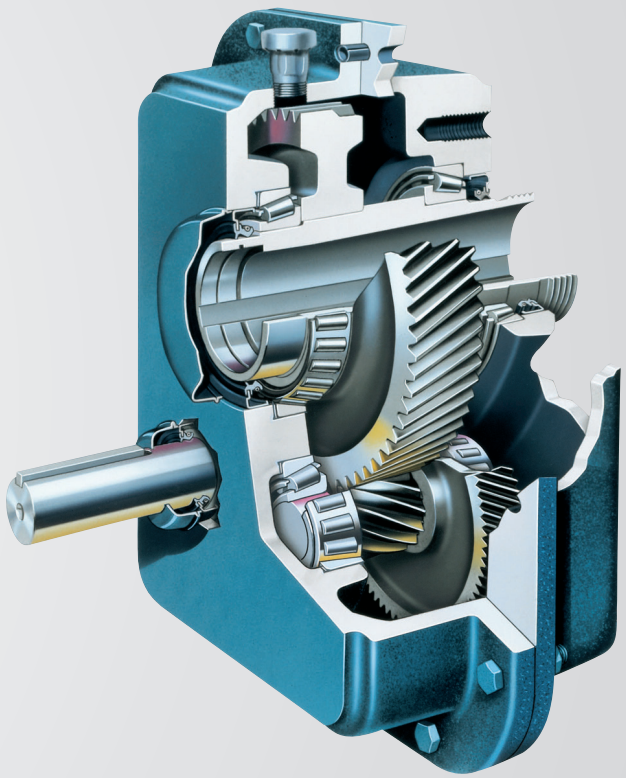
REXNORD

Falk Quadrive Shaft Mounted Drive

Interchange and Nomenclature Guide



FALK®

FALK® QUADRIVE®

Easiest On, Easiest Off...Guaranteed

It's a simple fact. The heavy duty, shaft-mounted Falk Quadrive features a completely unique design that makes it the easiest, quickest shaft-mounted drive to install and remove.

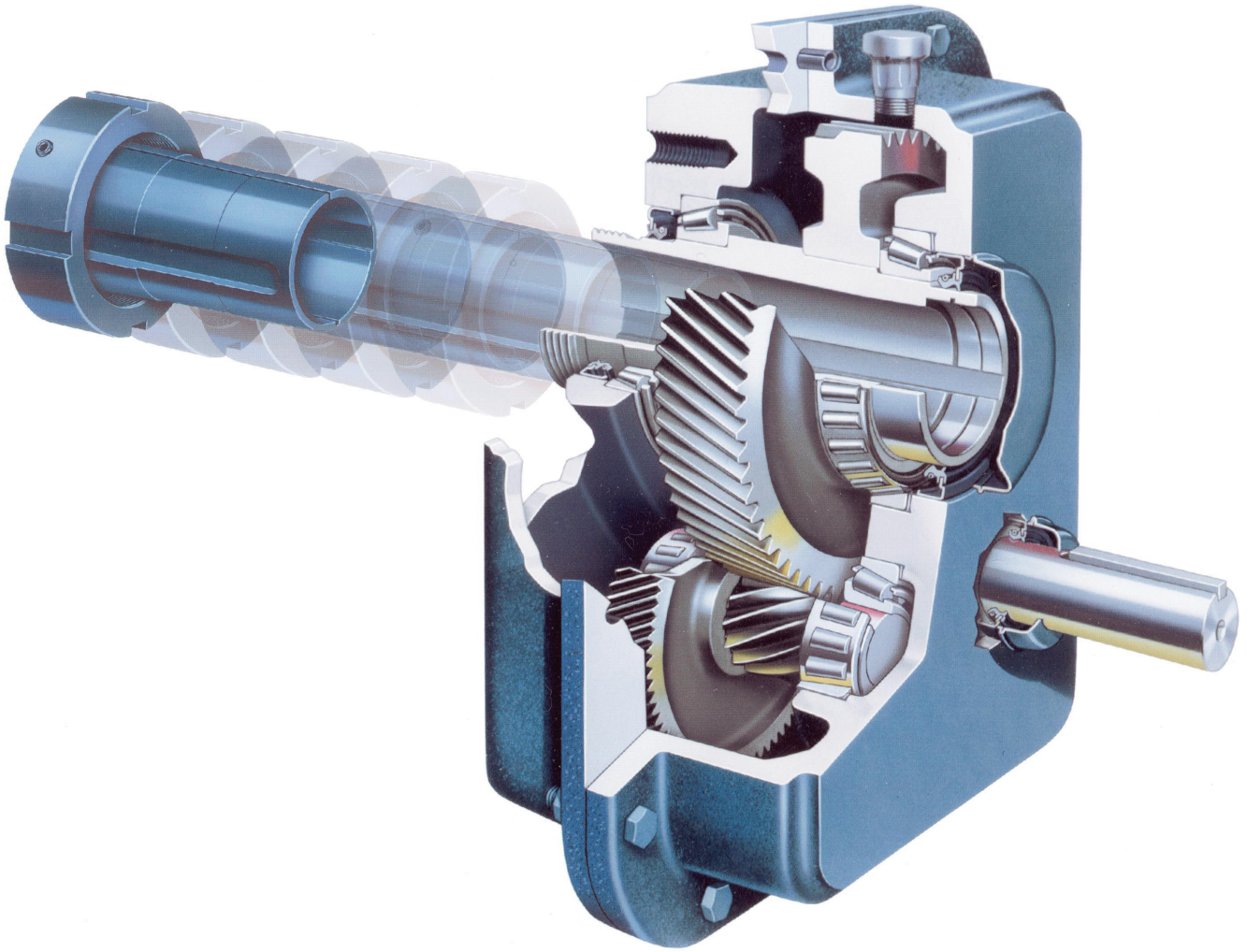
Quadrive is built to stand up to continuous rough duty. And now, with new higher ratings, you may be able to downsize the drive, saving money right up front. The Falk TA Taper Bushing design makes sure that drive removal is not only simple, but don't damage the drive, or driven equipment.

You don't need extra time. You don't need extra tools. And you're assured safe, worry-free operation.

In a game where there are so few sure things, Falk Quadrive is the right shot to take.

Lifetime Removal Guarantee

Due to the unique properties of the TA Taper Bushing, Quadrive is quaranteed to come off the shaft, regardless of length of service or operation conditions, or we'll replace it FREE. That's a promise no other shaft-mounted drive can make.



Interchange Guide 371-810, March 2006

Contents

THREE YEAR 3 THREE
HEAVY DUTY WARRANTY

Factory Warranty We're so confident in the performance and reliability of these Falk 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. It's an industry first... and one more powerful reason why Rexnord is your ultimate bottom-line value. ★

★ Warranty extends for 3 years from date of shipment.

Introduction

How to Make an Interchange

Example 1: Your customer wants to replace a Dodge TXT 425 with a taper bushed design. However, the available driven shaft length (2 7/16" diameter) is only 6 1/2". Select a Falk Quadrive replacement drive.

Step 1 — From Page 7, Table 1, a Size 5207J with a 25:1 nominal ratio is the correct interchange for a Dodge Size 4.

Step 2 — For a Size 5207JR shaft mounted drive a 2 7/16" TA Taper bushing requires a minimum 6.11 inch driven shaft length. Your customer will require a new sheave or sheave bushing (1.5" diameter vs. 1.437" diameter high speed shaft) and may need to adjust the motor and tie rod position.

Step 3 — Components Required:

5207J25A Basic Drive . . . . . PN 0794381
BU4207J Bushing 2.438 . . . . . PN 0769105
TR4207J Tie Rod . . . . . PN 0738515

Optional Accessories (which can be factory installed):

BS4207J25 Backstop . . . . . PN 0738517
MM4207J-1 Motor Mount . . . . . PN 0738718
Belt Guard . . . . . PN 0783738

Features & Benefits

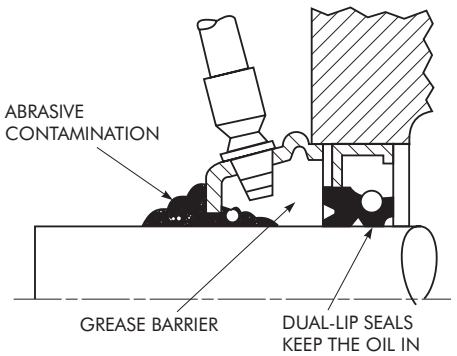
Quadrive is the fifth generation of heavy duty shaft mounted drives from Falk. Built for exceptional value, the Quadrive benefits from the latest in manufacturing and design technology.

The Economic Advantage Cellular manufacturing and modular components result in low drive costs. And the TA Taper bushing design means a simple, cost-effective installation.

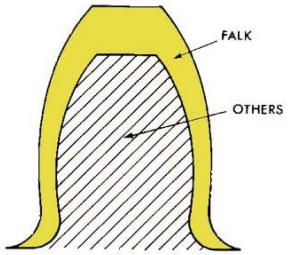
Honest Warranty A three year heavy duty warranty which includes all bearings and seals — the best in the industry!

Standard Bearings & Viton Seals with published manufacturers' numbers are available locally to minimize replacement downtime.

Severe-Duty Grease Purged Seals on high speed shafts prevent leakage and subsequent drive failure. A grease barrier traps abrasive contaminants before they can groove the shaft or enter the gear drive.



Traditional Long Life Gearing Falk's high hardness, surface finished, helical design features large teeth and wider face for maximum load carrying capacity.



"Torque Assist" TA Taper Bushing

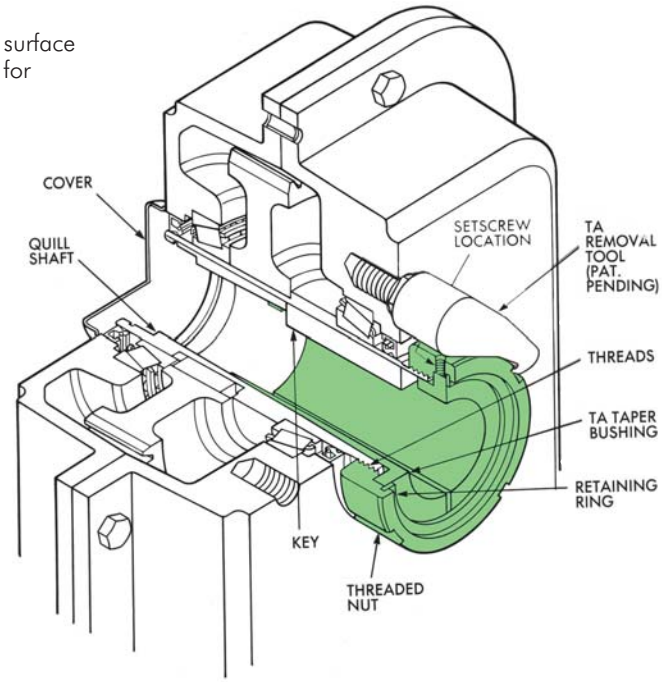
- Unique torque assist design provides easiest removal. Fast installation too!
- Eliminates binding common to twin-taper and single-flanged bushings.
- Concentric operation minimizes wobble even on worn shafts.
- Quill cover keeps out contaminants and protects outboard low speed shaft seal.
- Minimal shaft engagement requirement allows for easy retrofits.
- Inboard bushing location saves high speed bearings by minimizing sheave overhang.

Easiest On . . .

To Install, simply place the TA Taper bushing assembly onto the driven shaft. Slide the drive onto the bushing and tighten the threaded nut and setscrew. Falk's TA Taper design provides a uniform draw onto the taper with less difficulty than twin-taper or single-flanged bushings.

. . . And Easiest Off!

To remove, loosen the bushing setscrew, back off the bushing nut and the drive dismounts. It's that easy . . . only with Falk! In fact, Falk's Quadrive is guaranteed to come off the shaft, regardless of length of service or operating conditions, or WE'LL REPLACE IT FOR FREE!



Not all shaft mounted drives are created equal; when it comes down to ruggedness, life expectancy, cost, and accessories... Falk is the industry leader. Couple these features with the TA Bushing system and you have a real winner! But the really big difference is how they mount to your headshaft.

Compare Mounting Benefits:

Falk's simple, yet highly effective, single tapered bushing, mounted on the output side of the drive with the others you have been using or are considering.

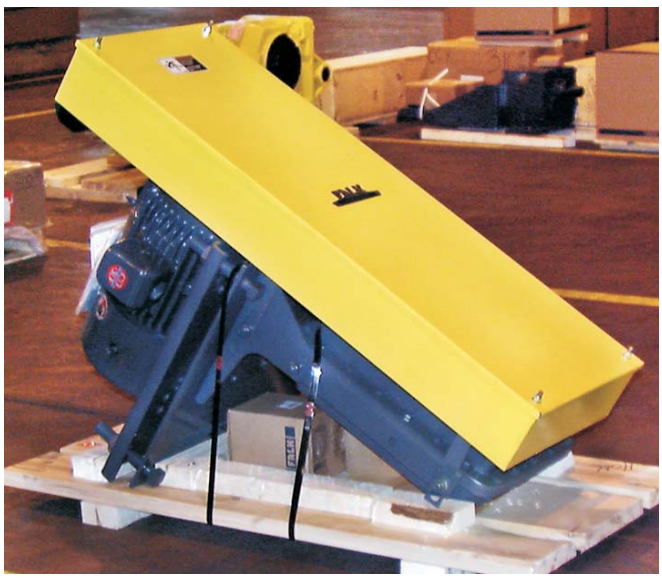
- **NO** cap screws to tighten, lose, torque, corrode in place, or break off when trying to remove them.
- **NO** numerous snap rings, "stabilizer" sleeves or bronze bushings to install, lose, or break.
- **NO** worries about having enough head shaft extension, since only the length of the Falk TA Taper Bushing needs to be engaged.
- **NO** special tools are required to install or remove your Quadrive. Readily available pipe and spanner wrenches are already in your tool room. You don't even need a torque wrench!
- **NO** large mounting distances from your head shaft bearings are required. Since there are no axial cap screws to tighten, the Falk Quadrive can be positioned right next to the headshaft bearing, reducing overhung loads.
- **NO** additional "lifts" will be required when installing; Falk's Quadrive is unique, in that you can install your sheaves, belts, motor mount, motor and belt guard before installing the drive. This will allow you to complete the whole installation with one lift to the headshaft. Your installer only needs to take the TA Taper Bushing, key and a pipe or spanner wrench up to install the drive. (Your maintenance people will thank you on those cold, windy days, 80 feet off the ground!)

The Falk Quadrive starts out with Falk's exclusive **3-year Heavy Duty Warranty**, which by the way, **includes oil seals and bearings — a true, shaft to shaft drive warranty!** Falk's unique TA Torque Assist Taper Bushing System eliminates binding found with twin-taper and single-flange bushing designs. Concentric operation minimizes wobble, even on worn shafts. A quill cover keeps contaminants out and protects the outboard shaft seal. The inboard bushing location minimizes sheave overhang, reducing overhung load on high-speed bearings. Minimal shaft engagement is required for retrofits.

Using **Standard Bearings and Seals, with published part numbers, and Falk's TA Torque Assist Taper Bushing System,** you are getting the best drive available. Standard high speed severe duty grease-purged seals are also included. They prevent leakage and ultimate drive failure. The grease barrier traps abrasive contaminants **before** they can groove the shaft or enter the drive.

Assemble your sheaves, belts, motor mount, motor, align them properly, add a belt guard and the lubricating oil **all in your shop!** Take your TA Taper Bushing and shaft key, along with your pipe or spanner wrench, out to the job-site and install your new Falk Quadrive. Hook up your motor and torque arm and you are ready to start running product! It couldn't be easier!

What happens when this particular drive has been running for 5 or 6 years and the head shaft bearing behind the drive fails? Is it going to take 2 or 3 hours to get the drive off, so you can get at that bearing? Not with a Falk Quadrive! Disconnect your drive motor, loosen the bushing setscrew, take your pipe or spanner wrench and back off the bushing nut. The Falk Quadrive will disengage itself immediately...**Falk's Quadrive is guaranteed to come off the shaft, regardless of length of service or operating conditions, or we'll replace it — FREE!**



Let's look at how the "others" install their drives:

Dodge TXT

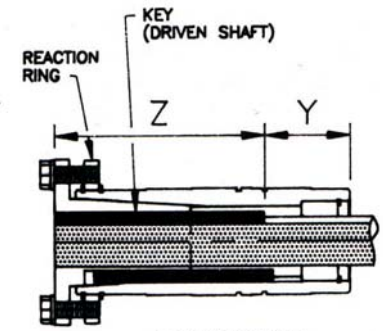
- The drive is mounted between two opposing tapered bushings.
- The minimum distance from the head shaft bearing required for cap screw clearance ranges from 1 $^{1}/_{4}$" to 2 $^{11}/_{16}$".
- The head shaft must extend completely through the drive to engage the second bushing.
- Cap screws in both bushings must be set to the proper torque to complete installation.
- Installation of sheaves, belts, and belt guard must be done after the drive is installed on the headshaft.

Dodge TAII

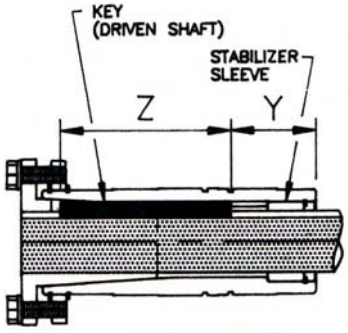
- Torque Arm II shaft mounts still use dual opposing 8° ductile iron taper bushings.
- New with this drive is the "Short-Shaft Twin Taper Bushing Kit" which consists of:
  - ✓ One standard bushing
  - ✓ One long bushing with insertable wedge
  - ✓ Two back-up plates, with snap rings
  - ✓ Hardware and key
- Housings—Still use cast iron for all sizes.
- All new motor mounts, backstops,CEMA bolt-on-adapters, and tapered screw conveyor shafts. None of these accessories are compatible with the previous TXT, SCXT, HXT, or HSCXT model drives.
- Installation of sheaves, belts, and belt guard must **STILL** be done **after** the drives are installed on the headshaft.
- Another system, using multiple small components, which can easily be misplaced, dropped, and/or lost.

Browning

- The Browning drive is mounted with a single tapered bushing from the low speed (output) side.
- Requires a long head shaft extension to fully engage the bushing.
- A minimum distance is required for installation and removal of bushing axial retaining cap screws. Cap screws must be set to the proper torque to finish installation.
- Now the installation of sheaves, belts, and belt guard can begin.



Bushing Assembly B



Bushing Assembly C

Link-Belt

- The Link-Belt drive is mounted with a single tapered bushing from the high speed (input) side.
- Requires stabilizer sleeves, bronze bushings and numerous snap ring installations before the drive is ready to mount. (There are numerous small parts to drop and/or lose.)
- Cap screws must be set to the proper torque to tighten bushing and finish installation.
- Now the installation of sheaves, belts, and belt guard can begin.

Fenner

- The Fenner drive is mounted with a single, modified keyless, tapered bushing from either input or output side.
- The bushing must be screwed into the drive and then cap screws are inserted, tightened and torqued to specifications. If the bushing is inserted from the output side, axial clearance is required. If the bushing is installed from the input side, mounting the sheaves, belts, and belt guard needs to be installed after the cap screws are torqued down.

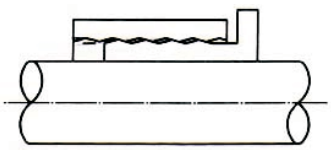


Table 1 — Selections Based Upon 1.0 Service Factor

HP & RPM	Falk 5000	Falk 4000	Browning	Dodge TXT	Dodge TA II	Sumitomo/ Fenner	Link Belt	Dorris
5hp/15rpm	5207J25A	4207J25C	207SMT25	TXT425	TA4207H25	215 G	207FX25	215TR
10hp/20rpm	5215J25A	4215J25C	215SMT25	TXT525	TA5215H25	307 H	215FX25	307TR
15hp/20rpm	5307J25A	4307J25C	307SMT25	TXT625	TA5215H25	315 J	307FX25	315TR
25hp/20rpm	5315J25A	4315J25C	315SMT25	TXT725	TA7315H25	407 S	315FX25	407TR
40hp/24rpm	5407J25A	4407J25C	407SMT25	TXT825	TA8407H25	415 K	407FX25	407TR
60hp/30rpm	5415J25A	4415J25C	415SMT25	TXT926	TA8407H25	507 L	415FX25	415TR
75hp/30rpm	5507J25A	4507J25C	507SMT25	TXT1024	TA9415H25	507 L	507D24	507TR
100hp/18rpm	5608J25A	4608J25C	608SMT25	TXT1225	TA12608H25	N/A	608D24	700TR

Table 2 — AGMA Size Comparison

Max Bore (in)	AGMA	Falk 5000	Falk 4000	Browning	Dodge TXT	Doge TA II	Sumitomo/ Fenner	Link Belt	Dorris
1 7/16	107	5107J	4107J	107SMT	TXT1	TA0107	107 C	107FX	107TR
1 15/16	115	5115J	4115J	115SMT	TXT2	TA2115	115 D	115FX	115TR
2 3/16	203	5203J	4203J	203SMT	TXT3	TA3203	203 E	203FX	203TR
2 7/16	207	5207J	4207J	207SMT	TXT4	TA4207	207 F	207FX	207TR
2 15/16	215	5215J	4215J	215SMT	TXT5	TA5215	215 G	215FX	215TR
3 7/16	307	5307J	4307J	307SMT	TXT6	TA6307	307 H	307FX	307TR
3 15/16	315	5315J	4315J	315SMT	TXT7	TA7315	315 J	315FX	315TR
4 7/16	407	5407J	4407J	407SMT	TXT8	TA8407	407 S	407FX	407TR
4 15/16	415	5415J	4415J	415SMT	TXT9	TA9415	415 K	415FX	415TR
5 7/16	507	5507J	4507J	507SMT	TXT10	TA10507	507 L	507D	507TR
6 1/2	608	5608J	4608J	608SMT	TXT12	TA12608	608 M	608D	608TR

Table 3 — Minimum Recommended Shaft Engagements (Inch)

AGMA Sizes	Falk	Browning	Dodge TXT	Dodge TA II	Dodge TA II Short Shaft Bushing	Sumitomo/ Fenner	Link Belt	Dorris
107	5.00	6.125	8.344	6.95	4.42	5.551	4.880	6.25
115	5.55	6.625	8.563	7.81	4.79	6.142	5.180	6.88
203	5.53	7.125	10.281	8.62	5.45	6.653	5.960	7.88
207	6.11	7.625	11.500	8.94	5.64	7.165	6.900	8.38
215	7.08	8.250	12.031	10.33	6.35	8.425	7.910	9.00
307	7.39	9.750	13.313	10.84	6.70	9.409	8.960	11.00
315	7.92	11.063	14.875	11.86	7.63	9.606	9.680	11.00
407	8.38	10.500	16.126	12.81	8.11	10.345	10.800	13.50
415	10.33	12.875	16.844	13.75	8.55	11.693	11.800	14.88
507	10.66	14.500	17.781	15.47	9.66	13.583	13.500	15.50
608	12.75	15.250	21.156	18.33	11.50	15.551	15.250	20.25

Shaded values show where cost savings can be achieved.

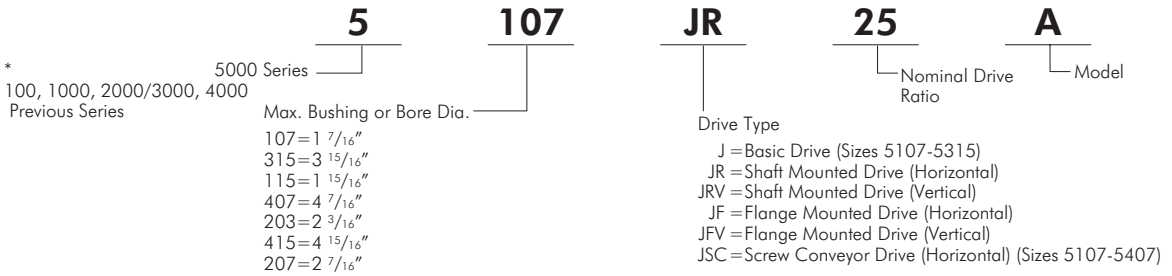
Table 4 — Oil Capacity Comparison (U.S. Quarts) – Horizontal Mounting w/HS Shafts @ 12:00 o'clock Position

FALK ♦	Quarts	Browning	Quarts	Dodge TXT	Quarts	Dodge TA II	Quarts	Sumitomo/Fenner	Quarts	Link Belt	Quarts	Dorris	Quarts
5107J25A	2.0	**107SMT25**	1.00	**TXT125**	0.750	**TA1107H**	1.7	**107 C**	0.63	**107FX25**	1.00	**107TR25**	1.50
5115J25A	3.0	**115SMT25**	1.25	**TXT225**	1.000	**TA2115H**	2.6	**115 D**	1.27	**115FX25**	1.25	**115TR25**	3.00
5203J25A	3.5	**203SMT25**	3.00	**TXT325**	2.125	**TA3203H**	4.0	**203 E**	1.90	**203FX25**	2.00	**203TR25**	3.75
5207J25A	5.5	**207SMT25**	3.50	**TXT425**	1.750	**TA4207H**	7.3	**215 G**	3.59	**207FX25**	3.50	**207TR25**	4.25
5215J25A	9.0	**215SMT25**	5.50	**TXT525**	4.000	**TA5215H**	12.9	**307 H**	5.28	**215FX25**	5.00	**215TR25**	7.00
5307J25A	13.0	**307SMT25**	8.00	**TXT625**	5.000	**TA6307H**	15.8	**315 J**	11.62	**307FX25**	10.25	**307TR25**	12.25
5315J25A	15.0	**315SMT25**	10.00	**TXT725**	9.250	**TA7315H**	22.0	**407 S**	15.32	**315FX25**	12.00	**315TR25**	15.50
5407J25A	17.2	**407SMT25**	12.50	**TXT825**	8.500	**TA8407H**	25.1	**415 K**	25.36	**407FX25**	17.50	**407TR25**	18.50
5415J25A	28.0	**415SMT25**	16.00	**TXT926**	14.250	**TA9415H**	33.2	**507 L**	26.42	**415FX25**	16.50	**415TR25**	34.00
5507J25A	41.2	**507SMT25**	22.00	**TXT1024**	18.750	**TA10507H**	53.5	**507 L**	26.42	**507D24**	22.00	**507TR25**	38.00
5608J25A	100.0	**608SMT25**	33.00	**TXT1225**	36.500	**TA12608H**	70.7	**N/A**	N/A	**608D24**	30.00	**608TR25**	N/A

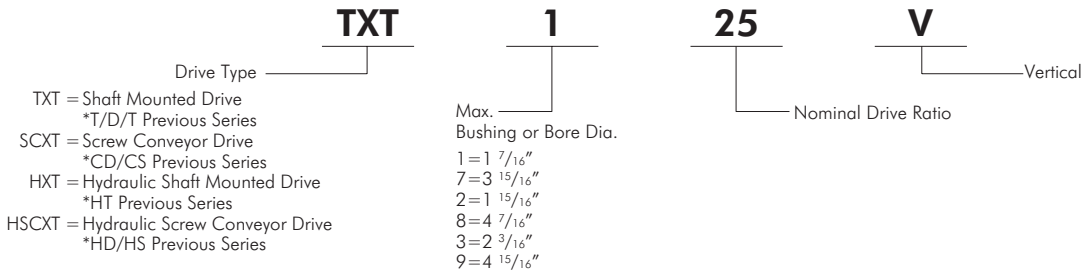
♦ Falk's oil level ensures bearings are lubricated during start-up.

Nomenclature Guide

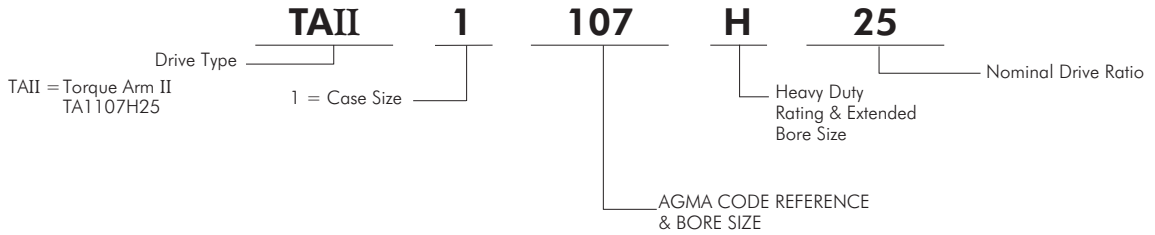
FALK QUADRIVE



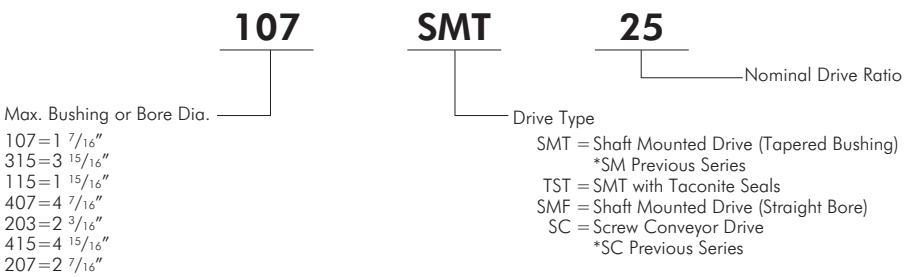
DODGE



DODGE TORQUE ARMII

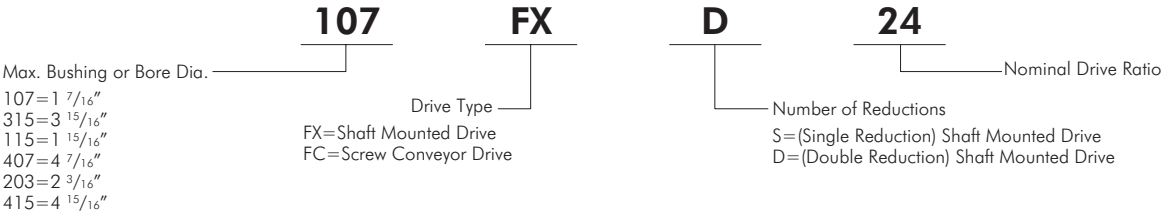


BROWNING

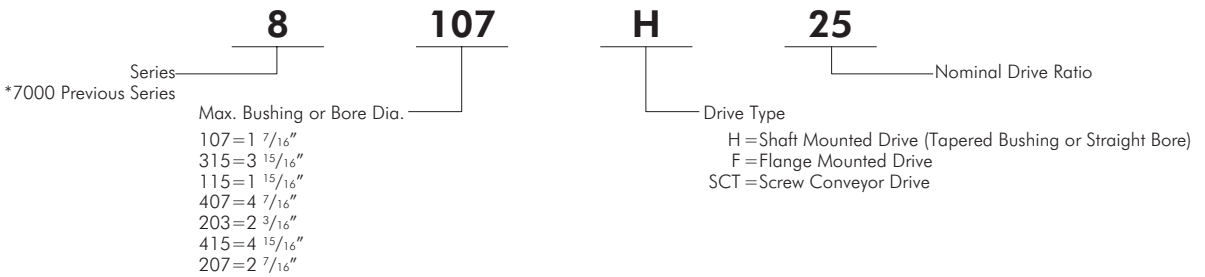


Nomenclature Guide

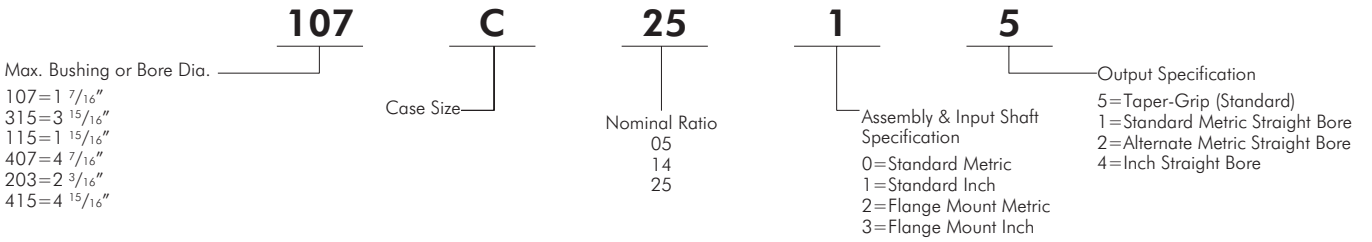
LINK BELT



FOOTE JONES



SUMITOMO/FENNER



DORRIS

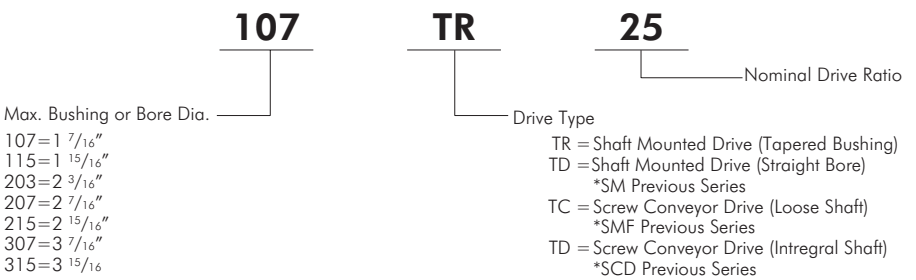


Table 6 — Load Classifications * . . . Electric Motor Driven Applications

Recommendations are minimum and normal conditions are assumed.

APPLICATION	Service 3 to 10 Hour	Service Over 10 Hour
AGITATORS		
Paper Mill (Mixers)	II	II
Pure Liquids	I	II
Semi-Liquids, Variable Density	II	II
APRON CONVEYORS		
Uniformly Loaded	I	II
Heavy Duty	II	III
ASSEMBLY CONVEYORS		
Uniformly Loaded	I	II
Heavy Duty	II	II
BELT CONVEYORS		
Uniformly Loaded	I	II
Heavy Duty	II	II
BREWING & DISTILLING		
Bottling Machinery	I	II
Brew Kettles, Continuous	...	II
Can Filling Machines	I	II
Cookers, Continuous	...	II
Mash Tubs, Continuous	...	II
Scale Hoppers, Frequent Starts	II	II
BUCKET		
Conveyors Heavy Duty	II	II
Elevators, Uniform Load	I	II
Elevators, Heavy Duty	II	III
CAN FILLING MACHINES	I	II
CAR		
Dumpers	III	...
Pullers	Refer to Factory	
CLARIFIERS	I	II
CLASSIFIERS	II	II
CLAY WORKING MACHINERY		
Brick Presses	III	III
Briquette Machines	III	III
Extruders & Mixers	II	III
CONVEYORS—UNIFORMLY LOADED OR FED ‡		
Apron and Assembly	I	II
Belt	I	II
Flight	II	II
Oven	I	II
Live Roll (Package)	I	II
Screw	I	II
Table—See Metal Mills	...	...
CONVEYORS—HEAVY DUTY —NOT UNIFORMLY FED ‡		
Apron	II	III
Assembly	II	II
Belt	II	II
Bucket or Pan	II	II
Flight	II	II
Live Roll	Refer to Factory	
Oven	II	II
Reciprocating	III	III
Screw	II	II
Table—See Metal Mills	...	...
CRANES & HOISTS ‡		
Bridge and Trolley Drive	II	II
CUTTER HEAD DRIVES	Refer to Factory	
DISTILLING — See Brewing	...	...
DRYERS & COOLERS, ROTARY	II	III
ELEVATORS		
Bucket—Unifarm Load	I	II
Bucket—Heavy Load	II	III
Escalators	Not Approved	
Freight	Not Approved	
Man lifts, Passenger	Not Approved	
FLIGHT CONVEYORS		
Uniformly Loaded	II	II
Heavy Duty	II	II
FOOD INDUSTRY		
Beet Slicers	II	II
Can Filling Machines	I	II
Cereal Cookers	I	II
Dough Mixers	II	II
Meat Grinders	II	II
LAUNDRY		
Washers, reversing	Refer to Factory	
Tumblers	II	III
LINE SHAFTS		
Uniform Load	I	II
Heavy Load	II	II
LIVE ROLL CONVEYORS		
Uniformly Loaded, Package	I	II
Heavy Duty	Refer to Factory	
MACHINE TOOLS		
Auxiliary Drives	I	II
Main Drives Uniform Load	II	II
Main Drives Heavy Load	III	III
METAL MILLS		
Table Conveyors, Non Reversing	II	III
Reversing	Refer to Factory	
Wire Drawing & Flattening Machines	II	III
MILLS (See Metal Mills)		
Pebble	II	III
MIXERS (See Agitators)		
Concrete, Continuous	II	III
Concrete, Intermittent	II	...
Constant Density	I	II
Variable Density	II	II
Liquid	I	II
Paper Mill (Agitators)	II	II
Semi-Liquid	II	II
OVEN CONVEYORS		
Uniformly Loaded	I	II
Heavy Duty	II	II
PAN CONVEYORS		
Heavy Duty	II	II
PAPER MILLS		
Agitators (Mixers)	II	II
Bleachers	I	II
Calenders	...	III
Cylinders	...	II
Felt Stretchers	...	II
Winders	...	II
PEBBLE MILLS	II	III
PUMPS		
Proportioning		
Refer to Factory		
Reciprocating, open Discharge	I	II
Double Acting Multi-Cylinder	II	III
Single Cylinder		
Refer to Factory		
Rotary (Gear Type)		
Constant Density	I	II
Variable Density	II	II
RECIPROCATING		
Conveyors	III	III
RUBBER INDUSTRY		
Tire Building Machines	II	II
Tire & Tube Press Openers	I	I
SCREENS		
Air Washing	I	II
Rotary, Stone or Gravel	II	II
Traveling Water Intake	I	II
Shaker	II	III
SCREW CONVEYORS		
Uniformly Loaded	I	II
Heavy Duty	II	II
SKI TOWS & LIFTS Not Approved		
SKIP HOISTS ‡	II	...
STOKERS	...	II
TEXTILE INDUSTRY		
Batchers	II	II
Calenders	II	II
Card Machines	III	III
Dry Cans	II	II
Dyeing Machinery	II	II
Looms		
Refer to Factory		
Mangles, Nappers & Soapers	II	II
Spinners	II	III
Tenter Frames	II	II
TUMBLING BARRELS	III	III

* LOAD CLASSIFICATIONS FOR ENGINE-DRIVEN APPLICATIONS — **Multi-Cylinder Engines:** Use the next higher Service Class than the one given in Table 6 for the same application when motor driven. (Example: A motor-driven uniformly loaded belt conveyor for 10 hour service is Class I; the same conveyor driven by a multi-cylinder engine would be Class II). For applications which require Class III when motor driven, consult the Factory for recommendations on engine drives. **Single Cylinder Engines:** Consult the Factory.

‡ Selection of Rexnord 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, fork lift platforms and ski tows and ski lifts. If the primary purpose of the application is material conveyance and occasionally people are transported, the Factory 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.

Motor Ratings and Dimensions are in accordance with NEMA standards

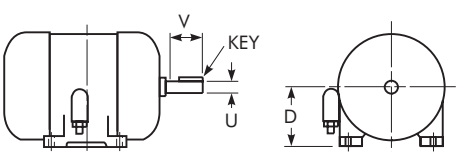


TABLE 7 — 1964 (Type T) NEMA Motor Standards †

MOTOR SPEED AND FRAME SIZE													MOTOR SHAFT DIMENSIONS – INCHES												
Motor hp	1800 rpm	1200 rpm	900 rpm	Motor hp	1800 rpm	1200 rpm	900 rpm	Motor hp	1800 rpm	1200 rpm	900 rpm	Motor Frame	D	U	V	Key (Sq)	Motor Frame	D	U	V	Key (Sq)	Motor Frame	D	U	V	Key (Sq)
½	56	56	143	**7 ½**	213	254	256	**50**	326	365	404	**56**	3 ½	5/8	2	3/16	**215**	5 ¼	1 3/8	3 1/8	5/16	**326**	8	2 1/8	5	½
¾	56	143	145	**10**	215	256	284	**60**	364	404	405	**143**	3 ½	7/8	2	3/16	**254**	6 ¼	1 5/8	3 ¾	3/8	**364**	9	2 3/8	5 5/8	5/8
1	143	145	182	**15**	254	284	286	**75**	365	405	...	**145**	3 ½	7/8	2	3/16	**256**	6 ¼	1 5/8	3 ¾	3/8	**365**	9	2 3/8	5 5/8	5/8
1 ½	145	182	184	**20**	256	286	324	**100**	404	...	...	**182**	4 ½	1 1/8	2 ½	¼	**284**	7	1 7/8	3/8	½	**404**	10	2 7/8	7	¾
2	145	184	213	**25**	284	324	326	**125**	405	...	...	**184**	4 ½	1 1/8	2 ½	¼	**286**	7	1 7/8	3/8	½	**405**	10	2 7/8	7	¾
3	182	213	215	**30**	286	326	364	**150**	444	...	...	**213**	5 ¼	1 3/8	3 1/8	5/16	**324**	8	1/8	5	½	**444**	11	3 3/8	8 ¼	7/8
5	184	215	254	**40**	324	364	365	**200**	445	...	...	**...**	...	...	...	...	**...**	...	...	...	...	**445**	11	3 3/8	8 ¼	7/8

† Frame numbers listed are for 110, 208, 220/440 and 550 volts. Falk Motor Mounts are pre-drilled for rerated 1964 NEMA standard foot-mounted motors.

Table 8 — 5000J Model A Mechanical Input Horsepower & Output Torque (lb-in) Ratings ★

Nom Ratio †	Output Speed rpm ‡	DRIVE SIZE 5107			5115			5203			5207			5215 ∗				5307			
		Hp ●	Output Torque (lb-in) ■	Min HSS Sheave Pitch Dia (in.) ♦	Hp ●	Output Torque (lb-in) ■	Min HSS Sheave Pitch Dia (in.) ♦	Hp ●	Output Torque (lb-in) ■	Min HSS Sheave Pitch Dia (in.) ♦	Hp ●	Output Torque (lb-in) ■	Min HSS Sheave Pitch Dia (in.) ♦	Hp ●	Output Torque (lb-in) ■	Min HSS Sheave Pitch Dia ♦ w/o Shaft Fan (in.)	Min HSS Sheave Pitch Dia ♦ with Shaft Fan (in.)	Hp ●	Output Torque (lb-in) ■	Min HSS Sheave Pitch Dia ♦ w/o Shaft Fan (in.)	Min HSS Sheave Pitch Dia ♦ with Shaft Fan (in.)
25:1	5	0.357	4494	2.1	0.652	8219	2.6	1.04	13078	4.0	1.65	20832	5.0	2.76	34821	6.0	6.0	4.48	56529	7.0	7.0
	7	0.499	4494	2.1	0.913	8219	2.6	1.45	13078	4.0	2.31	20832	5.0	3.87	34821	6.0	6.0	6.29	56529	7.0	7.0
	10	0.713	4494	2.1	1.30	8219	2.6	2.08	13078	4.0	3.31	20832	5.0	5.52	34821	6.0	6.0	8.97	56529	7.0	7.0
	15	1.07	4494	2.1	1.96	8219	2.6	3.11	13078	4.0	4.96	20832	5.0	8.29	34821	6.0	6.0	13.5	56529	7.0	7.0
	20	1.43	4494	2.1	2.61	8219	2.6	4.15	13078	4.0	6.61	20832	5.0	11.1	34821	6.0	6.0	17.9	56529	7.0	7.0
	25	1.79	4494	2.1	3.26	8219	2.6	5.19	13078	4.0	8.26	20832	5.0	13.8	34821	6.0	6.0	22.4	56529	7.0	7.0
	30	2.14	4494	2.1	3.91	8219	2.6	6.23	13078	4.0	9.92	20832	5.0	16.6	34821	6.0	6.0	26.9	56529	7.0	7.0
	35	2.50	4494	2.1	4.56	8219	2.6	7.26	13078	4.0	11.6	20832	5.0	19.3	34821	6.0	6.0	31.4	56529	7.0	7.0
	40	2.85	4494	2.1	5.22	8219	2.6	8.30	13078	4.0	13.2	20832	5.0	22.1	34821	6.0	6.0	35.9	56529	7.0	7.0
	50	3.56	4494	2.1	6.52	8219	2.6	10.4	13063	4.0	15.5	20832	5.0	27.6	34821	6.0	6.0	44.9	56529	7.0	7.0
	60	4.28	4494	2.1	7.82	8219	2.6	11.8	12367	4.0	19.8	20832	5.0	33.2	34821	6.0	6.0	53.8	56529	7.0	7.0
	70	4.99	4494	2.1	9.13	8219	2.6	13.1	11808	4.0	23.1	20832	5.0	38.7	34821	6.0	6.0	62.8	56529	7.0	7.0
14:1	71	4.79	4254	1.7	9.07	8052	2.0	14.7	13078	4.0	23.5	20832	6.5	39.2	34821	6.0	6.6	63.7	56529	7.0	8.3
	80	5.40	4254	1.7	10.2	8052	2.0	16.6	13078	4.4	26.4	20832	7.4	44.2	34821	6.0	7.2	71.8	56529	7.0	8.6
	90	6.08	4254	1.7	11.5	8052	2.0	18.3	12838	4.6	29.2	20421	8.0	49.7	34821	6.1	8.0	80.7	56529	7.2	9.2
	100	6.75	4254	1.7	12.8	8052	2.0	19.7	12439	4.7	31.4	19786	8.0	55.3	34821	6.8	8.9	89.7	56529	7.7	9.8
	110	7.43	4254	1.7	14.1	8052	2.0	21.1	12088	4.6	33.6	19228	8.0	60.8	34821	7,5	9.8	98.1	56227	8.1	10.4
	120	8.10	4254	1.7	15.3	8052	2.1	22.4	11777	4.6	35.7	18732	7.9	66.3	34821	8.4	10.9	104	54778	8.1	10.4
	125	8.44	4254	1.7	16.0	8052	2.1	23.1	11633	4.6	36.7	18504	7.9	69.1	34821	8.9	11.5	107	54112	8.1	10.4
9:1	126	8.56	4317	2.6	15.0	7509	2.6	22.0	11027	12.0	35.3	17634	15.0	68.4	34220	9.5	12.5	75.1	37545	14.1	18.0
	130	8.90	4317	2.5	15.5	7509	2.6	22.5	10904	12.0	36.0	17438	15.0	70.6	34220	9.8	12.9	76.8	37211	14.1	18.0
	140	9.59	4317	2.4	16.7	7509	2.7	23.7	10647	12.0	37.9	17076	15.0	76.0	34220	10.7	13.9	80.8	36362	14.1	18.0
	150	10.3	4317	2.3	17.9	7509	2.8	24.9	10453	12.0	39.8	16725	15.0	81.3	34163	11.5	14.9	84.8	35625	14.1	18.0
	160	11.0	4317	2.2	19.1	7509	3.0	26.0	10265	12.0	41.6	16383	15.0	85.1	33504	11.5	15.0	88.7	34846	14.1	18.0
	170	11.6	4317	2.2	20.3	7509	3.1	27.1	10059	12.0	43.5	16114	15.0	88.8	32923	11.5	15.0	92.6	34313	14.1	18.0
	180	12.3	4317	2.2	21.4	7509	3.2	28.3	9906	12.0	45.3	15843	15.0	92.4	32344	11.5	15.0	96.4	33750	14.1	18.0
	190	13.0	4317	2.2	22.6	7509	3.3	29.4	9740	12.0	47.0	15572	15.0	96.0	31826	11.5	15.0	100	33203	14.1	18.0

Nom Ratio †	Output Speed rpm ‡	DRIVE SIZE 5315				5407 ∗				5415				5507				5608			
		Hp ●	Output Torque (lb-in) ■	Min HSS Sheave Pitch Dia ♦ w/o Shaft Fan (in.)	Min HSS Sheave Pitch Dia ♦ with Shaft Fan (in.)	Hp ●	Output Torque (lb-in) ■	Min HSS Sheave Pitch Dia ♦ w/o Shaft Fan (in.)	Min HSS Sheave Pitch Dia ♦ with Shaft Fan (in.)	Hp ●	Output Torque (lb-in) ■	Min HSS Sheave Pitch Dia ♦ w/o Shaft Fan (in.)	Min HSS Sheave Pitch Dia ♦ with Shaft Fan (in.)	Hp ●	Output Torque (lb-in) ■	Min HSS Sheave Pitch Dia ♦ w/o Shaft Fan (in.)	Min HSS Sheave Pitch Dia ♦ with Shaft Fan (in.)	Hp	Output Torque (lb-in) ■	Min HSS Sheave Pitch Dia ♦ w/o Shaft Fan (in.)	Min HSS Sheave Pitch Dia ♦ with Shaft Fan (in.)
25:1	5	5.72	72122	7.0	7.0	8.52	107421	7.0	7.0	11.1	140422	8.0	8.0	17.5	220560	8.0	8.0	25.9	325993	9.5	10.1
	7	8.01	72092	7.0	7.0	11.9	107366	7.0	7.0	15.6	140348	8.0	8.0	24.5	220423	8.0	8.0	36.2	325765	9.5	10.2
	10	11.4	72046	7.0	7.0	17.0	107286	7.0	7.0	22.3	140238	8.0	8.0	34.9	220219	8.0	8.0	51.6	325423	9.5	10.2
	15	17.1	71968	7.0	7.0	25.5	107152	7.0	7.0	33.3	140054	8.0	8.0	52.3	219879	8.0	8.0	77.3	324853	9.5	10.2
	20	22.8	71891	7.0	7.0	34.0	107018	7.0	7.0	44.4	139869	8.0	8.0	69.7	219538	8.0	8.0	103	324283	9.5	10.2
	25	28.5	71813	7.0	7.0	42.4	106883	7.0	7.0	55.4	139684	8.0	8.0	86.9	219917	8.0	8.0	128	323713	9.5	10.1
	30	34.1	71736	7.0	7.0	50.8	106749	7.0	7.0	66.4	139500	8.0	8.0	104	218857	8.0	8.0	154	323143	9.5	10.1
	35	39.8	71659	7.0	7.0	59.2	106614	7.0	7.0	77.4	139315	8.0	8.0	123	218516	8.0	8.0	179	322573	9.5	10.1
	40	45.4	71581	7.0	7.0	67.6	106480	7.0	7.0	88.3	139130	8.0	8.0	138	218176	8.0	8.0	204	322003	9.5	10.2
	50	56.7	71427	7.0	7.0	84.3	106212	7.0	7.0	110	138762	8.0	8.0	173	217495	8.0	8.0	253	318702	9.5	12.0
	60	67.9	71272	7.0	7.0	101	105604	7.0	7.0	132	138393	8.0	8.0	206	216813	8.0	8.0	299	314493	10.0	14.0
	70	79.0	71118	7.0	7.0	116	104709	7.0	7.0	153	137878	8.0	8.0	240	216132	8.0	8.0	345	310283	11.4	16.1
14:1	71	80.1	71102	11.0	13.3	112	99193	7.0	8.5	155	137987	8.0	12.3	243	216064	8.3	16.2	294	261388	9.5	12.0
	80	90.1	70963	12.4	14.9	126	99193	7.0	8.5	175	137654	8.0	12.2	273	215452	9.0	16.1	332	261388	9.5	13.0
	90	101.1	70808	14.2	17.0	142	99193	7.0	8.5	196	137286	8.0	12.2	307	214771	9.8	16.1	373	261388	10.0	14.2
	100	110	69525	15.0	18.0	157	99193	7.0	8.5	217	136916	8.0	12.2	335	211443	10.2	15.8	415	261388	10.8	15.3
	110	118	67577	15.0	18.0	173	99193	7.0	9.0	238	136547	8.0	12.1	359	205482	10.2	15.4	456	261388	11.7	16.5
	120	125	65860	15.0	18.0	189	99193	7.0	9.6	259	136179	8.0	12.1	381	200188	10.2	15.0	498	261388	12.7	17.8
	125	129	65025	15.0	18.0	197	99193	7.0	9.9	270	135994	8.0	12.1	392	197750	10.2	14.8	518	261388	13.2	18.5
9:1	126	109	54286	14.8	18.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	130	111	53790	14.8	18.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	140	117	52594	14.8	18.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	150	123	51525	14.8	18.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	160	128	50554	14.8	18.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	170	134	49632	14.8	18.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	180	139	48781	14.8	18.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	190	145	48019	14.8	18.0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

★ Refer 5507J14 with backstop applications to the Factory.
† Maximum output speed per nominal ratio based on 1750 input rpm.
‡ Refer to Manual 377-114 for maximum output speeds and vertical mounting.
● Check required up (without service factor) against the application adjusted thermal capacity.
■ Convert required torque (without service factor) to hp and check against the application adjusted thermal capacity.
♦ Values are for V-belt drives and load applied one shaft diameter from seal cage or fan if so equipped. For minimum sheave diameters for other axial locations, refer to load location factor table in Selection Guide 371-110. Multiply values by 0.66 when using timing belt or chain drives.
∗ 5215J09 backstop torque limit 34220 lb-in, 5407J14 backstop torque limit 99193 lb-in.

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371-810 Printed in USA 5/13