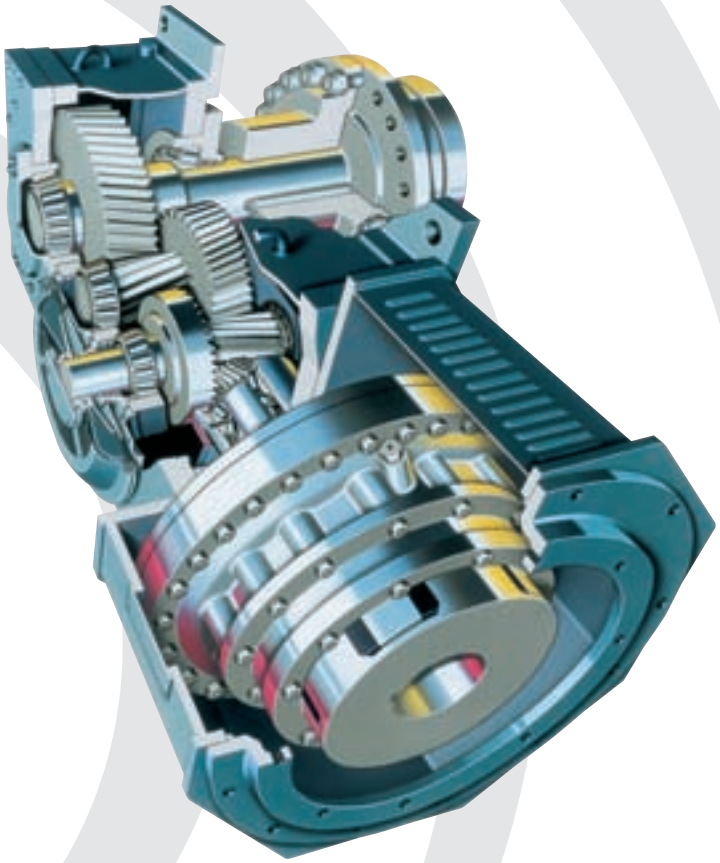
Falk™ Alignment-Free Drives | Lowest Initial Cost, Simplified Installation

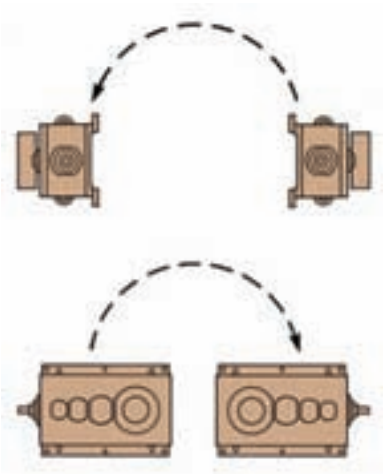
(English-Metric)



REXNORD

Falk™ Alignment Free Drives™
Lowest Initial Cost, Reduced Downtime, Simplified Maintenance

The Falk Alignment Free Drive – Developed by Rexnord specifically to meet the demands of worldwide surface and underground belt conveyor applications – is a cost-effective alternative to conventional drive approaches. The Alignment Free drive offers 40-125 output rpm, compatibility with both Nema and IEC motors in ranges from 125Hp (90Kw) to 800Hp (630Kw), and uses fluid or electrical soft starts.



For the lowest initial cost, backed up with simplified maintenance, minimal downtime, and reduced spares expense, the Falk Alignment Free drive puts teeth into your productivity plans.

Lowest Initial Cost

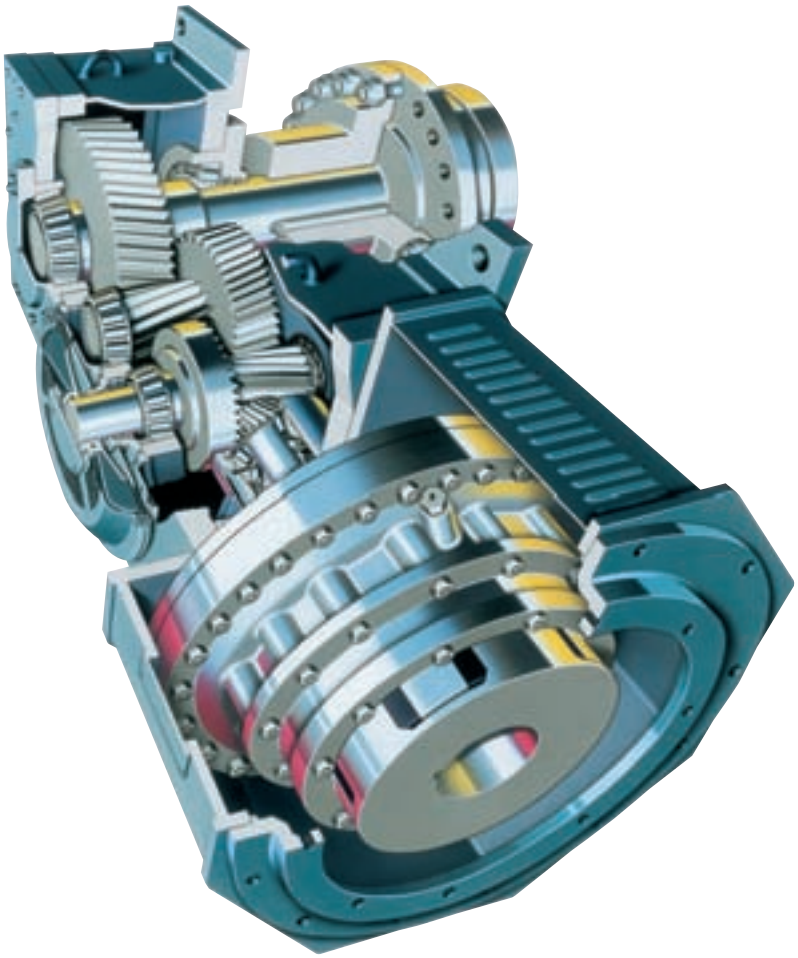
Up front, you save as much as 20% over conventional foot-mounted approaches. How? By eliminating expensive foundation and installation costs. A symmetrical housing design allows the Alignment Free drive to be used in right or left-hand assembly, with only a dipstick and torque arm relocation.

Reduced Downtime

Shaft misalignment – a major cause of costly failure and downtime – is eliminated. What's more, the Alignment Free drive offers registered fit and bolt-together construction for quick, proper assembly and trouble-free operation. The drive is not affected by foundation movement, and offers superior mobility.

Simplified Maintenance

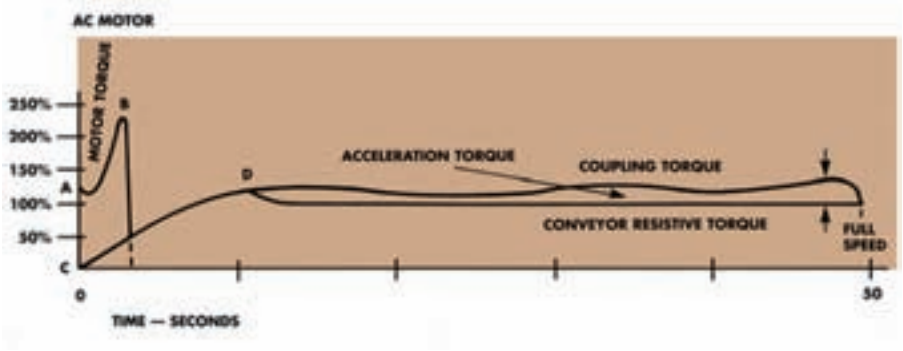
The Alignment Free drive gives you plenty of value-added features, including "High Strength" gearing, "Tough Steel" housing construction and Magnum™ tandem seals. These extras simplify maintenance, extend operating life – and save on long-term costs.



Extra Soft Starts

The combination of the Falk True Torque® extended start fluid coupling and the Alignment Free drive exceeds nearly all requirements for conveyor belt protection and load sharing. An improved fluid circuit design – with an oversized delay fill chamber and field-adjustable metering orifices – delivers ultra-low starting torques, and conveyor start times as long as 50 seconds.

The Alignment Free Drive also accepts AC and DC motors and controls for multiple-drive speed and torque control.



Accessories and Options

Standard Accessories

- Intermediate Shaft Fans
- Electric Fans
- Coupling Guards
- High Speed Backstops

Engineered Options

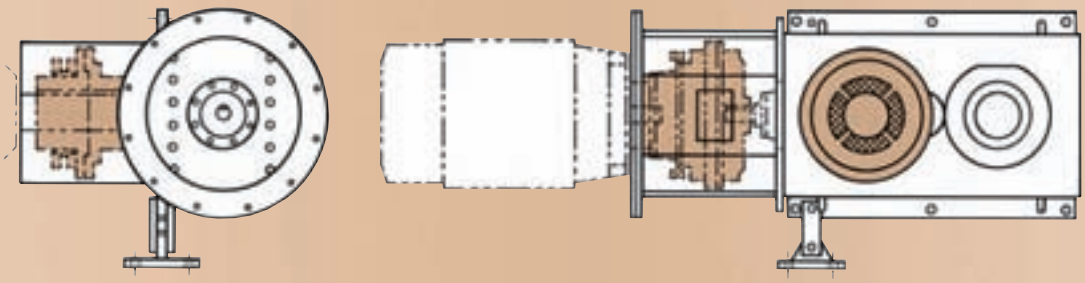
- Brakes
- Flywheel
- Sump Heaters
- Inching Drives
- Special Paint

MCF Coupling (Flanged Connection) Coupling with shrink disc offers easy installation and removal

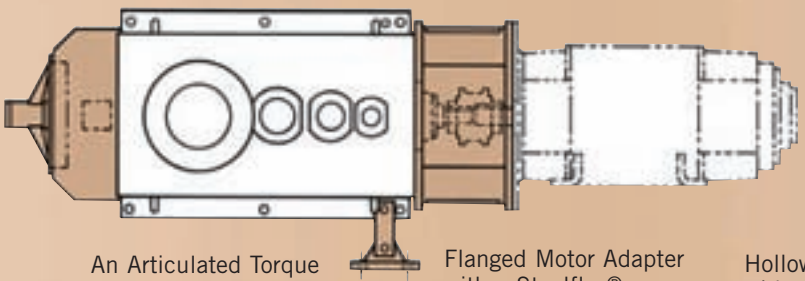
Flanged Motor Adapter (with True Torque Fluid Coupling) features ventilated top and bottom covers, and air turbulators for effective cooling. Side inspection covers and fill angle match marks simplify fluid settings.

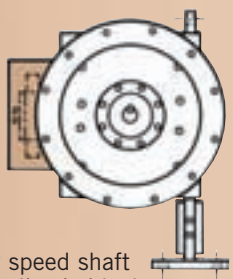
Bi-directional Intermediate Shaft fans can meet a wide range of underground cooling requirements.

Type ABRCM with MCF Coupling (Flanged Connection)



High-volume electric fans are available with standard temperature regulating switch.





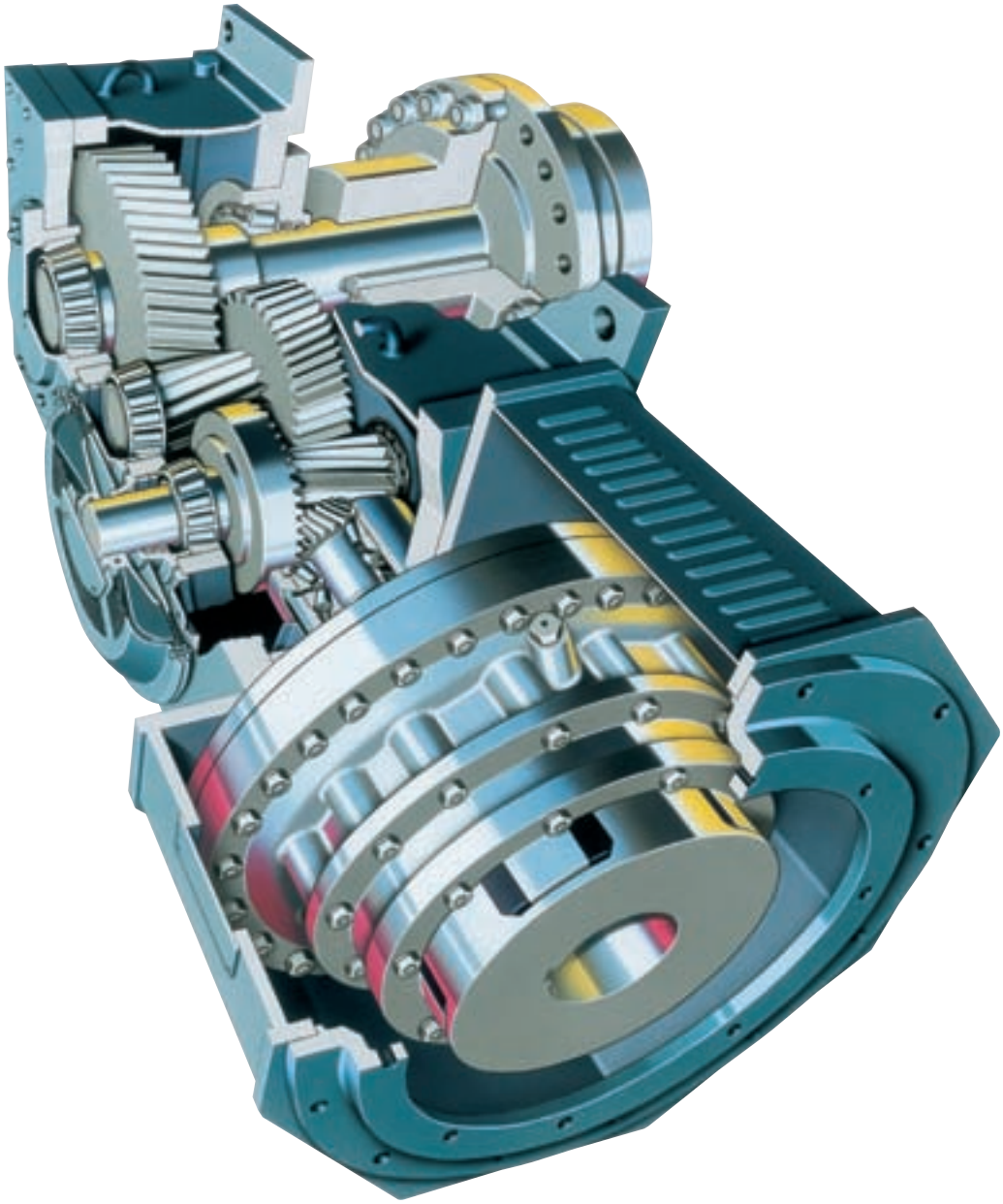
Type ABRCJ Hollow Low Speed Shaft with Shrink Disc

An Articulated Torque Arm accommodates drive system movement without binding.

Flanged Motor Adapter with a Steelflex® Coupling is used together with electronic soft starts and controls.

Hollow low speed shaft with shrink disc is ideal for axially-restricted applications.

Alignment Free Drives – Selection Guide



Selection Guide M231-210, March 2007

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THREE YEAR 3 THREE
HEAVY DUTY WARRANTY

Factory Warranty We're so confident in the performance and reliability of these Falk™ heavy-duty gear drives that we're backing this comprehensive offering with the best standard warranty in the business. Our full, 3-year Heavy-Duty Warranty provides "shaft-to-shaft" protection on all Falk components – including bearings and seals (warranty extends for 3 years from date of shipment). It's an industry first... and one more powerful reason why Rexnord is your ultimate bottom-line value.

Drawing Symbols The following symbols are used throughout the dimensioned drawings.


= OIL DIPSTICK


= BREATHER


= OIL FILL


= OIL DRAIN

Basic Information

Safety Notes

Falk™ Gear Drives — The Falk™ name on the gear drive is the purchaser's assurance that the drive was engineered, rated and manufactured to sound gear practices.

When one prime mover drives two pieces of equipment, one of which is either a standard Falk™ geared drive or a customer standard geared drive, the division of power between each machine is the responsibility of the customer. The power supplied to the geared drive must be equal to or less than the power for which the drive was selected using the appropriate service factor for the application. The customer must also assume the responsibility of isolating the geared drive from any vibratory or transient load induced by the driven equipment.

Install and operate Falk™ products in conformance with applicable local and national safety codes and per Falk installation manuals which are available upon request. Consult your local Rexnord Account Executive.

WARNING: *Lock out power source and remove all external loads from gear drive before servicing drive or accessories. Locking out the power source and removing the load will reduce the possibility of an unexpected motion or reaction in the system.*

People Conveying Equipment — Selection of Falk™ Products for applications whose primary purpose is the transportation of people is not approved. This includes such applications as freight or passenger elevators, escalators, man lifts, work lift platforms and ski tows and ski lifts. If the primary purpose of the application is material conveyance and occasionally people are transported, the Falk warranty may remain in effect provided the design load conditions are not exceeded and certification to the appropriate safety codes and load conditions has been obtained by the system designer or end user from the appropriate enforcement authorities.

Gear Drive Ratings — All gear drive ratings in this selection guide allow for starting loads and momentary overloads of 200% selection kilowatts.

Operating Temperature — Gear drives can encounter sump oil temperatures up to 93°C (200°F). Higher temperatures are possible in localized areas. Since the drive will feel hot to the human hand at temperatures over 49°C (120°F), a portable pyrometer should be used to measure temperatures.

Conditions Affecting Selections

Non-Standard Application Procedures

The following conditions may affect the drive selection procedure, drive size and auxiliary equipment being furnished.

Excessive Overloads — The maximum momentary or starting load must not exceed 200% of selection kilowatts. If the maximum starting or momentary load exceeds the above conditions, compute a second equivalent kilowatt by dividing the peak load by two. The gear drive selected must have capacity equal to, or in excess of, the larger equivalent kilowatt.

Reversing Service — Applications involving either more than 20 reversals per 10 hour period, or less than 20 reversals per 10 hour period with peak torques greater than 200% of normal load must be referred to Factory.

Brake Equipped Applications — When a gear drive is equipped with a "working" brake that is used to decelerate the motion of the system and the brake is located between the prime mover and the gear drive, select the drive based on the brake rating or the highest equivalent kilowatt, whichever is greater. If the brake is used for holding only and is applied after the motion of the system has come to rest, the brake rating must be less than 200% of the selection kilowatts of the gear drive selected for the application. If the brake rating is greater than 200% of the selection kilowatts, refer the application to Rexnord. Also refer to Factory all applications in which the brake is located on the output shaft of the gear drive.

Oversize Prime Movers — Published Service Factors do not cover applications that require oversize prime movers for high energy or peak loads. Refer such applications to Factory for selection of suitable drives.

Speed Variation — Refer to Factory variable speed or multi-speed applications.

Ambient Temperatures — If a drive operates in the sun at ambient temperatures over 38°C (100°F), then special measures should be taken to protect the drive from solar energy. This protection can consist of a canopy over the drive or reflective paint on the drive. If neither is possible, a heat exchanger or other cooling device may be required to prevent the sump temperature from exceeding the allowable maximum of 93°C (200°F).

Selection tables were prepared for 16°C (60°F) and 38°C (100°F) ambient temperatures. If the ambient temperature is between 16°C (60°F) and 38°C (100°F), you may select the drive and cooling accessories from the 38°C (100°F) selection table. If the ambient temperature is less than 16°C (60°F), you may select the drive and cooling accessories from the 16°C (60°F) selection table. For exact cooling requirements at ambient conditions other than 16°C (60°F) and 38°C (100°F), consult Rexnord.

Non-Standard Motors or Prime Movers — Motor prints must be submitted to the Factory for motors that are NOT standard NEMA motors through the 449TD frame size or standard IEC motors through the 400 frame size.

Non-Horizontal Mounting Positions — The ABRC drives were designed for horizontal input and horizontal output. Refer to Factory applications requiring other mounting positions.

How to Select

1. **Determine Service Factor** from Service Factor Table, Page 12, for electric motor driven applications operating 3 to 10 hours or over 10 hours per day. For applications requiring service factors other than 1,25 or 1,5, refer to Factory.
2. **Determine Ambient Temperature — either** 16°C (60°F) for applications under ground or 38°F (100°F) for applications above ground.
3. **Determine Motor Power** — kW.
4. **Determine Gear Drive Ratio** — For ratio, divide high speed shaft rpm by low speed shaft rpm.
5. **Select Drive Size** — Locate the selection tables on Pages 10 or 11 for the appropriate location (Above ground or Underground), service factor, and ambient temperature. Select the drive size opposite the motor power and ratio determined is steps 3 and 4. Note the cooling requirements, if needed.
6. **Select Coupling Type** — For fluid couplings refer to the last rows of the appropriate selection table used in Step 5 for the size and fill angle. If the H.S. coupling is a Steelflex® (T10 or T20), an analysis by Rexnord is required upon receipt of order. Refer to Falk any non-standard coupling requirements.
7. **Compare Motor Weights** to the minimum and maximum weights provided in the Motor Weight Limits Table on Page 12. For motor weights outside these limits, or for Steelflex coupling connections, refer to Factory.
8. **Select the Standard Assembly Desired** — Identify the gear drive nomenclature below and the standard assembly number on Page 12.
9. **Select Low Speed Shaft Connection Option** — For ABRCM (Hollow L.S. Shaft with Type MCF Coupling (Flanged Connection), refer to page 19. Insure driven shaft diameter is within the bore range of the driven hub. The Falk™ MCF coupling is the recommended interface between the ABRCM drive and the driven shaft. Provide Rexnord the diameter and the usable shaft length dimensions of the driven shaft for an MCF coupling guard (refer to page 20). For ABRCJ (Hollow L.S. Shaft with Shrink Disc), refer to pages 14 and 15 for details.
10. **Loads Generated** — Verify that the driven shaft can withstand the maximum bending moment and radial force being transmitted at the face of the MCF coupling (Flanged Connection). Verify the driven shaft can withstand the maximum forces being transmitted (Hollow L.S. Shaft with Shrink Disc). Verify the foundation supplied for the torque arm can withstand the maximum force being transmitted by the ABRC Drive. The maximum moments and forces are provided in the Loads Generated Table on Page 12.
11. **Engineered Options** — Refer to Rexnord requirements for brakes, flywheels, cast iron/steel fluid couplings, sump heaters, inching drives, special paint, monitoring devices, special ratios, special torque arms, or other special needs.

Drive Nomenclature

M	425	ABRCM	3	A	B	18,45
		Type	Reduction	Model	Variations	Ratio
"M" if Metric Hollow L.S. shaft bore diameter, length, and keyway.	**Drive Size** 405 425 445 465 485	ABRCM = Conveyor Drive with Solid L.S. Shaft & Flanged Connection (MCF Coupling) ABRCJ = Conveyor Drive with Hollow L.S. Shaft & Shrink Disc	3 = Triple	A,B,C, etc.	A = Drive with Backstop B = Drive with Fan(s) C = Drive with Backstop & Fan R = Drive with Any Combination of the Variations S = Modified Standard Drive with Minor Changes	Exact Ratio expressed to 4 digits

The ABRCM drive is supplied complete with standard torque arm, flanged motor adapter, fluid or Steelflex H.S. coupling, required cooling accessory, and MCF flanged connection with 2/4 (shrink disc) hub types and guard.

The ABRCJ drive is supplied complete with standard torque arm, flanged motor adapter, fluid or Steelflex H. S. coupling, required cooling accessory, and hollow L.S. shaft, shrink disc and guard.

Selection Example

Example

Application: Above Ground Belt Conveyor, heavy duty, driven shaft speed is 100 rpm, ambient temperature is 38°C (100°F). Driven shaft diameter t is 240 mm.

Duty Cycle: 12 hours per day.

Driver: Flange mounted 400 kW electric motor, 1450 rpm, approximate motor weight — 2948 kg.

1. Service Factor from Page 12 is 1,50.
2. Ambient Temperature is 38°C (100°F).
3. Motor power is 400 kW.
4. Ratio is 14,5. The closest standard ratio is 13,95:1.
5. From Page 10, in the 1,50 Service Factor — 38°C (100°F) Selection Table, the correct drive size is a 465 drive. An electric fan is required.
6. From the last row of the selection table, the correct Fluid Coupling is a 1660HFDD132 with a 88° fill angle.
7. The approximate motor weight is within the allowable range (See Page 12).
8. The desired standard assembly is assembly 2 (See Page 12). The gear drive nomenclature is 465ABRCM3-A-13,82. Exact ratio obtained from table on Page 10.
9. From Page 19, the required MCF Coupling is a 1065MCF. A Size 300SD shrink disc is required at the driven hub to accommodate the 240 mm driven shaft. A MCF guard is needed. Provide diameter and usable length of driven shaft to Rexnord.
10. Check the driven shaft and the foundation for their ability to withstand the loading being transmitted by the ABRC drive, see Loads Generated Table, Page 12.
11. No engineered options required.

How to Order

On the order please supply:

1. Drive size, type, and ratio.
2. Drive assembly number, MCF driven hub bore and type if required.
3. Cooling accessory if required.
4. Fluid coupling size and fill angle, or, Steelflex coupling motor connection.
5. Provide electric motor certified prints.
6. List any other accessories or engineered options required.

Above Ground Belt Conveyors/1500 rpm/38°C (100°F) Ambient

Quick Drive Size Selections for Service Factor 1,25

Total Ratio	L.S.S. rpm	Selection kW †												
		90	110	132	160	180	200	250	280	315	355	400	500	630
13,95	**105**	**405**	**405**	405	**425**	425	425	425	445	445	445	465	465	
15,44	**95**	**405**	**405**	405	**425**	425	425	425	445	445	445	465	465	
17,09	**87**	**405**	**405**	405	**425**	425	425	425	445	445	445	465	485	
18,91	**78**	**405**	**405**	405	**425**	425	425	445	445	445	445	465	485	
20,93	**71**	**405**	**405**	405	**425**	425	425	445	445	445	445	465	485	Consult Factory
23,16	**64**	**405**	**405**	405	**425**	425	425	445	445	445	465	465	485	
25,63	**57**	**405**	**405**	405	**425**	425	425	445	445	445	465	465	485	
28,36	**52**	**405**	**405**	**425**	**425**	425	**445**	445	**465**	465	465	485	485	
31,39	**48**	**405**	**425**	**425**	**425**	**445**	**445**	**465**	**465**	465	**485**	485	485	
34,74	**42**	**425**	**425**	**425**	**445**	**445**	**445**	**465**	**465**	**485**	**485**	485	Consult Factory	
Fluid Coupling & Fill Angle ●		1480HFDD132 95°	1480HFDD132 88°	1480HFDD132 85°	1584HFDD132 100°	1584HFDD132 98°	1584HFDD132 96°	1584HFDD132 92°	1584HFDD132 88°	1584HFDD132 85°	1660HFDD132 ■ 97°	1660HFDD132 88°	1660HFDD132 84°	1760HFDD132 98°

Quick Drive Size Selections for Service Factor 1,5

Total Ratio	L.S.S. rpm	Selection kW †												
		90	110	132	160	180	200	250	280	315	355	400	500	630
13,95	**105**	**405**	**405**	**425**	**425**	425	425	445	445	465	465	465	485	
15,44	**95**	**405**	**405**	**425**	**425**	425	425	445	445	465	465	465	485	
17,09	**87**	**405**	**405**	**425**	**425**	425	425	445	445	465	465	465	485	
18,91	**78**	**405**	**405**	**425**	**425**	425	425	445	445	465	465	465	485	
20,93	**71**	**405**	**405**	**425**	**425**	425	425	445	445	465	465	465	485	
23,16	**64**	**405**	**405**	**425**	**425**	425	**445**	445	445	465	465	485	485	Consult Factory
25,63	**57**	**405**	**405**	**425**	**425**	425	**445**	445	**465**	465	**485**	485	485	
28,36	**52**	**405**	**425**	**425**	**425**	**445**	**445**	**465**	**465**	465	**485**	485	485	
31,39	**48**	**425**	**425**	**425**	**445**	**445**	**465**	**465**	**485**	**485**	**485**	485	Consult Factory	
34,74	**42**	**425**	**425**	**445**	**445**	**445**	**465**	**465**	**485**	**485**	**485**	Consult Factory		
Fluid Coupling & Fill Angle ●		1480HFDD132 95°	1480HFDD132 88°	1480HFDD132 85°	1584HFDD132 100°	1584HFDD132 98°	1584HFDD132 96°	1584HFDD132 92°	1584HFDD132 88°	1584HFDD132 85°	1660HFDD132 97°	1660HFDD132 88°	1660HFDD132 84°	1760HFDD132 98°

† Selections in **bold** type require two intermediate shaft driven fans.
Shaded selections require an electric fan.
● Fill angle shown is based on a typical 120% start factor.
■ For drive size 445 select fluid coupling size 1584HFDD132 with a fill angle of 71°.

Exact Ratios

Nominal Ratios ■	Drive Size				
	405	425	445	465	485
13,95	14,38	13,70	14,41	13,82	14,16
15,44	15,99	14,98	15,57	15,30	15,24
17,09	17,71	17,27	16,83	16,43	16,72
18,91	18,60	18,45	18,19	18,19	17,99 ■
20,93	21,65	21,28	21,48	20,99	20,72
23,16	22,32	23,16	22,83	22,74	22,55
25,63	25,19	25,20	24,76	26,33	26,11
28,36	27,28	27,61	29,20	27,52	28,42
31,39	32,07	31,97	31,26	32,24	30,93
34,74	33,48	34,80	34,25	34,54	33,83

■ Except where noted with a (■), exact ratios are within ± 4% of the nominal ratios.

Underground Belt Conveyors/1500 rpm/16°C (60°F) Ambient

Quick Drive Size Selections for Service Factor 1,25

Total Ratio	L.S.S. rpm	Selection kW †												
		90	**110**	**132**	**160**	**180**	**200**	**250**	**280**	**315**	**355**	**400**	**500**	**630**
13,95	**105**	405	405	**405**	**425**	**425**	**425**	**425**	**445**	**445**	**445**	**465**	**465**	
15,44	**95**	405	405	**405**	**425**	**425**	**425**	**425**	**445**	**445**	**445**	**465**	**465**	
17,09	**87**	405	405	**405**	**425**	**425**	**425**	**425**	**445**	**445**	**445**	**465**	**465**	
18,91	**78**	405	405	**405**	**425**	**425**	**425**	**445**	**445**	**445**	**445**	**465**	**465**	
20,93	**71**	405	405	**405**	**425**	**425**	**425**	**445**	**445**	**445**	**445**	**465**	**485**	Consult Factory
23,16	**64**	405	405	**405**	**425**	**425**	**425**	**445**	**445**	**445**	**465**	**465**	**485**	
25,63	**57**	405	405	**405**	**425**	**425**	**425**	**445**	**445**	**445**	**465**	**465**	**485**	
28,36	**52**	405	405	425	**425**	**425**	445	**445**	**465**	**465**	**465**	**485**	**485**	
31,39	**48**	405	425	425	**425**	445	445	465	**465**	**465**	**485**	**485**	**485**	
34,74	**42**	425	425	425	445	445	445	465	**465**	**485**	**485**	**485**	Consult Falk	
Fluid Coupling & Fill Angle ●		1480HFDD132 95°	1480HFDD132 88°	1480HFDD132 85°	1584HFDD132 100°	1584HFDD132 98°	1584HFDD132 96°	1584HFDD132 92°	1584HFDD132 88°	1584HFDD132 85°	1660HFDD132 ■ 97°	1660HFDD132 88°	1660HFDD132 84°	1760HFDD132 98°

Quick Drive Size Selections for Service Factor 1,50

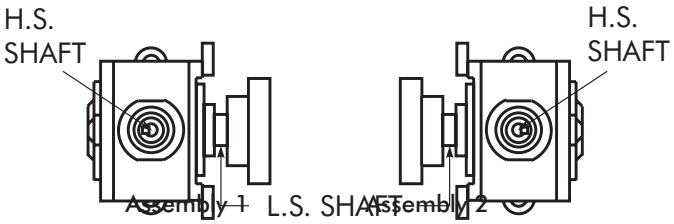
Total Ratio	L.S.S. rpm	Selection kW †												
		90	**110**	**132**	**160**	**180**	**200**	**250**	**280**	**315**	**355**	**400**	**500**	**630**
13,95	**105**	405	405	425	**425**	**425**	**425**	**445**	**445**	**465**	**465**	**465**	**485**	
15,44	**95**	405	405	425	**425**	**425**	**425**	**445**	**445**	**465**	**465**	**465**	**485**	
17,09	**87**	405	405	425	**425**	**425**	**425**	**445**	**445**	**465**	**465**	**465**	**485**	
18,91	**78**	405	405	425	**425**	**425**	**425**	**445**	**445**	**465**	**465**	**465**	**485**	
20,93	**71**	405	405	425	**425**	**425**	**425**	**445**	**445**	**465**	**465**	**465**	**485**	Consult Factory
23,16	**64**	405	405	425	**425**	**425**	445	**445**	**445**	**465**	**465**	**485**	**485**	
25,63	**57**	405	405	425	**425**	**425**	445	**445**	**465**	**465**	**485**	**485**	**485**	
28,36	**52**	405	425	425	**425**	445	445	465	**465**	**465**	**485**	**485**	**485**	
31,39	**48**	425	425	425	445	445	465	465	485	**485**	**485**	**485**	Consult Falk	
34,74	**42**	425	425	445	445	445	465	465	485	**485**	**485**	Consult Falk		
Fluid Coupling & Fill Angle ●		1480HFDD132 95°	1480HFDD132 88°	1480HFDD132 85°	1584HFDD132 100°	1584HFDD132 98°	1584HFDD132 96°	1584HFDD132 92°	1584HFDD132 88°	1584HFDD132 85°	1660HFDD132 97°	1660HFDD132 88°	1660HFDD132 84°	1760HFDD132 98°

† Selections in **bold** type require two intermediate shaft driven fans.
● Fill angle shown is based on a typical 120% start factor.
■ For drive size 445 select fluid coupling size 1584HFDD132 with a fill angle of 71°.

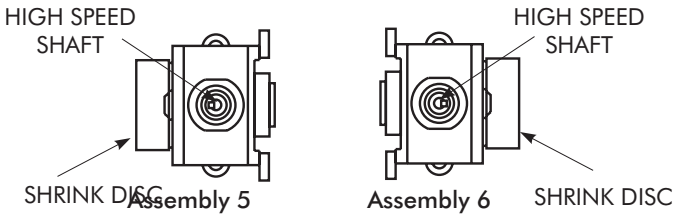
Standard Assemblies

Please specify from the plan views below, the desired assembly number.

Type ABRCM (Solid Low Speed Shaft)



Type ABRCJ (Hollow Low Speed Shaft)



Service Factors

Conveyor Application	3 to 10 Hours per Day	Over 10 Hours per Day
Uniformly Loaded or Fed	1,25	1,25
Heavy Duty, Not Uniformly Fed	1,25	1,50

Motor Weight Limits

Drive Size	Motor Weight — kg	
	Minimum	Maximum
405	0	2 630
425	230	2 630
445	230	4 540
465	680	4 540
485	680	4 540

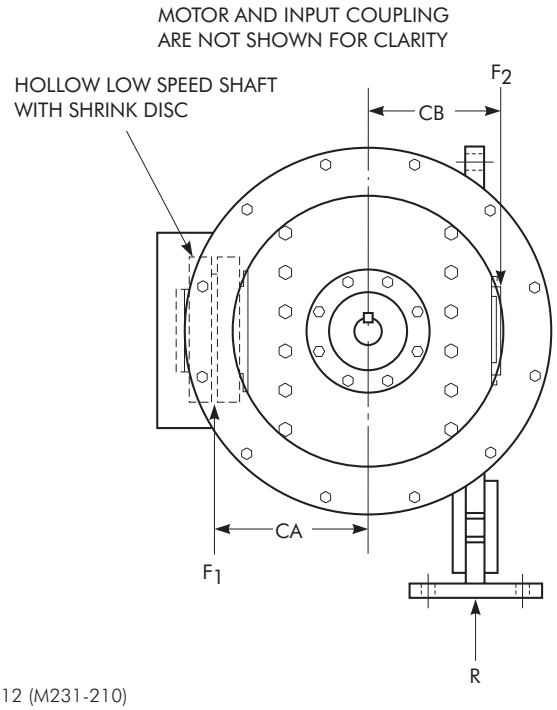
Loads Generated†/Torque Arm Forces, Hollow Shaft Forces & Loads at the Flange of MCF Coupling

Drive Size	Maximum Torque Arm Force★ R – kN	Dimensions — Millimeters		Maximum Forces on Hollow Shaft ★		Maximum Loads at Face of MCF Coupling (Flanged Connection)	
		CA	CB	F_1—kN	F_2—kN	Radial Force ★ F – kN	Bending Moment ★ M – Nm
405	143	306	277	17,3	109	101	19 000
425	181	363	312	21,8	138	132	29 300
445	252	396	335	28,0	194	178	42 100
465	274	425	358	28,5	216	185	58 300
485	399	465	381	31,6	298	298	92 400

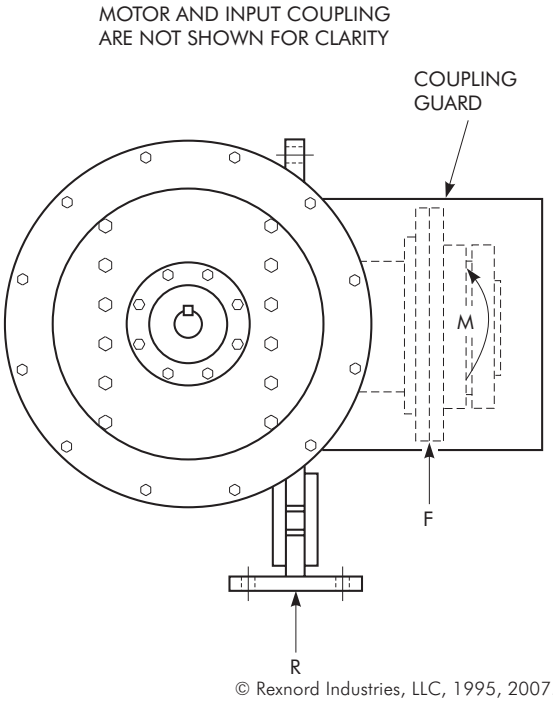
† The loads generated are based upon a combination of the most unfavorable conditions of rotation, speed, selection kilowatts, motor weight and a 150% start factor. Refer to Rexnord any Steelflex or non-standard coupling requirement.

★ Values of R, F, F_1, F_2 and M are the maximum loads at the position shown during start-up.
The loads may NOT be acting in the direction of the arrows. Use the worst case loading condition when designing the driven equipment.

Hollow Low Speed Shaft Connection

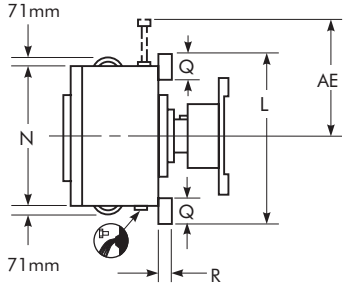


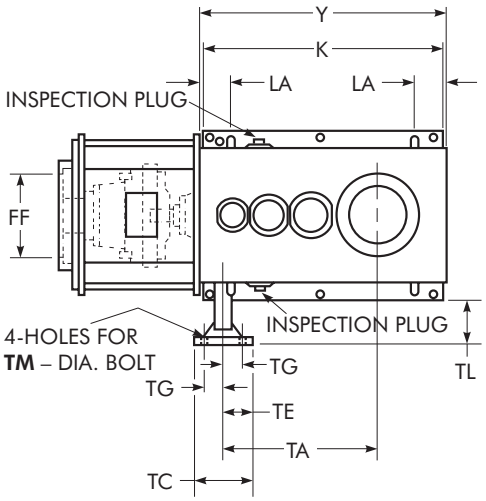
Flanged Connection (MCF Coupling)

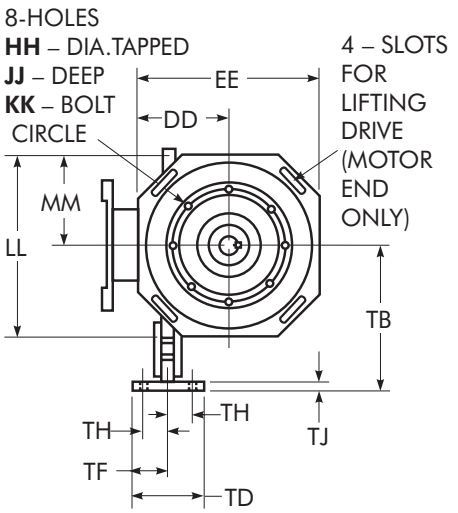


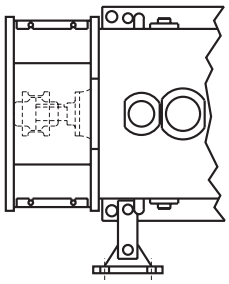
Type ABRC

Conveyor Drive/Dimensions—Millimeters

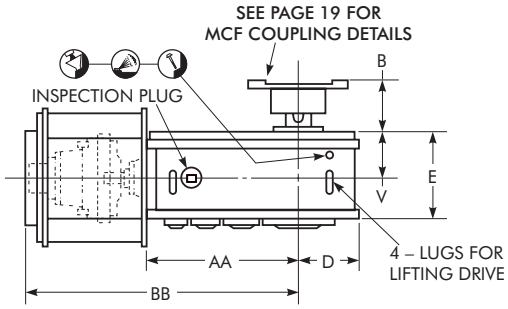








STEELFLEX COUPLING OPTION
(DESIGNED TO THE ORDER)



SEE PAGES 14 & 15
FOR ABRCJ DIMENSIONS
(HOLLOW L.S. SHAFT
WITH SHRINK DISC)

DRIVE SIZE ★	AE	B	D	E	K	L	LA	N	Q	R	Torque Arm											DRIVE SIZE ★
											TA	TB		TC	TD	TE	TF	TG	TH	TJ	TL	TM ■	
												Standard	Maximum									
405	645	262	287	448	1 016	705	145	549	127	38	648	559	1 156	280	304	140	152	89	102	32	207	30	**405**
425	715	295	313	494	1 143	808	168 ●	625	152	41	737	610	1 207	280	304	140	152	89	102	32	206	30	**425**
445	835	326	371	544	1 308	940	170	743	178	46	838	699	1 575	304	342	152	171	102	121	38	229	36	**445**
465	950	372	422	588	1 480	1 041	196	845	178	45	953	749	1 689	304	342	152	171	102	121	38	229	36	**465**
485	1 035	369	470	635	1 483	1 181	239 ●	940	203	51	879	838	1 778	368	394	184	197	127	140	44	248	42	**485**

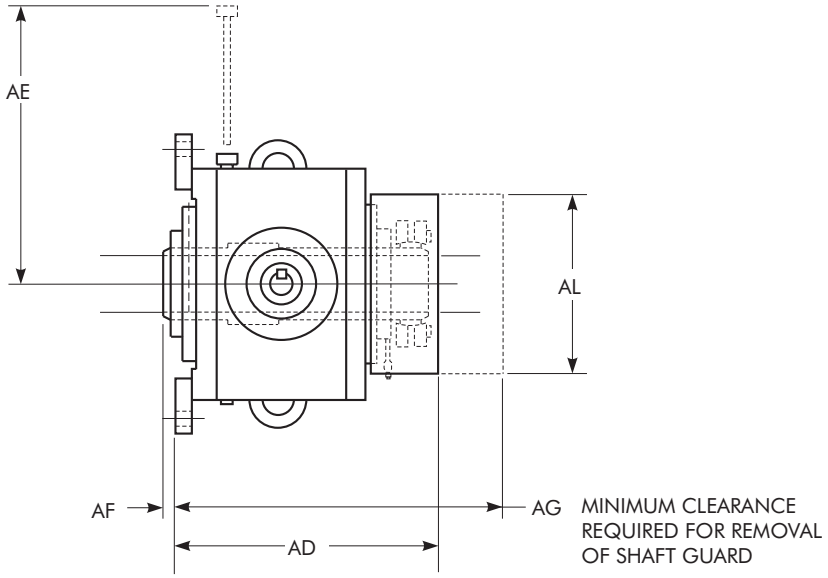
DRIVE SIZE ★	V	Y	Flange Motor Adapter										Wt Kg	DRIVE SIZE ★
			AA	BB	DD	EE	FF	HH	JJ	KK	LL	MM		
405	246	1 044	757	▲	362	724	†	†	†	†	724	362	1 640	**405**
425	269	1 169	856	▲	425	850	†	†	†	†	850	425	2 330	**425**
445	297	1 338	966	▲	425	850	†	†	†	†	850	425	2 980	**445**
465	320	1 510	1 087	▲	470	940	†	†	†	†	940	470	4 360	**465**
485	345	1 511	1 041	♣	♦	✱	†	†	†	†	1 054	527	5 500	**485**

★ Drives are for horizontal shaft mounted operation unless specifically stated otherwise. Consult Factory for other mountings.
Dimensions are for reference only and subject to change without notice unless certified.
† Dimensions vary with motor selections. Certified prints will be provided after receipt of order.
● Size 425 low speed end of drive dimension LA=170mm.
Size 485 low speed end of drive dimension LA=241mm.
■ Use Property Class 8,8 or better fasteners. Flat washers required below head.
♦ 425mm with 1584HFDD132 coupling. 465mm with 1660HFDD132 coupling.
✱ 850mm with 1584HFDD132 coupling. 930mm with 1660HFDD132 coupling.
▲ "BB" dimension typically varies from 170% to 200% of "AA" dimension.
♣ "BB" dimension typically varies from 200% to 215% of "AA" dimension.

Type ABRCJ

Hollow Low Speed Shaft with Shrink Disc/Dimensions—Millimeters

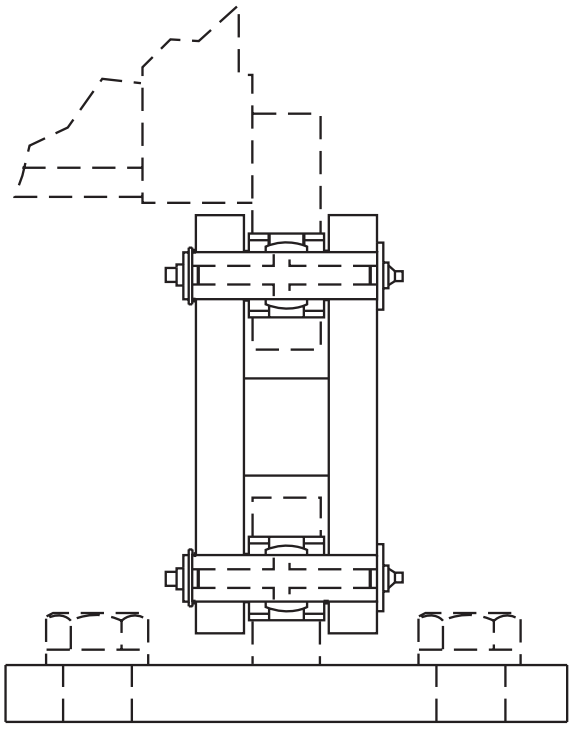
Dimensions to be used in conjunction with conveyor drive dimensions on Page 13.



DRIVE SIZE ★	AD	AE	AF	AG	AL
405	673	645	30	812	425
425	760	716	43	964	456
445	847	836	38	1 074	504
465	904	950	38	1 147	542
485	988	1034	36	1 268	625

★ Dimensions are for reference only and are subject to change without notice unless certified.

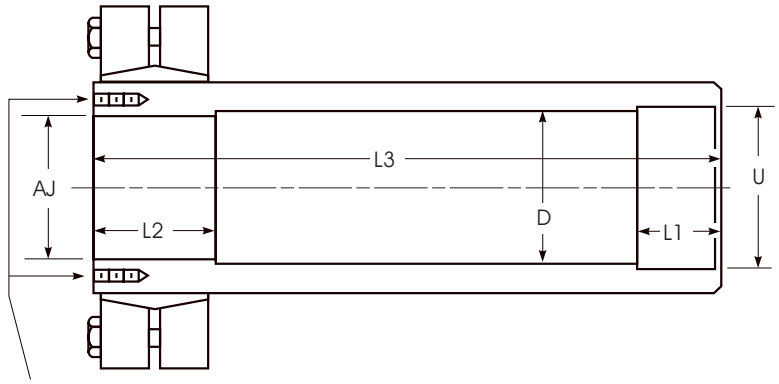
TORQUE ARM DETAIL



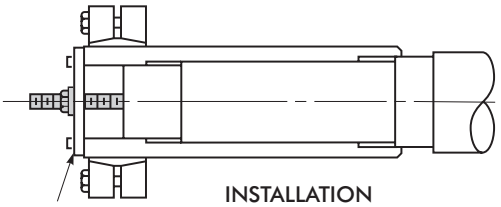
Type ABRCJ

Driven Shaft Recommendations/Dimensions—Millimeters

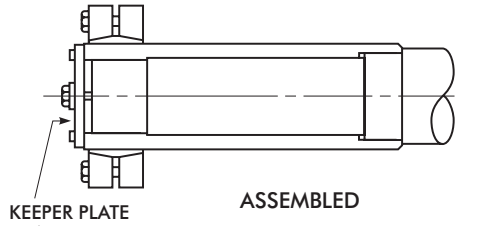
Hollow L.S. Shaft with Shrink Disc



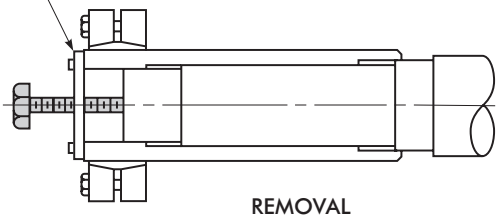
Z - QUANTITY
ZA - DIA. UNC TAPPED HOLES IN HOLLOW SHAFT
ZB - DEEP
Y - DIA. BOLT CIRCLE - EQUALLY SPACED HOLES FOR USE IN DRIVEN SHAFT REMOVAL



INSTALLATION
NUT AND THREADED ROD INSERTED IN DRIVEN SHAFT ARE USED TO AID ASSEMBLY



ASSEMBLED



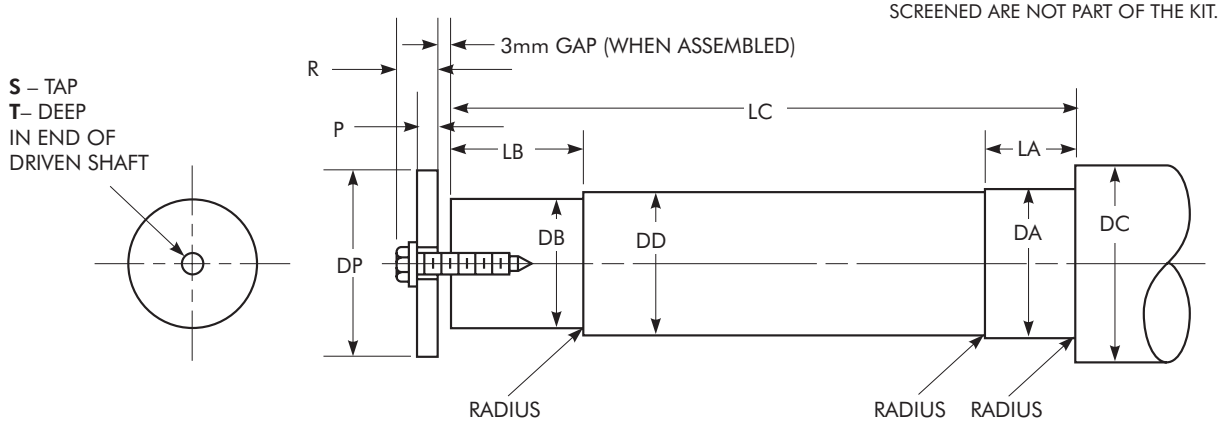
REMOVAL
LARGER FASTENER INSERTED IN A TAPPED HOLE IN THE CENTER OF THE KEEPER PLATE IS USED TO REMOVE DRIVEN SHAFT FROM DRIVE.

COMBINATION KEEPER PLATE INSTALLATION AND REMOVAL TOOL KIT IS AVAILABLE FROM FALK AS AN OPTIONAL ACCESSORY. PARTS SHOWN SCREENED ARE NOT PART OF THE KIT.

Hollow Low Speed Shaft Dimensions — Millimeters

DRIVE SIZE ★	AJ †	D	L1	L2	L3	U ‡	Z	ZA	ZB	Y
405	130	137	64	89	627	140	8	M10 x 1,5-6H	20	153
425	150	157	89	127	739	160	8	M10 x 1,5-6H	20	172
445	165	172	89	152	808	175	6	M12 x 1,75-6H	25	191
465	180	187	89	165	866	190	6	M12 x 1,75-6H	25	210
485	210	217	127	203	947	220	6	M12 x 1,75-6H	25	248

★ Dimensions are for reference only and are subject to change without notice unless certified.
† AJ dimension bore is J7 tolerance.
‡ U dimension bore is H7 tolerance.



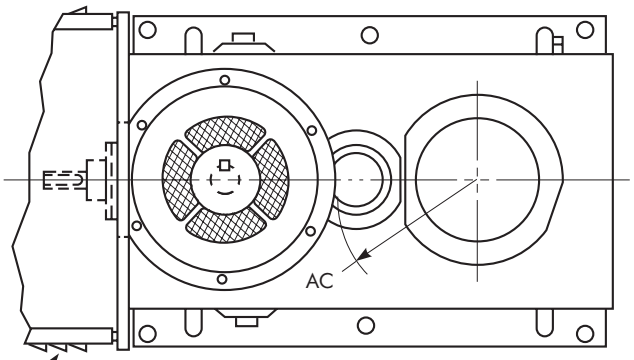
Driven Shaft Recommended Dimensions — Millimeters

DRIVE SIZE ★	DA †	DB †	DC Min	DD ■	Radius Max	LA	LB	LC	DP	P	R	S ●	T	Fastener Length	Tapped Hole In Center of Plate ●	Gap
405	140	130	155	133	3	58	95	624	174	19	42	M30 x 3,5-6H	60	65	M42 x 4,5	3
425	160	150	175	153	3	84	135	736	190	19	42	M30 x 3,5-6H	60	65	M42 x 4,5	3
445	175	165	190	168	3	84	160	805	219	25	53	M36 x 4-6H	72	80	M48 x 5	3
465	190	180	210	183	3	84	170	863	235	19	47	M36 x 4-6H	72	80	M48 x 5	3
485	220	210	240	213	3	122	210	944	276	25	53	M36 x 4-6H	72	80	M48 x 5	3

★ Dimensions are for reference only and are subject to change without notice unless certified.
† h6 tolerance.
■ c11 tolerance.
● Coarse pitch.

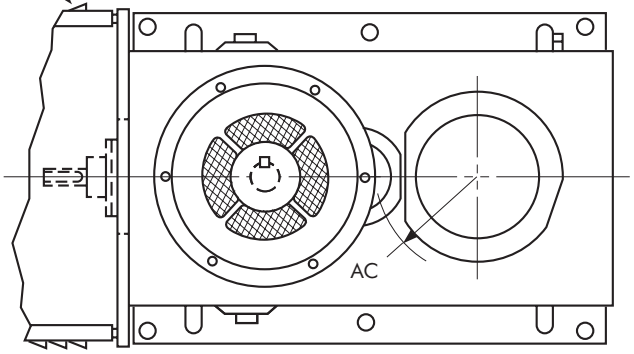
Type ABRC

Shaft Driven Fan Clearance ✱/Dimensions—Millimeters

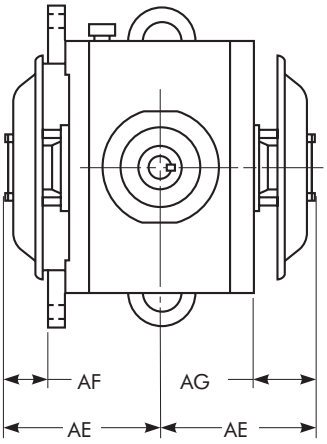


SIZE 485

FLANGED
MOTOR
ADAPTER



SIZES 405 – 465



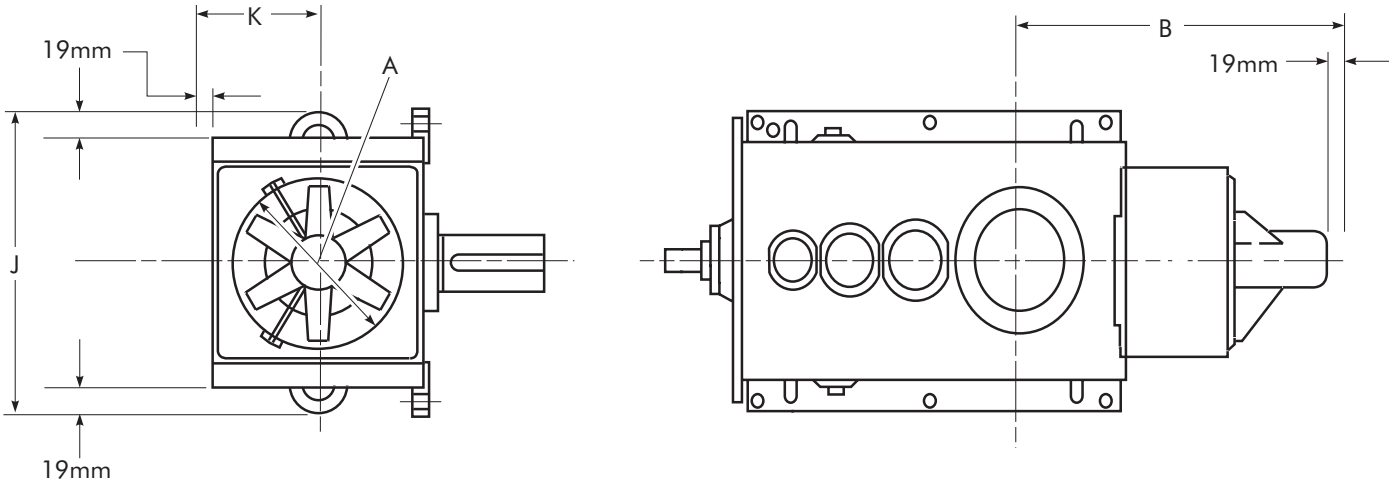
DRIVE SIZE ★	AC	AE	AF	AG
405	205	333	87	132
425	241	365	95	140
445	290	397	100	150
465	346	420	100	151
485	435	448	102	158

★ Dimensions are for reference only and are subject to change without notice unless certified.

✱ Drives with backstop at intermediate shaft can accommodate only one shaft driven fan.

Type ABRC

Electric Fan Clearance/Dimensions—Millimeters

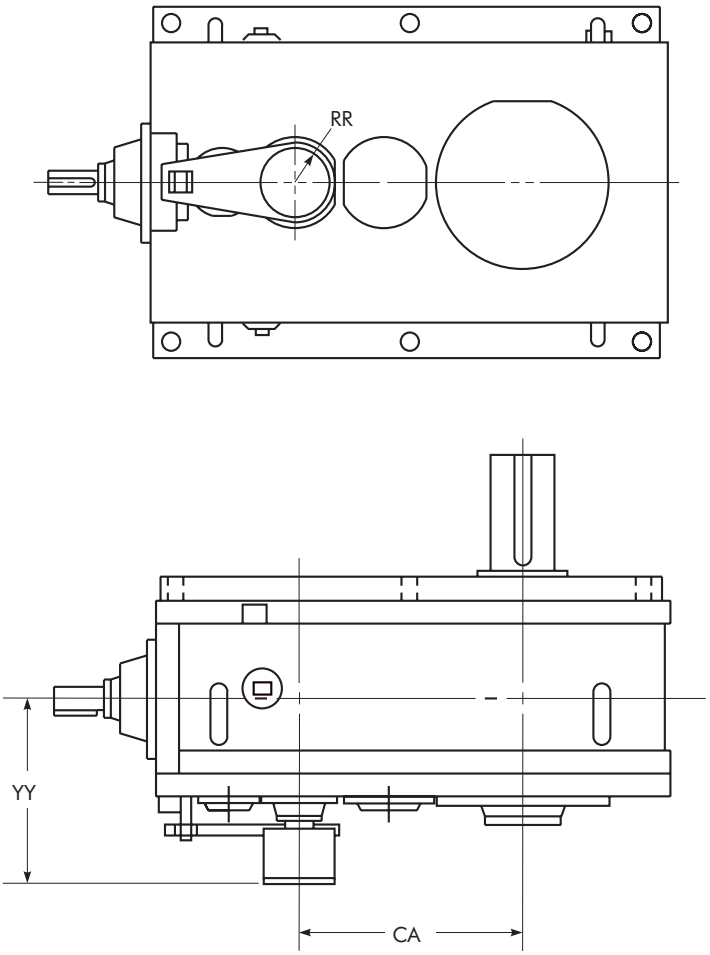


DRIVE SIZE ★	A	Air Flow (m3/h)	B	J	K
405	350	2 888	776	624	249
425	400	3 915	830	700	275
445	450	5 125	891	814	297
465	500	6 570	976	916	329
485	560	7 922	1 087	1 011	351

★ Dimensions are for reference only and are subject to change without notice unless certified.

Type ABRC

Drives with Backstops ✱/Dimensions—Millimeters



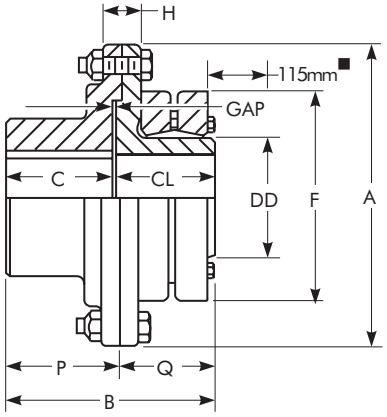
DRIVE SIZE ★	CA	RR	YY
405	450	80	398
425	513	102	454
445	592	102	480
465	673	127	509
485	762	127	539

★ Dimensions are for reference only and are subject to change without notice unless certified.

✱ Drives with backstop at intermediate shaft can accommodate only one shaft driven fan.

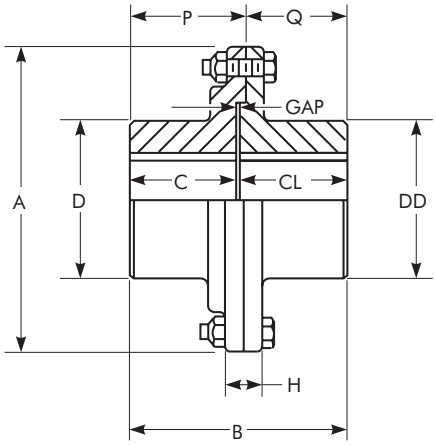
Type MCF Couplings/for ABRCM Drives

Flanged Connection/Dimensions—Millimeters



DRIVING HUB (Type 2) | DRIVEN HUB WITH SHRINK DISC (Type 4)

STANDARD (with Shrink Disc at Driven Hub)



DRIVING HUB (Type 2) | DRIVEN HUB (Type 2)

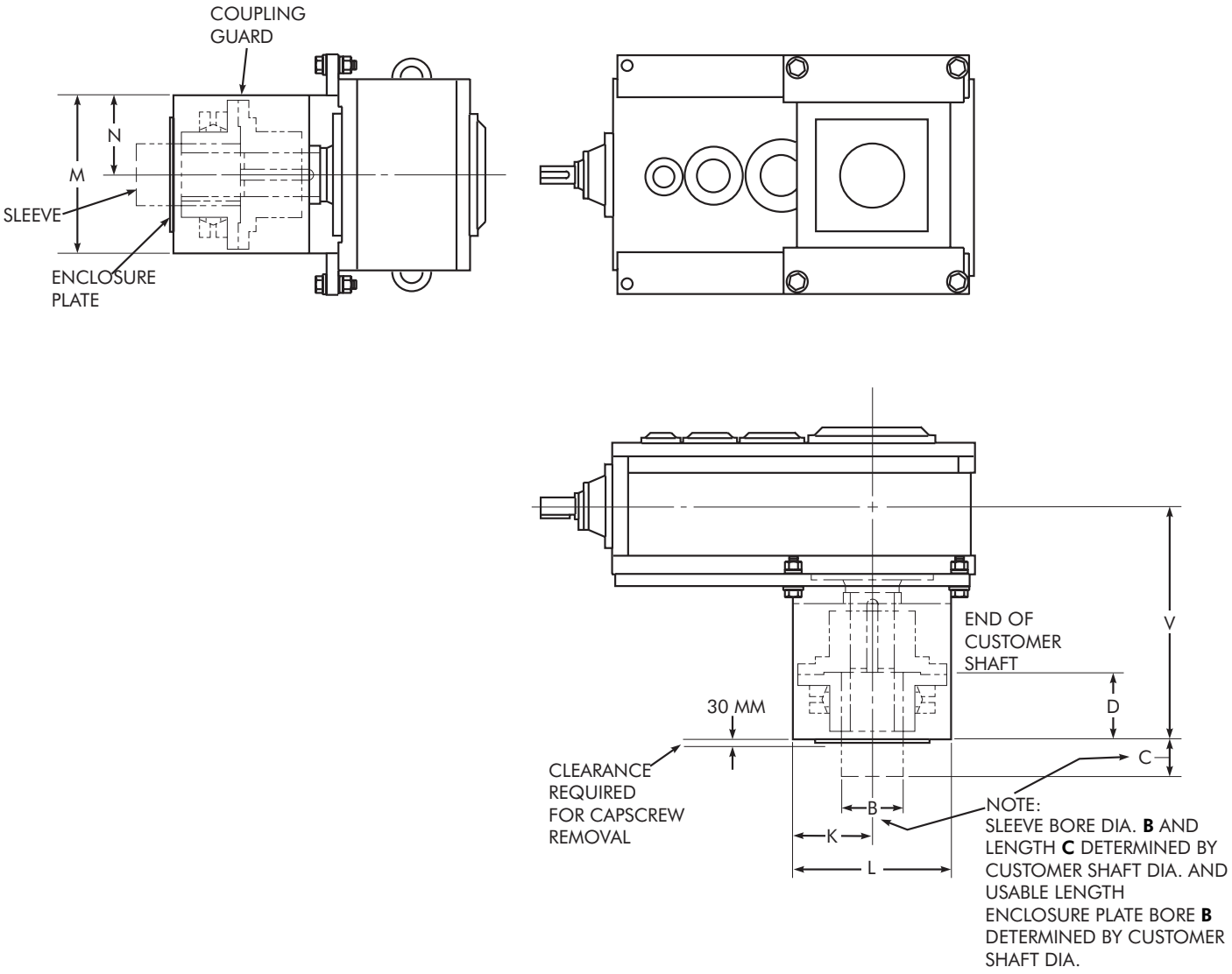
OPTIONAL (No Shrink Disc)

DRIVE SIZE	CPLG. SIZE ★	Hub Type				Min/Max Bore ‡	Dimensions – Millimeters											
		Driving Hub	No. †	Driven Hub	No. †	Driven Hub	Cplg. ● Wt-kg	A	B	C	CL	D	DD	F	H	P	Q	Gap
405	1045MCF	RSB	2	RSB	2	125-180	231	500	360	178	178	254	254	....	64	194	165	3
		RSB	2	185SD	4	135-145	254	500	347	178	167	254	185	330	64	194	154	3
		RSB	2	200SD	4	145-155	259	500	347	178	167	254	200	350	64	194	154	3
425	1055MCF	RSB	2	RSB	2	145-205	327	555	410	203	203	292	292	....	64	219	191	3
		RSB	2	220SD	4	160-170	349	555	395	203	189	292	220	370	64	219	176	3
		RSB	2	240SD	4	170-190	381	555	410	203	203	292	240	405	64	219	191	3
445	1060MCF	RSB	2	RSB	2	165-230	449	590	460	229	229	330	330	....	76	244	216	3
		RSB	2	240SD	4	170-190	472	590	440	229	208	330	240	405	76	244	195	3
		RSB	2	260SD	4	190-210	503	590	460	229	229	330	260	430	76	244	216	3
465	1065MCF	RSB	2	RSB	2	180-255	571	620	524	254	254	356	356	....	89	270	254	3
		RSB	2	280SD	4	210-230	640	620	500	254	242	356	280	460	89	270	229	3
		RSB	2	300SD	4	230-245	662	620	503	254	246	356	300	485	89	270	233	3
485	1075MCF	RSB	2	RSB	2	200-290	848	700	587	292	292	406	406	....	102	308	279	3
		RSB	2	320SD	4	240-260	902	700	555	292	260	406	320	520	102	308	248	3

★ Refer to Factory all applications above 125 rpm. Dimensions are for reference only and are subject to change without notice unless certified.
■ Distance required for torque wrench clearance to tighten the shrink disc fasteners.
‡ Driven shaft diameter tolerance is h6.
● Coupling weights are for hubs with no bore and include shrink disc(s).
† Type 2 hub is straight bored without shrink disc; Type 4 hub is straight bored with shrink disc.

Type ABRCM

MCF Coupling Guards/Dimensions—Millimeters



DRIVE SIZE ★	D	K	L	M	N	V
405	210	271	542	546	273	705
425	227	307	613	613	307	779
445	256	332	664	671	335	866
465	278	332	664	689	345	957
485	313	376	753	753	376	1 016

★ Dimensions are for reference only and are subject to change without notice unless certified.

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M231-210 03/2007 Delzer Litho Printed in USA