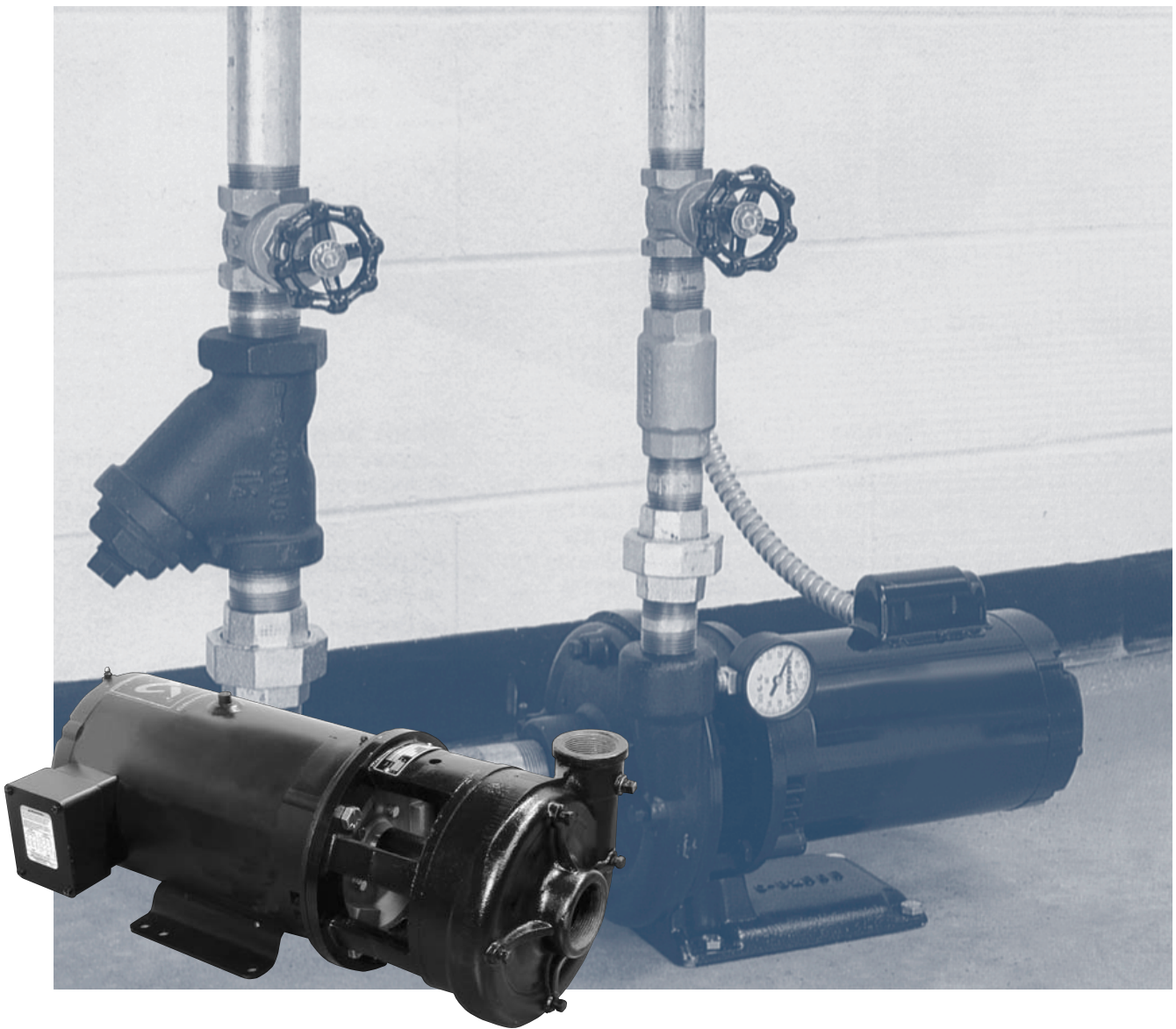


HS

Horizontal single-stage end-suction pumps
60 Hz



Contents

General data

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Mission

- to successfully develop, produce, and sell high quality pumps and pumping systems worldwide, contributing to a better quality of life and healthier environment



GBJ - Bjerringbro, Denmark



GMU - Fresno, California



GPU - Olathe, Kansas



GMX - Monterrey, Mexico



GPA - Allentown, Pennsylvania



GCA - Oakville, Ontario, Canada

- One of the 3 largest pump companies in the world
- World headquarters in Denmark
- North American headquarters in Kansas City - Manufacturing in Fresno, California
- 60 companies in 40 countries
- More than 10 million pumps produced annually worldwide
- North American companies operating in USA, Canada and Mexico
- Continuous reinvestment in growth and development enables the company to **BE** responsible, **THINK** ahead, and **INNOVATE**

Applications

The HS range of compact, horizontal, centrifugal pumps is designed for small domestic and industrial water supply systems.

Applications include:

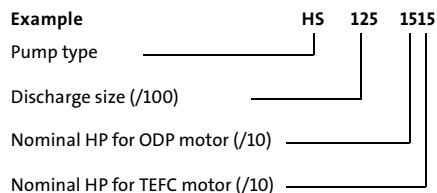
- Liquid transfer:
Transfer and circulation of liquids within light industry and farming.
- Pressure boosting
- Air conditioning
- Domestic water supply
- Water fountains
- Cooling systems
- Air-conditioning systems
- Light irrigation

In addition to this, the HS range is suitable for incorporation in specialized OEM equipment.

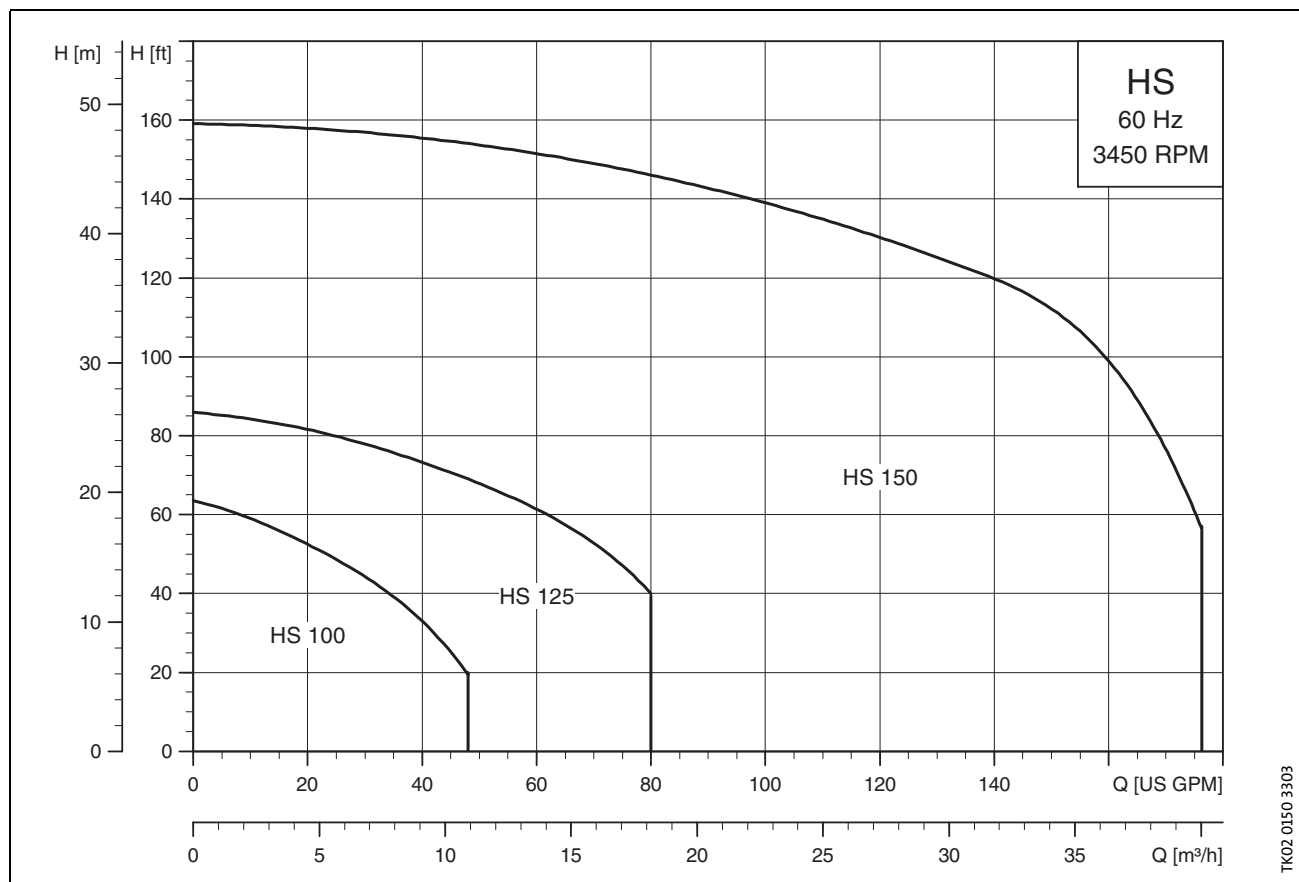
(OEM = Original Equipment Manufacturer)

Type key

HS



Performance range, HS



Pumped liquids

Thin, clean, non-aggressive and non-explosive liquids without solid particles or fibers.



Operating conditions

Liquid temp.:	-5°F to +180°F (-20°C to +82°C) continuous
	-5°F to +211°F (-20°C to +99°C) intermittent
Max. ambient temp.:	+104°F (+40°C)
Max. operating press.:	125 psi (8.6 bar)
Minimum inlet press.:	According to the NPSHR curve plus a safety margin of 3 ft.
Maximum inlet press.:	Limited by maximum operating pressure.

Motor

The pump is fitted with a heavy-duty, Grundfos-specified motor.

Electrical data

Mounting designation	NEMA
Insulation class	F
Efficiency class	Standard Efficiency EPAct - on request High Efficiency - on request
Enclosure class	ODP - Open Drip Proof TEFC - Totally Enclosed Fan Cooled
60 Hz Standard voltages	1 x 115/208-230V 3 x 208-230/460V
Approvals	Motors are   rated.

Single-phase motors have built-in thermal overload protection. Three-phase motors must be connected to a motor starter according to local regulations.

Direction of rotation: Clockwise from motor end.

Pump

The HS pumps are non-self-priming, single-stage, horizontal centrifugal pumps with mechanical shaft seal and close coupled pump/motor shaft. The pumps have an axial suction port and radial discharge port and are mounted on a base plate.

Buna-N O-rings are standard.

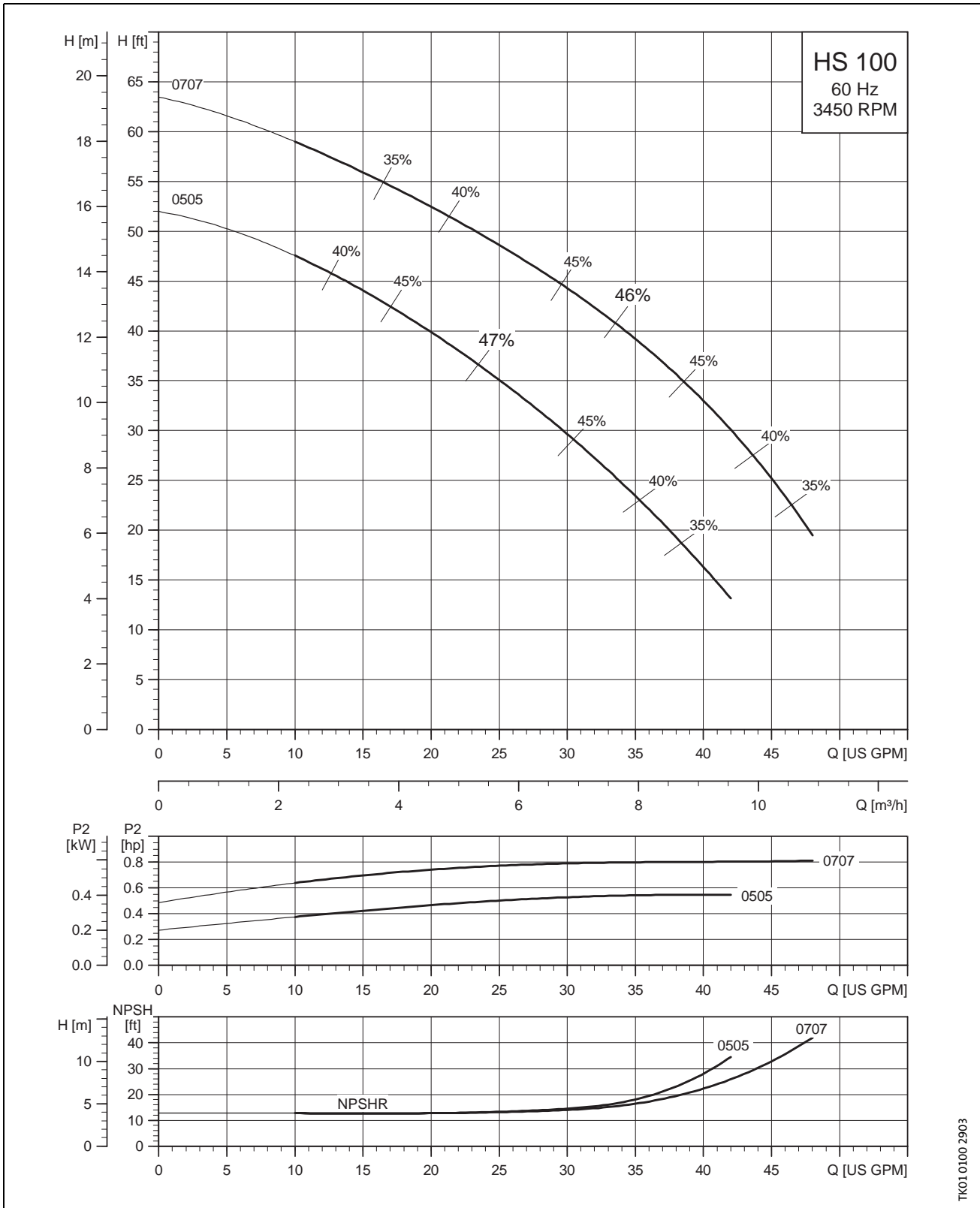
For pipe connections see table below.

Connections	HS 100	HS 125	HS 150
Axial suction port	1 1/4" NPT	1 1/2" NPT	2" NPT
Radial discharge port	1" NPT	1 1/4" NPT	1 1/2" NPT



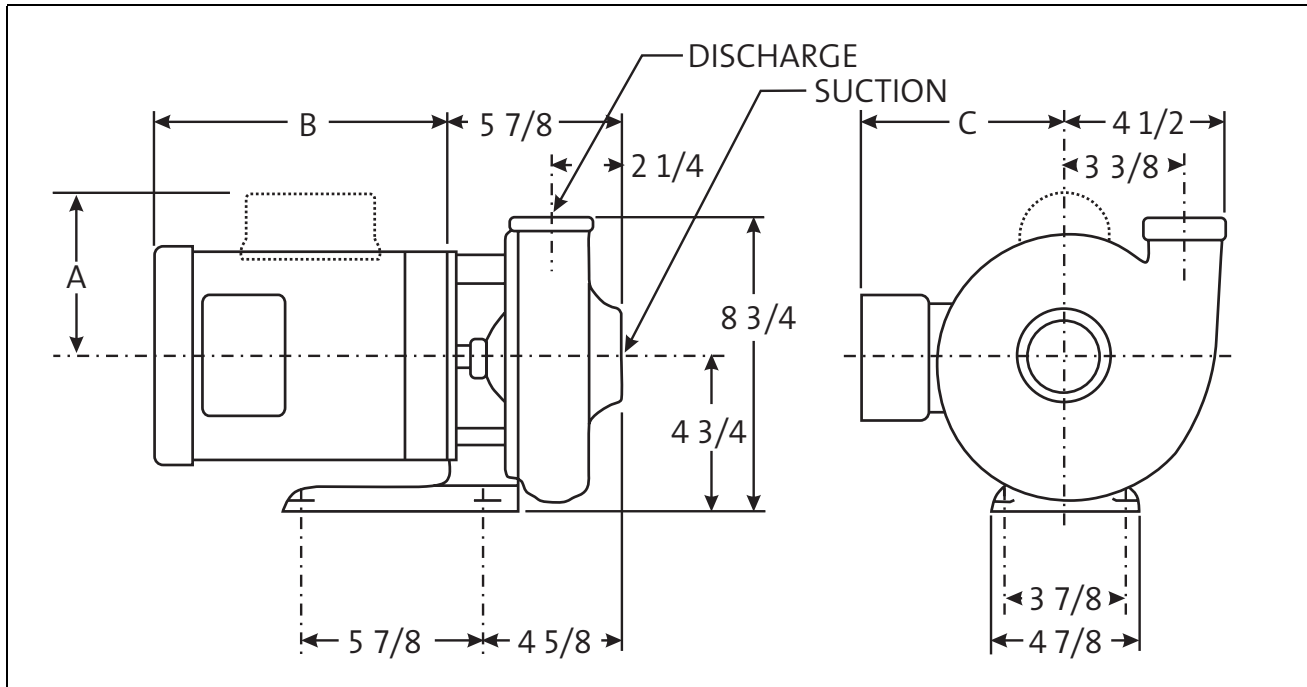
Materials, HS

Description	Material	
Pump housing, motor stool, base plate	Cast iron	
Impeller	Brass	
Pump shaft	HS 100, HS 125	Brass
	HS 150	AISI 416 SS
Shaft seal	Carbon/ceramic with Buna-N elastomer and stainless steel parts (FKM elastomers optional)	



TK01 0100 2903

Dimensional sketch, HS 100



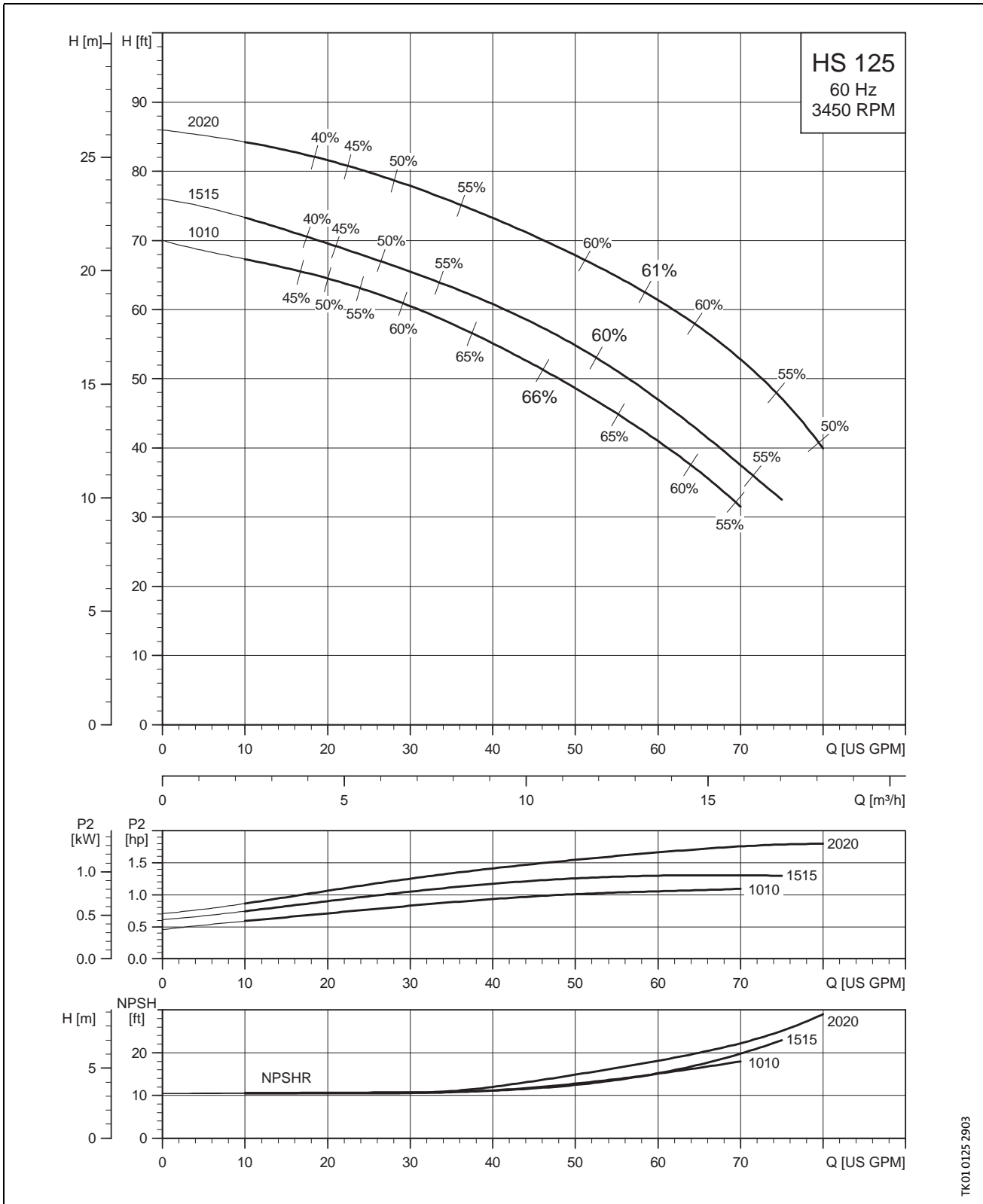
Dimensions, HS 100

Pump type	HP	PH	NEMA Frame Size	Suc. Size [in]	Dis. Size [in]	Open drip proof (ODP) motor				Totally enclosed fan cooled (TEFC) motor				Ship vol. [ft ³]
						A [in]	B [in]	C [in]	Ship wt. [lbs]	A [in]	B [in]	C [in]	Ship wt. [lbs]	
HS 100 0505	1/2	1	56C	1 1/4	1	4 3/8	9 3/8	4 3/4	47	5	9 3/8	5	53	1.7
		3				-	9 1/4	4 3/8	50	-	9 3/8	5	47	1.7
HS 100 0707	3/4	1	56C	1 1/4	1	5	11	4 7/8	50	5 1/8	10	5	57	1.7
		3				-	9 1/2	4 3/8	51	-	9 3/8	5	50	1.7

Electrical data, HS 100

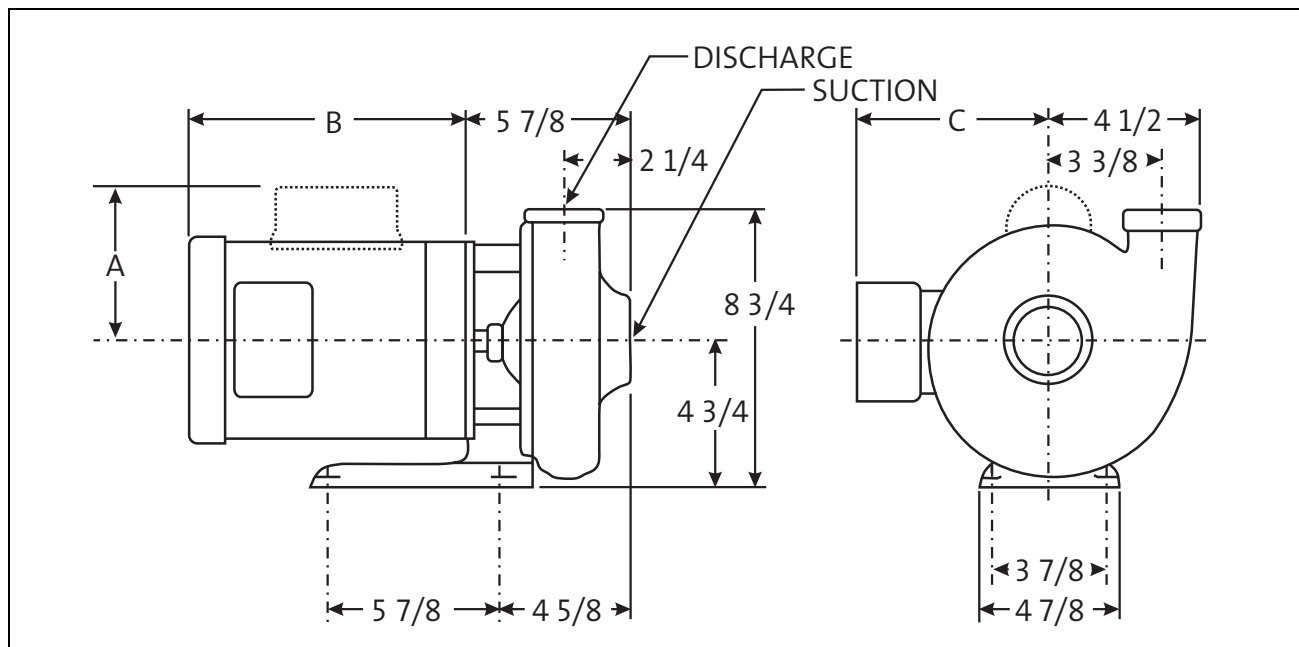
Pump type	HP	PH	Voltage	Open drip proof (ODP) motor				Totally enclosed fan cooled (TEFC) motor			
				S.F.	Full load current [A]	S.F. current [A]	Start current [A]	S.F.	Full load current [A]	S.F. current [A]	Start current [A]
HS 100 0505	1/2	1	115/208-230*	1.25	7.2/4.0-3.6	8.0/4.4-4.0	30/16.6-15	1.6	7.4/4.1-3.7	9.8/5.2-4.9	39/21.6-19.5
		3	208-230/460	1.25	2.1-2.0/1.0	2.6-2.4/1.2	13.3-12/6.0	1.25	2.1-2.0/1.0	2.6-2.4/1.2	13.3-12/6.0
HS 100 0707	3/4	1	115/208-230*	1.25	9.6/5.3-4.8	11.4/6.3-5.7	56/31-28	1.25	9.6/4.8	11.4/5.7	56/28
		3	208-230/460	1.25	2.7-2.6/1.3	3.1-3.0/1.5	16.8-15.2/7.6	1.25	2.7-2.6/1.3	3.1-3.0/1.5	16.8-15.2/7.6

TEFC voltage is: *115/230



TK01 0125 2903

Dimensional sketch, HS 125



Dimensions, HS 125

Pump type	HP	PH	NEMA Frame Size	Suc. Size [in]	Dis. Size [in]	Open drip proof (ODP) motor				Totally enclosed fan cooled (TEFC) motor				Ship vol. [ft ³]
						A [in]	B [in]	C [in]	Ship wt. [lbs]	A [in]	B [in]	C [in]	Ship wt. [lbs]	
HS 125 1010	1	1	56C	1 1/2	1 1/4	5 5/8	11 1/4	5 5/8	52	5 5/8	11 1/4	5 3/4	68	1.7
		3				-	9 1/2	5 5/8	51	-	10 1/4	5 3/4	50	1.7
HS 125 1515	1 1/2	1	56C	1 1/2	1 1/4	5 1/2	11 3/4	5 5/8	54	5 5/8	11 3/4	5 3/4	70	1.7
		3				-	10 3/4	5 5/8	55	-	10 3/4	5 3/4	57	1.7
HS 125 2020	2	1	56C	1 1/2	1 1/4	5 1/2	11 3/4	5 5/8	37	5 5/8	12 5/8	5 3/4	77	1.7
		3				-	10 3/4	5 5/8	66	-	11 3/4	5 3/4	66	1.7

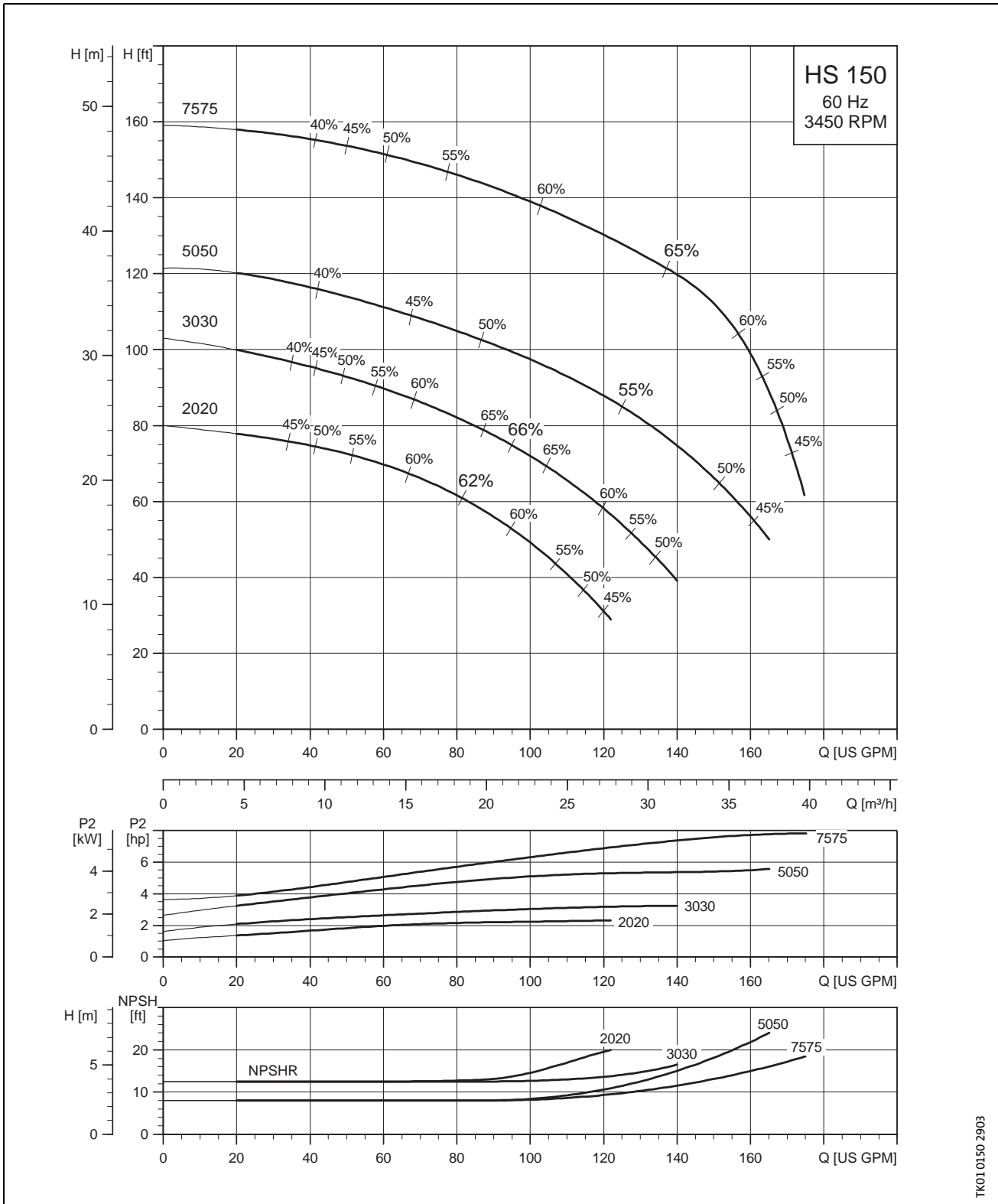
Electrical data, HS 125

Pump type	HP	PH	Voltage	Open drip proof (ODP) motor				Totally enclosed fan cooled (TEFC) motor			
				S.F.	Full load current [A]	S.F. current [A]	Start current [A]	S.F.	Full load current [A]	S.F. current [A]	Start current [A]
HS 125 1010	1	1	115/208-230	1.4	10/5.5-5.0	15/8.0-7.5	85/47-42.5	1.25	12/6.0	14.4/7.2	77/38.5
		3	208-230/460	1.25	3.4-3.2/1.6	3.8-3.6/1.8	19.5-17.6/8.9	1.25	3.4-3.2/1.6	3.8-3.6/1.8	19.7-17.8/8.9
HS 125 1515	1 1/2	1	115/208-230*	1.15	18/10-9	19.7/10.7-9.7	121/66.8-60.4	1.3	17/9.5-8.6	20.4/11.3-10.2	106/58.6-53
		3	208-230/460	1.15	5.0-4.6/2.3	5.4-5.0/2.5	35.4-32/16	1.15	5.0-4.6/2.3	5.4-5.2/2.6	35.4-32/16
HS 125 2020	2	1	115/208-230*	1.15	24/13.3-12	27.6/15.3-13.8	160/88.5-80	1.15	23/11.5	25.4/12.7	156/78
		3	208-230/460	1.15	5.9-5.6/2.8	6.7-6.4/3.2	40.9-37/18.5	1.15	5.7-5.4/2.7	6.5-6.2/3.1	38.7-35/17.5

TEFC voltage is: *115/230

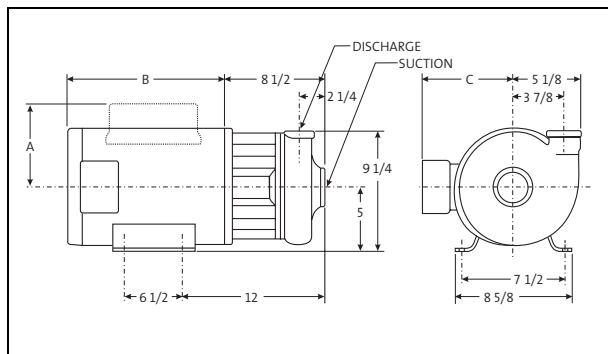
Performance curves

HS 150

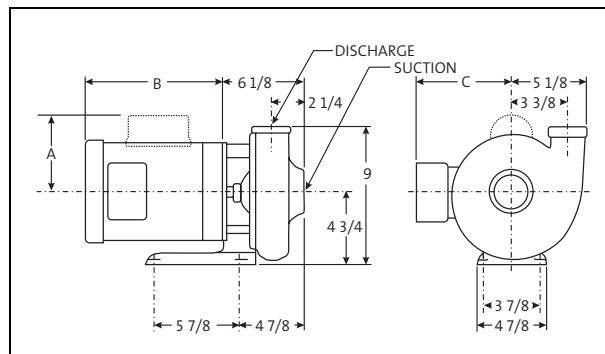


TK010150 2903

Dimensional sketch, HS 150 Large



Dimensional sketch, HS 150 Small



Dimensions, HS 150

Pump type	HP	PH	NEMA Frame Size	Suc. Size [in]	Dis. Size [in]	Open drip proof (ODP) motor				Totally enclosed fan cooled (TEFC) motor				Ship vol. [ft ³]
						A [in]	B [in]	C [in]	Ship wt. [lbs]	A [in]	B [in]	C [in]	Ship wt. [lbs]	
HS 150 2020	2	1	56C	2	1 1/2	5 1/2	11 3/4	5 5/8	37	5 5/8	12 5/8	5 3/4	83	1.7
		3				-	10 3/4	5 5/8	66	-	11 3/4	5 3/4	72	1.7
HS 150 3030	3	1	56C	2	1 1/2	5 1/2	12 1/8	5 1/4	85	6 1/4	13	6	103	1.7
		3				-	11 1/4	5 1/8	78	-	12 1/8	5 3/4	81	1.7
HS 150 5050	5	1	184TC	2	1 1/2	6 5/8	12 1/4	6 3/4	116	6 5/8	15 1/4	6	130	1.7
		3	182TC			-	12 1/4	6 3/4	113	-	13 3/4	6 7/8	115	1.7
HS 150 7575	7 1/2	3	184TC	2	1 1/2	-	12 1/4	6 3/4	118	-	15 1/4	6 7/8	129	1.7

Electrical data, HS 150

Pump type	HP	PH	Voltage	Open drip proof (ODP) motor				Totally enclosed fan cooled (TEFC) motor			
				S.F.	Full load current [A]	S.F. current [A]	Start current [A]	S.F.	Full load current [A]	S.F. current [A]	Start current [A]
HS 150 2020	2	1	115/208-230*	1.15	24/13.3-12	27.6/15.3-13.8	160/88.5-80	1.15	23/11.5	25.4/12.7	156/78
		3	208-230/460	1.15	5.9-5.6/2.8	6.7-6.4/3.2	40.9-37/18.5	1.15	5.7-5.4/2.7	6.5-6.2/3.1	38.7-35/17.5
HS 150 3030	3	1	230**	1.15	13	14.8	108	1.15	30/16.5-15	32.2/17.8-16.1	172/95.1-86
		3	208-230/460	1.15	8.4-8.0/4.0	9.2-8.7/4.4	66.3-60/30	1.15	7.8-7.4/3.7	9.5-8.6/4.3	59.7-54/27
HS 150 5050	5	1	208-230***	1.15	24-23	30.1-27.2	138-125	1.15	21	24.2	124
		3	208-230/430	1.15	13.1-11.5/5.7	15.3-13.8/6.9	106-96/48	1.15	13-12/6.0	14.8-13.4/6.7	123.8-112/56
HS 150 7575	7 1/2	3	208-230/460	1.15	19-18/9.0	22.3-20.2/10.1	168-152/76	1.15	18.5-17.4/8.7	21.7-19.6/9.8	207.9-188/94

TEFC voltage is: *115/230, **115/208-230, ***230

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Submittal Data Sheet

HS

Horizontal Single-stage Centrifugal Pumps

Company name: _____
 Prepared by: _____
 Phone number: () - _____
 Fax number: () - _____
 Date: _____ Page 1 of: _____
 Quote number: _____

Client Information	
Project title: _____	Client name: _____
Reference number: _____	Client number: _____
Client contact: _____	Client phone no: () - _____

Location Information	
For: _____	Unit: _____
Site: _____	Service: _____
Address: _____	City: _____ State: _____ Zip Code: _____

Application Information			
Operating Conditions		Pumped Fluid	
	max.	norm.	
Capacity (gpm)			Fluid type: _____
Suction Pressure (psig)			Fluid Temperature (°F) rated max. norm.
Discharge Pressure (psig)			at designated temperature
Differential Head (ft)			Specific Gravity _____
Hydraulic Power (hp)			Vapor Pressure (psia) _____
at designated capacity			Viscosity (cp) _____
NPSH Available (ft)			Fluid ph: _____ Chlorides (ppm): _____
Service			Hazardous: _____ Flammable: _____
Continuous: _____	Intermittent (starts/day): _____		Other: _____
		Corrosion/Errrosion caused by: _____	
		% Solids: _____ Max. particle size (in): _____	

Pump Information	
Model Information from Type Key and Codes: _____	
Quantity Required: _____	Example: HS 125 1015
Minimum required flow: _____	NPSH required at duty point: _____
Product Guide additional information pages	
Materials page number: _____	Performance curve page number: _____
Technical data page number: _____	Motor data page number: _____

Motor Information			
HP: _____	Phase: _____	Voltage: _____	Enclosure: _____

Additional Information	

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Quotation Text

HS

Horizontal, single-stage, non-self-priming, centrifugal pump with axial suction port and radial discharge port.

The compact unit has maintenance-free mechanical shaft seal and a close-coupled motor/pump shaft.

Pump and motor are mounted on a common baseplate and the tangential discharge can be rotated to any of four positions.

The motor is a _____-phase motor.

Technical:

Rated flow: _____ GPM

Rated head: _____ Feet

Minimum liquid temperature: _____ °F

Maximum liquid temperature: _____ °F

Type of shaft seal: _____

Materials:

Material, pump housing: Cast iron

Material, impeller: Bronze

Material, shaft: _____

Material, seal metal: Stainless Steel

- seal face: Carbon

- seal face: Ceramic

- seal elastomer: _____

Installation:

Minimum ambient temperature: _____ °F

Maximum ambient temperature: _____ °F

Maximum operating pressure: _____ PSI

Max. pressure at stated temp.: _____ PSI/°F

Size, pipe connection: _____ / _____ Suction/Discharge " NPT

Electrical data:

Rated power (P2): _____ HP

Frequency: _____ Hz

Rated voltage: _____ V

Rated current: _____ A

Service factor:

Rated speed: _____ RPM

Enclosure class: _____

Insulation class: _____ F

Additional:

Gross weight: _____ Lbs.

Shipping volume: _____ ft³

L-HS-PG-001	11/03
PRINTED IN USA	

Subject to alterations.

GRUNDFOS Pumps Corporation
17100 West 118th Terrace
Olathe, Kansas 66061
Phone: 913 227 3400
Fax: 913 227 3500
www.grundfos.com

GRUNDFOS Canada Inc.
2941 Brighton Road
Oakville, Ontario Canada L6H 6C9
Phone: 905 829 9533
Fax: 905 829 9512

Bombas GRUNDFOS de Mexico S.A. de C.V.
Boulevard TLC No. 15
Parque Industrial Stiva Aeropuerto
Apodaca, N.L. Mexico 66600
Phone: 52 81 8144 4000
Fax: 52 81 8144 4010

