



Maxum[®] XTR

CONCENTRIC REDUCERS



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WARNING

The information provided for Product Interchange in this catalog is for use only as a general reference by persons qualified to recognize unreasonable selection options. Products suggested as substitutes may have dimensional, rating, pricing and other differences from products to be replaced. This selection method must be used in conjunction with the applicable product catalog which contains important precautions and other pertinent information.

In illustrations throughout this catalog, safety guards have been removed for photographic purposes.

Warning: Because of the possible danger to person(s) or property from accidents which may result from the improper use of products, it is important that correct procedures be followed: Products must be used in accordance with the engineering information specified in the catalog. Proper installation, maintenance and operation procedures must be observed. The instructions in the instruction manuals must be followed. Inspections should be made as necessary to assure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures as may be described or as may be specified in safety codes should be provided, and are neither provided by Dodge Industrial nor are the responsibility of Dodge Industrial. This unit and its associated equipment must be installed, adjusted and maintained by qualified personnel who are familiar with the construction and operation of all equipment in the system and the potential hazards involved. When risk to persons or property may be involved, a holding device must be an integral part of the driven equipment beyond the speed reducer output shaft.

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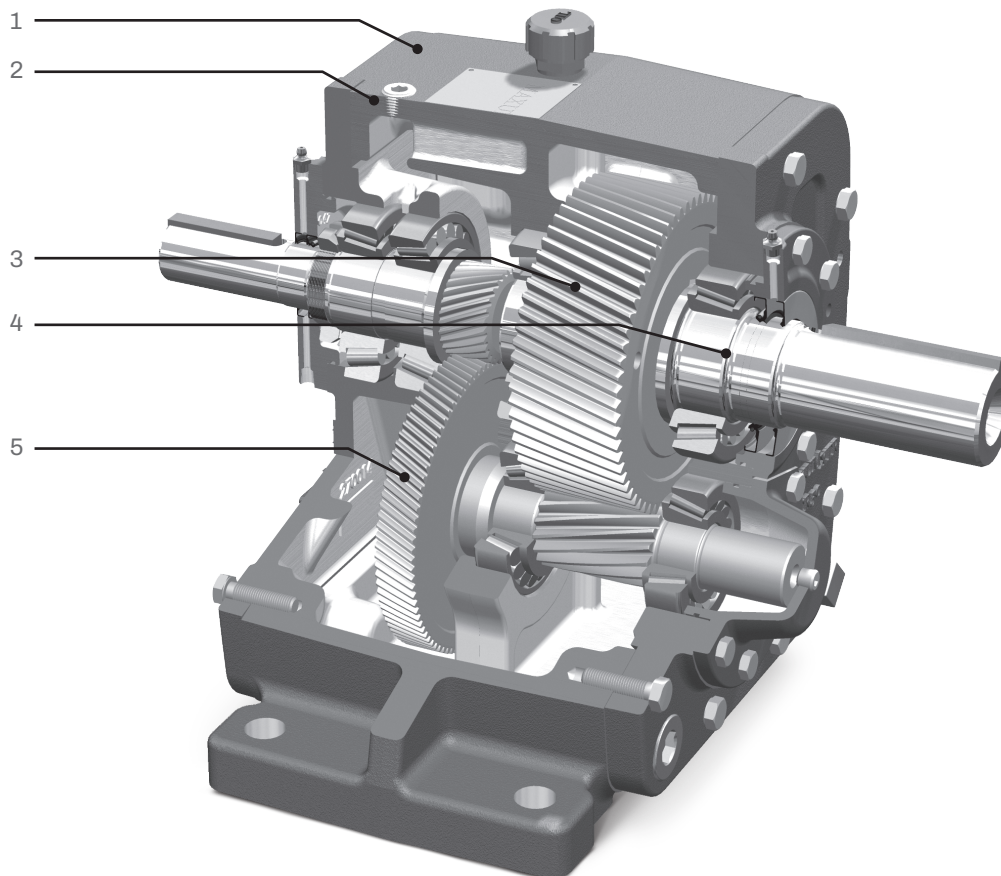
Features and Benefits

Maxum XTR concentric gearbox

The Dodge Maxum XTR is a heavy duty gearbox designed to excel in severe applications. The Maxum XTR provides a solution for quick installation while minimizing downtime, helping to lower the total cost of ownership for the end user. It is a drop in replacement for the majority of installed concentric reducers and offers longer life by having higher comparable ratings with a harsh duty design.

1. Housing - Rugged ductile iron, compact design with increased stiffness to provide dependable performance in less space. Condition monitoring pads are standard for the mounting of accelerometers.
2. Lubrication - Oil level sight plug and magnetic drain plug are standard. Internal housing features enhanced oil circulation and accommodate inclined mounting of reducer. Pitot tube for dynamic oil sampling is available as an optional accessory.
3. Gearing - High precision carburized and ground gearing with tooth geometry designed to optimize contact, reduce stress and maximize efficiency.
4. Tandem Seals - Premium HNBR oil seals are protected by an excluder lip auxiliary seal on all shafts. These seals provide high temperature protection, minimize shaft wear, while providing twice the security to contain lubrication and prevent ingress of contaminants.
5. Bearings - Longer life tapered and/or spherical roller bearings throughout, designed to meet or exceed AGMA standards and provide a minimum unadjusted L_{10} life of 5,000 hours and an average of 25,000 hours. O-ring sealing and steel shims eliminate gasket creep.
6. Drop in replacement for the majority of installed base of concentric gearboxes in the field.

Accessories - Available with shaft driven fan, backstop, scoop motor bracket package, or top motor mount.



Specifications

Maxum XTR speed reducer

- The speed reducer shall be a direct coupled, V-belt, or chain driven enclosed concentric type unit with a double or triple reduction ratio. The published rating of the speed reducer shall conform to all applicable AGMA standards.
- The reducer housing shall be constructed of corrosion resistant, ductile iron with cast internal walls for added strength. All housings and end covers shall be doweled and precision machined to assure accurate alignment for all gear sets.
- All gearing shall be of single helical design, and crown shaved or ground to provide an ellipsoid tooth form to eliminate tooth end bearing and assure meshing in the strongest tooth area. All gears shall be case carburized to insure a high surface durability and resilient tooth core for greater impact resistance and longer service life.
- Reducer bearings shall be roller type, and provide a minimum 25,000 hour average life.
- Oil seals shall be of the tandem radial lip seal arrangement, made of HNBR material.
- Reducer gears and bearings shall be splash lubricated using a quality petroleum base oil containing rust and oxidation inhibitors.

Maxum XTR speed reducer with scoop

- The speed reducer shall be direct coupled enclosed concentric type unit with a double or triple reduction ratio.
- The published rating of the speed reducer shall conform to all applicable AGMA standards. The motor shall be supported by a steel fabricated scoop of rigid design to maintain motor shaft alignment to the input shaft of the speed reducer.
- The reducer housing shall be constructed of corrosion resistant, ductile iron with cast internal walls for added strength. All housings and end covers shall be doweled and precision machined to assure accurate alignment for all gear sets.
- All gearing shall be of single helical design, and crown shaved or ground to provide an ellipsoid tooth form to eliminate tooth end bearing and assure meshing in the strongest tooth area. All gears shall be case carburized to insure a high surface durability and resilient tooth core for greater impact resistance and longer service life.
- Reducer bearings shall be roller type, and provide a minimum 25,000 hour average life.
- Oil seals shall be of the tandem radial lip seal arrangement, made of HNBR material.
- Reducer gears and bearings shall be splash lubricated using a quality petroleum base oil containing rust and oxidation inhibitors.
- The fabricated steel scoop shall be supported by the reducer housing and shall include a means of accommodating the motor frame required.
- A flexible coupling of either the elastomeric or grid type design shall be furnished to couple motor to reducer. The shaft coupling shall be covered by an approved guard as required.

Maxum XTR speed reducer with base plates

- The speed reducer shall be direct coupled enclosed concentric type unit with a double or triple reduction ratio. The published rating of the speed reducer shall conform to all applicable AGMA standards. The motor shall be supported by a steel fabricated baseplate of rigid design to maintain motor shaft alignment to the input shaft of the speed reducer.
- The reducer housing shall be constructed of corrosion resistant, ductile iron with cast internal walls for added strength.
- All housing and end covers shall be doweled and precision machined to assure accurate alignment for all gear sets.
- All gearing shall be of single helical design, and crown shaved or ground to provide an ellipsoid tooth form to eliminate tooth end bearing and assure meshing in the strongest tooth area. All gears shall be case carburized to insure a high surface durability and resilient tooth core for greater impact resistance and longer service life.
- Reducer bearings shall be roller type, and provide a minimum 25,000 hour average life.
- Oil seals shall be of the tandem radial lip seal arrangement, made of HNBR material.

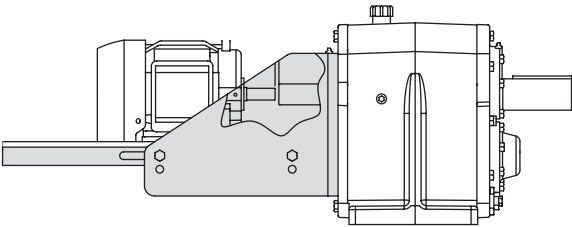
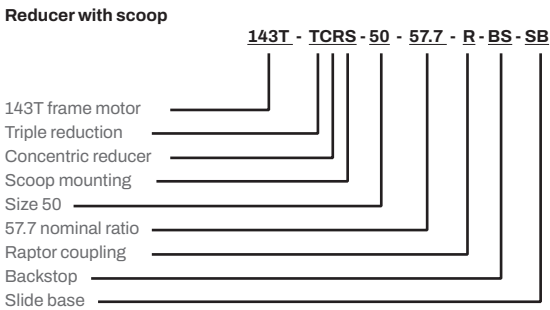
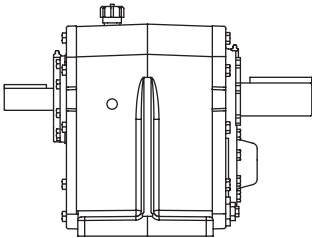
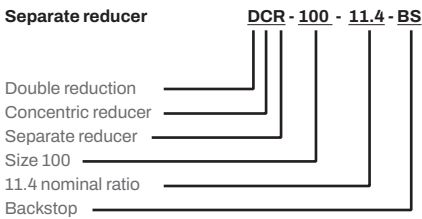
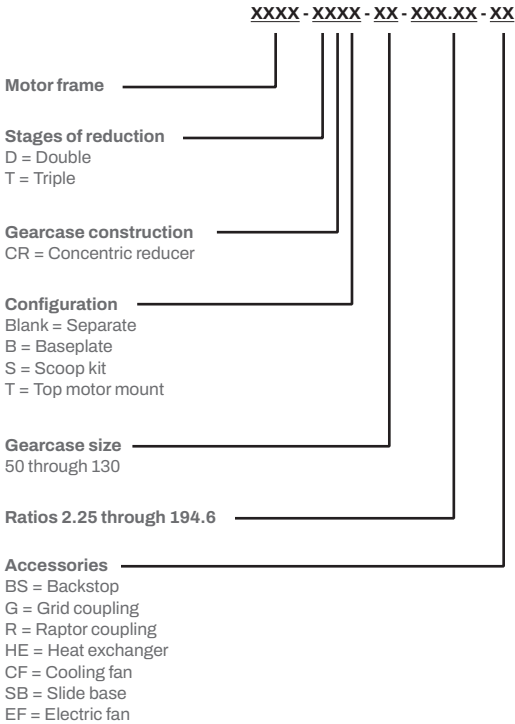
How to order / nomenclature

How to order Maxum XTR reducer

Once the correct Dodge Maxum XTR concentric shaft reducer and accessories have been selected from information published in this catalog, the complete assembly can be specified or ordered using the nomenclature provided and/or the part numbers listed in the selection/dimensions section on pages 24-41.

Note: If selection cannot be made from information herein, technical assistance is available to recommend drives for new or existing applications. Submit full details to Dodge Maxum XTR application engineering or Dodge customer service (864) 297-4800.

Nomenclature:



Selection

Service factors

The service factors that follow are adapted from AGMA.

Applications which expose the gear drive to high starting torques, extreme repetitive shock, or where high energy loads must be absorbed as when stalling, require special consideration. Service factors for these special applications should be agreed upon by the user and Dodge technical support for Dodge mechanical products since variations of the values in the table may be required.

The service factors in the service factor table are based on the use of an electric or hydraulic motor or the use of a steam or gas turbine as a prime mover. If the prime mover is a single or multi-cylinder engine, then the service factor must be adjusted in accordance with the table below.

Conversion table for single or multi-cylinder engines to find equivalent single or multi-cylinder application factor or service factor

Steam and gas turbines, hydraulic or electric motor	Single cylinder engines	Multi cylinder engines
1.00	1.50	1.25
1.25	1.75	1.50
1.50	2.00	1.75
1.75	2.25	2.00
2.00	2.50	2.25
2.25	2.75	2.50
2.50	3.00	2.75
2.75	3.25	3.00
3.00	3.50	3.25
3.50	4.00	3.75

Selection

Service factors

Features

Specifications

Selection

Dimensions

Accessories

Engineering

Application	Service	
	3-10	10+hrs /day
Agitators	Hrs/day	Day
Pure liquids	1.00	1.25
Liquids & solids	1.25	1.50
Liquids - variable density	1.25	1.50
Apron conveyors		
Uniformly loaded or fed	1.00	1.25
Heavy duty	1.25	1.50
Apron feeders	1.25	1.50
Assembly conveyors		
Uniformly loaded or fed	1.00	1.25
Heavy duty	1.25	1.50
Ball mills	▲	▲
Barge haul pullers	1.25	1.50
Barking		
Drums (coupling connected)	-	2.00
Mechanical	-	2.00
Bar screens (sewage)	1.25	1.25
Batchers (textile)	1.25	1.50
Belt conveyors		
Uniformly loaded or fed	1.00	1.25
Heavy duty	1.25	1.50
Belt feeders	1.25	1.50
Bending rolls		
(Machine)	1.25	1.50
Blowers		
Centrifugal	1.00	1.25
Lobe	1.25	1.50
Vane	1.25	1.50
Bottling machinery	1.00	1.25
Brewing & distilling		
Bottling machinery	1.00	1.25
Brew kettles, cont. duty	1.25	1.25
Can filling machines	1.00	1.25
Cookers - cont. duty	1.25	1.25
Mash tubs - cont. duty	1.25	1.25
Scale hoppers - frequent starts	1.25	1.50
Brick press		
(Clay working)	1.75	2.00
Briquette machines		
(Clay working)	1.75	2.00
Bucket		
Conveyors uniform	1.00	1.25
Conveyors heavy duty	1.25	1.50
Elevators cont.	1.00	1.25
Elevators uniform	1.00	1.25
Elevators heavy duty	1.25	1.50
Calenders		
Rubber	-	1.50
Textile	1.25	1.50
Cane knives	-	1.50

† Consult Dodge
▲ See mill, rotary

Application	Service	
	3-10	10+hrs /day
Can filling machines	1.00	1.25
Card machines (textile)	1.25	1.50
Car dumpers	1.75	2.00
Car pullers	1.25	1.50
Cement kilns	▲	▲
Centrifugal		
Blowers, compressors, discharge elevators, fans or pumps	1.00	1.25
Chain conveyors		
Uniformly loaded or fed	1.00	1.25
Heavy duty	1.25	1.50
Chemical feeders		
(Sewage)	1.25	1.25
Clarifiers	1.00	1.25
Classifiers	1.25	1.50
Clay working ind.		
Brick press	1.75	2.00
Briquette machines	1.75	2.00
Pug mills	1.25	1.50
Collectors (sewage)	1.25	1.25
Compressors		
Centrifugal	1.00	1.25
Lobe	1.25	1.50
Reciprocating:		
Multi-cylinder	1.50	1.75
Single cylinder	1.75	2.00
Concrete mixers		
Continuous	1.25	1.50
Intermittent	1.25	1.50
Conveyors - uniformly loaded or fed		
Apron, assembly, belt, bucket, chain, flight oven, screw	1.00	1.25
Conveyors - heavy duty		
Not uniformly fed:		
Apron, assembly, belt, bucket, chain, flight, oven, screw	1.25	1.50
Conveyors - severe duty		
Live roll reciprocating	†	†
Shaker	1.75	2.00
Cookers		
(Brewing & distilling), (food)	1.25	1.25
Cooling tower fans	†	†
Cranes	†	†
Crushers		
Ore or stone	1.75	2.00
Sugar	-	1.50
Dewatering screens		
(Sewage)	1.50	1.50
Disc feeders	1.00	1.25
Distilling (see brewing)		

Application	Service	
	3-10	10+hrs /day
Double acting pumps		
2 or more cylinders	1.25	1.50
Single cylinder	†	†
Dough mixer (food)	1.25	1.50
Draw bench		
(Metal mills) carriage & main drive	1.25	1.50
Dredges		
Cable reels, conveyors	1.25	1.50
Cutter head & jig drives	2.00	2.00
Maneuvering winches	1.25	1.50
Pumps	2.00	2.00
Screen drives	1.75	2.00
Stackers, utility winches	1.25	1.50
Dry dock cranes	†	†
Dryers & coolers		
(Mills, rotary)		1.50
Dyeing machinery		
(Textile)	1.25	1.50
Elevators		
Bucket - uniform load	1.00	1.25
Bucket - heavy duty	1.25	1.50
Centrifugal discharge	1.00	1.25
Escalators	1.00	1.25
Freight	1.25	1.50
Gravity discharge	1.00	1.25
Man. lifts, passenger	†	†
Extruders		
General	1.50	1.50
Plastics		
Variable speed drive	1.50	1.50
Fixed speed drive	1.75	1.75
Rubber		
Continuous screw operation	1.75	1.75
Intermittent screw operation	1.75	1.75
Fans		
Centrifugal	1.00	1.25
Cooling towers	†	†
Forced draft	1.25	1.25
Induced draft	1.50	1.50
Large (mine, etc.)	1.50	1.50
Large industrial	1.50	1.50
Light (small diameter)	1.00	1.25
Feeders		
Apron, belt	1.25	1.50
Disc	1.00	1.25
Reciprocating	1.75	2.00
Screw	1.25	1.50
Flight		
Conveyors, uniform	1.00	1.25
Conveyors, heavy	1.25	1.50

Selection

Service factors

Application	Service	
	3-10	10+hrs /day
Food/industry		
Beet slicers	1.25	1.50
Bottling, can filling machine	1.00	1.25
Cereal cookers	1.00	1.25
Dough mixers, meat grinders	1.25	1.50
Generators (not welding)	1.00	1.25
Gravity discharge		
Elevators	1.00	1.25
Hammer mills	1.75	2.00
Hoists (see cranes)	†	†
Induced draft fans	1.50	1.50
Kilns	▲	▲
Laundry		
Tumblers	1.25	1.50
Washers	1.50	2.00
Line shafts		
Driving processing equipment	1.25	1.50
Other line shafts, light	1.00	1.25
Live roll conveyors	†	†
Lobe blowers or Compressors	1.25	1.50
Log hauls (lumber)		
Incline-well type	1.75	1.75
Looms (textile)		
	1.25	1.50
Lumber industry		
Barkers - spindle feed	1.25	1.50
Barkers - main drive	1.75	1.75
Carriage drive	†	†
Conveyors		
Burner	1.25	1.50
Main or heavy duty	1.50	1.50
Main log	1.75	2.00
Re-saw merry-go-round	1.25	1.50
Slab	1.75	2.00
Transfer	1.25	1.50
Chains - floor	1.50	1.50
Chains - green	1.50	1.75
Cut-off saws - chain & drag	1.50	1.75
Debarking drums	1.75	2.00
Feeds - edger	1.25	1.50
Feeds - gang	1.75	1.75
Feeds - trimmer	1.25	1.50
Log deck	1.75	1.75
Log hauls - incline, well type	1.75	1.75
Log turning devices	1.75	1.75
Planer feed	1.25	1.50
Planer tilting hoists	1.25	1.50
Rolls - live - off		
Bearing - roll cases	1.75	1.75

† Consult Dodge
▲ See mill, rotary

Application	Service	
	3-10	10+hrs /day
Sorting table, tippie hoist	1.25	1.50
Transfer - chain & craneway	1.50	1.75
Tray drives	1.25	1.50
Veneer lathe drives	†	†
Machine tools		
Auxiliary drives	1.00	1.25
Banding rolls	1.25	1.50
Main drives	1.25	1.50
Notching press (beltd)	†	†
Plate planers	1.75	2.00
Punch press (geared)	1.75	2.00
Tapping machines	1.75	2.00
Mangle (textile)	1.25	1.50
Mash tubs (brewing &		
Distilling	1.25	1.25
Meat grinders (food)	1.25	1.50
Metal mills		
Draw bench carriages & main drives	1.25	1.50
Pinch, dryer & scrubber		
Rolls reversing	†	†
Slitters	1.25	1.50
Table conveyors:		
Non-reversing		
Group drives	1.50	1.50
Individual drives	2.00	2.00
Reversing	†	†
Wire drawing & flattening machines		
Wire winding machines	1.50	1.50
Mills, rotary		
Ball and rod mills		
with spur ring gear	-	2.00
with helical ring gear	-	1.50
Direct connected	-	2.00
Cement kilns, dryers, coolers, pebble, plain & wedge bar mills	-	1.50
Tumbling barrels	1.75	2.00
Mixers (also see agitators)		
Concrete, cont. & Int.	1.25	1.50
Constant density	1.00	1.25
Variable density	1.25	1.50
Nappers (textile)	1.25	1.50
Oil industry		
Chillers	1.25	1.50
Oil well pumping	†	†
Paraffin filter press	1.25	1.50
Rotary kilns	1.25	1.50
Ore crushers	1.75	2.00

Application	Service	
	3-10	10+hrs /day
Oven conveyors		
Uniform	1.00	1.25
Heavy duty	1.25	1.50
Paper mills (1)		
Agitator (mixer)	-	1.50
Agitator for pure liquids	-	1.25
Barking drums. barkers - mech.	-	2.00
Beater	-	1.50
Breaker stack	-	1.25
Calender (2)	-	1.25
Chipper	-	2.00
Chip feeder	-	1.50
Coating rolls	-	1.25
Conveyors:		
Chip, bark, chemical	-	1.25
Log (incl. slab)	-	2.00
Couch rolls	-	1.25
Cutter	-	2.00
Cylinder molds	-	1.25
Dryers (2)		
Paper mach. & conveyor type	-	1.25
Embosses	-	1.25
Extruder	-	1.50
Fourdrinier rolls:		
Lumpbreaker, wire turning, dandy & return rolls	-	1.25
Jordan	-	1.50
Kiln drive	-	1.50
Mt. Hope & paper rolls	-	1.25
Platter	-	1.50
Presses (felt & suction)	-	1.25
Pulper	-	2.00
Reel (surface type)	-	1.25
Screens:		
Chip, rotary	-	1.50
Vibrating	-	2.00
Size press	-	1.25
Super calender (3)	-	1.25
Thickener & washer:		
AC motor	-	1.50
DC motor	-	1.25
Vacuum pumps	-	1.50
Wind & unwind stand	-	1.25
Winders (surface type)	-	1.25
Yankee dryer (2)	-	1.25
Passenger elevators	†	†
Pebble mills	▲	▲

Selection

Service factors

Features

Specifications

Selection

Dimensions

Accessories

Engineering

Application	Service	
	3-10	10+hrs /day
Plastics industry		
Primary processing		
Intensive internal	-	-
Mixers		
Batch mixers	1.75	1.75
Continuous mixers	1.50	1.50
Batch drop mill - 2 smooth rolls	1.25	1.25
Continuous feed, holding & blend mill	1.25	1.25
Compounding mill	1.25	1.25
Calenders	1.50	1.50
Secondary processing		
Blow molders	1.50	1.50
Coating	1.25	1.25
Film	1.25	1.25
Pipe	1.25	1.25
Pre-plasticizers	1.50	1.50
Rods	1.25	1.25
Sheets	1.25	1.25
Tubing	1.25	1.50
Plate planers	1.75	2.00
Printing presses	†	†
Proportioning pumps	1.25	1.50
Pug mills (clay)	1.25	1.50
Pullers (barge haul)	1.25	1.50
Pumps		
Centrifugal	1.00	1.25
Proportioning	1.25	1.50
Reciprocating		
Single act., 3 or more cyl.	1.25	1.50
Double act., 2 or more cyl.	1.25	1.50
Single act., 1 or 2 cyl.	†	†
Double act., 1 cyl.	†	†
Rotary: gear, lobe, vane	1.00	1.25
Punch press		
(Gear driven)	1.75	2.00
Reciprocating		
Conveyors, feeders	1.75	2.00
Reciprocating		
Compressors	-	-
Multi cylinder	1.50	1.75
Single cylinder	1.75	2.00
Reversing direction	†	†
Application	▲	▲
Rod mills		
Rotary		
Pumps	1.00	1.25
Screens (sand and gravel)	1.25	1.50

Application	Service	
	3-10	10+hrs /day
Rubber industry		
Intensive internal mixers		
Batch mixers	1.75	1.75
Continuous mixers	1.50	1.50
Mixing mill - 2 smooth rolls (If corrugated rolls are used, then use the same service factors that are used for a Cracker-Warmer)	1.50	1.50
Batch drop mill - 2 smooth rolls	1.50	1.50
Cracker warmer - 2 rolls: 1 corrugated roll	1.75	1.75
Cracker - 2 corrugated rolls	2.00	2.00
Holding, feed & blend mill - 2 rolls	1.25	1.25
Refiner - 2 rolls	1.50	1.50
Calenders	1.50	1.50
Sand mullers	1.25	1.50
Screens		
Air washing	1.00	1.25
Rotary-sand or gravel	1.25	1.50
Traveling water intake	1.00	1.25
Screw conveyors		
Uniform	1.00	1.25
Heavy duty or feeder	1.25	1.50
Scum breakers		
(Sewage)	1.50	1.50
Sewage disposal		
Bar screens	1.25	1.25
Chemical feeders	1.25	1.25
Collectors	1.25	1.25
Dewatering screens	1.50	1.50
Scum breakers	1.50	1.50
Slow or rapid mixers	1.50	1.50
Thickeners	1.50	1.50
Vacuum filters	1.50	1.50
Shaker conveyors	1.75	2.00
Sheeters (rubber)	-	1.50
Single acting pump		
1 or 2 cylinders	†	†
3 or more cylinders	1.25	1.50
Skip hoist	†	†
Slab pushers	1.50	1.50
Slitters (metal)	1.25	1.50
Sludge collectors		
(Sewage)	1.25	1.25
Soapers (textile)	1.25	1.50
Spinners (textile)	1.25	1.50
Steering gears	-	-
Stokers	1.00	1.25

Application	Service	
	3-10	10+hrs /day
Stone crushers	1.75	2.00
Sugar industry		
Cane knives, crushers mill	-	1.50
Table conveyors		
Non-reversing		
Group drives	1.50	1.50
Individual drives	2.00	2.00
Reversing	†	†
Tenter frames (textile)	1.25	1.50
Textile industry		
Batchers, calenders	1.25	1.50
Card machines	1.25	1.50
Dry cans, dryers	1.25	1.50
Dyeing machinery	1.25	1.50
Knitting machinery	†	†
Looms, mangles, nappers, pads	1.25	1.50
Range drives	†	†
Slashers, soapers, spinners	1.25	1.50
Tenter framers, washers, winders	1.25	1.50
Thickness (sewage)	1.50	1.50
Tumbling barrels	1.75	2.00
Vacuum filters		
(Sewage)	1.50	1.50
Vane blowers	1.25	1.50
Winches (dredges)	1.25	1.50
Winders (textile)	1.25	1.50
Windglass	†	†
Wire		
Drawing machines	1.25	1.50
Winding machines	1.50	1.50

- † Consult Dodge
 ▲ See mill, rotary
- (1) Service factors for paper mill applications are applied to the nameplate rating of the electric motor at the motor rated base speed.
 - (2) Using anti-friction bearings only. Use 1.50 for sleeve bearings.
 - (3) When a super calender operates over a speed range of part constant horsepower and part constant torque and the constant horsepower speed range is greater than 1.5:1, use a service factor of 1.00 at base speed. When operating at constant torque over the entire speed range or when the constant horsepower speed range is less than 1.5:1, a 1.25 service factor should be used.

Selection

Easy selection

3.0 - 7.5 Hp / 1750 RPM / 182T - 213T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
3 Hp - 182T motor								
17	TCR50	103.3	7.9	2.64	None	None	5250	4.36
13	TCR50	125.1	6.5	2.18	None	None	5250	5.34
11	TCR50	153.1	5.4	1.78	None	None	5250	6.54
9	TCR50	191.3	4.3	1.43	None	None	5250	8.01
9	TCR60	186.2	7.7	2.57	None	None	6500	6.47
9	TCR70	197.2	8.0	2.65	None	None	8500	4.95
5 Hp - 184T motor								
30	TCR50	55.81	14.7	2.94	None	None	5250	3.95
25	TCR50	68.31	12.0	2.40	None	None	5250	4.84
20	TCR50	84.22	9.7	1.95	None	None	5250	5.93
17	TCR50	103.3	7.9	1.59	None	None	5250	7.26
17	TCR60	102.6	13.4	2.69	None	None	6500	5.87
13	TCR50	125.1	6.5	1.31	None	None	5250	8.90
13	TCR60	129.4	11.1	2.22	None	None	6500	7.19
11	TCR50	153.1	5.4	1.07	None	None	5250	10.90
11	TCR60	151.9	9.4	1.88	None	None	6500	8.80
11	TCR70	152.8	13.6	2.71	None	None	8500	6.73
9	TCR60	186.2	7.7	1.54	None	None	6500	10.78
9	TCR70	197.2	8.0	1.59	None	None	8500	8.24
9	TCR80	185.0	13.7	2.74	None	None	11000	6.37
7.5 Hp - 213T motor								
46	TCR50	37.58	19.5	2.60	None	None	5039	4.12
37	TCR50	46.08	17.0	2.27	None	None	5097	4.99
30	TCR50	55.81	14.7	1.96	None	None	5250	5.93
25	TCR50	68.31	12.0	1.60	None	None	5250	7.26
25	TCR60	68.84	20.0	2.67	None	None	6500	5.87
20	TCR50	84.22	9.7	1.30	None	None	5250	8.90
20	TCR60	82.86	16.0	2.13	None	None	6500	7.19
20	TCR70	86.03	20.9	2.79	None	None	8500	5.50
17	TCR50	103.3	7.9	1.06	None	None	5250	10.90
17	TCR60	102.6	13.4	1.79	None	None	6500	8.80
17	TCR70	108.3	19.0	2.53	None	None	8500	6.73
13	TCR60	129.4	11.1	1.48	None	None	6500	10.78
13	TCR70	131.8	15.6	2.09	None	None	8500	8.24
11	TCR60	151.9	9.4	1.25	None	None	6500	13.20
11	TCR70	152.8	13.6	1.81	None	None	8500	10.10
11	TCR80	155.4	19.2	2.55	None	None	11000	7.80
9	TCR60	186.2	7.7	1.03	None	None	6500	16.17
9	TCR70	197.2	8.0	1.06	None	None	8500	12.36
9	TCR80	185.0	13.7	1.82	None	None	11000	9.55
9	TCR90	188.1	21.8	2.90	None	None	14000	7.51

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

10-15 Hp / 1750 RPM / 215T-254T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
10 Hp - 215T motor								
56	DCR50	31.23	26.2	2.62	None	None	4437	5.09
46	TCR50	37.58	19.5	1.95	None	None	5039	5.49
37	TCR50	46.08	17.0	1.70	None	None	5097	6.65
37	TCR60	46.52	28.4	2.84	None	None	6500	5.22
30	TCR50	55.81	14.7	1.47	None	None	5250	7.91
30	TCR60	58.66	23.7	2.37	None	None	6500	6.39
25	TCR50	68.31	12.0	1.20	None	None	5250	9.69
25	TCR60	68.84	20.0	2.00	None	None	6500	7.82
20	TCR60	82.86	16.0	1.60	None	None	6500	9.58
20	TCR70	86.03	20.9	2.09	None	None	8500	7.33
17	TCR60	102.6	13.4	1.34	None	None	6500	11.73
17	TCR70	108.3	19.0	1.90	None	None	8500	8.97
17	TCR80	103.8	28.7	2.87	None	None	11000	6.93
13	TCR60	129.4	11.1	1.11	None	None	6500	14.37
13	TCR70	131.8	15.6	1.56	None	None	8500	10.99
13	TCR80	125.3	23.8	2.38	None	None	11000	8.49
11	TCR70	152.8	13.6	1.36	None	None	8500	13.46
11	TCR80	155.4	19.2	1.92	None	None	11000	10.40
11	TCR90	154.9	27.1	2.71	None	None	14000	8.17
9	TCR80	185.0	13.7	1.37	None	None	11000	12.74
9	TCR90	188.1	21.8	2.18	None	None	14000	10.01
15 Hp - 254T motor								
84	DCR50	20.42	40.1	2.67	None	None	3592	6.29
68	DCR50	24.99	32.8	2.18	None	None	3981	6.95
56	DCR50	31.23	26.2	1.75	None	None	4437	7.64
56	DCR60	30.68	44.2	2.95	None	None	6500	5.22
46	TCR50	37.58	19.5	1.30	None	None	5039	8.24
46	TCR60	37.56	32.7	2.18	None	None	6500	6.39
37	TCR50	46.08	17.0	1.13	None	None	5097	9.98
37	TCR60	46.52	28.4	1.89	None	None	6500	7.82
37	TCR70	48.91	39.5	2.64	None	None	8500	5.98
30	TCR60	58.66	23.7	1.58	None	None	6500	9.58
30	TCR70	59.55	33.4	2.22	None	None	8500	7.33
25	TCR60	68.84	20.0	1.33	None	None	6500	11.73
25	TCR70	69.00	30.1	2.01	None	None	8500	8.97
25	TCR80	70.05	37.5	2.50	None	None	11000	6.93
20	TCR60	82.86	16.0	1.06	None	None	6500	14.37
20	TCR70	86.03	20.9	1.39	None	None	8500	10.99
20	TCR80	84.20	31.3	2.09	None	None	11000	8.49
17	TCR70	108.3	19.0	1.27	None	None	8500	13.46
17	TCR80	103.8	28.7	1.91	None	None	11000	10.40
13	TCR70	131.8	15.6	1.04	None	None	8500	16.49
13	TCR80	125.3	23.8	1.58	None	None	11000	12.74
13	TCR90	126.5	37.2	2.48	None	None	14000	10.01
11	TCR80	155.4	19.2	1.28	None	None	11000	15.60
11	TCR90	154.9	27.1	1.81	None	None	14000	12.26
11	TCR100	153.7	38.7	2.58	None	None	17000	10.10
9	TCR90	188.1	21.8	1.45	None	None	14000	15.01
9	TCR100	184.8	34.4	2.29	None	None	17000	12.36
9	TCR110	189.3	39.6	2.64	None	None	18000	11.68

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

20 Hp / 1750 RPM / 256T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
125	DCR50	13.75	58.3	2.91	None	None	2990	6.72
102	DCR50	16.86	48.3	2.41	None	None	3282	7.50
84	DCR50	20.42	40.1	2.01	None	None	3592	8.39
68	DCR50	24.99	32.8	1.64	None	None	3981	9.27
68	DCR60	25.03	55.6	2.78	None	None	6500	5.68
56	DCR50	31.23	26.2	1.31	None	None	4437	10.19
56	DCR60	30.68	44.2	2.21	None	None	6500	6.95
56	DCR70	32.20	55.6	2.78	None	None	8500	5.32
46	TCR60	37.56	32.7	1.64	None	None	6500	8.52
46	TCR70	38.86	45.6	2.28	None	None	8500	6.51
37	TCR60	46.52	28.4	1.42	None	None	6500	10.43
37	TCR70	48.91	39.5	1.98	None	None	8500	7.98
37	TCR80	46.81	53.6	2.68	None	None	11000	6.16
30	TCR60	58.66	23.7	1.19	None	None	6500	12.78
30	TCR70	59.55	33.4	1.67	None	None	8500	9.77
30	TCR80	56.49	45.4	2.27	None	None	11000	7.55
25	TCR70	69.00	30.1	1.50	None	None	8500	11.96
25	TCR80	70.05	37.5	1.87	None	None	11000	9.25
25	TCR90	70.94	59.2	2.96	None	None	14000	7.26
20	TCR70	86.03	20.9	1.04	None	None	8500	14.65
20	TCR80	84.20	31.3	1.57	None	None	11000	11.32
20	TCR90	83.54	54.7	2.74	None	None	14000	8.90
17	TCR80	103.8	28.7	1.43	None	None	11000	13.87
17	TCR90	103.5	45.2	2.26	None	None	14000	10.90
17	TCR100	104.5	58.3	2.92	None	None	17000	8.97
13	TCR80	125.3	23.8	1.19	None	None	11000	16.98
13	TCR90	126.5	37.2	1.86	None	None	14000	13.35
13	TCR100	125.1	49.1	2.46	None	None	17000	10.99
11	TCR90	154.9	27.1	1.36	None	None	14000	16.34
11	TCR100	153.7	38.7	1.94	None	None	17000	13.46
11	TCR110	156.4	58.6	2.93	None	None	18000	12.71
9	TCR90	188.1	21.8	1.09	None	None	14000	20.02
9	TCR100	184.8	34.4	1.72	None	None	17000	16.49
9	TCR110	189.3	39.6	1.98	None	None	18000	15.57
9	TCR120	196.4	55.6	2.78	None	None	19000	14.75

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

25 Hp / 1750 RPM / 284T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
423	DCR50	4.11	64.8	2.59	None	None	3107	2.39
154	DCR50	11.09	70.9	2.84	None	None	2689	7.62
125	DCR50	13.75	58.3	2.33	None	None	2990	8.40
102	DCR50	16.86	48.3	1.93	None	None	3282	9.37
84	DCR50	20.42	40.1	1.60	None	None	3592	10.49
84	DCR60	21.33	64.8	2.59	None	None	6500	5.79
68	DCR50	24.99	32.8	1.31	None	None	3981	11.59
68	DCR60	25.03	55.6	2.23	None	None	6500	7.10
56	DCR50	31.23	26.2	1.05	None	None	4437	12.73
56	DCR60	30.68	44.2	1.77	None	None	6500	8.69
56	DCR70	32.20	55.6	2.22	None	None	8500	6.65
46	TCR60	37.56	32.7	1.31	None	None	6500	10.65
46	TCR70	38.86	45.6	1.82	None	None	8500	8.14
46	TCR80	37.96	64.8	2.59	None	None	11020	6.28
37	TCR60	46.52	28.4	1.13	None	None	6500	13.04
37	TCR70	48.91	39.5	1.58	None	None	8500	9.97
37	TCR80	46.81	53.6	2.14	None	None	11000	7.70
30	TCR70	59.55	33.4	1.33	None	None	8500	12.21
30	TCR80	56.49	45.4	1.82	None	None	11000	9.44
25	TCR70	69.00	30.1	1.20	None	None	8500	14.96
25	TCR80	70.05	37.5	1.50	None	None	11000	11.56
25	TCR90	70.94	59.2	2.37	None	None	14000	9.08
20	TCR80	84.20	31.3	1.25	None	None	11000	14.15
20	TCR90	83.54	54.7	2.19	None	None	14000	11.12
20	TCR100	85.45	66.7	2.67	None	None	17000	9.16
17	TCR80	103.8	28.7	1.15	None	None	11000	17.34
17	TCR90	103.5	45.2	1.81	None	None	14000	13.62
17	TCR100	104.5	58.3	2.33	None	None	17000	11.22
13	TCR90	126.5	37.2	1.49	None	None	14000	16.68
13	TCR100	125.1	49.1	1.96	None	None	17000	13.74
13	TCR110	129.2	70.5	2.82	None	None	18000	12.97
11	TCR90	154.9	27.1	1.08	None	None	14000	20.43
11	TCR100	153.7	38.7	1.55	None	None	17000	16.83
11	TCR110	156.4	58.6	2.34	None	None	18000	15.89
9	TCR100	184.8	34.4	1.38	None	None	17000	20.61
9	TCR110	189.3	39.6	1.58	None	None	18000	19.46
9	TCR120	196.4	55.6	2.22	None	None	19000	18.44

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

30 Hp / 1750 RPM / 286T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
519	DCR50	3.264	81.7	2.72	None	None	2903	2.51
423	DCR50	4.112	64.8	2.16	None	None	3107	2.87
188	DCR50	9.281	79.5	2.65	None	None	2534	7.93
154	DCR50	11.09	70.9	2.36	None	None	2689	9.15
125	DCR50	13.75	58.3	1.94	None	None	2990	10.08
102	DCR50	16.86	48.3	1.61	None	None	3282	11.25
102	DCR60	16.92	80.1	2.67	None	None	6500	5.68
84	DCR50	20.42	40.1	1.34	None	None	3592	12.58
84	DCR60	21.33	64.8	2.16	None	None	6500	6.95
68	DCR50	24.99	32.8	1.09	None	None	3981	13.91
68	DCR60	25.03	55.6	1.85	None	None	6500	8.52
68	DCR70	24.94	78.6	2.62	None	None	8500	6.51
56	DCR60	30.68	44.2	1.47	None	None	6500	10.43
56	DCR70	32.20	55.6	1.85	None	None	8500	7.98
56	DCR80	30.52	83.2	2.77	None	None	9857	6.88
46	TCR60	37.56	32.7	1.09	None	None	6500	12.78
46	TCR70	38.86	45.6	1.52	None	None	8500	9.77
46	TCR80	37.96	64.8	2.16	None	None	11020	7.53
37	TCR70	48.91	39.5	1.32	None	None	8500	11.96
37	TCR80	46.81	53.6	1.79	None	None	11000	9.25
30	TCR70	59.55	33.4	1.11	None	None	8500	14.65
30	TCR80	56.49	45.4	1.51	None	None	11000	11.32
30	TCR90	57.94	79.0	2.63	None	None	14000	8.90
25	TCR70	69.00	30.1	1.00	None	None	8500	17.95
25	TCR80	70.05	37.5	1.25	None	None	11000	13.87
25	TCR90	70.94	59.2	1.97	None	None	14000	10.90
25	TCR100	69.70	85.4	2.85	None	None	17000	8.97
20	TCR80	84.20	31.3	1.04	None	None	11000	16.98
20	TCR90	83.54	54.7	1.82	None	None	14000	13.35
20	TCR100	85.45	66.7	2.22	None	None	17000	10.99
17	TCR90	103.5	45.2	1.51	None	None	14000	16.34
17	TCR100	104.5	58.3	1.94	None	None	17000	13.46
17	TCR110	105.5	85.8	2.86	None	None	18000	12.71
13	TCR90	126.5	37.2	1.24	None	None	14000	20.02
13	TCR100	125.1	49.1	1.64	None	None	17000	16.49
13	TCR110	129.2	70.5	2.35	None	None	18000	15.57
11	TCR100	153.7	38.7	1.29	None	None	17000	20.19
11	TCR110	156.4	58.6	1.95	None	None	18000	19.07
11	TCR120	164.7	78.4	2.61	None	None	19000	18.07
9	TCR100	184.8	34.4	1.15	None	None	17000	24.73
9	TCR110	189.3	39.6	1.32	None	None	18000	23.35
9	TCR120	196.4	55.6	1.85	None	None	19000	22.13
9	TCR130	181.3	86.9	2.90	None	None	22500	18.68

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

40 Hp / 1750 RPM / 324T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
778	DCR50	2.207	112.6	2.82	None	None	2573	2.52
635	DCR50	2.722	97.9	2.45	None	None	2709	2.93
519	DCR50	3.264	81.7	2.04	None	None	2903	3.35
423	DCR50	4.112	64.8	1.62	None	None	3107	3.83
346	DCR50	4.981	115.9	2.90	None	None	2204	6.62
282	DCR50	6.144	102.5	2.56	None	None	2320	7.70
230	DCR50	7.366	91.8	2.29	None	None	2379	9.19
188	DCR50	9.281	79.5	1.99	None	None	2534	10.57
154	DCR50	11.09	70.9	1.77	None	None	2689	12.20
154	DCR60	11.37	117.0	2.92	None	None	6500	5.05
125	DCR50	13.75	58.3	1.46	None	None	2990	13.44
125	DCR60	13.66	98.8	2.47	None	None	6500	6.18
102	DCR50	16.86	48.3	1.21	None	None	3282	15.00
102	DCR60	16.92	80.1	2.00	None	None	6500	7.57
102	DCR70	17.68	108.0	2.70	None	None	7830	6.28
84	DCR50	20.42	40.1	1.00	None	None	3592	16.78
84	DCR60	21.33	64.8	1.62	None	None	6500	9.27
84	DCR70	21.52	90.0	2.25	None	None	8500	7.09
68	DCR60	25.03	55.6	1.39	None	None	6500	11.36
68	DCR70	24.94	78.6	1.96	None	None	8500	8.68
68	DCR80	25.63	109.8	2.74	None	None	8429	8.76
56	DCR60	30.68	44.2	1.11	None	None	6500	13.91
56	DCR70	32.20	55.6	1.39	None	None	8500	10.64
56	DCR80	30.52	83.2	2.08	None	None	9857	9.17
46	TCR70	38.86	45.6	1.14	None	None	8500	13.03
46	TCR80	37.96	64.8	1.62	None	None	11020	10.05
46	TCR90	38.25	106.4	2.66	None	None	14000	7.91
37	TCR80	46.81	53.6	1.34	None	None	11000	12.33
37	TCR90	47.37	95.8	2.40	None	None	14000	9.69
30	TCR80	56.49	45.4	1.14	None	None	11000	15.10
30	TCR90	57.94	79.0	1.97	None	None	14000	11.86
30	TCR100	56.75	108.3	2.71	None	None	17000	9.77
25	TCR90	70.94	59.2	1.48	None	None	14000	14.53
25	TCR100	69.70	85.4	2.13	None	None	17000	11.96
20	TCR90	83.54	54.7	1.37	None	None	14000	17.79
20	TCR100	85.45	66.7	1.67	None	None	17000	14.65
20	TCR110	86.56	101.0	2.53	None	None	18000	13.84
17	TCR90	103.5	45.2	1.13	None	None	14000	21.79
17	TCR100	104.5	58.3	1.46	None	None	17000	17.95
17	TCR110	105.5	85.8	2.14	None	None	18000	16.95
13	TCR100	125.1	49.1	1.23	None	None	17000	21.98
13	TCR110	129.2	70.5	1.76	None	None	18000	20.76
13	TCR120	131.0	98.5	2.46	None	None	19000	19.67
11	TCR110	156.4	58.6	1.47	None	None	18000	25.42
11	TCR120	164.7	78.4	1.96	None	None	19000	24.09
11	TCR130	155.6	115.0	2.87	None	None	22500	20.34
9	TCR120	196.4	55.6	1.39	None	None	19000	29.50
9	TCR130	181.3	86.9	2.17	None	None	22500	24.91

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

50 Hp / 1750 RPM / 326T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
778	DCR50	2.207	113	2.25	None	None	2573	3.15
635	DCR50	2.722	97.9	1.96	None	None	2709	3.66
519	DCR50	3.264	81.7	1.63	None	None	2903	4.19
519	DCR60	3.289	142	2.84	None	None	6105	1.99
423	DCR50	4.112	64.8	1.30	None	None	3107	4.79
423	DCR60	4.136	124	2.48	None	None	6516	2.28
346	DCR50	4.981	116	2.32	None	None	2204	8.27
282	DCR50	6.144	103	2.05	None	None	2320	9.62
230	DCR50	7.366	91.8	1.84	None	None	2379	11.49
188	DCR50	9.281	79.5	1.59	Shaft fan	Shaft fan	2534	13.21
188	DCR60	9.344	134	2.68	None	None	6500	5.15
154	DCR50	11.09	70.9	1.42	Shaft fan	Shaft fan	2689	15.25
154	DCR60	11.37	117	2.34	None	None	6500	6.31
125	DCR50	13.75	58.3	1.17	Shaft fan	Shaft fan	2990	16.80
125	DCR60	13.66	98.8	1.98	None	None	6500	7.73
125	DCR70	14.05	133	2.67	None	None	7120	7.05
102	DCR60	16.92	80.1	1.60	Shaft fan	Shaft fan	6500	9.46
102	DCR70	17.68	108	2.16	None	None	7830	7.86
84	DCR60	21.33	64.8	1.30	Shaft fan	Shaft fan	6500	11.59
84	DCR70	21.52	90.0	1.80	None	None	8500	8.86
84	DCR80	20.67	134	2.68	None	None	7531	10.00
68	DCR60	25.03	55.6	1.11	Shaft fan	Shaft fan	6500	14.19
68	DCR70	24.94	78.6	1.57	None	None	8500	10.85
68	DCR80	25.63	110	2.20	None	None	8429	10.95
56	DCR70	32.20	55.6	1.11	None	None	8500	13.29
56	DCR80	30.52	83.2	1.66	None	None	9857	11.46
56	DCR90	31.08	133	2.65	None	None	13564	8.33
46	TCR80	37.96	64.8	1.30	None	None	11020	12.56
46	TCR90	38.25	106	2.13	None	None	14000	9.89
46	TCR100	38.75	150	3.00	None	None	17000	8.14
37	TCR80	46.81	53.6	1.07	None	None	11000	15.41
37	TCR90	47.37	95.8	1.92	None	None	14000	12.11
37	TCR100	47.37	129	2.57	None	None	17000	9.97
30	TCR90	57.94	79.0	1.58	None	None	14000	14.83
30	TCR100	56.75	108	2.17	None	None	17000	12.21
25	TCR90	70.94	59.2	1.18	None	None	14000	18.16
25	TCR100	69.70	85.4	1.71	None	None	17000	14.96
25	TCR110	68.83	129	2.59	None	None	18000	14.12
20	TCR90	83.54	54.7	1.09	None	None	14000	22.24
20	TCR100	85.45	66.7	1.33	None	None	17000	18.32
20	TCR110	86.56	101	2.02	None	None	18000	17.30
20	TCR120	85.26	138	2.75	None	None	19000	16.39
17	TCR100	104.5	58.3	1.17	None	None	17000	22.43
17	TCR110	105.5	85.8	1.72	None	None	18000	21.19
17	TCR120	107.5	120	2.40	None	None	19000	20.07
13	TCR110	129.2	70.5	1.41	None	None	18000	25.95
13	TCR120	131.0	98.5	1.97	None	None	19000	24.58
13	TCR130	127.1	142	2.84	None	None	22500	20.76
11	TCR110	156.4	58.6	1.17	None	None	18000	31.78
11	TCR120	164.7	78.4	1.57	None	None	19000	30.11
11	TCR130	155.6	115	2.30	None	None	22500	25.42
9	TCR120	196.4	55.6	1.11	None	None	19000	36.88
9	TCR130	181.3	87	1.74	None	None	22500	31.14

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

60 Hp / 1750 RPM / 364T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
778	DCR50	2.207	113	1.88	None	None	2573	3.78
778	DCR60	2.234	167.0	2.78	None	None	5537	1.76
635	DCR50	2.722	97.9	1.63	None	None	2709	4.39
635	DCR60	2.748	158	2.63	None	None	5800	2.05
519	DCR50	3.264	81.7	1.36	None	None	2903	5.02
519	DCR60	3.289	142	2.37	None	None	6105	2.39
423	DCR50	4.112	65	1.08	None	None	3107	5.75
423	DCR60	4.136	124	2.06	None	None	6516	2.74
346	DCR50	4.981	115.9	1.93	Shaft fan	Shaft fan	2204	9.92
282	DCR50	6.144	102.5	1.71	Shaft fan	Shaft fan	2320	11.54
282	DCR60	6.208	166	2.77	None	None	6474	4.14
230	DCR50	7.366	91.8	1.53	Shaft fan	Shaft fan	2379	13.79
230	DCR60	7.430	153	2.55	Shaft fan	Shaft fan	6500	5.05
188	DCR50	9.281	79.5	1.32	Shaft fan	Shaft fan	2534	15.86
188	DCR60	9.344	134.0	2.23	Shaft fan	Shaft fan	6500	6.18
154	DCR50	11.09	71	1.18	Shaft fan	Shaft fan	2689	18.30
154	DCR60	11.37	117.0	1.95	Shaft fan	Shaft fan	6500	7.57
154	DCR70	11.45	161	2.68	None	None	6500	7.57
125	DCR60	13.66	98.8	1.65	Shaft fan	Shaft fan	6500	9.27
125	DCR70	14.05	133.5	2.22	None	None	7120	8.46
102	DCR60	16.92	80	1.33	Shaft fan	Shaft fan	6500	11.36
102	DCR70	17.68	108.0	1.80	None	None	7830	9.43
102	DCR80	17.12	159.3	2.66	None	None	6959	10.61
84	DCR60	21.33	65	1.08	Shaft fan	Shaft fan	6500	13.91
84	DCR70	21.52	90.0	1.50	None	None	8500	10.64
84	DCR80	20.67	133.9	2.23	None	None	7531	12.00
68	DCR70	24.94	79	1.31	Shaft fan	Shaft fan	8500	13.03
68	DCR80	25.63	109.8	1.83	None	None	8429	13.14
68	DCR90	25.60	164	2.74	None	None	12277	9.02
56	DCR80	30.52	83	1.39	None	None	9857	13.76
56	DCR90	31.08	132.7	2.21	None	None	13564	10.00
46	TCR80	37.96	64.8	1.08	None	None	11020	15.07
46	TCR90	38.25	106	1.77	None	None	14000	11.86
46	TCR100	38.75	149.8	2.50	None	None	17000	9.77
37	TCR90	47.37	96	1.60	None	None	14000	14.53
37	TCR100	47.37	128.6	2.14	None	None	17000	11.96
37	TCR110	46.43	178.6	2.98	None	None	18000	11.30
30	TCR90	57.94	79	1.32	None	None	14000	17.79
30	TCR100	56.75	108.3	1.80	None	None	17000	14.65
30	TCR110	56.87	151.4	2.52	None	None	18000	13.84
25	TCR100	69.70	85	1.42	None	None	17000	17.95
25	TCR110	68.83	129	2.16	None	None	18000	16.95
25	TCR120	72.49	175.9	2.93	None	None	19000	16.06
20	TCR100	85.45	66.7	1.11	None	None	17000	21.98
20	TCR110	86.56	101	1.68	None	None	18000	20.76
20	TCR120	85.26	137.7	2.29	None	None	19000	19.67
17	TCR110	105.5	85.8	1.43	None	None	18000	25.42
17	TCR120	107.5	120	2.00	None	None	19000	24.09
17	TCR130	100.8	176.4	2.94	None	None	22500	20.34
13	TCR110	129.2	70.5	1.18	None	None	18000	31.14
13	TCR120	131.0	99	1.64	None	None	19000	29.50
13	TCR130	127.1	142	2.37	None	None	22500	24.91
11	TCR120	164.7	78	1.31	None	None	19000	36.13
11	TCR130	155.6	115.0	1.92	None	None	22500	30.51
9	TCR130	181.3	87	1.45	None	None	22500	37.37

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

75 Hp / 1750 RPM / 365T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
778	DCR50	2.207	112.6	1.50	Shaft fan	Shaft fan	2573	4.72
778	DCR60	2.234	167.0	2.23	None	None	5537	2.19
635	DCR50	2.722	97.9	1.31	Shaft fan	Shaft fan	2709	5.49
635	DCR60	2.748	158.0	2.11	None	None	5800	2.57
519	DCR50	3.264	81.7	1.09	Shaft fan	Shaft fan	2903	6.28
519	DCR60	3.289	142.0	1.89	None	None	6105	2.99
423	DCR60	4.136	123.8	1.65	None	None	6516	3.43
423	DCR70	4.148	202.7	2.70	None	None	5570	4.01
346	DCR50	4.981	115.9	1.55	Shaft fan	Shaft fan	2204	12.40
346	DCR60	5.047	194.1	2.59	Shaft fan	Shaft fan	6189	4.42
282	DCR50	6.144	102.5	1.37	Shaft fan	Shaft fan	2320	14.43
282	DCR60	6.208	166.0	2.21	Shaft fan	Shaft fan	6474	5.17
230	DCR50	7.366	91.8	1.22	Shaft fan	Shaft fan	2379	17.24
230	DCR60	7.430	153.0	2.04	Shaft fan	Shaft fan	6500	6.31
188	DCR50	9.281	79.5	1.06	Shaft fan	Shaft fan	2534	19.82
188	DCR60	9.344	134.0	1.79	Shaft fan	Shaft fan	6500	7.73
188	DCR70	9.094	198.8	2.65	None	None	5870	8.56
154	DCR60	11.37	117.0	1.56	Shaft fan	Shaft fan	6500	9.46
154	DCR70	11.45	161.0	2.15	None	None	6500	9.46
125	DCR60	13.66	98.8	1.32	Shaft fan	Shaft fan	6500	11.59
125	DCR70	14.05	133.5	1.78	Shaft fan	Shaft fan	7120	10.58
125	DCR80	13.89	193.1	2.57	None	None	6255	12.04
102	DCR60	16.92	80.1	1.07	Shaft fan	Shaft fan	6500	14.19
102	DCR70	17.68	108.0	1.44	Shaft fan	Shaft fan	7830	11.78
102	DCR80	17.12	159.3	2.12	None	None	6959	13.26
84	DCR70	21.52	90.0	1.20	Shaft fan	Shaft fan	8500	13.29
84	DCR80	20.67	133.9	1.79	None	None	7531	15.01
84	DCR90	20.91	209.2	2.79	None	None	10792	10.47
68	DCR70	24.94	78.6	1.05	Shaft fan	Shaft fan	8500	16.28
68	DCR80	25.63	109.8	1.46	Shaft fan	Shaft fan	8429	16.42
68	DCR90	25.60	164.4	2.19	None	None	12277	11.27
56	DCR80	30.52	83.2	1.11	Shaft fan	Shaft fan	9857	17.20
56	DCR90	31.08	132.7	1.77	Shaft fan	Shaft fan	13564	12.50
56	DCR100	30.22	198.4	2.65	None	None	17000	9.97
46	TCR90	38.25	106.4	1.42	None	None	14000	14.83
46	TCR100	38.75	149.8	2.00	None	None	17000	12.21
46	TCR110	38.10	203.8	2.72	None	None	18000	11.53
37	TCR90	47.37	95.8	1.28	None	None	14000	18.16
37	TCR100	47.37	128.6	1.71	None	None	17000	14.96
37	TCR110	46.43	178.6	2.38	None	None	18000	14.12

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

75 Hp / 1750 RPM / 365T motor (continued)

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
30	TCR90	57.94	79.0	1.05	None	None	14000	22.24
30	TCR100	56.75	108.3	1.44	None	None	17000	18.32
30	TCR110	56.87	151.4	2.02	None	None	18000	17.30
30	TCR120	57.68	213.4	2.85	None	None	19000	16.39
25	TCR100	69.70	85.4	1.14	None	None	17000	22.43
25	TCR110	68.83	129.4	1.72	None	None	18000	21.19
25	TCR120	72.49	175.9	2.35	None	None	19000	20.07
20	TCR110	86.56	101.0	1.35	None	None	18000	25.95
20	TCR120	85.26	137.7	1.84	None	None	19000	24.58
20	TCR130	82.24	213.2	2.84	None	None	22500	20.76
17	TCR110	105.5	85.8	1.14	None	None	18000	31.78
17	TCR120	107.5	120.1	1.60	None	None	19000	30.11
17	TCR130	100.8	176.4	2.35	None	None	22500	25.42
13	TCR120	131.0	98.5	1.31	None	None	19000	36.88
13	TCR130	127.1	141.9	1.89	None	None	22500	31.14
11	TCR120	164.7	78	1.05	None	None	19000	45.16
11	TCR130	155.6	115.0	1.53	None	None	22500	38.14
9	TCR130	181.3	87	1.16	None	None	22500	46.71

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

100 Hp / 1750 RPM / 405T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
778	DCR50	2.207	112.6	1.13	Shaft fan	Shaft fan	2573	6.30
778	DCR60	2.234	167.0	1.67	Shaft fan	Shaft fan	5537	2.93
635	DCR60	2.748	158.0	1.58	Shaft fan	Shaft fan	5800	3.42
635	DCR70	2.857	273.1	2.73	Shaft fan	Shaft fan	4930	4.02
519	DCR60	3.289	142.0	1.42	Shaft fan	Shaft fan	6105	3.98
519	DCR70	3.497	232.9	2.33	Shaft fan	Shaft fan	5250	4.63
423	DCR60	4.136	123.8	1.24	Shaft fan	Shaft fan	6516	4.57
423	DCR70	4.148	202.7	2.03	Shaft fan	Shaft fan	5570	5.34
346	DCR50	4.981	115.9	1.16	Shaft fan	Shaft fan	2204	16.54
346	DCR60	5.047	194.1	1.94	Shaft fan	Shaft fan	6189	5.89
282	DCR50	6.144	102.5	1.03	Shaft fan	Shaft fan	2320	19.24
282	DCR60	6.208	166.0	1.66	Shaft fan	Shaft fan	6474	6.90
282	DCR70	6.265	260.5	2.61	Shaft fan	Shaft fan	5210	8.57
230	DCR60	7.430	153.0	1.53	Shaft fan	Shaft fan	6500	8.41
230	DCR70	7.667	229.1	2.29	Shaft fan	Shaft fan	5490	9.96
188	DCR60	9.344	134.0	1.34	Shaft fan	Shaft fan	6500	10.30
188	DCR70	9.094	198.8	1.99	Shaft fan	Shaft fan	5870	11.41
188	DCR80	9.394	276.1	2.76	None	Shaft fan	5092	13.15
154	DCR60	11.37	117.0	1.17	Shaft fan	Shaft fan	6500	12.62
154	DCR70	11.45	161.0	1.61	Shaft fan	Shaft fan	6500	12.62
154	DCR80	11.26	234.0	2.34	Shaft fan	Shaft fan	5612	14.61
125	DCR70	14.05	133.5	1.33	Shaft fan	Shaft fan	7120	14.11
125	DCR80	13.89	193.1	1.93	Shaft fan	Shaft fan	6255	16.06
102	DCR70	17.68	108.0	1.08	Shaft fan	Shaft fan	7830	15.71
102	DCR80	17.12	159.3	1.59	Shaft fan	Shaft fan	6959	17.68
102	DCR90	17.09	253.2	2.53	Shaft fan	Shaft fan	9772	12.59
84	DCR80	20.67	133.9	1.34	Shaft fan	Shaft fan	7531	20.01
84	DCR90	20.91	209.2	2.09	Shaft fan	Shaft fan	10792	13.96
84	DCR100	20.46	284.3	2.84	Shaft fan	Shaft fan	17000	8.86
68	DCR80	25.63	109.8	1.10	Shaft fan	Shaft fan	8429	21.89
68	DCR90	25.60	164.4	1.64	Shaft fan	Shaft fan	12277	15.03
68	DCR100	25.13	226.5	2.27	Shaft fan	Shaft fan	17000	10.85
56	DCR90	31.08	132.7	1.33	Shaft fan	Shaft fan	13564	16.66
56	DCR100	30.22	198.4	1.98	Shaft fan	Shaft fan	17000	13.29
56	DCR110	30.65	269.0	2.69	None	None	16162	13.98
46	TCR90	38.25	106.4	1.06	Shaft fan	Shaft fan	14000	19.77
46	TCR100	38.75	149.8	1.50	None	None	17000	16.28
46	TCR110	38.10	203.8	2.04	None	None	18000	15.38
46	TCR120	37.53	293.1	2.93	None	None	19000	14.57
37	TCR100	47.37	128.6	1.29	None	None	17000	19.94
37	TCR110	46.43	178.6	1.79	None	None	18000	18.83
37	TCR120	47.32	248.2	2.48	None	None	19000	17.84
30	TCR100	56.75	108.3	1.08	None	None	17000	24.42
30	TCR110	56.87	151.4	1.51	None	None	18000	23.07
30	TCR120	57.68	213.4	2.13	None	None	19000	21.85
30	TCR130	57.61	293.7	2.94	None	None	22500	18.45
25	TCR110	68.83	129.4	1.29	None	None	18000	28.25
25	TCR120	72.49	175.9	1.76	None	None	19000	26.76
25	TCR130	70.48	246.1	2.46	None	None	22500	22.60
20	TCR110	86.56	101.0	1.01	None	None	18000	34.60
20	TCR120	85.26	137.7	1.38	None	None	19000	32.78
20	TCR130	82.24	213.2	2.13	None	None	22500	27.68
17	TCR120	107.5	120.1	1.20	None	None	19000	40.14
17	TCR130	100.8	176.4	1.76	None	None	22500	33.90
13	TCR130	127.1	141.9	1.42	None	None	22500	41.52
11	TCR130	155.6	115.0	1.15	None	None	22500	50.85

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

125 Hp / 1750 RPM /444T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
778	DCR60	2.234	167.0	1.34	Shaft fan	Shaft fan	5537	3.66
778	DCR70	2.266	307.5	2.46	Shaft fan	Shaft fan	4690	4.32
635	DCR60	2.748	158.0	1.26	Shaft fan	Shaft fan	5800	4.28
635	DCR70	2.857	273.1	2.18	Shaft fan	Shaft fan	4930	5.03
519	DCR60	3.289	142.0	1.14	Shaft fan	Shaft fan	6105	4.98
519	DCR70	3.497	232.9	1.86	Shaft fan	Shaft fan	5250	5.79
423	DCR70	4.148	202.7	1.62	Shaft fan	Shaft fan	5570	6.68
346	DCR60	5.047	194.1	1.55	Electric fan	Electric fan	6189	7.36
346	DCR70	4.968	301.0	2.41	Shaft fan	Shaft fan	4930	9.24
282	DCR60	6.208	166.0	1.33	Electric fan	Electric fan	6474	8.62
282	DCR70	6.265	260.5	2.08	Shaft fan	Shaft fan	5210	10.71
282	DCR80	6.248	374.5	3.00	Shaft fan	Shaft fan	4408	12.66
230	DCR60	7.430	153.0	1.22	Electric fan	Electric fan	6500	10.51
230	DCR70	7.667	229.1	1.83	Shaft fan	Electric fan	5490	12.45
230	DCR80	7.614	334.3	2.67	Shaft fan	Shaft fan	4531	15.08
188	DCR60	9.344	134.0	1.07	Electric fan	Electric fan	6500	12.88
188	DCR70	9.094	198.8	1.59	Shaft fan	Electric fan	5870	14.26
188	DCR80	9.394	276.1	2.21	Shaft fan	Shaft fan	5092	16.44
154	DCR70	11.45	161.0	1.29	Shaft fan	Electric fan	6500	15.77
154	DCR80	11.26	234.0	1.87	Shaft fan	Shaft fan	5612	18.27
125	DCR70	14.05	133.5	1.07	Electric fan	Electric fan	7120	17.63
125	DCR80	13.89	193.1	1.54	Shaft fan	Shaft fan	6255	20.07
125	DCR90	13.80	309.8	2.48	Shaft fan	Shaft fan	8772	14.31
102	DCR80	17.12	159.3	1.27	Shaft fan	Shaft fan	6959	22.10
102	DCR90	17.09	253.2	2.03	Shaft fan	Shaft fan	9772	15.74
102	DCR100	17.08	335.6	2.68	Shaft fan	Shaft fan	15859	9.70
84	DCR80	20.67	133.9	1.07	Shaft fan	Electric fan	7531	25.01
84	DCR90	20.91	209.2	1.67	Shaft fan	Shaft fan	10792	17.45
84	DCR100	20.46	284.3	2.27	Shaft fan	Shaft fan	17000	11.08
68	DCR90	25.60	164.4	1.32	Shaft fan	Shaft fan	12277	18.79
68	DCR100	25.13	226.5	1.81	Shaft fan	Shaft fan	17000	13.57
68	DCR110	25.32	335.8	2.69	None	None	14141	16.31
56	DCR90	31.08	132.7	1.06	Shaft fan	Shaft fan	13564	20.83
56	DCR100	30.22	198.4	1.59	Shaft fan	Shaft fan	17000	16.62
56	DCR110	30.65	269.0	2.15	None	None	16162	17.48
56	DCR120	31.34	366.1	2.93	None	None	19000	14.87
46	TCR100	38.75	149.8	1.20	None	None	17000	20.35
46	TCR110	38.10	203.8	1.63	None	None	18000	19.22
46	TCR120	37.53	293.1	2.34	None	None	19000	18.21
37	TCR100	47.37	128.6	1.03	Shaft fan	Shaft fan	17000	24.93
37	TCR110	46.43	178.6	1.43	None	None	18000	23.54
37	TCR120	47.32	248.2	1.99	None	None	19000	22.30
37	TCR130	45.67	350.0	2.80	None	None	21134	20.05
30	TCR110	56.87	151.4	1.21	None	None	18000	28.83
30	TCR120	57.68	213.4	1.71	None	None	19000	27.32
30	TCR130	57.61	293.7	2.35	None	None	22500	23.07
25	TCR110	68.83	129.4	1.03	Shaft fan	Shaft fan	18000	35.31
25	TCR120	72.49	175.9	1.41	None	None	19000	33.45
25	TCR130	70.48	246.1	1.97	None	None	22500	28.25
20	TCR120	85.26	137.7	1.10	None	None	19000	40.97
20	TCR130	82.24	213	1.71	None	None	22500	34.60
17	TCR130	100.8	176.4	1.41	None	None	22500	42.37
13	TCR130	127.1	142	1.14	None	None	22500	51.90

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

150 Hp / 1750 RPM / 445T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
778	DCR60	2.234	167.0	1.11	Electric fan	Electric fan	5537	4.39
778	DCR70	2.266	307.5	2.05	Shaft fan	Shaft fan	4690	5.18
635	DCR60	2.748	158.0	1.05	Shaft fan	Electric fan	5800	5.13
635	DCR70	2.857	273.1	1.82	Shaft fan	Shaft fan	4930	6.04
519	DCR70	3.497	232.9	1.55	Shaft fan	Shaft fan	5250	6.94
423	DCR70	4.148	202.7	1.35	Shaft fan	Electric fan	5570	8.01
346	DCR60	5.047	194.1	1.29	Electric fan	Electric fan	6189	8.83
346	DCR70	4.968	301.0	2.01	Electric fan	Electric fan	4930	11.09
346	DCR80	4.977	408.4	2.72	Shaft fan	Shaft fan	4459	12.26
282	DCR60	6.208	166.0	1.11	Electric fan	Electric fan	6474	10.34
282	DCR70	6.265	260.5	1.74	Electric fan	Electric fan	5210	12.85
282	DCR80	6.248	374.5	2.50	Shaft fan	Shaft fan	4408	15.19
230	DCR60	7.430	153.0	1.02	Electric fan	Electric fan	6500	12.62
230	DCR70	7.667	229.1	1.53	Electric fan	Electric fan	5490	14.94
230	DCR80	7.614	334.3	2.23	Shaft fan	Shaft fan	4531	18.10
188	DCR70	9.094	198.8	1.33	Electric fan	Electric fan	5870	17.11
188	DCR80	9.394	276.1	1.84	Shaft fan	Shaft fan	5092	19.73
188	DCR90	9.214	438.0	2.92	Shaft fan	Shaft fan	6733	14.92
154	DCR70	11.45	161.0	1.07	Electric fan	Electric fan	6500	18.93
154	DCR80	11.26	234.0	1.56	Shaft fan	Shaft fan	5612	21.92
154	DCR90	11.23	376.3	2.51	Shaft fan	Shaft fan	7406	16.61
125	DCR80	13.89	193.1	1.29	Shaft fan	Electric fan	6255	24.09
125	DCR90	13.80	309.8	2.07	Shaft fan	Shaft fan	8772	17.18
125	DCR100	13.97	403.3	2.69	Shaft fan	Shaft fan	14242	10.58
102	DCR80	17.12	159.3	1.06	Shaft fan	Electric fan	6959	26.52
102	DCR90	17.09	253.2	1.69	Shaft fan	Shaft fan	9772	18.88
102	DCR100	17.08	335.6	2.24	Shaft fan	Shaft fan	15859	11.64
84	DCR90	20.91	209.2	1.39	Shaft fan	Shaft fan	10792	20.94
84	DCR100	20.46	284.3	1.90	Shaft fan	Shaft fan	17000	13.29
84	DCR110	20.92	400.2	2.67	Shaft fan	Shaft fan	12121	18.64
68	DCR90	25.60	164.4	1.10	Shaft fan	Shaft fan	12277	22.55
68	DCR100	25.13	226.5	1.51	Shaft fan	Shaft fan	17000	16.28
68	DCR110	25.32	335.8	2.24	Shaft fan	Shaft fan	14141	19.57
56	DCR100	30.22	198.4	1.32	Shaft fan	Shaft fan	17000	19.94
56	DCR110	30.65	269.0	1.79	Shaft fan	Shaft fan	16162	20.98
56	DCR120	31.34	366.1	2.44	Shaft fan	Shaft fan	19000	17.84
46	TCR110	38.10	203.8	1.36	Shaft fan	Shaft fan	18000	23.07
46	TCR120	37.53	293.1	1.95	None	None	19000	21.85
46	TCR130	37.26	404.1	2.69	None	None	19794	20.98
37	TCR110	46.43	178.6	1.19	Shaft fan	Shaft fan	18000	28.25
37	TCR120	47.32	248.2	1.65	None	None	19000	26.76
37	TCR130	45.67	350.0	2.33	None	None	21134	24.06
30	TCR110	56.87	151.4	1.01	Shaft fan	Shaft fan	18000	34.60
30	TCR120	57.68	213.4	1.42	None	None	19000	32.78
30	TCR130	57.61	293.7	1.96	None	None	22500	27.68
25	TCR120	72.49	175.9	1.17	Shaft fan	Shaft fan	19000	40.14
25	TCR130	70.48	246.1	1.64	None	None	22500	33.90
20	TCR130	82.24	213.2	1.42	None	None	22500	41.52
17	TCR130	100.8	176.4	1.18	None	None	22500	50.85

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

200 Hp / 1750 RPM / 447T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
778	DCR70	2.266	307.5	1.54	Electric fan	Electric fan	4690	6.91
635	DCR70	2.857	273.1	1.37	Electric fan	Electric fan	4930	8.05
519	DCR70	3.497	232.9	1.16	Shaft fan	Electric fan	5250	9.26
423	DCR70	4.148	202.7	1.01	Electric fan	Cooling package	5570	10.69
346	DCR70	4.968	301.0	1.51	Electric fan	Electric fan	4930	14.79
346	DCR80	4.977	408.4	2.04	Shaft fan	Electric fan	4459	16.35
282	DCR70	6.265	260.5	1.30	Electric fan	Electric fan	5210	17.14
282	DCR80	6.248	374.5	1.87	Shaft fan	Electric fan	4408	20.25
282	DCR90	6.058	574.3	2.87	Shaft fan	Shaft fan	6297	14.18
230	DCR70	7.667	229.1	1.15	Electric fan	Electric fan	5490	19.92
230	DCR80	7.614	334.3	1.67	Shaft fan	Electric fan	4531	24.14
230	DCR90	7.591	494.2	2.47	Shaft fan	Shaft fan	6624	16.51
188	DCR70	9.094	199.0	1.00	Electric fan	Electric fan	5092	26.30
188	DCR80	9.394	276.1	1.38	Electric fan	Electric fan	5092	26.30
188	DCR90	9.214	438.0	2.19	Shaft fan	Shaft fan	6733	19.89
188	DCR100	9.367	580.1	2.90	Shaft fan	Shaft fan	11414	11.73
154	DCR80	11.26	234.0	1.17	Electric fan	Electric fan	5612	29.23
154	DCR90	11.23	376.3	1.88	Shaft fan	Shaft fan	7406	22.15
154	DCR100	11.34	487.6	2.44	Shaft fan	Shaft fan	12626	12.99
125	DCR90	13.80	309.8	1.55	Shaft fan	Shaft fan	8772	22.90
125	DCR100	13.97	403.3	2.02	Shaft fan	Shaft fan	14242	14.10
125	DCR110	14.01	577.4	2.89	Shaft fan	Shaft fan	9091	22.10
102	DCR90	17.09	253.2	1.27	Shaft fan	Shaft fan	9772	25.18
102	DCR100	17.08	335.6	1.68	Shaft fan	Shaft fan	15859	15.51
102	DCR110	17.08	482.0	2.41	Shaft fan	Shaft fan	13131	18.74
84	DCR90	20.91	209.2	1.05	Shaft fan	Shaft fan	10792	27.92
84	DCR100	20.46	284.3	1.42	Shaft fan	Shaft fan	17000	17.73
84	DCR110	20.92	400.2	2.00	Shaft fan	Shaft fan	12121	24.86
84	DCR120	20.91	555.2	2.78	Shaft fan	Shaft fan	19000	15.86
68	DCR100	25.13	226.5	1.13	Shaft fan	Shaft fan	17000	21.71
68	DCR110	25.32	335.8	1.68	Shaft fan	Shaft fan	14141	26.10
68	DCR120	26.28	450.2	2.25	Shaft fan	Shaft fan	19000	19.42
56	DCR110	30.65	269.0	1.35	Shaft fan	Shaft fan	16162	27.97
56	DCR120	31.34	366.1	1.83	Shaft fan	Shaft fan	19000	23.79
56	DCR130	30.21	521.3	2.61	Shaft fan	Shaft fan	15464	29.23
46	TCR110	38.10	203.8	1.02	Shaft fan	Shaft fan	18000	30.75
46	TCR120	37.53	293.1	1.47	Shaft fan	Shaft fan	19000	29.14
46	TCR130	37.26	404.1	2.02	Shaft fan	Shaft fan	19794	27.97
37	TCR120	47.32	248.2	1.24	Shaft fan	Shaft fan	19000	35.68
37	TCR130	45.67	350.0	1.75	Shaft fan	Shaft fan	21134	32.08
30	TCR120	57.68	213.4	1.07	Shaft fan	Shaft fan	19000	43.70
30	TCR130	57.61	293.7	1.47	Shaft fan	Shaft fan	22500	36.91
25	TCR130	70.48	246.1	1.23	Shaft fan	Shaft fan	22500	45.20
20	TCR130	82.24	213.2	1.07	Shaft fan	Shaft fan	22500	55.36

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

250 Hp / 1750 RPM / 449T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
778	DCR70	2.266	307.5	1.23	Cooling package	Cooling package	4690	6.91
635	DCR70	2.857	273.1	1.09	Cooling package	Cooling package	4930	8.05
346	DCR70	4.968	301.0	1.20	Cooling package	Cooling package	4930	14.79
346	DCR80	4.977	408.4	1.63	Electric fan	Electric fan	4459	16.35
346	DCR90	5.060	641.0	2.56	Electric fan	Electric fan	4459	16.35
282	DCR70	6.265	260.5	1.04	Cooling package	Cooling package	5210	17.14
282	DCR80	6.248	374.5	1.50	Electric fan	Electric fan	4408	20.25
282	DCR90	6.058	574.3	2.30	Shaft fan	Shaft fan	6297	14.18
230	DCR80	7.614	334.3	1.34	Electric fan	Electric fan	4531	24.14
230	DCR90	7.591	494.2	1.98	Shaft fan	Shaft fan	6624	16.51
188	DCR80	9.394	276.1	1.10	Electric fan	Electric fan	5092	26.30
188	DCR90	9.214	438.0	1.75	Shaft fan	Shaft fan	6733	19.89
188	DCR100	9.367	580.1	2.32	Shaft fan	Shaft fan	11414	11.73
154	DCR90	11.23	376.3	1.51	Shaft fan	Shaft fan	7406	22.15
154	DCR100	11.34	487.6	1.95	Shaft fan	Shaft fan	12626	12.99
125	DCR90	13.80	309.8	1.24	Shaft fan	Shaft fan	8772	22.90
125	DCR100	13.97	403.3	1.61	Shaft fan	Shaft fan	14242	14.10
125	DCR110	14.01	577.4	2.31	Shaft fan	Shaft fan	9091	22.10
102	DCR90	17.09	253.2	1.01	Shaft fan	Shaft fan	9772	25.18
102	DCR100	17.08	335.6	1.34	Shaft fan	Shaft fan	15859	15.51
102	DCR110	17.08	482.0	1.93	Shaft fan	Shaft fan	13131	18.74
84	DCR100	20.46	284.3	1.14	Shaft fan	Shaft fan	17000	17.73
84	DCR110	20.92	400.2	1.60	Shaft fan	Shaft fan	12121	24.86
84	DCR120	20.91	555.2	2.22	Shaft fan	Shaft fan	19000	15.86
68	DCR110	25.30	335.8	1.34	Shaft fan	Shaft fan	14141	26.10
68	DCR120	26.28	450.2	1.80	Shaft fan	Shaft fan	19000	19.42
68	DCR130	25.60	620.0	2.48	Shaft fan	Shaft fan	19000	19.42
56	DCR110	30.65	269.0	1.08	Shaft fan	Shaft fan	16162	27.97
56	DCR120	31.34	366.1	1.46	Shaft fan	Shaft fan	19000	23.79
56	DCR130	30.21	521.3	2.09	Shaft fan	Shaft fan	15464	29.23
46	TCR120	37.53	293.1	1.17	Shaft fan	Shaft fan	19000	29.14
46	TCR130	37.26	404.1	1.62	Shaft fan	Shaft fan	19794	27.97
37	TCR120	47.32	248.2	0.99	Shaft fan	Shaft fan	19000	35.68
37	TCR130	45.67	350.0	1.40	Shaft fan	Shaft fan	21134	32.08
30	TCR130	57.61	293.7	1.17	Shaft fan	Shaft fan	22500	36.91
25	TCR130	70.48	246.1	0.98	Shaft fan	Shaft fan	22500	45.20

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

300 Hp / 1750 RPM / 449T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
778	DCR70	2.266	307.5	1.03	Cooling package	Cooling package	4690	6.91
346	DCR70	4.968	301.0	1.00	Cooling package	Cooling package	4930	14.79
346	DCR80	4.977	408.4	1.36	Electric fan	Cooling package	4459	16.35
282	DCR80	6.248	374.5	1.25	Electric fan	Cooling package	4408	20.25
282	DCR90	6.058	574.3	1.91	Shaft fan	Shaft fan	6297	14.18
282	DCR100	6.200	841.0	2.80	Shaft fan	Shaft fan	6297	14.18
230	DCR80	7.614	334.3	1.11	Electric fan	Electric fan	4531	24.14
230	DCR90	7.591	494.2	1.65	Shaft fan	Shaft fan	6624	16.51
230	DCR100	7.590	703.0	2.34	Shaft fan	Shaft fan	6624	16.51
188	DCR90	9.214	438.0	1.46	Shaft fan	Shaft fan	6733	19.89
188	DCR100	9.367	580.1	1.93	Shaft fan	Shaft fan	11414	11.73
154	DCR90	11.23	376.3	1.25	Shaft fan	Shaft fan	7406	22.15
154	DCR100	11.34	487.6	1.63	Shaft fan	Shaft fan	12626	12.99
154	DCR110	11.39	700.0	2.33	Shaft fan	Shaft fan	12626	12.99
125	DCR90	13.80	309.8	1.03	Shaft fan	Shaft fan	8772	22.90
125	DCR100	13.97	403.3	1.34	Shaft fan	Shaft fan	14242	14.10
125	DCR110	14.01	577.4	1.92	Shaft fan	Shaft fan	9091	22.10
102	DCR100	17.08	335.6	1.12	Shaft fan	Shaft fan	15859	15.51
102	DCR110	17.08	482.0	1.61	Shaft fan	Shaft fan	13131	18.74
102	DCR120	17.09	665.0	2.22	Shaft fan	Shaft fan	13131	18.74
84	DCR110	20.92	400.2	1.33	Shaft fan	Shaft fan	12121	24.86
84	DCR120	20.91	555.2	1.85	Shaft fan	Shaft fan	19000	15.86
68	DCR110	25.32	335.8	1.12	Shaft fan	Shaft fan	14141	26.10
68	DCR120	26.28	450.2	1.50	Shaft fan	Shaft fan	19000	19.42
68	DCR130	25.63	620.0	2.07	Shaft fan	Shaft fan	19000	19.42
56	DCR120	31.34	366.1	1.22	Shaft fan	Shaft fan	19000	23.79
56	DCR130	30.21	521.3	1.74	Shaft fan	Shaft fan	15464	29.23
46	TCR120	37.53	293.1	0.98	Shaft fan	Shaft fan	19000	29.14
46	TCR130	37.26	404.1	1.35	Shaft fan	Shaft fan	19794	27.97
37	TCR130	45.67	350.0	1.17	Shaft fan	Shaft fan	21134	32.08
30	TCR130	57.61	293.7	0.98	Shaft fan	Shaft fan	22500	36.91

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

350 Hp / 1750 RPM / L 449T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
346	DCR80	4.977	408.4	1.17	Cooling package	Cooling package	4459	16.35
346	DCR90	5.060	541.0	1.55	Shaft fan	Electric fan	4459	16.35
346	DCR100	5.060	939.0	2.68	Shaft fan	Shaft fan	4459	16.35
282	DCR80	6.248	374.5	1.07	Cooling package	Cooling package	4408	20.25
282	DCR90	6.058	574.3	1.64	Electric fan	Electric fan	6297	14.18
230	DCR80	7.614	334.3	0.96	Cooling package	Cooling package	4531	24.14
230	DCR90	7.591	494.2	1.41	Shaft fan	Shaft fan	6624	16.51
230	DCR100	7.590	703.0	2.01	Shaft fan	Shaft fan	6624	16.51
188	DCR90	9.214	438.0	1.25	Electric fan	Electric fan	6733	19.89
188	DCR100	9.367	580.1	1.66	Shaft fan	Shaft fan	11414	11.73
188	DCR110	9.300	841.0	2.40	Shaft fan	Shaft fan	11414	11.73
154	DCR90	11.23	376.3	1.08	Electric fan	Cooling package	7406	22.15
154	DCR100	11.34	487.6	1.39	Shaft fan	Shaft fan	12626	12.99
154	DCR110	11.39	700.0	2.00	Shaft fan	Shaft fan	12626	12.99
125	DCR100	13.97	403.3	1.15	Shaft fan	Shaft fan	14242	14.10
125	DCR110	14.01	577.4	1.65	Shaft fan	Shaft fan	9091	22.10
125	DCR120	13.95	801.0	2.29	Shaft fan	Shaft fan	9091	22.10
102	DCR100	17.08	335.6	0.96	Shaft fan	Shaft fan	15859	15.51
102	DCR110	17.08	482.0	1.38	Shaft fan	Shaft fan	13131	18.74
102	DCR120	17.09	665.0	1.90	Shaft fan	Shaft fan	13131	18.74
84	DCR110	20.92	400.2	1.14	Shaft fan	Shaft fan	12121	24.86
84	DCR120	20.91	555.2	1.59	Shaft fan	Shaft fan	19000	15.86
84	DCR130	20.93	743.0	2.12	Shaft fan	Shaft fan	19000	15.86
68	DCR110	25.32	335.8	0.96	Shaft fan	Shaft fan	14141	26.10
68	DCR120	26.28	450.2	1.29	Shaft fan	Shaft fan	19000	19.42
68	DCR130	25.63	620.0	1.77	Shaft fan	Shaft fan	19000	19.42
56	DCR120	31.34	366.1	1.05	Shaft fan	Shaft fan	19000	23.79
56	DCR130	30.21	521.3	1.49	Shaft fan	Shaft fan	15464	29.23
46	TCR130	37.26	404.1	1.15	Shaft fan	Shaft fan	19794	27.97
37	TCR130	45.67	350.0	1.00	Shaft fan	Shaft fan	21134	32.08

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Selection

Easy selection

400 Hp / 1750 RPM / 586/7T motor

Approximate low speed shaft RPM	Reduction & drive size	Actual ratio	Hp rating	Service factor	Minimum cooling required 80°F @ 2500' ASL ▲	Minimum cooling required 100°F @ 2500' ASL ▲	L.S. shaft OHL capacity (lbs.) †	Minimum L.S. shaft sprocket pitch dia. (in.) †
346	DCR80	4.977	408.4	1.02	Cooling package	Cooling package	4459	16.35
346	DCR90	5.060	541.0	1.35	Shaft fan	Electric fan	4459	16.35
346	DCR100	5.060	939.0	2.35	Shaft fan	Shaft fan	4459	16.35
282	DCR90	6.058	574.3	1.44	Electric fan	Electric fan	6297	14.18
230	DCR90	7.591	494.2	1.24	Shaft fan	Shaft fan	6624	16.51
230	DCR100	7.590	703.0	1.76	Shaft fan	Shaft fan	6624	16.51
188	DCR90	9.214	438.0	1.10	Electric fan	Electric fan	6733	19.89
188	DCR100	9.367	580.1	1.45	Shaft fan	Shaft fan	11414	11.73
188	DCR110	9.300	841.0	2.10	Shaft fan	Shaft fan	11414	11.73
154	DCR100	11.34	487.6	1.22	Shaft fan	Shaft fan	12626	12.99
154	DCR110	11.39	700.0	1.75	Shaft fan	Shaft fan	12626	12.99
154	DCR120	11.39	895.0	2.24	Shaft fan	Shaft fan	12626	12.99
125	DCR100	13.97	403.3	1.01	Shaft fan	Shaft fan	14242	14.10
125	DCR110	14.01	577.4	1.44	Shaft fan	Shaft fan	9091	22.10
125	DCR120	13.95	801.0	2.00	Shaft fan	Shaft fan	9091	22.10
102	DCR110	17.08	482.0	1.21	Shaft fan	Shaft fan	13131	18.74
102	DCR120	17.09	665.0	1.66	Shaft fan	Shaft fan	13131	18.74
102	DCR130	17.09	879.0	2.20	Shaft fan	Shaft fan	13131	18.74
84	DCR110	20.92	400.2	1.00	Shaft fan	Shaft fan	12121	24.86
84	DCR120	20.91	555.2	1.39	Shaft fan	Shaft fan	19000	15.86
84	DCR130	20.93	743.0	1.86	Shaft fan	Shaft fan	19000	15.86
68	DCR120	26.28	450.2	1.13	Shaft fan	Shaft fan	19000	19.42
68	DCR130	25.63	620.0	1.55	Shaft fan	Shaft fan	19000	19.42
56	DCR130	30.21	521.3	1.30	Shaft fan	Shaft fan	15464	29.23
46	TCR130	37.26	404.1	1.01	Shaft fan	Shaft fan	19794	27.97

▲ Minimum cooling requirements are based on an ambient temperature of 80°F (27°C) at sea level (0-2500 ft.) If your operating conditions are different, the application adjusted thermal rating must be calculated and compared to the thermal rating tables to ensure adequate cooling is provided.

† The overhung load and minimum sprocket pitch diameter are appropriate for loads applied one shaft diameter from the seal cage with a service factor of unity. When overhung load is proportional to torque (i.e., pinion, sprocket) adjustment to the published values must be made based on the minimum required service factor.

Dimensions

Reducers size 50

Features

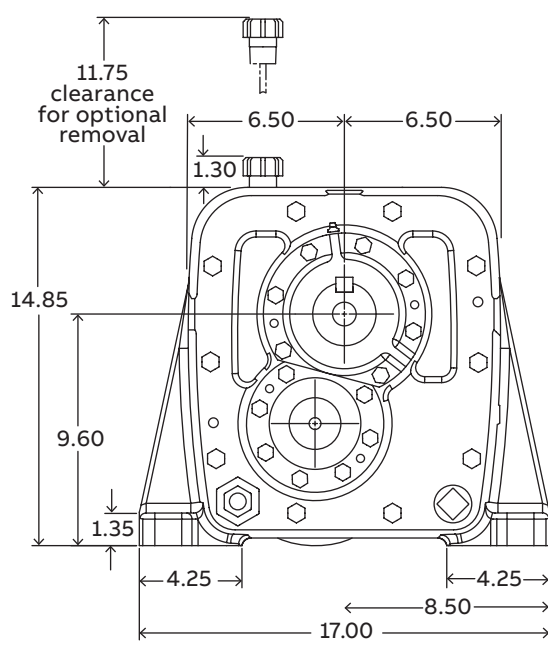
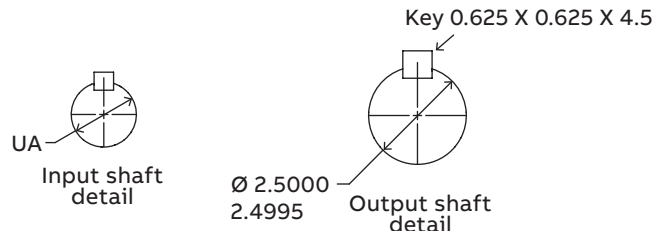
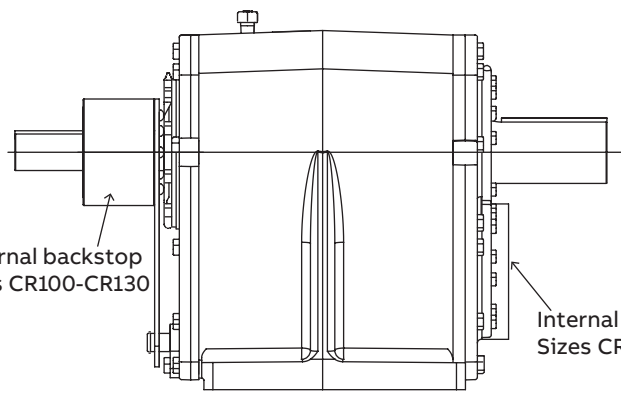
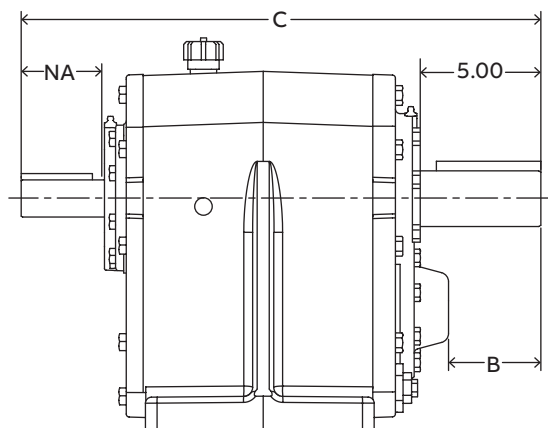
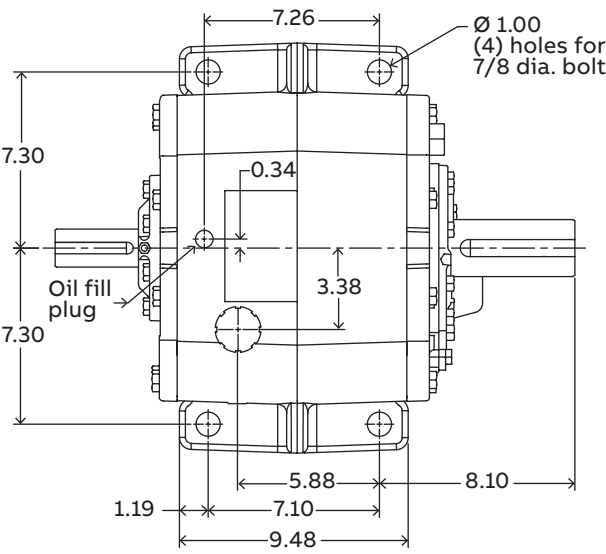
Specifications

Selection

Dimensions

Accessories

Engineering



Note: Verify application compatibility and fit of accessories and components.

Dimensions

Reducers size 50

Size 50	C	NA		UA	Input shaft key			B		Weight (lbs.)
		Without fan	With fan		W	H	L	Without backstop	With backstop*	
Double reduction	21.54	3.34	1.65	1.6250 1.6245	0.375	0.375	3.00	3.83	3.65	415
Triple reduction	21.54	3.25	-	1.2500 1.2495	0.25	0.25	3.00	3.83	3.65	415

* Refer to page 61 for internal backstop dimensions.

Size 50 part numbers

Nominal ratio		Basic reducer	
		Basic reducer	With backstop †
Double	DCR50 - 2.25	268700	-
	DCR50 - 2.75	268701	-
	DCR50 - 3.37	268702	-
	DCR50 - 4.13	268703	-
	DCR50 - 5.06	268704	268634CC 268634CW
	DCR50 - 6.20	268705	268635CC 268635CW
	DCR50 - 7.59	268706	268636CC 268636CW
	DCR50 - 9.30	268707	268637CC 268637CW
	DCR50 - 11.39	268708	268638CC 268638CW
	DCR50 - 13.95	268709	268639CC 268639CW
	DCR50 - 17.09	268710	268640CC 268640CW
	DCR50 - 20.93	268711	268641CC 268641CW
Triple	DCR50 - 25.63	268712	268642CC 268642CW
	DCR50 - 31.39	268713	268643CC 268643CW
	TCR50 - 38.44	268714	268644CC 268644CW
	TCR50 - 47.08	268715	268645CC 268645CW
	TCR50 - 57.67	268716	268646CC 268646CW
	TCR50 - 70.62	268717	268647CC 268647CW
	TCR50 - 86.50	268718	268648CC 268648CW
	TCR50 - 105.9	268719	268649CC 268649CW
	TCR50 - 129.7	268720	268650CC 268650CW
	TCR50 - 158.9	268721	268651CC 268651CW
	TCR50 - 194.6	268722	268652CC 268652CW

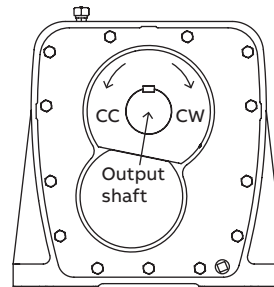
† When ordering, direction of output shaft rotation is required to choose the correct part number (CC or CW) as viewed looking toward the output end of the reducer.

See dimensions on page 61.

Size 50 accessories ♦ ♦

Description	Part number	Weight (lbs.)
Shaft driven fan (2.25-31.39)	271945	10
Shaft driven fan (2.25-31.39) for scoops	271946	11
Electric fan 230/460V	273961	39
Electric fan 575V	273962	39
Heat exchanger	273933	55
Pitot tube oil sampling port	270893	8
Top motor mount	270007	110
Slide base	270008	87

♦ Refer to page 42 for compatibility of accessory combinations.



Backstop - specify direction of rotation of the output shaft (cw for clockwise, CC for counterclockwise) when looking toward the gearbox from the end of the output shaft

Size 50 scoop part numbers ♦ ♦

NEMA AC - motor frame		Scoop package Raptor coupling	Scoop package weights Raptor (lbs.)*	Scoop package Grid-Lign coupling	Scoop package weights Grid-Lign (lbs.)
Double	182T, 184T	274801	138	269165	132
	213T, 215T	274802	138	269166	132
	254T, 256T	274803	147	269167	137
	284T, 286T	274804	167	269168	158
	324T, 326T	274805	174	269169	170
Double with shaft fan	182T, 184T	274806	148	269170	142
	213T, 215T	274807	148	269171	142
	254T, 256T	274808	157	269172	147
	284T, 286T	274809	177	269173	168
	324T, 326T	274810	184	269174	180
Triple	143T, 145T	274811	134	269175	132
	182T, 184T	274812	138	269176	132
	213T, 215T	274813	138	269177	132
	254T, 256T	274814	143	269178	137
	284T, 286T	274815	167	269179	156

* Scoop package includes scoop, coupling, coupling guard, shaft fan (where indicated) and mounting hardware.

Dimensions

Reducers size 60

Features

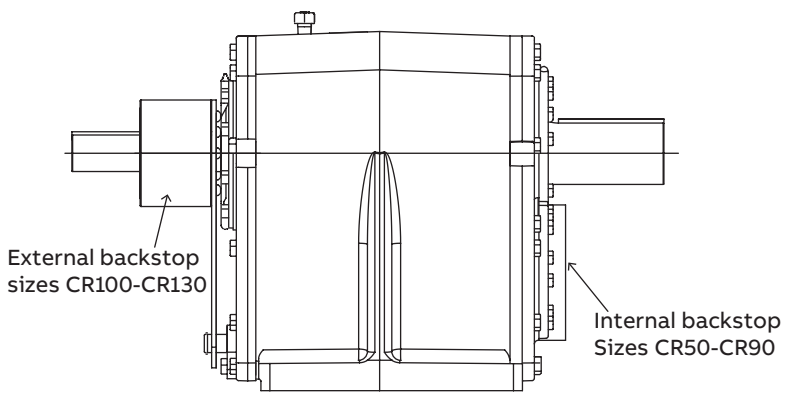
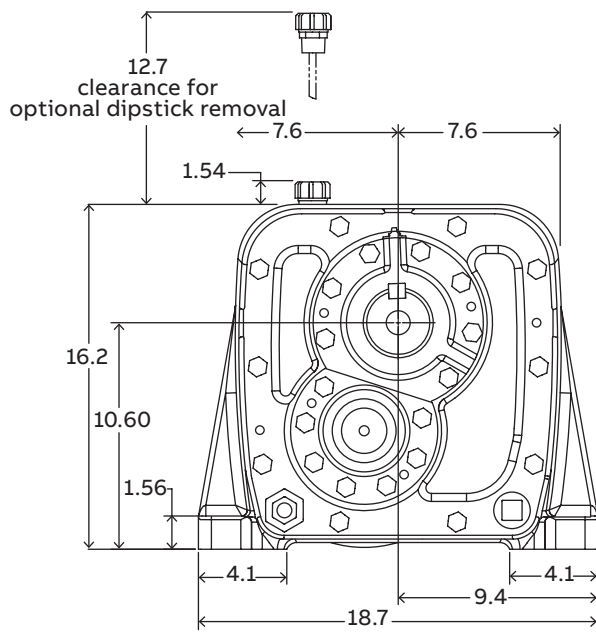
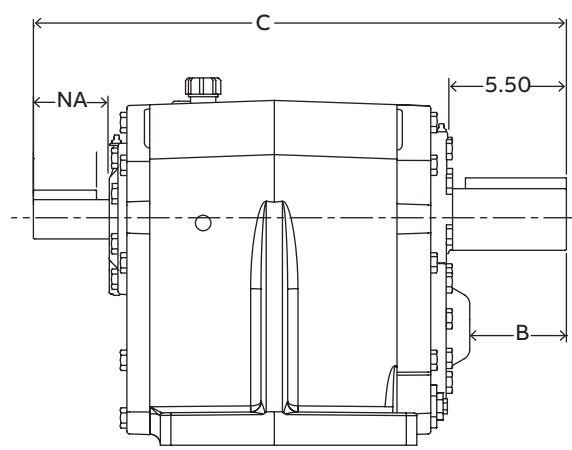
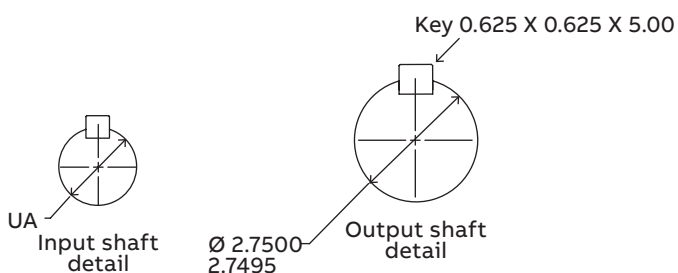
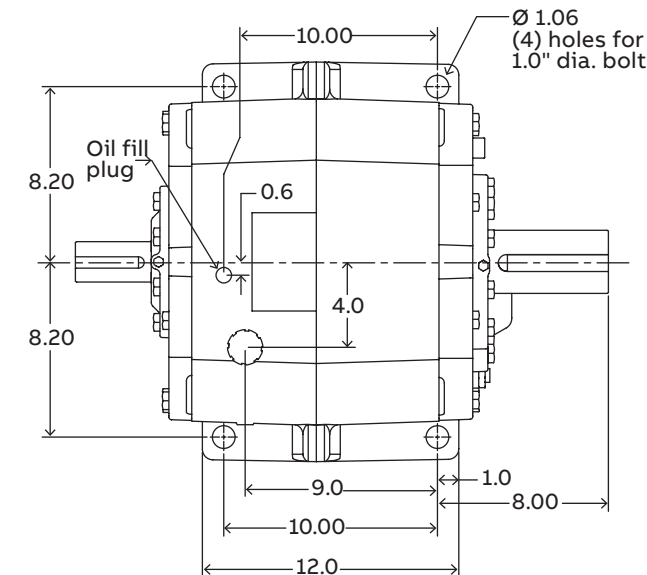
Specifications

Selection

Dimensions

Accessories

Engineering



Note: Verify application compatibility and fit of accessories and components.

Dimensions

Reducers size 60

Size 60	C	NA		UA	Input shaft key			B		Weight (lbs.)
		Without fan	With fan		W	H	L	Without backstop	With backstop*	
Double reduction	24.94	3.49	1.86	1.8750 1.8745	0.50	0.50	3.00	4.5	4.5	485
Triple reduction	24.32	3.06	-	1.2500 1.2495	0.25	0.25	2.80	4.5	4.5	505

* Refer to page 61 for internal backstop dimensions.

Size 60 part numbers

Nominal ratio		Basic reducer	
		Basic reducer	With backstop †
Double	DCR60 - 2.25	268750	-
	DCR60 - 2.75	268751	-
	DCR60 - 3.37	268752	-
	DCR60 - 4.13	268753	-
	DCR60 - 5.06	268754	268657CC 268657CW
	DCR60 - 6.20	268755	268658CC 268658CW
	DCR60 - 7.59	268756	268659CC 268659CW
	DCR60 - 9.30	268757	268660CC 268660CW
	DCR60 - 11.39	268758	268661CC 268661CW
	DCR60 - 13.95	268759	268662CC 268662CW
	DCR60 - 17.09	268760	268663CC 268663CW
	DCR60 - 20.93	268761	268664CC 268664CW
Triple	DCR60 - 25.63	268762	268665CC 268665CW
	DCR60 - 31.39	268763	268666CC 268666CW
	TCR60 - 38.44	268764	268667CC 268667CW
	TCR60 - 47.08	268765	268668CC 268668CW
	TCR60 - 57.67	268766	268669CC 268669CW
	TCR60 - 70.62	268767	268670CC 268670CW
	TCR60 - 86.50	268768	268671CC 268671CW
	TCR60 - 105.9	268769	268672CC 268672CW
	TCR60 - 129.7	268770	268673CC 268673CW
	TCR60 - 158.9	268771	268674CC 268674CW
	TCR60 - 194.6	268772	268675CC 268675CW

† When ordering, direction of output shaft rotation is required to choose the correct part number (CC or CW) as viewed looking toward the output end of the reducer.
See dimensions on page 61.

Size 60 scoop part numbers ♦ ♦

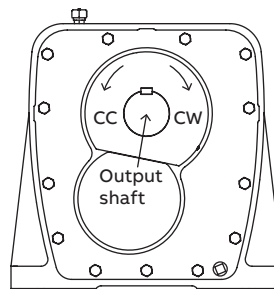
NEMA AC - motor frame		Scoop package Raptor coupling	Scoop package weights Raptor (lbs.)*	Scoop package Grid-Lign coupling	Scoop package weights Grid-Lign (lbs.)
Double	213T, 215T	274816	187	269195	183
	254T, 256T	274817	187	269196	183
	284T, 286T	274818	195	269197	191
	324T, 326T	274819	195	269198	191
	364T, 365T	274820	204	269199	197
Double with shaft fan	213T, 215T	274821	199	269200	195
	254T, 256T	274822	199	269201	196
	284T, 286T	274823	207	269202	203
	324T, 326T	274824	207	269203	204
	364T, 365T	274825	216	269204	206
Triple	143T, 145T	274826	170	269205	168
	182T, 184T	274827	174	269206	168
	213T, 215T	274828	174	269207	168
	254T, 256T	274829	179	269208	173
	284T, 286T	274830	187	269209	177

* Scoop package includes scoop, coupling, coupling guard, shaft fan (where indicated) and mounting hardware.

Size 60 accessories ♦ ♦

Description	Part number	Weight (lbs.)
Shaft driven fan (2.25-31.39)	271948	12
Shaft driven fan (2.25-31.39) for scoops	271949	13
Electric fan 230/460V	273964	42
Electric fan 575V	273965	42
Heat exchanger	273933	55
Pitot tube oil sampling port	270893	8
Top motor mount	270107	142
Slide base	270108	105

♦ Refer to page 42 for compatibility of accessory combinations



Backstop - specify direction of rotation of the output shaft (cw for clockwise, CC for counterclockwise) when looking toward the gearbox from the end of the output shaft

Dimensions

Reducers size 70

Features

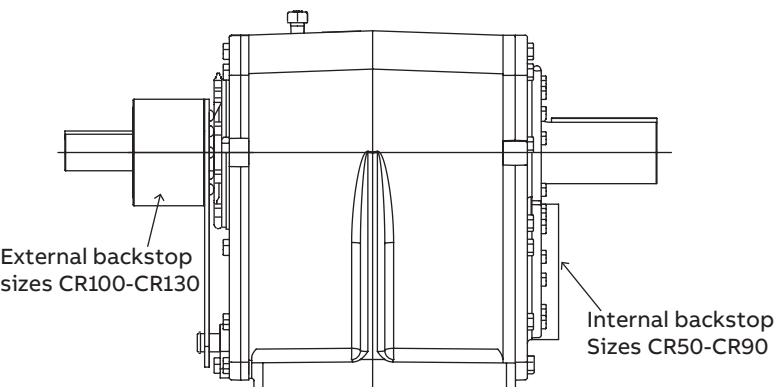
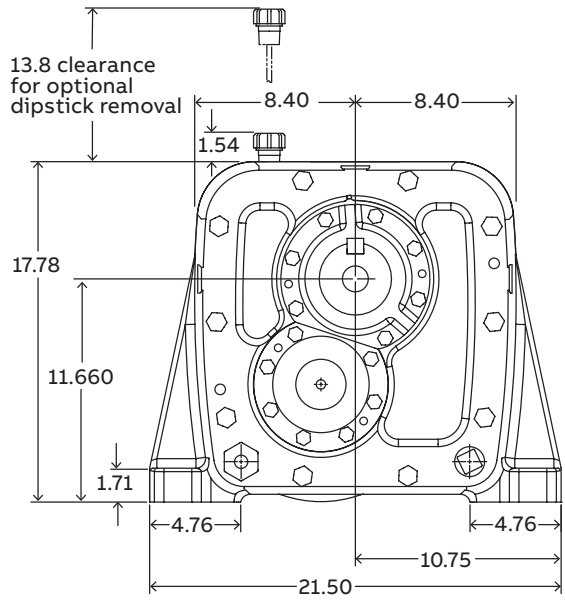
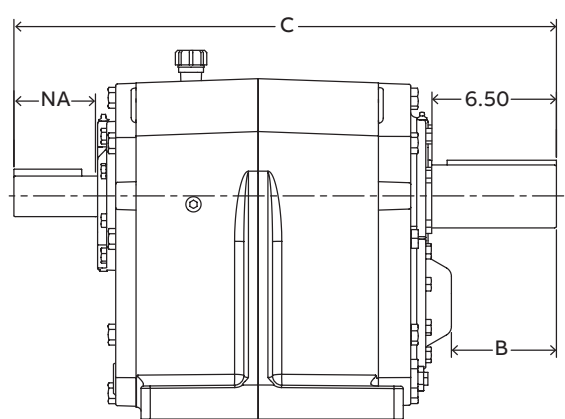
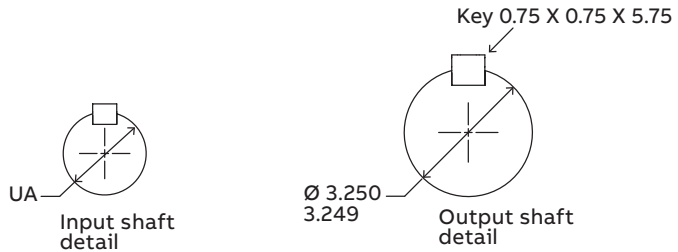
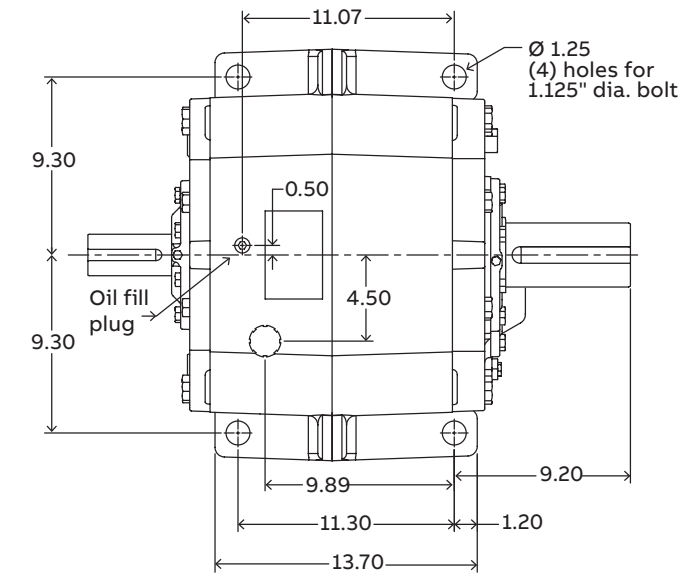
Specifications

Selection

Dimensions

Accessories

Engineering



Note: Verify application compatibility and fit of accessories and components.

Dimensions

Reducers size 70

Size 70	C	NA		UA	Input shaft key			B		Weight (lbs.)
		Without fan	With fan		W	H	L	Without backstop	With backstop*	
Double reduction	28.34	4.26	2.52	2.1250 2.1245	0.50	0.50	3.75	5.46	5.03	750
Triple reduction	27.28	3.32	-	1.3750 1.3745	0.3125	0.3125	3.00	5.46	5.03	750

* Refer to page 61 for internal backstop dimensions.

Size 70 part numbers

Nominal ratio		Basic reducer	
		Basic reducer	With backstop †
Double	DCR70 - 2.25	268800	-
	DCR70 - 2.75	268801	-
	DCR70 - 3.37	268802	-
	DCR70 - 4.13	268803	-
	DCR70 - 5.06	268804	268680CC 268680CW
	DCR70 - 6.20	268805	268681CC 268681CW
	DCR70 - 7.59	268806	268682CC 268682CW
	DCR70 - 9.30	268807	268683CC 268683CW
	DCR70 - 11.39	268808	268684CC 268684CW
	DCR70 - 13.95	268809	268685CC 268685CW
	DCR70 - 17.09	268810	268686CC 268686CW
	DCR70 - 20.93	268811	268687CC 268687CW
Triple	DCR70 - 25.63	268812	268688CC 268688CW
	DCR70 - 31.39	268813	268689CC 268689CW
	TCR70 - 38.44	268814	268690CC 268690CW
	TCR70 - 47.08	268815	268691CC 268691CW
	TCR70 - 57.67	268816	268692CC 268692CW
	TCR70 - 70.62	268817	268693CC 268693CW
	TCR70 - 86.50	268818	268694CC 268694CW
	TCR70 - 105.9	268819	268695CC 268695CW
	TCR70 - 129.7	268820	268696CC 268696CW
	TCR70 - 158.9	268821	268697CC 268697CW
	TCR70 - 194.6	268822	268698CC 268698CW

† When ordering, direction of output shaft rotation is required to choose the correct part number (CC or CW) as viewed looking toward the output end of the reducer.
See dimensions on page 61.

Size 70 scoop part numbers ♦ ♦

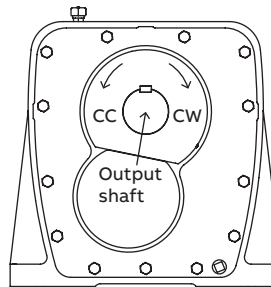
NEMA AC - motor frame		Scoop package Raptor coupling	Scoop package weights Raptor (lbs.)*	Scoop package Grid-Lign coupling	Scoop package weights Grid-Lign (lbs.)
Double	213T, 215T	274831	196	269226	200
	254T, 256T	274832	196	269227	200
	284T, 286T	274833	206	269228	208
	324T, 326T	274834	206	269229	208
	364T, 365T	274835	215	269230	208
Double with shaft fan	213T, 215T	274836	212	269231	216
	254T, 256T	274837	212	269232	216
	284T, 286T	274838	222	269233	224
	324T, 326T	274839	222	269234	224
	364T, 365T	274840	231	269235	224
Triple	182T, 184T	274841	185	269236	179
	213T, 215T	274842	185	269237	179
	254T, 256T	274843	190	269238	184
	284T, 286T	274844	197	269239	188
	324T, 326T	274845	204	269240	200
	364T, 365T	274846	218	269241	211

* Scoop package includes scoop, coupling, coupling guard, shaft fan (where indicated) and mounting hardware.

Size 70 accessories ♦ ♦

Description	Part number	Weight (lbs.)
Shaft driven fan (2.25-31.39)	271951	15
Shaft driven fan (2.25-31.39) For scoops	271952	16
Electric fan 230/460V	273967	49
Electric fan 575V	273968	49
Heat exchanger	273933	55
Pitot tube oil sampling port	270893	8
Top motor mount	270207	142
Slide base	270208	119

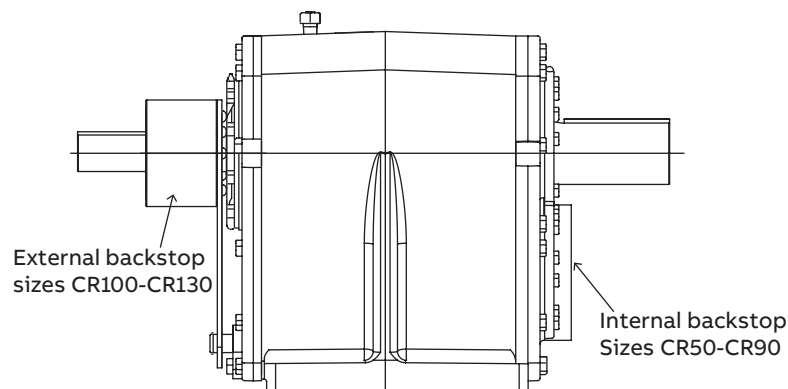
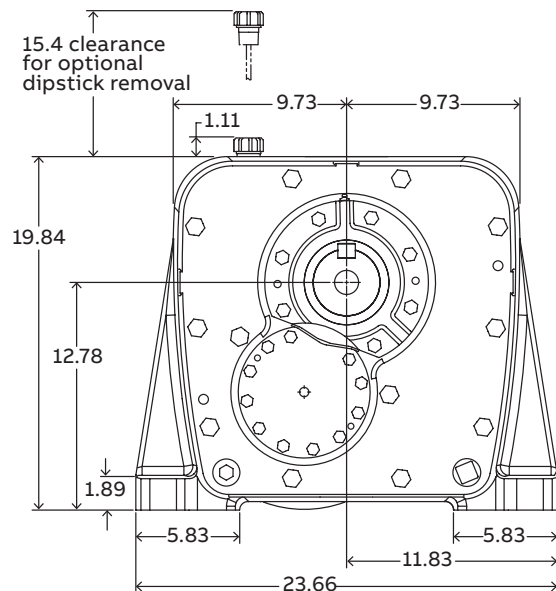
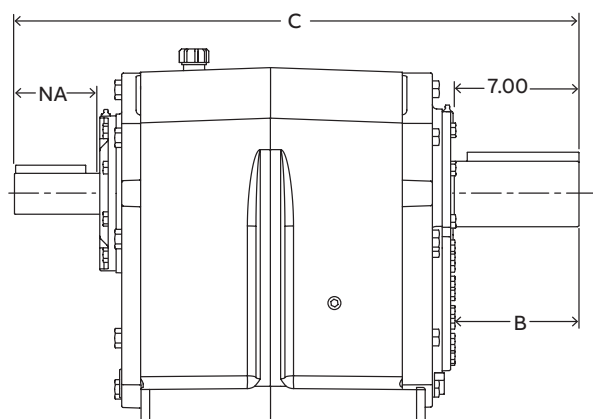
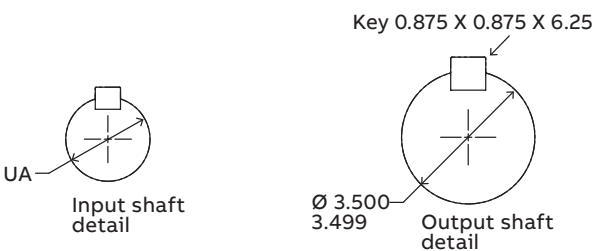
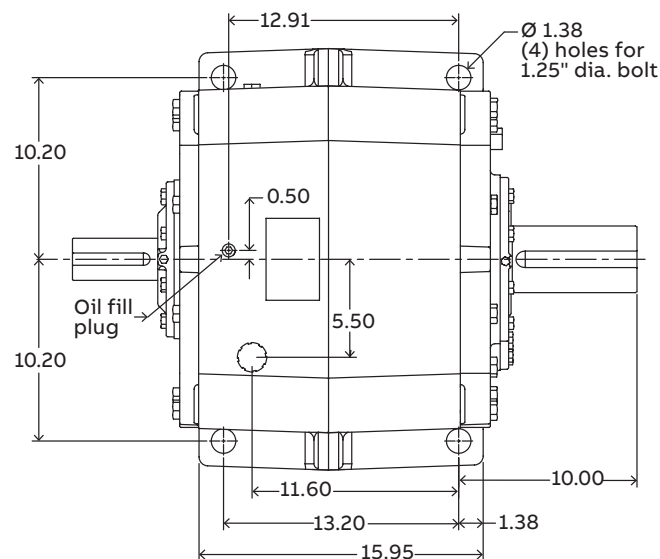
♦ Refer to page 42 for compatibility of accessory combinations



Backstop - specify direction of rotation of the output shaft (cw for clockwise, CC for counterclockwise) when looking toward the gearbox from the end of the output shaft

Dimensions

Reducers size 80



Note: Verify application compatibility and fit of accessories and components.

Dimensions

Reducers size 80

Size 80	C	NA		UA	Input shaft key			B		Weight (lbs.)
		Without fan	With fan		W	H	L	Without backstop	With backstop*	
Double reduction	31.68	4.62	2.41	2.2500 2.2495	0.50	0.50	4.00	6.96	4.81	960
Triple reduction	30.64	3.86	-	1.5000 1.4995	0.375	0.375	3.50	6.96	4.81	960

* Refer to page 61 for internal backstop dimensions.

Size 80 part numbers

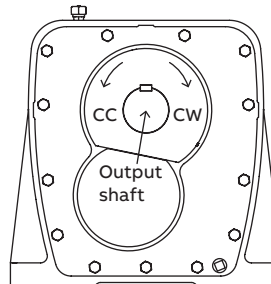
Nominal ratio		Basic reducer		
		Without backstop	With backstop †	
Double	DCR80 - 5.06	268850	268860CC	268860CW
	DCR80 - 6.20	268851	268861CC	268861CW
	DCR80 - 7.59	268852	268862CC	268862CW
	DCR80 - 9.30	268853	268863CC	268863CW
	DCR80 - 11.39	268854	268864CC	268864CW
	DCR80 - 13.95	268855	268865CC	268865CW
	DCR80 - 17.09	268856	268866CC	268866CW
	DCR80 - 20.93	268857	268867CC	268867CW
	DCR80 - 25.63	268858	268868CC	268868CW
	DCR80 - 31.39	268859	268869CC	268869CW
Triple	TCR80 - 38.44	268870	268880CC	268880CW
	TCR80 - 47.08	268871	268881CC	268881CW
	TCR80 - 57.67	268872	268882CC	268882CW
	TCR80 - 70.62	268873	268883CC	268883CW
	TCR80 - 86.50	268874	268884CC	268884CW
	TCR80 - 105.9	268875	268885CC	268885CW
	TCR80 - 129.7	268876	268886CC	268886CW
	TCR80 - 158.9	268877	268887CC	268887CW
	TCR80 - 194.6	268878	268888CC	268888CW

† When ordering, direction of output shaft rotation is required to choose the correct part number (CC or CW) as viewed looking toward the output end of the reducer.
See dimensions on page 61.

Size 80 accessories ♦

Description	Part number	Weight (lbs.)
Shaft driven fan (5.06-31.39)	268839	23
Shaft driven fan (5.06-31.39) for scoops	271209	22
Electric fan 230/460V	273970	54
Electric fan 575V	273971	54
Heat exchanger	273933	55
Pitot tube oil sampling port	270893	8
Top motor mount	270607	252
Slide base	270608	197

♦ Refer to page 42 for compatibility of accessory combinations



Backstop - specify direction of rotation of the output shaft (cw for clockwise, CC for counterclockwise) when looking toward the gearbox from the end of the output shaft

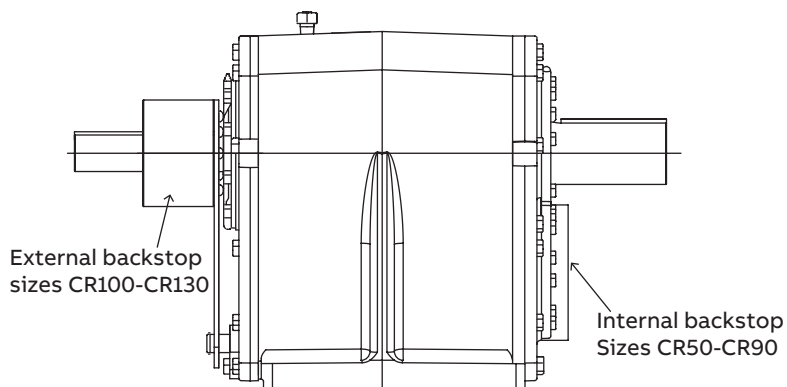
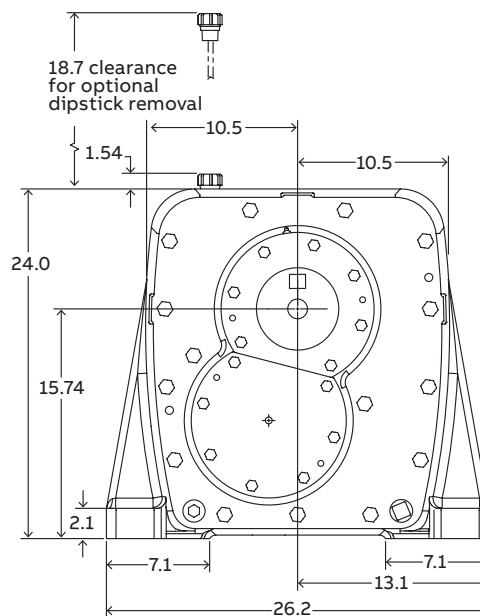
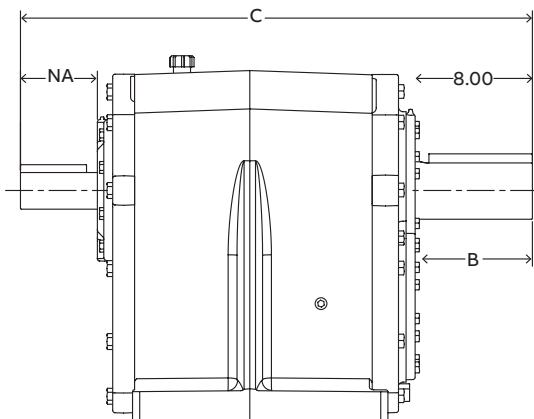
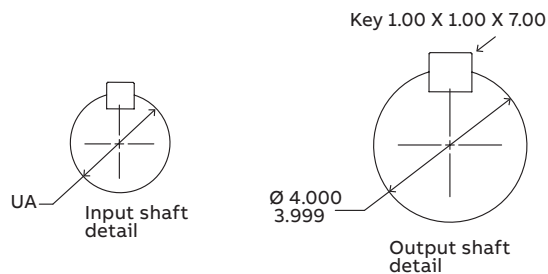
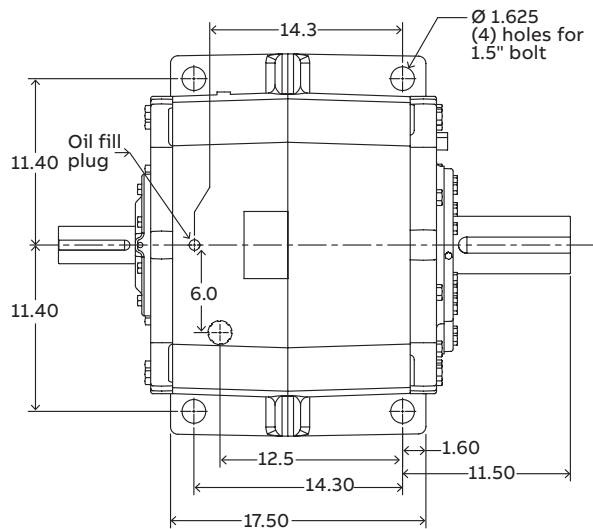
Size 80 scoop part numbers ♦♦

NEMA AC - motor frame		Scoop package Raptor coupling	Scoop package weights Raptor (lbs.)*	Scoop package Grid-Lign coupling	Scoop package weights Grid-Lign (lbs.)
Double	254T, 256T	274847	253	269259	246
	284T, 286T	274848	253	269260	246
	324T, 326T	274849	253	269261	246
	364T, 365T	274850	253	269262	246
	404T, 405T	274851	356	269263	321
	444T, 445T	274852	436	269264	341
Double with shaft fan	284T, 286T	274853	275	269265	268
	324T, 326T	274854	275	269266	268
	364T, 365T	274855	275	269267	268
	404T, 405T	274856	378	269268	343
	444T, 445T	274857	458	269269	363
	213T, 215T	274858	230	269270	221
Triple	254T, 256T	274859	230	269271	221
	284T, 286T	274860	243	269272	234
	324T, 326T	274861	243	269273	234
	364T, 365T	274862	252	269274	245

* Scoop package includes scoop, coupling, coupling guard, shaft fan (where indicated) and mounting hardware.

Dimensions

Reducers size 90



Note: Verify application compatibility and fit of accessories and components.

Dimensions

Reducers size 90

Size 90	C	NA		UA	Input shaft key			B		Weight (lbs.)
		Without fan	With fan		W	H	L	Without backstop	With backstop*	
Double reduction	35.08	5.27	3.00	2.5000 2.4995	0.625	0.625	4.50	7.7	5.65	1610
Triple reduction	33.66	3.72	1.85	2.0000 1.9995	0.500	0.500	3.50	7.7	5.65	1620

* Refer to page 61 for internal backstop dimensions.

Size 90 part numbers

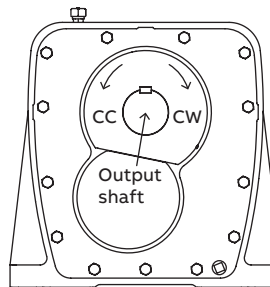
Nominal ratio		Basic reducer	
		Without backstop	With backstop †
Double	DCR90 - 5.06	268900	268910CC 268910CW
	DCR90 - 6.20	268901	268911CC 268911CW
	DCR90 - 7.59	268902	268912CC 268912CW
	DCR90 - 9.30	268903	268913CC 268913CW
	DCR90 - 11.39	268904	268914CC 268914CW
	DCR90 - 13.95	268905	268915CC 268915CW
	DCR90 - 17.09	268906	268916CC 268916CW
	DCR90 - 20.93	268907	268917CC 268917CW
	DCR90 - 25.63	268908	268918CC 268918CW
	DCR90 - 31.39	268909	268919CC 268919CW
Triple	TCR90 - 38.44	268920	268930CC 268930CW
	TCR90 - 47.08	268921	268931CC 268931CW
	TCR90 - 57.67	268922	268932CC 268932CW
	TCR90 - 70.62	268923	268933CC 268933CW
	TCR90 - 86.50	268924	268934CC 268934CW
	TCR90 - 105.9	268925	268935CC 268935CW
	TCR90 - 129.7	268926	268936CC 268936CW
	TCR90 - 158.9	268927	268937CC 268937CW
	TCR90 - 194.6	268928	268938CC 268938CW

† When ordering, direction of output shaft rotation is required to choose the correct part number (CC or CW) as viewed looking toward the output end of the reducer. See dimensions on page 61.

Size 90 accessories ♦

Description	Part number	Weight (lbs.)
Shaft driven fan (5.06-31.39)	268847	26
Shaft driven fan (5.06-31.39) for scoops	271210	24
Shaft driven fan (38.44-194.6)	268848	25
Shaft driven fan (38.44-194.6) for scoops	271211	23
Electric fan 230/460V	273973	66
Electric fan 575V	273974	66
Heat exchanger	273933	55
Pitot tube oil sampling port	270893	8
Top motor mount	270807	252
Slide base	270808	269

♦ Refer to page 42 for compatibility of accessory combinations



Backstop - specify direction of rotation of the output shaft (cw for clockwise, CC for counterclockwise) when looking toward the gearbox from the end of the output shaft

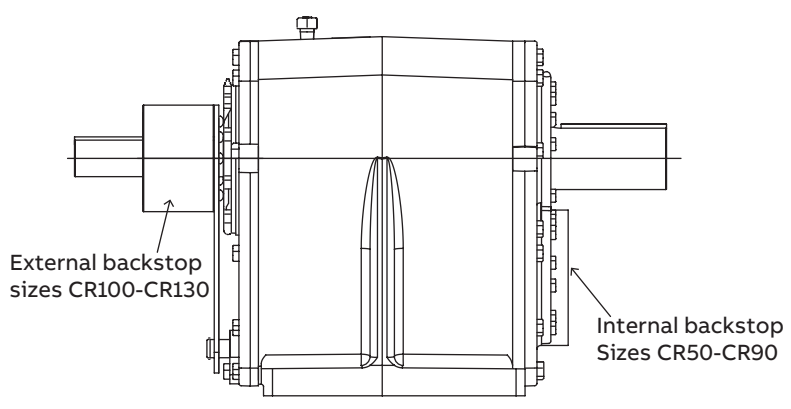
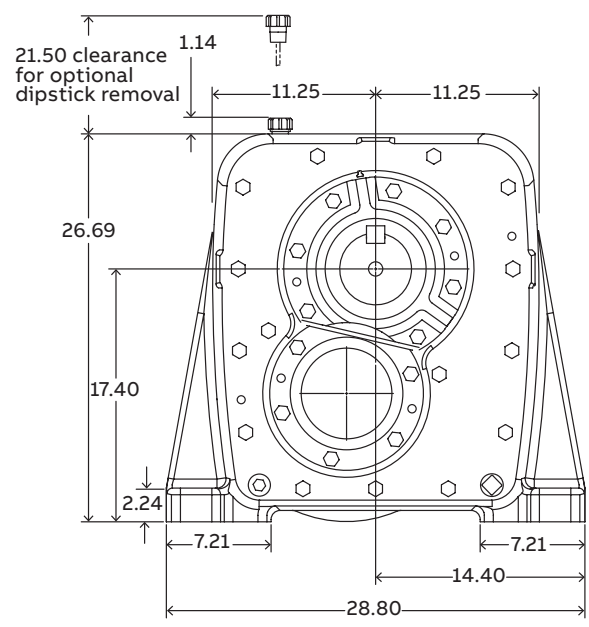
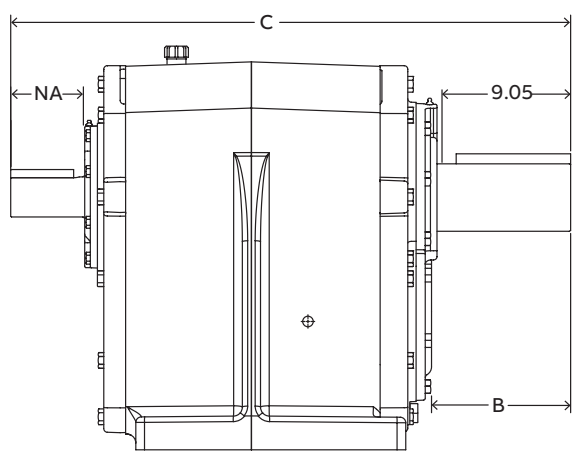
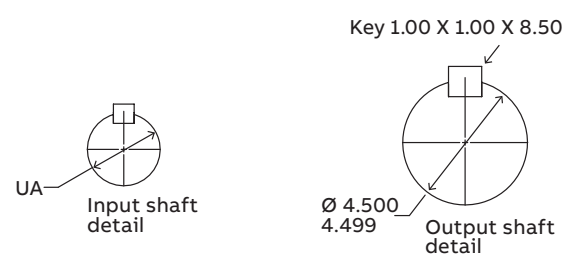
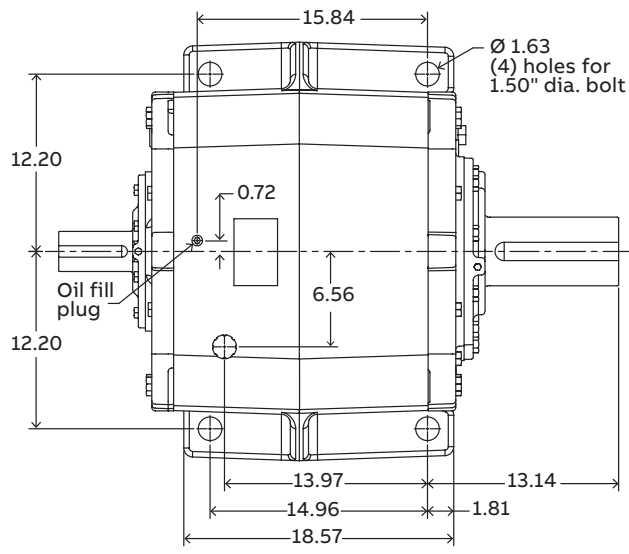
Size 90 scoop part numbers ♦♦

NEMA AC - motor frame		Scoop package Raptor coupling	Scoop package weights Raptor (lbs.)*	Scoop package Grid-Lign coupling	Scoop package weights Grid-Lign (lbs.)
Double	324T, 326T	274863	356	269292	356
	364T, 365T	274864	359	269293	359
	404T, 405T	274865	451	269294	411
	444T, 445T	274866	521	269295	417
Double with shaft fan	324T, 326T	274867	380	269296	380
	364T, 365T	274868	383	269297	383
	404T, 405T	274869	475	269298	435
	444T, 445T	274870	545	269299	441
Triple	213T, 215T	274871	347	269300	326
	254T, 256T	274872	356	269301	335
	284T, 286T	274873	356	269302	335
	324T, 326T	274874	356	269303	335
	364T, 365T	274875	359	269304	338
	404T, 405T	274876	451	269305	411
Triple with shaft fan	324T, 326T	274877	379	269306	358
	364T, 365T	274878	382	269307	361
	404T, 405T	274879	474	269308	434

* Scoop package includes scoop, coupling, coupling guard, shaft fan (where indicated) and mounting hardware.

Dimensions

Reducers size 100



Note: Verify application compatibility and fit of accessories and components.

Dimensions

Reducers size 100

Size 100	C	NA		UA	Input shaft key			B	Weight (lbs.)
		Without fan	With fan		W	H	L		
Double reduction	38.5	5.00	2.81	2.7500 2.7485	0.625	0.625	4.75	9.57	1910
Triple reduction	37.14	4.00	1.99	2.1250 2.1245	0.50	0.50	3.50	9.57	1910

* Refer to page 62 for external backstop dimensions.

Size 100 part numbers

Nominal ratio		Basic reducer	
		Without backstop	With backstop †
Double	DCR100 - 5.06	268950	268960CC 268960CW
	DCR100 - 6.20	268951	268961CC 268961CW
	DCR100 - 7.59	268952	268962CC 268962CW
	DCR100 - 9.30	268953	268963CC 268963CW
	DCR100 - 11.39	268954	268964CC 268964CW
	DCR100 - 13.95	268955	268965CC 268965CW
	DCR100 - 17.09	268956	268966CC 268966CW
	DCR100 - 20.93	268957	268967CC 268967CW
	DCR100 - 25.63	268958	268968CC 268968CW
	DCR100 - 31.39	268959	268969CC 268969CW
Triple	TCR100 - 38.44	268970	268980CC 268980CW
	TCR100 - 47.08	268971	268981CC 268981CW
	TCR100 - 57.67	268972	268982CC 268982CW
	TCR100 - 70.62	268973	268983CC 268983CW
	TCR100 - 86.50	268974	268984CC 268984CW
	TCR100 - 105.9	268975	268985CC 268985CW
	TCR100 - 129.7	268976	268986CC 268986CW
	TCR100 - 158.9	268977	268987CC 268987CW
	TCR100 - 194.6	268978	268988CC 268988CW

† When ordering, direction of output shaft rotation is required to choose the correct part number (CC or CW) as viewed looking toward the output end of the reducer. See dimensions on page 62.

Size 100 scoop part numbers ♦

NEMA AC - motor frame	Scoop package Raptor coupling	Scoop package weights Raptor (lbs.)*	Scoop package Grid-Lign coupling	Scoop package weights Grid-Lign (lbs.)*	Scoop package Raptor coupling for backstop 5.06-13.95/17.09-31.39	Scoop package Grid-Lign coupling for backstop 5.06-13.95/17.09-31.39
Double	364T, 365T	274880	269325	327	274896 / 274897	274382 / 274383
	404T, 405T	274881	269326	382	274898 / 274899	274384 / 274385
	444T, 445T	274882	269327	405	274900 / 274901	274386 / 274387
Double with shaft fan	364T, 365T	274883	269328	385	-	-
	404T, 405T	274884	269329	440	-	-
	444T, 445T	274885	269330	463	-	-
Triple	254T, 256T	274886	269331	290	274902	274388
	284T, 286T	274887	269332	290	274903	274389
	324T, 326T	274888	269333	301	274904	274390
	364T, 365T	274889	269334	307	274905	274391
	404T, 405T	274890	269335	380	274906	274392
	444T, 445T	274891	269336	403	274907	274393
Triple with shaft fan	324T, 326T	274892	269337	358	-	-
	364T, 365T	274893	269338	364	-	-
	404T, 405T	274894	269339	437	-	-
	444T, 445T	274895	269340	460	-	-

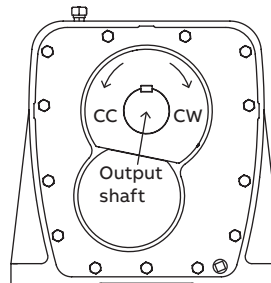
* Scoop package includes scoop, coupling, coupling guard, shaft fan (where indicated) and mounting hardware.

* For backstop option, add 137 lbs. for DCR's and 55 lbs. for TCR's.

Size 100 accessories ♦

Description	Part number	Weight (lbs.)
Shaft driven fan (5.06-31.39)	268849	29
Shaft driven fan (5.06-31.39) for scoops	271212	29
Shaft driven fan (38.44-194.6)	269242	28
Shaft driven fan (38.44-194.6) for scoops	271216	28
Electric fan 230/460V	273976	75
Electric fan 575V	273977	75
Heat exchanger	273933	55
Pitot tube oil sampling port	270893	8
Top motor mount	270907	262
Slide base	270908	332

♦ Refer to page 42 for compatibility of accessory combinations



Backstop - specify direction of rotation of the output shaft (cw for clockwise, CC for counterclockwise) when looking toward the gearbox from the end of the output shaft

Dimensions

Reducers size 110

Features

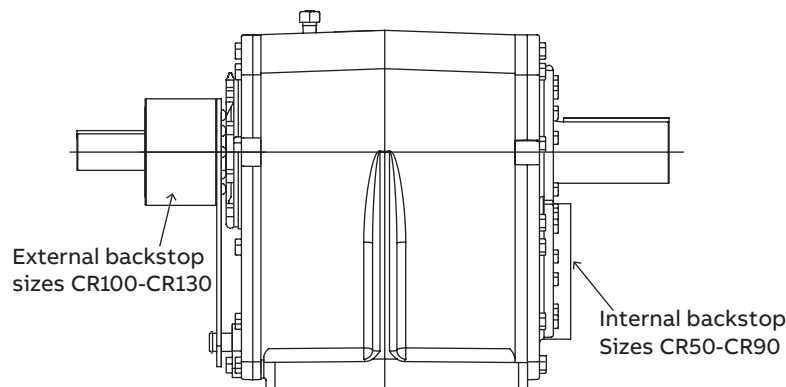
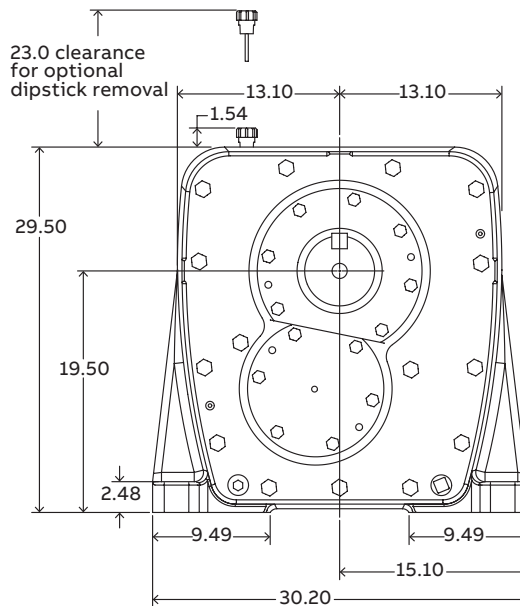
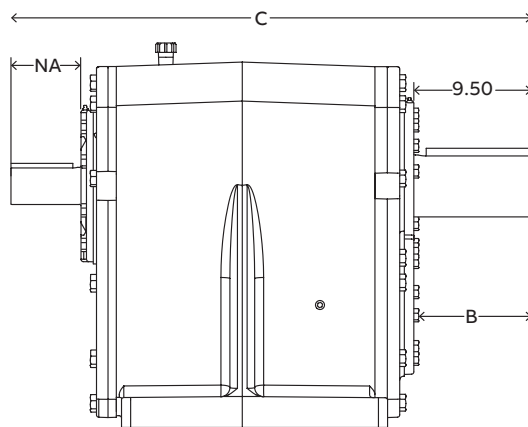
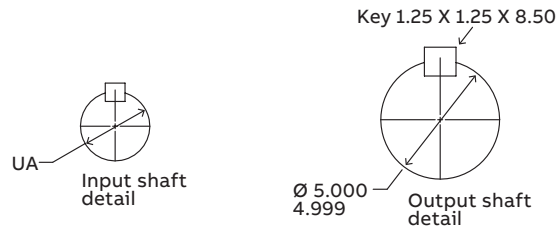
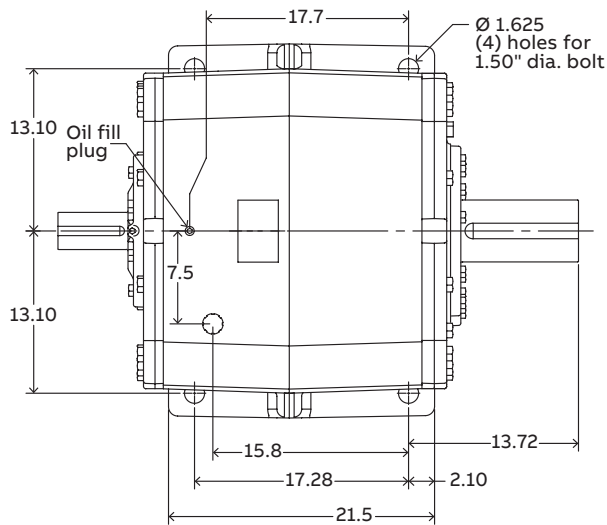
Specifications

Selection

Dimensions

Accessories

Engineering



Note: Verify application compatibility and fit of accessories and components.

Dimensions

Reducers size 110

Size 110	C	NA		UA	Input shaft key			B	Weight (lbs.)
		Without fan	With fan		W	H	L		
Double reduction	42.02	5.63	3.02	3.000 2.999	0.75	0.75	5.00	9.10	2810
Triple reduction	40.10	4.00	2.13	2.1250 2.1245	0.50	0.50	3.50	9.10	2820

Size 110 part numbers

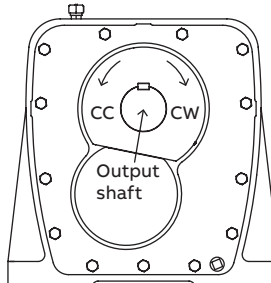
Nominal ratio		Basic reducer	
		Without backstop	With backstop †
Double	DCR110 - 9.300	269003	269013CC 269013CW
	DCR110 - 11.39	269004	269014CC 269014CW
	DCR110 - 13.95	269005	269015CC 269015CW
	DCR110 - 17.09	269006	269016CC 269016CW
	DCR110 - 20.93	269007	269017CC 269017CW
	DCR110 - 25.63	269008	269018CC 269018CW
	DCR110 - 31.39	269009	269019CC 269019CW
Triple	TCR110 - 38.44	269020	269030CC 269030CW
	TCR110 - 47.08	269021	269031CC 269031CW
	TCR110 - 57.67	269022	269032CC 269032CW
	TCR110 - 70.62	269023	269033CC 269033CW
	TCR110 - 86.50	269024	269034CC 269034CW
	TCR110 - 105.9	269025	269035CC 269035CW
	TCR110 - 129.7	269026	269036CC 269036CW
	TCR110 - 158.9	269027	269037CC 269037CW
	TCR110 - 194.6	269028	269038CC 269038CW

† When ordering, direction of output shaft rotation is required to choose the correct part number (CC or CW) as viewed looking toward the output end of the reducer.
See dimensions on page 62.

Size 110 accessories ♦

Description	Part number	Weight (lbs.)
Shaft driven fan (9.300-31.39)	273215	36
Shaft driven fan (9.300-31.39) for scoops	273216	32
Shaft driven fan (38.44-194.6)	273218	33
Shaft driven fan (38.44-194.6) for scoops	273219	26
Electric fan 230/460V	273979	91
Electric fan 575V	273980	91
Heat exchanger	273933	55
Pitot tube oil sampling port	270893	8
Top motor mount	269407	266
Slide base	269408	361

♦ Refer to page 42 for compatibility of accessory combinations



Backstop - specify direction of rotation of the output shaft (cw for clockwise, CC for counterclockwise) when looking toward the gearbox from the end of the output shaft

Size 110 scoop part numbers ♦ ♦

NEMA AC - motor frame	Scoop package Raptor coupling	Scoop package weights Raptor (lbs.)*	Scoop package Grid-Lign coupling	Scoop package weights Grid-Lign (lbs.)*	Scoop package Raptor coupling for backstop 9.30-20.93/25.63-31.39	Scoop package Grid-Lign coupling for backstop 9.30-20.93/25.63-31.39
Double	364T, 365T	274908	467	273336	372	274924 / 274925
	404T, 405T	274909	509	273337	414	274926 / 274927
	444T, 445T	274910	518	273338	423	274928 / 274929
Double with shaft fan	364T, 365T	274911	499	273339	404	-
	404T, 405T	274912	541	273340	446	-
	444T, 445T	274913	550	273341	455	-
Triple	254T, 256T	274914	317	273342	310	274930
	284T, 286T	274915	317	273343	310	274931
	324T, 326T	274916	336	273344	330	274932
	364T, 365T	274917	336	273345	330	274933
	404T, 405T	274918	432	273346	397	274934
	444T, 445T	274919	518	273347	423	274935
	324T, 326T	274920	362	273348	356	-
Triple with shaft fan	364T, 365T	274921	362	273349	356	-
	404T, 405T	274922	458	273350	423	-
	444T, 445T	274923	544	273351	449	-

* Scoop package includes scoop, coupling, coupling guard, shaft fan (where indicated) and mounting hardware.

* For backstop option, add 137 lbs. for DCR's and 55 lbs. for TCR's.

Dimensions

Reducers size 120

Features

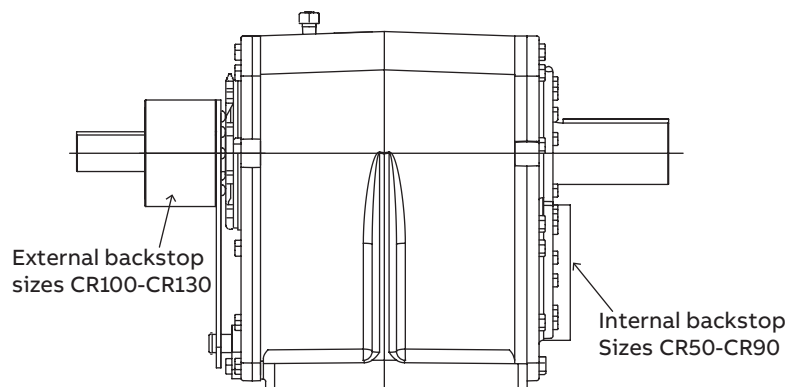
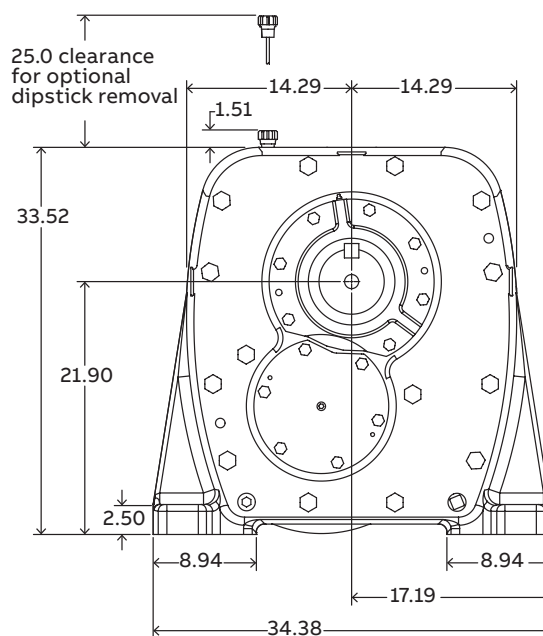
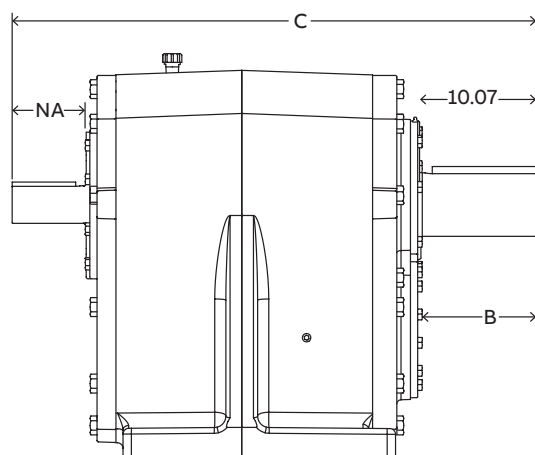
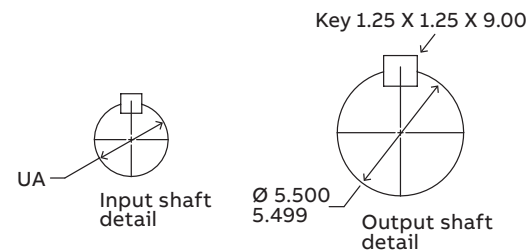
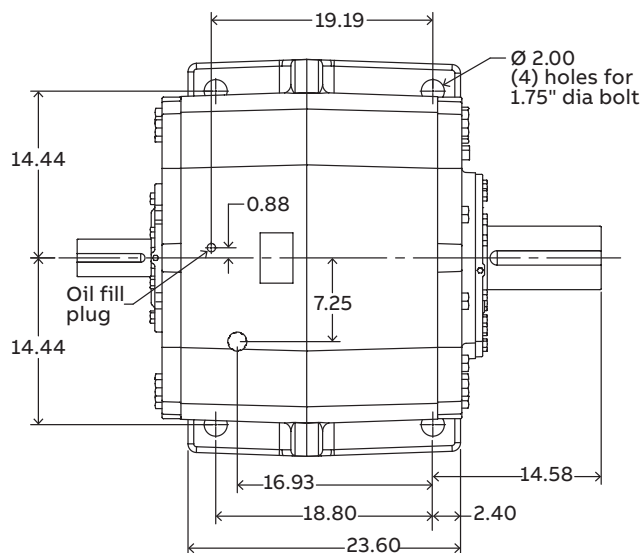
Specifications

Selection

Dimensions

Accessories

Engineering



Note: Verify application compatibility and fit of accessories and components.

Dimensions

Reducers size 120

Size 120	C	NA		UA	Input shaft key			B	Weight (lbs.)
		Without fan	With fan		W	H	L		
Double reduction	45.38	6.31	3.70	3.250 3.249	0.75	0.75	5.50	9.87	3970
Triple reduction	43.40	4.26	2.58	2.2500 2.2495	0.50	0.50	3.75	9.87	3970

Size 120 part numbers

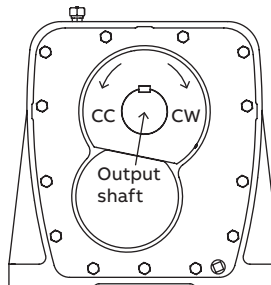
Nominal ratio		Basic reducer	
		Without backstop	With backstop †
Double	DCR120 - 11.39	269054	269064CC 269064CW
	DCR120 - 13.95	269055	269065CC 269065CW
	DCR120 - 17.09	269056	269066CC 269066CW
	DCR120 - 20.93	269057	269067CC 269067CW
	DCR120 - 25.63	269058	269068CC 269068CW
	DCR120 - 31.39	269059	269069CC 269069CW
Triple	TCR120 - 38.44	269070	269080CC 269080CW
	TCR120 - 47.08	269071	269081CC 269081CW
	TCR120 - 57.67	269072	269082CC 269082CW
	TCR120 - 70.62	269073	269083CC 269083CW
	TCR120 - 86.50	269074	269084CC 269084CW
	TCR120 - 105.9	269075	269085CC 269085CW
	TCR120 - 129.7	269076	269086CC 269086CW
	TCR120 - 158.9	269077	269087CC 269087CW
	TCR120 - 194.6	269078	269088CC 269088CW

† When ordering, direction of output shaft rotation is required to choose the correct part number (CC or CW) as viewed looking toward the output end of the reducer.
See dimensions on page 62.

Size 120 accessories ♦

Description	Part number	Weight (lbs.)
Shaft driven fan (11.39-31.39)	273221	43
Shaft driven fan (11.39-31.39) for scoops	273222	37
Shaft driven fan (38.44-194.6)	273224	41
Shaft driven fan (38.44-194.6) for scoops	273225	34
Electric fan 230/460V	273982	110
Electric fan 575V	273983	110
Heat exchanger	273933	55
Pitot tube oil sampling port	270893	8
Top motor mount	269507	276
Slide base	269508	410

♦ Refer to page 42 for compatibility of accessory combinations



Backstop - specify direction of rotation of the output shaft (cw for clockwise, CC for counterclockwise) when looking toward the gearbox from the end of the output shaft

Size 120 scoop part numbers ♦♦

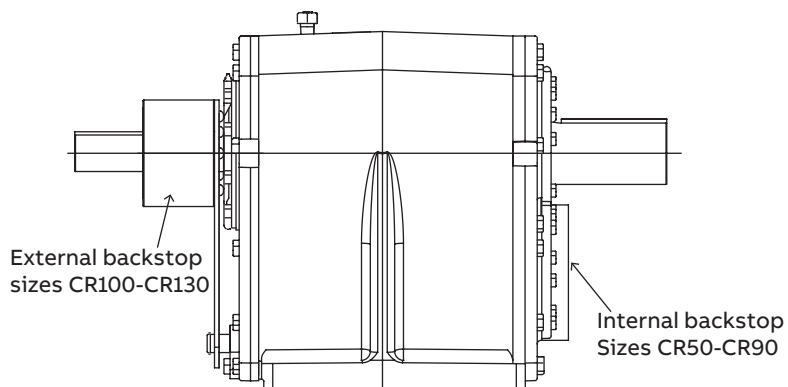
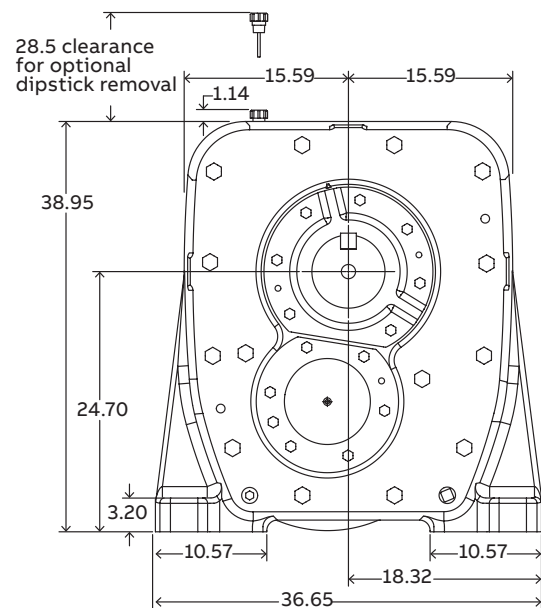
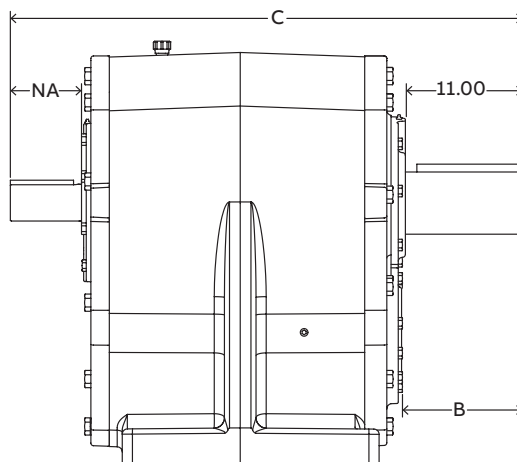
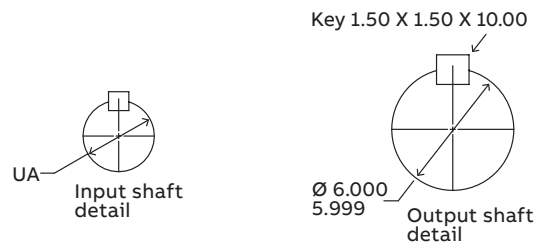
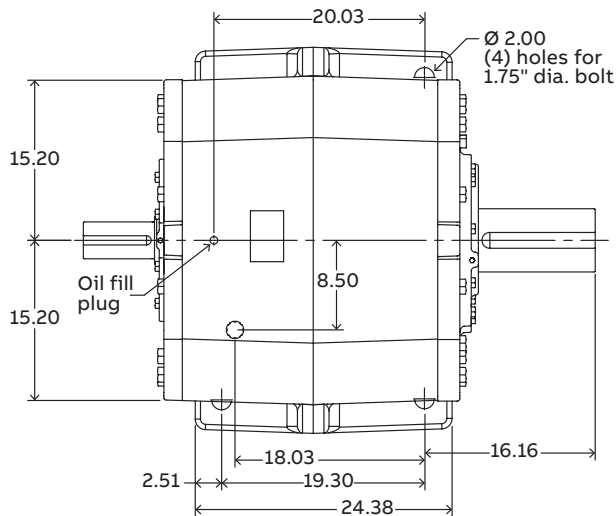
NEMA AC - motor frame	Scoop package Raptor coupling	Scoop package weights Raptor (lbs.)*	Scoop package Grid-Lign coupling	Scoop package weights Grid-Lign (lbs.)*	Scoop package Raptor coupling for backstop	Scoop package Grid-Lign coupling for backstop
Double	404T, 405T	274936	537	273365	442	274949 274426
	444T, 445T	274937	550	273366	455	274950 274427
Double with shaft fan	404T, 405T	274938	574	273367	479	-
	444T, 445T	274939	587	273368	492	-
Triple	254T, 256T	274940	332	273369	327	274951 274428
	284T, 286T	274941	364	273370	357	274952 274429
	324T, 326T	274942	364	273371	357	274953 274430
	364T, 365T	274943	364	273372	357	274954 274431
	404T, 405T	274944	459	273373	423	274955 274432
	444T, 445T	274945	544	273374	449	274956 274433
Triple with shaft fan	364T, 365T	274946	398	273375	391	-
	404T, 405T	274947	493	273376	457	-
	444T, 445T	274948	578	273377	483	-

* Scoop package includes scoop, coupling, coupling guard, shaft fan (where indicated) and mounting hardware.

* For backstop option, add 137 lbs. for DCR's and 55 lbs. for TCR's.

Dimensions

Reducers size 130



Note: Verify application compatibility and fit of accessories and components.

Dimensions

Reducers size 130

Size 130	C	NA		UA	Input shaft key			B	Weight (lbs.)
		Without fan	With fan		W	H	L		
Double reduction	48.59	6.75	4.13	3.500 3.499	0.875	0.875	6.00	11.36	5336
Triple reduction	45.88	4.03	2.48	2.2500 2.2495	0.50	0.50	3.75	11.36	5336

Size 130 part numbers

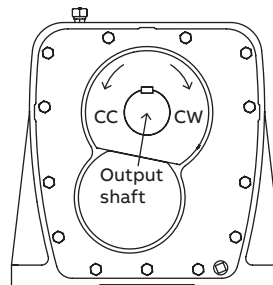
Nominal ratio		Basic reducer		
		Without backstop	With backstop †	
Double	DCR130 - 11.39	269104	269114CC	269114CW
	DCR130 - 13.95	269105	269115CC	269115CW
	DCR130 - 17.09	269106	269116CC	269116CW
	DCR130 - 20.93	269107	269117CC	269117CW
	DCR130 - 25.63	269108	269118CC	269118CW
	DCR130 - 31.39	269109	269119CC	269119CW
Triple	TCR130 - 38.44	269120	269130CC	269130CW
	TCR130 - 47.08	269121	269131CC	269131CW
	TCR130 - 57.67	269122	269132CC	269132CW
	TCR130 - 70.62	269123	269133CC	269133CW
	TCR130 - 86.50	269124	269134CC	269134CW
	TCR130 - 105.9	269125	269135CC	269135CW
	TCR130 - 129.7	269126	269136CC	269136CW
	TCR130 - 158.9	269127	269137CC	269137CW
	TCR130 - 194.6	269128	269138CC	269138CW

† When ordering, direction of output shaft rotation is required to choose the correct part number (CC or CW) as viewed looking toward the output end of the reducer. See dimensions on page 62.

Size 130 accessories ♦

Description	Part number	Weight (lbs.)
Shaft driven fan (11.39-31.39)	273227	51
Shaft driven fan (11.39-31.39) for scoops	273228	44
Shaft driven fan (38.44-194.6)	273230	49
Shaft driven fan (38.44-194.6) for scoops	273231	40
Electric fan 230/460V	273985	123
Electric fan 575V	273986	123
Heat exchanger	273933	55
Pitot tube oil sampling port	270893	8
Top motor mount	269607	292
Slide base	269608	484

♦ Refer to page 42 for compatibility of accessory combinations



Backstop - specify direction of rotation of the output shaft (cw for clockwise, CC for counterclockwise) when looking toward the gearbox from the end of the output shaft

Size 130 scoop part numbers ♦♦

NEMA AC - motor frame		Scoop package Raptor coupling	Scoop package weights Raptor (lbs.)*	Scoop package Grid-Lign coupling	Scoop package weights Grid-Lign (lbs.)*	Scoop package Raptor coupling for backstop	Scoop package Grid-Lign coupling for backstop
Double	444T, 445T	274957	565	273388	470	274967	274440
	444T, 445T	274958	609	273389	514	-	-
Double with shaft fan	284T, 286T	274959	379	273390	372	274968	274441
	324T, 326T	274960	379	273391	372	274969	274442
Triple	364T, 365T	274961	379	273392	372	274970	274443
	404T, 405T	274962	474	273393	438	274971	274444
	444T, 445T	274963	559	273394	464	274972	274445
	364T, 365T	274964	419	273395	412	-	-
Triple with shaft fan	404T, 405T	274965	514	273396	478	-	-
	444T, 445T	274966	599	273397	504	-	-

♦ Scoop package includes scoop, coupling, coupling guard, shaft fan (where indicated) and mounting hardware.

* For backstop option, add 137 lbs. for DCR's and 55 lbs. for TCR's.

Accessories

Accessory compatibility

Accessory compatibility for Maxum XTR reducers ♦

Reducer size	Accessories					
	Motor mount accessory	Backstop	Shaft driven cooling fan •	Backstop & shaft driven cooling fan •	Electric cooling fan	Backstop & electric cooling fan
50	None	Yes	Yes	Yes	Yes	Yes
	Scoop mount	Yes	Yes	Yes	Yes	Yes
	Top mount	Yes	No	No	No	No
60	None	Yes	Yes	Yes	Yes	Yes
	Scoop mount	Yes	Yes	Yes	Yes	Yes
	Top mount	Yes	No	No	No	No
70	None	Yes	Yes	Yes	Yes	Yes
	Scoop mount	Yes	Yes	Yes	Yes	Yes
	Top mount	Yes	No	No	No	No
80	None	Yes	Yes	Yes	Yes	Yes
	Scoop mount	Yes	Yes	Yes	Yes	Yes
	Top mount	Yes	No	No	No	No
90	None	Yes	Yes	Yes	Yes	Yes
	Scoop mount	Yes	Yes	Yes	Yes	Yes
	Top mount	Yes	No	No	No	No
100	None	Yes	Yes	*	Yes	Yes
	Scoop mount	Yes	Yes	No	Yes	Yes
	Top mount	No	No	No	No	No
110	None	Yes	Yes	*	Yes	Yes
	Scoop mount	Yes	Yes	No	Yes	Yes
	Top mount	No	No	No	No	No
120	None	Yes	Yes	*	Yes	Yes
	Scoop mount	Yes	Yes	No	Yes	Yes
	Top mount	No	No	No	No	No
130	None	Yes	Yes	*	Yes	Yes
	Scoop mount	Yes	Yes	No	Yes	Yes
	Top mount	No	No	No	No	No

♦ Consult factory for combinations of accessories not listed.

• Different fan part numbers are used for reducers with scoop mounts.

* Consult factory.

YES = Indicates combination of standard accessories is compatible.

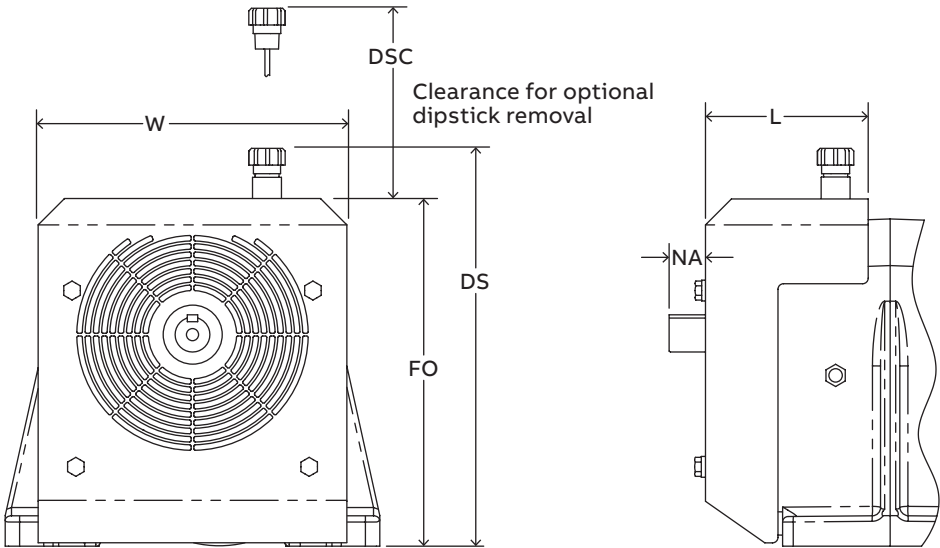
Note: Verify application compatibility and fit of accessories and components.

Accessories

Cooling accessories

Shaft cooling fans

When the thermal capacity of the Maxum XTR concentric shaft reducer is exceeded, cooling fans provide an optional, inexpensive way of lowering the oil temperature thus increasing the thermal capacity. Selection tables indicate the need for cooling fans. Refer to the thermal tables on pages 72-79. Fan speed not to exceed 2300 RPM. Consult factory for fan speeds in excess of 2300 RPM.



Maxum XTR shaft cooling fans/dimensions (inches) ♦

Unit size	Drive with scoop	Part number	NA	L	W	FO	DS	DSC	Weight (lbs.)
DCR50	No	271945	1.65	7.4	14.2	15.8	18.1	16	11
	Yes	271946							9
DCR60	No	271948	1.86	8.3	16.6	17.1	19.4	17	14
	Yes	271949							11
DCR70	No	271951	2.52	9.1	17.9	18.7	21.1	19	17
	Yes	271952							14
DCR80	No	268839	2.41	10.8	20.7	20.8	23.0	20	23
	Yes	271209							18
DCR90	No	268847	3.00	11.9	22.0	24.9	27.1	21	27
	Yes	271210							22
TCR90	No	268848	1.85	11.5	22.0	24.9	27.1	21	29
	Yes	271211							24
DCR100	No	268849	2.81	12.7	23.4	27.7	29.8	23	31
	Yes	271212							25
TCR100	No	269242	1.99	11.7	23.4	27.7	29.8	23	32
	Yes	271216							26
DCR110	No	273215	3.02	14.7	27.7	30.5	32.6	25	43
	Yes	273216							34
TCR110	No	273218	2.13	13.6	27.7	30.5	32.6	25	42
	Yes	273219							34
DCR120	No	273221	3.70	14.4	29.7	34.5	36.6	27	50
	Yes	273222							41
TCR120	No	273224	2.58	14.5	29.7	34.5	36.6	27	50
	Yes	273225							41
DCR130	No	273227	4.13	16.4	33.2	39.8	42.0	31	60
	Yes	273228							48
TCR130	No	273230	2.48	15.7	33.2	39.8	42.0	31	58
	Yes	273231							47

♦ Refer to accessory compatibility table on page 42.

Accessories

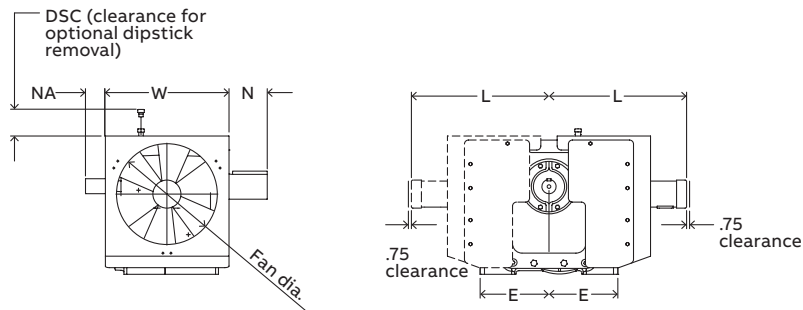
Cooling accessories

Electric fans / dimensions - (inches)

Electric fans are not affected by shaft rotation or direction and can be mounted on either side of the Maxum XTR and allow the use of the full Maxum XTR shaft length.

Electric fans are available with the motor specifications listed in chart below.

Consult factory for other motor options that may be available.



Maxum XTR electric fans / dimensions (inches) ♦

Drive size	Electric fan dia. - inches	L	E	N	W	NA	DSC	Weight (lbs.)	230/460 3 phase 60 Hz	575V 3 phase 60 Hz
50	10	20.00	8.50	4.69	13.83	3.02	16	39	273961	273962
60	14	22.46	9.35	5.15	16.62	3.17	17	42	273964	273965
70	14	24.60	10.75	6.25	18.14	3.95	19	49	273967	273968
80	16	26.54	11.83	6.56	20.62	4.51	20	54	273970	273971
90	18	28.85	13.10	7.48	23.00	4.62	21	66	273973	273974
100	20	30.21	14.40	8.87	25.62	4.13	23	75	273976	273977
110	24	33.88	15.10	8.86	28.05	5.11	25	91	273979	273980
120	24	34.35	17.18	9.54	31.01	4.83	27	110	273982	273983
130	28	38.20	18.32	10.79	32.22	5.58	31	123	273985	273986

♦ Refer to accessory compatibility table on page 42.

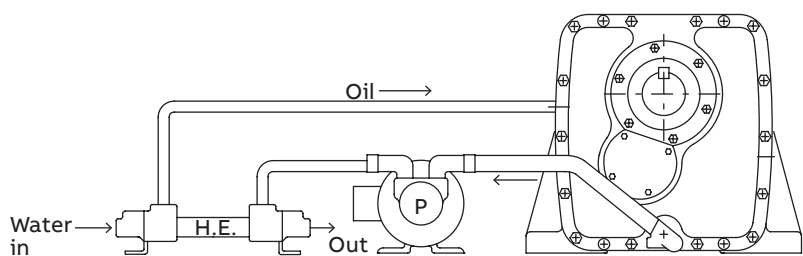
Heat exchanger cooling packages

For thermal capacities beyond the range of cooling fans, an optional heat exchanger cooling package is available to achieve the use of full mechanical Hp rating by lowering the oil temperature.

The cooling package is available to cover the basic reducer sizes CR50 through CR130. (See thermal Hp table on pages 72-79.)

Specifications for the heat exchanger motor are as follows: 1/2 Hp, 60 Hz, 3 Ph, 230/460 Volt, TEFC, 56 frame. Minimum coolant (water) flow is 3 G.P.M. based upon a maximum water temperature of 80oF. Minimum oil temperature for operation is 60oF.

Part number 273933.



Accessories

Dipsticks

An optional dipstick is available for applications where viewing of the side oil sight plug is not possible. The dipstick is suitable for foot mounted reducers where the foot is in the horizontal plane below the rotating shafts. Consult the factory for applications where the reducer is mounted on an incline.

The dipstick is vented and should be installed in the existing vent hole location. The dipstick comes pre-marked and is dependent on reducer size, output speed, and presence of fan (shaft driven or electric) accessory. The dipstick part number can be identified from the table below.

Optional dipsticks ▲*

Reducer size	Output RPM	Without or with fan	Part number
50	Up to 250	Without fan	273258050HW
		With fan	273258050HF
	Above 250	Without fan	273258050LW
		With fan	273258050LF
60	Up to 225	Without fan	273258060HW
		With fan	273258060HF
	Above 225	Without fan	273258060LW
		With fan	273258060LF
70	Up to 205	Without fan	273258070HW
		With fan	273258070HF
	Above 205	Without fan	273258070LW
		With fan	273258070LF
80	Up to 180	Without fan	273258080HW
		With fan	273258080HF
	Above 180	Without fan	273258080LW
		With fan	273258080LF
90	Up to 150	Without fan	273258090HW
		With fan	273258090HF
	Above 150	Without fan	273258090LW
		With fan	273258090LF
100	Up to 135	Without fan	273258100HW
		With fan	273258100HF
	Above 135	Without fan	273258100LW
		With fan	273258100LF
110	Up to 122	Without fan	273258110HW
		With fan	273258110HF
	Above 122	Without fan	273258110LW
		With fan	273258110LF
120	Up to 107	Without fan	273258120HW
		With fan	273258120HF
	Above 107	Without fan	273258120LW
		With fan	273258120LF
130	Up to 95	Without fan	273258130HW
		With fan	273258130HF
	Above 95	Without fan	273258130LW
		With fan	273258130LF

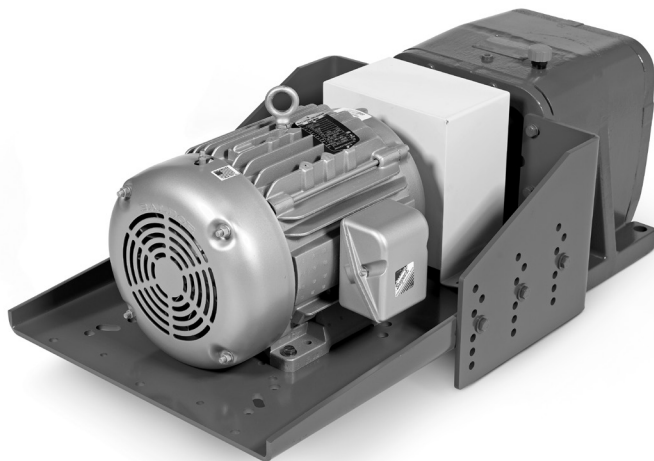
▲ Refer to accessory compatibility table on page 42.

* Consult factory for reducers mounted on an incline and/or sealed dipsticks.



Accessories

Scoop mounts



Scoop motor mount for reducers

Dodge Maxum XTR scoop motor mounts are available for all reducer sizes ranging in motor frame sizes from 140T to 440T. Scoop mounting your motor can be an economical alternative to foot mounting or where fastening the motor to a rigid foundation is not possible. The scoop motor mount kit can be supplied with your reducer and factory-mounted Baldor® AC NEMA motors, or may be ordered separately for use with customer supplied AC motors.

Included couplings

Dodge Raptor couplings are standard with all scoop motor mount kits, however, Dodge Grid-Lign couplings are also available.

Thermal limitations

Thermally limited reducers should be equipped with a cooling fan or heat exchanger as required. Refer to pages 72-79 for thermal data. Refer to pages 43-44 for cooling fan information.

Compatible accessories

Refer to the accessory compatibility table on page 42 for other accessories that can be used in conjunction with scoop motor mounts.

Compatibility with brake motors

Scoop motor mount kits were not designed to be compatible with brake motors. If the application is using a brake motor, forward

brake motor dimensions and application data to Dodge technical support for Dodge mechanical products for engineering review prior to placing order.

Drive system vibration

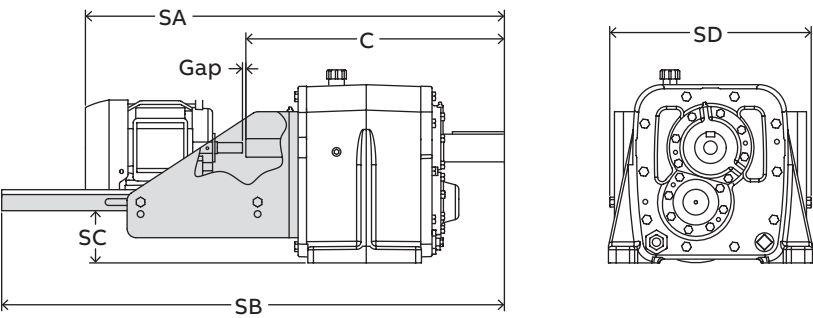
Scoop motor mounts are NOT recommended for variable speed DC or AC applications. Scoop motor mounts were designed for use with constant speed motors at 1750 RPM. Use of motors with lower base speeds increases the chance of producing resonance. The probability of a constant speed motor operating at resonant frequency is remote, however, should this occur, the customer must add stiffening supports to the scoop bottom plate to move the resonant frequency away from the motor operating speed. For recommended scoop mount support, contact Dodge technical support for Dodge mechanical products.

Caution: The customer is responsible and Dodge expressly disclaims responsibility for isolating the scoop motor mount from any vibratory or transient load induced by the motor or other equipment driven by the motor. The scoop motor mount is expressly not warranted against failure or unsatisfactory operation resulting from dynamic vibration of any form imposed upon it whether by the drive system in which it is installed or for any other reason, no matter how induced.

Note: The high speed coupling may be required to slightly overhang the input shaft when using a scoop package. This overhang has been approved by Dodge engineering department for Dodge mechanical products.

Accessories

Scoop mounts – CR50



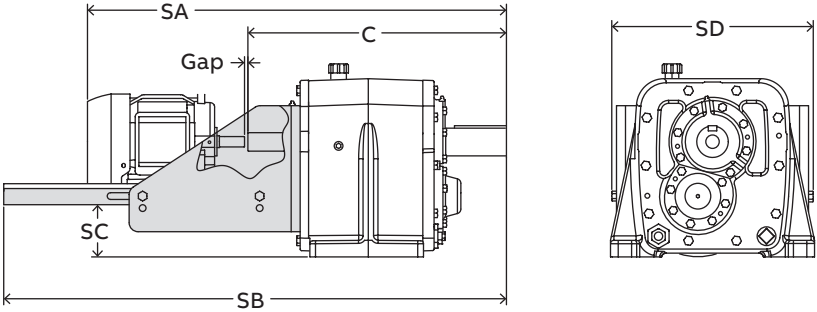
CR50 Maxum XTR scoop mount with AC motors ♦

Coupling type	Reducer type	Reference dimension	Motor frame size					
			140	180	210	250	280	320
Both	ALL	SC	4.35	3.35	4.04	3.04	2.29	1.30
		SD †	16.79				20.16	
Grid-Lign	DCR	C	-	21.55				
		Shaft gap	-	0.10			0.50 (1)	0.10
		SA ‡	-	38.15	41.15	44.65	49.05	51.15
		SB	-	41.86			42.26	
	DCR with fan	C	-	21.55				
		Shaft gap	-	0.50 (1)			0.95 (2)	
		SA ‡	-	38.55	41.55	45.05	49.50	52.00
		SB	-	42.26			42.71	
	TCR	C	21.55					-
		Shaft gap	0.10				0.50 (1)	-
		SA ‡	34.65	38.15	41.15	44.65	49.05	-
		SB	41.86				42.26	-
Raptor	DCR	C	-	21.54				
		Shaft gap	-	0.56			0.50	
		SA ‡	-	38.65	41.12	46.60	49.54	52.54
		SB	-	42.71			42.53	
	DCR with fan	C	-	21.54				
		Shaft gap	-	0.81			0.95	
		SA ‡	-	38.90	41.37	47.05	51.54	54.54
		SB	-	42.71			42.53	
	TCR	C	21.54					-
		Shaft gap	0.45			0.56	0.50	0.56
		SA ‡	35.30	38.54	41.12	46.60	49.54	-
		SB	42.48			42.71	42.53	-

♦ Scoops are designed for standard conduit boxes, oversize boxes may interfere with side plates.
† SD = Scoop width plus head height of bolts.
‡ SA = Approximate overall length. Motor dimensions vary. Refer to motor print for more accurate value.
Coupling hub overhang on reducer shaft:
(1) 0.40 in. (2) 0.85 in.

Accessories

Scoop mounts – CR60



CR60 Maxum XTR scoop mount with AC motors ♦

Coupling type	Reducer type	Reference dimension	Motor frame size						
			140	180	210	250	280	320	360
Both	All	SC	6.73	5.73	4.98	3.98	3.23	2.23	0.51
		SD †	24.53						21.25
Grid-Lign	DCR	C	-	-	24.94				
		Shaft gap	-	-	0.10				0.50 (1)
		SA ‡	-	-	44.54	48.04	52.04	54.54	57.94
		SB	-	-	51.92				55.00
	DCR with fan	C	-	-	24.94				
		Shaft gap	-	-	0.76 (2)			0.86 (3)	1.36 (4)
		SA ‡	-	-	45.20	48.70	52.70	55.30	58.80
		SB	-	-	52.58			52.68	55.00
	TCR	C	24.32					-	-
		Shaft gap	0.50 (1)					-	-
		SA ‡	37.82	41.32	44.32	47.82	51.82	-	-
		SB	51.69					-	-
Raptor	DCR	C	-	-	24.94				
		Shaft gap	-	-	0.56				
		SA ‡	-	-	44.52	50.06	52.94	55.94	58.94
		SB	-	-	42.53				55.00
	DCR with fan	C	-	-	24.94				
		Shaft gap	-	-	0.95	0.88	1.12		2.38
		SA ‡	-	-	0.95	50.38	53.50	56.50	60.76
		SB	-	-	42.53				55.00
	TCR	C	24.32					-	-
		Shaft gap	0.44		0.56			-	-
		SA ‡	38.07	41.31	43.90	49.44	52.32	-	-
		SB	51.91	52.14			51.96	-	-

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† SD = Scoop width plus head height of bolts.

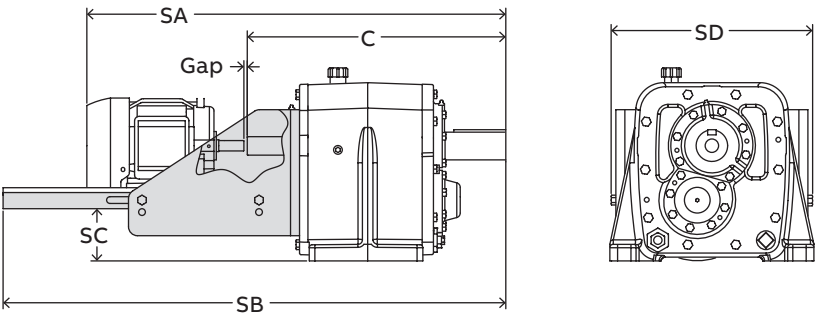
‡ SA = Approximate overall length. Motor dimensions vary. Refer to motor print for more accurate value.

Coupling hub overhang on reducer shaft:

(1) 0.40 in. (2) 0.66 in. (3) 0.76 in. (4) 1.26 in.

Accessories

Scoop mounts – CR70



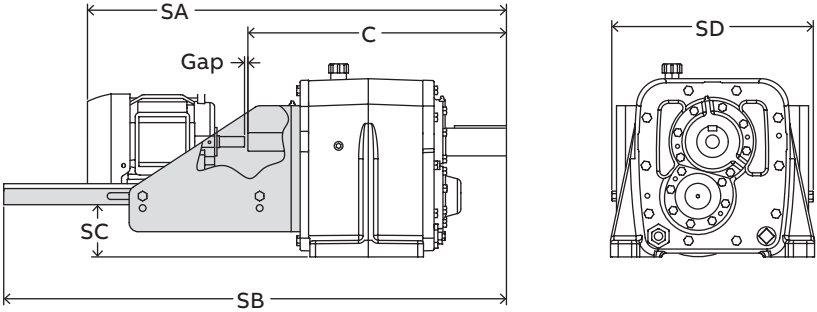
CR70 Maxum XTR scoop mount with AC motors ♦

Coupling type	Reducer type	Reference dimension	Motor frame size					
			180	210	250	280	320	360
Both	All	SC	6.79	6.04	5.04	4.29	3.29	1.57
		SD †	24.54					21.25
Grid-Lign	DCR	C	-	28.34				
		Shaft gap	-	0.10				
		SA ‡	-	47.94	51.44	55.44	57.94	60.94
		SB	-	55.32				58.41
	DCR with fan	C	-	28.34				
		Shaft gap	-	0.50 (1)				0.95 (2)
		SA ‡	-	48.34	51.84	55.84	58.34	61.79
		SB	-	55.72				58.41
	TCR	C	27.38					
		Shaft gap	0.10			0.50 (1)	0.10	0.50 (1)
		SA ‡	43.98	46.98	50.48	54.88	56.98	60.38
		SB	54.38			54.65	54.25	58.41
Raptor	DCR	C	-	28.34				
		Shaft gap	-	0.56				
		SA ‡	-	38.65	41.12	46.60	49.54	52.54
		SB	-	55.55				58.41
	DCR with fan	C	-	28.34				
		Shaft gap	-	0.56				0.72
		SA ‡	-	47.92	53.46	56.34	59.34	62.50
		SB	-	55.55				58.41
	TCR	C	27.28					
		Shaft gap	0.56	0.72	0.75	0.56	0.72	0.56
		SA ‡	44.39	47.02	52.59	55.28	58.44	61.44
		SB	55.00		55.23	55.05		58.41

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† SD = Scoop width plus head height of bolts.
‡ SA = Approximate overall length. Motor dimensions vary. Refer to motor print for more accurate value.
Coupling hub overhang on reducer shaft:
(1) 0.40 in. (2) 0.85 in.

Accessories

Scoop mounts – CR80



CR80 Maxum XTR scoop mount with AC motors ♦

Coupling type	Reducer type	Reference dimension	Motor frame size						
			210	250	280	320	360	400	440
Both	All	SC	7.16	6.16	5.41	4.41	2.69	1.64	0.69
		SD †	24.54				23.40		26.10
Grid-Lign	DCR	C	-	31.69					
		Shaft gap	-	0.10					
		SA ‡	-	55.96	59.65	63.00	65.51	73.95	80.47
		SB	-	58.65			61.78	64.95	70.32
	DCR with fan	C	-	-	31.69				
		Shaft gap	-	-	0.49 (1)			0.99 (2)	1.39 (3)
		SA ‡	-	-	60.00	63.39	65.90	74.84	81.36
		SB	-	-	59.04		61.78	64.95	70.32
	TCR	C	30.65					-	-
		Shaft gap	0.10					-	-
		SA ‡	50.21	54.92	58.61	61.96	64.47	-	-
		SB	57.61				61.78	-	-
Raptor	DCR	C	-	31.68					
		Shaft gap	-	0.56				0.69	0.75
		SA ‡	-	56.80	59.68	62.68	65.68	70.68	77.05
		SB	-	42.53			61.78	64.95	70.32
	DCR with fan	C	-	-	31.68				
		Shaft gap	-	-	0.56	0.81	1.00	2.32	1.76
		SA ‡	-	-	59.68	62.93	66.12	72.31	78.06
		SB	-	-	58.90		61.78	64.95	70.32
	TCR	C	30.64					-	-
		Shaft gap	0.50	0.71	0.56			-	-
		SA ‡	50.16	55.91	58.64	61.64	64.64	-	-
		SB	58.46		58.28		61.78	-	-

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† SD = Scoop width plus head height of bolts.

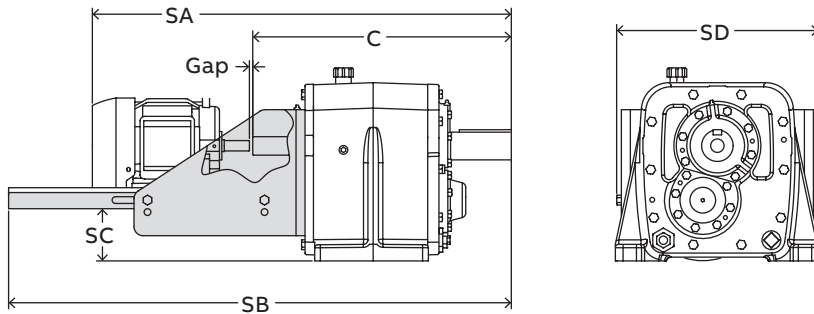
‡ SA = Approximate overall length. Motor dimensions vary. Refer to motor print for more accurate value.

Coupling hub overhang on reducer shaft:

(1) 0.39 in. (2) 0.89 in. (3) 1.29 in.

Accessories

Scoop mounts – CR90



CR90 Maxum XTR scoop mount with AC motors ♦

Coupling type	Reducer type	Reference dimension	Motor frame size					
			210	250	280	320	360	400
Both	All	SC	10.12	9.12	8.37	7.37	4.14	3.65
		SD †	25.04				25	26.1
Grid-Lign	DCR	C	-	-	-	35.08		
		Shaft gap	-	-	-	0.10		
		SA ‡	-	-	-	66.41	68.90	77.31
		SB	-	-	-	62.00	64.29	67.91
	DCR with fan	C	-	-	-	35.08		
		Shaft gap	-	-	-	0.78 (1)		1.11 (5)
		SA ‡	-	-	-	67.00	69.53	77.94
		SB	-	-	-	62.63	64.29	67.91
	TCR	C	33.66					-
		Shaft gap	0.10					-
		SA ‡	53.22	57.94	61.58	65.00	67.48	75.89
		SB	62.13	62.39	60.58		64.29	67.91
Raptor	TCR with fan	C	-	-	-	33.66		-
		Shaft gap	-	-	-	0.78 (2)	1.28 (3)	1.78 (4)
		SA ‡	-	-	-	65.63	68.11	76.52
		SB	-	-	-	63.26	64.29	67.91
	DCR	C	-	-	-	35.08		
		Shaft gap	-	-	-	0.56		0.69
		SA ‡	-	-	-	66.08	69.08	74.08
		SB	-	-	-	62.29	64.29	67.91
	DCR with fan	C	-	-	-	35.08		
		Shaft gap	-	-	-	0.56		1.38
		SA ‡	-	-	-	66.08	69.08	74.77
		SB	-	-	-	62.29	64.29	67.91
Raptor	TCR	C	33.66					-
		Shaft gap	0.56				1.13	-
		SA ‡	53.24	58.78	61.66	64.66	67.66	79.41
		SB	60.87				64.29	67.91
	TCR with fan	C	-	-	-	33.66		-
		Shaft gap	-	-	-	2.56	2.38	1.75
		SA ‡	-	-	-	66.66	69.48	73.77
		SB	-	-	-	60.87	64.29	67.91

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† SD = Scoop width plus head height of bolts.

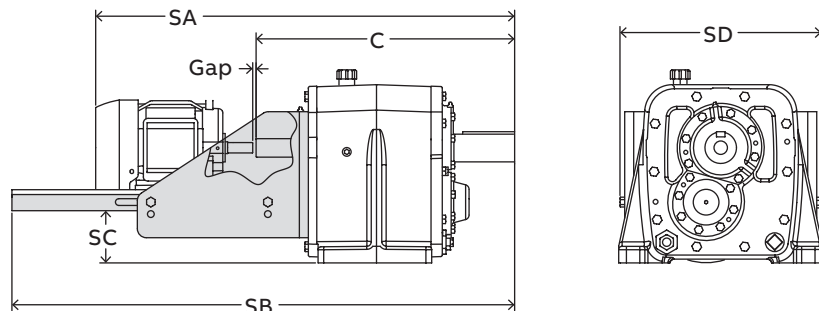
‡ SA = Approximate overall length. Motor dimensions vary. Refer to motor print for more accurate value.

Coupling hub overhang on reducer shaft:

(1) 0.68 in. (2) 0.65 in. (3) 1.15 in. (4) 1.65 in. (5) 1.01 in.

Accessories

Scoop mounts – CR100



CR100 Maxum XTR scoop mount with AC motors ♦

Coupling type	Reducer type	Reference dimension	Motor frame size					
			250	280	320	360	400	440
Both	All	SC	10.78	10.00	9.03	4.39		
		SD †	35.00			26.38		
Grid-Lign	DCR	C	-	-	-	38.50		
		Shaft gap	-	-	-	0.10		
		SA ‡	-	-	-	72.33	80.73	87.28
		SB	-	-	-	65.45	73.50	
		C	-	-	-	38.50		
	DCR with fan	Shaft gap	-	-	-	0.65 (3)		1.03 (1)
		SA ‡	-	-	-	72.87	81.28	88.23
		SB	-	-	-	68.10	71.23	75.60
	DCR with backstop	C	-	-	-	45.10		
		Shaft gap	-	-	-	0.10		
		SA ‡	-	-	-	79.47	87.88	94.83
		SB	-	-	-	72.60	80.65	81.05
Raptor	TCR	C	37.14					
		Shaft gap	0.65 (3)			0.10	0.45 (2)	
		SA ‡	61.41	65.06	68.47	70.96	79.51	86.46
		SB	65.89	64.08		68.10	71.23	75.60
	TCR with fan	C	-	-	37.14			
		Shaft gap	-	-	0.77 (4)	1.24 (5)	1.74 (6)	2.14 (7)
		SA ‡	-	-	68.96	71.96	80.84	87.84
		SB	-	-	64.57	68.10	71.23	75.60
	TCR with backstop	C	-	-	42.74			
		Shaft gap	-	-	0.10			
		SA ‡	-	-	74.56	77.56	86.44	93.44
		SB	-	-	70.17	70.68	79.06	79.51
Raptor	DCR	C	-	-	-	38.50		
		Shaft gap	-	-	-	0.69		0.75
		SA ‡	-	-	-	72.63	77.50	83.87
		SB	-	-	-	68.10	71.23	75.60
	DCR with fan	C	-	-	-	38.50		
		Shaft gap	-	-	-	1.25		
		SA ‡	-	-	-	73.19	78.06	84.37
		SB	-	-	-	68.10	71.23	75.60
	DCR with backstop	C	-	-	-	45.10		
		Shaft gap	-	-	-	-	-	-
		SA ‡	-	-	-	-	-	-
		SB	-	-	-	72.44	80.44	81.23
Raptor	TCR	C	37.14					
		Shaft gap	0.50		0.56		0.69	
		SA ‡	62.20	65.08	68.14	71.14	76.14	82.45
		SB	64.36			68.10	71.23	75.60
	TCR with fan	C	-	-	37.14			
		Shaft gap	-	-	0.96	2.38	3.31	1.82
		SA ‡	-	-	68.54	72.96	78.76	83.58
		SB	-	-	64.36	68.10	71.23	75.60
	TCR with backstop	C	-	-	42.74			
		Shaft gap	-	-	-	-	-	-
		SA ‡	-	-	-	-	-	-
		SB	-	-	69.96	73.70	78.08	79.95

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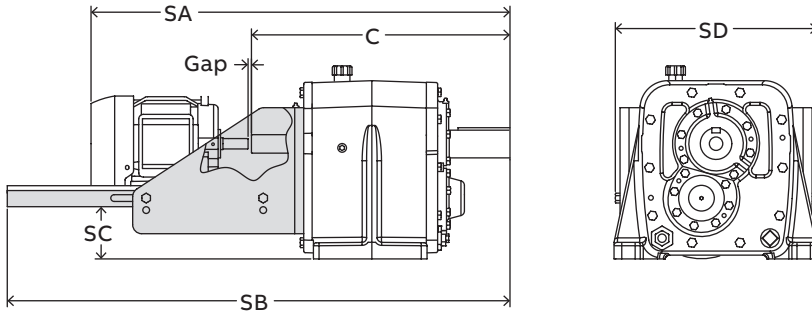
‡ SA = Approximate overall length. Motor dimensions vary. Refer to motor print for more accurate value.

Coupling hub overhang on reducer shaft:

(1) 0.93 in. (2) 0.32 in. (3) 0.55 in. (4) 0.67 in. (5) 1.14 in. (6) 1.64 in. (7) 2.04 in.

Accessories

Scoop mounts – CR110



CR110 Maxum XTR scoop mount with AC motors ♦

Coupling type	Reducer type	Reference dimension	Motor frame size					
			250	280	320	360	400	440
Both	All	SC	12.88	12.13	11.13	10.13	9.13	8.13
		SD†	35.04			30.77		
Grid-Lign	DCR	C	-	-	-	42.02		
		Shaft gap	-	-	-	0.10		
		SA‡	-	-	-	75.84	84.24	90.79
		SB	-	-	-	71.29	74.42	78.79
	DCR with fan	C	-	-	-	42.02		
		Shaft gap	-	-	-	0.55 (1)		0.93 (2)
		SA‡	-	-	-	76.29	84.69	91.62
		SB	-	-	-	71.29	74.42	78.79
	DCR with backstop	C	-	-	-	48.62		
		Shaft gap	-	-	-	0.10		
		SA‡	-	-	-	82.89	91.29	98.22
		SB	-	-	-	77.89	81.02	85.39
	TCR	C	40.10					
		Shaft gap	0.10					
		SA‡	65.05	68.70	72.09	73.96	82.36	88.91
		SB	67.75			71.29	74.42	78.79
	TCR with fan	C	-	-	40.10			
		Shaft gap	-	-	0.77 (2)	1.03 (3)	1.53 (4)	1.91 (5)
		SA‡	-	-	72.09	74.85	89.36	90.68
		SB	-	-	67.11	71.29	74.42	78.79
	TCR with backstop	C	-	-	45.70			
		Shaft gap	-	-	0.10			
		SA‡	-	-	77.69	80.45	89.36	96.29
		SB	-	-	72.71	76.89	80.02	84.39
Raptor	DCR	C	-	-	-	42.02		
		Shaft gap	-	-	-	0.69		
		SA‡	-	-	-	76.15	81.02	87.33
		SB	-	-	-	71.29	74.42	78.79
	DCR with fan	C	-	-	-	42.02		
		Shaft gap	-	-	-	3.31		1.00
		SA‡	-	-	-	78.77	83.64	89.95
		SB	-	-	-	71.29	74.42	78.79
	DCR with backstop	C	-	-	-	48.62		
		Shaft gap	-	-	-	0.69		
		SA‡	-	-	-	82.75	87.62	93.93
		SB	-	-	-	77.89	81.02	85.39
	TCR	C	40.10					
		Shaft gap	0.50		0.56		0.69	1.11
		SA‡	65.16	68.04	71.10	74.10	79.10	85.83
		SB	67.75			71.29	74.42	78.79
	TCR with fan	C	-	-	40.10			
		Shaft gap	-	-	2.56	2.38	3.31	1.35
		SA‡	-	-	73.10	75.92	81.72	86.07
		SB	-	-	67.75	71.29	74.42	78.79
	TCR with backstop	C	-	-	45.70			
		Shaft gap	-	-	0.56		0.69	1.11
		SA‡	-	-	76.70	79.70	84.70	91.43
		SB	-	-	73.35	76.89	80.02	84.39

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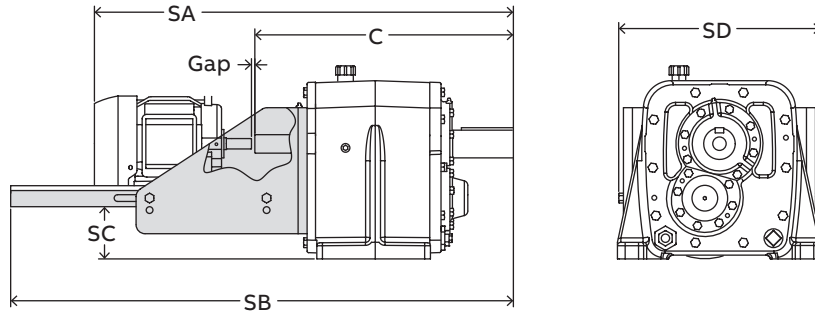
† SD = Scoop width plus head height of bolts.

Coupling hub overhang on reducer shaft:

(1) 0.44 in. (2) 0.62 in. (3) 0.90 in. (4) 1.40 in. (5) 1.78 in.

Accessories

Scoop mounts – CR120



CR120 Maxum XTR scoop mount with AC motors ♦

Coupling type	Reducer type	Reference dimension	Motor frame size					
			250	280	320	360	400	440
Both	All	SC	15.19	14.53	13.53	12.53	11.53	10.53
		SD†	35.04			33.78		
Grid-Lign	DCR	C	-	-	-	-	45.38	
		Shaft gap	-	-	-	-	0.20	
		SA‡	-	-	-	-	87.71	94.26
		SB	-	-	-	-	77.33	81.70
	DCR with fan	C	-	-	-	-	45.38	
		Shaft gap	-	-	-	-	1.23 (2)	
		SA‡	-	-	-	-	88.74	95.30
		SB	-	-	-	-	77.33	81.70
	DCR with backstop	C	-	-	-	-	51.98	
		Shaft gap	-	-	-	-	0.20	
		SA‡	-	-	-	-	95.34	101.90
		SB	-	-	-	-	83.93	88.30
Grid-Lign	TCR	C	43.40					
		Shaft gap	0.38 (1)			0.10		
		SA‡	67.96	71.61	75.01	77.50	85.70	92.21
		SB	70.66			74.20	77.33	81.70
	TCR with fan	C	-	-	-	43.40		
		Shaft gap	-	-	-	1.17 (2)		1.55 (3)
		SA‡	-	-	-	78.29	86.74	93.67
		SB	-	-	-	74.20	77.33	81.70
	TCR with backstop	C	-	-	-	48.86		
		Shaft gap	-	-	-	0.10		
		SA‡	-	-	-	83.75	92.20	99.13
		SB	-	-	-	79.66	82.79	87.16
Raptor	DCR	C	-	-	-	-	45.38	
		Shaft gap	-	-	-	-	0.75	
		SA‡	-	-	-	-	84.44	90.75
		SB	-	-	-	-	77.33	81.70
	DCR with fan	C	-	-	-	-	45.38	
		Shaft gap	-	-	-	-	0.75	
		SA‡	-	-	-	-	84.44	90.75
		SB	-	-	-	-	77.33	81.70
	DCR with backstop	C	-	-	-	-	51.98	
		Shaft gap	-	-	-	-	0.81	
		SA‡	-	-	-	-	91.10	97.41
		SB	-	-	-	-	83.93	88.30
Raptor	TCR	C	43.40					
		Shaft gap	0.50		0.56		0.69	1.25
		SA‡	68.46	71.34	74.40	77.40	82.27	88.58
		SB	70.66			74.20	77.30	81.70
	TCR with fan	C	-	-	-	43.4		
		Shaft gap	-	-	-	0.81	1.18	1.68
		SA‡	-	-	-	77.60	82.89	89.70
		SB	-	-	-	74.20	77.33	81.70
	TCR with backstop	C	-	-	-	48.86		
		Shaft gap	-	-	-	0.56	0.69	1.25
		SA‡	-	-	-	82.86	87.86	94.73
		SB	-	-	-	79.66	82.79	87.16

♦ Scoops are designed for standard conduit boxes, oversize boxes may interfere with side plates.

† SD = Scoop width plus head height of bolts.

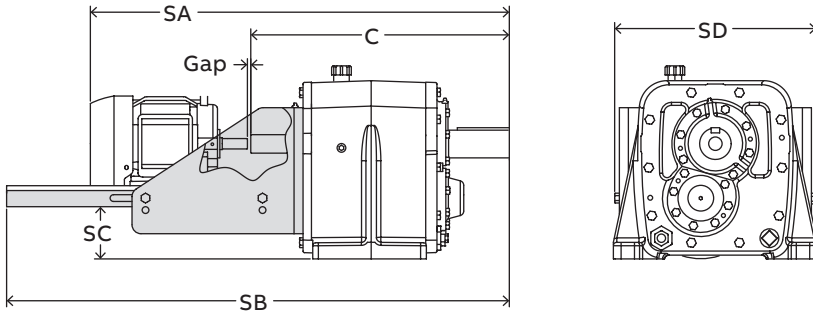
‡ SA = Approximate overall length. Motor dimensions vary. Refer to motor print for more accurate value.

Coupling hub overhang on reducer shaft:

(1) 0.25 in. (2) 1.04 in. (3) 1.42 in.

Accessories

Scoop mounts – CR130



CR130 Maxum XTR scoop mount with AC motors ♦

Coupling type	Reducer type	Reference dimension	Motor frame size				
			280	320	360	400	440
Both	All	SC	17.34	16.34	15.34	14.34	13.34
		SD†	35.04		37.25		
Grid-Lign	DCR	C	-	-	-	-	48.58
		Shaft gap	-	-	-	-	0.20
		SA‡	-	-	-	-	97.46
		SB	-	-	-	-	84.61
	DCR with fan	C	-	-	-	-	48.58
		Shaft gap	-	-	-	-	0.81 (1)
		SA‡	-	-	-	-	98.07
		SB	-	-	-	-	84.61
	DCR with backstop	C	-	-	-	-	55.18
		Shaft gap	-	-	-	-	0.20
		SA‡	-	-	-	-	104.66
		SB	-	-	-	-	91.20
	TCR	C	45.88				
		Shaft gap	0.81 (1)		0.10		
		SA‡	74.52	77.92	79.75	88.14	94.69
		SB	73.57	77.11	80.24	84.61	
	TCR with fan	C	-	-	45.88		
		Shaft gap	-	-	1.25 (2)		1.63 (3)
		SA‡	-	-	80.85	89.26	96.19
		SB	-	-	77.11	80.24	84.61
	TCR with backstop	C	-	-	51.44		
		Shaft gap	-	-	0.10		
		SA‡	-	-	86.41	94.82	101.75
		SB	-	-	82.67	85.80	90.17
Raptor	DCR	C	-	-	-	-	48.59
		Shaft gap	-	-	-	-	2.38
		SA‡	-	-	-	-	95.59
		SB	-	-	-	-	84.61
	DCR with fan	C	-	-	-	-	48.59
		Shaft gap	-	-	-	-	2.38
		SA‡	-	-	-	-	95.59
		SB	-	-	-	-	84.61
	DCR with backstop	C	-	-	-	-	55.18
		Shaft gap	-	-	-	-	2.28
		SA‡	-	-	-	-	102.08
		SB	-	-	-	-	91.20
	TCR	C	45.88				
		Shaft gap	0.56			3.31	0.69
		SA‡	73.88	76.88	79.88	87.50	91.19
		SB	73.57		77.11	80.24	84.61
	TCR with fan	C	-	-	45.88		
		Shaft gap	-	-	2.38	3.31	1.06
		SA‡	-	-	78.70	87.50	91.56
		SB	-	-	77.11	80.24	84.61
	TCR with backstop	C	-	-	51.44		
		Shaft gap	-	-	0.56	3.31	0.69
		SA‡	-	-	85.44	93.06	91.19
		SB	-	-	82.67	85.80	90.17

♦ Scoops are designed for standard conduit boxes, oversize boxes may interfere with side plates.

† SD = Scoop width plus head height of bolts.

‡ SA = Approximate overall length. Motor dimensions vary. Refer to motor print for more accurate value.

Coupling hub overhang on reducer shaft:

(1) 0.65 in. (2) 1.12 in. (3) 1.50 in.

Accessories

Scoop mounts – Raptor



Raptor coupling selection *

Reducer size	Reducer type	Reducer input shaft. dia.	Raptor coupling and hub used with respective AC motors @ 1750 RPM ■								
			140	180	210	250	280	320	360	400	440
			(7/8")	(1-1/8")	(1-3/8")	(1-5/8")	(1-7/8")	(2-1/8")	(2-3/8")	(2-7/8")	(3-3/8")
50	DCR	1-5/8"	-	E10H	E10H	E20H	E30H	E30H	-	-	-
	TCR	1-1/4"	E4H	E4H	E10H	E20H	E30H	-	-	-	-
60	DCR	1-7/8"	-	-	E10H	E30H	E30H	E30H	E40H	-	-
	TCR	1-1/4"	E4H	E4H	E10H	E20H	E30H	-	-	-	-
70	DCR	2-1/8"	-	-	E10H	E30H	E30H	E40H	E40H	-	-
	TCR	1-3/8"	-	E10H	E10H	E20H	E30H	E30H	E40H	-	-
80	DCR	2-1/4"	-	-	-	E30H	E30H	E40H	E40H	E60H	E70H
	TCR	1-1/2"	-	-	E20H	E20H	E30H	E30H	E40H	-	-
90	DCR	2-1/2"	-	-	-	-	-	E40H	E40H	E60H	E70H
	TCR	2"	-	-	E30H	E30H	E30H	E30H	E40H	E60H	-
100	DCR	2-3/4"	-	-	-	-	-	-	E60H	E60H	E70H
	TCR	2-1/8"	-	-	-	E20H	E20H	E30H	E40H	E60H	E60H
110	DCR	3"	-	-	-	-	-	-	E60H	E60H	E60H
	TCR	2-1/8"	-	-	-	E20H	E20H	E30H	E40H	E60H	E70H
120	DCR	3-1/4"	-	-	-	-	-	-	-	E70H	E70H
	TCR	2-1/4"	-	-	-	E20H	E20H	E30H	E40H	E60H	E70H
130	DCR	3-1/2"	-	-	-	-	-	-	-	-	E70HTL
	TCR	2-1/4"	-	-	-	-	E30H	E40H	E40H	E60HTL	E60H

■ Frame size reference with motor shaft diameter shown in parentheses

* For applications with shaft driven fans, use table below.

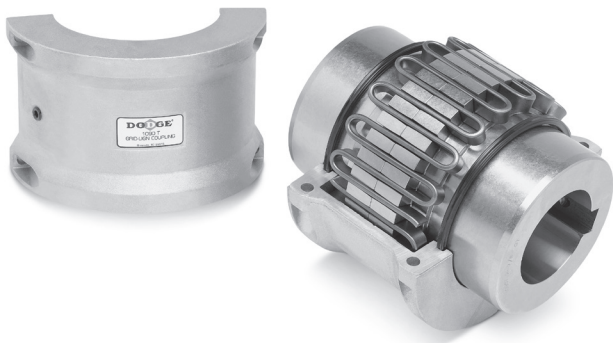
Raptor coupling selection used with shaft driven fan

Reducer size	Reducer type	Reducer input shaft. dia.	Raptor coupling and hub used with respective AC motors @ 1750 RPM ■							
			180	210	250	280	320	360	400	440
			(1-1/8")	(1-3/8")	(1-5/8")	(1-7/8")	(2-1/8")	(2-3/8")	(2-7/8")	(3-3/8")
50	DCR	1-5/8"	E10H	E10H	E20H	E30HTL	E30HTL	-	-	-
	TCR	1-1/4"	-	-	-	-	-	-	-	-
60	DCR	1-7/8"	-	E10H	E20H	E30H	E30H	E40HTL	-	-
	TCR	1-1/4"	-	-	-	-	-	-	-	-
70	DCR	2-1/8"	-	E10H	E30H	E30H	E40H	E40H	-	-
	TCR	1-3/8"	-	-	-	-	-	-	-	-
80	DCR	2-1/4"	-	-	-	E30H	E40H	E40H	E60HTL	E60HTL
	TCR	1-1/2"	-	-	-	-	-	-	-	-
90	DCR	2-1/2"	-	-	-	-	E40H	E40H	E60H	E70H
	TCR	2"	-	-	-	-	E30HTL	E40HTL	E40H	-
100	DCR	2-3/4"	-	-	-	-	-	E60H	E60H	E60H
	TCR	2-1/8"	-	-	-	-	E30H	E40HTL	E60HTL	E50H
110	DCR	3"	-	-	-	-	-	E60HTL	E60HTL	E60H
	TCR	2-1/8"	-	-	-	-	E30HTL	E40HTL	E60HTL	E50H
120	DCR	3-1/4"	-	-	-	-	-	-	E70H	E70H
	TCR	2-1/4"	-	-	-	-	-	E40H	E50H	E60H
130	DCR	3-1/2"	-	-	-	-	-	-	-	E70HTL
	TCR	2-1/4"	-	-	-	-	-	-	E60HTL	E50H

■ Frame size reference with motor shaft diameter shown in parentheses

Accessories

Scoop mounts – Grid Lign



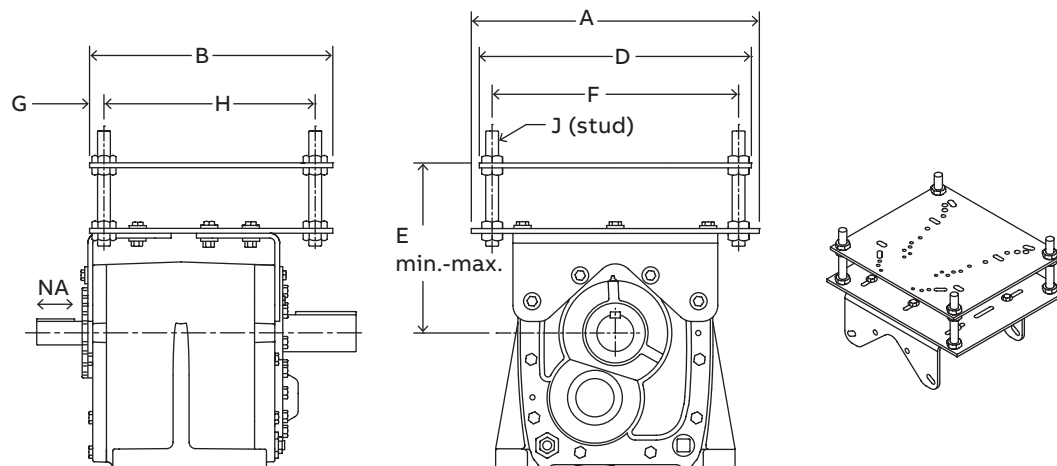
Grid-Lign straight bore coupling selection

Reducer size	Reducer type	Reducer input shaft. dia.	Grid-Lign coupling used with respective A/C motors @ 1750 RPM ■								
			140	180	210	250	280	320	360	400	440
			(7/8")	(1-1/8")	(1-3/8")	(1-5/8")	(1-7/8")	(2-1/8")	(2-3/8")	(2-7/8")	(3-3/8")
50	DCR	1-5/8"	-	1040T	1040T	1040T	1050T	1060T	-	-	-
	TCR	1-1/4"	1040T	1040T	1040T	1040T	1050T	-	-	-	-
60	DCR	1-7/8"	-	-	1050T	1050T	1050T	1060T	1070T	-	-
	TCR	1-1/4"	1040T	1040T	1040T	1040T	1050T	-	-	-	-
70	DCR	2-1/8"	-	-	1060T	1060T	1060T	1060T	1070T	-	-
	TCR	1-3/8"	-	1040T	1040T	1040T	1050T	1060T	1070T	-	-
80	DCR	2-1/4"	-	-	-	1070T	1070T	1070T	1070T	1080T	1090T
	TCR	1-1/2"	-	-	1040T	1040T	1050T	1060T	1070T	-	-
90	DCR	2-1/2"	-	-	-	-	-	1080T	1080T	1080T	1090T
	TCR	2"	-	-	1060T	1060T	1060T	1060T	1070T	1080T	-
100	DCR	2-3/4"	-	-	-	-	-	-	1080T	1080T	1090T
	TCR	2-1/8"	-	-	-	1060T	1060T	1060T	1070T	1080T	1090T
110	DCR	3"	-	-	-	-	-	-	1080T	1080T	1090T
	TCR	2-1/8"	-	-	-	1060T	1060T	1060T	1070T	1080T	1090T
120	DCR	3-1/4"	-	-	-	-	-	-	-	1100T	1100T
	TCR	2-1/4"	-	-	-	1070T	1070T	1070T	1070T	1080T	1090T
130	DCR	3-1/2"	-	-	-	-	-	-	-	-	1100T
	TCR	2-1/4"	-	-	-	-	1070T	1070T	1070T	1080T	1090T

■ Frame size reference with motor shaft diameter shown in parentheses

Accessories

Top motor mounts



The Maxum XTR motor mount is a rugged fabricated steel assembly which requires no drilling or foundation. It bolts directly to the reducer and accommodates a wide variety of NEMA AC motor frames.

For initial belt installation, the adjustment screws can be set at the minimum position which offers adequate future V-belt adjustment.

Note: Fans cannot be used with Maxum XTR gearboxes using top motor mounts

Top motor mounts sizes CR50 - CR100 ♦ ♣

Reducer size	Part number	Weight (lbs.)	To accommodate NEMA motor frame sizes	A	B	D	E *	
							Min.	Max.
CR50	270007	118	143T thru 326T	20.50	18.50	19.25	9.96	13.67
CR60	270107	142	182T thru 365T	22.50	19.00	21.25	9.92	15.00
CR70	270207	142	182T thru 365T	22.50	19.00	21.25	10.55	15.62
CR80	270607	252	213T thru 445T	28.50	24.00	27.25	13.95	18.45
CR90	270807	252	213T thru 445T	28.50	24.00	27.25	14.90	19.40
CR100	270907	262	213T thru 445T	28.50	24.00	27.25	16.01	20.51

Reducer size	F	G	H	J-stud		NA	
				Thread	Lgth.	Double	Triple
CR50	17.50	1.00	16.50	3/4 - 10	8.00	3.34	3.25
CR60	19.25	1.13	16.50	1 - 8	9.00	3.49	3.06
CR70	19.25	1.13	16.50	1 - 8	9.00	4.26	3.32
CR80	24.50	2.00	15.00	1 - 8	10.25	4.62	3.86
CR90	24.50	2.00	15.00	1 - 8	10.25	5.27	3.72
CR100	24.50	2.00	15.00	1 - 8	10.25	5.00	4.00

• Provides for V-belt adjustment.

♣ Select motor size to suit horsepower requirements. See table below for V-belt center distances.

♦ Refer to accessory compatibility table on page 42.

V-belt center distances for Maxum XTR motor mounts

Reducer size	Center distances for NEMA motor mounts																	
	140		180		210		250		280		320		360		400		440	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
CR50	13.77	16.98	14.77	17.98	15.52	18.73	16.52	19.73	17.27	20.48	18.27	21.48	-	-	-	-	-	-
CR60	-	-	15.78	20.23	16.53	20.98	17.53	21.98	18.28	22.73	19.28	23.73	20.28	24.73	-	-	-	-
CR70	-	-	16.40	20.85	17.15	21.60	18.15	22.60	18.90	23.35	19.90	24.35	20.90	25.35	-	-	-	-
CR80	-	-	-	-	19.20	23.70	20.20	24.70	20.95	25.45	21.95	26.45	22.95	27.45	23.95	28.45	24.95	29.45
CR90	-	-	-	-	20.15	24.65	21.15	25.65	21.90	26.40	22.90	27.40	23.90	28.40	24.90	29.40	25.90	30.40
CR100	-	-	-	-	21.26	25.76	22.26	26.76	23.01	27.51	24.01	28.51	25.01	29.51	26.01	30.51	27.01	31.51

Accessories

Top motor mounts

Top motor mounts sizes CR110 - CR130 ♦ ♣

Reducer size	Part number	Weight (lbs.)	To accommodate NEMA motor frame sizes	A	B	D	E •	
							Min.	Max.
CR110	269407	226	254T thru 445T	28.50	24.00	27.25	16.95	21.45
CR120	269507	275	284T thru 445T	28.50	24.00	27.25	18.55	23.05
CR130	269607	292	284T thru 445T	28.50	24.00	27.25	21.15	26.65

Reducer size	F	G	H	J-stud		NA	
				Dia.	Lgth.	Double	Triple
CR110	24.50	2.00	15.00	1 - 8	10.25	5.90	4.00
CR120	24.50	2.00	15.00	1 - 8	10.25	6.21	4.22
CR130	24.50	2.00	15.00	1 - 8	10.25	6.50	3.80

V-belt center distances for Maxum XTR motor mounts

Reducer size	Center distances for NEMA motor mounts											
	250		280		320		360		400		440	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
CR110	23.50	27.70	23.95	28.45	24.95	29.45	25.95	30.45	26.95	31.45	27.95	32.45
CR120	-	-	25.55	30.05	26.55	31.05	27.55	32.05	28.55	33.05	29.55	34.05
CR130	-	-	28.15	32.65	29.15	33.65	30.15	34.65	31.15	35.65	32.15	36.65

- Provides for V-belt adjustment.
- ♣ Select motor size to suit horsepower requirements. See table below for V-belt center distances.
- ♦ Refer to accessory compatibility table on page 42.

Heavy duty baseplate assemblies

Heavy duty baseplates are rigid units fabricated of heavy steel, providing a sturdy mounting base for motor/coupling/reducer combinations. This accessory is recommended for large motors where the motor weight exceeds the reducer weight or 700 lbs. and for variable speed AC or DC application regardless of the motor weight. The combination of a factory mounted Baldor motor, Dodge coupling, Maxum XTR reducer and HD baseplate becomes a drive package warranted as a single system.

HD baseplate assemblies include baseplate, Raptor coupling and coupling guard.

When mounting variable speed AC or DC motors, consult general guidelines on pages 88-89.

Consult factory for baseplate dimensions.

Accessories

Backstops assemblies

Optional backstops are offered for service conditions that require the prevention of reverse rotation. On reducer sizes 50 through 90, the backstops are internally mounted. On reducer sizes 100 through 130, the backstops are externally mounted on an extended high speed shaft.

Note: All backstops have a maximum overrunning speed limitation of 1800 RPM.

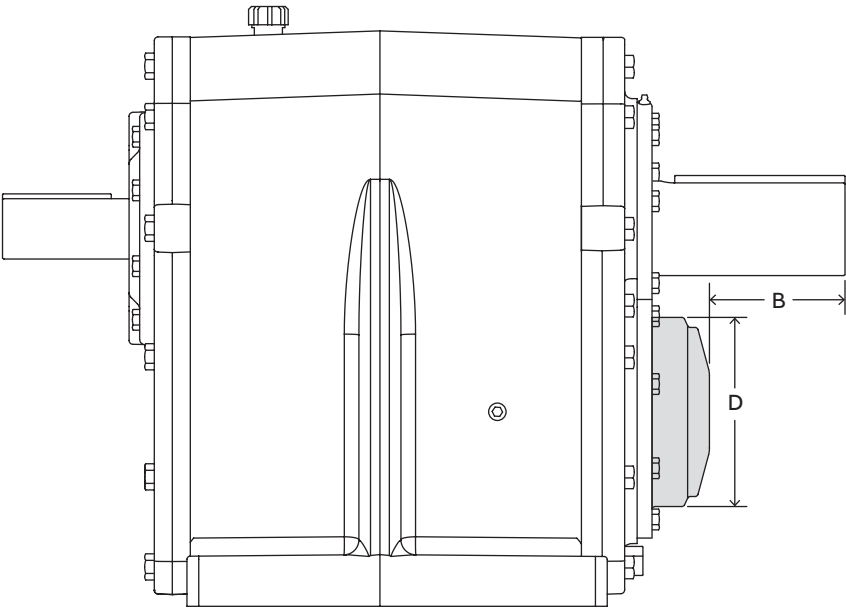
When ordering a reducer with a backstop, it will be necessary to indicate on the order the desired direction of rotation of the output shaft, either by designating “CW” for clockwise or “CCW” for counter clockwise, when looking at the output shaft.

Warning: Backstops are not to be used for applications involving energy absorption and shock or torque loads in excess of reducer ratings nor on applications such as chair lifts, amusement rides, etc., and where the safety of property is dependent on their function. On such applications, other holding devices must be provided. DO NOT use a backstop as a substitute for a brake. DO NOT use a backstop for indexing. Backstopping more frequently than five times in an eight hour period, or less than one minute between applications, is categorized as indexing.

Refer to page 42 for compatibility of various combinations of reducers and accessories.

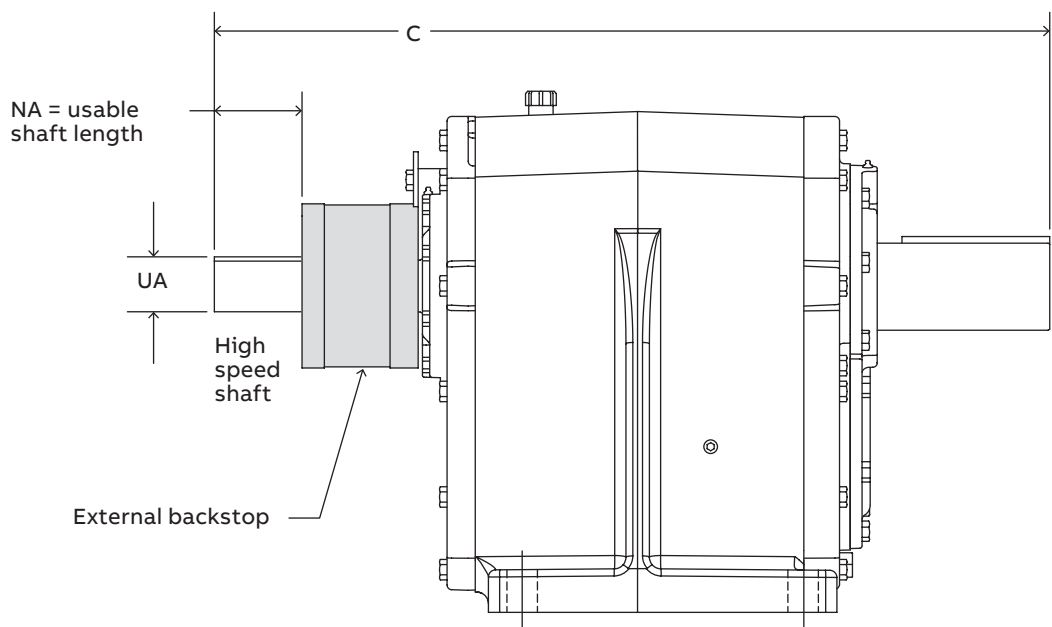
Internal backstops

Double & triple reduction		
Size	B	D
DCR50	3.65	5.88
DCR60	4.50	7.11
DCR70	5.03	7.06
DCR80	5.30	7.50
DCR90	5.65	8.24



Accessories

External backstops



Double reduction

Size	Ratios	C	NA	UA	
				Input shaft diameter	Key
DCR100	5.06 - 13.95	45.10	5.24 6.22	2.7500	.625 x .625 x 11.00
	17.09 - 31.39			2.1250	.500 x .500 x 11.00
DCR110	9.30 - 20.93	48.62	5.62 6.62	3.0000	.750 x .750 x 11.50
	25.63 - 31.39			2.1250	.500 x .500 x 11.50
DCR120	11.39 - 31.39	51.98	6.22	3.250	.750 x .750 x 12.00
DCR130	11.39 - 31.39	55.18	6.76	3.500	.875 x .875 x 12.50

Triple reduction

Size	C	NA	UA	
			Input shaft diameter	Key
TCR100	42.74	3.88	2.1250	.500 x .500 x 9.00
TCR110	45.70	3.82	2.1250	.500 x .500 x 9.00
TCR120	48.86	4.00	2.1250	.500 x .500 x 9.00
TCR130	51.44	4.00	2.1250	.500 x .500 x 9.00

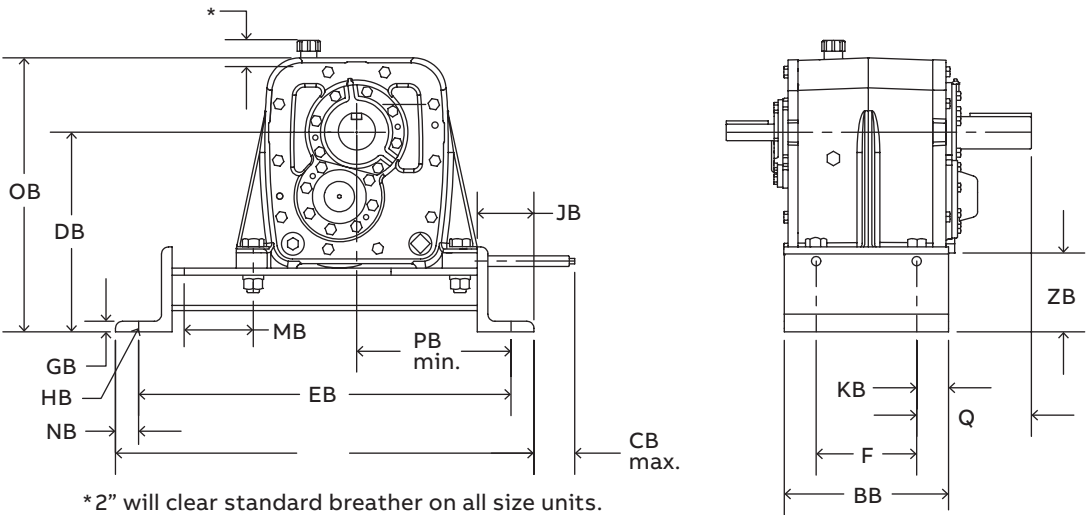
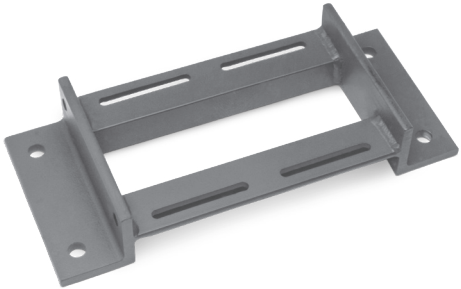
Note: Verify application compatibility and fit of accessories and components.

Accessories

Slide bases

Slide bases

The Maxum XTR reducer slide base positions the reducer, providing simplified installation and servicing of belt and chain drives. When a change in reducer position is desired, simply loosen reducer hold-down bolts and slide reducer by using the adjusting screw provided. After desired belt or chain tension has been obtained, retighten reducer bolts and unit is ready to operate.



Reducer size	Part numbers	AB	BB	CB	DB	EB	F	GB	HB bolts
50	270008	29.55	11.60	3.54	14.10	26.30	7.10	0.75	7/8"
60	270108	31.97	14.70	3.60	15.10	28.72	10.00	0.75	1"
70	270208	34.37	16.40	3.72	16.16	31.12	11.30	0.75	1-1/8"
80	270608	38.13	19.00	4.73	17.19	34.88	13.22	0.75	1-1/4"
90	270808	44.27	21.00	3.70	20.12	39.72	14.30	1.00	1-1/2"
100	270908	46.16	21.20	4.10	12.96	41.16	4.96	1.00	1-1/2"
110	269408	49.10	23.60	4.14	25.75	44.10	17.28	1.00	1-1/2"
120	269508	54.93	25.60	4.31	28.16	49.93	18.80	1.00	1-3/4"
130	269608	56.45	26.20	4.35	30.97	51.45	19.30	1.00	1-3/4"

Reducer size	JB	KB	MB	NB	OB	PB min.	Q	ZB	Wt. (lbs.)
50	4.00	2.25	4.75	1.63	19.37	10.90	8.10	4.50	87.14
60	4.00	2.35	4.75	1.63	22.18	12.00	7.99	4.50	105.46
70	4.00	2.55	4.75	1.63	24.01	13.24	9.23	4.57	118.84
80	4.00	2.90	6.38	1.63	26.28	14.27	10.01	4.38	197.20
90	6.00	3.12	5.50	2.50	35.15	17.91	12.96	6.38	268.80
100	6.00	3.16	7.00	2.50	35.75	18.57	13.72	6.25	332.10
110	6.00	3.16	7.00	2.50	37.97	18.57	13.72	6.25	361.31
120	6.00	3.40	7.50	2.50	42.27	21.25	14.58	6.25	410.35
130	6.00	3.45	7.50	2.50	47.33	21.91	16.22	6.25	484.15

Engineering

Lubrication

CAUTION: Unit is shipped without oil. Add proper amount of recommended lubricant before operating. Failure to observe this precaution could result in damage to or destruction of the equipment.

One oil sight plug is provided with gear reducer. It is installed in the high side plug hole at the factory. Based on output speed, the plug may need to be relocated to the low side plug hole. Refer to Table 2 to identify the appropriate oil sight plug location for the application. The locations provided are appropriate for applications with the foot below the shafts and in the horizontal plane. Contact Dodge if the drive is being mounted on an incline. If the application requires the sight plug in the low side plug hole, switch the oil sight and plug between the two holes. Coat threads of both plugs with Loctite 564 or similar thread sealant prior to installation in housing.

Table 1 - Oil Level & Sump Capacity

Reducer Size	Output Speed (RPM)	Side Hole Location For Oil Sight Plug	Oil Capacity	
			U.S Gallons	Liters
CR50	Above 250	Low	1.7	6.4
	250 & Below	High	2.7	10.2
CR60	Above 225	Low	2.7	10.2
	225 & Below	High	4.8	18.2
CR70	Above 205	Low	3.2	12.1
	205 & Below	High	5.6	21.2
CR80	Above 180	Low	4.6	17.4
	180 & Below	High	8.3	31.4
CR90	Above 150	Low	7.2	27.3
	150 & Below	High	12.2	46.2
CR100	Above 135	Low	7.7	29.1
	135 & Below	High	13.0	49.2
CR110	Above 122	Low	11.5	43.5
	122 & Below	High	19.3	73.1
CR120	Above 104	Low	14.9	56.4
	104 & Below	High	22.6	85.6
CR130	Above 95	Low	17.6	66.6
	95 & Below	High	28.0	106.0

Quantities are approximate and based on horizontal mounting position. Fill with oil until it is visible in the sight glass.

Table 2 - Oil Recommendations

ISO Grades For Ambient Temperatures of 50°F to 125°F

Output RPM	Torque-Arm II Reducer Size								
	CR50	CR60	CR70	CR80	CR90	CR100	CR110	CR120	CR130
Above 125	220	220	220	220	220	220	220	220	220
116-125	320	220	220	220	220	220	220	220	220
106-115	320	320	220	220	220	220	220	220	220
91-105	320	320	320	220	220	220	220	220	220
75-90	320	320	320	320	220	220	220	220	220
71-75	320	320	320	320	320	220	220	220	220
62-70	320	320	320	320	320	320	220	220	220
54-61	320	320	320	320	320	320	320	220	220
49-53	320	320	320	320	320	320	320	320	220
48 & lower	320	320	320	320	320	320	320	320	320

Table 3 - Oil Recommendations

ISO Grades For Ambient Temperatures of 15°F to 60°F

Output RPM	Torque-Arm II Reducer Size								
	CR50	CR60	CR70	CR80	CR90	CR100	CR110	CR120	CR130
Above 125	150	150	150	150	150	150	150	150	150
116-125	220	150	150	150	150	150	150	150	150
106-115	220	220	150	150	150	150	150	150	150
91-105	220	220	220	150	150	150	150	150	150
75-90	220	220	220	220	150	150	150	150	150
71-75	220	220	220	220	220	150	150	150	150
62-70	220	220	220	220	220	220	150	150	150
54-61	220	220	220	220	220	220	220	150	150
49-53	220	220	220	220	220	220	220	220	150
48 & lower	220	220	220	220	220	220	220	220	220

(1) Assumes auxiliary cooling where recommended in the catalog.

(2) Pour point of lubricant selected should be at least 10°F lower than expected minimum ambient starting temperature.

(3) Special lubricant may be required for food and drug industry applications where contact with the product being manufactured may occur. Consult a lubrication manufacturer's representative for his recommendations.

(4) For reducers operating in ambient temperatures between -22°F (-30°C) and 20°F (-6.6°C) use a synthetic hydrocarbon lubricant, 100 ISO grade or AGMA 3 grade (for example, Mobil SHC627). Above 125°F (51°C), consult DODGE Gear Application Engineering (864) 288-9050 for lubrication recommendation.

(5) Mobil SHC630 Series oil recommended for high ambient temperatures.

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Torque method of selection

Step 1: Determine service factor - see pages 7-9 for electric motor, hydraulic motor, steam turbine or gas turbine driven applications operating up to 10 hours per day or over 10 hours per day. If the application is engine driven, refer to table on page 6 to convert the service factor obtained from service factors table on pages 7-9 to the service factor required for engine driven applications. Service factor recommendations are minimum. (For extreme shock or high energy loads which must be absorbed, as when stalling, or for power sources not listed, consult Dodge for special consideration.)

Note: AGMA classifies scoop mounted motors as gearmotor applications which are sized using a load classification in place of a service factor. (See easy selection chart, pages 10-23.)

Step 2: Calculate equivalent horsepower - multiply the actual horsepower to be transmitted by the service factor obtained from step 1.

Step 3: Calculate required ratio - divide the high speed shaft RPM by the low speed shaft RPM.

Caution: Instantaneous gear loading is limited to 200% of the reducer rating. Do not allow starting load or other peak loads to exceed this value. Failure to observe this precaution could result in damage to, or destruction of, the equipment.

Step 4: Determine unit size and ratio - refer to the horsepower tables on pages 66-71. From the high speed shaft RPM in the left hand column and desired ratio and low speed shaft RPM in the next two columns, trace right into the table and find the horsepower rating equal to or greater than the equivalent horsepower obtained from step 2. (When the required input speed falls between those tabulated, use straight line interpolation to determine the unit rating.)

Step 5: Check thermal ratings - adjust the actual horsepower required (without service factor) for ambient operating conditions as described on page 73 to determine actual thermal Hp. Compare the actual thermal Hp to the thermal ratings on pages 74-79. If actual thermal Hp exceeds the thermal capacity, an auxiliary cooling fan or a heat exchanger may be added to provide additional thermal capacity or a larger reducer may be selected.

Step 6: Check overhung and thrust loads - overhung loads may be imposed on the input or output shafts when connected by means other than a coupling. If overhung loads are present, refer to page 80 for method to calculate overhung load. If calculated OHL exceeds published capacity on page 82, consult Baldor.

External thrust loads may exist in applications such as agitators, mixers and similar equipment. Calculate the direction and magnitude of the thrust and provide complete application information to Baldor for review.

Step 7: Variable speed applications - provide complete application information to Baldor for engineering review.

Step 8: Check dimensions - refer to pages 24-41 for dimensions, weights and part numbers.

Steps 1 through 3: Determine service factor, equivalent torque and required ratio using similar steps from the horsepower method.

Step 4: Determine unit size and ratio - refer to torque tables on pages 66-71. From the high speed shaft RPM in the left hand column and desired ratio and output RPM in the next two columns, trace right into the table and find the torque rating equal to or greater than the required torque calculated above.

Step 5: Check thermal ratings - convert required torque (without service factor) to horsepower using the formula below. Check thermal ratings based on the procedure described in the horsepower method.

$$\text{Horsepower} = \frac{\text{Torque (lb.-in.)} \times \text{output shaft RPM}}{63025}$$

Steps 6 through 8: Refer to horsepower method.

Examples of selection

Horsepower method

A centrifugal pump operating at 230 RPM is driven by a 150 horsepower 1750 RPM motor. The duty cycle is 24 hours per day. Both the input and output reducer shafts are coupling connected.

Step 1: Determine service factor - since the centrifugal pump is operating more than 10+ hours/day, a service factor of 1.25 is recommended (see page 7).

Step 2: Calculate equivalent horsepower - multiply the motor horsepower by the service factor ($150 \times 1.25 = 187.5$) to get the equivalent horsepower of 187.5.

Step 3: Calculate required ratio - divide the high speed shaft RPM by the low speed shaft RPM ($1750 / 230 = 7.6$) to get the required ratio of 7.6:1.

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Selection procedure

Step 4: Determine unit size and ratio - locate the horsepower table for 1750 high speed shaft RPM on page 66. Trace down the ratio column to the closest nominal ratio to the 7.6:1 required ratio and find 7.59:1 ratio. Trace to the right until the horsepower equals or exceeds the calculated equivalent horsepower of 187.5 and find 229 horsepower listed under a size 70 reducer.

Step 5: Check thermal ratings - calculate actual thermal Hp per the procedure on page 72. Refer to thermal rating tables on pages 74-79 and find the thermal rating for the size 70 reducer at 1750 input RPM. Note that the thermal rating without fan is 83 horsepower and the thermal rating with fan is 135 horsepower. Compare the actual thermal Hp to these values to determine if additional cooling is required.

Step 6: Check overhung load and thrust loads - since both input and output shafts are coupling connected, overhung or thrust loads are not applied.

Step 7: Variable speed applications - does not apply.

Step 8: Check dimensions - refer to pages 24-41 for dimensions, weights and part numbers.

Torque method

Running 10 hours a day, a scum breaker for a sewage disposal system requires 34,233 lb.-in. of torque at 230 RPM and has an overhung load of 4,712 pounds on the low speed shaft. The overhung load is located 4 inches out from the reducer on the usable shaft extension. The motor speed is 1170 RPM and is coupling connected.

Step 1: Determine service factor - since the scum breaker is operating 10 hours/day, a service factor of 1.50 is recommended (see page 9).

Step 2: Calculate equivalent torque - multiply the system torque of 34,233 by the service factor of 1.50 ($34,233 \times 1.50 = 51,349$) to get 51,349 lb.-in. equivalent torque.

Step 3: Calculate required ratio - divide the high speed shaft RPM by the low speed shaft RPM ($1170 / 230 = 5.09$) to get the required ratio of 5.09:1.

Step 4: Determine unit size and ratio - locate the torque table for 1170 high speed shaft RPM on page 69. Trace down the ratio column to the closest nominal ratio to the 5.09:1 required ratio and find 5.06:1 ratio. Trace to the right until the torque equals or exceeds the calculated equivalent torque of 51,349 and find 57,400 listed under a Maxum XTR size 70 reducer.

Step 5: Check thermal ratings - convert the required torque without service factor (34,233) to horsepower at 230 RPM as follows:

$$\text{Horsepower} = \frac{34,233 \times 230}{63025} = 125 \text{ Hp}$$

Calculate the actual thermal horsepower requirement per the procedure on page 72. For this example, the ambient adjustment factors are all considered to be 1.0. Refer to thermal rating tables on page 76 and find the thermal rating for the size 70 reducer at 1170 input RPM. Since the 125 calculated horsepower exceeds the thermal rating shown without fan (91), an auxiliary cooling fan is required. The size 70 has a thermal horsepower rating of 137 with fan so this meets the thermal horsepower requirement.

Step 6: Check overhung load and thrust loads - an overhung load of 4,712 pounds is on the low speed shaft. It must be adjusted for its position on the shaft. Refer to page 80 for the load location factor table and locate the 4 inch distance in the left hand column. Under the Maxum XTR 70 column find the load location factor of 1.12. Multiply the 4,712 overhung load by this factor ($4,712 \times 1.12 = 5,183$) to get an equivalent overhung load of 5,183 pounds. Now turn to the overhung load capacity table on page 85 and locate 230 output RPM in the left hand column. Trace right to the Maxum XTR size 70 reducer and find the overhung load capacity of 5,490 pounds. Since the capacity exceeds the equivalent overhung load, the selection is acceptable.

Step 7: Variable speed applications - does not apply.

Step 8: Check dimensions - refer to pages 24-41 for dimensions, weights and part numbers.

Engineering

1750, 1430 RPM input – input horsepower ratings

High speed shaft RPM	AGMA nominal ratio	Approx. low speed shaft RPM	Unit reduction	Rating data @ 1.0 service factor for Maxum XTR unit size of:								
				50	60	70	80	90	100	110	120	130
1750	2.25	778	Double	113	167	308	-	-	-	-	-	-
	2.76	635		97.9	158	273	-	-	-	-	-	-
	3.37	519		81.7	142	233	-	-	-	-	-	-
	4.13	423		64.8	124	203	-	-	-	-	-	-
	5.06	346		116	194	301	408	641	939	-	-	-
	6.20	282		103	166	261	374	574	841	-	-	-
	7.59	230		91.8	153	229	334	494	703	-	-	-
	9.30	188		79.5	134	199	276	438	580	841	-	-
	11.39	154		70.9	117	161	234	376	488	700	895	1166
	13.95	125		58.3	98.8	133	193	310	403	577	801	1019
	17.09	102		48.3	80.1	108	159	253	336	482	665	879
	20.93	84		40.1	64.8	90.0	134	209	284	400	555	743
	25.63	68		32.8	55.6	78.6	110	164	227	336	450	620
	31.39	56		26.2	44.2	55.6	83.2	133	198	269	366	521
	38.44	45.5	Triple	19.5	32.7	45.6	64.8	106	150	204	293	404
	47.08	37.2		17.0	28.4	39.5	53.6	95.8	129	179	248	350
	57.67	30.3		14.7	23.7	33.4	45.4	79.0	108	151	213	294
	70.62	24.8		12.0	20.0	30.1	37.5	59.2	85.4	129	176	246
	86.50	20.2		9.73	16.0	20.9	31.3	54.7	66.7	101	138	213
	105.9	16.5		7.93	13.4	19.0	28.7	45.2	58.3	85.8	120	176
129.7	13.5	6.55		11.1	15.6	23.8	37.2	49.1	70.5	98.5	142	
158.9	11.0	5.35	9.39	13.6	19.2	27.1	38.7	58.6	78.4	115		
194.6	9.0	4.28	7.70	7.96	13.7	21.8	34.4	39.6	55.6	86.9		
1430	2.25	636	Double	97.8	151	265	-	-	-	-	-	-
	2.76	519		80.0	137	223	-	-	-	-	-	-
	3.37	424		66.7	124	190	-	-	-	-	-	-
	4.13	346		53.0	102	165	-	-	-	-	-	-
	5.06	282		101	168	261	355	556	808	-	-	-
	6.20	231		89.0	148	220	325	499	695	-	-	-
	7.59	188		79.7	139	188	278	429	586	-	-	-
	9.30	154		69.0	116	163	230	375	483	700	-	-
	11.39	126		58.9	97.0	134	195	311	406	582	777	1012
	13.95	103		48.3	81.7	111	160	256	335	480	684	885
	17.09	84		39.7	66.3	89.5	132	209	279	401	553	763
	20.93	68		32.8	53.4	74.6	111	173	236	332	461	620
	25.63	56		26.8	45.8	64.9	91.0	135	188	278	374	515
	31.39	46		21.4	36.7	45.4	68.0	109	165	224	299	426
	38.44	37.2	Triple	16.9	28.7	39.9	56.2	88.2	126	177	254	351
	47.08	30.4		14.5	24.9	34.7	46.5	78.9	105	155	216	304
	57.67	24.8		12.0	20.0	28.9	39.4	65.0	88.5	128	180	246
	70.62	20.2		9.80	16.3	24.9	32.5	48.5	69.8	107	146	204
	86.50	16.5		7.95	13.2	17.6	26.0	45.3	55.5	82.6	115	177
	105.9	13.5		6.48	11.0	15.8	23.4	37.2	47.7	70.6	98.2	146
129.7	11.0	5.35		8.99	13.0	19.4	30.5	40.1	58.0	80.5	117	
158.9	9.0	4.37	7.63	11.3	15.7	22.3	31.6	47.9	64.1	94.0		
194.6	7.3	3.50	6.24	6.59	11.2	17.8	28.1	36.0	45.4	71.0		

Engineering

1750, 1430 RPM input – output torque ratings (in.- lb.)

High speed shaft RPM	AGMA nominal ratio	Approx. low speed shaft RPM	Unit reduction	Rating data @ 1.0 service factor for Maxum XTR unit size of (multiply value shown by 1000):								
				50	60	70	80	90	100	110	120	130
1750	2.25	778	Double	8.95	13.4	25.1	-	-	-	-	-	-
	2.76	635		9.60	15.6	28.1	-	-	-	-	-	-
	3.37	519		9.60	16.8	29.3	-	-	-	-	-	-
	4.13	423		9.60	18.4	30.3	-	-	-	-	-	-
	5.06	346		20.8	35.3	53.8	73.2	116	173	-	-	-
	6.20	282		22.7	37.1	58.8	84.3	125	188	-	-	-
	7.59	230		24.4	40.9	63.2	91.7	135	192	-	-	-
	9.30	188		26.6	45.1	65.1	93.4	145	196	281	-	-
	11.39	154		28.3	47.9	66.4	94.9	152	199	286	375	479
	13.95	125		28.9	48.6	67.5	96.6	154	203	291	393	503
	17.09	102		29.3	48.8	68.7	98.2	156	206	296	411	532
	20.93	84	Triple	29.5	49.8	69.8	99.7	157	209	302	418	567
	25.63	68		29.5	50.1	70.6	101	152	214	306	426	579
	31.39	56		29.5	48.9	64.5	91.5	149	216	297	413	567
	38.44	45.5		26.4	44.3	63.8	88.6	147	209	280	396	542
	47.08	37.2		28.3	47.5	69.6	90.3	163	219	299	423	576
	57.67	30.3		29.5	50.1	71.5	92.4	165	221	310	443	609
	70.62	24.8		29.5	49.6	74.8	94.5	151	223	321	459	625
	86.50	20.2		29.5	47.6	64.7	94.9	165	205	315	423	631
	105.9	16.5		29.5	49.7	74.0	107	168	219	326	465	640
	129.7	13.5		29.5	51.6	74.3	107	169	221	328	465	650
	158.9	11.0		29.5	51.3	74.5	107	151	223	330	465	644
	194.6	9.0		29.5	51.6	56.6	91.1	147	229	270	393	567
1430	2.25	636	Double	9.51	14.8	26.5	-	-	-	-	-	-
	2.76	519		9.60	16.6	28.1	-	-	-	-	-	-
	3.37	424		9.60	17.9	29.3	-	-	-	-	-	-
	4.13	346		9.60	18.7	30.2	-	-	-	-	-	-
	5.06	282		22.1	37.4	57.2	77.8	123	183	-	-	-
	6.20	231		24.1	40.6	60.8	89.5	133	190	-	-	-
	7.59	188		25.9	45.5	63.4	93.4	144	196	-	-	-
	9.30	154		28.2	47.8	65.4	95.1	152	199	286	-	-
	11.39	126		28.8	48.6	67.4	96.5	154	203	291	398	509
	13.95	103		29.3	49.2	68.5	98.2	156	206	297	410	535
	17.09	84	Triple	29.5	49.4	69.7	99.8	157	210	301	418	565
	20.93	68		29.5	50.2	70.7	101	159	213	306	425	579
	25.63	56		29.5	50.5	71.4	103	152	217	310	433	589
	31.39	46		29.5	49.7	64.4	91.5	149	219	303	413	567
	38.44	37.2		28.1	46.8	67.5	94.1	149	216	297	421	576
	47.08	30.4		29.5	50.3	73.7	96.0	165	219	317	449	612
	57.67	24.8		29.5	51.0	74.8	98.2	166	221	321	458	625
	70.62	20.2		29.5	48.9	74.8	100	151	223	323	465	633
	86.50	16.5		29.5	47.7	65.6	96.6	167	209	315	431	640
	105.9	13.5		29.5	49.0	74.4	107	169	219	328	465	649
	129.7	11.0		29.5	50.5	74.8	107	170	221	330	465	658
	158.9	9.0		29.5	50.4	74.8	107	152	223	330	465	644
	194.6	7.3		29.5	50.5	56.5	91.1	147	229	300	393	567

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1170, 870 RPM input – input horsepower ratings

High speed shaft RPM	AGMA nominal ratio	Approx. low speed shaft RPM	Unit reduction	Rating data @ 1.0 service factor for Maxum XTR unit size of:								
				50	60	70	80	90	100	110	120	130
1170	2.25	520	Double	80.7	130	217	-	-	-	-	-	-
	2.76	425		65.5	114	183	-	-	-	-	-	-
	3.37	347		54.6	103	156	-	-	-	-	-	-
	4.13	283		43.3	85.2	135	-	-	-	-	-	-
	5.06	231		87.5	147	215	308	474	661	-	-	-
	6.20	189		77.3	128	181	267	432	569	-	-	-
	7.59	154		69.3	115	154	229	372	485	-	-	-
	9.30	126		57.8	96.8	133	190	310	402	583	-	-
	11.39	103		49.0	80.4	110	162	257	338	485	657	879
	13.95	84		39.8	67.5	91.7	133	212	279	399	569	769
	17.09	68		32.5	55.1	74.4	110	173	232	333	460	638
	20.93	56		26.8	44.1	61.7	92.3	143	196	275	384	516
	25.63	46		21.9	37.8	53.6	75.6	110	156	229	311	428
	31.39	37		17.5	30.6	37.1	55.6	89.5	137	187	245	349
	38.44	30.4		Triple	14.6	24.7	34.4	48.9	73.2	103	153	221
	47.08	24.8	11.9		20.7	28.4	40.4	65.1	86.0	128	180	253
	57.67	20.3	9.81		16.4	23.3	34.3	53.6	72.4	105	150	204
	70.62	16.6	8.02		13.7	20.1	28.3	39.8	57.1	87.8	119	169
	86.50	13.5	6.50		11.0	14.4	21.7	37.5	46.2	67.6	95.6	146
	105.9	11.0	5.30		9.20	12.8	19.2	30.5	39.0	58.1	80.3	121
	129.7	9.0	4.38		7.45	10.5	15.9	24.9	32.8	47.4	65.9	96.4
	158.9	7.4	3.58		6.35	9.09	12.8	18.2	25.9	39.2	52.4	76.9
	194.6	6.0	2.86		5.18	5.31	9.18	14.5	23.0	29.0	37.2	58.1
870	2.25	387	Double	60.0	98.3	162	-	-	-	-	-	-
	2.76	316		48.7	86.0	136	-	-	-	-	-	-
	3.37	258		40.6	77.7	116	-	-	-	-	-	-
	4.13	210		32.2	64.4	101	-	-	-	-	-	-
	5.06	172		71.1	111	160	235	362	491	-	-	-
	6.20	140		62.8	97.0	134	199	329	423	-	-	-
	7.59	115		54.1	87.3	114	170	282	361	-	-	-
	9.30	94		43.7	72.9	99.1	141	234	303	445	-	-
	11.39	76		36.7	60.4	81.7	121	194	257	369	501	693
	13.95	62		29.6	50.7	68.4	101	160	212	304	434	586
	17.09	51		24.2	41.2	55.4	83.4	130	176	252	350	486
	20.93	42		19.9	33.0	46.3	70.1	107	149	207	292	392
	25.63	34		16.3	28.3	40.2	57.3	81.7	119	173	236	326
	31.39	28		13.0	22.9	27.7	41.4	66.6	104	143	182	259
	38.44	22.6		Triple	10.8	19.0	26.6	39.0	55.5	76.8	114	169
	47.08	18.5	8.83		15.3	21.1	31.6	48.9	63.9	95.9	136	192
	57.67	15.1	7.30		12.1	17.3	26.2	40.3	53.8	78.3	111	155
	70.62	12.3	5.96		10.1	15.0	21.1	29.6	42.4	65.7	88.6	126
	86.50	10.1	4.84		8.36	10.9	16.5	28.1	34.8	50.2	73.0	111
	105.9	8.2	3.94		6.73	9.54	14.3	22.7	29.0	43.2	59.7	90.4
	129.7	6.7	3.26		5.43	7.83	11.8	18.5	24.4	35.3	49.0	71.7
	158.9	5.5	2.66		4.62	6.76	9.52	13.5	19.2	29.1	39.0	57.2
	194.6	4.5	2.13		3.77	3.96	6.83	10.8	17.1	22.0	27.6	43.2
Engineering												

Engineering

1170, 870 RPM input – output torque ratings (in.- lb.)

High speed shaft RPM	AGMA nominal ratio	Approx. low speed shaft RPM	Unit reduction	Rating data @ 1.0 service factor for Maxum XTR unit size of (multiply value shown by 1000):								
				50	60	70	80	90	100	110	120	130
1170	2.25	520	Double	9.60	15.6	26.5	-	-	-	-	-	-
	2.76	425		9.60	16.8	28.1	-	-	-	-	-	-
	3.37	347		9.60	18.2	29.4	-	-	-	-	-	-
	4.13	283		9.60	19.0	30.2	-	-	-	-	-	-
	5.06	231		23.5	39.9	57.4	82.6	128	183	-	-	-
	6.20	189		25.6	42.9	60.9	90.0	141	190	-	-	-
	7.59	154		27.5	46.2	63.6	93.7	152	198	-	-	-
	9.30	126		28.9	48.7	65.4	96.0	154	203	291	-	-
	11.39	103		29.3	49.3	67.8	98.1	156	206	296	412	541
	13.95	84		29.5	49.7	69.4	99.7	157	210	302	417	568
	17.09	68		29.5	50.2	70.9	101	159	213	306	425	578
	20.93	56		29.5	50.7	71.6	103	161	216	310	432	589
	25.63	46		29.5	51.0	72.0	104	162	220	313	440	598
	31.39	37		29.5	50.6	64.4	91.5	150	222	309	413	567
	38.44	30.4	Triple	29.5	49.9	71.9	99.9	151	216	315	447	612
	47.08	24.8		29.5	51.9	74.8	101.9	166	219	321	459	623
	57.67	20.3		29.5	51.8	74.8	104	167	221	322	465	633
	70.62	16.6		29.5	50.7	74.8	107	152	223	326	465	642
	86.50	13.5		29.5	49.2	66.9	98.3	169	213	315	439	649
	105.9	11.0		29.5	50.8	74.8	107	170	219	330	465	657
	129.7	9.0		29.5	51.9	74.8	107	170	221	330	465	660
	158.9	7.4		29.5	51.9	74.8	107	152	223	330	465	644
	194.6	6.0		29.5	51.9	56.4	91.5	147	229	296	393	567
870	2.25	387	Double	9.60	15.9	26.5	-	-	-	-	-	-
	2.76	316		9.60	17.1	28.1	-	-	-	-	-	-
	3.37	258		9.60	18.5	29.3	-	-	-	-	-	-
	4.13	210		9.60	19.3	30.3	-	-	-	-	-	-
	5.06	172		25.6	40.6	57.4	84.7	131	183	-	-	-
	6.20	140		28.0	43.6	60.6	90.0	144	190	-	-	-
	7.59	115		28.9	47.0	63.2	93.7	155	198	-	-	-
	9.30	94		29.4	49.4	65.3	96.0	157	206	299	-	-
	11.39	76		29.5	49.8	67.8	99.0	158	211	304	422	573
	13.95	62		29.5	50.2	69.6	102	160	215	308	427	582
	17.09	51		29.5	50.5	70.9	103	161	218	311	435	592
	20.93	42		29.5	51.0	72.2	105	163	221	314	442	602
	25.63	34		29.5	51.4	72.7	106	151	225	317	449	611
	31.39	28		29.5	50.9	64.5	91.5	150	227	317	413	567
	38.44	22.6	Triple	29.5	51.8	74.8	107	154	216	315	461	627
	47.08	18.5		29.5	51.4	74.8	107	168	219	322	465	636
	57.67	15.1		29.5	51.4	74.8	107	169	221	322	465	646
	70.62	12.3		29.5	50.5	74.8	107	152	223	327	465	644
	86.50	10.1		29.5	50.2	68.2	101	170	216	315	451	660
	105.9	8.2		29.5	50.0	74.8	107	170	219	330	465	660
	129.7	6.7		29.5	50.9	74.8	107	170	221	330	465	660
	158.9	5.5		29.5	50.8	74.8	107	152	223	330	465	644
	194.6	4.5		29.5	50.8	56.6	91.5	147	229	302	393	567

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720, 850 RPM input – input horsepower ratings

High speed shaft RPM	AGMA nominal ratio	Approx. low speed shaft RPM	Unit reduction	Rating data @ 1.0 service factor for Maxum XTR unit size of:								
				50	60	70	80	90	100	110	120	130
720	2.25	320	Double	49.7	82.5	134	-	-	-	-	-	-
	2.76	261		40.3	72.2	112	-	-	-	-	-	-
	3.37	213		33.6	65.2	95.7	-	-	-	-	-	-
	4.13	174		26.7	54.0	83.6	-	-	-	-	-	-
	5.06	142		62.3	93.2	132	195	304	407	-	-	-
	6.20	116		53.7	81.4	110	165	276	350	-	-	-
	7.59	95		45.4	73.2	93.8	141	235	299	-	-	-
	9.30	77		36.3	60.9	82.0	117	196	251	374	-	-
	11.39	63		30.4	50.5	67.5	100	162	213	310	421	583
	13.95	52		24.5	42.3	56.7	84.5	133	178	254	364	493
	17.09	42		20.0	34.3	45.6	69.0	109	148	210	294	408
	20.93	34		16.5	27.4	38.3	58.0	89.6	125	173	245	329
	25.63	28	13.5	23.6	33.5	47.5	67.6	99.4	144	198	273	
	31.39	23	10.8	19.1	23.0	34.2	55.1	86.9	120	151	214	
	38.44	18.7	Triple	8.96	15.7	22.0	32.3	46.5	63.5	94.4	142	195
	47.08	15.3		7.31	12.6	17.5	26.2	40.7	52.9	79.3	112	161
	57.67	12.5		6.04	9.92	14.4	21.7	33.5	44.6	64.8	92.1	130
	70.62	10.2		4.93	8.33	12.4	17.5	24.5	35.1	54.4	73.3	104
	86.50	8.3		4.00	7.02	9.18	13.9	23.2	28.8	41.6	61.4	91.7
	105.9	6.8		3.26	5.54	7.89	11.8	18.8	24.0	35.7	49.4	74.8
129.7	5.5	2.69		4.44	6.48	9.77	15.3	20.2	29.2	40.5	59.3	
158.9	4.5	2.20		3.78	5.60	7.88	11.2	15.9	24.1	32.3	47.3	
194.6	3.7	1.76	3.05	3.28	5.65	8.94	14.2	18.0	22.9	35.7		
580	2.25	258	Double	40.0	67.7	108	-	-	-	-	-	-
	2.76	210		32.5	59.3	90.3	-	-	-	-	-	-
	3.37	172		27.1	53.5	77.0	-	-	-	-	-	-
	4.13	140		21.5	44.4	67.6	-	-	-	-	-	-
	5.06	115		52.7	76.5	106	157	249	328	-	-	-
	6.20	94		44.2	66.8	88.2	133	226	282	-	-	-
	7.59	76		36.9	60.1	75.1	113	192	241	-	-	-
	9.30	62		29.3	49.7	65.9	94.0	159	202	306	-	-
	11.39	51		24.5	41.1	54.3	80.9	132	172	252	345	478
	13.95	42		19.7	34.5	45.9	68.1	108	146	206	298	404
	17.09	34		16.1	27.8	36.6	55.6	88.3	121	171	241	334
	20.93	28		13.3	22.2	30.8	46.8	72.8	102	141	200	269
	25.63	23	10.9	19.1	27.3	38.2	54.5	81.2	117	162	223	
	31.39	18	8.69	15.5	18.6	27.6	44.5	71.0	97.4	121	173	
	38.44	15.1	Triple	7.22	12.7	17.7	26.0	37.9	51.2	76.1	114	159
	47.08	12.3		5.89	10.3	14.1	21.1	33.0	42.6	63.9	90.4	132
	57.67	10.1		4.87	8.17	11.6	17.5	27.0	35.9	52.2	74.2	105
	70.62	8.2		3.97	6.89	10.0	14.1	19.7	28.3	43.8	59.0	84.1
	86.50	6.7		3.22	5.77	7.55	11.4	18.7	23.2	33.5	50.2	73.9
	105.9	5.5		2.63	4.62	6.36	9.50	15.1	19.3	28.8	39.8	60.3
129.7	4.5	2.17		3.69	5.22	7.87	12.4	16.3	23.5	32.7	47.8	
158.9	3.6	1.77		3.14	4.51	6.35	9.03	12.8	19.4	26.0	38.1	
194.6	3.0	1.42	2.56	2.65	4.55	7.20	11.4	14.5	18.4	28.8		

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720, 850 RPM input – output torque ratings (in.- lb.)

High speed shaft RPM	AGMA nominal ratio	Approx. low speed shaft RPM	Unit reduction	Rating data @ 1.0 service factor for Maxum XTR unit size of (multiply value shown by 1000):								
				50	60	70	80	90	100	110	120	130
720	2.25	320	Double	9.60	16.1	26.6	-	-	-	-	-	-
	2.76	261		9.60	17.4	28.1	-	-	-	-	-	-
	3.37	213		9.60	18.8	29.3	-	-	-	-	-	-
	4.13	174		9.60	19.6	30.3	-	-	-	-	-	-
	5.06	142		27.1	41.2	57.4	84.7	133	183	-	-	-
	6.20	116		28.9	44.2	60.4	90.0	146	190	-	-	-
	7.59	95		29.3	47.6	63.0	93.7	156	198	-	-	-
	9.30	77		29.5	49.8	65.3	96.0	158	206	303	-	-
	11.39	63		29.5	50.2	67.7	99.0	160	212	308	429	582
	13.95	52		29.5	50.6	69.8	103	161	218	311	434	591
	17.09	42		29.5	50.7	70.6	103	163	221	314	442	600
	20.93	34		29.5	51.2	72.1	105	164	224	317	448	611
	25.63	28		29.5	51.6	73.2	106	151	228	319	455	620
	31.39	23		29.5	51.2	64.7	91.5	150	230	322	413	567
	38.44	18.7	Triple	29.5	51.6	74.8	107	156	216	315	465	636
	47.08	15.3		29.5	51.4	74.8	107	169	219	322	465	644
	57.67	12.5		29.5	50.9	74.8	107	170	221	322	465	654
	70.62	10.2		29.5	50.2	74.8	107	152	223	327	465	644
	86.50	8.3		29.5	50.9	69.2	102	170	216	315	458	660
	105.9	6.8		29.5	49.7	74.8	107	170	219	330	465	660
	129.7	5.5		29.5	50.3	74.8	107	170	221	330	465	660
	158.9	4.5		29.5	50.3	74.8	107	152	223	330	465	644
	194.6	3.7		29.5	49.8	56.7	91.5	147	229	298	393	567
	2.25	258	Double	9.60	16.4	26.7	-	-	-	-	-	-
580	2.76	210		9.60	17.7	28.0	-	-	-	-	-	-
	3.37	172		9.60	19.1	29.3	-	-	-	-	-	-
	4.13	140		9.60	19.9	30.4	-	-	-	-	-	-
	5.06	115		28.5	42.0	57.4	84.7	135	183	-	-	-
	6.20	94		29.5	45.1	60.0	90.0	149	190	-	-	-
	7.59	76		29.5	48.5	62.5	93.7	158	198	-	-	-
	9.30	62		29.5	50.4	65.2	96.0	160	206	308	-	-
	11.39	51		29.5	50.8	67.6	99.0	161	212	311	436	593
	13.95	42		29.5	51.2	70.0	103	163	221	314	441	601
	17.09	34		29.5	51.1	70.2	103	164	224	317	449	610
	20.93	28		29.5	51.5	72.0	105	165	227	320	455	620
	25.63	23		29.5	52.0	74.0	106	151	231	322	462	629
	31.39	18		29.5	51.6	64.9	91.5	150	233	324	413	567
	38.44	15.1	Triple	29.5	51.9	74.8	107	158	216	315	465	645
	47.08	12.3		29.5	52.0	74.8	107	170	219	322	465	653
	57.67	10.1		29.5	52.1	74.8	107	170	221	322	465	660
	70.62	8.2		29.5	51.5	74.8	107	152	223	327	465	644
	86.50	6.7		29.5	52.0	70.6	104	170	216	315	465	660
	105.9	5.5		29.5	51.5	74.8	107	170	219	330	465	660
	129.7	4.5		29.5	51.8	74.8	107	170	221	330	465	660
	158.9	3.6		29.5	51.8	74.8	107	152	223	330	465	644
	194.6	3.0		29.5	51.8	56.9	91.5	147	229	298	393	567

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Thermal ratings

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Thermal rating is the actual horsepower (without service factor) that a drive can continuously transmit without overheating. The thermal horsepower shown on pages 74-79 are based on an ambient temperature of 80°F, altitude less than 2,500 feet and an external air flow between 100 and 275 ft. per minute. The thermal horsepower is based on providing a maximum calculated sump temperature of 200°F.

If operating conditions do not match the values above, the thermal horsepower must be adjusted to determine the actual thermal horsepower based upon operating conditions. Actual thermal horsepower equals the published thermal horsepower multiplied by the appropriate factors shown below.

If the actual thermal horsepower is less than the required thermal horsepower, then a cooling fan or other method needs to be added to increase the actual thermal horsepower. Failure to consider actual operating conditions may result in shortened reducer life or catastrophic failure.

Method 1

Actual thermal horsepower = Published thermal horsepower x Ambient temperature adjustment factor B_{REF} x Altitude adjustment factor B_A x Ambient air velocity adjustment factor B_V x Duty cycle adjustment factor B_D Ex.. DCR70, 7.59:1 ratio, selected with a 150 horsepower motor. 100°F maximum ambient temperature, 1500' elevation, moderate airflow (>100 FPM - ≥250 FPM), 100% duty cycle. Thermal rating without fan is below motor horsepower (83), so it will not work. Thermal rating with shaft fan is below motor horsepower (135), so it will not work. Thermal rating with electric fan is above motor horsepower (240), so we start there. $240 \times .86 \times 1.00 \times 1.00 \times 1.00 = 206$, so we need an electric fan for this application.

Method 2

Minimum required thermal horsepower = Motor nameplate horsepower rating ÷ Ambient temperature adjustment factor B_{REF} ÷ Altitude adjustment factor B_A ÷ Ambient air velocity adjustment factor B_V ÷ Duty cycle adjustment factor B_D Ex.. DCR70, 7.59:1 ratio, selected with a 150 horsepower motor. 100°F maximum ambient temperature, 1500' elevation, moderate airflow (>100 FPM - ≥250 FPM), 100% duty cycle. Motor horsepower = $150 \div .86 \div 1.00 \div 1.00 = 175$. So we need a minimum thermal rating of 175 for this. No fan is 83, won't work, shaft fan is 135, won't work. Electric fan is 240, it will work. So we need an electric fan for this application.

Ambient temperature adjustment factor

Ambient temperature (°F)	B_{REF}
50	1.19
60	1.13
70	1.07
80	1.00
90	0.93
100	0.86
110	0.78
120	0.69

Altitude adjustment factor

Altitude (ft.)	B_A
0 – sea level	1.00
2500	0.95
5000	0.90
7500	0.85
10000	0.81
12500	0.76
15000	0.72
17500	0.68

Ambient air velocity adjustment factor

Air velocity (FPM)	B_V
≤ 100	0.75
> 100 and ≤ 275	1.00
> 275 and < 725	1.40
≥ 725	1.90

Duty cycle adjustment factor

Operation time per hour	B_D
100% (continuous)	1.00
80% (48 minutes per hour)	1.05
60% (36 minutes per hour)	1.15
40% (24 minutes per hour)	1.35
20% (12 minutes per hour)	1.80

Engineering

1750, 1430 RPM input – thermal horsepower ratings * †

High speed shaft RPM	AGMA nominal ratio	Without shaft fan									With shaft fan								
		50	60	70	80	90	100	110	120	130	50	60	70	80	90	100	110	120	130
1750	2.25	63	76	88	-	-	-	-	-	-	121	147	175	-	-	-	-	-	-
	2.75	64	79	91	-	-	-	-	-	-	122	163	180	-	-	-	-	-	-
	3.37	65	80	92	-	-	-	-	-	-	120	170	213	-	-	-	-	-	-
	4.13	64	79	91	-	-	-	-	-	-	112	149	169	-	-	-	-	-	-
	5.06	54	55	86	115	140	163	-	-	-	107	114	150	220	395	540	-	-	-
	6.20	53	62	84	110	138	157	-	-	-	101	112	147	214	380	538	-	-	-
	7.59	51	60	83	108	132	148	-	-	-	95	110	135	206	375	519	-	-	-
	9.30	49	57	81	105	130	140	162	-	-	91	108	133	194	368	505	685	-	-
	11.39	47	55	77	100	110	125	158	184	231	84	105	130	183	362	495	670	930	967
	13.95	46	52	72	96	100	110	152	181	225	79	102	125	171	350	483	630	863	907
	17.09	45	49	66	89	95	100	145	173	221	72	95	122	156	320	474	582	835	875
	20.93	43	47	61	80	91	95	138	169	208	65	87	117	143	285	448	563	806	867
	25.63	42	46	58	74	83	86	131	154	192	60	82	106	132	279	410	542	777	862
	31.39	40	45	56	72	75	82	126	149	189	53	80	99	129	275	401	538	759	860
	38.44	31	40	54	69	93	134	143	178	190	‡	‡	‡	‡	185	223	260	414	421
	47.08	29	38	51	62	87	124	136	166	181	‡	‡	‡	‡	173	206	251	378	417
	57.67	28	34	46	58	82	117	130	157	174	‡	‡	‡	‡	159	198	248	363	413
	70.62	26	32	43	53	78	110	125	150	168	‡	‡	‡	‡	145	192	245	347	401
	86.50	33	42	59	70	81	120	134	156	172	‡	‡	‡	‡	167	211	269	395	435
	105.9	30	39	54	65	71	95	119	142	167	‡	‡	‡	‡	140	173	226	342	380
	129.7	26	35	50	61	66	85	112	136	164	‡	‡	‡	‡	128	162	216	301	361
	158.9	23	33	45	56	61	79	109	130	160	‡	‡	‡	‡	115	158	199	284	347
	194.6	21	30	42	52	57	72	107	125	155	‡	‡	‡	‡	107	143	190	273	320
1430	2.25	60	69	79	-	-	-	-	-	-	131	149	170	-	-	-	-	-	-
	2.75	66	81	97	-	-	-	-	-	-	139	174	214	-	-	-	-	-	-
	3.37	71	88	104	-	-	-	-	-	-	149	185	210	-	-	-	-	-	-
	4.13	62	72	83	-	-	-	-	-	-	113	143	166	-	-	-	-	-	-
	5.06	53	65	93	124	136	-	-	-	-	95	124	145	213	362	490	-	-	-
	6.20	52	63	89	120	132	152	-	-	-	93	120	132	206	349	481	-	-	-
	7.59	50	62	86	117	130	148	-	-	-	92	118	130	172	338	471	-	-	-
	9.30	49	58	83	113	125	142	171	-	-	87	111	126	165	331	467	625	-	-
	11.39	47	57	78	107	121	130	165	215	249	78	103	124	160	328	460	620	854	912
	13.95	45	54	72	99	119	125	148	206	243	73	96	134	168	316	431	594	821	887
	17.09	42	49	67	91	110	122	126	172	212	68	86	124	153	296	402	568	786	862
	20.93	40	45	59	84	99	108	110	143	171	62	79	113	139	280	380	542	753	837
	25.63	38	41	54	75	89	94	100	125	164	55	73	103	129	265	365	516	719	812
	31.39	37	40	50	68	76	80	88	122	156	48	66	95	118	252	355	490	685	787
	38.44	32	39	54	69	85	113	139	193	192	‡	‡	‡	‡	191	222	242	417	390
	47.08	29	37	50	62	78	106	133	179	182	‡	‡	‡	‡	175	206	225	378	372
	57.67	27	33	46	58	72	98	127	166	171	‡	‡	‡	‡	161	187	215	346	365
	70.62	24	31	43	54	66	91	119	152	162	‡	‡	‡	‡	148	171	197	321	361
	86.50	32	41	58	71	77	107	129	162	178	‡	‡	‡	‡	177	210	268	390	436
	105.9	29	38	53	65	70	98	121	157	165	‡	‡	‡	‡	163	189	249	356	406
	129.7	25	35	49	61	66	91	113	148	154	‡	‡	‡	‡	150	174	230	314	379
	158.9	22	32	44	58	61	89	108	142	144	‡	‡	‡	‡	146	165	214	359	349
	194.6	20	29	41	52	57	84	98	125	131	‡	‡	‡	‡	139	156	192	317	324

* Actual horsepower, without service factor, that reducer will transmit continuously without overheating.

† Thermal ratings are for an 80 degree Fahrenheit ambient temperature and below 2500 feet altitude. Refer to tables on page 73 for application adjustment factors.

‡ Shaft fans not available due to limited shaft length.

Engineering

1750, 1430 RPM input – thermal horsepower ratings * †

High speed shaft RPM	AGMA nominal ratio	With electric fan								
		50	60	70	80	90	100	110	120	130
1750	2.25	180	211	239	-	-	-	-	-	-
	2.75	184	215	245	-	-	-	-	-	-
	3.37	185	218	258	-	-	-	-	-	-
	4.13	170	201	225	-	-	-	-	-	-
	5.06	160	163	255	341	476	603	-	-	-
	6.20	155	181	246	322	462	575	-	-	-
	7.59	147	173	240	313	436	536	-	-	-
	9.30	139	163	232	301	423	555	754	-	-
	11.39	132	155	217	283	398	546	710	1023	1064
	13.95	128	145	201	268	385	524	693	949	998
	17.09	123	135	182	246	352	521	640	919	963
	20.93	116	127	166	218	314	493	619	887	954
	25.63	112	114	153	199	307	451	596	855	948
	31.39	105	113	146	181	303	441	592	835	946
	38.44	80	104	141	176	270	444	493	631	689
	47.08	74	98	132	161	248	406	463	581	648
	57.67	71	74	117	149	230	378	433	543	604
	70.62	65	73	108	134	215	351	401	512	565
	86.50	88	111	154	182	227	388	448	536	602
	105.9	80	102	139	167	196	305	394	483	578
129.7	69	91	128	155	179	271	366	457	560	
158.9	61	85	114	141	163	249	352	431	539	
194.6	55	77	105	130	150	225	341	410	515	
1430	2.25	195	239	275	-	-	-	-	-	-
	2.75	209	271	342	-	-	-	-	-	-
	3.37	229	288	335	-	-	-	-	-	-
	4.13	172	223	265	-	-	-	-	-	-
	5.06	142	195	231	320	424	580	-	-	-
	6.20	142	189	210	309	409	569	-	-	-
	7.59	142	186	207	258	396	557	-	-	-
	9.30	133	175	201	248	388	553	739	-	-
	11.39	123	162	198	240	384	544	733	1018	1169
	13.95	118	145	205	246	364	499	687	951	1091
	17.09	116	130	190	224	341	466	657	911	1060
	20.93	111	119	173	203	323	440	627	872	1029
	25.63	103	110	158	189	306	423	597	833	999
	31.39	95	100	146	173	291	411	567	794	968
	38.44	83	102	141	181	276	321	370	641	648
	47.08	74	95	129	161	253	298	343	582	618
	57.67	68	72	117	149	233	271	328	532	607
	70.62	60	71	108	136	214	247	301	494	600
	86.50	78	101	144	177	256	304	409	600	725
	105.9	70	92	130	160	231	268	381	530	650
129.7	59	84	118	148	213	247	353	468	607	
158.9	51	75	104	139	207	234	329	534	558	
194.6	46	67	96	123	197	221	295	472	518	

* Actual horsepower, without service factor, that reducer will transmit continuously without overheating.

† Thermal ratings are for an 80 degree Fahrenheit ambient temperature and below 2500 feet altitude. Refer to tables on page 73 for application adjustment factors.

Engineering

1170, 870 RPM input – thermal horsepower ratings * †

High speed shaft RPM	AGMA nominal ratio	Without shaft fan									With shaft fan								
		50	60	70	80	90	100	110	120	130	50	60	70	80	90	100	110	120	130
1170	2.25	68	83	106	-	-	-	-	-	-	108	139	170	-	-	-	-	-	-
	2.75	74	93	116	-	-	-	-	-	-	108	139	185	-	-	-	-	-	-
	3.37	78	96	122	-	-	-	-	-	-	105	137	188	-	-	-	-	-	-
	4.13	70	88	109	-	-	-	-	-	-	84	135	158	-	-	-	-	-	-
	5.06	56	67	91	127	150	182	-	-	-	76	101	137	170	327	451	-	-	-
	6.20	54	64	89	124	149	179	-	-	-	72	99	134	164	325	447	-	-	-
	7.59	52	62	87	119	148	175	-	-	-	71	98	130	159	316	429	-	-	-
	9.30	51	59	83	113	145	172	193	-	-	67	96	124	150	302	427	579	-	-
	11.39	50	55	77	107	140	169	184	193	195	61	93	115	145	296	412	569	790	859
	13.95	47	50	70	98	120	137	148	174	184	57	76	104	129	288	407	541	754	827
	17.09	43	44	63	90	102	119	132	163	169	53	67	95	118	273	387	514	719	795
	20.93	40	41	57	82	92	105	120	138	147	47	62	86	108	257	366	488	683	763
	25.63	39	40	53	74	83	94	110	125	142	43	60	80	100	242	346	461	648	731
	31.39	37	39	49	66	78	88	98	120	134	40	59	74	91	227	325	435	612	699
	38.44	28	38	54	69	80	118	130	175	192	‡	‡	‡	‡	190	220	241	410	391
	47.08	27	36	50	63	74	112	123	163	183	‡	‡	‡	‡	174	205	224	376	366
	57.67	26	32	46	59	68	104	115	151	178	‡	‡	‡	‡	161	185	204	343	337
	70.62	25	30	43	54	65	98	107	140	175	‡	‡	‡	‡	148	170	193	303	325
	86.50	31	40	57	72	78	91	119	159	182	‡	‡	‡	‡	175	206	264	383	432
105.9	28	37	52	66	71	78	112	144	167	‡	‡	‡	‡	161	187	245	350	401	
129.7	24	34	48	60	67	72	104	135	155	‡	‡	‡	‡	149	172	226	309	375	
158.9	22	31	44	55	62	69	98	130	146	‡	‡	‡	‡	145	168	210	352	345	
194.6	19	28	41	51	56	67	92	124	142	‡	‡	‡	‡	138	163	190	311	323	
870	2.25	73	91	114	-	-	-	-	-	-	109	136	186	-	-	-	-	-	-
	2.75	70	92	116	-	-	-	-	-	-	105	138	189	-	-	-	-	-	-
	3.37	67	89	115	-	-	-	-	-	-	100	133	187	-	-	-	-	-	-
	4.13	54	70	96	-	-	-	-	-	-	80	118	144	-	-	-	-	-	-
	5.06	58	64	88	127	150	185	-	-	-	70	92	130	163	297	438	-	-	-
	6.20	56	62	83	123	149	184	-	-	-	66	90	125	157	285	426	-	-	-
	7.59	55	61	80	117	145	183	-	-	-	64	88	120	149	278	415	-	-	-
	9.30	54	59	77	110	140	182	205	-	-	59	87	113	139	273	403	510	-	-
	11.39	53	58	75	103	135	175	200	250	279	57	85	105	131	245	369	498	697	771
	13.95	45	49	67	85	118	140	150	160	180	50	69	93	120	198	310	448	665	739
	17.09	41	43	60	77	101	128	143	149	170	47	62	85	108	172	289	399	627	700
	20.93	38	39	52	74	90	114	131	144	160	42	58	73	99	163	233	351	590	679
	25.63	37	38	51	71	88	112	128	142	148	40	55	72	90	155	192	300	555	635
	31.39	36	37	47	63	86	110	132	138	140	39	54	66	85	148	189	251	520	600
	38.44	27	38	53	70	81	112	130	175	202	‡	‡	‡	‡	188	212	234	396	382
	47.08	25	35	49	63	74	107	122	163	192	‡	‡	‡	‡	170	198	216	365	361
	57.67	23	31	45	59	68	99	116	151	180	‡	‡	‡	‡	157	180	201	334	332
	70.62	22	29	42	55	63	94	109	147	174	‡	‡	‡	‡	146	166	182	294	317
	86.50	30	39	56	72	79	87	118	156	182	‡	‡	‡	‡	171	199	255	370	418
105.9	27	36	51	66	72	78	98	138	164	‡	‡	‡	‡	158	181	235	338	390	
129.7	23	33	47	60	67	72	90	130	153	‡	‡	‡	‡	147	167	219	298	366	
158.9	21	30	43	54	62	67	85	122	141	‡	‡	‡	‡	144	163	204	339	336	
194.6	18	27	40	51	57	62	82	117	135	‡	‡	‡	‡	137	158	184	298	322	

* Actual horsepower, without service factor, that reducer will transmit continuously without overheating.
† Thermal ratings are for an 80 degree Fahrenheit ambient temperature and below 2500 feet altitude. Refer to tables on page 73 for application adjustment factors.
‡ Shaft fans not available due to limited shaft length.

Engineering

1170, 870 RPM input – thermal horsepower ratings * †

High speed shaft RPM	AGMA nominal ratio	With electric fan								
		50	60	70	80	90	100	110	120	130
1170	2.25	160	223	275	-	-	-	-	-	-
	2.75	163	217	295	-	-	-	-	-	-
	3.37	162	213	300	-	-	-	-	-	-
	4.13	128	210	252	-	-	-	-	-	-
	5.06	113	159	218	255	383	534	-	-	-
	6.20	110	156	214	246	381	529	-	-	-
	7.59	110	154	207	239	370	508	-	-	-
	9.30	103	151	198	225	354	505	685	-	-
	11.39	96	146	183	218	347	488	673	942	1102
	13.95	92	115	159	189	332	472	626	874	1017
	17.09	91	101	146	173	315	448	594	833	978
	20.93	84	94	132	158	296	424	564	791	938
	25.63	80	91	123	146	279	401	533	751	899
	31.39	79	89	113	133	262	377	503	709	860
	38.44	73	99	141	181	275	318	367	630	650
	47.08	69	92	129	163	252	297	342	578	608
	57.67	65	70	117	151	233	268	312	528	560
	70.62	62	68	108	136	214	246	295	466	540
	86.50	76	98	141	180	253	298	402	589	718
	105.9	67	90	127	162	228	265	376	521	641
129.7	57	81	116	146	211	244	347	460	600	
158.9	51	73	104	132	206	238	322	524	553	
194.6	44	65	96	120	196	231	291	463	517	
870	2.25	162	218	301	-	-	-	-	-	-
	2.75	158	215	302	-	-	-	-	-	-
	3.37	154	207	299	-	-	-	-	-	-
	4.13	122	184	230	-	-	-	-	-	-
	5.06	104	145	207	245	348	518	-	-	-
	6.20	101	142	199	236	334	504	-	-	-
	7.59	99	139	191	224	326	491	-	-	-
	9.30	90	137	180	209	320	477	603	-	-
	11.39	90	134	167	197	287	437	589	831	989
	13.95	81	104	143	176	228	359	518	770	909
	17.09	80	94	130	158	198	335	461	726	861
	20.93	75	88	112	145	188	270	406	684	835
	25.63	75	83	110	132	179	222	347	643	781
	31.39	77	82	101	124	171	219	290	602	738
	38.44	70	99	139	184	272	307	357	610	636
	47.08	64	90	127	163	246	286	330	562	601
	57.67	58	67	115	151	227	260	307	514	551
	70.62	55	66	106	139	211	240	277	453	528
	86.50	73	96	139	180	247	288	389	569	696
	105.9	65	87	125	162	224	257	361	503	624
129.7	55	79	113	146	208	237	335	443	586	
158.9	49	71	102	129	204	231	312	505	538	
194.6	41	63	94	120	194	224	283	444	515	

* Actual horsepower, without service factor, that reducer will transmit continuously without overheating.

† Thermal ratings are for an 80 degree Fahrenheit ambient temperature and below 2500 feet altitude. Refer to tables on page 73 for application adjustment factors.

Engineering

720, 580 RPM input – thermal horsepower ratings * †

High speed shaft RPM	AGMA nominal ratio	Without shaft fan									With shaft fan								
		50	60	70	80	90	100	110	120	130	50	60	70	80	90	100	110	120	130
720	2.25	74	94	129	-	-	-	-	-	-	111	141	193	-	-	-	-	-	-
	2.75	70	92	128	-	-	-	-	-	-	105	138	192	-	-	-	-	-	-
	3.37	66	89	125	-	-	-	-	-	-	99	133	187	-	-	-	-	-	-
	4.13	60	69	95	-	-	-	-	-	-	80	104	143	-	-	-	-	-	-
	5.06	57	66	92	123	155	200	-	-	-	69	93	129	160	260	400	-	-	-
	6.20	56	62	88	121	148	198	-	-	-	64	87	123	153	257	385	-	-	-
	7.59	54	59	83	114	145	194	-	-	-	62	83	116	144	255	371	-	-	-
	9.30	52	57	78	107	141	180	235	-	-	58	77	109	136	252	365	462	-	-
	11.39	51	54	72	100	138	175	210	271	301	54	73	100	127	249	353	441	652	717
	13.95	49	52	63	91	125	158	180	205	220	52	68	89	116	240	321	419	600	662
	17.09	47	49	58	84	115	135	171	192	203	50	59	82	106	210	290	380	560	614
	20.93	44	47	53	76	105	126	161	183	192	47	54	75	97	187	250	333	509	592
	25.63	42	44	49	69	95	122	150	170	177	45	51	69	87	160	223	290	461	561
	31.39	40	42	45	61	91	115	148	159	166	43	48	65	80	143	190	248	413	536
	38.44	29	37	52	70	81	113	138	195	202	‡	‡	‡	‡	182	205	227	389	378
	47.08	27	34	48	64	74	108	131	181	191	‡	‡	‡	‡	167	193	212	356	354
	57.67	25	30	44	60	68	99	125	170	179	‡	‡	‡	‡	154	176	197	326	326
	70.62	23	28	41	55	63	93	117	155	171	‡	‡	‡	‡	140	163	178	288	305
	86.50	30	38	55	72	80	87	117	155	180	‡	‡	‡	‡	167	194	247	359	409
	105.9	26	35	50	67	72	78	96	139	162	‡	‡	‡	‡	155	177	228	328	382
	129.7	22	32	46	60	67	73	90	132	152	‡	‡	‡	‡	140	163	213	290	358
	158.9	20	29	42	53	62	68	83	126	139	‡	‡	‡	‡	135	157	198	329	329
	194.6	17	26	39	50	57	62	79	117	130	‡	‡	‡	‡	130	152	179	290	308
580	2.25	74	94	131	-	-	-	-	-	-	111	141	197	-	-	-	-	-	-
	2.75	69	92	128	-	-	-	-	-	-	104	138	192	-	-	-	-	-	-
	3.37	64	87	122	-	-	-	-	-	-	96	130	183	-	-	-	-	-	-
	4.13	56	67	93	-	-	-	-	-	-	79	101	140	-	-	-	-	-	-
	5.06	55	56	90	126	151	195	-	-	-	66	72	126	160	249	331	-	-	-
	6.20	52	55	84	116	147	190	-	-	-	62	68	117	151	241	328	-	-	-
	7.59	51	53	80	110	144	180	-	-	-	59	65	110	142	235	323	-	-	-
	9.30	50	52	78	107	142	175	245	-	-	55	64	92	133	233	321	440	-	-
	11.39	49	50	75	96	130	165	214	298	340	53	62	81	120	220	315	413	582	653
	13.95	43	44	60	88	117	152	186	256	275	47	65	85	117	189	285	368	522	582
	17.09	40	42	56	80	115	145	169	221	230	44	58	79	104	168	268	339	464	511
	20.93	39	40	50	73	103	143	159	201	211	42	55	70	93	145	239	316	406	440
	25.63	37	38	47	66	94	134	151	184	201	39	48	66	86	128	214	275	348	369
	31.39	36	37	46	58	91	132	146	179	193	38	45	63	78	124	189	245	290	298
	38.44	25	36	51	70	81	103	124	178	198	‡	‡	‡	‡	177	198	219	372	367
	47.08	23	33	47	65	75	99	118	167	188	‡	‡	‡	‡	163	187	204	343	344
	57.67	20	29	43	60	68	89	112	155	177	‡	‡	‡	‡	151	170	190	314	316
	70.62	18	27	40	55	63	83	104	141	168	‡	‡	‡	‡	140	157	172	277	296
	86.50	29	37	54	71	80	87	99	136	170	‡	‡	‡	‡	163	187	236	345	396
	105.9	25	35	49	66	72	78	92	127	158	‡	‡	‡	‡	151	170	220	315	370
	129.7	22	31	45	61	68	74	86	119	147	‡	‡	‡	‡	141	163	205	278	346
	158.9	19	28	41	54	62	68	80	115	136	‡	‡	‡	‡	136	155	191	316	318
	194.6	16	25	38	50	58	63	72	110	127	‡	‡	‡	‡	131	151	173	279	298

* Actual horsepower, without service factor, that reducer will transmit continuously without overheating.

† Thermal ratings are for an 80 degree Fahrenheit ambient temperature and below 2500 feet altitude. Refer to tables on page 73 for application adjustment factors.

‡ Shaft fans not available due to limited shaft length.

Engineering

720, 580 RPM input – thermal horsepower ratings * †

High speed shaft RPM	AGMA nominal ratio	With electric fan								
		50	60	70	80	90	100	110	120	130
720	2.25	165	226	312	-	-	-	-	-	-
	2.75	158	215	307	-	-	-	-	-	-
	3.37	152	207	299	-	-	-	-	-	-
	4.13	122	162	228	-	-	-	-	-	-
	5.06	103	146	206	240	305	473	-	-	-
	6.20	98	137	196	230	301	456	-	-	-
	7.59	96	131	185	216	299	439	-	-	-
	9.30	89	121	174	204	295	432	547	-	-
	11.39	85	115	159	191	292	418	522	778	919
	13.95	84	103	136	170	277	372	485	695	814
	17.09	86	89	126	155	242	336	439	649	755
	20.93	84	82	115	142	216	290	385	590	728
	25.63	84	77	106	127	184	258	335	534	690
	31.39	85	72	100	117	165	220	287	478	659
	38.44	75	96	136	184	263	297	347	598	629
	47.08	69	87	124	166	242	279	323	548	589
	57.67	63	65	112	154	223	255	300	502	543
	70.62	57	64	103	139	203	236	272	443	507
	86.50	73	94	136	180	242	281	377	552	679
	105.9	63	85	122	165	220	251	350	488	611
129.7	52	77	111	146	198	231	327	431	573	
158.9	47	68	100	127	191	223	304	489	527	
194.6	39	60	91	118	184	216	275	432	494	
580	2.25	165	226	319	-	-	-	-	-	-
	2.75	157	215	307	-	-	-	-	-	-
	3.37	148	203	292	-	-	-	-	-	-
	4.13	120	157	224	-	-	-	-	-	-
	5.06	98	113	201	240	292	392	-	-	-
	6.20	95	107	186	227	282	388	-	-	-
	7.59	91	102	175	213	275	382	-	-	-
	9.30	84	101	147	200	273	380	521	-	-
	11.39	83	98	129	180	258	373	489	694	837
	13.95	76	98	130	171	218	330	426	605	716
	17.09	75	88	121	152	194	311	392	538	628
	20.93	75	83	107	136	167	277	365	470	541
	25.63	73	72	101	126	148	248	318	403	454
	31.39	75	68	97	114	143	219	283	336	366
	38.44	65	94	133	184	256	286	335	573	611
	47.08	59	85	121	169	236	271	312	528	572
	57.67	50	63	110	154	218	246	289	484	526
	70.62	45	62	101	139	203	227	262	427	492
	86.50	71	91	134	177	236	271	361	531	658
	105.9	60	85	120	162	214	241	338	469	593
129.7	52	74	108	148	200	231	315	414	554	
158.9	44	66	97	129	193	220	293	471	510	
194.6	37	58	89	118	186	214	265	415	387	

* Actual horsepower, without service factor, that reducer will transmit continuously without overheating.

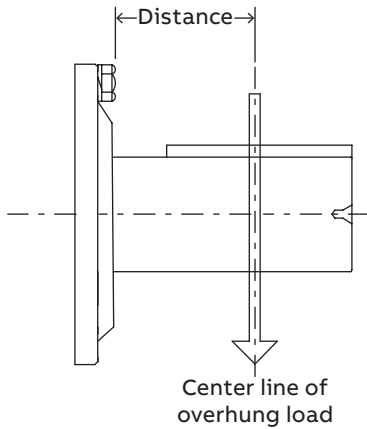
† Thermal ratings are for an 80 degree Fahrenheit ambient temperature and below 2500 feet altitude. Refer to tables on page 73 for application adjustment factors.

Engineering

High speed / input shaft overhung load factors and capacities

Overhung load calculation

Overhung load can be calculated based on the formula below. For applications where load is proportional to torque (i.e., sheave, sprocket, pinion) an equivalent power (motor power * s.f.) should be used in the calculation.



$$\text{OHL (lbs.)} = \frac{126,000 \times \text{Hp} \times \text{Fc}}{\text{PD (inches)} \times \text{RPM}}$$

$$\text{OHL (N)} = \frac{19,100,000 \times \text{kW} \times \text{Fe} \times \text{Lf}}{\text{PD (mm)} \times \text{RPM}}$$

Where:

OHL = Overhung load

Hp = Horsepower

kW = Kilowatts

Fe = Load connection factor

Lf = Load location factor

PD = Pitch diameter of item mounted on shaft

RPM = Revolutions per minute

Load connection factors - Fc

Drive type	Fc
Roller chain sprocket	1
Machined pinion or gear	1.25
Synchronous belt	1.3
V-belt	1.5
V-ribbed belt	1.7
Flat belt	2.5

Load location factors for DCR high speed shafts *

Distance		Reducer size								
(inches)	mm	50	60	70	80	90	100	110	120	130
0.50	13	0.81	0.79	0.77	0.77	0.76	0.76	0.77	0.73	0.71
0.75	19	0.85	0.83	0.81	0.80	0.79	0.79	0.79	0.75	0.73
1.00	25	0.90	0.86	0.84	0.83	0.82	0.82	0.81	0.77	0.75
1.25	32	0.94	0.90	0.87	0.86	0.85	0.84	0.84	0.80	0.77
1.50	38	0.99	0.94	0.91	0.89	0.88	0.87	0.86	0.82	0.79
1.75	44	1.05	0.98	0.94	0.94	0.91	0.89	0.89	0.84	0.81
2.00	51	1.12	1.03	0.98	1.00	0.93	0.92	0.91	0.86	0.83
2.25	57	1.20	1.10	1.02	1.07	0.96	0.95	0.93	0.88	0.86
2.50	64	1.27	1.17	1.08	1.13	0.99	0.97	0.96	0.91	0.88
2.75	70	1.34	1.24	1.13	1.19	1.04	1.00	0.98	0.93	0.90
3.00	76	1.42	1.31	1.19	1.25	1.09	1.05	1.01	0.95	0.92
3.25	83	1.49	1.38	1.25	1.32	1.14	1.09	1.05	0.97	0.94
3.50	89	-	1.45	1.30	1.38	1.19	1.14	1.10	1.00	0.96
3.75	95	-	1.52	1.36	1.44	1.24	1.19	1.14	1.03	0.98
4.00	102	-	-	1.42	1.50	1.29	1.23	1.19	1.07	1.01
4.25	108	-	-	1.48	1.57	1.34	1.28	1.23	1.11	1.04
4.50	114	-	-	-	1.63	1.39	1.33	1.28	1.15	1.07
4.75	121	-	-	-	-	1.44	1.37	1.32	1.19	1.10
5.00	127	-	-	-	-	1.49	1.42	1.37	1.22	1.13
5.25	133	-	-	-	-	-	1.47	1.41	1.26	1.16
5.50	140	-	-	-	-	-	1.51	1.45	1.30	1.19
5.75	146	-	-	-	-	-	-	1.50	1.34	1.22
6.00	152	-	-	-	-	-	-	1.54	1.38	1.26
6.25	159	-	-	-	-	-	-	-	1.42	1.29
6.50	165	-	-	-	-	-	-	-	1.46	1.32
6.75	171	-	-	-	-	-	-	-	-	1.35
7.00	178	-	-	-	-	-	-	-	-	1.38

* Interpolate for intermediate values

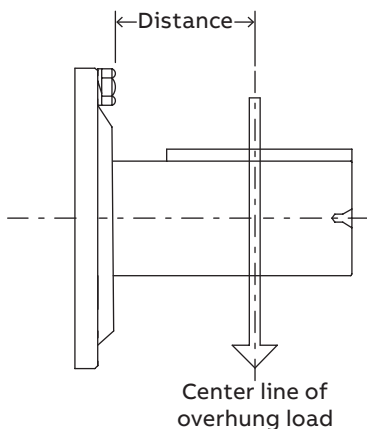
Engineering

High speed / input shaft overhung load factors and capacities

Features

Specifications

Selection



$$\text{OHL (lbs.)} = \frac{126,000 \times \text{Hp} \times \text{Fc} \times \text{Lf}}{\text{PD (inches)} \times \text{RPM}}$$

$$\text{OHL (N)} = \frac{19,100,000 \times \text{kW} \times \text{Fe} \times \text{Lf}}{\text{PD (mm)} \times \text{RPM}}$$

Where:

OHL = Overhung load

Hp = Horsepower

kW = Kilowatts

Fe = Load connection factor

Lf = Load location factor

PD = Pitch diameter of item mounted on shaft

RPM = Revolutions per minute

Load connection factors - Fc

Drive type	Fc
Roller chain sprocket	1
Machined pinion or gear	1.25
Synchronous belt	1.3
V-belt	1.5
V-ribbed belt	1.7
Flat belt	2.5

Load location factors for DCR high speed shafts *

Distance		Reducer size								
(inches)	mm	50	60	70	80	90	100	110	120	130
0.50	13	0.81	0.79	0.77	0.77	0.76	0.76	0.77	0.73	0.71
0.75	19	0.85	0.83	0.81	0.80	0.79	0.79	0.79	0.75	0.73
1.00	25	0.90	0.86	0.84	0.83	0.82	0.82	0.81	0.77	0.75
1.25	32	0.94	0.90	0.87	0.86	0.85	0.84	0.84	0.80	0.77
1.50	38	0.99	0.94	0.91	0.89	0.88	0.87	0.86	0.82	0.79
1.75	44	1.05	0.98	0.94	0.94	0.91	0.89	0.89	0.84	0.81
2.00	51	1.12	1.03	0.98	1.00	0.93	0.92	0.91	0.86	0.83
2.25	57	1.20	1.10	1.02	1.07	0.96	0.95	0.93	0.88	0.86
2.50	64	1.27	1.17	1.08	1.13	0.99	0.97	0.96	0.91	0.88
2.75	70	1.34	1.24	1.13	1.19	1.04	1.00	0.98	0.93	0.90
3.00	76	1.42	1.31	1.19	1.25	1.09	1.05	1.01	0.95	0.92
3.25	83	1.49	1.38	1.25	1.32	1.14	1.09	1.05	0.97	0.94
3.50	89	-	1.45	1.30	1.38	1.19	1.14	1.10	1.00	0.96
3.75	95	-	1.52	1.36	1.44	1.24	1.19	1.14	1.03	0.98
4.00	102	-	-	1.42	1.50	1.29	1.23	1.19	1.07	1.01
4.25	108	-	-	1.48	1.57	1.34	1.28	1.23	1.11	1.04
4.50	114	-	-	-	1.63	1.39	1.33	1.28	1.15	1.07
4.75	121	-	-	-	-	1.44	1.37	1.32	1.19	1.10
5.00	127	-	-	-	-	1.49	1.42	1.37	1.22	1.13
5.25	133	-	-	-	-	-	1.47	1.41	1.26	1.16
5.50	140	-	-	-	-	-	1.51	1.45	1.30	1.19
5.75	146	-	-	-	-	-	-	1.50	1.34	1.22
6.00	152	-	-	-	-	-	-	1.54	1.38	1.26
6.25	159	-	-	-	-	-	-	-	1.42	1.29
6.50	165	-	-	-	-	-	-	-	1.46	1.32
6.75	171	-	-	-	-	-	-	-	-	1.35
7.00	178	-	-	-	-	-	-	-	-	1.38

* Interpolate for intermediate values

Dimensions

Accessories

Engineering

Engineering

1750, 1430, 1170 input – overhung load capacity *

High speed shaft RPM	AGMA nominal ratio	Approx. low speed shaft RPM	Unit reduction	Overhung load capacity (lbs.)								
				Maxum XTR reducer size								
				50	60	70	80	90	100	110	120	130
1750	5.06	345.8	Double	43	59	48	0	0	30	-	-	-
	6.20	282.3		74	78	115	0	0	125	-	-	-
	7.59	230.6		143	214	285	0	0	236	-	-	-
	9.30	188.2		152	253	460	118	0	409	1500	-	-
	11.39	153.6		198	312	710	480	80	712	1500	0	1400
	13.95	125.4		278	300	800	775	550	1042	1500	0	1750
	17.09	102.4		313	300	800	925	900	1311	1500	200	1750
	20.93	83.6		429	300	800	1050	940	1400	1500	500	1750
	25.63	68.3		477	300	800	1050	1250	1400	1500	575	1750
	31.39	55.8		532	300	800	1050	1250	1400	1500	1385	1750
	38.44	45.5	Triple	300	150	400	300	483	285	463	900	1000
	47.08	37.2		300	150	400	580	512	501	800	900	1000
	57.67	30.3		300	150	400	580	516	513	800	900	1000
	70.62	24.8		300	200	400	580	519	700	800	900	1000
	86.50	20.2		300	200	400	580	620	700	800	900	1000
	105.9	16.5		300	250	551	580	620	700	800	900	1000
	129.7	13.5		300	250	563	580	620	700	800	900	1000
	158.9	11.0		300	250	570	580	620	700	800	900	1000
	194.6	9.0		300	325	579	580	620	700	800	900	1000
1430	5.06	282.6	Double	50	80	50	0	0	112	-	-	-
	6.20	282.3		100	120	286	0	0	356	-	-	-
	7.59	230.6		125	210	553	275	0	486	-	-	-
	9.30	188.2		150	300	750	450	150	623	1500	-	-
	11.39	153.6		300	350	800	750	450	1100	1500	0	1750
	13.95	125.4		350	400	800	1050	950	1400	1500	250	1750
	17.09	102.4		400	400	525	1050	1250	1400	1500	730	1750
	20.93	83.6		500	400	600	1050	1250	1400	1500	1000	1750
	25.63	68.3		500	400	710	1050	1250	1400	1500	1000	1750
	31.39	55.8		500	400	750	1050	1250	1400	1500	1500	1750
	38.44	45.5	Triple	300	180	420	340	620	300	800	900	1000
	47.08	37.2		300	180	500	580	620	670	800	900	1000
	57.67	30.4		300	220	530	580	620	700	800	900	1000
	70.62	24.8		300	220	530	580	620	700	800	900	1000
	86.50	20.2		300	220	530	580	620	700	800	900	1000
	105.9	16.5		300	300	530	580	620	700	800	900	1000
	129.7	13.5		300	300	530	580	620	700	800	900	1000
	158.9	11.0		300	300	530	580	620	700	800	900	1000
	194.6	9.0		300	340	530	580	620	700	800	900	1000
1170	5.06	231.2	Double	250	46	400	0	0	875	-	-	-
	6.20	188.7		250	93	660	503	0	1400	-	-	-
	7.59	154.2		500	146	800	564	0	1400	-	-	-
	9.30	125.8		500	308	800	633	525	1400	1438	-	-
	11.39	102.7		500	593	800	1050	900	1400	1500	375	1750
	13.95	83.9		500	600	800	1050	1250	1400	1500	800	1750
	17.09	68.5		500	600	800	1050	1250	1400	1500	1300	1750
	20.93	55.9		500	600	800	1050	1250	1400	1500	1500	1750
	25.63	45.6		500	600	800	1050	1250	1400	1500	1500	1750
	31.39	37.3		500	600	800	1050	1250	1400	1500	1500	1750
	38.44	30.4	Triple	300	400	483	340	620	300	800	900	1000
	47.08	24.9		300	400	530	580	620	650	800	900	1000
	57.67	20.3		300	400	530	580	620	700	800	900	1000
	70.62	16.6		300	400	530	580	620	700	800	900	1000
	86.50	13.5		300	400	530	580	620	700	800	900	1000
	105.9	11.0		300	400	530	580	620	700	800	900	1000
	129.7	9.0		300	345	530	580	620	700	800	900	1000
	158.9	7.4		300	300	530	580	620	700	800	900	1000
	194.6	6.0		300	300	530	580	620	700	800	900	1000

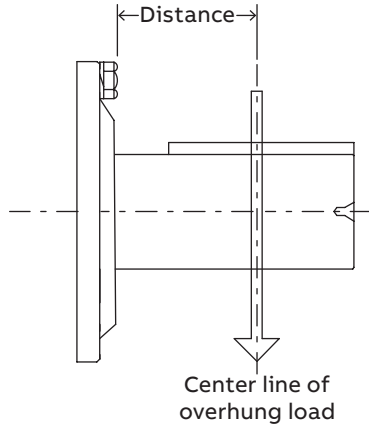
* Overhung load ratings are for pure radial loads applied one shaft diameter away from the seal carrier and a service factor of 1.0. If overhung load is proportional to torque (i.e., sheave, sprocket, pinion) an appropriate service factor should be applied (refer to OHL calculation on pages 80-81). Consult Baldor if application has combined radial and thrust loads.

Engineering

Low speed/output shaft overhung load factor and capacities

Overhung load calculation

Overhung load can be calculated based on the formula below. For applications where load is proportional to torque (i.e., sheave, sprocket, pinion) an equivalent power (motor power * s.f.) should be used in the calculation.



$$\text{OHL (lbs.)} = \frac{126,000 \times \text{Hp} \times \text{Fc} \times \text{Lf}}{\text{PD (inches)} \times \text{RPM}}$$

$$\text{OHL (N)} = \frac{19,100,000 \times \text{kW} \times \text{Fc} \times \text{Lf}}{\text{PD (mm)} \times \text{RPM}}$$

Where:

OHL = Overhung load

Hp = Horsepower

kW = Kilowatts

Fc = Load connection factor

Lf = Load location factor

PD = Pitch diameter of item mounted on shaft

RPM = Revolutions per minute

Load connection factors - Fc

Drive type	Fc
Roller chain sprocket	1
Machined pinion or gear	1.25
Synchronous belt	1.3
V-belt	1.5
V-ribbed belt	1.7
Flat belt	2.5

Load location factors for low speed shafts*

Distance		Reducer size								
(inches)	mm	50	60	70	80	90	100	110	120	130
1.00	25	0.84	0.81	0.80	0.79	0.79	0.77	0.78	0.78	0.77
1.25	32	0.87	0.83	0.82	0.81	0.81	0.79	0.80	0.79	0.78
1.50	38	0.90	0.85	0.84	0.83	0.83	0.80	0.81	0.81	0.79
1.75	44	0.93	0.88	0.86	0.85	0.85	0.82	0.82	0.82	0.80
2.00	51	0.96	0.90	0.88	0.87	0.86	0.83	0.84	0.83	0.81
2.25	57	0.99	0.93	0.91	0.89	0.88	0.85	0.85	0.84	0.83
2.50	64	1.03	0.95	0.93	0.91	0.90	0.86	0.86	0.85	0.84
2.75	70	1.08	0.97	0.95	0.92	0.92	0.88	0.88	0.87	0.85
3.00	76	1.14	1.00	0.97	0.94	0.94	0.89	0.89	0.88	0.86
3.50	89	1.25	1.09	1.03	0.98	0.97	0.92	0.92	0.90	0.88
4.00	102	1.36	1.18	1.11	1.04	1.01	0.96	0.95	0.93	0.91
4.50	114	1.47	1.27	1.19	1.12	1.09	0.99	0.97	0.95	0.93
5.00	127	1.58	1.36	1.28	1.20	1.16	1.03	1.00	0.98	0.95
5.50	140	-	1.45	1.36	1.27	1.24	1.09	1.07	1.00	0.98
6.00	152	-	-	1.44	1.35	1.31	1.14	1.13	1.06	1.00
6.50	165	-	-	1.53	1.43	1.39	1.20	1.20	1.12	1.05
7.00	178	-	-	-	1.51	1.46	1.25	1.26	1.18	1.10
7.50	191	-	-	-	-	1.54	1.31	1.33	1.23	1.15
8.00	203	-	-	-	-	1.61	1.37	1.40	1.29	1.20
8.50	216	-	-	-	-	-	1.42	1.46	1.35	1.26
9.00	229	-	-	-	-	-	1.48	1.53	1.41	1.31
9.50	241	-	-	-	-	-	-	1.60	1.47	1.36
10.00	254	-	-	-	-	-	-	-	1.53	1.41
10.50	267	-	-	-	-	-	-	-	1.59	1.46
11.00	279	-	-	-	-	-	-	-	-	1.51
11.50	292	-	-	-	-	-	-	-	-	1.56

* Interpolate for intermediate values.

Engineering

Low speed/output shaft overhung load factor and capacities

Low speed overhung loads *

Approx. low speed shaft RPM	Unit reduction & ratio	Overhung load capacity Maxum XTR reducer size (lbs. - multiply value shown by 1000)								
		50	60	70	80	90	100	110	120	130
777.8	Double 2.25 - 4.13	2.65	5.26	4.69	♦	♦	♦	♦	♦	♦
636.4		2.79	5.51	4.93	♦	♦	♦	♦	♦	♦
519.3		2.99	5.80	5.25	♦	♦	♦	♦	♦	♦
423.7		3.20	6.19	5.57	♦	♦	♦	♦	♦	♦
347.2		3.40	5.39	6.20	♦	♦	♦	♦	♦	♦
283.3		3.68	5.79	6.58	♦	♦	♦	♦	♦	♦
345.8	Double 5.06 - 31.39	2.27	5.88	4.93	4.37	6.37	8.69	♦	♦	♦
282.3		2.39	6.15	5.21	4.32	6.36	8.76	♦	♦	♦
230.6		2.45	6.50	5.49	4.44	6.69	9.88	♦	♦	♦
188.2		2.61	6.50	5.87	4.99	6.80	11.3	6.62	♦	♦
153.6		2.77	6.50	6.50	5.50	7.48	12.5	7.93	18.9	8.04
125.4		3.08	6.50	7.12	6.13	8.86	14.1	9.09	19.0	8.87
102.4		3.38	6.50	7.83	6.82	9.87	15.7	13.1	19.0	9.59
83.6		3.70	6.50	8.50	7.38	10.9	17.0	12.1	19.0	10.1
68.3		4.10	6.50	8.50	8.26	12.4	17.0	14.1	19.0	11.9
55.8		4.57	6.50	8.50	9.66	13.7	17.0	16.2	19.0	15.5
45.5	Triple 38.44 - 194.6	5.19	6.50	8.50	10.8	14.0	17.0	18.0	19.0	19.8
37.2		5.25	6.50	8.50	11.0	14.0	17.0	18.0	19.0	21.1
30.4		5.25	6.50	8.50	11.0	14.0	17.0	18.0	19.0	22.5
24.8		5.25	6.50	8.50	11.0	14.0	17.0	18.0	19.0	22.5
20.2		5.25	6.50	8.50	11.0	14.0	17.0	18.0	19.0	22.5
16.5		5.25	6.50	8.50	11.0	14.0	17.0	18.0	19.0	22.5
13.5		5.25	6.50	8.50	11.0	14.0	17.0	18.0	19.0	22.5
11.0		5.25	6.50	8.50	11.0	14.0	17.0	18.0	19.0	22.5
9.0		5.25	6.50	8.50	11.0	14.0	17.0	18.0	19.0	22.5

* Overhung load ratings are for pure radial loads applied one shaft diameter away from the seal carrier and a service factor of 1.0. If overhung load is proportional to torque (i.e., sheave, sprocket, pinion) an appropriate service factor should be applied (refer to OHL calculation on page 84). Consult Baldor if application has combined radial and thrust loads.

♦ Consult factory.

Engineering

Ratios and moments of inertia

Actual ratios											
Nominal ratio	Approx. low speed shaft RPM #	Unit reduction	Actual ratio of reduction Maxum XTR reducer size								
			50	60	70	80	90	100	110	120	130
2.25	777.8	Double	2.207	2.234	2.266	-	-	-	-	-	-
2.75	636.4		2.722	2.748	2.857	-	-	-	-	-	-
3.37	519.3		3.264	3.289	3.497	-	-	-	-	-	-
4.13	423.7		4.112	4.136	4.148	-	-	-	-	-	-
5.06	345.8		4.981	5.047	4.968	4.977	5.005	5.127	-	-	-
6.20	282.3		6.144	6.208	6.265	6.248	6.058	6.208	-	-	-
7.59	230.6		7.366	7.430	7.667	7.614	7.591	7.576	-	-	-
9.30	188.2		9.281	9.344	9.094	9.394	9.214	9.367	9.263	-	-
11.39	153.6		11.09	11.37	11.45	11.26	11.23	11.34	11.35	11.63	11.41
13.95	125.4		13.75	13.66	14.05	13.89	13.80	13.97	14.01	13.61	13.71
17.09	102.4		16.86	16.92	17.68	17.12	17.09	17.08	17.08	17.15	16.80
20.93	83.6		20.42	21.33	21.52	20.67	20.91	20.46	20.92	20.91	21.19
25.63	68.3	Triple	24.99	25.03	24.94	25.63	25.60	25.13	25.32	26.28	25.93
31.39	55.8		31.23	30.68	32.20	30.52	31.08	30.22	30.65	31.34	30.21
38.44	45.5		37.58	37.56	38.86	37.96	38.25	38.75	38.10	37.53	37.26
47.08	37.2		46.08	46.52	48.91	46.81	47.37	47.37	46.43	47.32	45.67
57.67	30.3		55.81	58.66	59.55	56.49	57.94	56.75	56.87	57.68	57.61
70.62	24.8		68.31	68.84	69.00	70.05	70.94	69.70	68.83	72.49	70.48
86.50	20.2		84.22	82.86	86.03	84.20	83.54	85.45	86.56	85.26	82.24
105.9	16.5		103.3	102.6	108.3	103.8	103.5	104.5	105.5	107.5	100.8
129.7	13.5		125.1	129.4	131.8	125.3	126.5	125.1	129.2	131.0	127.1
158.9	11.0		153.1	151.9	152.8	155.4	154.9	153.7	156.4	164.7	155.6
194.6	9.0		191.3	186.2	197.2	185.0	188.1	184.8	189.3	196.4	181.3

Based on 1750 high speed shaft RPM.

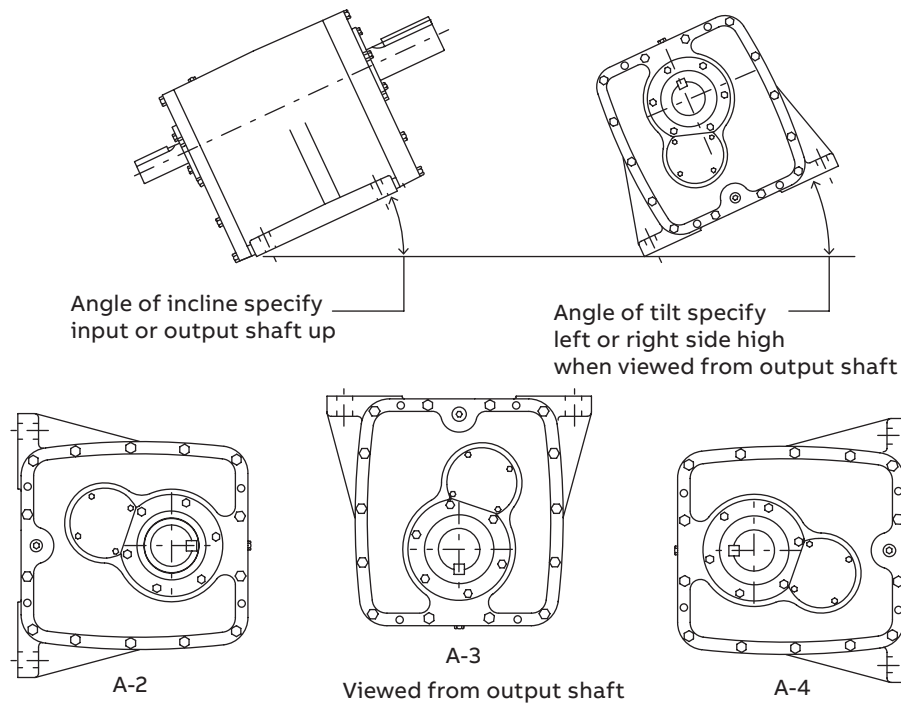
Moments of inertia - WR ² values											
AGMA nominal ratio	Approx. low speed shaft RPM †	Unit reduction	WR ² (lb.-in. ²) at high speed shaft ▲ Maxum XTR reducer size								
			50	60	70	80	90	100	110	120	130
2.25	777.8	Double	78.23	118.9	248.4	-	-	-	-	-	-
2.75	636.4		59.13	93.49	179.0	-	-	-	-	-	-
3.37	519.3		47.32	78.04	137.2	-	-	-	-	-	-
4.13	423.7		37.10	62.73	112.0	-	-	-	-	-	-
5.06	345.8		55.14	104.0	170.8	344.2	738.5	1182	-	-	-
6.20	282.3		43.95	83.63	130.1	268.2	579.4	941.7	-	-	-
7.59	230.6		36.76	71.16	104.6	220.5	443.6	757.0	-	-	-
9.30	188.2		30.45	58.38	88.86	181.9	357.8	607.5	972.1	-	-
11.39	153.6		25.72	50.22	71.95	156.5	292.0	502.9	798.9	1527	2390
13.95	125.4		22.47	43.92	61.14	133.4	238.4	417.5	659.7	1317	1980
17.09	102.4		19.95	38.42	53.36	116.0	197.2	353.4	559.8	1078	1627
20.93	83.6		19.04	34.01	46.10	104.2	167.6	308.3	481.1	923.1	1320
25.63	68.3	Triple	16.49	31.68	42.67	93.72	146.0	270.7	424.7	791.2	1121
31.39	55.8		15.36	29.43	38.18	87.32	129.8	242.6	381.3	712.7	1004
38.44	45.5		2.424	4.956	7.142	19.41	38.56	52.27	98.88	188.8	713.9
47.08	37.2		2.236	4.228	5.944	17.08	33.20	43.95	85.36	157.3	665.9
57.67	30.3		2.116	3.645	5.178	15.50	29.35	38.08	74.72	137.0	624.4
70.62	24.8		1.999	3.335	4.716	14.10	26.52	33.19	67.08	119.6	597.3
86.50	20.2		1.002	1.701	2.132	4.728	13.56	15.92	35.99	49.990	83.98
105.9	16.5		0.965	1.552	1.887	4.254	12.43	14.21	33.37	43.88	74.14
129.7	13.5		0.941	1.432	1.731	3.933	11.62	13.00	31.30	39.95	65.61
158.9	11.0		0.917	1.368	1.637	3.647	11.03	12.00	29.82	36.59	60.06
194.6	9.0		0.907	1.306	1.520	3.473	10.59	11.25	28.69	34.58	56.81

▲ For WR² at low speed shaft, multiply the WR2 value listed by (actual Ratio)².

† Based on 1750 high speed shaft RPM.

Engineering

Mounting guidelines



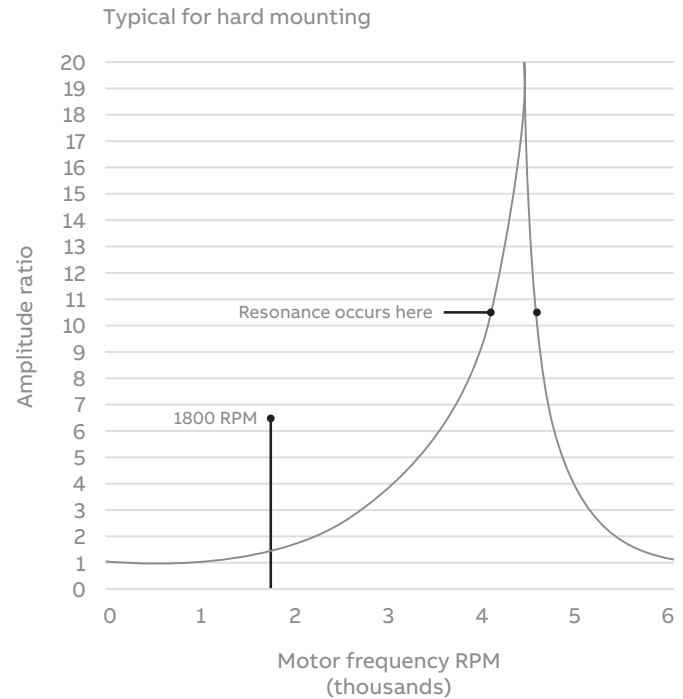
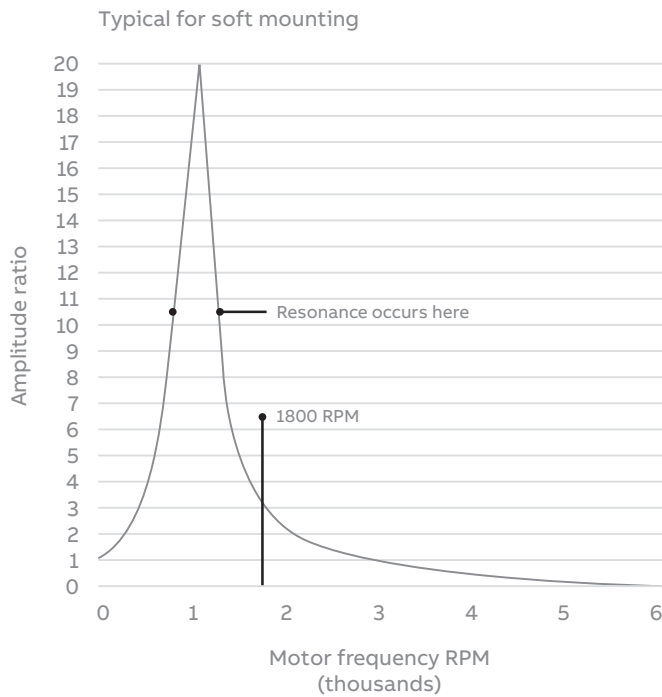
Dodge Maxum XTR concentric shaft reducers can be modified to permit mounting in positions other than the conventional (A-1) floor mounting. Some of these include ceiling (A-3) and wall (A-2 and A-4) and various inclined, vertical and tilted positions. Consult factory to determine what modifications are required for your specific application.

In order for Dodge to make recommendations on the required modifications, the following information must be provided:

- Reducer size
- Ratio
- Input and/or output speed
- Transmitted horsepower
- Duty cycle. Continuous or intermittent operation. If intermittent, running time vs. idle time.
- Mounting position, such as A-2, A-3 or A-4 with shafts level, or a more complete description of the mounting arrangement including the angle of tilt of the housing, the incline of the shafts and whether the output shaft is higher or lower than the input shaft.

Engineering

General guidelines for mounting variable speed AC or DC motors



Definitions:

Fundamental natural frequency is the lowest number of times per minute that the motor and supporting structure will maintain a periodic oscillation, once displaced, under the sole influence of its own mass and stiffness.

Resonance is a vibration of large amplitude caused by the small periodic stimulus of the unbalance force when the motor speed is the same or nearly the same frequency as the fundamental natural frequency of the motor and support structure.

Soft mounting - The fundamental natural frequency is below the motor operating speed.

Hard mounting - The fundamental natural frequency is above the motor operating speed.

Engineering

General guidelines for mounting variable speed AC or DC motors

Features

Specifications

Selection

Dimensions

Accessories

Engineering

Scoop mount accessory

- This is a soft mounting of the motor.
- The benefits obtained by using this accessory are low cost and isolation of the reducer support structure from the motor vibration.
- This motor mount was designed for use with a constant speed motor at 1750 RPM. Use of motors with lower base speeds increases the chance of producing resonance. Stiffening techniques within the scoop structure can increase the fundamental natural frequency about 20% which is generally enough to eliminate resonance should it occur.
- This accessory is NOT recommended for variable speed DC or AC applications.
- Customers who prefer to use the scoop mount accessory to mount variable speed AC or DC motors must state on the face of the purchase order that they plan to support scoop and assume full responsibility for any vibratory or transient load induced by the motor.

Note: For more information on Dodge Maxum XTR concentric reducer scoop mount reducers, refer to page 46.

Top mount accessory

- This may be a soft or hard mounting of the motor depending on the size of the motor and the distance that the adjusting screws are extended.
- The benefits obtained by using this accessory are low cost, minimum floor space used for the motor/reducer assembly, and greater flexibility to obtain the required output RPM of the reducer than concentric coupling.
- This motor mount was designed for use with a constant speed motor at 1750 RPM.
- This accessory is NOT recommended for variable speed DC or AC applications.

Note: For more information on Dodge Maxum XTR concentric reducer motor mount, refer to page 59.

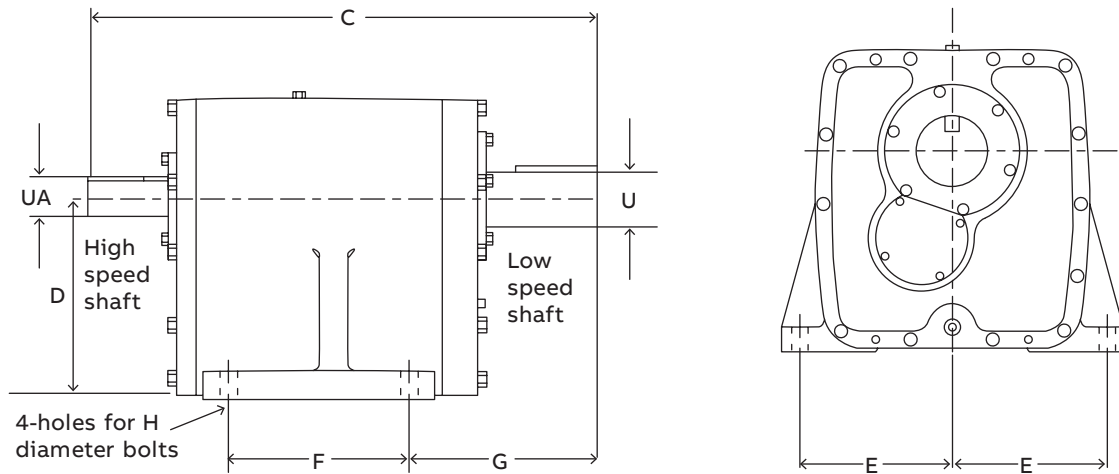
HD baseplate accessory

1. This is a hard mounting of the motor.
2. The benefits obtained by using this accessory are:
 - a. Resonance problems are minimized.
 - b. Accurate assembly of motor/coupling/reducer can be done at the factory instead of the job site.Note: Alignment must always be rechecked at job site prior to start-up.
 - c. Large motors can be rigidly mounted to keep deflection under control and provide longer service life.
3. This accessory is recommended for large motors where the motor weight exceeds the reducer weight or 700 lbs., and for variable speed DC or AC applications regardless of the motor weight.

Note: For more information on Dodge Maxum XTR concentric reducer hd baseplates, refer to page 60.

Engineering

Dimensional comparison of Maxum to Maxum XTR



Reducer size	Stage	C (in.)	D (in.)	E (in.)	F (in.)	G (in.)	H (in.)	U (in.)	UA (in.)
CR4	Double	25.47	9.60	7.30	9.00	9.45	0.875	2.875 / 2.874	1.625 / 1.624
	Triple	25.47							1.625 / 1.624
CR50	Double	21.54	9.60	7.30	7.10	8.10	0.875	2.5000 / 2.4995	1.6250 / 1.6245
	Triple	21.54							1.2500 / 1.2495
CR5	Double	29.14	9.96	8.20	10.00	10.75	1.000	3.375 / 3.374	2.125 / 2.124
	Triple	28.05							1.625 / 1.624
CR60	Double	24.94	10.60	8.20	10.00	8.00	1.000	2.7500 / 2.7495	1.875 / 1.8745
	Triple	24.32							1.2500 / 1.2495
CR6	Double	31.44	11.66	9.30	11.30	11.91	1.125	3.75 / 3.749	2.125 / 2.124
	Triple	30.63							1.625 / 1.624
CR70	Double	28.34	11.66	9.30	11.30	9.20	1.125	3.250 / 3.249	2.1250 / 2.1245
	Triple	27.28							1.3750 / 1.3745
CR7	Double	39.06	14.80	11.22	14.70	14.09	1.250	4.000 / 3.999	2.625 / 2.624
	Triple	37.64							1.875 / 1.874
CR80	Double	31.68	12.78	10.20	13.20	10.00	1.250	3.500 / 3.499	2.2500 / 2.2495
	Triple	30.64							1.5000 / 1.4995
CR8	Double	43.25	16.00	12.56	17.19	14.97	1.375	4.500 / 4.499	2.750 / 2.749
	Triple	41.52							1.875 / 1.874
CR90	Double	35.08	15.74	11.40	14.30	11.50	1.500	4.000 / 3.999	2.5000 / 2.4995
	Triple	33.66							2.0000 / 1.9995
CR9	Double	47.39	18.13	13.44	18.19	17.49	1.500	5.250 / 5.249	3.000 / 2.999
	Triple	45.70							2.125 / 2.124
CR100	Double	38.50	17.40	12.20	14.96	13.14	1.500	4.500 / 4.499	2.7500 / 2.7485
	Triple	37.14							2.1250 / 2.1245
CR10	Double	48.2	18.38	13.10	20.25	16.67	1.500	6.000 / 5.999	3.500 / 3.499
	Triple	47.09							2.375 / 2.374
CR110	Double	42.02	19.50	13.10	17.28	13.72	1.625	5.000 / 4.999	3.000 / 2.999
	Triple	40.1							2.1250 / 2.1245
CR11	Double	49.84	20.75	14.44	20.38	17.93	1.750	6.500 / 6.499	3.750 / 2.375
	Triple	48.65							2.375 / 2.374
CR120	Double	45.38	21.90	14.44	18.80	14.58	2.000	5.500 / 5.499	3.250 / 3.249
	Triple	43.4							2.2500 / 2.2495
CR12	Double	50.41	23.38	15.20	21.00	18.17	1.750	7.000 / 6.999	3.750 / 3.749
	Triple	49.22							2.375 / 2.374
CR130	Double	48.59	24.70	15.20	19.30	16.16	2.000	6.000 / 5.999	3.500 / 3.499
	Triple	45.88							2.2500 / 2.2495

Engineering

Retrofitting guide to replace Maxum with Maxum XTR

Sizes CR4 through CR6

Step 1 - Identify Maxum XTR replacement for the current Maxum reducer. The replacement size is generally suitable to replace the current Maxum, however thermal and mechanical ratings should be compared to application requirements to ensure suitability for use. Consult Baldor if the replacement size does not meet application requirements.

Step 2 - Determine if special output shaft is required. Special output shafts have been designed to match current Maxum distance from foundation hole to the end of output shaft. Alternatively, the standard Maxum XTR reducer may be able to replace the current Maxum using a spacer coupling or an overhung hub on the output shaft extension. Preference should be given to the standard reducer for better cost and availability.

Step 3 - Identify cooling requirements. Existing cooling devices may not be suitable for the Maxum XTR.

Step 4 - Identify motor foundation. Maxum scoops and motor mounts are suitable for retrofitting to the Maxum XTR with an additional parts kit. The parts kit listed provides only those parts needed to retrofit. If a completely new scoop or motor mount is desired, order the accessory complete as listed under selection & dimensions tables.

Step 1 Identify replacement size		Step 2 Determine if special output shaft is required		Step 3 Identify cooling requirements		Step 4 Identify motor foundation		
Current Maxum reducer	Maxum XTR replacement	Special output shaft desired	Action	Type of cooling	Action	Baseplate or foundation mounted motor	Scoop	Motor mount
CR4	CR50 ⁽¹⁾	No	Refer to selection & dimension page for basic reducer part number	Shaft driven fan	Refer to selection & dimension page for new fan part number	Add foundation holes for new motor location	Order new side brackets & hardware	Order new brackets & hardware to retrofit existing motor mount to new reducer
		Yes	Order basic reducer with special output shaft part number 270498	Other	Consult Baldor	-or-	Motor frames 140-250 Part number 269921	
				None	Go to step 4	Use spacer coupling at input shaft	Motor frames 280-320 Part number 269922	Part number 270005
CR5	CR60 ⁽²⁾	No	Refer to selection & dimension page for basic reducer part number	Shaft driven fan	Refer to selection & dimension page for new fan part number	Add foundation holes for new motor location	Order new side brackets & hardware	Order new brackets & hardware to retrofit existing motor mount to new reducer
		Yes	Order basic reducer with special output shaft part number 270499	Other	Consult Baldor	-or-	Motor frames 140-320 Part number 269923	
				None	Go to step 4	Use spacer coupling at input shaft	Motor frame 360 use standard welded scoop	Part number 270105
CR6	CR70	No	Refer to selection & dimension page for basic reducer part number	Shaft driven fan	Refer to selection & dimension page for new fan part number	Add foundation holes for new motor location	Order new side brackets & hardware	Order new brackets & hardware to retrofit existing motor mount to new reducer
		Yes	Order basic reducer with special output shaft part number 270500	Other	Consult Baldor	-or-	Motor frames 140-320 Part number 269924	
				None	Go to step 4	Use spacer coupling at input shaft	Motor frame 360 use standard welded scoop	Part number 270398

(1) The F dimension (see dimensional comparison) of the CR50 is slightly different than the CR4. New foundation holes at the input end will be required.

(2) The D dimension (see dimensional comparison) of the CR60 is slightly greater than the CR5. The height of the reducer foundation or the driven equipment must be adjusted to suit.

(3) Verify application compatibility and fit of accessories and components.

Engineering

Retrofitting guide to replace Maxum with Maxum XTR

Sizes CR7 through CR9

Step 1 - Identify Maxum XTR replacement for the current Maxum reducer. The replacement size is generally suitable to replace the current Maxum, however thermal and mechanical ratings should be compared to application requirements to ensure suitability for use. Consult Baldor if the replacement size does not meet application requirements.

Step 2 - Determine if adapter plate is available. The adapter plate will be bolted to the existing foundation and feature tapped holes for the new Maxum XTR. The difference in foundation hole locations will nominally align the end of the output shaft extension with the existing Maxum drive. Alternatively, the standard Maxum XTR reducer may be used without adapter plate by adding new holes in the customer's foundation and shimming the reducer to the appropriate height.

Step 3 - Identify cooling requirements. Existing cooling devices may not be suitable for the Maxum XTR.

Step 4 - Identify motor foundation. Maxum scoops and motor mounts are suitable for retrofitting to the Maxum XTR with an additional parts kit. The parts kit Listed provides only those parts needed to retrofit. If a completely new scoop or motor mount is desired, order the accessory complete as listed under selection & dimensions tables.

Step 1 Identify replacement size		Step 2 Determine if foundation adapter plate is available		Step 3 Identify cooling requirements		Step 4 Identify motor foundation		
Current Maxum reducer	Maxum XTR replacement	Is adapter plate desired?	Action	Type of cooling	Action	Baseplate or foundation mounted motor	Scoop	Motor mount
CR7	CR80 ⁽¹⁾	No	Refer to selection & dimension page for CR80 & modify foundation to suit.	Shaft driven fan	Refer to selection & dimension page for new fan part number	Add foundation holes for new motor location	Order new side brackets & hardware	
		Yes	Order basic reducer with special adapter plate part number 271743	Other	Consult Baldor	-or-	Motor frames 210-320 Part number 271589	Order new brackets & hardware to retrofit existing motor mount to new reducer
				None	Go to step 4	Use spacer coupling at input shaft	Motor frame 360-440 Use standard welded scoop	Part number 271744
CR8	CR90 ⁽²⁾	No	Refer to selection & dimension page for CR90 & modify foundation to suit.	Shaft driven fan	Refer to selection & dimension page for new fan part number	Add foundation holes for new motor location	Order new side brackets & hardware	
		Yes	Differences in the "D" dimension are insufficient to accommodate an adapter plate.	Other	Consult Baldor	-or-	Motor frames 210-320 Part number 271590	Order new brackets & hardware to retrofit existing motor mount to new reducer
				None	Go to step 4	Use spacer coupling at input shaft	Motor frame 360-440 Use standard welded scoop	Part number 271745
CR9	CR100 ⁽²⁾	No	Refer to selection & dimension page for CR100 & modify foundation to suit.	Shaft driven fan	Refer to selection & dimension page for new fan part number	Add foundation holes for new motor location	Order new side brackets & hardware	
		Yes	Differences in the "D" dimension are insufficient to accommodate an adapter plate.	Other	Consult Baldor	-or-	Motor frames 250-320 Part numbers 271591 & 273428	Order new brackets & hardware to retrofit existing motor mount to new reducer
				None	Go to step 4	Use spacer coupling at input shaft	Motor frame 360-440 Use standard welded scoop	Part number 271746

(1) Foundation hole locations are different. An adapter plate is available to retrofit the CR80 to the CR7 foundations holes.

(2) Foundation hole locations are different. Modifications to existing foundation is required.

(3) Verify application compatibility and fit of accessories and components.

Engineering

Retrofitting guide to replace Maxum with Maxum XTR

Sizes CR10 through CR12

Step 1 - Identify Maxum XTR replacement for the current Maxum reducer. The replacement size is generally suitable to replace the current Maxum, however thermal and mechanical ratings should be compared to application requirements to ensure suitability for use. Consult Baldor if the replacement size does not meet application requirements.

Step 2 - Determine if adapter plate is available. The adapter plate will be bolted to the existing foundation and feature tapped holes for the new Maxum XTR. The difference in foundation hole locations will nominally align the end of the output shaft extension with the existing Maxum drive. Alternatively, the standard Maxum XTR reducer may be used without adapter plate by adding new holes in the customer's foundation and shimming the reducer to the appropriate height.

Step 3 - Identify cooling requirements. Existing cooling devices may not be suitable for the Maxum XTR.

Step 4 - Identify motor foundation. Maxum scoops and motor mounts are suitable for retrofitting to the Maxum XTR with an additional parts kit. The parts kit listed provides only those parts needed to retrofit. If a completely new scoop or motor mount is desired, order the accessory complete as listed under selection & dimensions tables.

Step 1 Identify replacement size		Step 2 Determine if foundation adapter plate is available		Step 3 Identify cooling requirements		Step 4 Identify motor foundation		
Current Maxum reducer	Maxum XTR replacement	Is adapter plate desired?	Action	Type of cooling	Action	Baseplate or foundation mounted motor	Scoop	Motor mount
CR10	CR110 ⁽¹⁾	No	Refer to selection & dimension page for CR110 & modify foundation to suit.	Shaft driven fan	Refer to selection & dimension page for new fan part number	Add foundation holes for new motor location	Order new side brackets & hardware Motor frames 250-320 Part numbers 271845 & 273428	Order new brackets & hardware to retrofit existing motor mount to new reducer
		Yes	Differences in the "D" dimension are insufficient to accommodate an adapter plate.	Other	Consult Baldor	-or-	Motor frame 360-440 Use standard welded scoop	Part number 269405
				None	Go to step 4	Use spacer coupling at input shaft		
CR11	CR120 ⁽¹⁾	No	Refer to selection & dimension page for CR120 & modify foundation to suit.	Shaft driven fan	Refer to selection & dimension page for new fan part number	Add foundation holes for new motor location	Order new side brackets & hardware Motor frames 250-320 Part number 271846	Order new brackets & hardware to retrofit existing motor mount to new reducer
		Yes	Differences in the "D" dimension are insufficient to accommodate an adapter plate.	Other	Consult Baldor	-or-	Motor frame 360-440 Use standard welded scoop	Part number 269505
				None	Go to step 4	Use spacer coupling at input shaft		
CR12	CR130 ⁽¹⁾	No	Refer to selection & dimension page for CR130 & modify foundation to suit.	Shaft driven fan	Refer to selection & dimension page for new fan part number	Add foundation holes for new motor location	Order new side brackets & hardware Motor frames 280-320 Part number 271847	Order new brackets & hardware to retrofit existing motor mount to new reducer
		Yes	Differences in the "D" dimension are insufficient to accommodate an adapter plate.	Other	Consult Baldor	-or-	Motor frame 360-440 Use standard welded scoop	Part number 269605
				None	Go to step 4	Use spacer coupling at input shaft		

(1) Foundation hole locations are different. Modifications to existing foundation is required.

(2) Verify application compatibility and fit of accessories and components.



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