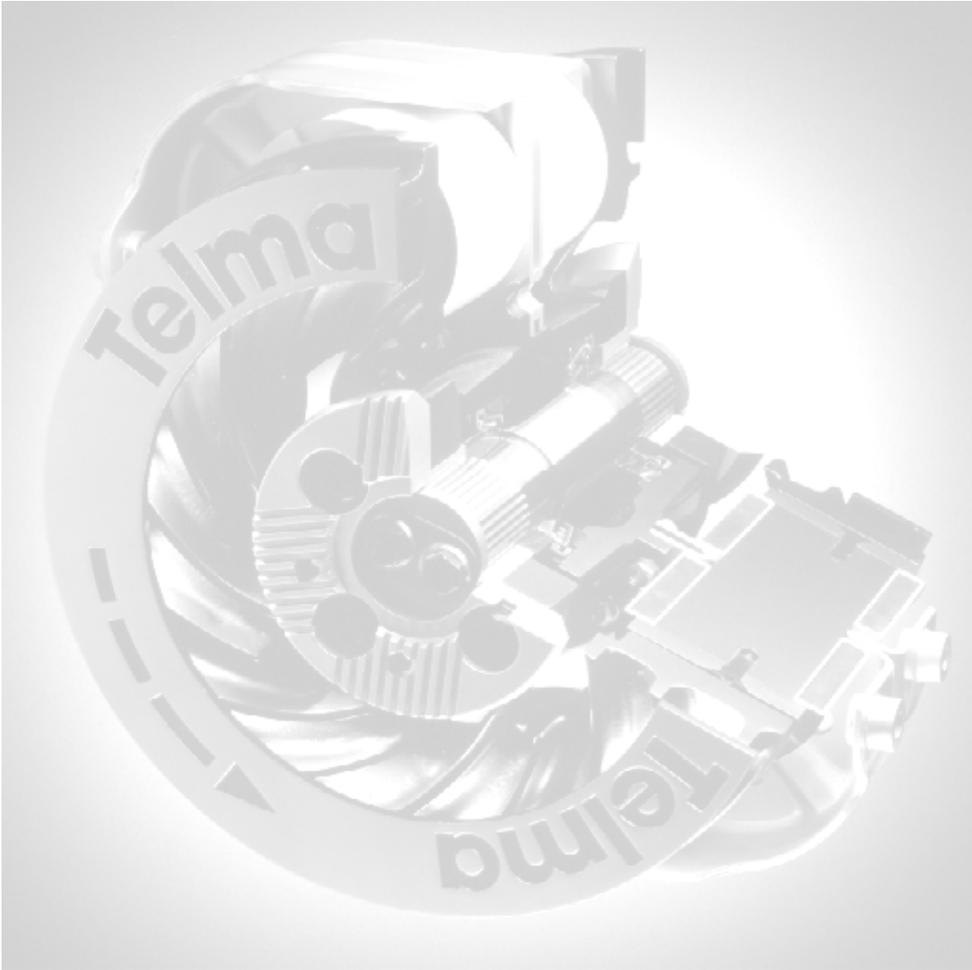


TL117000



Selection Guide

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7. ORDER FORM

1 GENERAL INFORMATION

1.1 COMPARISON MATRIX OF SECONDARY BRAKING SYSTEMS

Performance Measured	Exhaust Brake	Engine Brake	Hydraulic System	Telma
BRAKING HORSEPOWER {% of Rated Engine Horsepower}	50%	60% -110%	110% to 200% Cooling system determines capacity	110% to 300%
BRAKING POWER LIMITATIONS	ENGINE SIZE RPM RATING EXH. VALVE SPRING SIZE	ENGINE SIZE RPM RATING COMPRESSION RATING	UNIT SIZE COOLING SYSTEM CAPACITY	TELMA SIZE
ACTIVATION ~ DEACTIVATION RESPONSE TIME	.20 to 2.00 seconds	100 to 200 milliseconds	1.60 to 2.25 seconds	120 milliseconds
ABS COMPATIBILITY + Deactivation Time + Progressive Reactivation	.20 to 2.00 seconds NO	100 to 200 milliseconds NO	1.60 to 2.25 seconds NO	60 -100 milliseconds YES
MODULATION	TOTAL ON or TOTAL OFF	TOTAL ON or TOTAL OFF	PROGRESSIVE UNEVEN DOWNSHIFT INERTIA	PROGRESSIVE SMOOTH
HEAT DISSIPATION	ENGINE COOLING SYSTEM	ENGINE COOLING SYSTEM	TRANSMISSION COOLING SYSTEM ENGINE COOLING SYSTEM	SELF AIR COOLED
BRAKING EFFECTIVENESS	NONE IN NEUTRAL or TORQUE CONVERSION. CONSTANTLY VARYING WITH RPM & GEAR CHANGES - DOWNSHIFTING REQUIRED TO MAXIMIZE	NONE IN NEUTRAL or TORQUE CONVERSION. CONSTANTLY VARYING WITH RPM & GEAR CHANGES - DOWNSHIFTING REQUIRED TO MAXIMIZE	LIMITED BRAKING AT LOW AND HIGH VEHICLE SPEEDS.	BRAKING ACTION CONSTANT THROUGHOUT ENTIRE VEHICLE OPERATING SPEED RANGE
NOISE	LOW FREQUENCY RUMBLE	LOW FREQUENCY POPPING	ALMOST SILENT	NONE
IMPACT ON EQUIPMENT	BRAKE LOADS CARRIED BY TRANSMISSION INTERNAL COMPONENTS	BRAKE LOADS CARRIED BY TRANSMISSION INTERNAL COMPONENTS	BRAKE LOADS CARRIED BY TRANSMISSION INTERNAL COMPONENTS (INPUT UNITS)	NONE
WEIGHT	NON FACTOR	NON FACTOR	110 LBS (INCLUDES COOLER)	FV61-41, 286 LBS

1.2 RANGE AND MODEL CROSS REFERENCE**

AXIAL Range	
Previous Model	New Model
AE 30-32	AF 30-35
AC 50-55	AF 50-55
AC 50-65	AF 50-90
AC 50-80	AF 50-90
AC 51-00	AF 50-90
AD 50-90	AF 50-90
AC 61-25	AD 61-30
AC 61-35	AD 61-30
AC 61-60	AD 61-55
AC 72-00	AD 72-00
AC 82-45	AD 72-45

FOCAL Range	
Previous Model	New Model
FN 50-85	-----
FV 61-00	-----
FV 61-30	FV 61-40
FV 61-40	-----
FV 71-70	FN 71-65
FN 72-00	FN 71-95
FN 72-20	-----
FN 72-40	-----

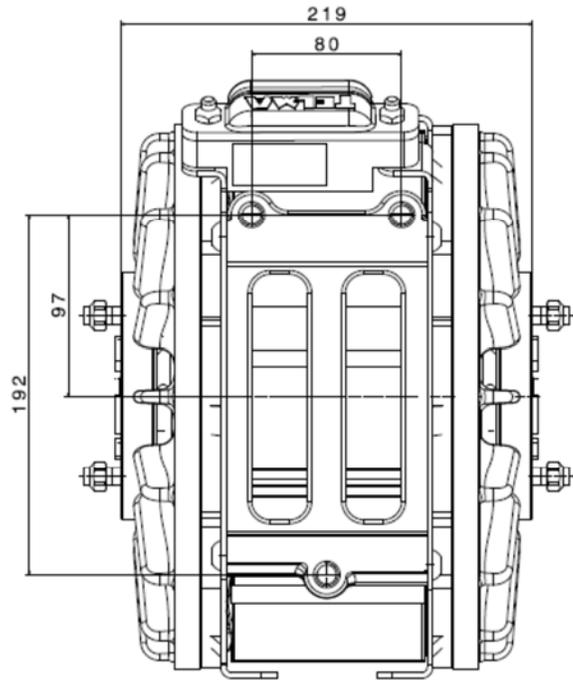
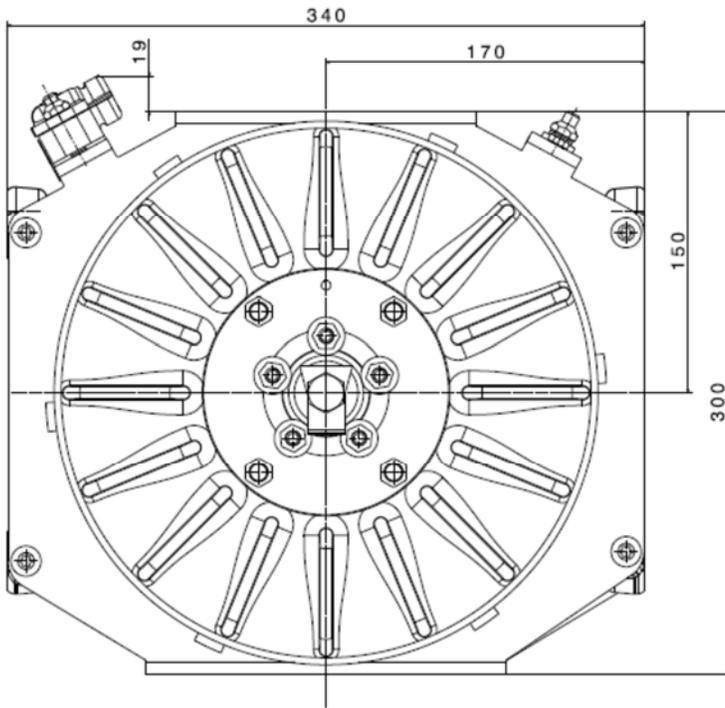
Example	
A C 82-45	
↓	↘
Index Letter	Index Number

Index Number	Rotor Diameter
3	251 to 300 mm
5	351 to 400 mm
6	401 to 450 mm
7	450 to 505 mm
8	506 to 550 mm

Index Letter	
A X I A L	E CE Range C AC Range D AD Range F AF Range
F O C A L	V Old Generation Rotor N New Rotor

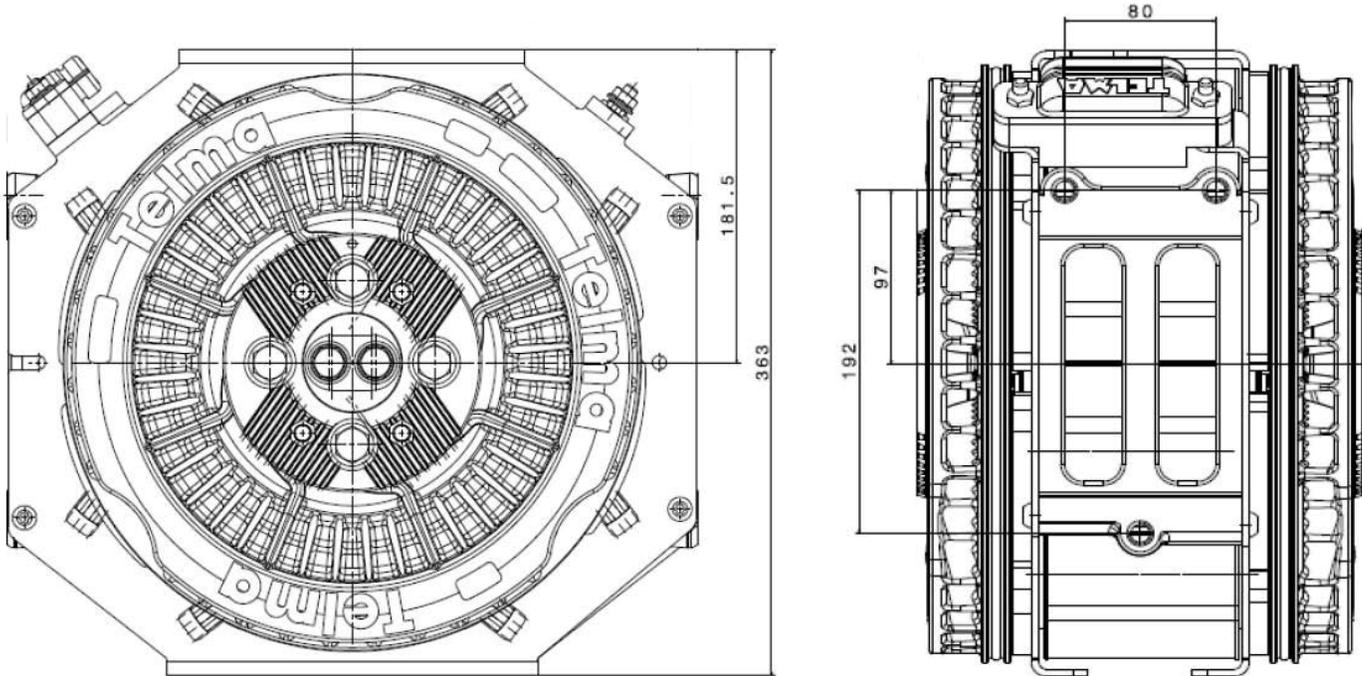
2 SPECIFICATIONS

2.1 AF30-35



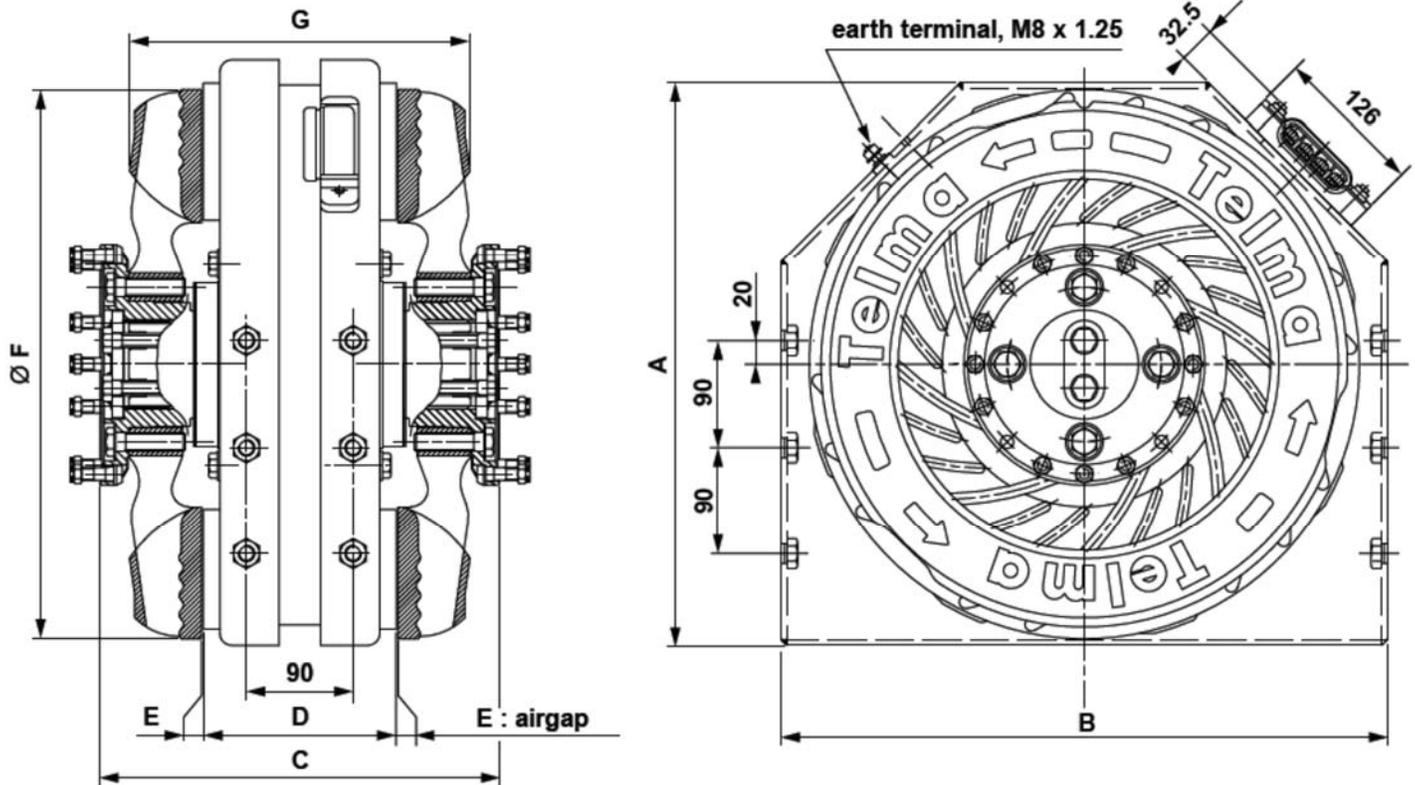
MODEL	DIMENSIONS			HORSE POWER AT 2500 rpm	MAXIMUM BRAKING TORQUE LB.-FT	WEIGHT LBS	AIR GAP INCHES	SHAFT TORQUE LIMIT LB.-FT	AMPS PER STAGE	NUMBER OF STAGES
	height	width	Length rotor to rotor							
AF30-35	11 13/16	13 3/8	8 1/4	120	258	128	0.031	2460	32	3

2.2 AF5 RANGE



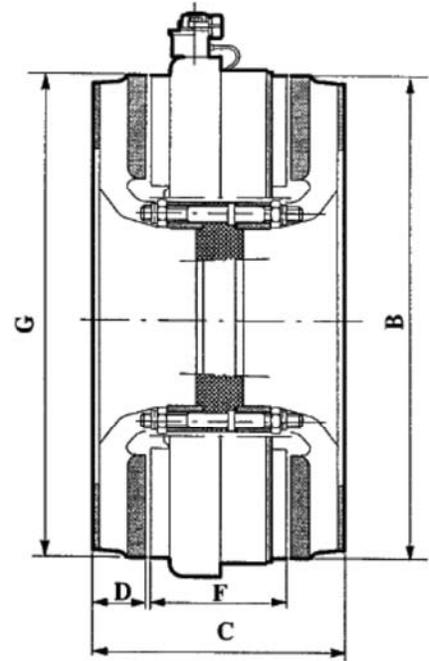
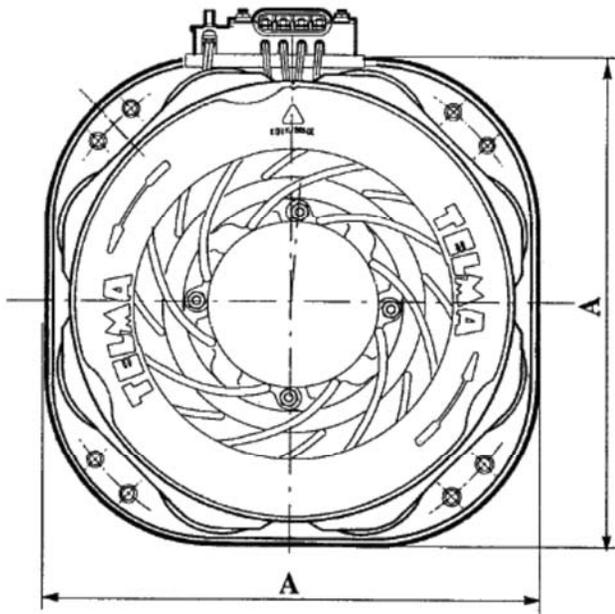
MODEL	REPLACES	DIMENSIONS			HORSE POWER AT 2500 rpm	MAXIMUM BRAKING TORQUE LB.-FT	WEIGHT LBS	AIR GAP INCHES	SHAFT TORQUE LIMIT LB.-FT	AMPS PER STAGE
		height	width	Length rotor to rotor						
AF50-55	AC50-55	14 1/4	14 3/4	8 3/4	140	413	209	0.039	7380	22
AF50-90	AD50-90	14 1/4	15 3/4	8 3/4	300	663	223	0.039	7380	49

2.3 AD RANGE



MODEL	REPLACES	DIMENSIONS			HORSE POWER AT 2500 rpm	MAXIMUM BRAKING TORQUE LB.-FT	WEIGHT LBS	AIR GAP INCHES	SHAFT TORQUE LIMIT LB.-FT	AMPS PER STAGE
		A	B	G						
AD61-30	AC61-25	18	19 1/2	11 7/16	350	959	419	0.039	9440	33
AD61-55	AC61-60	18	19 1/2	11 7/16	450	1180	434	0.055	9440	54
AD72-00	AC72-00	18 3/4	20 7/16	11 1/4	600	1475	507	0.055	23300	60.5
AD72-45	AC82-45	19 1/2	20 7/16	11 1/2	680	1770	551	0.047	23300	61

2.4 FOCAL RANGE



MODEL	REPLACES	DIMENSIONS INCHES			HORSEPOWER AT 2500 rpm	MAXIMUM BRAKING TORQUE LB.-FT	WEIGHT LBS	AIR GAP INCHES	AMPS PER STAGE 12V
		A	B	C					
FV61-00	-----	18 1/4	18 1/4	8 1/2	263	738	256	0.051	37
FV61-40	-----	18 1/4	18 1/4	8 1/2	351	1024	286	0.051	52.5
FN71-65	FV71-70	20 5/16	20 5/16	9 7/16	450	1180	359	0.055	50
FN71-95	FN72-00	20 5/16	20 5/16	9 7/16	540	1401	362	0.061	58.4
FN72-20	-----	20 5/16	20 5/16	9 7/16	585	1623	381	0.061	69.4
FN72-40	-----	20 5/16	20 5/16	9 1/2	702	1722	407	0.061	75

3.2 Tire Radius Table

<i>Tire Size</i>	<i>Radius</i>	<i>Tire Size</i>	<i>Radius</i>	<i>Tire Size</i>	<i>Radius</i>
10-22.5	19.2	11.00R-24.5	20.6	14.00-24	25
10.00-20	19.7	11R-22.5	19.7	14.00-25	25.3
10.00-22	20.6	11R-24.5	20.7	14/80R-20	19.6
10.00-24	21.6	12-22.5	20.1	15-19.5	18.4
10.00R-20	19.7	12.00-20	21	15-22.5	19.8
10.00R-22	20.7	12.00-24	22.9	15R-22.5	19.6
10R-22.5	19.5	12.00R-20	20.4	16-25	28.2
11-22.5	19.7	12.00R-22	21.4	16.5-19.5	18.9
11-24.5	20.6	12.00R-24	22.4	16.5-22.5	20.5
11.00-18	19.2	12R-22.5	20.7	16.5R-22.5	20.1
11.00-20	20.1	12R-24.5	20.2	18-19.5	19.5
11.00-22	21.1	13.00-20	22	18-22.5	20.9
11.00-24	22	13.00R-20	21.2	18R-22.5	21.5
11.00R-20	20.2	13/80R-20	19.1	19.5-19.5	20.3
11.00R-22	21	14-17.5	16.5	20.5R-25	25.8
11.00R-24	22	14.00-20	23	215/75R-17.5	14.2
215/85R-16	14.3	7.00-16	14.4	8.25-18	17.2
21R-25	28	7.00-20	16.9	8.25-20	18.2
225/70R-19.5	15	7.00R-16	14.3	8.25R-15	15.5
225/75R-16	13.6	7.50-16	15	8.25R-17	16
235/80R-22.5	17.4	7.50-17	16	8.25R-20	18.1
235/85R-16	14.7	7.50-18	16.4	8.75-16.5	13.8
245/70R-19.5	15.7	7.50-20	17.4	8R-19.5	15.7
245/75R-22.5	17.4	7.50R-16	14.6	9-19.5	16.9
255/70R-22.5	17.1	7.50R-17	15.8	9-22.5	18.1
265/75R-22.5	18.2	7.50R-20	17	9.00-18	18
275/80R-22.5	18.8	7.75-15	13.1	9.00-20	19
275/80R-24.5	19.3	8-17.5	14.9	9.00R-20	19.1
285/75R-24.5	19.7	8-19.5	16	9R-17.5	15.5
295/75R-22.5	19	8.00-16.5	13.4	9R-22.5	18.1
315/75R-22.5	19.2	8.25-15	15.6		
315/80R-22.5	19.7	8.25-17	16.7		

3.3 Axial Model Selection and Shaft Torque Limits

(Skip this page for focal applications)

Use the table below to choose the model with a Torque Rating as close as possible to the calculated Torque Factor and for the u-joint series of the vehicle.

Example: For a calculated Torque Factor of 1256 and a u-joint series of 1610, the appropriate AXIAL model would be AD61-30 part number BC301158.

Axial Model Selection Table

Torque Rating	U-Joint Series	Model	Part Number
550	1410 (SPL36) / 1480 (SPL55) / 1550 (SPL70)	AF 50-55	LFA101156
900	1480 (SPL55) / 1550 (SPL70) / 1610 / SPL90 / SPL100	AF 50-90	LBA101158
1300	1480 (SPL55) / 1550 (SPL70) / 1610 / SPL90 / SPL100	AD 61-30	BC301158
1300	1610 / SPL90 / 1710 / SPL140	AD 61-30	BC301152
1600	1610 / SPL90 / 1710 / SPL140	AD 61-55	BD301152
2000	1710 / 1760 / 1810 / SPL140* / SPL170 / SPL250	AD 72-00	BE301157
2400**	1710 / 1760 / 1810 / SPL140* / SPL170 / SPL250	AD 72-45	BH301157

- *Flange yoke holes must be enlarged to 7/16" diameter
 - **Divide 2400 by the calculated torque factor. If the result is less than 0.70, contact Telma technical support for application approval.
 - Divide the torque rating by the calculated torque factor. The result should not exceed 1.2
- Note:** All part numbers listed are for 12-volt systems. Contact Telma for other applications.

Comparing Driveline Torque to Shaft Limits

Estimate maximum driveline torque by making the following calculation and comparing to shaft torque limits in the table below. The driveline torque calculation should not exceed the Telma shaft torque limits. For applications such as off road applications with special gearing, obtain lowest gear ratios of main transmission, auxiliary transmission or transfer case. Contact Telma for more detailed analysis.

Multiply

Engine Maximum Torque Rating (lb-ft)

X

Transmission lowest gear ratio (5.0 typical)

X

Torque converter ratio (2.0 typical) =

Model	Shaft Torque Limit (lb-ft)
AF 50-55	7380
AF 50-90	7380
AD 61-30	9440
AD 61-55	
AD 72-00	23300
AD 72-45	

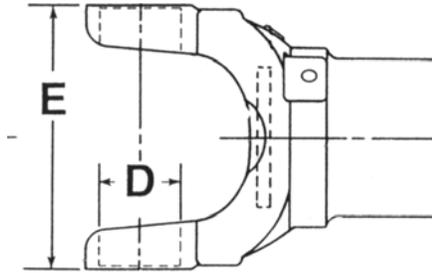
3.4 Flange Yokes for Axial Applications

(Skip this page for focal applications)

Choose the Flange Yokes

Axial model installations require two flange yokes for each installation. Some Spicer flange yokes needed for applications are available from Telma. Use the figure and table below to identify the driveline series and select the flange yoke for your application.

The flange index refers to the last three digits of the Telma part number.



Flange Yoke Selection Table

Driveline u-joint Series	E Approximate Distance across lugs	D Approximate Bearing diameter	Flange index (last 3 digits of the part number)	Telma flange yoke part number	Spicer flange yoke part number
1350 (SPL30)	3 7/8"	1 3/16"	154	TIF01082	3-2-119
1410 (SPL36)	4 7/16"	1 3/16"	155	TIF01080	3-2-429
1480 (SPL55)	4 7/16"	1 3/8"	155	TIF01081	3-2-479
1480 (SPL55)	4 7/16"	1 3/8"	158	TIF01086	3-2-499
1550 (SPL70)	5 1/4"	1 3/8"	158	TIF01088	4-2-689
SPL90/SPL100	5"	1 5/8"	158	TIF01089 n/a	90-2-19
SPL90/SPL100	5"	1 5/8"	152	n/a	90-2-69-1
1610	5 5/16"	1 7/8"	158	TIF01091	5-2-279
1610	5 5/16"	1 7/8"	152	TIF01090	5-2-629
SPL140	5"	1 15/16"	152/157**	TIF01085 n/a	140-2-19
1710	6"	1 15/16"	152	TIF01093*	6-2-749-1
1710	6"	1 15/16"	157	TIF01094*	6-2-779-1
1760	7"	1 15/16"	157	TIF01095*	6.3-2-19-1
SPL170	6 7/16"	2 3/16"	157	TIF01084 n/a	170-2-19
1810	7 1/2"	1 15/16"	157	TIF01097*	6.5-2-329-1
SPL250	6 7/16"	2 3/8"	157	TIF01101 n/a	250-2-49-1

* Half Round flange yoke

** Flange yoke holes must be enlarged to 7/16" diameter for 157 index

4 AXIAL UNIVERSAL INSTALLATIONS

4.1 Universal Installation Selection

Choose one part number from each category for a complete installation.

1. **Telma**

Choose the Telma part number based on the Torque Factor calculation and driveline series

2. **Universal Outside Mounting Kit**

Choose mounting kit **TIK03000**.

Note: No offset is possible with AF50-55 and AF50-90

Note: If inside mount chassis brackets are desired notify Telma technical support at time of installation

3. **Universal Control System Kit (12V) with Wiring Harness**

Choose one part number based on the application.

Foot control kits TIK10103 and TIK10104 include Telma Control Module (TRCM) (P/N TIG31062). No TRCM is required for hand control kit TIK10100.

Hand Control	TIK10100
Hydraulic Brake Foot Control	TIK10103*
Air Brake Foot Control	TIK10104

IMPORTANT

* TIK10103 does not contain foot switch mounting brackets. Contact Telma technical support to find out if brackets are available for your application. If not, brackets must be designed and fabricated by the installer.

Note 1: For dual control: Order hand control switch (P/N JL210304) in addition to foot control system kit TIK10103 or TIK10104.

Note 2: Refer to telmausa.com technical website for general wiring diagrams.

Contact vehicle manufacturer or Telma Technical Department for specific wiring connections.

4. **Flange Yokes**

Choose a flange yoke part number based on the u-joint series and order a quantity of two.

5. **Additional Requirements**

Driveline modification: to be provided by the installer.

An electrical system upgrade may be necessary, depending on vehicle electrical needs, Telma model used, and vehicle vocation. As an example, a 200-amp alternator and 4 group-31 high cycle batteries is a typical recommendation for some refuse applications.

6. **Installation Time**

Average install time including Telma mounting and wiring is 16 –20 hours.

4.2 GROUPED UNIVERSAL AXIAL KITS

1. Telma Unit

The Telma unit is included in the kit

Choose the kit below based on the Torque Factor calculation, the shaft torque limits, and u-joint size.

2. Mounting kit

Mounting kits use universal outside mounting chassis brackets TIB10304 and retarder brackets TIB10305, TIB10306.

Note: Contact Telma Technical support if your application requires inside mounting chassis brackets

3. Controls

Controls included may be hand control or universal foot control for air brakes

Note 1: Foot control kits listed below include Telma Control Module (TRCM). No TRCM included with hand control kits TIK10201 and TIK13090.

Note 2: Refer to telmausa.com technical website for general wiring diagrams.
Contact vehicle manufacturer or Telma Technical Department for specific wiring connections.

4. U-joint size

Two flange yokes are included in the kit.

Choose a kit below based on the flange yokes needed.

Choose a kit from the table below based on the items mentioned above.

Torque Rating	Telma Model	Controls	U-Joint Series	Transmission	Brakes Air / Hyd	Part Number
1300	AD 61-30	foot	1710	Allison	Air	TIK13097
1600	AD 61-55	hand	1710	Allison	Air / Hyd	TIK10201
1600	AD 61-55	foot	1710	Allison	Air	TIK13089
2000	AD 72-00	hand	1710	Allison	Air / Hyd	TIK13090
2000	AD72-00	foot	1710	Allison	Air	TIK13094
2000	AD72-00	foot	1760	Allison	Air	TIK13095
2000	AD72-00	foot	1810	Allison	Air	TIK13096
2450	AD72-45	foot	1710	Allison	Air	TIK13084
2450	AD72-45	foot	1760	Allison	Air	TIK13085
2450	AD72-45	foot	1810	Allison	Air	TIK13087

5 AXIAL kits by Application

5.1 Chevrolet 4500 Express Cutaway

2010 and beyond Chevrolet 4500 Express Cutaway chassis with dual rear wheels

1. Installation Kit (includes Telma model AF50-55 / p/n LFA101156)

Diesel 6.6L engine all wheelbases

- ↳ Order installation kit part number – **TIK10316**

Gasoline 6.0L engine all wheelbases

- ↳ Order installation kit part number – **TIK10317**

Note 1: This kit includes Telma model AF50-55 / part number LFA101156 and complete wiring harness with TRCM control module.

Note 2: This kit does not include drivelines or flange yokes

2. Flange Yokes

Order two 1480 flange yokes Spicer part number 3-2-479 or Telma part number TIF01081

3. Additional Requirements

Driveline modification: to be provided by the installer

Exhaust modification required

4. Installation Time

Average install time including Telma mounting and wiring is 8 –10 hours for a chassis without a body.

5.2 Ford Econoline Cutaway

2009 and beyond Ford Econoline Cutaway chassis with dual rear wheels

5. Installation Kit (includes Telma model AF50-55 / p/n LFA101156)

E350 and E450 all wheelbases

↳ Order installation kit part number – **TIK10689**

Note 1: This kit includes Telma model AF50-55 / part number LFA101156 and complete wiring harness with TRCM control module.

Note 2: This kit does not include drivelines or flange yokes

6. Flange Yokes

Order two 1410 flange yokes Spicer part number 3-2-429 or Telma part number TIF01080

7. Additional Requirements

Driveline modification: to be provided by the installer

8. Installation Time

Average install time including Telma mounting and wiring is 8 –10 hours for a chassis without a body.

5.3 Ford F350/F450/550

F350/450/550 from model year 2011

1. Installation kit

F350



Order installation kit part number – **TIK10690** (includes AF50-55 / LFA101156)

F450/550



Order installation kit part number – **TIK10688** (includes AF50-90 / LBA101158)

Note 1: These kits include retarder, wiring harness, rotary foot switch and bracket for fixed brake pedal.

Contact Telma technical support if you have adjustable brake pedal

Note 2: This kit does not include drivelines or flange yokes

2. Flange Yokes

For F350 with 1410 u-joints and Telma LFA101156 (TIK10690) order two flange yokes, Spicer part number 3-2-429.

For F450/550 with 1480 u-joints and Telma LBA101158 (TIK10688) order two flange yokes, Spicer part number 3-2-499.

3. Additional Requirements

Driveline modification: to be provided by the installer

4. Installation Time

Average install time including Telma mounting and wiring is 8 –10 hours

5.4 Navistar ICBus HC/Durastar and UC/Terrastar bus cutaway

1. Installation kit

↳ Order installation kit part number – **TIK11212**

Note 1: This kits include AF50-90 retarder (LBA101158), wiring harness, rotary foot switch and bracket, outside mount chassis brackets and TRCM for connection to J1939.

Note 2: These kits do not include drivelines or flange yokes

2. Flange Yokes

For Navistar chassis equipped with SPL90 u-joint series order 2 flange yokes, Spicer part number 90-2-19.

3. Additional Requirements

Driveline modification: to be provided by the installer

4. Installation Time

Average install time including Telma mounting and wiring is 8 –10 hours

5.6 Mack with inside chassis brackets

1. **Telma Unit**

2. **Mounting kit**

Mounting kits use inside chassis brackets TIB06000 and TIB05043

3. **Controls**

Universal foot control for air brakes is included

Note: Refer to www.telmausa.com technical website for general wiring diagrams.

Contact vehicle manufacturer or Telma Technical Department for specific wiring connections.

4. **U-joint size**

Two flange yokes are included in the kit.

Choose a kit based on the flange yokes needed.

Driveline Series	Kit part number
1710	TIK13101
1760	TIK13102
1810	TIK13103

6 FOCAL UNIVERSAL INSTALLATIONS

1. Telma →

Choose the Telma from the table based on the Torque Factor calculation.

Torque Rating	Model	Telma 12V Part Number Equipped with Rotor Spacer
1000	FV61-00	FU831310
1400	FV61-40	FJ791310
1600	FN71-65	DV311279
1900	FN71-95	DU311279
2200	FN72-20	DJ311279
2400	FN72-40	DK311279

2. Focal Mounting Kit

Choose a mounting kit based on the Telma model chosen and the axle models on the following pages in sections 6.1, 6.2, 6.3, and 6.4.

Rent or Buy the Telma Spot Facing Tool

The pinion cage of the axle must be spot faced before the Telma can be installed. Spot facing is a simple procedure to machine the surface of the pinion cage bolt holes. This avoids the need for a special pinion cage. A tool and procedure to perform this operation can be rented or purchased from Telma. Use the table below for correct Spot Face Tool kits. Contact Telma technical department for more details.

Axle Make/Model	Kit Includes Basic Tool and	RENT Spot Face Tool P/N	BUY Spot Face Tool P/N
Meritor RS/RD/RP145/160	1 3/16" Counterbore 1/2" Pilot	TIR04000	TIT04000
Dana 105S	1 1/2" Counterbore 3/4" Pilot	TIR04001	TIT04001
Dana 090S	1 3/8" Counterbore 5/8" Pilot	TIR04002	TIT04002
Dana 060S	1 3/16" Counterbore 9/16" Pilot	TIR04003	TIT04003

3. Flange Yokes →

Choose only one of the flange yokes from the table.

Driveline Series	Flange Yoke Part Number
1610	VB107389
1710	VB107149
1760	VB107793
1810	VB107148

5. Universal Control System Kit (12V) with Wiring Harness

Choose one part number based on the application.

Foot control kits TIK10103 and TIK10104 include Telma Control Module (TRCM) (P/N TIG31062). No TRCM is required for hand control kit TIK10100.

Hand Control	TIK10100
Hydraulic Brake Foot Control	TIK10103*
Air Brake Foot Control	TIK10104

IMPORTANT

* TIK10103 does not contain foot switch mounting brackets. Contact Telma technical support to find out if brackets are available for your application. If not, brackets must be designed and fabricated by the installer.

Note 1: For dual control: Order hand control switch (P/N JL210304) in addition to foot control system kit TIK10103 or TIK10104.

Note 2: Refer to telmausa.com technical website for general wiring diagrams.

Contact vehicle manufacturer or Telma Technical Department for specific wiring connections.

6. Installation Time Average install time including Telma mounting and wiring is 8-12 hours.

6.1 Meritor RS145 Single Axle

Focal Mounting Kit

Choose a mounting kit from the table below based on the Telma model chosen and the axle. Refer to section 6.1 Universal Focal Installation for other items needed.

Differential Assembly Number	Differential Rough Casting Number	Pinion Cage Outside Diameter	Axle Ratio	Driver Controlled Differential Lock (DCDL)	Telma Model	Mounting Kit Part Number
A2 3200-S-1865	3200-R-1864	8.5"	3.42-7.17	NO	FV61-00 FV61-40	TIK02323
A2 3200-A-1873					FN71-65 FN71-95 FN72-40	TBD
A2 3200-L-1676	3200-K-1675	9.65"	2.64-7.17	NO	FV61-00 FV61-40	TIK02324
A2 3200-U-1919					FN71-65 FN71-95 FN72-40	TBD
A2 3200-G-1879	3200-F-1878			YES		
A2 3200-F-1904						

This kit contains the stator carrier, companion flange and the necessary hardware to mount the Telma focal to the axle.

6.3 Meritor RS160-185 Single Axle

Focal Mounting Kit

Choose a mounting kit from the table below based on the Telma model chosen and the axle. Refer to section 6.1 Universal Focal Installation for other items needed.

1. Focal Mounting Kit

Choose a mounting kit based on the Telma model chosen.

Telma Model	Part Number
<ul style="list-style-type: none"> FV61-00 FV61-40 	FB940100
<ul style="list-style-type: none"> FN71-65 FN71-95 FN72-20 FN72-40 	FD983100

2. Flange Kit for spot faced pinion cages

Choose a flange kit according to axle model. These kits are for spot faced axles only and include a Meritor Telma ready pinion companion flange. A special pinion cage is not needed or included. See details below.

Axle Model	Part Number
RS160 axle	TIK02321
RS180-185 axle	TIK02322

6.4 DANA 060/090/105 S/D SINGLE AXLE

DANA APPLICATION APPROVAL FORM MUST BE COMPLETED AND SUBMITTED BEFORE INSTALLATION IS ALLOWED

Focal Mounting Kit

Choose a mounting kit from the table below based on the Telma model chosen and the axle. Refer to section 6.1 Universal Focal Installation for other items needed.

Telma Model	Kit Part Number		
Axle Model	060S	090S	105S
<ul style="list-style-type: none"> FV61-00 FV61-40 	TIK12507	-----	-----
<ul style="list-style-type: none"> FN71-65 FN71-95 FN72-20 FN72-40 	TIK12506	TIK12501	TIK12500

This kit contains the stator carrier, companion flange and the necessary hardware to mount the Telma focal to the axle.

6.5 Dana D170/D190 Tandem Axle

DANA APPLICATION APPROVAL FORM MUST BE COMPLETED AND SUBMITTED BEFORE INSTALLATION IS ALLOWED

1. Telma

Choose Telma part number **DK311415**.

2. Focal Mounting Kit

This kit contains the stator carrier, companion flange and the necessary hardware to mount the Telma focal to the axle.

Kit Part Number	
D170	D190
TIK12504	TIK12505

6.6 GROUPED FOCAL UNIVERSAL KITS

1. Telma Unit

The Telma unit is included in the kit
 Choose the kit below based on the Torque Factor calculation.

2. Mounting kit

The focal mounting kit is included in the kit

3. Controls

Controls included may be may hand control or universal foot control for air brakes

Note 1: Foot control kits listed below include Telma Control Module (TRCM).

Note 2: Refer to telmausa.com technical website for general wiring diagrams.

Contact vehicle manufacturer or Telma Technical Department for specific wiring connections.

4. U-joint size

The Telma flange yoke is included in the kit.
 Choose a kit below based on the u-joint size.

Choose a kit from the table below based on the items mentioned above.

Torque Rating	Telma Model	Meritor Axle	Controls	U-Joint Series	Transmission	Brakes Air / Hyd	Part Number
1600	FN71-65	RS160	foot	1710	Allison	Air	TIK13061
2200	FN72-20	RS160	foot	1710	Allison	Air	TIK13062
2400	FN72-40	RS160	foot	1710	Allison	Air	TIK13063
1600	FN71-65	RS160	foot	1810	Allison	Air	TIK13064
2200	FN72-20	RS160	foot	1810	Allison	Air	TIK13065
2400	FN72-40	RS160	foot	1810	Allison	Air	TIK13066
1600	FN71-65	RS180	foot	1710	Allison	Air	TIK13067
2200	FN72-20	RS180	foot	1710	Allison	Air	TIK13068
2400	FN72-40	RS180	foot	1710	Allison	Air	TIK13069
1600	FN71-65	RS180	foot	1810	Allison	Air	TIK13070
2200	FN72-20	RS180	foot	1810	Allison	Air	TIK13071
2400	FN72-40	RS180	foot	1810	Allison	Air	TIK13072



Date: _____

Order Form

Customer number: _____

Shipment Number: _____

Application Data	
Vehicle year / make / model	
Wheelbase	
GVW	
Axle Ratio	
Tire Size	
Driveline Series	
Transmission make / model	
Axle make / model	
End User/Vocation	
Alternator/Batteries	
Telma Control System (foot / hand / dual)	

Bill to:		Ship to:	
Company		Company	
Address		Address	
City		City	
State	Zip	State	Zip
Phone		Phone	
Attention		Attention	

Customer P. O.	Date Needed	Shipment Date	Ship Via	Ordered By

Qty	Telma Part Number	DESCRIPTION	Net price	
			Price each	Price Total

Special Instructions:	
Approval for Telma model and Installation Kit:	Date:
Please attach customer purchase order	