

IN-LINE SERIES BOOSTER PUMPS

Cast Iron And Stainless Steel Booster Pumps

Quiet...Quiet...Quiet is what you get with the Webtrol In-Line Series, Heavy Duty Booster Pumps, designed for various flow ranges at high heads. The In-Line Series is the quietest operating centrifugal style pump on the market today. Literally whisper quiet for those installations where the elimination of noise can be a plus. They are built to withstand the rigorous demands generated through use in the Reverse Osmosis, Deionization, Car Wash, Washdown and Booster Lift Station applications, as well as various other Industrial and Agricultural uses.



The Webtrol In-Line Series Booster Pumps are virtually maintenance free. No mechanical seals or oil filled bearing housings to worry about. Ease of installation dependability, performance and reliability are just a few of the reasons you should look at the Webtrol In-Line Series Booster Pumps.

Features And Benefits

Pump Shaft - Heavy duty stainless steel, cold drawn pump shaft.

Impellers / Diffusers - High strength thermoplastic, precision machined for dimensional stability and efficiency. Diffusers have molded in stainless steel wear rings at all critical wear points.

Motor - Water cooled submersible motor for smooth, efficient and quiet operation.

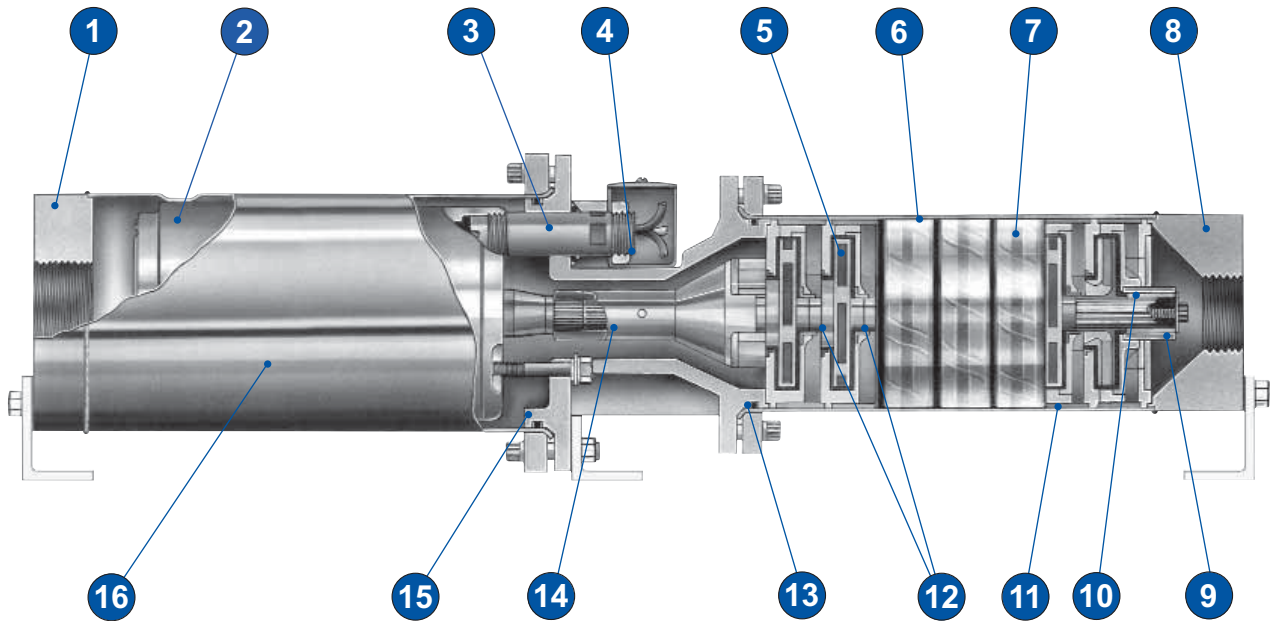
Specifications

Webtrol In-Line Series Booster Pumps are available from 5 to 100 Gallons Per Minute. Pressures to 750 PSI

Every Webtrol Booster Pump is hand assembled and checked during each step of the assembly process up to the final test where each pump is checked for flow, pressure, power consumption, leaks, vibration and noise.

IN-LINE SERIES BOOSTER PUMP

Construction And Design Features



Note:

A 60-80 GPM pump is shown, although 5-35 GPM pumps are similar and have the same design features. Consult the service manual for repair parts illustrations.

CONSTRUCTION MATERIALS

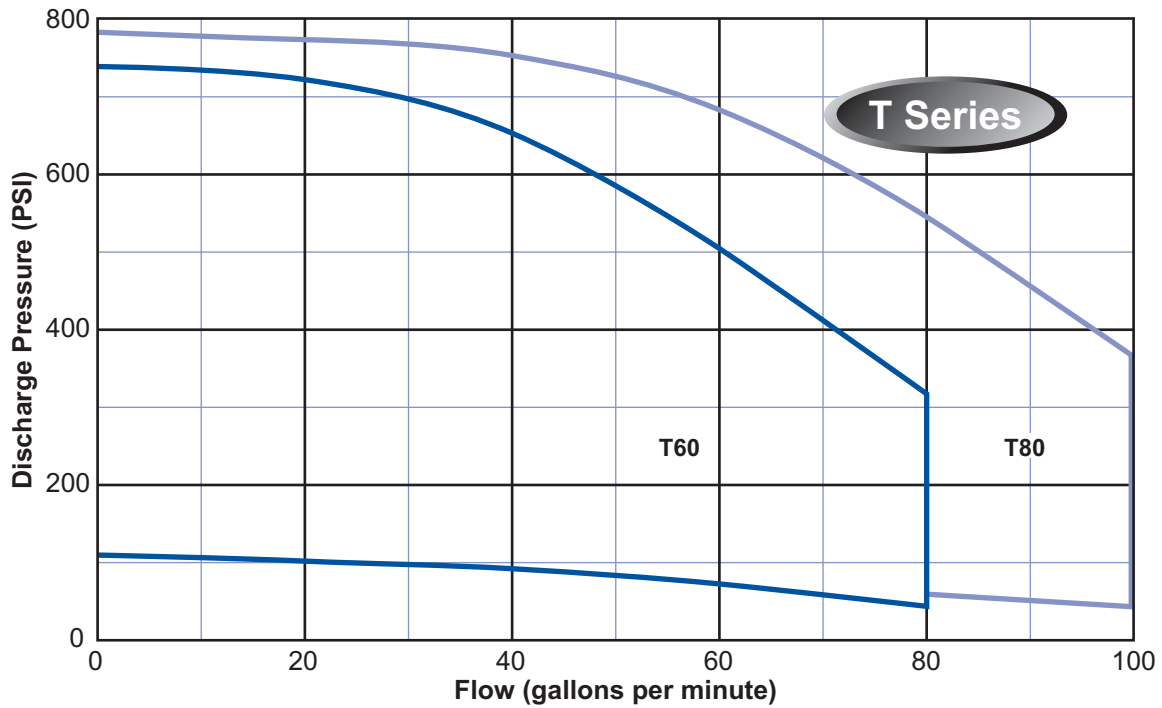
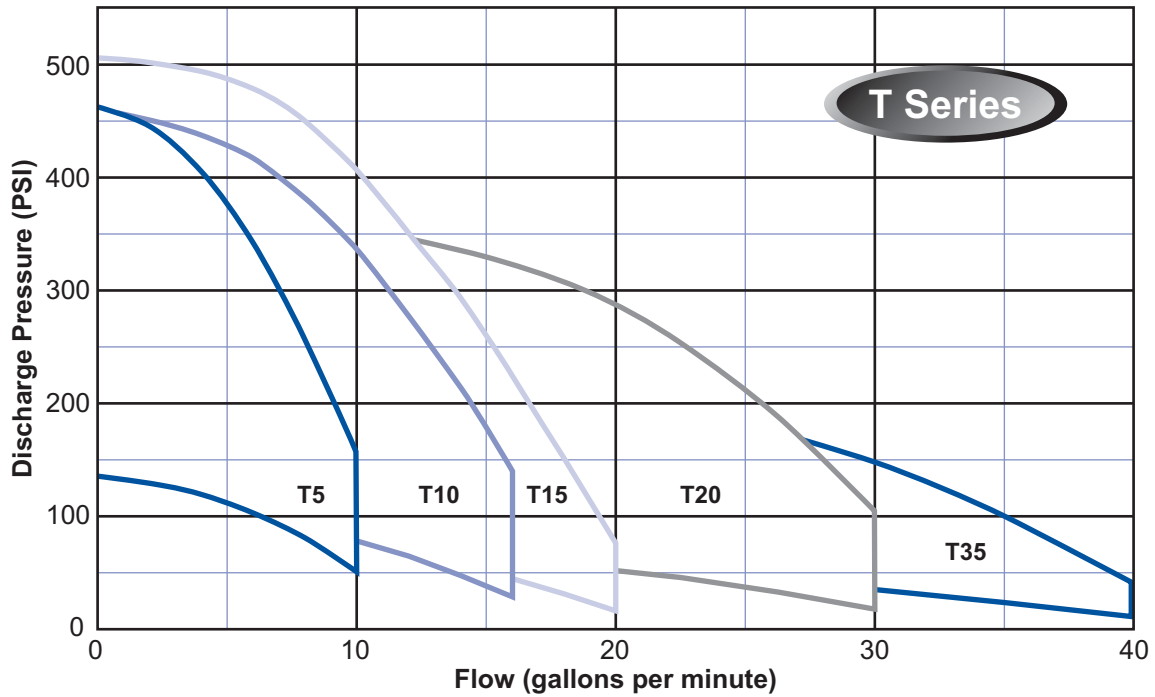
Part	Cast Iron Pump	Stainless Steel Pump
Inlet / Motor Bracket	Cast Iron	Cast 316 SS
Discharge	316 SS	316 SS
Pump Housing	304 SS Tubing	316 SS Tubing
Motor Housing	316 SS	316 SS
Inlet	Steel	316 SS
Motor	316 SS	316SS
Impellers	Noryl	Noryl
Diffusers	Noryl	Noryl
Wear Rings	316 SS	316 SS
Shaft & Coupling	Steel	316 SS
Shaft Sleeve & Bearing	Steel	316 SS
Shaft Bearing	Bronze	Rulon
O-Rings	Viton	Viton

IN-LINE SERIES BOOSTER PUMP

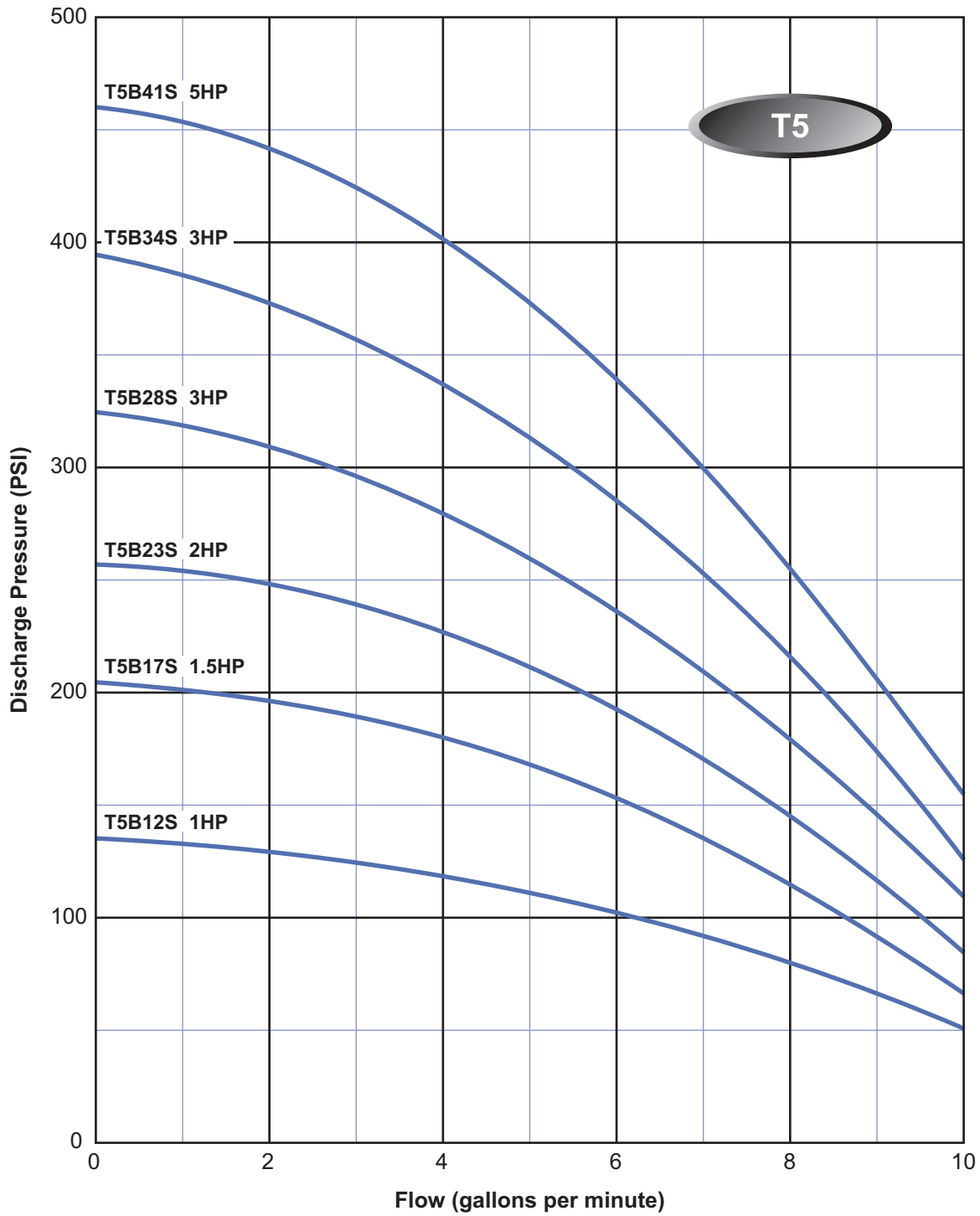
Construction And Design Features

- 1 Inlet** - Heavy-duty 316SS with NPT connection is standard. Flange, sanitary, and victaulic fittings are available upon request. Maximum inlet pressure is 250 PSIG. Minimum inlet pressure is 2 PSIG because allowable motor temperature is based upon having at least atmospheric pressure on the water surrounding the motor. (optional steel construction available).
- 2 Motor** - Standard on 316 stainless steel In-Line Series Boosters are 316 SS continuous duty submersible motors (other options are available). These motors run extremely quiet due to the fact that they operate submerged in water. A Kingsbury pivoting shoe bearing is used to support the pump thrust load. Since, the bearing and motor are water lubricated, eliminating the need for mechanical seals. Motors are available in single or three phase, 60 cycle, and three phase 50 cycle. Motor will handle inlet water temperature up to 95 degrees F, however water temperature up to 122 degrees F can be used if the motor is derated.
- 3 Wiring** - Motor wiring is not contacted by the feedwater, therefore the motor cannot short out from breaks in the wiring insulation caused by chemical attack. Wiring connections are made with wire nuts contained inside a conduit box.
- 4 Up-Thrust Bearing** - The "Rulon" upthrust bearing protects the pump from damage during startup.
- 5 Impellers** - Impellers are "Noryl" polyphenylene oxide thermoplastic. The centrifugal design delivers a steady, pulse free flow with minimal noise and wear. All thermoplastic pump components are injection molded at Weber Industries to insure the strictest of "Quality Control Standards".
- 6 Pump Housing** - The 304/316 SS pump housing is bolted, not threaded to the motor bracket. Since, it is not enclosed by another tube, maintenance and priming is easy. Prior to servicing, the wiring and cord seal do not have to be disconnected nor does the pump and motor have to be pulled out of a tube. Air or stagnant pockets of water cannot be trapped near the discharge and delay priming.
- 7 Rotating Assembly** - The entire rotating assembly is easily removed by simply unbolting the pump housing from the motor bracket, and removing it. Then remove the rotating assembly by slipping it off the motor shaft.
- 8 Discharge** - Rugged heavy-duty 316 SS with NPT connection is standard. Flange and sanitary, fittings are available upon request. Maximum working pressure is 1000 PSIG for the 60 and 80 GPM series and 750 PSIG for the 5 thru 35 GPM series. Ease of removal is guaranteed by the welded discharge/tube assembly (optional steel construction available).
- 9 Top Shaft Sleeve and Bearing** - 316 SS shaft sleeve is water lubricated and runs in a "Rulon" bearing that is molded into the top diffuser then machined to close concentricity and bore tolerances. Longer pumps use several intermediate bearings to reduce shaft deflections.
- 10 Shaft** - 316 SS shaft is cold drawn and straightened to tight tolerances to eliminate shaft whip and resulting vibration.
- 11 Diffusers** - Diffuser assemblies molded of "Noryl" polyphenylene oxide thermoplastic are assembled using concentric rabbet fits. Inside the pump housing, they are compressed to prevent interstage leakage and loss of pressure which improves efficiency.
- 12 Impeller Wear Rings** - 316 SS stamped wear rings are insert molded into each diffuser at both the suction and discharge side to eliminate plastic on plastic contact and maintain tight clearances for low leakage and high efficiency.
- 13 "O" Rings** - Viton "O" Rings are used throughout for resistance to aggressive high purity water.
- 14 Coupling** - The 316 SS coupling of this pump is rugged and simple. It is pressed onto the pump shaft, pinned, and splined to correctly fit the motor shaft. This design insures reliable operation and long life. Set screws are not necessary so assembly is simplified.
- 15 Motor/Pump Bracket** - 316 SS motor bracket is standard (steel is available). This is precision investment casting, machined for perfect alignment of the motor shaft with pump shaft coupling. Ribbing adds strength and stiffness for horizontal mounting.
- 16 Motor Housing** - The 316 SS motor housing is designed to provide a minimum water velocity past 4" motors of 0.25 ft/sec (3 GPM). These minimum flow rates will prevent premature motor failure. This motor heated feedwater tends to improve the efficiency of RO membranes. Dimples in the highly polished housing located close to the inlet assist in supporting the motor.

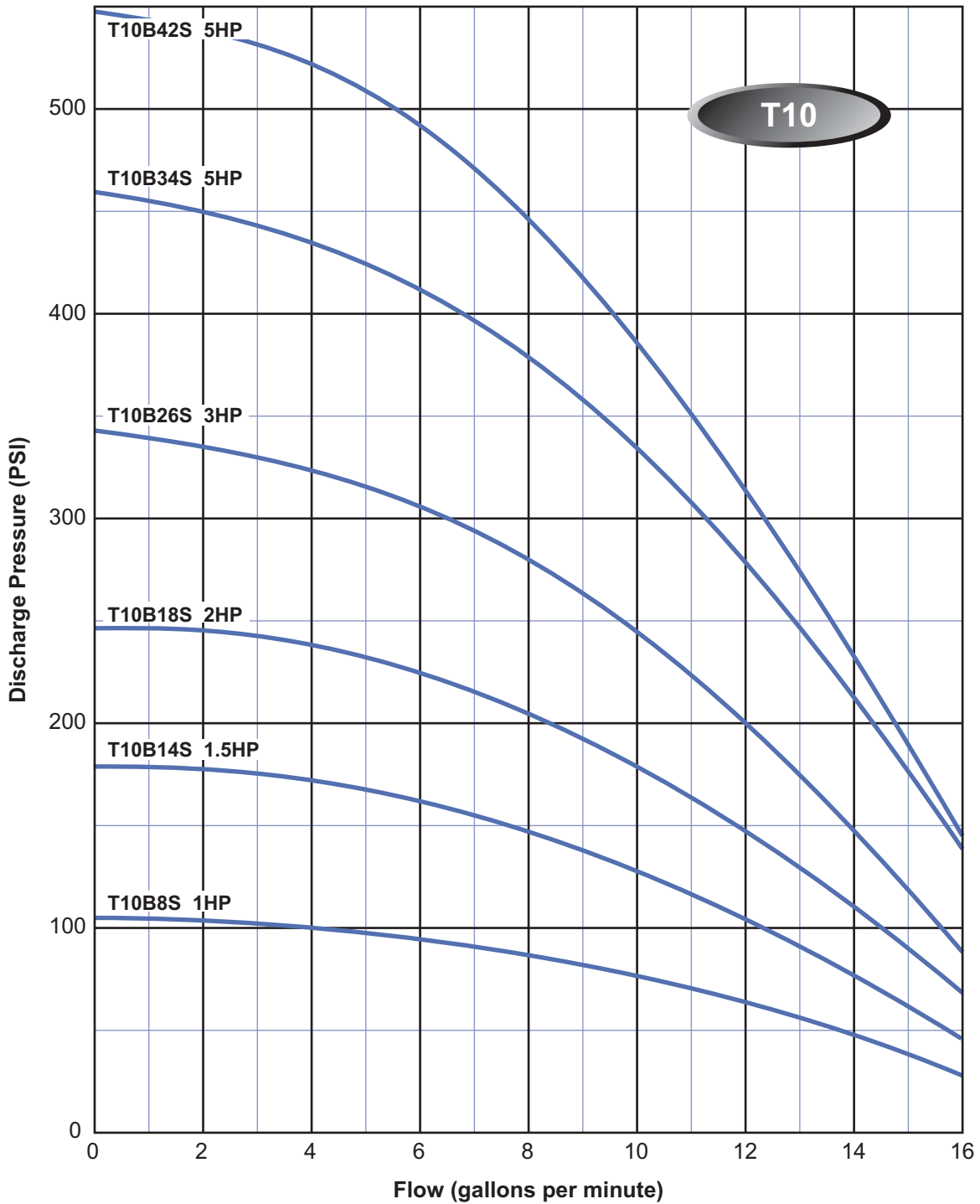
IN-LINE SERIES FAMILY CURVES



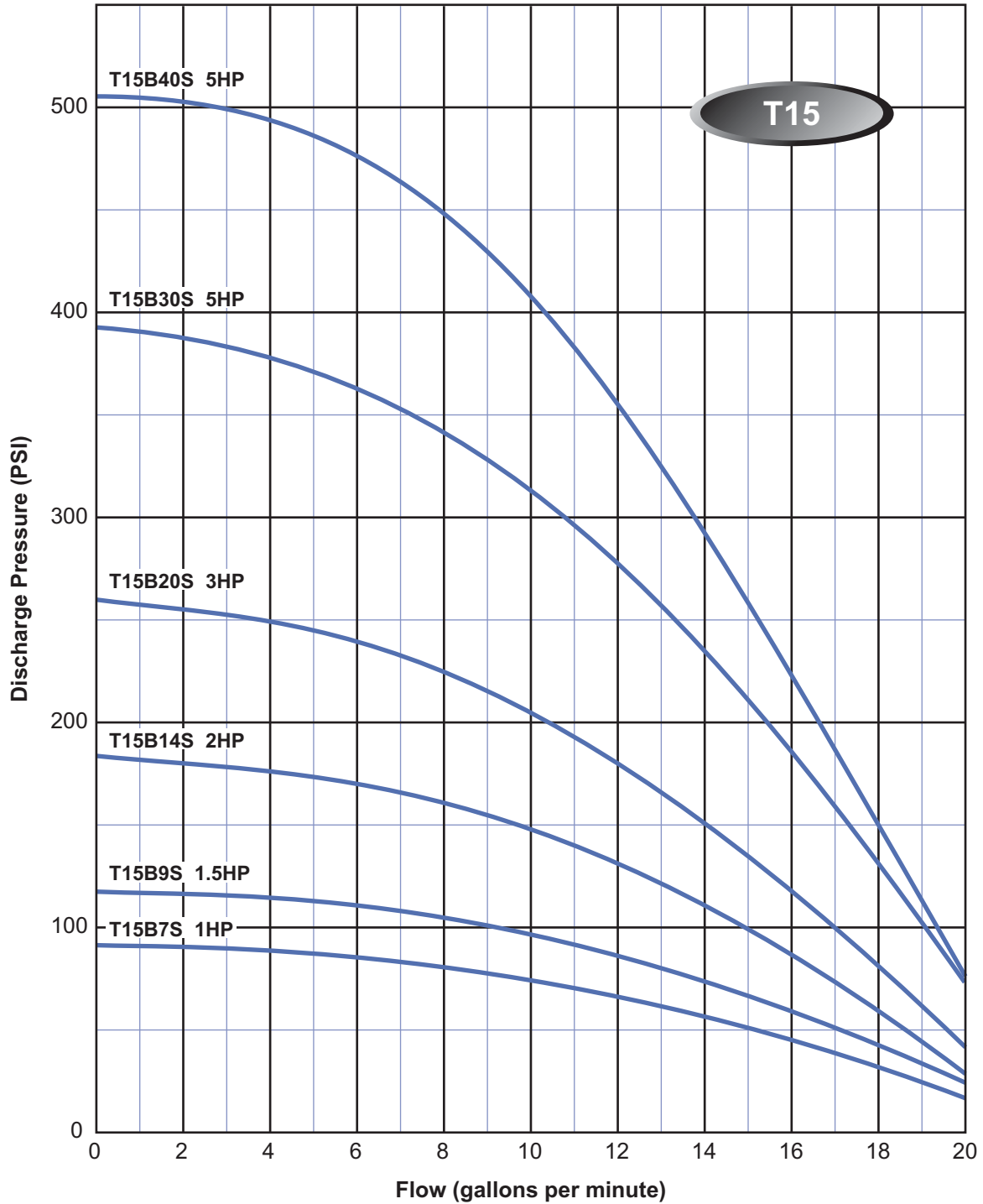
IN-LINE T5 SERIES GROUP CURVES



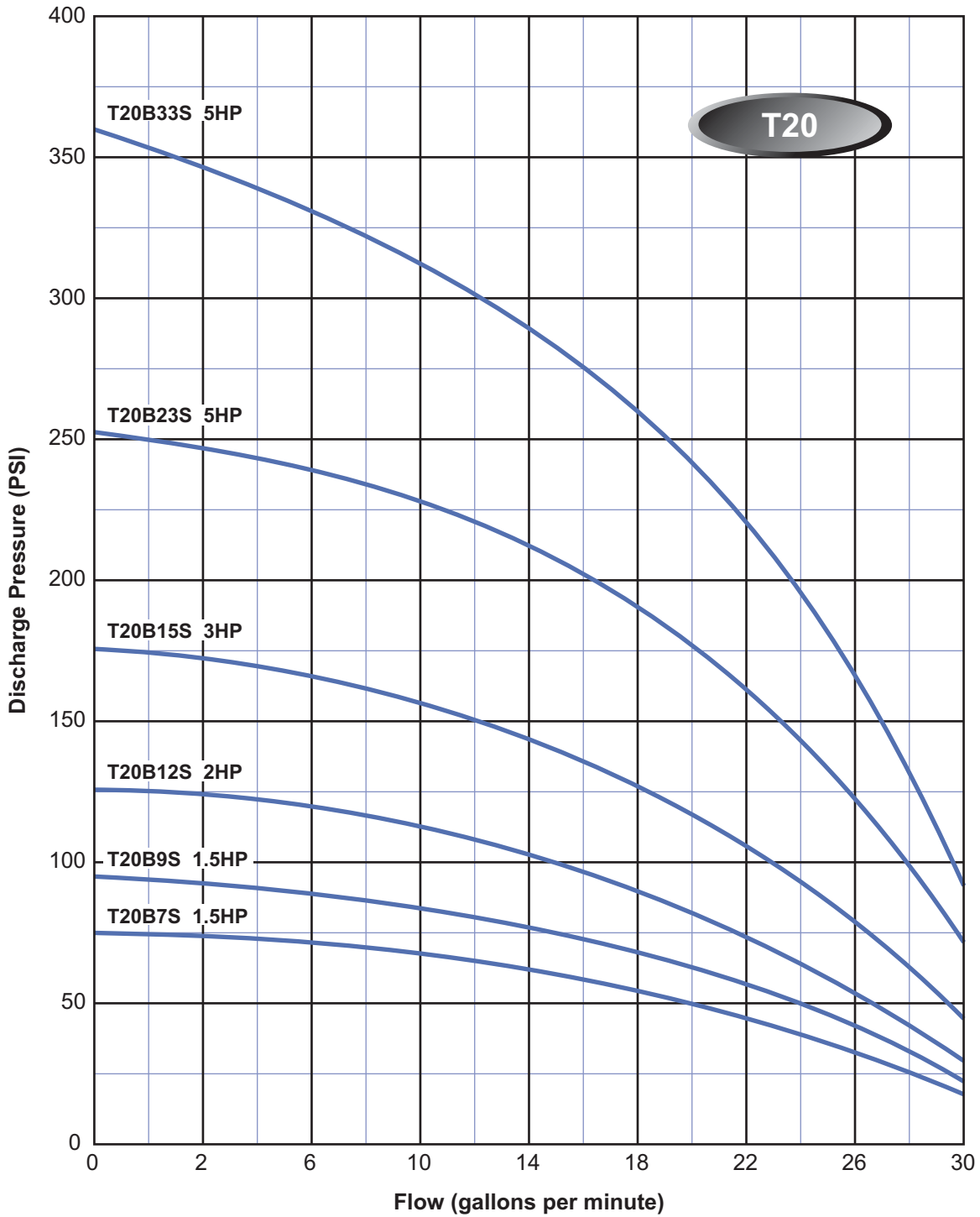
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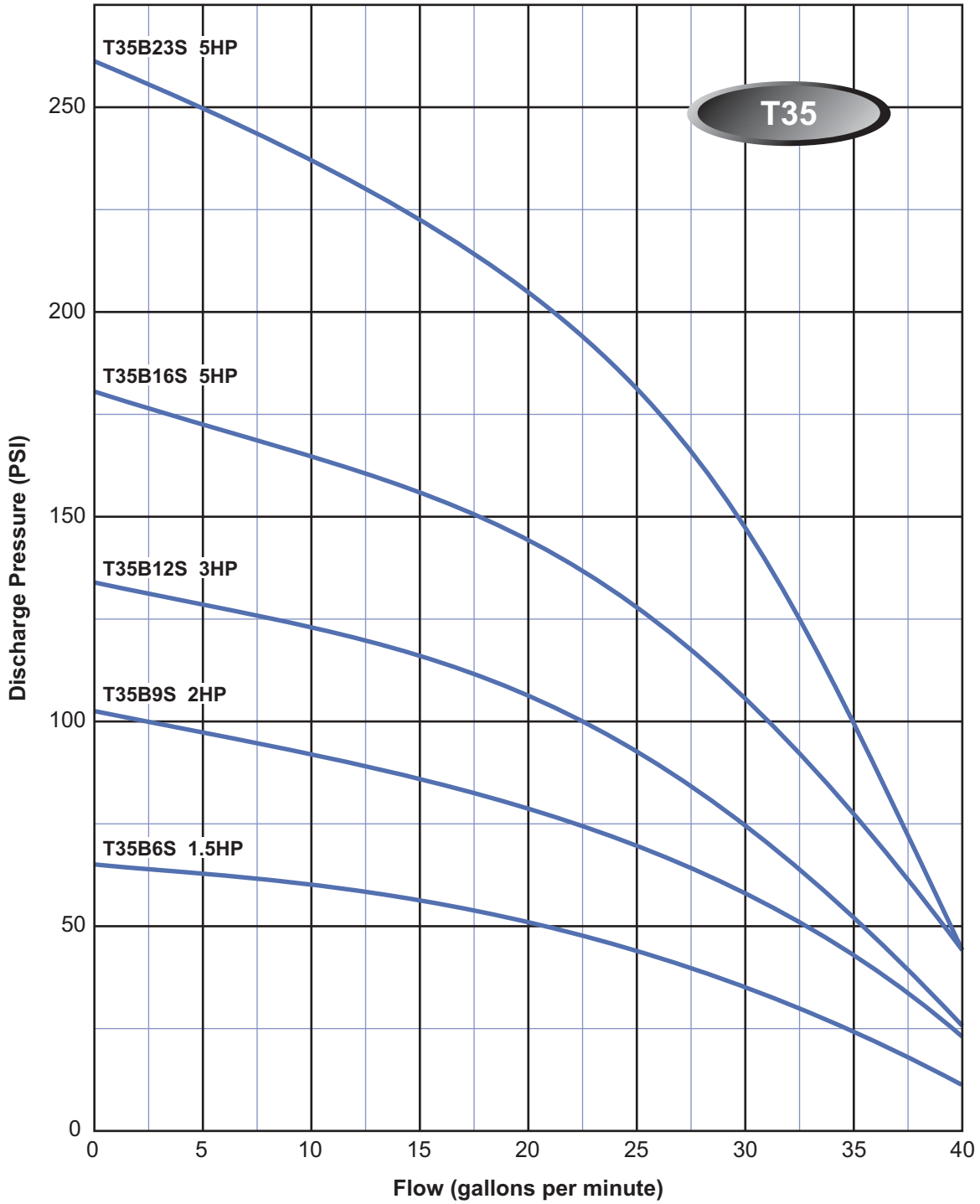
IN-LINE T15 SERIES GROUP CURVES



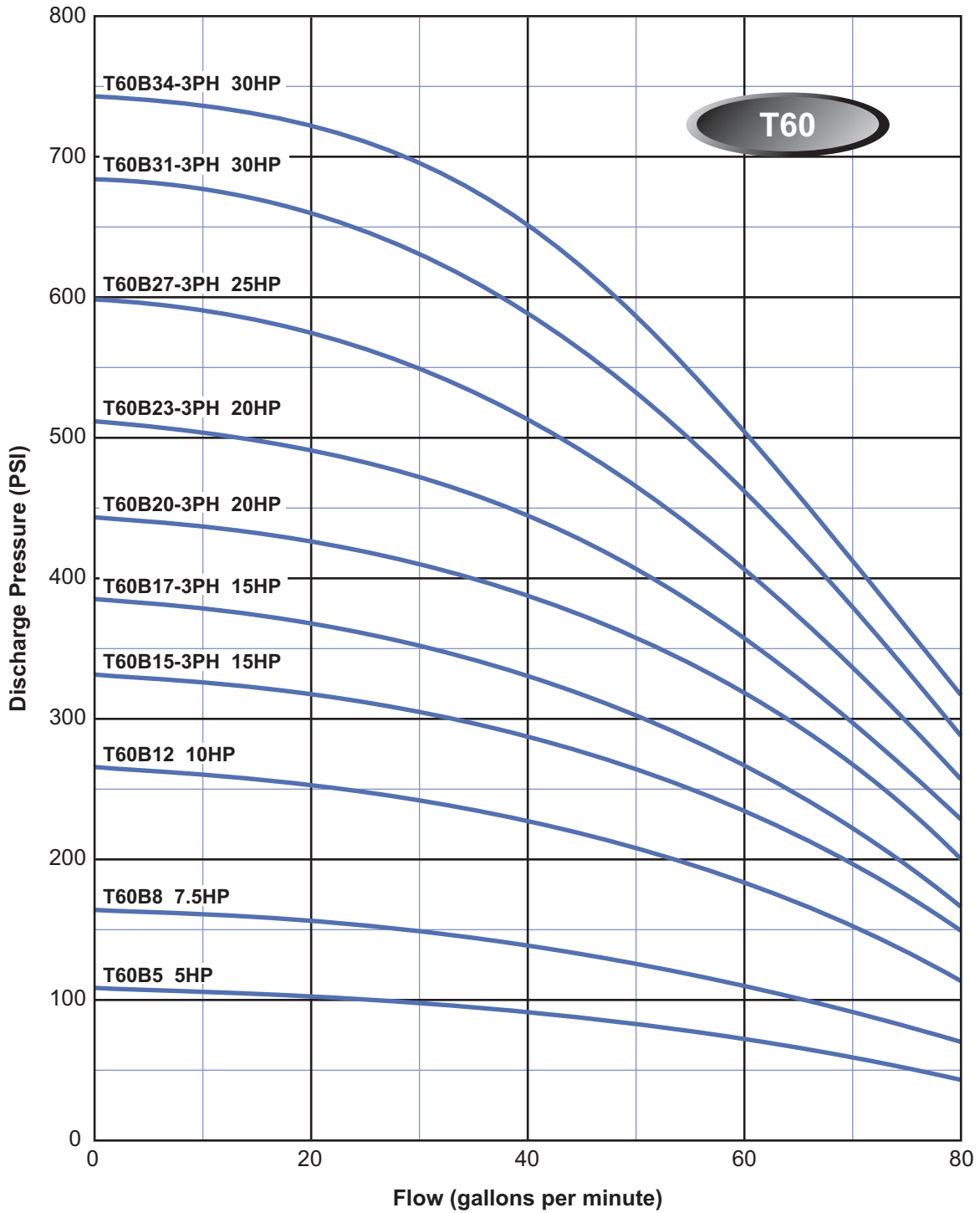
IN-LINE T20 SERIES GROUP CURVES



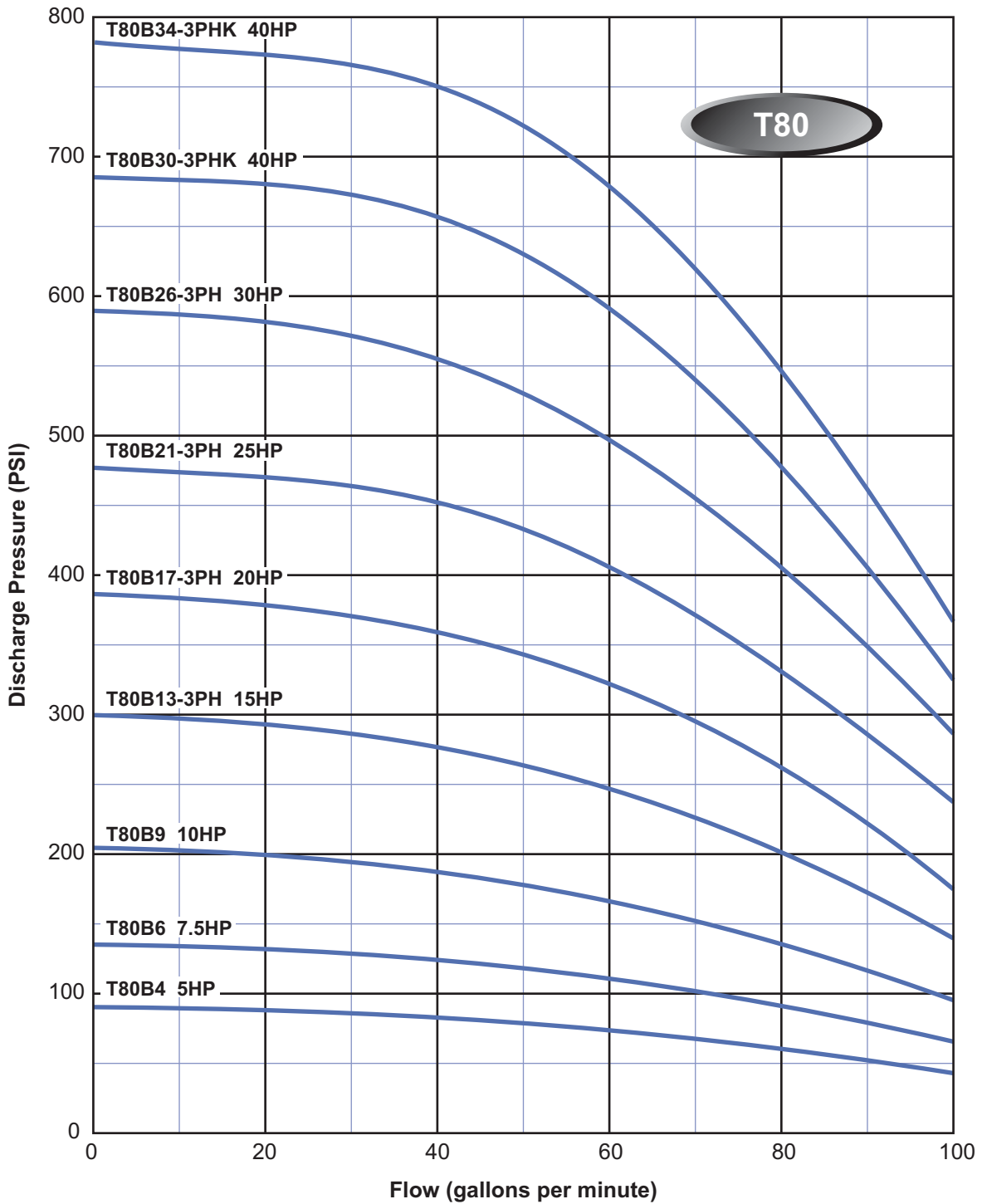
IN-LINE T35 SERIES GROUP CURVES



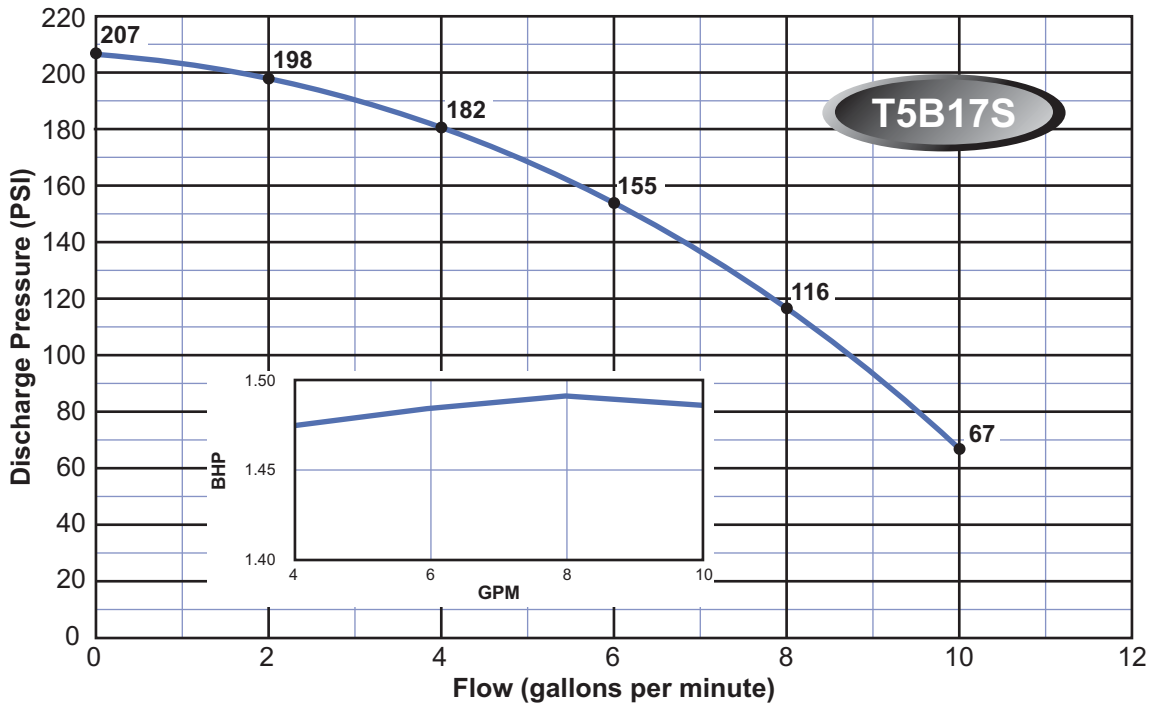
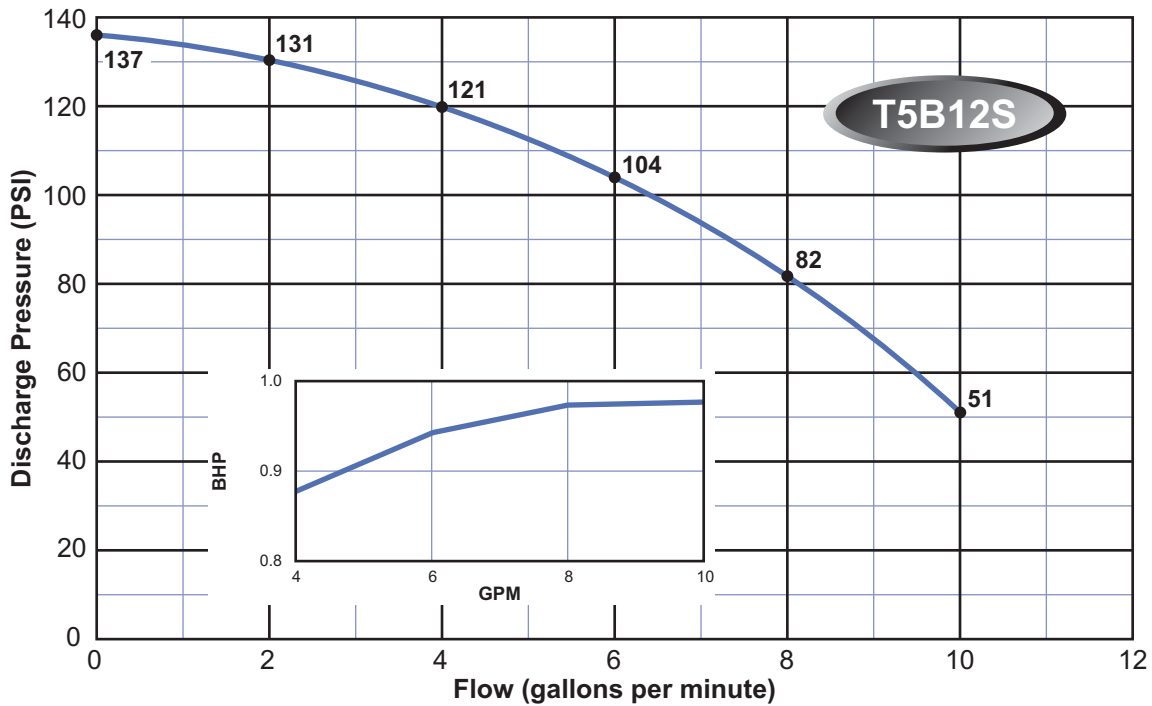
IN-LINE T60 SERIES GROUP CURVES



IN-LINE T80 SERIES GROUP CURVES



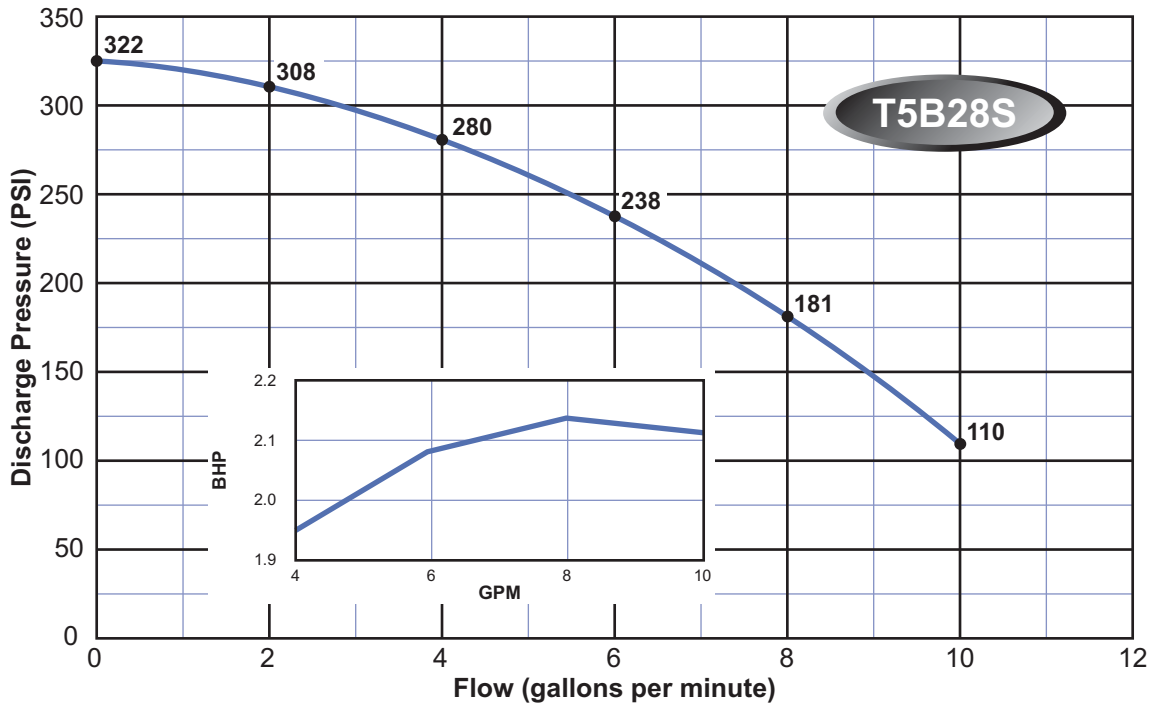
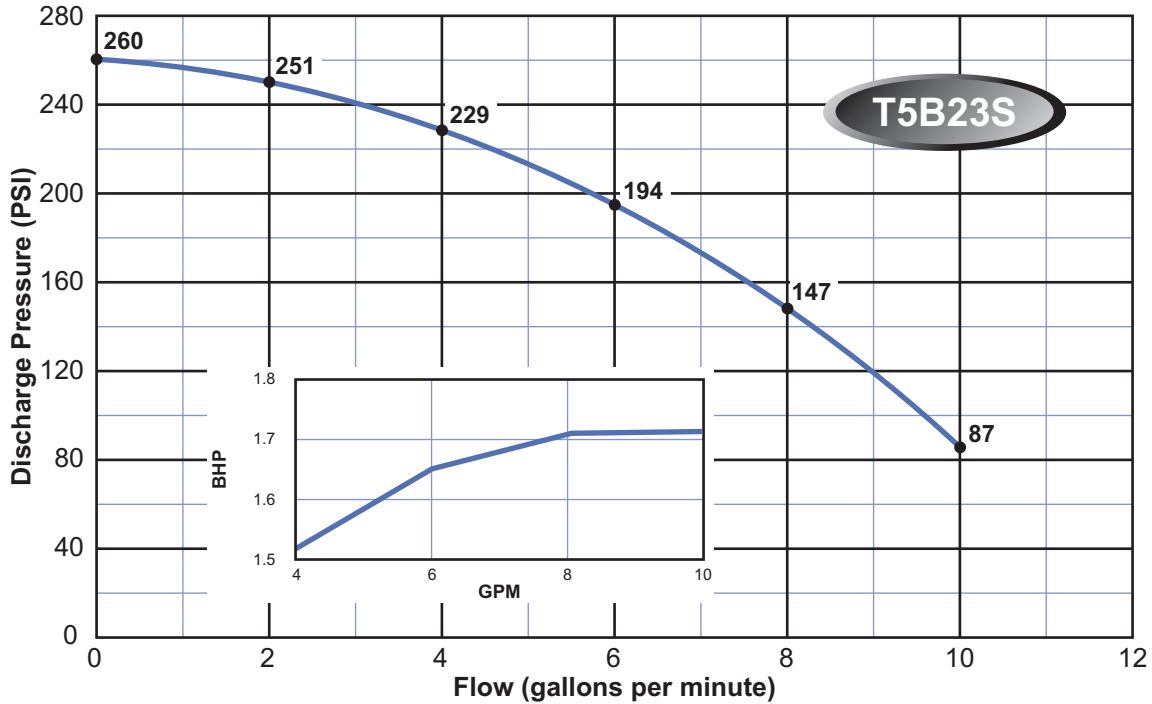
IN-LINE SERIES BOOSTER CURVES - 5 Series



Note:

Curves are based on 60 Hz 3450 rpm motors. 50 Hz 2875 rpm curves are available. These curves are for general guidance only, individual pump curves are available upon request. A certified curve may be requested for an additional cost. Webtrol will build pumps to fit your specific needs, contact factory for pricing.

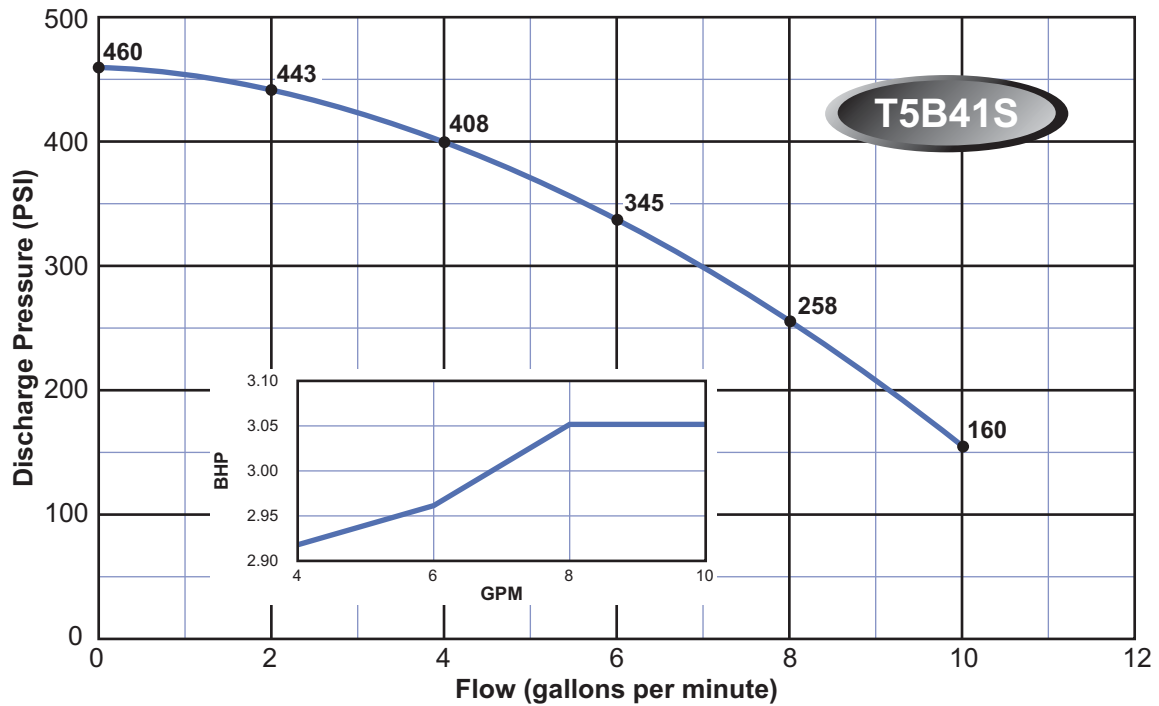
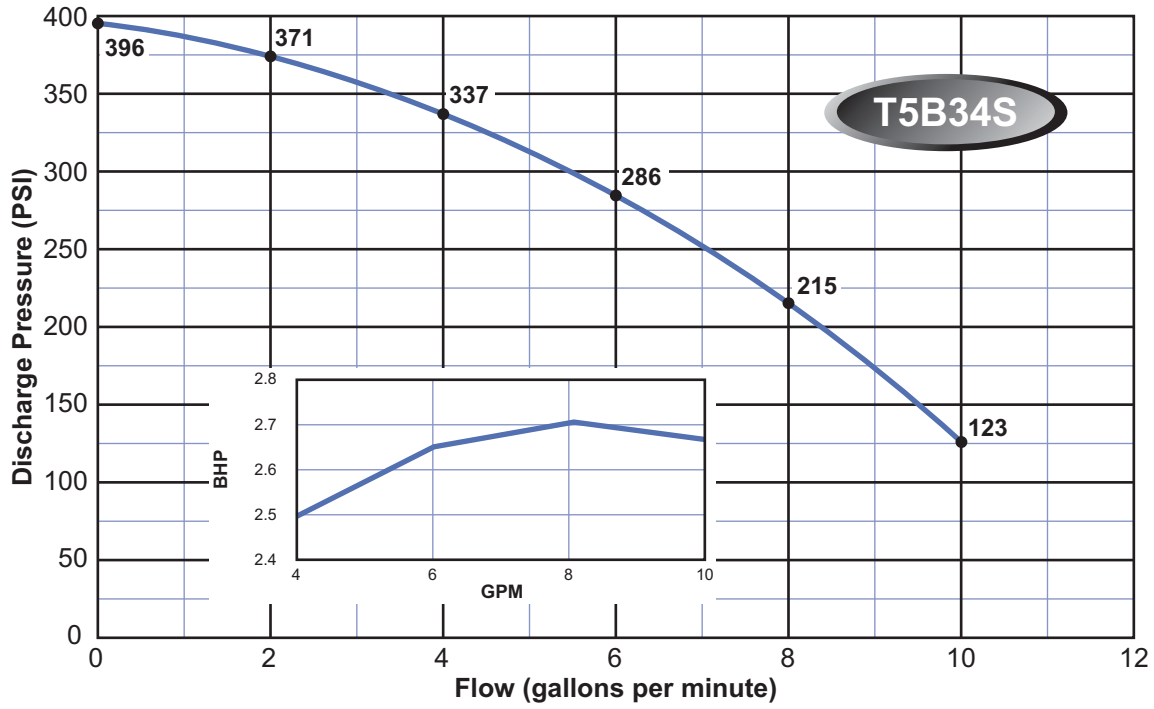
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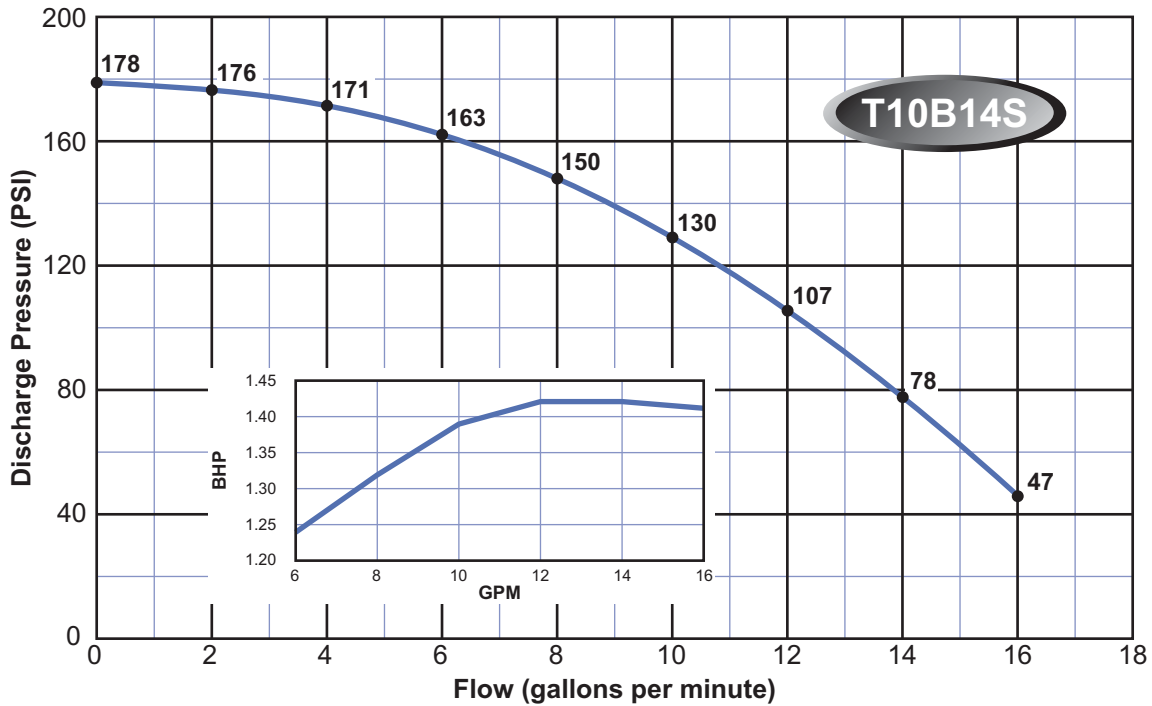
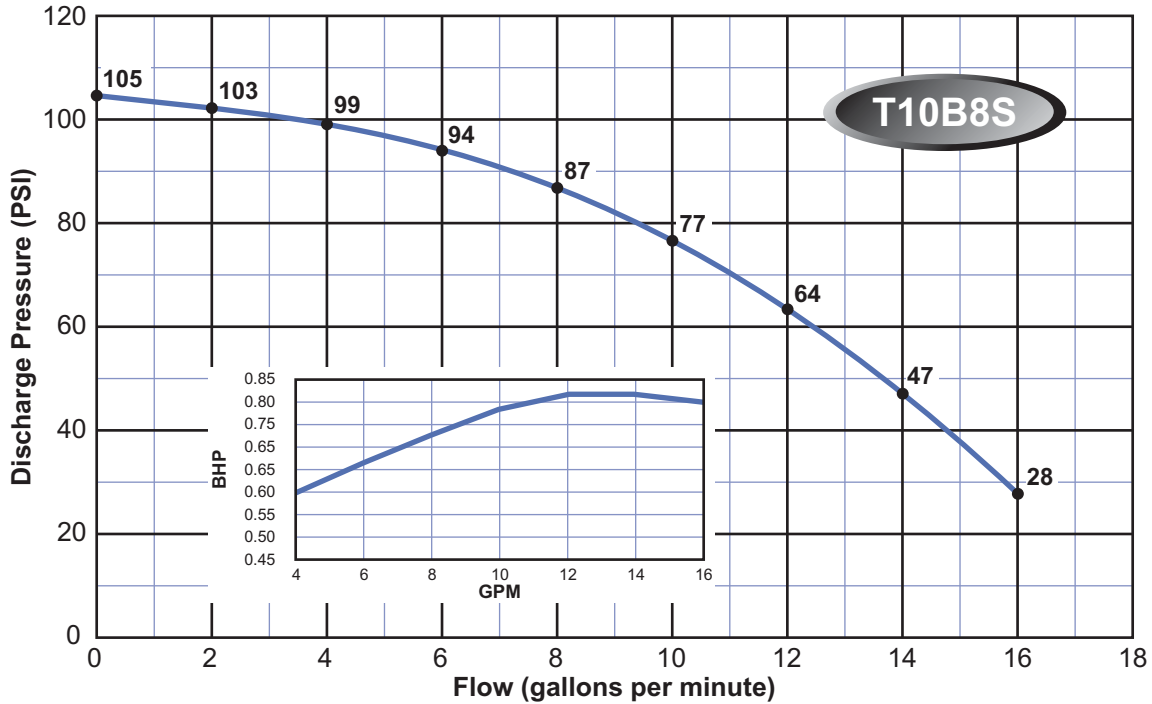
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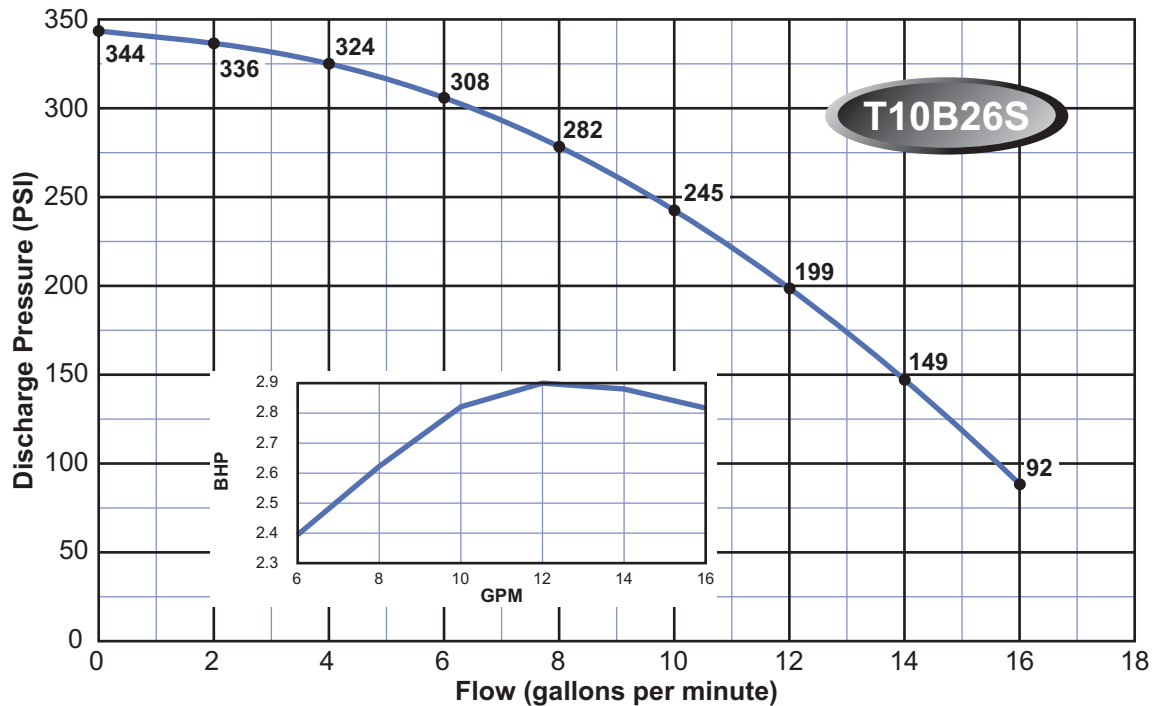
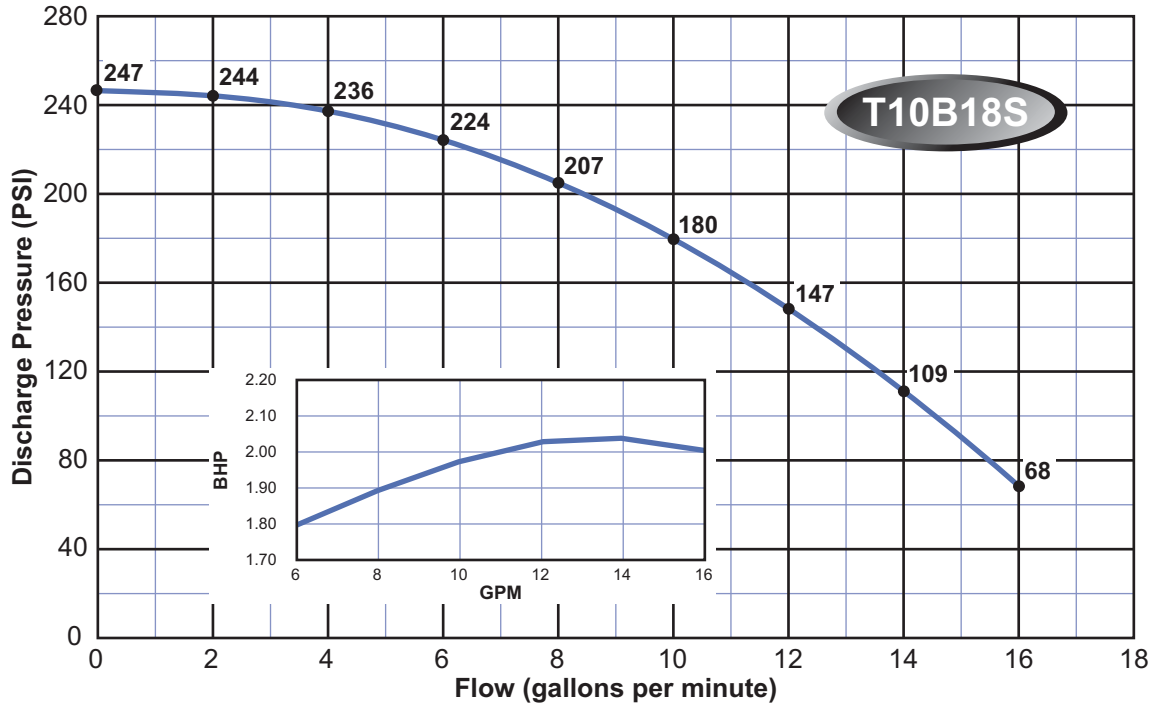
IN-LINE SERIES BOOSTER CURVES - 10 Series



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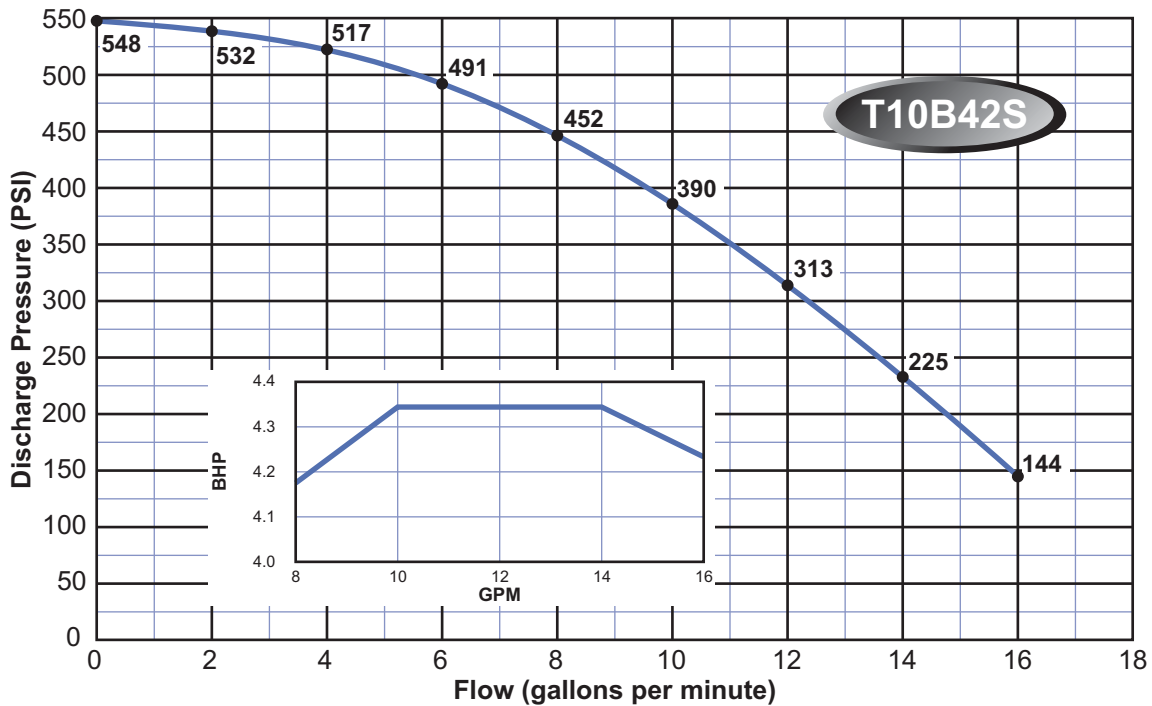
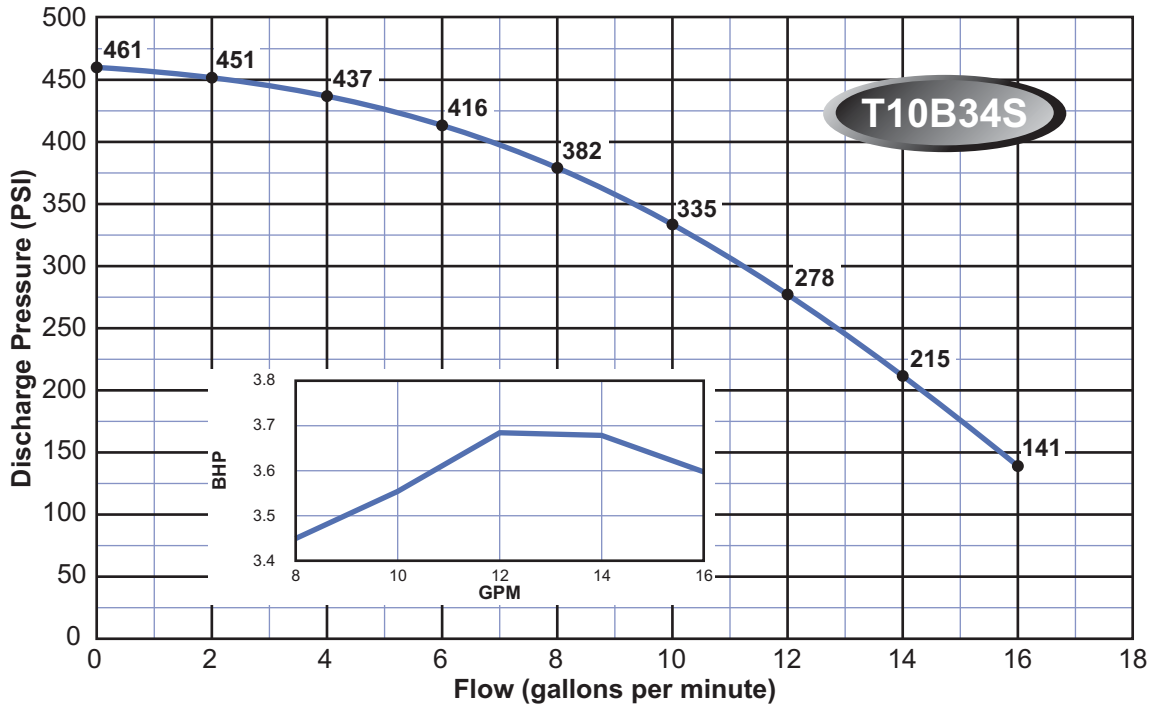
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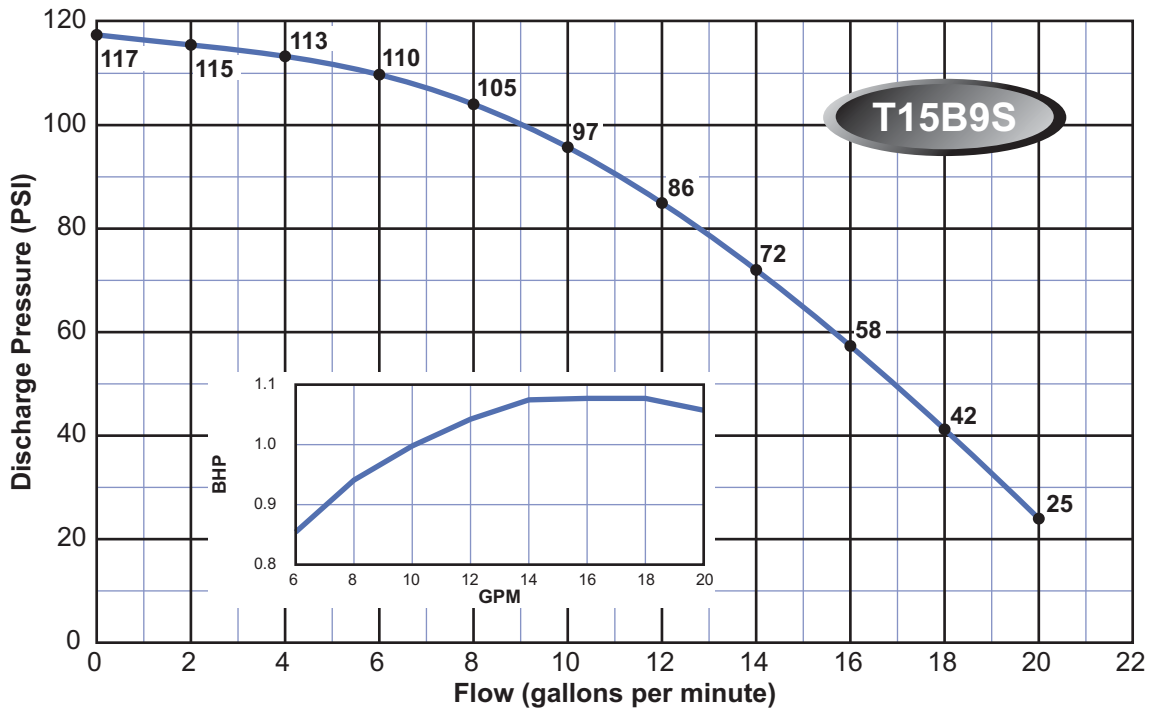
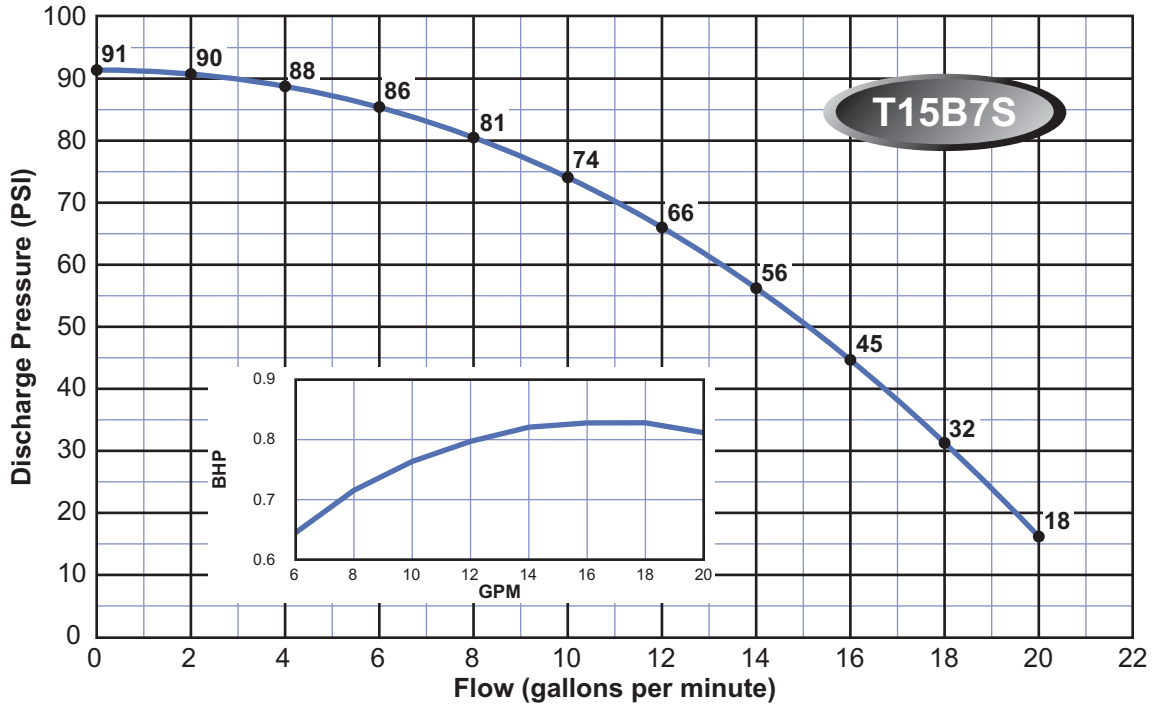
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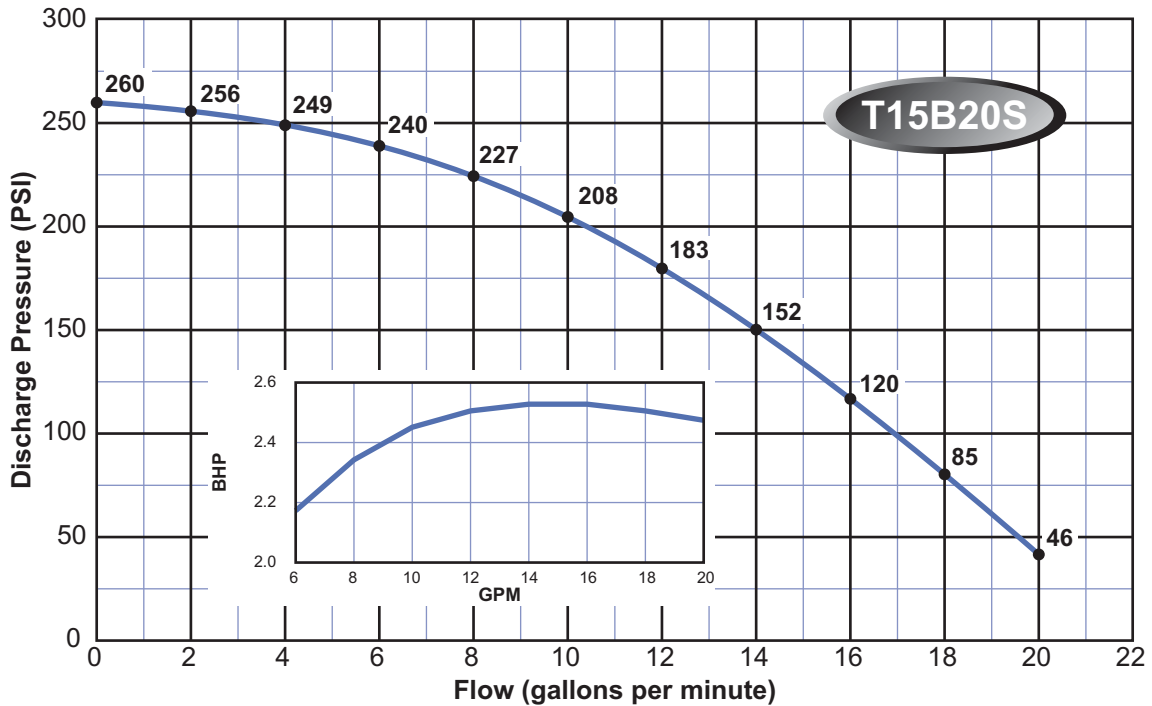
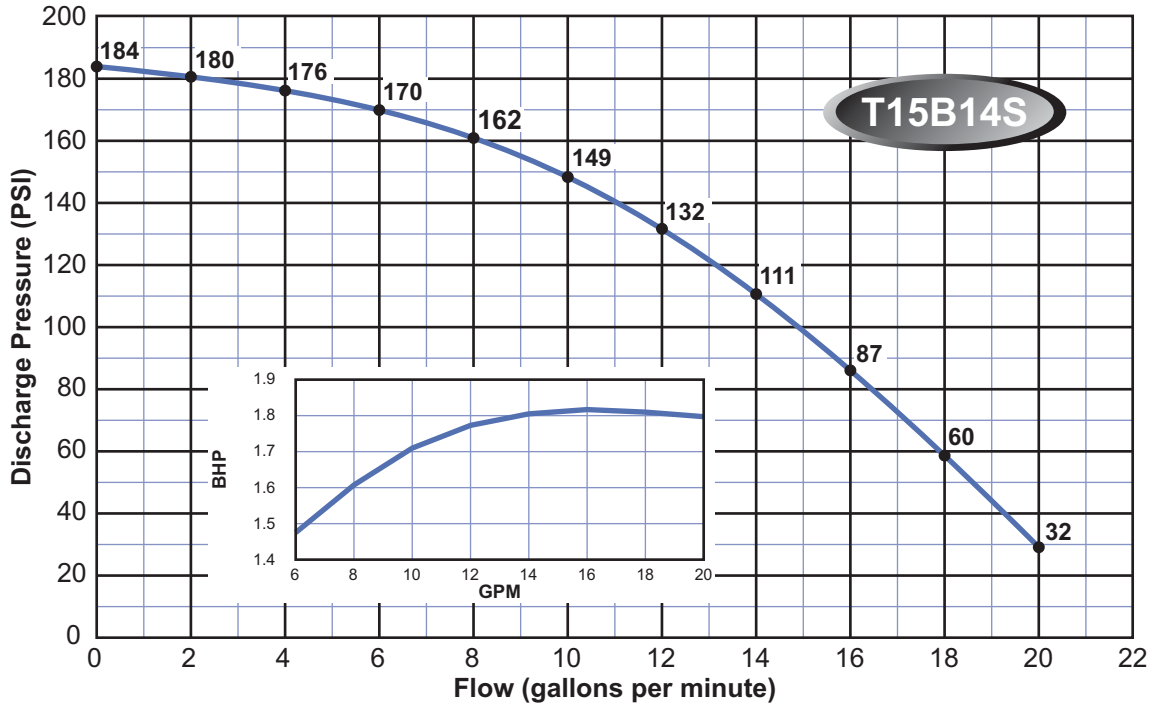
IN-LINE SERIES BOOSTER CURVES - 15 Series



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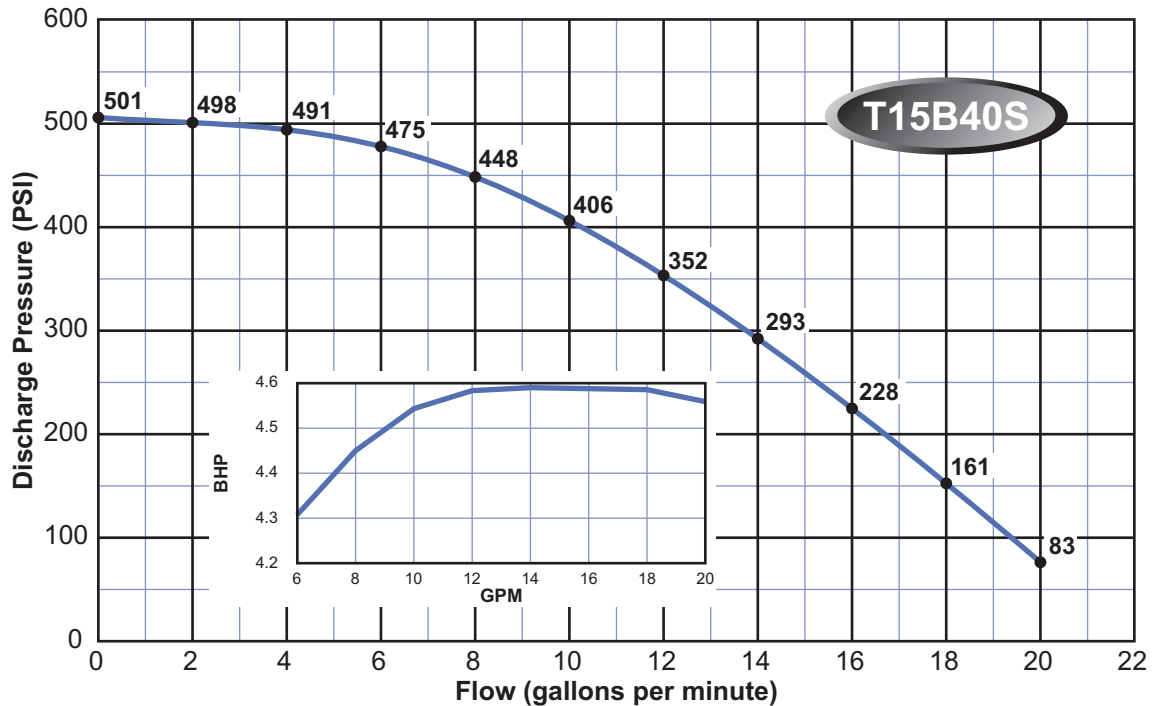
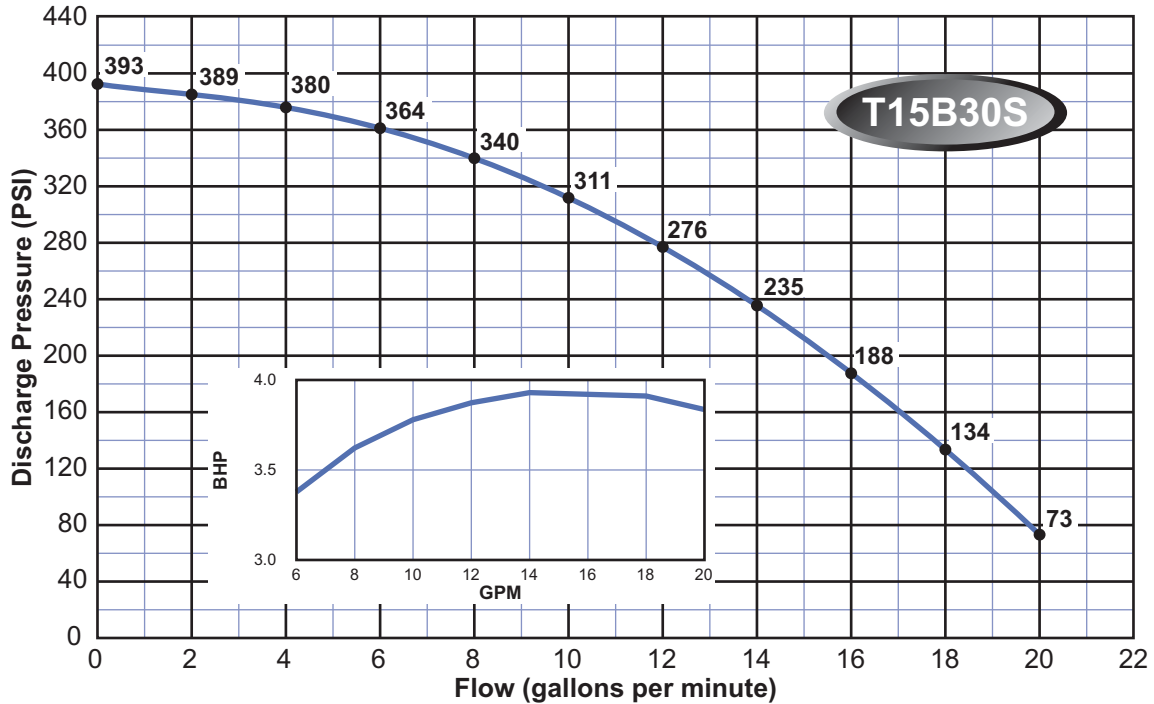
IN-LINE SERIES BOOSTER CURVES - 15 Series



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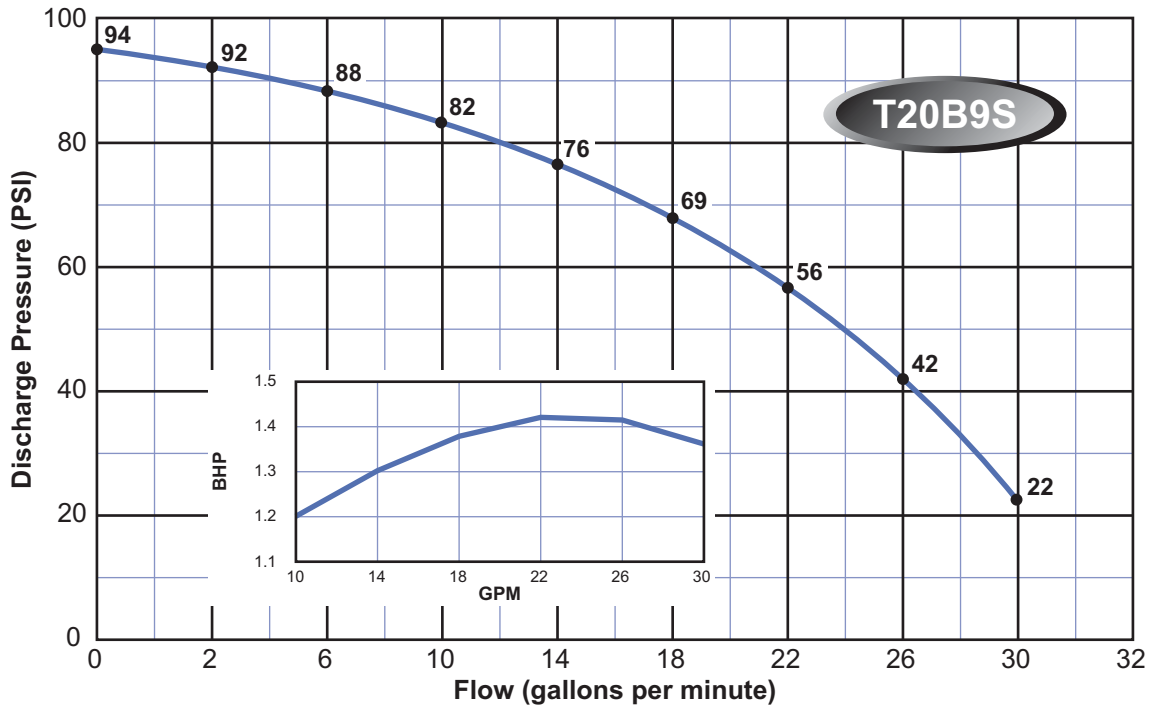
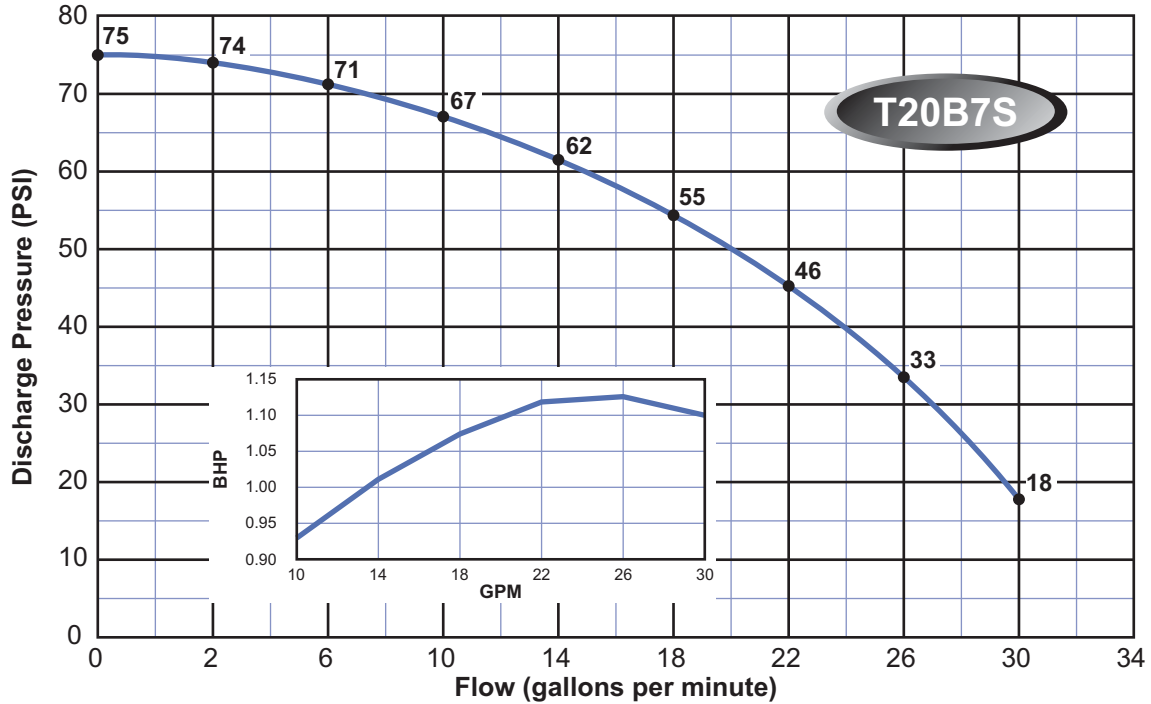
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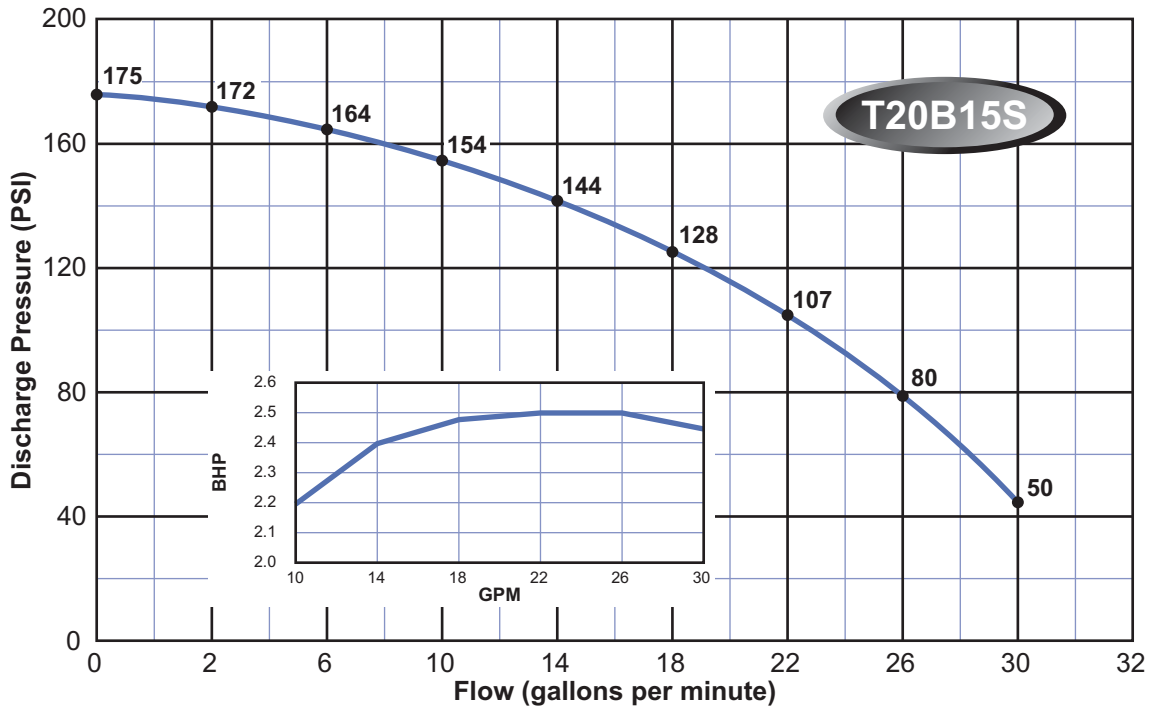
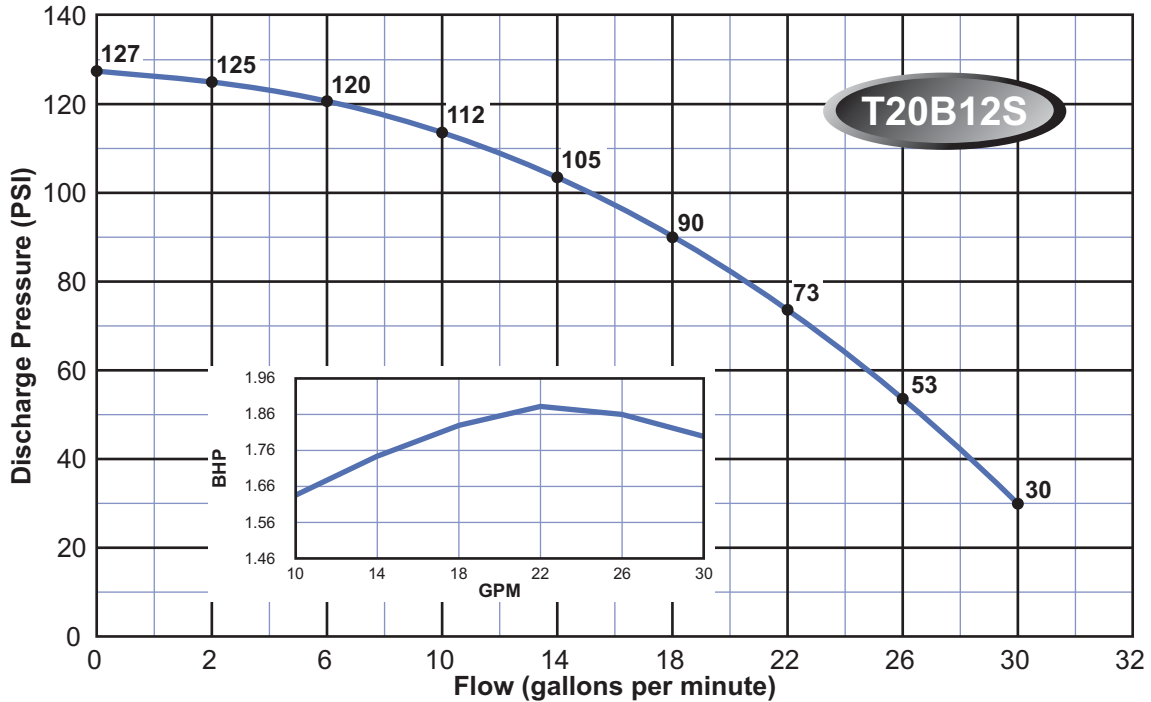
IN-LINE SERIES BOOSTER CURVES - 20 Series



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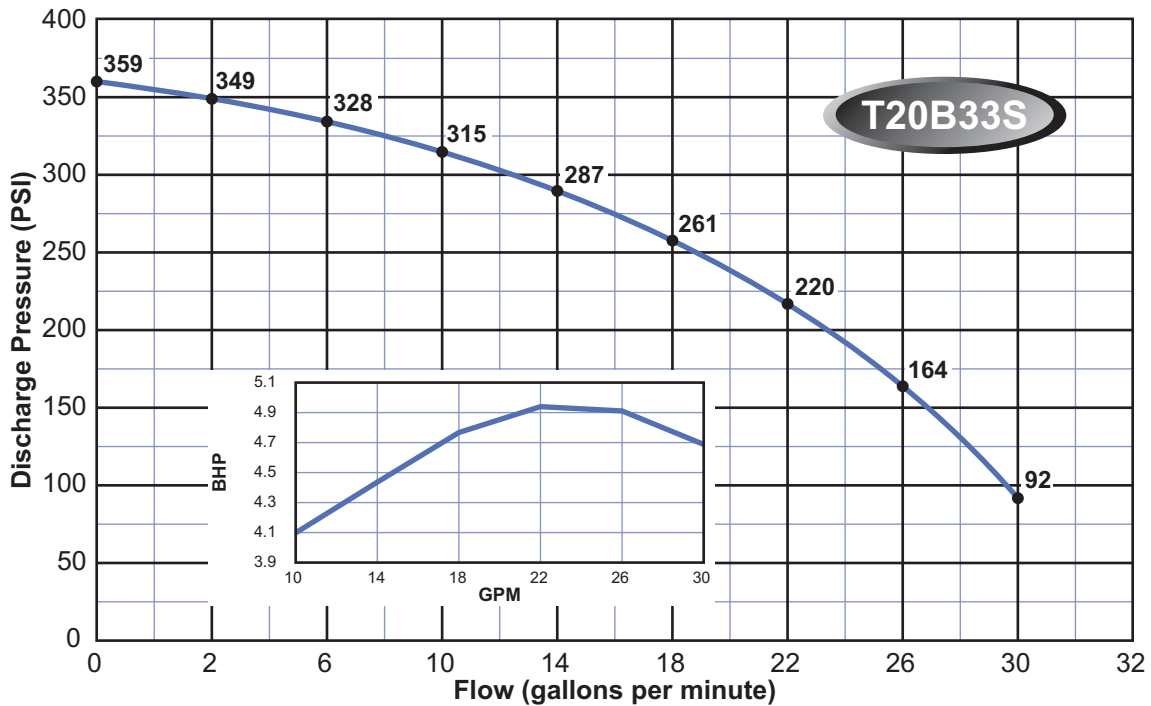
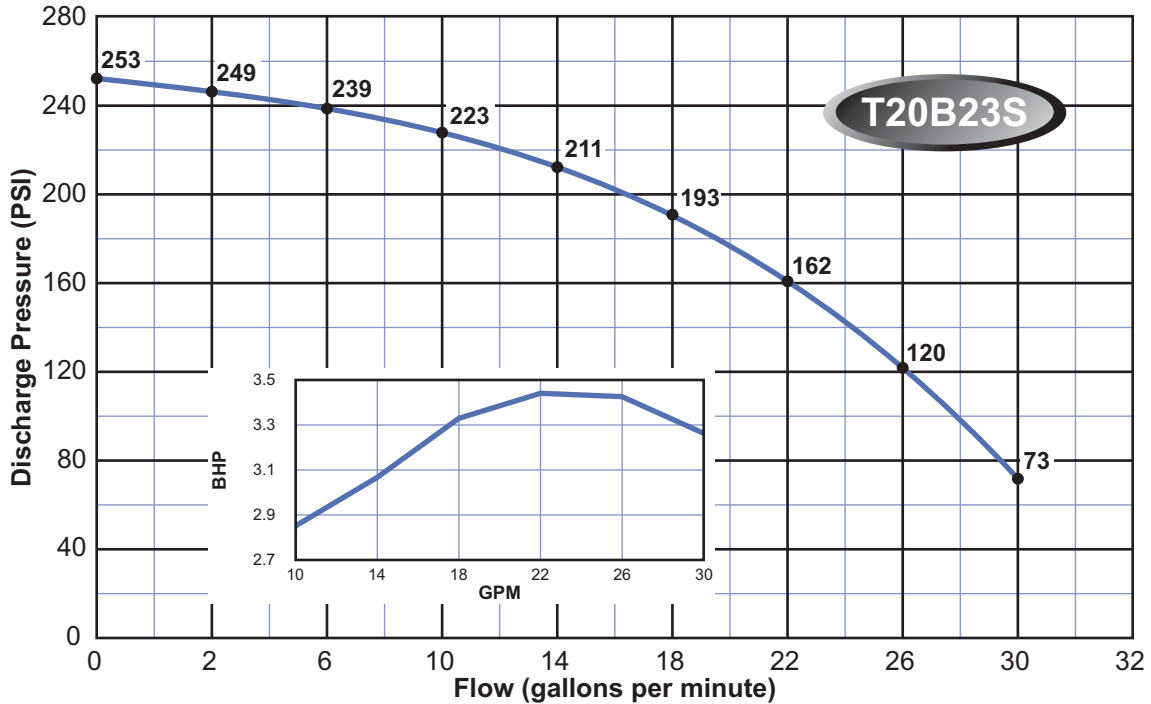
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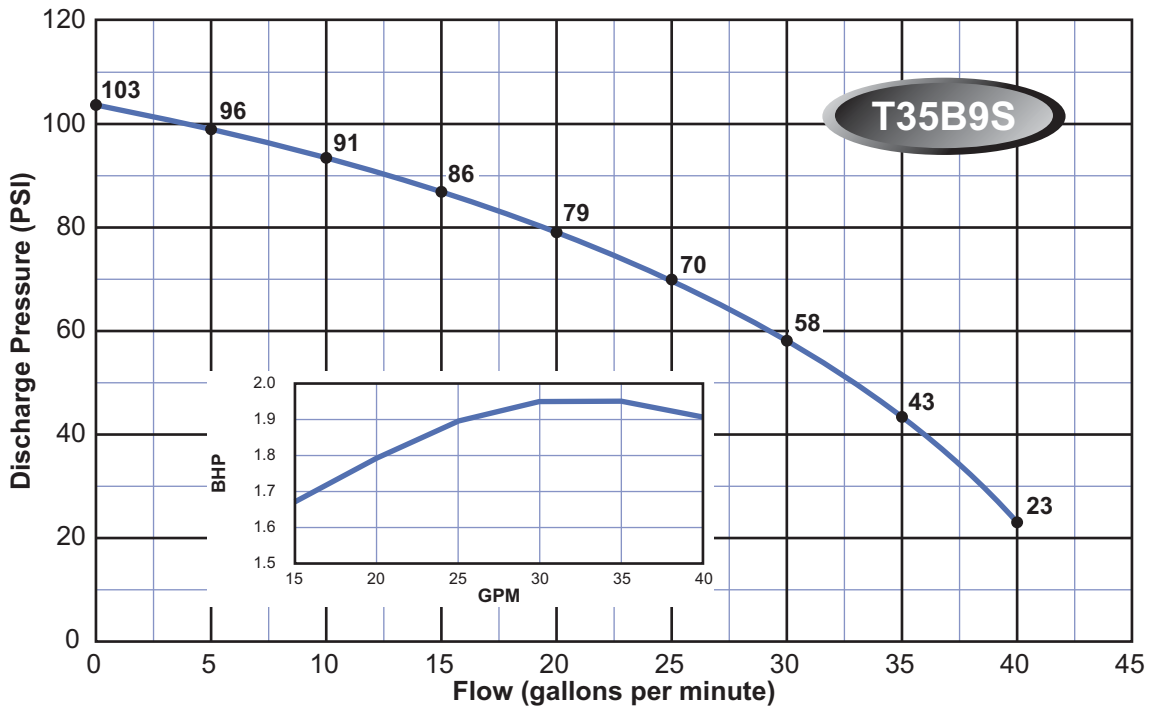
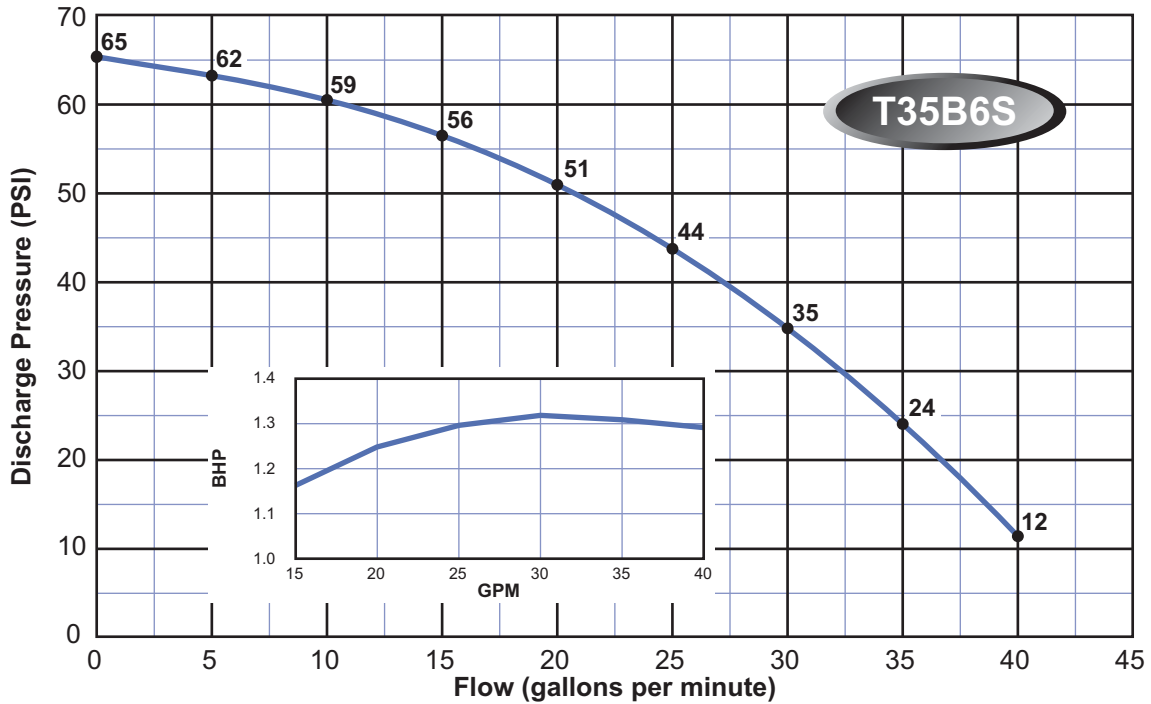
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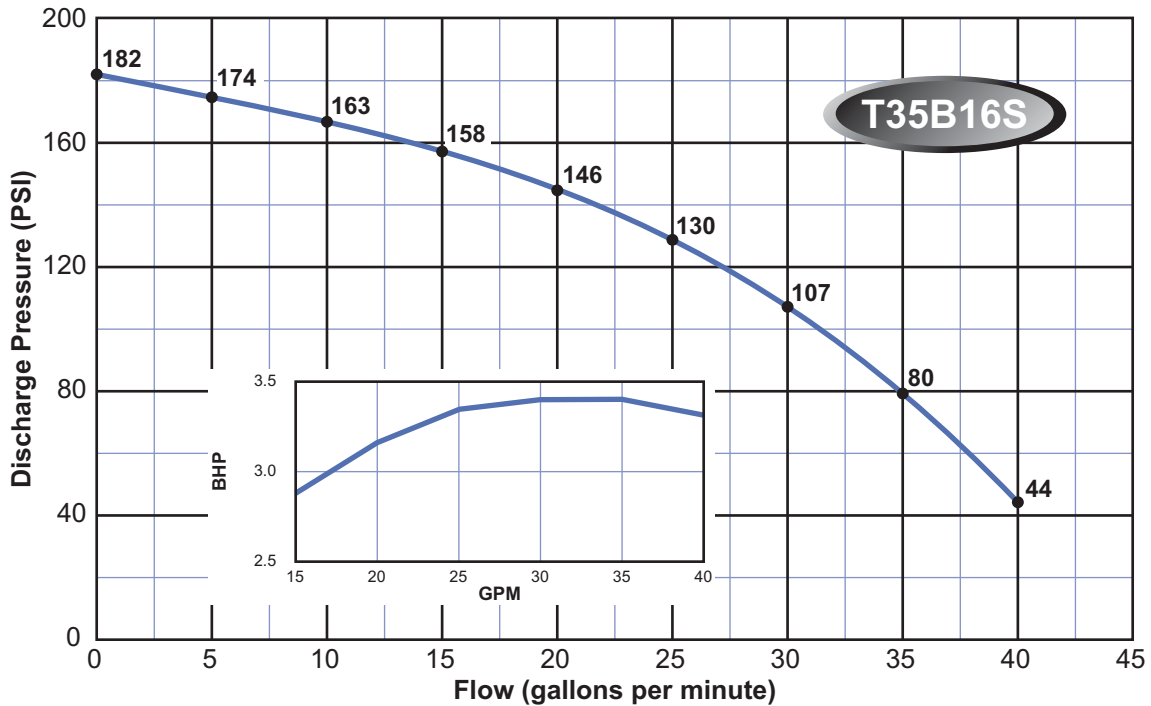
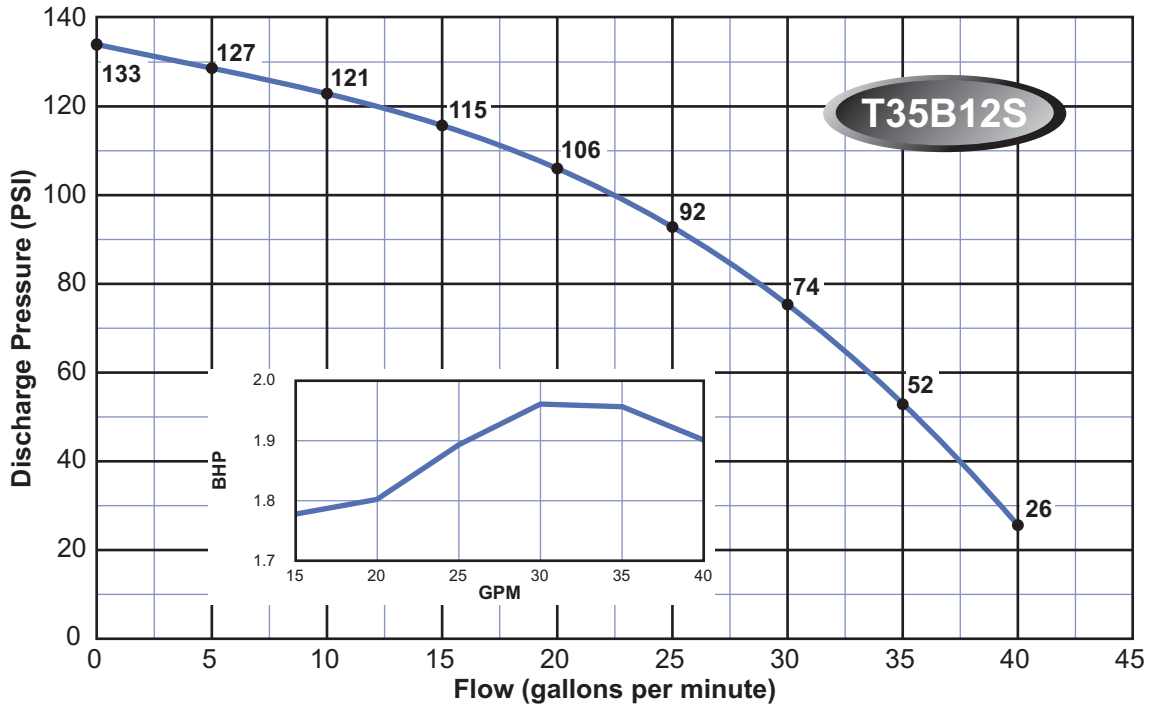
IN-LINE SERIES BOOSTER CURVES - 35 Series



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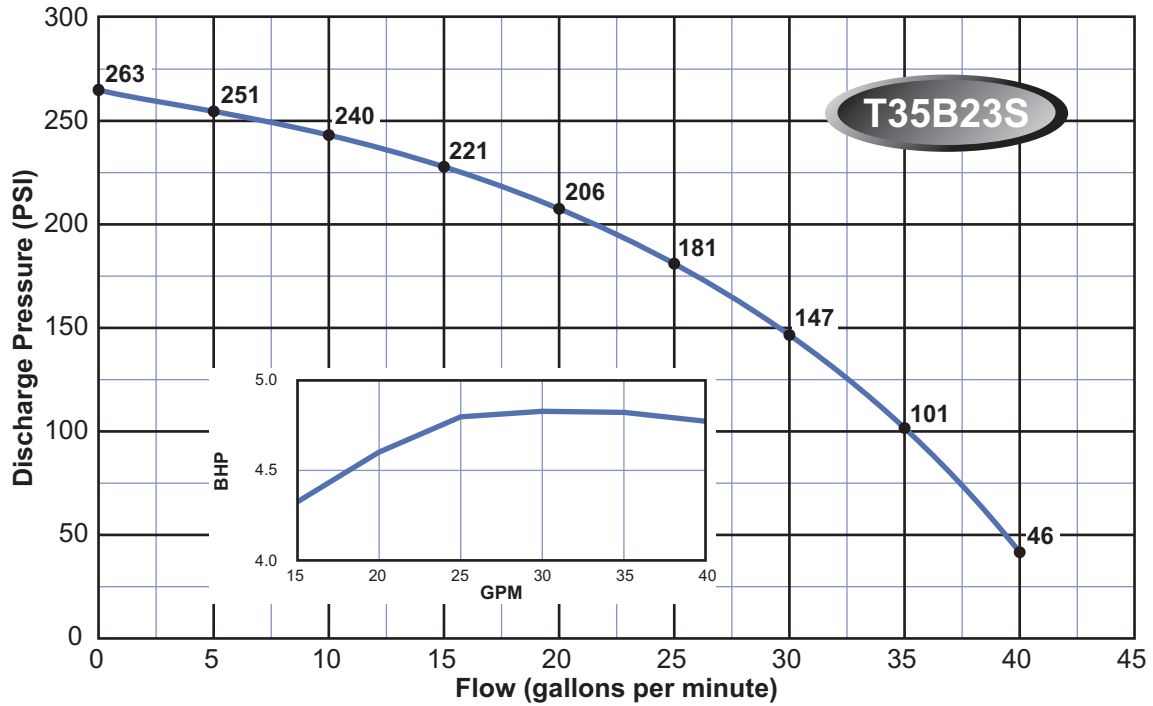
IN-LINE SERIES BOOSTER CURVES - 35 Series



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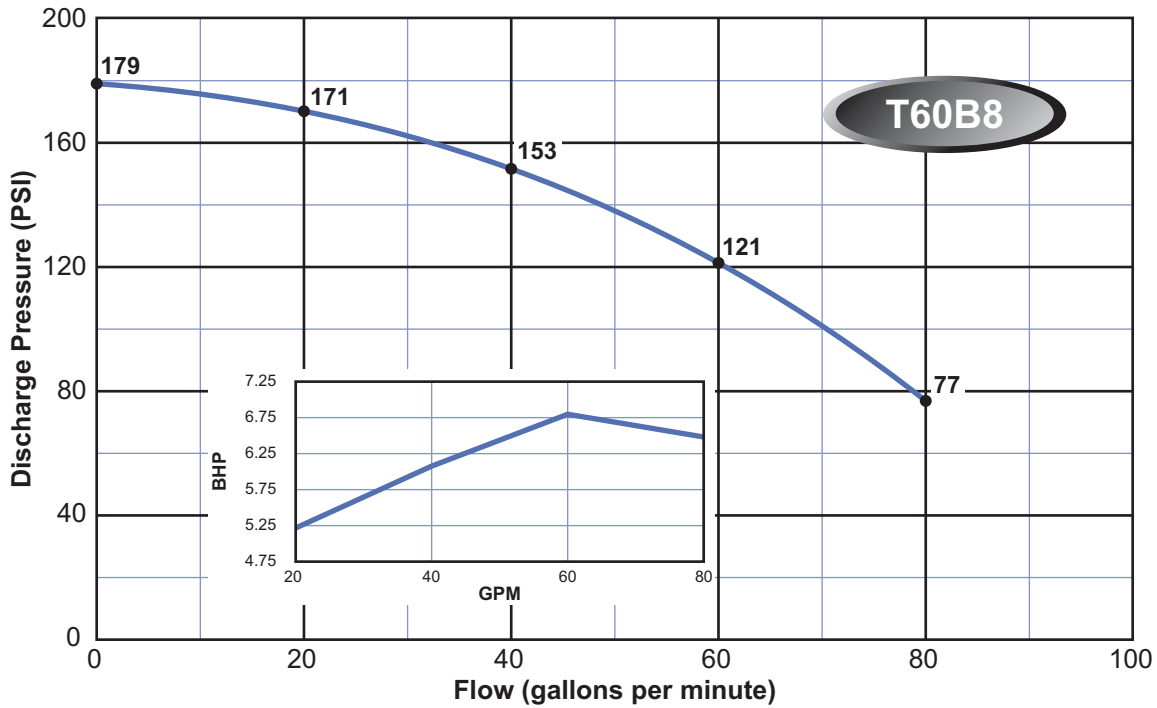
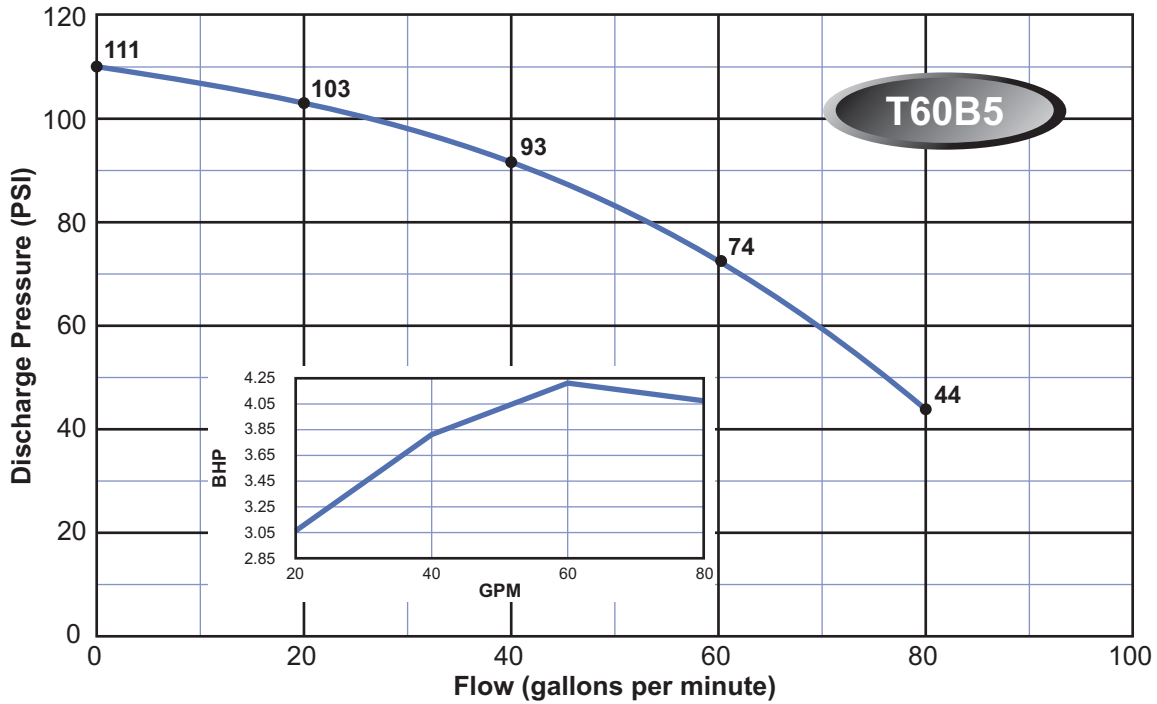
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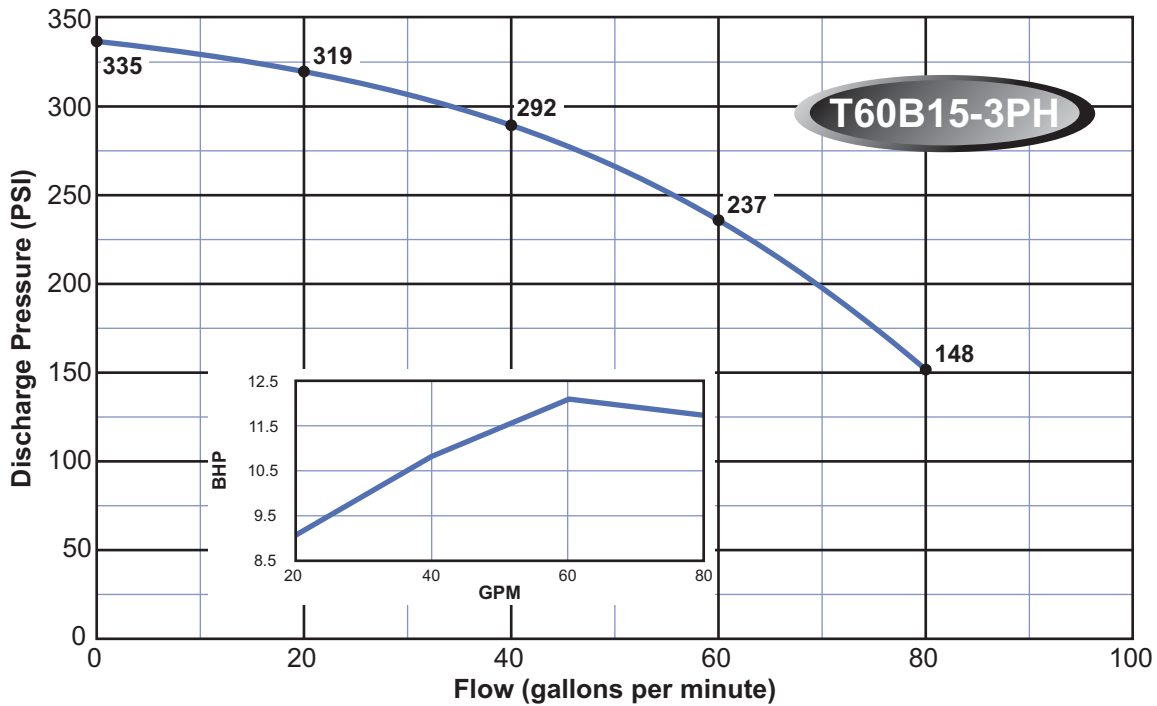
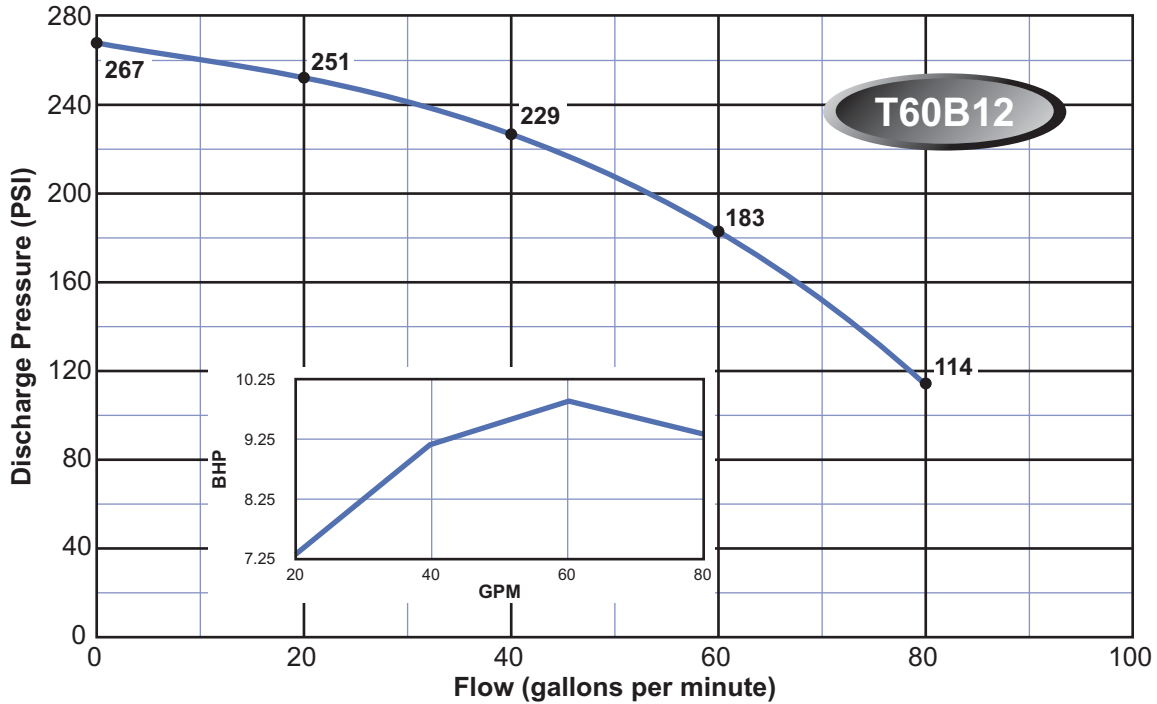
IN-LINE SERIES BOOSTER CURVES - 60 Series



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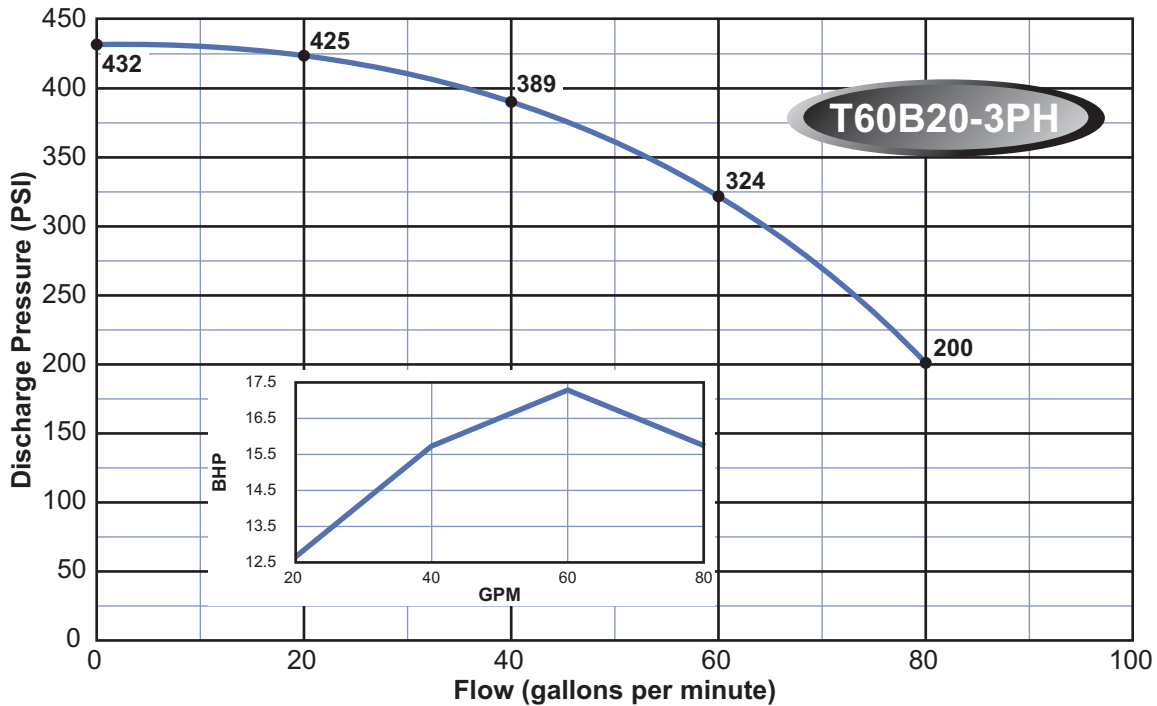
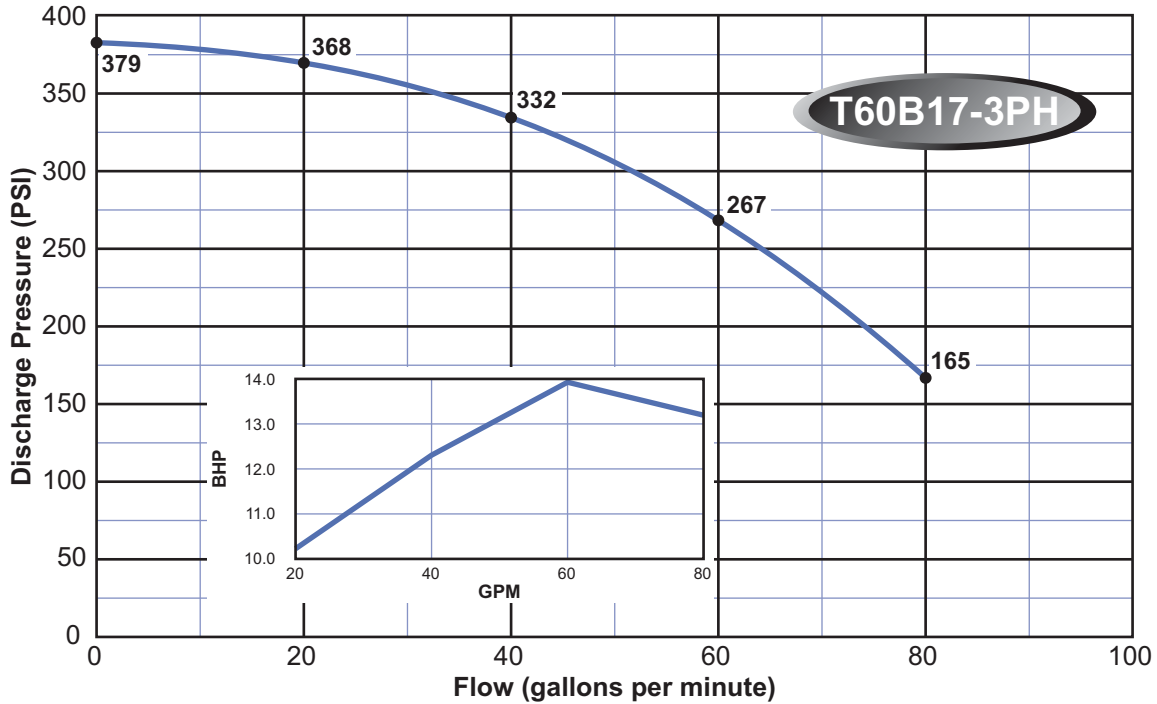
IN-LINE SERIES BOOSTER CURVES - 60 Series



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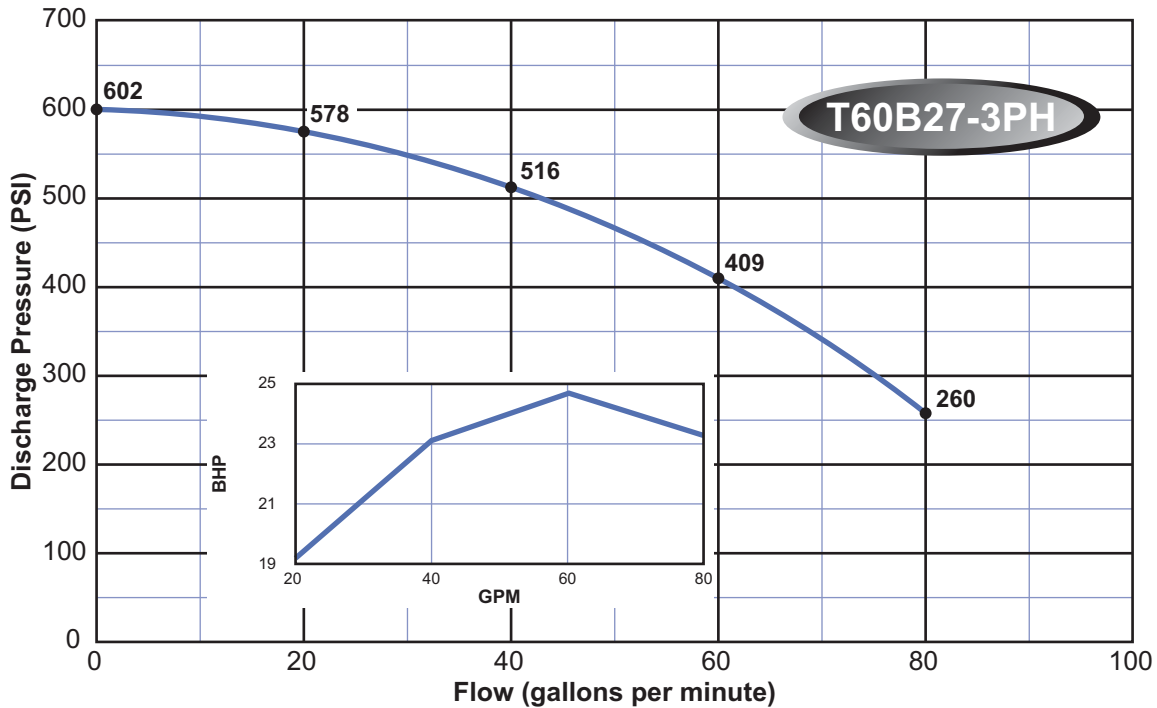
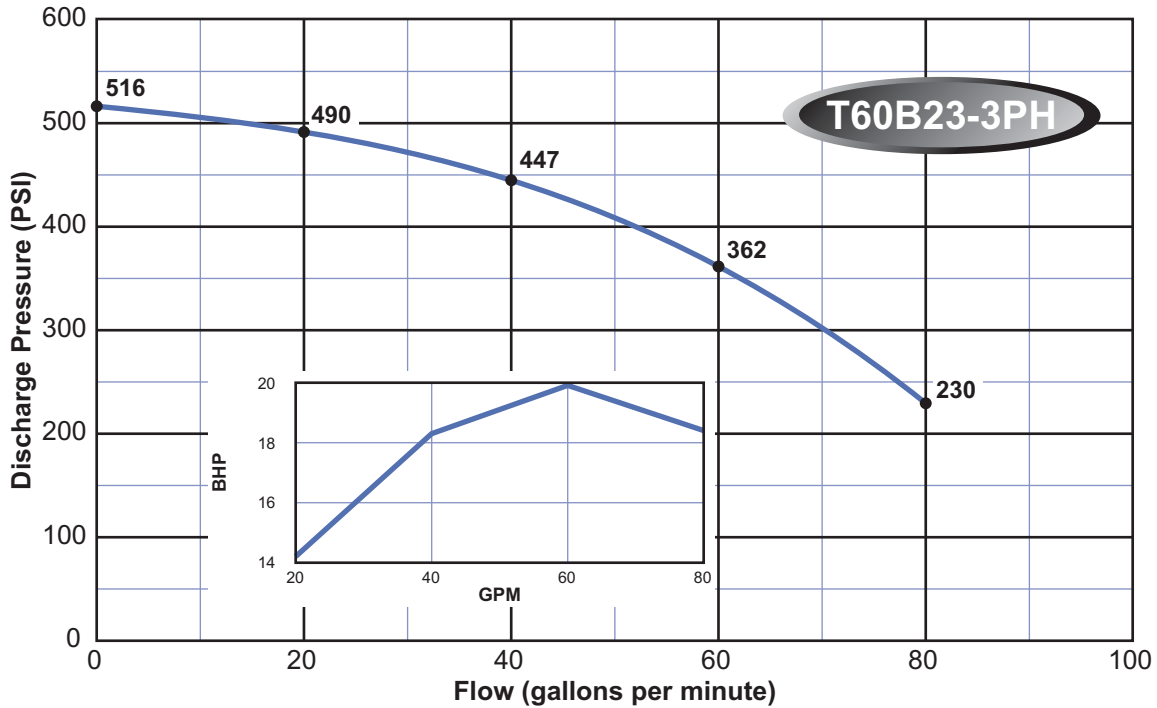
IN-LINE SERIES BOOSTER CURVES - 60 Series



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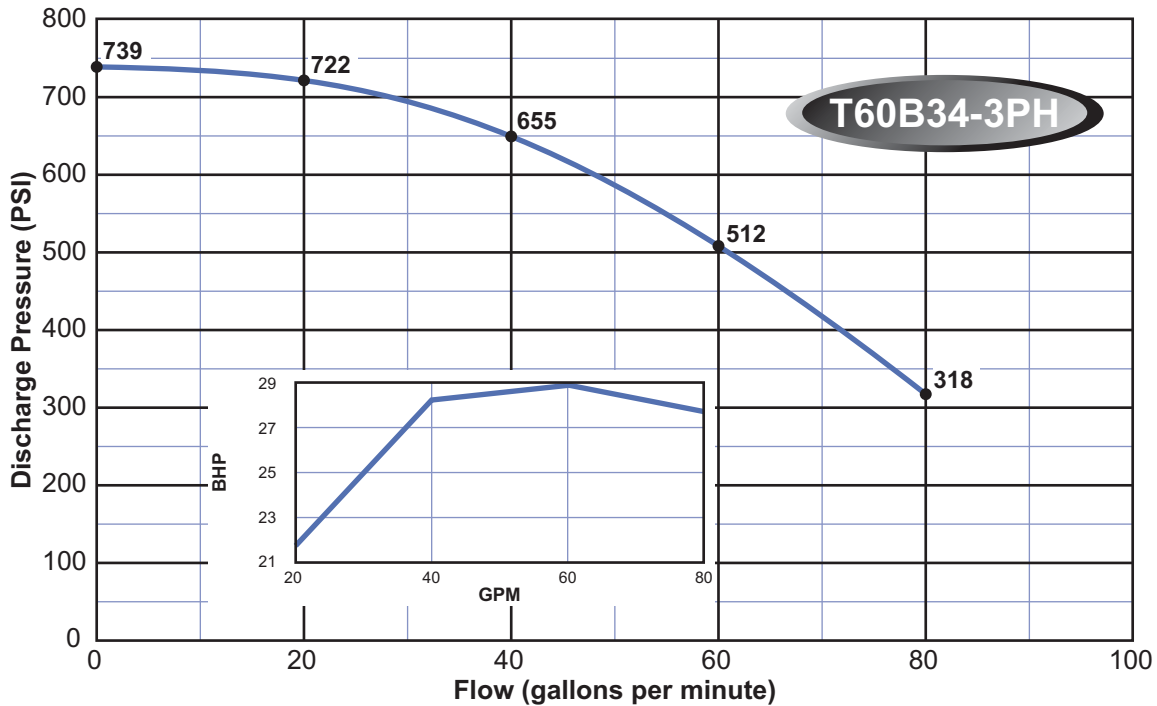
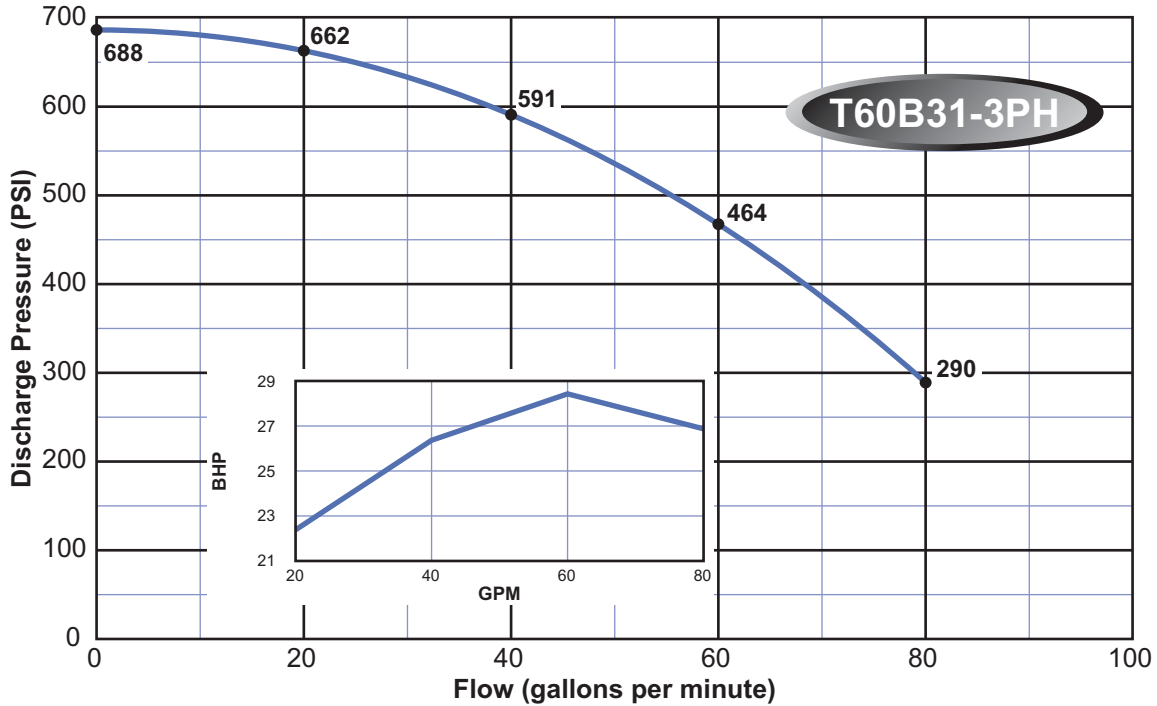
IN-LINE SERIES BOOSTER CURVES - 60 Series



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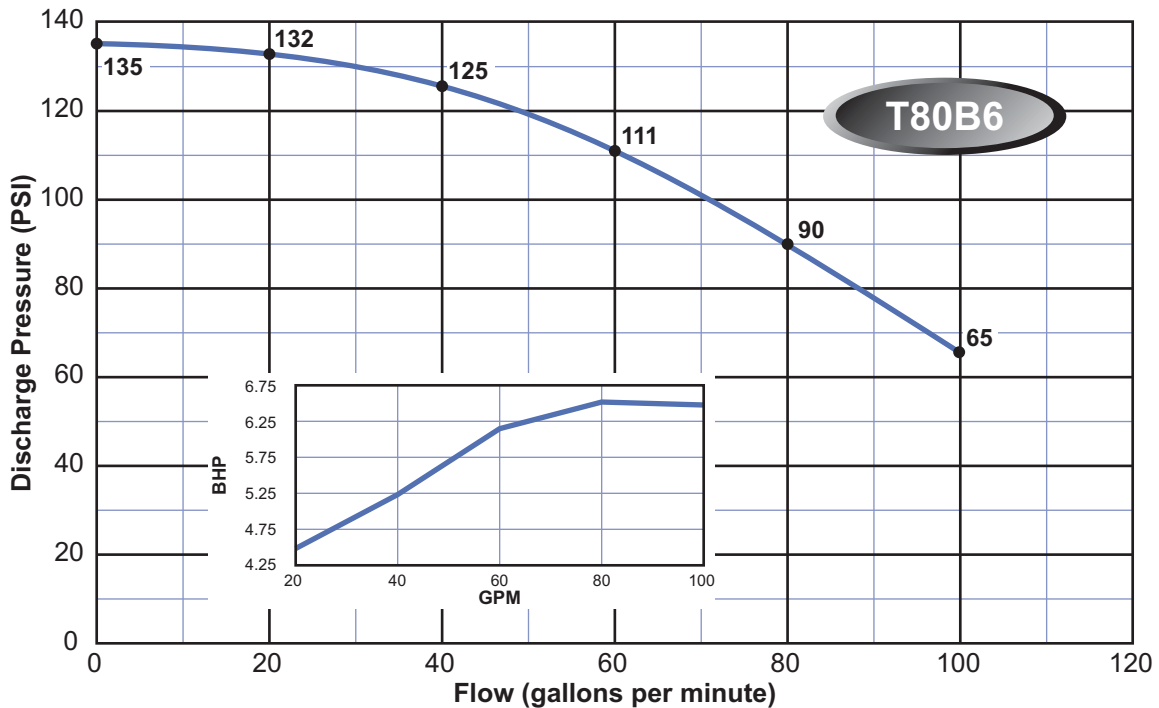
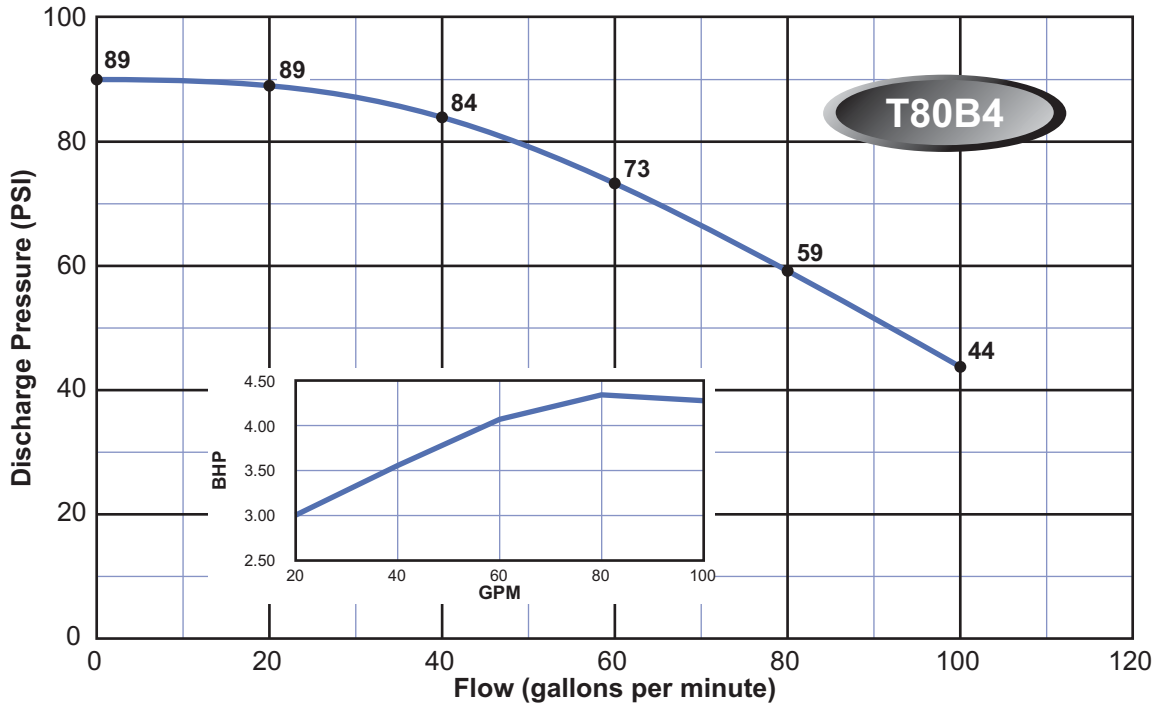
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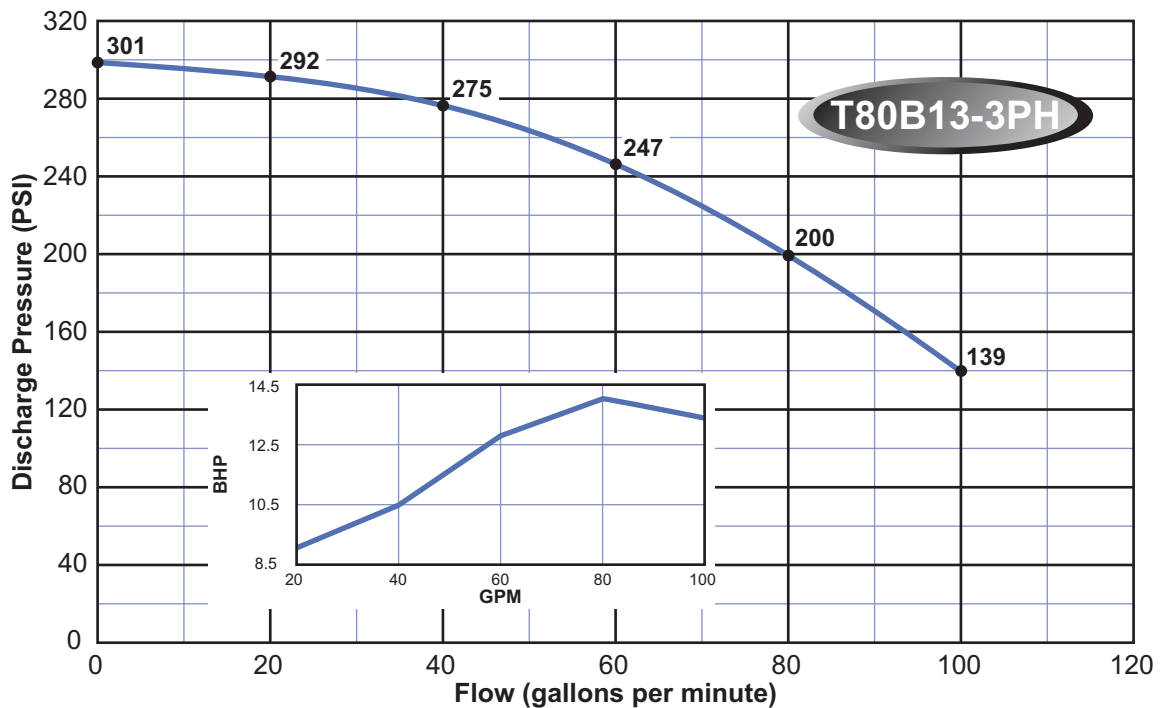
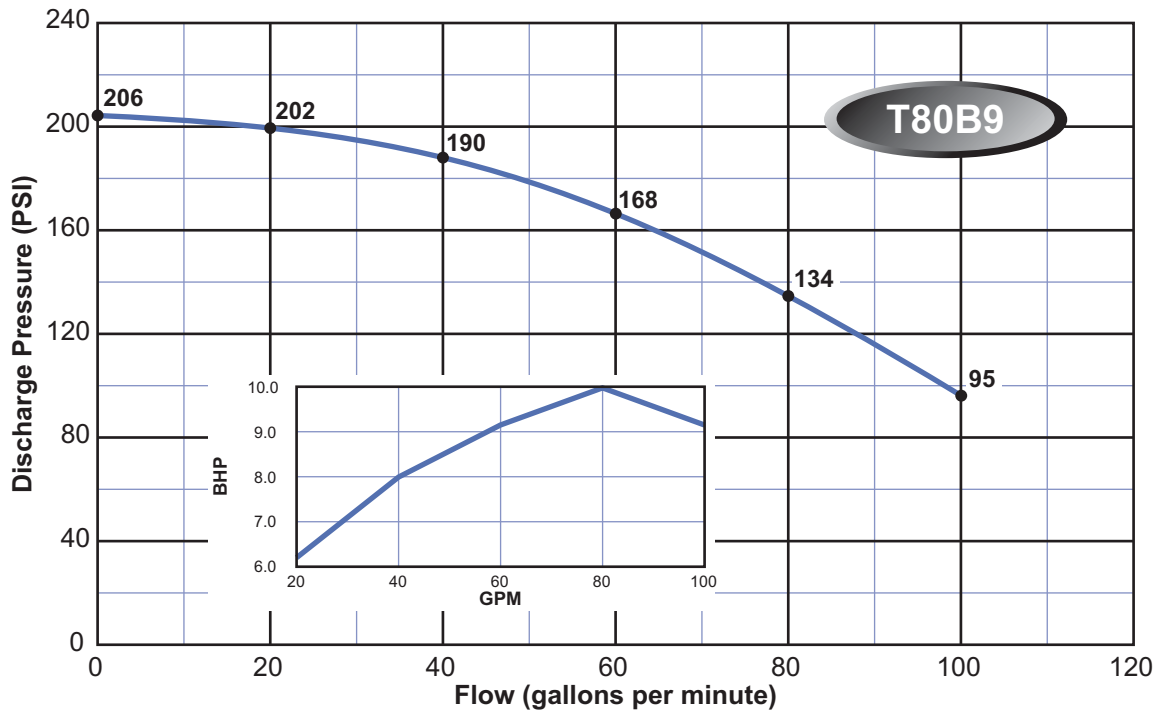
IN-LINE SERIES BOOSTER CURVES - 80 Series



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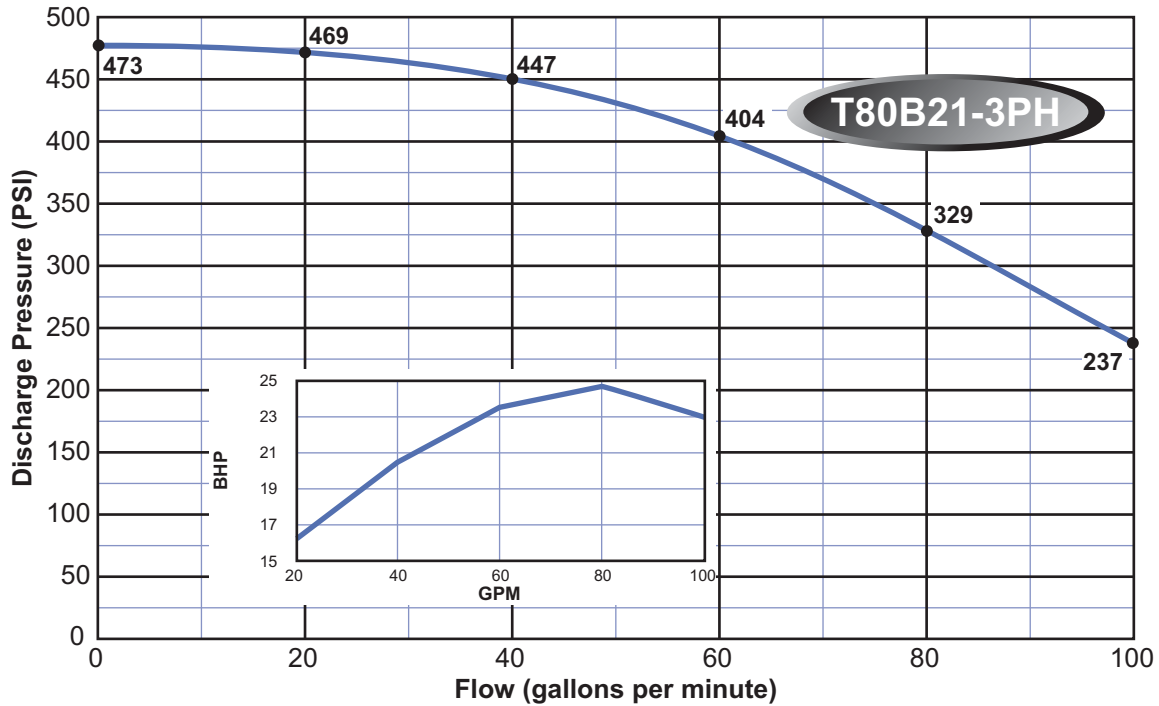
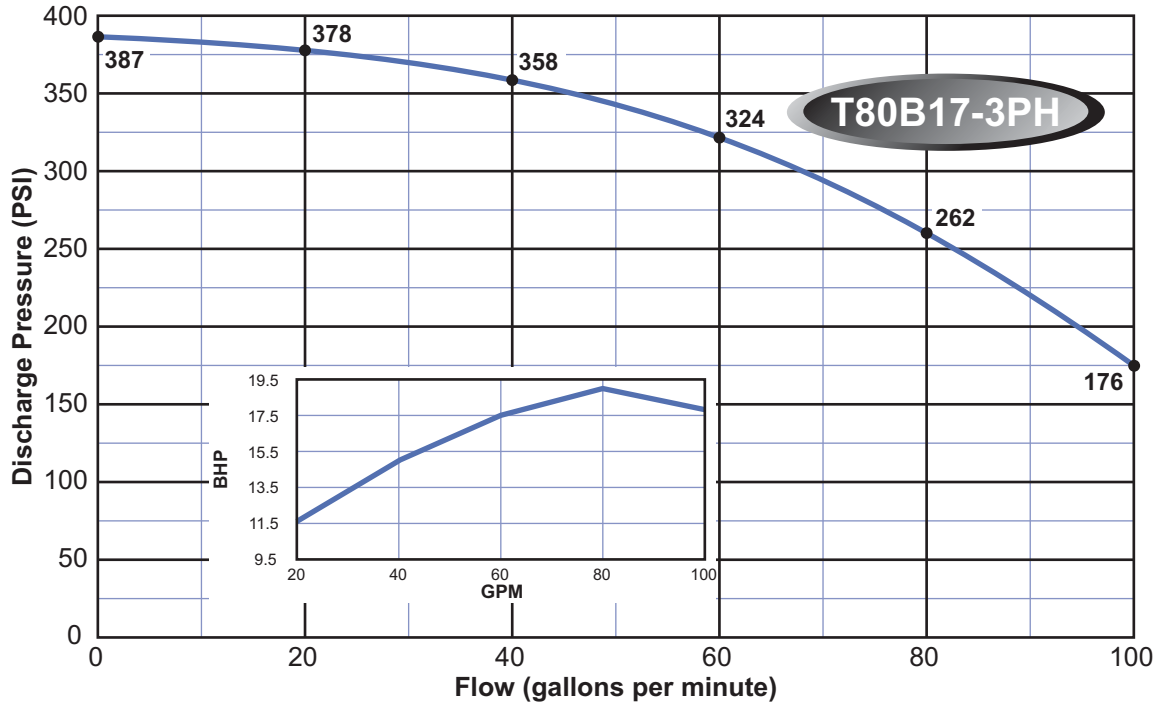
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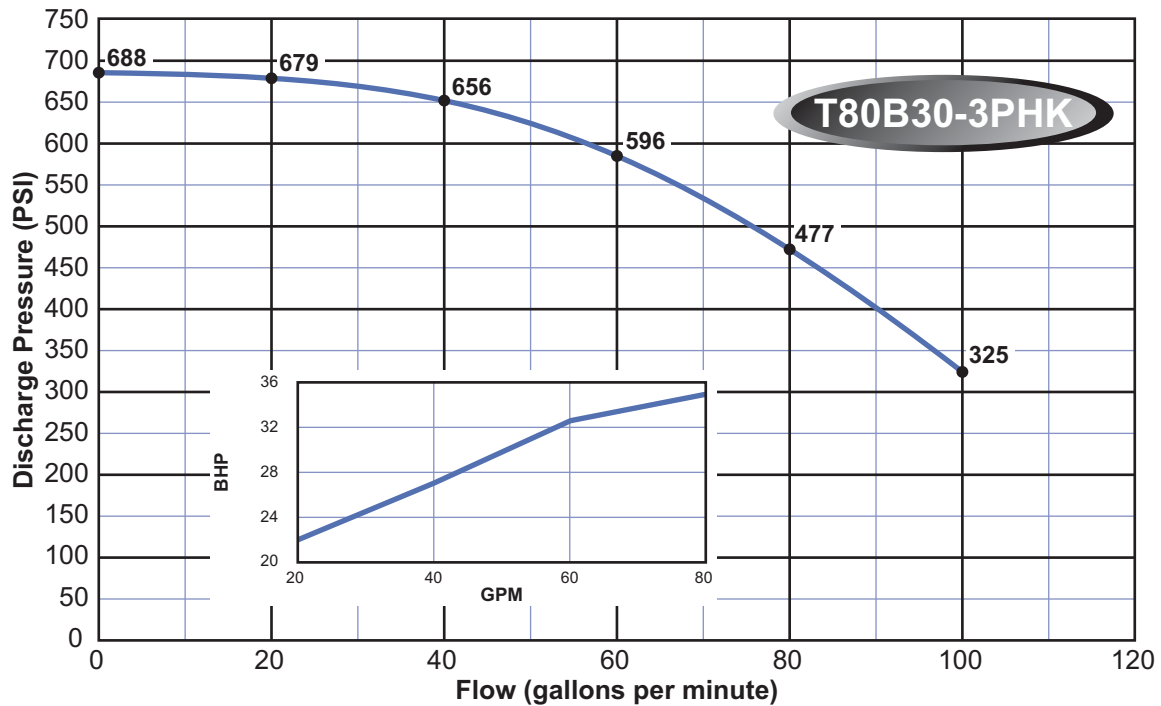
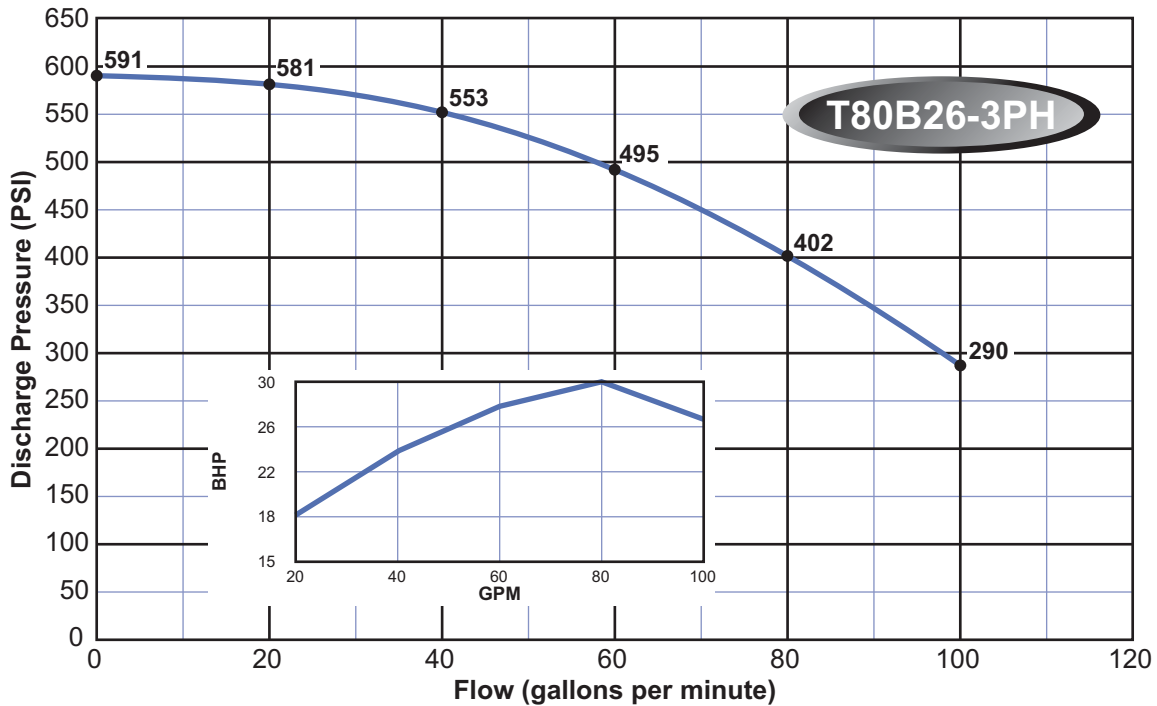
IN-LINE SERIES BOOSTER CURVES - 80 Series



Note:

Curves are based on 60 Hz 3450 rpm motors. 50 Hz 2875 rpm curves are available. These curves are for general guidance only, individual pump curves are available upon request. A certified curve may be requested for an additional cost. Webtrol will build pumps to fit your specific needs, contact factory for pricing.

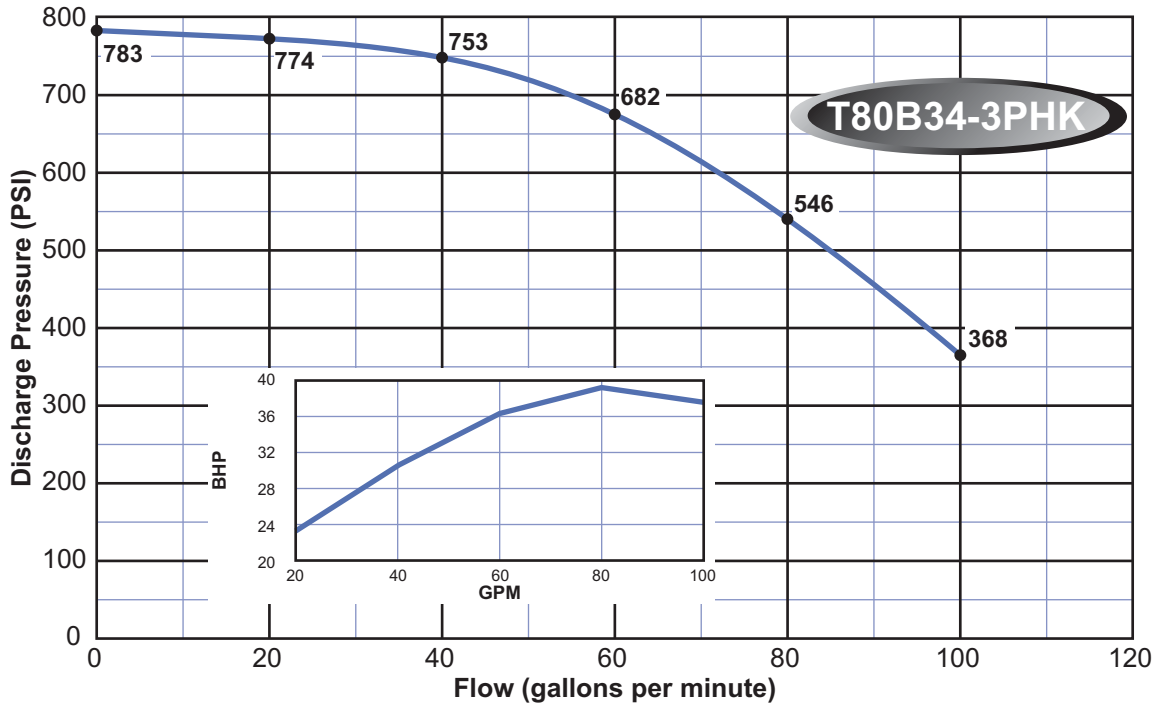
IN-LINE SERIES BOOSTER CURVES - 80 Series



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Curves are based on 60 Hz 3450 rpm motors. 50 Hz 2875 rpm curves are available. These curves are for general guidance only, individual pump curves are available upon request. A certified curve may be requested for an additional cost. Webtrol will build pumps to fit your specific needs, contact factory for pricing.

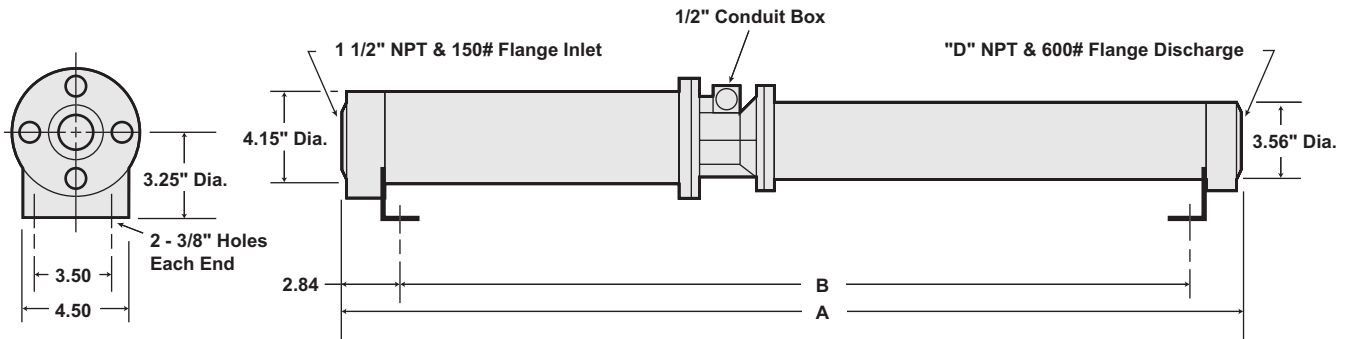
IN-LINE SERIES BOOSTER CURVES - 80 Series



Note:

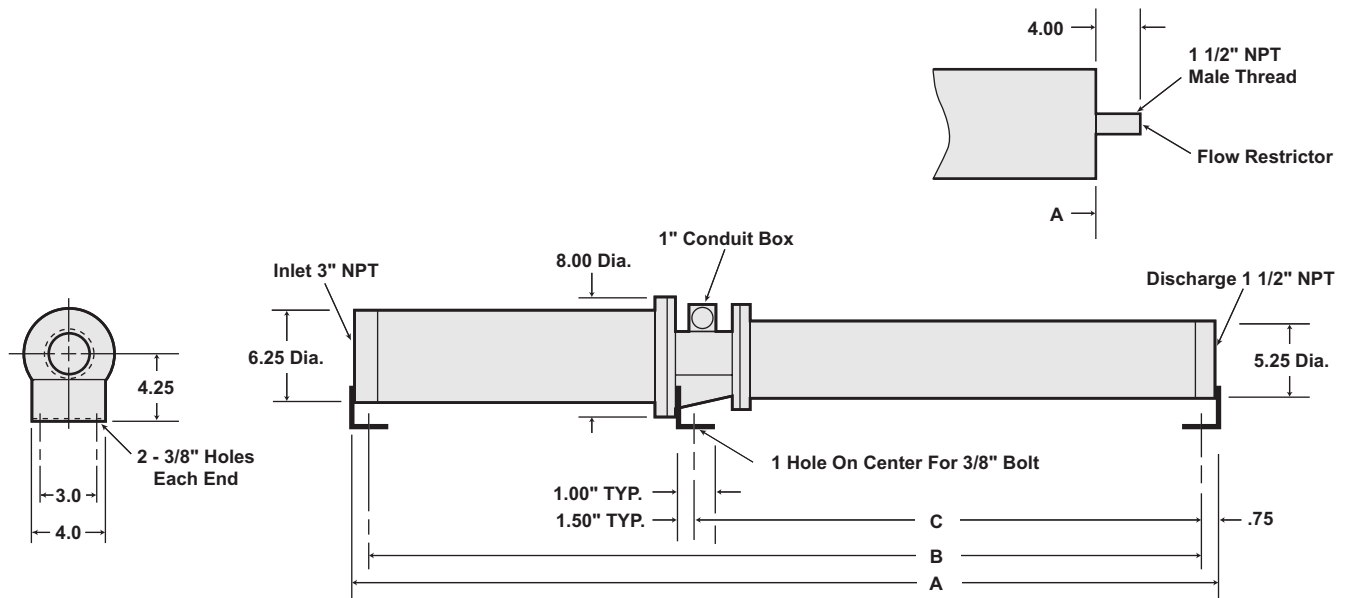
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IN-LINE SERIES BOOSTER DIMENSIONS 5, 10, 15, 20 & 35 Series



Model No.	HP	A		B		C	D	Pump Weight (lbs.)	
		1 Phase	3 Phase	1 Phase	3 Phase			1 Phase	3 Phase
T5B12S	1	33.8	32.8	29.0	28.0	5.0	1	75	73
T5B17S	1 1/2	45.9	44.8	41.1	40.0	5.0	1	83	81
T5B23S	2	53.8	52.3	49.0	47.5	5.0	1	91	90
T5B28S	3	61.3	58.4	56.0	53.6	5.0	1	104	95
T5B34S	3	67.8	64.9	63.0	60.1	5.0	1	109	100
T5B41S	5	80.2	74.2	75.4	69.4	5.0	1	131	115
T10B8S	1	30.0	29.3	25.5	24.5	5.0	1	74	72
T10B14S	1 1/2	42.6	41.5	37.8	36.7	5.0	1	82	80
T10B18S	2	48.8	47.3	44.0	42.5	5.0	1	90	89
T10B26S	3	60.2	57.4	55.4	52.6	5.0	1	103	94
T10B34S	5	74.8	68.8	70.0	64.0	5.0	1	129	113
T10B42S	5	82.4	76.4	77.6	71.6	5.0	1	132	116
T15B7S	1	29.8	28.8	25.0	24.0	5.0	1	74	72
T15B9S	1 1/2	38.4	37.3	33.6	32.5	5.0	1	80	78
T15B14S	2	46.0	44.5	41.2	39.7	5.0	1	82	80
T15B20S	3	54.9	52.0	50.1	47.2	5.0	1	101	92
T15B30S	5	72.0	66.0	67.2	61.2	5.0	1	127	111
T15B40S	5	83.1	77.1	78.3	72.3	5.0	1	131	115
T20B7S	1 1/2	37.8	36.6	33.2	32.1	5 3/4	1 1/2	77	75
T20B9S	1 1/2	40.2	39.1	35.7	34.6	5 3/4	1 1/2	79	77
T20B12S	2	46.7	45.2	42.2	40.7	5 3/4	1 1/2	81	79
T20B15S	3	53.3	50.4	48.7	45.9	5 3/4	1 1/2	100	91
T20B23S	5	70.5	64.5	65.9	59.9	5 3/4	1 1/2	126	110
T20B33S	5	84.1	78.1	79.6	73.6	5 3/4	1 1/2	130	114
T35B5S	1 1/2	36.1	35.0	31.6	30.5	5 3/4	1 1/2	77	75
T35B6S	1 1/2	37.6	36.4	33.0	31.9	5 3/4	1 1/2	78	76
T35B9S	2	43.3	41.8	38.7	37.2	5 3/4	1 1/2	80	78
T35B12S	3	50.4	47.5	45.8	43.0	5 3/4	1 1/2	98	89
T35B16S	5	63.5	57.5	58.9	52.9	5 3/4	1 1/2	119	103
T35B23S	5	73.3	67.3	68.8	62.8	5 3/4	1 1/2	127	111

IN-LINE SERIES BOOSTER DIMENSIONS 60 & 80 Series



Model No.	HP	A		B		C	D	Pump Weight (lbs.)	
		1 Phase	3 Phase	1 Phase	3 Phase			1 Phase	3 Phase
T60B5	5	50.9	48.3	49.4	46.8	16.0	1 1/2	181	161
T60B8	7 1/2	58.3	54.5	56.8	53.0	20.8	1 1/2	203	176
T60B12	10	67.4	62.2	62.2	60.7	27.3	1 1/2	229	198
T60B15-3PH	15	77.4	72.2	75.9	70.7	34.8	1 1/2	252	223
T60B17-3PH	15	80.6	75.5	79.1	74.0	38.0	1 1/2	257	228
T60B20-3PH	20		83.0		81.5	42.9	1 1/2		255
T60B23-3PH	20		87.8		86.3	47.8	1 1/2		262
T60B27-3PH	25		99.4		97.9	56.9	1 1/2		288
T60B31-3PH	30		108.5		107.0	63.3	1 1/2		312
T60B34-3PH	30		113.3		111.8	68.2	1 1/2		320
T80B4	5	49.6	47.1	48.8	46.5	14.8	1 1/2	179	159
T80B6	7 1/2	55.6	51.8	54.1	50.3	18.2	1 1/2	198	171
T80B9	10	63.4	58.2	61.9	56.7	23.3	1 1/2	223	192
T80B13-3PH	15	75.3	70.2	73.8	68.7	32.8	1 1/2	249	220
T80B17-3PH	20		79.7		78.2	39.6	1 1/2		246
T80B21-3PH	25		89.0		87.5	46.5	1 1/2		272
T80B26-3PH	30		102.8		101.3	57.7	1 1/2		303
T80B30-3PHK	40		114.8		113.3	64.5	1 1/2		346
T80B34-3PHK	40		121.6		120.1	71.3	1 1/2		357