The Pumps with Nine Lives

8K Series Pumps

Stainless Steel Multistage Centrifugal Pumps

Product Quality, Reliability and Support You Expect

www.catpumps.com

8K Multistage Centrifugal Pumps

Designed for long-life and trouble free service, the 8K series is a superior line of multistage centrifugal pumps. Originally engineered for booster, water purification, and hot water applications, many other industries have adopted this product due to its reliable performance.

The 8K series is an industrial grade pump, consisting of 304 or 316 SS hydraulic assemblies constructed with cast stainless steel flanges for maximum installation support. Optional mechanical seal face configurations are available. The 8K also features tungsten carbide lower pump bearings and sleeves – standard construction for all services, providing maximum operating life. Count on the 8K to get the job done.

Features:

- All stainless steel wetted parts (8K, 8CK feature 304SS – 8SK feature 316SS)
- All Viton® elastomers (other materials available for special applications)
- Available with standard NEMA motors
- Air vent located at the top of casing cover prevents air entrapment eliminating run dry conditions during start up
- Dimensions and flanges built to industry standards to allow easy retrofit of existing systems
- Cartridge style mechanical seals on all series. Standard materials are Silicon Carbide/ Carbon/Viton®
- Reinforced Impellers and bowls eliminates flexing during operation
- Temperature range -22° F to 248° F

Applications:

- Water Boosting
- Water Supply
- Reverse Osmosis
- Washing Systems
- Boiler Feed
- Fire Misting
- Water Treatment
- Sprinkler Systems
- Heat Exchangers
- Filtration
- Jockey Pump Service
- Circulation Systems

Materials:

- 8K – 304SS
- 8CK – 304SS/Cast Iron
- 8SK – 316 SS

Part Number Breakdown:

8 S 32 K 5 S 11 T 3 F

Multistage

Material
Blank - 304SS
C - 304SS/Cast Iron
S - 316SS

Nominal Size

Centrifugal

Number of Stages

Mechanical seal type
S - Silicon Carbide/Carbon/FPM*
G - Silicon Carbide+Graphite/Silicon Carbide/FPM
E - Silicon Carbide/Carbon/EPDM
R - Silicon Carbide+Graphite/Silicon Carbide/EPDM
B - Silicon Carbide/Carbon/EPDM (optional balanced seal)
X - Special order seal materials (consult factory)

Horsepower

1 = 1/2 HP	6 = 3.0 HP	11 = 20 HP
2 = 3/4 HP	7 = 5.0 HP	12 = 25 HP
3 = 1.0 HP	8 = 7.5 HP	13 = 30 HP
4 = 1.5 HP	9 = 10 HP	14 = 40 HP
5 = 2.0 HP	10 = 15 HP	15 = 50 HP

D = Open Drip Proof (ODP)
T = Totally Enclosed Fan Cooled (TEFC)

1 = Single Phase
3 = Three Phase

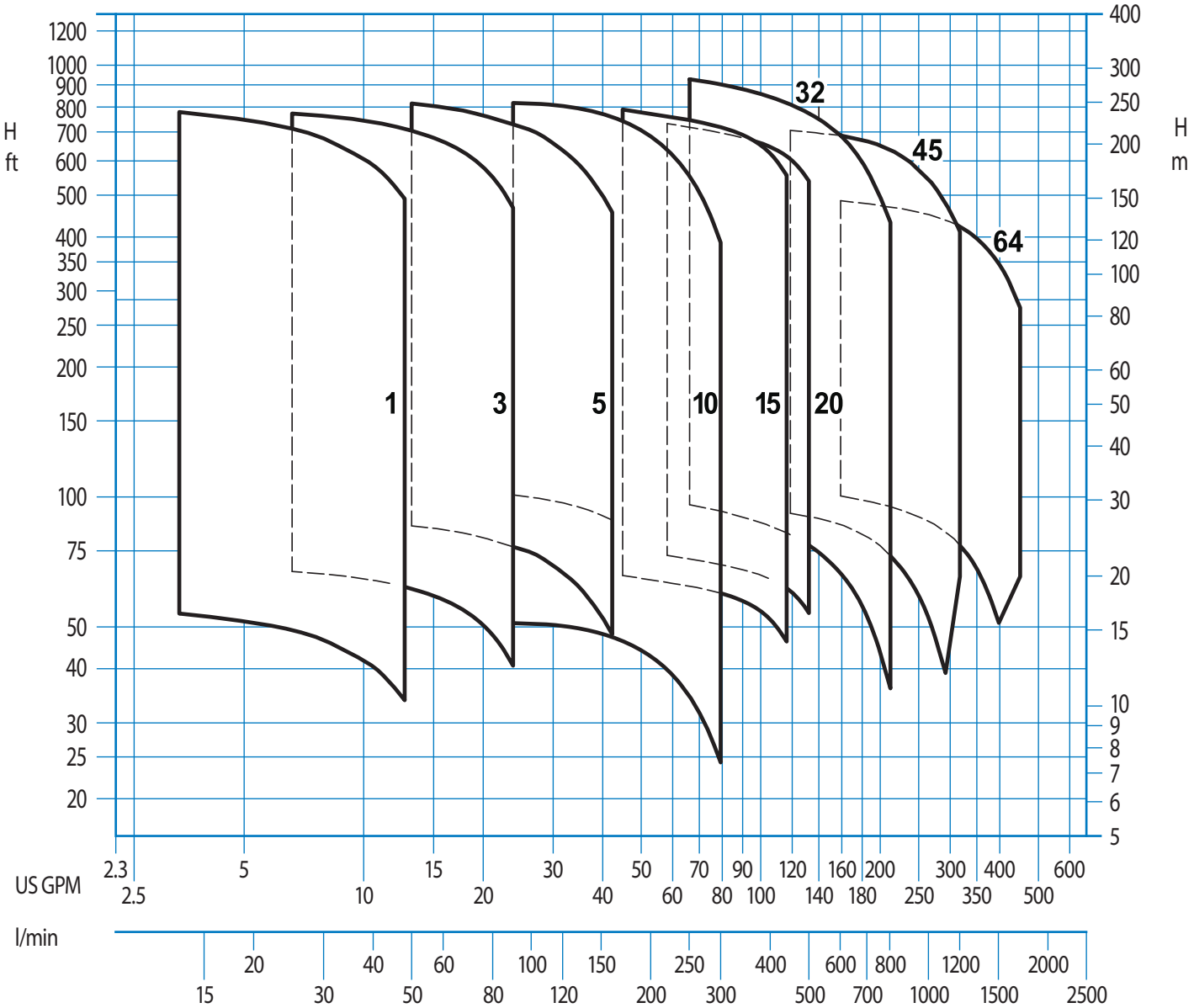
Piping Connection Type
F - Round ANSI compatible flange
N - Oval flange
L - Loose ANSI compatible flange
V - Victaulic
C - Clamp

*NSF/ANSI 61 & 372 certified configuration

Viton® is a registered trademark of DuPont Dow Elastomers.

Model 8K/8CK/8SK Selection Chart

60 Hz • Nominal Speed 3500 rpm • 8K1 – 8K20 Series
60 Hz • Nominal Speed 3450 rpm • 8K32 – 8K64 Series

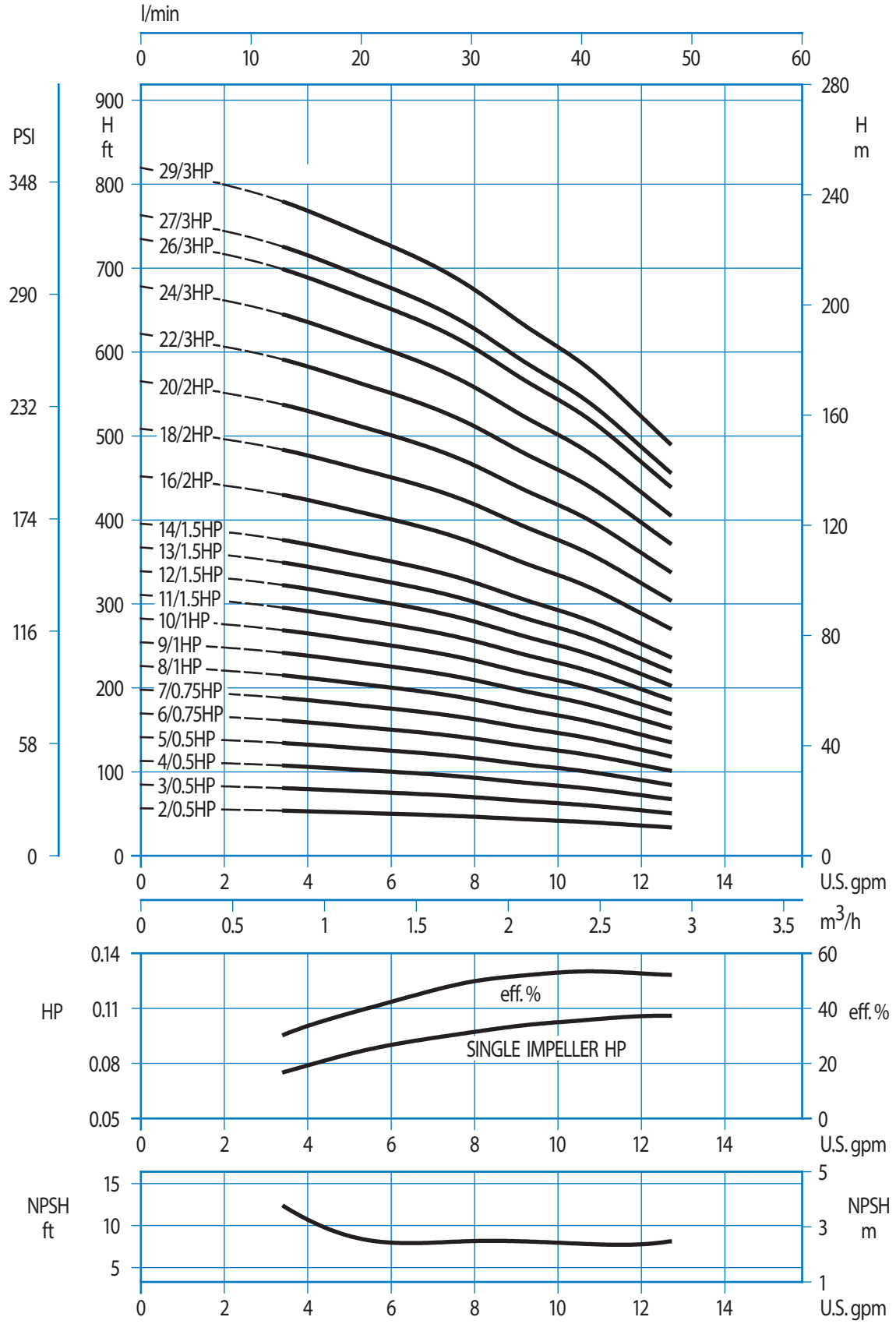


Individual Model Selection:

8K1 Series	Page 4
8K3 Series	Page 5
8K5 Series	Page 6
8K10 Series	Page 7
8K15 Series	Page 8
8K20 Series	Page 9
8K32 Series	Page 10
8K45 Series	Page 11
8K64 Series	Page 12

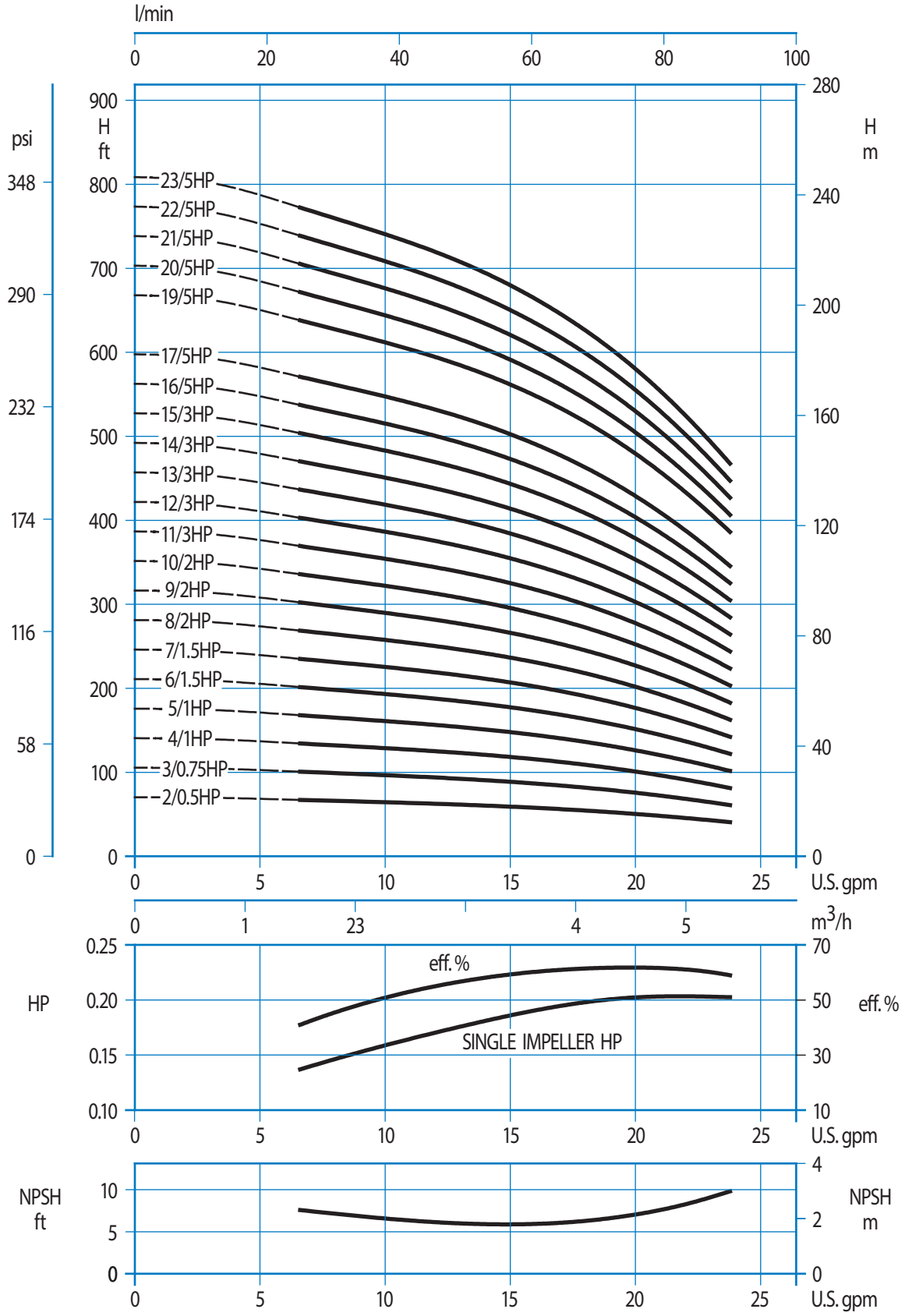
8K/8SK 1-Series Performance Curves

0.5 HP - 3 HP • Nominal Speed 3500 RPM • 300# ANSI 1-1/4" 4-Bolt



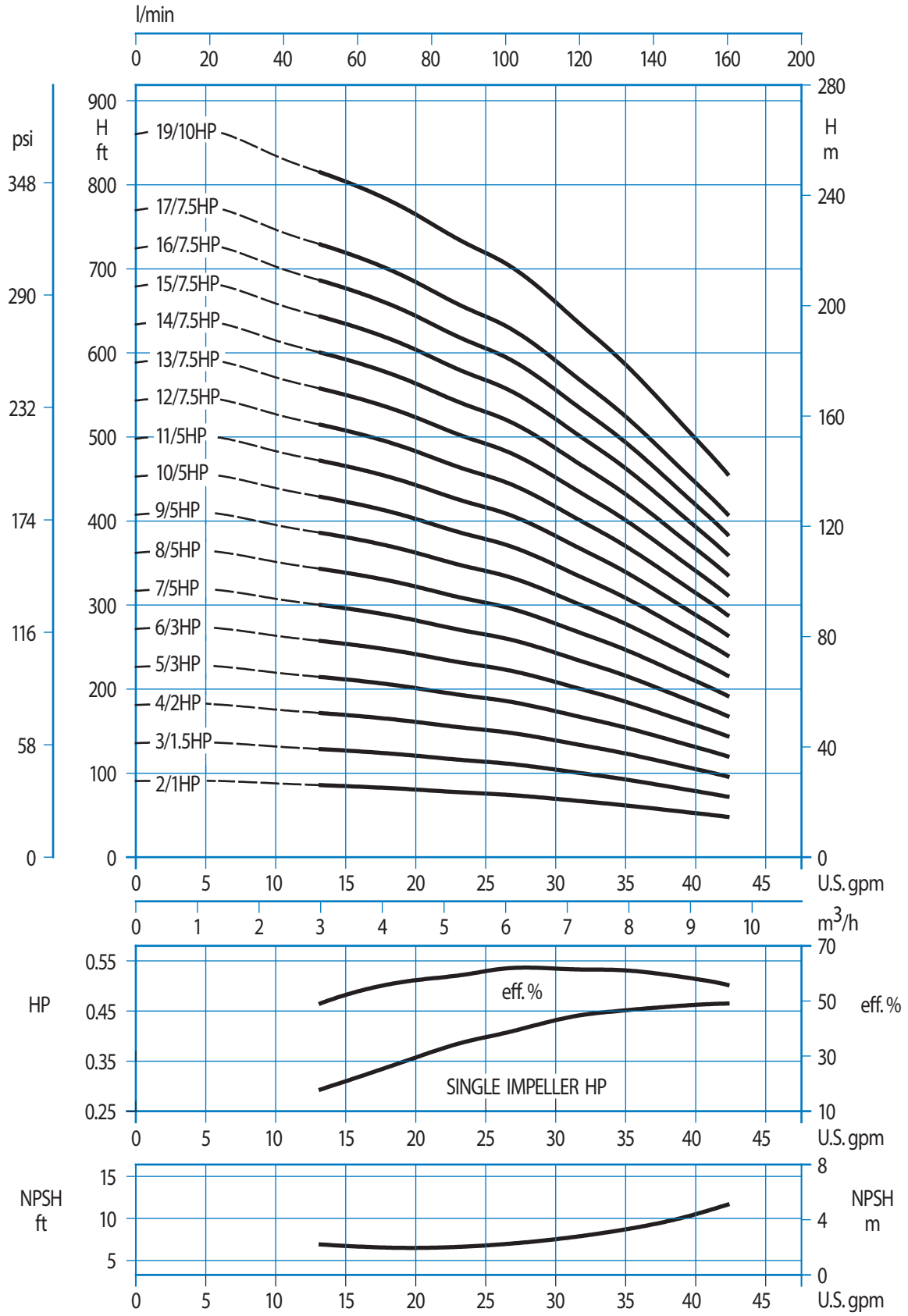
8K/8SK 3-Series Performance Curves

0.5 HP - 5 HP • Nominal Speed 3500 RPM • 300# ANSI 1-1/4" 4-Bolt



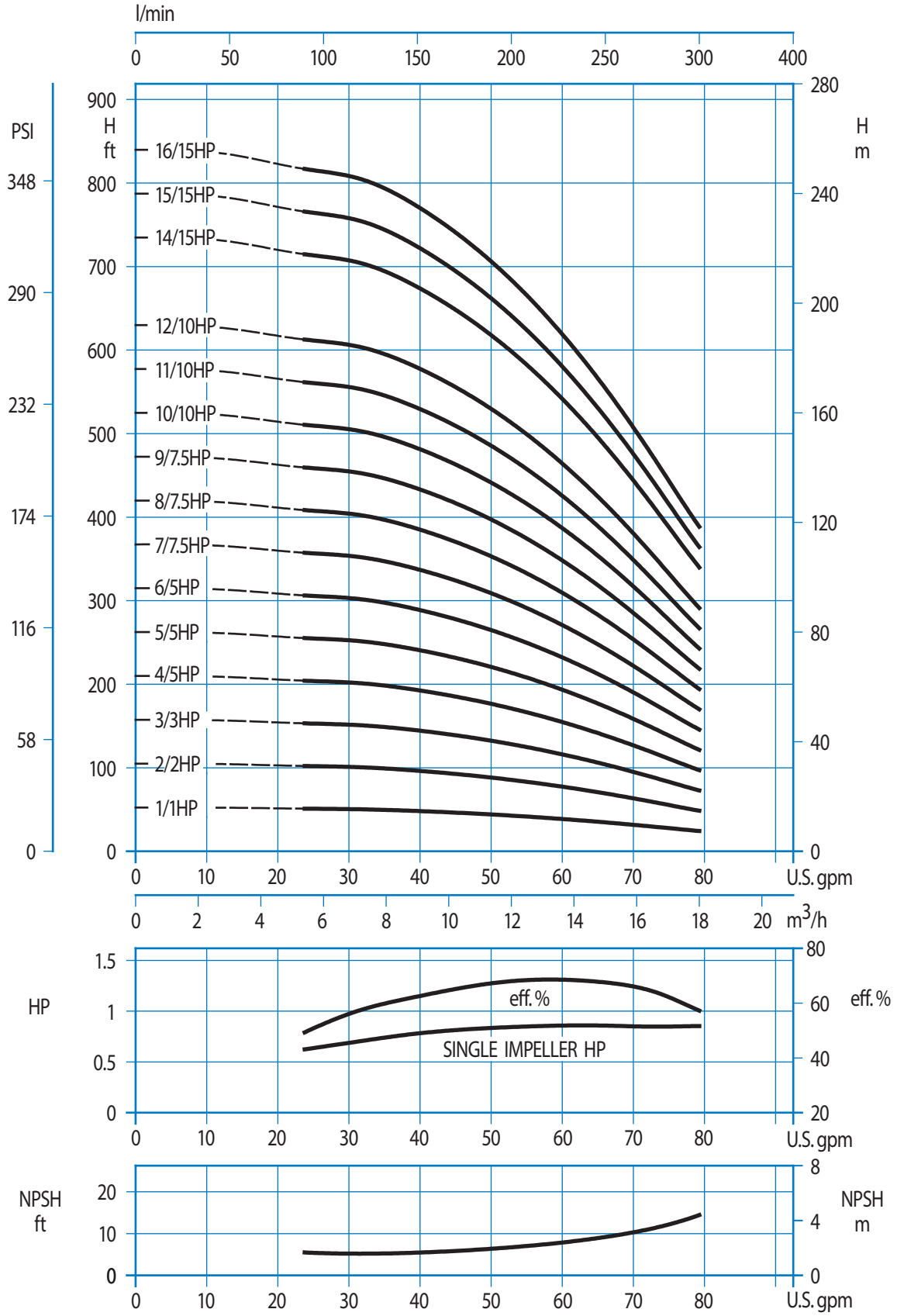
8K/8SK 5-Series Performance Curves

1.0 HP - 10 HP • Nominal Speed 3500 RPM • 300# ANSI 1-1/4" 4-Bolt



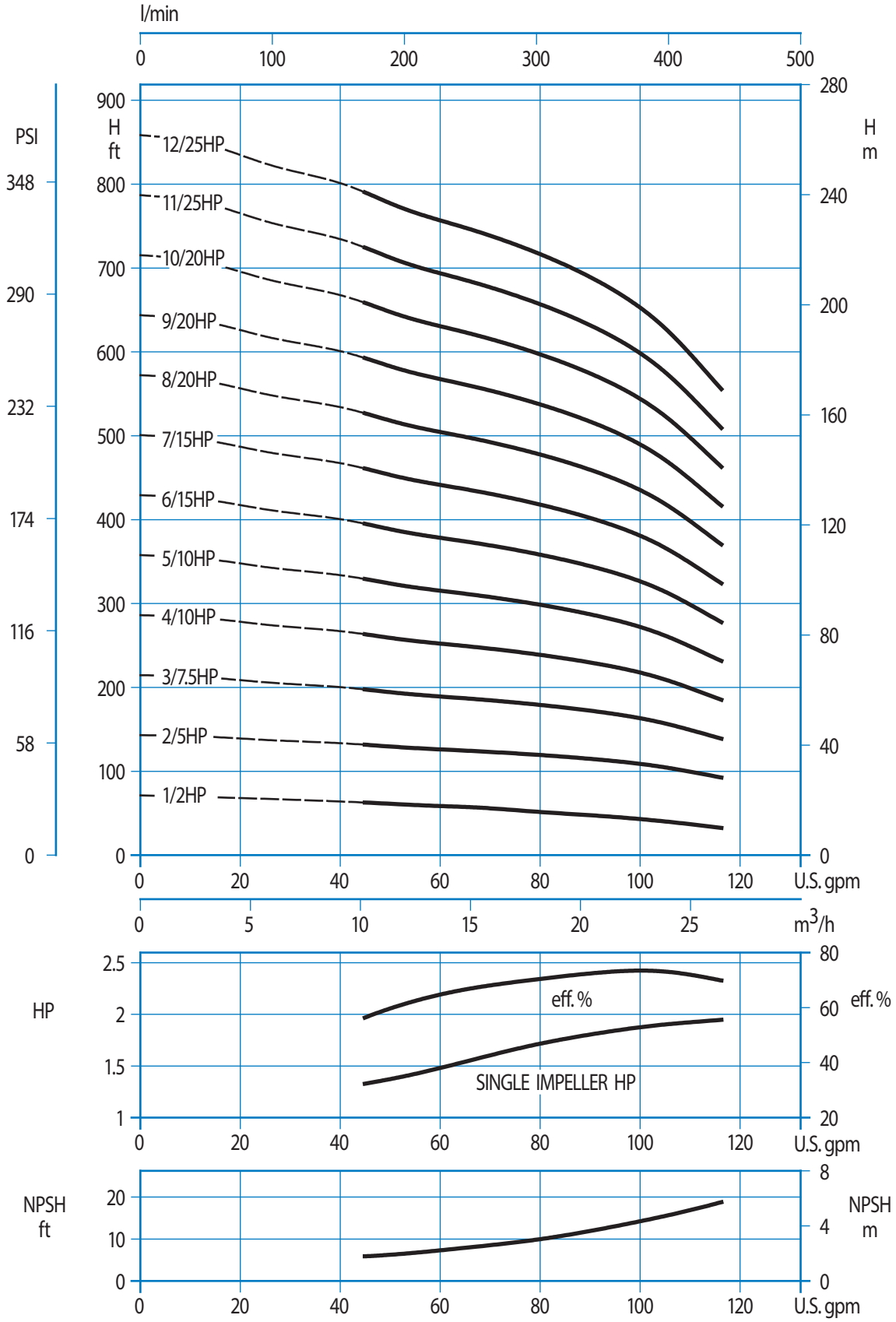
8K/8SK 10-Series Performance Curves

1.0 HP - 15 HP • Nominal Speed 3500 RPM • 300# ANSI 2" 8-Bolt



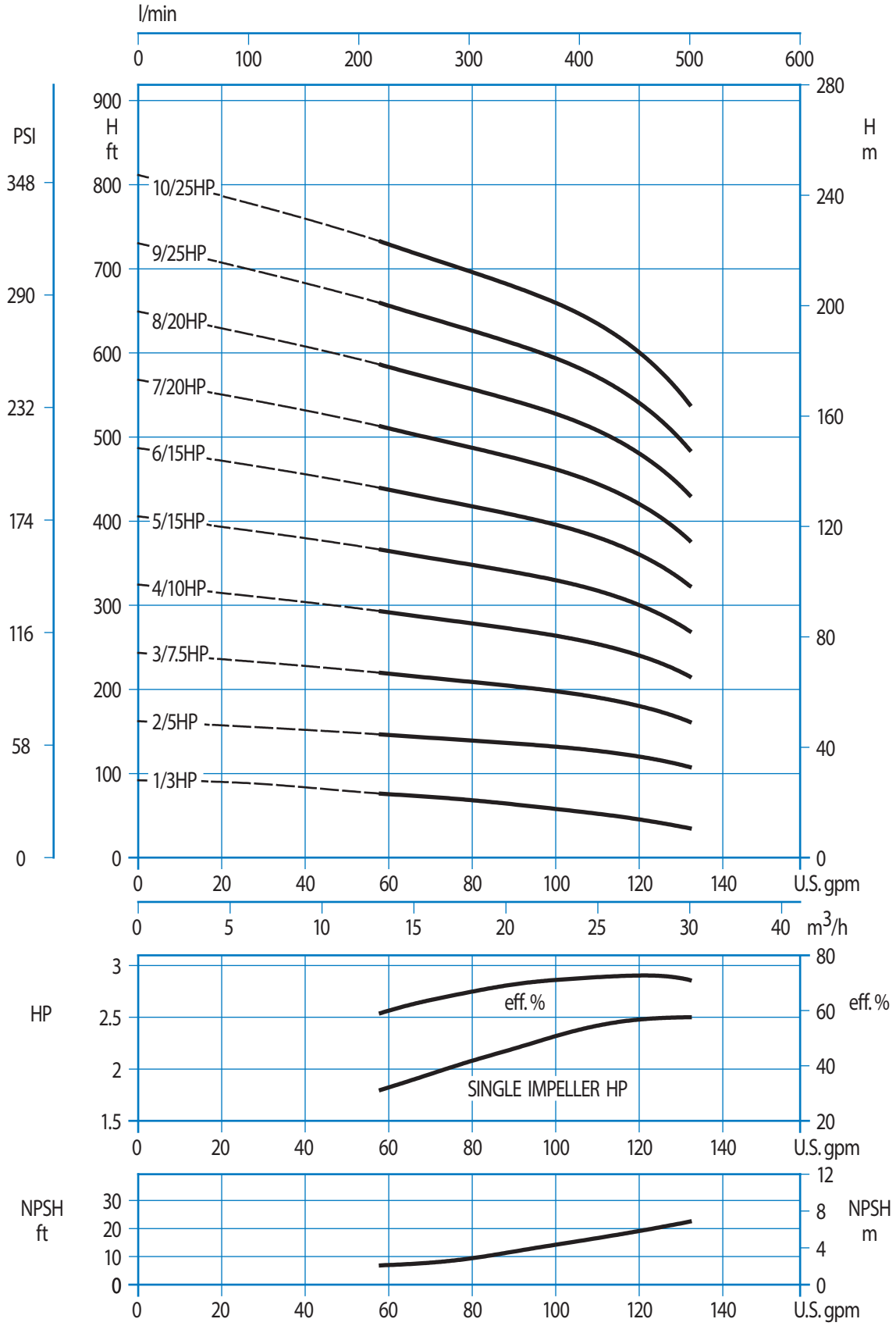
8K/8SK 15-Series Performance Curves

2.0 HP - 25 HP • Nominal Speed 3500 RPM • 300# ANSI 2" 8-Bolt



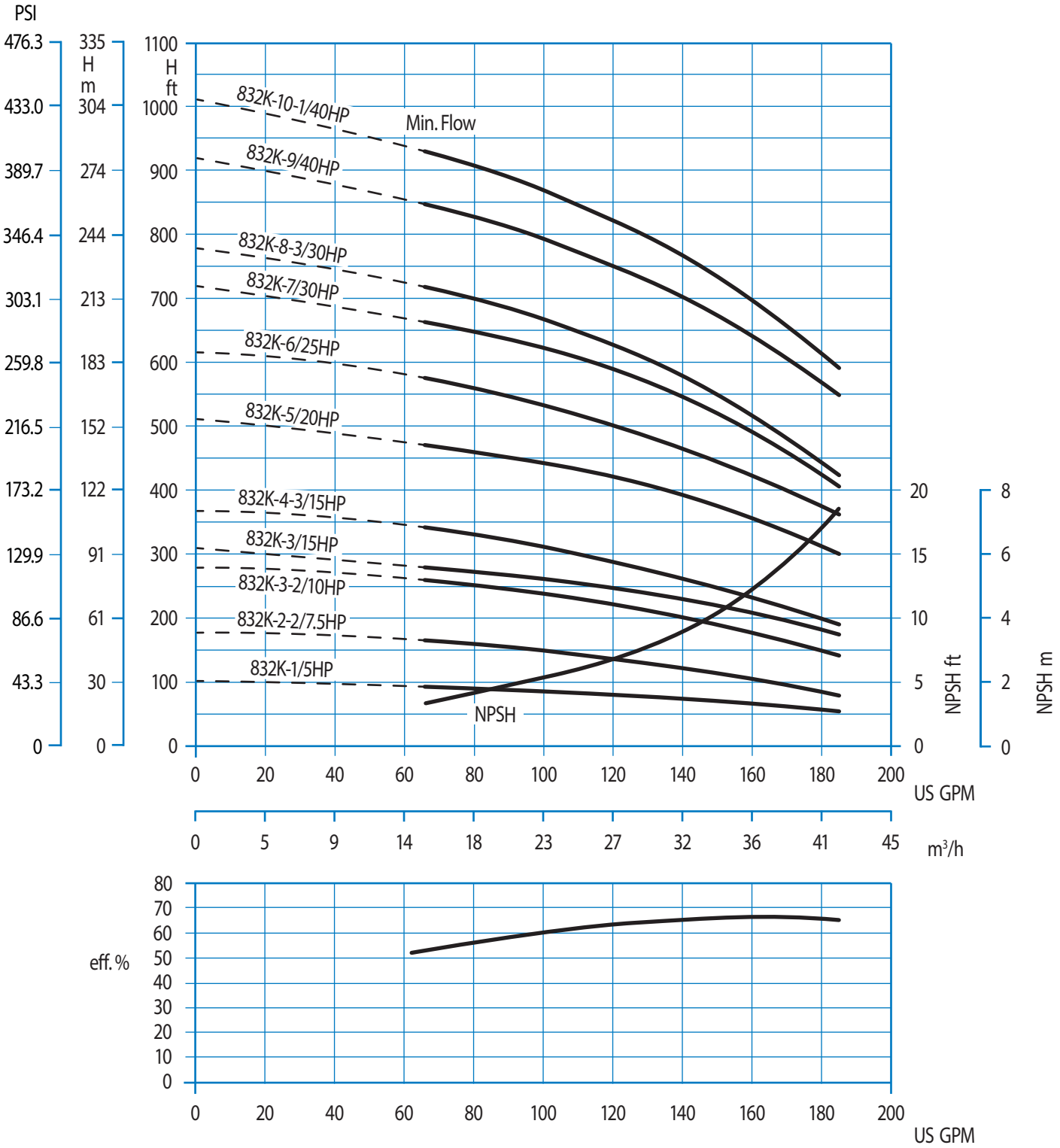
8K/8SK 20-Series Performance Curves

3.0 HP - 25 HP • Nominal Speed 3500 RPM • 300# ANSI 2" 8-Bolt



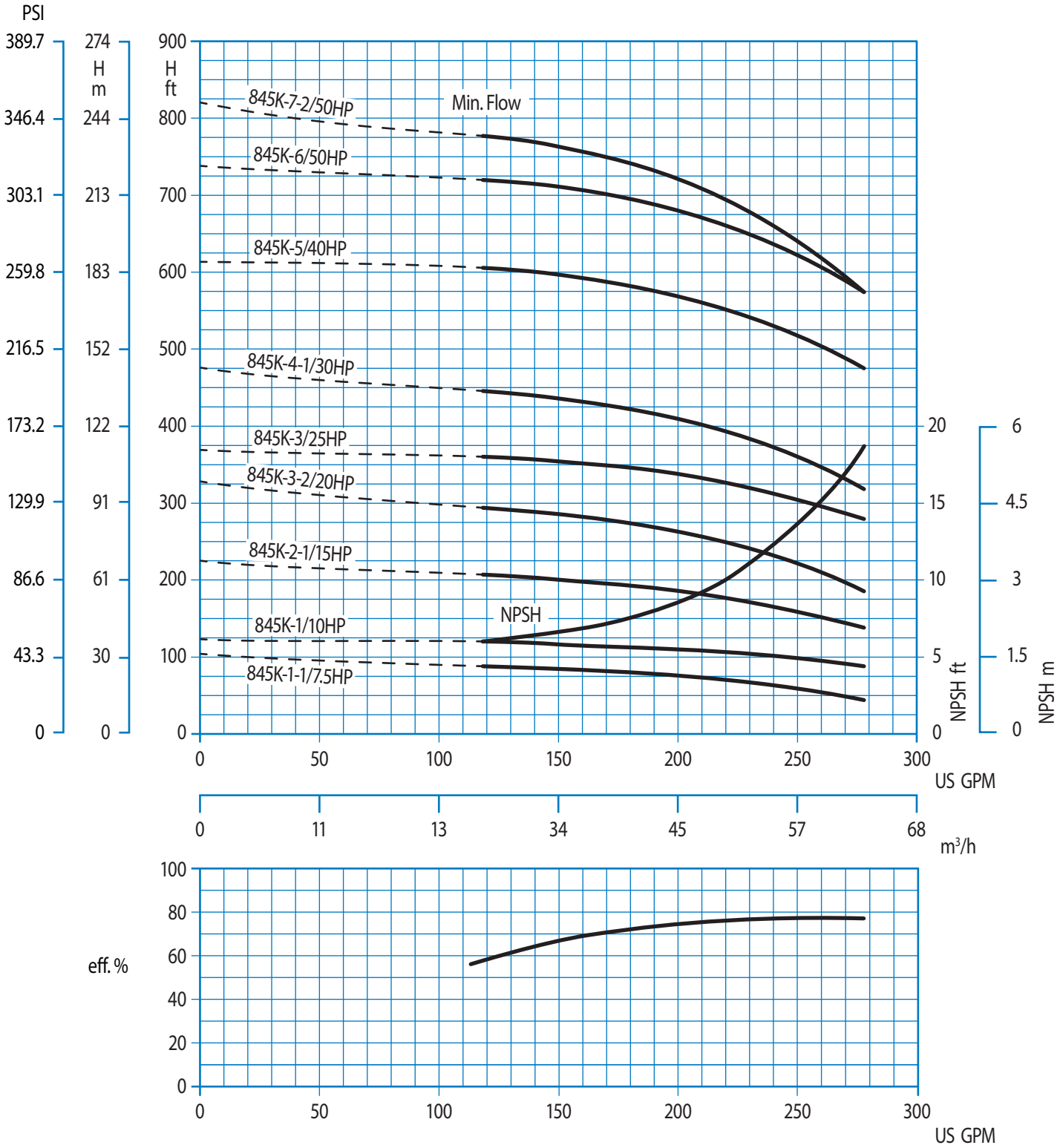
8CK/8SK 32-Series Performance Curves

5 HP - 15 HP • Nominal Speed 3450 RPM • 150# ANSI 2-1/2" 4-Bolt
20 HP - 40 HP • Nominal Speed 3450 RPM • 300# ANSI 2-1/2" 8-Bolt



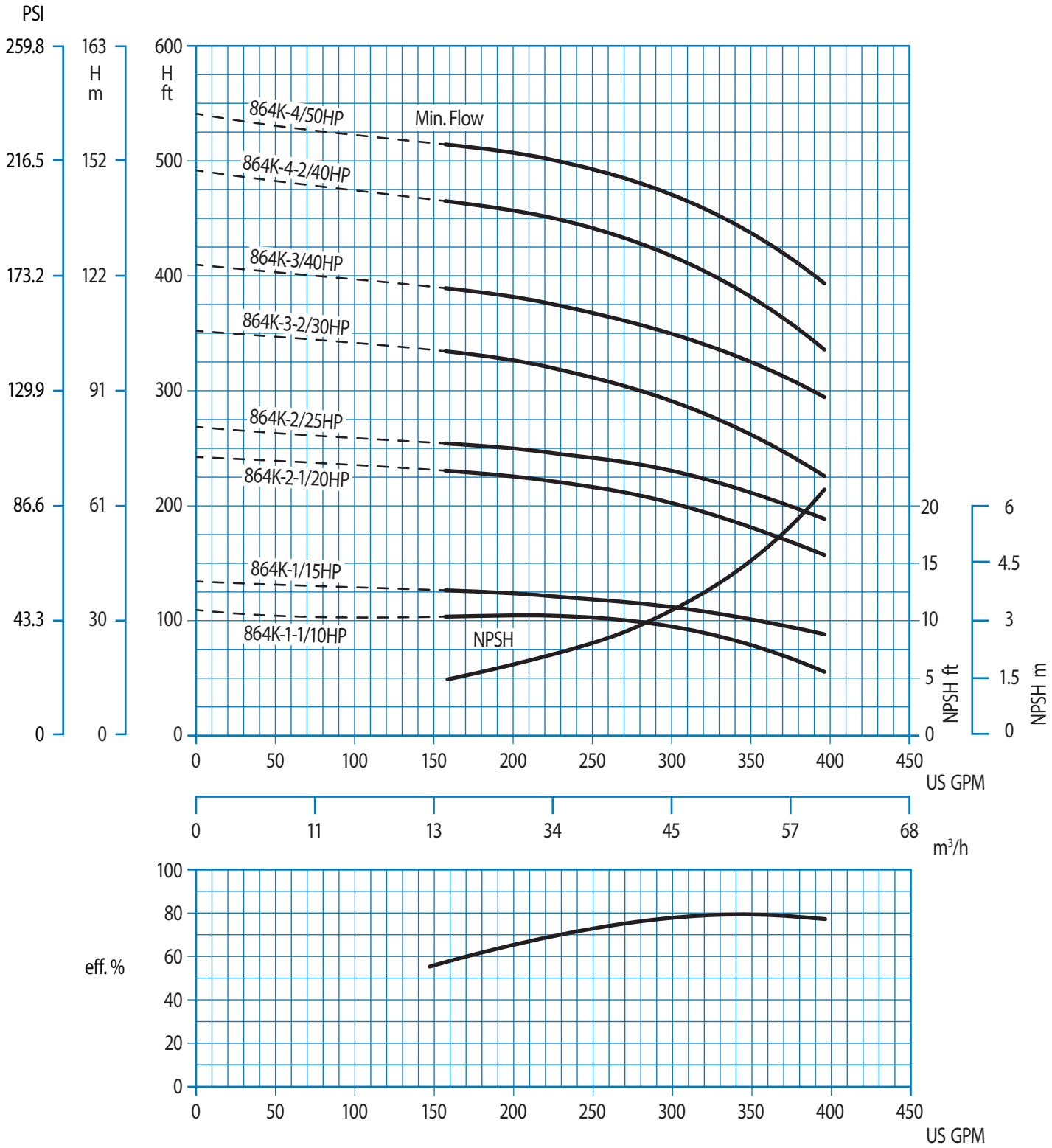
8CK/8SK 45-Series Performance Curves

7.5 HP - 25 HP • Nominal Speed 3450 RPM • 150# ANSI 3" 4-Bolt
30 HP - 50 HP • Nominal Speed 3450 RPM • 300# ANSI 3" 8-Bolt



8CK/8SK 64-Series Performance Curves

10 HP - 50 HP • Nominal Speed 3450 RPM • 300# ANSI 4" 8-Bolt



Product Specifications

8 1 - 3 - 5 - 10 - 20K
8S 1 - 3 - 5 - 10 - 20K

PUMP														
Version			8K						8SK					
Performance Type	Nominal size		1	3	5	10	15	20	1	3	5	10	15	20
	HP		½ to 25 HP											
	Capacity		2.9 to 132.1 gpm											
	Head		24.3 to 860 ft TDH											
Liquid Handling	Type of liquid		Clean water (for other clean liquids, consult factory)											
	Maximum working pressure		230 / 360 psi (530 / 830 ft TDH)											
	Liquid temperature range		-22° F to 248° F (-30° C to 120° C)											
Size	Suction		1 ¼"			2"			1 ¼"			2"		
	Discharge		1 ¼"			2"			1 ¼"			2"		
Materials	Impeller		AISI 304						AISI 316					
	Intermediate casing		AISI 304						AISI 316					
	Liner ring		AISI 304						AISI 316					
	Bottom casing		AISI 304						AISI 316					
	Casing cover		AISI 304						AISI 316					
	Shaft	AISI 304	8 1-3-5, 10-15-20K (depending on model)											
		AISI 316L	8S 1-3-5, 10-15-20K (depending on model)											
		AISI 329A	8/8S 5-15-20K (depending on model)											
	Shaft sleeve bearing		Tungsten carbide											
	Shaft seal		Silicon Carbide / Carbon / FPM											
	O-Ring	EPDM	○	○	○	○	○	○	○	○	○	○	○	○
		FPM	●	●	●	●	●	●	●	●	●	●	●	●
	Outer casing		AISI 304						AISI 316L					
	Motor bracket		Cast iron											
	Tie rod		Galvanized steel 6.8 strength class ISO 898/1											
	Coupling	Up to 5 HP	Die cast aluminum											
		From 7 ½ HP	Cast iron											
	Base		Die cast aluminum											
Pipe Connection	Oval flange	Up to 230 psi	○	○	○	○	○	○	○	○	○	○	○	○
	Round flange (ANSI compatible)	Up to 230 psi	●	●	●	●	●	●	●	●	●	●	●	●
		From 230 to 360 psi	●	●	●	●	●	●	●	●	●	●	●	●
	Loose round flange (ANSI compatible)	Up to 230 psi	○	○	○	○	○	○	○	○	○	○	○	○
		From 230 to 360 psi	○	○	○	○	○	○	○	○	○	○	○	○
	Victaulic	Up to 230/360 psi	○	○	○	○	○	○	○	○	○	○	○	○
	Clamp	Up to 230/360 psi	○	○	○	○	○	○	○	○	○	○	○	○
Motor	Type		NEMA C/TC/TSC frame, TEFC enclosure											
	Speed		2-pole, 60 Hz, 3500 rpm											
	Power Requirements		3 Phase, 230/460V or 208-230/460V - Single Phase, 115/230V											
	Direction or rotation		Clockwise when viewed from motor end											
	Motor options		Consult factory for optional motor types											

Legend: ● Standard ○ Options

Product Specifications

8C - 32 - 45 - 64K
8S - 32 - 45 - 64K

PUMP													
Version			8CK						8SK				
Performance Type	Nominal size		32		45		64		32		45		64
	HP		5 to 50 HP										
	Capacity		66 to 390 gpm										
	Head		44 to 930 ft TDH										
Liquid Handling	Type of liquid		Clean water (for other clean liquids, consult factory)										
	Maximum working pressure		to 440 psi (30 bar) max										
	Liquid temperature range		5° F to 248° F (-15° C to 120° C)										
Size	Suction		2 ½"		3"		4"		2 ½"		3"		4"
	Discharge		2 ½"		3"		4"		2 ½"		3"		4"
Materials	Impeller		AISI 304						AISI 316				
	Intermediate casing		AISI 304						AISI 316				
	Liner ring		PTFE/AISI 316						PTFE/AISI 316				
	Bottom casing		Cast iron						AISI 316				
	Casing cover		Cast iron						AISI 316				
	Shaft		AISI 316L										
	Shaft sleeve bearing		Tungsten carbide										
	Shaft seal (Mechanical seal)		Silicon Carbide / Carbon / FPM										
	O-Ring	EPDM	○	○	○	○	○	○	○	○	○	○	○	○
		FPM	●	●	●	●	●	●	●	●	●	●	●	●
	Outer casing		AISI 304						AISI 316L				
	Motor bracket		Cast iron						Cast iron/AISI 316				
	Tie rod		Galvanized steel 6.8 strength class ISO 898/1										
	Coupling	Upper half	Steel										
		Lower half	Steel										
	Base		Cast iron						Cast iron/AISI 316				
Pipe connection	Round flange (ANSI compatible)	Raised face	●	●	●	●	●	●	●	●	●	●	●	●
Motor	Type		NEMA TC/TSC frame, TEFC enclosure										
	Speed		2-pole, 60 Hz, 3450 rpm										
	Power Requirements		3 Phase, 208-230/460V										
	Direction or rotation		Clockwise when viewed from motor end										
	Test Standard		ISO9906 annex A										

Legend: ● Standard ○ Options

Additional Centrifugal Pumps

304 Stainless Steel Casing

Centrifugal pumps offer solutions for high-flow, low-pressure industrial pumping needs. Typical fluids pumped include fresh water or liquids with some suspended solids. Below is a sampling of popular centrifugal models that include the pump, seal and motor. Most of the pumps listed are rated at 3450 rpm, but many models are available at 1725 rpm.

SUBMERSIBLE PUMPS WITH INTEGRAL MOTOR AND SEAL*
45 to 100 gpm (170 to 379 lpm)

PUMP MODEL	MAXIMUM FLOW		MAXIMUM PRESSURE		HORSEPOWER		PHASE/VOLTAGE
	gpm	lpm	psi	bar	hp	kW	
1K100	45	170	10	0.69	0.3	0.2	1PH / 115V**
1K201	73	276	17	1.17	0.5	0.4	1PH / 115V**
1K203	73	276	17	1.17	0.5	0.4	1PH / 115V***
1K205	73	276	17	1.17	0.5	0.4	3PH / 460V***
1K301	74	280	21	1.45	0.8	0.6	1PH / 115V**
1K303	74	280	21	1.45	0.8	0.6	1PH / 115V***
1K305	74	280	21	1.45	0.8	0.6	3PH / 460V***
2K102	88	333	9	0.62	0.5	0.4	1PH / 230V***
2K103	88	333	9	0.62	0.5	0.4	1PH / 230V**
2K200	100	379	11	0.76	1.0	0.7	1PH / 115V**
2K202	100	379	11	0.76	1.0	0.7	1PH / 230V**

*Motor side seal is NBR fitted Carbon/Ceramic and impeller side seal is Viton® fitted Silicon Carbide/Silicone Carbide.
**Supplied with automatic float switch
***Manual models, no float switch

END-SUCTION MOTORIZED UNITS WITH TEFC 56J NEMA MOTOR
38 to 63 gpm (144 to 238 lpm)

3K132WT0	38	144	62	4.3	2.0	1.5	1PH / 115/208-230V
3K132WT3	38	144	62	4.3	2.0	1.5	3PH / 208-230/460V
3K392BT3	52	197	13	0.9	0.5	0.4	3PH / 208-230/460V
3K142WT0	63	238	32	2.2	1.0	0.7	1PH / 115/208-230V
3K142WT3	63	238	32	2.2	1.0	0.7	3PH / 208-230/460V
3K152WT0	63	238	44	3.0	1.5	1.1	1PH / 115/208-230V
3K152WT3	63	238	44	3.0	1.5	1.1	3PH / 208-230/460V
3K162WT3	63	238	63	4.3	3.0	2.2	3PH / 208-230/460V

Note: All motors are rated at 3450 rpm except model 3K392BT3 which is rated at 1725. All models listed are equipped with a Viton®/Carbon/Ceramic chemical resistant seal. Buna-N and high temperature seals are also available.

END-SUCTION MOTORIZED UNITS WITH TEFC 213/215JM NEMA MOTOR
153 to 380 gpm (579 to 1,438 lpm)

4K142WT3	153	579	90	6.2	0.5	0.4	3PH / 208-230/460V
4K192WT3	250	946	82	5.7	1.0	0.7	3PH / 208-230/460V
4K252WT3	380	1,438	84	5.8	1.0	0.7	3PH / 208-230/460V

Note: All motors are rated at 3450 rpm. All models listed are equipped with a Viton®/Carbon/Ceramic chemical resistant seal. Buna-N and high temperature seals are also available.

SELF-PRIMING MOTORIZED UNITS WITH TEFC 56J NEMA MOTOR
18.5 gpm (70 lpm)

5K112WT0	18.5	70	56	3.9	1.0	0.7	1PH / 115/208-230V
5K112WT3	18.5	70	56	3.9	1.0	0.7	3PH / 208-230/460V
5K122WT0	18.5	70	82	5.7	1.0	0.7	1PH / 115/208-230V
5K122WT3	18.5	70	82	5.7	2.0	1.5	3PH / 208-230/460V

Note: All motors are rated at 3450 rpm. All models listed are equipped with a Viton®/Carbon/Ceramic chemical resistant seal. Buna-N and high temperature seals are also available.

ABOUT CAT PUMPS

Proven Quality, Customer Focused

Cat Pumps is the world leader in the design, manufacture and marketing of the most dependable high-pressure positive displacement reciprocating triplex pumps and systems in the market. Our mission to exceed customer expectations for quality, reliability, availability, delivery, technical expertise and aftermarket support to assure the best value in all the industries served.

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SALES, DISTRIBUTION, SERVICE

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The Pumps with Nine Lives

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