

B65-320L

AMEND & RESUBNIT

Project No. 07910 Residential Water Systems

DILLON CONSULTING LIMITED

Goulds Pumps

65L, 95L, 120L, 160L, 250L, 320L 6" Stainless Steel Submersible Pumps

60 Hz High Capacity

For 6" and larger wells



GGOULDS PUMPS

Goulds Pumps is a brand of ITT Corporation.

www.goulds.com

Engineered for life

FEATURES

- Powered for Continuous Operation: All ratings are within the working limits of the motor. Pump can be operated continuously.
- New Design Features: Cast 304 SS discharge head and motor adapter.
- Field Serviceable: Easy to install and service. All parts easily dismantled if field service is ever necessary.
- Diverse Application: Designed for commercial, municipal and agricultural water needs.
- Stainless Steel Construction: Durable in most
- Bearings: Replaceable, silicon carbide bearings allow excellent abrasives handling and wear resistance.
- Built-in Check Valve: Positive sealing, stainless steel \ Remove check valve assembly incorporated into discharge
- Impellers: New stainless steel impeller design provides improved efficiency.
- Maximum Temperature: 140°F (60°C) for pump.
- Four-Fluted Shaft Design: Four sided stainless steel shaft eliminates impeller keys and provides positive
- Coupling: Removeable heavy duty stainless steel, splined coupling for maximum load-carrying capability.
- **Suction Strainer:** Stainless steel strainer restricts gravel and other debris from entering the pump.
- Cable Guard: Stainless steel cable guard surrounds and protects motor leads.
- Fasteners: All fasteners are stainless steel.
- NEMA Design Motors: Stainless steel casing resists corrosion. Water filled design provides a constant supply of lubrication. Hermetically sealed stator assures moisture free windings. Durable Kingsbury type thrust bearing absorbs all thrust. Replaceable motor lead assembly.

⊚ GOULDS PUMPS Performance Data

L Series Submersible

Submersible Pumps MODEL: 320L20

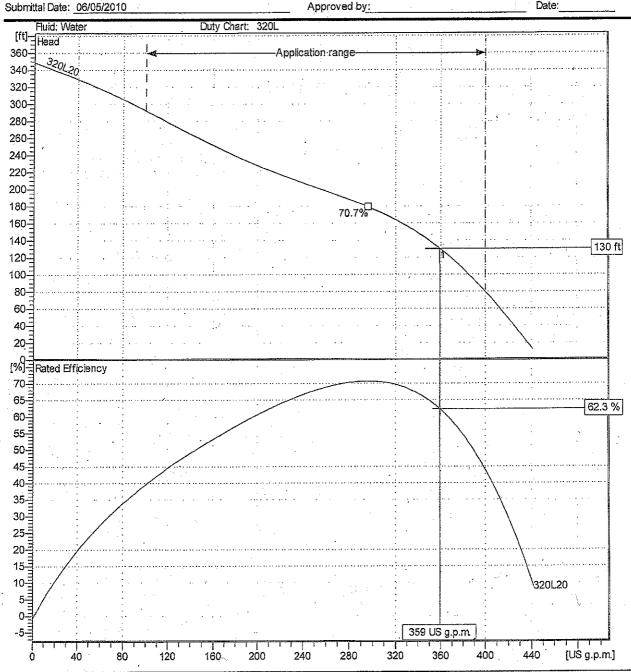
	Hydrau	ilic Data		Motor Data	L Series 6 Inch Submersible
Maximum Flow	Flow at Duty Point	Maximum TDH	TDH at Duty Point	Voltage / Phase / Enclosure	Model
441 US g.p.m	359 US g.p.m.	349 ft	130 ft		320L20

 Submittal Prepared for:
 Job:

 Engineer:
 Contractor:

 Submittal Prepared by:
 Company:

 Submittal Date:
 06/05/2010
 Approved by:
 Date:





L Series Submersible

Submersible Pumps

MODEL: 320L20

	Hydrau	lic Data		Motor Data	L Series 6 Inch Submersible	
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Submittal Prepared	for:		Job; /			
Engineer:			Contra	ctor:		
Submittal Prepared	by:		Compa	Company:		
Submittal Date: 06/	05/2010		Approv	red by:	Date:	

Engineering Data

Pump Code: 320L20 Pump Size: 6 Inch

Pump Max Horsepower: 0.00 hp Pump Shut Off Head: 349 ft

Motor Speed: Max. Temperature: Liquid: Water

Motor Code: System input Power:

Motor Rated Horsepower:

Max, Frequency: Electrical Enclosures: Motor Standard:

Suction Flange Standard: Suction Flange Rating:

Suction Size:

Discharge Flange Standard: Discharge Flange Rating:

Discharge:

Approximate Net Weight: On demand lb

impeller Size: "

Impeller Construction: Closed Impeller Type: Radial impeller

Impeller Material:

AISI 304 Stainless Steel

Sense of Rotation: Clockwise from the drive end

Shaft Seal:

Standard Equipment / Capability:

Powered for Continuous Operation: All ratings are within the working

limits of the motor. Pump can be operated continuously. New Design Features: Cast 304 SS discharge head and motor adapter. Field Serviceable: Easy to install and service. All parts easily dismantled

if field service is ever necessary.

Diverse Application: Designed for commercial, municipal, and agricultural water needs.

Stainless Steel Construction: Durable in most waters.

Bearings: Replaceable, silicon carbide bearings allow excellent

abrasives handling and wear resistance.
Built-in Check Valve: Positive sealing, stainless steel check valve, assembly incorporated into discharge head.
Impellers: New stainless steel impeller design provides improved

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Fasteners: All fasteners are stainless steel.

NEMA Design Motors Stainless steel casing resists corrosion.

Water filled design provides a constant supply of lubrication.

Hermetically sealed stator assures moisture free windings.

Durable Kingsbury type thrust bearing absorbs all thrust. Replaceable motor lead assembly.



WATER END (PUMP) DATA

							Dimension	s & Weights		
24-4-3		No. Common	Min. HP	Required	Ler	ngth	Dian	neter	We	ght
Model	Order No.	No. Stages	Required	Motor Dia.	ln.	mm	ln.	mm	Lbs.	kg.
	65103	3	3	_	18.6	472		142	26	12
•	65L05	5	5	4	22.2	564	5.59	142	31	14
	65L07	7	7.5		25.8	656		144	35	16
	65L10	10	10] ' [31,3	794	1	144	44	20
65L	65L15 16 15]	42.1	1070	5.67	144	60	27.		
:	65L20	21	20	- 6 (53.0	1346]	144	75	34
	65L25	. 27	. 25]	63.9	1622		144	90	41
	65L30 *	32	30	[98.7	2508		177	220	100
	65L40 *	41	40] [115.0	2922 -	6.97*	177	253	115
	95L05	3	5	. 4	18.6	472	5.59	142	26	12
	95L07	5	7.5		22.2	564		144	31	14
	95L10	7	10	1 1	25.8	656	1 .	144	35	16
	95L15	10	15		31.3	794	Ī	144	44	20
95L	95L20	14	20 ·	6	38.5	978	5.67	144	53	24
Ì	95L25	17	25	1	43.9	1116		144	62	28
١ .	95L30	21	30		53.0	1346	1	144	75	34
l	95L40 *	28	40	•	67.3	1710	6.97*	177	156	71
	120L05	· 2	. 5	4	16.8	426	5.59	142	22	10
	120L07	3	7.5		19.5	495	3.33	· 144	26	12
	120L10	5	10	1	24.9	633	1 i	144	33	15
ı	120L15	. 7	15	İ	30.4	771	1 i	144	40	18
120L	120L20	10	20		38.5	978	5.67	144	51	23
	120L25	12	25	6 -	43.9	1116		144	57	26
	120L30	15	30	•	52.1	1323		144	68	31
Ì	120L40	20	40		65.7	1668	1 .	144	86	39
İ	120L50 *	24	50	Ţ	80.9	2055	6.97*	177	179	81
	160L05	2	5	4	17.2	436	5.59	142	22	10
	160L07	3	7.5		19.9	505		144	26	12
Ì	160L10	-4	10 ·		22.6	574	1 . 1	144	31	14
Ī	160L15	6	15	ľ	28.0	712	1 1	144	37 .	17
160L	160L20	8	20	ľ	33.5	850	1 1	144	44	. 20
`	160L25	9	25	6	36.2	919	5.67	144	46	21
.	160L30	11	30	· •	41.6	1057	1	144	53	24
ŀ	160L40	15	40	·	52.5	1333	1 '	144	68	-31
Ī	160L50	18	50		60.5	1540	1 .	144	77	35
	250L07	2	7.5	-	20.8	528	<u> </u>	144	26	12
j	250L10	3 .	10		25.3	643	† i	144	33	15
-	250L15	5	15		34.4	873	1	144	44	20
ľ	250L20	7	20		43.4	1103	1	144	55	25
250L	250L25	8	25	6	48.0	1218	5.67	144	60	27
	250L30	9	30		52.5	1333	'	144	66	30
ŀ	250L40	13	40		70.6	1793	1 . 1	144	88	40
f	250150	16	50		84.2	2138		144	104	47
	320L07	2	7.5		21.8	553	 	144	27	12
}	3 <u>20L15</u>	4	15	.	30.8	783	1 1	144	38	17
ļ.	320L20)	(5)	(20)	 	(35.4)	898	1 1	144	45	20
320L	320L25	6	25	6	39.9	1013	(5.67)	144	50	22
	320L30	8	30	~ \rightarrow \rig	49.0	1243	ا ست	144	61	27
F	320L40	11	40 .		62.5	1588	1	144	78	35
\	320L50	13	50	F	71.6	1818	4 }	144	89	40

^{*} Note pump diameter - high pressure models have an exterior casing and larger diameters, verify they will fit your well.



SPECIFICATIONS

Model	Horsepower Range	Discharge Connection	Recommended GPM Operating Range	GPM at Best Efficiency	Minimum* Well Size	Rotation at Disch. End
65L	3 - 40		20 - 90	65	6"/8"*	
95L	5 - 40	Ţ	25 - 130	90	6" / 8" *	
120L	5 - 50 ·	3" NPT	40 - 170	120	6" / 8" *	CCW
160L	5 - 50	Ī	50 - 240	160	· 6"	CCM
250L	7.5 - 50		70 - 300	250	б "	
320L	7.5 - 50	(4" NPT)	100 - 400 -	320	5"	

^{*} Minimum well size refers only to dimensional fit in a well, the specifier or installer must determine the minimum required well diameter that will insure an adequate supply of water to the pump and also properly cool the motor. See Water End Data Chart for specific diameter by model number.

"L" SERIES MATERIALS OF CONSTRUCTION

Ref. No.	Part Name	Material	Material Code
1	Discharge Head	Stainless steel	ASTM CF-8 (AISI 304 cast)
2	Check Valve Support	Stainless steel	ASTM CF-8 (AISI 304 cast)
3	Check Valve	Stainless steel	AISI 304 SS
4	Elastomers	EPDM	<
5	Bolts and Screws	Stainless steel	· AISI 304 SS
, 6	Shaft Sleeve and Bushing	Tungsten carbide	
7	Thrust Bearing	PTFE+Graphite	
8.	Impeller	Stainless steel	AIS! 304 SS
9	Diffuser	Stainless steel	AISI 304 SS
10	Spacer	Stainless steel	AISI 431 SS
11	Tie Rod	Stainless steel	AISI 304 SS
12	Cable Guard	Stainless steel	AISI 304 SS
13	Wear Rings	Technopolymer PPO	
14	Strainer	Stainless steel	AISI 304 SS
15	Shaft	Stainless steel	AISI 431 SS
16	Shaft Coupling	Stainless steel	, AISI 431 SS
17	Motor Adapter	Stainless steel	ASTM CF-8 (AISI 304 cast)

ORDER NUMBER CODE

Pump Size/ Gallons per minute at Best Efficiency Point Pump Series —	95 120 160 250 320	- 03 Horsepower Code = HP 03 = 3 05 = 5 07 = 7.5 10 = 10 15 = 15 20 = 20 25 = 25 30 = 30 40 = 40 50 = 50
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SYSTEM COMPONENTS

- Pump/Water End:
 - 6" Pump with 3" NPT discharge.
 - 4" Motor Adapter on 3 and 5 HP models.
 - 6" Motor Adapter on 7.5 HP and larger models.
- Motor:
 - 4" motor required for 3 HP and 5 HP pumps.
 - 6" motor required for 7.5 HP and larger pumps.
- Control Box: Required for all single phase motors.
- Magnetic Starter: A magnetic starter with Class 10 overloads is required for all three phase units.

WATER ENDS AND MOTORS MUST BE ORDERED SEPARATELY AND ARE PACKAGED SEPARATELY.

Goulds Pumps is ISO 9001 Registered.



Application - Three-Phase Motors

Table 24 Three-Phase Motor Specifications (60 Hz)

	MOTOR			HATING			FU.	LLOAD:		(IMUM) LOAD)	LINETOLINE	EFFICI	ENCY %	LOCKED	KVA
TYPE	MODEL Prefix	HP	KW	VOLTS	нz	S.F.	AMPS	WATTS	AMPS	WATIS	RESISTANCE OHMS	SF	FL	ROTOR. AMPS	CODE
	236650	5	3.7	200	60	1.15	17.5	4700	20.0	5400	.7793	79	79	99	н
SIL.	236600	5	37	230	60	1:15	15	4700	17.6	:5400	1.0-1.2	79	: 79	∴86	6-H-6
U	236660		The Control	380	60 Paragent	1.15	9.1	4700	10.7	5400	2.6-3.2	79	79	52	H
j E	236610 236620	3 T	3.7	460 575	60 60	1.15	(7.5 6	4700 4700	8:8 7.1	5400 5400	3.9:4.8 6.3-7.7	79 79	79 79	34 34	H
	236651	75	37 55	200	60	1.15	25.1	7000	28.3	8000	43.53	80	80	150	HE
	236601	75	5.5	230	60	1.15	21.8	7000	24.6	8000	.6478	80	80	130	H
	236661	75	550	380	60 (77,15	13.4	7000	15	8000	1.6-2.1	80	80	79.	HX
	236611	7.5	55	460	60	1.15	10.9	7000	,12,3	8000	2.4-2.9	80.	80	65	H
	236621	7,5	5.5	575	60	1.15	8.7	7000.	9.8	8000	3.7-4.6	80	.80	52.	
	236652 236602	10	75 75	200 230	60 60	1.15 1.15	32.7 28.4	9400 9400	37 32.2	10800 10800	.3745 47-57	79 79	79 79	198 172	H
į.	236662	10.	7.5	380	60	1.15	17.6	9400	19.6	10800	1.2-1.5	79	79	104	H
	236612	10	75	460	601	1515	142	9400	16.1	10800	1.9-2.4	79	79	86	SH4
	236622	10.,	75	575	60	1.15	11.4	9400	12.9	10800	3.0-3.7	79	79	69	Н
	236653	15 %	211 24	2007	600	1815	47.8	18700	54.4	15800	24-29	181	81	306	
	236603	15	11	230	60 scrateres	1.15 ###################################	41.6	13700	47.4 ***********	15800	.2835	81 ************************************	81	266	H
	236663 236613	15	in.	380 460	60 60	1.15 1.15	25.8 20.8	13700 13700	28/91 23.7	15800 15800	77-95i 1.1-1.4	81 81	81 81	161 133	H
	236623	15		575	60	1.15	16.6	3700	23.7	15800	1.8-2.3	818	2812	106	Н
	236654	20	2.5	(200)	(60)	(1.15)	61.9	18100	(69.7)	20900	.1620	82	82	(416)	J
	236604	20	7 13	2301	60	1/15	53:8%	18100	60.6	20900	22=26	82	82%	4862 K	
	236664	20		380	60	1.15	33	18100	37.3	20900	.5568	82	. 82	219	J AMERICAN SAME
	236644	20	AF.	.460.	60	1.15	26:9	18100	(30.3)	20900	2.841.0x	82	82	81	ar x U
	236624 236655	201	15 165	575	60 60	1.15 物質器	21.5	18100 22500	24.2	20900 25700	1.3-1.6 12-1 5	82	82 3 83	145 552	J SS 1288
	236605 236605	25i 25i	3105	200 230	60 60	1.15 1.15	67	22500	86.3 75	25700	.1519	83 83	83	480	J
	236665	25	46-	380	60.5	%15	416	22500	46	257,000	46.56	83	83	291	300
	236615	25	18.5	460	60	1.15	33.5	22500	37.5	25700	.6377	83	83	240	J
	236625	25	10.5	57,5	60	1/16	26.8	22500	30%	25700	10-03	83	83	92	di di
	236656	30	222	200	60 ************************************	1.15	90.9	26900	104	31100 73007200	.0911	83	83	653	J
	236606 236666	.d0. (230 380	60 60	1.15 1.15	79 48.8	26900 26900	90.4 55.4	311005 31100	.14917 .3543	83 83	83 83	568. 317	J
	SUMMER PROPERTY.	30	22	THE COLUMN TWO IS NOT THE	60	-commence	39.5	26900	arcene represent	Marchester (1992)	52.64	83	*************	284	1
		300	925	575	60	1.15	31.6	26900	36.2	31100	.7895	83	83	227	· J
	236667	407	200	380°	60	1.15	66.5	35600	74.6	42400	26-38	85	B3	481	
	236617	40	30	460	60	1.15	54.9	35600	61.6	42400	.3442	83	83	397	J
/ 1100	236627	40	30	575	- 1	115	42.8	35600	49.6	42400	52-64	83	83	318	
	236668 236618	50 50	3T 37	380 460	60 - 60	1.15 1.15	83.5 67.7	45100 45100	95 77	52200 52200	.2125 .25-32	82 82	83 83	501 414	H
	236628	50	37	575	60	1.15	54.2	45100	61.6	52200	.4049	82	83	331	H
	236669	60	75	380	60	1:15	98.7	53500	ant	61700	5-18	84	84	627	EHE
	236619	60	45	460	60	1.15	80.5	53500	.91	61700	.2227	84	84	518	н
	236629	60	45	575	60	1.15	64.4	53500	72.8	61700	35-39	84	84	414	HA

Model numbers above are for three-lead motors. Six-lead motors with different model numbers have the same running performance, but when wye connected for starting have locked rotor amps 33% of the values shown. Six-lead individual phase resistance = table X 1.5.

6" ENCAPSULATED SUBMERSIBLE MOTORS

Drives
Controls
Protection

Motors

Single-Phase 5-15 hp & Three-Phase 5-40 hp 200-575 volts 60 & 50 Hz

Application Data:

These motors are built for dependable operation in 6-inch diameter or larger water wells. Temperature and time ratings are continuous in 86 °F (30 °C) water at 1/2 ft./sec. flow past the motor. Rotation: single-phase, CCW facing shaft end; three-phase, electrically reversible.

Basic Features:

- Full 3450 RPM design point
- Maximum temperature winding wire NEMA class 200
- Anti-track self-healing resin system
- Hermetically-sealed windings
- Removable Water-Bloc™ lead
- Double flange design
- Stainless steel shell
- Kingsbury-type water lubricated thrust bearing
- Pressure equalizing diapragm
- Sand slinger
- 3-lead & 6-lead (Wye Delta) configurations for 3-phase
- Copper bar rotor

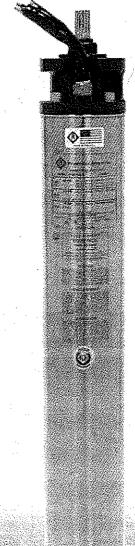
Special Features:

- 316 Stainless Steel: Special construction option for acid, low pH, and seawater applications. All 316 SS motors include a Subtrol-Plus heat sensor.
- Sand Fighter™ models available for sandy wells. All Sand Fighter models include Subtrol-Plus heat sensor.

SUBMONITOR® OVERLOAD OPTION FOR THREE-PHASE MOTORS

A field proven and contractor friendly premium motor protection system. It protects the motor against overload, underload, overheating and rapid cycling. It also extends the motor warranty to a full three years.* The motor must be manufactured with a Subtrol-Plus® heat sensor.

*Contact factory for warranty details.







Availability

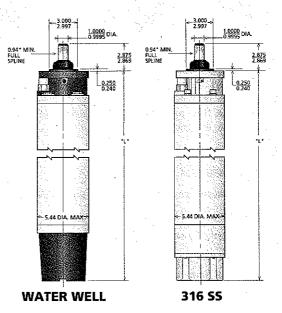
Single-Phase Capacitor start, Capacitor run (control box required)

		Wate	r Well	316	SS	Shir	pnie
ΠĐ	KU	"L"	Dim	"L"	Dim	We	ight
		IN	CM	IN	CM	LBS	KG
5	3.7	25.4	64.6	25.0	63.6	112	51
7.5	5.5	28.0	71.1	27.6	70.1	125	57
10	7.5	30.6	77.7	30.2	76.6	143	65
15	11.0	33.1	84.2	32.7	83.1	156	71

Three-Phase

		200000000000000000000000000000000000000	r Well				ping
HP	KW	"E"	Test Test Test Test Test Test Test Test	AT INC. THE PARTY OF THE PARTY	Dim	THE RESERVE OF THE PARTY OF THE	ight
	2.7		(ari		GV	TES.	
7.5	3.7 5.5	22.9 24.2	58.1 61.4	22.5 23.8	57.1 60.4	103 110	47 50
10	7.5	25.4	64.6	25.0 25.0	63.6	118	54
15	11.0	28.0	71.1	27.6	70.1	131	60
20	15.0	30.6	77.6	30.2	76.6	147	67
25	18.5	33.1	84.2	32.7	83.1	158	72
30	22.0	35.7	90.7	35.3	89.6	176	80
40	30.0	40.8	103.7	40.4	102.6	206	94

Note: 60 Hz - 3,450 RPM 50 Hz - 2,875 RPM



Construction Materials

Component	Standard Water Well	316 SS
Castings	Gray Iron	316 SS
Stator Shell	310 SS	316 SS
Stator Ends	Low Carbon Steel	316 SS
Shaft Extension	303 SS, Except 17-4 SS on 40 hp	17-4 SS
Fasteners	300 & 400 Series SS	316 SS
Seal Cover	304 SS & Sintered Bronze	316 SS
Seal	Carbon/Ceramic Face	Sand Fighter™ Seal System
Diaphragm	Nitrile Rubber	Nitrile Rubber
Diaphragm Plate	304 SS	316 SS
Diaphragm Spring	302 SS	17-7 SS
Slinger	Nitrile Rubber	Nitrile Rubber
Lead Wire (or Cable)	XLPE	XLPE
Lead Potting	Ероху	Ероху
Filter	Delrin & Polyester	316 SS Plug
Insulation	Class F	Class F

Note: Specifications subject to change without notice. Contact Franklin Electric if current material types are required for bid specifications.



400 East Spring Street, Bluffton, Indiana 46714 • Tel: 260.824.2900 Fax: 260.824.2909 • www.franklin-electric.com

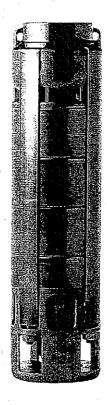


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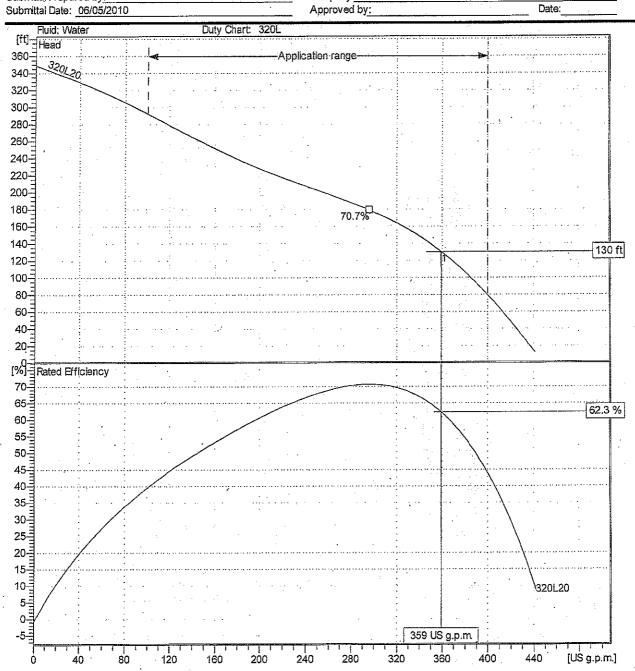
 Submittal Prepared for:
 Job:

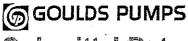
 Engineer:
 Contractor:

 Submittal Prepared by:
 Company:

 Submittal Date:
 06/05/2010

 Approved by:
 Date:





Submittal Data

L Series Submersible

Submersible Pumps . MODEL: 320L20

	Hydrau	lic Data		Motor Data	L Series 6 Inch Submersible
Maximum Flow	Flow at Duty Point	Maximum TDH	TDH at Duty Point	Voltage / Phase / Enclosure	Model
441 US g.p.m	359 US g.p.m.	349 ft	130 ft	•	320L20
Submittal Prepared	for <u>:</u>		Job;	-	
Engineer:			Contrac		
Submittal Prepared I Submittal Date: 06/			Compai Approv	·	Date:

Engineering Data

Pump Code: 320L20 Pump Size: 6 Inch

Pump Max Horsepower: 0.00 hp Pump Shut Off Head: 349 ft

Motor Speed: Max. Temperature:

Liquid: Water Motor Code:

System Input Power: Motor Rated Horsepower:

Max. Frequency: Electrical Enclosures: Motor Standard:

Suction Flange Standard: Suction Flange Rating:

Suction Size:

Discharge Flange Standard: Discharge Flange Rating:

Discharge:

Approximate Net Weight: On demand lb

Impeller Size: "

impeller Construction: Closed impeller Type: Radial impeller

Impeller Material:

AISI 304 Stainless Steel

Sense of Rotation: Clockwise from the drive end

Shaft Seal:

Standard Equipment / Capability:

Powered for Continuous Operation: All ratings are within the working Powered for Continuous Operation: All ratings are within the working limits of the motor. Pump can be operated continuously.

New Design Features: Cast 304 SS discharge head and motor adapter. Field Serviceable: Easy to install and service. All parts easily dismantled if field service is ever necessary.

Diverse Application: Designed for commercial, municipal, and agricultural water needs.

Stainless Steel Construction: Durable in most waters.

Bearings: Replaceable, silicon carbide bearings allow excellent

abrasives handling and wear resistance. Built-in Check Valve: Positive sealing, stainless steel check valve, assembly incorporated into discharge head.

Impeliers: New stainless steel impeller design provides improved

efficiency

Four-Fluted Shaft Design: Four sided stainless steel shaft eliminates impeller keys and provides positive drive. Coupling: Removeable heavy duty stainless steel, splined coupling for

maximum load-carrying capability.
Suction Strainer: Stainless deel strainer restricts gravel and other debris from entering the pump.
Cable Guard: Stainless deel cable guard surrounds and protects motor leads.

Fasteners: All fasteners are stainless steel.

NEMA Design Motors: Stainless steel casing resists corrosion. Water filled design provides a constant supply of lubrication. Hermetically sealed stator assures moisture free windings.

Durable Kingshury type thrust bearing absorbs all thrust. Replaceable motor lead assembly.



WATER END (PUMP) DATA

						:	Dimension:	& Weights			
N = 3 - 1	0-1	No. Cannon	Min. HP	Required	Length Dia			Diameter We		ight	
Model	Order No.	No. Stages	Required	Motor Dia.	in.	mm	in.	mm	Lbs.	kg.	
-	65L03	3	3		18.6	472	5.59	142	26	12	
	65L05	5	5	4	22.2	564		142	31	14	
	65L07	7	7.5		25.8	656		144	35	16	
	65L10	10	10		31.3	794] .	144	44	20	
65L	65L15	16	- 15	1	42.1	1070	5.67	144	60	27	
	65L20	21	20 ,	6 [53.0	1346		144	75	34	
•	65L25	. 27	25]	63.9	1622		144	90	41	
	65L30 *	32	30		98.7	2508	C 07*	177	220	100	
	65L40 *	41	40		115.0	2922 -	6.97*	177	253	115	
	95L05	3	5 .	4	18.6	472	5.59	142	26	12	
	95L07	5	7.5		22.2	564		144	31	14	
	95L10	7	10] . [25.8	656		144	35	16	
	95L15	10	15]	31.3	794] [144	44	20	
95L	95L20	14	20	6	38.5	978	5.67	144	53	24	
	95L25	17	25] [43.9	1116		144	62	28	
	95130	21	30] `	53.0	1346		144	75	34	
	95L40 *	28	40		67.3	1710	6.97*	177	156	71	
	120L05	2	5	4	16.8	426	5.59	142	22	10	
120L	120L07	; 3	7.5	6	19.5	495	5.67	144	26	12	
	120L10	5	10		24.9	633		144	33	15	
	120L15	7	15		30.4	771		144	40	18	
	120L20	10	20		38.5	978		144	51	23	
	120L25	12	25		43.9	1116		144	- 57	26	
	120L30	15	30		52.1	1323		144	68	31	
	120L40	20	40		65.7	1668		144	86	39	
	120L50*	24	50		80.9	2055	6.97*	177	179	81	
	160L05	2 -	5	4	17.2	436	5.59	142	22	10	
	160L07	3	7.5		19.9	505		144	26	12	
	160L10	-4	10		22.6	574	Ī	144	31	14	
	160L15	. 6	15	Ī	28.0	712	1	144	37 .	17	
160L	160L20	8	20	.[7	33.5	850	1	144	44	20	
	160L25	9	25	6	36.2	919	5.67	144	46	. 21	
	160L30	11	30		41.6	1057		144	53	24	
	160L40	15	40		52.5	1333	1	144	68	-31	
:	160L50	18	50		60.6	1540	1	144	77	35	
	250L07	2	7.5		20.8	528	· · · · · · ·	144	26	12	
İ	250L10	3 ·	10		25.3	643	1	144	33	15	
	250L15	5	15		34,4	873	1	144.	44	20	
	250L20	7	20		43.4	1103	1	144	55	25	
250L	250L25	8	25	6	48.0	1218	5.67	144	60	27	
	250L30	9	30	"	52.5	1333	1 .	144	66	30	
	250L40	13	40		70.6	1793	1 1	144	88	40	
į	250L50	16	50		84.2	2138	j	144	104	47	
	320L07	2	7.5		21.8	553		144	. 27	12	
Ì	3 <u>20L15</u>	4	15	· •	30.8	783	1 1	144	38	17	
	(320L20)	(5)	(20)		(35.4)	898	1	144	45	20	
320L	320L25	6	25.	6	39.9	1013	(5.67)	144	50	22	
	320L30	8	30		49.0	1243		144	61	27	
, / ' }	320L40	11	40		62.5	1588	† ·	- 144	78	35	
· }	320L50	13	50	-	71.6	1818	1	144	89	40	

^{*} Note pump diameter - high pressure models have an exterior casing and larger diameters, verify they will fit your well.



SPECIFICATIONS

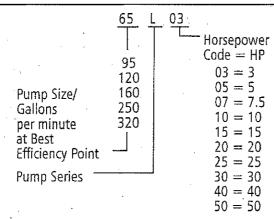
Model	Horsepower Range	Discharge Connection	Recommended GPM Operating Range	GPM at Best Efficiency	Minimum* Well Size	Rotation at Disch. End
65L	3 - 40		20 - 90	65	6°/8°*	
95L	5 - 40	. [25 - 130	90	6" / 8" *	
120L	5 - 50	3" NPT	40 - 170	120	6" / 8" *	CCW
160L	5 - 50		50 - 240	160	6"	CCVV
250L	7.5 - 50		70 - 300	250	6"	
320L	7.5 - 50	(4º NPT)	100 - 400	320	· 6"	

Minimum well size refers only to dimensional fit in a well, the specifier or installer must determine the minimum required well diameter that will insure an adequate supply of water to the pump and also properly cool the motor. See Water End Data Chart for specific diameter by model number.

"L" SERIES MATERIALS OF CONSTRUCTION

Ref. No.	Part Name	Material	Material Code
1	Discharge Head	Stainless steel	ASTM CF-8 (AISI 304 cast)
2	Check Valve Support	Stainless steel	ASTM CF-8 (AISI 304 cast)
3	Check Valve	Stainless steel	AISI 304 SS
4	Elastomers	EPDM	
5	Bolts and Screws	Stainless steel	AISI 304 SS
, 6	Shaft Sleeve and Bushing	Tungsten carbide	
7	Thrust Bearing	PTFE+Graphite	
8	Impeller	Stainless steel	AISI 304 SS
- 9	Diffuser	Stainless steel	AIS1 304 SS
10	Spacer	Stainless steel	AISI 431 SS
11	Tie Rođ	Stainless steel	AISI 304 SS
12	Cable Guard	Stainless steel	AISI 304 SS
13	Wear Rings	Technopolymer РРО	
14	Strainer	Stainless steel	AISI 304 SS
15	Shaft	Stainless steel	AISI 431 SS
16	Shaft Coupling	Stainless steel	AISI 431 SS
17	Motor Adapter	Stainless steel	ASTM CF-8 (AISI 304 cast)

ORDER NUMBER CODE



SYSTEM COMPONENTS

- Pump/Water End:
 - 6" Pump with 3" NPT discharge.
 - 4" Motor Adapter on 3 and 5 HP models.
 - 6" Motor Adapter on 7.5 HP and larger models.

■ Motor:

- 4" motor required for 3 HP and 5 HP pumps.
- 6" motor required for 7.5 HP and larger pumps.
- Control Box: Required for all single phase motors.
- Magnetic Starter: A magnetic starter with Class 10 overloads is required for all three phase units.

WATER ENDS AND MOTORS MUST BE ORDERED SEPARATELY AND ARE PACKAGED SEPARATELY.

Goulds Pumps is ISO 9001 Registered.



Application - Three-Phase Motors

Table 24 Three-Phase Motor Specifications (60 Hz)

Table 24		messan manage	Sec.	ilicatii	0000000	(00 11	~/	Bu i i a ta s		den saman name	Texas and	var avenue se com	(1000000000000000000000000000000000000	News and
	MOTOR		RATING			FUL	LLOAD	Mark Street	KIMUM?	LINETOLINE	EFFC	ENCY %	LOCKED	KVA
TYPE	MODEL. PREFIX	HP KW	VOLTS				k	Security	LOAD)	PESISTANCE OHMS	is Acres	Commence of the second	ROTOR. AMPS	CODE
	236650	HANCE THE PROPERTY.	200		SI6. 1.15	AMPS 17.5	4700	20.0	5400	.7793	79	79	99	Н
GII.	236600	5 37	230	ecception is	1.5	17.5	4700	17.6	5400	1.0-1.2	79	79	86	H
1	236660	5 3 <i>7</i> 5 3 <i>7</i>	380	Landon de la	1.15	9.1	4700	10.7	5400	2.6-3.2	79	79	52	H
	236610	5 37	460	erana e	1.75	7.5	4700	8.8	5400	3.94.8	79:	79	43	FAL
	236620		575	acceptanting at	1.15	6	4700	7.1	5400	6.3-7.7	79	79	34	H
	236651	7.5 5.5	200	THE REPORT OF THE	115	25.1	7000	28.3	8000	43-53	80	V 80	150	NHW
	236601	75 5.5	230	60	1.15	21.8	7000	24.6	8000	.6478	80	80	130	H
	236661	75 55	380	60	1 15	13.4	7000	15	8000	1621	80	80	79:	Fig.
	236611	7.5 5.5	460	60	1,15	10.9	7000	.12.3	8000	2.4-2.9	80.	. 80	65	Н
	236621	7.5 55	575	60	1.15	8.7	7000.	9.8	⊹8000s	3.744.6	:< 80	80	52.9	H
	236652	10 75	200	60	1.15	32.7	9400	37	10800	.3745	79	79	198.	Н
	236602	10 7.5	230	60	1.15	28.4	9400	-32:2	10800	47-57	.79	79	172	H
	236662	10 7.5	380	60	1.15	17.6	9400	19.6	10800	1.2-1.5	79	79	104	H
	236612,	10 75	460	60	15	14:2	9400	16.1	10800	5 1:9-2:4	79.	78	86	
	236622	10 75	575	ครายกรรมของสารที่ กระส	1.15	11.4	9400	-12.9	10800	3.0-3.7	79	79	69	H
	236653	15 11	2007		1 5	47.8	19700)	54.4	15800	24-29	181	81	306	₽ Hea
	236603	15 11	230	CONTRACTOR OF	1.15	41.6	13700	47.4	15800	.2835	81	81	266	H
	236663	- 15 Hi	380	entropy of the	15	25.8	13700	28/9	15800	77-95	84	818	161	
	236613	15 116	460	ENDER OF THE	i.15 D≌≅	20.8	13700	23.7	15800	1.1-1.4	81	81	133 2001	H
	236623 236654	15 11	200)	STATE OF THE PERSON	15	16.6 61.9	13700	(69.7)	15800	1823	181	81	106	
	236604	200 107 200 - F	2800	860	1.15/	50.83	18100 18100	60.6	20900 20900	.1620 .22-26	82 820	82	(416) 362	J
	236664	20 15 20 15	380		1.15	33	18100	37.3	20900	.5568	82	82	219	J
	2366.14	20 i.i. 20 15	460	60-Z	15	26.9	18100	303	20900	870	82	828	181	
	236624	20 15	575	recommendation	.15	21.5	18100	24.2	20900	1.3-1.6	82	82	145	J
	236655	25 185	200	60	45	77.1	22500	- 86.3	25700	12-15	83	83	552	
	236605	25 18.5	230	60 1	.15	67	22500	75	25700	.1519	83	83	480	J
	236665	25 185	380	60 Y	15	41	22500	46	25700	46:56	88	83	129134	
	236615	25 185	460	60 1	.15	33.5	22500	37.5	25700	.6377	83	83	240	J
	236625	25: 185:	57,5	607	k15	26.8	22500	-6301	25700	110113	83-	83	192	J. J.
	236656	30 22	200	60 1	.15	90.9	26900	104	31100	.0911	83 ***********	83	653	J
	37	.30. 22.	230	COLUMN TOO	. 5	79	26900	90.4	.31100≧	14917	683	83	568	J
	236666	30 22	380	~~~~~	.15	48.8	26900	55.4	31100	.3543	83	83	317	J
		30 22 36 22	***************************************	4 WANT IN THE PARTY OF THE PARTY.	Division in party and a	MANAGEMENT AND AND AND AND AND AND AND AND AND AND	26900	************	31100	A animalarity to Sality a Navigal Chical Specific	83			
	236626	30 22	575	energia de la composição de la composição de la composição de la composição de la composição de la composição	.15 1.25	31.6	26900	36.2	31100	.7895	83 *******	83	227	J Folk
		407 305	380 460	ACAD COMMENT OF STREET	تلتأوان فيكروها	66:5	35600	74.6	42400	26-33	. 88	83	481 397	J
		40 30 40 30	a seeds steeler as	escar terretar koase	.15 .15	54.9 42.8	35600 35600	61.6 49:6	42400 42400	.3442 .52-:64	83 83	83 83)	318	H
		40 30 50 37	575 380	Markett nest 1775	.15	83.5	45100	95	52200	.2125	82	83	501	H
	236618	50 <i>37</i> 50 <i>37</i>	460	กษาควรมายอ คร.สา	15	67.7	45100	77	52200	.2123	82	83	414	H
	236628	50 37	575		W. F. T. S.	54.2	45100	61.6	52200	.4049	82	83	331	H
		60 45	380	entra et el terre	 	98'75	53500	316	61700	1518	84	84	627	H
		60 45	460	CONTRACTOR AND SEC	en tradition	80.5	53500	91	61700	.2227	84	84	518	H
		60) 45	575	60 1	15	64.4.	53500	72.8	61700	35-39	84	84	414	WHO
				and the second second		· · · · · · · · · · · · · · · · · · ·								

Model numbers above are for three-lead motors. Six-lead motors with different model numbers have the same running performance, but when wye connected for starting have locked rotor amps 33% of the values shown. Six-lead individual phase resistance = table X 1.5.

6" ENCAPSULATED SUBMERSIBLE MOTORS

Motors
Drives
Controls
Protection

Single-Phase 5-15 hp & Three-Phase 5-40 hp 200-575 volts 60 & 50 Hz

Application Data:

These motors are built for dependable operation in 6-inch diameter or larger water wells. Temperature and time ratings are continuous in 86 °F (30 °C) water at 1/2 ft./sec. flow past the motor. Rotation: single-phase, CCW facing shaft end; three-phase, electrically reversible.

Basic Features:

- Full 3450 RPM design point
- Maximum temperature winding wire NEMA class 200
- Anti-track self-healing resin system
- Hermetically-sealed windings
- Removable Water-Bloc™ lead
- Double flange design
- Stainless steel shell
- Kingsbury-type water lubricated thrust bearing
- Pressure equalizing diapragm
- Sand slinger
- 3-lead & 6-lead (Wye Delta) configurations for 3-phase
- Copper bar rotor

Special Features:

- 316 Stainless Steel: Special construction option for acid, low pH, and seawater applications. All 316 SS motors include a Subtrol-Plus heat sensor.
- Sand Fighter™ models available for sandy wells. All Sand Fighter models include Subtrol-Plus heat sensor.

SUBMONITOR® OVERLOAD OPTION FOR THREE-PHASE MOTORS

A field proven and contractor friendly premium motor protection system. It protects the motor against overload, underload, overheating and rapid cycling. It also extends the motor warranty to a full three years.* The motor must be manufactured with a Subtrol-Plus® heat sensor.

*Contact factory for warranty details.







Availability

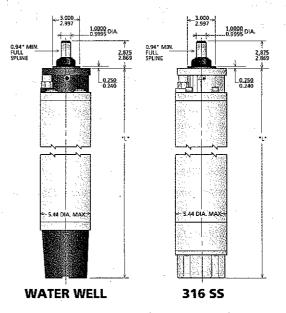
Single-Phase Capacitor start, Capacitor run (control box required)

		Wate	r Well	316	SS	Shir	pnia
HP		"L"		"L"		We	ight
		ΙN	CM	IN	CIVI	LES	KG
5	3.7	25.4	64.6	25.0	63.6	112	51
			71.1	27.6	70.1	125	57
10	7.5	30.6	77.7	30.2	76.6	143	65
	11.0		84.2	32.7	83.1	156	71

Three-Phase

		Wate		316			pping
H	KW		Dim	1.00	O m	Science I benefit of a life Sci	ight ve
5	3.7	22.9	€ (4.1 58.1	22.5	€ V. 57.1	103	(KG 47
7.5	5.5	24.2	61.4	23.8	60.4	110	50
10	7.5	25.4	64.6	25.0	63.6	118	54
15	11.0	28.0	71.1	27.6	70.1	131	60
20	15.0	30.6	77.6	30.2	76.6	147	67
25	18.5	33.1	84.2	32.7	83.1	158	72
30 40	22.0 30.0	35.7 40.8	90.7 103.7	35.3 40.4	89.6 102.6	176 206	80 94
40	ט.טנ	40.0	103.7	40.4	102.0	200	J 34

Note: 60 Hz - 3,450 RPM 50 Hz - 2,875 RPM



Construction Materials

Component	Standard Water Well	316 SS
Castings	Gray Iron	316 SS
Stator Shell	310 SS	316 SS
Stator Ends	Low Carbon Steel	316 SS
Shaft Extension	303 SS, Except 17-4 SS on 40 hp	17-4 SS
Fasteners	300 & 400 Series SS	316 SS
Seal Cover	304 SS & Sintered Bronze	316 SS
Seal	Carbon/Ceramic Face	Sand Fighter™ Seal System
Diaphragm	Nitrile Rubber	Nitrile Rubber
Diaphragm Plate	:304:5S	316 SS
Diaphragm Spring	302 SS	17-7 SS
Slinger	Nitrile Rubber	Nitrile Rubber
Lead Wire (or Cable)	XLPE	XLPE
Lead Potting	Ероху	Epoxy
Filter	Delrin & Polyester	316 SS Plug
Insulation	Class F	Class F

Note: Specifications subject to change without notice. Contact Franklin Electric if current material types are required for bid specifications.



400 East Spring Street, Bluffton, Indiana 46714 • Tel: 260.824.2900 Fax: 260.824.2909 • www.franklin-electric.com