



# Rexnord™ Viva™ Elastomeric Couplings

IMPERIAL





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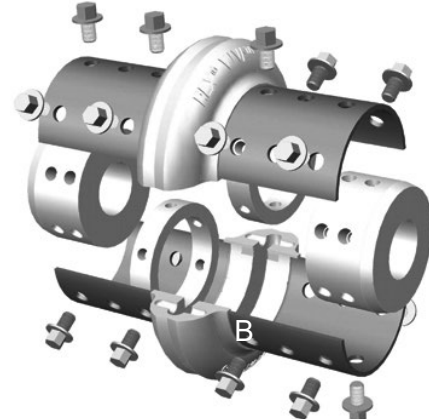
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† See back cover.

# DESCRIPTION



**Viva™ Close-Coupled Couplings**



**Viva Spacer Couplings**

- A — Two-piece flex element design allows for simple replacement without disturbing hubs or connected equipment.
- B — Tough polyurethane material is bonded to a corrosion resistant coated shoe, eliminating the need for mechanical clamping hardware.
- C — Adhesive coated high strength carbon steel shoe resists corrosion.
- D — Easily aligned reversible hubs accommodate multiple shaft gaps. Hubs are available in rough bore, custom bore, or bushed designs. Optional hub materials are available.
- E — High grade capscrews are provided with self-locking nylon thread patches. Stainless steel capscrews are also available.
- F — Torsionally soft polyurethane element cushions shock loads, accommodates unavoidable misalignment and is compatible with most environments.
- G — “V” notch design directs stress concentration away from the bond area providing a uniform failure area for overload protection.

Rexnord™ Viva is based on the design of its reputable predecessor, Rexnord Omega™. Design upgrades allow Rexnord Viva to transmit greater torque with a smaller coupling that, in addition, can accept larger bores. Although they have similar configurations, their parts are not interchangeable.

Rexnord Viva is a non-lubricated, torsionally flexible coupling. Its angular, axial and radial flexibility comes from its polyurethane element. It consists of only three components; one split and half element and two hubs.

All versions are field adjustable to meet ISO, DIN and ANSI shaft spacing specifications (up to 11.82 inches) without the need of additional parts.

## THE FLEXIBLE ELEMENT

The unique two-piece, split-in-half flexible element allows replacement without disturbing the hubs or connected equipment. A half element consists of a polyurethane element chemically bonded to two formed steel shoes. It transmits torque in shear through the element. Patented stress relief notches found on the end of each element uniformly distribute shear stresses. The polyurethane is formulated to withstand cyclic fatigue, common environmental conditions, and industrial chemicals. Although not to be used as a torque limiting device, the element serves as a fuse disconnecting the equipment in case of lockup or severe overload conditions. The steel shoes are coated for optimal resistance against oxidation and industrial chemicals. Paired half elements are supplied factory weight matched to ensure standard balance conform with ANSI/AGMA 9000 Class 8 standard.

Upgrades: The “V” notch on the polyurethane element channels stresses to provide a uniform center-line tear for overload protection.

Longer shoes for the smaller sizes reduce the need to oversize selections to meet required distance between shaft ends.

The VSX version connects shafts with extended shaft gaps (up to 11.82 inches) maintaining the basic three component design; one split and half element and two hubs.

## CAPSCREWS

Metric capscrews with self-locking Nylon thread patches are in standard steel (stainless steel optional). They conform to precise engineering specifications and are supplied standard with flexible elements. They fasten radially for easy accessibility. The capscrews generate a clamping force between the hub's outer diameter and the inner shoe surface.

## HUBS

In standard carbon steel, hubs are also available in stainless steel or with special surface treatment for particular corrosion resistance. They can be used interchangeably with V, VS and VSX (see below) versions for any given size.

Upgrades: A cylindrical hub, without a step for the smaller sizes, accepts larger bores. Two rows of radial holes grant more field spacing adjustability.

## HIGH SPEED RINGS

Machined from cold rolled steel, the rings are optional as reinforcement for the VS version and standard on VSX version.

Upgrades: Not required for any size of the VS version.

# NOMENCLATURE

1	2	3	-	4	-	5	6
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## 1 — Coupling Series

V: Close Coupled  
 VS: Spacer Coupled  
 VSX: Extended spacer coupled

## 2 — Sizes

110, 125, 130, 150, 170, 190, 215, 245, 290, 365, 425, 460

## 3 — Capscrew Material

No Code: Carbon steel  
 SS: A2-70 stainless steel capscrews

## 4 — High Speed Ring (Only VS and VSX Series)

No Code: Without rings  
 R: With high-speed rings; Standard on VSX series

## 5 — Hub Type\*

HRB: Hub rough bored (pilot bored)  
 HCB: Hub custom bored (specify bore & keyway)  
 HTL: Hub Taper-Lock<sup>®†</sup> bushings (bushing nut included)  
 HTLM: Hub Taper-Lock (Magic-Lock BSW thread not included)  
 HQD: Hub quick disconnect (bushings not included)

## 6 — Hub Material

No Code: Carbon Steel  
 SS: Stainless steel

## EXAMPLE

V	S	125		-	R	-	HCB		ø28 mm H7 / ø30 mm H7
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## HOW TO SELECT

- Choose Coupling Type:  
The choice is based on the type of application and the operating conditions.
- Calculate the operating torque  $T = \frac{hp \times 63,025}{rpm}$   
 where  
 T = torque (in-lbs)  
 hp = horsepower of equipment  
 rpm = Speed of equipment
- Determine Service Factor:  
 Select the proper service factor from the table on [page 6](#). If not listed, see load classification table on page 7.  
[Page 6](#) service factors apply for smooth drivers, such as electric motors or turbines.
- Calculate the equivalent torque  $Teq$  (in-lbs):  
 $Teq = T \times SF$   
 where:  
 T = torque (in-lbs) of the driven machine  
 SF = service factor  
 Select coupling from the catalog with a torque rating >  $Teq$
- Check shaft sizes and shaft gap to ensure they are within published selection ratings.

\* Bushed hubs sold in North America have inch threads for bushing mounting. Taper-Lock bushings sold in North America have inch threads as standard and British standard Whitworth (BSW) mounting threads outside of North America.

† See back cover.

# SERVICE FACTORS — MOTOR AND TURBINE DRIVEN EQUIPMENT<sup>①</sup>

Application	Service Factor	Application	Service Factor	Application	Service Factor	Application	Service Factor
<b>AGITATORS</b>		<b>FEEDERS</b>		<b>MIXERS</b>		<b>SCREENS</b>	
Pure Liquids.....	1.5	Light Duty.....	1.5	Concrete Mixers.....	2.0	Air Washing.....	1.0
Variable density.....	2.0	Heavy Duty.....	2.5	Drum Type.....	2.0	Rotary - Stone or Gravel.....	1.5
<b>ALTERNATOR</b> .....	1.5	<b>FOOD INDUSTRY</b>		<b>OIL INDUSTRY</b>		Traveling Water intake.....	1.5
<b>BLOWERS</b>		Beet Slicer.....	2.0	Chillers.....	1.5	Vibratory.....	2.5
Centrifugal.....	1.0	Cereal Cooker.....	1.5	Oil Well Pumping.....	2.0	<b>SEWAGE DISPOSAL EQUIPMENT</b> .....	1.5
Lobe.....	1.5	Dough Mixer.....	2.0	Paraffin-Filter-Press.....	2.0	<b>SEWAGE TREATMENT PUMPS</b> .....	1.5
Vane.....	1.5	Meat Grinders.....	2.0	Rotary Kilns.....	2.5	<b>TEXTILE INDUSTRY</b>	
<b>BRIQUETTER MACHINES</b> .....	2.0	Can Filling Machine.....	1.0	<b>PAPER MILLS</b>		Calenders.....	2.0
<b>CAN FILLING MACHINES</b> .....	1.0	Bottling.....	1.5	Barker Auxiliaries Hydraulic.....	2.0	Card Machines.....	2.0
<b>CANE KNIVES</b> .....	2.0	<b>GENERATORS</b>		Barker Mechanical.....	2.0	Cloth - Finishing Machines	
<b>CAR DUMPERS</b> .....	2.0	Non-Welding.....	1.0	Barking Drum (Spur Gear Only).....	3.0	(washers, pads, tenters, dryers, calenders, etc.).....	2.0
<b>CAR PULLERS</b> .....	2.0	Welding.....	3.0	Beater & Pulper.....	2.0	Dry Cans.....	2.0
<b>CLAY WORKING MACHINERY</b> .....	2.0	<b>HAMMER MILLS</b>		Bleacher.....	1.0	Dryers.....	1.5
<b>COMPRESSORS</b>		<b>LUMBER INDUSTRY</b>		Calenders.....	2.0	Dyeing Machinery.....	1.0
Centrifugal.....	1.0	Barkers - Drum Type.....	2.0	Converting Machines except Cutlers.....	1.5	Looms.....	2.0
Lobe, Vane, Screws		Edger Feed - Live Rolls.....	2.0	Couch.....	2.0	Mangles.....	1.5
Reciprocating - Multi-Cylinder.....	1.5	Log Haul - Incline.....	2.0	Cutters.....	2.0	Nappers.....	1.5
Axial.....	1.0	Log Haul - Well Type.....	2.0	Cylinders.....	2.0	Soapers.....	1.5
<b>CONVEYORS</b>		Planer Feed Chains.....	2.0	Dryers & Coolers.....	2.0	Spinners.....	2.0
Uniformly loaded or fed.....	1.5	Planer Tilting Hoist.....	2.0	Felt Stretcher.....	1.5	Tenter - Frames.....	2.0
Heavy duty - not uniformly fed.....	3.0	Slab Conveyor.....	1.5	Felt Whipper.....	2.0	Winders (other than Batchers).....	2.0
<b>CRANES AND HOISTS</b> .....	2.0	Sorting Table.....	1.5	Log Haul.....	2.5	<b>WINDLASS</b> .....	2.0
<b>CRUSHERS</b> .....	3.0	Trimmer Feed.....	2.0	Presses.....	2.5	<b>WOODWORKING MACHINERY</b> .....	1.5
<b>DREDGES</b>		<b>MACHINE TOOLS</b>		Reel.....	2.0		
Cable Reels.....	2.0	Bending Roll.....	2.0	Suction Roll.....	2.5		
Conveyors.....	2.0	Plate Planer.....	1.5	Washers and Thickeners.....	2.0		
Cutter Head Drives.....	3.0	Punch Press - Gear Driven.....	2.0	Winders.....	2.0		
Jig Drives.....	3.0	Tapping Machines.....	2.5	<b>PRINTING PRESSES</b> .....	1.5		
Maneuvering Winches.....	2.5	Other Machines Tools		<b>BARGE HAUL</b> .....	2.0		
Pumps.....	2.0	Main Drives.....	1.5	<b>PUMPS</b>			
Screen Drives.....	2.0	Auxiliary Drives.....	1.5	Centrifugal			
Stackers.....	2.0	<b>METAL MILLS</b>		General Duty (Liquid)			
Utility Winches.....	2.0	Draw - Bench - Carriage.....	2.0	Boiler Feed.....	1.0		
<b>ELEVATORS</b>		Draw - Bench - Main Drive.....	2.0	Slurry (Sewage etc.).....	1.5		
Bucket.....	2.5	Forming Machines.....	2.5	Dredge.....	2.0		
Centrifugal Discharge.....	2.5	Slitters.....	2.0	Reciprocating			
Escalators.....	2.5	Table Conveyor		Double Acting.....	②		
Freight.....	2.0	Non-Reversing.....	3.0	Single Acting			
Gravity Discharge.....	2.5	Reversing.....	4.5	1 or 2 Cylinders.....	②		
<b>EXTRUDERS</b>		Wire Drawing & Flattening Machine.....	2.0	3 or more Cylinders.....	②		
Plastic.....	2.0	Wire Winding Machine.....	2.0	Rotary - Gear, Lobe, Vane.....	1.5		
Metal.....	2.5	<b>MILLS ROTARY TYPE</b>		<b>RUBBER INDUSTRY</b>			
<b>FANS</b>		Ball.....	3.0	Mixer - Banbury.....	3.0		
Centrifugal		Cement Kilns.....	2.5	Rubber Calendar.....	2.5		
Forced Draft.....	1.5	Dryers & Coolers.....	2.0	Rubber Mill (2 or more).....	2.5		
Induced Draft.....	1.5	Kilns.....	2.5	Sheeter.....	2.0		
Axial		Pebble.....	2.0	Tire Building Machines.....	2.5		
Forced Draft.....	1.5	Rod.....	3.0	Tire & Tube Press Openers.....	1.0		
Induced Draft.....	1.5	Tumbling Barrels.....	2.0	Strainers.....	2.0		
Mine Ventilation.....	2.0						
Cooling Towers.....	2.0						
Light Duty Blower & Fans.....	1.0						

① The Service Factors listed are intended only as a general guide and for smooth power sources such as electric motors. For reciprocating prime movers, such as diesel or gas engines, add the following service factor:

For 8 or more cylinders, add 0.5

For 6 cylinders, add 1.0

For 4 cylinders, add 1.5

For less than 4 cylinders, consult Regal Rexnord

If both driver and driven equipment are reciprocating, consult Regal Rexnord.

Add 0.5 to service factor if drive is a hydraulic motor.

Viva™ couplings are not recommended for turbine drives if the coupling cannot be protected from steam leakage or from speeds in excess of the coupling's published speed rating.

② Consult Regal Rexnord™ Engineering.

**IMPORTANT NOTE:** The coupling selection criteria is intended for the determination of the coupling and style only. It is also recommended that the system be analyzed for torsional and lateral stability using the specific coupling mass-elastic data available from Regal Rexnord. This analysis is the responsibility of the user since the coupling is only a single component in the system.

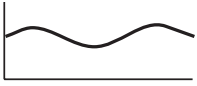

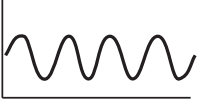
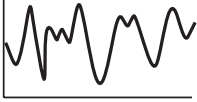
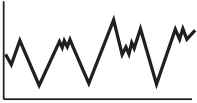
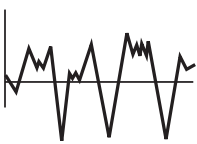
**CAUTION:** In the drive systems sensitive to axial movement (i.e. sleeve bearing equipment), it may be necessary to limit axial force and/or displacement. Consult Regal Rexnord for the proper installation procedure.

## Temperature Adjustment

Ambient Temperature	Service Factor St
T° > 140° F	0.25
T° > 165° F	0.50
T° > 180° F	0.75
T° > 200° F	1.00

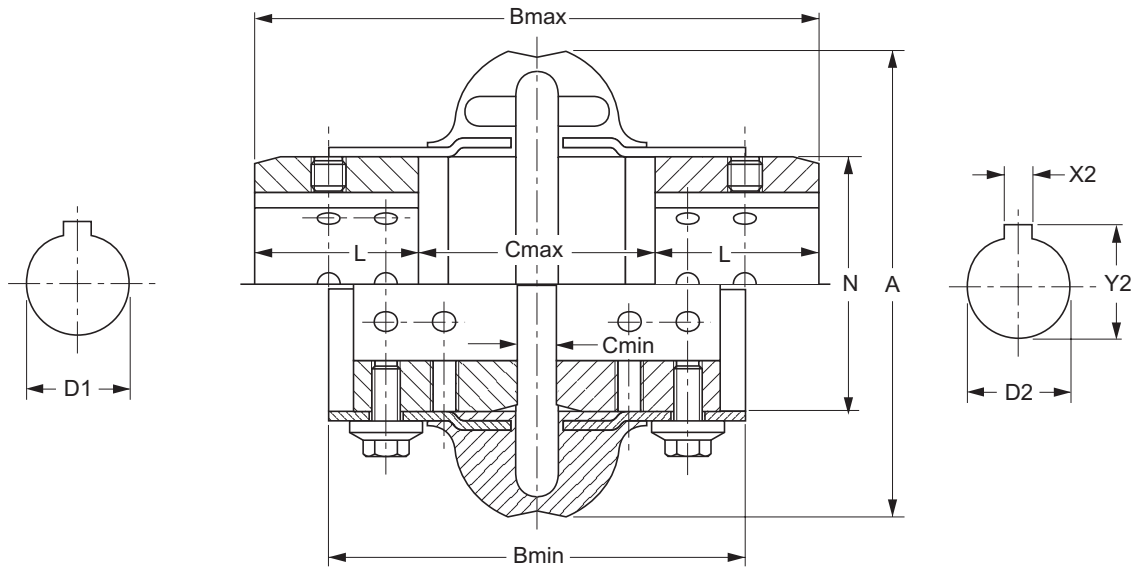
# SERVICE FACTORS - LOAD CLASSIFICATION

**Service Factors** are a guide, based on experience, of the ratio between coupling catalog rating and system characteristics. The system characteristics are best measured with a torque meter.

Torque Demands	Load Classifications	Service Factors S <sub>R</sub>
	Continuous service and running loads vary only slightly.	1.0
	Torque loading varies during operation of equipment.	1.5
	Torques varies during operation, frequent stop/start cycles are encountered.	2.0
	For shock loading and substantial torque variations.	2.5
	For heavy shock loading or light reversing drives.	3.0
	Reversing torque loads do not necessarily mean reversal of rotation. Depending on severity of torque reversal, such loads must be classified between "medium" and "extreme".	Consult Factory

# CLOSE COUPLED

## TYPE V — Straight Bored Hubs



### Dimensions (in)

Coupling Size	Continuous Torque (in-lbs)	Max RPM	Bore Size - D1 & D2			A	Overall Length - B		Shaft Gap - C		L	N	Weight (lb) <sup>②</sup>
			Min	Max <sup>①</sup>	Max <sup>①</sup> (mm)		Min	Max	Min	Max			
110	549	5,400	0.32	1.438	38	4.32	3.82	5.18	0.34	2.16	1.51	2.37	3.1
125	929	5,400	0.32	1.875	48	4.74	3.84	5.20	0.36	2.18	1.51	2.75	3.8
130	1,451	5,100	0.36	2.125	55	5.09	3.82	5.36	0.26	2.16	1.60	3.13	4.7
150	2,213	4,800	0.36	2.500	65	5.91	4.36	6.36	0.36	2.36	2.00	3.75	9.0
170	2,726	4,800	0.36	2.500	65	6.62	4.36	6.36	0.36	2.36	2.00	3.75	9.4
190	3,646	4,600	0.69	2.875	75	7.48	4.58	6.46	0.26	2.36	2.05	4.62	12.2
215	5,859	4,300	0.69	3.125	80	8.38	5.44	7.51	0.44	2.51	2.50	5.50	21.2
245	8,301	4,100	0.69	3.750	95	9.65	5.41	7.95	0.28	2.86	2.54	6.75	31.7
290	11,248	3,900	1.00	4.375	110	11.40	6.08	9.48	0.32	3.72	2.88	8.47	55
365	28,320	3,600	1.31	4.625	125	14.37	7.90	12.25	0.76	5.20	3.53	9.25	122
425	49,383	2,000	1.31	6.25	160	16.73	9.75	14.20	0.75	5.20	4.50	11.25	284
460	55,490	2,000	1.31	7.00	190	18.15	10.51	14.96	0.75	5.20	4.88	11.88	291

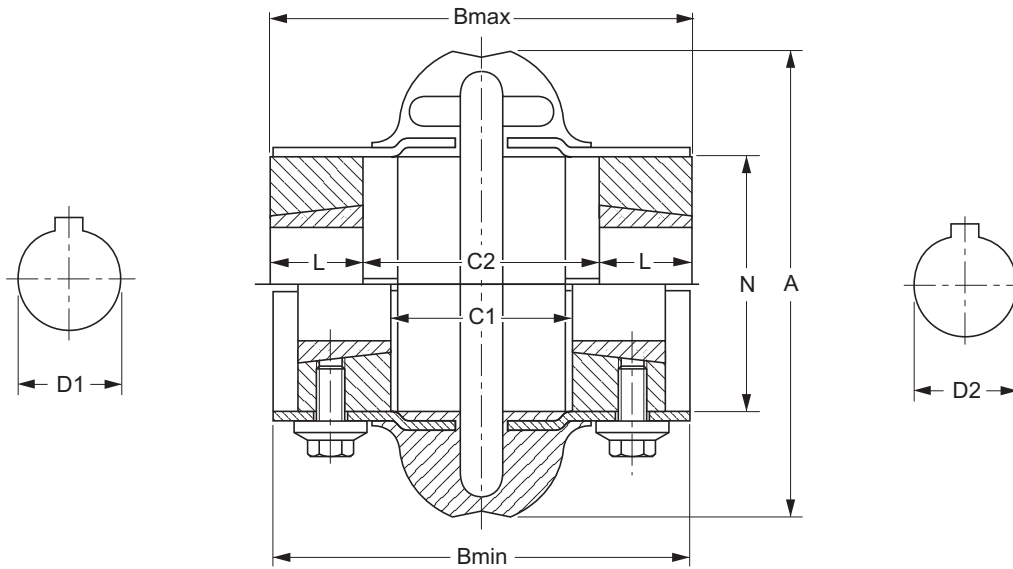
① Maximum bores for keyways as per AGMA 9002 (inch bores) and AGMA 9112 (metric bores).

② With maximum bores.

**NOTE:** Dimensions subject to change. Certified dimensions of ordered material furnished on request.

# CLOSE COUPLED.

## TYPE V — With Taper-Lock<sup>®†</sup> Hubs



### Dimensions (in)

Coupling Size	Continuous Torque (in-lbs)	Max RPM	A	Overall Length - B		C1	C2	N	Bushing <sup>③</sup>	Bore Size - D1 & D2			L	Weight (lb) <sup>②</sup>
				Min	Max					Min	Max <sup>①</sup>	Max <sup>①</sup> (mm)		
110	549	5,400	4.32	3.82	3.90	1.60	2.17	2.37	1108	.50	1.13	26	0.88	2.6
125	929	5,400	4.74	3.86	3.94	1.62	2.17	2.75	1108	.50	1.13	26	0.88	3.7
130	1,451	5,100	5.09	3.82	4.17	1.36	2.17	3.13	1310	.50	1.44	35	1.00	4.8
150	2,213	4,800	5.91	4.37	4.61	2.12	2.60	3.75	1610	.50	1.69	42	1.00	6.8
170	2,726	4,800	6.62	4.37	4.61	2.12	2.60	3.75	1610	.50	1.69	42	1.00	7.2
190	3,646	4,600	7.48	4.57	4.84	1.86	2.36	4.34	2012	.50	2.13	50	1.25	12.6
215	5,859	4,300	8.38	5.28	5.91	2.02	2.40	5.50	2517	.50	2.69	65	1.75	22.4
245	8,301	4,100	9.65	5.39	6.22	1.96	2.24	6.75	3020	.88	3.25	80	2.00	33.4
290	11,248	3,900	11.40	6.02	7.40	1.58	3.43	8.47	3020	.88	3.25	80	2.50	56.9
365	28,320	3,600	14.37	7.87	12.24	0.79	5.16	9.25	3535	1.18	3.94	90	3.53	121
425	49,383	2,000	16.73	9.72	13.19	1.73	5.20	11.25	4040	1.44	4.44	100	4.00	215
460	55,490	2,000	18.15	10.51	14.21	1.50	5.20	11.88	4545	1.94	4.94	115	4.50	272

① Maximum bores for keyways as per AGMA 9002 (inch bores) and 9112 (metric bores), except larger bore capacity is with shallow keyway and steel bushings.

② Weight (lb) without compression bushings.

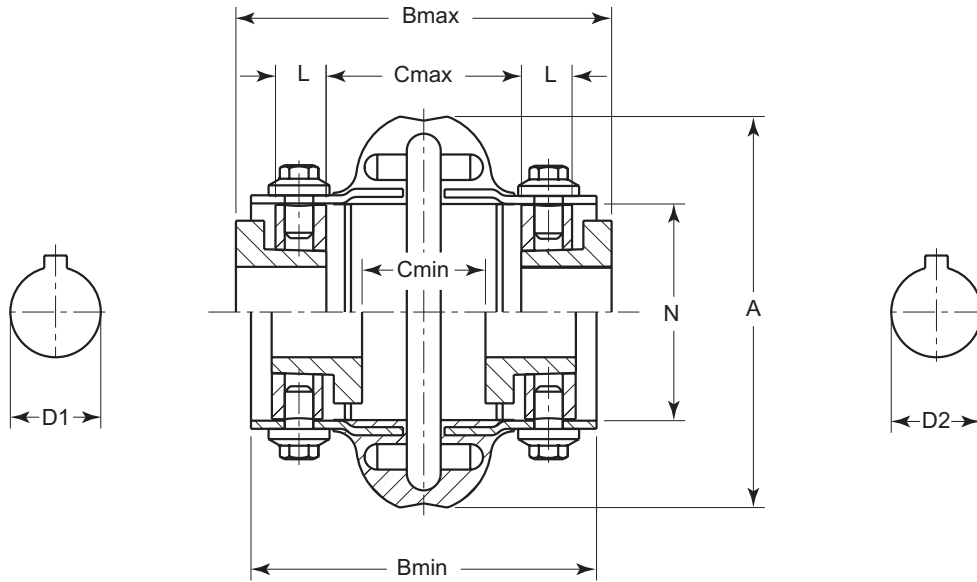
③ Review bushing rating with bushing manufacturer for adequate torque rating in application.

† See back cover.

**NOTE:** Dimensions subject to change. Certified dimensions of ordered material furnished on request.

# CLOSE COUPLED

## TYPE V — With Quick Disconnect (QD) Hubs



### Dimensions (in)

Coupling Size	Continuous Torque (in-lbs)	Max RPM	A	Overall Length - B		Shaft Gap - C		N	Bushing	Bore Size - D1 & D2			L	Weight (lb) <sup>②</sup>
				Min	Max	Min	Max			Min	Max <sup>①</sup>	Max <sup>①</sup> (mm)		
110	549	5,400	4.32	3.82	4.16	1.36	2.16	2.37	JA	0.5000	1.25	30	1.00	2.2
125	929	5,400	4.74	3.84	4.18	1.38	2.18	2.75	JA	0.5000	1.25	30	1.00	2.9
130	1,451	5,100	5.09	3.82	4.78	0.74	2.16	3.13	SH	0.5000	1.63	35	1.31	3.9
150	2,213	4,800	5.91	4.36	5.98	0.74	2.36	3.75	SD	0.5000	1.94	43	1.81	7.8
170	2,726	4,800	6.62	4.36	5.98	0.74	2.36	3.75	SD	0.5000	1.94	43	1.81	8.1
190	3,646	4,600	7.48	4.58	6.24	0.48	2.36	4.34	SK	0.5000	2.50	58	1.94	12.0
215	5,859	4,300	8.38	5.26	6.54	1.40	2.41	5.50	SF	0.5000	2.81	63	2.06	18.6
245	8,301	4,100	9.65	5.40	7.74	0.46	2.24	6.75	E	0.857	3.50	89	2.75	28.5
290	11,248	3,900	11.40	6.04	8.42	0.58	1.20	8.47	F	1.000	3.94	101	3.61	57.9
365	28,320	3,600	14.37	11.47	14.16	2.02	5.20	9.25	J	1.500	4.44	114	4.48	108
425	49,383	2,000	16.73	14.70	18.66	0.74	5.20	11.25	M	2.000	5.50	139	6.73	212
460	55,490	2,000	18.15	15.09	18.66	1.12	5.20	11.88	M	2.000	5.50	139	6.73	273

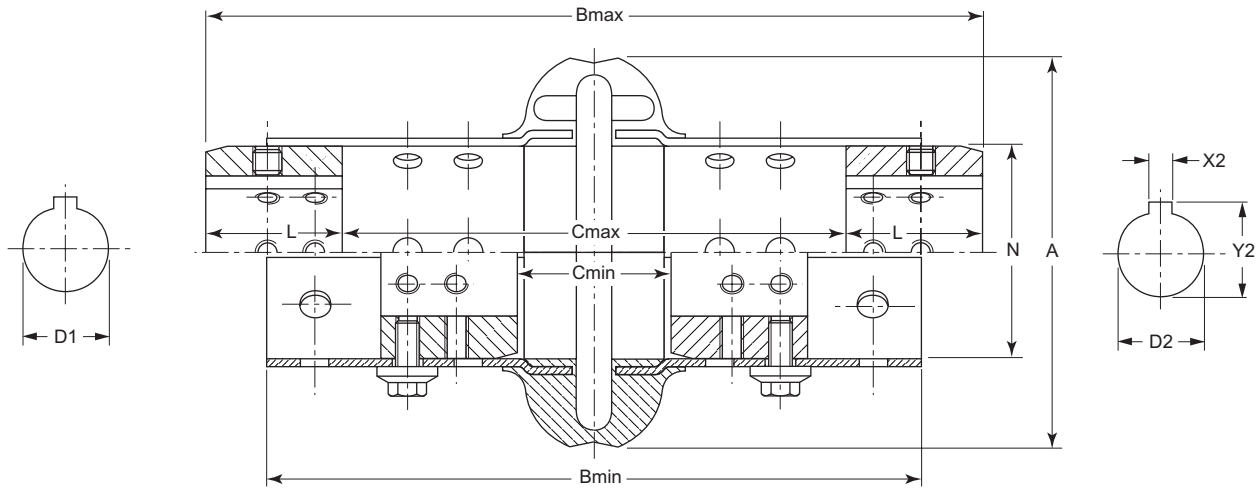
① Maximum bores with shallow keyways and steel bushings.

② Weight (lb) without compression bushings.

**NOTE:** Dimensions subject to change. Certified dimensions of ordered material furnished on request.

# SPACER COUPLED

## TYPE VS — Straight Bored

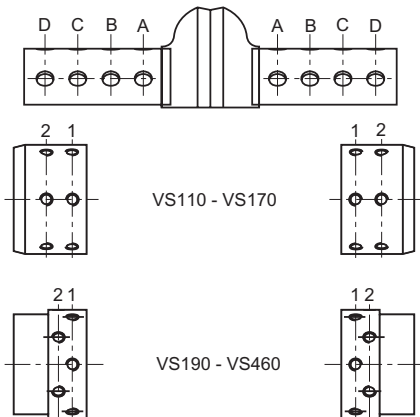


### Dimensions (in)

Coupling Size	Continuous Torque (in-lbs)	Max RPM	Bore Size - D1 & D2			A	Overall Length - B		Shaft Gap - C		L	N	Weight (lb) <sup>②</sup>
			Min	Max <sup>①</sup>	Max <sup>①</sup> (mm)		Min	Max	Min	Max			
110	549	4,300	0.32	1.438	38	4.32	7.18	8.54	1.69	5.52	1.51	2.37	3.7
125	929	4,300	0.32	1.875	48	4.74	7.50	8.86	2.13	5.84	1.51	2.75	4.6
130	1,451	4,200	0.36	2.125	55	5.09	7.18	8.72	1.30	5.52	1.60	3.13	5.6
150	2,213	4,000	0.36	2.500	65	5.91	9.26	11.04	2.01	7.04	2.00	3.75	11.0
170	2,726	4,000	0.36	2.500	65	6.62	9.26	11.04	2.01	7.04	2.00	3.75	11.2
190	13,646	3,900	0.69	2.875	75	7.48	9.26	11.14	1.89	7.04	2.05	4.62	14.6
215	5,859	3,800	0.69	3.125	80	8.38	9.90	12.14	1.97	7.14	2.50	5.50	24.5
245	8,301	3,700	0.69	3.750	95	9.65	10.21	12.74	1.57	7.66	2.54	6.75	37.0
290	11,248	3,600	1.00	4.375	110	11.40	12.42	15.06	3.15	10.10	2.88	8.47	63.3
365	28,320	2,600	1.31	4.625	125	14.37	12.56	16.93	2.64	9.84	3.53	9.25	131
425	49,383	1,800	1.31	6.25	160	16.73	12.56	17.87	2.13	9.84	4.50	11.25	250
460	55,490	1,800	1.31	7.00	190	18.15	12.56	18.89	2.64	9.84	4.88	11.88	303

① Maximum bores for keyways as per AGMA 9002 (inch bores) and AGMA 9112 (metric bores).

② With maximum bore.



Size	ISO & Din (mm)				ANSI (Inch)		
	100	140	180	250	3-1/2	5	7
110	C2-B1	C1-C1	—	—	B1-B1	C2*-C1	—
125	B1-B1	C1-C2*	—	—	B2-B2	C2-C2*	—
130	B2*-C2*	C1-C1	—	—	B1-B1	C2*-C2*	—
150	B1-B1	C1-C1	D1-D1	—	B1*-D1*	D1-D2*	—
170	B1-B1	C1-C1	D2*-D2*	—	B1-D1*	D1*-D1*	D1-D2*
190	B1-B1	C1-C1	D1-D1	—	C1*-C1*	D1*-D1*	D1-D1
215	C1-C1	C1-C1	D1-D1	—	C1*-C1*	D1*-D1*	D1-D1
245	C2-C2	D1-C1*	D2-D1	—	B1*-D1*	B2-C1	D1-C1
290	B2*-B1*	B2*-B1*	C2*-B1	C2-C1	B2*-B1*	C2*-B1*	B2-B1
365	—	C1*-C1*	C1-C1	C1-C1	B1-B1*	B1-B1	C2-B2
425	—	C1*-C1*	C1-C2	C1-C1	B1-B2*	B1-B1	C2-B2
460	—	C1*-C1*	C2-C2	C1-C1	B1-B2*	B1-B1	C1-D2

\* Hub mounted inboard.

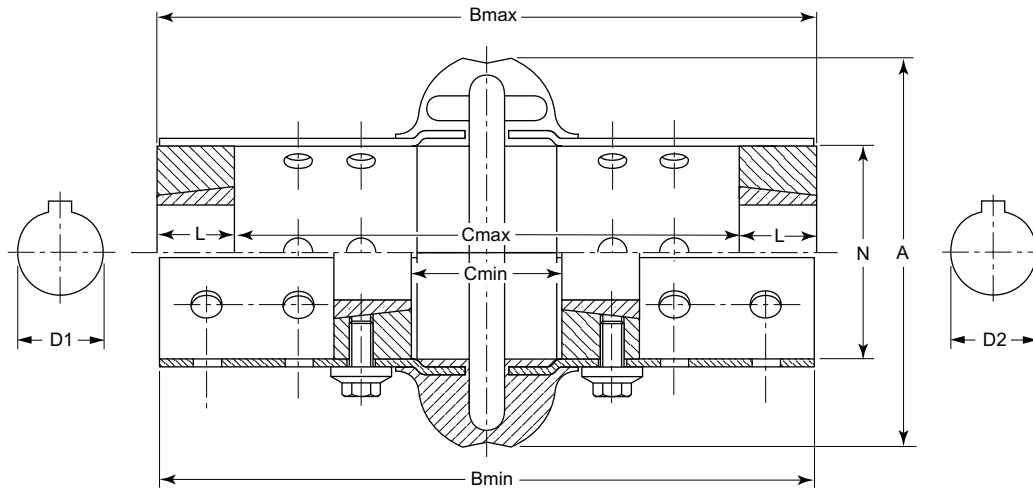
Note: Element holes "A" are for mounting high speed rings.

Note: DBSE means distance between shaft ends.

**NOTE:** Dimensions subject to change. Certified dimensions of ordered material furnished on request.

# SPACER VERSION

## TYPE VS — With Taper-Lock<sup>®†</sup> Bushing



### Dimensions (in)

Coupling Size	Continuous Torque (in-lbs)	Max RPM	A	Overall Length - B		Shaft Gap - C		N	Bushing <sup>③</sup>	Bore Size - D1 & D2			L	Weight (lb) <sup>②</sup>
				Min	Max	Min	Max			Min	Max <sup>①</sup>	Max <sup>①</sup> (mm)		
110	549	4,300	4.32	7.18	7.28	2.94	5.52	2.37	1108	.50	1.13	26	0.88	3.2
125	929	4,300	4.74	7.50	7.54	3.40	5.84	2.75	1108	.50	1.13	26	0.88	4.5
130	1,451	4,200	5.09	7.18	7.52	2.70	5.52	3.13	1310	.50	1.44	35	1.00	5.7
150	2,213	4,000	5.91	9.26	9.28	3.76	7.28	3.75	1610	.50	1.69	42	1.00	8.6
170	2,726	4,000	6.62	9.26	9.29	3.76	7.28	3.75	1610	.50	1.69	42	1.00	9.0
190	3,646	3,900	7.48	9.26	9.54	3.50	7.04	4.34	2012	.50	2.13	50	1.25	14.9
215	5,859	3,800	8.38	9.70	10.54	3.56	7.04	5.50	2517	.50	2.69	65	1.75	25.9
245	8,301	3,700	9.65	10.21	11.04	3.64	7.04	6.75	3020	.88	3.25	80	2.00	38.7
290	11,248	3,600	11.40	12.41	13.80	5.20	9.80	8.47	3020	.88	3.25	80	2.50	65.2
365	28,320	2,600	14.37	12.56	16.93	7.08	9.84	9.25	3535	1.18	3.94	90	3.53	130
425	49,383	1,800	16.73	12.56	17.87	7.08	9.84	11.25	4040	1.44	4.44	100	4.00	226
460	55,490	1,800	18.15	12.56	18.86	7.08	9.84	11.88	4545	1.94	4.94	115	4.50	284

① Maximum bores with shallow keyway and steel bushings.

② Weight (lb) without compression bushings.

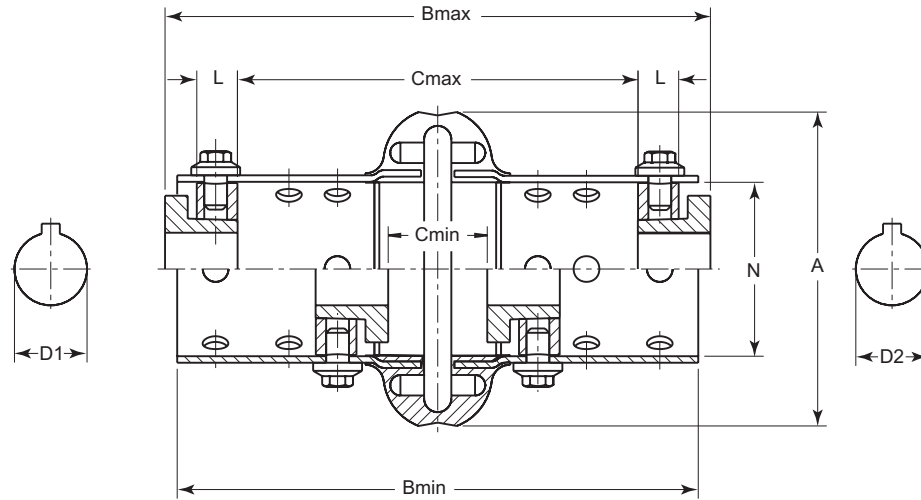
③ Review bushing rating with bushing manufacturer for adequate torque rating in application.

† See back cover.

**NOTE:** Dimensions subject to change. Certified dimensions of ordered material furnished on request.

# SPACER COUPLED

## TYPE VS — With Quick Disconnect (QD) Bushing



### Dimensions (in)

Coupling Size	Continuous Torque (in-lbs)	Max RPM	A	Overall Length - B		Shaft Gap - C		N	Bushing	Bore Size - D1 & D2			L	Weight (lb) <sup>②</sup>
				Min	Max	Min	Max			Min	Max <sup>①</sup>	Max <sup>①</sup> (mm)		
110	549	4,300	4.32	7.18	7.52	2.70	5.52	2.37	JA	0.500	1.25	30	1.00	2.8
125	929	4,300	4.74	7.50	7.84	3.16	5.84	2.75	JA	0.500	1.25	30	1.00	3.7
130	1,451	4,200	5.09	7.18	8.15	2.08	5.52	3.13	SH	0.500	1.63	35	1.31	4.8
150	2,213	4,000	5.91	9.26	10.67	2.38	7.04	3.75	SD	0.500	1.94	43	1.81	9.4
170	2,726	4,000	6.62	9.26	10.67	2.38	7.04	3.75	SD	0.500	1.94	43	1.81	9.9
190	3,646	3,900	7.48	9.26	10.92	2.12	7.04	4.34	SK	0.500	2.50	58	1.94	14.4
215	5,859	3,800	8.38	9.90	11.17	2.94	7.04	5.50	SF	0.500	2.81	63	2.06	22.0
245	8,301	3,700	9.65	10.21	12.54	2.14	7.04	6.75	E	0.875	3.50	89	2.75	33.8
290	11,248	3,600	11.40	12.42	14.80	3.61	7.58	8.47	F	1.000	3.94	101	3.61	66.2
365	28,320	2,600	14.37	12.55	18.80	0.73	9.84	9.25	J	1.500	4.44	114	4.48	116
425	49,383	1,800	16.73	14.39	23.30	0.75	9.84	11.25	M	2.000	5.50	139	6.73	223
460	55,490	1,800	18.15	15.15	23.30	1.70	9.84	11.88	M	2.000	5.50	139	6.73	284

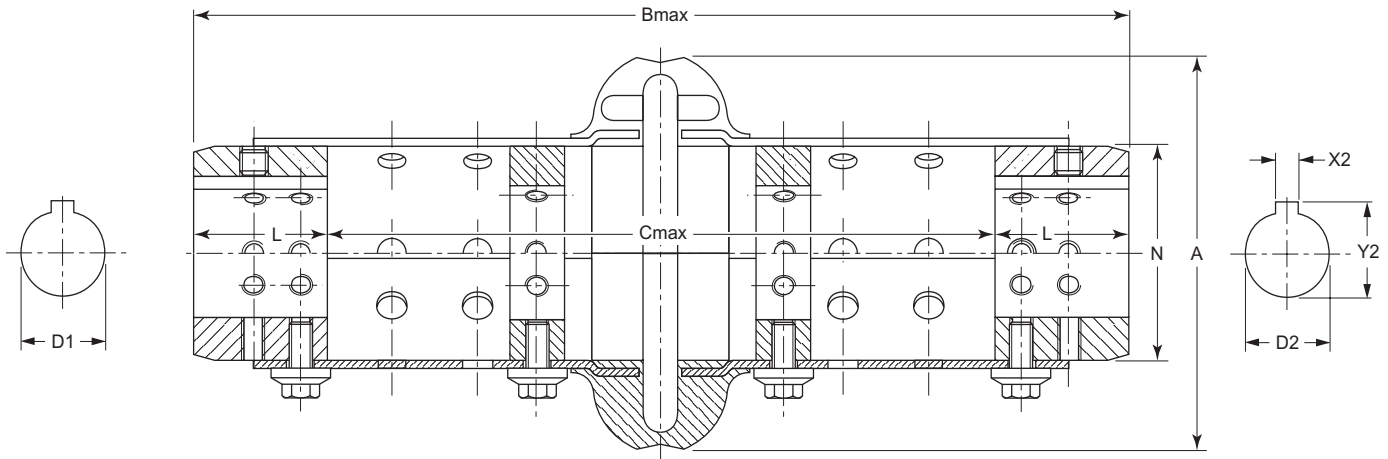
① Maximum bores with shallow keyways and steel bushings.

② Weight (lb) without compression bushings.

**NOTE:** Dimensions subject to change. Certified dimensions of ordered material furnished on request.

# EXTENDED SPACER COUPLED

## TYPE VSX — Straight Bored



### Dimensions (in)

Coupling Size	Continuous Torque (in-lbs)	Max RPM	Bore Size - D1 & D2			A	Overall Length - B		Shaft Gap - C		L	N	Weight (lb) <sup>②</sup>
			Min	Max <sup>①</sup>	Max <sup>①</sup> (mm)		Min	Max	Min	Max			
110	549	4,300	0.32	1.438	38	4.32	8.70	10.06	3.70	7.04	1.51	2.37	3.9
125	929	4,300	0.32	1.875	48	4.74	8.66	10.06	3.70	7.04	1.51	2.75	4.9
130	1,451	4,200	0.36	2.125	55	5.09	8.70	10.24	3.52	7.04	1.60	3.13	6.0
150	2,213	4,000	0.36	2.500	65	5.91	12.06	13.85	5.04	9.85	2.00	3.75	12.0
170	2,726	4,000	0.36	2.500	65	6.62	12.06	13.85	5.04	9.85	2.00	3.75	12.7
190	3,646	3,900	0.69	2.875	75	7.48	12.07	13.70	5.19	9.85	2.05	4.34	16.2
215	5,859	3,800	0.69	3.125	80	8.38	12.60	14.84	5.00	9.85	2.50	5.50	26.8
245	8,301	3,700	0.69	3.750	95	9.65	13.01	15.80	4.16	10.50	2.54	6.75	40.2
290	11,248	3,600	1.00	4.375	110	11.40	14.43	17.87	5.94	11.82	2.88	8.47	66.9
365	28,320	2,600	1.31	7.00	125	14.37	14.52	18.87	2.64	11.82	3.53	9.25	143.2
425	49,383	1,800	1.31	6.25	160	16.73	14.52	20.81	2.13	11.82	4.50	11.25	264.9
460	55,490	1,800	1.31	4.625	190	18.15	14.52	21.57	2.64	11.82	4.88	11.88	318.5

① Maximum bores for keyways as per AGMA 9002 (inch bores) and 9112 (metric bores).

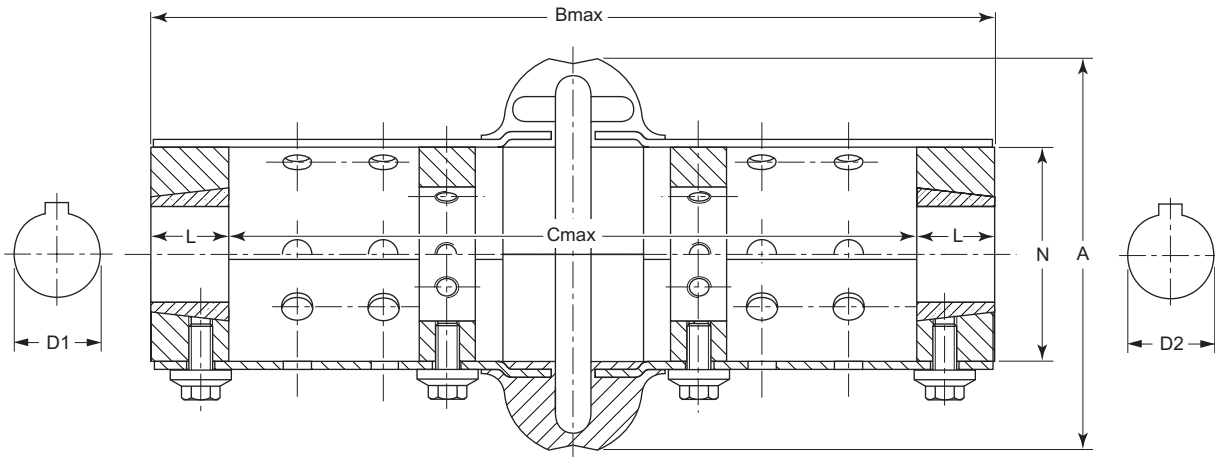
② With maximum bore.

NOTE: High speed rings are required with VSX coupling style and provided as standard.

NOTE: Dimensions subject to change. Certified dimensions of ordered material furnished on request.

# EXTENDED SPACER COUPLED

## TYPE VSX — With Taper-Lock<sup>®†</sup> Bushing



### Dimensions (in)

Coupling Size	Continuous Torque (in-lbs)	Max RPM	A	Overall Length - B		Shaft Gap - C		N	Bushing <sup>③</sup>	Bore Size - D1 & D2			L	Weight (lb) <sup>②</sup>
				Min	Max	Min	Max			Min	Max <sup>①</sup>	Max <sup>①</sup> (mm)		
110	549	4,300	4.32	8.80	8.80	3.70	7.04	2.37	1108	.50	1.13	26	0.88	3.5
125	929	4,300	4.74	8.80	8.80	4.96	7.04	2.75	1108	.50	1.13	26	0.88	4.8
130	1,451	4,200	5.09	9.04	9.04	4.72	7.04	3.13	1310	.50	1.44	35	1.00	6.1
150	2,213	4,000	5.91	12.08	12.08	3.78	9.85	3.75	1610	.50	1.69	42	1.00	10.0
170	2,726	4,000	6.62	12.08	12.08	3.78	9.85	3.75	1610	.50	1.69	42	1.00	10.6
190	3,646	3,900	7.48	12.08	12.35	6.54	9.85	4.34	2012	.50	2.13	50	1.25	16.6
215	5,859	3,800	8.38	12.60	13.24	6.56	9.85	5.50	2517	.50	2.69	65	1.75	28.2
245	8,301	3,700	9.65	13.01	13.84	6.10	9.85	6.75	3020	.88	3.25	80	2.00	41.0
290	11,248	3,600	11.40	14.43	15.81	7.96	11.82	8.47	3020	.88	3.25	80	2.50	68.8
365	28,320	2,600	14.37	14.53	18.87	—	11.82	9.25	3535	1.18	3.94	90	3.53	142
425	49,383	1,800	16.73	14.53	19.84	—	11.82	11.25	4040	1.44	4.44	100	4.00	241
460	55,490	1,800	18.15	14.53	20.83	—	11.82	11.88	4545	1.94	4.94	115	4.50	300

① Maximum bores for keyways as per ISO R773.

② Weight (lb) without compression bushings.

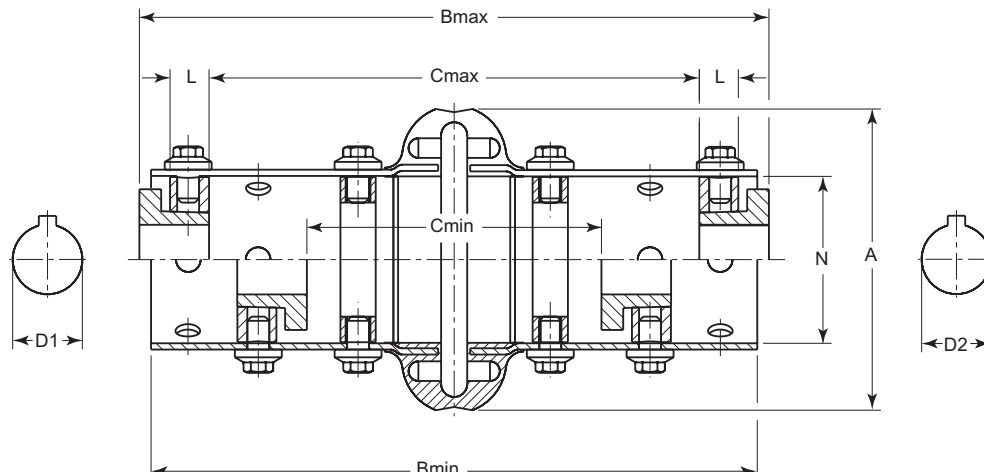
③ Review bushing rating with bushing manufacturer for adequate torque rating in application.

† See back cover.

**NOTE:** Dimensions subject to change. Certified dimensions of ordered material furnished on request.

# EXTENDED SPACER COUPLED

## TYPE VSX — With Quick Disconnect (QD) Bushing



### Dimensions (in)

Coupling Size	Continuous Torque (in-lbs)	Max RPM <sup>②</sup>	A	Overall Length - B		Shaft Gap - C		N	Bushing <sup>③</sup>	Bore Size - D1 & D2			L	Weight (lb) <sup>②</sup>
				Min	Max	Min	Max			Min	Max <sup>①</sup>	Max <sup>①</sup> (mm)		
110	549	4,300	4.32	8.70	9.04	4.72	7.04	2.37	JA	0.500	1.25	30	1.00	3.0
125	929	4,300	4.74	8.66	9.04	4.72	7.04	2.75	JA	0.500	1.25	30	1.00	4.1
130	1,451	4,200	5.09	8.70	9.67	4.10	7.04	3.13	SH	0.500	1.63	35	1.31	5.2
150	2,213	4,000	5.91	12.06	13.47	5.42	9.84	3.75	SD	0.500	1.94	43	1.81	10.9
170	2,726	4,000	6.62	12.06	13.47	5.42	9.84	3.75	SD	0.500	1.94	43	1.81	11.4
190	3,646	3,900	7.48	12.07	13.73	5.16	9.85	4.34	SK	0.500	2.50	58	1.94	16.0
215	5,859	3,800	8.38	12.60	13.87	5.94	11.17	5.50	SF	0.500	2.81	63	2.06	24.3
245	8,301	3,700	9.65	13.01	15.34	4.60	9.84	6.75	E	0.875	3.50	89	2.75	37.1
290	11,248	3,600	11.40	14.43	16.81	6.96	9.59	8.47	F	1.000	3.94	101	3.61	69.8
365	28,320	2,600	14.37	14.52	20.77	0.76	11.81	9.25	J	1.500	4.44	114	4.48	129
425	49,383	1,800	16.73	14.52	25.27	0.93	11.81	11.25	M	2.000	5.50	139	6.73	238
460	55,490	1,800	18.15	14.52	25.27	1.56	11.81	11.88	M	2.000	5.50	139	6.73	300

① Maximum bores with shallow keyways and steel bushings.

② Weight (lb) without compression bushings.

③ Review bushing rating with bushing manufacturer for adequate torque rating in application.

**NOTE:** Dimensions subject to change. Certified dimensions of ordered material furnished on request.

# ENGINEERING DATA

**Table 1 — Recommended Bores for Steel Hubs (in)**

Shaft Dia	Clearance Fit ①		Interference Fit		Shaft Dia	Clearance Fit ①		Interference Fit		Shaft Dia	Clearance Fit ①		Interference Fit		Shaft Dia	Interference Fit	
	Hub Bore	Clearance	Hub Bore	Interference		Hub Bore	Clearance	Hub Bore	Interference		Hub Bore	Clearance	Hub Bore	Interference		Hub Bore	Interference
+ .0000	+ .0010	.0000	+ .0005	.0000	+ .0000	+ .0015	.0000	+ .0010	.0000	+ .0000	+ .0015	.0000	+ .0015	.0010	+ .0000	+ .0015	.0015
- .0005	- .0000	.0015	- .0000	.0010	- .0010	- .0000	.0025	- .0000	.0020	- .0010	- .0000	.0025	- .0000	.0035	- .0010	- .0000	.0040
.5000	.5000		.4990		2.2500	2.2500		2.2480		4.0625	4.0625		4.0590		6.7500	6.7460	
.5625	.5625		.5615		2.3125	2.3125		2.3105		4.1250	4.1250		4.1215		7.0000	6.9960	
.6250	.6250		.6240		2.3750	2.3750		2.3730		4.1875	4.1875		4.1840				
.6875	.6875		.6865		2.4375	2.4375		2.4355		4.2500	4.2500		4.2465				
.7500	.7500		.7490		2.5000	2.5000		2.4980		4.3125	4.3125		4.3090				
.8125	.8125		.8115		2.5625	2.5625		2.5605		4.3750	4.3750		4.3715				
.8750	.8750		.8740		2.6250	2.6250		2.6230		4.4375	4.4375		4.4340				
.9375	.9375		.9365		2.6875	2.6875		2.6855		4.5000	4.5000		4.4965				
1.0000	1.0000		.9990		2.7500	2.7500		2.7480		4.5625	4.5625		4.5590				
1.0625	1.0625		1.0615		2.8125	2.8125		2.8105		4.6250	4.6250		4.6215				
1.1250	1.1250		1.1240		2.8750	2.8750		2.8730		4.6875	4.6875		4.6840				
1.1875	1.1875		1.1865		2.9375	2.9375		2.9355		4.7500	4.7500		4.7465				
1.2500	1.2500		1.2490		3.0000	3.0000		2.9980		4.8125	4.8125		4.8090				
1.3125	1.3125		1.3115		+ .0000	+ .0015	.0000	+ .0010	.0005	4.8750	4.8750		4.8715				
1.3750	1.3750		1.3740		- .0010	- .0000	.0025	- .0000	.0025	4.9375	4.9375		4.9340				
1.4375	1.4375		1.4365		3.0625	3.0625		3.0600		5.0000	5.0000		4.9965				
1.5000	1.5000		1.4990		3.1250	3.1250		3.1225		5.0625	5.0625		5.0585	.0015			
+ .0000	+ .0010	.0000	+ .0005	.0000	3.1875	3.1875		3.1850		5.1250	5.1250		5.1210	.0040			
- .0010	- .0000	.0020	- .0000	.0015	3.2500	3.2500		3.2475		5.1875	5.1875		5.1835				
1.5625	1.5625		1.5610		3.3125	3.3125		3.3100		5.2500	5.2500		5.2460				
1.6250	1.6250		1.6235		3.3750	3.3750		3.3725		5.3125	5.3125		5.3085				
1.6875	1.6875		1.6860		3.4375	3.4375		3.4350		5.3750	5.3750		5.3710				
1.7500	1.7500		1.7485		3.5000	3.5000		3.4975		5.4375	5.4375		5.4335				
1.8125	1.8125		1.8110		3.5625	3.5625		3.5600		5.5000	5.5000		5.4960				
1.8750	1.8750		1.8735		3.6250	3.6250		3.6225		5.5625	5.5625		5.5585				
1.9375	1.9375		1.9360		3.6875	3.6875		3.6850		5.6250	5.6250		5.6210				
2.0000	2.0000		1.9985		3.7500	3.7500		3.7475		5.6875	5.6875		5.6835				
+ .0000	+ .0015	.0000	+ .0005	.0000	3.8125	3.8125		3.8100		5.7500	5.7500		5.7460				
- .0010	- .0000	.0025	- .0000	.0015	3.8750	3.8750		3.8725		5.8125	5.8125		5.8085				
2.0625	2.0625		2.0610		3.9375	3.9375		3.9350		5.8750	5.8750		5.8710				
2.1250	2.1250		2.1235		4.0000	4.0000		3.9975		5.9375	5.9375		5.9335				
2.1875	2.1875		2.1860							6.0000	6.0000		5.9960				
										6.2500	6.2500		6.2460				
										6.5000	6.5000		6.4960				

① Viva™ rebored hubs provided with AGMA 9002 Class 1 clearance fit unless otherwise specified.

**Table 2 — Recommended Keyways for Hubs with One Keyway (in)**

Nominal Bore		Keyway Size ③	Width Tolerance ④
		Width x Depth	
.4375	.5625	.125 x .062	+ .0020 - .0000
.5625	.8750	.1875 x .094	+ .0020 - .0000
.8750	1.250	.250 x .125	+ .0020 - .0000
1.250	1.375	.3125 x .156	+ .0020 - .0000
1.375	1.750	.375 x .188	+ .0025 - .0000
1.750	2.250	.500 x .250	+ .0025 - .0000
2.250	2.750	.625 x .312	+ .0030 - .0000
2.750	3.250	.750 x .375	+ .0030 - .0000
3.250	3.750	.875 x .438	+ .0030 - .0000
3.750	4.500	1.000 x .500	+ .0030 - .0000
4.500	5.500	1.250 x .625	+ .0035 - .0000
5.500	6.500	1.500 x .750	+ .0035 - .0000
6.500	7.500	1.750 x .750	+ .0040 - .0000
7.500	9.000	2.000 x .750	+ .0040 - .0000
9.000	11.000	2.500 x .875	+ .0045 - .0000
11.000	13.000	3.000 x 1.000	+ .0045 - .0000
13.000	15.000	3.500 x 1.250	+ .0050 - .0000
15.000	18.000	4.000 x 1.500	+ .0050 - .0000

③ One square key for bore diameters thru 6.500";  
one rectangular key for bore diameters over 6.500".

④ Depth tolerance: +.010" to +.020".

**NOTE:** Dimensions subject to change. Certified dimensions of ordered material furnished on request.

# ENGINEERING DATA *Cont.*

**Table 3 — AGMA 9112 - Bore Tolerances Steel Coupling Hubs (mm) ②**

Shaft Diameter (ISO/R775-1969)		Bore Diameter Tolerance		
Nominal	Tolerance	Clearance	Transitional	Interference
6 to 30	j6 / k6 ①	F7	H7	M6
Over 30 to 50	k6	F7	H7	K6
Over 50 to 80	m6	F7	H7	K7
Over 80 to 100	m6	F7	H7	M7
Over 100 to 200	m6	F7	H7	P7
Over 200 to 355	m6	F7	H7	R7
Over 355 to 500	m6	F7	H7	R8

① Per DIN 748 — Differs from ISO/R775.

② Other ISO bore tolerances available (H7, H8, F7, F8, G7, E7, Js7, Js8, etc.).

**Table 4 — AGMA 9112 - Hub Keyway Dimensions (mm)**

Cylindrical Shaft Diameter, d		Nominal Key Size b x h	Hub Keyway							
Over	To (incl.)		Width, b			Depth, t2		Radius, r ④		
			Nominal	Normal Keyway Width Tolerance (Js9) ③	Close Keyway Width Tolerance (P9)	Nominal	Tolerance	Maximum	Minimum	
10	12	4 x 4	4			1.8	+0.10/-0.00	0.16	0.08	
12	17	5 x 5	5	+0.0150 / -0.0150	-0.012 / -0.042	2.3		+0.20/-0.00 ②	0.25	0.16
17	22	6 x 6	6			2.8				
22	30	8 x 7	8	+0.0180 / -0.0180	-0.015 / -0.051	3.3	+0.20/-0.00 ②		0.40	0.25
30	38	10 x 8	10			3.3				
38	44	12 x 8	12			3.3				
44	50	14 x 9	14	+0.0215 / -0.0215	-0.018 / -0.061	3.8	+0.20/-0.00 ②	0.60	0.40	
50	58	16 x 10	16			4.3				
58	65	18 x 11	18			4.4				
65	75	20 x 12	20			4.9	+0.20/-0.00 ②	0.60	0.40	
75	85	22 x 14	22	+0.0260 / -0.0260	-0.022 / -0.074	5.4				
85	95	25 x 14	25			5.4				
95	110	28 x 16	28			6.4	+0.20/-0.00 ②	0.60	0.40	
110	130	32 x 18	32			7.4				
130	150	36 x 20	36			8.4				
150	170	40 x 22	40	+0.0310 / -0.0310	-0.026 / -0.088	9.4	+0.30/-0.00	1.00	0.70	
170	200	45 x 25	45			10.4				
200	230	50 x 28	50			11.4				
230	260	56 x 32	56			12.4	+0.30/-0.00	1.60	1.20	
260	290	63 x 32	63	+0.0370 / -0.0370	-0.032 / -0.106	12.4				
290	330	70 x 36	70			14.4				
330	380	80 x 40	80			15.4	+0.30/-0.00	2.50	2.00	
380	440	90 x 45	90	+0.0435 / -0.0435	-0.037 / -0.124	17.4				
440	500	100 x 50	100			19.5				

② Other ISO keyway width tolerances available upon request (H9, D9, etc.).

② Viva™ hubs provided with Js9 keyway width tolerance unless otherwise specified.

③ Viva hubs do not have "Radius, r" in keyway unless otherwise specified.

**NOTE:** Dimensions subject to change. Certified dimensions of ordered material furnished on request.

# ENGINEERING DATA *Cont.*

**Table 5 — Recommended Bores for Metric Shafts per ISO/R775-1969 (mm)**

Nominal Shaft Diameter	Shaft Diameter	Clearance Fit		Transitional Fit ①		Interference Fit	
		Hub Bore	Fit ②	Hub Bore	Fit ②	Hub Bore	Fit ②
mm	<b>j6</b> <b>+ 0.008 / - 0.003</b>	<b>F7</b> <b>+ 0.016 / + 0.034</b>	<b>+ 0.008</b> <b>+ 0.037</b>	<b>H7</b> <b>+ 0.000 / + 0.018</b>	<b>- 0.008</b> <b>+ 0.021</b>	<b>M6</b> <b>- 0.015 / - 0.004</b>	<b>- 0.023</b> <b>- 0.001</b>
12	12.008 / 11.997	12.016 / 12.034	↓	12.000 / 12.018	↓	11.985 / 11.996	↓
14	14.008 / 13.997	14.016 / 14.034	↓	14.000 / 14.018	↓	13.985 / 13.996	↓
16	16.008 / 15.997	16.016 / 16.034	↓	16.000 / 16.018	↓	15.985 / 15.996	↓
18	18.008 / 17.997	18.016 / 18.034	↓	18.000 / 18.018	↓	17.985 / 17.996	↓
mm	<b>j6</b> <b>+ 0.009 / - 0.004</b>	<b>F7</b> <b>+ 0.020 / + 0.041</b>	<b>+ 0.011</b> <b>+ 0.045</b>	<b>H7</b> <b>+ 0.000 / + 0.021</b>	<b>- 0.009</b> <b>+ 0.025</b>	<b>M6</b> <b>- 0.017 / - 0.004</b>	<b>- 0.026</b> <b>+ 0.000</b>
19	19.009 / 18.996	19.020 / 19.041	↓	19.000 / 19.021	↓	18.983 / 18.996	↓
20	20.009 / 19.996	20.020 / 20.041	↓	20.000 / 20.021	↓	19.983 / 19.996	↓
22	22.009 / 21.996	22.020 / 22.041	↓	22.000 / 22.021	↓	21.983 / 21.996	↓
24	24.009 / 23.996	24.020 / 24.041	↓	24.000 / 24.021	↓	23.983 / 23.996	↓
25	25.009 / 24.996	25.020 / 25.041	↓	25.000 / 25.021	↓	24.983 / 24.996	↓
28	28.009 / 27.996	28.020 / 28.041	↓	28.000 / 28.021	↓	27.983 / 27.996	↓
30	30.009 / 29.996	30.020 / 30.041	↓	30.000 / 30.021	↓	29.983 / 29.996	↓
>30 mm	<b>k6</b> <b>+ 0.018 / + 0.002</b>	<b>F7</b> <b>+ 0.025 / + 0.050</b>	<b>+ 0.007</b> <b>+ 0.048</b>	<b>H7</b> <b>+ 0.000 / + 0.025</b>	<b>- 0.018</b> <b>+ 0.023</b>	<b>K6</b> <b>- 0.013 / + 0.003</b>	<b>- 0.031</b> <b>+ 0.001</b>
32	32.018 / 32.000	32.025 / 32.050	↓	32.000 / 32.025	↓	31.987 / 32.003	↓
35	35.018 / 35.002	35.025 / 35.050	↓	35.000 / 35.025	↓	34.987 / 35.003	↓
38	38.018 / 38.002	38.025 / 38.050	↓	38.000 / 38.025	↓	37.987 / 38.003	↓
40	40.018 / 40.002	40.025 / 40.050	↓	40.000 / 40.025	↓	39.987 / 40.003	↓
42	42.018 / 42.002	42.025 / 42.050	↓	42.000 / 42.025	↓	41.987 / 42.003	↓
45	45.018 / 45.002	45.025 / 45.050	↓	45.000 / 45.025	↓	44.987 / 45.003	↓
48	48.018 / 48.002	48.025 / 48.050	↓	48.000 / 48.025	↓	47.987 / 48.003	↓
50	50.018 / 50.002	50.025 / 50.050	↓	50.000 / 50.025	↓	49.987 / 50.003	↓
> 50 mm	<b>m6</b> <b>+ 0.030 / + 0.011</b>	<b>F7</b> <b>+ 0.030 / + 0.060</b>	<b>+ 0.000</b> <b>+ 0.049</b>	<b>H7</b> <b>+ 0.000 / + 0.030</b>	<b>- 0.030</b> <b>+ 0.019</b>	<b>K7</b> <b>- 0.021 / + 0.009</b>	<b>- 0.051</b> <b>- 0.002</b>
55	55.030 / 55.011	55.030 / 55.060	↓	55.000 / 55.030	↓	54.979 / 55.009	↓
56	56.030 / 56.011	56.030 / 56.060	↓	56.000 / 56.030	↓	55.979 / 56.009	↓
60	60.030 / 60.011	60.030 / 60.060	↓	60.000 / 60.030	↓	59.979 / 60.009	↓
63	63.030 / 63.011	63.030 / 63.060	↓	63.000 / 63.030	↓	62.979 / 63.009	↓
65	65.030 / 65.011	65.030 / 65.060	↓	65.000 / 65.030	↓	64.979 / 65.009	↓
70	70.030 / 70.011	70.030 / 70.060	↓	70.000 / 70.030	↓	69.979 / 70.009	↓
71	71.030 / 71.011	71.030 / 71.060	↓	71.000 / 71.030	↓	70.979 / 71.009	↓
75	75.030 / 75.011	75.030 / 75.060	↓	75.000 / 75.030	↓	74.979 / 75.009	↓
80	80.030 / 80.011	80.030 / 80.060	↓	80.000 / 80.030	↓	79.979 / 80.009	↓
> 80 mm	<b>m6</b> <b>+ 0.035 / + 0.013</b>	<b>F7</b> <b>+ 0.036 / + 0.071</b>	<b>+ 0.001</b> <b>+ 0.058</b>	<b>H7</b> <b>+ 0.000 / + 0.035</b>	<b>- 0.035</b> <b>+ 0.022</b>	<b>M7</b> <b>- 0.035 / + 0.000</b>	<b>- 0.070</b> <b>- 0.013</b>
85	85.035 / 85.013	85.036 / 85.074	↓	85.000 / 85.035	↓	84.965 / 85.000	↓
90	90.035 / 90.013	90.036 / 90.071	↓	90.000 / 90.035	↓	89.965 / 90.000	↓
95	95.035 / 95.013	95.036 / 95.071	↓	95.000 / 95.035	↓	94.965 / 95.000	↓
100	100.035 / 100.013	100.036 / 100.071	↓	100.000 / 100.035	↓	99.965 / 100.000	↓
> 100 mm	<b>m6</b> <b>+ 0.035 / + 0.013</b>	<b>F7</b> <b>+ 0.036 / + 0.071</b>	↓	<b>H7</b> <b>+ 0.000 / + 0.035</b>	↓	<b>P7</b> <b>- 0.059 / - 0.024</b>	<b>- 0.097</b> <b>- 0.037</b>
110	110.035 / 110.013	110.036 / 110.071	↓	110.000 / 110.035	↓	109.941 / 109.976	↓
120	120.035 / 120.013	120.036 / 120.071	↓	120.000 / 120.035	↓	119.941 / 119.976	↓
> 120 mm	<b>m6</b> <b>+ 0.040 / + 0.015</b>	<b>F7</b> <b>+ 0.043 / + 0.083</b>	<b>+ 0.003</b> <b>+ 0.068</b>	<b>H7</b> <b>+ 0.000 / + 0.040</b>	<b>- 0.040</b> <b>+ 0.025</b>	<b>P7</b> <b>- 0.068 / - 0.028</b>	<b>- 0.108</b> <b>- 0.043</b>
125	125.040 / 125.015	125.043 / 125.083	↓	125.000 / 125.040	↓	124.932 / 124.972	↓
130	130.040 / 130.015	130.043 / 130.083	↓	130.000 / 130.040	↓	129.932 / 129.972	↓
140	140.040 / 140.015	140.043 / 140.083	↓	140.000 / 140.040	↓	139.932 / 139.972	↓
150	150.040 / 150.015	150.043 / 150.083	↓	150.000 / 150.040	↓	149.932 / 149.972	↓
160	160.040 / 160.015	160.043 / 160.083	↓	160.000 / 160.040	↓	159.932 / 159.972	↓
170	170.040 / 170.015	170.043 / 170.083	↓	170.000 / 170.040	↓	169.932 / 169.972	↓
180	180.040 / 180.015	180.043 / 180.083	↓	180.000 / 180.040	↓	179.932 / 179.972	↓
> 180 mm	<b>m6</b> <b>+ 0.046 / + 0.017</b>	<b>F7</b> <b>+ 0.050 / + 0.096</b>	<b>+ 0.004</b> <b>+ 0.079</b>	<b>H7</b> <b>+ 0.000 / + 0.046</b>	<b>- 0.046</b> <b>+ 0.029</b>	<b>P7</b> <b>- 0.079 / - 0.033</b>	<b>- 0.125</b> <b>- 0.050</b>

① Positive values are clearance. Negative values are interference.

② Viva™ rebored hubs provided with AGMA 9112 H7 transitional fit unless otherwise specified.

**NOTE:** Dimensions subject to change. Certified dimensions of ordered material furnished on request.

# ENGINEERING DATA *Cont.*

**Table 6 — Shaft Diameters & Ratings for NEMA 60 Hertz & 50 Hertz Metric Motors**

**NEMA 60 HERTZ MOTORS (HP)**

Frame Size	T Frames																	TS Frames											
	143	145	182	184	213	215	254	256	284	286	324	326	364	365	404	405	444	445	284	286	324	326	364	365	404	405	444	445	
Shaft Dia — Inches	0.88	0.88	1.13	1.13	1.38	1.38	1.63	1.63	1.88	1.88	2.13	2.13	2.38	2.38	2.88	2.88	3.38	3.38	1.63	1.63	1.88	1.88	1.88	1.88	2.13	2.13	2.38	2.38	
3600 RPM	Drip Proof	1 1/2	2-3	5	7 1/2	10	15	20	25	30	40	50	60	75	100	125	150	200	250	30	40	50	60	75	100	125	150	200	250
	Enclosed	1 1/2	2	3	5	7 1/2	10	15	20	25	30	40	50	60	75	...	100	125	150	25	30	40	50	60	75	...	100	125	150
1800 RPM	Drip Proof	1	1 1/2-2	3	5	7 1/2	10	15	20	25	30	40	50	60	75	100	125	150	200	25	30	40	50	60	75	100	125	150	200
	Enclosed	1	1 1/2-2	3	5	7 1/2	10	15	20	25	30	40	50	60	75	...	100	125	150	25	30	40	50	60	75	...	100	125	150
1200 RPM	Drip Proof & Enclosed	3/4	1	1 1/2	2	3	5	7 1/2	10	15	20	25	30	40	50	60	75	100	125	15	20	25	30	40	50	60	75	100	125
900 RPM	Drip Proof & Enclosed	1/2	3/4	1	1 1/2	2	3	5	7 1/2	10	15	20	25	30	40	50	60	75	100	10	15	20	25	30	40	50	60	75	100

**50 HERTZ METRIC MOTORS (kW)**

Frame Size	80	90S	90L	100L	112M	132S	132M	160M	160L	180M	180L	200M/L	225S	225M	250S	250M	280S	280M
Shaft Dia — mm	19	24	24	28	28	38	38	42	42	48	48	55	45	45	55	55	75	90
3000 RPM	0,75 1,10	1,5	2,2	3,0	4	5,5 7,5	...	11 15	18,5	22	...	30 37	...	...	...	75	90	110
1500 RPM	0,55 0,75	1,1	1,5	2,2 3,0	4	5,5	7,5	11	15	18,5	22	30	37 45	45	55	55 75	75 90	90 110
1000 RPM	0,37 0,55	0,75	1,1	1,5	2,2	3	45,5	7,5	11	...	15	18,5 22	30	30	37	37 45	45 50	55 75
750 RPM	0,18 0,25	0,37	0,55	0,75 1,1	1,5	2,2	3	45,5	7,5	...	11	15	18,5	22	30	30 37	37 45	45 55

**NOTE:** Dimensions subject to change. Certified dimensions of ordered material furnished on request.









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