

# Universal Joint Kits

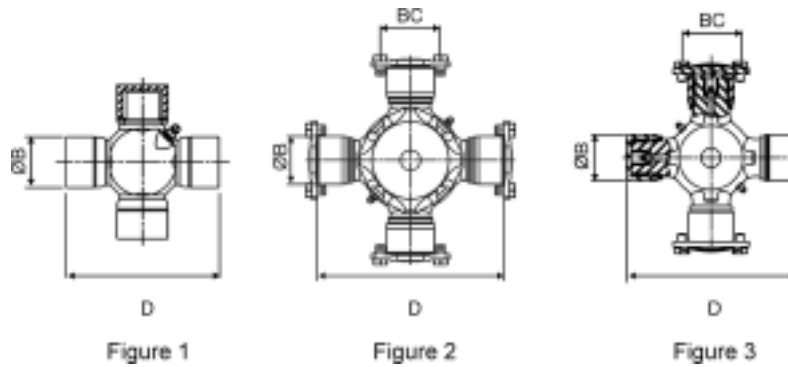
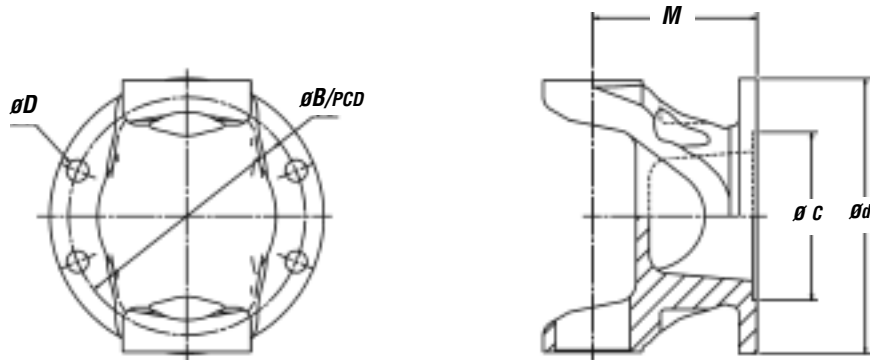


Figure	Series	Part Number	Ø B (Bearing Diameter)		D (Overall Span)		BC (Bolt Hole Centers)		Cross Length		Journal Cross Trunnion Diameter	
			Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters
1	1310	5-153X	1.06	26.9	3.22	81.8	-	-	2.96	75.2	0.65	16.5
1	1410	5-160X	1.18	29.9	4.18	106.2	-	-	3.93	99.8	0.76	19.3
1	1480	5-263X	1.37	34.8	4.18	106.2	-	-	3.87	98.3	0.88	22.4
1	1550	5-275X	1.37	34.8	4.96	126.0	-	-	4.65	118.1	0.88	22.4
2	1610	5-279X	1.88	47.7	5.31	134.9	2.31	58.7	4.99	126.7	1.26	32.0
2	1710	5-280X	1.94	49.3	6.09	154.7	2.43	61.7	5.77	146.6	1.26	32.0
2	1760	5-407X	1.94	49.3	6.99	177.5	2.43	61.7	6.68	169.7	1.26	32.0
2	1810	5-281X	1.94	49.3	7.55	191.8	2.43	61.7	7.25	184.2	1.26	32.0
2	1880	5-380X	2.18	55.4	8.09	205.5	2.81	71.4	7.59	192.8	1.37	34.8

# Universal Joint Kits for Half Round End Yokes

Figure	Series	Part Number	Ø B (Bearing Diameter)		D (Overall Span)		BC (Bolt Hole Centers)		Cross Length		Journal Cross Trunnion Diameter	
			Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters
3	1610	5-674X	1.88	47.8	5.31	134.9	2.31	58.7	4.99	126.7	1.26	32.0
3	1710	5-442X	1.94	49.3	6.09	154.7	2.43	61.7	5.77	146.6	1.26	32.0
3	1760	5-677X	1.94	49.3	6.99	177.5	2.43	61.7	6.68	169.7	1.26	32.0
3	1810	5-6-768X	1.94	49.3	7.55	191.8	2.43	61.7	7.25	184.2	1.26	32.0

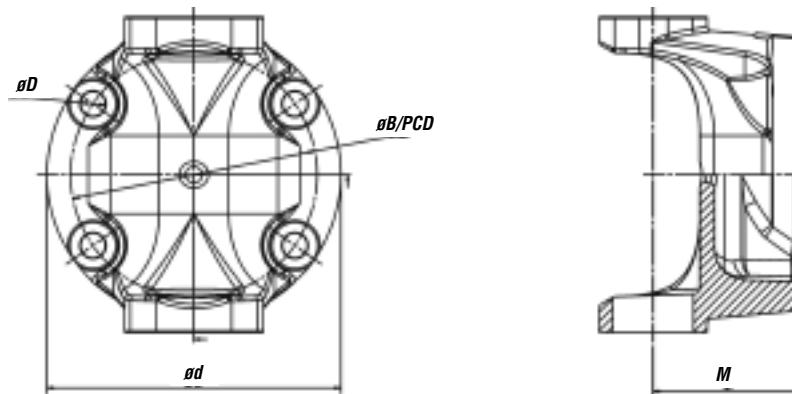
# DIN Pattern Flange Yokes



Series	Part Number	No. of Holes	$\varnothing d$	$\varnothing B/PCD$ Pitch Circle Diameter	$\varnothing C$	$M$ - Flange Face to Centerline FF- $\mathcal{C}$	$\varnothing D$ Thru Hole Diameter
1310	2-2-1329	4	90.0	74.5	47.0	50	M8
	2-2-1339	6	100.0	84.0	57.0	50	M8
1410	3-2-1239	6	100.0	84.0	57.0	64.3	M8
	3-2-1159	8	120.0	101.5	75.0	64.3	M10
1480	3-2-1299	8	120.0	101.5	75.0	60.0	M10
	02-323	6	120.0	101.5	82.5	60.0	M10
	3-2-1219	8	120.0	101.5	82.5	60.0	M10
1550	4-2-1069	8	150.0	130.0	90.0	80.0	M12
1610	5-2-1149	8	150.0	130.0	90.0	91.9	M12
1710	6-2-1259	8	165.0	140.0	95.0	101.6	M16
	6-2-1309	8	180.0	155.5	110.0	101.6	M14
	6-2-1339	8	180.0	155.5	110.0	101.6	M16
1760	6.3-2-89	8	180.0	155.5	110.0	108.0	M14
	6.3-2-69	8	180.0	155.5	110.0	108.0	M16
	6.3-2-59	10	180.0	155.5	110.0	108.0	M16
1760	6.3-2-89	8	180.0	155.5	110.0	108.0	M14
	6.3-2-69	8	180.0	155.5	110.0	108.0	M16
	6.3-2-59	10	180.0	155.5	110.0	108.0	M16

All Measurements in Millimeters

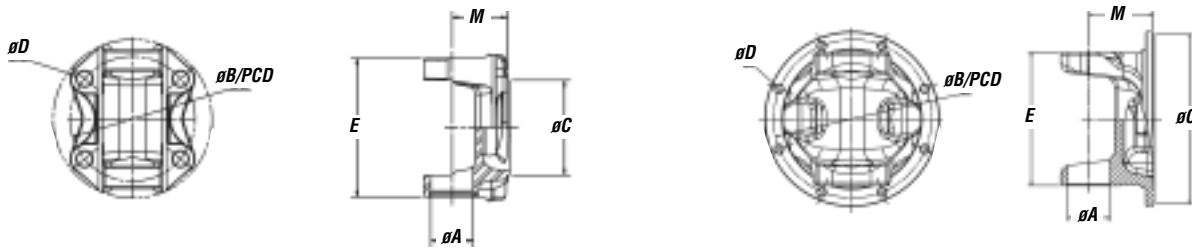
# T-Type Flanges



Series	Part Number	Pattern	$\phi d$	$\phi B/PCD$ Pitch Circle Diameter	$M$ - Flange Face to Centerline FF- $\phi$	$\phi D$ Thru Hole Diameter
1310						
1410	3-2-25	T120	120.0	100.0	57.0	M11
1480	3-2-15	T120	120.0	100.0	60.0	M11
1550	4-2-35	T120	120.0	100.0	65.0	M11
	4-2-25	T150	150.0	130.0	68.0	M13
1610						
1710	6-2-15	T150	150.0	130.0	81.0	M13
	6-2-25	T180	180.0	150.0	83.0	M15
1760	6.3-2-15	T180	180.0	180.0	88.0	M15
1550	6.5-2-15	T180	180.0	150.0	88.0	M15
1880						

All Measurements in Millimeters

# Flange Yokes



Series	Part Number	$E$	$\phi A$	$E$	Bolt Detail					$C$	$M$	$\beta$
		Distance Across Lugs	Bearing Diameter	Flange Swing Diameter	$\phi B/PCD$ (pitch circle diameter)	$\phi D$ Thru Hole Diameter	Size	Number of Holes	Torque	Pilot Diameter M - Male F - Female	Flange Face to Centerline	Joint Angle <sup>(4)</sup>
1310	2-2-329	3.47" (88.14 mm)	1.06" (26.92 mm)	3.88" (98.55 mm)	3.12" (79.25 mm)	.38"	3/8 - 24	4	22-26 Lb. Ft. (29.8-35.25 Nm)	M-2.38" (M-60.45 mm)	1.38" (35.05 mm)	20°
	3-2-119	3.88" (98.55 mm)	1.19" (30.24 mm)	4.62" (117.35 mm)	3.75" (95.25 mm)	.44"	7/16 - 20	4	63-75 Lb. Ft. (85.41-101.68 Nm)	M-2.75" (M-69.85 mm)	1.56" (39.62 mm)	20°
1410	3-2-159	4.44" (112.78 mm)	1.19" (30.24 mm)	4.96" (125.98 mm)	3.75" (95.25 mm)	.44"	7/16 - 20	4	63-75 Lb. Ft. (85.41-101.68 Nm)	M-2.75" (M-69.85 mm)	1.69" (42.93 mm)	22°
	3-2-309											
	3-2-309											
	3-2-939											
	3-2-429	4.44" (112.78 mm)	1.19" (30.23 mm)	5.88" (149.35 mm)	4.75" (120.65)	.50"	1/2 - 20	4	97-116 Lb. Ft. (85.41-101.68 Nm)	M-3.75" (M-95.25 mm)	2.00" (50.80 mm)	30°
1480	3-2-479	4.44" (112.78 mm)	1.38" (35.05 mm)	5.88" (149.35 mm)	4.75" (120.65 mm)	.50"	1/2 - 20	4	97-116 Lb. Ft. (131.51-157.27 Nm)	M-3.75" (M-95.25 mm)	2.00" (50.80 mm)	20°
	3-2-489	4.44" (112.78 mm)	1.38" (35.05 mm)	5.88" (149.35 mm)	4.75" (120.65 mm)	.50"	1/2 - 20	4	97-116 Lb. Ft. (131.51-157.27 Nm)	M-3.75" (M-95.25 mm)	1.50" (38.10 mm)	8°
1550	4-2-669	5.25" (133.35 mm)	1.38" (35.05 mm)	5.88" (149.35 mm)	4.75" (120.65 mm)	.50"	1/2 - 20	4	97-116 Lb. Ft. (131.51-157.27 Nm)	M-3.75" (M-95.25 mm)	2.00" (50.80 mm)	22°
	4-2-1159	5.25" (133.35 mm)	1.38" (35.05 mm)	5.88" (149.35 mm)	4.75" (120.65 mm)	.50"	1/2 - 20	4	97-116 Lb. Ft. (131.51-157.27 Nm)	M-3.75" (M-95.25 mm)	1.50" (38.10 mm)	8°
	3-2-699 <sup>(3)</sup>	5.25" (133.35 mm)	1.38" (35.05 mm)	6.88" (174.75 mm)	6.12" (155.45 mm)	.38"	3/8 - 24	8	22-26 Lb. Ft. (29.8-35.25 Nm)	M-5.31" (M-134.87 mm)	2.00" (50.80 mm)	-

Note: Spicer Flanges Bolts are **Special Heat Treated Grade 8 Bolts**. Do Not Substitute Inferior Grade Bolts.

<sup>(1)</sup>Bearing plate screw holes located on centerline of yoke

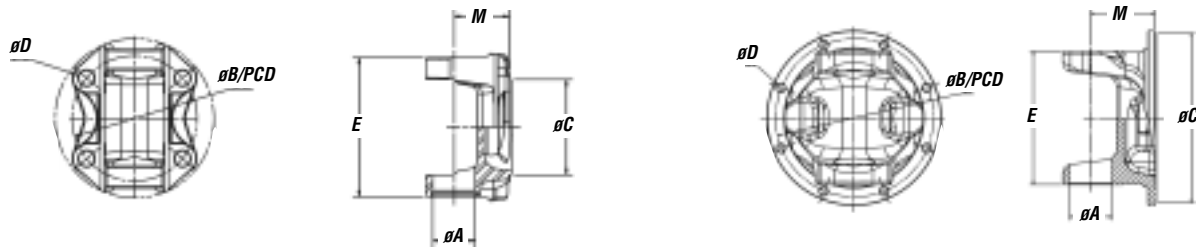
<sup>(2)</sup>For AC tru-stop brake

<sup>(3)</sup>For Bendix brake

<sup>(4)</sup>Angles shown are the maximum for momentary operation

Example: 22°/29° 22° angle when mated with long lug yokes, 29° angle when mated short lug yokes

# Flange Yokes cont.



Series	Part Number	$E$	$\phi A$	$E$	Bolt Detail					$C$	$M$	$B$
		Distance Across Lugs	Bearing Diameter	Flange Swing Diameter	$\phi B/PCD$ (pitch circle diameter)	$\phi D$ Thru Hole Diameter	Size	Number of Holes	Torque	Pilot Diameter M - Male F - Female	Flange Face to Centerline	Joint Angle <sup>(4)</sup>
1610	5-2-599	3.31" (84.07 mm)		6.88" (174.75 mm)	6.12" (155.45 mm)	.38"	3/8 - 24	8	22-26 Lb. Ft. (29.8-35.25 Nm)	M-6.62" F-5.31" <sup>(2)</sup> (M-168.15mm F-134.87)	2.75" (69.85 mm)	22°
	5-2-619											20°
	5-2-629											20°
	5-2-709											20°
	5-2-279 <sup>(1)</sup>	5.31" (134.87 mm)		6.88" (174.75 mm)	6.12" (155.45 mm)	.38"	3/8 - 24	8	22-26 Lb. Ft. (29.8-35.25 Nm)	M-6.62" (M-168.15 mm)	2.75" (69.85 mm)	22°
	5-2-379	5.31" (134.87 mm)		6.88" (174.75 mm)	6.12" (155.45 mm)	.38"	3/8 - 24	8	22-26 Lb. Ft. (29.8-35.25 Nm)	M-6.62" (M-168.15 mm)	1.88" (47.75 mm)	8°
1710	6-2-749	6.09" (157.69 mm)		8.00" (203.20 mm)	7.25" (184.15 mm)	.38"	3/8 - 24	8	22-26 Lb. Ft. (29.8-35.25 Nm)	M-6.62" (M-168.15 mm)	3.00" (76.20 mm)	22°/29°
	6-2-739											
1810	6.5-2-329	7.55" (191.77 mm)		8.00" (203.20 mm)	7.25" (184.15 mm)	.44"	7/16 - 20	12	63-75 Lb. Ft. (85.41-101.68 Nm)	M-7.75" (M-196.85 mm)	3.38" (85.85 mm)	30°
1880	8-2-109	8.09" (205.49 mm)		9.75" (247.65 mm)	8.25" (209.55 mm)	.62"	5/8 - 18	8	194-232 Lb. Ft. (263.02-314.55 Nm)	M-7.00" (M-177.80 mm)	3.50" (88.90 mm)	22°
	8-2-119	8.09" (205.49 mm)		9.75" (247.65 mm)	8.25" (209.55 mm)	.62"	5/8 - 18	8	194-232 Lb. Ft. (263.02-314.55 Nm)	M-7.00" (M-177.80 mm)	2.50" (63.50 mm)	8°

Note: Spicer Flanges Bolts are **Special Heat Treated Grade 8 Bolts**. Do Not Substitute Inferior Grade Bolts.

<sup>(1)</sup>Bearing plate screw holes located on centerline of yoke

<sup>(2)</sup>For AC tru-stop brake

<sup>(3)</sup>For Bendix brake

<sup>(4)</sup>Angles shown are the maximum for momentary operation

Example: 22°/29° 22° angle when mated with long lug yokes, 29° angle when mated short lug yokes

# ***10 Series and Spicer Life Series Application Form for Heavy/Medium Duty Applications***

Company: \_\_\_\_\_ Contact: \_\_\_\_\_

E-Mail: \_\_\_\_\_ Date: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Vocation: \_\_\_\_\_ Vehicle Make: \_\_\_\_\_ Vehicle Model: \_\_\_\_\_

Weight - Empty: \_\_\_\_\_ GVW Total: \_\_\_\_\_

\*GVW (front): \_\_\_\_\_ \*GVW (rear): \_\_\_\_\_ GCW: \_\_\_\_\_

Tire - Size: \_\_\_\_\_ Make: \_\_\_\_\_ \*Rolling Radius: \_\_\_\_\_

Engine - Make: \_\_\_\_\_ Model: \_\_\_\_\_ Displacement: \_\_\_\_\_

\*Net Torque: \_\_\_\_\_ At Speed: \_\_\_\_\_ Net H.P.: \_\_\_\_\_ At Speed: \_\_\_\_\_

Gross Torque: \_\_\_\_\_ At Speed: \_\_\_\_\_ Gross H.P.: \_\_\_\_\_ At Speed: \_\_\_\_\_

Maximum Operating Speed (including engine over speed): \_\_\_\_\_

Trans - Make: \_\_\_\_\_ Model: \_\_\_\_\_

\*Ratios - Forward (including overdrive): \_\_\_\_\_ \*Reverse: \_\_\_\_\_

Torque Converter - Make: \_\_\_\_\_ Model: \_\_\_\_\_ \*Stall Ratio: \_\_\_\_\_

Auxiliary - Make: \_\_\_\_\_ Model: \_\_\_\_\_ Ratios: \_\_\_\_\_

Transfer Case - Make: \_\_\_\_\_ Model: \_\_\_\_\_ Ratios: \_\_\_\_\_

Torque Split Ratio - Front: \_\_\_\_\_ Rear: \_\_\_\_\_

Axle - Make Front: \_\_\_\_\_ Model: \_\_\_\_\_ \*Ratios: \_\_\_\_\_

Axle - Make Rear: \_\_\_\_\_ Model: \_\_\_\_\_ \*Ratios: \_\_\_\_\_

B<sub>10</sub> Life Expectancy: \_\_\_\_\_

Vehicle Duty Cycle: \_\_\_\_\_ Fax: \_\_\_\_\_

Description of Vehicle Function: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Signed: \_\_\_\_\_

Title: \_\_\_\_\_

Spicer Engineer: \_\_\_\_\_ Phone: \_\_\_\_\_

E-Mail: \_\_\_\_\_ Fax: \_\_\_\_\_

# ***10 Series and Spicer Life Series Application Form for Heavy/Medium Duty Applications***

Vehicle Position	Series	Dana Part Number
Trans. to Rear Axle		
Trans. to Auxiliary		
Auxiliary to Rear Axle		
Trans. to Mid Bearing		
Mid Bearing to Rear Axle		
Interaxle		
Wheel Drive		

<b>*Wheel Drive Vehicle Application Sketch</b>	
Plan View	
Side View	

Proposed By: \_\_\_\_\_

Signed: \_\_\_\_\_

Title: \_\_\_\_\_

# Wing Bearing

## Application Form for Commercial Vehicles and Off-Highway Applications

Company:

Filled out by:

### Project identification – Vehicle Model:

Type of vehicle

Articulated Dump truck  Wheel loader  Other

Required B<sub>10</sub> lifetime (hours):

Type of drive: 4 x 2  4 x 4  6 x 4  6 x 6  Other

It is essential that a sketch representing the driveline layout in side and top view is supplied with this data sheet. The layout must contain enough information to calculate the working angles of each driveshaft.

### WEIGHTS:

\*Gross vehicle weight (kg): \_\_\_\_\_ Empty total weight (kg): \_\_\_\_\_

\*Vehicle weights shared by axles (kg): 1<sup>st</sup> = \_\_\_\_\_ 2<sup>nd</sup> = \_\_\_\_\_ 3<sup>rd</sup> = \_\_\_\_\_

### ENGINE:

Manufacturer and Model: \_\_\_\_\_ Diesel  Other  No. of Cylinders \_\_\_\_\_

Max. Power: \_\_\_\_\_ kW  HP  \_\_\_\_\_ @ \_\_\_\_\_ (rpm)

Max. Torque: \_\_\_\_\_ kgm  Nm  \_\_\_\_\_ @ \_\_\_\_\_ (rpm)

### GEAR BOX:

Manufacturer and Model: \_\_\_\_\_ Manual  Automatic

Torque converter: yes  no  \*converter ratio \_\_\_\_\_

Torque converter efficiency: \_\_\_\_\_

\*Gear box ratios: i<sub>1</sub>= \_\_\_\_\_ i<sub>2</sub>= \_\_\_\_\_ i<sub>3</sub>= \_\_\_\_\_ i<sub>4</sub>= \_\_\_\_\_ i<sub>5</sub>= \_\_\_\_\_ i<sub>6</sub>= \_\_\_\_\_

r<sub>1</sub>= \_\_\_\_\_ r<sub>2</sub>= \_\_\_\_\_ r<sub>3</sub>= \_\_\_\_\_

Drop box: yes  no  total ratio \_\_\_\_\_

Front to rear torque split (%): \_\_\_\_\_ Differential lock-up: Yes  No

Gear box total efficiency: \_\_\_\_\_

If available, please forward the Tractive effort diagram related to this installation, with all inputs and conditions used for working it out.

### AXLES:

\*Front axle total ratio: \_\_\_\_\_ Differential lock-up: Yes  No

Front tyre type \_\_\_\_\_ Dynamic rolling radius (m): \_\_\_\_\_

\*Front axle efficiency: \_\_\_\_\_

\*Rear axle total ratio: \_\_\_\_\_ Differential lock-up: Yes  NO

Rear tyre type \_\_\_\_\_ \*Dynamic rolling radius (m): \_\_\_\_\_ \*Rear axle efficiency: \_\_\_\_\_



# Wing Bearing Application Form for Industrial Applications

Company:

Address: \_\_\_\_\_

Phone (int.): \_\_\_\_\_ Fax (int.): \_\_\_\_\_

Filled out by: \_\_\_\_\_ Department: \_\_\_\_\_ Phone extension: \_\_\_\_\_

Please state the name of a person who we may contact in case further details related to this installation are needed

## Project identification :

Required B<sub>10</sub> lifetime (hours): \_\_\_\_\_

## ENGINE:

Manufacturer and Model: \_\_\_\_\_ Diesel  Other  No. of Cylinders \_\_\_\_\_

Max. Power: \_\_\_\_\_ kW  HP  \_\_\_\_\_ @ \_\_\_\_\_ (rpm)

\*Max. Torque: \_\_\_\_\_ kgm  Nm  \_\_\_\_\_ @ \_\_\_\_\_ (rpm)

Average Torque: \_\_\_\_\_ kgm  Nm  \_\_\_\_\_ @ \_\_\_\_\_ (rpm)

\*Working Angle : \_\_\_\_\_ [°] Max. foreseen Angle : \_\_\_\_\_ [°]

Max. foreseen Rotating Speed : \_\_\_\_\_ [°]

## GEAR REDUCTION:

Manufacturer and Model: \_\_\_\_\_ Manual  Automatic

Torque converter: yes  no  conversion ratio \_\_\_\_\_

Torque converter efficiency: \_\_\_\_\_

Gear total ratios: i= \_\_\_\_\_

Rubber coupling: yes  no

Gear box total efficiency: \_\_\_\_\_

## NOTES:

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