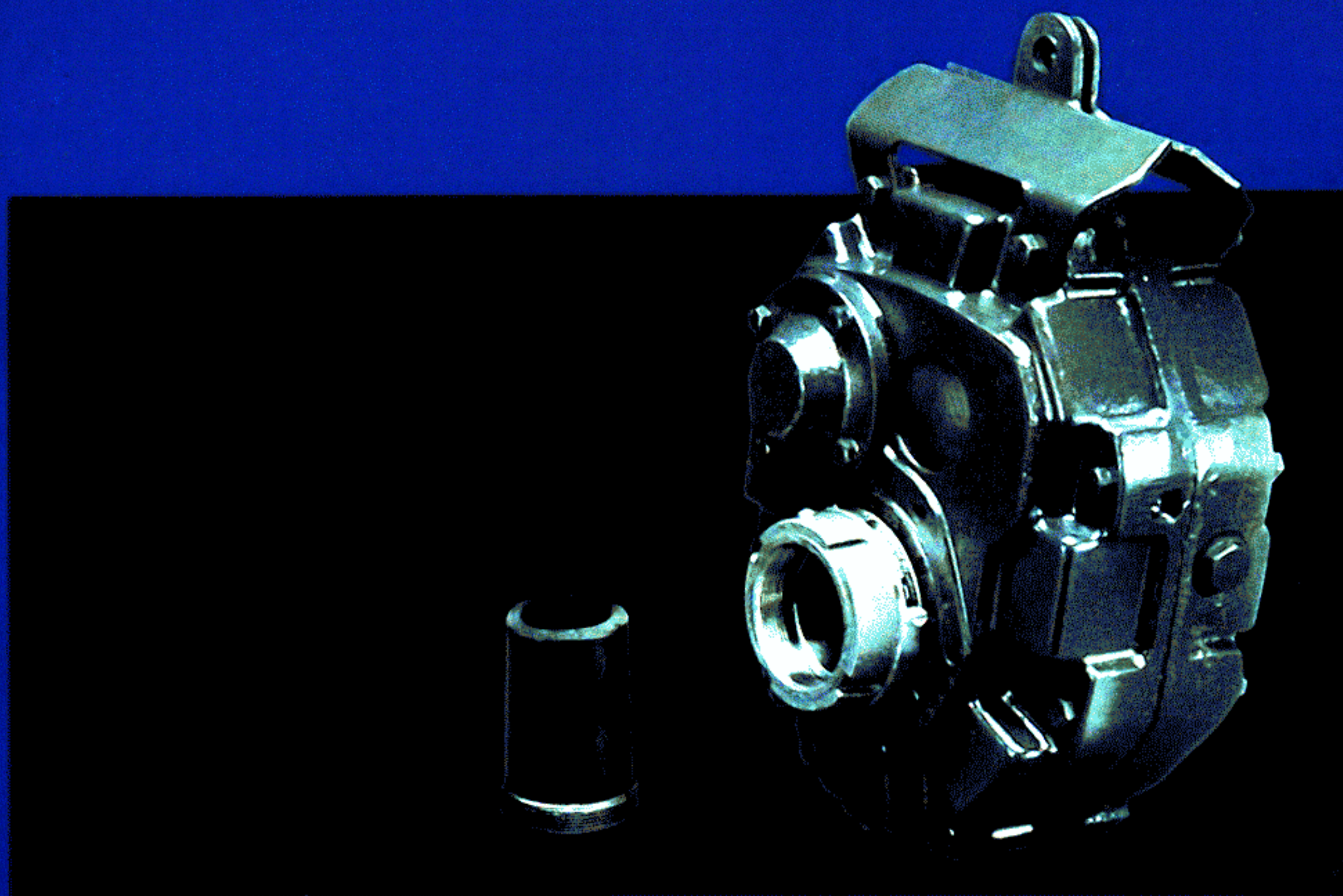




SHAFT MOUNT REDUCERS



USMOTORS

U.S. Electrical Motors Division
Emerson Electric Co.

Series 2000 Gear Products General Guide

Type SMR: Shaft Mount Reducers

Section F



U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC CO.



EMERSON

Shaft Mount Speed Reducer Type SMR

Unique tapered bushing is designed for easy and versatile mounting on driven shaft. A wide range of bushing bore sizes is available for each type.

Magnetic drain plug is standard.

Ribbed housing is precision machined in matched pairs for maximum strength, rigidity and permanent gear alignment.

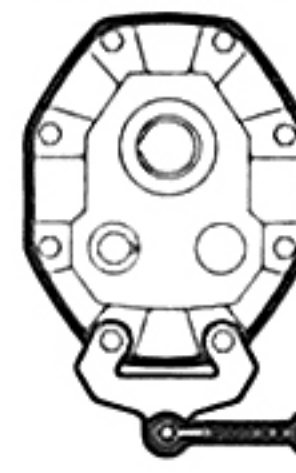
The hollow shaft is protected by a removable cap.

Case carbonized helical gears are hardened to 60/64 Rockwell C, crown shaved and ground.

A backstop is available from the factory or as an easily installed kit.

Cylindrical roller bearings are used on input shaft for high radial load capacity.

Double-lip seals are installed on ground and polished shafts. Oversized taper-roller and ball bearings are used for long gearbox life.



Torque arm bracket can be mounted in three positions. Torque arm and bushing spanner-wrench are supplied as standard.



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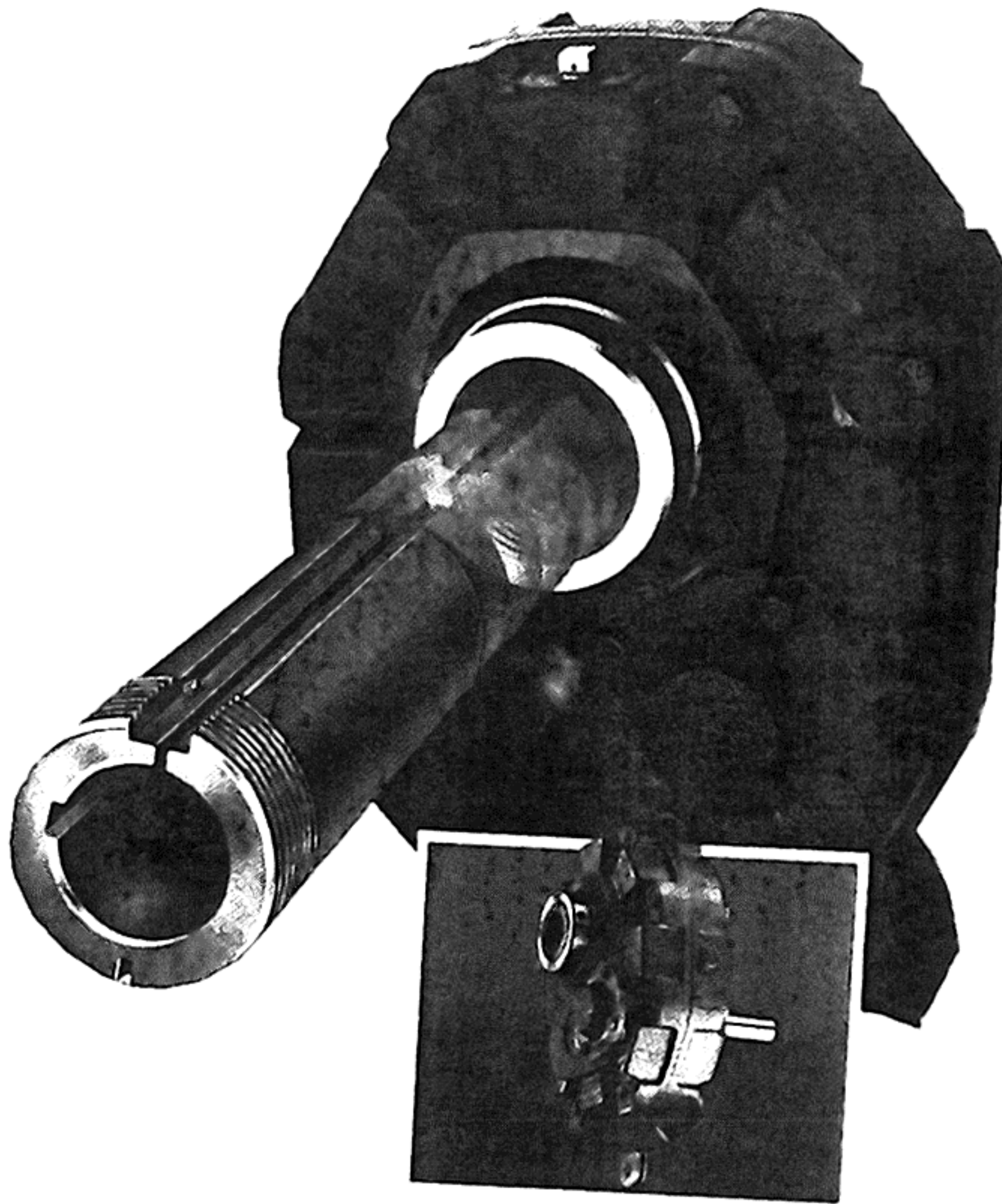
SMR Shaft Mount Reducer

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Mounting Versatility Type SMR



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General Presentation

Type SMR

General

Shaft Mounted Speed Reducers (SMR) adapt the speed of an electric motor to the driven machine.

The selection depends on the motor power (P) expressed in HP and the required output shaft speed (n) in RPM.

Output torque of the driven system can be calculated using the following formulas.

$$T \text{ (in.lbf.)} = \frac{P \times 63025}{n} \times \text{System efficiency}$$

- System efficiency = reducer eff x belt drive eff.
- Reducer efficiency :
 - Single reduction = 98 %
 - Double reduction = 96 %
- The overall ratio (i) of the drive system =

$$\frac{\text{motor speed (n)}}{\text{reducer output speed (n)}}$$

Presentation

High quality cast iron housing.

Input shaft made of nickel chromium molybdenum steel.

Precision finished, case hardened gears.

Unique tapered bushing design.

Ball or cylindrical roller bearings on input shaft for higher overhung load ratings.

Performances

A range of 7 AGMA sizes: 107 thru 315.

Output torque up to 55,000 in.lbs

Available nominal ratios 5: 1, 15: 1 and 25: 1.

High efficiency.

Excellent reversibility.

Exceptional flexibility

A wide range of bushings are available to match customer's shaft requirements.

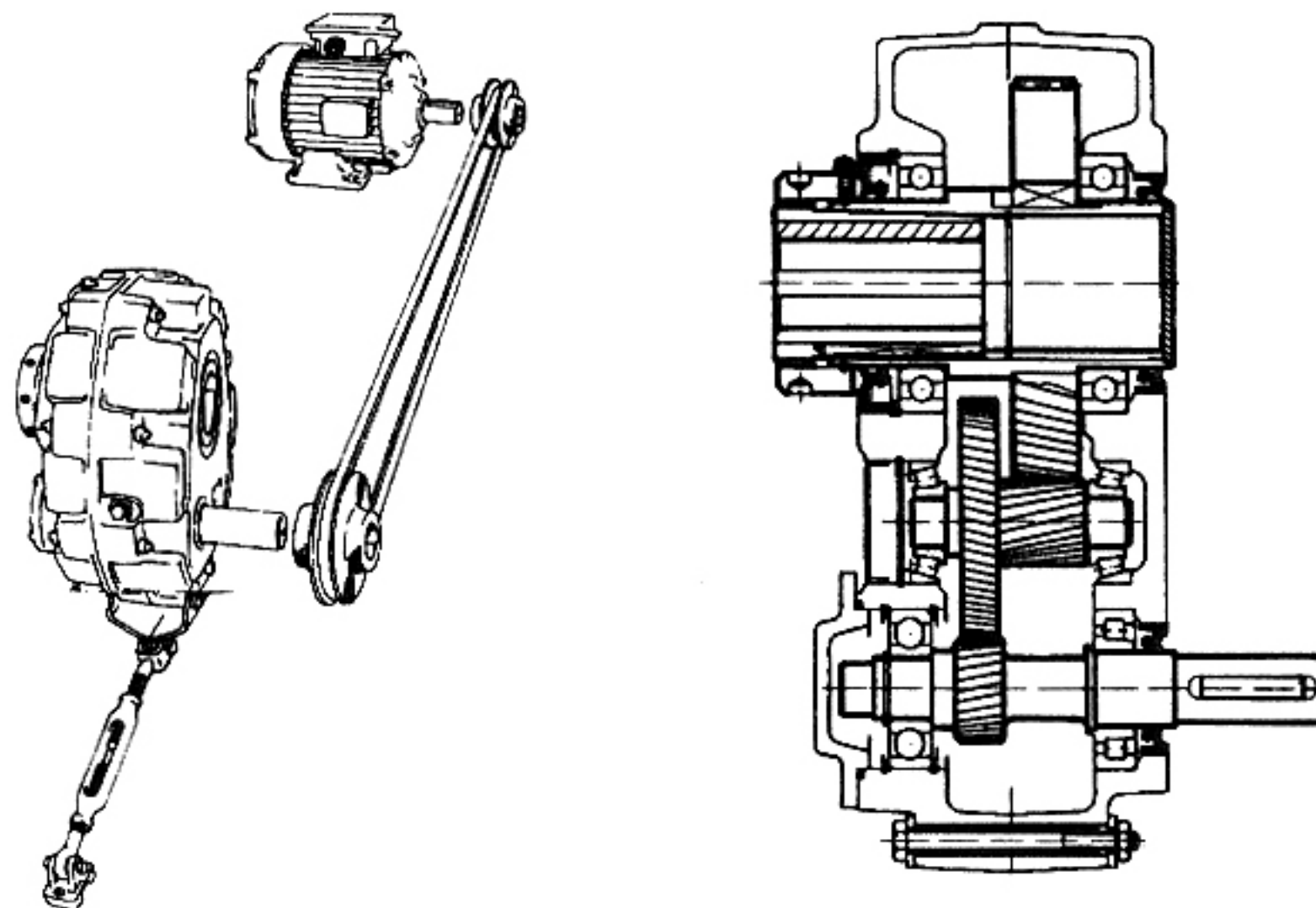
Numerous mounting positions available.

Multi-position torque arm assembly.

Field modifiable backstop assembly.

Reliability, maintenance

Mounting and removal simplified by tapered bushing: no more risk of "fretting corrosion".



SMR Drive



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Speed Reducer Selection Type SMR

Selection Information

1. **Input HP**
 - Based on application data.
2. **Speed/Ratio**
 - Obtain desired output speed (RPM) based on application.
3. **Load Classification**
 - Determine the required load classification using the AGMA Application Classification chart (see pages F8-F10)

Size Selection

Step 1

- Locate appropriate speed reducer selection tables. AGMA Selection Tables pages F14 - F16 or Speed Reducer Selection Tables with V-belt data pages F17 - F27.

Step 2

- Choose the nominal output speed based on application data.

Step 3

- Select the gear unit size based on the input HP and the appropriate AGMA Application Classification.

Step 4

- Verify the overhung load rating on the input shaft (page F7)

Example

1. Application Data:

Belt conveyor, non-uniform load, 24 hrs./day operation. 2-3/16" driven shaft. Backstop and motor mount required.

Motor Rating: TEFC, 230/460V, 3 HP, 1750 RPM, 182T frame

Output Speed: 30 RPM

2. Size Selection

AGMA Load Class = II

Motor power: 3 HP

Example from page F20

Motor power: 3 HP					
Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Driven
35	III	207.25	2.00	5.00	10.00
	II	203.25	2.10	5.00	10.50
	I	115.25	2.00	5.00	10.00
30	III	207.25	2.28	5.70	13.00
	II	203.25	2.37	4.60	10.90
	I	115.25	2.28	5.70	13.00
28	III	207.25	2.40	5.00	12.00
	I-II	203.25	2.59	4.40	11.40

3. Model Numbers (see "Ordering" page F5)

J259 reducer
912263 motor mount
912229 backstop

4. Bushing Model Number (see "Bushings" page F6)

912187 bushing

5. Motor Model Number (see "Unimount 125", page 29 of horizontal motor catalog)

A899 motor



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Ordering Type SMR

Model Numbers for SMR Reducers and Accessories

Shaft Mount Reducers (Includes torque arm and spanner wrench)

RATIO	REDUCER SIZE						
	107	115	203	207	215	307	315
	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER
5:1	J251	J254	J257	J260	J263	J266	J269
15:1	J252	J255	J258	J261	J264	J267	J270
25:1	J253	J256	J259	J262	J265	J268	J271

Motor Mounts (For use with SMR reducers)

REDUCER SIZE						
107	115	203	207	215	307	315
MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER	MODEL NUMBER
912261	912262	912263	912264	912265	912266	912267

Backstops (For use with SMR and SCD reducers)

MODEL #	REDUCER SIZE						
	107	115	203	207	215	307	315
	912227	912228	912229	912230	912231	912232	912233

Bushing Collars (Replacements for shaft mount reducers)

MODEL #	REDUCER SIZE						
	107	115	203	207	215	307	315
	912220	912221	912222	912223	912224	912225	912226



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Ordering Type SMR Bushings

Bushings (Model numbers for bushings)

BORE	REDUCER FRAME						
	107	115	203	207	215	307	315
15/16	912166	-	-	-	-	-	-
1	912168	912178	-	-	-	-	-
1-1/16	912161	-	-	-	-	-	-
1-1/8	912163	-	-	-	-	-	-
1-3/16	912164	912173	-	-	-	-	-
1-1/4	912162	912171	-	-	-	-	-
1-5/16	912160	912175	-	-	-	-	-
1-3/8	912165	911871	-	-	-	-	-
1-7/16	912167	912177	912185	-	-	-	-
1-1/2	-	912170	912181	-	-	-	-
1-5/8	-	912176	912184	-	-	-	-
1-11/16	-	912169	912180	912189	-	-	-
1-3/4	-	912174	912183	912191	-	-	-
1-7/8	-	-	912186	912192	912199	-	-
1-15/16	-	912172	912182	912190	912198	-	-
2	-	912179	912188	912197	912206	-	-
2-1/8	-	-	-	912194	-	-	-
2-3/16	-	-	912187	912195	912204	-	-
2-1/4	-	-	-	912193	912202	-	-
2-7/16	-	-	-	912196	912205	912210	-
2-1/2	-	-	-	-	912201	912208	-
2-11/16	-	-	-	-	912200	912207	-
2-7/8	-	-	-	-	-	912211	912215
2-15/16	-	-	-	-	912203	912209	912214
3	-	-	-	-	-	-	912219
3-3/16	-	-	-	-	-	912212	912217
3-7/16	-	-	-	-	-	912213	912218
3-15/16	-	-	-	-	-	-	912216



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Overhung Load Type SMR

Overhung load capability

Loads in Pounds (lbs.)									
Ratio 5:1					Ratios 15:1 & 25:1				
Input speed on the SMR: motor RPM ÷ belt ratio									
Reducer type	550	1100	1650	2200	200	500	1000	2000	3000
107	420	380	355	355	370	255	175	100	85
115	565	500	470	470	735	530	410	300	275
203	620	600	540	540	905	790	590	500	450
207	760	650	625	625	1085	780	600	500	455
215	840	780	730	730	1350	1020	830	650	580
307	1830	1764	1703	1630	2780	1780	1650	1310	1180
315	2370	2070	1980	1910	3360	2090	1925	1520	1375

* High speed shaft overhung load capacities in pounds force at midpoint of input shaft
Use straight line interpolation for intermediate speed.

This table shows the maximum overhung load allowed in single reduction (ratio 5:1) or double reduction (ratios 15:1 and 25:1) on the input shaft of the SMR. The calculation of the actual overhung load can be determined by the conveyor manufacturer, using the following formula.

$$\text{Actual overhung load (lbf)} = \frac{126000 \times (\text{motor HP}) \times (\text{AGMA factor}) \times (\text{Belt factor}) \times (\text{Belt ratio})}{\text{motor RPM} \times \text{pulley pitch diameter (in)}}$$

Belt factors
1.5: for V belt or timing belt
2.5: for flat belt
3.5: for variable speed pulley

AGMA factors
1.0: for AGMA I
1.4: for AGMA II
2.0: for AGMA III

Example

- Motor speed 1750 RPM - 5 HP - AGMA I - pulley ratio 1.59:1 - pulley pitch dia. = 5.9 in. - V-belt drive - reducer type: SMR 203-25 (ratio 25:1).

Calculation

- Input speed on the SMR = $\frac{\text{motor RPM}}{\text{belt ratio}} = \frac{1750}{1.59} = 1100 \text{ RPM}$
- Maximum overhung load allowed on the SMR 203 in ratio 25:1 with 1000 RPM (the closest of 1100 RPM) is 590 lbs.
- Actual overhung load calculation =
$$\frac{126000 \times 5 \times 1 \times 1.5 \times 1.59}{1750 \times 5.9} = 145.5 \text{ lbs}$$
- Selection is correct due to the fact that the actual overhung load is less than the maximum overhung load allowed.



U.S. ELECTRICAL MOTORS
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AGMA Application Classification

U: Uniform load M: Moderate shock load V: Heavy shock load

Application	Load	Class		Application	Load	Class		Application	Load	Class		
		Up to 10 hrs/day	Over 10 hrs/day			Up to 10 hrs/day	Over 10 hrs/day			Up to 10 hrs/day	Over 10 hrs/day	
AGITATORS				BUCKET				CONVEYORS - Uniformly				
Paper Mills	M	II	II	Conveyors, Uniform	U	I	II	Loaded or Fed: Apron, Ass- sembly, Belt, Bucket, Chain,	U	I	II	
Pure Liquids	U	I	II	Conveyors, Heavy Duty	M	II	II	Flight, Oven, Screw				
Liquids & Solids	M	II	II	Elevators Cont.	U	I	II					
Liquids - Variable Density	M	II	II	Elevators Uniform	U	I	II					
				Elevators, Heavy Duty	M	II	II					
APRON CONVEYORS				CALENDERS				CONVEYORS - Heavy Duty				
Uniformly Loaded or Fed	U	I	II	Paper	U	-	II	Not Uniformly Fed: Apron, Assembly, Belt, Bucket,	M	II	II	
Heavy Duty	M	II	II	Super (Paper)	U	-	II	Chain, Flight, Oven, Screw				
				Rubber	M	II	II	Live Roll (Package)				U
APRON FEEDERS	M	II	II	Textile	M	II	II	Reciprocating, shanker	V	III	III	
ASSEMBLY CONVEYORS				CANE KNIVES				COOKERS (Brewing & Dis- tilling) (Food)				
Uniformly Loaded or Fed	U	I	II		M	II	II		U	I	II	
Heavy Duty	M	II	II									
BALL MILLS				CAN FILLING MACHINES				COOLING TOWER FANS				
	V	III	III		U	I	II	Induced Draft	M	II	II	
BARKING				CARD MACHINES (Textile)				Forced Draft	Consult Office			
Drums	V	-	III		M	II	II					
Hydraulic Auxiliaries	V	-	III	CAR DUMPERS								
Mechanical	V	-	III		V	III	-	COUCH (Paper)	M	-	II	
BAR SCREENS (Sewage)				CAR PULLERS								
	U	I	II		M	II	-	CRANES & HOISTS				
BATCHERS (Textile)				CEMENT KILNS				Consult Office	Main Hoists			
	M	II	II	CENTRIFUGAL								
BEATERS & PULPERS (Paper)				Blowers, Compressors, Dis- charge Elevators or Pumps				U	I	II		
	U	-	II	CHAIN CONVEYORS								
BELT CONVEYORS				Uniformly Loaded or Fed				U	I	II		
Uniformly Loaded or Fed	U	I	II	Heavy Duty				M	II	II		
Heavy Duty	M	II	II	CHEMICAL FEEDERS (Sewage)								
BELT FEEDERS								U	I	II		
	M	II	II	CLARIFIERS								
BENDING ROLLS (Machine)								U	I	II		
	M	II	II	CLASSIFIERS								
BLEACHERS (Paper)								M	II	II		
	M	-	II	CLAY WORKING INDUSTRY								
BLOWERS				Brick Press				V	III	III		
Centrifugal	U	I	II	Briquette Machine				V	III	III		
Lobe	M	II	II	Clay Working Machinery				M	II	II		
Vane	U	I	II	Pug Mill				M	II	II		
BOTTLING MACHINERY				COLLECTORS (Sewage)								
	U	I	II					U	I	II		
BREWING & DISTILLING				COMPRESSORS								
Bottling Machinery	U	I	II	Centrifugal				U	I	II		
Brew Kettles, Cont. Duty	U	-	II	Lobe				M	II	II		
Can Filling Machines	U	I	II	Reciprocating,								
Cookers - Cont. Duty	U	-	II	Multi - Cylinder				M	II	II		
Mash Tubs - Cont. Duty	U	-	II	Single - Cylinder				V	III	III		
Scale Hoppers - Frequent Starts	M	II	II	CONCRETE MIXERS								
				Continuous				M	II	II		
BRICK PRESS (Clay Working)				Intermittent				U	I	-		
	V	III	III	CONVERTING MACHINES (Paper)				M	-	II		
BRIQUETTE MACHINES (Clay Working)												
	V	III	III									



U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC CO.



AGMA Application Classification

J: Uniform load M: Moderate shock load V: Heavy shock load

Application	Load	Class		Application	Load	Class		Application	Load	Class	
		Up to 10 hrs/day	Over 10 hrs/day			Up to 10 hrs/day	Over 10 hrs/day			Up to 10 hrs/day	Over 10 hrs/day
DRYERS (Paper)	U	-	II	HAMMER MILLS	V	III	III	MACHINE TOOLS			
DRYERS & COOLERS (Mills, Rotary)	M	II	II	INDUCED DRAFT FANS	M	II	II	Auxiliary Drives	U	I	II
DYEING MACHINERY (Textile)	M	II	II	JORDANS (Paper)	U	-	II	Bending Rolls	M	II	II
ELEVATORS				KILNS (Mills, Rotary) Cement	M	II	II Consult Office	Main Drives	M	II	II
Bucket - Uniform Load	U	I	II	LAUNDRY WASHERS & TUMBLERS	M	II	II	Notching Press (Belted)		Consult Office	
Bucket - Heavy Duty	M	II	II	LINE SHAFTS				Plate Planers	V	III	III
Bucket - Continuous	U	I	II	Heavy Shock Load	V	III	III	Punch Press (Geared)	V	III	III
Centrifugal Discharge	U	I	II	Moderate Shock Load	M	II	II	Tapping Machines	V	III	III
Escalators	U	I	II	Uniform Load	U	I	II	MANGLE (Textile)	M	II	II
Freight	M	II	II	LIVE ROLL CONVEYORS				MASH TUBS (Brewing & Distilling)	U	-	II
Gravity Discharge	U	I	II	Package	U	I	II	MEAT GRINDER (Food)	M	II	II
Man Lifts, Passenger		Consult Office		LOBE BLOWER OR COMPRESSORS	M	II	II	METAL MILLS			
ESCALATORS	U	I	II	LOG HAULS (Paper & Lumber)	V	III	III	Draw Bench Carriages & Main Drives	V	III	III
FANS				LOOMS (Textile)	M	II	II	Forming Machines	V	III	III
Centrifugal	M	II	II	LUMBER INDUSTRY				Pinch, Dryer & Scrubber		Consult Office	
Cooling Towers				Barkers - Spindle Feed	V	II	III	Rolls Reversing		Consult Office	
Induced Draft	M	II	II	Barkers - Main Drive	V	III	III	Slitters	M	II	II
Forced Draft		Consult Office		Carriage Drive		Consult Office		Table Conveyors, Non-Reversing	M	II	III
Induced Draft	M	II	II	Conveyors				Reversing	V	-	III
Large (Mine, etc.)	M	II	II	Burner	V	II	III	Wire Drawing & Flattening Machines	M	II	III
Large Industrial	M	II	II	Main or Heavy Duty	V	II	III	Wire Winding Machines	M	II	II
Light (Small Diameter)	U	I	II	Main Log	V	III	III	MILLS, ROTARY TYPE			
FEEDERS				Re-Saw Merry-Go-Round	V	II	III	Ball, Pebble, Rod	V	III	III
Apron, belt	M	II	II	Slab	V	III	III	Cement Kilns		Consult Office	
Disc	U	I	II	Transfer	V	II	III	Coolers, Dryers, Kilns	V	II	II
Reciprocating	V	III	III	Chains - Floor	V	II	III	Tumbling Barrels	V	III	III
Screw	M	II	II	Chains - Green	V	II	III	MIXERS (Also see Agitators)			
FELT				Cut-Off Saws-Chain	V	II	III	Concrete - Continuous	M	II	II
Stretchers (Paper)	U	-	II	Cut-Off Saws-Drum	V	II	III	Concrete - Intermittent	M	I	-
Whippers (Paper)	U	-	II	Debarking Drums	V	III	III	Constant Density	U	I	II
FLIGHT				Feeds - Edger	V	II	III	Variable Density	M	II	II
Conveyors, Uniform	U	I	II	Feeds - Gang	V	III	III	NAPPERS (Textile)	M	II	II
Conveyors, Heavy	M	II	II	Feeds - Trimmer	V	II	III	OIL INDUSTRY			
FOOD INDUSTRY				Log Deck	V	III	III	Chillers	M	II	II
Beet Slicers	M	II	II	Log Hauls - Incline, Well Type	V	III	III	Oil Well Pumping		Consult Office	
Bottling, Can Filling Mach.	U	I	II	Log Turning Devices	V	III	III	Paraffin Filter Press	M	II	II
Cereal Cookers	U	I	II	Planner Feed	V	II	III	Rotary Kilns	M	II	II
Dough Mixers	M	II	II	Planer Tilting Hoists	V	II	III	ORE CRUSHERS	V	III	III
Meat Grinders	M	II	II	Rolls - Live-Off Bearing				OVEN CONVEYORS			
FORMING MACHINES (Metal Mills)	V	III	III	Roll Cases	V	III	III	Uniform	U	I	II
GENERATORS (Not welding)	U	I	II	Sorting Table	V	II	III	Heavy Duty	M	II	II
GRAVITY DISCHARGE ELEVATORS	U	I	II	Tipple Hoist	V	II	III				
GRIT COLLECTORS (Sewage)	U	I	II	Transfers - Chain	V	II	III				
				Transfers - Craneway	V	II	III				
				Tray Drives	V	II	III				



U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC CO.



AGMA Application Classification

U: Uniform load M: Moderate shock load V: Heavy shock load

[illegible]

Applications not listed in this table or where the user has data indicating the severity of his usage to be greater than average should be referred to USEM office.

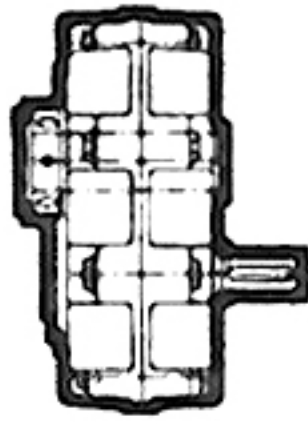


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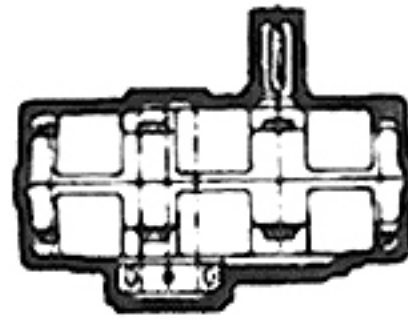


Mounting Positions Type SMR

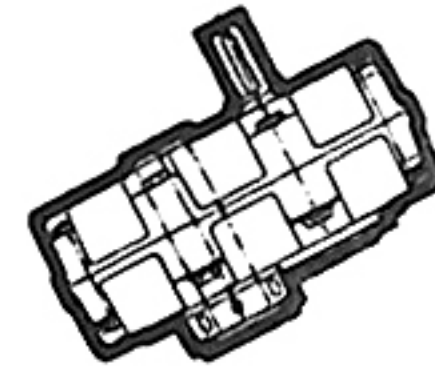
SMR: mounting positions



horizontal shaft

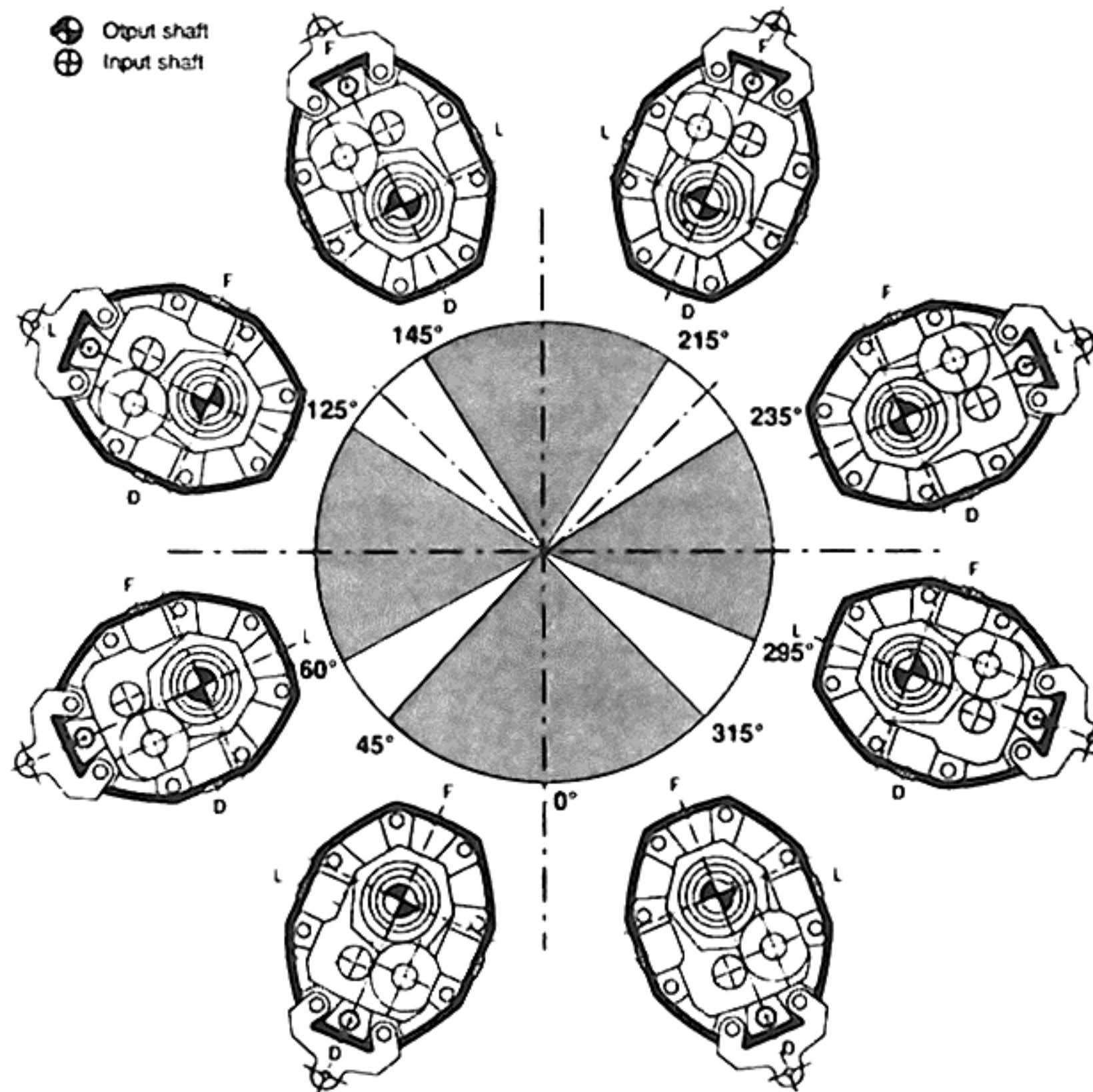


vertical shaft



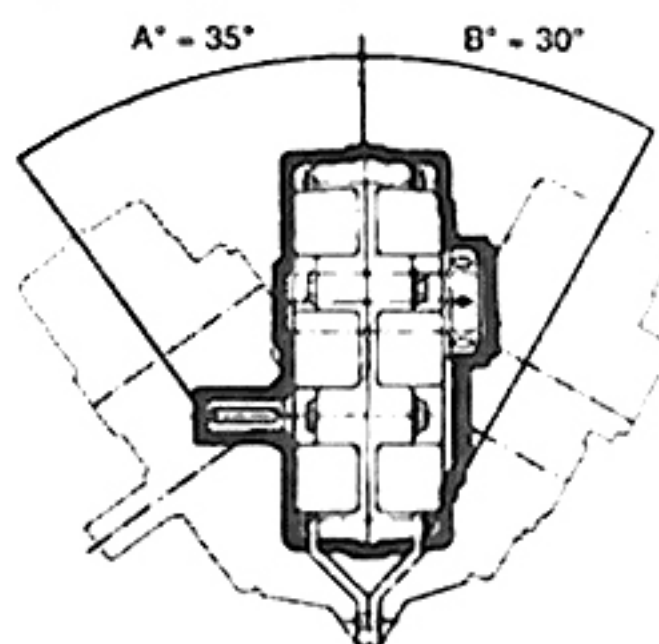
other positions: see below

Operating limit positions

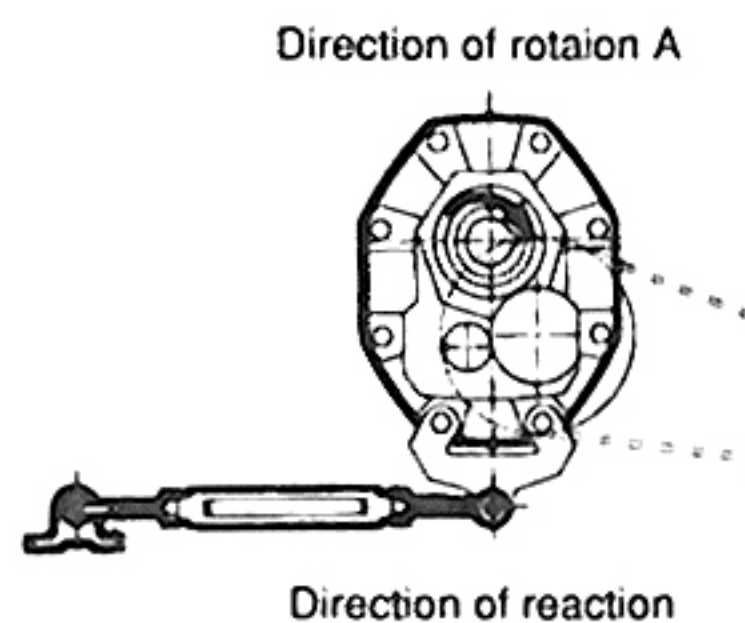


For correct operation of the unit and proper lubrication, only the shaded mounting positions should be used.
Plug = F: filling plug - L: level plug - D: drain plug.

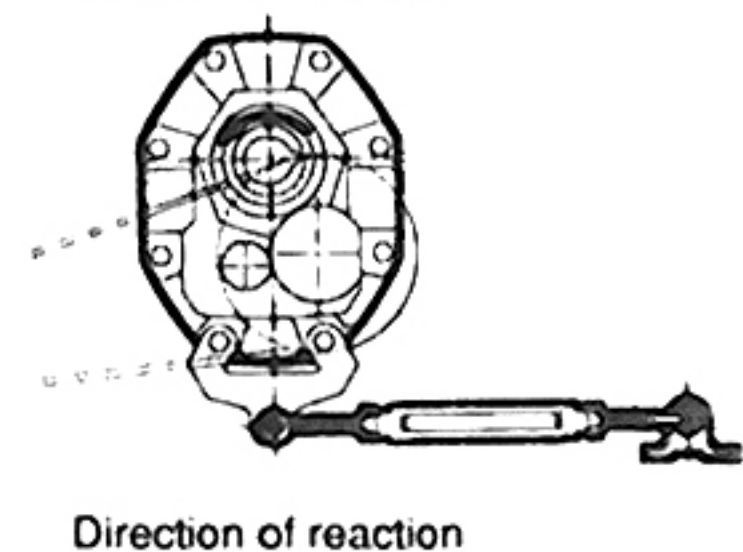
Operating limit positions



Torque arm positions



Direction of rotation B



When the gearbox is on 0 position, the maximum tilt allowed is: A° = 35° B = 30°



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Lubrication Type SMR

SMR 2000 reducers are shipped without oil. Gearboxes **must** be filled with one of the following oils and fitted with a magnetic drain plug before operation.

Refer to mounting positions on page F10 for proper oil levels.

Synthetic lubricants are recommended in the SMR 2000 gearbox due to their wide temperature range. In the event that the gearbox needs to be refilled, see the appropriate maintenance manual for the proper procedure and correct quantity of oil.

If synthetic oil is not available check the chart below for acceptable non-synthetic lubricants.

STANDARD SYNTHETIC GEAR OIL		OPERATING RANGE
Mobil	SHC 629	-22° to +122 °F
Cofran	Sintogear 125	(-30° to +50° C)

Acceptable Mineral Oil Lubricants

Mfr.	-4°F to 14°F (-20°C to -10°C)	14°F to 122°F (-10° C to 50° C) with AD (non EP)			122°F (50° C) and above	
	ISO VG 68	ISO VG 100	ISO VG 150	SAE 30	SAE 80/90	ISO VG 320
AGIP	Blasia 68	Radula 100	Blasia 150	Super Diesel 15W/40	Rotra 80W/90	Blasia 320
BP	Energol GR XP 68	Energol THB 100	Energol GR XP 150	HD SAE 30	Gear Oil EP SAE 80	Energol GR XP 320
COFRAN	Mécane 68 GL	Cofraline Equitex 100	Mécane 150	Équilux C2000 super	Cofrapoid 80W 90	Mécane 320
ELF	Réductelf SP 68	Polytelis 100	Réductelf SP150	Élan SAE 30	Tranself EP 80W 90	Réductelf SP320
ESSO	Teresso EPV 32	--	Spartan EP 150	HDX 30	HDX 30/40	Spartan EP320
MOBIL	Mobile Gear 626	DTE extra heavy	Mobil Gear 629	--	Mobilube C90	Mobil Gear 632
SHELL	Omala 68	Tellus 100	Omala 150	Dentax 80	Spirax EP 90	Omala 320
TOTAL	Carter EP 68	Azola 100	Carter EP 150	GTS 15W 40	GTS 15W 40	Carter EP320



U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC CO.



Exact Ratios Type SMR

Exact reductions ratios

Reducer type	Ratio	Model	Exact ratio
SMR 107	5:1	J251	5.50
	15:1	J252	15.54
	25:1	J253	24.75
SMR 115	5:1	J254	5.615
	15:1	J255	14.548
	25:1	J256	26.065
SMR 203	5:1	J257	5.357
	15:1	J258	14.539
	25:1	J259	24.489
SMR 207	5:1	J260	5.615
	15:1	J261	15.24
	25:1	J262	25.67
SMR 215	5:1	J263	5.50
	15:1	J264	14.41
	25:1	J265	24.354
SMR 307	5:1	J266	5.692
	15:1	J267	14.749
	25:1	J268	24.287
SMR 315	5:1	J269	5.50
	15:1	J270	14.663
	25:1	J271	24.75



U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC CO.



AGMA
/



AGMA
II



EMERSON

AGMA Speed Reducer Selection Type SMR

AGMA
III

Selection table: Shaft Mount Reducer

Output RPM	Power in HP														
	1/4	1/3	1/2	3/4	1	1.5	2	3	5	7.5	10	15	20	25	30
10	107-25	107-25	115-25	203-25	203-25	207-25	215-25	307-25	315-25						
11	107-25	107-25	115-25	203-25	203-25	207-25	215-25	307-25	315-25						
12	107-25	107-25	107-25	115-25	203-25	207-25	207-25	307-25	315-25						
13	107-25	107-25	107-25	115-25	203-25	207-25	207-25	215-25	307-25	315-25					
14	107-25	107-25	107-25	115-25	203-25	207-25	207-25	215-25	307-25	315-25					
15	107-25	107-25	107-25	115-25	203-25	203-25	207-25	215-25	307-25	315-25					
16	107-25	107-25	107-25	115-25	203-25	203-25	207-25	215-25	307-25	315-25					
17	107-25	107-25	107-25	107-25	115-25	203-25	207-25	215-25	307-25	315-25	315-25				
18	107-25	107-25	107-25	107-25	115-25	203-25	207-25	215-25	307-25	315-25	315-25				
19	107-25	107-25	107-25	107-25	115-25	203-25	207-25	207-25	307-25	315-25	315-25				
20	107-25	107-25	107-25	107-25	115-25	203-25	207-25	207-25	307-25	315-25	315-25				
21	107-25	107-25	107-25	107-25	115-25	203-25	207-25	207-25	307-25	307-25	315-25				
22	107-25	107-25	107-25	107-25	115-25	203-25	207-25	207-25	215-25	307-25	315-25				
24	107-25	107-25	107-25	107-25	107-25	115-25	203-25	207-25	215-25	307-25	315-25				
26	107-25	107-25	107-25	107-25	107-25	115-25	203-25	207-25	215-25	307-25	315-25	315-25			
28	107-25	107-25	107-25	107-25	107-25	115-25	203-25	207-25	215-25	307-25	315-25	315-25			
30	107-25	107-25	107-25	107-25	107-25	115-25	203-25	207-25	207-25	307-25	315-25	315-25			
35	107-25	107-25	107-25	107-25	107-25	115-25	115-25	207-25	207-25	307-25	307-25	315-25	315-25		
40	107-25	107-25	107-25	107-25	107-25	107-25	115-25	203-25	207-25	215-25	307-25	315-25	315-25		
45	107-25	107-25	107-25	107-25	107-25	107-25	115-25	203-25	207-25	215-25	307-25	315-25	315-25		
50	107-25	107-25	107-25	107-25	107-25	107-25	115-25	203-25	207-25	207-25	307-25	315-25	315-25	315-25	
55	107-25	107-25	107-25	107-25	107-25	107-25	115-25	203-25	207-25	207-25	215-25	307-25	315-25	315-25	
60	107-25	107-25	107-25	107-25	107-25	107-25	107-25	115-25	207-25	207-25	215-25	307-25	315-25	315-25	
65	107-25	107-25	107-25	107-25	107-25	107-25	107-25	115-25	207-25	207-25	215-25	307-25	315-25	315-25	315-25
70	107-25	107-25	107-25	107-25	107-25	107-25	107-25	115-25	207-25	207-25	207-25	307-25	315-25	315-25	315-25
75	107-25	107-25	107-25	107-25	107-25	107-25	107-25	115-25	203-25	207-25	207-25	307-25	315-25	315-25	315-25
80	107-15	107-15	107-15	107-15	107-15	107-15	107-15	115-15	203-15	207-15	207-15	307-15	315-15	315-15	315-15
90	107-15	107-15	107-15	107-15	107-15	107-15	107-15	115-15	203-15	207-15	207-15	307-15	307-15	315-15	315-15
100	107-15	107-15	107-15	107-15	107-15	107-15	107-15	115-15	203-15	207-15	207-15	215-15	307-15	315-15	315-15
110	107-15	107-15	107-15	107-15	107-15	107-15	107-15	107-15	115-15	203-15	207-05	215-15	307-15	315-15	315-15
120	107-15	107-15	107-15	107-15	107-15	107-15	107-15	107-15	115-15	203-15	207-05	215-05	307-15	307-15	315-15
135	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	207-05	215-05	307-15	307-05	307-05
150	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	207-05	215-05	307-05	307-05	307-05
160	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	207-05	215-05	307-05	307-05	307-05
170	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	207-05	215-05	307-05	307-05	307-05
185	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	207-05	215-05	307-05	307-05	307-05
200	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	207-05	215-05	307-05	307-05	307-05
215	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	207-05	207-05	307-05	307-05	307-05
230	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	207-05	207-05	307-05	307-05	307-05
250	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	207-05	207-05	215-05	307-05	307-05
270	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	207-05	207-05	215-05	307-05	307-05
290	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	207-05	207-05	215-05	307-05	307-05
315	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	203-05	207-05	215-05	307-05	307-05
340	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	203-05	207-05	215-05	307-05	307-05
365	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	203-05	207-05	215-05	307-05	307-05
400	107-05	107-05	107-05	107-05	107-05	107-05	107-05	107-05	115-05	203-05	203-05	207-05	215-05	307-05	307-05



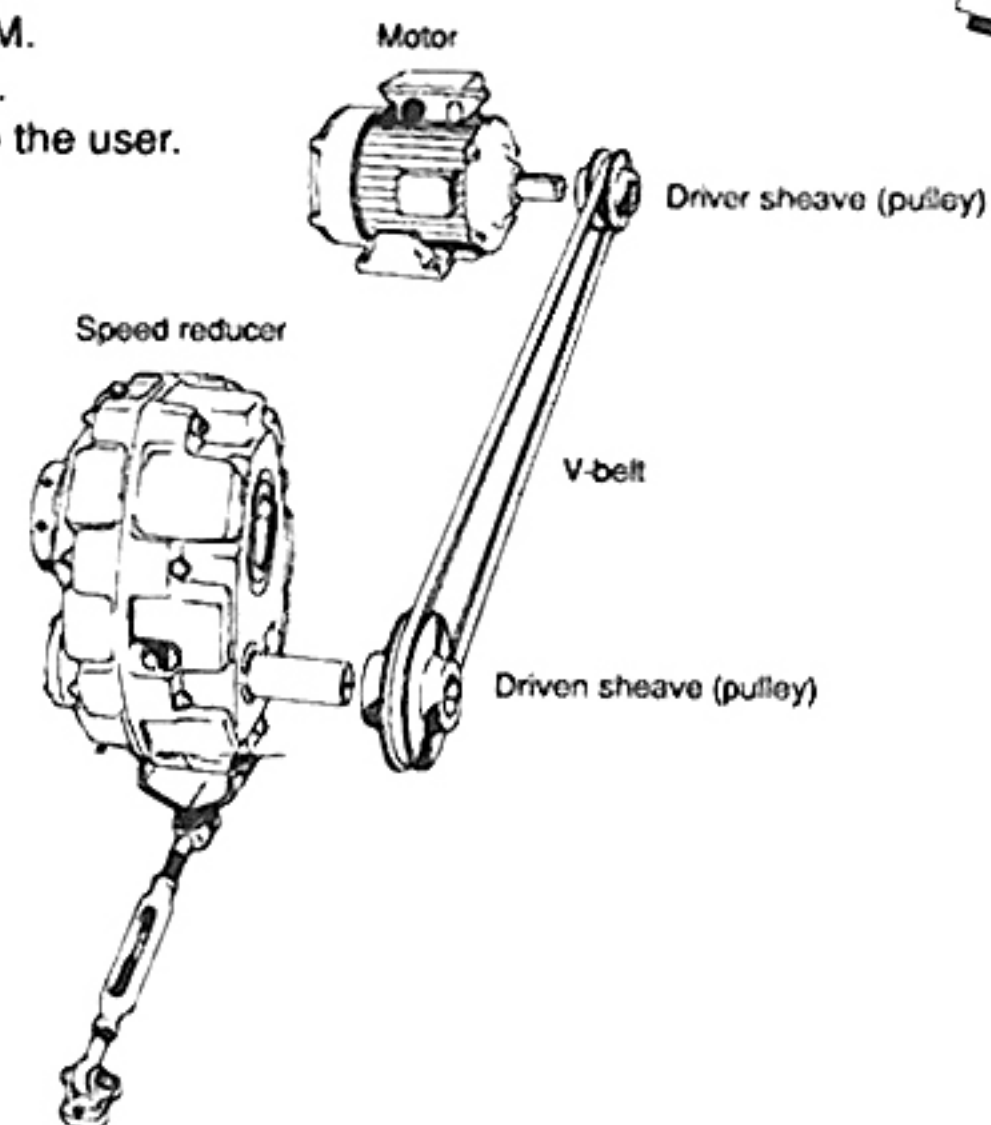
U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC CO.



Speed Reducer Selection Type SMR

Selection table: Shaft Mount Reducer

V-belt drive ratios and sheave diameters recommended to achieve the exact output RPM.
Sheave pitch diameters are shown as the most cost efficient for given speed and power.
Any combination resulting in the given V-belt ratio can be substituted for convenience to the user.



Motor power: 1/4 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	I-II-III	107.05	.81	3.70	3.00	120	I-II-III	107.15	.93	3.20	3.00	28	I-II-III	107.25	2.50	2.46	6.16
365	I-II-III	107.05	.87	3.20	2.80	110	I-II-III	107.15	1.00	2.46	2.46	26	I-II-III	107.25	2.70	2.40	6.50
340	I-II-III	107.05	.93	3.00	2.80	100	I-II-III	107.15	1.09	3.20	3.50	24	I-II-III	107.25	2.91	2.40	7.00
315	I-II-III	107.05	1.00	2.46	2.46	90	I-II-III	107.15	1.28	2.86	3.66	22	I-II-III	107.25	3.21	2.80	9.00
290	I-II-III	107.05	1.09	3.20	3.50	80	I-II-III	107.15	1.37	2.66	3.66	20	I-II-III	107.25	3.52	2.46	8.66
270	I-II-III	107.05	1.17	2.86	3.36	75	I-II-III	107.15	1.48	2.46	3.66	19	I-II-III	107.25	3.74	2.40	8.66
250	I-II-III	107.05	1.28	2.86	3.66	70	I-II-III	107.25	1.00	2.46	2.46	18	I-II-III	107.25	3.92	2.46	9.66
230	I-II-III	107.05	1.37	2.66	3.66	65	I-II-III	107.25	1.08	2.46	2.66	17	I-II-III	107.25	4.16	2.40	10.00
215	I-II-III	107.05	1.48	2.46	3.66	60	I-II-III	107.25	1.17	2.86	3.36	16	I-II-III	107.25	4.33	2.46	10.66
200	I-II-III	107.05	1.56	2.46	3.66	55	I-II-III	107.25	1.26	2.66	3.36	15	I-II-III	107.25	4.74	2.46	11.66
185	I-II-III	107.05	1.69	2.66	4.66	50	I-II-III	107.25	1.45	2.40	3.50	14	I-II-III	107.25	5.00	2.40	12.00
170	I-II-III	107.05	1.85	2.80	5.20	45	I-II-III	107.25	1.56	2.46	3.86	13	I-II-III	107.25	5.41	2.40	13.00
160	I-II-III	107.05	1.97	2.46	4.86	40	I-II-III	107.25	1.80	2.86	5.16	12	I-II-III	107.25	5.95	2.46	14.66
150	I-II-III	107.05	2.12	2.66	5.66	35	I-II-III	107.25	2.08	2.40	5.00	11	I-II-III	107.25	6.25	2.40	15.00
135	I-II-III	107.05	2.29	2.46	5.66	30	I-II-III	107.25	2.37	2.40	5.70	10	I-II-III	107.25	7.17	2.46	17.66

Motor power: 1/3 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	I-II-III	107.05	.81	3.70	3.00	120	I-II-III	107.15	.93	3.20	3.00	28	I-II-III	107.25	2.50	2.40	6.00
365	I-II-III	107.05	.87	3.70	2.80	110	I-II-III	107.15	1.00	2.60	2.80	26	I-II-III	107.25	2.70	2.40	6.50
340	I-II-III	107.05	.94	3.36	3.16	100	I-II-III	107.16	1.09	3.20	3.50	24	I-II-III	107.25	2.90	2.40	7.00
315	I-II-III	107.05	1.00	2.80	2.80	90	I-II-III	107.15	1.28	2.86	3.66	22	I-II-III	107.25	3.21	2.80	9.00
290	I-II-III	107.05	1.09	3.20	3.50	80	I-II-III	107.15	1.38	3.36	4.66	20	I-II-III	107.25	3.57	2.80	10.00
270	I-II-III	107.05	1.17	2.86	3.36	75	I-II-III	107.15	1.49	2.80	4.20	19	I-II-III	107.25	3.72	2.86	10.66
250	I-II-III	107.05	1.28	2.86	3.66	70	I-II-III	107.25	1.00	2.80	2.80	18	I-II-III	107.25	3.93	2.80	11.00
230	I-II-III	107.05	1.38	3.16	4.36	65	I-II-III	107.25	1.09	3.20	3.50	17	I-II-III	107.25	4.16	2.40	10.00
215	I-II-III	107.05	1.49	2.80	4.20	60	I-II-III	107.25	1.17	2.86	3.36	16	I-II-III	107.25	4.43	2.86	12.66
200	I-II-III	107.05	1.60	2.80	4.50	55	I-II-III	107.25	1.25	2.80	3.50	15	I-II-III	107.25	4.61	2.60	12.00
185	I-II-III	107.05	1.71	3.20	5.50	50	I-II-III	107.25	1.46	3.20	4.70	14	I-II-III	107.25	5.00	2.40	14.00
170	I-II-III	107.05	1.83	3.00	5.50	45	I-II-III	107.25	1.56	3.00	4.70	13	I-II-III	107.25	5.41	2.40	14.00
160	I-II-III	107.05	1.97	2.86	5.66	40	I-II-III	107.25	1.80	2.86	5.16	12	I-II-III	107.25	5.83	2.40	14.00
150	I-II-III	107.05	2.11	2.60	5.50	35	I-II-III	107.25	2.06	3.00	6.20	11	I-II-III	107.25	6.43	2.80	16.00
135	I-II-III	107.05	2.30	2.60	6.00	30	I-II-III	107.25	2.32	2.60	6.50	10	I-II-III	107.25	6.91	2.60	16.00



U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC CO.



Speed Reducer Selection

Type SMR

Selection table: Shaft Mount Reducer

V-belt drive ratios and sheave diameters recommended to achieve the exact output RPM.
Sheave pitch diameters are shown as the most cost efficient for given speed and power.
Any combination resulting in the given V-belt ratio can be substituted for convenience to the user.

Motor
1750
RPM

Motor power: 1/2 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	I-II-III	107.05	.81	3.70	3.00	90	I-II-III	107.15	1.28	3.50	4.50	18	I-II-III	107.25	3.93	2.80	11.00
365	I-II-III	107.05	.87	3.20	2.80	80	I-II-III	107.15	1.37	4.00	5.50	17	I-II-III	107.25	4.16	2.40	10.00
340	I-II-III	107.05	.93	3.00	2.80	75	I-II-III	107.15	1.48	3.50	5.20	16	I-II-III	107.25	4.37	2.40	10.50
315	I-II-III	107.05	1.00	3.00	3.00	70	I-II-III	107.25	1.00	3.00	3.00	15	I-II-III	107.25	4.61	2.60	12.00
290	I-II-III	107.05	1.09	3.20	3.50	65	I-II-III	107.25	1.09	3.20	3.50	14	I-II-III	107.25	5.00	2.40	12.00
270	I-II-III	107.05	1.16	3.00	3.50	60	I-II-III	107.25	1.16	3.00	3.50	13	I-II-III	107.25	5.41	2.40	13.00
250	I-II-III	107.05	1.28	3.50	4.50	55	I-II-III	107.25	1.25	3.20	4.00	12	I-II-III	107.25	5.83	2.40	14.00
230	I-II-III	107.05	1.37	4.00	5.50	50	I-II-III	107.25	1.46	3.20	4.70		III	115.25	6.00	3.00	18.00
215	I-II-III	107.05	1.48	3.50	5.20	45	I-II-III	107.25	1.57	3.50	5.50	11	I-II	107.25	6.25	2.40	15.00
200	I-II-III	107.05	1.60	2.80	4.50	40	I-II-III	107.25	1.83	3.00	5.50		III	115.25	6.43	2.80	18.00
185	I-II-III	107.05	1.71	3.20	5.50	35	I-II-III	107.25	2.08	2.40	5.00	10	I-II	107.25	6.91	2.60	18.00
170	I-II-III	107.05	1.83	3.00	5.50	30	I-II-III	107.25	2.37	2.40	5.70						
160	I-II-III	107.05	1.96	2.80	5.50	28	I-II-III	107.25	2.50	2.40	6.00						
150	I-II-III	107.05	2.14	2.80	6.00	26	I-II-III	107.25	2.70	2.40	6.50						
135	I-II-III	107.05	2.30	2.60	6.00	24	I-II-III	107.25	2.91	2.40	7.00						
120	I-II-III	107.15	.93	3.20	3.00	22	I-II-III	107.25	3.21	2.80	9.00						
110	I-II-III	107.15	1.00	3.00	3.00	20	I-II-III	107.25	3.54	2.40	8.50						
100	I-II-III	107.15	1.09	3.20	3.50	19	I-II-III	107.25	3.74	2.40	9.00						

Motor power: 3/4 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	I-II-III	107.05	.81	3.70	3.00	70	I-II-III	107.25	1.00	3.50	3.50		III	115.25	4.16	2.40	10.00
365	I-II-III	107.05	.87	3.20	2.80	65	I-II-III	107.25	1.09	3.20	3.50	16	I-II	107.25	4.37	2.40	10.50
340	I-II-III	107.05	.93	3.20	3.00	60	I-II-III	107.25	1.17	4.00	4.70		III	115.25	4.37	2.40	10.50
315	I-II-III	107.05	1.00	3.50	3.50	55	I-II-III	107.25	1.26	3.70	4.70	15	I-II	107.25	4.64	2.80	13.00
290	I-II-III	107.05	1.09	3.20	3.50	50	I-II-III	107.25	1.48	3.50	5.20	14	III	115.25	4.64	2.80	13.00
270	I-II-III	107.05	1.17	4.00	4.70	45	I-II-III	107.25	1.57	3.50	5.50		I-II	107.25	5.00	2.40	12.00
250	I-II-III	107.05	1.26	3.70	4.70	40	I-II-III	107.25	1.83	3.00	5.50	13	III	115.25	5.00	2.40	12.00
230	I-II-III	107.05	1.37	4.00	5.50	35	I-II-III	107.25	2.08	2.40	5.60		I-II	107.25	5.41	2.40	13.00
215	I-II-III	107.05	1.48	3.50	5.20	30	I-II-III	107.25	2.37	2.40	5.70	12	III	115.25	5.41	2.40	13.00
200	I-II-III	107.05	1.60	2.80	4.50	28	I-II-III	107.25	2.50	2.40	6.00		I-II	107.25	5.83	2.40	14.00
185	I-II-III	107.05	1.71	3.50	6.00	26	I-II-III	107.25	2.70	2.40	6.50		III	203.25	6.43	2.80	18.00
170	I-II-III	107.05	1.83	3.00	5.50	24	I-II-III	107.25	2.91	2.40	7.00	11	I	107.25	6.00	3.00	18.00
160	I-II-III	107.05	1.96	2.80	5.50	22	I-II-III	107.25	3.21	2.80	9.00		I	107.25	6.25	2.40	15.00
150	I-II-III	107.05	2.11	2.60	5.50	20	I-II-III	107.25	3.54	2.40	8.50		III	203.25	6.91	2.60	18.00
135	I-II-III	107.05	2.30	2.60	6.00	19	I-II-III	107.25	3.74	2.40	9.00	10	II	115.25	6.43	2.80	18.00
120	I-II-III	107.15	.93	3.20	3.00	18	I-II-III	107.25	3.93	2.80	11.00		I	107.25	6.43	2.80	18.00
110	I-II-III	107.15	1.00	3.50	3.50	17	I-II-III	107.25	4.16	2.40	10.00						
100	I-II-III	107.15	1.09	3.20	3.50												
90	I-II-III	107.15	1.28	3.50	4.50												
80	I-II-III	107.15	1.37	4.00	5.50												
75	I-II-III	107.15	1.48	3.50	5.20												



U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC CO.



Speed Reducer Selection

Type SMR

Selection table: Shaft Mount Reducer

V-belt drive ratios and sheave diameters recommended to achieve the exact output RPM.
Sheave pitch diameters are shown as the most cost efficient for given speed and power.
Any combination resulting in the given V-belt ratio can be substituted for convenience to the user.

Motor
1750
RPM

Motor power: 1 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	I-II-III	107.05	.81	3.70	3.00	55	I-II-III	107.25	1.26	3.70	4.70	17	III	115.25	4.22	2.40	10.00
365	I-II-III	107.05	.87	3.20	2.80	50	I-II-III	107.25	1.46	3.20	4.70	17	I-II	107.25	4.16	2.80	11.00
340	I-II-III	107.05	.93	3.20	3.00	45	I-II-III	107.25	1.56	3.00	4.70	16	III	203.25	4.50	4.00	18.00
315	I-II-III	107.05	1.00	2.80	2.80	40	I-II-III	107.25	1.80	2.60	4.70	16	I-II	107.25	4.37	2.40	10.50
290	I-II-III	107.05	1.09	3.20	3.50	35	I-II-III	107.25	2.06	3.00	6.20	15	III	203.25	4.64	2.60	13.00
270	I-II-III	107.05	1.17	4.00	4.70	30	I-II-III	107.25	2.38	2.60	6.20	15	II	115.25	4.33	3.00	13.00
250	I-II-III	107.05	1.26	3.70	4.70	28	I-II-III	107.25	2.50	2.80	7.00	15	I	107.25	4.61	2.60	12.00
230	I-II-III	107.05	1.37	4.00	5.50	26	I-II-III	107.25	2.69	2.60	7.00	14	III	203.25	5.14	3.50	18.00
215	I-II-III	107.05	1.49	2.80	4.20	24	I-II-III	107.25	3.00	3.00	9.00	14	II	115.25	4.86	3.70	18.00
200	I-II-III	107.05	1.60	2.80	4.50	22	III	115.25	3.03	2.80	8.50	14	I	107.25	5.00	2.40	12.00
185	I-II-III	107.05	1.71	3.50	6.00	20	I-II	107.25	3.21	2.80	9.00	13	III	203.25	5.62	3.20	18.00
170	I-II-III	107.05	1.83	3.00	5.50	20	III	115.25	3.35	3.00	10.00	13	II	115.25	5.35	2.80	15.00
160	I-II-III	107.05	1.96	2.80	5.50	19	I-II	107.25	3.57	2.80	10.00	13	I	107.25	5.41	2.40	13.00
150	I-II-III	107.05	2.11	2.60	5.50	19	III	115.25	3.74	3.20	12.00	12	III	203.25	6.00	3.00	18.00
135	I-II-III	107.05	2.30	2.60	6.00	18	III	115.25	3.66	3.00	11.00	12	II	115.25	5.41	2.40	13.00
120	I-II-III	107.15	.93	3.20	3.00	18	I-II	107.25	3.93	2.80	11.00	12	I	107.25	5.83	2.40	14.00
110	I-II-III	107.15	1.00	2.80	2.80							11	II-III	203.25	6.43	2.80	18.00
100	I-II-III	107.15	1.09	3.20	3.50							11	I	115.25	6.00	3.00	18.00
90	I-II-III	107.15	1.28	3.50	4.50							10	II-III	203.25	6.91	2.60	18.00
80	I-II-III	107.15	1.37	4.00	5.50							10	I	115.25	6.43	2.80	18.00
75	I-II-III	107.15	1.48	3.50	5.20												
70	I-II-III	107.25	1.00	2.80	2.80												
65	I-II-III	107.25	1.09	3.20	3.50												
60	I-II-III	107.25	1.17	4.00	4.70												

Motor power: 1 1/2 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	I-II-III	107.05	.81	3.70	3.00	55	I-II-III	107.25	1.26	3.70	4.70	18	III	203.25	4.00	3.55	14.00
365	I-II-III	107.05	.87	4.00	3.50	50	I-II-III	107.25	1.35	4.20	5.70	18	II	115.25	3.78	3.70	14.00
340	I-II-III	107.05	.94	3.70	3.50	45	I-II-III	107.25	1.57	3.50	5.50	18	I	107.25	3.78	3.70	14.00
315	I-II-III	107.05	1.00	3.50	3.50	40	I-II-III	107.25	1.81	3.70	6.70	17	II-III	203.25	4.29	3.50	15.00
290	I-II-III	107.05	1.08	3.70	4.00	35	III	115.25	2.00	3.50	7.00	17	I	107.25	4.00	3.50	16.00
270	I-II-III	107.05	1.17	4.00	4.70	30	I-II	107.25	2.09	3.20	6.70	16	II-III	203.25	4.50	4.00	18.00
250	I-II-III	107.05	1.26	3.70	4.70	28	III	115.25	2.25	4.00	9.00	16	I	115.25	4.29	3.50	15.00
230	I-II-III	107.05	1.37	4.00	5.50	26	I-II	107.25	2.34	3.20	7.50	15	II-III	203.25	4.69	3.20	15.00
215	I-II-III	107.05	1.48	3.50	5.20	24	III	115.25	2.38	4.20	10.00	15	I	115.25	4.50	4.00	18.00
200	I-II-III	107.05	1.57	3.50	5.50	22	I-II	107.25	2.50	3.20	8.00	14	III	207.25	4.86	3.70	18.00
185	I-II-III	107.05	1.71	3.50	6.00	20	III	115.25	2.57	3.50	9.00	14	II	203.25	5.15	3.50	18.00
170	I-II-III	107.05	1.85	3.50	6.50	19	I-II	107.25	2.69	2.60	7.00	14	I	115.25	4.86	3.70	18.00
160	I-II-III	107.05	2.00	3.50	7.00	18	III	115.25	2.97	3.20	9.50	13	III	207.25	5.15	3.50	18.00
150	I-II-III	107.05	2.14	3.50	7.50	17	I-II	107.25	3.13	3.20	10.00	13	II	203.25	5.63	3.20	18.00
135	I-II-III	107.05	2.29	3.70	8.50	16	III	203.25	3.26	3.70	12.00	13	I	115.25	5.35	2.80	15.00
120	I-II-III	107.15	.93	4.50	6.20	15	II	115.25	3.00	3.50	10.50	12	III	207.25	5.63	3.20	18.00
110	I-II-III	107.15	1.00	3.50	3.50	14	I	107.25	3.00	3.50	10.50	12	II	203.25	6.00	3.00	18.00
100	I-II-III	107.15	1.09	5.20	5.70	13	II-III	203.25	3.57	4.20	15.00	12	I	115.25	5.41	2.40	13.00
90	I-II-III	107.15	1.28	3.50	4.50	12	II	115.25	2.43	3.50	12.00	11	III	207.25	6.13	3.20	19.20
80	I-II-III	107.15	1.37	4.00	5.50	11	I	107.25	2.43	4.90	12.00	11	I-II	203.25	6.58	3.80	25.00
75	I-II-III	107.15	1.48	3.50	5.20	10	III	203.25	3.75	3.20	12.00	10	II-III	207.25	6.92	2.60	18.00
70	I-II-III	107.25	1.00	3.50	3.50	9	II	115.25	3.51	3.70	13.00	9	I	203.25	7.35	3.40	25.00
65	I-II-III	107.25	1.08	3.70	4.00	8	I	107.25	3.51	3.70	13.00						
60	I-II-III	107.25	1.17	4.00	4.70												



U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC CO.



Speed Reducer Selection

Type SMR

Selection table: Shaft Mount Reducer

V-belt drive ratios and sheave diameters recommended to achieve the exact output RPM.
Sheave pitch diameters are shown as the most cost efficient for given speed and power.
Any combination resulting in the given V-belt ratio can be substituted for convenience to the user.

Motor
1750
RPM

Motor power: 2 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	I-II-III	107.05	.81	5.20	4.20	50	III	115.25	1.36	4.20	5.70	19	III	207.25	3.57	4.20	15.00
365	I-II-III	107.05	.88	5.70	5.00	45	I-II	107.25	1.36	4.20	5.70	18	II	203.25	3.75	4.00	15.00
340	I-II-III	107.05	.94	5.00	4.70	40	III	115.25	1.49	4.50	6.70	17	I	115.25	3.75	4.00	15.00
315	I-II-III	107.05	1.00	4.00	4.00	35	I-II	107.25	1.56	4.50	7.00	16	III	207.25	3.79	3.70	14.00
290	I-II-III	107.05	1.10	5.20	5.70	30	III	203.25	1.81	3.70	6.70	15	II	203.25	4.00	4.50	18.00
270	I-II-III	107.05	1.18	4.00	4.70	28	I	107.25	1.82	5.50	10.00	14	I	115.25	3.76	4.90	18.40
250	I-II-III	107.05	1.28	4.70	6.00	26	III	203.25	2.00	4.00	8.00	13	II-III	207.25	4.00	4.50	18.00
230	I-II-III	107.05	1.38	4.50	6.20	24	I-II	107.25	2.00	4.00	8.00	12	II	203.25	4.29	4.20	18.00
215	I-II-III	107.05	1.48	4.20	6.20	22	III	203.25	2.38	4.20	10.00	11	I	115.25	4.00	4.60	18.40
200	I-II-III	107.05	1.59	4.20	6.70	20	II	115.25	2.25	4.00	9.00	10	III	207.25	4.29	4.20	18.00
185	I-II-III	107.05	1.70	4.70	8.00	19	I	107.25	2.25	4.00	9.00	9	I-II	203.25	4.50	4.00	18.00
170	I-II-III	107.05	1.81	4.70	8.50	18	III	203.25	2.57	3.70	9.50	8	III	207.25	4.50	4.00	18.00
160	I-II-III	107.05	2.00	4.00	8.00	17	II	115.25	2.60	5.00	12.00	7	I-II	203.25	4.50	4.00	18.00
150	I-II-III	107.05	2.14	4.20	9.00	16	I	107.25	2.60	4.60	12.00	6	III	207.25	5.00	2.60	13.00
135	I-II-III	107.05	2.34	4.70	11.00	15	III	203.25	2.75	4.00	11.00	5	I	203.25	5.00	2.60	13.00
120	I-II-III	107.15	.94	5.00	4.70	14	II	115.25	2.57	3.70	9.50	4	II-III	207.25	5.36	2.60	15.00
110	I-II-III	107.15	1.00	4.00	4.00	13	I	107.25	2.57	3.70	9.50	3	I	203.25	5.36	2.80	15.00
100	I-II-III	107.15	1.09	5.50	6.00	12	III	203.25	2.97	3.70	11.00	2	III	207.25	6.00	3.00	18.00
90	I-II-III	107.15	1.28	4.70	6.00	11	II	115.25	2.97	3.70	11.00	1	I	203.25	5.77	2.60	15.00
80	I-II-III	107.15	1.37	4.00	5.50	10	I	107.25	2.97	3.70	11.00	0	III	215.25	6.53	3.00	19.60
75	I-II-III	107.15	1.48	4.20	6.20	9	III	207.25	3.10	4.20	13.00	0	II	207.25	6.12	3.20	19.60
70	I-II-III	107.25	1.00	4.00	4.00	8	II	203.25	3.25	4.00	13.00	0	I	203.25	6.53	3.00	19.60
65	I-II-III	107.25	1.09	5.50	6.00	7	I	115.25	3.25	4.00	13.00	0	III	215.25	7.53	3.40	24.60
60	I-II-III	107.25	1.18	4.00	4.70	6	II	203.25	3.50	4.00	14.00	0	II	207.25	6.92	2.60	18.00
55	III	115.25	1.20	5.00	6.00	5	I	115.25	3.57	4.20	15.00	0	I	203.25	6.92	2.60	18.00
50	I-II	107.25	1.27	4.50	5.70	4						0					

Motor power: 3 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	I-II-III	107.05	.81	6.20	5.00	55	III	203.25	1.27	5.50	7.00	19	II-III	207.25	3.60	5.00	18.00
365	I-II-III	107.05	.88	5.70	5.00	50	II	115.25	1.20	5.00	6.00	18	I	203.25	3.60	5.00	18.00
340	I-II-III	107.05	.95	5.50	5.20	45	I	107.25	1.27	5.50	7.00	17	III	215.25	4.00	3.40	13.60
315	I-II-III	107.05	1.00	5.20	5.20	40	III	203.25	1.36	5.50	7.50	16	II	207.25	3.76	4.90	18.40
290	I-II-III	107.05	1.09	5.70	6.20	35	I	107.25	1.36	5.50	7.50	15	I	203.25	3.76	4.90	18.40
270	I-II-III	107.05	1.18	5.70	6.70	30	III	203.25	1.58	5.70	9.00	14	III	215.25	4.18	4.40	18.40
250	I-II-III	107.15	1.27	5.50	7.00	28	II	115.25	1.50	5.00	7.50	13	II	207.25	4.00	4.60	18.40
230	I-II-III	107.05	1.39	4.60	6.40	26	I	107.25	1.50	5.00	7.50	12	I	203.25	4.00	4.60	18.40
215	I-II-III	107.05	1.50	5.00	7.50	24	III	203.25	1.83	6.00	11.00	11	III	307.25	6.00	3.00	18.00
200	I-II-III	107.05	1.60	5.00	8.00	22	II	115.25	1.72	4.60	7.90	10	II	215.25	6.00	3.00	18.00
185	I-II-III	107.05	1.72	4.60	7.90	20	I	107.25	1.72	4.60	7.90	9	I	207.25	6.00	3.00	18.00
170	I-II-III	107.05	1.83	6.00	11.00	19	III	207.25	2.00	5.00	10.00	8	III	307.25	6.53	3.00	19.60
160	I-II-III	107.05	2.00	5.00	10.00	18	II	115.25	2.00	5.00	10.00	7	I	207.25	6.53	3.00	19.60
150	I-II-III	107.05	2.12	5.20	11.00	17	I-II	115.25	2.28	5.70	13.00	6	III	307.25	7.23	3.40	24.60
135	I-II-III	107.05	2.31	5.20	12.00	16	III	207.25	2.37	4.60	10.90	5	II	215.25	7.23	3.40	24.60
120	I-II-III	107.15	.94	4.90	4.60	15	I	115.25	2.28	5.70	13.00	4	I	207.25	6.00	3.00	18.00
110	I-II-III	107.15	1.00	5.20	5.20	14	III	207.25	2.40	5.00	12.00	3	II	215.25	6.00	3.00	18.00
100	I-II-III	107.15	1.09	5.50	6.00	13	II	115.25	2.59	4.40	11.40	2	I	207.25	6.00	3.00	18.00
90	III	115.15	1.36	5.50	7.50	12	I	115.25	2.59	4.40	11.40	1	III	307.25	6.53	3.00	19.60
80	I-II	107.15	1.27	5.50	7.00	11	III	207.25	2.60	5.00	13.00	0	II	215.25	6.53	3.00	19.60
75	III	115.15	1.44	5.20	7.50	10	II	203.25	2.73	5.50	15.00	0	I	207.25	6.53	3.00	19.60
70	I-II	107.15	1.36	5.50	7.50	9	I	115.25	2.73	5.50	15.00	0	III	307.25	7.23	3.40	24.60
65	III	115.15	1.58	5.70	9.00	8	III	207.25	2.82	4.40	12.40	0	II	215.25	7.23	3.40	24.60
60	I-II	107.15	1.50	5.00	7.50	7	I-II	203.25	3.00	5.00	15.00	0	I	207.25	7.23	3.40	24.60
55	III	115.15	.96	5.20	5.00	6	II-III	207.25	3.04	4.40	13.40	0					
50	I-II	107.25	1.00	5.20	5.20	5	I	203.25	3.23	3.40	11.00	0					
45	III	115.25	1.03	6.00	6.20	4	II-III	207.25	3.43	3.50	12.00	0					
40	I-II	107.25	1.04	5.50	6.00	3	I	203.25	3.65	3.40	12.40	0					
35	II-III	115.25	1.12	6.00	6.70	2						0					
30	I	107.25	1.18	5.50	6.50	1						0					



U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC CO.



Speed Reducer Selection

Type SMR

Selection table: Shaft Mount Reducer

V-belt drive ratios and sheave diameters recommended to achieve the exact output RPM.
Sheave pitch diameters are shown as the most cost efficient for given speed and power.
Any combination resulting in the given V-belt ratio can be substituted for convenience to the user.

Motor
1750
RPM

Motor power: 5 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	III	115.05	.80	7.40	5.90	90	III	203.15	1.38	6.10	8.40	25	III	215.25	2.75	4.00	11.00
	I-II	107.05	.81	7.90	6.40		II	115.15	1.36	6.90	9.40		I-II	207.25	2.61	5.90	15.40
365	III	115.05	.86	7.10	6.10		I	107.15	1.36	6.90	9.40		III	215.25	3.00	4.40	13.20
	I-II	107.05	.87	7.90	6.90		III	203.15	1.47	6.40	9.40		I-II	207.25	2.87	6.40	18.40
350	III	115.05	.92	6.60	6.10	80	II	115.15	1.47	6.40	9.40		III	215.25	3.24	4.20	13.60
	I-II	107.05	.93	7.40	6.90		I	170.15	1.47	6.40	9.40		I-II	207.25	3.24	4.20	13.60
315	III	115.05	1.00	6.40	6.40		III	203.15	1.58	6.90	10.90		III	307.25	3.57	4.20	15.00
	I-II	107.05	1.00	6.40	6.40	75	I-II	115.15	1.58	6.90	10.90		II	215.25	3.54	4.40	15.60
290	III	115.05	1.07	6.90	7.40		III	207.25	.97	7.10	6.90		I	207.25	3.54	4.40	15.60
	I-II	107.05	1.10	6.20	6.80	70	II	203.25	1.03	6.90	7.10		III	307.25	3.85	4.00	15.40
270	III	115.05	1.16	6.40	7.40		I	115.25	.95	6.40	6.10		II	215.25	3.81	4.20	16.00
	I-II	107.05	1.18	7.10	8.40		III	207.25	1.05	6.10	6.40		I	207.25	3.81	4.20	16.00
250	III	115.05	1.25	7.10	8.90	65	II	203.25	1.11	6.40	7.10		III	307.25	4.00	4.00	16.00
	I-II	107.05	1.27	6.60	8.40		I	115.25	1.08	6.40	7.90		II	215.25	4.00	4.00	16.00
230	III	115.05	1.35	6.60	8.90		III	207.25	1.14	7.40	8.40		I	207.25	4.00	4.00	16.00
	I-II	107.05	1.38	6.10	8.40	60	II	203.25	1.20	6.60	7.90		III	307.25	4.17	3.60	15.00
215	III	115.05	1.46	6.10	8.90		I	115.25	1.18	7.10	8.40		II	215.25	4.17	3.60	15.00
	I-II	107.05	1.46	6.10	8.90		III	207.25	1.22	6.90	8.40		I	207.25	4.17	3.60	15.00
200	III	115.05	1.55	6.40	9.90	55	II	203.25	1.27	6.60	8.40		III	307.25	4.59	3.40	15.60
	I-II	107.05	1.58	6.90	10.90		I	115.25	1.27	6.60	8.40		II	215.25	4.41	3.40	15.00
185	III	115.05	1.68	7.40	12.40		III	207.25	1.42	5.90	8.40		I	207.25	4.41	3.40	15.00
	I-II	107.05	1.71	6.10	10.40	50	II	203.25	1.50	6.60	9.90		II-II	315.25	4.70	3.40	16.00
170	III	115.05	1.79	6.10	10.90		I	115.25	1.50	6.60	9.90		I	207.25	4.70	3.40	16.00
	I-II	107.05	1.79	6.10	10.90	45	III	207.25	1.51	5.90	8.90		II-III	307.25	5.11	3.60	18.40
160	III	115.05	1.94	6.40	12.40		II	203.25	1.59	5.90	9.60		I	215.25	5.11	3.60	18.40
	I-II	107.05	1.95	7.90	15.40		I	115.25	1.50	6.60	9.90		II-III	307.25	5.63	3.20	18.00
150	III	115.05	2.08	7.40	15.40	40	II-III	207.25	1.75	7.10	12.60		I	215.25	5.63	3.20	18.00
	I-II	107.05	2.13	4.70	10.00		I	203.25	1.85	5.90	10.90		III	315.25	6.00	3.00	18.00
135	III	115.05	2.27	6.00	13.60	35	II-III	207.25	2.00	4.50	9.00		I-II	307.25	6.00	3.00	18.00
	I-II	107.05	2.31	5.20	12.00		I	203.25	2.12	6.60	13.60		III	315.25	6.53	3.00	19.60
120	III	115.15	1.00	6.40	6.40	30	I-II-III	207.25	2.27	5.90	13.40		I-II	307.25	6.53	3.00	19.60
	I-II	107.15	.94	7.90	7.40		III	215.25	2.57	6.00	15.40		III	315.25	6.73	4.40	29.60
110	III	115.15	1.08	6.40	6.90	28	I-II	207.25	2.44	4.50	11.00		I-II	307.25	7.23	3.40	24.60
	I-II	107.15	1.00	6.40	6.40												
100	III	203.15	1.16	6.10	7.10												
	II	115.15	1.16	6.10	7.10												
	I	107.15	1.16	6.10	7.10												



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Speed Reducer Selection

Type SMR

Selection table: Shaft Mount Reducer

V-belt drive ratios and sheave diameters recommended to achieve the exact output RPM.
Sheave pitch diameters are shown as the most cost efficient for given speed and power.
Any combination resulting in the given V-belt ratio can be substituted for convenience to the user.

Motor
1750
RPM

Motor power: 7 1/2 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	III	203.05	.83	7.00	5.90	135	III	203.05	2.19	8.40	18.40	35	III	307.25	2.00	6.00	12.00
	II	115.05	.80	7.90	7.90		I-II	115.05	2.26	6.20	14.00		I-II	207.25	1.88	5.00	9.40
	I	107.05	.81	7.00	5.70		III	203.05	2.43	4.90	13.40		III	307.25	2.38	5.20	12.40
365	III	203.05	.89	6.60	5.90	120	I-II	115.15	1.00	8.40	8.40	30	II	215.25	2.38	5.20	12.40
	II	115.05	.86	10.40	8.90		III	207.15	1.11	8.90	9.90		I	207.25	2.38	5.20	12.40
	I	107.05	.86	5.90	5.10	110	I-II	115.15	1.09	5.60	6.10		II-III	307.25	2.58	4.80	12.40
340	III	203.05	.97	6.40	6.60		III	207.15	1.30	8.40	10.90	28	II	215.25	2.52	5.40	13.60
	II	115.05	.92	6.60	5.60	100	II	203.15	1.17	8.90	10.40		I	207.25	2.52	5.40	13.60
	I	107.05	.94	8.90	6.40		I	115.15	1.17	8.90	10.40		II-III	307.25	2.75	4.00	11.00
315	III	203.05	1.04	5.40	5.60		III	207.15	1.39	8.90	12.40	26	II	215.25	2.75	4.00	11.00
	II	115.05	1.00	8.40	8.40	90	II	203.15	1.37	5.40	7.40		I	207.25	2.75	4.00	11.00
	I	107.05	1.00	8.40	8.40		I	115.15	1.37	5.40	7.40		III	307.25	3.00	4.40	13.20
290	III	203.05	1.12	8.40	9.40		III	207.15	1.51	8.90	13.40	24	II	215.25	3.00	4.40	13.20
	II	115.05	1.08	5.20	5.60	80	II	203.15	1.48	8.40	12.40		I	207.25	3.00	4.40	13.20
	I	107.05	1.09	5.60	6.10		I	115.15	1.48	8.40	12.40		II-III	307.25	3.24	4.20	13.60
270	III	203.05	1.21	9.40	11.40		II-III	207.25	.97	6.20	6.00	22	I	215.25	3.24	4.20	13.60
	II	115.05	1.16	5.10	5.90	75	I-II	203.15	1.60	8.40	13.40		III	315.25	3.57	4.20	15.00
	I	107.05	1.18	8.40	9.90		II-III	207.25	1.05	9.40	9.90	20	II	307.25	3.57	4.20	15.00
250	III	203.05	1.32	7.90	10.40	70	I	203.25	1.03	6.00	6.20		I	215.25	3.57	4.20	15.00
	II	115.05	1.24	8.40	10.40		II-III	207.25	1.13	5.40	6.10		III	315.25	3.71	4.20	15.60
	I	107.05	1.24	8.40	10.40	65	I	203.25	1.10	5.10	5.60	19	II	307.25	3.81	4.20	16.00
230	III	203.05	1.43	9.40	13.40		II-III	207.25	1.13	5.40	6.10		I	215.25	3.81	4.20	16.00
	II	115.05	1.43	9.40	13.40	60	I	203.25	1.13	5.40	6.10		III	315.25	3.85	4.00	15.40
	I	107.05	1.36	8.40	11.40		II-III	207.25	1.21	9.40	11.40	18	II	307.25	4.00	4.00	16.00
215	III	203.05	1.51	8.90	13.40	55	I	203.25	1.21	9.40	11.40		I	215.25	4.00	4.00	16.00
	I-II	115.05	1.44	7.90	11.40		I	203.25	1.43	9.40	13.40		III	315.25	4.09	4.40	18.00
200	III	203.05	1.64	9.40	15.40	50	II-III	207.25	1.60	5.00	8.00	17	II	307.25	4.29	4.20	18.00
	I-II	115.05	1.56	5.40	8.40		III	215.25	1.83	5.80	10.60		I	215.25	4.29	4.20	18.00
	III	203.05	1.74	5.40	9.40	45	I-II	207.25	1.51	8.30	13.40		III	315.25	4.33	3.60	15.60
185	I-II	115.05	1.67	6.00	10.00		III	215.25	1.83	5.80	10.60	16	I-II	307.25	4.50	4.00	18.00
	III	203.05	1.88	5.00	9.40	40	I-II	207.25	1.74	5.40	9.40		III	315.25	4.70	3.40	16.00
170	I-II	115.05	1.81	5.20	9.40							15	I-II	307.25	4.74	3.80	18.00
	III	203.05	2.04	5.10	10.40								III	315.25	5.00	3.60	18.00
160	I-II	115.05	1.94	6.20	12.00							14	I-II	307.25	5.00	3.60	18.00
	III	203.05	2.19	8.40	18.40								III	315.25	5.44	3.60	19.60
150	I-II	115.05	2.07	8.90	18.40							13	I-II	307.25	5.44	3.60	19.60
													II	315.25	5.95	4.20	25.00
												12	I	307.25	5.95	4.20	25.00
													II	315.25	6.25	4.00	25.00
												11	I	307.25	6.43	4.60	29.60
													II	315.25	7.14	4.20	30.00
												10	I	307.25	7.14	4.20	30.00

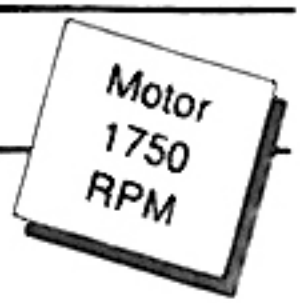


Speed Reducer Selection

Type SMR

Selection table: Shaft Mount Reducer

V-belt drive ratios and sheave diameters recommended to achieve the exact output RPM.
Sheave pitch diameters are shown as the most cost efficient for given speed and power.
Any combination resulting in the given V-belt ratio can be substituted for convenience to the user.



Motor power: 10 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	II-III	203.05	.86	7.40	6.20	150	III	207.05	2.07	6.00	12.40	45	III	307.25	1.61	4.60	7.40
	I	115.05	.79	8.60	6.80		II	203.05	2.19	6.20	13.20		I-II	207.25	1.61	4.60	7.40
365	II-III	203.05	.89	6.60	5.90		I	115.05	2.19	6.20	13.20		III	307.25	1.83	6.00	11.00
	I	115.05	.86	7.00	6.00	135	III	207.05	2.31	5.70	12.00	40	II	215.25	1.83	6.00	11.00
340	II-III	203.05	.97	6.40	6.20		II	203.05	2.39	4.60	11.00		I	207.25	1.83	6.00	11.00
	I	115.05	.92	6.60	6.10		I	115.05	2.39	4.60	11.00		III	307.25	2.00	6.20	12.40
315	III	207.05	1.00	6.40	6.40	120	III	207.05	2.64	5.00	13.20	35	II	215.25	2.00	6.20	12.40
	II	203.05	1.03	6.20	6.40		II	203.15	.95	6.40	6.10		I	207.25	2.00	6.20	12.40
	I	115.05	1.00	6.40	6.40		I	115.15	1.00	6.40	6.40		III	315.25	2.35	5.80	13.60
290	III	207.05	1.08	7.60	8.00	110	III	207.05	2.86	4.20	12.00	30	II	307.25	2.40	5.00	12.00
	II	203.05	1.12	6.60	7.40		II	203.15	1.03	6.20	6.40		I	207.25	2.40	5.00	12.00
	I	115.05	1.08	6.10	6.60		I	115.15	1.08	6.10	6.60		III	315.25	2.54	5.20	13.20
270	III	207.05	1.16	6.40	7.40	100	III	207.15	1.12	6.60	7.40	28	II	307.25	2.57	6.00	15.40
	II	203.05	1.21	6.60	8.00		I-II	203.15	1.17	6.00	7.00		I	215.25	2.57	6.00	15.40
	I	115.05	1.16	6.40	7.40	90	II-III	207.15	1.30	6.60	8.60	26	III	315.25	2.70	4.60	12.40
250	III	207.05	1.25	6.40	8.00		I	203.15	1.37	4.80	6.60		II	307.25	2.76	5.80	16.00
	II	203.05	1.30	6.60	8.60	80	III	215.05	3.83	4.80	18.60		I	215.25	2.76	5.80	16.00
	I	115.05	1.25	6.40	8.00		II	207.15	1.39	6.20	8.60		III	315.25	2.88	5.20	15.00
230	III	207.05	1.34	6.40	8.60		I	203.15	1.39	6.20	8.60	24	II	307.25	3.00	5.20	15.60
	II	203.05	1.42	5.90	8.40	75	III	215.15	1.58	8.70	13.60		I	215.25	3.00	5.20	15.60
	I	115.05	1.34	6.40	8.60		II	207.15	1.52	6.20	9.40		III	315.25	3.12	5.00	15.60
215	III	207.05	1.43	6.00	8.60		I	203.15	1.52	6.20	9.40	22	II	307.25	3.21	4.80	15.40
	II	203.05	1.52	5.40	8.20	70	III	215.25	1.03	6.80	7.00		I	215.25	3.21	4.80	15.40
	I	115.05	1.43	6.00	8.60		I-II	207.25	.97	6.80	6.60		III	315.25	3.57	4.20	15.00
200	III	207.05	1.57	6.00	9.40	65	III	215.25	1.11	5.40	6.00	20	I-II	307.25	3.57	4.20	15.00
	II	203.05	1.63	6.40	10.40		I-II	207.25	1.05	6.10	6.40		III	315.25	3.71	4.20	15.60
	I	115.05	1.63	6.40	10.40	60	III	215.25	1.20	5.00	6.00	19	I-II	307.25	3.71	4.20	15.60
185	III	207.05	1.67	6.60	11.60		I-II	207.25	1.13	7.40	8.40		II-III	315.25	4.00	4.60	18.40
	II	203.05	1.76	5.90	10.40	55	III	215.25	1.21	6.10	7.40	18	I	307.25	4.00	4.60	18.40
	I	115.05	1.76	5.90	19.40		I-II	207.25	1.21	6.10	7.40		II-III	315.25	4.09	4.40	18.00
170	III	207.05	1.78	6.40	11.60	50	III	307.25	1.52	6.20	9.40	17	I	307.25	4.09	4.40	18.00
	II	203.05	1.88	6.60	12.40		I-II	207.25	1.48	5.80	8.60		II	315.25	4.39	4.20	18.40
	I	115.05	1.88	6.60	12.40							16	I	307.25	4.39	4.20	18.40
160	III	207.05	1.93	5.90	11.40								II	315.25	4.74	3.80	18.00
	II	203.05	2.03	6.10	12.40							15	I	307.25	4.74	3.80	18.00
	I	115.05	2.03	6.10	12.40								II	315.25	5.00	4.00	20.00
												14	I	307.25	5.00	4.00	20.00
													II	315.25	5.43	4.60	25.00
												13	I	307.25	5.43	4.60	25.00
												12	I-II	315.25	5.69	5.20	29.60
												11	I	315.25	6.25	4.80	30.00
												10	I	315.25	6.73	4.40	29.60



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Speed Reducer Selection

Type SMR

Selection table: Shaft Mount Reducer

V-belt drive ratios and sheave diameters recommended to achieve the exact output RPM.
Sheave pitch diameters are shown as the most cost efficient for given speed and power.
Any combination resulting in the given V-belt ratio can be substituted for convenience to the user.

Motor
1750
RPM

Motor power: 15 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	II-III	207.05	.81	10.40	8.40	150	III	215.05	2.13	6.40	13.60	55	II-III	307.25	1.29	6.20	8.00
	I	203.05	.84	7.40	6.20		II	207.05	2.07	5.80	12.00		I	207.25	1.29	6.20	8.00
365	II-III	207.05	.85	11.00	9.40		I	203.05	2.07	5.80	12.00	50	II-III	307.25	1.50	6.00	9.00
	I	203.05	.89	9.40	8.40		III	215.05	2.30	8.00	18.40		I	207.25	1.50	6.00	9.00
340	II-III	207.05	.92	13.00	12.00	135	II	207.05	2.30	8.00	18.40	45	III	315.25	1.57	6.00	9.40
	I	203.05	.97	6.20	6.00		I	203.05	2.27	6.00	13.60		II	307.25	1.60	5.00	8.00
315	II-III	207.05	1.00	8.40	8.40		III	215.05	2.66	5.80	15.40		I	215.25	1.60	5.00	8.00
	I	203.05	1.03	6.20	6.40	120	II	207.05	2.66	5.80	15.40	40	III	315.25	1.82	6.80	12.40
290	II-III	207.05	1.07	7.50	8.00		I	203.05	2.66	5.80	15.40		II	307.25	1.83	6.00	11.00
	I	203.05	1.12	8.40	9.40	110	III	215.15	1.06	6.20	6.60		I	215.25	1.83	6.00	11.00
270	II-III	207.05	1.16	6.40	7.40		II	207.05	2.87	6.40	18.40	35	III	315.25	1.93	8.00	15.40
	I	203.05	1.21	9.40	11.40		I	203.15	1.03	6.20	6.40		I-II	307.25	2.00	6.20	12.40
250	II-III	207.05	1.25	6.40	8.00	100	III	215.05	3.33	4.80	16.00	30	II-III	315.25	2.35	5.80	13.60
	I	203.05	1.30	6.60	8.60		I-II	207.15	1.21	6.60	8.00		I	307.25	2.41	6.40	15.40
230	II-III	207.05	1.34	6.40	8.60	90	III	307.15	1.36	6.40	8.60	28	II-III	315.25	2.48	6.20	15.40
	I	203.05	1.42	6.60	9.40		I-II	207.15	1.30	6.60	8.60		I	307.25	2.48	6.20	15.40
215	II-III	207.05	1.44	8.60	12.40	80	III	307.15	1.45	3.40	13.60	26	II-III	315.25	2.66	5.80	15.40
	I	203.05	1.52	6.20	9.40		I-II	207.15	1.39	6.20	8.60		I	307.25	2.75	5.60	15.40
200	II-III	207.05	1.55	8.00	12.40	75	III	307.15	1.57	6.00	9.40	24	II	315.25	2.88	6.40	18.40
	I	203.05	1.64	9.40	15.40		I-II	207.15	1.58	8.60	13.60		I	307.25	2.97	6.20	18.40
185	III	215.05	1.70	8.00	13.60	70	III	307.25	1.03	6.80	7.00	22	II	315.25	3.21	4.80	15.40
	II	207.05	1.67	6.60	11.00		II	215.15	1.72	6.40	11.00		I	307.25	3.21	4.80	15.40
	I	203.05	1.67	6.60	11.00		I	207.15	1.72	6.40	11.00		II	315.25	3.33	4.80	16.00
170	III	215.05	1.83	6.00	11.00	65	III	307.25	1.10	6.00	6.60	21	I	307.25	3.33	4.80	16.00
	II	207.05	1.79	8.60	15.40		II	215.25	1.10	6.00	6.60	20	I-II	315.25	3.54	5.20	18.40
	I	203.05	1.79	8.60	15.40		I	207.15	1.88	6.60	12.60	19	I	315.25	3.68	5.00	18.40
160	III	215.05	2.00	6.20	12.40	60	III	307.25	1.20	5.00	6.00	18	I	315.25	3.83	4.80	18.40
	II	207.05	1.94	6.40	12.40		II	215.25	1.20	5.00	6.00	17	I	315.25	4.00	4.60	18.40
	I	203.05	1.94	6.40	12.40		I	207.25	1.20	5.00	6.00	16	I	315.25	4.31	5.80	25.00
												15	I	315.25	4.67	5.40	25.00
												14	I	315.25	5.00	5.00	25.00
												13	I	315.25	5.38	4.60	25.00



U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC CO.



Speed Reducer Selection

Type SMR

Motor
1750
RPM

Selection table: Shaft Mount Reducer

V-belt drive ratios and sheave diameters recommended to achieve the exact output RPM.
Sheave pitch diameters are shown as the most cost efficient for given speed and power.
Any combination resulting in the given V-belt ratio can be substituted for convenience to the user.

Motor power: 20 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	III	215.05	.81	13.00	10.50	160	III	307.05	1.90	5.60	10.60	65	III	315.25	1.08	6.00	6.50
	I-II	207.05	.79	12.00	9.50		II	215.05	1.98	6.70	13.20		II	307.25	1.12	6.70	7.50
365	III	215.05	.88	12.00	10.50		I	207.05	1.93	5.90	11.30		I	215.25	1.12	6.70	7.50
	I-II	207.05	.86	10.50	9.00		III	307.05	2.04	6.90	14.00		III	315.25	1.16	5.60	6.50
340	III	215.05	.94	9.00	8.50	150	II	215.05	2.13	5.00	10.60	60	II	307.25	1.20	5.00	6.00
	I-II	207.05	.92	13.00	12.00		I	207.05	2.11	6.30	13.20		I	215.25	1.20	5.00	6.00
315	III	215.05	1.00	8.50	8.50		III	307.05	2.24	4.75	10.60		III	315.25	1.23	7.50	9.25
	I-II	207.05	1.00	8.00	8.00	135	II	215.05	2.35	6.00	14.00	55	II	307.25	1.30	5.00	6.50
290	III	215.05	1.09	8.50	9.25		I	207.05	2.35	6.00	14.00		I	215.25	1.30	3.80	5.00
	I-II	207.05	1.07	7.50	8.00		III	307.15	1.00	6.90	6.90		II-III	315.25	1.33	8.00	10.60
270	III	215.05	1.16	8.00	9.25	120	II	215.05	1.00	6.90	6.90	50	I	307.25	1.38	5.00	6.90
	I-II	207.05	1.16	8.00	9.25		I	207.05	2.66	5.30	14.00		II-III	315.25	1.61	5.00	8.00
250	III	215.05	1.24	7.50	9.25		III	307.15	1.06	6.50	6.90	45	I	307.25	1.61	5.00	8.00
	I-II	207.05	1.23	5.60	6.90	110	II	215.15	1.06	6.50	6.90		II-III	315.25	1.69	4.75	8.00
230	III	307.05	1.33	8.00	10.60		I	207.05	2.88	4.65	13.20	40	I	307.25	1.76	8.00	14.00
	II	215.05	1.38	7.10	9.75	100	III	307.15	1.15	6.00	6.90		II-III	315.25	1.96	4.65	9.00
	I	207.05	1.34	6.00	8.00		II	215.15	1.15	6.00	6.90	35	I	307.25	1.96	4.65	9.00
215	III	307.05	1.44	6.30	9.00	90	I	207.05	3.10	4.90	15.00	30	I-II	315.25	2.35	6.00	14.00
	II	215.05	1.48	6.30	9.25		III	307.15	1.35	6.70	9.00	28	I-II	315.25	2.51	5.60	14.00
	I	207.05	1.45	5.90	8.50	80	II	215.15	1.35	6.70	9.00	26	I-II	315.25	2.66	5.30	14.00
200	III	307.05	1.54	5.90	9.00		I	215.05	3.61	5.30	19.00	24	I-II	315.25	3.00	6.30	18.70
	II	215.05	1.61	5.00	8.00		III	315.15	1.45	5.90	8.50	22	I	315.25	3.14	8.00	25.00
	I	207.05	1.56	6.30	9.75	75	II	307.15	1.45	5.90	8.50	21	I	315.25	3.33	5.40	18.00
185	III	307.05	1.66	5.90	9.75		I	215.15	1.45	5.90	8.50	20	I	315.25	3.50	5.10	18.00
	II	215.05	1.69	4.75	8.00		III	315.15	1.56	6.30	9.75	19	I	315.25	3.68	6.60	25.00
	I	207.05	1.66	5.90	9.75	70	II	307.15	1.56	6.30	9.75	18	I	315.25	3.89	6.40	25.00
170	III	307.05	1.77	6.00	10.60		I	207.15	1.63	9.25	15.00	17	I	315.25	4.12	6.10	25.00
	II	215.05	1.85	4.65	8.50		II-III	307.25	1.03	6.80	7.00						
	I	207.05	1.73	6.30	11.30		I	207.15	1.67	9.00	15.00						

Motor power: 25 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	III	307.05	.81	13.00	10.50	200	III	307.05	1.54	6.90	10.60	75	III	315.15	1.57	8.00	12.50
	II	215.05	.81	13.00	10.50		I-II	215.05	1.58	7.50	11.80		II	307.15	1.57	8.00	12.50
	I	207.05	.79	12.00	9.50		III	307.05	1.66	8.00	13.20		I	215.25	0.93	9.90	9.25
365	III	307.05	.85	13.00	11.00	185	I-II	215.05	1.69	4.75	8.00		III	315.25	1.00	9.00	9.00
	II	215.05	.88	12.00	10.50		III	307.05	1.86	5.90	10.90	70	II	307.25	1.03	9.00	9.25
	I	207.05	.85	13.00	12.00		I-II	215.05	1.86	5.90	10.90		I	215.25	1.03	9.00	9.25
340	III	307.05	.91	11.00	10.00	170	III	307.05	1.98	6.90	13.20		II-III	315.25	1.06	9.75	10.30
	II	215.05	.95	11.00	10.50		III	307.05	1.98	6.90	13.20	65	I	307.25	1.11	9.25	10.30
	I	207.05	.92	13.00	12.00	160	I-II	215.05	1.98	6.90	13.20		II-III	315.25	1.20	5.00	6.00
315	III	307.05	.95	11.00	10.50		III	307.05	2.12	5.20	10.90	60	I	307.25	1.20	5.00	6.00
	II	215.05	1.00	10.00	10.00	150	I-II	215.05	2.12	5.20	10.90		II-III	315.25	1.26	9.00	11.30
	I	207.05	1.00	10.00	10.00		II-III	307.05	2.29	5.20	11.80	55	I	307.25	1.30	5.30	6.90
290	III	307.05	1.06	9.75	10.30	135	I	215.05	2.29	5.20	11.80		II-III	315.25	1.37	8.00	10.90
	II	215.05	1.09	8.50	9.25		II-III	307.15	1.00	8.00	8.00	50	I	307.25	1.37	8.00	10.90
	I	207.05	1.07	7.50	8.00	120	I	215.05	2.66	5.30	14.00		II	315.25	1.54	6.90	10.60
270	III	307.05	1.15	9.00	10.30		III	315.15	1.06	9.75	10.30	45	I	307.25	1.54	6.90	10.60
	II	215.05	1.18	9.25	10.90	110	II	307.15	1.06	9.75	10.30		I-II	315.25	1.79	5.20	9.25
	I	207.05	1.16	8.00	9.25		I	215.05	2.88	4.65	13.20	40	I-II	315.25	2.11	6.70	14.00
250	III	307.05	1.22	9.25	11.30		III	315.15	1.16	9.75	11.30	35	I-II	315.25	2.11	6.70	14.00
	II	215.05	1.27	6.70	8.50	100	II	307.15	1.16	9.75	11.30	30	I-II	315.25	2.99	5.20	11.80
	I	207.05	1.24	7.50	9.25		I	215.05	3.10	4.90	15.00	28	I	315.25	2.51	5.60	14.00
230	III	307.05	1.33	8.00	10.60	90	III	315.15	1.35	6.70	9.00	26	I	315.25	2.66	5.30	14.00
	I-II	215.05	1.38	7.50	10.30		II	307.15	1.35	6.70	9.00	24	I	315.25	2.92	5.50	16.00
	III	307.05	1.43	9.25	13.20	80	III	315.15	1.46	7.10	10.30	22	I	315.25	3.18	5.70	18.00
215	I-II	215.05	1.48	8.00	11.80		I	215.15	1.35	6.70	9.00	21	I	315.25	3.33	5.40	18.00
							II	307.15	1.46	7.10	10.30	20	I	315.25	3.50	5.70	20.00
							I	215.15	1.46	6.70	9.75						



U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC CO.



Speed Reducer Selection

Type SMR

Selection table: Shaft Mount Reducer

V-belt drive ratios and sheave diameters recommended to achieve the exact output RPM.
Sheave pitch diameters are shown as the most cost efficient for given speed and power.
Any combination resulting in the given V-belt ratio can be substituted for convenience to the user.

Motor
1750
RPM

Motor power: 30 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	III	307.05	.79	15.90	12.50	165	II-III	307.05	1.66	5.90	9.75	90	II-III	315.15	1.36	9.25	12.50
	I-II	215.05	.82	11.30	9.25		I	215.05	1.66	5.90	9.75		I	307.15	1.36	5.90	8.00
365	III	307.05	.84	15.40	13.00	170	II-III	307.05	1.77	6.00	10.60	80	II-III	315.15	1.43	9.25	13.20
	I-II	215.05	.87	10.30	9.00		I	215.05	1.86	5.90	10.90		I	307.15	1.45	5.90	8.50
340	III	307.05	.91	13.20	12.00	160	II-III	307.05	1.90	5.60	10.60	75	II-III	315.15	1.54	6.90	10.60
	I-II	215.05	.94	10.90	10.30		I	215.05	2.00	6.30	12.50		I	307.15	1.56	8.50	13.20
315	III	307.05	.98	12.30	12.00	150	II-III	307.05	2.40	6.90	14.00	70	II-III	315.25	1.04	11.30	11.80
	I-II	215.05	1.00	9.00	9.00		I	215.05	2.14	5.90	12.50		I	307.25	1.04	11.30	11.80
290	III	307.05	1.05	11.40	12.00	135	II-III	307.05	2.22	8.50	18.70	65	III	315.25	1.09	8.50	9.25
	I-II	215.05	1.09	8.50	9.25		I	215.05	2.22	8.50	18.70		I-II	307.25	1.09	8.50	9.25
270	III	307.05	1.18	9.25	10.90	120	III	315.15	1.00	10.30	10.30	60	II	315.25	1.18	9.25	10.90
	I-II	215.05	1.18	9.25	10.90		I	215.15	1.00	8.00	8.00		I	307.25	1.18	9.25	10.90
250	II-III	307.05	1.24	11.30	14.00	110	II-III	307.15	1.08	10.90	11.80	55	I-II	315.25	1.26	9.00	11.30
	I	215.05	1.28	5.90	7.50		I	215.15	1.07	7.50	8.00		II	315.25	1.33	8.00	10.60
230	II-III	307.05	1.33	8.00	10.60	100	III	315.15	1.16	9.75	11.30	50	I	307.25	1.36	5.90	8.00
	I	215.05	1.38	7.50	10.30		II	307.15	1.16	9.75	11.30		I-II	315.25	1.57	8.00	12.50
215	II-III	307.05	1.43	9.25	13.20		I	215.15	1.15	6.00	6.90	45	I-II	315.25	1.68	7.50	12.50
	I	215.05	1.48	8.00	11.80							40	I-II	315.25	1.68	7.50	12.50
200	II-III	307.05	1.54	6.90	10.60							35	I	315.25	1.93	5.90	11.30
	I	215.05	1.58	7.50	11.80							30	I	315.25	2.33	6.00	14.00
												28	I	315.25	2.50	5.60	14.00
												26	I	315.25	2.69	5.20	14.00

Motor power: 40 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	I-II	307.05	.79	17.80	14.00	160	I-II	307.05	1.93	9.75	18.70		II	315.15	1.36	9.25	12.50
365	I-II	307.05	.84	16.60	14.00	150	I-II	307.05	2.04	6.90	14.00	90	I	307.15	1.36	9.25	12.50
340	I-II	307.05	.91	14.50	13.20		II	315.05	2.31	9.25	21.20	80	I-II	315.15	1.46	7.10	10.30
315	I-II	307.05	.96	11.30	10.90	135	I	307.05	2.24	6.30	14.00		II	315.15	1.56	9.00	14.00
290	I-II	307.05	1.06	12.50	13.20		II	315.15	1.00	9.25	9.25	75	I	307.25	0.83	8.60	8.00
270	I-II	307.05	1.15	10.30	11.80	120	I	307.15	1.00	8.00	8.00	70	I-II	315.25	1.00	8.00	8.00
250	I-II	307.05	1.22	9.25	11.30		II	315.15	1.08	10.90	11.80	65	I-II	315.25	1.08	10.90	11.80
230	I-II	307.05	1.33	11.30	15.00	110	I	307.15	1.06	8.50	9.00	60	I-II	307.25	1.17	11.30	13.20
215	I-II	307.05	1.43	9.25	13.20		II	315.15	1.16	9.75	11.30	55	I	315.25	1.22	9.25	11.30
200	I-II	307.05	1.54	6.90	10.60	100	I	307.15	1.15	10.90	12.50	50	I	315.25	1.33	8.00	10.60
185	I-II	307.05	1.65	9.75	16.00							45	I	315.25	1.56	7.20	11.30
170	I-II	307.05	1.77	6.70	11.80							40	I	315.25	1.75	6.50	11.30



U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC CO.



Speed Reducer Selection

Type SMR

Motor
1750
RPM

Selection table: Shaft Mount Reducer

V-belt drive ratios and sheave diameters recommended to achieve the exact output RPM.
Sheave pitch diameters are shown as the most cost efficient for given speed and power.
Any combination resulting in the given V-belt ratio can be substituted for convenience to the user.

Motor power: 50 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	I	307.05	.78	16.60	13.00	200	I	307.05	1.54	6.90	10.60	110	I	315.15	1.08	10.90	11.80
365	I	307.05	.84	15.50	13.10	185	I	307.05	1.66	11.30	18.70	100	I	315.15	1.16	8.00	9.25
340	I	307.05	.91	14.50	13.20	170	I	315.05	1.82	10.30	18.70	90	I	315.15	1.36	9.25	12.50
315	I	307.05	.98	14.00	13.70	160	I	315.05	1.99	7.10	14.00	80	I	315.15	1.46	7.10	10.30
290	I	307.05	1.06	12.50	13.20	150	I	315.05	2.13	7.10	15.00	75	I	315.15	1.56	9.00	14.00
270	I	307.05	1.13	8.00	9.00	135	I	315.05	2.49	11.30	28.00	70	I	315.25	1.00	10.90	10.90
250	I	307.05	1.22	8.00	9.75	120	I	315.15	1.00	10.90	10.90	65	I	315.25	1.06	11.80	12.50
230	I	307.05	1.33	11.30	15.00							60	I	315.25	1.17	10.70	12.50
215	I	307.05	1.43	9.25	13.20							55	I	315.25	1.27	9.80	12.50
												50	I	315.25	1.40	8.90	12.50

Motor power: 60 HP

Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven	Output RPM	AGMA Class	Reducer type	Exact V-belt ratio	Sheave Pitch Dia. Driver	Sheave Pitch Dia. Driven
400	I	307.05	.79	15.50	12.20	200	I	315.05	1.59	11.80	18.70	120	I	315.15	1.00	13.20	13.20
365	I	307.05	.84	14.20	12.00	185	I	315.05	1.72	10.90	18.70	110	I	315.15	1.08	10.90	11.80
340	I	307.05	.89	13.20	11.80	170	I	315.05	1.82	10.30	18.70	100	I	315.15	1.16	8.00	9.25
315	I	307.05	.98	13.20	12.90	160	I	315.05	1.95	10.90	21.81	90	I	315.15	1.36	9.25	12.50
290	I	305.05	1.06	12.50	13.20	150	I	315.05	2.13	13.20	28.00	80	I	315.15	1.42	13.20	18.70
270	I	305.05	1.20	12.50	15.00	135	I	315.05	2.31	9.25	21.20	75	I	315.15	1.54	9.75	15.00
250	I	305.05	1.28	12.50	16.00							70	I	315.25	1.00	10.90	10.90
230	I	305.05	1.38	10.90	15.00							65	I	315.25	1.08	11.60	12.50
215	I	305.05	1.50	12.50	18.70												



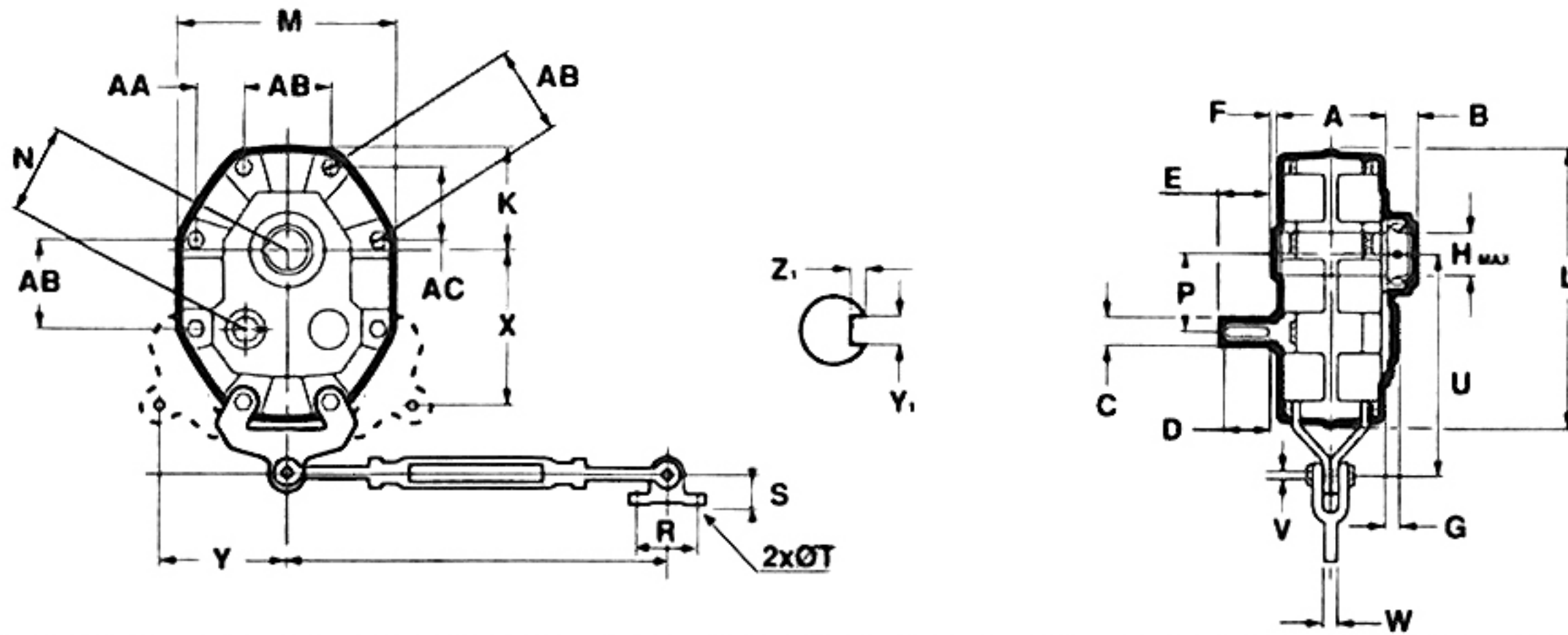
U.S. ELECTRICAL MOTORS
DIVISION OF EMERSON ELECTRIC CO.



Dimensions Type SMR

Dimensions
in
inches

Overall Dimensions Shaft Mount Reducer



Reducer size	A	B	C	D	E	F	G	H max	K	L	M	N	P	U	V	W	X	Y	Y1 x Z1	AA	AB	AC	WEIGHT LB.
107	4.29	1.18	0.75	2.12	2.36	0.16	0.47	1 7/16	3.52	9.65	7.8	3.35	3.03	8.27	0.63	0.39	5.51	4.41	3/16 x 3/32	1.82	3.25	2.69	48
115	4.72	1.3	1	2.12	2.36	0.12	0.67	2	3.94	10.6	8.42	3.62	3.31	8.94	0.63	0.39	6.02	4.84	1/4 x 1/8	2.01	3.55	2.95	53
203	5.16	1.42	1.25	2.95	3.15	0.35	0.98	2 3/16	4.65	12.6	9.92	4.21	3.78	10.2	0.63	0.39	6.97	5.47	1/4 x 1/8	2.37	4.25	3.52	76
207	5.79	1.42	1.38	2.95	3.15	0.16	0.83	2 7/16	5.24	14.2	11.2	4.96	4.41	11.4	0.63	0.39	8.03	6.14	5/16 x 5/32	2.71	4.84	4.00	112
215	6.69	1.5	1.94	4.13	4.33	0.34	1.02	2 15/16	5.74	15.6	12.4	5.71	5.2	13.1	0.63	0.39	9.18	7.52	1/2 x 1/4	3.03	5.37	4.43	150
5:1			1.5	4.13	4.33	0.51													3/8 x 3/16				
307	8.27	1.97	—	—	—	—	0.94	3 7/16	6.5	17.8	14.1	6.46	5.83	14.9	0.69	0.63	10.4	8.35	—	3.43	6.14	5.09	210
15:1																							
25:1			1.94	4.13	4.33	0.51													1/2 x 1/4				
5:1			1.94	4.13	4.33	0.24													1/2 x 1/4				
315	9.37	2.4	—	—	—	—	0.91	3 15/16	7.52	20.6	16.1	7.56	6.77	17.3	0.69	0.79	12.1	9.76	—	3.92	7.04	5.85	348
15:1																							
25:1			2.125	4.13	4.33	0.24													1/2 x 1/4				

— Arm in the same line as the bracket.
— 8 positions available (3 recommended).

Reducer size	Q max	Q min	R	S	T bolt
SMR 107	35.8	30.7	2.50	1.10	3/8
SMR 115	35.8	30.7	2.99	1.10	7/16
SMR 203	35.8	30.7	2.99	1.10	7/16
SMR 207	35.8	30.7	3.75	1.50	1/2
SMR 215	35.8	30.7	3.75	1.50	1/2
SMR 307	35.4	29.1	4.13	1.77	5/8
SMR 315	35.4	29.1	4.13	1.77	5/8

Note: Q min may be reduced to 14.57 in for reducer sizes 107 thru 215 and 17.32 in for reducer size 307 thru 315 by customer cutting turn buckle adjustment rods.

¹ All rough casting dimensions may vary by .25" due to casting variations.

² Shaft extension tolerance: +.0000"; -.0005" up to 1.5" diameter inclusive. Larger diameters: +.000"; -.001".



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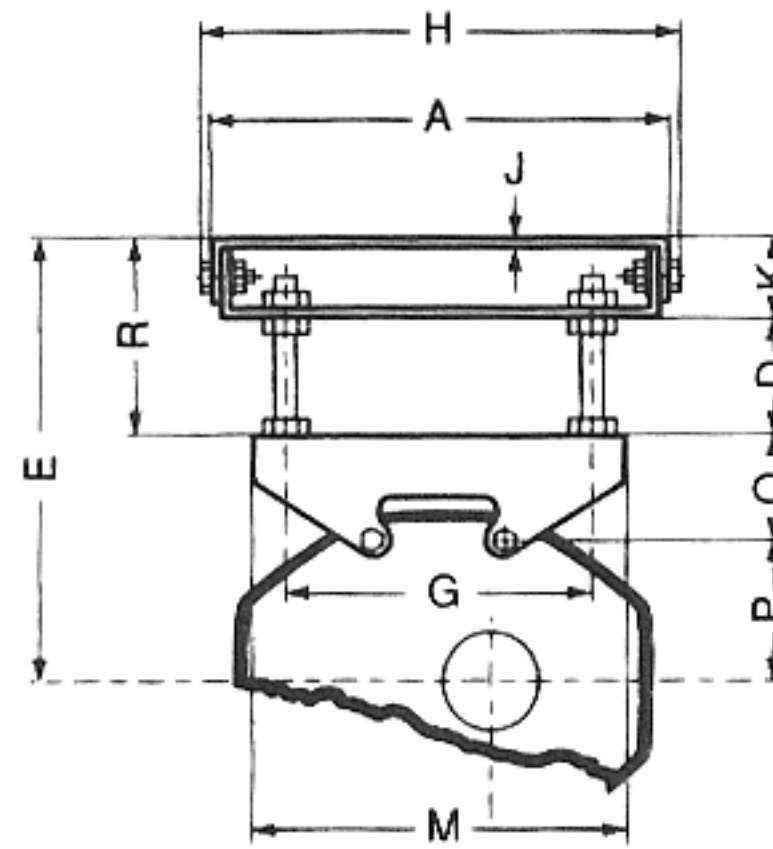
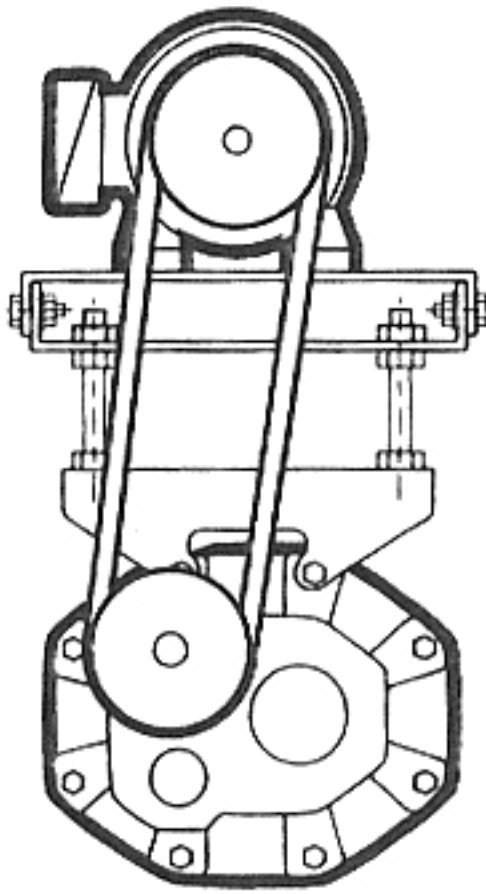


Dimensions Type SMR

Dimensions
in
inches

Overall Dimensions Shaft Mount Reducer motor mount (standard series)

Motor mount



REDUCER OUTPUT HUB

Shaft mount reducer motor mount (standard series)

Reducer size	A	B	C	D		E		G	J	K	M	P	Q	R		T		U	V	
				min	max	min	max							min	max	min	max		min	max
107	11.625	11.00	2.6	2.26	5.26	10.35	13.35	8.00	.19	2.2	9.3	3.06	2.83	4.29	7.29	0.8	3.8	1.16	1.9	4.9
115	11.625	11.00	3.00	2.26	5.26	11.25	14.25	8.00	.19	2.2	9.3	3.37	3.42	4.29	7.29	0.8	3.8	1.0	2.7	5.7
203	15.81	17.5	3.24	4.00	7.00	13.57	16.57	11.00	.25	2.2	13.00	4.00	3.37	6.13	9.13	1.2	4.2	6.56	3.1	6.1
207	15.81	17.5	3.54	4.00	7.00	13.95	16.95	11.00	.25	2.2	13.00	4.56	3.19	6.13	9.13	1.2	4.2	6.28	3.6	6.6
215	15.81	17.5	4.33	4.00	7.00	14.71	17.71	11.00	.25	2.2	13.00	5.08	3.43	6.13	9.13	1.2	4.2	6.09	4.3	7.3
307	15.81	17.5	5.19	4.00	7.00	16.71	19.57	11.00	.25	2.2	15.00	5.77	4.6	6.13	9.13	1.2	4.2	5.26	6.2	9.2
315	15.81	17.5	5.12	4.00	7.00	17.96	21.96	11.00	.25	2.2	13.38	6.6	6.16	6.13	9.13	1.2	4.2	5.89	8.56	11.56

V belt drive center distance for various NEMA motor frames

Reducer size	Frame size	56	143 T 145 T	182 T 184 T	213 T 215 T	254 T 256 T	284 T 286 T	324 T 326 T
107	Max.	19.70	19.70	20.70	21.45	-	-	-
	Min.	16.70	16.70	17.70	18.45	-	-	-
115	Max.	20.91	20.91	21.91	22.66	-	-	-
	Min.	17.91	17.91	18.91	19.66	-	-	-
203	Max.	-	23.77	24.77	25.52	26.52	27.27	28.27
	Min.	-	20.77	21.77	22.52	23.52	24.27	25.27
207	Max.	-	24.80	25.80	26.55	27.55	28.30	29.30
	Min.	-	21.80	22.80	23.55	24.55	25.30	26.30
215	Max.	-	26.34	27.34	28.09	29.09	29.84	30.84
	Min.	-	23.34	24.34	25.09	26.09	26.84	27.84
307	Max.	-	28.82	29.82	30.57	31.57	32.82	33.32
	Min.	-	25.82	26.82	27.57	28.57	29.32	30.32
315	Max.	-	32.17	33.17	33.92	34.92	35.67	36.67
	Min.	-	29.17	30.17	30.92	31.92	32.67	33.67

¹ All rough casting dimensions may vary by .25" due to casting variations.



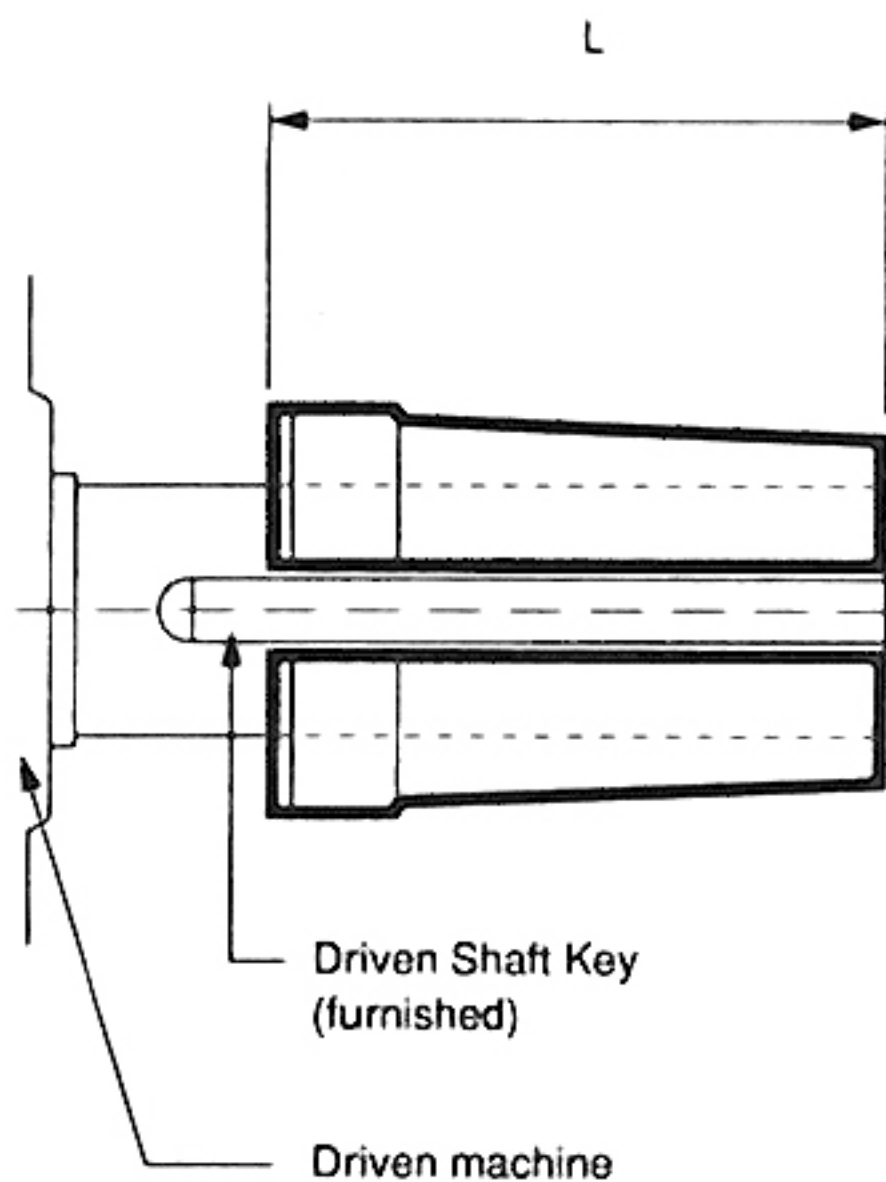
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DIVISION OF EMERSON ELECTRIC CO.



Dimensions Type SMR

Bushing Dimensions Shaft Mount Reducer

Dimensions
in
inches



Bushing sizes and key way sizes

Reducer type	Bushing size	Driven shaft key seat required	L
107	15/16 to 1 1/4	1/4 x 1/8 x 3.40	3.15
	1 5/16 to 1 3/8	5/16 x 5/32 x 3.46	3.15
	1 7/16	3/8 x 3/16 x 3.46	3.15
115	1 to 1 1/4	1/4 x 1/8 x 3.48	3.23
	1 5/16 to 1 3/8	5/16 x 5/32 x 3.54	3.23
	1 7/16 to 1 3/4	3/8 x 3/16 x 3.61	3.23
	1 15/16 to 2	1/2 x 1/4 x 3.73	3.23
203	1 7/16 to 1 3/4	3/8 x 3/16 x 4.51	4.13
	1 7/8 to 2 3/16	1/2 x 1/4 x 4.63	4.13
207	1 11/16 to 1 3/4	3/8 x 3/16 x 4.95	4.57
	1 7/8 to 2 1/4	1/2 x 1/4 x 5.07	4.57
	2 7/16	5/8 x 5/16 x 5.20	4.57
215	1 7/8 to 2 1/4	1/2 x 1/4 x 5.78	5.28
	2 7/16 to 2 1/2	5/8 x 5/16 x 5.91	5.28
	2 11/16 to 2 15/16	3/4 x 3/8 x 6.03	5.28
307	2 7/16 to 2 1/2	5/8 x 5/16 x 6.65	6.02
	2 11/16 to 3 3/16	3/4 x 3/8 x 6.77	6.02
	3 7/16	7/8 x 7/16 x 6.90	6.02
315	2 7/8 to 3 3/16	3/4 x 3/8 x 8.39	7.64
	3 7/16	7/8 x 7/16 x 8.52	7.64
	3 15/16	1 x 1/2 x 8.64	7.64

Minimum shaft extension length requirement

Reducer Type	107 + 115	203	207	215	307	315
Minimum (in)	2 15/16	3 3/4	4 1/4	5	6	7 1/2
Minimum (mm)	76	95	108	127	152	190



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