855 –Filtrate Pump, Close Coupled and Overhead Mounted Pumps

Technical Specification Pages

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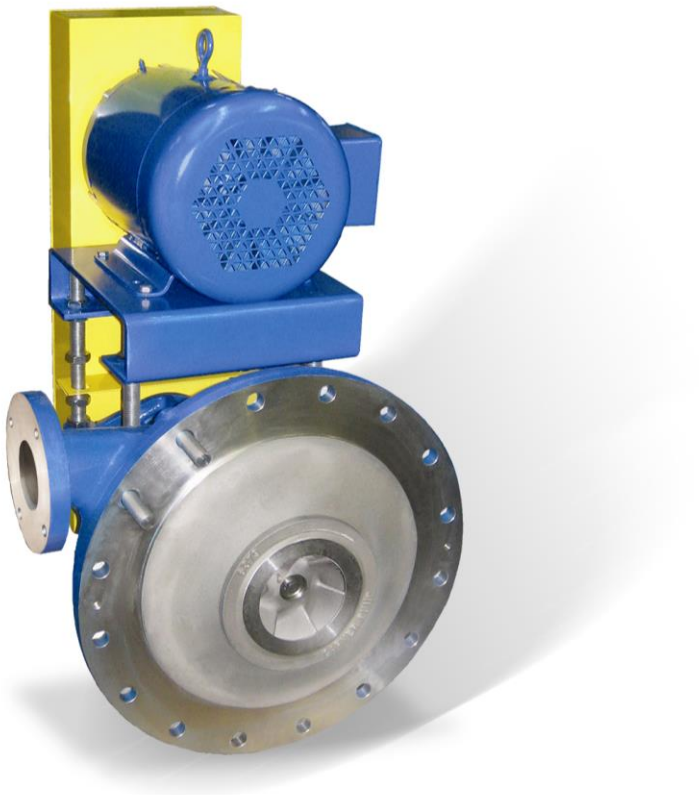
1.0 Overview.

The 855 Series is Carver's offering specifically designed to meet the needs of Filtrate Pump users. Since originally developed in the late 1950's at the request of a large Original Equipment Manufacturer (OEM) of vacuum filtration equipment, a wide variety of options are now being included as standards into each pump produced. Flange mounting directly to the receiver tank eliminates suction piping/NPSH problems and allows pumping to resume even after periods of interrupted flow. Capable of operating in vacuum conditions up to 26" Hg, the specially designed semi-open impeller assures pumping from a trickle to full capacity. Rugged in design and dependable in nature, the 855 Series is a workhorse in some of the toughest environments in the industry.

Capacities range to 1000 GPM, depending on discharge head and speed of operation. Available in 6 sizes ranging from 1"-4"; standard materials of construction include All Iron, CD4MCu and Rubber Lined. The 855 Series features an overhead v-belt drive arrangement as a standard, with options for close coupled or frame mounted drives. By utilizing either belt drive or variable frequency drive, performance characteristics can be fine-tuned to match most system requirements. Maintenance is simplified as the vertically split case may be disassembled to expose the entire wetted area. Standard features include a rotatable discharge casing which allows flexibility in locating desired discharge flange orientation, packed stuffing box with seal water connections provided to insure lubrication and eliminate vacuum/air leakage and 2" diameter stuffing box bore on all units. Pumps come with discharge flanges dual drilled for both 150lb / PN 10 connections. 17-4pH stainless steel shafts are utilized to both strengthen the shaft and eliminate the need for shaft sleeves (duplex shafts with CD4MCu). Impellers are keyed to the shaft, providing a secure fit and protection should momentary reverse rotation occur. The Swing-Out Mount is popular as an optional feature, allowing inspection of the pump or quick access to the tank interior.



1.1 855 Ordering Code.

The following Ordering Code defines the 855 Series pump and pump/motor and mounting arrangements. When quoting or ordering a pump, **this Ordering Code must be used**.

This Ordering Code enables Carver Pump Company to accept orders quickly, assuring timely and correct manufacture of the desired pump.

55 B B C A – B B A – E C B – # # # #

Pump Series:
55 – 855 Series

Drive Arrangement:
A – Overhead Belt Drive
B – Close-Coupled

X – Special

Pump Size:
A – 1”
B – 1.5”
C – 2”
D – 2.5”
E – 3”
F – 4”

Basic Material of Construction:
A – All Iron Construction
B – Natural Rubber Lined/CD4 Impeller
C – CD4MCu
D – CD4 Fitted
X – Special

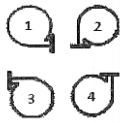
Sealing Arrangement:
A – Packed Box (**Standard**)
B – JC Single Type 1, 316SS metal parts w/CI gland*
C – JC Single Type 1, 316SS metal parts w/316SS gland*
D – JC Single Type 1, Monel metal parts w/316SS gland*

X – Special

*Mechanical seals B, C & D all include Silicon Carbide vs. Carbon Faces with Viton elastomers

Swing Out Mount Option:
A – No (**Standard**)
B – Yes

Mounting Arrangment (Viewed from Suction End):
A – Position 1
B – Position 2
C – Position 3 (**Standard**)
D – Position 4 (CC – Only)



X - Special

Drive Pac with Belts, Sheaves and Guards:
A – Yes (**Belt Drive Only**)
B – No

X – Special

Pump Speed (2400 RPM MAX):
– RPM

Motor Mount / Enclosure:
A – Foot Mounted / ODP
B – Foot Mounted / TEFC
C – Foot Mounted / XP
D – Foot Mounted IP54
E – Foot Mounted IP55
F – Close Coupled / ODP
G – Close Coupled / TEFC
H – Close Coupled / XP

X – Special
Z – None / Customer Supplied

Motor Speed, Voltage and Frequency:
A – 3500 RPM, 230/460 Volt, 60 Hz
B – 1750 RPM, 230/460 Volt, 60 Hz
C – 1150 RPM, 230/460 Volt, 60 Hz
D – 2900 RPM, 190/380 Volt, 50Hz
E – 1500 RPM, 190/380 Volt, 50Hz
F – 900 RPM, 190/380 Volt, 50Hz

X – Special
Z – None / Customer Supplied

Motor Power Rating:
A – 1.5 HP (1.1 kW)
B – 2 HP (1.5 kW)
C – 3 HP (2.2 kW)
D – 5 HP (4 kW)
E – 7.5 HP (5.5 kW)
F – 10HP (7.5 kW)
G – 15 HP (11 kW)
H – 20 HP (15 kW)
J – 25 HP (18.5 kW)
K – 30 HP (22 kW)
L – 40 HP (30 kW)

X – Special
Z – None / Customer Supplied

1.2 Standard Surface Treatment.

All 855 pumps are painted per Carver Standard PA-007. This provides for one coat of Carver Blue, industrial epoxy enamel with a 3-5 mils dry film thickness.

Surface Preparation of Key Components		
Component	**Material**	**Specification**
Bearing Frame	Ductile iron	Carver Standard PA-007
Belt Guard	Steel	Carver Standard PA-007
Casing	Rubber-lined C.I.	Carver Standard PA-007
	Cast iron	Carver Standard PA-007
	CD4MCu	N/A
Motor	Any	N/A

All of the guards are painted yellow, but the guard hardware as well as the adjusting nuts and rods are not painted because they are zinc plated.

Since all pumps and parts are assumed to be installed and operated soon after receipt, we do not include any special preservation for long term storage. We also assume no responsibility for storage deterioration after shipment unless explicitly stated in our quotation and purchase order acknowledgment.

Users can also provide their own protection by sealing all ports and openings and coating the pump internals with a water soluble preservative.

1.3 Material of Construction.

The standard materials and material specifications are given in the table below:

Key Component Materials		
Component	**Material**	**Specification**
Bearing Frame	Ductile Iron	ASTM A536
Casing	Rubber Lined Cast Iron	Natural Rubber ASTM A48, Class 30
	CD4MCu	ASTM A890
	Cast Iron	ASTM A48, Class 30
Impeller	Cast iron	ASTM A48, Class 30
	CD4MCu	ASTM A890
Shaft	17-4PH	ASTM A564
	Duplex	ASTM A276

1.4 Key 855 Mechanical Data.

Many of the key 855 design parameters are specified in the table below:

Key 855 Mechanical Data			
Item	**Bearing Frame**		
	KFA	KFB	KFC
Max power (BHP) @ 2400 RPM	20	30	33
Maximum Speed - RPM	2400	2400	2400
Pump Size(s)	1”	1-1/2”, 2” & 2-1/2“	3” & 4”
Maximum Discharge Pressure	100 psig / 690 kPa		
Bearing Type – radial bearing	6307	5307	5308
– thrust bearing	6307	5307	5308
Lubrication method (standard)	Sealed for life (Grease)		
L_{10} bearing life (hrs) - radial	50,000	25,000	25,000
- thrust	100,000	100,000	100,000
Radial to thrust bearing C/L (in)	5.83	7.25	9.18
Shaft diameters (in) @ pulley	1.26	1.26	1.26
@ impeller hub	0.875	0.875	0.875
@radial bearing	1.378	1.378	1.575
@ thrust bearing	1.378	1.378	1.575
@ stuffing box	1.25	1.25	1.25
Rotor WR2 (lb – in)	31.81	88.1	99.05

All L_{10} bearing lives shown are calculated per ANSI Standard B13.5-1972, and are usually given in each manufacturers’ bearing catalog as well. 855 pumps seal for life ball bearings as standard. Compared to other bearings:

- *less maintenance*
- *better protection from external contaminants*

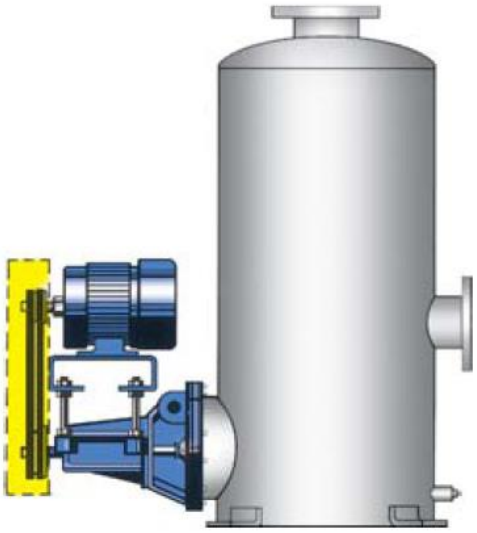
1.5 A Typical 855 Series Specification (Specifier's options in parentheses)

Each pump shall be a horizontal, end suction OH motor (close coupled) tank flange mounted centrifugal pump capable of developing (1000) US GPM at a total head of (90) feet when pumping water with a specific gravity of (1.00). In meeting these hydraulic conditions, the pump shall have not an NPSH requirement because the pump is designed to run under a vacuum and be self-priming once fluid returns to the system.

The pump shall include a separate liquid end, mechanical seal (packing) and bearing frame (CC Motor) sections for ease of maintenance. The liquid end shall be cast iron (rubber lined, CD4MCu), with all components fully compatible with the corrosion and abrasion properties of the pumped fluid. All pressure retaining parts shall be hydrostatically tested to 150% of the operating pressure and all piping connections shall be BSPT threaded connections for mechanical seal (packing) flush ports and drains. The discharge flanges are specially designed universal flanges that fit both ANSI Class 150 and DIN PN 10 measurements. The entire assembly is mounted to the specially designed tank flange.

The impellers shall be precision, semi-open type cast iron (CD4MCu) for highest efficiency. The impellers shall also be keyed to the pump drive shaft for positive driving. As a further means of assuring longer component life, all impellers shall be statically balanced in accordance with ISO 1940 G6.3 guidelines. The drive shaft shall be 17-4 PH (CD4MCu) for protection from corrosion and erosion over the life of the pump.

The bearing frame shall consist of 2 sealed for life bearings, one at the pump end and one at the drive end. The thrust and radial bearing shall have a minimum L_{10} life of 25,000 hours. The bearings shall not need to be greased, because they are sealed for life to enhance the ease of use of the pump. The bearing shall be secured to the shaft with a press fit.

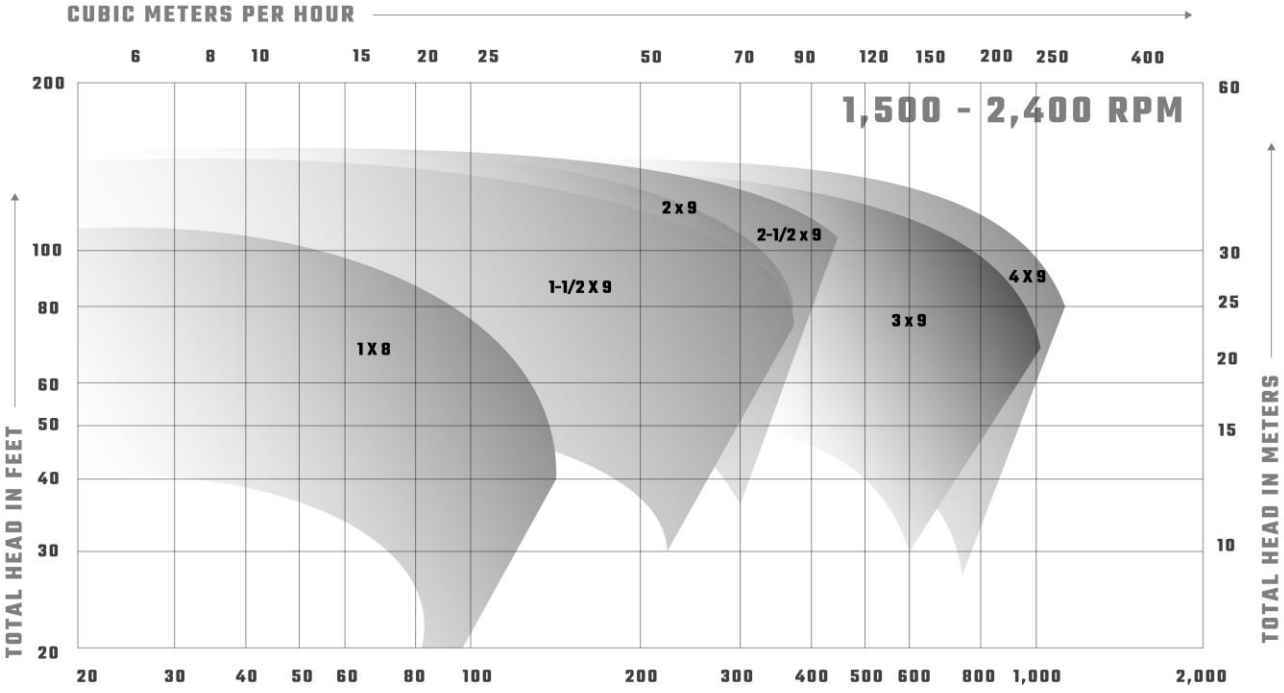


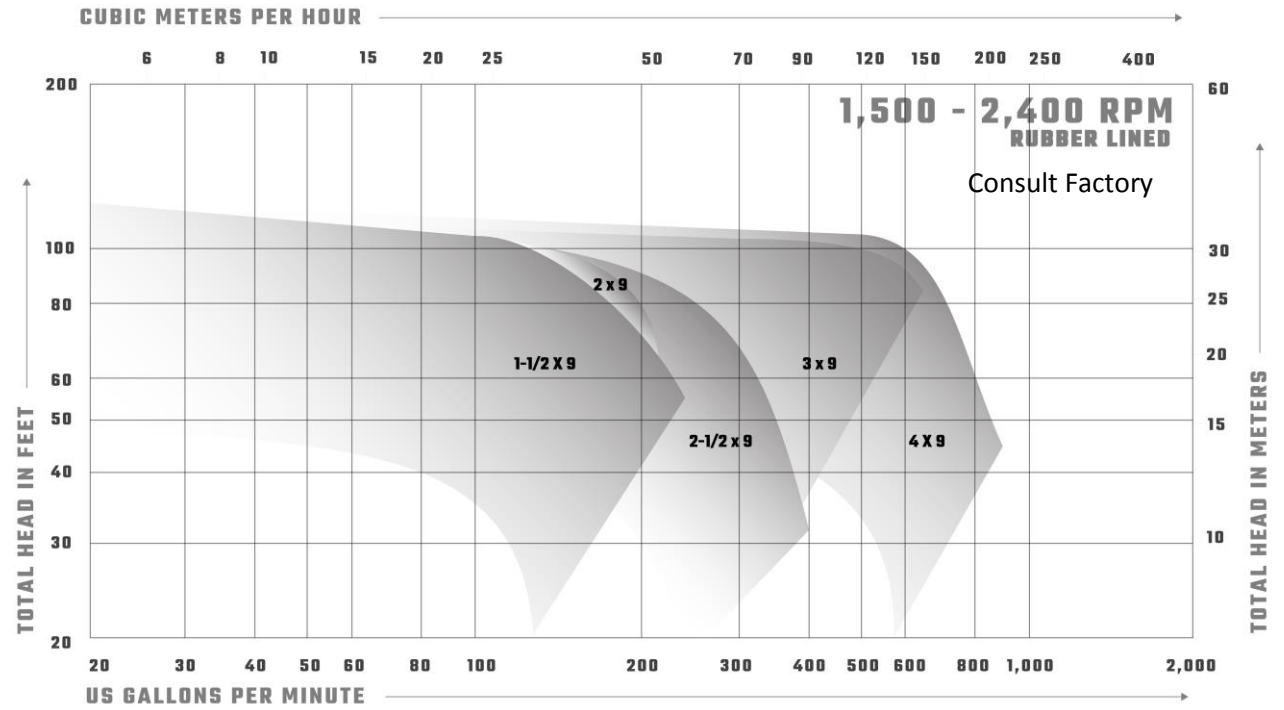
For pumps that shall have one mechanical seal (packing with lantern ring) the stuffing box shall be capable of accepting component mechanical seal. The seals shall have Viton elastomers, 316 Stainless Steel metal components, and carbon on ceramic (silicon carbide). The pump shall also need to be equipped with a 316 Stainless Steel external balance line to facilitate flushing and cooling in the stuffing box area of the pump.

The pump shall be supplied complete with a (swing out, belts and sheaves, guards, and motor plate). If an electric motor is also provided, it shall be sized to operate throughout the entire range of the pump performance curve without exceeding the nameplate horsepower rating of the motor. The motor can be mounted in 2 ways: over head on the motor plate as shown at right or close coupled. In all cases, the pump shall be a heavy-duty industrial design, 855 Series as manufactured by the Carver Pump Company of Muscatine, Iowa, or ISO-9001 Certified, United States manufactured approved or equal.

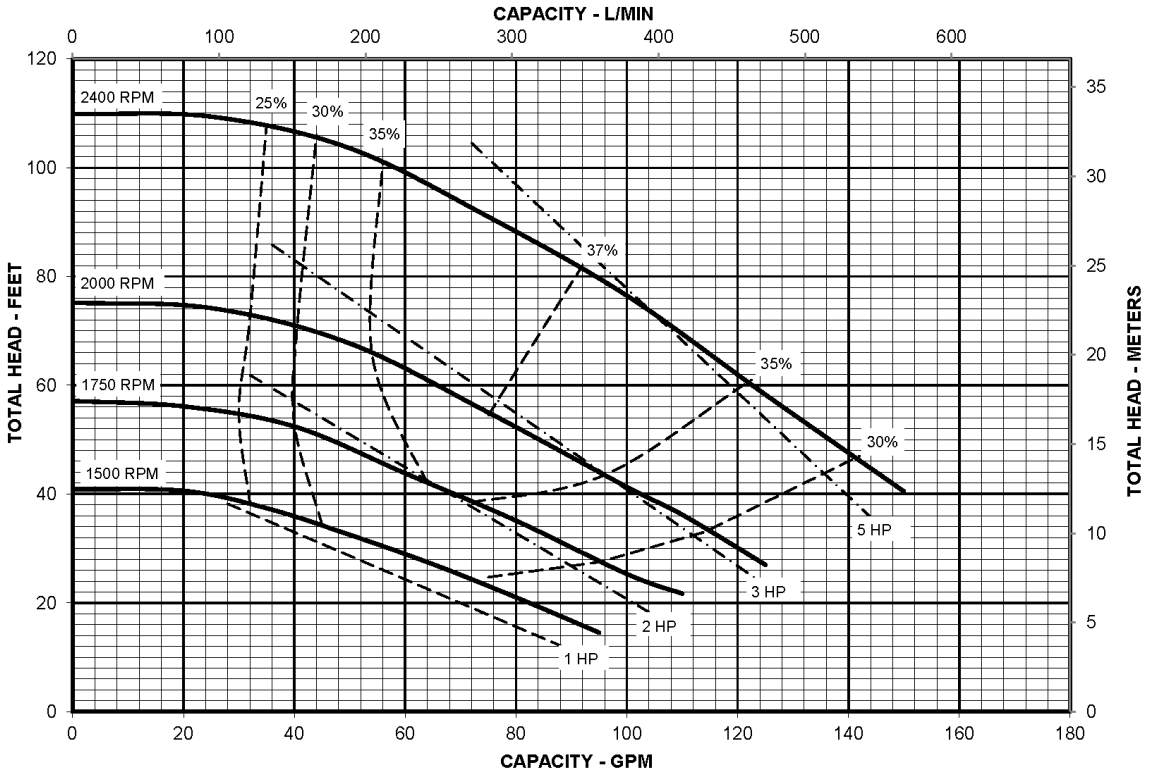
1.6 Hydraulic Coverage and Performance by Individual Size.

855 hydraulic performance extends to 1000 GPM and 140 feet of head. This range is covered by six sizes in cast iron, CD4MCu, rubber lined construction.

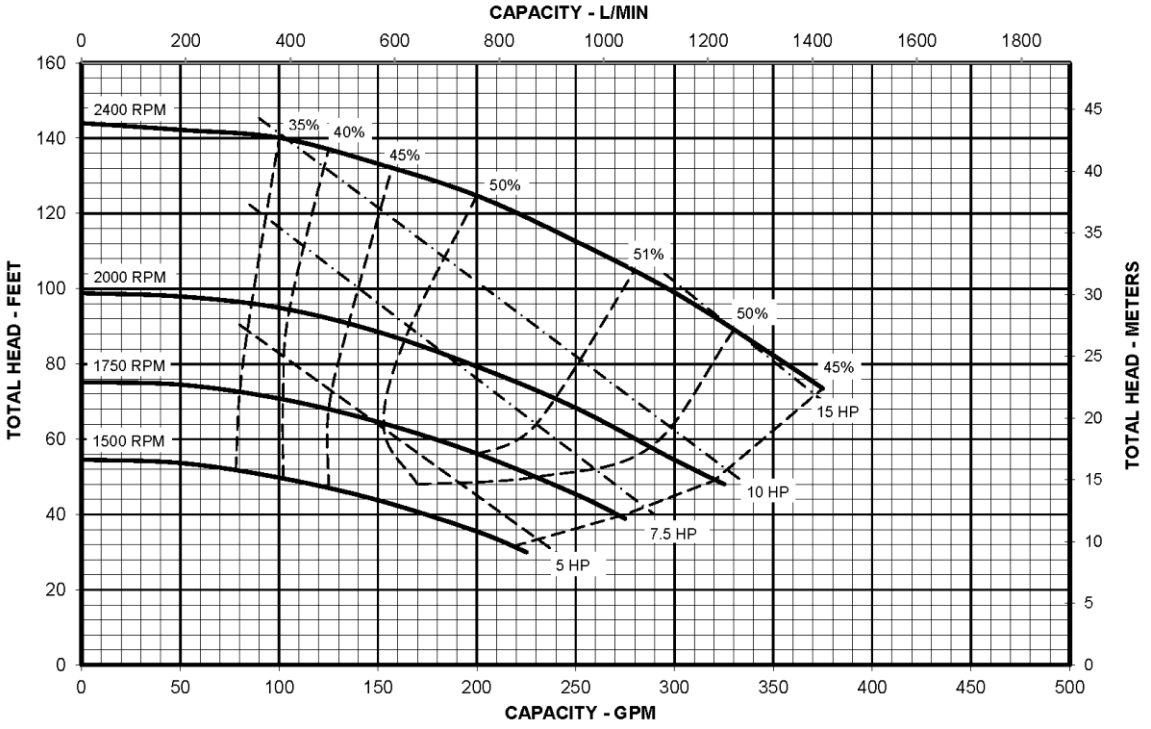




Hydraulic Performance – 1 x 8” Pump



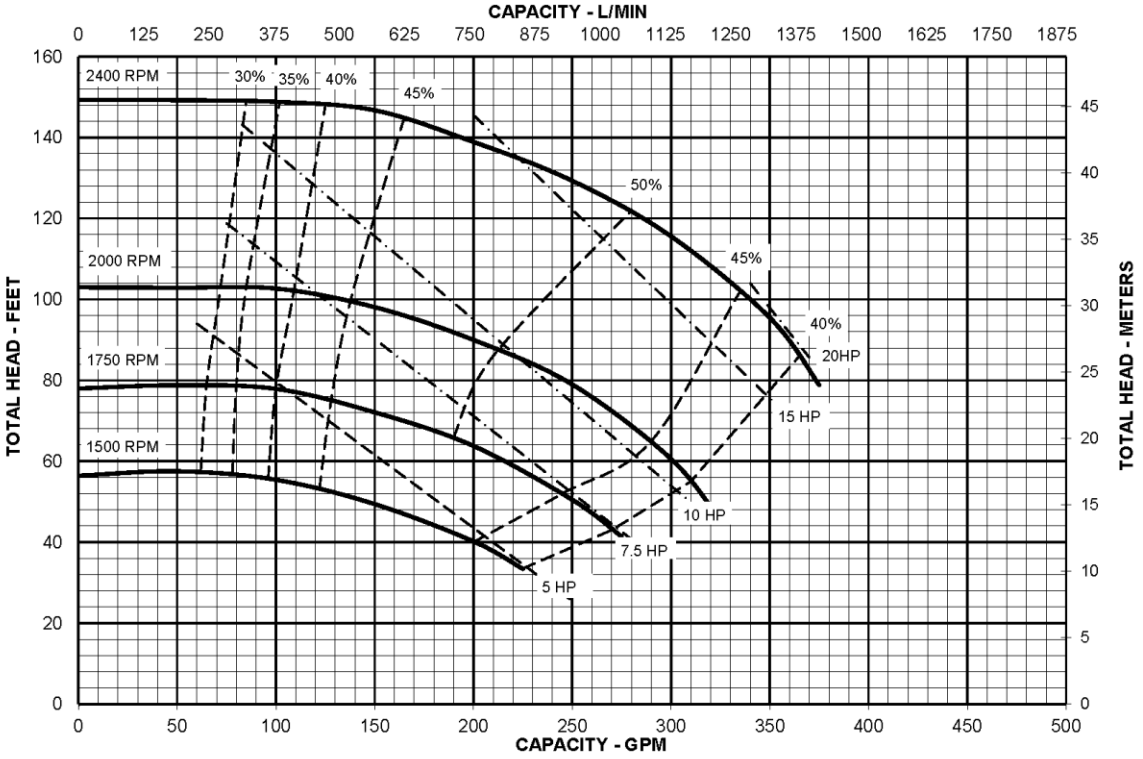
Hydraulic Performance – 1-1/2x 9” Pump



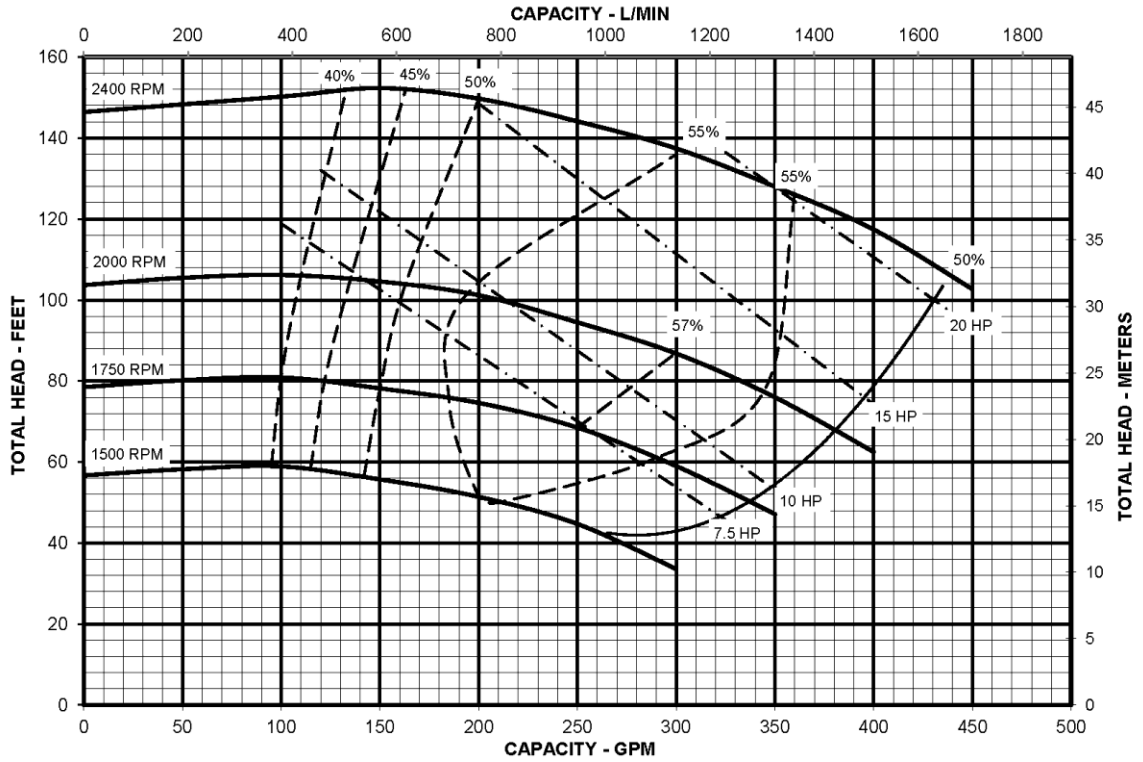
Notes:

1. Above data is based on 1.0 sp. gr. water at ambient temperature and pressure in accordance with Hydraulic Institute guidelines.

Hydraulic Performance – 2 x 9” Pump



Hydraulic Performance – 2.5 x 9” Pump



Notes:

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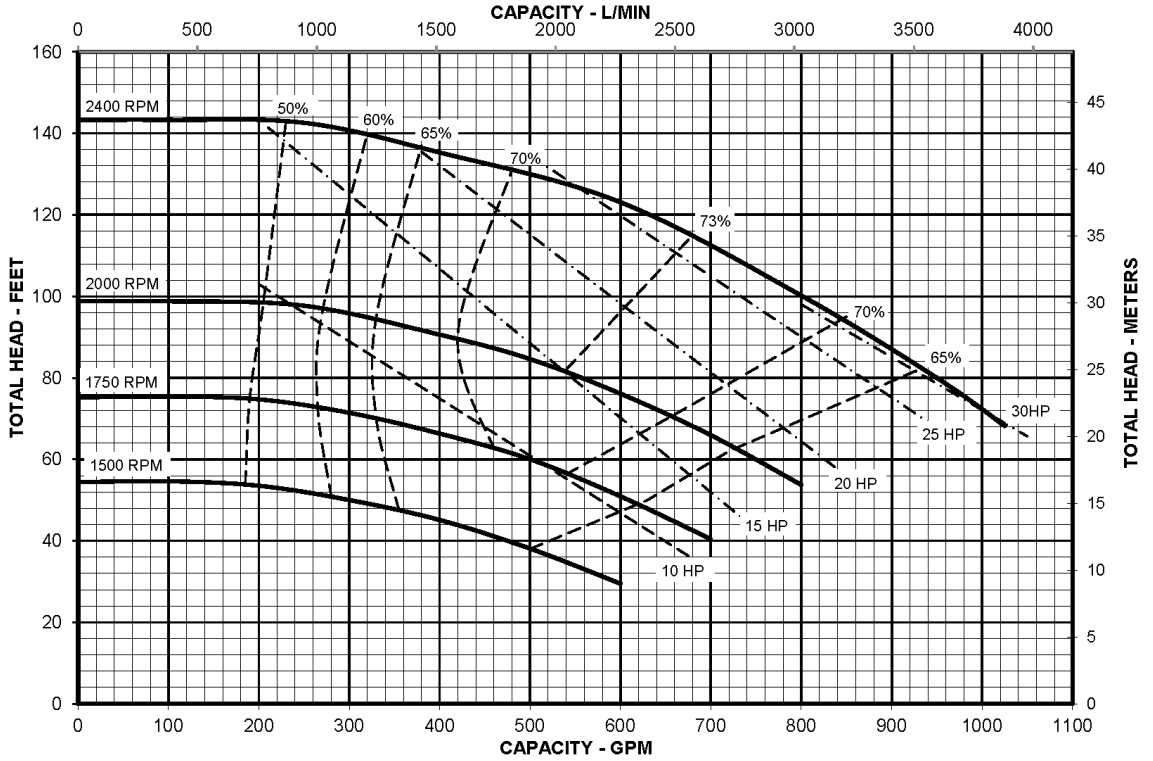
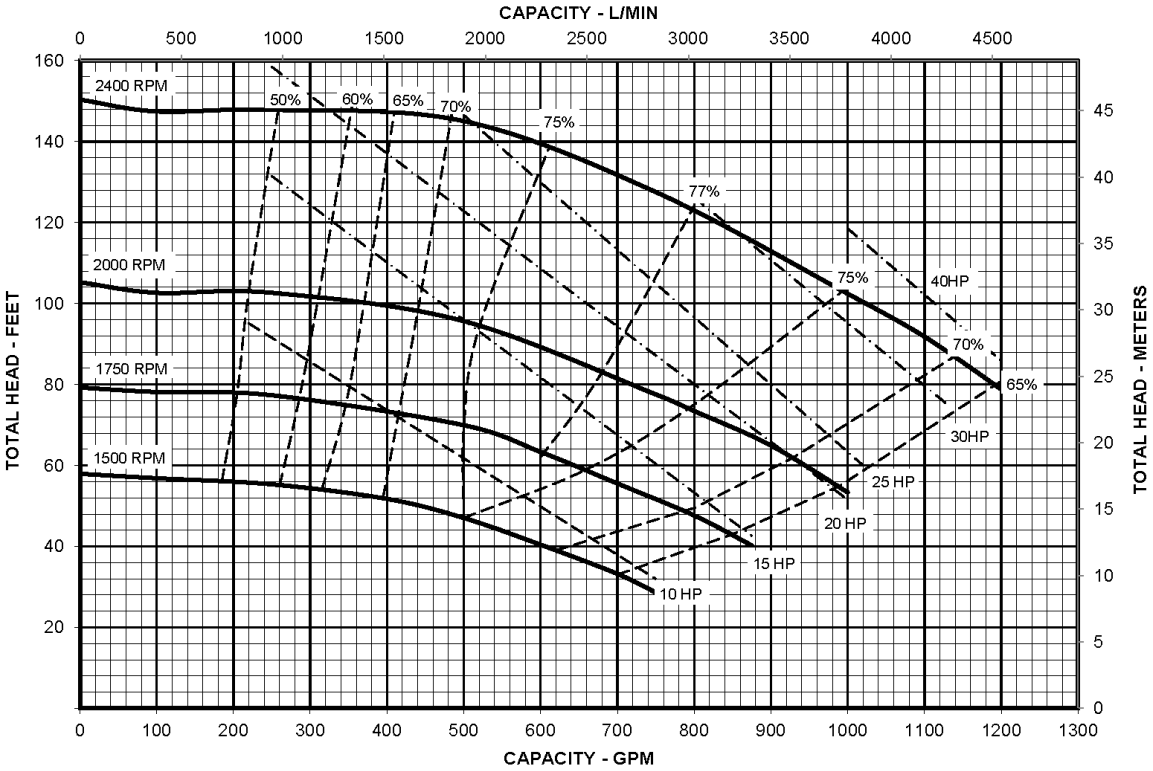
Hydraulic Performance – 3 x 9” Pump



Hydraulic Performance – 4 x 9” Pump



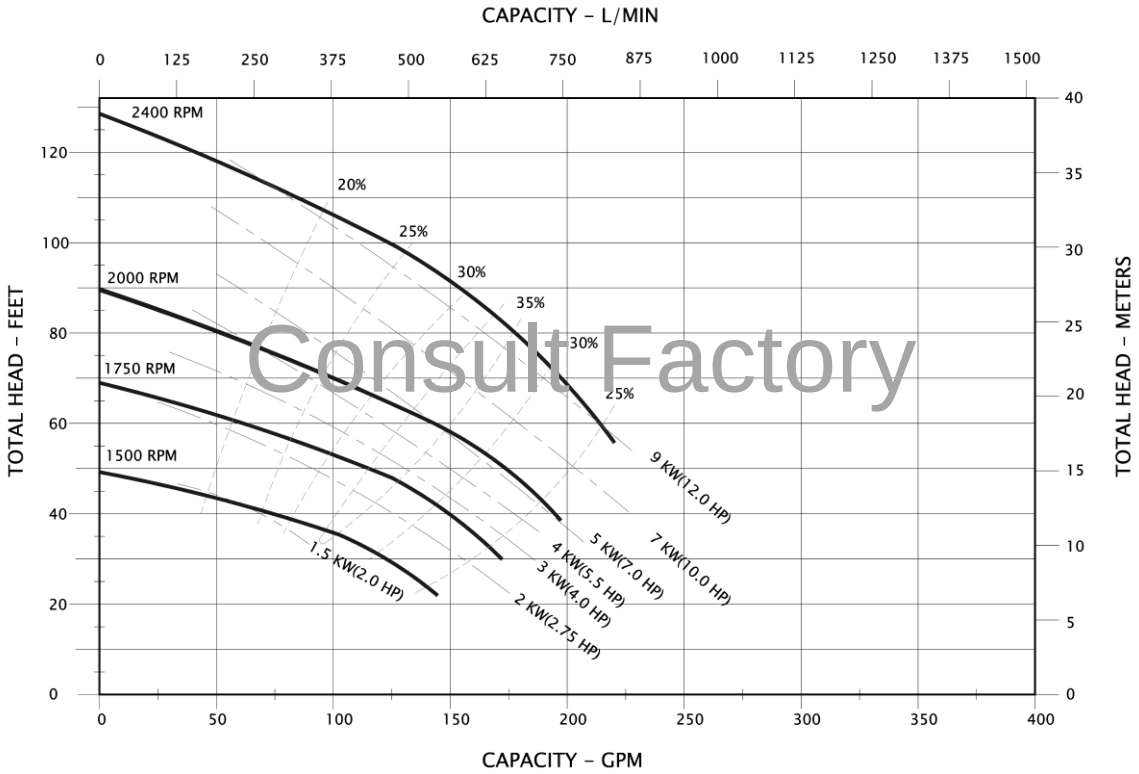
Notes:

1. Above data is based on 1.0 sp. gr. water at ambient temperature and pressure in accordance with Hydraulic Institute guidelines.

Hydraulic Performance – 1 x 8” Pump Rubber Lined

Note: Rubber lined pump is not available in the 1x8 size

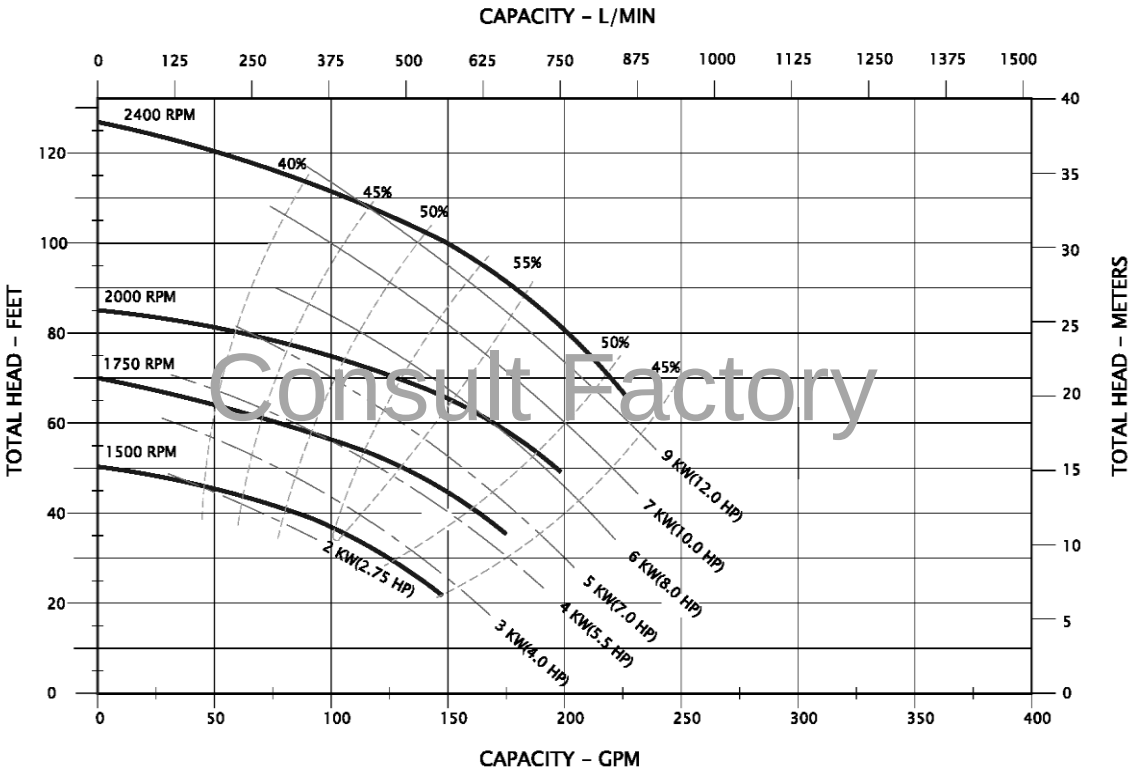
Hydraulic Performance – 1-1/2 x 9” Pump Rubber Lined



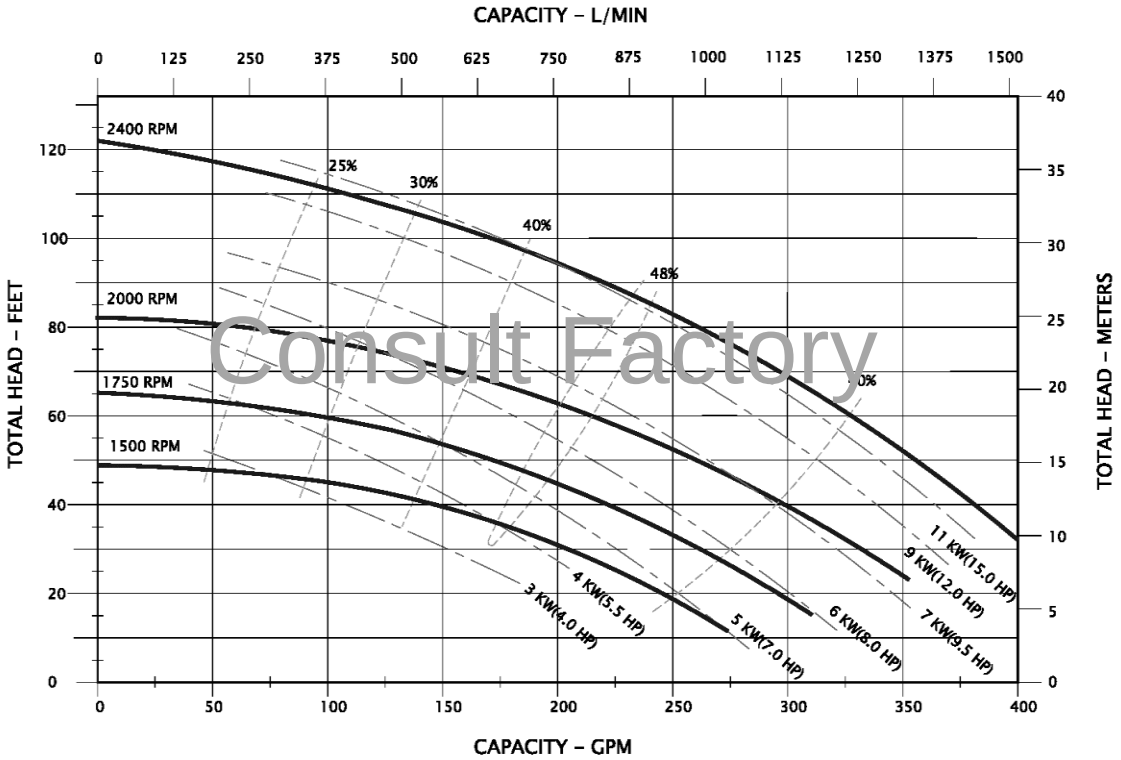
Notes:

1. Above data is based on 1.0 sp. gr. water at ambient temperature and pressure in accordance with Hydraulic Institute guidelines.

Hydraulic Performance – 2 x 9” Pump Rubber Lined



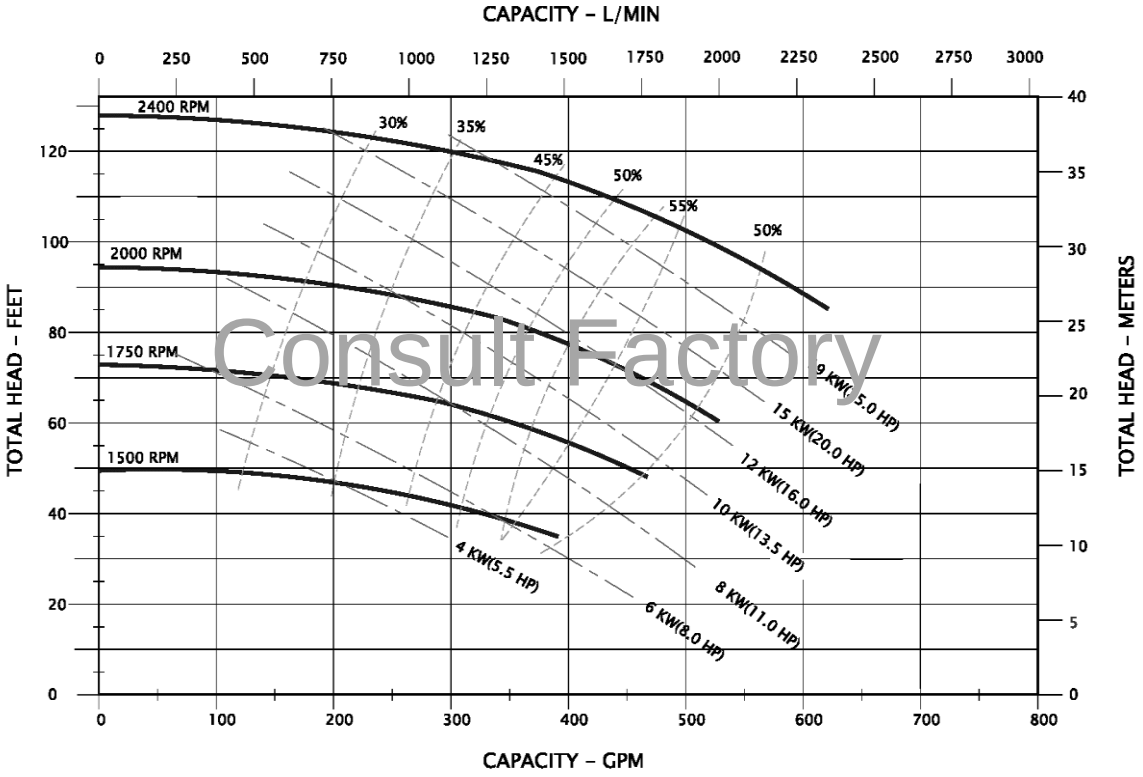
Hydraulic Performance – 2-1/2 x 9” Pump Rubber Lined



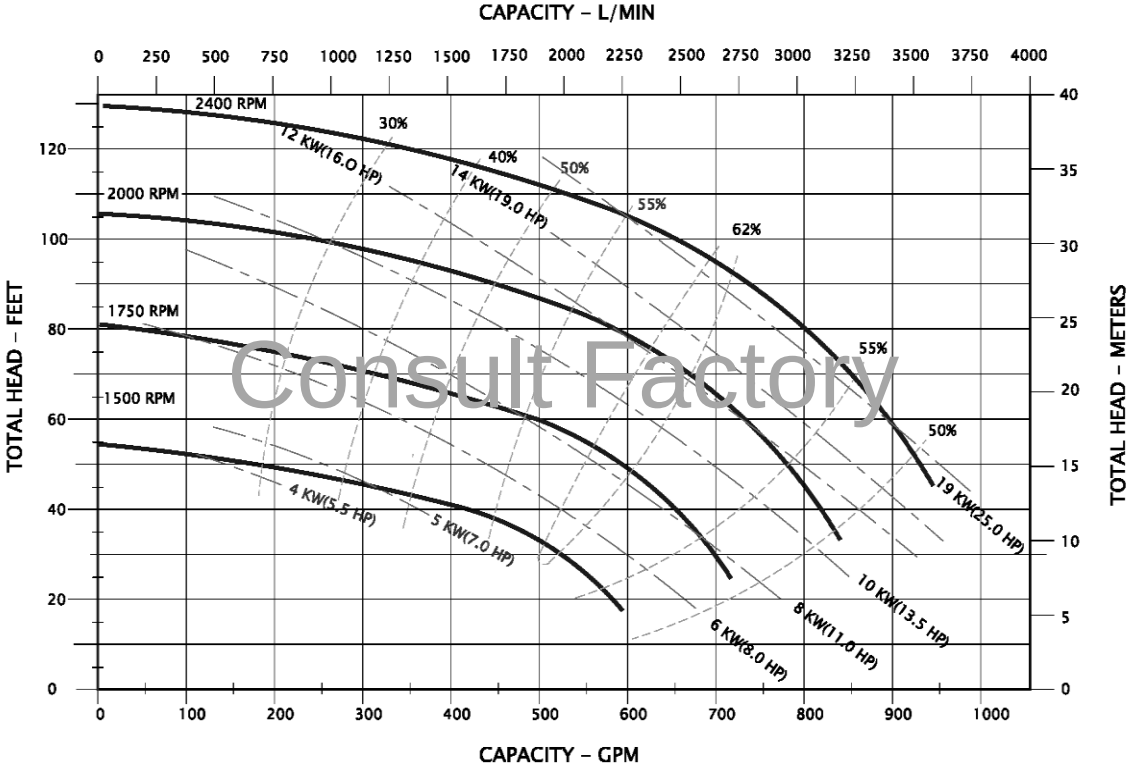
Notes:

1. Above data is based on 1.0 sp. gr. water at ambient temperature and pressure in accordance with Hydraulic Institute guidelines.

Hydraulic Performance – 3 x 9” Pump Rubber Lined



Hydraulic Performance – 4 x 9” Pump Rubber Lined



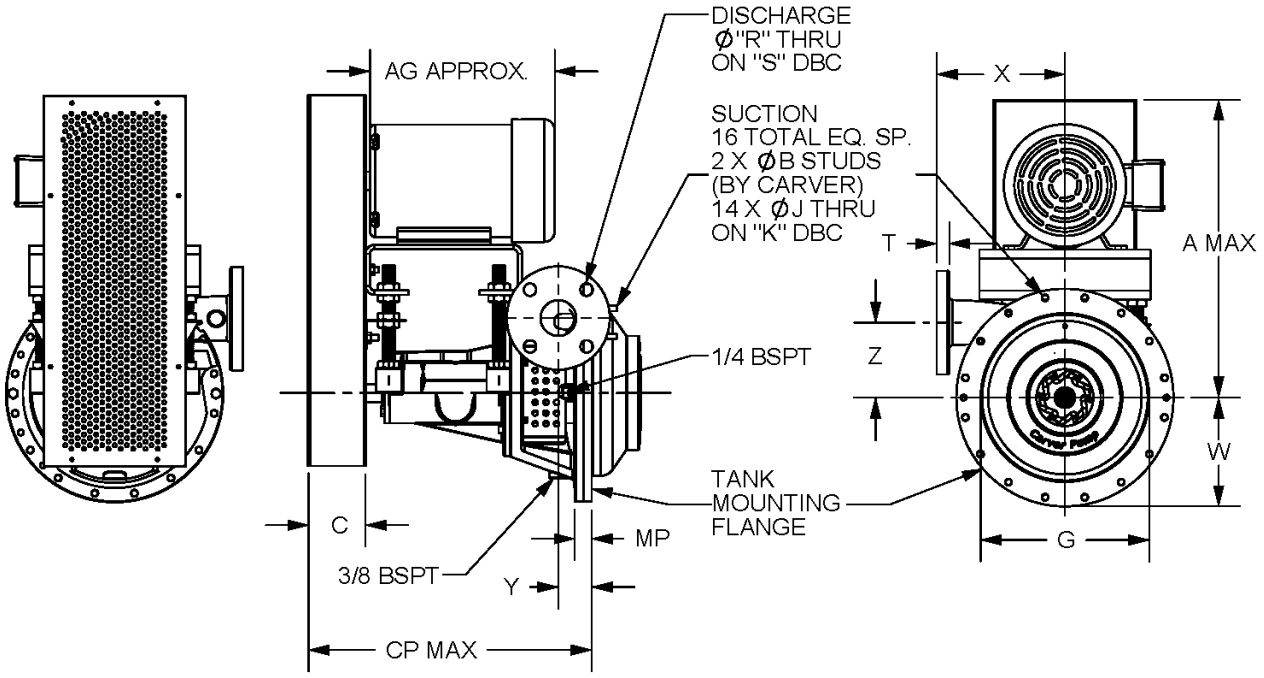
Notes:

1. Above data is based on 1.0 sp. gr. water at ambient temperature and pressure in accordance with Hydraulic Institute guidelines.

MODEL 855 OH

FLANGE MOUNTED

SP-KF-001



PUMP SIZE	PUMP DIMENSIONS - INCHES												
	B	G	CP	MP	T	W	X	Y	Z	J	K	R (QTY)	S
1 X 8	M10x1.5	8.00	19.75	0.88	0.63	6.75	8.00	1.91	4.44	0.47	11.75	0.75 (4)	3.19
1-1/2 X 9	M10x1.5	11.63	20.53	1.19	0.69	7.63	9.00	2.34	4.88	0.47	14.25	0.94 (4)	4.13
2 X 9	M10x1.5	11.63	20.88	1.19	0.75	7.63	9.00	2.09	5.25	0.47	14.25	0.88 (4)	4.88
2-1/2 X 9	M10x1.5	11.63	20.88	1.19	0.88	7.63	9.00	2.34	5.25	0.47	14.25	0.88 (4)	5.63
3 X 9	M20x2.5	14.63	24.84	1.60	0.94	10.25	11.63	3.16	5.81	0.88	18.75	0.94 (4)	6.13
4 X 9	M20x2.5	14.63	24.84	1.60	0.94	10.25	12.13	3.16	5.81	0.88	18.75	1.00 (8)	7.25

TOLERANCE ±.25 in.

NEMA MOTOR FRAME	MOTOR DIMENSIONS - INCHES		
	AG	A	C
143T	11.62	20.87	4.00
145T	13.00	20.87	4.00
182T	15.00	20.87	4.00
184T	16.50	20.87	4.00
213T	17.45	20.87	4.00
215T	17.45	20.87	4.00
254T	21.69	25.50	5.00
256T	21.69	25.50	5.00
284T	21.69	25.50	5.00
286T	21.69	25.50	5.00

PUMP SIZE	PUMP DIMENSIONS - mm											
	B	G	CP	MP	T	W	X	Y	Z	J	K	R (QTY)	S
1 X 8	M10x1.5	203.2	501.6	22.4	16.0	171.0	203.2	48.5	112.8	11.9	298.5	19.1 (4)	81.0
1-1/2 X 9	M10x1.5	295.4	521.5	30.2	17.5	194.0	228.6	59.4	124.0	11.9	362.0	23.9 (4)	104.9
2 X 9	M10x1.5	295.4	530.4	30.2	19.1	194.0	228.6	53.1	133.4	11.9	362.0	22.4 (4)	124.0
2-1/2 X 9	M10x1.5	295.4	530.4	30.2	22.4	194.0	228.6	59.4	133.4	11.9	362.0	22.4 (4)	143.0
3 X 9	M20x2.5	371.6	630.9	40.6	23.9	260.0	295.4	80.3	147.6	22.4	476.3	23.9 (4)	155.7
4 X 9	M20x2.5	371.6	630.9	40.6	23.9	260.0	308.1	80.3	147.6	22.4	476.3	25.4 (8)	184.2

TOLERANCE ±6.35mm

IEC MOTOR FRAME	MOTOR DIMENSIONS - mm		
	AG	A	C
80	246	530	102
90 S	267	530	102
90 L	267	530	102
100 L	321	530	102
160 M	600	650	127
160 L	600	650	127
180 M	700	650	127
200 L	750	650	127

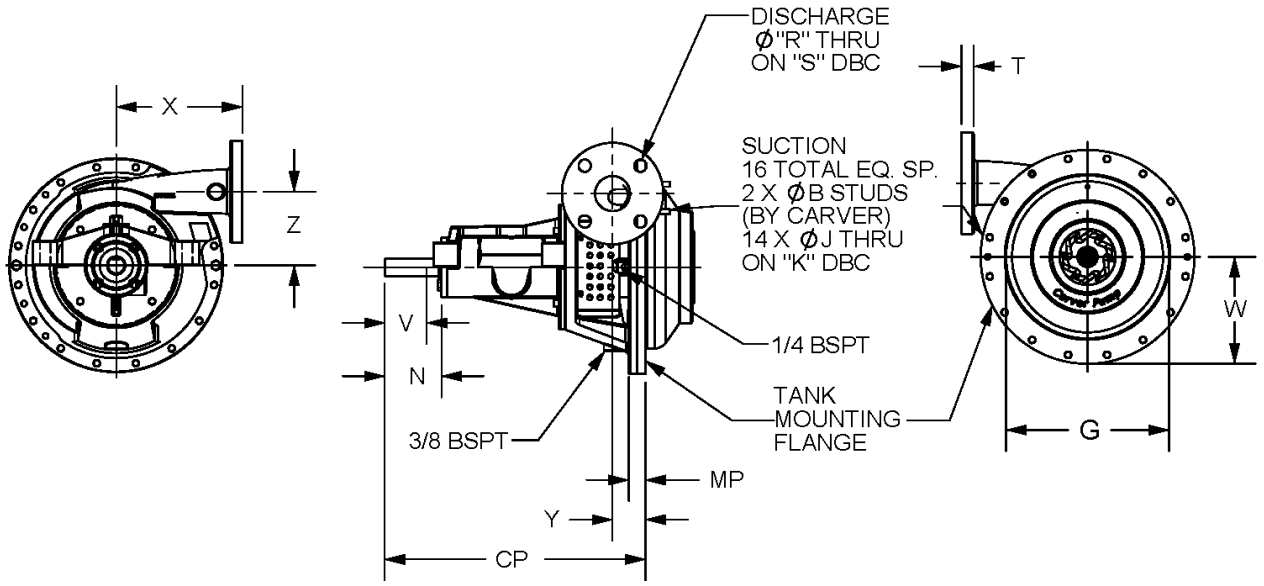
CARVER PUMP™

1. All dimensions in inches, all tolerances +/- 0.125 inch (+/- 6.35mm).
2. All motor dimensions are approximate.
3. Not valid for construction unless certified.

MODEL 855 OH BARE PUMP

SP-KF-002

FLANGE MOUNTED



PUMP SIZE	PUMP DIMENSIONS - INCHES															
	UNIT WEIGHT	B	CP	G	MP	N	W	V	X	Y	Z	J	K	R (QTY)	S	T
1 X 8	125 #	M10x1.5	17.86	8.00	0.88	3.81	6.75	3.00	8.00	1.91	4.44	0.47	11.75	0.75 (4)	3.19	0.63
1-1/2 X 9	146 #	M10x1.5	18.26	11.63	1.19	4.06	7.63	3.00	9.00	2.34	4.88	0.47	14.25	0.94 (4)	4.13	0.69
2 X 9	161 #	M10x1.5	18.61	11.63	1.19	4.06	7.63	3.00	9.00	2.09	5.25	0.47	14.25	0.88 (4)	4.88	0.75
2-1/2 X 9	161 #	M10x1.5	18.61	11.63	1.19	4.06	7.63	3.00	9.00	2.34	5.25	0.47	14.25	0.88 (4)	5.63	0.88
3 X 9	248 #	M20x2.5	22.05	14.53	1.60	4.27	10.25	3.00	11.63	3.16	5.81	0.88	18.75	0.94 (4)	6.13	0.94
4 X 9	250 #	M20x2.5	22.05	14.53	1.60	4.27	10.25	3.00	12.13	3.16	5.81	0.88	18.75	1.00 (8)	7.25	0.94

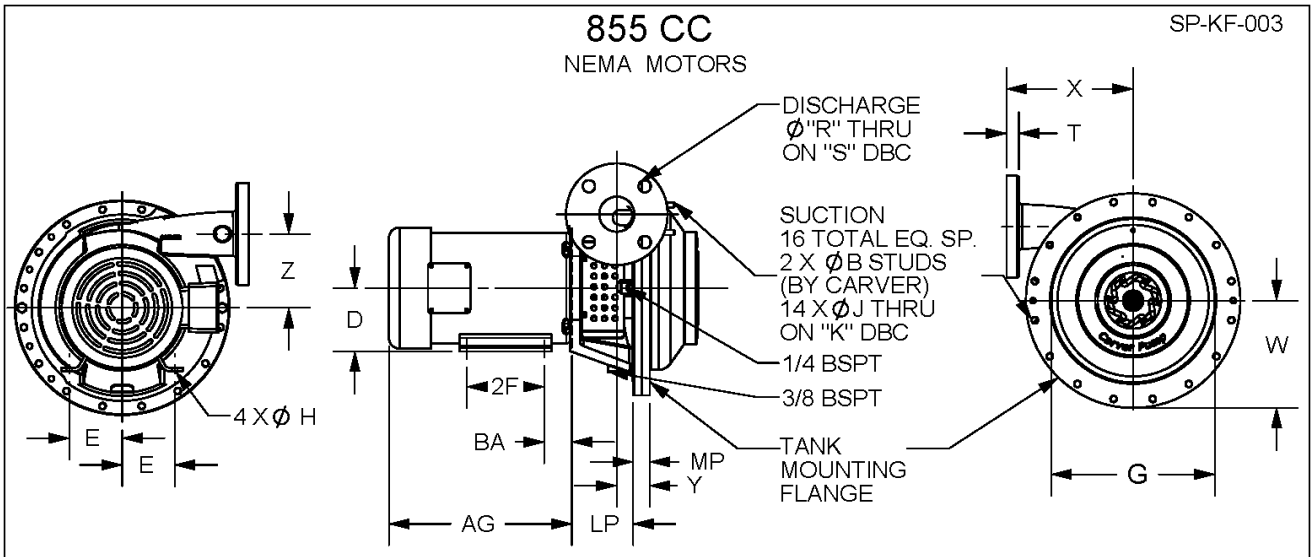
TOLERANCE ±.25in.

PUMP SIZE	PUMP DIMENSIONS - mm															
	UNIT WEIGHT	B	CP	G	MP	N	W	V	X	Y	Z	J	K	R (QTY)	S	T
1 X 8	57 KG	M10x1.5	453.6	203.2	21.6	96.8	171	76.2	203.2	48.5	112.8	11.9	298.5	19.1 (4)	81.0	16.0
1-1/2 X 9	66 KG	M10x1.5	463.8	295.4	30.2	103.1	194	76.2	228.6	59.4	124.0	11.9	362.0	23.9 (4)	104.9	17.5
2 X 9	73 KG	M10x1.5	472.7	295.4	30.2	103.1	194	76.2	228.6	53.1	133.4	11.9	362.0	22.4 (4)	124.0	19.1
2-1/2 X 9	73 KG	M10x1.5	472.7	295.4	30.2	103.1	194	76.2	228.6	59.4	133.4	11.9	362.0	22.4 (4)	143.0	22.4
3 X 9	112 KG	M20x2.5	560.1	371.6	40.6	108.5	260	76.2	295.4	80.3	147.6	22.4	476.3	23.9 (4)	155.7	23.9
4 X 9	113 KG	M20x2.5	560.1	371.6	40.6	108.5	260	76.2	308.1	80.3	147.6	22.4	476.3	25.4 (8)	184.2	23.9

TOLERANCE ±6.35mm

CARVER PUMP™

1. All dimensions in inches, all tolerances +/- 0.125 inch (+/- 6.35mm).
2. For motor dimensions CF and P see prior page.
3. Not valid for construction unless certified.



PUMP SIZE	PUMP DIMENSIONS - INCHES												
	LP	MP	B	G	W	X	Y	Z	J	K	R (QTY)	S	T
1 X 8	6.21	0.88	M10x1.5	8.00	6.75	8.00	1.91	4.44	0.47	11.75	0.75 (4)	3.19	0.63
1-1/2 X 9	4.03	1.19	M10x1.5	11.63	7.63	9.00	2.34	4.88	0.47	14.25	0.94 (4)	4.13	0.69
2 X 9	4.38	1.19	M10x1.5	11.63	7.63	9.00	2.09	5.25	0.47	14.25	0.88 (4)	4.88	0.75
2-1/2 X 9	4.38	1.19	M10x1.5	11.63	7.63	9.00	2.34	5.25	0.47	14.25	0.88 (4)	5.63	0.88
3 X 9	5.19	1.60	M20x2.5	14.53	10.25	11.63	3.16	5.81	0.88	18.75	0.94 (4)	6.13	0.94
4 X 9	5.19	1.60	M20x2.5	14.53	10.25	12.13	3.16	5.81	0.88	18.75	1.00 (8)	7.25	0.94

*TOLERANCE ±.25in.

PUMP SIZE	PUMP DIMENSIONS - mm												
	LP	MP	B	G	W	X	Y	Z	J	K	R (QTY)	S	T
1 X 8	157.7	22.4	M10x1.5	203.2	171.0	203.2	48.5	112.8	11.9	298.5	19.1 (4)	81.0	16.0
1-1/2 X 9	102.4	30.2	M10x1.5	295.4	194.0	228.6	59.4	124.0	11.9	362.0	23.9 (4)	104.9	17.5
2 X 9	111.3	30.2	M10x1.5	295.4	194.0	228.6	53.1	133.4	11.9	362.0	22.4 (4)	124.0	19.1
2-1/2 X 9	111.3	30.2	M10x1.5	295.4	194.0	228.6	59.4	133.4	11.9	362.0	22.4 (4)	143.0	22.4
3 X 9	131.8	40.6	M20x2.5	371.6	260.0	295.4	80.3	147.6	22.4	476.3	23.9 (4)	155.7	23.9
4 X 9	131.8	40.6	M20x2.5	371.6	260.0	308.1	80.3	147.6	22.4	476.3	25.4 (8)	184.2	23.9

*TOLERANCE ±6.35mm

NEMA MOTOR FRAME	MOTOR DIMENSIONS - INCHES					
	BA	D	AG	E	2F	H
143JP	2.25	3.50	10.50	2.75	4.00	0.34
145JP	2.25	3.50	11.50	2.75	5.00	0.34
182JP	2.75	4.50	12.63	3.75	4.50	0.41
184JP	2.75	4.50	13.64	3.75	5.50	0.41
213TCZ	3.50	5.25	15.25	4.25	5.50	0.41
215TCZ	3.50	5.25	16.75	4.25	7.00	0.41

NEMA MOTOR FRAME	MOTOR DIMENSIONS -mm					
	BA	D	AG	E	2F	H
143JP	57.2	88.9	266.7	69.9	152.4	8.6
145JP	57.5	88.9	292.1	69.9	152.4	8.6
182JP	69.9	114.3	320.8	95.3	171.5	10.4
184JP	69.9	114.3	346.5	95.3	171.5	10.4
213TCZ	88.9	133.4	387.4	108.0	177.8	10.4
215TCZ	88.9	133.4	425.5	108.0	215.9	10.4

CARVER PUMP™

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2. All motor dimensions are approximate.
3. Not valid for construction unless certified.

Model 855 Tank Mounting Flange

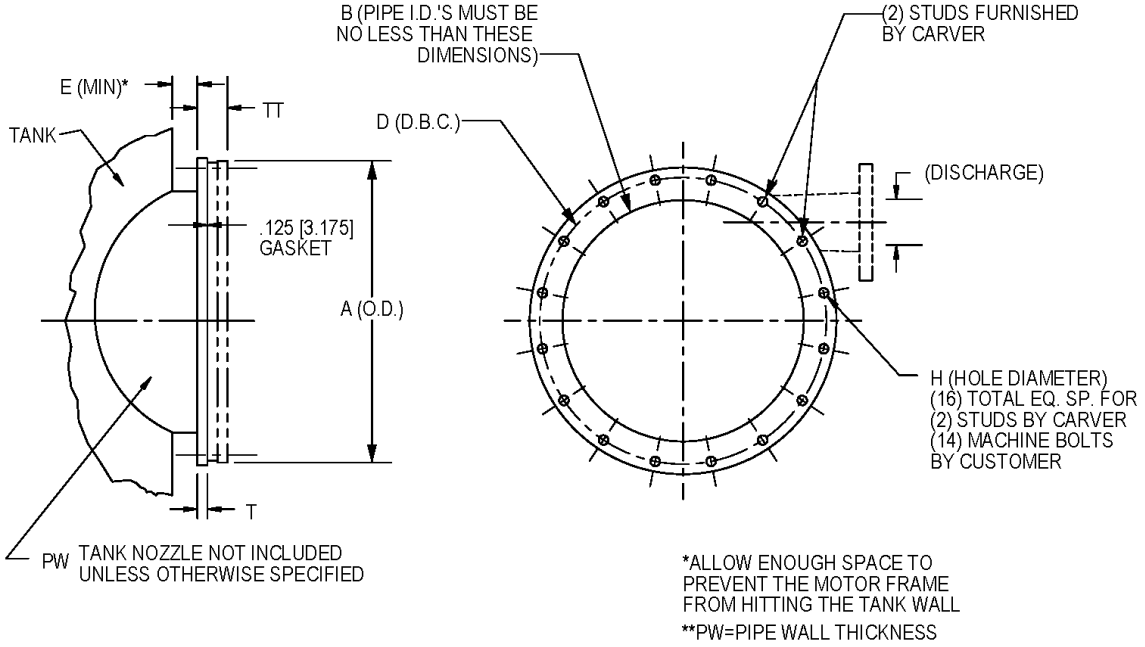
250-KF-005

U.S.CUSTOMARY

Pump Size	Max. Wt, lbs.	Discharge Size	Discharge Connection	Dimensions (inch) A	B	D	E	H	PW**	T	TT	Flange Mounting Bolts Diameter	Pitch	Length
1x8	340	1	Flanged ANSI 125# FF	13.50	10	11.75	4.00	0.47	0.25	0.375	1.500	M10	1.5	50
1½x9	400	1 1/2	Flanged ANSI 125# FF	15.25	12	14.25	4.25	0.47	0.25	0.375	1.750	M10	1.5	60
2x9	550	2	Flanged ANSI 125# FF	15.25	12	14.25	4.50	0.47	0.25	0.375	2.000	M10	1.5	65
2½x9	550	2 1/2	Flanged ANSI 125# FF	15.25	12	14.25	4.50	0.47	0.25	0.375	2.000	M10	1.5	65
3x9	750	3	Flanged ANSI 125# FF	20.50	15	18.75	5.25	0.88	0.25	0.375	2.250	M20	2.5	85
4x9	760	4	Flanged ANSI 125# FF	20.50	15	18.75	5.25	0.88	0.25	0.375	2.250	M20	2.5	85

METRIC

Pump Size	Max. Wt, kg.	Discharge Size	Discharge Connection	DIMENSIONS (mm) A	B	D	E	H	PW**	T	TT	Flange Mounting Bolts Diameter	Pitch	Length
1x8	150	25	Flanged DIN PN10	343	254	298	100	12	6	10	38	M10	1.5	50
1½x9	190	40	Flanged DIN PN10	387	300	362	110	12	6	10	44	M10	1.5	60
2x9	250	50	Flanged DIN PN10	387	300	362	115	12	6	10	51	M10	1.5	65
2½x9	250	65	Flanged DIN PN10	387	300	362	115	12	6	10	51	M10	1.5	65
3x9	350	80	Flanged DIN PN10	521	380	476	135	22	6	10	57	M20	2.5	85
4x9	350	100	Flanged DIN PN10	521	380	476	135	22	6	10	57	M20	2.5	85



CARVER PUMP™

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2. All motor dimensions are approximate.
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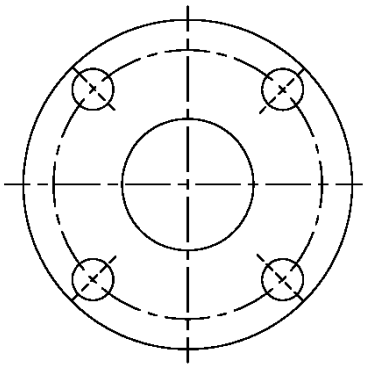
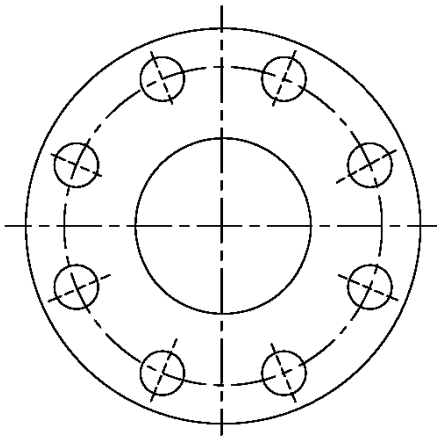
Model 855 Universal Discharge Flange

ANSI SIZE/DIN SIZE	1"/25MM	1.5"/40MM	2"/50MM	2.5"/65MM	3"/80MM	4"/100MM
ANSI HOLE	5/8"	5/8"	3/4"	3/4"	3/4"	3/4"
DIN HOLE	1/2"	3/4"	3/4"	3/4"	3/4"	3/4"
CARVER HOLE	3/4"	15/16"	7/8"	7/8"	15/16"	1"
ANSI D.B.C.	3-1/8"	3-7/8"	4-3/4"	5-1/2"	6"	7-1/2"
DIN D.B.C.	3-3/8"	4-3/8"	4-15/16"	5-3/4"	6-5/16"	7-1/16"
CARVER D.B.C.	3-3/16"	4-1/8"	4-7/8"	5-5/8"	6-1/8"	7-1/4"
ANSI THICKNESS	.56"	.69"	.75"	.88"	.94"	.94"
DIN THICKESS	.63"	.63"	.71"	.71"	.79"	.79"
CARVER THICKNESS	.63"	.69"	.75"	.88"	.94"	.94"

ALL DIMENSIONS ARE DIAMETERS



3" AND SMALLER



4"

CARVER PUMP™

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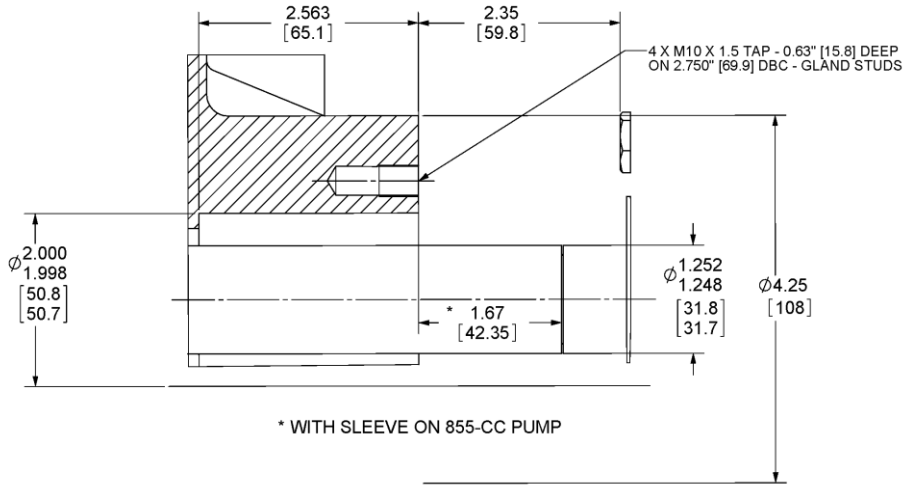
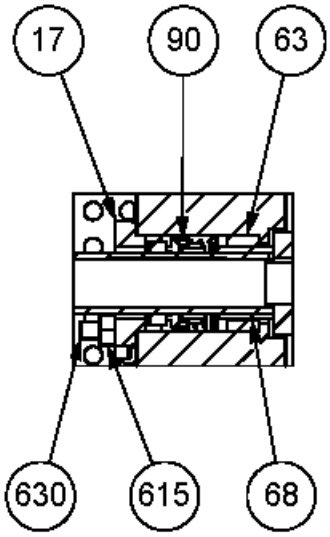
3. Not valid for construction unless certified.

Stuffing Box Dimensions



Mechanical Seal

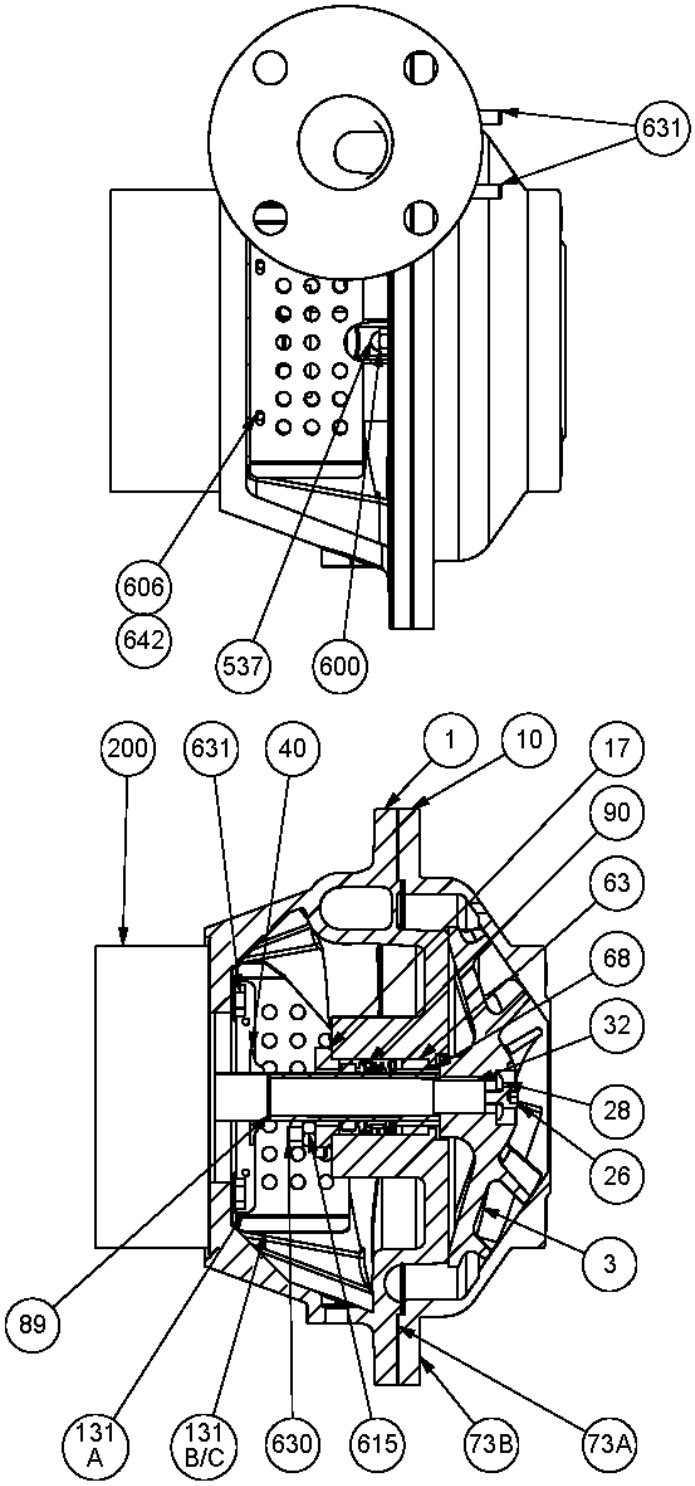


Item No.	Description
*17	Gland
*63A	Throttle Bushing – Seal
*68	Spacer – Mechanical Seal
*90	Mechanical Seal
615	Hex Nut – Gland
630	Stud - Gland

*Options

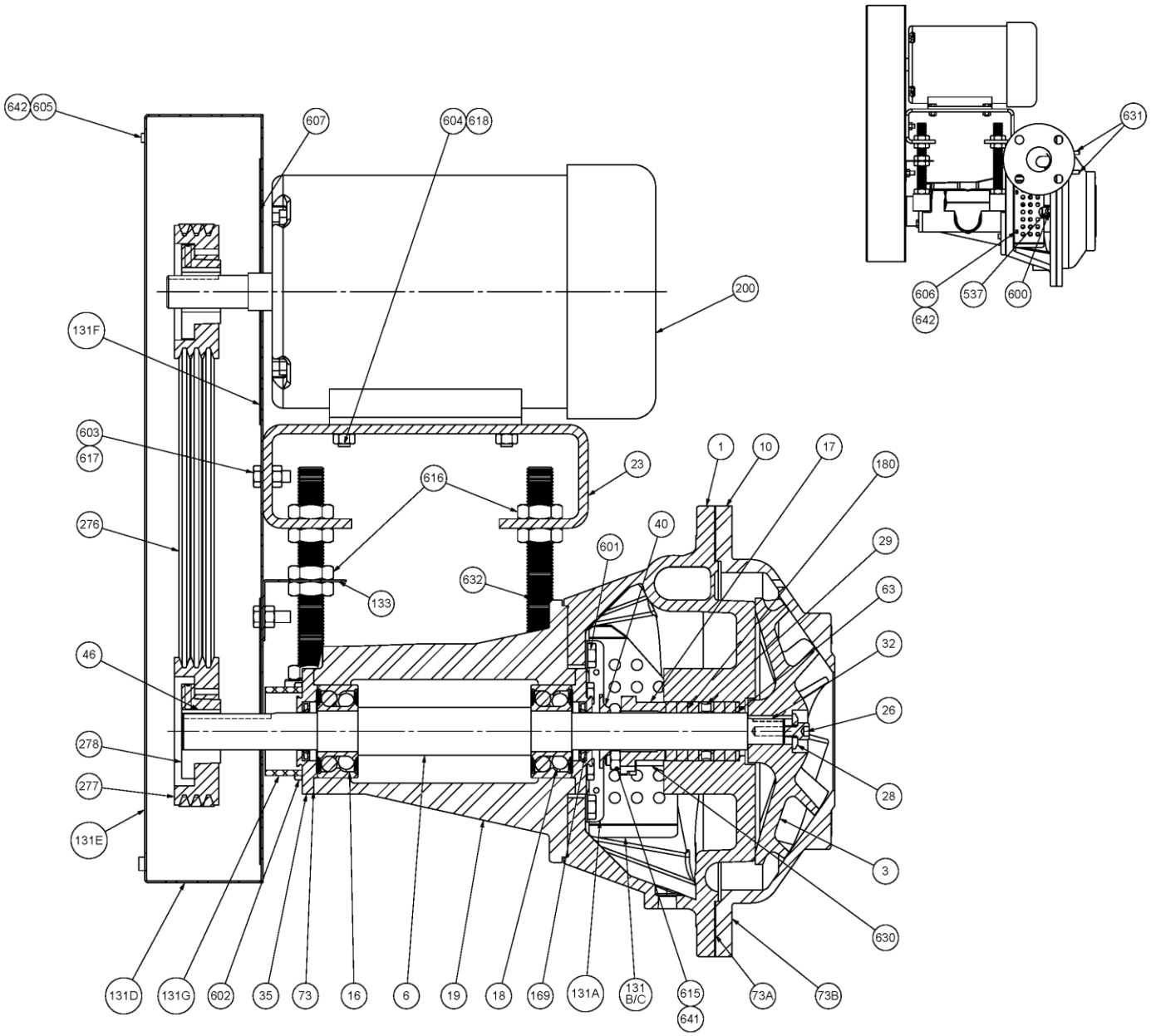
CARVER PUMP™	1. All dimensions in inches, all tolerances +/- 0.125 inch (+/- 6.35mm). 2. All motor dimensions are approximate. 3. Not valid for construction unless certified.	

Sectional Assembly – Close-coupled Pump (Shown with Mechanical Seal)



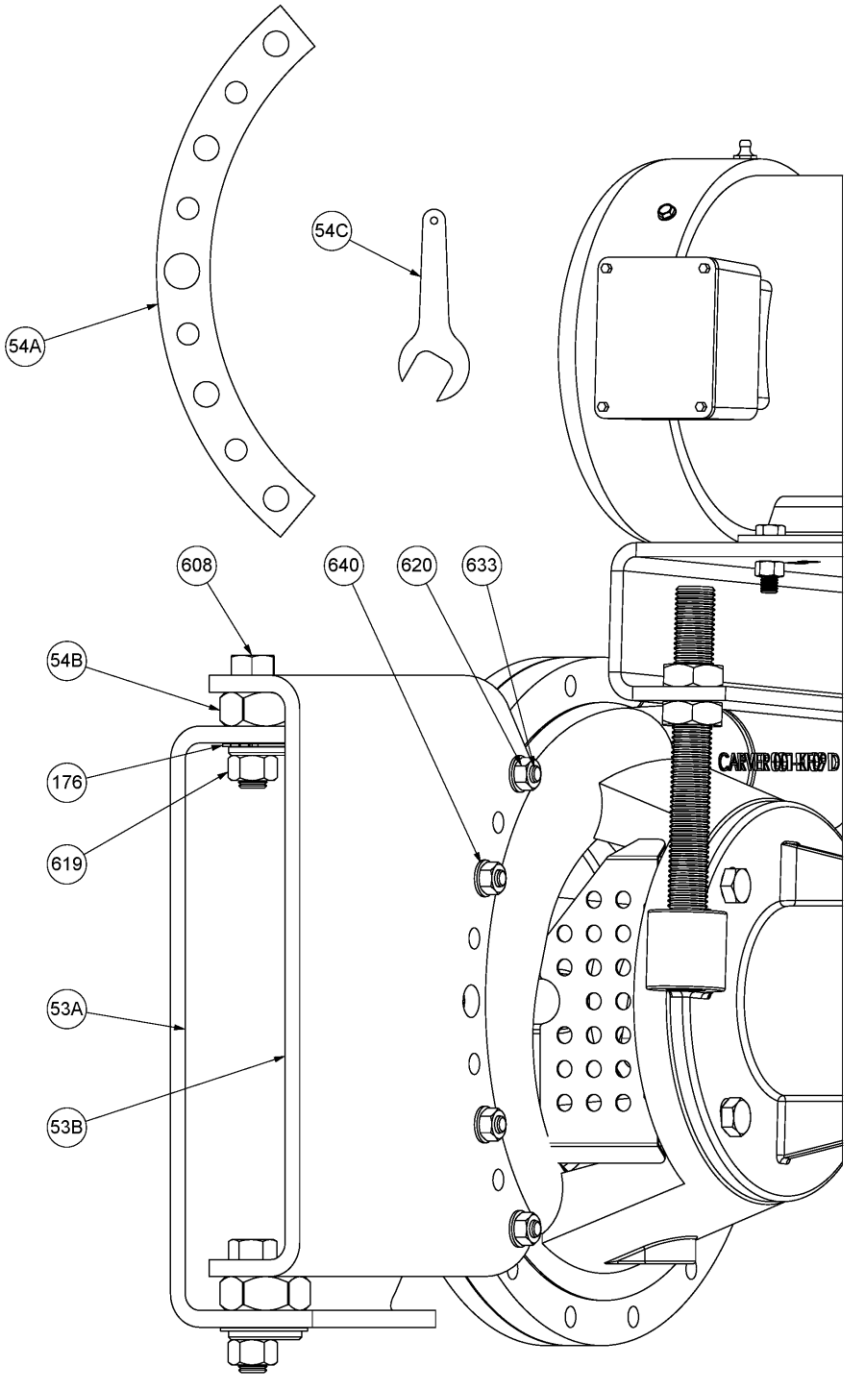
CARVER PUMP™	1. Not valid for construction unless certified.	

Sectional Assembly, with Overhead Drive (Shown with Packing)



CARVER PUMP	1. Not valid for construction unless certified.	

Swing-out Assembly



CARVER PUMP™	1. Not valid for construction unless certified.	

Parts List

Item Number	Description	Item Number	Description
1	Casing	131D	Belt Guard
3	Impeller	131E	Cover, Belt Guard
6	Shaft	131G	Shaft Guard
10	Suction Cover	133	Bracket, Belt Guard
*14	Shaft Sleeve	169	Lip Seal
15	Impeller Shim (not shown)	*176	Snap Ring - Adjuster Bolt
16	Ball Bearing	*180	Packing
*17	Gland	200	Motor
18	Ball Bearing	276	Belt
19	Bearing Frame	277	Sheave
23	Motor Plate	278	Bushing
26	Impeller Capscrew	537	Bushing - BSPT TO NPT
28	Impeller Washer	600	Capscrew – Casing/Cover
*29	Lantern Ring	601	Capscrew – Casing
32	Key, Impeller	602	Capscrew – Bearing Cap
35	Bearing Cap	603	Bolt – Guard
40	Slinger	**604	Bolt – Motor / Base
46	Key, Pump Bushing	605	Screw - Guard Cover
46X	Key - Motor Bushing	606	Screw - Splash Guard
*53A	Hinge Plate – Lower	607	Screw - Slide Guard
*53B	Hinge Plate – Upper	*608	Bolt – Swing-out Hinge
*54A	Spacer Plate	615	Hex Nut - Gland
*54B	Adjuster Bolt	616	Jam Nut - Adjustment
*54C	Adjuster Wrench	617	Hex Nut - Guard
*63	Retaining Ring - Packing	**618	Hex Nut - Motor
*63A	Throttle Bushing - Seal	*619	Hex Nut – Swing-out Hinge
*68	Spacer - Mechanical Seal	*620	Hex Nut – Swing-out Mounting
73	Gasket, Frame - Cap	630	Stud - Gland
73A	Gasket, Casing - Suction	631	Stud - Casing
73B	Gasket, Suction - Tank	632	Threaded Rod - Adjusting
*89	O-Ring, Sleeve	*633	Stud – Swing-out Mounting
*90	Mechanical Seal	*640	Flat Washer – Swing-out Mounting
131A	Bracket, Splash Guard	*641	Flat Washer - Gland
131B	Splash Guard, Right	642	Flat Washer - Guard Screw Retaining
131C	Splash Guard, Left		

* Parts are options that vary by pumping unit. ** Supplied by incorporator of motor ***Supplied by Pump Installer

Recommended Spare Parts List

Item Number	Description	Item Number	Description
3	Impeller	46	Key, Pump Bushing
*14	Shaft Sleeve	*68	Spacer - Mechanical Seal
15	Impeller Shim (set)	73	Gasket, Frame - Cap (set)
16	Ball Bearing	73A	Gasket, Casing - Suction
*17	Gland	73B	Gasket, Suction - Tank
18	Ball Bearing (Impeller End)	*89	O-Ring, Sleeve
28	Impeller Washer	*90	Mechanical Seal
*29	Lantern Ring	*180	Packing
32	Key, Impeller		

*Parts are options that vary by pumping unit.

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CARVER PUMP™

Built for purpose

2415 Park Avenue, Muscatine, IA 52761
Phone: 563.263.3410 www.carverpump.com

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