

# FAIRBANKS NIJHUIS™ 2500/1500 SERIES SINGLE STAGE END SUCTION PUMPS

# FAIRBANKS NIJHUIS™ 2500/1500 SERIES

## Single Stage End Suction Pumps

Capacities to 4500 GPM (1022 m<sup>3</sup>/hr)

Heads to 370 Ft. (112 m)

Temperatures to 300°F (149°C)

### Setting New Standards of Efficiency

Liquid handling requirements are much more involved than they were five years ago. The variety of liquids being handled has increased along with temperatures and pressures. Today's installations demand quiet, smooth running pumps with long life. Fairbanks Nijhuis' 130 years of experience with design, sales and manufacturing of centrifugal pumps has led to the 2500/1500 Series. These modern pumps with a clean, straightforward design were developed with maximum interchangeability in mind. Fairbanks Nijhuis' highly reliable 2500/1500 Series pumps offer an economical solution to your liquid handling problems.



End suction products such as the flexible coupled horizontal pump seen above are used in offices and high rise buildings for internal environment control. End suction pumps come in a variety of configurations including close coupled, flexible coupled, horizontal or vertical mounted units.

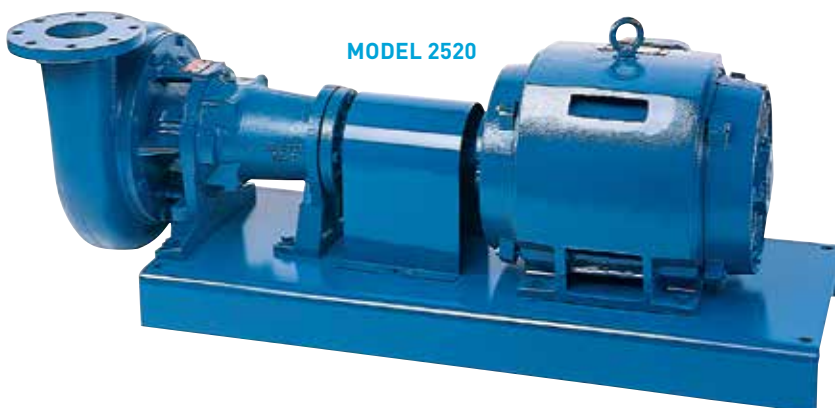
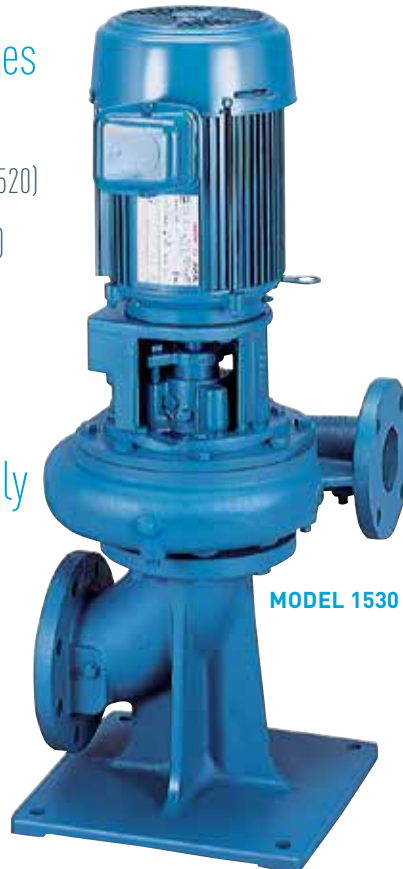
# Standard & Optional Features

## Standard – 2500/1500 Series

- Discharge position No. 1
- Regreaseable bearings (Models 2520, 1520)
- Standard JM motor (Models 2550, 2520)
- Standard JP motor (Models 1550, 1520)
- Coupling guard (Models 2520, 1520)

## Standard – 1500 Series Only

- Interchangeable stuffing box
- Graphite impregnated acrylic packing



## Optional – 2500/1500 Series

- Standard 2500/1500 Series pumps are designed to meet the requirements of most applications. However, to meet special services, a number of optional features have been made available. For services not handled by the features listed, refer to the factory.
- All iron construction
- 316 stainless steel sleeve
- Stainless steel shaft
- Impeller wearing rings
- Oil lubricated ball bearings (Models 2520, 1520)
- Sealed permanently lubricated ball bearings (power frames Nos. 1, 2 and 3)
- Alternative discharge positions Nos. 2, 3 and 4 (see pages 13 and 14)
- Fabricated stainless steel drip-rim bases (Models 2520, 1520)
- Formed steel bases (Models 2520, 1520)
- High temperature mechanical seal
- Variety of alternative constructions

## Optional – 1500 Series Only

- All bronze construction
- Hardened shaft sleeve (for packing)
- Various mechanical seal types
- Water jacketed stuffing box
- Semiopen impellers (Model 1520)
- Double row thrust bearings (Model 1520)
- Packing with lantern ring

# Pump Features

## 1. Computer Machined

major components with 360 degree registered fits to assure concentricity of all pump parts.

## 2. Precision Cast, Dynamically Balanced, Enclosed Impeller

is keyed to the shaft extension and secured by a capscrew and washer. Gaskets are used to prevent leakage to shaft end.

## 3. Oil Seals

and nonsparking neoprene rotating slingers protect both bearings during pump operation and pump washdown.

## 4. Mechanical Seal

has hot water carbon against Ceramic face for optimum hot water performance. Long life is also assured with 303 stainless steel metal parts and Buna-N elastomer.

## 5. Power Frame

provides heavy duty maximum interchangeability for flexible coupled applications.

## 6. Hydrostatic Test

of pumps at factory guarantees casting and seal integrity.

## 7. Bronze Shaft Sleeve

prevents shaft wear, is slip fit over the shaft, keylocked and extends the full length of seal box to eliminate corrosion of the shaft by the pumped liquid. This cancels the requirement for high cost, special stainless steel or alloy shafts.

## 8. Back Pull-Out

design simplifies disassembly. The suction and discharge piping is not disturbed at disassembly.

## 9. Lubrication Fittings

are conveniently located for quick accessibility and provide positive bearing lubrication. Oil lubrication optionally available.

## 10. Carbon Steel Shaft

designed for minimum deflection, not to exceed .002" at the sealing faces at maximum load.

## 11. Bearings

selected for 3 year minimum life at maximum load. Average bearing life 5 x minimum. Grease lube standard.

## 12. Close Coupled Motors

in smaller frame sizes are supported off the motor bracket for maximum rigidity.

## 13. Case Wearing Ring

prevents wear on casing and is easily and inexpensively replaced. Impeller rings are available. Front case wearing rings are standard on all models and size pumps. Rear case wearing rings are standard only on 2" discharge and larger Model 1500 Series pumps. Front impeller wearing rings are optional on all models and size pumps. Rear impeller wearing rings are optional only on 2" discharge and larger Model 2500/1500 Series pumps.

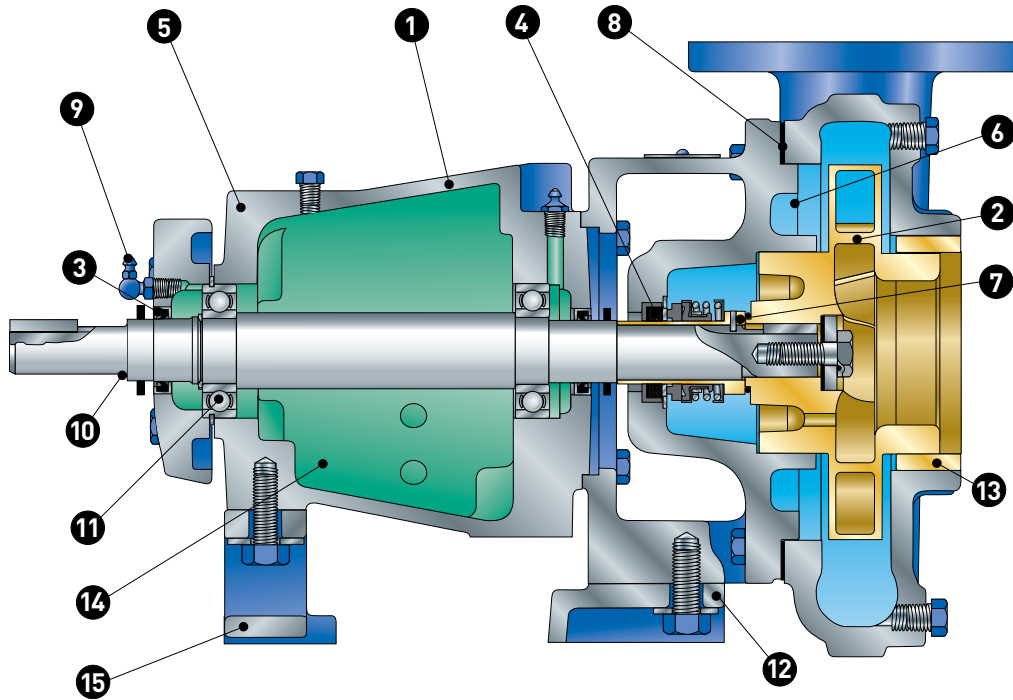
## 14. Large Capacity Oil Reservoir

is provided on power frame Model 2520 and 1520 pumps for optional oil lube.

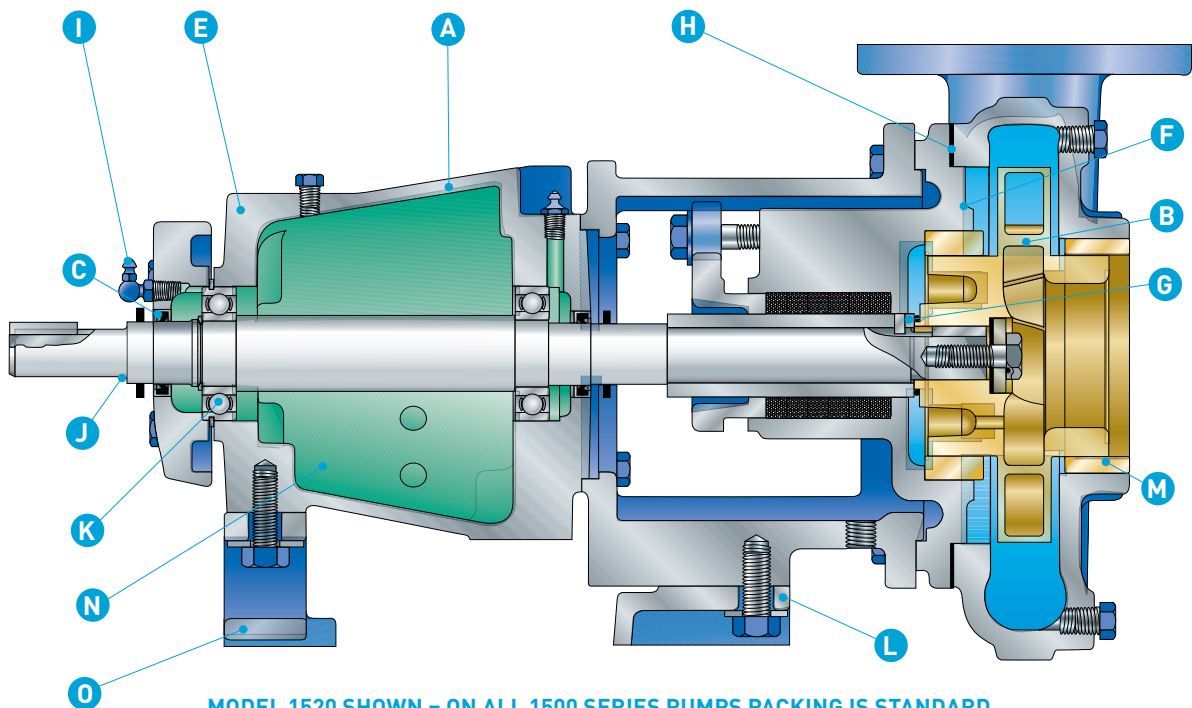
## 15. Rear Support Foot

provides support and simplifies coupling alignment. All supports are slotted to simplify back pull-out of power frame.

# Pump Features

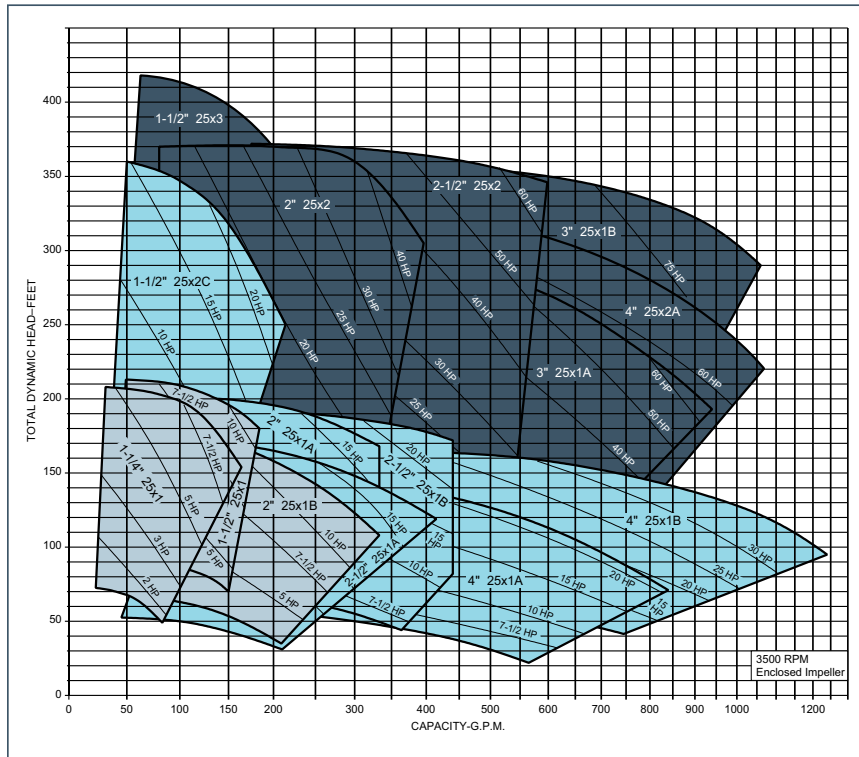


MODEL 2520 SHOWN - ON ALL 2500 SERIES PUMPS  
MECHANICAL SEALS ARE STANDARD



MODEL 1520 SHOWN - ON ALL 1500 SERIES PUMPS PACKING IS STANDARD,  
MECHANICAL SEALS ARE OPTIONAL

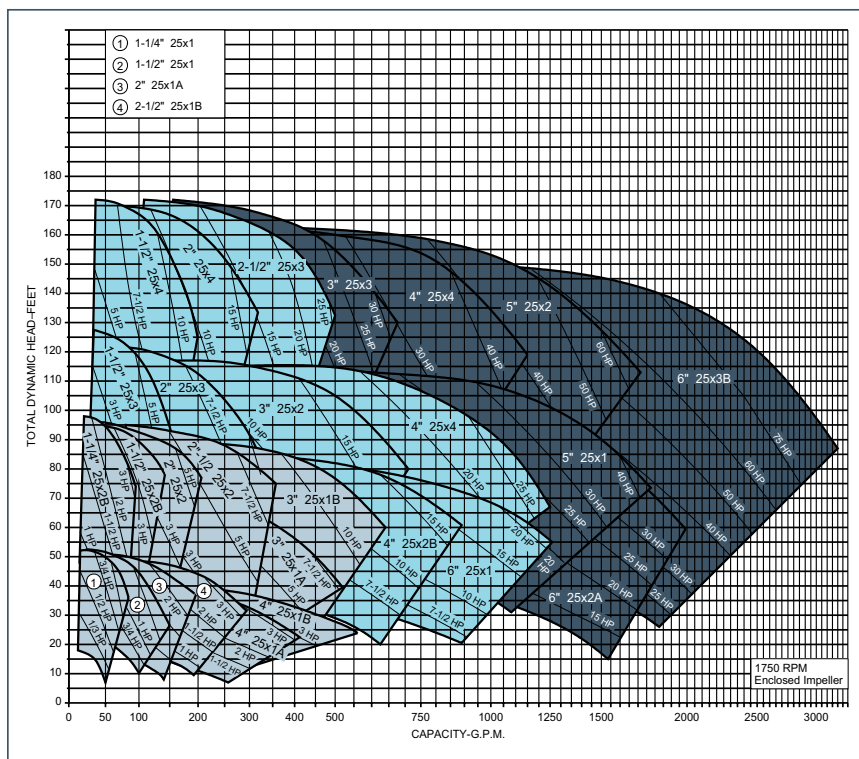
# 2500 SERIES Range Charts – 60 Hertz



## 3500 RPM

Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.

	Power Frame No. 1		
	Power Frame No. 2		
	Power Frame No. 3		
Maximum Horsepower	Close Coupled	Open Drip Proof	60
		TE & EX PR	50
	Frame Mounted		100



## 1750 RPM

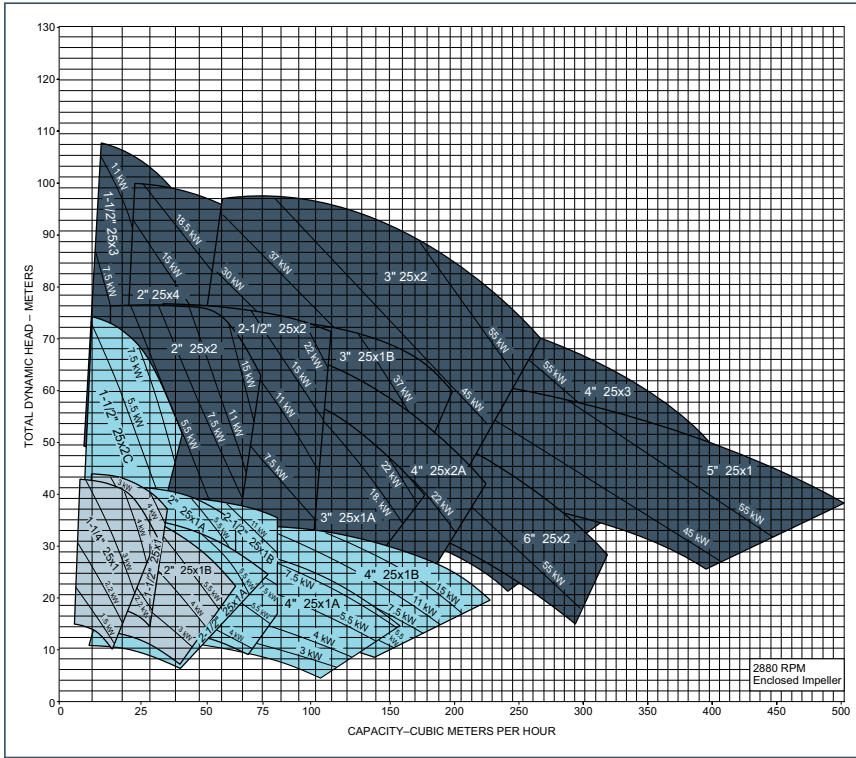
Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.

	Power Frame No. 1		
	Power Frame No. 2		
	Power Frame No. 3		
Maximum Horsepower	Close Coupled	Open Drip Proof	50
		TE & EX PR	50
	Frame Mounted		100

# 2500 SERIES Range Charts – 50 Hertz

## 2880 RPM

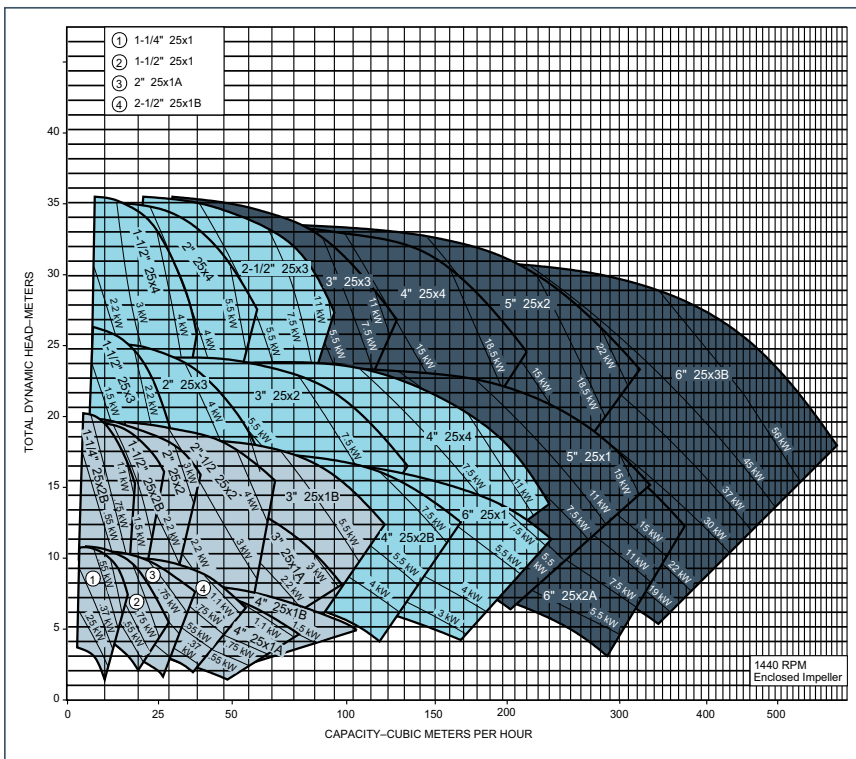
Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.



	Power Frame No. 1		
	Power Frame No. 2		
	Power Frame No. 3		
Maximum Horsepower	Close Coupled	Open Drip Proof	60
		TE & EX PR	50
	Frame Mounted		100

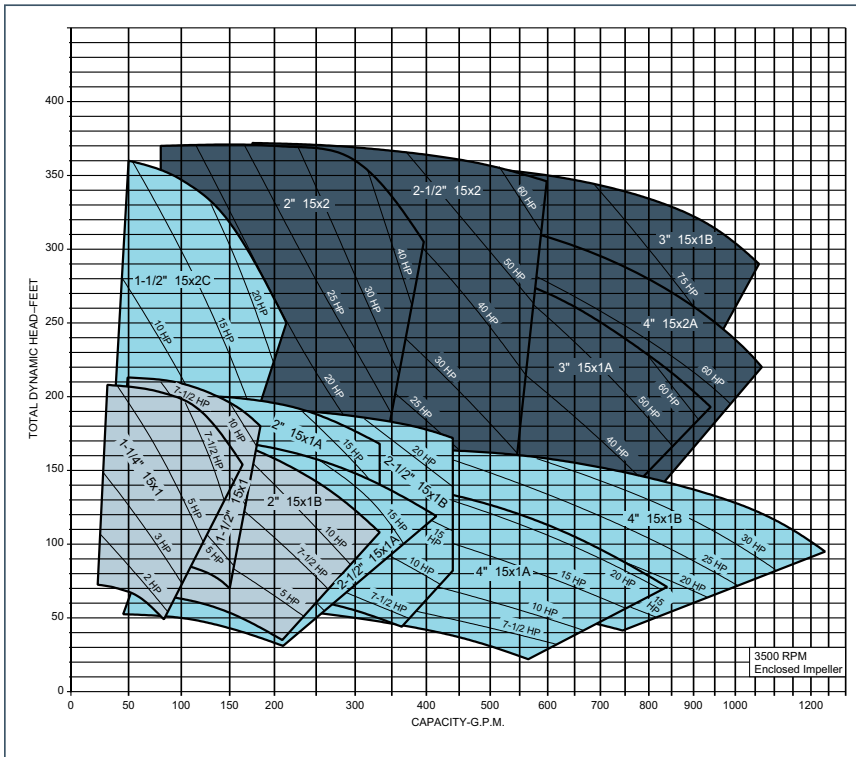
## 1440 RPM

Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.



	Power Frame No. 1		
	Power Frame No. 2		
	Power Frame No. 3		
Maximum Horsepower	Close Coupled	Open Drip Proof	50
		TE & EX PR	50
	Frame Mounted		100

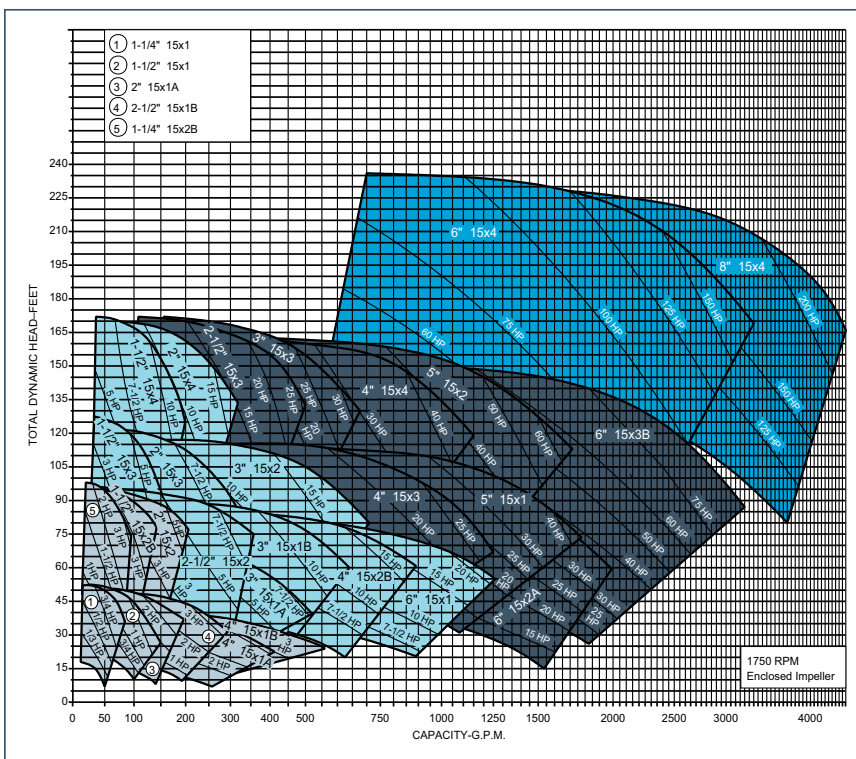
# 1500 SERIES Range Charts – 60 Hertz



## 3500 RPM

Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.

	Power Frame No. 1		
	Power Frame No. 2		
	Power Frame No. 3		
Maximum Horsepower	Close Coupled	Open Drip Proof	60
		TE & EX PR	50
	Frame Mounted		100



## 1750 RPM

Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.

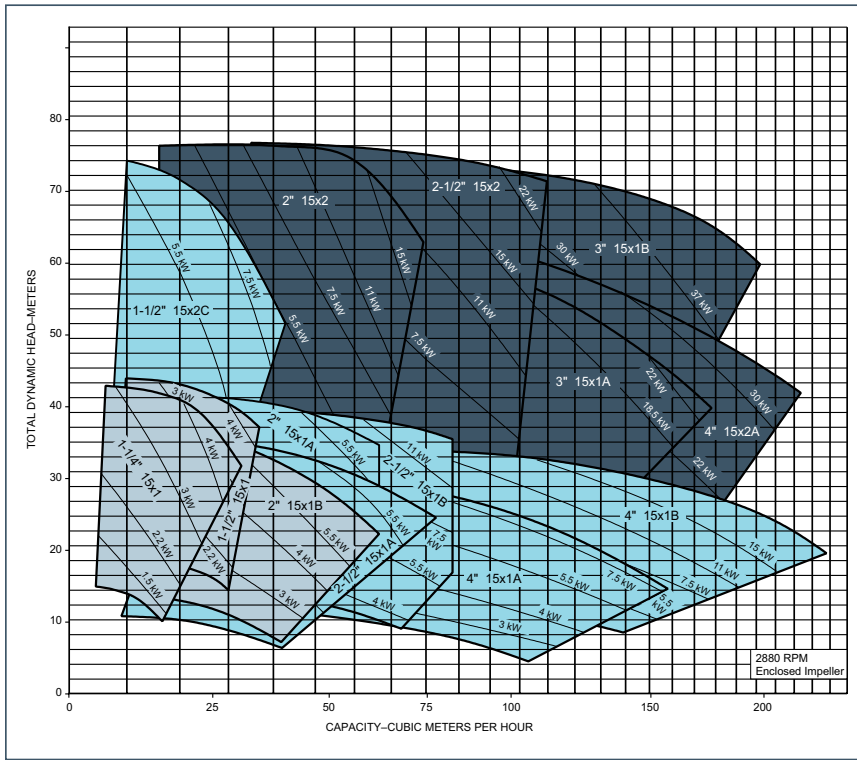
	Power Frame No. 1		
	Power Frame No. 2		
	Power Frame No. 3		
	Power Frame No. 21		
Maximum Horsepower	Close Coupled	Open Drip Proof	50
		TE & EX PR	50
	Frame Mounted		250



# 1500 SERIES Range Charts – 50 Hertz

## 2880 RPM

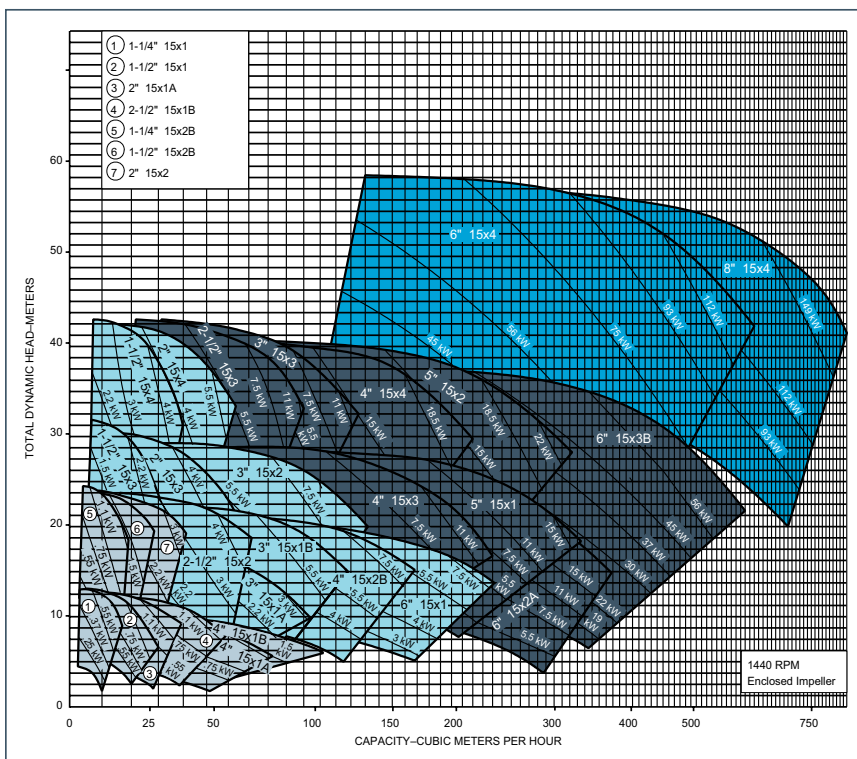
Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.



	Power Frame No. 1		
	Power Frame No. 2		
	Power Frame No. 3		
Maximum Horsepower	Close Coupled	Open Drip Proof	60
		TE & EX PR	50
	Frame Mounted		100

## 1440 RPM

Individual performance curves should be checked for final selection. For selections not shown on this chart, please refer to the factory.



	Power Frame No. 1		
	Power Frame No. 2		
	Power Frame No. 3		
	Power Frame No. 21		
Maximum Horsepower	Close Coupled	Open Drip Proof	50
		TE & EX PR	50
	Frame Mounted		250

# Materials of Construction

Pump Part	Standard Fitted	Bronze Fitted	All Iron	*All Bronze
Casing	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Bronze – ASTM B62
Case Wearing Ring	Bronze – ASTM B62	Bronze – ASTM B62	Cast Iron – ASTM A48	Bronze – ASTM B62
Impeller	Cast Iron – ASTM A48	Bronze – ASTM B584	Cast Iron – ASTM A48	Bronze – ASTM B584
Motor Bracket	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Cast Iron – ASTM A48
Shaft	Steel – AISI C1045	Steel – AISI C1045	Steel – AISI C1045	Steel – AISI C1045
Sleeve	Bronze – ASTM B62	Bronze – ASTM B62	Stainless Steel – AISI 316	Bronze – ASTM B62
Power Frame (2520 & 1520)	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Cast Iron – ASTM A48
Mechanical Seal 2500 Series	303 stainless steel metal parts, Buna-N elastomer parts, Ceramic seat and carbon washer			303 stainless steel metal parts, Viton® elastomer, ceramic seat, and carbon washer
1500 Series (Optional)				
Stuffing Box	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Cast Iron – ASTM A48	Bronze – ASTM B62
Packing (Standard) – 1500 Series Only	Interwoven, graphited fiber diagonally cut			

\* All Bronze optionally available in 1550 and 1520 pumps only.

## Design Details

Area	Description	Power Frame			
		1	2	3	21
Pump Shaft	Rotation—from driver end	CW	CW	CW	CW
	Diameter at impeller	7/8	1-1/4	1-1/4	1-5/8-12
	Diameter at shaft sleeve	1	1-3/8	1-3/8	2-1/4
	Diameter between bearings	1-3/8	1-15/16	2-3/8	3-1/4
	Diameter at coupling end	7/8	1-1/8	1-1/8	2-3/8
	Coupling key—square	3/16	1/4	1/4	5/8
	Max. deflection at seal face	.002	.002	.002	.002
Ball Bearings	Bearing (inboard radial)	206K	308K	310K	313
	Bearing (outboard thrust)	206KG	308KG	310KG	5313
	Bearing centers	5-11/16	7-11/16	7-11/16	9-5/8
	Bearing type	Ball	Ball	Ball	Ball
	Min B <sub>10</sub> bearing life under maximum load	3 years	3 years	3 years	3 years
Sleeve	Packing size 1500 Series	3/8	3/8	3/8	7/16
	Outside diameter of sleeve 1500 Series	1-1/2	1-7/8	1-7/8	2-1/2
	Outside diameter of sleeve 2500 Series	1-1/8	1-1/2	1-1/2	N/A

### 2500 Series

Sealing Method	Temperature °F	
	Close Coupled	Frame Mounted
Standard Mechanical Seal	225	225

### 1500 Series

Sealing Method	Temperature °F	
	Close Coupled	Frame Mounted
Standard Mechanical Seal	225	225
Mechanical Seal with Water Jacket*	300	300
Standard Packing	225	225
Packing with Water Jacket*	275	275

Packing . . . Suction lift requires lantern ring  
\* 7, 9 and 12 bore pumps only

2500/1500 Series Case Working Pressure  
(all or any part can be suction pressure) – 175 psi  
Hydrostatic Test Pressure – 265 psi

## Limitations 2500/1500 Series – H.P.

Speed—RPM	3500	3500	1750	1150
Close Coupled	O.D.P.	60	50	30
	T.E. & EX. PR.	50	50	30
Power Frame	1	40	20	15
	2 & 3	125	75	40
	21	N/A	250	150

# Power Frame Construction

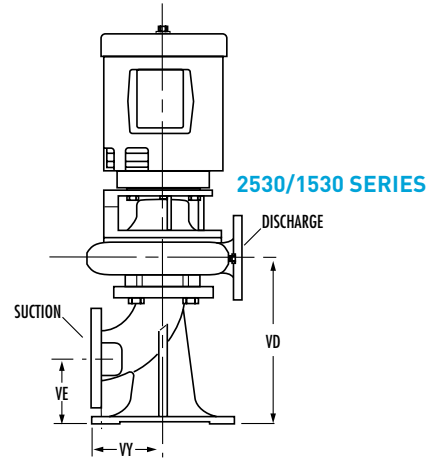
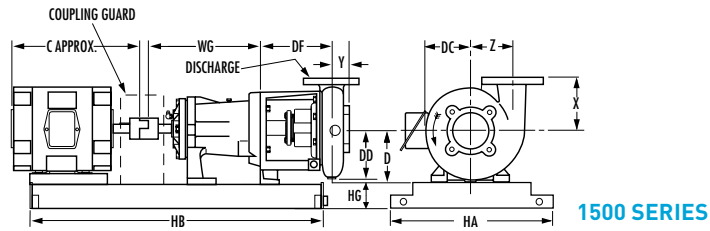
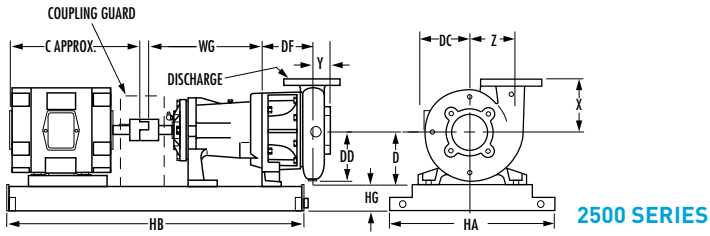
Model 2520					Model 1520						
Pump Size	3500 RPM	2880 RPM	1750/1440 RPM	1150/960 RPM	Pump Size	3500 RPM	3000 RPM	1750/1440 RPM		1150/960 RPM	
						ENC.	ENC.	ENC.	SEMI.	ENC.	SEMI.
1-1/4" 2521	1	1	1	*	1-1/4" 1521	1	1	1	1	*	*
1-1/4" 2522B	*	*	1	*	1-1/4" 1522B	*	*	1	*	*	*
1-1/2" 2521	1	1	1	*	1-1/2" 1521	1	1	1	1	*	*
1-1/2" 2522A	*	*	1	*	1-1/2" 1522A	*	*	1	2	*	1
1-1/2" 2522B	*	*	1	*	1-1/2" 1522B	*	*	1	*	*	*
1-1/2" 2522C	2	2	1	*	1-1/2" 1522C	2	2	1	*	*	*
1-1/2" 2523	3	3	2	2	1-1/2" 1523	*	*	2	*	2	*
1-1/2" 2524	*	*	2	2	1-1/2" 1524	*	*	2	3	2	2
2" 2521A	2	2	1	*	2" 1521A	2	2	1	1	*	*
2" 2521B	1	1	1	*	2" 1521B	1	1	1	*	*	*
2" 2522	3	3	1	*	2" 1522	3	3	1	*	*	*
2" 2523	*	*	2	2	2" 1523	*	*	2	*	2	*
2" 2524	*	3	2	2	2" 1524	*	*	2	*	2	*
2-1/2" 2521A	1	1	1	*	2-1/2" 1521A	2	2	1	1	*	*
2-1/2" 2521B	2	2	1	*	2-1/2" 1521B	2	2	1	*	*	*
2-1/2" 2522	3	3	1	*	2-1/2" 1522	3	3	2	2	*	2
2-1/2" 2523	*	*	2	2	2-1/2" 1523	*	*	3	3	2	2
3" 2521A	3	3	1	*	3" 1521A	3	3	2	*	*	*
3" 2521B	3	3	1	*	3" 1521B	3	3	2	*	*	*
3" 2522	*	3	2	2	3" 1522	*	*	2	*	2	*
3" 2523	*	*	3	2	3" 1523	*	*	3	3	2	2
4" 2521A	2	2	1	*	4" 1521A	2	2	1	*	*	*
4" 2521B	2	2	1	*	4" 1521B	2	2	1	1	*	*
4" 2522A	3	3	2	*	4" 1522A	3	3	2	*	*	*
4" 2522B	*	*	2	*	4" 1522B	*	*	2	2	*	2
4" 2523	*	3	2	2	4" 1523	*	*	3	*	2	*
4" 2524	*	*	3	2	4" 1524	*	*	3	3	2	2
5" 2521	*	3	3	2	5" 1521	*	*	3	*	2	*
5" 2522	*	*	3	2	5" 1522	*	*	3	3	3	2
6" 2521	*	*	2	2	6" 1521	*	*	2	2	2	2
6" 2522	*	3	3	2	6" 1522	*	*	3	*	2	*
6" 2522A	*	*	3	2	6" 1522A	*	*	3	*	2	*
6" 2523B	*	*	3	3	6" 1523B	*	*	3	*	3	*
6" 2524	*	*	*	*	6" 1524	*	*	21	*	21	*
8" 2524	*	*	*	*	8" 1524	*	*	21	*	21	*

\* = Not Available

ENC. = Enclosed Impeller

SEMI. = Semiopen Impeller (Optional)

# Engineering & Dimension Details

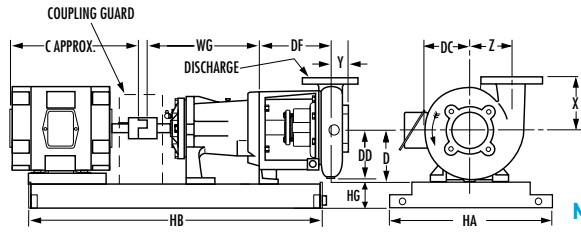


Pumps with Threaded Connections						2500 Series			1500 Series		2530/1530		
Pump Size**	X	Y	Z	DC	DD	DF			DF		Vertical Pumps		
						Frame 1 143JM- 215JM	Frame 2 or 3 254JM- 256JM	Frame 2 or 3 284JM- 326JM	Frame 1 143JP- 184JP	Frame 2, 3 or 21 213JP- 325JP	VD	VE	WY
1-1/4" 15x1 / 1-1/4" 25x1	5-1/4	2-7/16	4-3/16	4-15/16	5-3/16	4-3/4	N/A	N/A	7-13/16	N/A	9-3/8	3-3/4	4
1-1/4" 15x2B / 1-1/4" 25x2	6-3/8	2-9/16	5-3/8	6-3/16	6-3/8	4-11/16	N/A	N/A	7-3/4	N/A	9-3/8	3-3/4	4
1-1/2" 15x1 / 1-1/2" 25x1	5-3/8	2-1/2	4-5/16	5-1/8	5-3/8	4-13/16	N/A	N/A	7-7/8	N/A	10-5/16	4-1/8	4-1/2
1-1/2" 15x2A / 1-1/2" 25x2	6-3/4	2-5/8	5-1/2	6-5/16	6-9/16	4-3/4	5-3/4	5-3/4	7-13/16	8-5/8	10-5/16	4-1/8	4-1/2
1-1/2" 15x3 / 1-1/2" 25x3	9	2-13/16	6-1/8	7-1/16	7-1/4	N/A	5-3/4	5-3/4	N/A	8-5/8	10-1/2	4-1/8	4-1/2
1-1/2" 15x4 / 1-1/2" 25x4	7-3/4	2-3/4	7-1/16	8	8-1/4	N/A	5-7/8	N/A	N/A	8-3/4	10-7/16	4-1/8	4-1/2
Pumps with Ansi Standard 125 Lb. Flanged Connections													
2" 15x1A / 2" 25x1	5-5/8	1-7/8	4-9/16	5-3/8	5-13/16	4-15/16	5-15/16	N/A	8	8-13/16	11-7/16	4-1/2	5
2" 15x2 / 2" 25x2	7	1-7/8	5-11/16	6-1/2	6-7/8	4-7/8	5-7/8	5-7/8	7-15/16	8-3/4	11-7/16	4-1/2	5
2" 15x3 / 2" 25x3	8	1-7/8	7-3/16	8-3/16	8-1/2	5	6	N/A	N/A	8-7/8	11-7/16	4-1/2	5
2" 15x4 / 2" 25x4	8	2-3/8	6-1/2	7	7-3/8	5-1/8	6-1/8	N/A	N/A	8-5/8	12-7/8	5	5-1/2
2-1/2" 15x1 / 2-1/2" 25x1	5-7/8	2	4-13/16	5-13/16	6-1/4	5-1/16	6-1/16	N/A	8-1/8	8-15/16	12-9/16	5	5-1/2
2-1/2" 15x2 / 2-1/2" 25x2	7-1/4	2	5-15/16	6-3/4	7-1/4	5	6	6	8-1/16	8-7/8	12-9/16	5	5-1/2
2-1/2" 15x3 / 2-1/2" 25x3	8-1/4	2	7-3/8	8-3/8	8-3/4	5-1/8	6-1/8	N/A	N/A	9	12-9/16	5	5-1/2
3" 15x1 / 3" 25x1	7-1/2	2-1/8	6-1/8	6-7/8	7-7/16	5-1/8	6-1/8	6-1/8	8-3/16	9	14-11/16	6	6-1/2
3" 15x2 / 3" 25x2	9	2-3/4	7	7-9/16	8-3/16	5-7/16	6-7/16	N/A	N/A	9-1/8	15-1/4	6	6-1/2
3" 15x3 / 3" 25x3	8-1/2	2-1/8	7-9/16	8-7/16	8-15/16	5-1/2	6-1/2	6-1/2	N/A	9-1/8	14-11/16	6	6-1/2
4" 15x1 / 4" 25x1	6-1/2	2-1/2	5/1-2	6-7/16	7-5/16	5-7/16	6-7/16	6-7/16	8-1/2	9-5/16	14-15/16	6	6-1/2
4" 15x2A / 4" 25x2A	7-1/4	3-1/8	5-3/4	6-11/16	7-3/8	5-1/4	6-1/4	6-1/4	N/A	9-1/8	17-3/16	6-1/2	7-1/2
4" 15x2B / 4" 25x2B	7-3/4	2-5/8	6-5/8	8-1/16	8-11/16	5-3/8	6-3/8	N/A	N/A	9-1/4	16-11/16	6-1/2	7-1/2
4" 15x3 / 4" 25x3	9	3	7-1/4	7-15/16	8-11/16	5-5/8	6-5/8	6-5/8	N/A	9-1/4	17	6-1/2	7-1/2
4" 15x4 / 4" 25x4	8-3/4	2-5/8	7-15/16	8-7/8	9-9/16	N/A	6-3/4	6-3/4	N/A	9-3/8	16-11/16	6-1/2	7-1/2
5" 15x1 / 5" 25x1	9	3-1/8	8-1/16	8-11/16	10-1/8	6	7	7	N/A	9-5/8	18-1/8	7	8
5" 15x2 / 5" 25x2	9	2-7/8	8-5/16	9-1/4	10-1/8	N/A	7	7	N/A	9-5/8	17-7/8	7	8
6" 15x1 / 6" 25x1	8-1/4	2-3/4	7	8	9	5-1/2	6-1/2	6-1/2	N/A	9-3/8	17-13/16	7	8
6" 15x2 / 6" 25x2	9-1/4	3-1/8	8-11/16	9-11/16	10-13/16	N/A	7-1/4	7-1/4	N/A	9-7/8	18-1/4	7	8
6" 15x2A / 6" 25x2A	9-1/4	3-1/8	8-11/16	9-11/16	10-13/16	N/A	7-1/4	7-1/4	N/A	9-7/8	18-1/4	7	8
6" 15x3B / 6" 25x3B	9-1/4	3-1/8	8-11/16	9-11/16	10-13/16	N/A	7-1/4	7-1/4	N/A	9-7/8	18-1/4	7	8
6" 15x4	18	6	—	10-7/16	14-1/2	N/A	N/A	N/A	N/A	10-3/16*	N/A	N/A	N/A
8" 15x4	19	6	—	11	14-1/2	N/A	N/A	N/A	N/A	10-5/16*	N/A	N/A	N/A

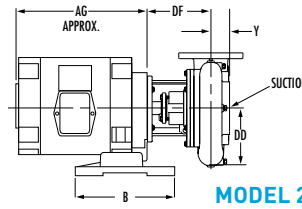
\* Power Frame 21 Only

\*\* Applies to all impeller revisions except where revision letter is stated

# 2500 SERIES Engineering & Dimension Details

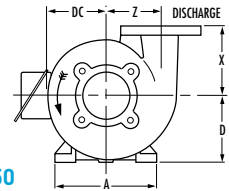


MODEL 2520



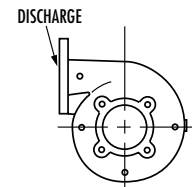
MODEL 2550

STANDARD POSITION (1)



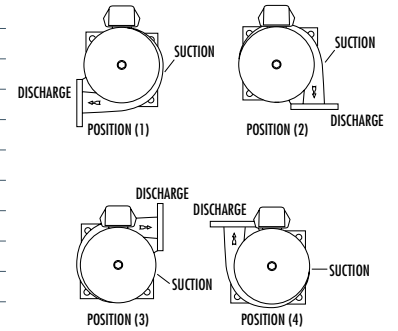
Pump Model	Base Number	Weight Lbs.	HA <sub>1</sub>	HB	HG
2520	4	49	17-1/4	30-1/2	3
	5	59	17-1/4	36-1/2	3
	7	82	20-1/2	36-1/2	3
	8	96	20-1/2	42-1/2	3
	11	164	26-3/4	46-1/2	4
	15	291	30-3/4	54-1/2	4-1/2

Power Frame		1	2	3	
Weight in Pounds		36	82	87	
D	Case Bore	7	5-1/4	6-1/4	—
		9	6-1/4	7	7
		11	—	7	7
		12	—	7	7
WG		10-5/16	13-13/16	13-13/16	

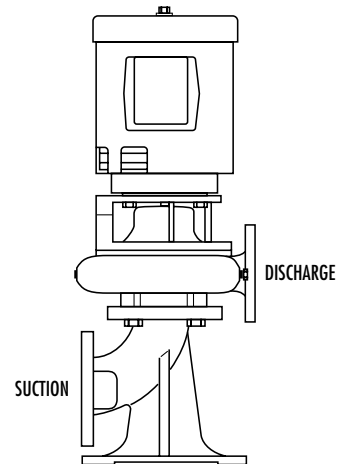


POSITION (4)

Pump Model	Motor Frame	Horsepower			Mtr. Wgt. Lbs.	D	Pump Model 2550				Base Number		
		3500 RPM	1750 RPM	1150 RPM			A	B	AG	C			
2520	56	—	1/2-3/4	—	50	5-1/4	—	—	—	12	4	N/A	N/A
2550	143T	1-1/2	1	3/4	30	5-1/4	9-3/4	8-5/8	10	12	4	N/A	N/A
	145T	2-3	1-1/2-2	1	35	5-1/4	9-3/4	8-5/8	11	13	4	7	N/A
	182T	5	3	1-1/2	45	5-1/4	9-3/4	8-5/8	11	13	4	7	N/A
	184T	7-1/2	5	2	50	5-1/4	9-3/4	8-5/8	12	14	4	7	N/A
	213T	10	7-1/2	3	120	5-1/4	10-1/2	7-1/2	14	16	4	7	N/A
	215T	15	10	5	144	5-1/4	10-1/2	9	15	18	5	7	N/A
	254T	20	15	7-1/2	217	6-1/4	12-1/2	10-3/4	17	21	7	8	8
	256T	25	20	10	246	6-1/4	12-1/2	12-1/2	19	23	N/A	8	8
	284T	—	25	15	320	7	13-3/4	11-1/2	19	24	N/A	8	8
	284TS	30	—	—	320	7	13-3/4	11-1/2	19	22	N/A	8	8
2530 & 2520	286T	—	30	20	351	7	13-3/4	13	21	25	N/A	8	8
	286TS	40	—	—	351	7	13-3/4	13	21	24	N/A	8	8
	324T	—	40	25	442	8	16	14	22	26	N/A	11	11
	324TS	50	—	—	442	8	16	14	22	25	N/A	11	11
	326T	—	50	30	485	8	16	15-1/2	23	28	N/A	11	11
	326TS	60	—	—	485	8	16	15-1/2	23	26	N/A	11	11
	364T	—	—	40	540	9	18	15-1/2	23	29	N/A	11	11
	364TS	75	60	—	540	9	18	15-1/2	23	27	N/A	11	11
	365TS	100	75	—	590	9	18	15-1/2	24	28	N/A	11	11
	404TS	125	100	—	690	10	20	16-1/4	26	30	N/A	15	15



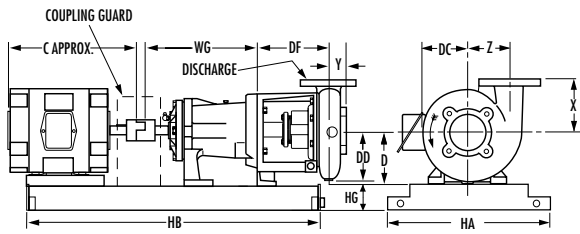
MODEL 2530



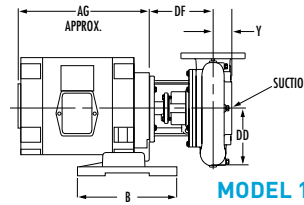
Notes:

- Dimensions and weights are approximate.
- All dimensions are in inches and may vary ±1/4" (6).
- Frame sizes, "C" and "AG", dimension and motor weight are for open drip-proof motors only.
- Conduit box is shown in approximate position. Dimensions are not specified as they vary with each motor manufacturer.
- Not for construction purposes unless certified.
- Discharge positions No. 2 and 3 are not available on Models 2530 and 2520. Position No. 1 is furnished as standard unless otherwise specified.
- When two "D" dimensions are indicated, always use the larger figure.
- Power frame selection for 2520 pumps can be made from the range charts.
- Models 2550 and 2530 have "JM" motor frames. Model 2520 has "T" frame motor.

# 1500 SERIES Engineering & Dimension Details

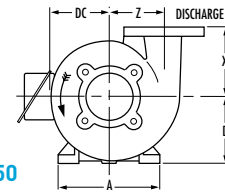


MODEL 1520



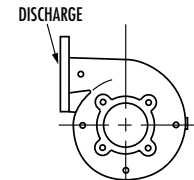
MODEL 1550

STANDARD POSITION (1)



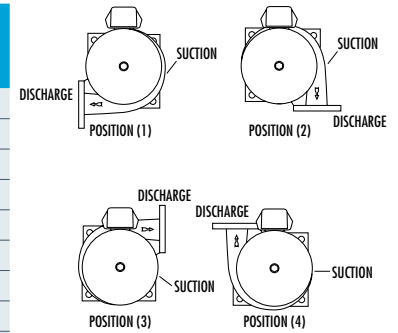
Pump Model	Base Number	Weight Lbs.	HA	HB	HG
1520	4	49	17-1/4	30-1/2	3
	5	59	17-1/4	36-1/2	3
	7	82	20-1/2	36-1/2	3
	8	96	20-1/2	42-1/2	3
	9	164	26-3/4	46-1/2	4
	11	291	30-3/4	54-1/2	4-1/2
	15	291	30-3/4	54-1/2	4-1/2
	16	345	30-3/4	64-1/2	4-1/2
17	399	30-3/4	74-1/2	4-1/2	

Power Frame		1	2	3	21
Weight in Pounds		36	82	87	163
D	Case Bore	7	5-1/4	6-1/4	—
		9	6-1/4	7	7
		11	—	7	7
		12	—	7	7
		15	—	—	—
WG		10-5/16	13-13/16	13-13/16	13-13/16

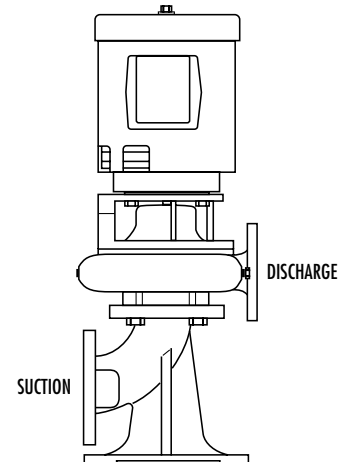


POSITION (4)

Pump Model	Motor Frame	Horsepower			Mtr. Wgt. Lbs.	D	Pump Model 1550			C	Base Number			
		3500 RPM	1750 RPM	1150 RPM			A	B	AG					
1520	56	—	1/2-3/4	—	50	5-1/4	—	—	—	12	4	N/A	N/A	N/A
1550 1530 & 1520	143T	1-1/2	1	3/4	30	5-1/4	9-3/4	8-5/8	10	12	4	N/A	N/A	N/A
	145T	2-3	1-1/2-2	1	35	5-1/4	9-3/4	8-5/8	11	13	4	7	N/A	N/A
	182T	5	3	1-1/2	45	5-1/4	9-3/4	8-5/8	11	13	4	7	N/A	N/A
	184T	7-1/2	5	2	50	5-1/4	9-3/4	8-5/8	12	14	4	7	N/A	N/A
	213T	10	7-1/2	3	120	5-1/4	10-1/2	7-1/2	14	16	4	7	7	N/A
	215T	15	10	5	144	5-1/4	10-1/2	9	15	18	5	7	7	N/A
	254T	20	15	7-1/2	217	6-1/4	12-1/2	10-3/4	17	21	N/A	8	8	N/A
	256T	25	20	10	246	6-1/4	12-1/2	12-1/2	19	23	N/A	8	8	N/A
	284T	—	25	15	320	7	13-3/4	11-1/2	19	24	N/A	8	8	N/A
	284TS	30	—	—	320	7	13-3/4	11-1/2	19	22	N/A	8	8	N/A
	286T	—	30	20	351	7	13-3/4	13	21	25	N/A	9	9	16
	286TS	40	—	—	351	7	13-3/4	13	21	24	N/A	8	8	N/A
	324T	—	40	25	442	8	16	14	22	26	N/A	11	11	16
	324TS	50	—	—	442	8	16	14	22	25	N/A	11	11	N/A
326T	—	50	30	485	8	16	15-1/2	23	28	N/A	11	11	16	
326TS	60	—	—	485	8	16	15-1/2	23	26	N/A	11	11	N/A	
1520	364T	—	—	40	540	9	18	15-1/2	23	29	N/A	12	12	16
	364TS	75	60	—	540	9	18	15-1/2	23	27	N/A	11	11	16
	365T	—	—	50	590	9	18	15-1/2	24	28	N/A	N/A	N/A	16
	365TS	100	75	—	590	9	18	15-1/2	24	28	N/A	11	11	16
	404T	—	100	60	690	10	20	16-1/4	26	33	N/A	N/A	N/A	17
	404TS	125	100	—	690	10	20	16-1/4	26	30	N/A	15	15	17
	405T	—	—	75	780	10	20	17-3/4	27	34	N/A	N/A	N/A	17
	405TS	—	125	—	780	10	20	17-3/4	27	31	N/A	N/A	N/A	17
	444TS	—	150	—	950	11	22	18-1/2	30	34	N/A	N/A	N/A	17
	445TS	—	200	—	1000	11	22	20-1/2	32	36	N/A	N/A	N/A	17



MODEL 1530



Notes:

- Dimensions and weights are approximate.
- All dimensions are in inches and may vary  $\pm 1/4"$  (6).
- Frame sizes, "C" and "AG", dimension and motor weight are for open drip-proof motors only.
- Conduit box is shown in approximate position.  
Dimensions are not specified as they vary with each motor manufacturer.
- Not for construction purposes unless certified.
- Discharge positions No. 2 and 3 are not available on Models 1550 and 1520. Position No. 1 is furnished as standard unless otherwise specified.
- When two "D" dimensions are indicated, always use the larger figure.
- Power frame selection for 1520 pumps can be made from the range charts.
- Models 1550 and 1530 have "JP" motor frames. Model 1520 has "T" frame motor.

# Engineering Specifications

## Flexible-Close Coupled Pumps

The contractor shall furnish (and install as shown on the plans) Fairbanks Nijhuis™ Model (2550 horizontal close coupled) (2530 vertical close coupled) (2520 horizontal flexible coupled) back pull-out centrifugal pumps size \_\_\_\_\_x\_\_\_\_\_x\_\_\_\_\_ of (standard fitted) (bronze fitted) (all iron) construction.

The contractor shall furnish (and install as shown on the plans) Fairbanks Nijhuis Model (1550 horizontal close coupled) (1530 vertical close coupled) (1520 horizontal flexible coupled) back pull-out centrifugal pumps size \_\_\_\_\_x\_\_\_\_\_x\_\_\_\_\_ of (bronze fitted) (all bronze) (all iron) (stainless steel) construction. Each pump is to be furnished with a (standard) (water cooled) stuffing box with (packing) (\_\_\_\_\_) (see options).

Each pump shall have a capacity of \_\_\_\_\_GPM at \_\_\_\_\_ft. total head, with a temperature of \_\_\_\_\_°F, \_\_\_\_\_specific gravity. Each pump is to be furnished with a mechanical seal with all metal parts to be 303 stainless steel with Buna-N elastomers, Ceramic seat, and carbon washer. The unit must be equipped with (bronze) (stainless steel) keylocked shaft sleeve that extends the length of the seal box. The pump shaft extension shall be O-ring sealed from the pumped liquid. Pump shall have a case wearing ring (impeller wearing rings). Impellers to be vacuum cast, dynamically balanced, and keylocked to the shaft.

## Flexible Coupled-Frame Mounted (Models 2520–1520)

Pump and motor are to be mounted on a common (fabricated steel drip rim) (steel) baseplate. The shaft is to be steel, installed in a cast iron power frame. Pumps shall have a shaft design for .002" deflection at the seal face with the pump running under maximum load condition. (Grease) (oil) (permanently lubricated) ball bearings, having a 3 year minimum life (AFBMA B10) under the maximum condition of load. Bearings to be protected by separate oil seals and slingers. The pump shall be flexible coupled to a standard horizontal NEMA \_\_\_\_\_ HP \_\_\_\_\_ phase \_\_\_\_\_ Hertz \_\_\_\_\_ volt \_\_\_\_\_ RPM (open drip-proof) (totally enclosed fan cooled) (hazardous location) motor. Alignment shall be checked in accordance with the standards of the Hydraulic Institute after installation and there shall be no strain transmitted to the pumps.

## Close Coupled (Models 2550–1550) (Models 2530–1530)

Each pump is to be close coupled to a standard HI-NEMA-JM (2500 Series) JP (1500 Series). \_\_\_\_\_HP \_\_\_\_\_ phase \_\_\_\_\_ Hertz \_\_\_\_\_ volt \_\_\_\_\_ RPM (drip-proof) (totally enclosed) (hazardous location) motor. Models 2550 and 1550 in motor frame sizes up to 184JM shall be supported by a separate support foot on the close coupled pump bracket.



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