	16 / 16	-- / --	16 / 16
M	8.46 / 215	8.46 / 215	10.24 / 260	10.24 / 260	-- / --	11.42 / 290
S *	10.75 / 273.1	10.75 / 273.1	12.75 / 323.9	12.75 / 323.9	-- / --	14.0 / 355.6
X	2.76 / 70	-- / --	3.15 / 80	3.54 / 90	-- / --	3.54 / 90
Y	0.71 / 18	-- / --	0.79 / 20	0.89 / 22.5	-- / --	0.89 / 22.5
Minimum Length Lz / Length Compensation La						
	in	**mm**	**in**	**mm**	**in**	**mm**
0.01 ** **Lz**	62.20	1580	65.94	1675	72.05	1830
La	7.48	190	7.48	190	7.87	200
0.03 **Lf**	33.86	860	40.94	1040	42.52	1080
9.01 **Lz**	54.72	1390	58.46	1485	64.17	1630
La	3.94	100	3.94	100	3.94	100
9.04 **Lf**	25.98	660	28.35	720	30.71	780

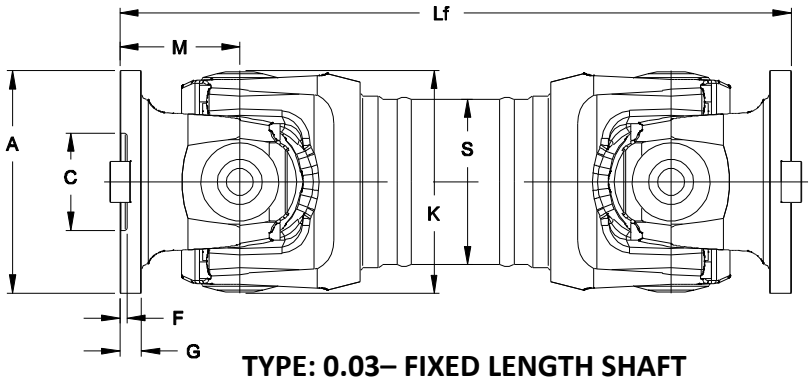
Series	4090		4095			
Torque Ratings	in-lb	kNm	in-lb	kNm	in-lb	kNm
Te	4,425,000	500	5,531,250	625	--	--
Tow	6,195,000	700	7,743,750	875	--	--
Tl	3,424,837	387	4,249,119	480.1	--	--
Tp	8,850,000	1,000	11,062,500	1,250	--	--
Dimensional Data (inches and millimeters except where noted)						
	in / mm	in / mm	in / mm	in / mm	in / mm	in / mm
β	15°	15°	15°	15°	15°	15°
A ***	-- / --	21.65 / 550	-- / --	24.41 / 620	-- / --	-- / --
K	-- / --	21.65 / 550	-- / --	24.41 / 620	-- / --	-- / --
B	-- / --	19.37 / 492	-- / --	11.02 / 280	-- / --	-- / --
C (H7)	-- / --	6.50 / 320	-- / --	7.50 / 380	-- / --	-- / --
F	-- / --	0.47 / 12	-- / --	0.28 / 7.0	-- / --	-- / --
G	-- / --	1.97 / 50	-- / --	0.87 / 22	-- / --	-- / --
H	-- / --	1.22 / 31	-- / --	6.30 / 160	-- / --	-- / --
I	-- / --	8 / 16	-- / --	8 / 8	-- / --	-- / --
M	-- / --	12.01 / 305	-- / --	13.39 / 340	-- / --	-- / --
S *	-- / --	16.00 / 406.4	-- / --	16.75 / 425.5	-- / --	-- / --
X	-- / --	3.94 / 100	-- / --	4.33 / 110	-- / --	-- / --
Y	-- / --	0.89 / 23	-- / --	0.98 / 25	-- / --	-- / --
Minimum Length Lz / Length Compensation La						
	in	**mm**	**in**	**mm**	**in**	**mm**
0.01 ** **Lz**	46.85	1190	52.17	1325		
La	7.09	180	7.09	180		
0.03 **Lf**	33.07	840	36.61	930		
9.01 **Lz**	39.76	1010	45.08	1145		
La	3.54	90	3.54	90		
9.04 **Lf**	35.43	900	32.28	820		



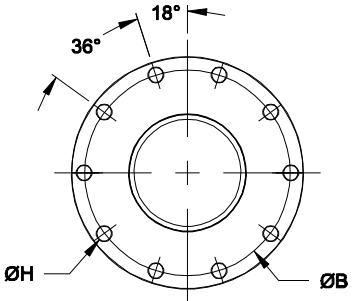
TYPE: 0.01– TELESCOPIC SHAFT



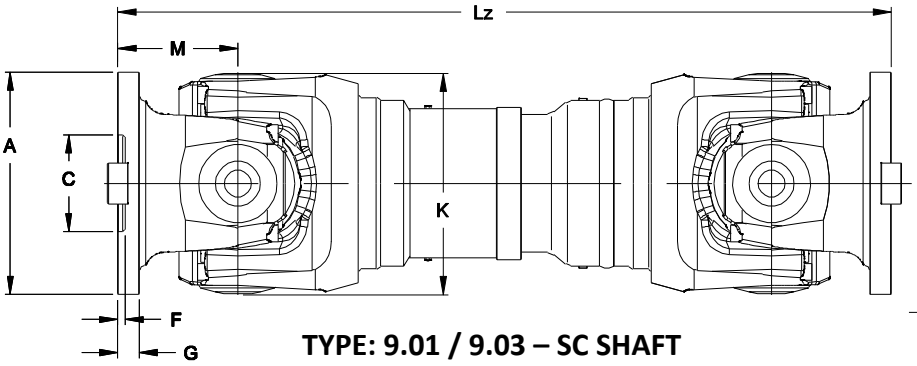
8 BOLT FLANGE



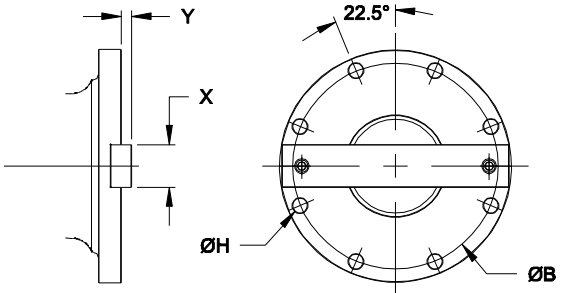
TYPE: 0.03– FIXED LENGTH SHAFT



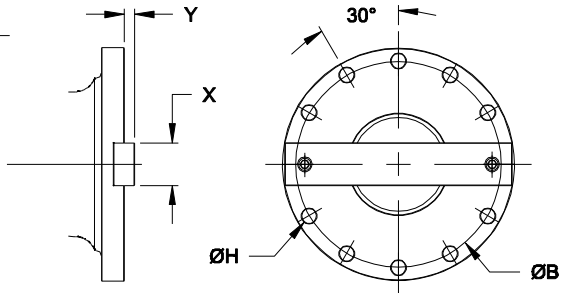
10 BOLT FLANGE



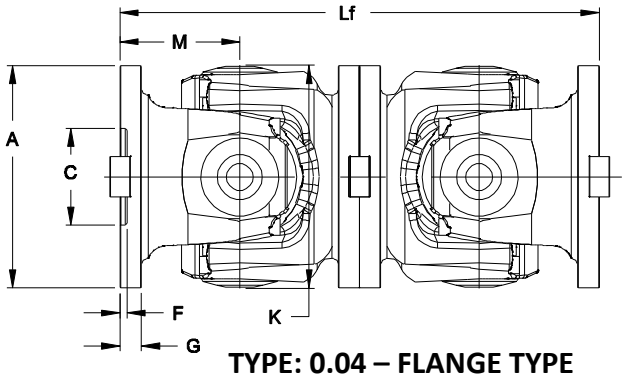
TYPE: 9.01 / 9.03 – SC SHAFT



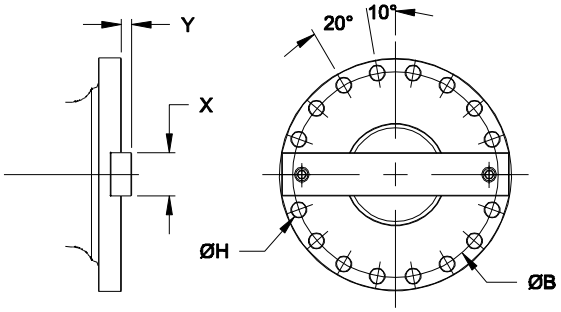
8 BOLT FLANGE DRIVE KEY



10 BOLT FLANGE DRIVE KEY



TYPE: 0.04 – FLANGE TYPE
SHORT ASSEMBLY



16 BOLT FLANGE DRIVE KEY

Engineering Data

Metric Split-Cap Series 6055-6080

Series	6055		6060		6065	
Torque Ratings	in-lb	kNm	in-lb	kNm	in-lb	kNm
Te	318,600	36.0	469,050	53.0	637,200	72.0
Tow	446,040	50.4	656,670	74.2	892,080	100.8
Tl	297,070	33.6	453,020	51.2	650,100	73.5
Tp	929,250	105.0	1,327,500	150.0	1,770,000	200.0

Dimensional Data (inches and millimeters except where noted)

	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
β	15°		15°		15°		15°		15°		15°	
A ***	9.84	250	11.22	285	11.22	285	12.40	315	12.40	315	13.78	350
K	9.84	250	9.84	250	11.22	285	11.22	285	12.40	315	12.40	315
B	8.58	218	9.65	245	9.65	245	11.02	280	11.02	280	12.20	310
C (H7)	6.50	105	6.50	175	7.50	125	7.50	191	8.75	130	8.75	220
F	0.20	5.0	0.28	7	0.24	6	0.28	7	0.28	7	0.31	8
G	0.98	25	0.79	20	1.06	27	0.87	22	1.26	32	0.98	25
H	0.75	19	0.79	20	0.83	21	6.30	160	0.91	23	0.87	22
I	8	8	8	8	8	8	8	8	10	10	10	10
M	6.50	165	6.50	165	7.09	180	7.09	180	7.68	195	7.68	195
S *	7.00	177.8	7.00	177.8	8.75	222.3	8.75	222.3	9.75	247.7	9.75	247.7
X	1.57	40	--	--	1.57	40	--	--	1.57	40	--	--
Y	0.49	12.5	--	--	0.59	15	--	--	0.59	15	--	--

Minimum Length Lz / Length Compensation La

		in	mm	in	mm	in	mm
0.01 **	**Lz**	39.96	1015	42.72	1085	48.82	1240
	La	5.31	135	5.31	135	6.69	170
0.03	**Lf**	28.35	720	30.71	780	35.04	890
9.01	**Lz**	30.51	775	37.99	965	46.06	1170
	La	1.18	30	4.13	105	6.69	170
9.04	**Lf**	25.98	660	28.35	720	30.71	780

Series	6070		6075		6080	
Torque Ratings	in-lb	kNm	in-lb	kNm	in-lb	kNm
Te	885,000	100.0	1,239,000	140.0	1,991,250	225.0
Tow	1,239,000	140.0	1,734,600	196.0	2,787,750	315.0
Tl	879,690	99.4	1,156,700	130.7	1,773,540	200.4
Tp	2,301,000	260.0	3,274,500	370.0	5,310,000	600.0

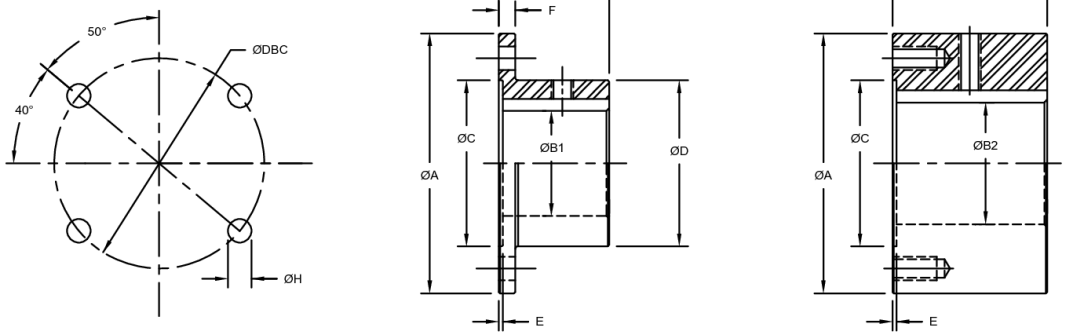
Dimensional Data (inches and millimeters except where noted)

	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
β	15°		15°		10°		10°		10°		10°	
A ***	13.78	350	15.35	390	15.35	390	17.13	435	17.13	435	18.90	480
K	13.78	350	13.78	350	15.35	390	15.35	390	17.13	435	17.13	435
B	12.20	310	9.65	245	13.58	345	11.02	280	15.16	385	12.20	310
C (H7)	6.50	155	6.50	175	7.50	170	7.50	191	8.75	190	8.75	220
F	0.28	7	0.28	7	0.31	8	0.28	7.0	0.39	10	0.31	8
G	1.38	35	0.79	20	1.57	40	0.87	22	1.65	42	0.98	25
H	0.91	23	0.79	20	0.98	25	6.30	160	1.10	28	0.87	22
I	10	10	10	10	10	10	10	10	16	16	16	16
M	8.86	225	8.86	225	8.07	205	8.07	205	9.25	235	9.25	235
S *	10.75	273.1	10.75	273.1	10.75	273.1	10.75	273.1	12.75	323.9	12.75	323.9
X	1.97	50	--	--	2.76	70	--	--	3.15	80	3.54	90
Y	0.63	16.0	--	--	0.71	18	--	--	0.79	20	0.89	22.5

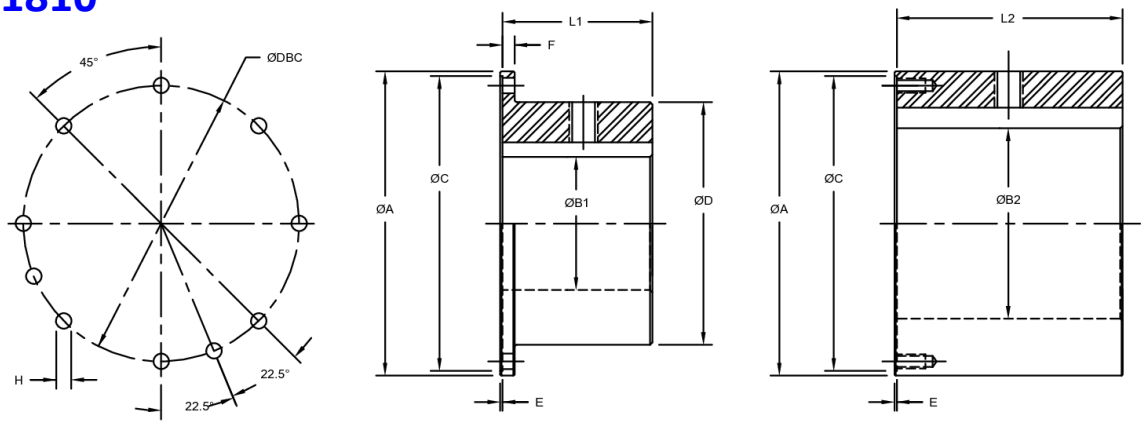
Minimum Length Lz / Length Compensation La

		in	mm	in	mm	in	mm
0.01 **	Lz	52.95	1345	58.86	1495	66.14	1680
	La	6.69	170	6.69	170	6.69	170
0.03	Lf	38.78	985	41.34	1050	47.64	1210
9.01	Lz	45.28	1150	55.91	1420	61.61	1565
	La	3.94	100	6.69	170	6.69	170
9.04	Lf	35.43	900	32.28	820	37.01	940

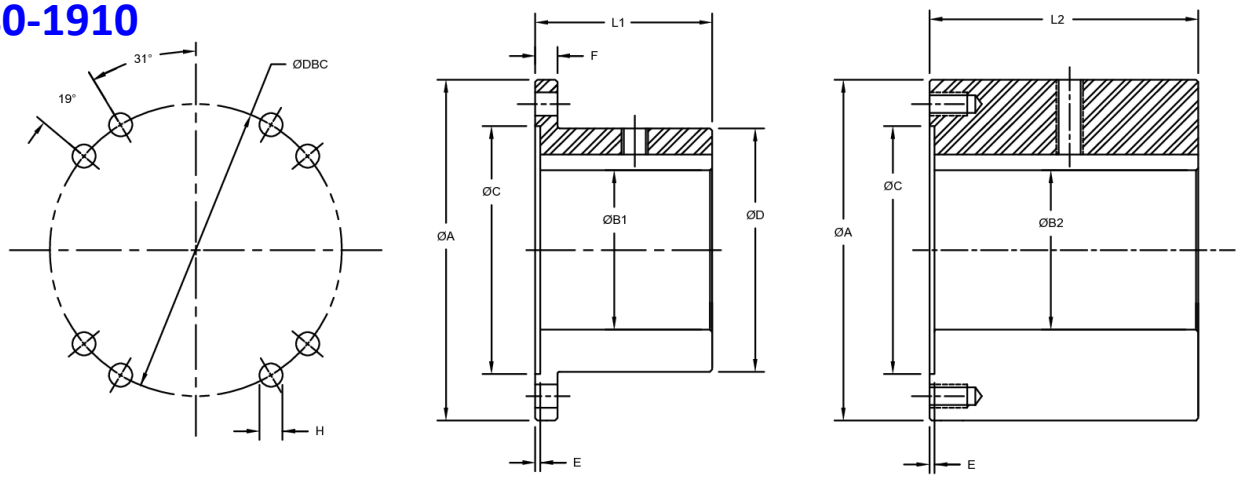
1310-1550



1610-1810



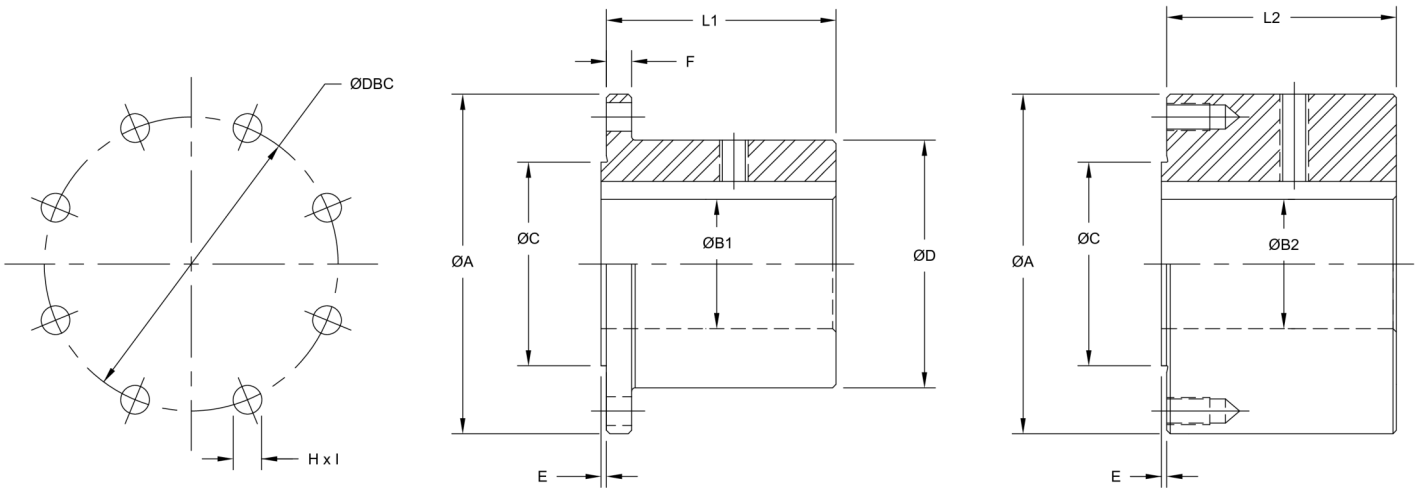
1880-1910



Size	1310		1350/1410		1480/1550		1610		1710		1810		1880/1910	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
A	3.88	98.6	4.63	117.6	5.88	149.4	6.88	174.8	8.00	203.2	8.00	203.2	9.63	244.6
C	2.38	60.5	2.75	69.9	3.75	95.3	6.62	168.1	7.75	196.9	7.75	196.9	7.00	177.8
E	0.08	2.0	0.08	2.0	0.08	2.0	0.04	1.0	0.04	1.0	0.04	1.0	0.11	2.8
F	0.38	9.7	0.50	12.7	0.38	9.7	0.38	9.7	0.38	9.7	0.50	12.7	0.38	9.7
D	2.44	62.0	2.88	73.2	3.75	95.3	5.25	133.4	6.38	162.1	6.38	162.1	6.88	174.8
DBC	3.13	79.4	3.75	95.3	4.75	120.7	6.13	155.6	7.25	184.2	7.25	184.2	8.25	209.6
H	0.38	9.7	0.44	11.2	0.50	12.7	0.38	9.7	0.38	9.7	0.44	11.2	0.63	16.0
I (Qty of holes)	4	4	4	4	4	4	8	8	8	8	12	12	8	8
L1	2.00	50.8	2.00	50.8	2.50	63.5	3.50	88.9	4.00	101.6	4.00	101.6	4.50	114.3
B1 (maximum)	1.69	42.9	1.88	47.8	2.44	62.0	3.50	88.9	4.00	101.6	4.00	101.6	4.63	117.6
L2	2.50	63.5	3.00	76.2	3.50	88.9	5.00	127.0	6.00	152.4	6.00	152.4	6.00	152.4
B2 (maximum)	2.38	60.5	2.75	69.9	3.75	95.3	4.75	120.7	5.50	139.7	5.50	139.7	6.50	165.1

Engineering Data

DIN Companion Flanges 2000-3078



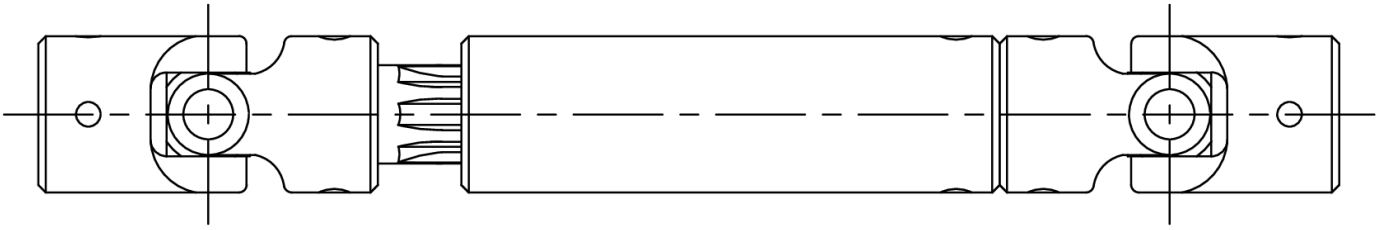
Size	DIN58		DIN65		DIN75		DIN90		DIN100	
	in	mm	in	mm	in	mm	in	mm	in	mm
A	2.28	58.0	2.56	65.0	2.95	75.0	3.54	90.0	3.94	100.0
C	1.18	30.0	1.38	35.0	1.65	42.0	1.85	47.0	3.31	84.0
E	0.054	1.4	0.062	1.6	0.074	1.9	0.094	2.4	0.094	2.4
F	-	-	-	-	-	-	0.25	6	0.25	6
D	-	-	-	-	-	-	2.12	54	2.31	59
DBC	1.85	47	2.05	52	2.44	62	2.93	75	3.31	84
H	0.20	5	0.24	6	0.24	6	0.31	8	0.31	8
I (Qty of holes)	4	4	4	4	6	6	4	4	6	6
L1	-	-	-	-	-	-	2.000	50.8	2.000	50.8
B1 (maximum)	-	-	-	-	-	-	1.25	31.8	1.62	41.1
L2	2.00	50.8	2.00	50.8	2.25	57.2	2.50	63.5	3.00	76.2
Br (maximum)	1.18	30.0	1.38	35.1	1.65	41.9	1.85	47.0	2.24	56.9

Size	DIN120		DIN150		DIN180		DIN180.10		DIN225	
	in	mm	in	mm	in	mm	in	mm	in	mm
A	4.73	120	5.91	150	7.09	180	7.09	180	8.86	225
C	4.00	101.5	5.12	130	4.33	110	4.33	110	5.51	140
E	0.094	2.4	0.094	2.4	0.094	2.4	0.094	2.4	0.157	4.0
F	0.38	10	0.44	11	0.50	13	0.50	13	0.63	16
D	3.30	84	4.31	110	5.19	132	5.19	132	6.59	167
DBC	4.00	101.5	5.12	130	6.12	155.5	6.12	155.5	7.72	196
H	0.39	10	0.47	12	0.63	16	0.63	16	0.63	16
I (Qty of holes)	8	8	8	8	8	8	10	10	8	8
L1	3.00	76	4.00	102	4.00	102	4.00	102	5.50	140
B1 (maximum)	2.25	57	2.88	73	3.44	87	3.44	87	4.44	113
L2	4.00	102	5.00	127	4.50	114	4.50	114	7.25	184
B2 (maximum)	2.95	75	3.54	90	4.13	105	4.13	105	5.88	149

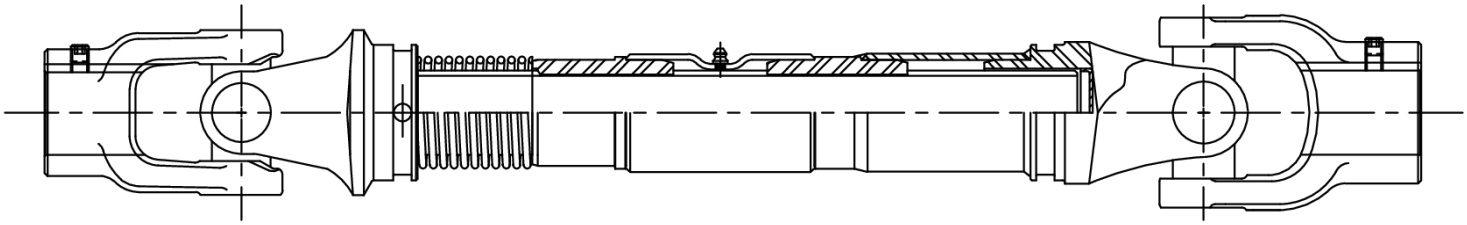
Size	DIN250		DIN285		DIN315		DIN350		DIN390	
	in	mm	in	mm	in	mm	in	mm	in	mm
A	9.84	250	11.22	285	12.40	315	13.78	350	15.35	390
C	5.51	140	6.89	175	6.89	175	8.66	220	9.84	250
E	0.197	5.0	0.236	6.0	0.236	6.0	0.276	7.0	0.276	7.0
F	0.75	19	0.81	21	0.88	22	1.00	25	1.12	28
D	7.44	189	8.41	214	9.69	246	10.88	276	12.09	307
DBC	8.58	218	9.65	245	11.02	280	12.20	310	13.58	345
H	0.71	18	0.79	20	0.87	22	0.87	22	0.94	24
I (Qty of holes)	8	8	8	8	8	8	10	10	10	10
L1	6.00	152	7.00	178	8.00	203	9.00	229	10.00	254
B1 (maximum)	4.94	125	5.56	141	6.44	164	7.25	184	8.06	205
L2	8.25	210	9.38	238	10.25	260	11.25	286	12.25	311
B2 (maximum)	6.56	167	7.50	191	8.25	210	9.00	229	10.00	254

AISCO engineering has many years of experience solving problems with unique driveline solution. We have the standard product to fit any application and can engineer a specialty solution that will incorporate tried and true design practices. The following specialty shafts can be used on a wide array of applications. Our engineers will customer design a shaft assembly to fit any application and solve any design or application issue. Using our 3D solid modeling software we can provide you with design proposal that can be integrated into planning stages right up through installation.

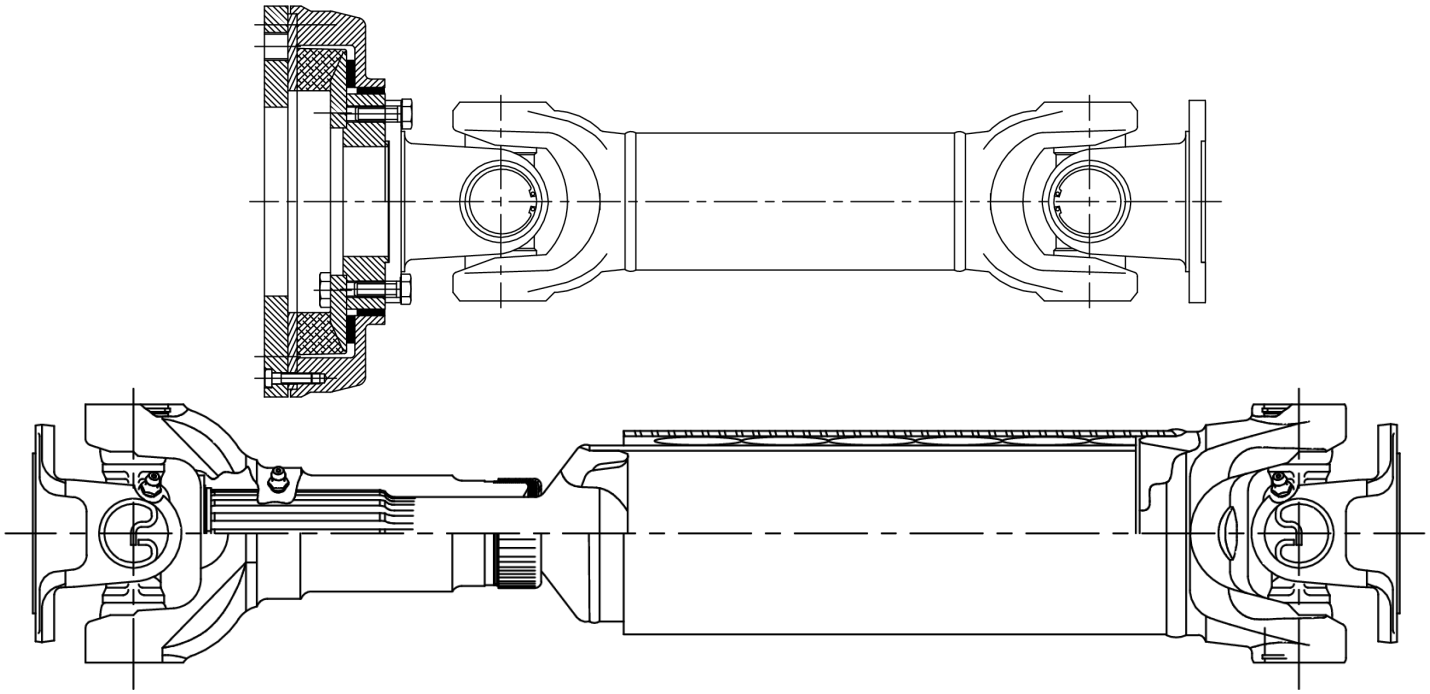
Pin & Block Universal Joints



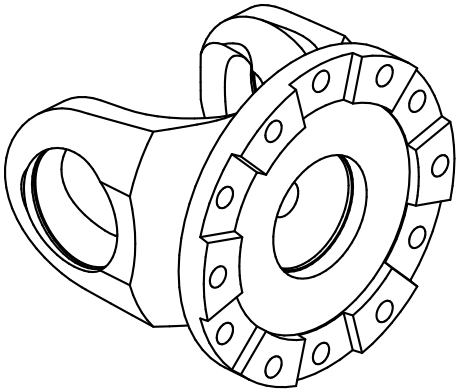
Spring Loaded Universal Joints



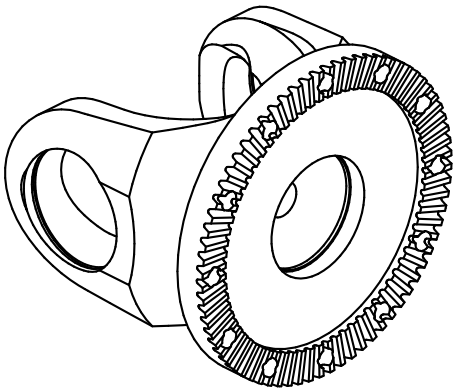
Torsionally Dampened Universal Joints



Flange Connection Options

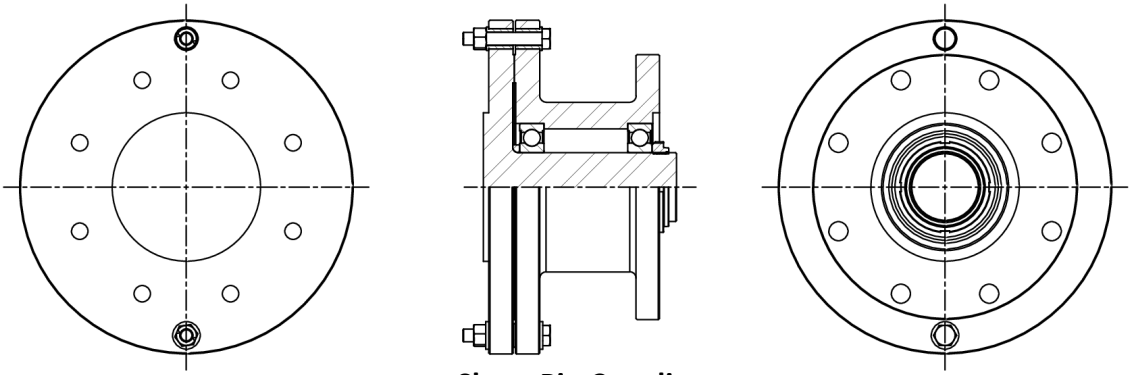


Integral Face Pad Connection



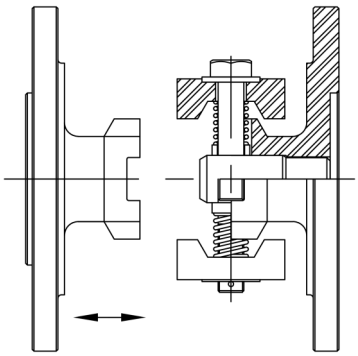
Hirth Tooth Face Connection

Torque Overload Solutions

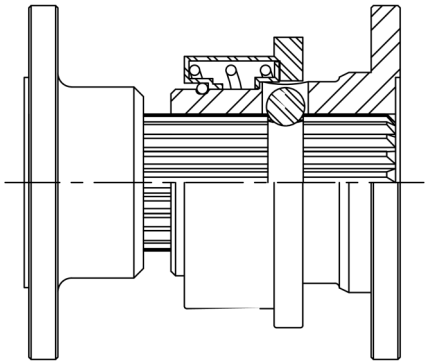


Shear Pin Coupling

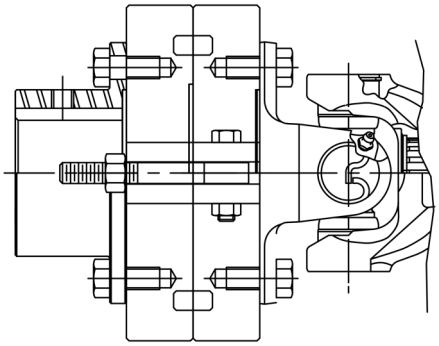
Quick Disconnect Solutions



Clamp Disconnect QD

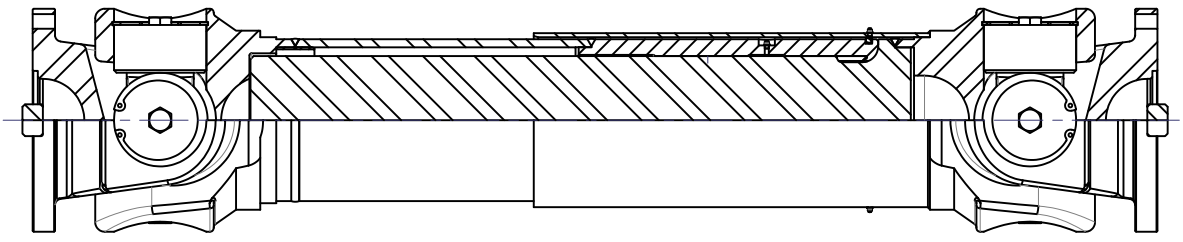


Spring Detent QD

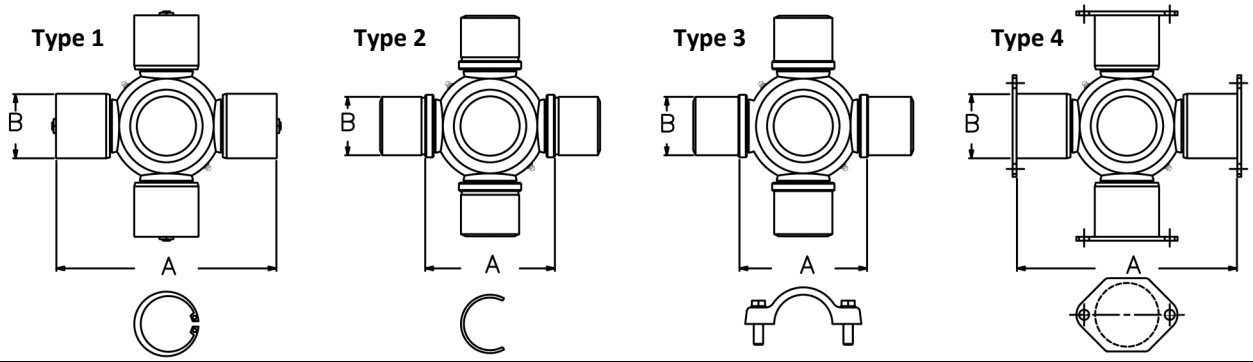


Swing Bolt QD

Extended Axial Travel Shaft Assemblies



Universal Joint Service Kits



P/N	A (mm)	B (mm)	Type
J-001	15.00	40.20	1
J-002	15.00	41.00	1
J-003	17.00	41.00	1
J-004	19.00	48.00	1
J-005	19.00	49.20	1
J-006	22.00	58.00	1
J-007	22.00	58.80	1
J-008	22.00	59.00	1
J-009	23.00	53.20	1
J-010	23.00	58.20	1
J-011	23.82	38.10	2
J-012	23.82	61.24	1
J-013	23.82	63.00	1
J-014	24.00	34.34	1
J-015	24.00	40.00	1
J-016	24.00	63.00	1
J-017	24.66	37.92	2
J-018	25.40	38.83	1
J-019	26.00	70.40	1
J-020	26.00	88.98	1
J-021	26.50	43.20	1
J-022	26.97	46.43	2
J-023	26.97	61.91	1
J-024	26.97	74.50	1
J-025	26.97	81.76	1
J-026	26.97	92.08	1
J-027	27.00	74.50	1
J-028	27.38	53.98	2
J-029	28.00	44.00	1
J-030	28.00	49.00	1
J-031	28.00	71.50	1
J-032	28.50	62.00	1
J-033	28.50	70.90	1
J-034	28.58	66.68	2
J-035	30.00	81.80	1
J-036	30.00	83.00	1
J-037	30.00	86.80	1
J-038	30.82	82.30	1
J-039	30.18	92.08	1
J-040	30.18	106.38	1
J-041	31.75	81.46	1
J-042	32.00	76.02	1
J-043	32.00	106.30	1
J-044	34.00	97.00	1
J-045	34.90	92.00	1
J-046	34.93	106.38	1
J-047	34.93	126.09	1
J-048	35.00	96.80	1
J-049	35.00	97.00	1
J-050	35.00	97.20	1
J-051	36.00	69.80	1
J-052	38.00	89.20	1
J-053	38.00	105.90	1
J-054	38.00	106.00	1
J-055	38.00	110.00	1
J-056	39.68	115.95	1
J-057	41.28	141.99	1
J-058	42.00	104.50	1
J-059	42.00	104.70	1
J-060	42.00	106.00	1
J-061	42.00	117.50	1
J-062	42.00	123.00	1
J-063	44.00	124.80	1
J-064	44.00	125.50	1
J-065	44.00	149.00	1
J-066	45.00	118.40	1
J-067	45.00	126.00	1
J-068	45.00	131.00	1
J-069	45.00	152.00	1
J-070	45.03	120.40	1
J-071	47.00	131.00	1
J-072	47.00	132.00	1
J-073	47.63	134.94	4
J-074	48.00	116.50	1
J-075	48.00	125.50	1
J-076	48.00	126.00	1
J-077	48.00	131.00	1
J-078	48.00	134.00	1
J-079	48.00	160.80	1
J-080	48.04	82.50	1
J-081	49.20	154.78	4
J-082	49.20	177.80	4
J-083	49.20	191.77	4
J-084	50.00	131.00	1
J-085	50.00	152.80	1
J-086	50.00	152.80	1
J-087	50.00	164.00	1
J-088	52.00	133.00	1
J-089	53.00	135.00	1
J-090	55.00	164.00	1
J-091	55.58	205.59	1
J-092	55.58	205.59	4
J-093	57.00	144.00	1
J-094	57.00	147.20	1
J-095	57.00	152.00	1
J-096	57.00	152.00	1
J-097	57.00	164.00	1
J-098	59.00	168.00	1
J-099	65.00	172.00	1
J-100	72.00	185.00	1
J-101	74.00	129.00	3
J-102	74.00	154.00	3
J-103	74.00	171.00	1
J-104	74.00	180.00	1
J-105	74.00	195.00	1
J-106	74.00	217.00	1
J-107	83.00	139.00	3
J-108	83.00	175.00	3
J-109	83.00	195.00	1
J-110	83.00	220.00	1
J-111	86.00	129.00	3
J-112	95.00	139.00	3
J-113	95.00	160.00	3
J-114	95.00	190.00	3
J-115	95.00	219.00	1
J-116	95.00	250.00	1
J-117	110.00	160.00	3
J-118	110.00	176.00	3
J-119	110.00	210.00	3
J-120	110.00	243.00	1
J-121	110.00	275.00	1
J-122	120.00	176.00	3
J-123	120.00	196.00	3
J-124	120.00	235.00	3
J-125	130.00	196.00	3
J-126	130.00	216.00	3
J-127	130.00	262.00	3
J-128	130.00	269.00	1
J-129	130.00	300.00	1
J-130	145.00	145.00	1
J-131	154.00	250.00	3
J-132	170.00	276.00	3
J-133	175.00	375.00	1
J-134	185.00	377.00	1
J-135	195.00	315.00	3

General Machinery Application Data for Selection and Design

Customer: _____

Contact Name: _____

Type of Machine: _____

Manufacturer: _____

Date: _____ No. of Pages _____

Inquiry No.: _____

No. of Units: _____

Phone: _____

Fax: _____

Complete the following information for your application.

1. Motor Horsepower _____
2. Motor RPM (Min. and Max.) _____
3. Required Service Factor _____
4. Operating RPM _____
5. Reduction Ratio _____
6. Normal Operating Torque _____
7. Shaft Separation (Min. and Max.) _____
8. Required Shaft Axial Slide _____
9. Operating Angle _____
9a. Operating Offset _____
10. No Load Angle _____
10a. No Load Offset _____
11. Horizontal Application _____
11a. Vertical Application _____
12. Drive Connection _____
13. Driven End Connection _____
14. Diameter Limitations _____
15. Desired B-10 Life Hours _____

Comments or special conditions such as: Ambient temperature, atmosphere, etc.: _____

Note: If bolting to existing drive and driven flanges, please specify flange diameter, pilot diameter, bolt circle, number of bolts, and bolt size: _____

Space provided for sketch below.