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MARCH PUMPS

1819 PICKWICK AVE., GLENVIEW, IL 60026-1306, U.S.A
PHONE: (847) 729-5300 - FAX: (847) 729-7062
WWW.MARCHPUMP.COM

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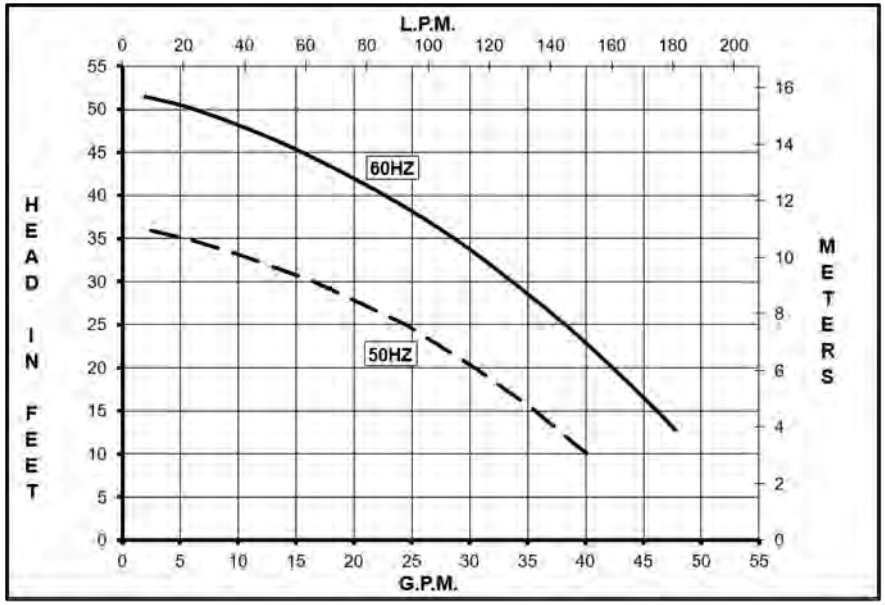
SP-TE-7P-MD, SP-TE-7K-MD



DESCRIPTION & OPERATION: : SP-TE-7-MD series are centrifugal magnetic drive pumps eliminating the need for a shaft seal. Pumps can be serviced with an adjustable wrench. See the parts list for a breakdown of parts. The housing container should be filled completely with liquid. The container holds approximately 1-3/4 gallons. After the container is full and the filler cap has been screwed tight, check all the connections for any leakage. Start the motor and continue to check for any leakage. The pump has the ability to pull up water a distance of 12 feet from the surface of your supply tank to the pump within one minute. If the unit does not self-prime, then check for leakage or for obstructions. Pumps **cannot be run dry** because the impeller requires the liquid being pumped for lubrication. The direction of the motor rotation should be counterclockwise when facing the motor end of the pump. A trimmed impeller may be necessary when pumping a liquid with a specific gravity or viscosity greater than water as well in cases of high liquid temperature. For application assistance, contact March Pump.

Model Abbreviations: P: Polypropylene, K: Kynar

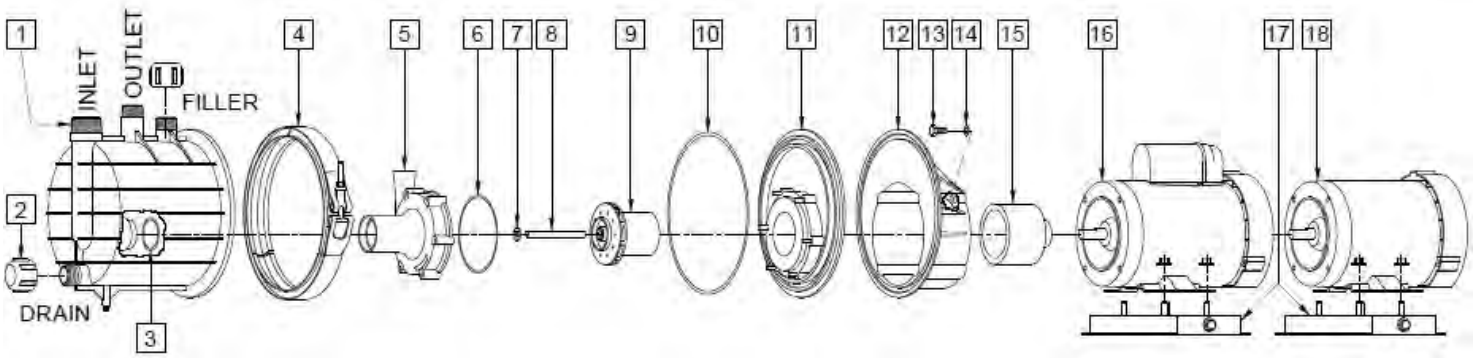
ELECTRICAL: 1 phase 115/230 Volt, 50/60 Hz or 3 phase 230/460 Volt, 60 Hz, 190/380 Volt, 50 Hz. Motors are totally enclosed fan cooled and are U.L. listed as well as rated for continuous operation. All motors have a conduit box for electrical connections.

DISASEMBLY & REASSEMBLY: Drain all the liquid from the unit and flush with water. Examine the exploded view of the pump construction before starting to disassemble to become familiar with the unit. Loosen the hex nut on the "V" retainer clamp. Slide off the clamp. The housing container can now be removed. The front housing can now be pulled forward and removed. The impeller will slide off the shaft. Clean all the parts as necessary and replace any worn or damaged parts. Reassemble as shown in the exploded view. Make sure the "O" rings and thrust washer are in the proper position.

Specifications		SP-TE-7P-MD	SP-TE-7K-MD
Product	1Ph	0155-0330-0100	0155-0331-0100
	3Ph	0155-0330-0200	0155-0331-0200
Inlet-Outlet		1-1/2"FPT-1"MPT	1-1/2"FPT-1"MPT
Max Internal Pressure		40PSI (275 kPa)	40PSI (275 kPa)
Max Liquid Temperature		180F (82C)	180F (82C)

	60Hz											50Hz											
	Max Flow		Max Head			Electrical						Max Flow		Max Head			Electrical						Packed Weight
Model	GPM	LPM	FT	PSI	M	Ph	V	A	HP	kW	RPM	GPM	LPM	Feet	PSI	M	Ph	V	A	HP	kW	RPM	Pounds
SP-TE-7P-MD	53	201	52	22.5	15.8	1	115/230	12.6/6.2	1	0.75	3450	47.6	181	36	15.6	11	1	115/230	14.3/7.1	1	0.75	2850	54
SP-TE-7P-MD	53	201	52	22.5	15.8	3	230/460	3/1.5	1	0.75	3450	47.6	181	36	15.6	11	3	190/380	3.3/1.6	1	0.75	2850	45
SP-TE-7K-MD	53	201	52	22.5	15.8	1	115/230	12.6/6.2	1	0.75	3450	47.6	181	36	15.6	11	1	115/230	14.3/7.1	1	0.75	2850	57
SP-TE-7K-MD	53	201	52	22.5	15.8	3	230/460	3/1.5	1	0.75	3450	47.6	181	36	15.6	11	3	190/380	3.3/1.6	1	0.75	2850	48

All specifications & data are based on pumping water & are intended as a guideline only. Specifications may vary with different motors.



NOTE: When replacing impeller bushing in the field: The plastic bushing must be bored to size after they have been pressed into the impeller. Bore to 0.378/0.381 I.D. The carbon and ceramic bushings are to finished size and do not require boring. When attaching drive magnet to the motor shaft, position the face of the drive magnet 49/64 inch above the face of the motor bracket. When reassembling "V" retainer clamp, tighten down to 100-inch pounds.

SP-TE-7P-MD				SP-TE-7K-MD			
Item	Part Number	QTY REQ	Description	Item	Part Number	QTY REQ	Description
1	0155-0328-0100	1	Housing Container & Stud Extender (Polypropylene)	1	0155-0329-0100	1	Housing Container & Stud Extender (Kynar)
2	0155-0182-1000	2	Drain & Filler Cap (Polypropylene)	2	0155-0197-1000	2	Drain & Filler Cap (Kynar
3	0155-0179-1000	1	1/8" CS x 4-3/4" OD "O" Ring (Viton)	3	0155-0179-1000	1	1/8" CS x 4-3/4" OD "O" Ring (Viton)
4	0155-0183-1000	1	V-Retainer Clamp (Stainless)	4	0155-0183-1000	1	V-Retainer Clamp (Stainless)
5	0155-0175-1000	1	Front Housing (Polypropylene)	5	0155-0195-1000	1	Front Housing (Kynar)
6	0155-0180-1000	1	1/8" CS x 4-3/4" OD "O" Ring (Viton)	6	0155-0180-1000	1	1/8" CS x 4-3/4" OD "O" Ring (Viton)
7	0155-0009-1000	1	Thrust Washer (Ceramic)	7	0155-0009-1000	1	Thrust Washer (Ceramic)
8	0155-0039-1000	1	Shaft (Ceramic)	8	0155-0039-1000	1	Shaft (Ceramic)
9	0155-0159-0200	1	Impeller w/Carbon Bushing (Polypropylene)	9	0155-0160-0200	1	Impeller w/Carbon Bushing (Kynar)
10	0155-0181-1000	1	3/16" CS x 9-7/8" OD "O" Ring (Viton)	10	0155-0181-1000	1	3/16" CS x 9-7/8" OD "O" Ring (Viton)
11	0155-0176-0100	1	Rear Housing w/Ceramic Thrust Washer (Polypropylene)	11	0155-0194-0100	1	Rear Housing w/Ceramic Thrust Washer (Kynar)
12	0155-0178-1000	1	Motor Bracket (Plastic)	12	0155-0178-1000	1	Motor Bracket (Plastic)
13	0155-0017-1000	4	3/8"-16 x 3/4" LG. Screw (Stainless)	13	0155-0017-1000	4	3/8"-16 x 3/4" LG. Screw (Stainless)
14	0155-0019-1000	4	3/8" ID x 5/8" OD Washer (Stainless)	14	0155-0019-1000	4	3/8" ID x 5/8" OD Washer (Stainless)
15	0155-0130-0200	1	Drive Magnet	15	0155-0130-0200	1	Drive Magnet
16	0155-0173-1000	1	Motor, TEFC, 1HP 1 Phase, 115/230V, 50/60Hz	16	0155-0173-1000	1	Motor, TEFC, 1HP 1 Phase, 115/230V, 50/60Hz
17	0155-0327-1000	1	Base (Motor) w/ Nuts & Washers	17	0155-0327-1000	1	Base (Motor) w/ Nuts & Washers
18	0155-0174-1000	1	Motor, TEFC, 1HP, 3 Phase 230/460V 50/60Hz	18	0155-0174-1000	1	Motor, TEFC, 1HP, 3 Phase 230/460V 50/60Hz

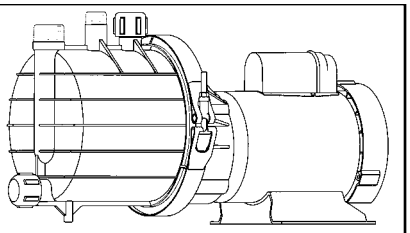
NOTE: Contact Factory for other materials and/or parts not listed.
Special voltage motors are available upon special order.

Materials in contact with the liquid:
SP-TE-7P-MD: Polypropylene, Carbon, Ceramic, Viton
SP-TE-7K-MD: Glass Filled Kynar, Carbon, Ceramic, Viton

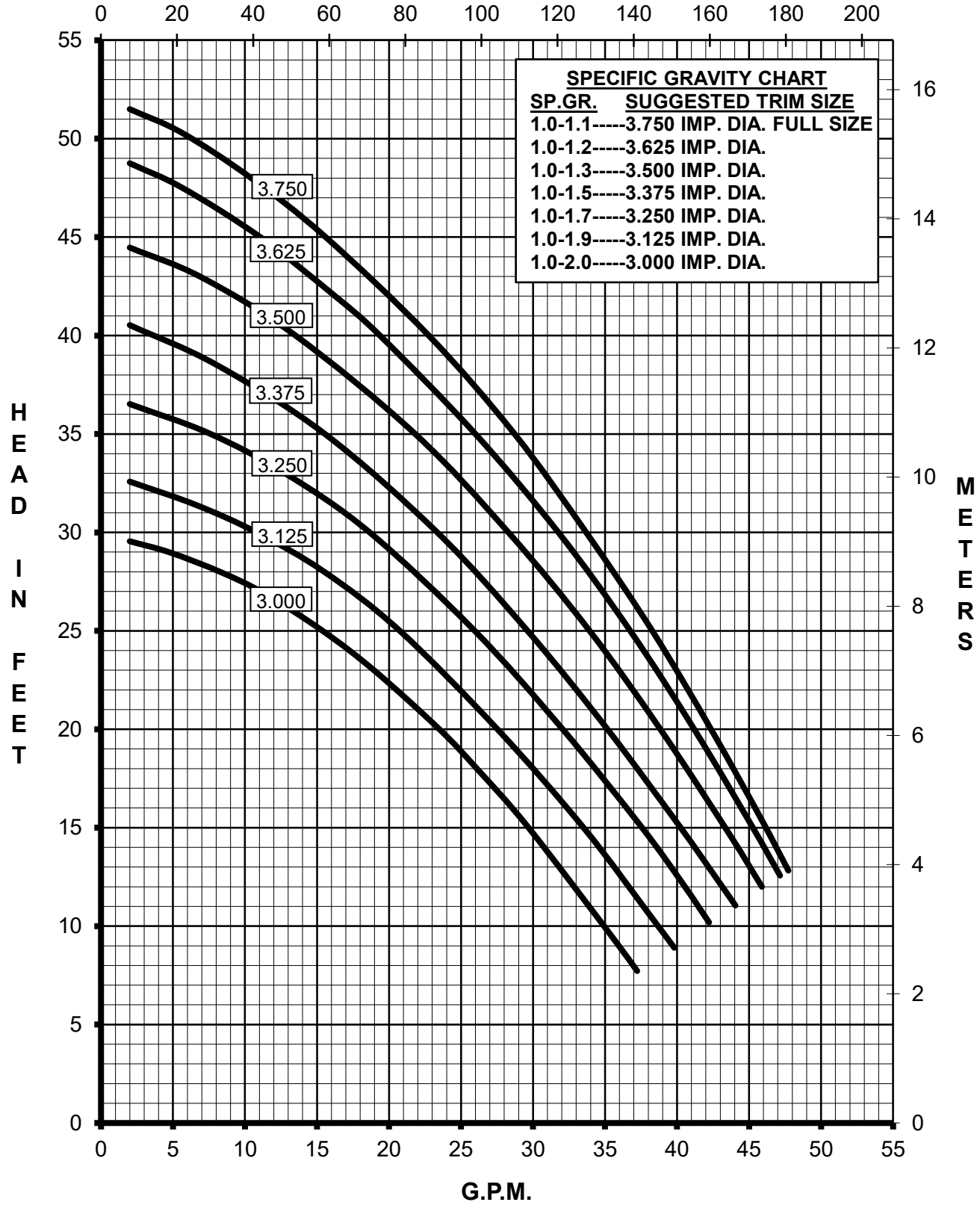
LIMITED WARRANTY: March pumps are guaranteed only against defects in workmanship or materials for a period of one year from date of manufacture pumping water. For the complete warranty and to register online go to www.marchpump.com/warranty-registration

MARCH PUMPS

SP-TE-7P-MD
SP-TE-7K-MD
1PH, 3PH, 60HZ



L.P.M.



SPECIFIC GRAVITY CHART

SP.GR.	SUGGESTED TRIM SIZE
1.0-1.1	3.750 IMP. DIA. FULL SIZE
1.0-1.2	3.625 IMP. DIA.
1.0-1.3	3.500 IMP. DIA.
1.0-1.5	3.375 IMP. DIA.
1.0-1.7	3.250 IMP. DIA.
1.0-1.9	3.125 IMP. DIA.
1.0-2.0	3.000 IMP. DIA.

CURVES ARE AT 1FT SUCTION LIFT

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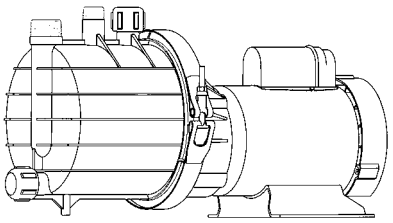
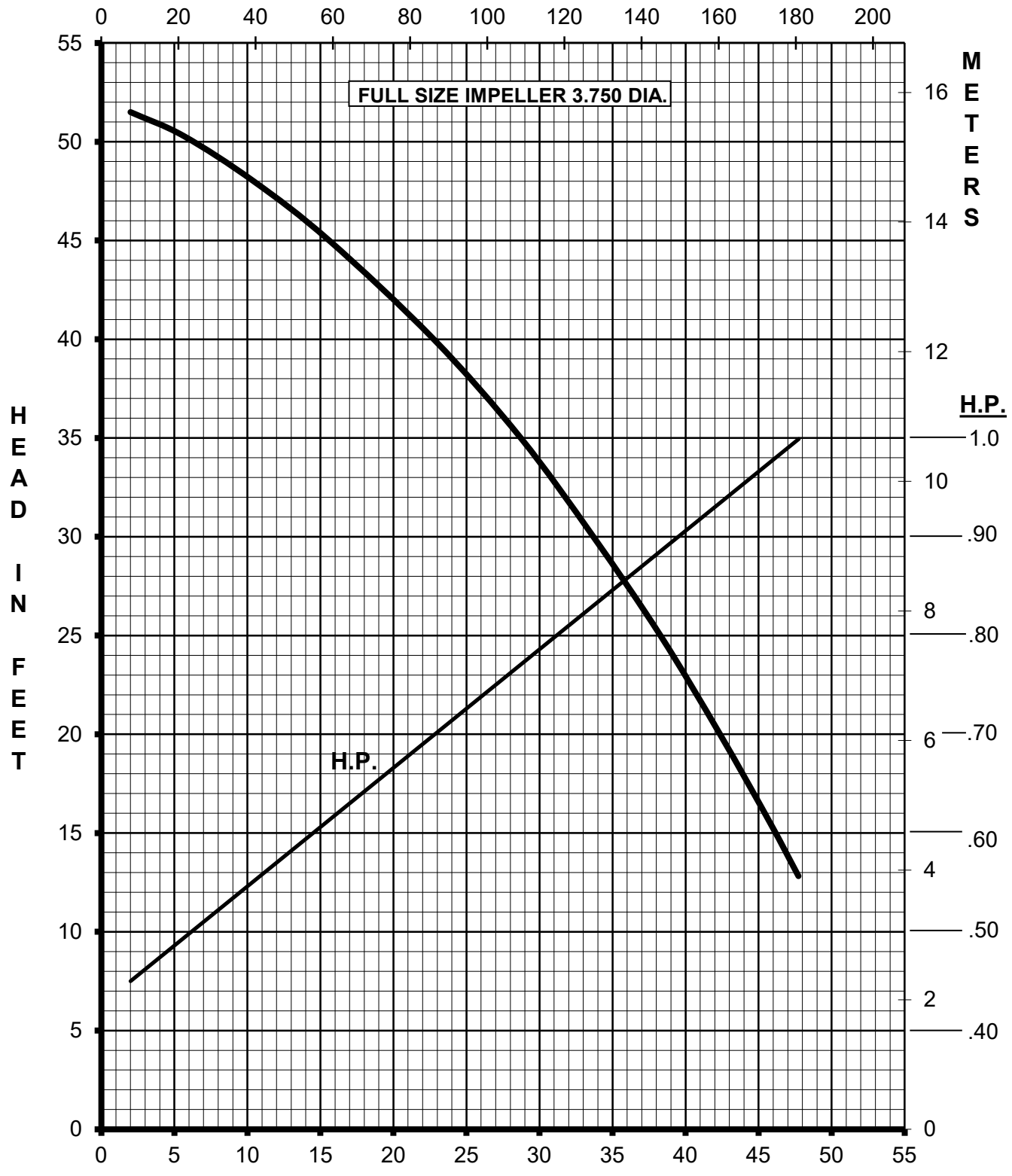
SP-TE-7P-MD
SP-TE-7K-MD

FULL SIZE IMPELLER 3.750 DIA.
1PH, 3PH 60HZ





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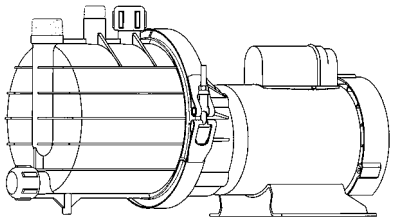
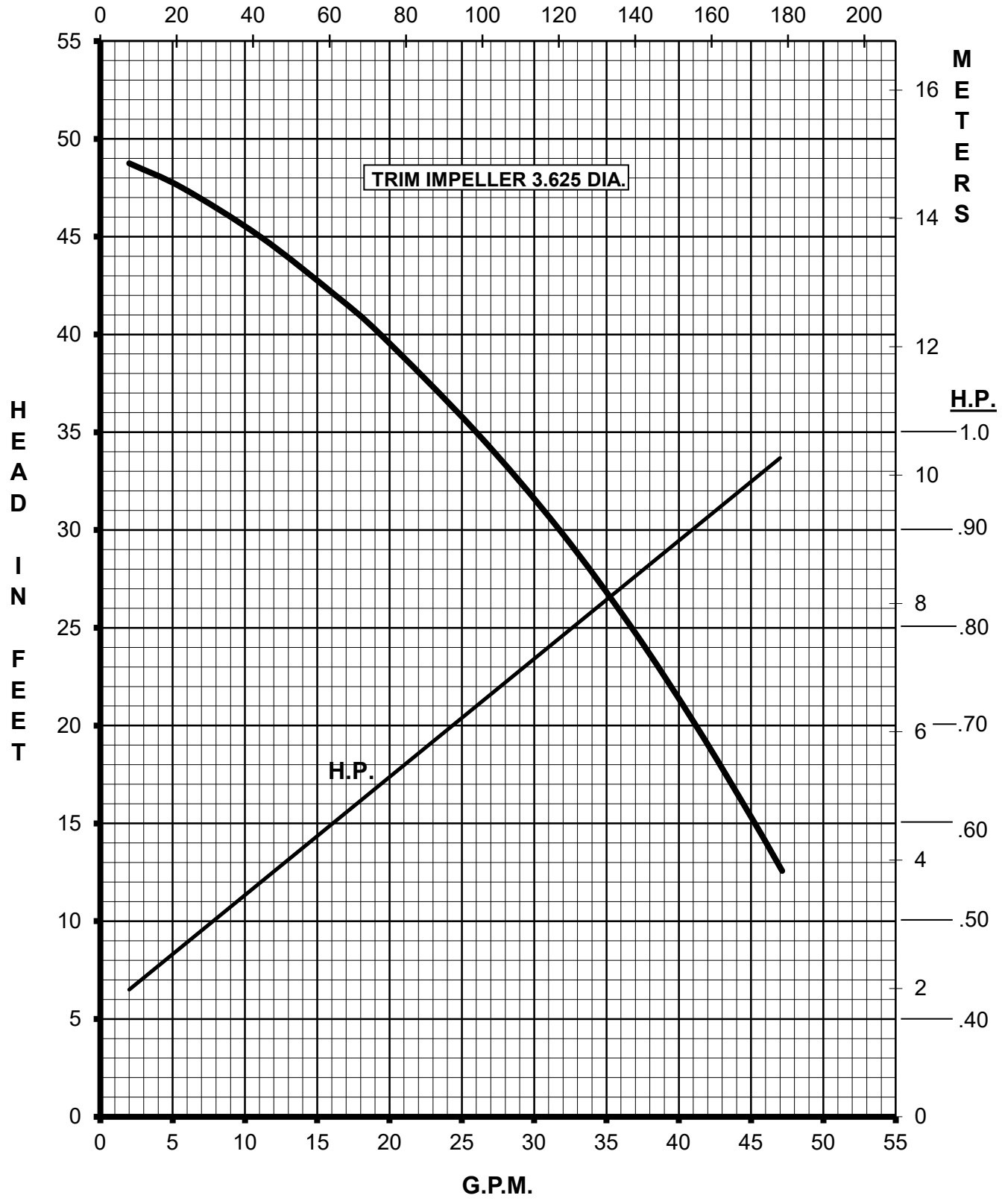
SP-TE-7P-MD
SP-TE-7K-MD

TRIM IMPELLER 3.625 DIA.
1PH, 3PH 60HZ





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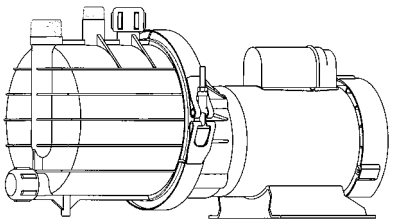
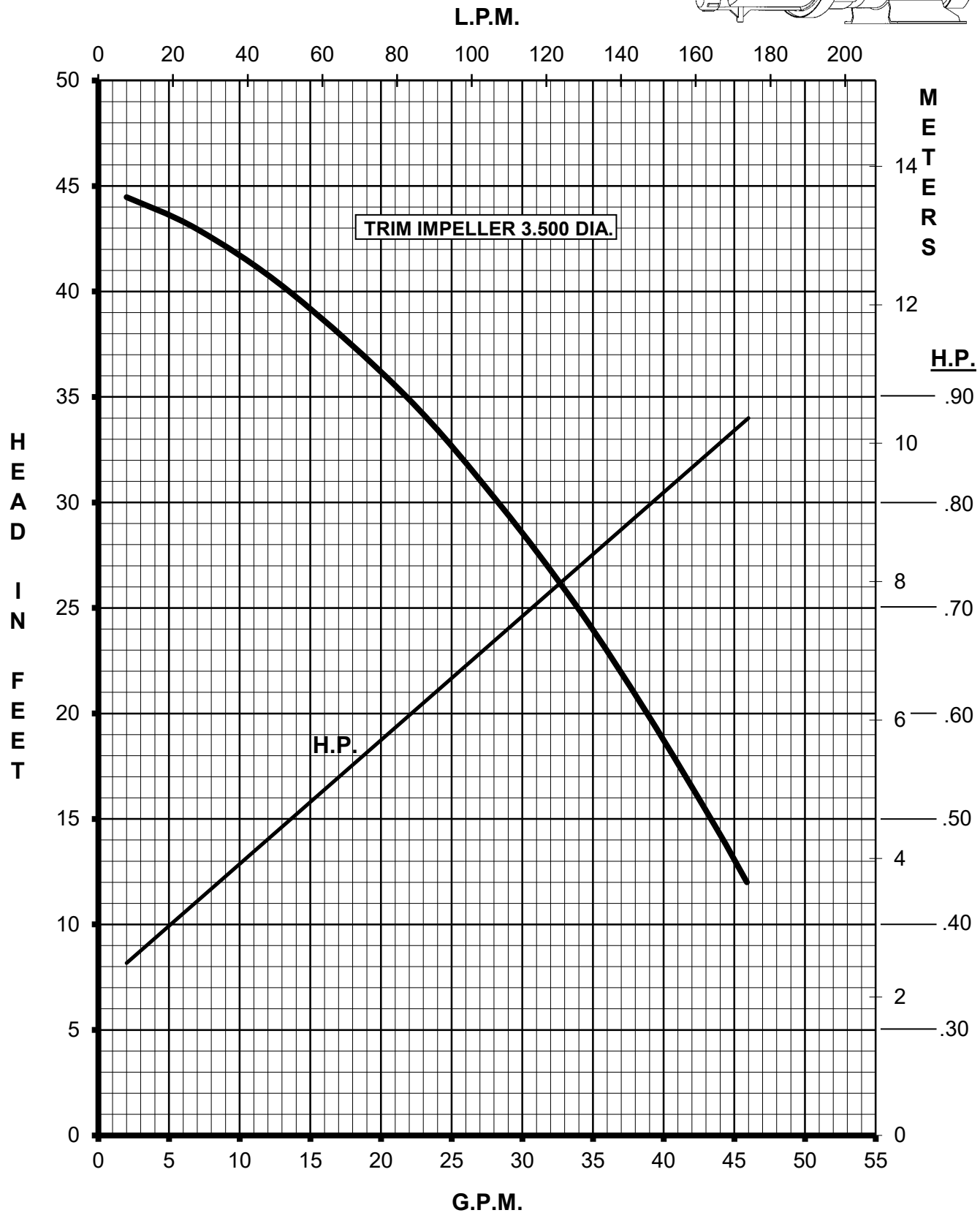
SP-TE-7P-MD
SP-TE-7K-MD
TRIM IMPELLER 3.500 DIA.





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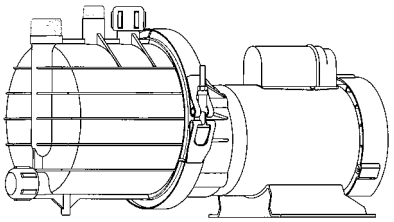
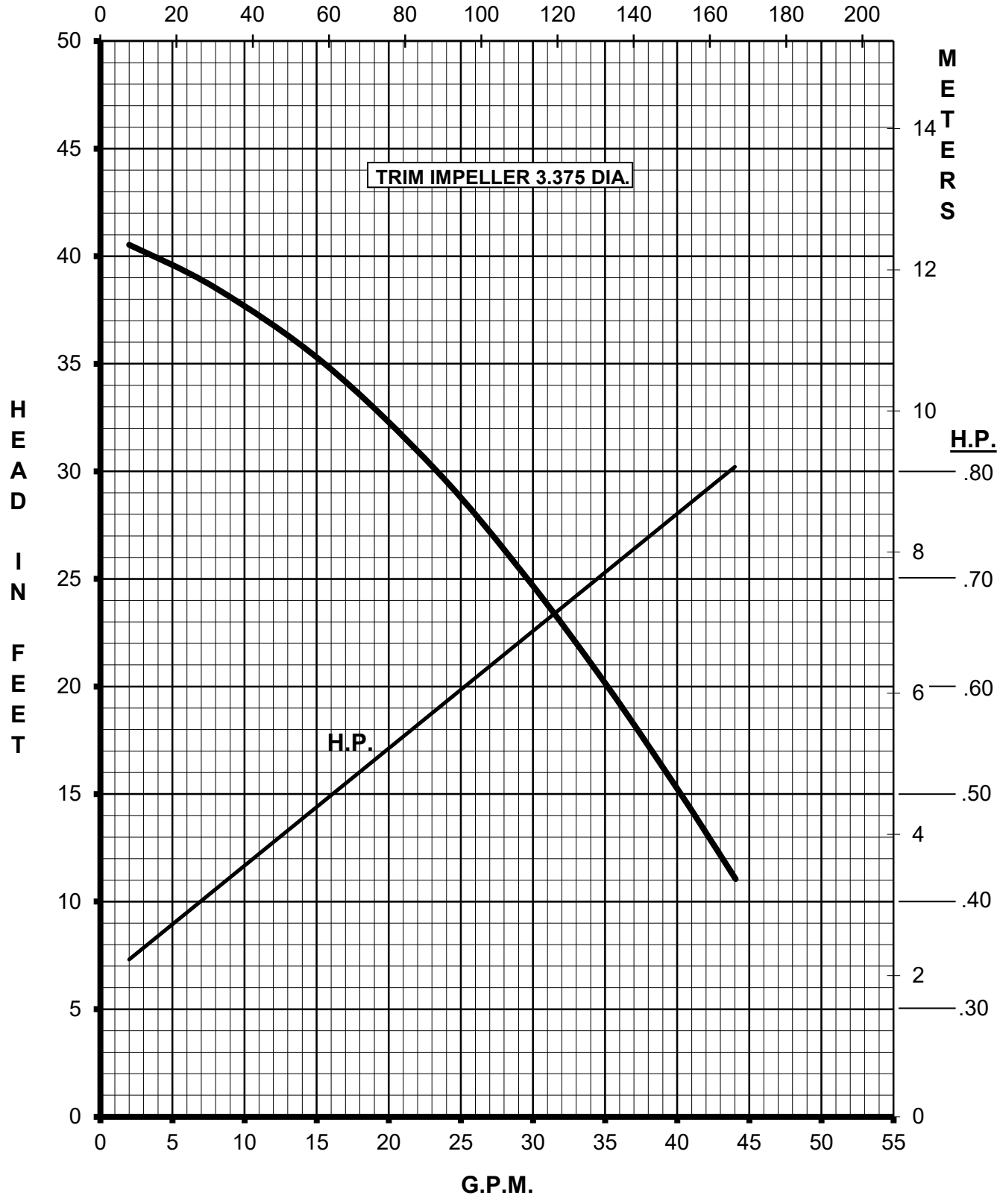
SP-TE-7P-MD
SP-TE-7K-MD

TRIM IMPELLER 3.375 DIA.
1PH, 3PH 60HZ





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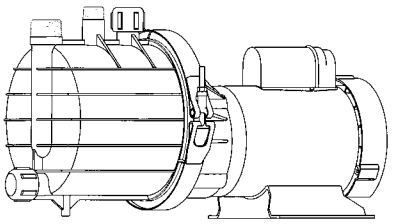
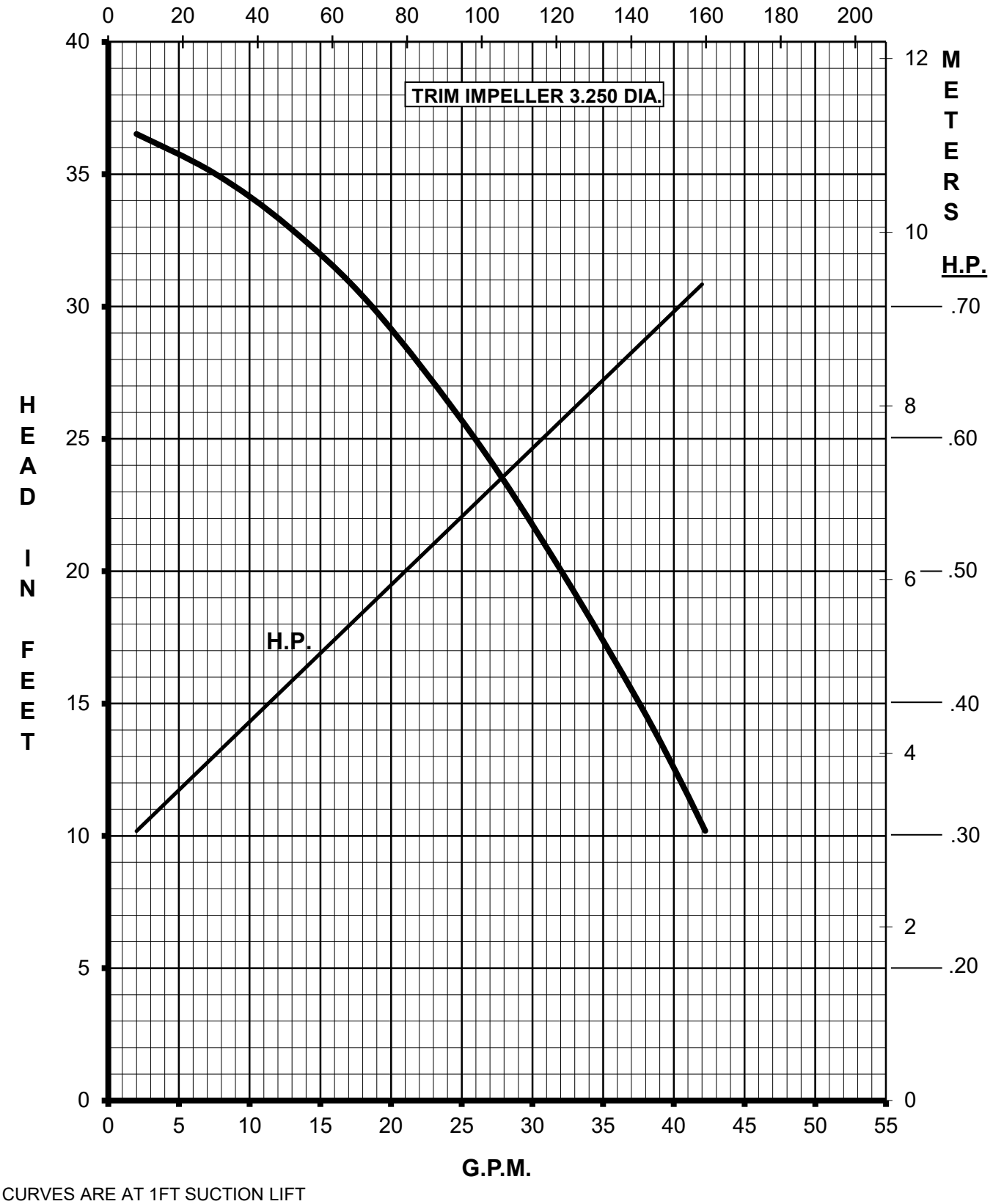
SP-TE-7P-MD
SP-TE-7K-MD

TRIM IMPELLER 3.250 DIA.
1PH, 3PH 60HZ





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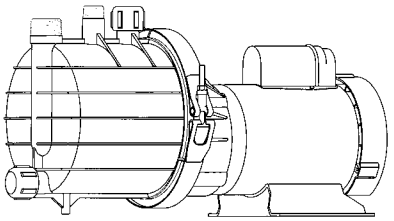
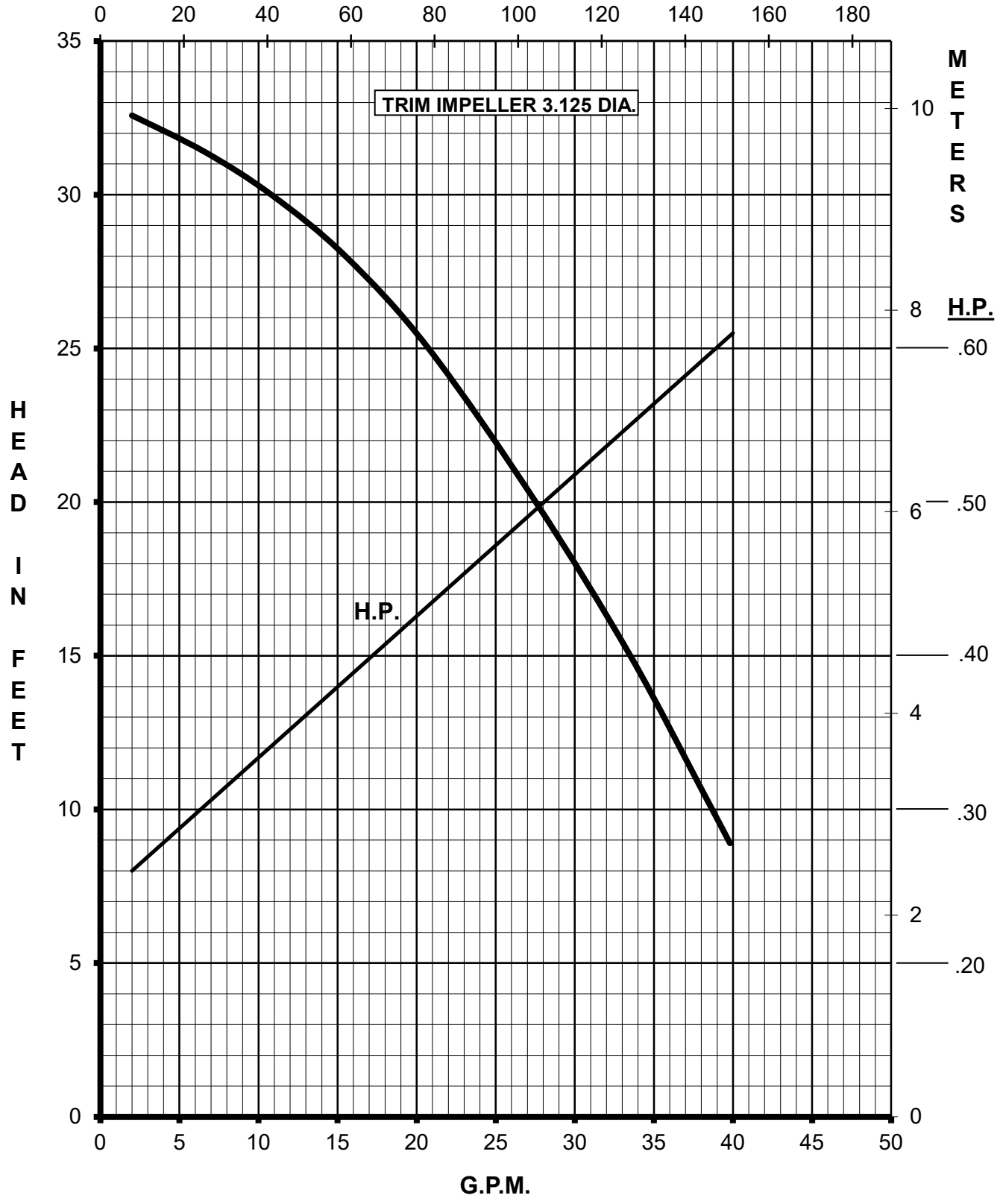
SP-TE-7P-MD
SP-TE-7K-MD

TRIM IMPELLER 3.125 DIA.
1PH, 3PH 60HZ



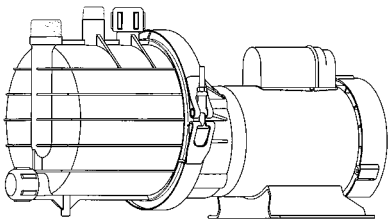


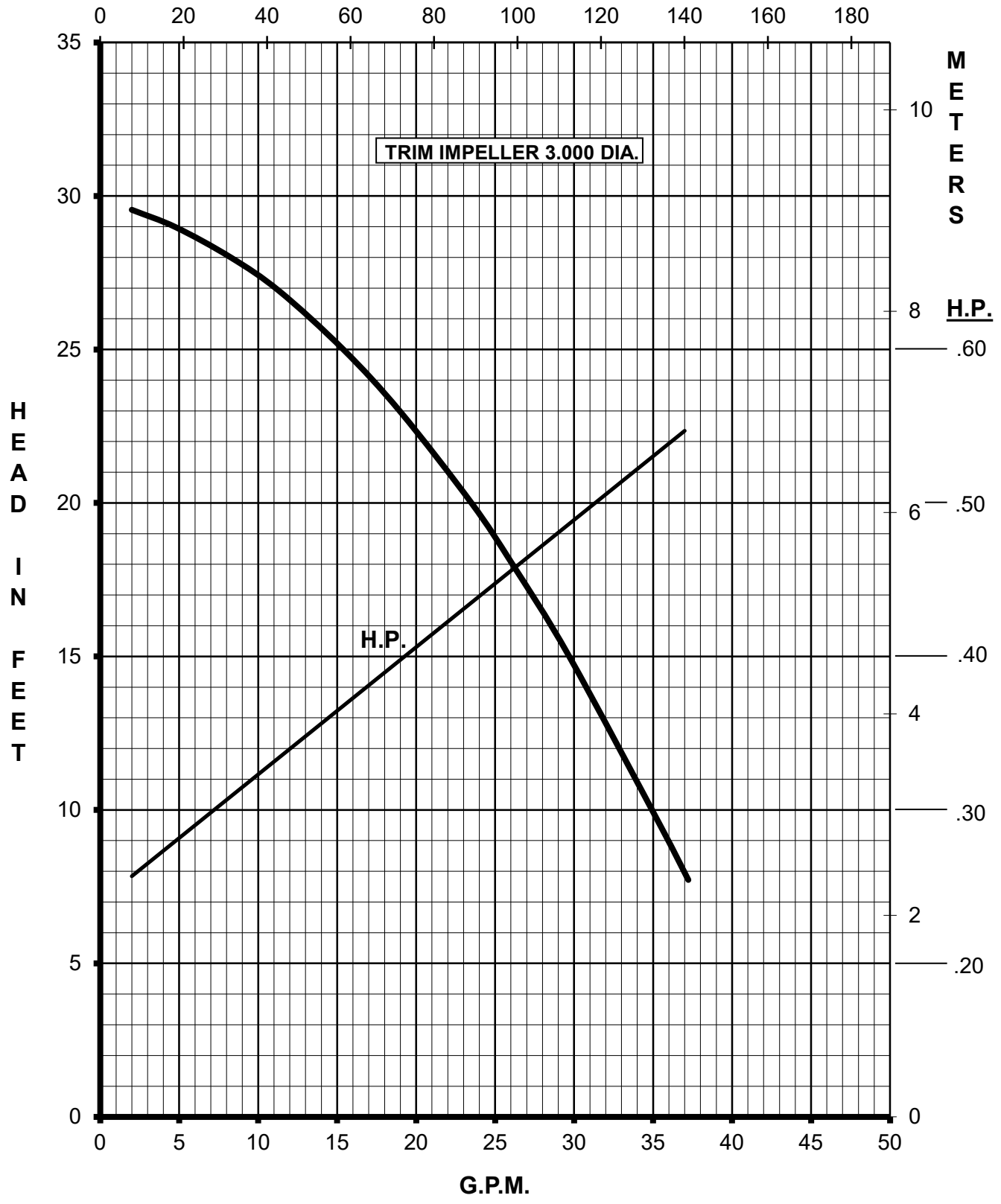
CURVES ARE AT 1FT SUCTION LIFT

MARCH PUMPS

SP-TE-7P-MD
SP-TE-7K-MD

TRIM IMPELLER 3.000 DIA.
1PH, 3PH 60HZ



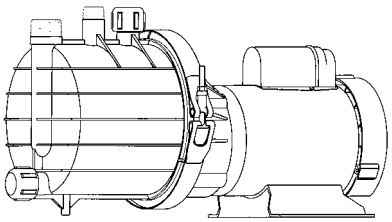


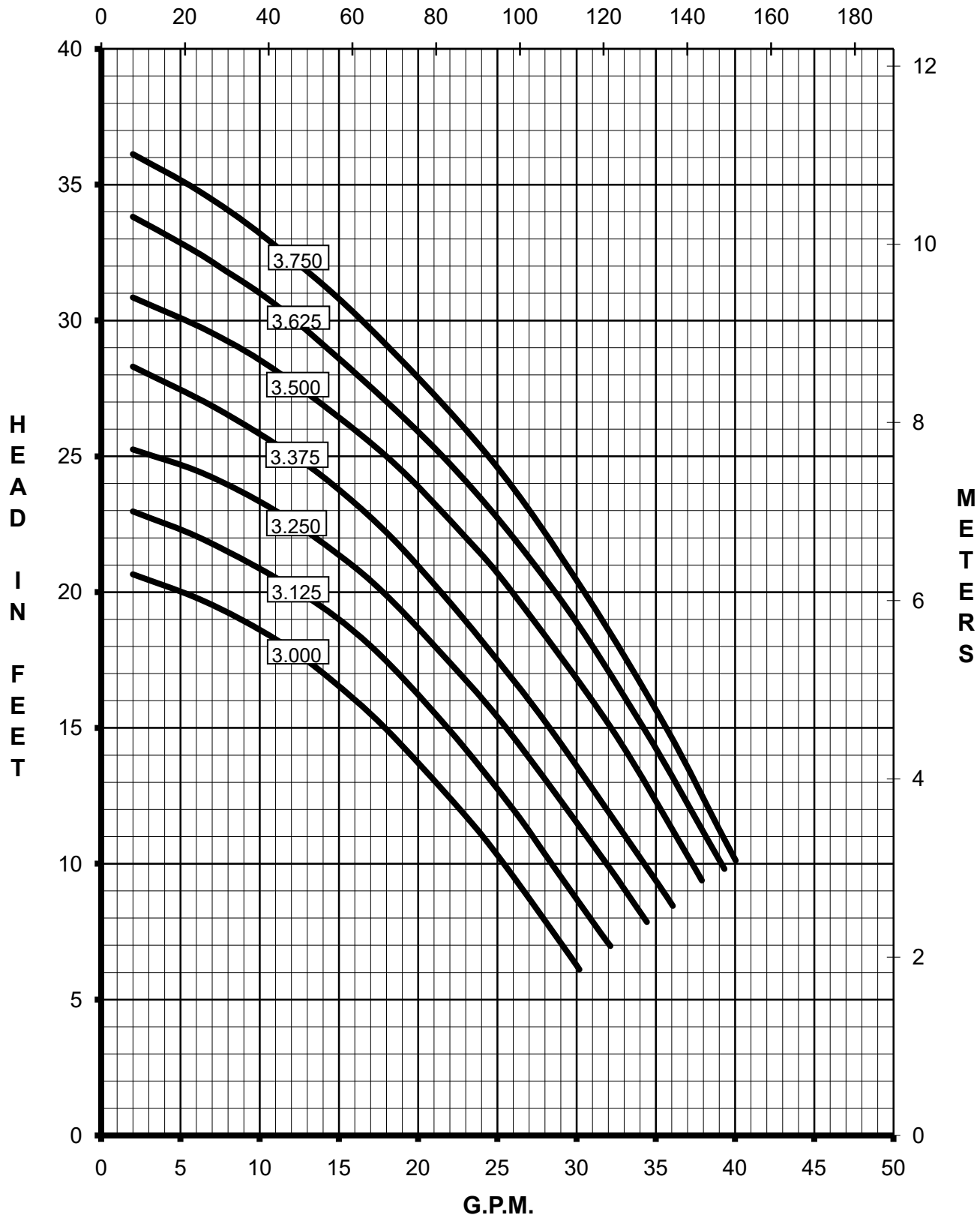
CURVES ARE AT 1FT SUCTION LIFT

MARCH PUMPS

SP-TE-7P-MD
SP-TE-7K-MD

1PH, 3PH, 50HZ





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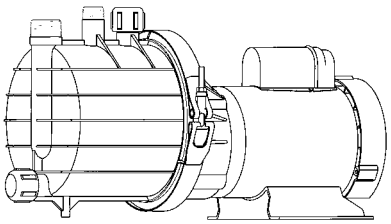
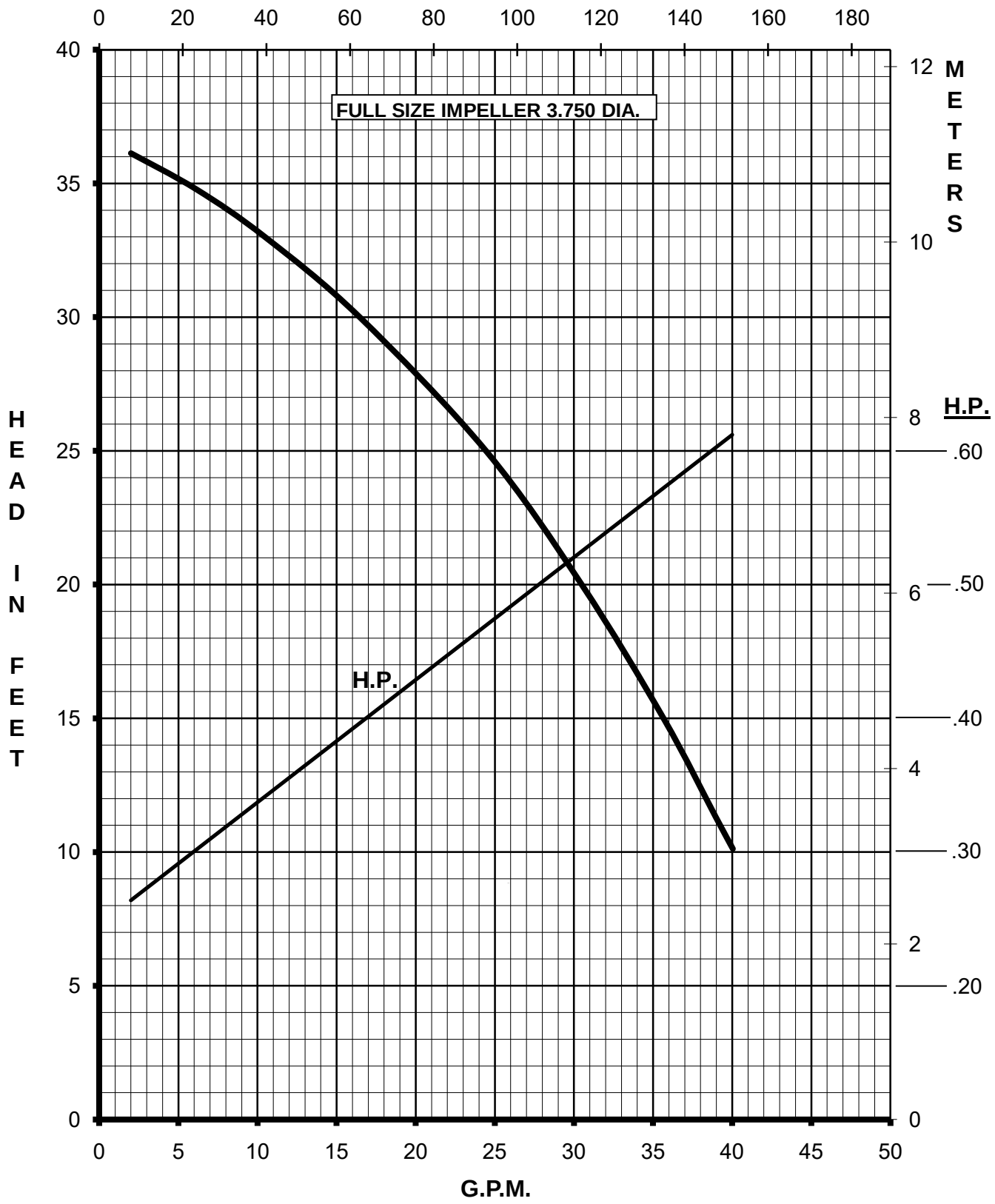
MARCH PUMPS

SP-TE-7P-MD
SP-TE-7K-MD

FULL SIZE IMPELLER 3.750 DIA.
1PH, 3PH 50HZ



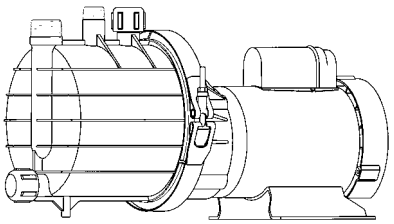


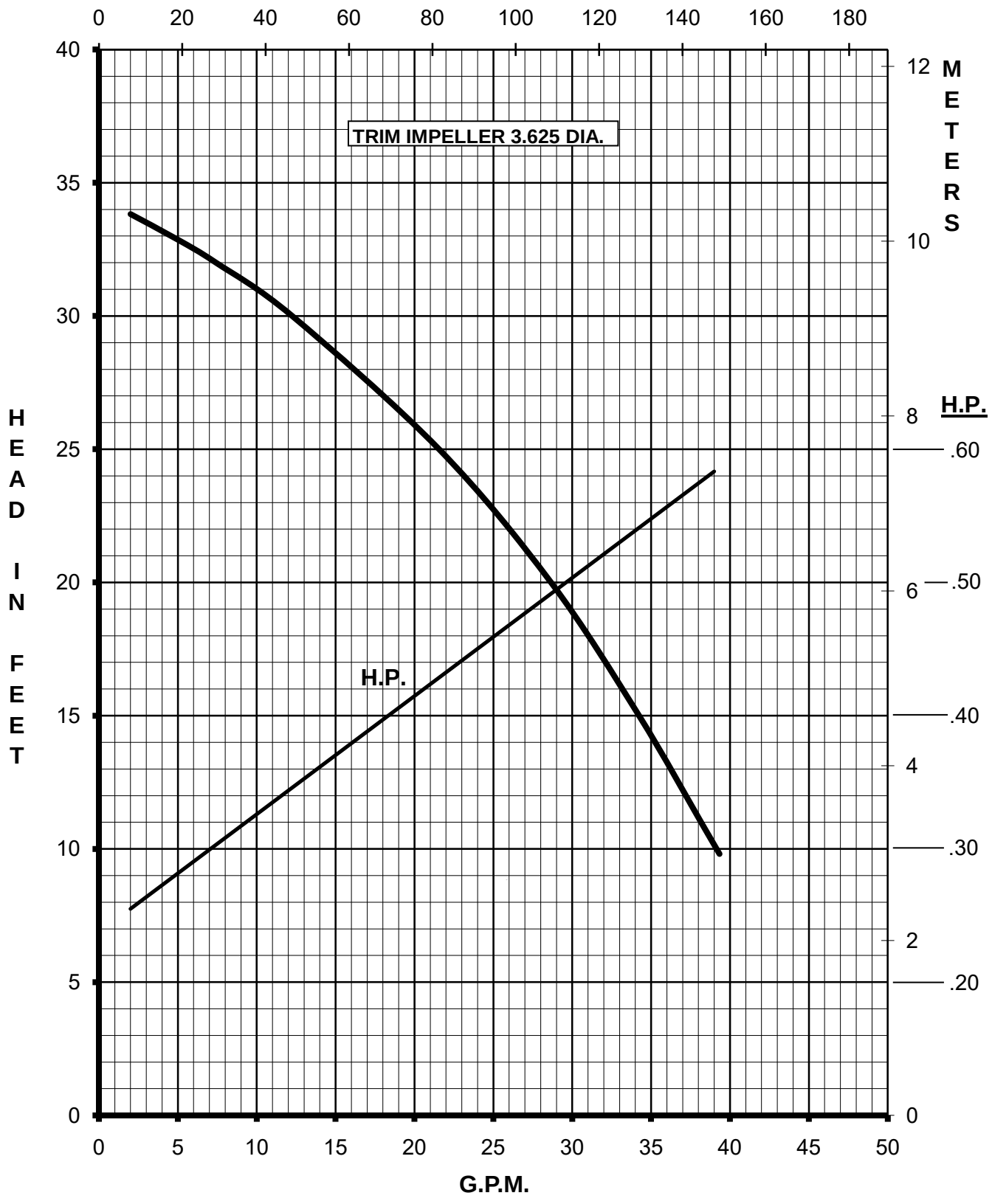
CURVES ARE AT 1FT SUCTION LIFT

MARCH PUMPS

SP-TE-7P-MD
SP-TE-7K-MD

TRIM IMPELLER 3.625 DIA.
1PH, 3PH 50HZ





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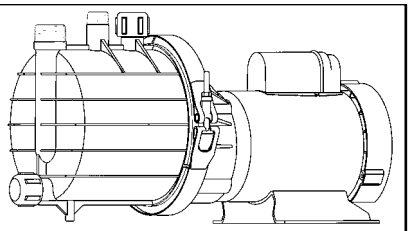
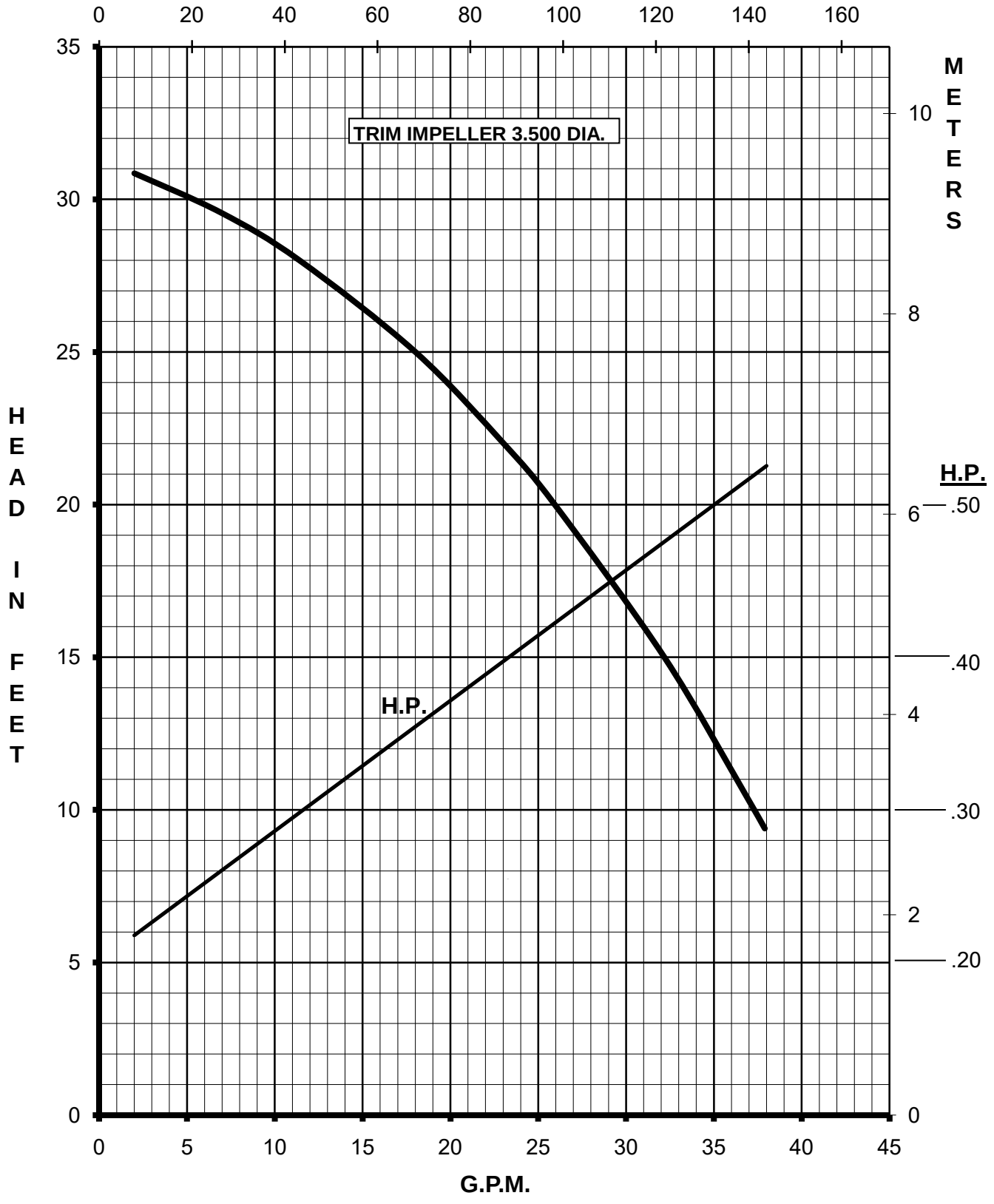
MARCH PUMPS

SP-TE-7P-MD
SP-TE-7K-MD

TRIM IMPELLER 3.500 DIA.
1PH, 3PH 50HZ



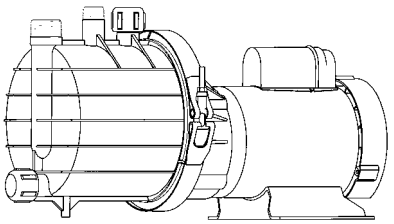


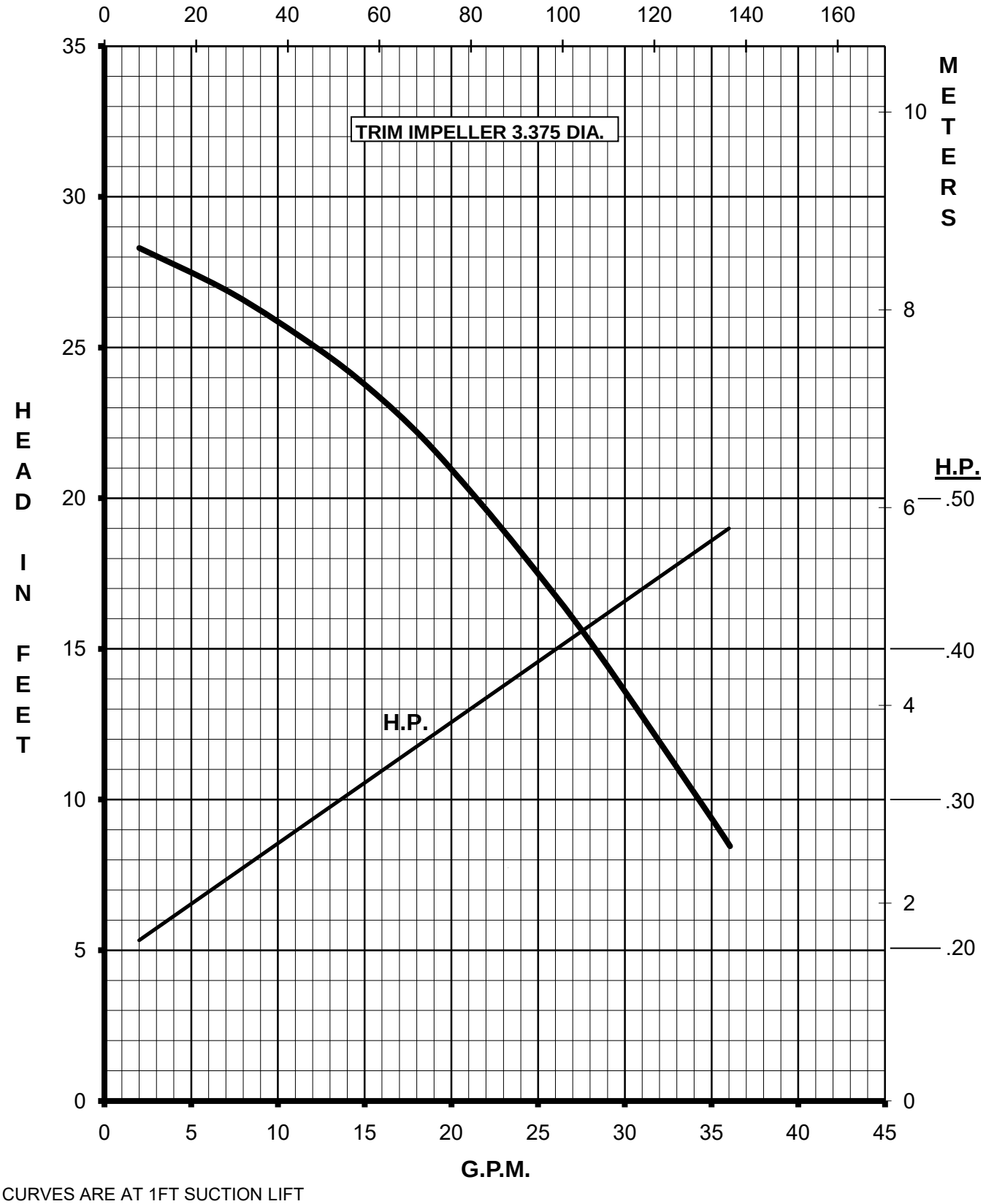
CURVES ARE AT 1FT SUCTION LIFT

MARCH PUMPS

SP-TE-7P-MD
SP-TE-7K-MD

TRIM IMPELLER 3.375 DIA.
1PH, 3PH 50HZ





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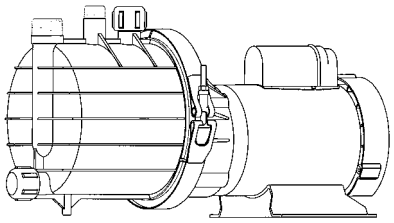
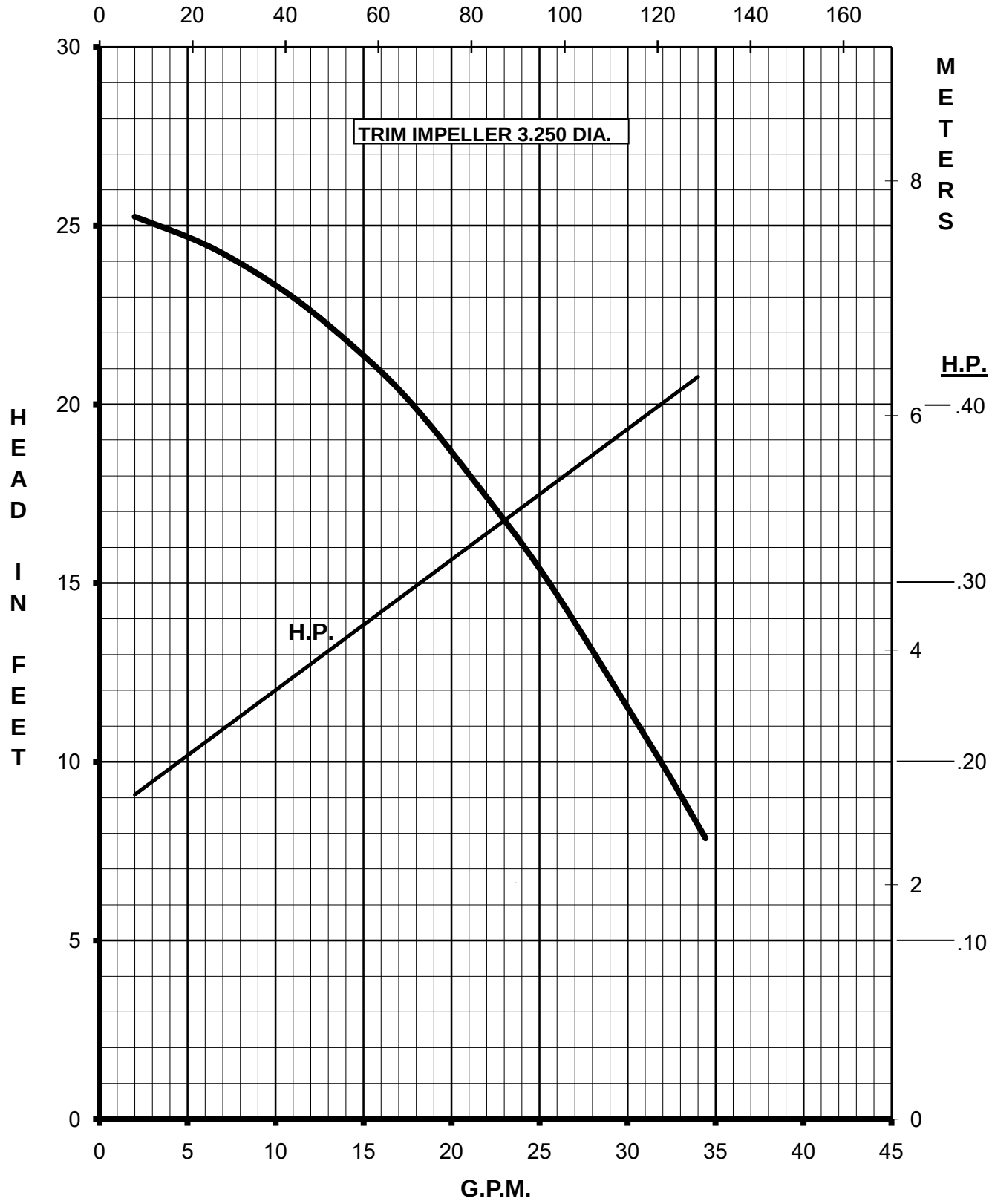
MARCH PUMPS

SP-TE-7P-MD
SP-TE-7K-MD

TRIM IMPELLER 3.250 DIA.
1PH, 3PH 50HZ
L.P.M.





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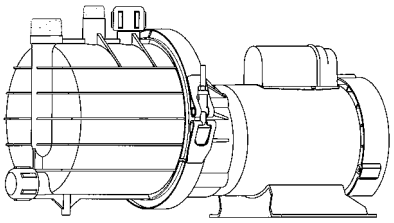
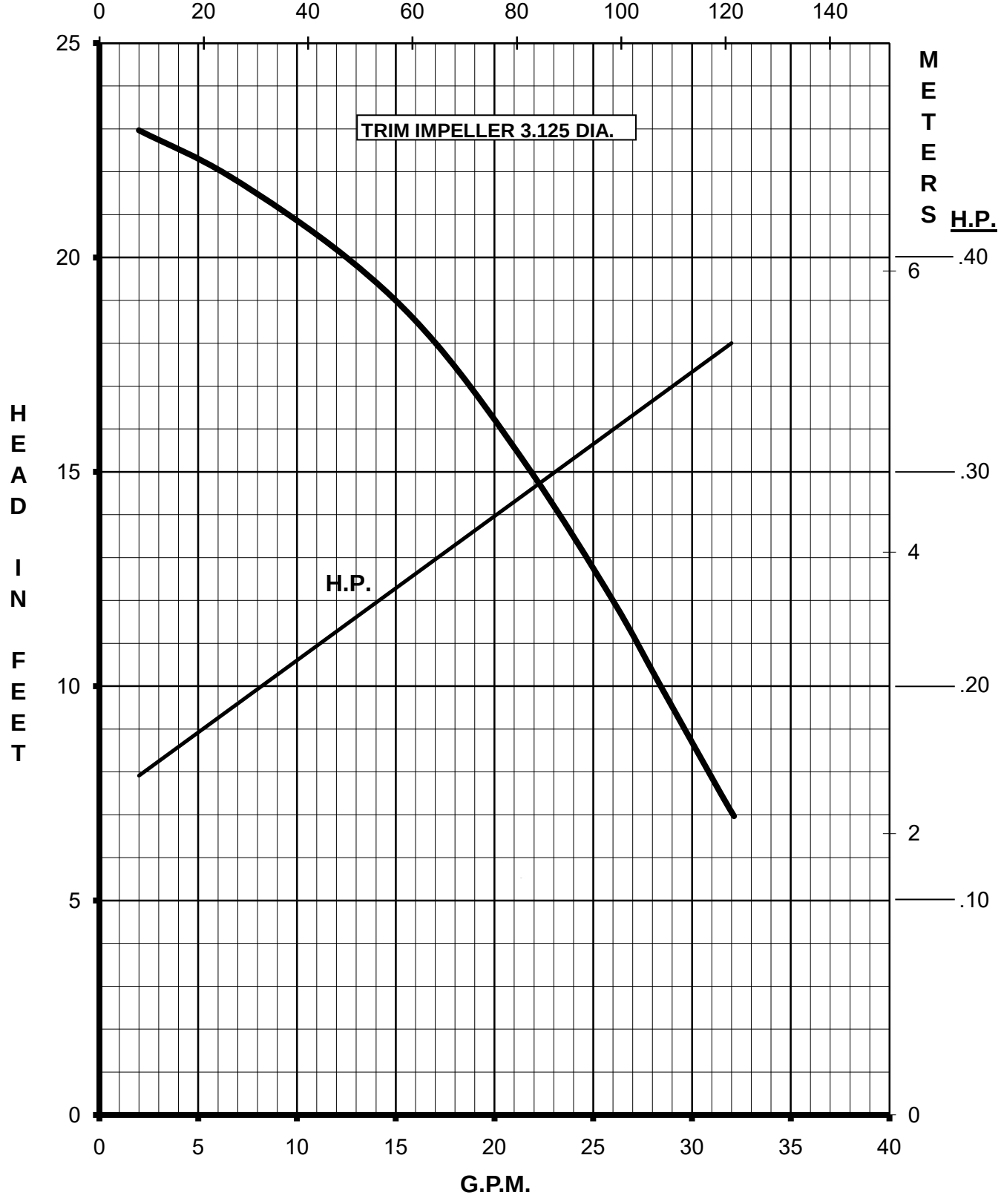
MARCH PUMPS

SP-TE-7P-MD
SP-TE-7K-MD

TRIM IMPELLER 3.125 DIA.
1PH, 3PH 50HZ





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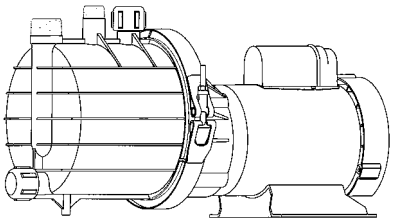
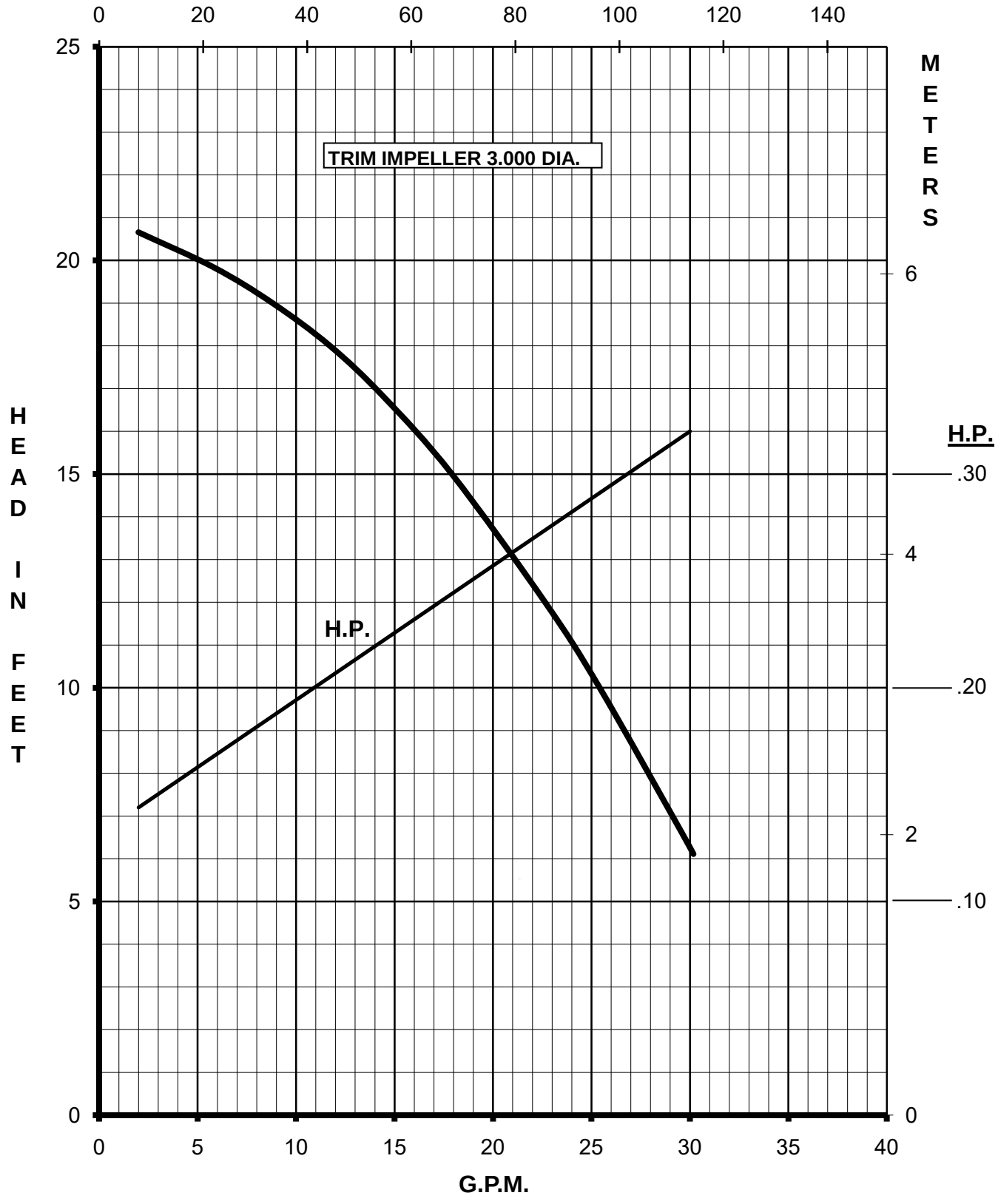
SP-TE-7P-MD
SP-TE-7K-MD

TRIM IMPELLER 3.000 DIA.
1PH, 3PH 50HZ
L.P.M.





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MARCH PUMPS
1819 PICKWICK AVE., GLENVIEW, IL 60026-1306, U.S.A
PHONE: (847) 729-5300 - FAX: (847) 729-7062
WWW.MARCHPUMP.COM

GENERAL INSTALLATION SELF-PRIMING PUMPS

1. The Pump should be mounted horizontally on a foundation and secured by Anchor Bolts.
2. Install the pump as near to the suction source. When using an elbow, valve, etc., the suction must have straight piping in length at least five (5) times the diameter of the pipe.
3. Suction piping should not be smaller than the pump suction size.
4. Piping and valves should be independently supported. Do not allow the pump to support the weight of the piping.
5. All suction piping should be direct and short as possible with as little bending as possible. Excessive bending and pump suction length will lead to flow distortion and pump cavitation.
6. Suction velocity should not exceed 6.5 feet per second. Viscous and hot liquids will have an effect on velocity.
7. If reducers or increasers are necessary, caution is to be used so as not to trap air.
8. Use a vacuum gauge in the suction line and it should be as close as possible to the pump suction. This is for monitoring the performance of the pump while in operation.
9. Valves may be installed on the suction side to allow maintenance and service. NEVER use the valve to limit flow into the pump.
10. Suction Pressure: Systems utilizing high suction pressure where a pump is used to boost system pressure is of concern. Be sure that the pressures do not exceed that of pump design, otherwise severe damage and possible operator injury could result.
11. If checking the system for leaks with air, do not exceed 20 PSI.

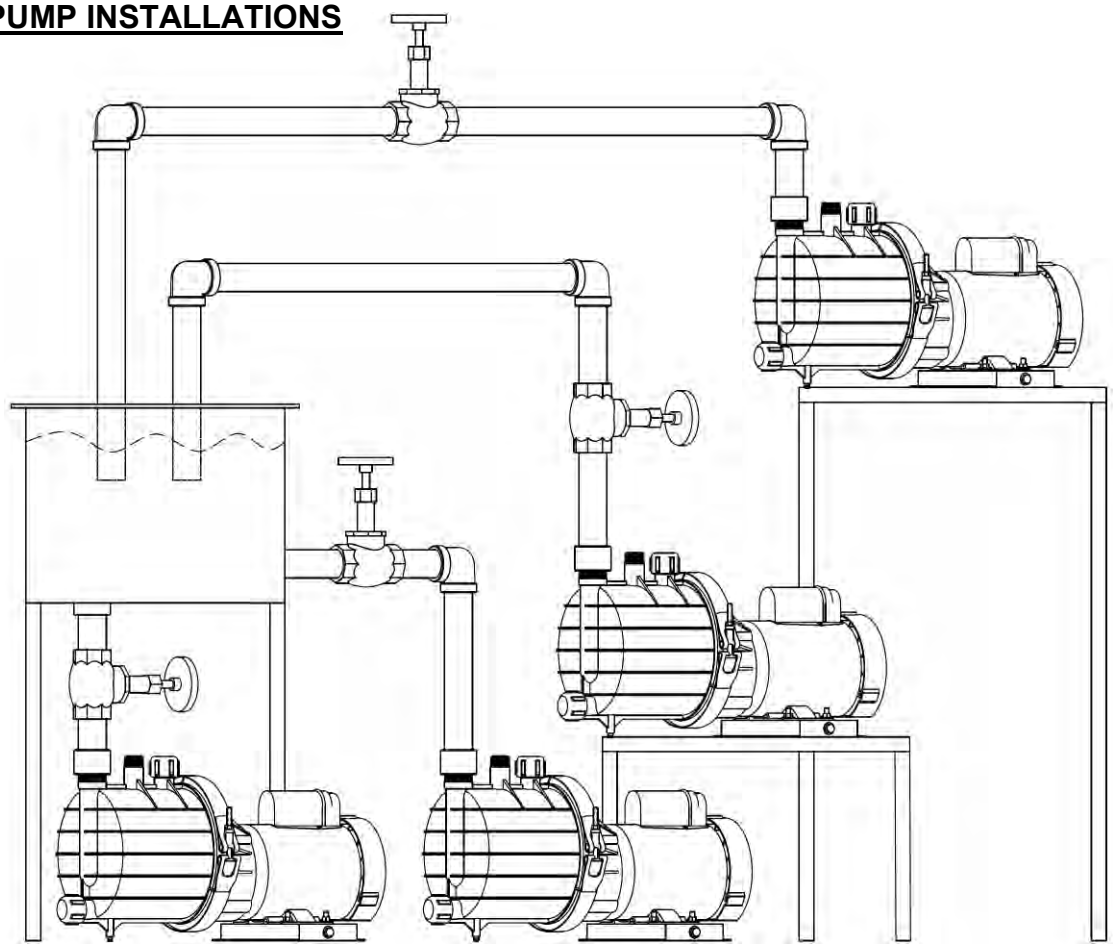
DISCHARGE

1. All discharge piping size should be determined by flow velocity which should not exceed 15 feet per second.
2. A Throttling Valve should be installed for flow and pressure control. Caution—Location of check valves on long discharge piping, high static discharge of 50 feet or more and two or more pumps used on the same common piping.
3. Install Discharge Pressure Gauge to monitor performance during operation.
4. Connect electrical power to the motor in accordance with motor manufacture's nameplate instructions.

OPERATION

1. Priming container and pump must be filled completely with liquid before turning pump on.
   750 self-priming container holds approximately one gallon of liquid.
   Pump SP-TE-7-MD container holds approximately 1.75 gallons of liquid.
   Pump SP-TE-8P-MD container holds approximately 1.75 gallons of liquid.
2. Do not run pump without liquid. If pump is run dry, excessive heat will occur damaging internal parts and could result in operator injury.
3. Open suction valve completely.
4. Open discharge valve slightly.
5. Observe all connections for leaks. If leaks occur, close all valves and repair all leaks before further operation.
6. Start motor and check for proper rotation.
7. Open discharge valve gradually until desired flow and pressure is attained.

TYPICAL PUMP INSTALLATIONS



—CAUTION—

IF DISCHARGE VALVE IS WIDE OPEN ON START UP, DECOUPLING CAN OCCUR OR MOTOR OVERLOAD IS POSSIBLE

8. Operating the pump for excessive periods of time at shut off (discharge valve fully closed) or at near shut off conditions can cause the liquid to rise in temperature which can cause failure of internal parts and failure of pump.
9. Flow rates should be controlled by the discharge valve only, never by the suction valve.
10. If using variable speed do not exceed the max internal pressure of the pump. If decreasing speed priming time will increase.

—OPERATING PERFORMACE NOTES—

—Altitude—

For every thousand feet, the maximum suction lift is decreased by a multiplier of 0.06.
2500 Feet: 0.88 of maximum suction lift.
4500 Feet: 0.76 of maximum suction lift.
6500 Feet: 0.64 of maximum suction lift.

—Specific Gravity—

The specific gravity will affect the maximum suction lift. The higher the specific gravity the less the maximum suction lift will be.
Divide the specific gravity by the maximum suction. For example, if the pump's maximum suction lift is 20 feet, and the specific gravity is 1.5, then the equation is
20/1.5= 13.33 Feet. The 13.33 Feet is the maximum suction lift.