



# Series 1510 Centrifugal Pumps

The industry standard in end suction pump design.



**Bell & Gossett®**  
a xylem brand

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## Useful Pump Formulas

$$\begin{aligned} \text{Pressure (PSI)} &= \frac{\text{Head (Feet)} \times \text{Specific Gravity}}{2.31} \\ \text{Head (Feet)} &= \frac{\text{Pressure (PSI)} \times 2.31}{\text{Specific Gravity}} \\ \text{Vacuum (Inches of Mercury)} &= \frac{\text{Dynamic Suction Lift (Feet)} \times .883}{\text{Specific Gravity}} \\ \text{Horsepower (Brake)} &= \frac{\text{GPM} \times \text{Head (Feet)} \times \text{Specific Gravity}}{3960 \times \text{Pump Efficiency}} \\ \text{Horsepower (Water)} &= \frac{\text{GPM} \times \text{Head (Feet)} \times \text{Specific Gravity}}{3960} \\ \text{Efficiency (Pump)} &= \frac{\text{Horsepower (Water)}}{\text{Horsepower (Brake)}} \times 100 \text{ Per Cent} \\ \text{NPSH (Available)} &= \text{Positive Factors} - \text{Negative Factors} \end{aligned}$$

Affinity Laws: Effect of change of speed or impeller diameter on centrifugal pumps.

	GPM Capacity	Ft. Head	BHP
Impeller Diameter Change	$Q_2 = \frac{D_2}{D_1} Q_1$	$H_2 = \left(\frac{D_2}{D_1}\right)^2 H_1$	$P_2 = \left(\frac{D_2}{D_1}\right)^3 P_1$
Speed Change	$Q_2 = \frac{RPM_2}{RPM_1} Q_1$	$H_2 = \left(\frac{RPM_2}{RPM_1}\right)^2 H_1$	$P_2 = \left(\frac{RPM_2}{RPM_1}\right)^3 P_1$

Where Q = GPM, H = Head, P = BHP, D = Impeller Dia., RPM = Pump Speed

# Take away these eight standard features and you'll have a pump like everyone else's.



## True Back Pullout

A B&G standard in design and construction. Ease in service is assured, while piping and motor remain undisturbed. Extended delays for repairs are virtually eliminated.



## Solid-Foot Mounted Volute

All Series 1510 pumps are provided as standard with an integrally cast volute foot located directly beneath the pump volute. This integrally cast foot ensures that the alignment between the volute and motor assembly is maintained. Without

solid support beneath the volute, the piping weight alone will cause distortion which can lead to premature failure of the bearings, shaft and mechanical seal. This feature is equally important on hot water applications. The Series 1510 volute foot provides a solid foundation and eliminates the deflections which would otherwise exist within an unsupported overhung volute during the normal thermal expansion of the system piping against the volute.

## Internally Self-Flushing Mechanical Seal

This design is way ahead of its time. This unique seal design is proven in many years of service. It requires no special external flushing provisions, since the design provides for constant efficient flushing action internally. This standard feature ensures maximum seal face lubrication, heat dissipation and debris removal without vulnerable, external flush tubing. The internal flushing action passes two and a half to three times the flow over the seal faces - compared to a few GPM for conventional, stuffing-box designed pumps.



## Computer Controlled Impeller Balancing

1510 impellers are balanced to ANSI/HI 9.6.4-2009, balance grade G6.3 standards. This method of computer balancing Impellers provides for quiet, efficient, vibration free performance. Diameters are

computer selected at the factory to furnish assurance that your capacity requirements will be met.



## Center Drop-Out Spacer Coupling

Unlike conventional jaw type or rigid style couplings, a center drop-out spacer coupling allows removal of the bearing frame and rotating element without disturbing the pump end pipe alignment or motor electrical connections.



## ANSI/OSHA-Compliant Coupling Guard

The coupler guard complies with ANSI B15.1 and OSHA 1910.219. The guard offers increased protection against potential injuries and is standard on all

1510 pumps. The guards include slotted viewing windows for easy inspection.



## Heavy-Duty, Rugged Baseplate

The Bell & Gossett fabricated heavy duty baseplate is supplied as standard on every Series 1510 pump. The Series 1510 baseplate provides a heavy-duty saddle assembly, full seam welds, closed baseplate ends and an open top to provide ease of access for proper equipment grouting.



## Patented i-ALERT™ Condition Monitor (Optional)

Continuously measures vibration and temperature at the outboard bearing and automatically indicates when pre-set levels of vibration and

temperature have been exceeded, so that changes can be made before failure occurs. A visual indication of pump health makes walk-around inspections more efficient and accurate. This onboard pump intelligence helps minimize life-cycle costs while maximizing performance.

# Technical Data

## BALANCE STANDARDS

Impellers are balanced to Hydraulic Institute Standards ANSI/HI 9.6.4-2009.

The allowable residual unbalance in the impeller rotating assembly conforms to ANSI grade G6.3 (Ref. ISO 1940).

ANSI Balance Quality Grades of G2.5 and G1 for the rotating assembly are also available. Consult your local Bell & Gossett Representative for additional details.

## VIBRATION LIMITS

Series 1510 pumps conform to Hydraulic Institute ANSI/HI 9.6.4-2009 for recommended acceptable unfiltered field vibration limits (as measured at the pump bearings per ANSI/HI 9.6.4-2009, Figure 9.6.4.2.3.1) for pumps with rolling contact bearings.

## SEISMIC CAPABILITIES

Series 1510 pumps are capable of withstanding a horizontal load of 0.5g\* without adversely affecting pump operation.

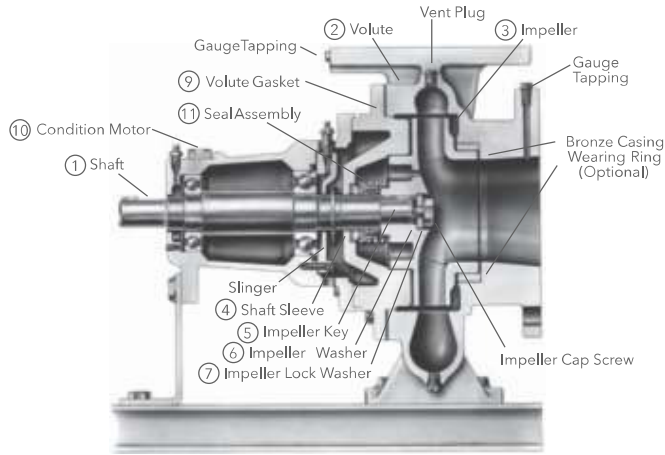
\*Piping and/or fasteners used to anchor the pump to the mounting pads on the floor are excluded.

## MECHANICAL SEAL

Seal Features	
Standard Seal Type	B&G
Internally Flushed Seal	Yes
Enlarged Seal Chamber	Yes
Standard Seal Construction	Buna-Carbon-Ceramic
Standard Working Pressure	12 Bar (175 PSI)
Maximum Working Pressure	17 Bar (250 PSI)
Standard Seal Temperature Rating	107°C (225°F)
Optional Temperature Rating	121°C (250°F)

The ceramic material is 99.5% pure alumina oxide, ceramic seat hardness of 68 Rockwell C, or a tensile strength of 300,000 psi.

# Materials of Construction

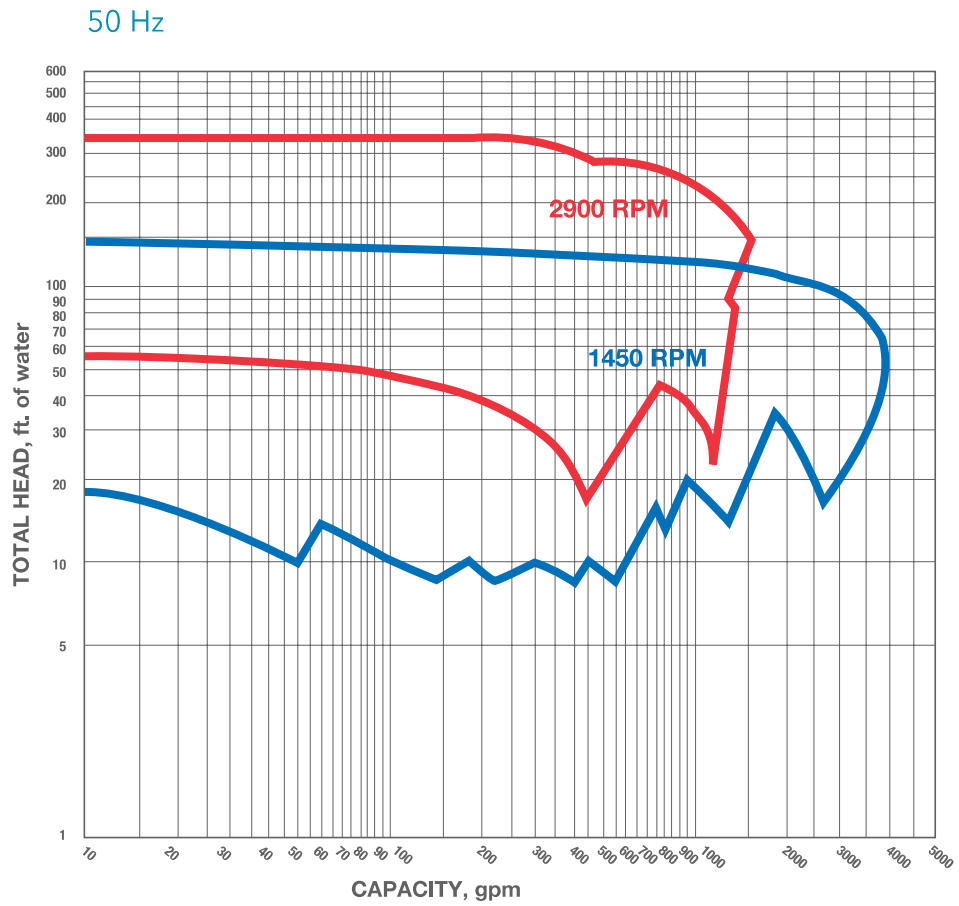


Standard Configuration

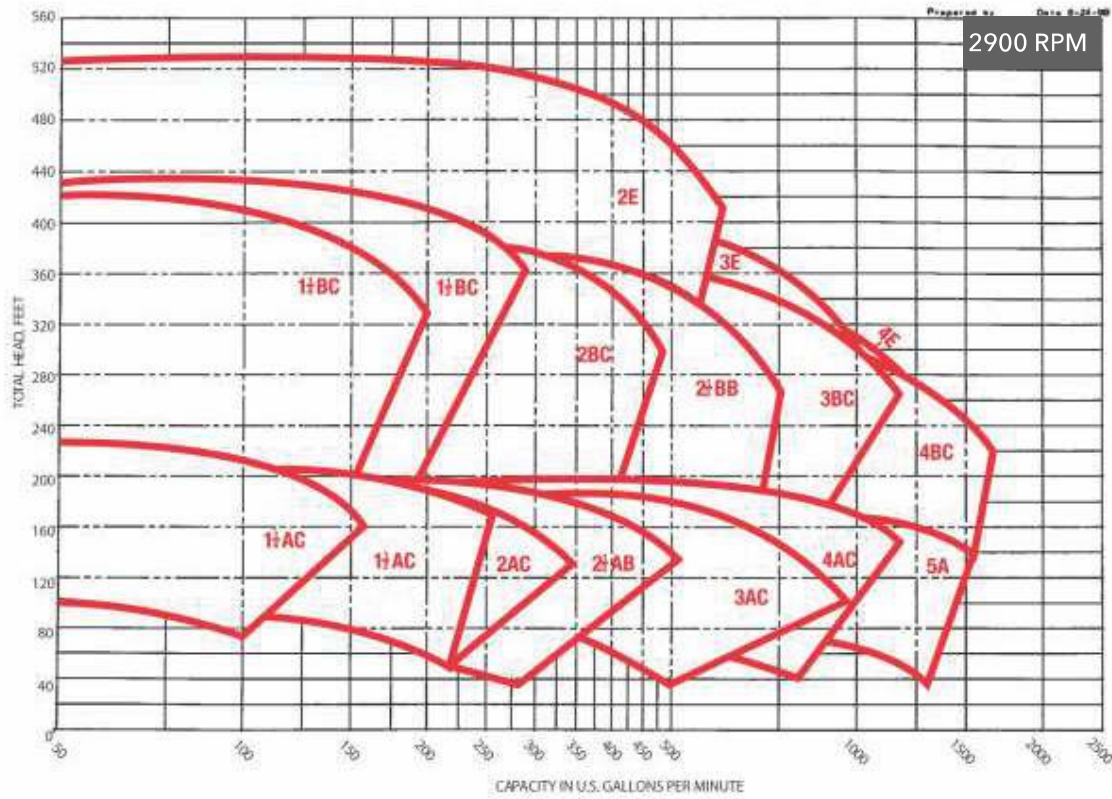
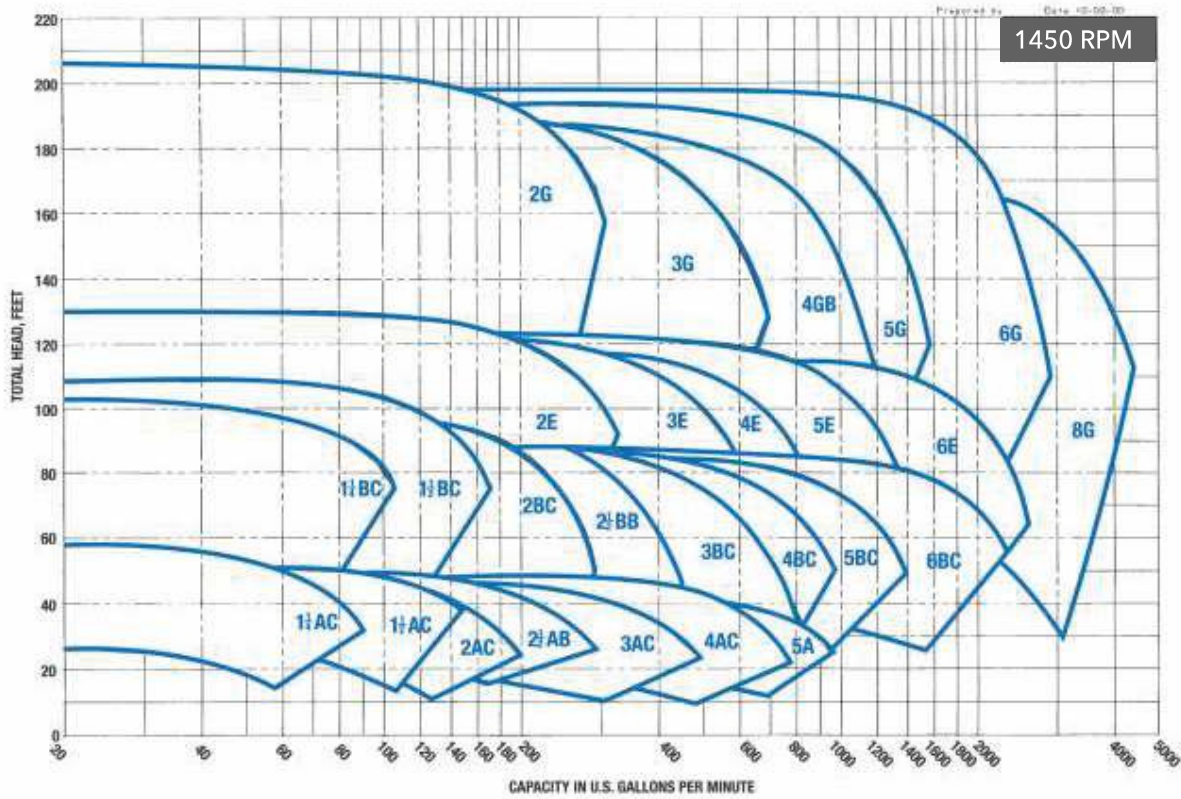
DESCRIPTION	STAINLESS STEEL FITTED PUMP STANDARD CONFIGURATION	BRONZE FITTED PUMP (OPTIONAL)
1 Shaft	Alloy Steel AISI 4140	Alloy Steel AISI 4140
2 Volute	Cast Iron ASTM #A159	Cast Iron ASTM #A159
3 Impeller	CF8 ASTM #A 351	ASTM #B 584, C87500
4 Shaft Sleeve	Bronze ASTM #B505	Bronze ASTM #B505
5 Impeller Key	#304 Stainless Steel	#304 Stainless Steel
6 Impeller Washer	1510 - Steel	1510 - Steel
7 Impeller Lock Washer	#304 Stainless Steel	#304 Stainless Steel
8 Impeller Cap Screw	#304 Stainless Steel	#304 Stainless Steel
9 Volute Gasket	Cellulose Fiber	Cellulose Fiber
10 Condition Motor	Stainless Steel Enclosure	Stainless Steel Enclosure
11 Seal Assembly		
Standard Seal		
Bellows	Buna N	Buna N
Faces	Carbon-Ceramic	Carbon-Ceramic
Metal Parts	Brass	Brass
Spring	Stainless Steel	Stainless Steel

\*\* BUNA-PH Limitations 7-9, Temperatures Range -20°F to +250°F

# Selection Charts



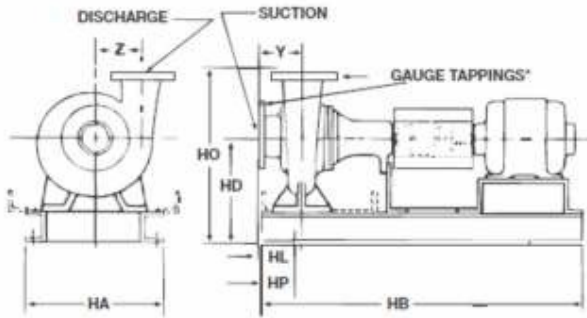
# Series 1510 Performance Curves



# Series 1510 Centrifugal Pumps

Motor KW and Frame Tabulation  
three phase (TEFC)

Dimensions



\*Gauge Tapping Sizes: 1/8" for NPT, 1/4" for flanged size

KW	Frame @ 1450 Rpm	Frame @ 2900 Rpm	KW	Frame @ 1450 Rpm	Frame @ 2900 Rpm
0.37	71	71	11	160M	160M
0.55	80	71	15	160L	160M
0.75	80	80	18.5	180M	160L
1.1	90S	80	22	180L	180M
1.5	90L	90S	30	200L	200L
2.2	100L	90L	37	225SX	200L
4	112M	100L	45	225MX	225M
5.5	132S	112M	55	250MX	250M
7.5	132M	132S	75	280SX	280S

Dimensions Inches

PUMP SIZE	DISCHARGE SIZE	SUCTION SIZE	MOTOR FRAME SIZE	HA	HB	HD	HL	HO	HP	Y	Z
1.25AC	1.25	1.5	71	12	28.750	9.750	3.1250	14.750	3	3.250	4.500
			71	12	28.750	9.750	3.1250	14.750	3	3.250	4.500
			80	12	28.750	9.750	3.1250	14.750	3	3.250	4.500
			90S	12	28.750	9.750	3.1250	14.750	3	3.250	4.500
			90L	12	28.750	9.750	1.7500	14.750	3	3.250	4.500
			100L	14.625	31.000	9.750	1.7500	14.750	3	3.250	4.500
1.25BC	1.25	1.5	71	14.625	31.000	10.750	1.8125	18.750	3	3.243	5.500
			71	14.625	31.000	10.750	1.8125	18.750	3	3.243	5.500
			80	14.625	31.000	10.750	1.8125	18.750	3	3.243	5.500
			80	14.625	31.000	10.750	1.8125	18.750	3	3.243	5.500
			90S	14.625	31.000	10.750	1.8125	18.750	3	3.243	5.500
			100L	14.625	31.000	10.750	1.8125	18.750	3	3.243	5.500
			112M	14.625	39.380	10.750	1.8125	18.750	3	3.243	5.500
			132S	14.625	39.380	10.750	1.8125	18.750	3	3.243	5.500
1.5AC	1.5	2	160M	16	46.500	13.000	2.9375	21.000	5	3.243	5.500
			160M	16	46.500	13.000	2.9375	21.000	5	3.243	5.500
			71	12	28.750	9.750	3.0625	15.750	3	3.130	4.630
			71	12	28.750	9.750	3.0625	15.750	3	3.130	4.630
			80	12	28.750	9.750	3.0625	15.750	3	3.130	4.630
			80	12	28.750	9.750	3.0625	15.750	3	3.130	4.630
			90L	12	28.750	9.750	3.0625	15.750	3	3.130	4.630
			100L	14.625	31.000	9.750	1.6875	15.750	3	3.130	4.630
1.5BC	1.5	2	112M	14.625	34.630	9.750	1.6875	15.750	3	3.130	4.630
			132S	14.625	34.630	9.750	1.6875	15.750	3	3.130	4.630
			80	14.625	31.000	10.750	1.6875	17.250	3	3.109	5.750
			80	14.625	31.000	10.750	1.6875	17.250	3	3.109	5.750
			90S	14.625	31.000	10.750	1.6875	17.250	3	3.109	5.750
			90L	14.625	31.000	10.750	1.6875	17.250	3	3.109	5.750
			112M	14.625	31.000	10.750	1.6875	17.250	3	3.109	5.750
			132S	14.625	31.000	10.750	1.6875	17.250	3	3.109	5.750
2.5AB	2.5	3	160M	16	46.500	12.000	2.8125	18.500	5	3.109	5.750
			160M	16	46.500	12.000	2.8125	18.500	5	3.109	5.750
			71	12	28.750	9.750	4.3750	15.750	3	4.250	4.688
			71	12	28.750	9.750	4.3750	15.750	3	4.250	4.688
			80	12	28.750	9.750	4.3750	15.750	3	4.250	4.688
			80	12	28.750	9.750	4.3750	15.750	3	4.250	4.688
			90S	12	28.750	9.750	4.3750	15.750	3	4.250	4.688
			90L	12	28.750	9.750	4.3750	15.750	3	4.250	4.688
2.5AC	2.5	3	100L	14.625	31.000	9.750	3.0000	15.750	3	4.250	4.688
			100L	14.625	31.000	9.750	3.0000	15.750	3	4.250	4.688
			112M	14.625	34.630	10.750	3.0000	16.750	3	4.250	4.688
			112M	14.625	34.630	10.750	3.0000	16.750	3	4.250	4.688
			132S	14.625	34.630	10.750	3.0000	16.750	3	4.250	4.688
			132S	14.625	34.630	10.750	3.0000	16.750	3	4.250	4.688

These dimensions are not to be used for installation purpose unless certified. \*\*250 psi (17 bar) available Maximum Working Pressure 175 psi (12 bar)



# Series 1510 Centrifugal Pumps

PUMP SIZE	DISCHARGE SIZE	SUCTION SIZE	MOTOR FRAME SIZE	HA	HB	HD	HL	HO	HP	Y	Z
2.5BB	2.5	3	80	14.625	31.000	10.750	3.0000	17.500	3	4.000	6.000
			80	14.625	31.000	10.750	3.0000	17.500	3	4.000	6.000
			90S	14.625	31.000	10.750	3.0000	17.500	3	4.000	6.000
			90L	14.625	34.630	10.750	3.0000	17.500	3	4.000	6.000
			100L	14.625	31.000	10.750	3.0000	17.500	3	4.000	6.000
			132S	14.625	34.630	10.750	3.0000	17.500	3	4.000	6.000
			160M	16	46.500	13.000	2.8750	19.750	5	4.000	6.000
			160M	16	46.500	13.000	2.8750	19.750	5	4.000	6.000
			160L	16	46.500	13.000	2.8750	19.750	5	4.000	6.000
180M	16	46.500	14.000	2.8750	20.750	5	4.000	6.000			
2AC	2	2.5	71	12	28.750	9.750	3.5625	16.250	3	3.500	4.750
			71	12	28.750	9.750	3.5625	16.250	3	3.500	4.750
			80	12	28.750	9.750	3.5625	16.250	3	3.500	4.750
			80	12	28.750	9.750	3.5625	16.250	3	3.500	4.750
			90L	12	28.750	9.750	3.5625	16.250	3	3.500	4.750
			100L	14.625	31.000	9.750	2.1875	16.250	3	3.500	4.750
			112M	14.625	34.630	10.750	2.1875	17.250	3	3.500	4.750
			132S	14.625	34.630	10.750	2.1875	17.250	3	3.500	4.750
2BC	2	2.5	80	14.625	31.000	10.750	2.1875	17.750	3	4.000	5.875
			80	14.625	31.000	10.750	2.1875	17.750	3	4.000	5.875
			90S	14.625	31.000	10.750	2.1875	17.750	3	4.000	5.875
			90L	14.625	31.000	10.750	2.1875	17.750	3	4.000	5.875
			100L	14.625	31.000	10.750	2.1875	17.750	3	4.000	5.875
			132S	14.625	34.630	10.750	2.1875	17.750	3	4.000	5.875
			160M	16	46.500	13.000	2.6875	20.000	5	4.000	5.875
			160M	16	46.500	13.000	2.6875	20.000	5	4.000	5.875
			160L	16	46.500	13.000	2.6875	20.000	5	4.000	5.875
			180M	16	46.500	14.000	2.6875	21.000	5	4.000	5.875
2E**	2	2.5	90L	16	42.250	14.000	2.6875	22.000	5	5.500	6.500
			100L	16	42.250	14.000	2.6875	22.000	5	5.500	6.500
			112M	16	42.250	14.000	2.6875	22.000	5	5.500	6.500
			160M	16	42.250	14.000	2.6875	22.000	5	5.500	6.500
			160L	16	42.250	14.000	2.6875	22.000	5	5.500	6.500
			180M	16	51.750	14.000	2.6875	22.000	5	5.500	6.500
			200L	16	51.750	15.000	2.6875	23.000	5	5.500	6.500
			200L	16	51.750	15.000	2.6875	23.000	5	5.500	6.500
			90L	16	46.500	14.000	2.6875	23.000	5	5.500	7.250
			100L	16	46.500	14.000	2.6875	23.000	5	5.500	7.250
2G**	2	2.5	112M	16	46.500	14.000	2.6875	23.000	5	5.500	7.250
			132S	16	46.500	14.000	2.6875	23.000	5	5.500	7.250
			160M	16	46.500	14.000	2.6875	23.000	5	5.500	7.250
			80	12	28.750	9.750	4.3125	15.750	3	4.125	5.000
			80	12	28.750	9.750	4.3125	15.750	3	4.125	5.000
			90S	12	28.750	9.750	4.3125	15.750	3	4.125	5.000
			90L	14.625	31.000	9.750	2.9375	15.750	3	4.125	5.000
			112M	14.625	39.380	10.750	2.9375	16.750	3	4.125	5.000
3AC	3	4	132S	14.625	39.380	10.750	2.9375	16.750	3	4.125	5.000
			160M	16	46.500	13.000	4.0625	19.000	5	4.125	5.000
			160M	16	46.500	13.000	4.0625	19.000	5	4.125	5.000
			90L	14.625	31.000	10.750	3.6875	18.250	3	4.750	6.130
			100L	14.625	31.000	10.750	3.6875	18.250	3	4.750	6.130
			112M	14.625	34.630	10.750	3.6875	18.250	3	4.750	6.130
			132S	14.625	34.630	10.750	3.6875	18.250	3	4.750	6.130
			160M	16	46.500	13.000	4.8125	20.500	5	4.750	6.130
3BC	3	4	160L	16	46.500	13.000	4.8125	20.500	5	4.750	6.130
			180M	16	46.500	14.000	4.8125	21.500	5	4.750	6.130
			200L	24	56.000	12.500	4.8125	20.000	6	4.750	6.130
			200L	24	56.000	12.500	4.8125	20.000	6	4.750	6.130
			225M	24	56.000	13.500	4.8125	21.000	6	4.750	6.130
			100L	16	42.250	14.000	3.6875	23.500	5	5.438	7.375
			112M	16	42.250	14.000	3.6875	23.500	5	5.438	7.375
			132S	16	42.250	14.000	3.6875	23.500	5	5.438	7.375
3E**	3	4	180M	16	51.750	14.000	4.3125	23.500	5	5.438	7.375
			200L	16	51.750	15.000	4.3125	24.500	5	5.438	7.375
			200L	16	51.750	15.000	4.3125	24.500	5	5.438	7.375
			225M	24	56.000	14.500	4.9375	24.000	6	5.438	7.375

These dimensions are not to be used for installation purpose unless certified. \*\*250 psi (17 bar) available Maximum Working Pressure 175 psi (12 bar)

# Series 1510 Centrifugal Pumps

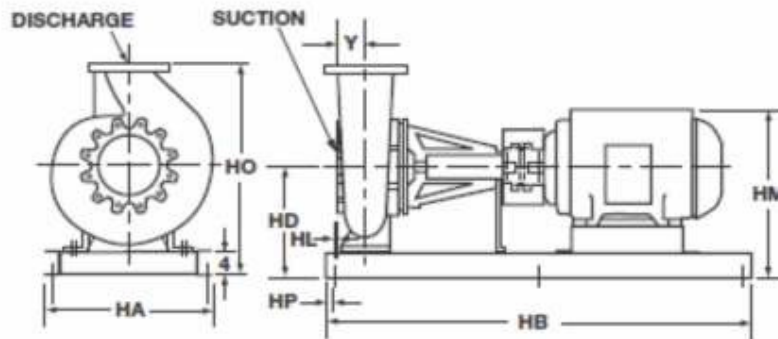
PUMP SIZE	DISCHARGE SIZE	SUCTION SIZE	MOTOR FRAME SIZE	HA	HB	HD	HL	HO	HP	Y	Z			
3G**	3	4	100L	16	46.500	14.000	4.1250	23.500	5	5.625	8.000			
			112M	16	46.500	14.000	4.1250	23.500	5	5.625	8.000			
			132S	16	46.500	14.000	4.1250	23.500	5	5.625	8.000			
			160M	16	46.500	14.000	4.1250	23.500	5	5.625	8.000			
			160M	16	46.500	14.000	4.1250	23.500	5	5.625	8.000			
4AC**	4	5	80	14.625	31.000	10.750	4.3125	18.250	3	4.938	5.750			
			90S	14.625	31.000	10.750	4.3125	18.250	3	4.938	5.750			
			90L	14.625	31.000	10.750	4.3125	18.250	3	4.938	5.750			
			100L	14.625	31.000	10.750	4.3125	18.250	3	4.938	5.750			
			112M	14.625	39.380	10.750	4.3125	18.250	3	4.938	5.750			
			132S	14.625	39.380	10.750	4.3125	18.250	3	4.938	5.750			
			160M	16	46.500	13.000	5.4375	20.500	5	4.938	5.750			
			160M	16	46.500	13.000	5.4375	20.500	5	4.938	5.750			
			160L	16	46.500	13.000	5.4375	20.500	5	4.938	5.750			
			180M	16	46.500	14.000	5.4375	21.500	5	4.938	5.750			
			4BC	4	5	90L	14.625	31.000	12.750	4.0000	20.750	3	5.000	7.000
						100L	14.625	34.630	12.750	4.0000	20.750	3	5.000	7.000
112M	14.625	34.630				12.750	4.0000	20.750	3	5.000	7.000			
132S	14.625	34.630				12.750	4.0000	20.750	3	5.000	7.000			
160L	16	46.500				14.000	5.1250	22.000	5	5.000	7.000			
180M	16	51.750				15.000	5.1250	23.000	5	5.000	7.000			
200L	24	56.000				14.500	5.1250	22.500	6	5.000	7.000			
200L	24	56.000				14.500	5.1250	22.500	6	5.000	7.000			
225M	24	56.000				14.500	5.7500	22.500	6	5.000	7.000			
250M	24	56.000				14.500	5.7500	22.500	6	5.000	7.000			
4E**	4	5				100L	16	42.250	14.000	6.6875	23.750	5	5.531	7.250
						112M	16	42.250	14.000	6.6875	23.750	5	5.531	7.250
			132S	16	42.250	14.000	6.6875	23.750	5	5.531	7.250			
			160M	16	42.250	14.000	6.6875	23.750	5	5.531	7.250			
			180M	16	51.750	14.000	4.3125	23.750	5	5.531	7.250			
			200L	16	51.750	15.000	4.3125	24.750	5	5.531	7.250			
			200L	16	51.750	15.000	4.3125	24.750	5	5.531	7.250			
			225M	24	56.000	14.500	4.9375	24.250	6	5.531	7.250			
			250M	24	56.000	14.500	4.9375	24.250	6	5.531	7.250			
			4GB	4	5	112M	16	46.500	15.000	4.6250	25.000	5	6.000	8.560
						132S	16	46.500	15.000	4.6250	25.000	5	6.000	8.560
						160M	16	46.500	15.000	4.6250	25.000	5	6.000	8.560
160M	16	46.500				15.000	4.6250	25.000	5	6.000	8.560			
160L	16	51.750				15.000	4.6250	25.000	5	6.000	8.560			
180M	16	51.750				15.000	4.6250	25.000	5	6.000	8.560			
5A**	5	6	90S	14.625	31.000	12.750	5.7500	21.250	3	6.031	6.250			
			90L	14.625	31.000	12.750	5.7500	21.250	3	6.031	6.250			
			100L	14.625	31.000	12.750	5.7500	21.250	3	6.031	6.250			
			160M	16	46.500	14.000	6.8750	22.500	5	6.031	6.250			
			160M	16	46.500	14.000	6.8750	22.500	5	6.031	6.250			
			160L	16	46.500	14.000	6.8750	22.500	5	6.031	6.250			
			180M	16	46.500	14.000	6.8750	22.500	5	6.031	6.250			
			200L	16	51.750	15.000	6.8750	23.500	5	6.031	6.250			
5BC**	5	6	100L	16	46.500	15.000	4.5625	25.000	5	6.000	7.500			
			112M	16	46.500	15.000	4.5625	25.000	5	6.000	7.500			
			132S	16	46.500	15.000	4.5625	25.000	5	6.000	7.500			
5E**	5	6	160M	16	46.500	15.000	4.4375	25.500	5	5.547	7.938			
			160M	16	46.500	15.000	4.4375	25.500	5	5.547	7.938			
			160M	16	46.500	15.000	4.4375	25.500	5	5.547	7.938			
5G**	5	6	132S	24	56.000	16.500	5.4375	29.500	6	6.000	9.000			
			160M	24	56.000	16.500	5.4375	29.500	6	6.000	9.000			
			160M	24	56.000	16.500	5.4375	29.500	6	6.000	9.000			
			160L	24	56.000	16.500	5.4375	29.500	6	6.000	9.000			
			180M	24	56.000	16.500	5.4375	29.500	6	6.000	9.000			
			200L	24	56.000	16.500	5.4375	29.500	6	6.000	9.000			
6BC**	6	8	112M	16	46.500	15.000	8.3750	25.500	5	7.000	8.250			
			132S	16	46.500	15.000	8.3750	25.500	5	7.000	8.250			
			160M	16	46.500	15.000	8.3750	25.500	5	7.000	8.250			
			160M	16	46.500	15.000	8.3750	25.500	5	7.000	8.250			

These dimensions are not to be used for installation purpose unless certified. \*\*250 psi (17 bar) available Maximum Working Pressure 175 psi (12 bar)

# Series 1510 Centrifugal Pumps

PUMP SIZE	DISCHARGE SIZE	SUCTION SIZE	MOTOR FRAME SIZE	HA	HB	HD	HL	HO	HP	Y	Z
6E**	6	8	160M	24	56.000	16.500	6.0000	27.500	6	6.125	8.469
			160M	24	56.000	16.500	6.0000	27.500	6	6.125	8.469
			160L	24	56.000	16.500	6.0000	27.500	6	6.125	8.469
			180M	24	56.000	16.500	6.0000	27.500	6	6.125	8.469
6G**	6	8	160M	24	56.000	16.500	6.2500	30.500	6	6.500	9.313
			160L	24	56.000	16.500	6.2500	30.500	6	6.500	9.313
			180M	24	56.000	16.500	6.2500	30.500	6	6.500	9.313
			200L	24	56.000	16.500	6.2500	30.500	6	6.500	9.313
			200L	24	56.000	16.500	6.2500	30.500	6	6.500	9.313
			225M	24	56.000	16.500	6.2500	30.500	6	6.500	9.313
			250M	24	56.000	16.500	6.2500	30.500	6	6.500	9.313

## 8G ONLY



PUMP SIZE	DISCHARGE SIZE	SUCTION SIZE	MOTOR FRAME SIZE	HA	HB	HD	HL	HO	HP	Y
8G	8	10	160L	28	70.000	18.370	0.3750	35.690	1.25	4.770
			180M	28	70.000	18.370	0.3750	35.690	1.25	4.770
			200L	28	70.000	18.370	0.3750	35.690	1.25	4.770
			200L	28	70.000	18.370	0.3750	35.690	1.25	4.770
			225M	28	70.000	18.370	0.3750	35.690	1.25	4.770
			250M	28	70.000	18.370	0.3750	35.690	1.25	4.770
			280S	28	70.000	18.370	0.3750	35.690	1.25	4.770

## FLANGE DETAILS

Flanges are : 125# ANSI-Standard

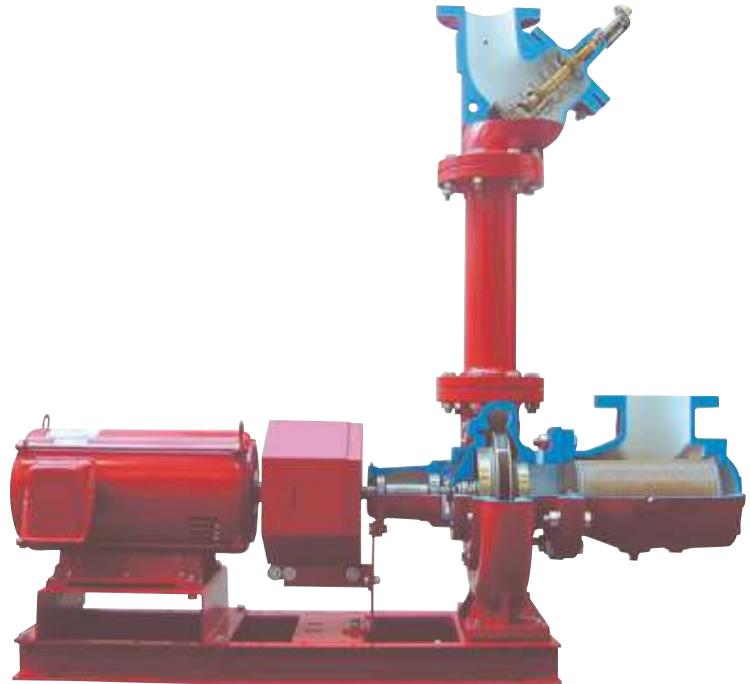
Flange Dimensions in inch

SIZE	O.D	P.C.D	THICKNESS	BOLT HOLE(DIA)	NO OF BOLTS
2	6.00	4.75	0.625	0.750	4.00
2.5	7.00	5.50	0.688	0.750	4.00
3	7.50	6.00	0.750	0.750	4.00
4	9.00	7.50	0.938	0.750	8.00
5	10.00	8.50	0.938	0.875	8.00
6	11.00	9.50	1.000	0.875	8.00
8	13.50	11.75	1.125	0.875	8.00
10	16.00	14.25	1.188	1.000	12.00

These dimensions are not to be used for installation purpose unless certified. \*\*250 psi (17 bar) available Maximum Working Pressure 175 psi (12 bar)

# THE B&G End Suction Pump System

Consists of:  
B&G Series 1510 Pump  
B&G Triple Duty Valve  
B&G Suction Diffuser



## Triple Duty Valve

- Lowest Pressure Drop
- ASHRAE 90.1 Energy Efficient Design
- Three Valves in one!
  - Nonslam drip-tight check valve
  - Positive shutoff valve
  - Calibrated system balance valve
- EPDM Disc Soft Seat Design
- Repack Under Pressure
- Brass Seat & Bronze Disc
- Stainless Steel Stem
- Multi-turn Valve (8-9 turns) vs 1/4 turn range of control
- Available connections - Threaded- Flanged - Grooved
- ESP-Plus System Selection



## Suction Diffuser

- Full length stainless steel straightening vanes
- Oversize cylinder assures minimum strainer pressure drop
- Pressure gauge tap
- Magnetic drain plug to protect pump seals
- Adjustable support foot
- Space saving design reduces the "footprint" size of the unit
- Available connections - Threaded - Flanged - Grooved
- Reducer and elbow provide multiple combinations of inlet and pump suction configurations which eliminate the need for reducer fittings
- ESP-Plus System Selection

# Typical Specification for Series 1510 Base Mounted, Flexible Coupled, End-Suction Pumps

Furnish and install pumps with performance characteristics as shown on plans. Pumps shall be base mounted, single stage, end suction design with a foot mounted volute to allow removal and service of the entire rotating assembly without disturbing the pump piping, electrical motor connections or pump to motor alignment.

A CSA certified condition monitor shall be installed on the pump power end to continuously measure vibration and temperature at the outbound bearing. Vibration modes shall be based on ANSI/HI 9.6.4-2009 and ISO 101816 recommended levels. Vibration alarms shall be at 100% increase over pump baseline. Minimum vibration of 0.125 inch/sec is required to avoid nuisance tripping. A high vibration alarm shall be at 0.05 inch/sec. and temperature alarm shall be at 195°F (91°C). The condition monitors' electronics shall be potted in epoxy and surrounded by stainless steel enclosure. Accuracy shall be +/-15% within an ambient temperature range of -40°F to 212°F (-40°C to 100°C)

Pump volute shall be Class 30 cast iron with integrally cast pedestal support feet. The impeller shall be cast Stainless Steel enclosed type, balanced to ANSI/HI 9.6.4-2009 balance grade G6.3 and keyed to the shaft and secured by a locking capscrew.

The liquid cavity shall be sealed off at the pump shaft by an internally-flushed mechanical seal with ceramic seal seat and carbon seal ring, suitable for continuous operation at 225°F (107°C). A replaceable bronze shaft sleeve shall completely cover the wetted area under the seal.

Pump shall be rated for minimum of 175 psi (12 bar) working pressure. Volute shall have gauge tappings at the suction and discharge nozzles and vent and drain tappings at the top and bottom.

The pump(s) vibration limits shall conform to Hydraulic Institute ANSI/HI 9.6.4-2009 for recommend acceptable unfiltered field vibration limits (as measured per ANSI/HI 9.6.4-2009 Figure 9.6.4.2.3.1) for pumps with rolling contact bearings.

Baseplate shall be of structural steel or fabricated steel channel design with fully enclosed sides and ends, and securely welded cross members. Grouting area shall be fully open. The combined pump and motor baseplate shall be sufficiently stiff as to limit the susceptibility of vibration. The minimum baseplate stiffness shall conform to ANSI/HI 1.3-2009 for Horizontal Baseplate Design standards.

The seismic capability of the pump shall allow it to withstand a horizontal load of 0.5g, excluding piping and/or fasteners used to anchor the pump to mounting pads or to the floor, without adversely affecting pump operation.

A flexible type, center drop-out design coupler, capable of absorbing torsional vibration, shall be employed between the pump and motor. Pumps for variable speed application shall be provided with a suitable coupler sleeve. The coupling shall be shielded by a dual rated ANSI B15.1 & OSHA 1910.219 compliant coupling guard and contain viewing windows for inspection of the coupling.

Motor shall meet IS:325 and IEC:60034-1 for electrical specification and IS:1231 for mechanical dimensions and shall be of the size, voltage and enclosure called for on the plans. Pump and motor shall be factory aligned, and shall be realigned by the contractor per factory recommendations after installation. Motor should be preferably efficiency #1 class.

The pump(s) selected shall conform to ANSI/HI 9.6.3.1 standards for Preferred Operating Region (POR) unless otherwise approved by the engineer.

Each pump shall be factory hydrostatically tested per Hydraulic Institute standards. It shall then be thoroughly cleaned and painted with at least one coat of high grade paint prior to shipment.

The pump(s) shall be manufactured, assembled and tested in an ISO 9001 approved facility.

Pumps shall be Series 1510 as manufactured by Xylem Bell & Gossett or equal.



Xylem (XYL) is a leading global water technology provider, enabling customers to transport, treat, test and efficiently use water in public utility, residential and commercial building services, industrial and agricultural settings. The company does business in more than 150 countries through a number of market-leading product brands, and its people bring broad applications expertise with a strong focus on finding local solutions to the world's most challenging water and wastewater problems. Xylem is headquartered in Rye Brook, N.Y., with 2013 revenues of \$3.8 billion and more than 12,500 employees worldwide. Xylem was named to the Dow Jones Sustainability World Index for the last two years for advancing sustainable business practices and solutions worldwide.

The name Xylem is derived from classical Greek and is the tissue that transports water in plants, highlighting the engineering efficiency of our water-centric business by linking it with the best water transportation of all - that which occurs in nature. For more information, please visit us at [www.xylem.com](http://www.xylem.com)



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The specifications and features may change before prior notice.

