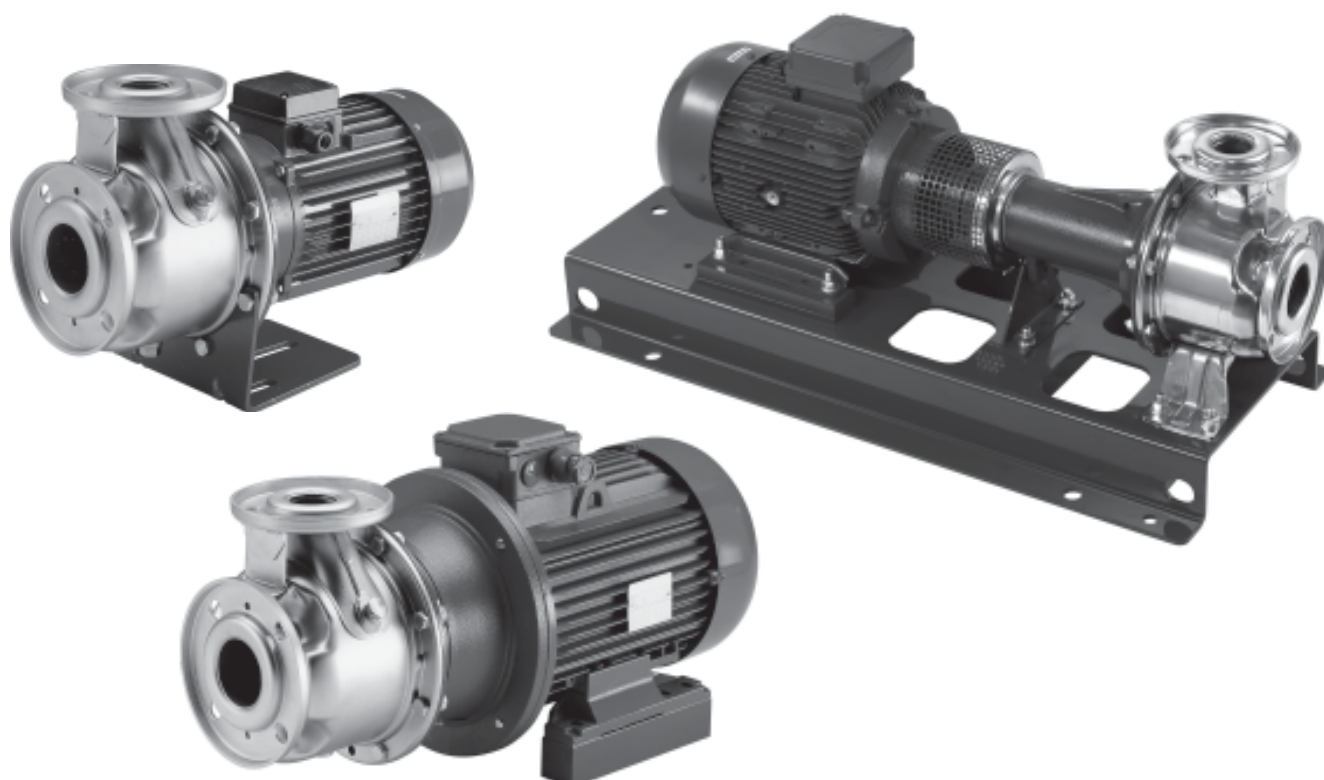


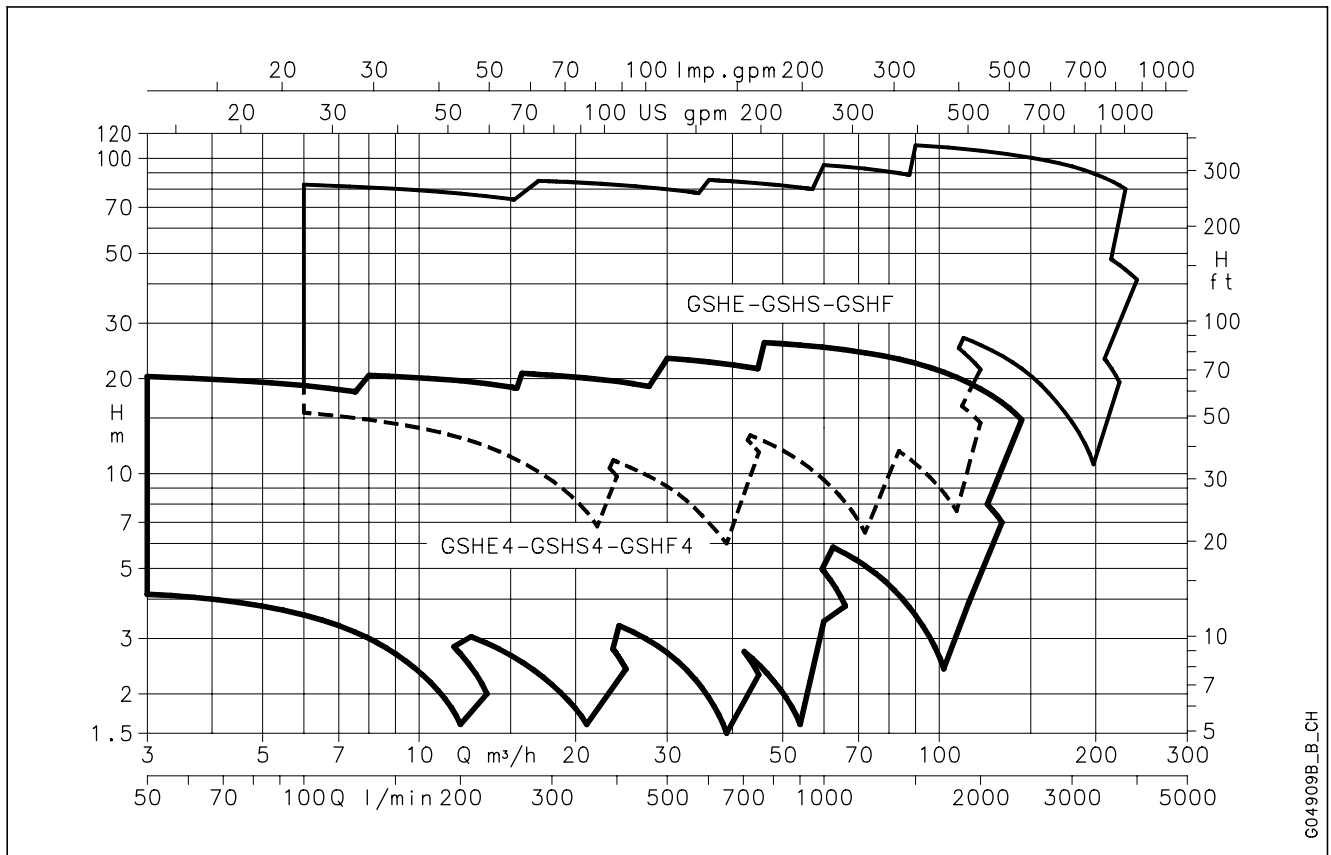
**50 Hz**



## GSH Series

CENTRIFUGAL ELECTRIC PUMPS MADE OF AISI 316 STAINLESS STEEL  
IN COMPLIANCE WITH EN 733, EQUIPPED WITH IE2/IE3 MOTORS  
COMPLYING WITH REGULATION (EC) no. 640/2009

## GS SERIES HYDRAULIC PERFORMANCE RANGE AT 50 Hz



## CONTENTS

Specifications .....	<b>5</b>
Construction Characteristics .....	<b>6</b>
List of Models .....	<b>8</b>
List of Models and Tables of Materials .....	<b>9</b>
GSH Mechanical Seal .....	<b>14</b>
Motors .....	<b>15</b>
Hydraulic Performance Range, GSH series, 50 Hz 2 Poles .....	<b>24</b>
Hydraulic Performance Range, GSH series, 50 Hz 4 Poles .....	<b>26</b>
Operating Characteristics, GSH series, 50 Hz 2 Poles .....	<b>28</b>
Operating Characteristics, GSH series, 50 Hz 4 Poles .....	<b>51</b>
Dimensions and Weights .....	<b>75</b>
Accessories .....	<b>93</b>
Technical Appendix .....	<b>99</b>

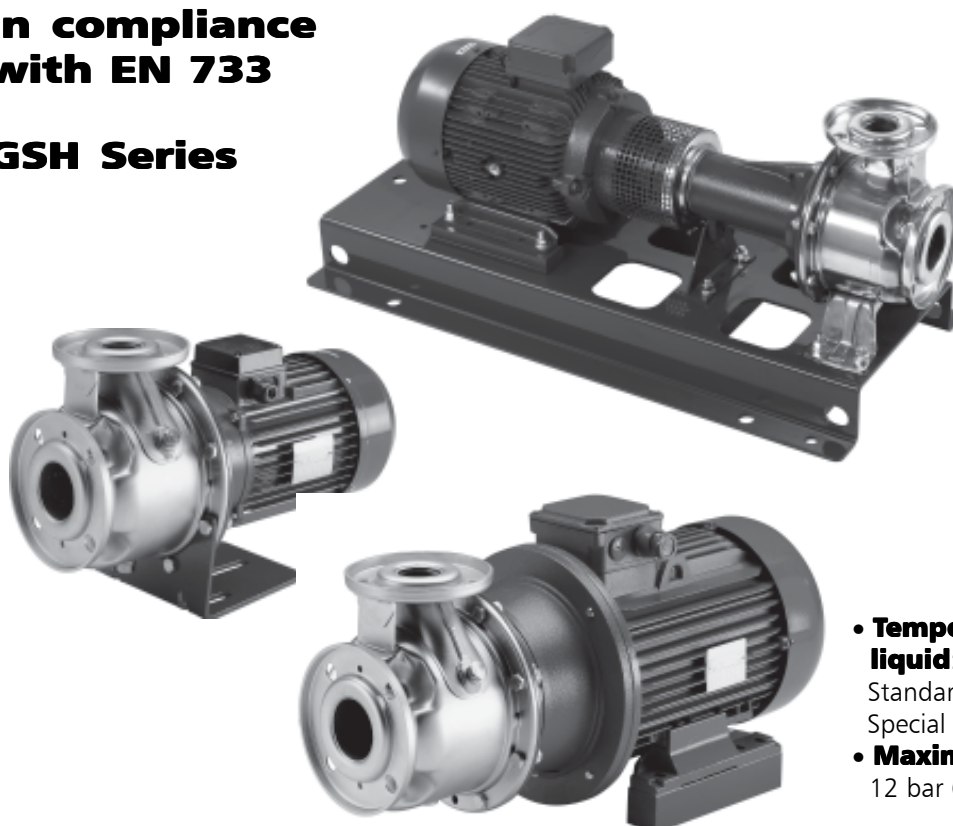


**Centrifugal  
electric pumps  
made of  
AISI 316  
stainless steel  
in compliance  
with EN 733**

**GSH Series**

**MARKET SECTORS**

The GSH series pumps are used for water and clean liquid circulation in heating, ventilating and air conditioning systems, and for pressure boosting in industrial applications.



**SPECIFICATIONS  
PUMP**

- The GSH series consists of singlestage centrifugal pumps made of pressed AISI 316 stainless steel.
- The liquid sizes and diameters of the suction and delivery ports are in compliance with EN 733 standards (ex DIN 24255).
- Flange dimensions in compliance with EN 1092-1.
- Available sizes: DN 25 to DN 80.
- Anti-clockwise rotation when facing pump's suction port.
- Back pull-out design.

**APPLICATION RANGE**

- **Delivery:**  
up to 240 m<sup>3</sup>/h, 2 poles.  
up to 130 m<sup>3</sup>/h, 4 poles.
- **Head:**  
up to 110 m, 2 poles.  
up to 23 m, 4 poles.

• **Temperature of pumped liquid:**

Standard -10°C to +120°C.  
Special versions available on request.

- **Maximum working pressure:**  
12 bar (PN 12).

**MOTOR**

- Three-phase asynchronous, squirrel cage rotor, enclosed construction, external ventilation.
- Performances according to EN 60034-1.
- **Standard supplied IE2/IE3 motors are compliant with Regulation (EC) no. 640/2009 and IEC 60034-30.**
- IP55 protection.
- Insulation class 155 (F).
- Max. ambient temperature: 40°C.  
For different environmental conditions, check the power.
- Overload protection to be provided by user.
- Condensation drain plugs on all standard internal production motors.
- **Standard voltage:**  
Single-phase version 220-240 V, 50 Hz  
Three-phase version 220-240/380-415 V, 50 Hz for powers up to 3 kW;  
380-415/660-690 V, 50 Hz for powers above 3 kW.

## CONSTRUCTION CHARACTERISTICS

- Stainless steel centrifugal pump with end suction and radial discharge ports.
- Pump body made of AISI 316L stainless steel.
- Flanges in compliance with EN 1092-1 (ex UNI 2236 and DIN 2533).
- Back pull-out design (impeller, bracket and motor can be extracted without disconnecting the pump body from the piping).
- Closed impeller made of AISI 316L stainless steel, laser-technology welded (for sizes 25, 32, 40, 50, 65-160/75, 65-160/110A) or AISI CF8M cast stainless steel.
- Mechanical seal according to EN 12756 (ex DIN 24960).
- AISI 316L stainless steel fill & drain plugs.

## MOTOR-PUMP COUPLING

- **GSHE**: close-coupled by means of a bracket with impeller keyed directly to the motor shaft extension.
- **GSHS**: with a bracket, adaptor and rigid coupling keyed to the standard motor shaft extension.
- **GSHF**: with bracket, support, flexible coupling, and aligning and anchoring base.
- **GSHF.SC**: with bracket, support, spacer coupling, aligning and anchoring base.
- Bare shaft pump version.

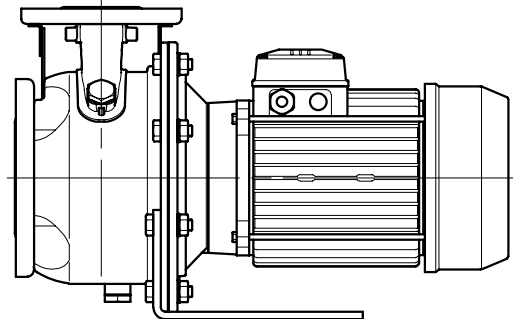
## ACCESSORIES ON REQUEST

- AISI 316 stainless steel or galvanized iron counterflanges.
- Intermediate flange with pressure gauge connection.
- Pump and motor shims.

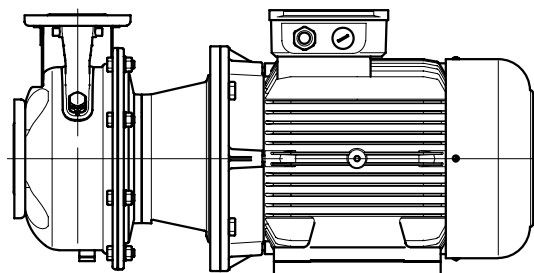
## OPTIONAL FEATURES

- Different voltages and frequencies.
- Special materials for the mechanical seal and gaskets.
- Version with internal recirculation of pumped liquid to mechanical seal.
- Version with rotation locking system seal.
- Tropicalized motors.
- Version with Hydrovar® control system.
- GSHF with flexible coupling with spacer.
- Diesel motor.

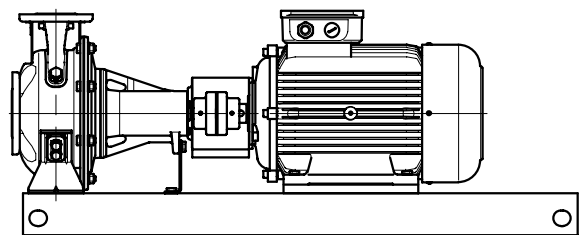
GSHE – GSHE4



GSHS – GSHS4

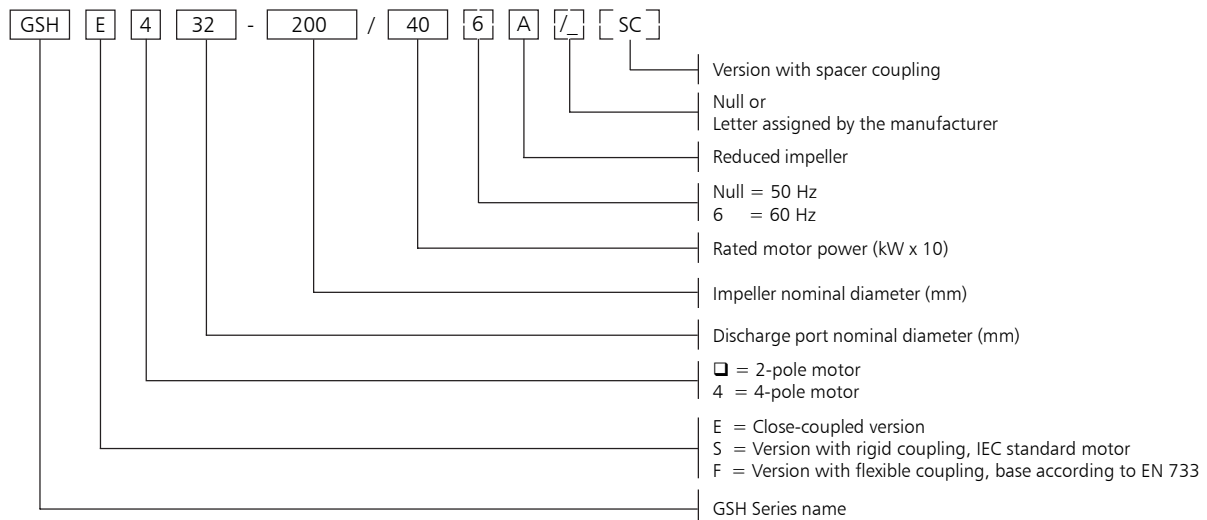


GSHF – GSHF4

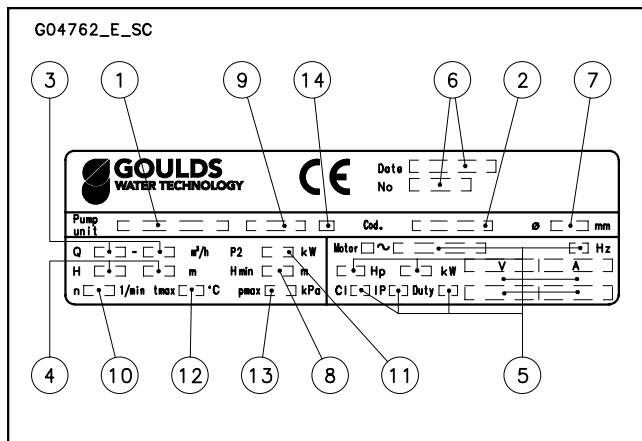


G04905\_A\_SC

## GSB SERIES IDENTIFICATION CODE



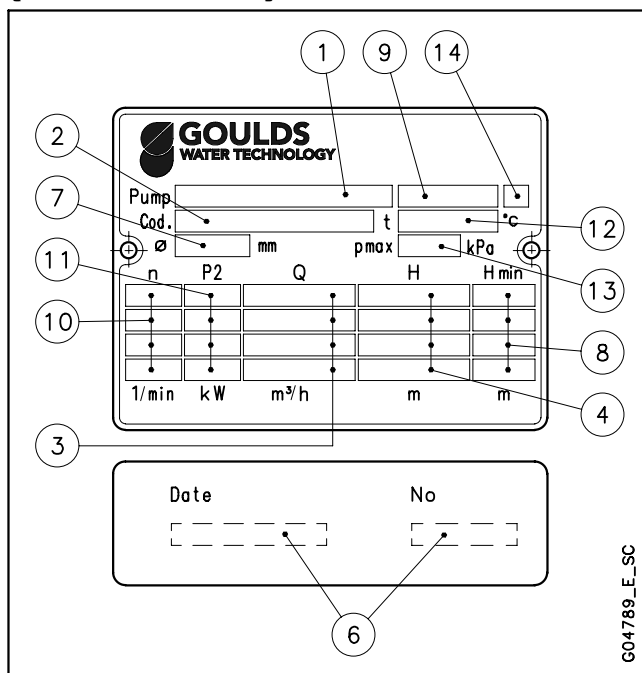
## GSHE - GSHS RATING PLATE



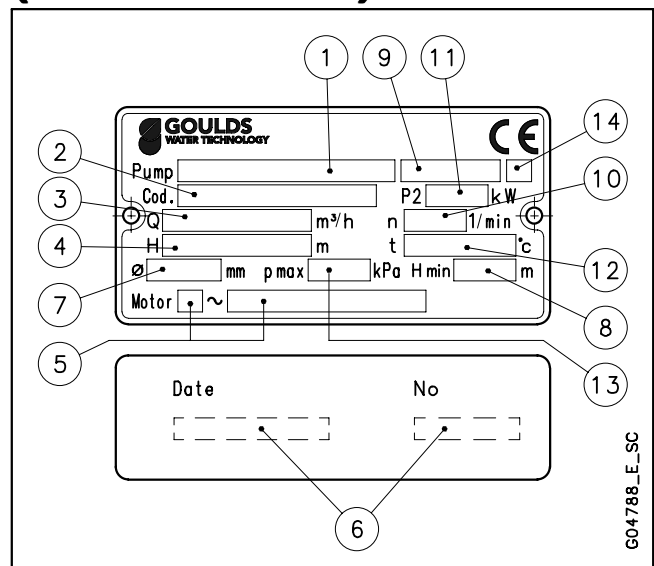
## LEGEND

- 1 - Electric pump type
- 2 - Code
- 3 - Delivery range
- 4 - Head range
- 5 - Motor type
- 6 - Date of manufacturing and serial number
- 7 - Impeller diameter
- 8 - Minimum head
- 9 - Mechanical seal material identification code
- 10 - Speed
- 11 - Rated power
- 12 - Maximum operating temperature
- 13 - Maximum operating pressure
- 14 - O-ring material identification code

## GSHF RATING PLATE (PUMP ONLY)



## GSHF RATING PLATE (ELECTRIC PUMP)



## LIST OF MODELS GSH SERIES 50 Hz 2 POLES

SIZE	kW	VERSION			
		GSHEM	GSHE	GSHS	GSHF
25-125/07	0,75	•	•	•	•
25-125/11	1,1	•	•	•	•
25-160/15	1,5	•	•	•	•
25-160/22	2,2	•	•	•	•
25-200/30	3	-	•	•	•
25-200/40	4	-	•	•	•
25-250/55	5,5	-	•	•	•
25-250/75	7,5	-	•	•	•
25-250/110	11	-	•	•	•
32-125/07	0,75	•	•	•	•
32-125/11	1,1	•	•	•	•
32-160/15	1,5	•	•	•	•
32-160/22	2,2	•	•	•	•
32-200/30	3	-	•	•	•
32-200/40	4	-	•	•	•
32-250/55	5,5	-	•	•	•
32-250/75	7,5	-	•	•	•
32-250/110	11	-	•	•	•
40-125/11	1,1	•	•	•	•
40-125/15	1,5	•	•	•	•
40-125/22	2,2	•	•	•	•
40-160/30	3	-	•	•	•
40-160/40	4	-	•	•	•
40-200/55	5,5	-	•	•	•
40-200/75	7,5	-	•	•	•
40-250/92	9,2	-	•	-	-
40-250/110A	11	-	-	•	•
40-250/110	11	-	•	•	•
40-250/150	15	-	•	•	•
50-125/22	2,2	•	•	•	•
50-125/30	3	-	•	•	•
50-125/40	4	-	•	•	•
50-160/55	5,5	-	•	•	•
50-160/75	7,5	-	•	•	•
50-200/92	9,2	-	•	-	-
50-200/110A	11	-	-	•	•
50-200/110	11	-	•	•	•
50-250/150	15	-	•	•	•
50-250/185	18,5	-	•	•	•
50-250/220	22	-	•	•	•
65-160/40	4	-	•	•	•
65-160/55	5,5	-	•	•	•
65-160/75	7,5	-	•	•	•
65-160/92	9,2	-	•	-	-
65-160/110A	11	-	-	•	•
65-160/110	11	-	•	•	•
65-200/150	15	-	•	•	•
65-200/185	18,5	-	•	•	•
65-200/220	22	-	•	•	•
65-250/300	30	-	-	•	•
65-250/370	37	-	-	•	•
80-160/110	11	-	•	•	•
80-160/150	15	-	•	•	•
80-160/185	18,5	-	•	•	•
80-200/220	22	-	•	•	•
80-200/300	30	-	-	•	•
80-200/370	37	-	-	•	•
80-250/450	45	-	-	-	•
80-250/550	55	-	-	-	•
80-250/750	75	-	-	-	•

• = Available

gsh\_gshe-gshs-gshf\_2p50-en\_b\_tem

## 4 POLES

SIZE	kW	VERSION		
		GSHE4	GSHS4	GSHF4
25-125/02A	0,25	•	-	•
25-125/02	0,25	•	-	•
25-160/02	0,25	•	-	•
25-160/03	0,37	•	-	•
25-200/03	0,37	•	-	•
25-200/05	0,55	•	-	•
25-250/07	0,75	•	•	•
25-250/11	1,1	•	•	•
25-250/15	1,5	•	•	•
32-125/02A	0,25	•	-	•
32-125/02	0,25	•	-	•
32-160/02	0,25	•	-	•
32-160/03	0,37	•	-	•
32-200/03	0,37	•	-	•
32-200/05	0,55	•	-	•
32-250/07	0,75	•	•	•
32-250/11	1,1	•	•	•
32-250/15	1,5	•	•	•
40-125/02A	0,25	•	-	•
40-125/02	0,25	•	-	•
40-125/03	0,37	•	-	•
40-160/03	0,37	•	-	•
40-160/05	0,5	•	-	•
40-200/07	0,75	•	•	•
40-200/11	1,1	•	•	•
40-250/11	1,1	•	•	•
40-250/15	1,5	•	•	•
40-250/22	2,2	•	•	•
50-125/03A	0,37	•	-	•
50-125/03	0,37	•	-	•
50-125/05	0,5	•	-	•
50-160/07	0,75	•	•	•
50-160/11	1,1	•	•	•
50-200/11	1,1	•	•	•
50-200/15	1,5	•	•	•
50-250/22A	2,2	•	•	•
50-250/22	2,2	•	•	•
50-250/30	3	•	•	•
65-160/05	0,5	•	•	•
65-160/07	0,75	•	•	•
65-160/11A	1,1	•	•	•
65-160/11	1,1	•	•	•
65-160/15	1,5	•	•	•
65-200/15	1,5	•	•	•
65-200/22	2,2	•	•	•
65-200/30	3	•	•	•
65-250/40	4	•	•	•
65-250/55	5,5	•	•	•
80-160/15	1,5	•	•	•
80-160/22A	2,2	•	•	•
80-160/22	2,2	•	•	•
80-200/30	3	•	•	•
80-200/40	4	•	•	•
80-250/55	5,5	•	•	•
80-250/75	7,5	•	•	•
80-250/110	11	•	•	•

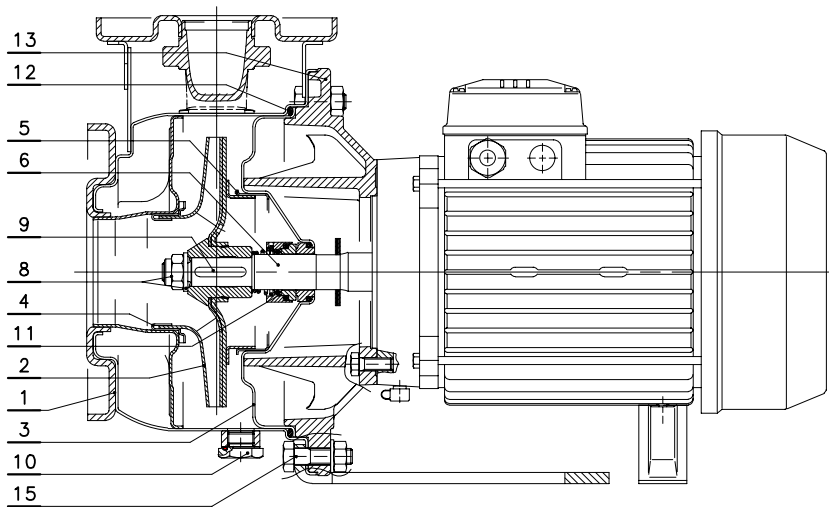
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## GSHE - GSHE4 SERIES LIST OF MODELS AND TABLE OF MATERIALS

04906\_B\_DS



VERSIONS	
2 POLES	4 POLES
GSHE 25-125/07	GSHE4 25-200/05
GSHE 25-125/11	GSHE4 25-250/07
GSHE 25-160/15	GSHE4 25-250/11
GSHE 25-160/22	GSHE4 25-250/15
GSHE 25-200/30	GSHE4 32-200/05
GSHE 25-200/40	GSHE4 32-250/07
GSHE 25-250/55	GSHE4 32-250/11
GSHE 25-250/75	GSHE4 32-250/15
GSHE 25-250/110	GSHE4 40-160/05
GSHE 32-125/07	GSHE4 40-200/07
GSHE 32-125/11	GSHE4 40-200/11
GSHE 32-160/15	GSHE4 40-250/11
GSHE 32-160/22	GSHE4 40-250/15
GSHE 32-200/30	GSHE4 40-250/22
GSHE 32-200/40	GSHE4 50-125/05
GSHE 32-250/55	GSHE4 50-160/07
GSHE 32-250/75	GSHE4 50-160/11
GSHE 32-250/110	GSHE4 50-200/11
GSHE 40-125/11	GSHE4 50-200/15
GSHE 40-125/15	GSHE4 50-250/22A
GSHE 40-125/22	GSHE4 50-250/22
GSHE 40-160/30	GSHE4 50-250/30
GSHE 40-160/40	GSHE4 65-160/05
GSHE 40-200/55	GSHE4 65-160/07
GSHE 40-200/75	GSHE4 65-160/11A
GSHE 40-250/92	GSHE4 65-160/11
GSHE 40-250/110	GSHE4 65-160/15
GSHE 50-125/22	GSHE4 65-200/15
GSHE 50-125/30	GSHE4 65-200/22
GSHE 50-125/40	GSHE4 65-200/30
GSHE 50-160/55	GSHE4 65-250/40
GSHE 50-160/75	GSHE4 65-250/55
GSHE 50-200/92	GSHE4 80-160/15
GSHE 50-200/110	GSHE4 80-160/22A
GSHE 65-160/40	GSHE4 80-160/22
GSHE 65-160/55	GSHE4 80-200/30
GSHE 65-160/75	GSHE4 80-200/40
GSHE 65-160/92	GSHE4 80-250/55
GSHE 65-160/110	GSHE4 80-250/75
GSHE 80-160/110	

gsh-gshe-p-en\_b\_mo

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
2	Impeller 25-32-40-50-65(160)	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
	Impeller 65(200-250)-80	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (cast AISI 316)
3	Seal housing	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
4	Wear ring	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Counterwear ring	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
6	Shaft extension	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
7	Rigid shaft coupling	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
8	Impeller locknut and washer	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
9	Tab	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
10	Fill/drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
11	Mechanical seal	Ceramic / Carbon / FPM (standard version)		
12	Elastomers	FPM (standard version)		
13	Adapter *	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
	Adapter *	Cast iron	EN 1561-GJL-200 (JL1030)	ASTM Class 25
15	Pump body fastening bolts & screws	Galvanized steel		

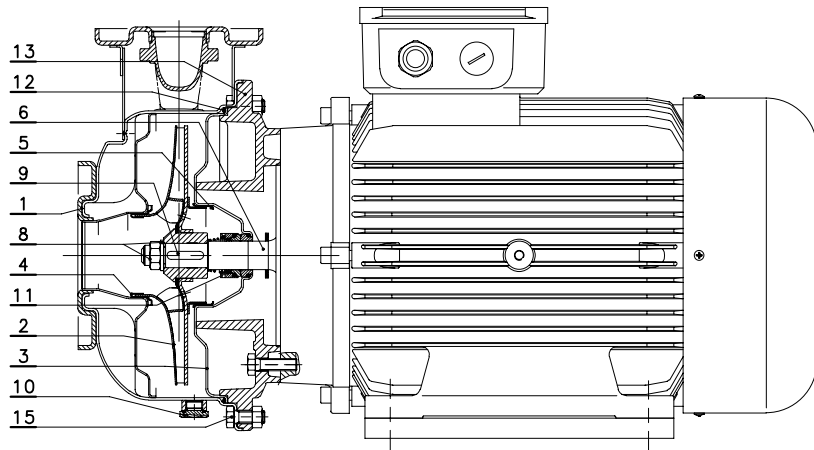
\* For the 25/32/40-125 2/4 pole, 25/32/40-160 2/4 pole, 25/32/40-200 2/4 pole versions

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## GSHE - GSHE4 SERIES

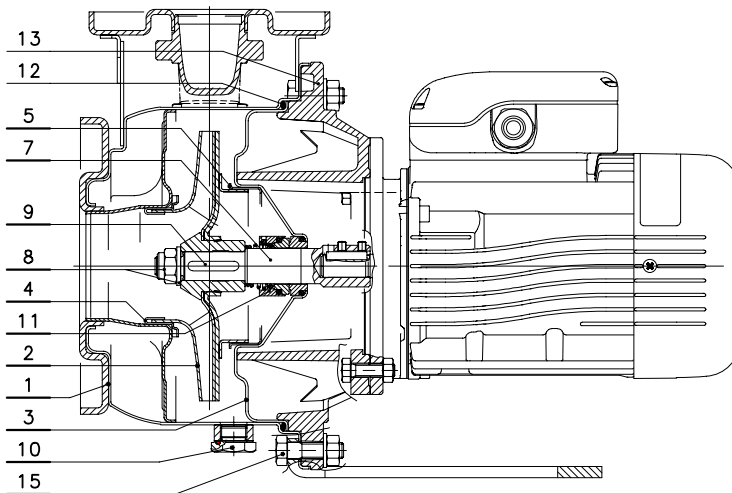
### LIST OF MODELS AND TABLE OF MATERIALS

04902\_B\_DS



VERSIONS	
2 POLES	4 POLES
GSHE 40-250/150	GSHE4 80-250/110
GSHE 50-250/150	
GSHE 50-250/185	
GSHE 50-250/220	
GSHE 65-200/150	
GSHE 65-200/185	
GSHE 65-200/220	
GSHE 80-160/150	
GSHE 80-160/185	
GSHE 80-200/220	

gsh-gshe-s-en\_b\_mo



VERSIONS	
4 POLES	
GSHE4 25-125/02A	GSHE4 40-125/02A
GSHE4 25-125/02	GSHE4 40-125/02
GSHE4 25-160/02	GSHE4 40-125/03
GSHE4 25-160/03	GSHE4 40-160/03
GSHE4 25-200/03	GSHE4 50-125/03A
GSHE4 32-125/02A	GSHE4 50-125/03
GSHE4 32-125/02	
GSHE4 32-160/02	
GSHE4 32-160/03	
GSHE4 32-200/03	

gsh-gshe4-p-en\_a\_mo

REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
2	Impeller 25-32-40-50-65(160)	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
	Impeller 65(200-250)-80	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (cast AISI 316)
3	Seal housing	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
4	Wear ring	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Counterwear ring	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
6	Shaft extension	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
7	Rigid shaft coupling	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
8	Impeller locknut and washer	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
9	Tab	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
10	Fill/drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
11	Mechanical seal	Ceramic / Carbon / FPM (standard version)		
12	Elastomers	FPM (standard version)		
13	Adapter *	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
	Adapter *	Cast iron	EN 1561-GJL-200 (JL1030)	ASTM Class 25
15	Pump body fastening bolts & screws	Galvanized steel		

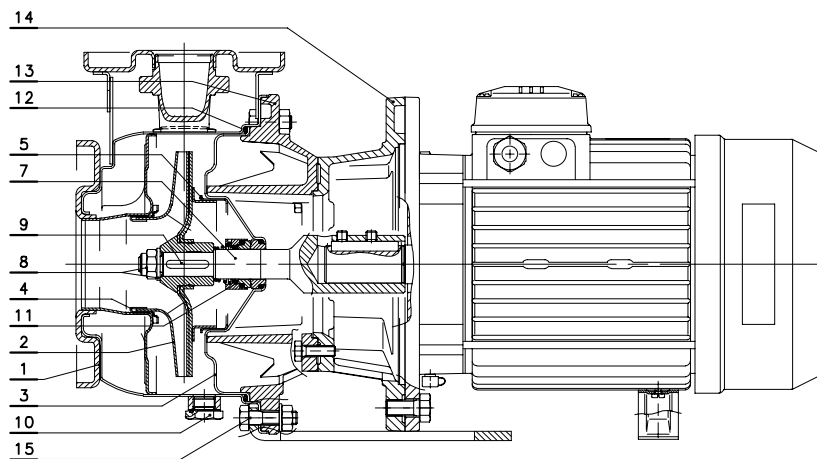
\* For the 25/32/40-125 2/4 pole, 25/32/40-160 2/4 pole, 25/32/40-200 2/4 pole versions

sh\_she-en\_c\_tm

## GSHS - GSHS4 SERIES

### LIST OF MODELS AND TABLE OF MATERIALS

04956\_C\_DS



#### VERSIONS

2 POLES	4 POLES
GSHS 25-125/07	GSHS4 25-250/07
GSHS 25-125/11	GSHS4 25-250/11
GSHS 25-160/15	GSHS4 25-250/15
GSHS 25-160/22	GSHS4 32-250/07
GSHS 25-200/30	GSHS4 32-250/11
GSHS 25-200/40	GSHS4 32-250/15
GSHS 25-250/55	GSHS4 40-200/07
GSHS 25-250/75	GSHS4 40-200/11
GSHS 32-125/07	GSHS4 40-250/11
GSHS 32-125/11	GSHS4 40-250/15
GSHS 32-160/15	GSHS4 40-250/22
GSHS 32-160/22	GSHS4 50-160/07
GSHS 32-200/30	GSHS4 50-160/11
GSHS 32-200/40	GSHS4 50-200/11
GSHS 32-250/55	GSHS4 50-200/15
GSHS 32-250/75	GSHS4 50-250/22A
GSHS 40-125/11	GSHS4 50-250/22
GSHS 40-125/15	GSHS4 50-250/30
GSHS 40-125/22	GSHS4 65-160/05
GSHS 40-160/30	GSHS4 65-160/07
GSHS 40-160/40	GSHS4 65-160/11A
GSHS 40-200/55	GSHS4 65-160/11
GSHS 40-200/75	GSHS4 65-160/15
GSHS 50-125/22	GSHS4 65-200/15
GSHS 50-125/30	GSHS4 65-200/22
GSHS 50-125/40	GSHS4 65-200/30
GSHS 50-160/55	GSHS4 65-250/40
GSHS 50-160/75	GSHS4 65-250/55
GSHS 65-160/40	GSHS4 80-160/15
GSHS 65-160/55	GSHS4 80-160/22A
GSHS 65-160/75	GSHS4 80-160/22
	GSHS4 80-200/30
	GSHS4 80-200/40
	GSHS4 80-250/55
	GSHS4 80-250/75

gsh-gshs-p-en\_b\_mo

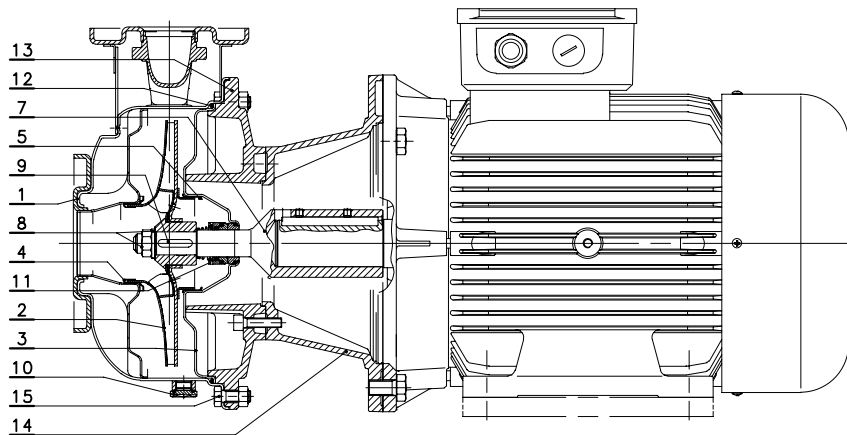
REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
2	Impeller 25-32-40-50-65(160)	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
	Impeller 65(200-250)-80	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (cast AISI 316)
3	Seal housing	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
4	Wear ring	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Counterwear ring	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
7	Rigid shaft coupling	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
8	Impeller locknut and washer	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
9	Tab	Acciaio inox	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
10	Fill/drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
11	Mechanical seal	Ceramic / Carbon / FPM (standard version)		
12	Elastomers	FPM (standard version)		
13	Adapter *	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
	Adapter	Cast iron	EN 1561-GJL-200 (JL1030)	ASTM Class 25
14	Adapter motor coupling	Cast iron	EN 1561-GJL-200 (JL1030)	ASTM Class 25
15	Pump body fastening bolts & screws	Galvanized steel		

\* For the 25/32/40-125 2/4 pole, 25/32/40-160 2/4 pole, 25/32/40-200 2/4 pole versions

sh\_shs-en\_c\_tm

## GSHS SERIES LIST OF MODELS AND TABLE OF MATERIALS

04952\_B\_DS



VERSIONS	
2 POLES	4 POLES
GSHS 25-250/110	GSHS4 80-250/110
GSHS 32-250/110	
GSHS 40-250/110A	
GSHS 40-250/110	
GSHS 40-250/150	
GSHS 50-200/110A	
GSHS 50-200/110	
GSHS 50-250/150	
GSHS 50-250/185	
GSHS 50-250/220	
GSHS 65-160/110A	
GSHS 65-160/110	
GSHS 65-200/150	
GSHS 65-200/185	
GSHS 65-200/220	
GSHS 65-250/300	
GSHS 65-250/370	
GSHS 80-160/110	
GSHS 80-160/150	
GSHS 80-160/185	
GSHS 80-200/220	
GSHS 80-200/300	
GSHS 80-200/370	

gsh-gshs-s-en\_b\_mo

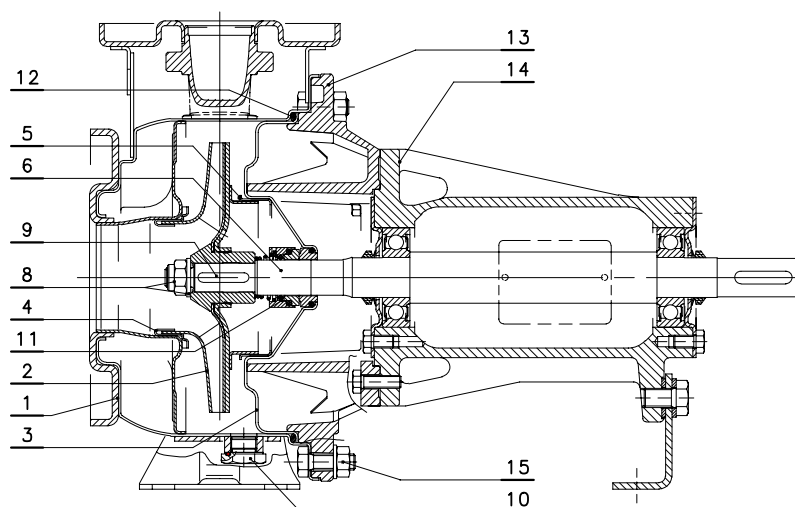
REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
2	Impeller 25-32-40-50-65(160)	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
	Impeller 65(200-250)-80	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (cast AISI 316)
3	Seal housing	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
4	Wear ring	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Counterwear ring	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
7	Rigid shaft coupling	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
8	Impeller locknut and washer	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
9	Tab	Acciaio inox	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
10	Fill/drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
11	Mechanical seal	Ceramic / Carbon / FPM (standard version)		
12	Elastomers	FPM (standard version)		
13	Adapter *	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
	Adapter	Cast iron	EN 1561-GJL-200 (JL1030)	ASTM Class 25
14	Adapter motor coupling	Cast iron	EN 1561-GJL-200 (JL1030)	ASTM Class 25
15	Pump body fastening bolts & screws	Galvanized steel		

\* For the 25/32/40-125 2/4 pole, 25/32/40-160 2/4 pole, 25/32/40-200 2/4 pole versions

sh\_shs-en\_c\_tm

## GSHF BARE SHAFT SERIES LIST OF MODELS AND TABLE OF MATERIALS

04979\_B\_DS



### VERSIONS

GSHF 25-125  
GSHF 25-160  
GSHF 25-200  
GSHF 25-250  
GSHF 32-125  
GSHF 32-160  
GSHF 32-200  
GSHF 32-250  
GSHF 40-125  
GSHF 40-160  
GSHF 40-200  
GSHF 40-250  
GSHF 50-125  
GSHF 50-160  
GSHF 50-200  
GSHF 50-250  
GSHF 65-160  
GSHF 65-200  
GSHF 65-250  
GSHF 80-160  
GSHF 80-200  
GSHF 80-250

gsh-gshf-p-en\_a\_mo

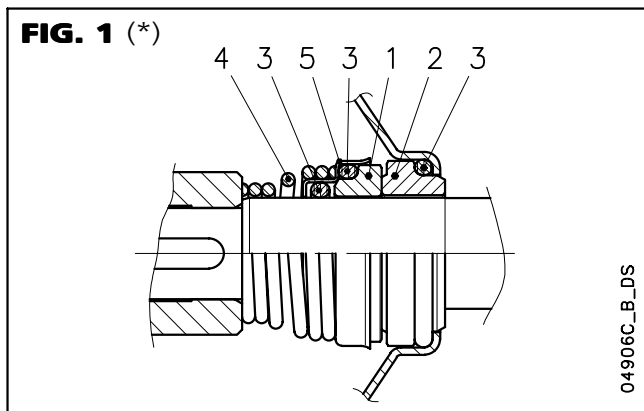
REF. N.	NAME	MATERIAL	REFERENCE STANDARDS	
			EUROPE	USA
1	Pump body	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
2	Impeller 25-32-40-50-65(160)	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
	Impeller 65(200-250)-80	Stainless steel	EN 10213-4-GX5CrNiMo19-11-2 (1.4408)	ASTM CF8M (cast AISI 316)
3	Seal housing	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
4	Wear ring	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
5	Counterwear ring	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
6	Shaft extension	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
8	Impeller locknut and washer	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
9	Tab	Stainless steel	EN 10088-1-X2CrNiMo17-12-2 (1.4404)	AISI 316L
10	Fill/drain plugs	Stainless steel	EN 10088-1-X5CrNiMo17-12-2 (1.4401)	AISI 316
11	Mechanical seal	Ceramic / Carbon / FPM (standard version)		
12	Elastomers	FPM (standard version)		
13	Adapter *	Aluminium	EN 1706-AC-AISI11Cu2 (Fe) (AC46100)	-
	Adapter	Cast iron	EN 1561-GJL-200 (JL1030)	ASTM Class 25
14	Transmission support body	Cast iron	EN 1561-GJL-200 (JL1030)	ASTM Class 25
15	Pump body fastening bolts & screws	Galvanized steel		

\* For the 25/32/40-125 2/4 pole, 25/32/40-160 2/4 pole, 25/32/40-200 2/4 pole versions

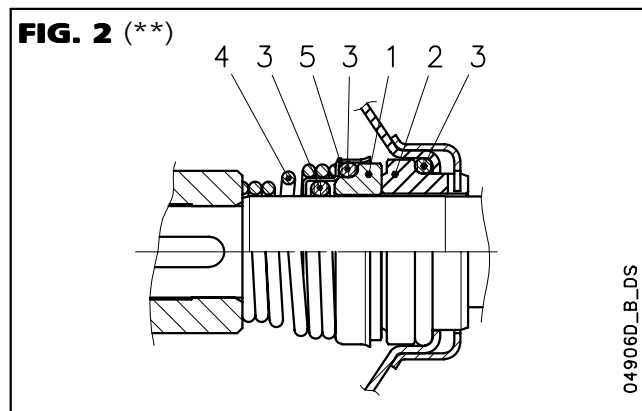
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## GSH MECHANICAL SEAL SERIES, ACCORDING TO EN 12756

Mechanical seal with mounting dimensions according to EN12756 (ex DIN 24960) and ISO 3069.



(\*) Standard version



(\*\*) Version with fixed assembly anti-rotation lockpin

## LIST OF MATERIALS

POSITION 1 - 2	POSITION 3	POSITION 4 - 5
<b>B</b> : Resin impregnated carbon	<b>E</b> : EPDM	<b>G</b> : AISI 316
<b>Q<sub>1</sub></b> : Silicon carbide	<b>V</b> : FPM	
<b>V</b> : Ceramic		

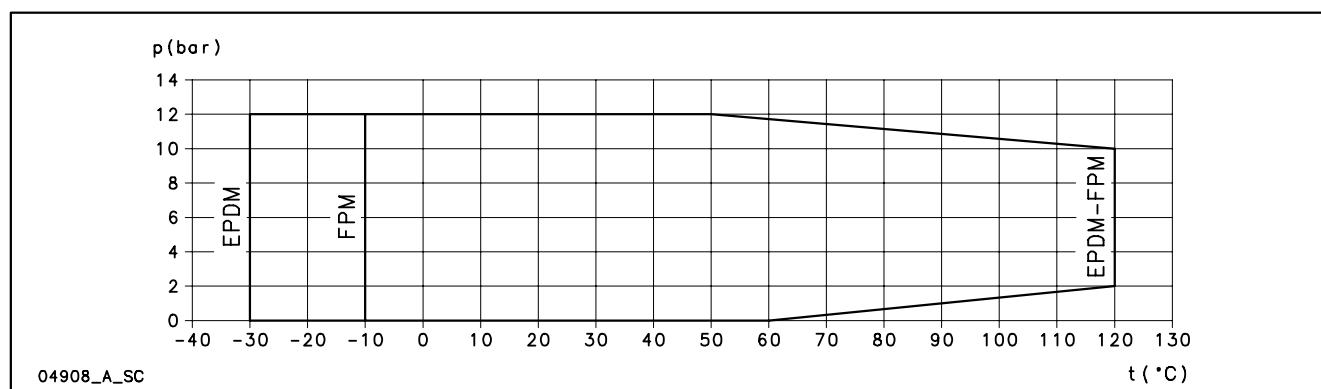
sh\_ten-mec-en\_a\_tm

## SEAL TYPES

TYPE	POSITION					TEMPERATURE ( °C )
	1 ROTATING ASSEMBLY	2 FIXED ASSEMBLY	3 ELASTOMERS	4 SPRINGS	5 OTHER COMPONENTS	
STANDARD MECHANICAL SEAL						
VB V G G	V	B	V	G	G	-10 +120
OTHER MECHANICAL SEAL TYPES						
Q <sub>1</sub> B V G G	Q <sub>1</sub>	B	V	G	G	-10 +120
Q <sub>1</sub> Q <sub>1</sub> V G G	Q <sub>1</sub>	Q <sub>1</sub>	V	G	G	-10 +120
VB E G G	V	B	E	G	G	-30 +120
Q <sub>1</sub> B E G G	Q <sub>1</sub>	B	E	G	G	-30 +120
Q <sub>1</sub> Q <sub>1</sub> E G G	Q <sub>1</sub>	Q <sub>1</sub>	E	G	G	-30 +120

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## COMPLETE PUMP PRESSURE / TEMPERATURE OPERATING LIMITS (WITH ANY OF THE SEALS LISTED ABOVE)



## MOTORS FOR GSH SERIES

**Standard supplied IE2/IE3 three-phase surface motors  $\geq 0,75$  kW are compliant with Regulation (EC) no. 640/2009 and IEC 60034-30.**

Enclosed short circuit squirrel cage motor (TEFC), with external ventilation.

Electrical performances according to EN 60034-1.

Insulation class 155 (F).

IP55 protection.

Condensate drain plugs on standard version.

Cooling by fan according to EN 60034-6.

Cable gland metric size according to EN 50262.

Standard voltage:

- Single-phase version: 220-240 V 50 Hz, with incorporated automatic-reset overload protection up to 1,5 kW.
- Three-phase version: 220-240/380-415 V 50 Hz for powers up to 3 kW. 380-415/660-690 V 50 Hz for powers above 3 kW. Overload protection to be provided by the user.

## GSHE SERIES SINGLE-PHASE MOTORS AT 50 Hz, 2 POLES

P <sub>N</sub> kW	MOTOR TYPE	IEC SIZE*	Construction Design	INPUT CURRENT I <sub>n</sub> (A) 220-240 V	CAPACITOR		DATA FOR 230 V 50 Hz VOLTAGE						
					μF	V	min <sup>-1</sup>	I <sub>s</sub> / I <sub>n</sub>	η %	cosφ	T <sub>n</sub> Nm	T <sub>s</sub> /T <sub>n</sub>	T <sub>m</sub> /T <sub>n</sub>
0,75	SM90RB14/107	90R	B14	4,83-5,23	30	450	2875	5,28	71,8	0,92	2,49	0,70	2,59
1,1	SM90RB14/111	90R	B14	6,88-6,65	30	450	2800	3,89	74,7	0,96	3,75	0,46	1,72
1,5	SM90RB14/115	90R	B14	9,21-8,58	40	450	2810	4,00	76,1	0,98	5,15	0,39	1,74
2,2	PLM90B14/122	90	B14	12,5-11,6	70	450	2825	4,47	82,4	0,97	7,43	0,53	1,87

\* R = Reduced size of motor casing as compared to shaft extension and flange.

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## GSHE SERIES

### THREE-PHASE MOTORS AT 50 Hz, 2 POLES

P <sub>N</sub> kW	Efficiency $\eta_N$ %																		IE	Year of manufacture
	$\Delta$ 220 V Y 380 V			$\Delta$ 230 V Y 400 V			$\Delta$ 240 V Y 415 V			$\Delta$ 380 V Y 660 V			$\Delta$ 400 V Y 690 V			$\Delta$ 415 V				
	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4		
0,75	82,5	83,1	81,3	82,8	82,7	80,1	82,6	82,0	78,9	82,5	82,0	78,9	82,5	82,0	78,9	82,5	82,0	78,9	3	By June 2011
1,1	84,0	84,7	83,4	84,4	84,5	82,5	84,3	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4		
1,5	85,6	86,5	85,8	85,9	86,4	84,9	86,0	86,0	84,0	85,6	86,0	84,0	85,6	86,0	84,0	85,6	86,0	84,0		
2,2	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	2	
3	85,5	86,8	85,6	86,1	86,8	85,6	86,3	86,8	85,6	85,5	86,8	85,6	85,5	86,8	85,6	85,5	86,8	85,6		
4	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3		
5,5	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6		
7,5	88,6	88,1	88,1	88,6	88,1	88,1	88,6	88,1	88,1	88,6	88,1	88,1	88,6	88,1	88,1	88,6	88,1	88,1		
9,2	89,3	88,8	88,8	89,3	88,8	88,8	89,3	88,8	88,8	89,3	88,8	88,8	89,3	88,8	88,8	89,3	88,8	88,8		
11	90,3	91,1	90,3	90,3	91,1	90,3	90,3	91,1	90,3	90,3	91,1	90,3	90,8	91,1	90,3	91,0	91,1	90,3		
15	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3		
18,5	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2		
22	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3		

P <sub>N</sub> kW	Manufacturer	IEC SIZE*	Construction Design	N. of Poles	f <sub>N</sub> Hz	Data for 400 V / 50 Hz Voltage				
	XYLEM WATER SYSTEMS USA LLC 1 Goulds Drive - Auburn NY 13021 – U.S.A.									
	Model					cosφ	Is / I <sub>N</sub>	T <sub>N</sub> Nm	Ts/T <sub>N</sub>	Tm/T <sub>N</sub>
0,75	SM90RB14S/307PE	90R	SPECIAL	2	50	0,78	7,38	2,48	3,57	3,75
1,1	SM90RB14S/311PE	90R				0,79	8,31	3,63	3,95	3,95
1,5	SM90RB14S/315PE	90R				0,80	8,80	4,96	4,31	4,10
2,2	PLM90B14S/322	90				0,80	8,63	7,25	3,74	3,71
3	PLM90B14S/330	90				0,82	8,39	9,96	3,50	3,32
4	PLM112RB14S/340	112R				0,85	9,52	13,1	3,04	4,40
5,5	PLM112B14S/355	112				0,87	10,3	18,1	4,43	5,80
7,5	PLM132B14S/375	132				0,87	9,21	24,5	3,26	4,55
9,2	PLM132B14S/392	132				0,88	9,66	30,3	3,17	4,54
11	PLM132B14S/3110	132				0,87	9,72	36,0	3,46	4,56
15	PLM160B34S/3150	160				0,91	8,45	48,6	2,26	3,81
18,5	PLM160B34S/3185	160				0,88	9,75	59,8	2,82	4,53
22	PLM160B34S/3220	160				0,89	9,50	71,1	2,74	4,26

P <sub>N</sub> kW	Voltage U <sub>N</sub> V											n <sub>N</sub> min <sup>-1</sup>	Observe the regulations and codes locally in force regarding sorted waste disposal.	Operating conditions **		
	Δ			Y			Δ			Y				Altitude Above Sea Level (m)	T. amb min/max °C	ATEX
	220 V	230 V	240 V	380 V	400 V	415 V	380 V	400 V	415 V	660 V	690 V					
	I <sub>N</sub> (A)															
0,75	2,96	2,94	2,96	1,71	1,70	1,71	1,70	1,69	1,70	0,98	0,98	2875 ÷ 2895		≤ 1000	-15 / 40	No
1,1	4,19	4,14	4,16	2,42	2,39	2,40	2,41	2,38	2,38	1,39	1,37	2870 ÷ 2900				
1,5	5,56	5,49	5,51	3,21	3,17	3,18	3,21	3,18	3,19	1,85	1,84	2870 ÷ 2895				
2,2	8,05	8,04	8,09	4,65	4,64	4,67	4,62	4,61	4,63	2,67	2,66	2885 ÷ 2900				
3	10,8	10,6	10,6	6,23	6,14	6,12	6,18	6,10	6,06	3,57	3,52	2850 ÷ 2885				
4	13,6	13,5	13,5	7,88	7,77	7,79	7,80	7,63	7,65	4,51	4,41	2895 ÷ 2920				
5,5	18,3	18,0	17,9	10,6	10,4	10,3	10,6	10,4	10,5	6,14	6,02	2885 ÷ 2905				
7,5	25,4	24,8	24,4	14,7	14,3	14,1	14,5	14,0	13,9	8,35	8,11	2920 ÷ 2935				
9,2	29,7	28,9	28,3	17,2	16,7	16,4	17,3	16,8	16,6	10,0	9,70	2910 ÷ 2930				
11	36,0	35,1	34,7	20,8	20,3	20,0	20,8	20,3	20,1	12,0	11,7	2910 ÷ 2925				
15	47,2	45,3	44,0	27,2	26,2	25,4	27,2	26,0	25,3	15,7	15,0	2940 ÷ 2950				
18,5	58,3	56,9	55,9	33,7	32,9	32,3	34,1	33,2	32,8	19,7	19,1	2945 ÷ 2955				
22	68,3	66,2	64,3	39,4	38,2	37,1	40,0	38,6	37,8	23,1	22,3	2945 ÷ 2955				

\* R = Reduced size of motor casing as compared to shaft extension and flange.

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\*\* Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.



## GSHS SERIES

### THREE-PHASE MOTORS AT 50 Hz, 2 POLES

P <sub>N</sub> kW	Efficiency $\eta_N$																		IE	Year of manufacture
	%																			
	$\Delta$ 220 V Y 380 V			$\Delta$ 230 V Y 400 V			$\Delta$ 240 V Y 415 V			$\Delta$ 380 V Y 660 V			$\Delta$ 400 V Y 690 V			$\Delta$ 415 V				
	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4		
0,75	82,5	83,1	81,3	82,8	82,7	80,1	82,6	82,0	78,9	82,5	82,0	78,9	82,5	82,0	78,9	82,5	82,0	78,9	3	By June 2011
1,1	84,0	84,7	83,4	84,4	84,5	82,5	84,3	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4		
1,5	85,6	86,5	85,8	85,9	86,4	84,9	86,0	86,0	84,0	85,6	86,0	84,0	85,6	86,0	84,0	85,6	86,0	84,0		
2,2	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	2	
3	85,5	86,8	85,6	86,1	86,8	85,6	86,3	86,8	85,6	85,5	86,8	85,6	85,5	86,8	85,6	85,5	86,8	85,6		
4	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3		
5,5	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6	87,6		
7,5	88,6	88,1	88,1	88,6	88,1	88,1	88,6	88,1	88,1	88,6	88,1	88,1	88,6	88,1	88,1	88,6	88,1	88,1		
11	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8		
15	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3		
18,5	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2		
22	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3	91,3		

P <sub>N</sub> kW	Manufacturer	IEC SIZE*	Construction Design	N. of Poles	f <sub>N</sub> Hz	Data for 400 V / 50 Hz Voltage				
	XYLEM WATER SYSTEMS USA LLC 1 Goulds Drive - Auburn NY 13021 – U.S.A.									
	Model					cosφ	Is / I <sub>N</sub>	T <sub>N</sub> Nm	Ts/T <sub>N</sub>	Tm/T <sub>N</sub>
0,75	SM80B5/307PE	80	B5	2	50	0,78	7,38	2,48	3,57	3,75
1,1	SM80B5/311PE	80				0,79	8,31	3,63	3,95	3,95
1,5	SM90RB5/315PE	90R				0,80	8,80	4,96	4,31	4,10
2,2	PLM90B5/322	90				0,80	8,63	7,25	3,74	3,71
3	PLM100RB5/330	100R				0,82	8,39	9,96	3,50	3,32
4	PLM112RB5/340	112R				0,85	9,52	13,1	3,04	4,40
5,5	PLM132RB5/355	132R				0,87	10,3	18,1	4,43	5,80
7,5	PLM132B5/375	132				0,87	9,21	24,5	3,26	4,55
11	PLM160B35/3110	160	B35			0,88	8,14	35,6	2,22	4,00
15	PLM160B35/3150	160				0,91	8,45	48,6	2,26	3,81
18,5	PLM160B35/3185	160				0,88	9,75	59,8	2,82	4,53
22	PLM180RB35/3220	180R				0,89	9,50	71,1	2,74	4,26

P <sub>N</sub> kW	Voltage U <sub>N</sub> V											n <sub>N</sub> min <sup>-1</sup>	Observe the regulations and codes locally in force regarding sorted waste disposal.	Operating conditions **		
	V													Altitude Above Sea Level (m)	T. amb min/max °C	ATEX
	Δ			Y			Δ			Y						
	220 V	230 V	240 V	380 V	400 V	415 V	380 V	400 V	415 V	660 V	690 V					
I <sub>N</sub> (A)																
0,75	2,96	2,94	2,96	1,71	1,70	1,71	1,70	1,69	1,70	0,98	0,98	2875 ÷ 2895				
1,1	4,19	4,14	4,16	2,42	2,39	2,40	2,41	2,38	2,38	1,39	1,37	2870 ÷ 2900				
1,5	5,56	5,49	5,51	3,21	3,17	3,18	3,21	3,18	3,19	1,85	1,84	2870 ÷ 2895				
2,2	8,05	8,04	8,09	4,65	4,64	4,67	4,62	4,61	4,63	2,67	2,66	2885 ÷ 2900				
3	10,8	10,6	10,6	6,23	6,14	6,12	6,18	6,10	6,06	3,57	3,52	2850 ÷ 2885				
4	13,6	13,5	13,5	7,88	7,77	7,79	7,80	7,63	7,65	4,51	4,41	2895 ÷ 2920				
5,5	18,3	18,0	17,9	10,6	10,4	10,3	10,6	10,4	10,5	6,14	6,02	2885 ÷ 2905				
7,5	25,4	24,8	24,4	14,7	14,3	14,1	14,5	14,0	13,9	8,35	8,11	2920 ÷ 2935				
11	35,5	34,3	33,4	20,5	19,8	19,3	20,6	19,9	19,5	11,9	11,5	2940 ÷ 2950				
15	47,2	45,3	44,0	27,2	26,2	25,4	27,2	26,0	25,3	15,7	15,0	2940 ÷ 2950				
18,5	58,3	56,9	55,9	33,7	32,9	32,3	34,1	33,2	32,8	19,7	19,1	2945 ÷ 2955				
22	68,3	66,2	64,3	39,4	38,2	37,1	40,0	38,6	37,8	23,1	22,3	2945 ÷ 2955				

\* R = Reduced size of motor casing as compared to shaft extension and flange.

gshs-ie2-mott-2p50-en\_b\_te

\*\* Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

## GSHF SERIES

### THREE-PHASE MOTORS AT 50 Hz, 2 POLES (up to 18,5 kW)

P <sub>N</sub>  kW	Efficiency $\eta_N$  %																		IE	Year of manufacture
	$\Delta$ 220 V Y 380 V			$\Delta$ 230 V Y 400 V			$\Delta$ 240 V Y 415 V			$\Delta$ 380 V Y 660 V			$\Delta$ 400 V Y 690 V			$\Delta$ 415 V				
	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4		
0,75	82,5	83,1	81,3	82,8	82,7	80,1	82,6	82,0	78,9	82,5	82,0	78,9	82,5	82,0	78,9	82,5	82,0	78,9	3	By June 2011
1,1	84,0	84,7	83,4	84,4	84,5	82,5	84,3	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4	84,0	84,0	81,4		
1,5	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8	81,8		
2,2	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	83,7	2	
3	85,1	85,1	85,1	85,1	85,1	85,1	85,1	85,1	85,1	85,1	85,1	85,1	85,1	85,1	85,1	85,1	85,1	85,1		
4	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3	86,3		
5,5	87,6	87,6	87,0	87,6	87,6	87,0	87,6	87,6	87,0	87,6	87,6	87,0	87,6	87,6	87,0	87,6	87,6	87,0		
7,5	88,6	88,1	88,1	88,6	88,1	88,1	88,6	88,1	88,1	88,6	88,1	88,1	88,6	88,1	88,1	88,6	88,1	88,1		
11	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8		
15	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3	90,3		
18,5	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2	91,2		

P <sub>N</sub> kW	Manufacturer		IEC SIZE	Construction Design	N. of Poles	f <sub>N</sub> Hz	Data for 400 V / 50 Hz Voltage				
	XYLEM WATER SYSTEMS USA LLC 1 Goulds Drive - Auburn NY 13021 – U.S.A.						cosφ	Is / I <sub>N</sub>	T <sub>N</sub> Nm	Ts/T <sub>N</sub>	Tm/Tn
	Model										
0,75	SM80B3/307PE		80	B3	2	50	0,78	7,38	2,48	3,57	3,75
1,1	SM80B3/311PE		80				0,79	8,31	3,63	3,95	3,95
1,5	PLM90B3/315		90				0,86	7,86	4,96	3,34	3,27
2,2	PLM90B3/322		90				0,80	8,63	7,25	3,74	3,71
3	PLM100B3/330		100				0,84	9,45	9,83	3,59	4,27
4	PLM112B3/340		112				0,87	9,16	13,2	3,60	4,59
5,5	PLM132B3/355		132				0,83	9,93	17,9	3,34	4,66
7,5	PLM132B3/375		132				0,87	9,21	24,5	3,26	4,55
11	PLM160B3/3110		160				0,88	8,14	35,6	2,22	4,00
15	PLM160B3/3150		160				0,91	8,45	48,6	2,26	3,81
18,5	PLM160B3/3185		160				0,88	9,75	59,8	2,82	4,53

P <sub>N</sub> kW	Voltage U <sub>N</sub> V											n <sub>N</sub> min <sup>-1</sup>	Observe the regulations and codes locally in force regarding sorted waste disposal.	Operating conditions **		
	Δ			Y			Δ			Y				Altitude Above Sea Level (m)	T. amb min/max °C	ATEX
	220 V	230 V	240 V	380 V	400 V	415 V	380 V	400 V	415 V	660 V	690 V					
	I <sub>N</sub> (A)															
0,75	2,96	2,94	2,96	1,71	1,70	1,71	1,70	1,69	1,70	0,98	0,98	2875 ÷ 2895		≤ 1000	-15 / 40	No
1,1	4,19	4,14	4,16	2,42	2,39	2,40	2,41	2,38	2,38	1,39	1,37	2870 ÷ 2900				
1,5	5,53	5,23	5,13	3,19	3,02	2,96	3,19	3,03	2,96	1,84	1,75	2865 ÷ 2895				
2,2	8,05	8,04	8,09	4,65	4,64	4,67	4,62	4,61	4,63	2,67	2,66	2885 ÷ 2900				
3	10,4	10,2	10,3	5,98	5,91	5,92	6,01	5,95	5,96	3,47	3,44	2905 ÷ 2920				
4	13,3	13,0	12,9	7,67	7,50	7,43	7,68	7,51	7,45	4,44	4,34	2890 ÷ 2905				
5,5	19,2	19,1	19,2	11,1	11,0	11,1	10,9	10,8	10,8	6,30	6,22	2930 ÷ 2945				
7,5	25,4	24,8	24,4	14,7	14,3	14,1	14,5	14,0	13,9	8,35	8,11	2920 ÷ 2935				
11	35,5	34,3	33,4	20,5	19,8	19,3	20,6	19,9	19,5	11,9	11,5	2940 ÷ 2950				
15	47,2	45,3	44,0	27,2	26,2	25,4	27,2	26,0	25,3	15,7	15,0	2940 ÷ 2950				
18,5	58,3	56,9	55,9	33,7	32,9	32,3	34,1	33,2	32,8	19,7	19,1	2945 ÷ 2955				

\*\* Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

gshf-ie2-mott18-2p50-en\_b\_te

# **GSHS-GSHF SERIES**

## **THREE-PHASE MOTORS AT 50 Hz, 2 POLES (from 22 to 75 kW)**

P <sub>N</sub> kW	Efficiency $\eta_N$ %									IE	Year of manufacture
	$\Delta$ 380 V Y 660 V			$\Delta$ 400 V Y 690 V			$\Delta$ 415 V				
	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4		
22	91,8	92,2	92,2	92,0	92,4	92,2	92,4	92,4	91,8	2	By June 2011
30	92,6	92,9	92,7	92,5	93,0	92,9	93,0	93,0	92,3		
37	93,0	93,3	93,2	93,0	93,4	93,3	93,5	93,4	92,8		
45	93,2	93,5	93,4	93,3	93,6	93,6	93,8	93,6	93,1		
55	93,6	93,8	93,8	93,6	93,9	93,9	94,0	93,8	93,3		
75	94,1	94,3	93,6	93,4	94,3	94,3	94,3	94,2	93,2		

P <sub>N</sub> kW	Manufacturer	IEC SIZE	Construction Design	N. of Poles	f <sub>N</sub> Hz	Data for 400 V / 50 Hz Voltage				
	WEG Equipamentos Eletricos S.A. Reg. No. 07.175.725/0010-50 Jaragua do Sul - SC (Brazil)					cosφ	Is / I <sub>N</sub>	T <sub>N</sub> Nm	Ts/T <sub>N</sub>	Tm/Tn
	Model									
22	W22 180M2-B3 22kW	180	B3	2	50	0,88	7,30	71,40	2,20	3,00
30	W22 200L2-B3 (B35) 30kW	200	B3			0,87	6,50	97,00	2,40	2,70
37	W22 200L2-B3 (B35) 37kW	200	B35			0,87	6,80	120,0	2,40	2,60
45	W22 225S/M2-B3 45kW	225	B3			0,89	7,00	145,0	2,20	2,80
55	W22 250S/M2-B3 55kW	250				0,89	7,00	178,0	2,20	2,80
75	W22 280S/M2-B3 75kW	280				0,89	7,00	241,0	2,00	2,80

P <sub>N</sub> kW	Voltage U <sub>N</sub> V					n <sub>N</sub> min <sup>-1</sup>	See note.	Operating conditions **		
	Δ			Y				Altitude Above Sea Level (m)	T. amb min/max °C	ATEX
	380 V	400 V	415 V	660 V	690 V					
	I <sub>N</sub> (A)									
22	40,90	39,10	38,10	23,55	22,67	2940 ÷ 2950	≤ 1000	-15 / 40	No	
30	55,90	53,60	52,20	32,18	31,07	2950 ÷ 2960				
37	68,70	65,80	64,00	39,55	38,14	2945 ÷ 2955				
45	81,50	78,00	75,80	46,92	45,22	2955 ÷ 2960				
55	99,20	95,00	92,50	57,12	55,07	2955 ÷ 2960				
75	135,00	129,00	126,00	77-73	74,78	2970 ÷ 2975				

\*\* Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

shf-ie2-mott75-2p50-en\_a\_te

Note: Observe the regulations and codes locally in force regarding sorted waste disposal.

## GSHE4 SERIES

### THREE-PHASE MOTORS AT 50 Hz, 4 POLES

P <sub>N</sub> kW	Efficiency $\eta_N$ %																		IE	Year of manufacture	
	$\Delta$ 220 V Y 380 V			$\Delta$ 230 V Y 400 V			$\Delta$ 240 V Y 415 V			$\Delta$ 380 V Y 660 V			$\Delta$ 400 V Y 690 V			$\Delta$ 415 V					
	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4			
0,25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	By June 2011
0,37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
0,55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
0,75	80,4	81,3	79,8	81,1	81,4	79,1	81,4	81,2	78,4	80,4	81,2	78,4	80,4	81,2	78,4	80,4	81,2	78,4			
1,1	81,4	81,4	81,1	81,4	81,4	81,1	81,4	81,4	81,1	81,4	81,4	81,1	81,4	81,4	81,1	81,4	81,4	81,1			
1,5	83,1	83,1	82,0	83,1	83,1	82,0	83,1	83,1	82,0	83,1	83,1	82,0	83,1	83,1	82,0	83,1	83,1	82,0			
2,2	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7			
3	85,5	85,5	84,1	85,5	85,5	84,1	85,5	85,5	84,1	85,5	85,5	84,1	85,5	85,5	84,1	85,5	85,5	84,1			
4	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6			
5,5	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0			
7,5	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7			
11	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8			

P <sub>N</sub> kW	Manufacturer	IEC SIZE*	Construction Design	N. of Poles	f <sub>N</sub> Hz	Data for 400 V / 50 Hz Voltage				
	XYLEM WATER SYSTEMS USA LLC 1 Goulds Drive - Auburn NY 13021 – U.S.A.					cosφ	I <sub>s</sub> / I <sub>N</sub>	T <sub>N</sub> Nm	Ts/T <sub>N</sub>	Tm/T <sub>N</sub>
	Model									
0,25	SM471B5/302	71	B5	4	50	0,59	3,58	1,71	3,16	2,63
0,37	SM471B5/304	71				0,60	3,39	2,57	3,40	2,47
0,55	SM490RB14S/305	90R				0,67	3,95	3,77	2,45	2,38
0,75	LLM490RB5S/307	90R	SPECIAL			0,75	5,78	5,03	2,77	3,31
1,1	PLM490B5S/311	90				0,72	6,34	7,27	2,80	3,43
1,5	PLM490B5S/315	90				0,67	6,79	9,88	3,33	3,67
2,2	PLM4100B5S/322	100				0,77	7,50	14,4	2,71	3,97
3	PLM4100B5S/330	100				0,73	7,84	19,6	2,96	4,09
4	PLM4112B5S/340	112				0,78	7,91	26,3	2,86	3,94
5,5	PLM4132B14S/355	132				0,78	7,89	35,9	2,79	3,47
7,5	PLM4132B14S/375	132				0,78	7,71	49,1	2,75	3,63
11	PLM4160B34S/3110	160				0,83	6,94	71,6	2,34	3,02

P <sub>N</sub> kW	Voltage U <sub>N</sub> V											n <sub>N</sub> min <sup>-1</sup>	Observe the regulations and codes locally in force regarding sorted waste disposal.	Operating conditions **		
	Δ			Y			Δ			Y				Altitude Above Sea Level (m)	T. amb min/max °C	ATEX
	220 V	230 V	240 V	380 V	400 V	415 V	380 V	400 V	415 V	660 V	690 V					
	I <sub>N</sub> (A)															
0,25	1,68	1,71	1,77	0,97	0,99	1,02	-	-	-	-	-	1375 ÷ 1400		≤ 1000	-15 / 40	No
0,37	2,46	2,53	2,62	1,42	1,46	1,51	-	-	-	-	-	1355 ÷ 1380				
0,55	2,98	3,03	3,1	1,72	1,75	1,79	-	-	-	-	-	1380 ÷ 1400				
0,75	3,08	3,03	3,01	1,78	1,75	1,74	1,78	1,75	1,74	1,03	1,01	1410 ÷ 1430				
1,1	4,64	4,61	4,61	2,68	2,66	2,66	2,66	2,64	2,64	1,54	1,53	1435 ÷ 1445				
1,5	6,50	6,51	6,62	3,75	3,76	3,82	3,74	3,75	3,80	2,16	2,16	1440 ÷ 1450				
2,2	8,49	8,31	8,24	4,90	4,80	4,76	4,87	4,78	4,72	2,81	2,76	1445 ÷ 1455				
3	12,0	11,9	12,0	6,91	6,89	6,94	6,88	6,86	6,90	3,97	3,96	1455 ÷ 1465				
4	15,5	15,3	15,2	8,93	8,82	8,78	8,80	8,64	8,60	5,08	4,99	1445 ÷ 1455				
5,5	20,4	19,9	19,6	11,8	11,5	11,3	11,9	11,5	11,5	6,85	6,66	1455 ÷ 1465				
7,5	27,4	26,8	26,4	15,8	15,5	15,2	15,9	15,6	15,4	9,20	8,98	1450 ÷ 1460				
11	38,3	37,9	37,9	22,1	21,9	21,9	21,8	21,2	21,1	12,6	12,3	1465 ÷ 1470				

\* R = Reduced size of motor casing as compared to shaft extension and flange.

gshe-ie2-mott-4p50-en\_b\_te

\*\* Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

## GSHS4-GSHF4 SERIES THREE-PHASE MOTORS AT 50 Hz, 4 POLES (up to 11 kW)

P <sub>N</sub>  kW	Efficiency $\eta_N$  %																		IE	Year of manufacture	
	$\Delta$ 220 V Y 380 V			$\Delta$ 230 V Y 400 V			$\Delta$ 240 V Y 415 V			$\Delta$ 380 V Y 660 V			$\Delta$ 400 V Y 690 V			$\Delta$ 415 V					
	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4	4/4	3/4	2/4			
0,25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	By June 2011
0,37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
0,55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
0,75	80,4	81,3	79,8	81,1	81,4	79,1	81,4	81,2	78,4	80,4	81,2	78,4	80,4	81,2	78,4	80,4	81,2	78,4			
1,1	81,4	81,4	81,1	81,4	81,4	81,1	81,4	81,4	81,1	81,4	81,4	81,1	81,4	81,4	81,1	81,4	81,4	81,1			
1,5	83,1	83,1	82,0	83,1	83,1	82,0	83,1	83,1	82,0	83,1	83,1	82,0	83,1	83,1	82,0	83,1	83,1	82,0			
2,2	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7	84,7			
3	85,5	85,5	84,1	85,5	85,5	84,1	85,5	85,5	84,1	85,5	85,5	84,1	85,5	85,5	84,1	85,5	85,5	84,1			
4	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6	86,6			
5,5	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0	88,0			
7,5	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7	88,7			
11	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8	89,8			

P <sub>N</sub> kW	Manufacturer	IEC SIZE	Construction Design	N. of Poles	f <sub>N</sub> Hz	Data for 400 V / 50 Hz Voltage				
	XYLEM WATER SYSTEMS USA LLC 1 Goulds Drive - Auburn NY 13021 – U.S.A.									
	Model					cosφ	Is / I <sub>N</sub>	T <sub>N</sub> Nm	Ts/T <sub>N</sub>	Tm/T <sub>N</sub>
0,25	SM471B3/302	71	B3	4	50	0,59	3,58	1,71	3,16	2,63
0,37	SM471B3/304	71				0,60	3,39	2,57	3,40	2,47
0,55	SM480B3 (B5 )/305	80	0,67			3,95	3,77	2,45	2,38	
0,75	LLM480B3 (B5) /307	80	0,75			5,78	5,03	2,77	3,31	
1,1	PLM490B3 (B5) /311	90	0,72			6,34	7,27	2,80	3,43	
1,5	PLM490B3 (B5) /315	90	0,67			6,79	9,88	3,33	3,67	
2,2	PLM4100B3 (B5) /322	100	0,77			7,50	14,4	2,71	3,97	
3	PLM4100B3 (B5) /330	100	0,73			7,84	19,6	2,96	4,09	
4	PLM4112B3 (B5) /340	112	0,78			7,91	26,3	2,86	3,94	
5,5	PLM4132B3 (B5) /355	132	0,78			7,89	35,9	2,79	3,47	
7,5	PLM4132B3 (B5) /375	132	0,78			7,71	49,1	2,75	3,63	
11	PLM4160B3 (B5) /3110	160	B3 / B5					0,83	6,94	71,6

P <sub>N</sub> kW	Voltage U <sub>N</sub> V											n <sub>N</sub> min <sup>-1</sup>	Observe the regulations and codes locally in force regarding sorted waste disposal.	Operating conditions **		
	Δ						Y							Altitude Above Sea Level (m)	T. amb min/max °C	ATEX
	Δ			Y			Δ			Y						
	220 V	230 V	240 V	380 V	400 V	415 V	380 V	400 V	415 V	660 V	690 V					
I <sub>N</sub> (A)																
0,25	1,68	1,71	1,77	0,97	0,99	1,02	-	-	-	-	-	1375 ÷ 1400		≤ 1000	-15 / 40	No
0,37	2,46	2,53	2,62	1,42	1,46	1,51	-	-	-	-	-	1355 ÷ 1380				
0,55	2,98	3,03	3,10	1,72	1,75	1,79	-	-	-	-	-	1380 ÷ 1400				
0,75	3,08	3,03	3,01	1,78	1,75	1,74	1,78	1,75	1,74	1,03	1,01	1410 ÷ 1430				
1,1	4,64	4,61	4,61	2,68	2,66	2,66	2,66	2,64	2,64	1,54	1,53	1435 ÷ 1445				
1,5	6,50	6,51	6,62	3,75	3,76	3,82	3,74	3,75	3,80	2,16	2,16	1440 ÷ 1450				
2,2	8,49	8,31	8,24	4,90	4,80	4,76	4,87	4,78	4,72	2,81	2,76	1445 ÷ 1455				
3	12,0	11,9	12,0	6,91	6,89	6,94	6,88	6,86	6,90	3,97	3,96	1455 ÷ 1465				
4	15,5	15,3	15,2	8,93	8,82	8,78	8,80	8,64	8,60	5,08	4,99	1445 ÷ 1455				
5,5	20,4	19,9	19,6	11,8	11,5	11,3	11,9	11,5	11,5	6,85	6,66	1455 ÷ 1465				
7,5	27,4	26,8	26,4	15,8	15,5	15,2	15,9	15,6	15,4	9,20	8,98	1450 ÷ 1460				
11	38,3	37,9	37,9	22,1	21,9	21,9	21,8	21,2	21,1	12,6	12,3	1465 ÷ 1470				

\*\* Operating conditions to be referred to motor only. About electric pump, refer to limits in user's manual.

gshf-ie2-mott11-4p50-en\_a\_te

## MOTOR NOISE

The tables below show the mean sound pressure levels (Lp) measured at 1 meter's distance in a free field according to the A curve (ISO 1680 standard).

The noise values are measured with idling 50 Hz motor with a tolerance of 3 dB (A).

### GSHE-GSHS MOTORS 2 POLES 50 Hz

POWER	MOTOR TYPE	NOISE
kW	IEC* SIZE	LpA dB
0,75	90R	<70
1,1	90R	<70
1,5	90R - 90	<70
2,2	90	<70
3	90	<70
3	100R	<70
4	112R	<70
5,5	112	<70
5,5	132R	<70
7,5	132	71
9,2	132	73
11	132	73
11	160R	73
11	160	71
15	160	71
18,5	160	73
22	160	70
22	180R	70
30	200	72
37	200	72

### GSHE4 MOTORS 4 POLES 50 Hz

POWER	MOTOR TYPE	NOISE
kW	IEC* SIZE	LpA dB
0,25	71	<70
0,37	71	<70
0,55	90R	<70
0,75	90R	<70
1,1	90	<70
1,5	90	<70
2,2	100	<70
3	100	<70
4	112	<70
5,5	132	<70
7,5	132	<70
11	160	<70

\*R=Reduced size of motor as compared to shaft extension and flange.

### GSHF MOTORS 2 POLES 50 Hz

POWER	MOTOR TYPE	NOISE
kW	IEC SIZE	LpA dB
0,75	80	<70
1,1	80	<70
1,5	90	<70
2,2	90	<70
3	100	<70
4	112	<70
5,5	132	71
7,5	132	71
11	160	71
15	160	71
18,5	160	73
22	180	67
30	200	72
37	200	72
45	225	75
55	250	75
75	280	77

### GSHS4-GSHF4 MOTORS 4 POLES 50 Hz

POWER	MOTOR TYPE	NOISE
kW	IEC SIZE	LpA dB
0,25	71	<70
0,37	71	<70
0,55	80	<70
0,75	80	<70
1,1	90	<70
1,5	90	<70
2,2	100	<70
3	100	<70
4	112	<70
5,5	132	<70
7,5	132	<70
11	160	<70

she-shs-shf\_mott-en\_d\_tr

## AVAILABLE VOLTAGES MOTORS FOR GSH SERIES (up to 22 kW)

P <sub>N</sub> kW	IEC SIZE	SINGLE-PHASE							
		50 Hz			60 Hz				
		1 x 220-240	1 x 100	1 x 110-120	1 x 220-230	1 x 100	1x 110-115	1 x 120-127	1 x 200-210
0,75	80	s	-	o	s	-	o	-	o
1,1	80	s	-	o	s	-	o	-	o
1,5	80	s	-	-	s	-	o	-	o
2,2	90	s	-	-	s	-	-	-	-

s = Standard voltage      o = Optional voltage

- = Not available

sh-volt-low-a-en\_a\_te

## MOTORS FOR GSH SERIES (≥ 22 kW)

PN kW	THREE-PHASE - 2 POLES																			
	50 Hz									60 Hz									50/60 Hz	
	3 x 220-230-240/380-400-415	3 x 380-400-415/660-690	3 x 110/190	3 x 200-208/346-360	3 x 255-265/440-460	3 x 290-300/500-525	3 x 440-460/-	3 x 500-525/-	3 x 230/380	3 x 380-400/660-690	3 x 440-480/-	3 x 110-115/190-200	3 x 200-208/346-360	3 x 255-265-277/440-460-480	3 x 330-346/575-600	3 x 575/-	3 x 230/400 50 Hz 3 x 265/460 60 Hz	3 x 400/690 50 Hz 3 x 460/- 60 Hz		
22	o	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o		
30	o	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o		
37	o	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o		
45	o	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o		
55	o	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o		
75	o	s	o	o	o	o	o	o	s	o	o	o	o	o	o	o	o	o		

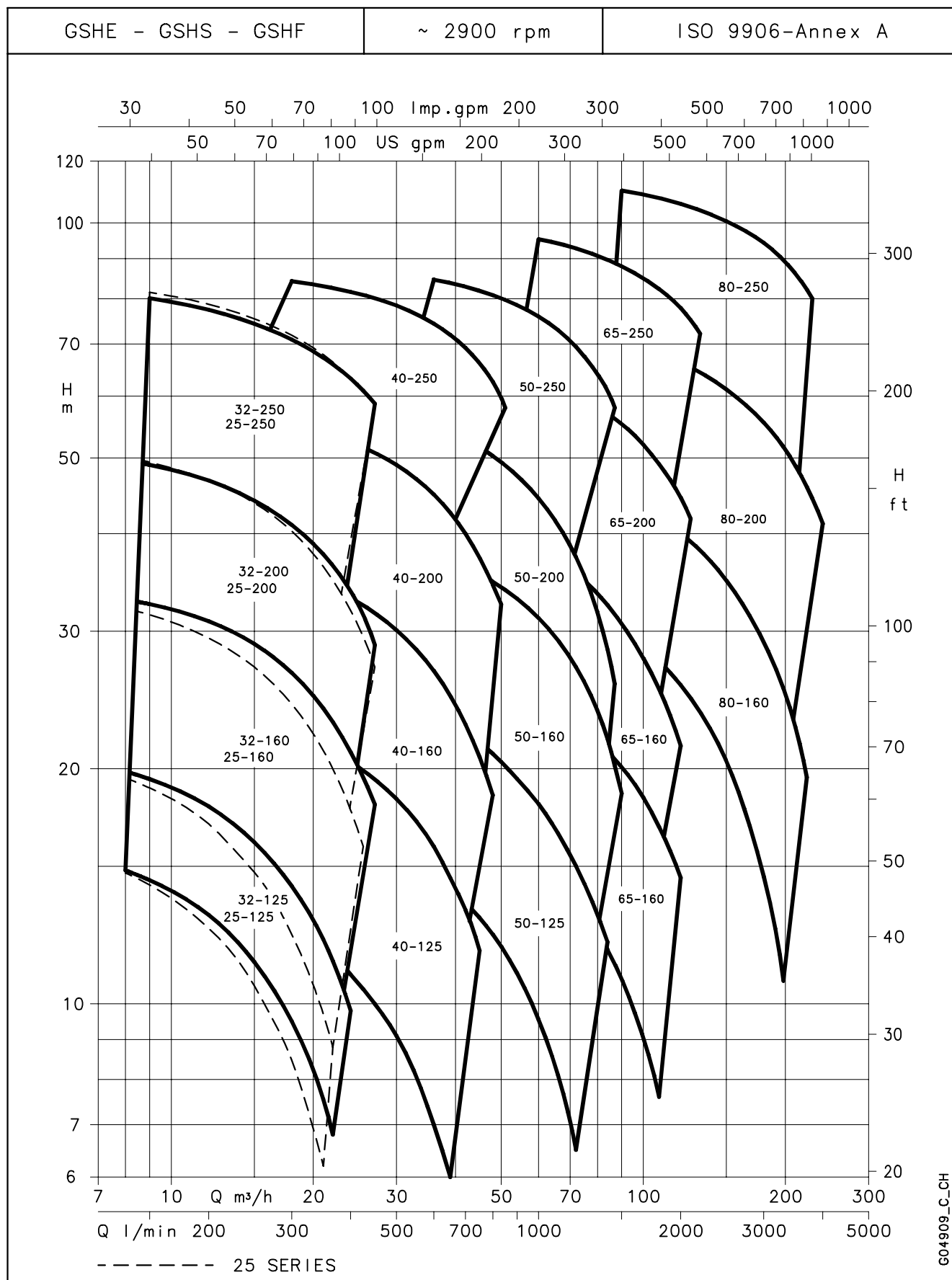
s = Standard voltage

o = Optional voltage

- = Not available

sh-volt-weg-en\_b\_te

**GSHE-GSHS-GSHF SERIES**  
**HYDRAULIC PERFORMANCE RANGE AT 50 Hz, 2 POLES**



These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .



## GSHE-GSHS-GSHF SERIES

### TABLE OF HYDRAULIC PERFORMANCES AT 50 Hz, 2 POLES

PUMP TYPE	RATED POWER		Q = DELIVERY																			
			l/min 0	150	200	250	300	400	450	600	700	800	900	1000	1200	1500	1800	2000	2500	3150	3700	
	m³/h 0	9	12	15	18	24	27	36	42	48	54	60	72	90	108	120	150	189	222			
H = TOTAL HEAD METRES COLUMN OF WATER																						
25-125/07 *	0,75	1	17,3	14,2	12,5	10,5	8,4															
25-125/11 *	1,1	1,5	22,3	18,9	17	14,7	12,3															
25-160/15 *	1,5	2	27,7	24,8	22,9	20,5	17,9	11,9														
25-160/22 *	2,2	3	34,6	31,5	29,4	27	24,2	17,7														
25-200/30	3	4	44,9	39,2	36,7	33,8	30,4	22,4														
25-200/40	4	5,5	54,5	49,4	46,8	43,8	40,3	31,9	27													
25.250/55	5,5	7,5	61,4	55,8	53,2	50,3	47	39,2														
25-250/75	7,5	10	75,9	69,3	66,5	63,2	59,6	51,1														
25-250/110	11	15	87,5	81,5	78,7	75,4	71,8	63,3	58,4													
32-125/07 *	0,75	1	16,6	14,4	13	11,3	9,5															
32-125/11 *	1,1	1,5	21,6	19,4	17,8	16,2	14,2	9,8														
32-160/15 *	1,5	2	27,6	24,6	22,7	20,6	18,1	12,7														
32-160/22 *	2,2	3	35	32,5	31	29	26,6	21	18													
32-200/30	3	4	43,7	38,5	36	33	30	22,3														
32-200/40	4	5,5	53,5	49	46,8	44	41	33,8	28,8													
32-250/55	5,5	7,5	61,7	56,7	54,2	51,2	47,9	40														
32-250/75	7,5	10	74,1	68,9	66,2	63	60	52,2														
32-250/110	11	15	86,2	80,1	77,5	74,3	71	63,3	58,7													
40-125/11 *	1,1	1,5	14,4				12,5	10,9	10	7												
40-125/15 *	1,5	2	17,5				16	14,4	13,4	10,2	8											
40-125/22 *	2,2	3	25,3				22,2	20,4	19,5	15,9	13,2											
40-160/30	3	4	32,2				29,5	26,9	25,4	20,8	17											
40-160/40	4	5,5	38				35,5	33,2	31,7	26,7	22,8	18,5										
40-200/55	5,5	7,5	49,1				46,4	43,8	42	36,2	31	25										
40-200/75	7,5	10	58,2				55,1	52,3	50,8	45	40	34,5										
40-250/ **	**	**	64,9				62	59,5	58	51,5	44,6											
40-250/110	11	15	74,7				71,4	69	67,8	61,5	55,2											
40-250/150	15	20	87,7				84,2	81,5	80	74,3	69,2	62,5										
50-125/22 *	2,2	3	17,2							14,6	13,4	12,2	11	9,5	6,5							
50-125/30	3	4	21,7							18,8	17,5	16,3	14,8	13,4	10,5							
50-125/40	4	5,5	25,7							23,3	22,2	20,8	19,3	18	15							
50-160/55	5,5	7,5	34,1							30,6	29,2	27,6	25,8	24	19,8							
50-160/75	7,5	10	40,8							37,5	36,2	34,8	33	31,2	27	18,6						
50-200/ **	**	**	53							47,5	45,3	42,8	40	36,8	29,8							
50-200/110	11	15	60,1							55	52,8	50,3	47,5	44,3	37,5							
50-250/150	15	20	70,2							66,6	65	63,3	61	58,3	51							
50-250/185	19	25	80							75	73,2	71,4	69	66,3	59,5							
50-250/220	22	30	88,9							84,6	82,8	80,7	78,5	75,8	69,5							
65-160/40	4	5,5	19,6									16,8	16	15,2	13,5	10,8	7,6					
65-160/55	5,5	7,5	24,2									21,4	20,7	19,8	18	15,2	11,8					
65-160/75	7,5	10	28,2									26	25,3	24,7	23	20	16,8	14,5				
65-160/ **	**	**	38,2									35,4	34,3	33	30	25,5	20					
65-160/110	11	15	43,2									40,8	39,8	38,5	35,5	30,6	25,4	21,4				
65-200/150	15	20	53										48,8	47,5	44,3	38,5	32					
65-200/185	19	25	60,2										56,5	55,3	52	47	40	35,4				
65-200/220	22	30	68										64,4	63,3	60	55	49	44,5				
65-250/300	30	40	84,3											81,7	79,5	75	69	64				
65-250/370	37	50	98											95,3	93	88	82,5	78				
80-160/110	11	15	33,6												31,9	30	27,5	25,5	20,5	12,5		
80-160/150	15	20	40,3												38,8	37	34,5	33	27,5	20		
80-160/185	19	25	47,2												45,7	44	41,5	40	35	27,5	19,5	
80-200/220	22	30	53													49,8	47,5	46	41	33,5		
80-200/300	30	40	63,6													61,2	59	57	52	44	36,5	
80-200/370	37	50	71,4													69,5	67,5	66	61	53,5	46	
80-250/450***	45	60	83,5													80,5	78	76	70	61		
80-250/550***	55	75	95,7													93,6	91	89	83,5	75	64,6	
80-250/750***	75	100	112													110	108	106	101	92	82	

\* A single-phase version ( GSHEM ) is also available

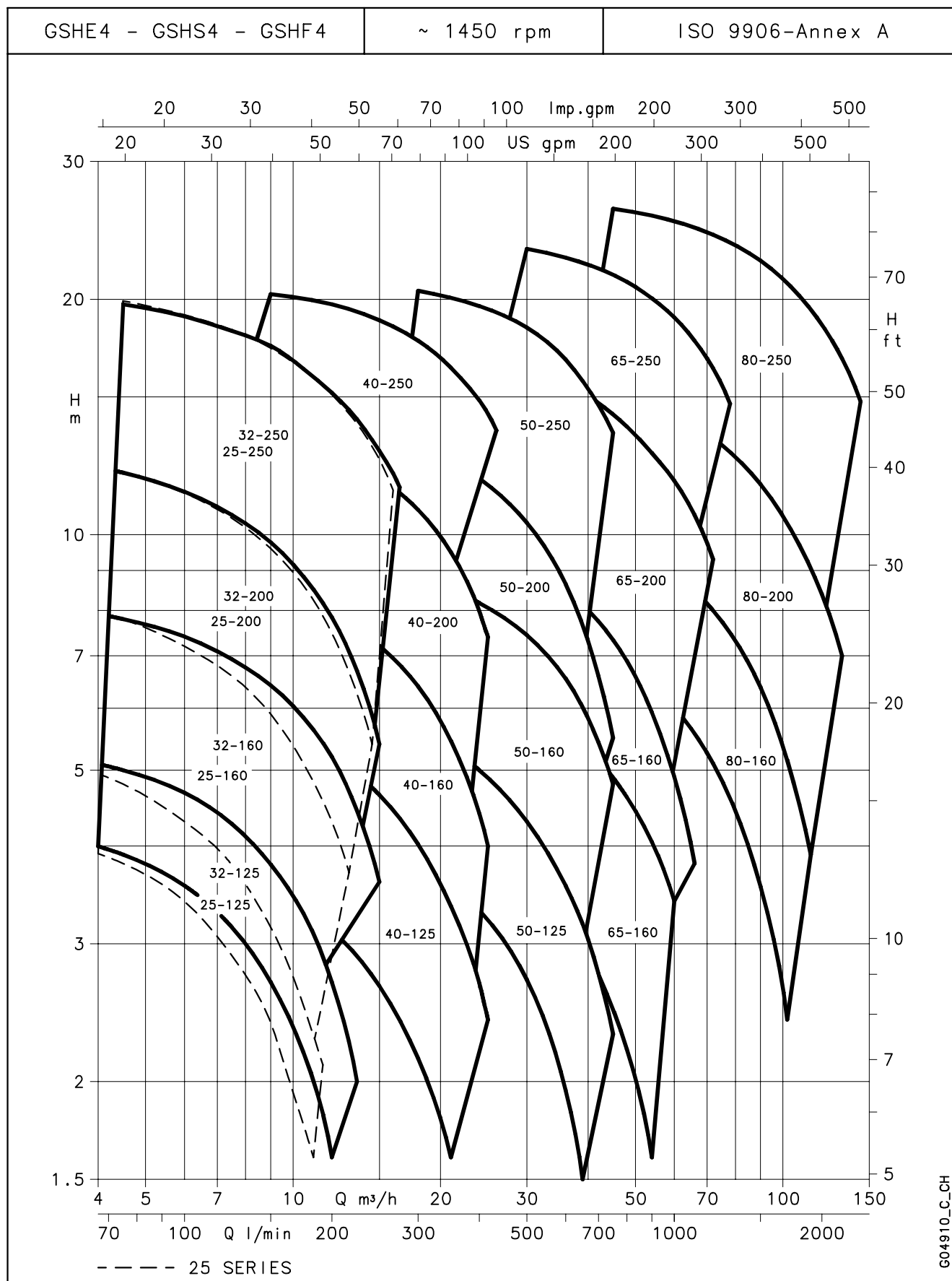
gshe-gshs-gshf-2p50-en\_d\_th

\*\* /92 = 9.2kW - 12.5HP GSHE \*\* /110 = 11kW - 15HP GSHS

\*\*\* Only the GSHF version is available

Performances according to ISO standards 9906 - Annex A.

**GSHE4-GSHS4-GSHF4 SERIES**  
**HYDRAULIC PERFORMANCE RANGE AT 50 Hz, 4 POLES**



These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

## GSHE4-GSHS4-GSHF4 SERIES

### TABLE OF HYDRAULIC PERFORMANCES AT 50 Hz, 4 POLES

PUMP TYPE	RATED POWER		Q = DELIVERY																		
			l/min 0	75	100	125	150	200	250	300	350	400	450	500	600	750	1000	1200	1800	2000	2200
	kW	HP	m³/h 0	4,5	6	7,5	9	12	15	18	21	24	27	30	36	45	60	72	108	120	132
H = TOTAL HEAD METRES COLUMN OF WATER																					
25-125/02A *	0,25	0,33	4,4	3,8	3,4	2,9	2,4														
25-125/02 *	0,25	0,33	5,6	4,8	4,3	3,8	3,2														
25-160/02 *	0,25	0,33	6,9	6,1	5,6	5,1	4,4	2,9													
25-160/03 *	0,37	0,5	8,6	7,8	7,2	6,6	5,9	4,3													
25-200/03 *	0,37	0,5	11	9,4	8,7	8	7,1	5,1													
25-200/05 *	0,55	0,75	13,4	12	11,3	10,5	9,6	7,5													
25-250/07	0,75	1	14,9	13,3	12,6	11,9	11	9	6,7												
25-250/11	1,1	1,5	18,8	17,1	16,3	15,5	14,6	12,4	9,9												
25-250/15	1,5	2	21,5	19,9	19,1	18,3	17,3	15,1	12,6												
32-125/02A *	0,25	0,33	4,4	3,9	3,6	3,1	2,7	1,6													
32-125/02 *	0,25	0,33	5,5	5	4,7	4,3	3,8	2,7													
32-160/02 *	0,25	0,33	6,9	5,9	5,4	4,9	4,4	2,9													
32-160/03 *	0,37	0,5	8,6	7,8	7,4	6,9	6,4	5,2	3,6												
32-200/03 *	0,37	0,5	10,8	9,4	8,7	7,9	7	5,1													
32-200/05 *	0,55	0,75	13,2	12	11,3	10,6	9,8	7,8	5,4												
32-250/07	0,75	1	14,5	13	12,3	11,6	10,8	8,9	6,5												
32-250/11	1,1	1,5	18,4	16,8	16,1	15,3	14,4	12,5	10,1												
32-250/15	1,5	2	21,3	19,7	19	18,2	17,5	15,2	12,8												
40-125/02A *	0,25	0,33	3,5				3	2,7	2,3	1,8	1,3										
40-125/02 *	0,25	0,33	5,4				4,8	4,4	3,9	3,3	2,7	2									
40-125/03 *	0,37	0,5	6,3				5,7	5,2	4,7	4	3,3	2,7									
40-160/03 *	0,37	0,5	8				7,2	6,6	5,9	5,2	4	3,1									
40-160/05 *	0,55	0,75	9,2				8,5	7,9	7,2	6,4	5,4	4,4									
40-200/07	0,75	1	11,9				11,2	10,5	9,7	8,6	7,3	5,8									
40-200/11	1,1	1,5	14,2				13,3	12,7	11,8	10,8	9,5	8									
40-250/11	1,1	1,5	15,7				15	14	13	11,9	10,3										
40-250/15	1,5	2	18,1				17	16,3	15,6	14,5	13	11,4									
40-250/22	2,2	3	21,5				20,3	19,7	18,8	17,7	16,3	14,8									
50-125/03A *	0,37	0,5	4,4							3,8	3,6	3,3	3	2,7	1,9						
50-125/03 *	0,37	0,5	5,4							4,6	4,3	4	3,7	3,3	2,6						
50-125/05 *	0,55	0,75	6,4							5,6	5,3	5	4,7	4,3	3,6	2,3					
50-160/07	0,75	1	8,2							7,3	7	6,7	6,3	5,8	5						
50-160/11	1,1	1,5	9,9							8,8	8,5	8,2	7,8	7,5	6,5	4,8					
50-200/11	1,1	1,5	12,8							11,2	10,7	10	9,3	8,6	6,8						
50-200/15	1,5	2	14,7							13	12,4	11,8	11,2	10,3	8,7	5,5					
50-250/22A	2,2	3	17,5							16	15,5	15	14,3	13,8	12						
50-250/22	2,2	3	19,4							17,8	17,3	16,8	16,2	15,4	13,8						
50-250/30	3	4	21,9							20,5	20,2	19,6	19	18,4	16,7	13,5					
65-160/05	0,55	0,75	5,4									4,2	3,9	3,7	3,2	2,5					
65-160/07	0,75	1	6,4									5,3	5,1	4,8	4,4	3,6					
65-160/11A	1,1	1,5	7,6									7	6,3	6,1	5,7	4,9	3,4				
65-160/11	1,1	1,5	9,4									8,5	8,2	8	7	5,9	3,4				
65-160/15	1,5	2	10,6									9,7	9,5	9,2	8,5	7,3	4,9				
65-200/15	1,5	2	11,9										10,6	10,2	9,3	7,9	5,1				
65-200/22	2,2	3	14,4										13,2	12,8	12	10,6	7,8				
65-200/30	3	4	17,5										16,6	16,3	15,6	14,2	11,7	9,3			
65-250/40	4	5,5	20,7											19,5	18,8	17,7	15	12			
65-250/55	5,5	7,5	24											23,2	22,7	21,4	19	16,4			
80-160/15	1,5	2	8,3												7,6	7	6	5,2			
80-160/22A	2,2	3	9,6												9	8,5	7,5	6,5	3,2		
80-160/22	2,2	3	11												10,4	9,8	9	8	4,5		
80-200/30	3	4	12,9													12	10,8	9,8	6,1	4,6	
80-200/40	4	5,5	16,1													15,4	14,3	11,3	9,7	8,4	7
80-250/55	5,5	7,5	20,3													19,5	18,4	17,3	12,3	10,1	
80-250/75	7,5	1	23,1													22,2	21,3	20,3	16,1	14,2	12,2
80-250/110	11	15	26,7													26,1	25,2	24,2	20,2	18,6	16,8

\* GSHS4 version is not available.

gshe4-gshs4-gshf4-4p50-en\_f\_th

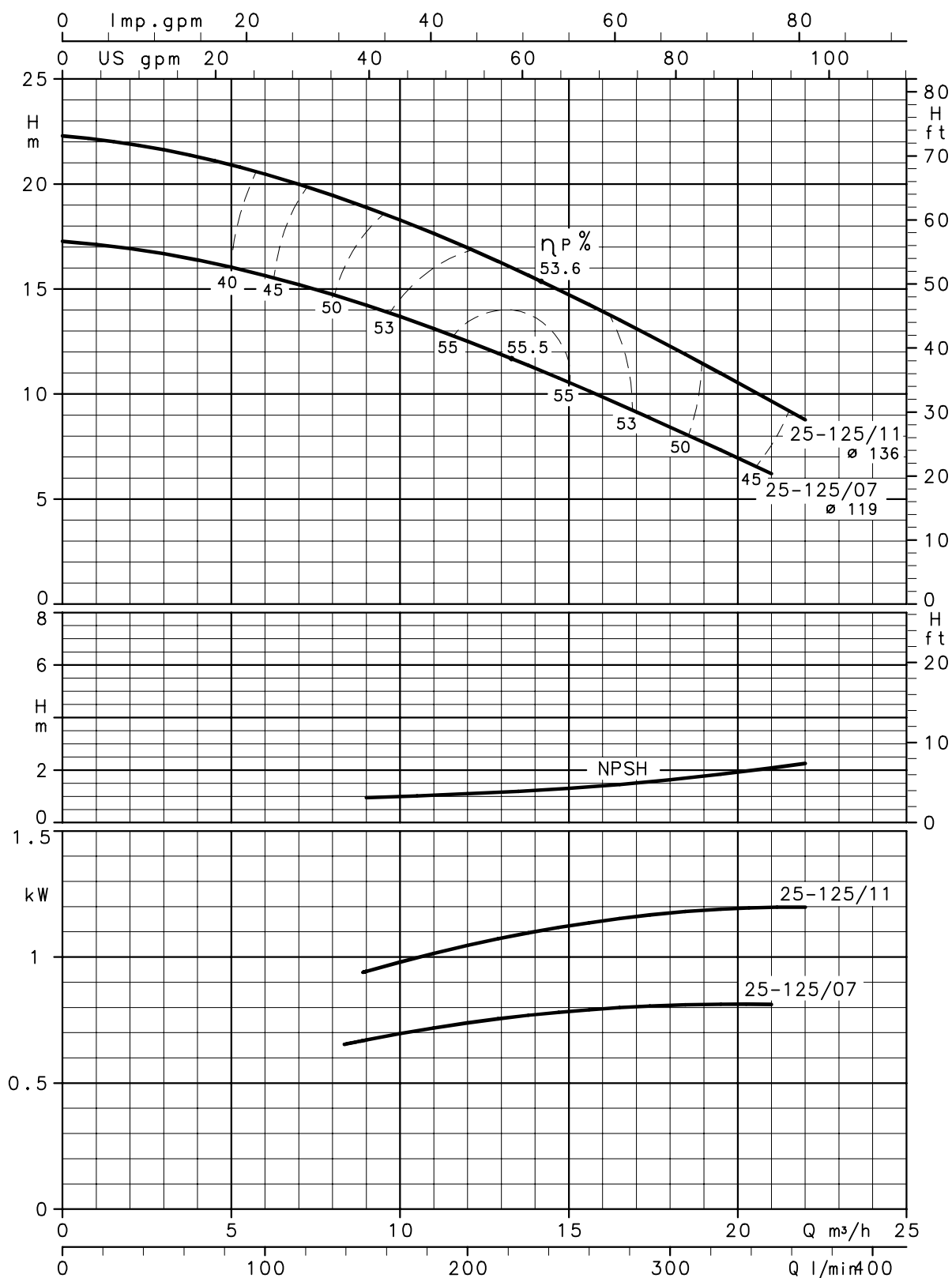
Performances according to ISO standards 9906 - Annex A.

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**

GSHE-GSHS-GSHF 25-125

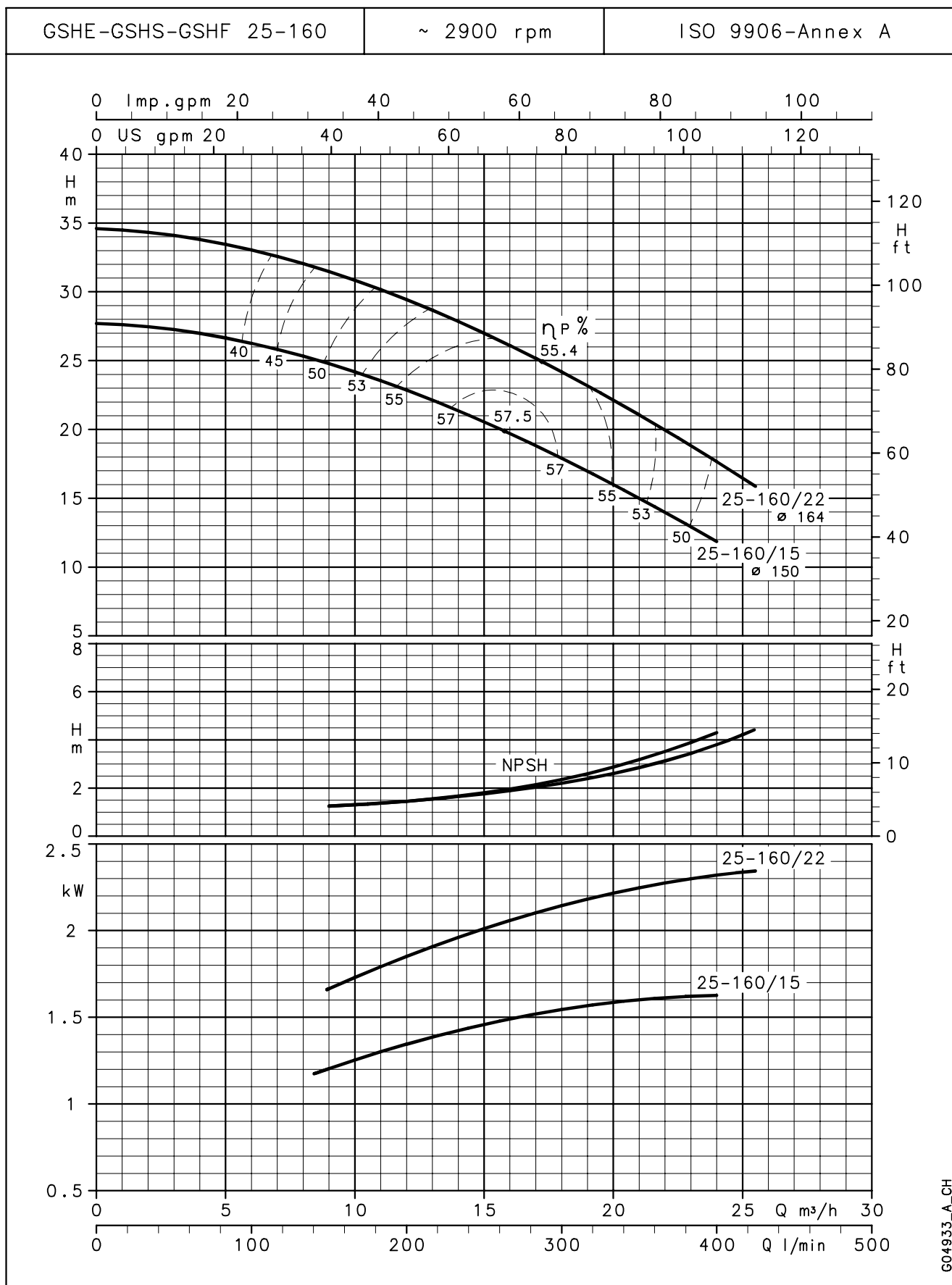
~ 2900 rpm

ISO 9906-Annex A



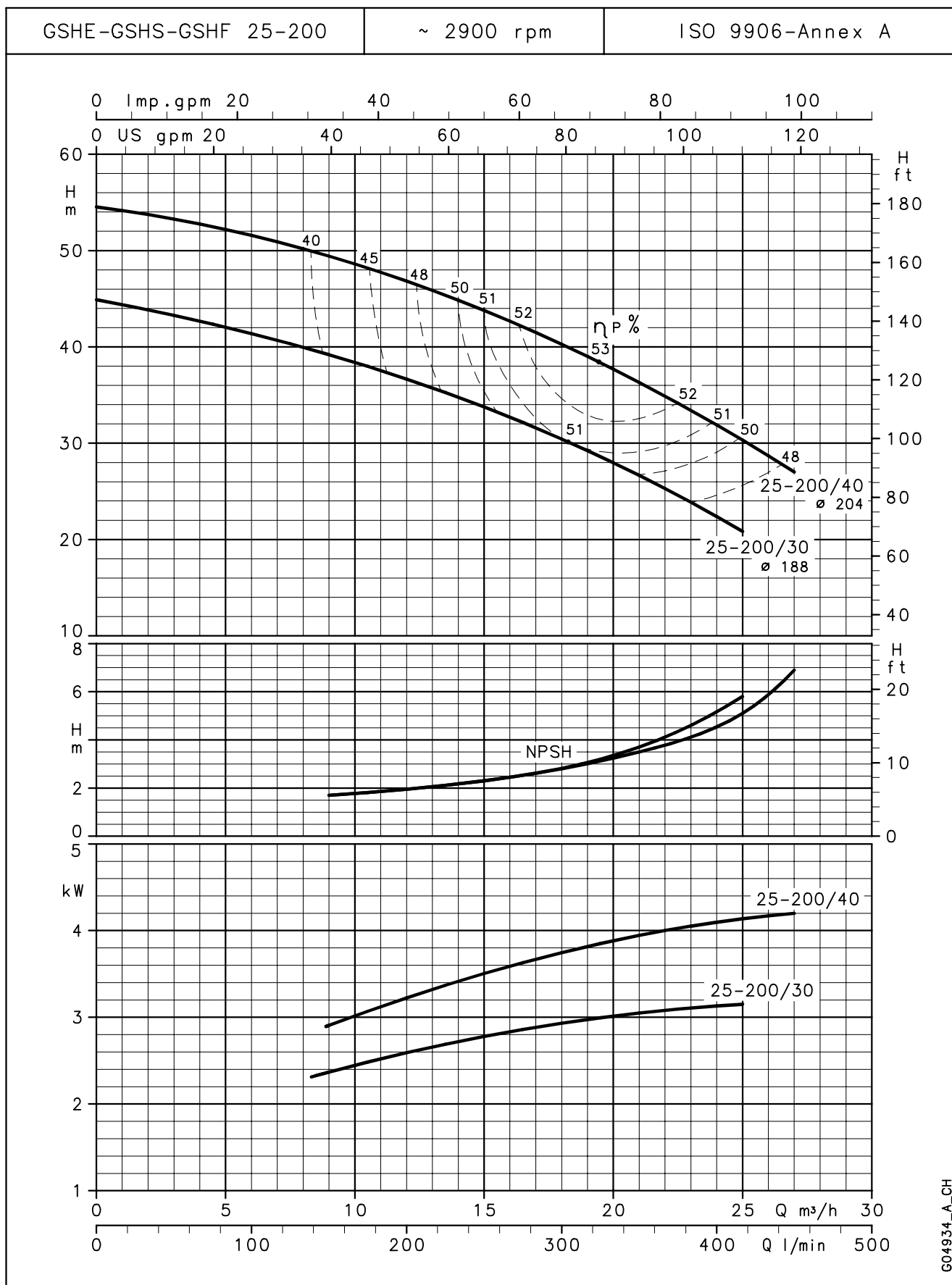
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



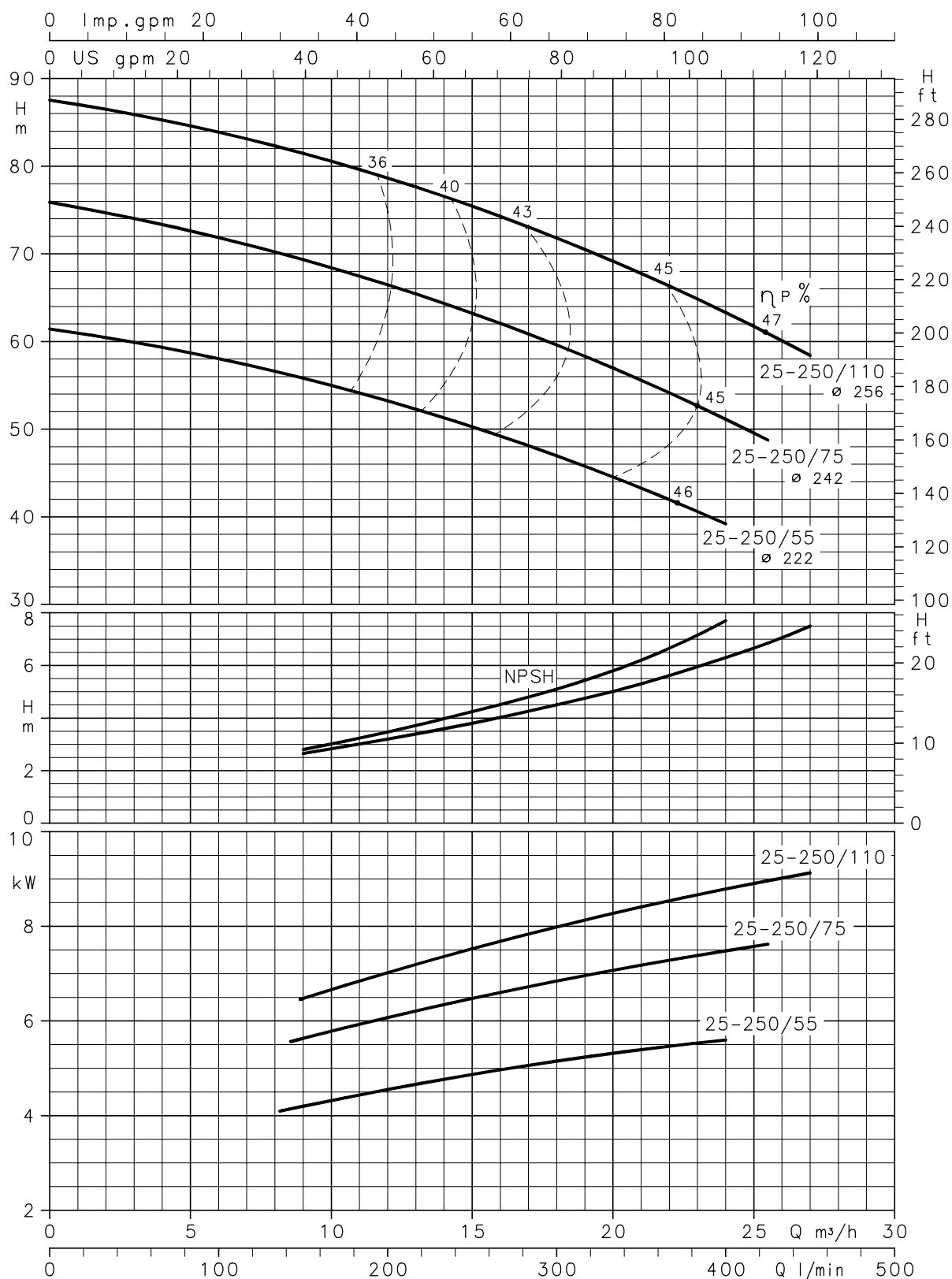
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**

GSHE-GSHS-GSHF 25-250

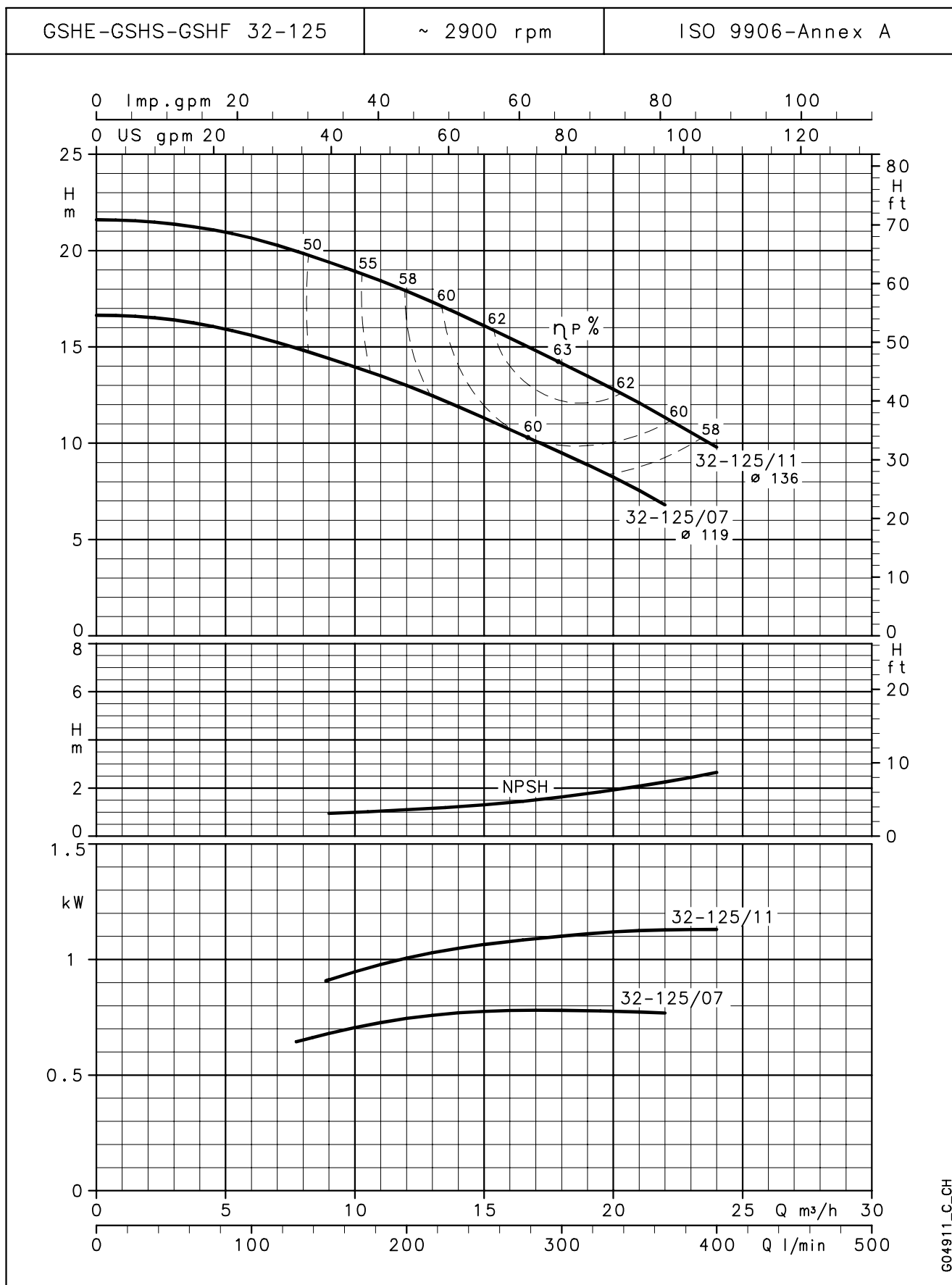
~ 2900 rpm

ISO 9906-Annex A



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

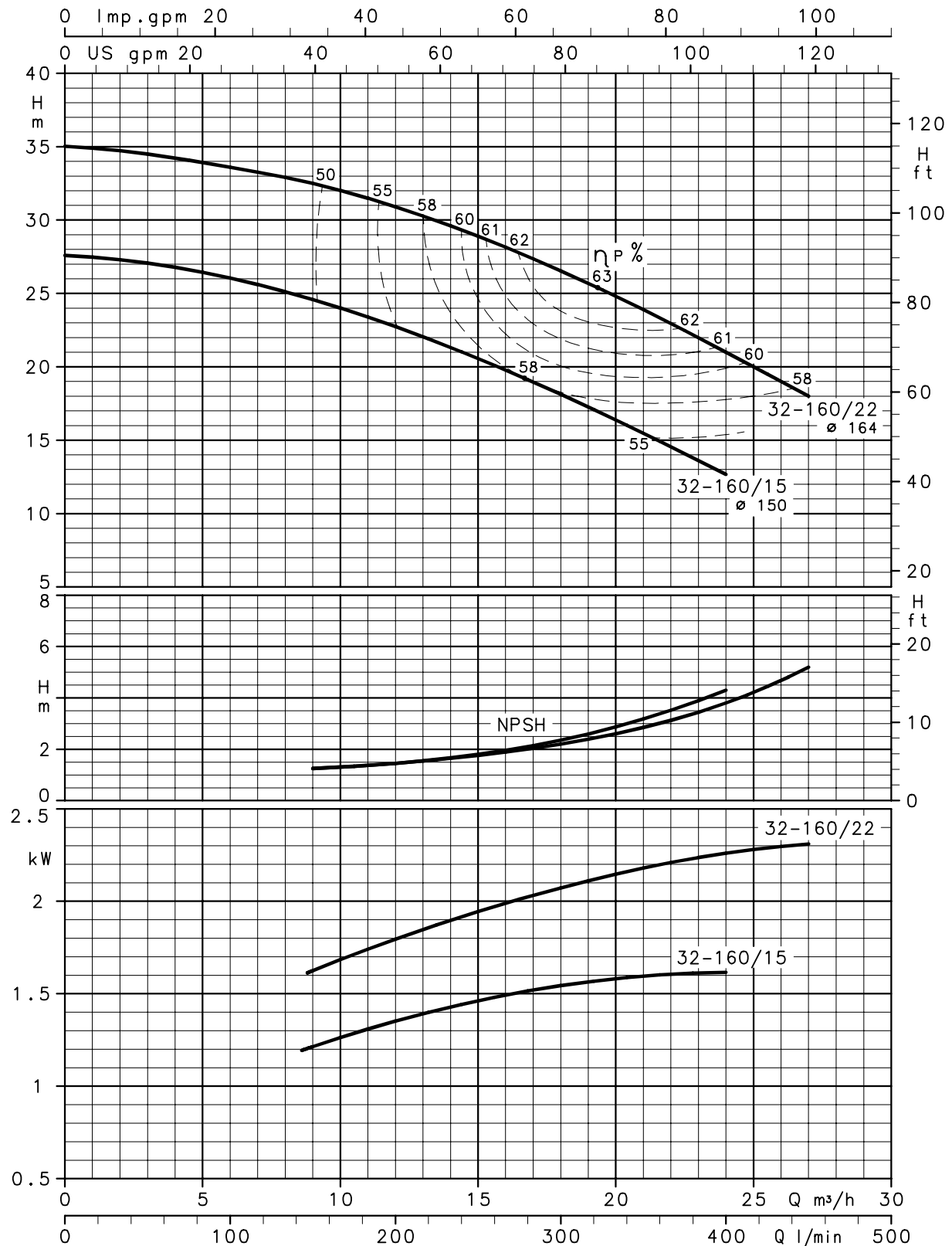


**GSHE-GSHS-GSHF SERIES**  
**OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**

GSHE-GSHS-GSHF 32-160

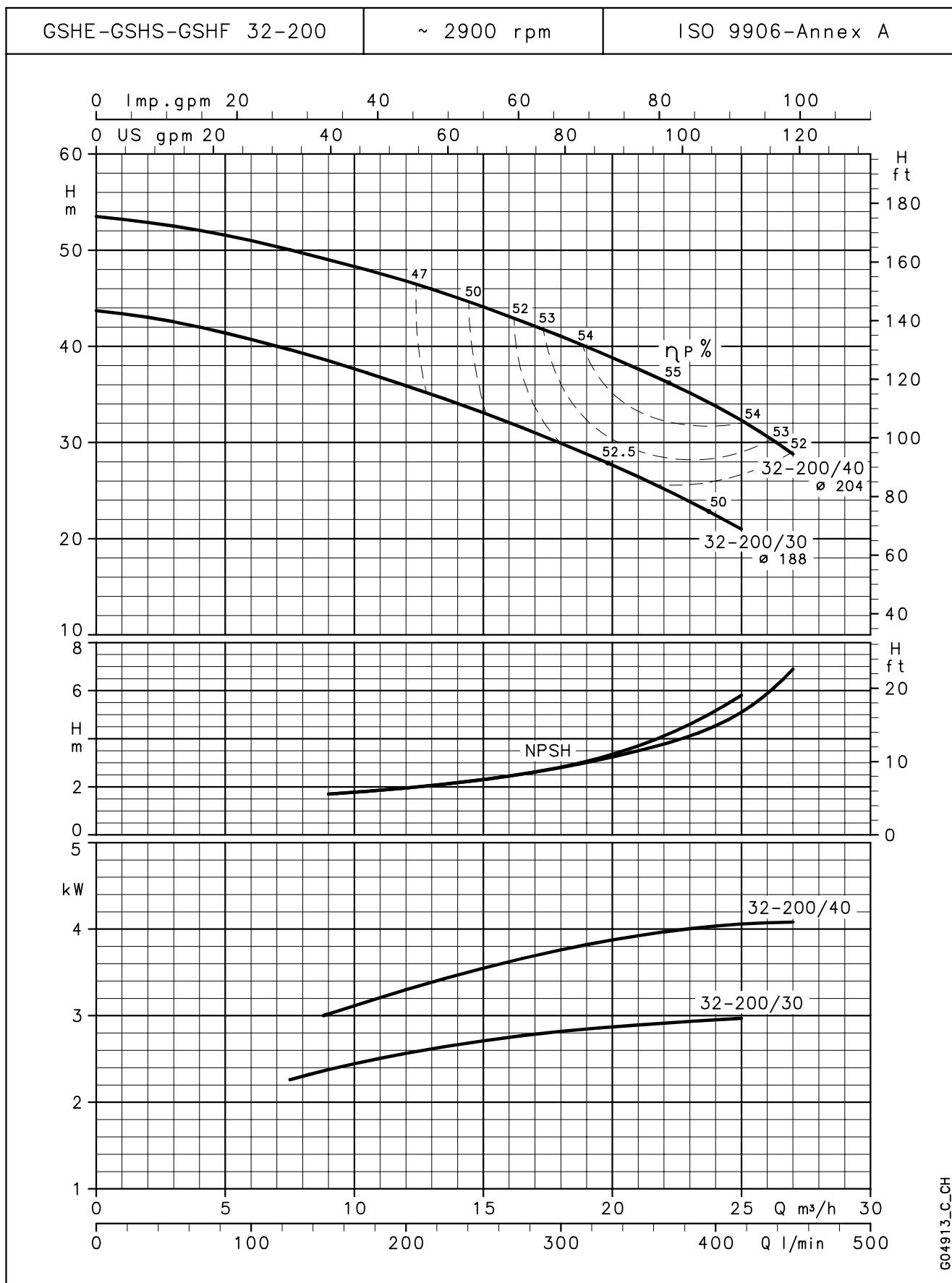
~ 2900 rpm

ISO 9906-Annex A



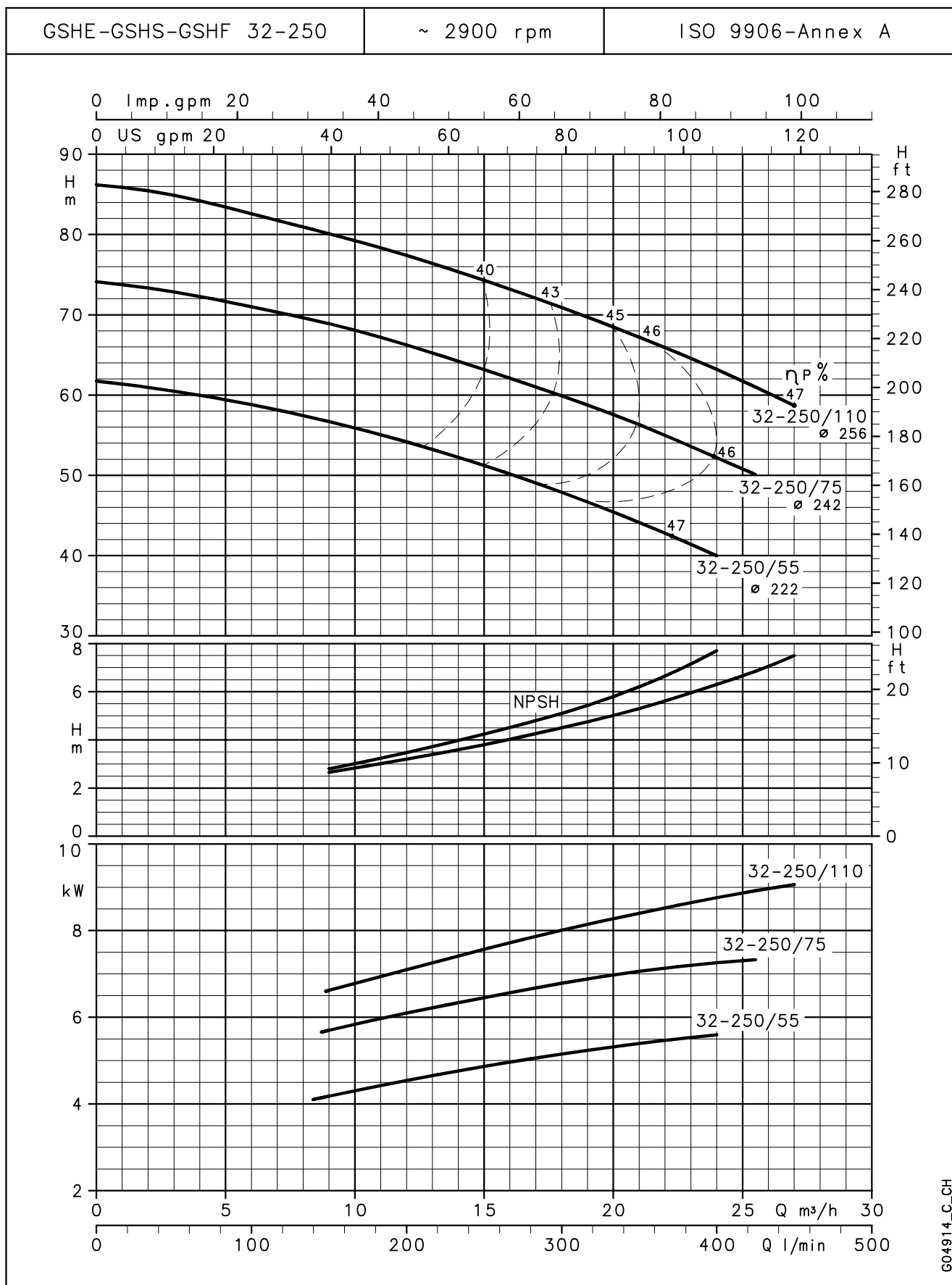
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



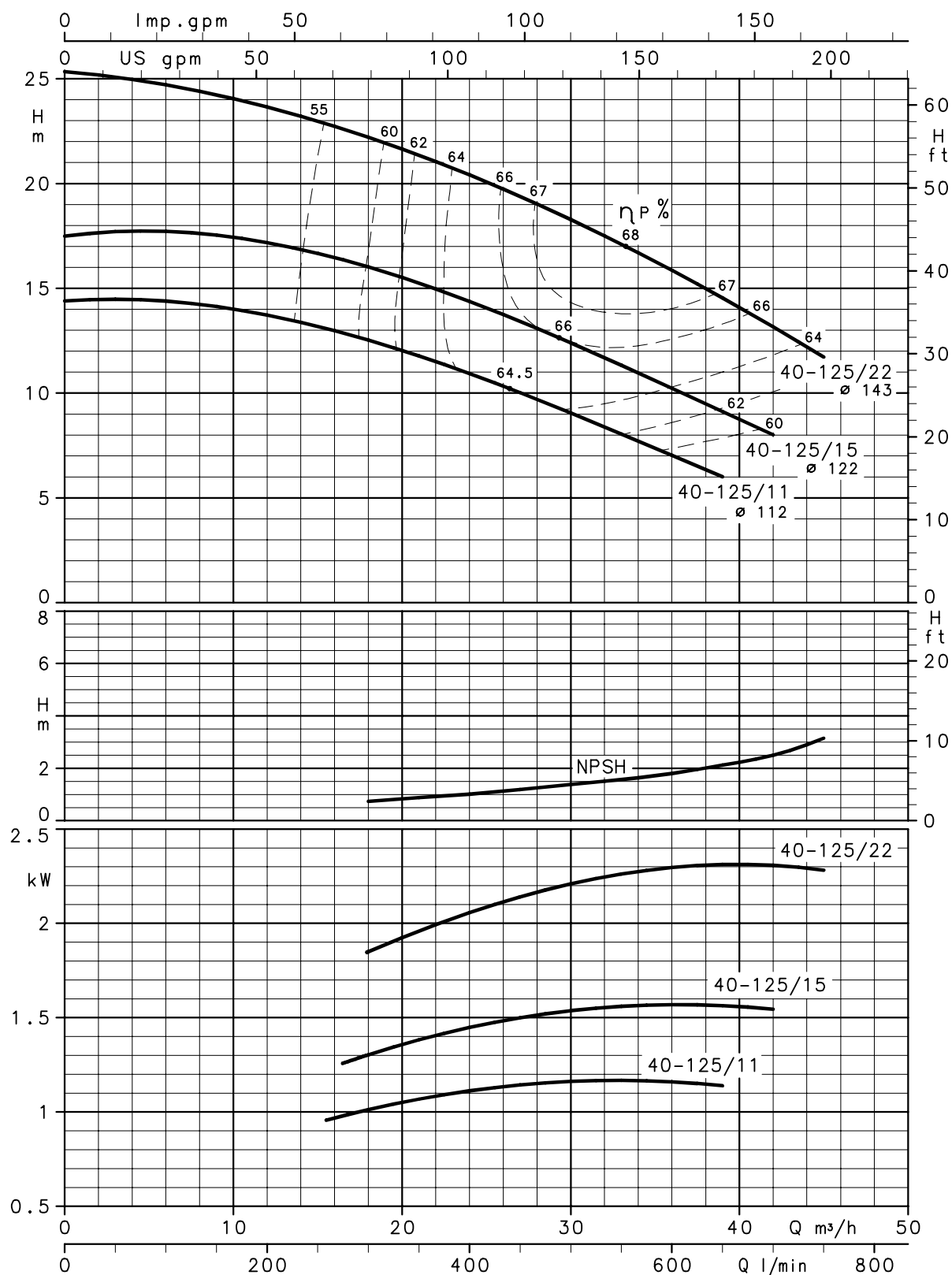
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**

GSHE-GSHS-GSHF 40-125

~ 2900 rpm

ISO 9906-Annex A



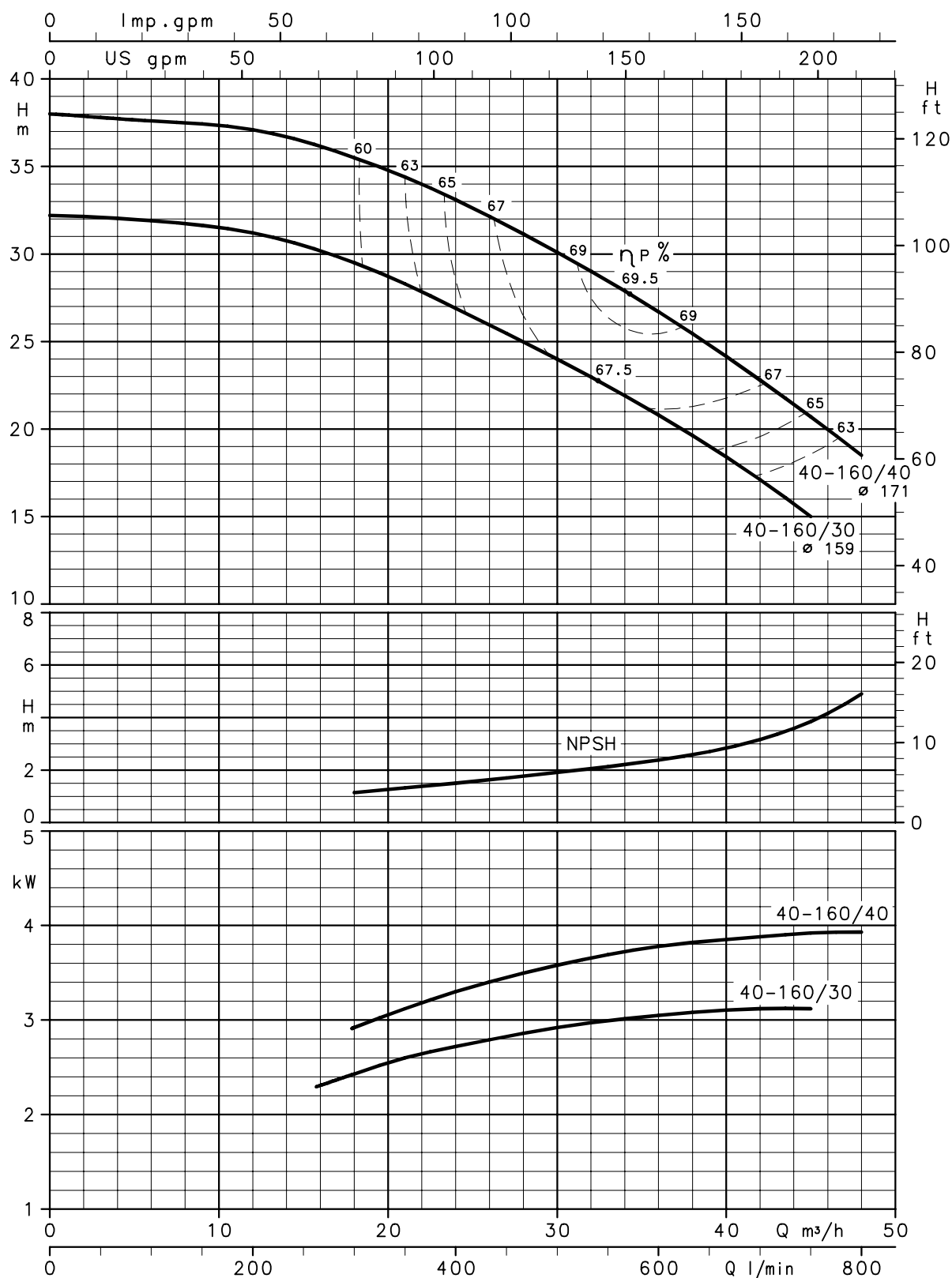
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
 These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**

GSHE-GSHS-GSHF 40-160

~ 2900 rpm

ISO 9906-Annex A



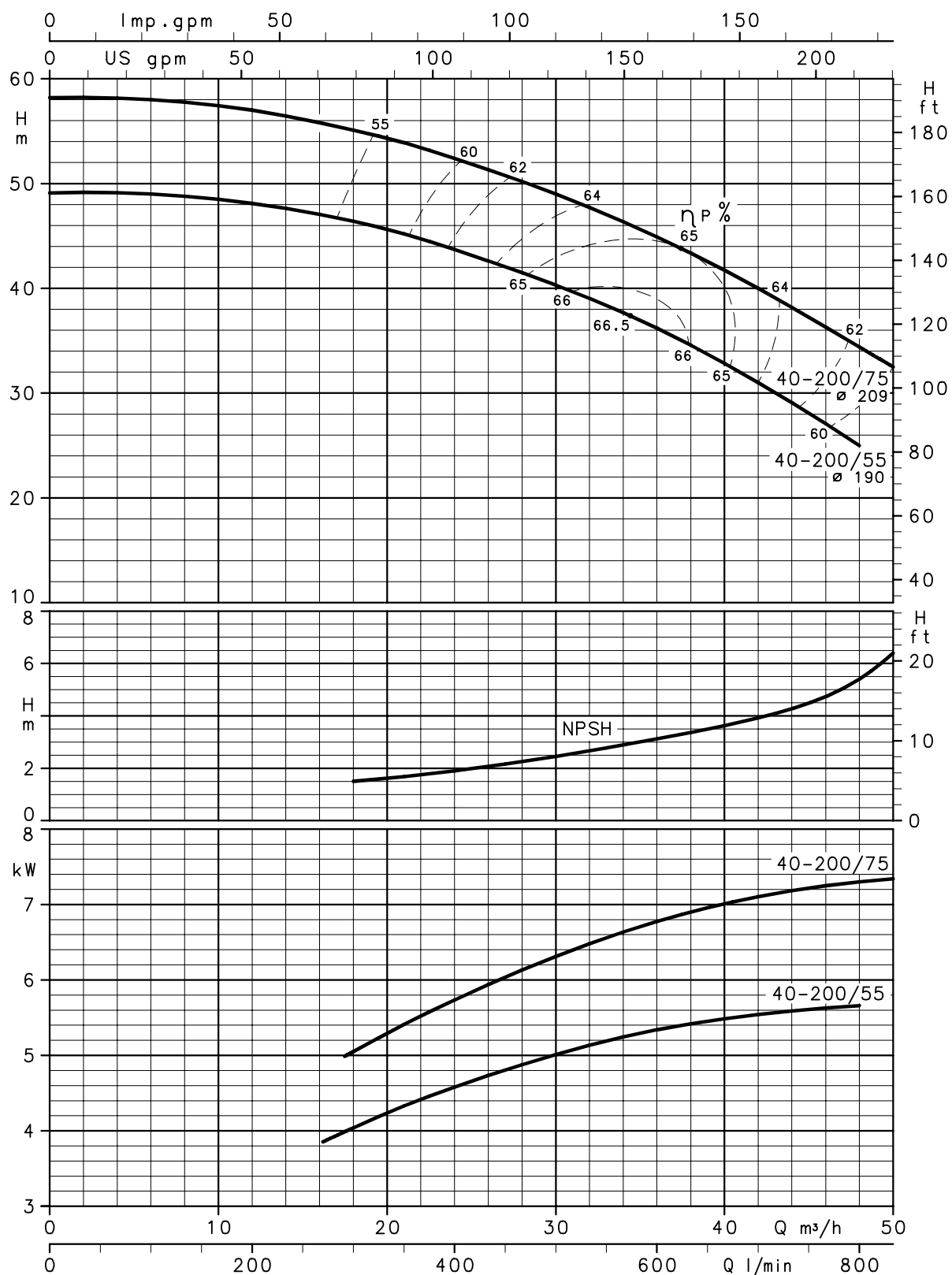
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**

GSHE-GSHS-GSHF 40-200

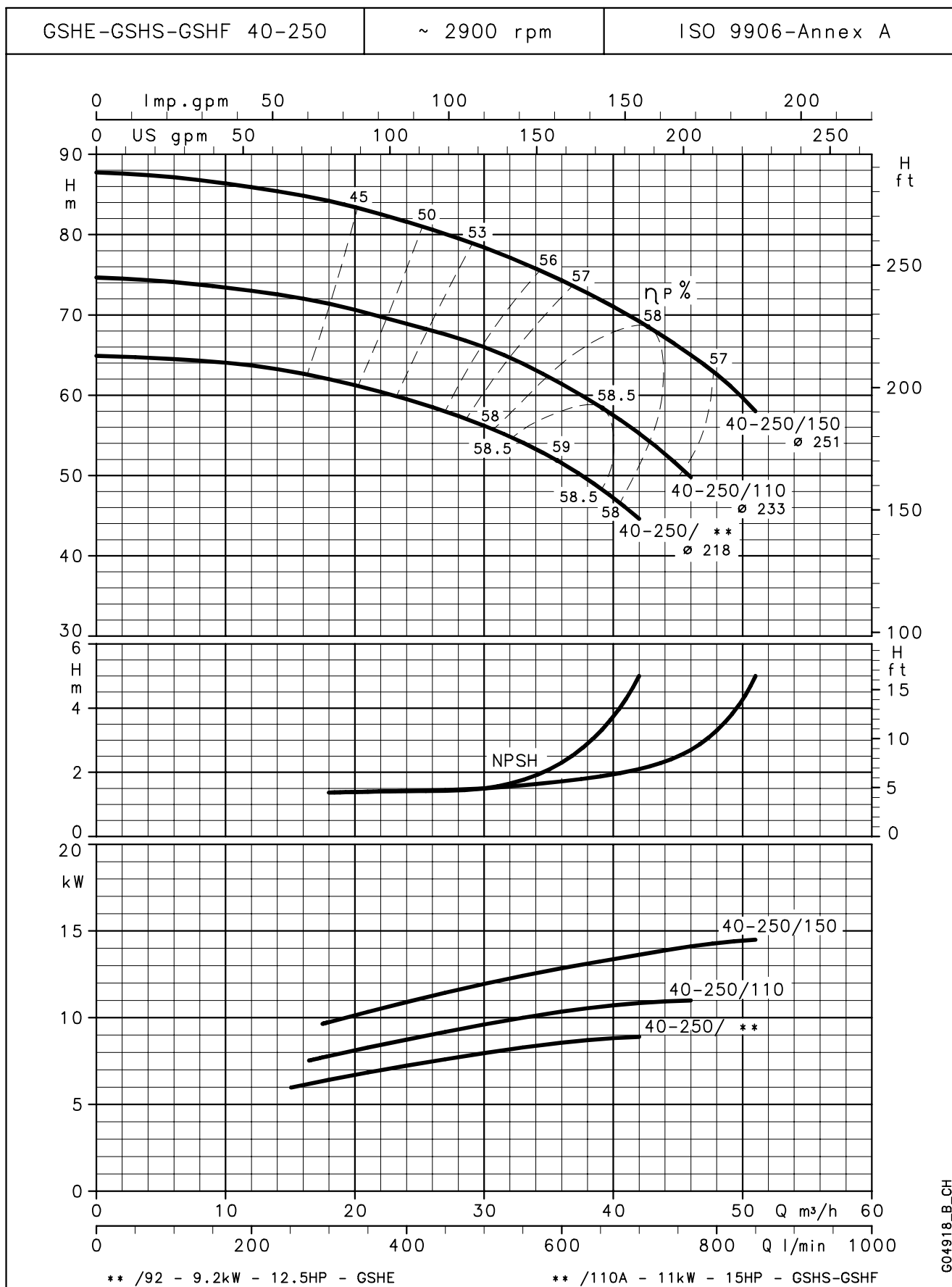
~ 2900 rpm

ISO 9906-Annex A



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



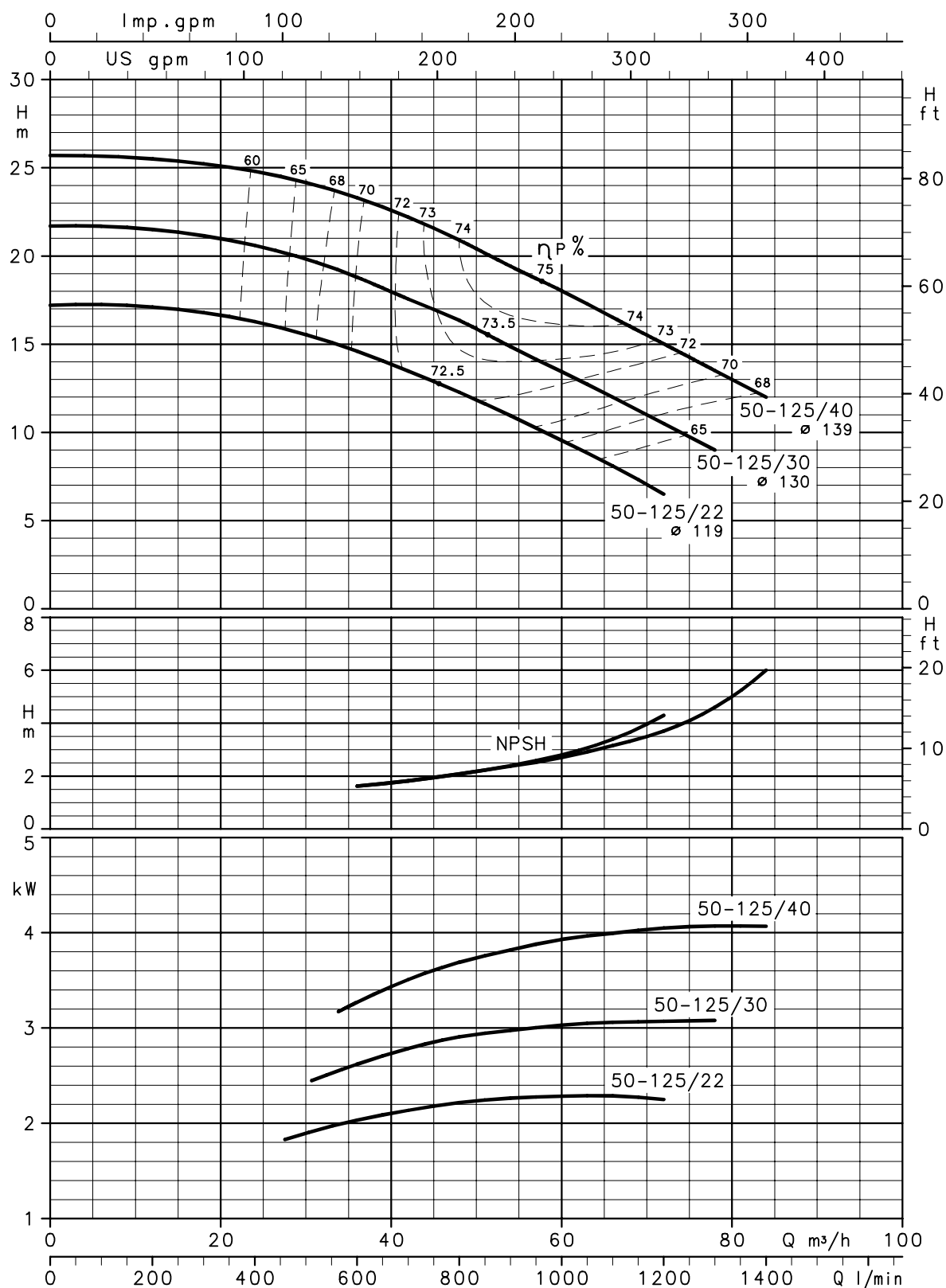
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**

GSHE-GSHS-GSHF 50-125

~ 2900 rpm

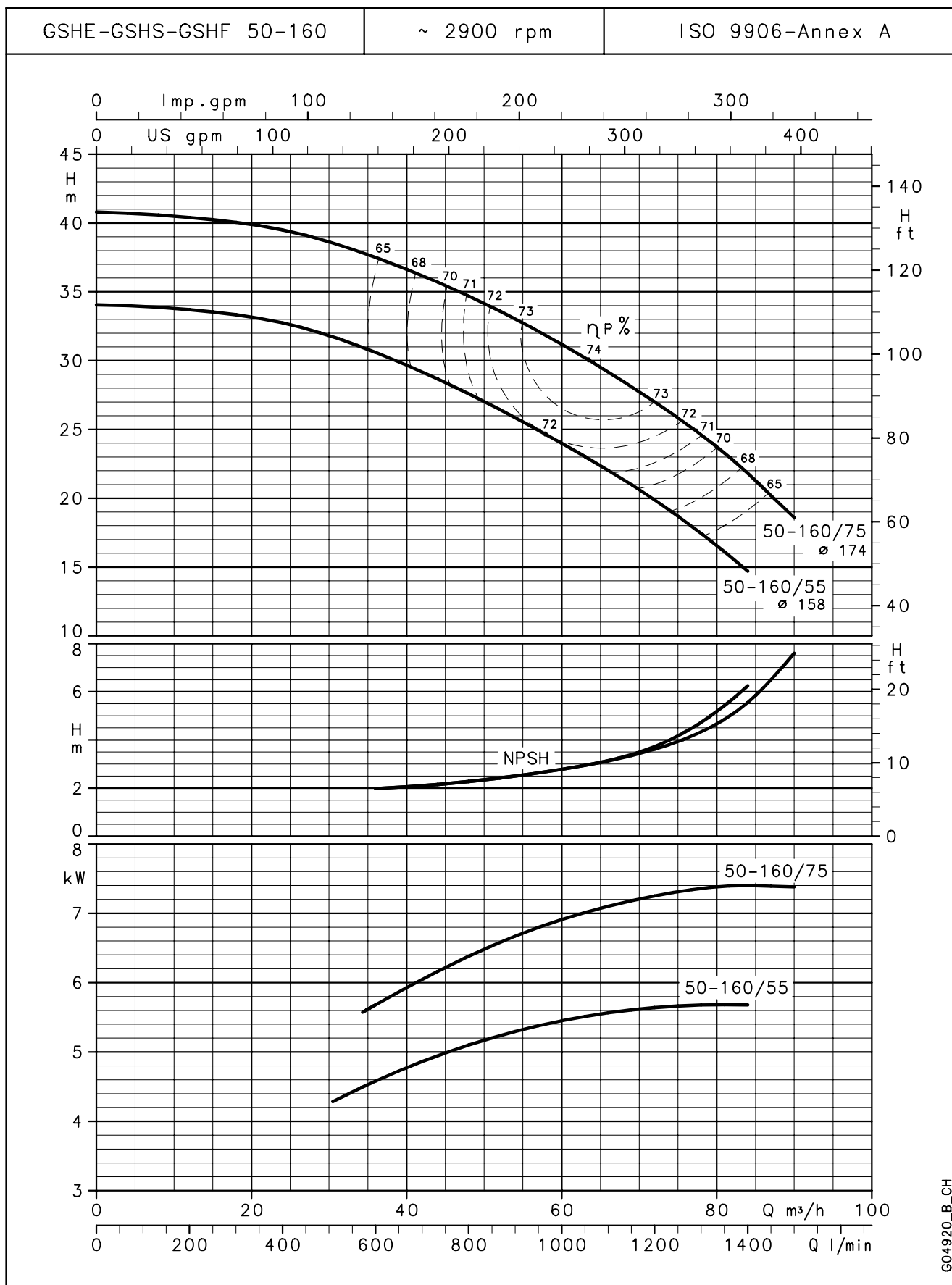
ISO 9906-Annex A



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

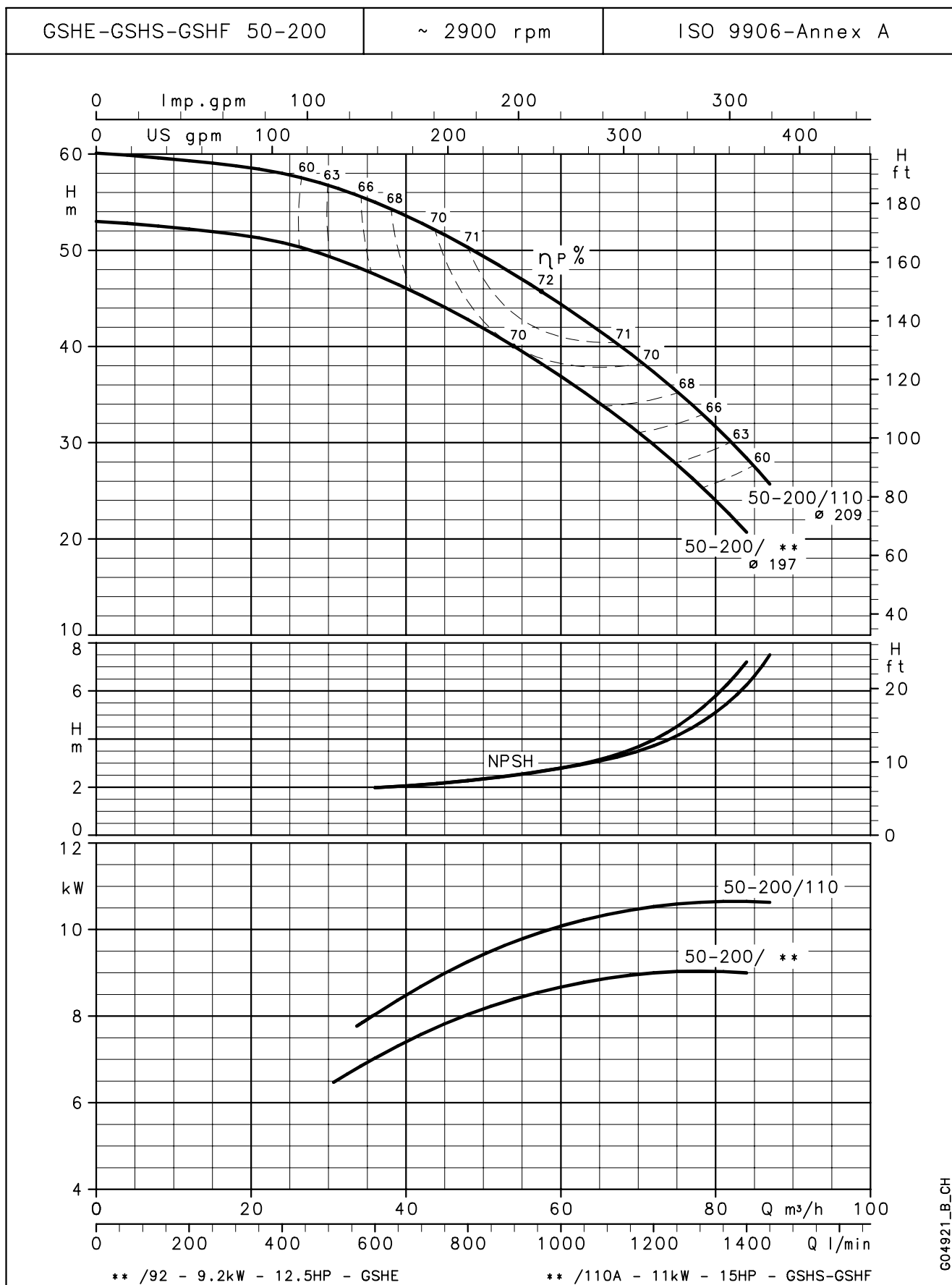


# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
 These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



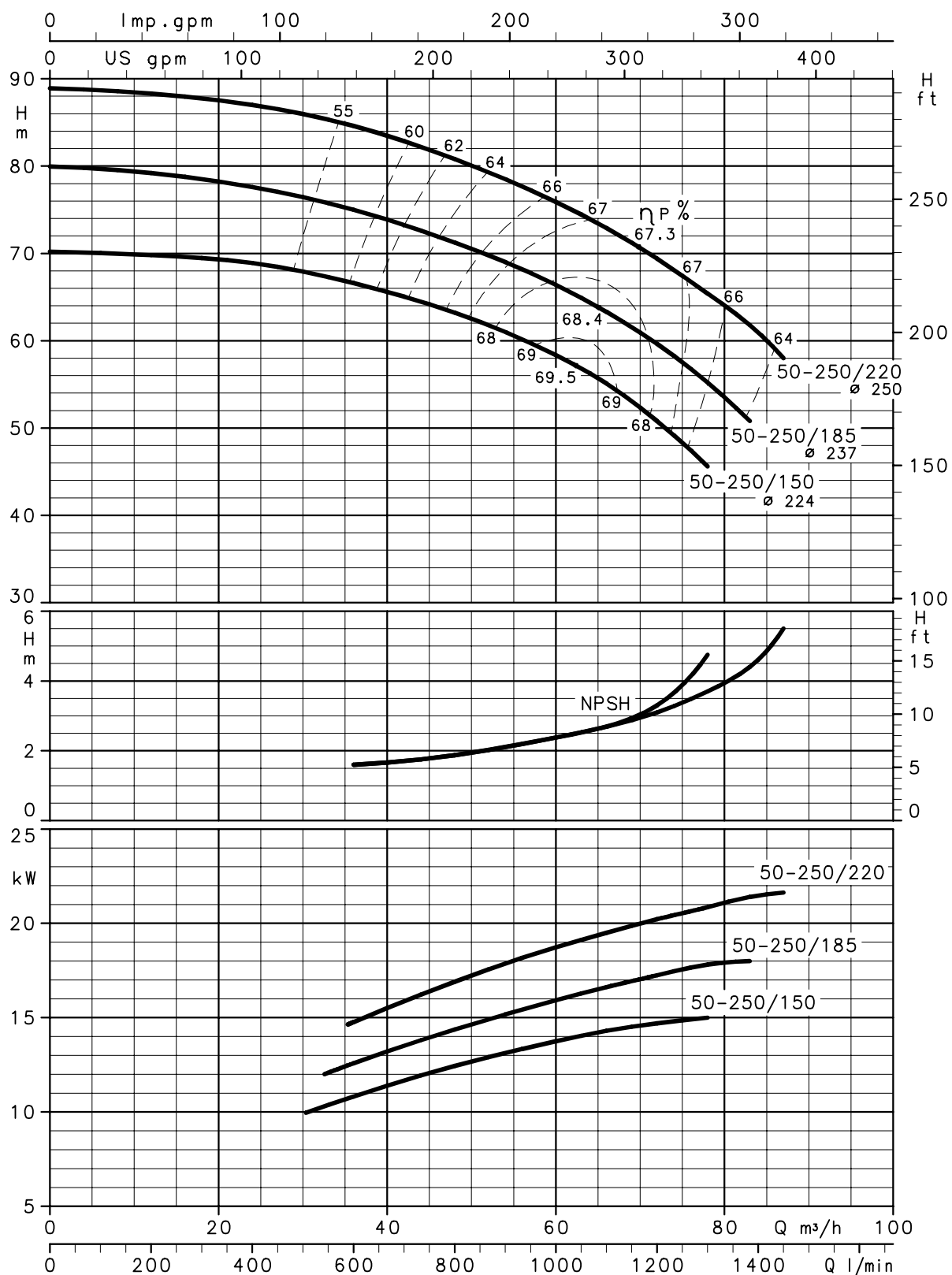
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**

GSHE-GSHS-GSHF 50-250

~ 2900 rpm

ISO 9906-Annex A



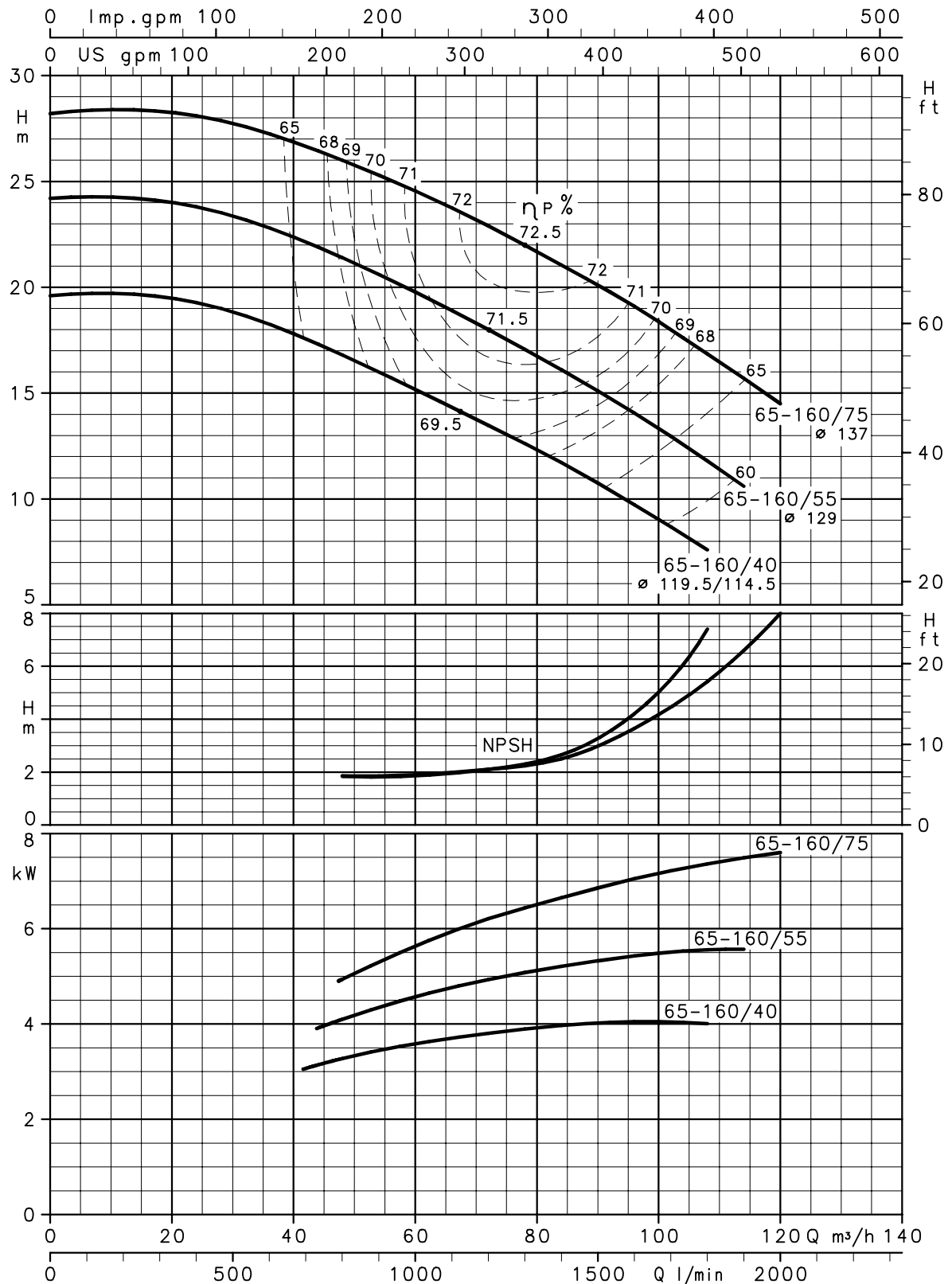
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

**GSHE-GSHS-GSHF SERIES**  
**OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**

GSHE-GSHS-GSHF 65-160

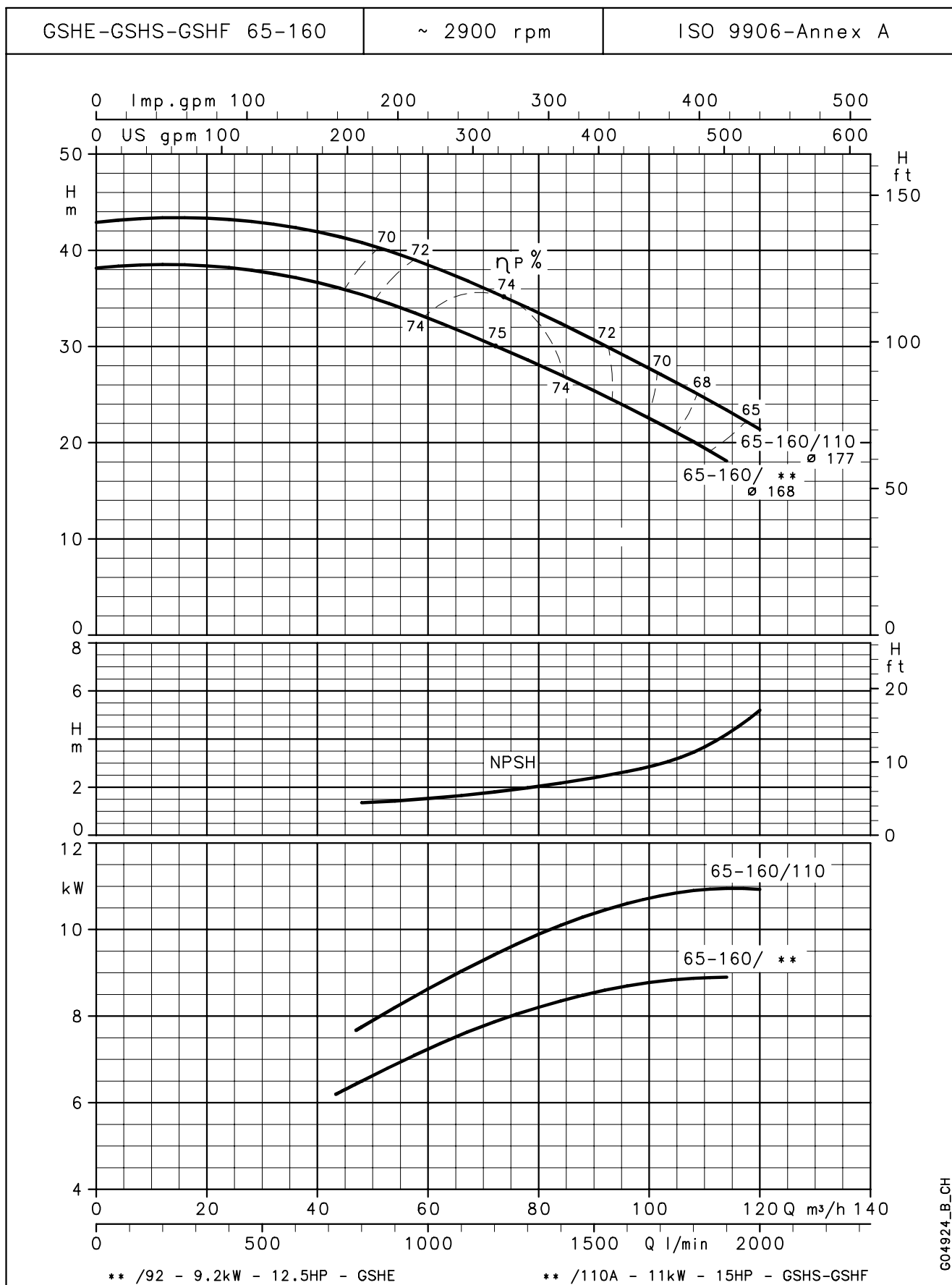
~ 2900 rpm

ISO 9906-Annex A



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



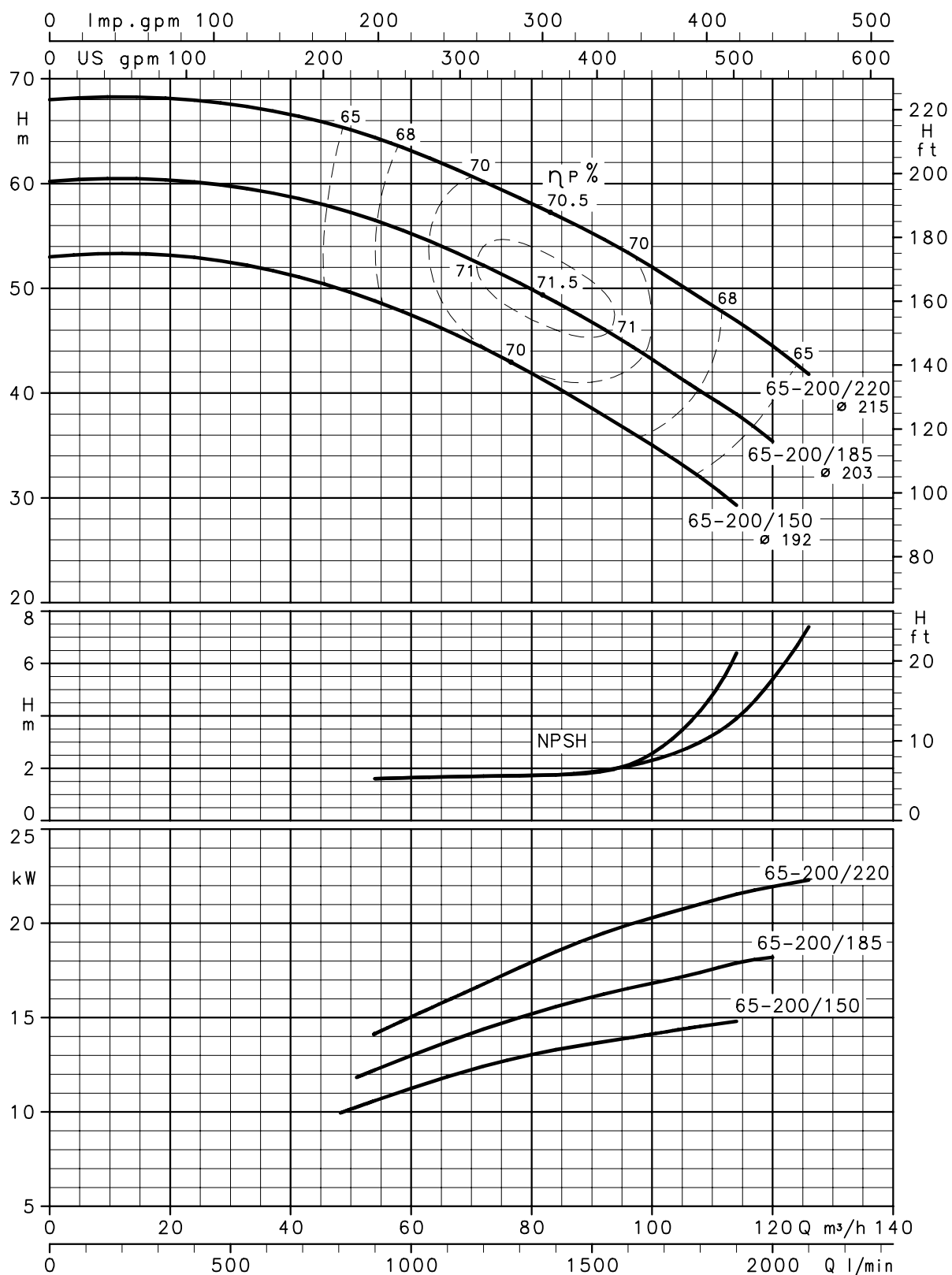
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**

GSHE-GSHS-GSHF 65-200

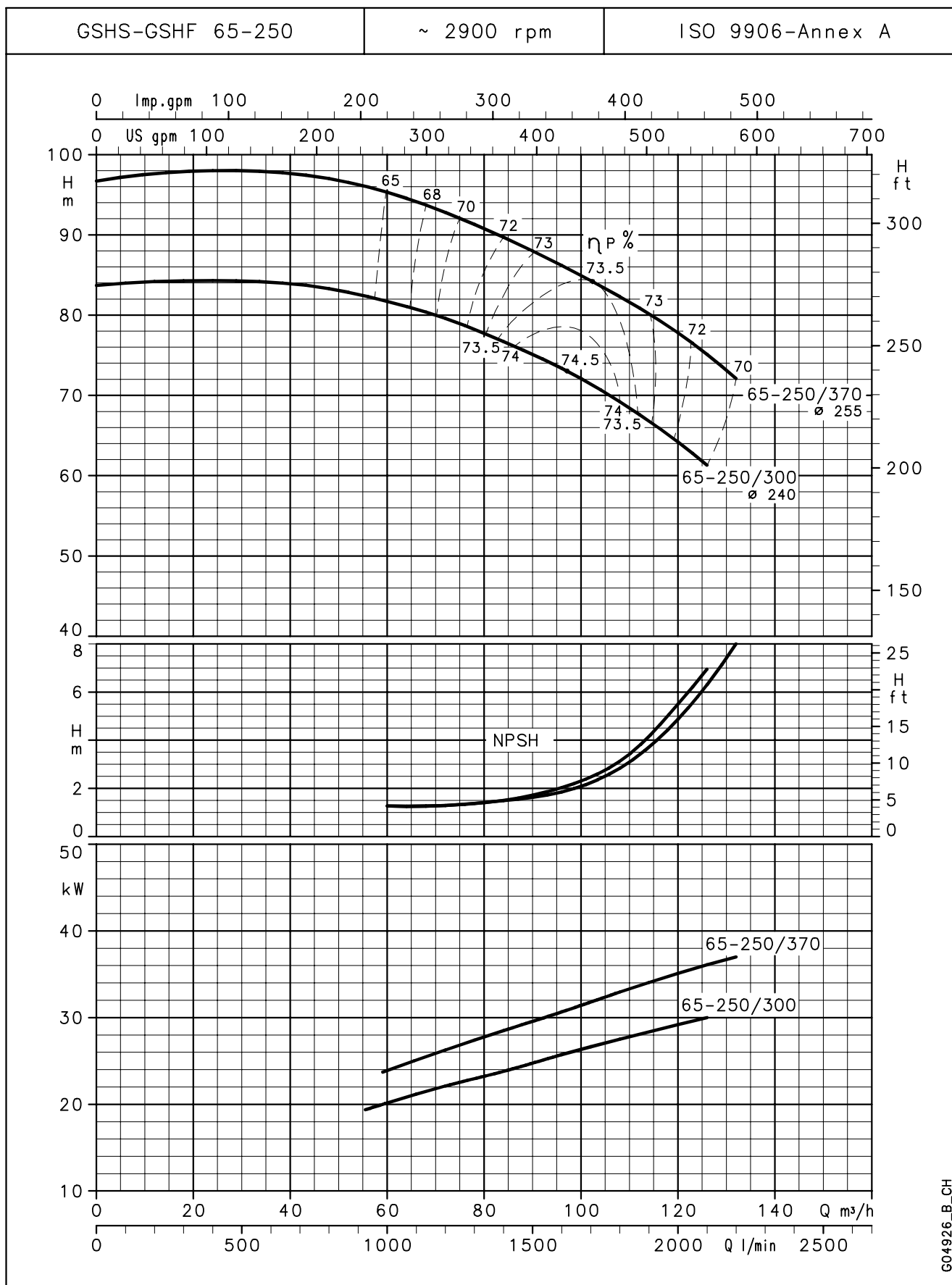
~ 2900 rpm

ISO 9906-Annex A



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**



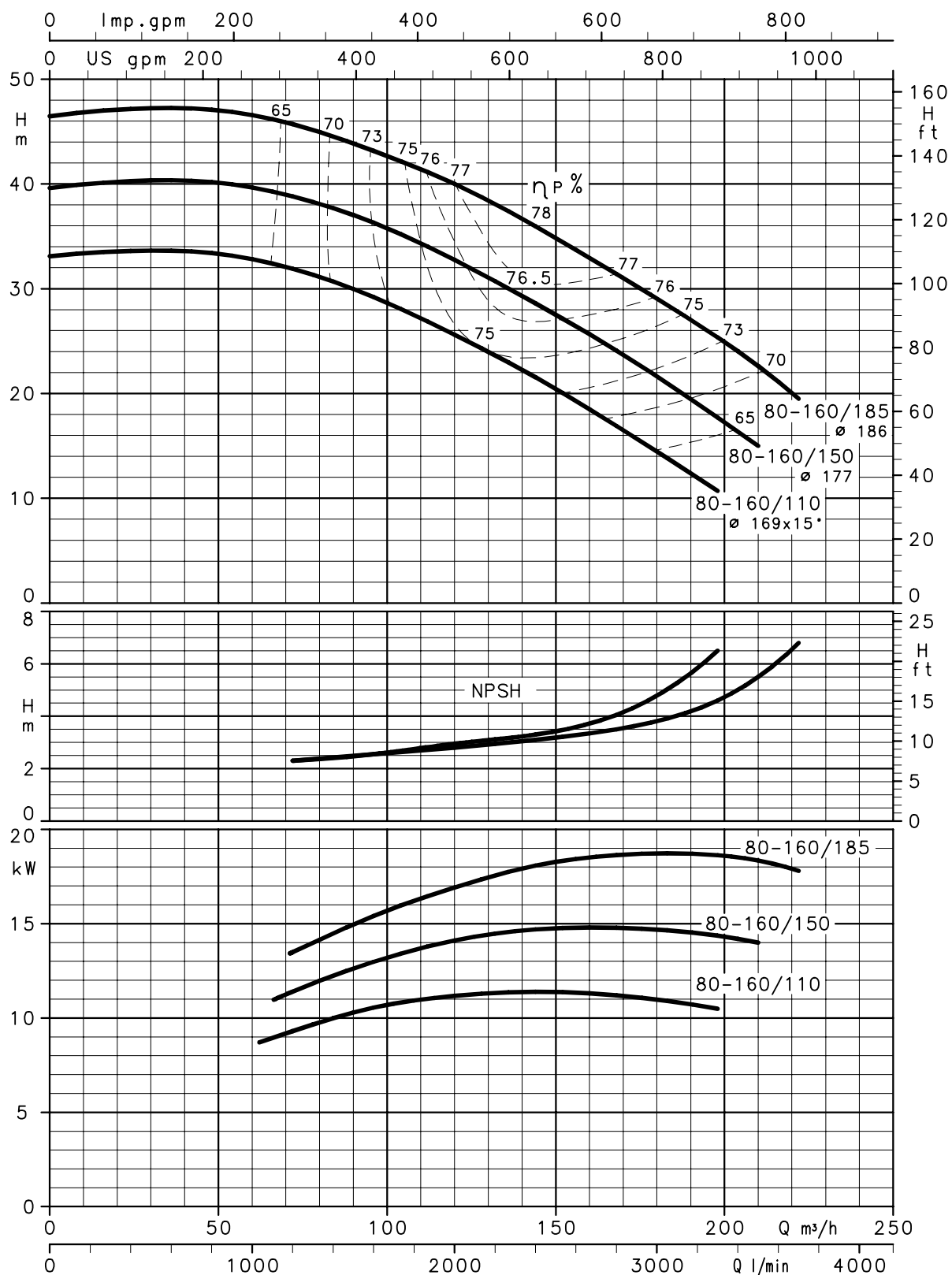
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**

GSHE-GSHS-GSHF 80-160

~ 2900 rpm

ISO 9906-Annex A



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

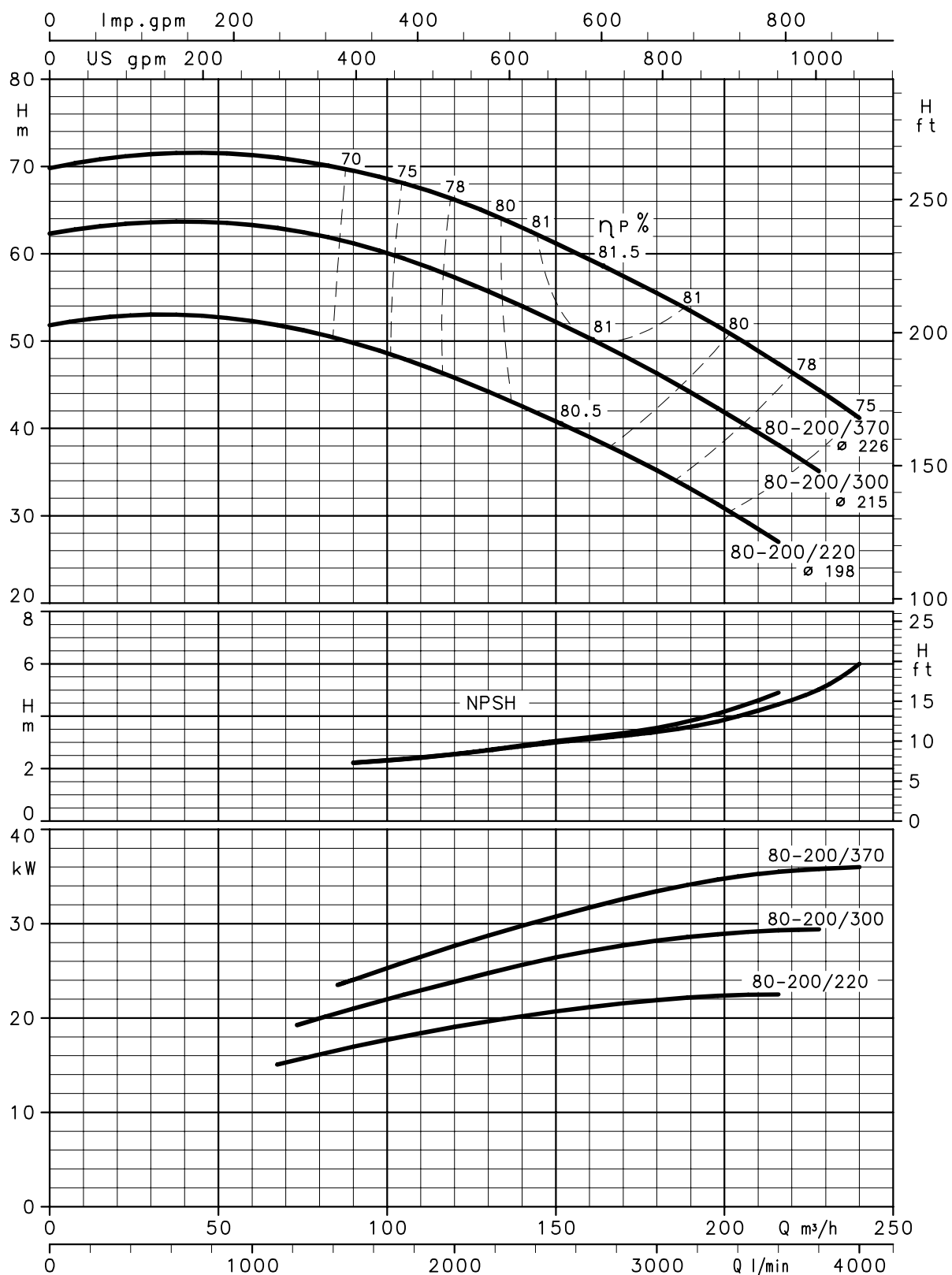


# **GSHE-GSHS-GSHF SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES**

GSHE-GSHS-GSHF 80-200

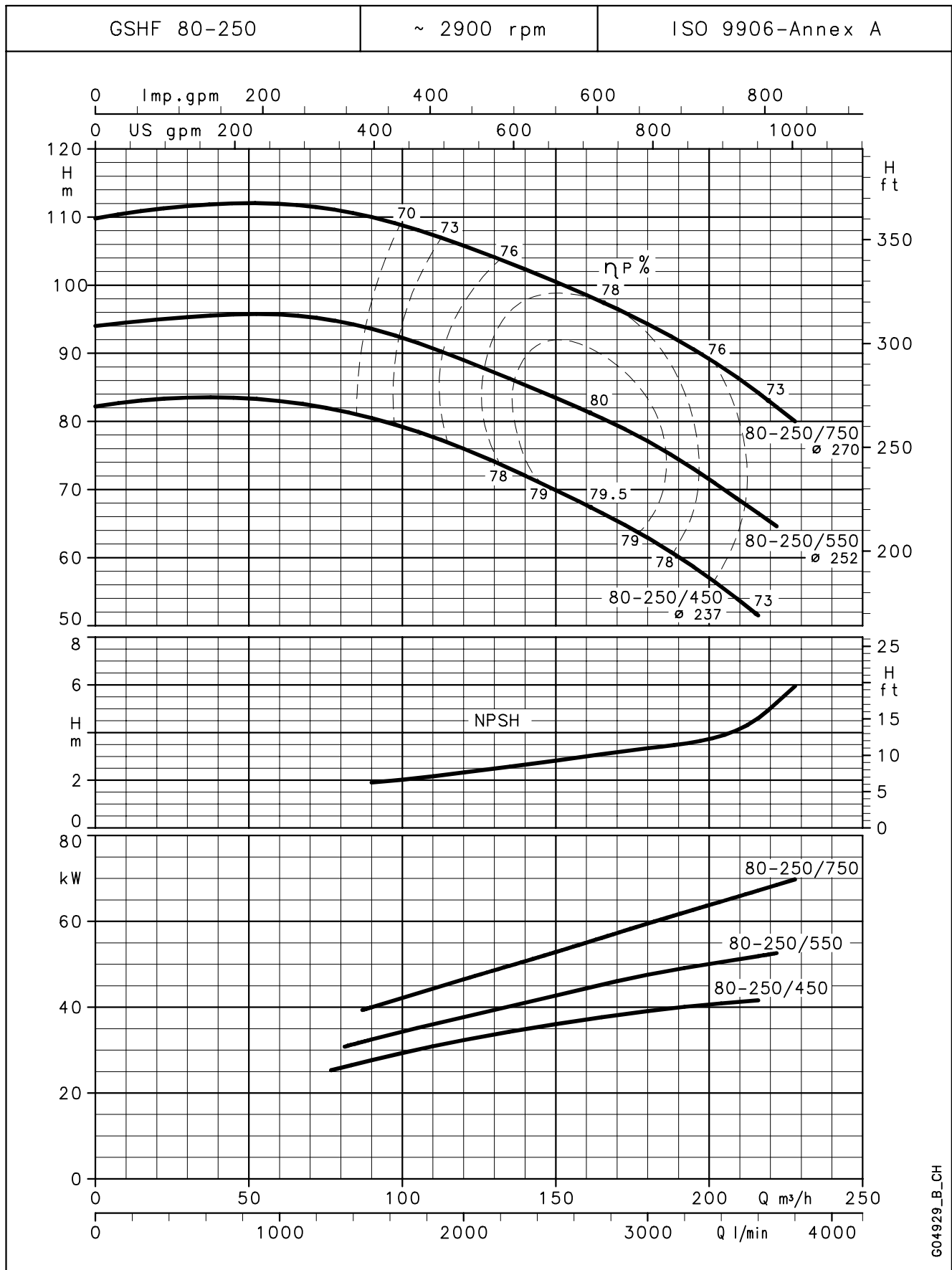
~ 2900 rpm

ISO 9906-Annex A



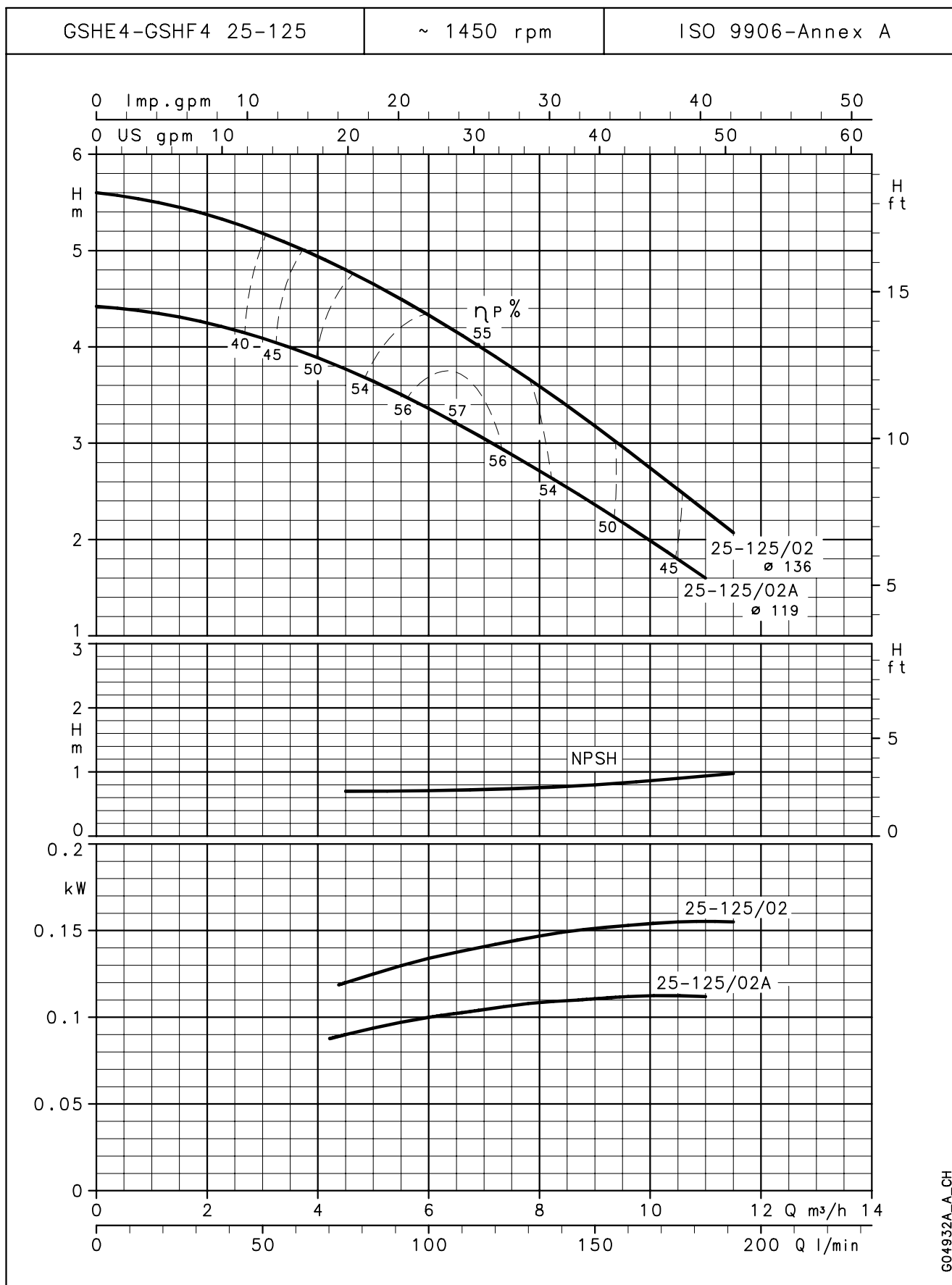
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

## GSHF SERIES OPERATING CHARACTERISTICS AT 50 Hz, 2 POLES



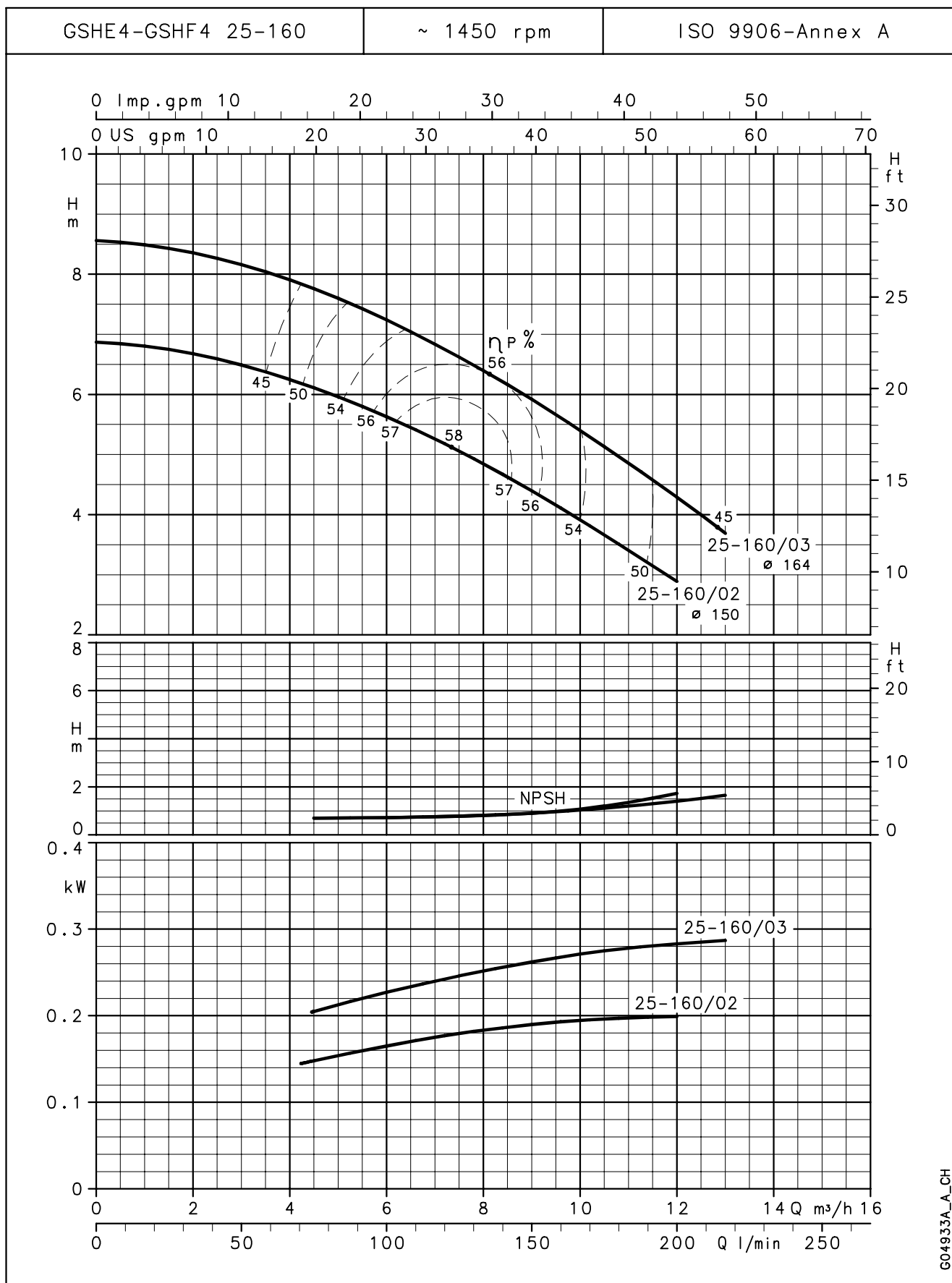
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
 These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



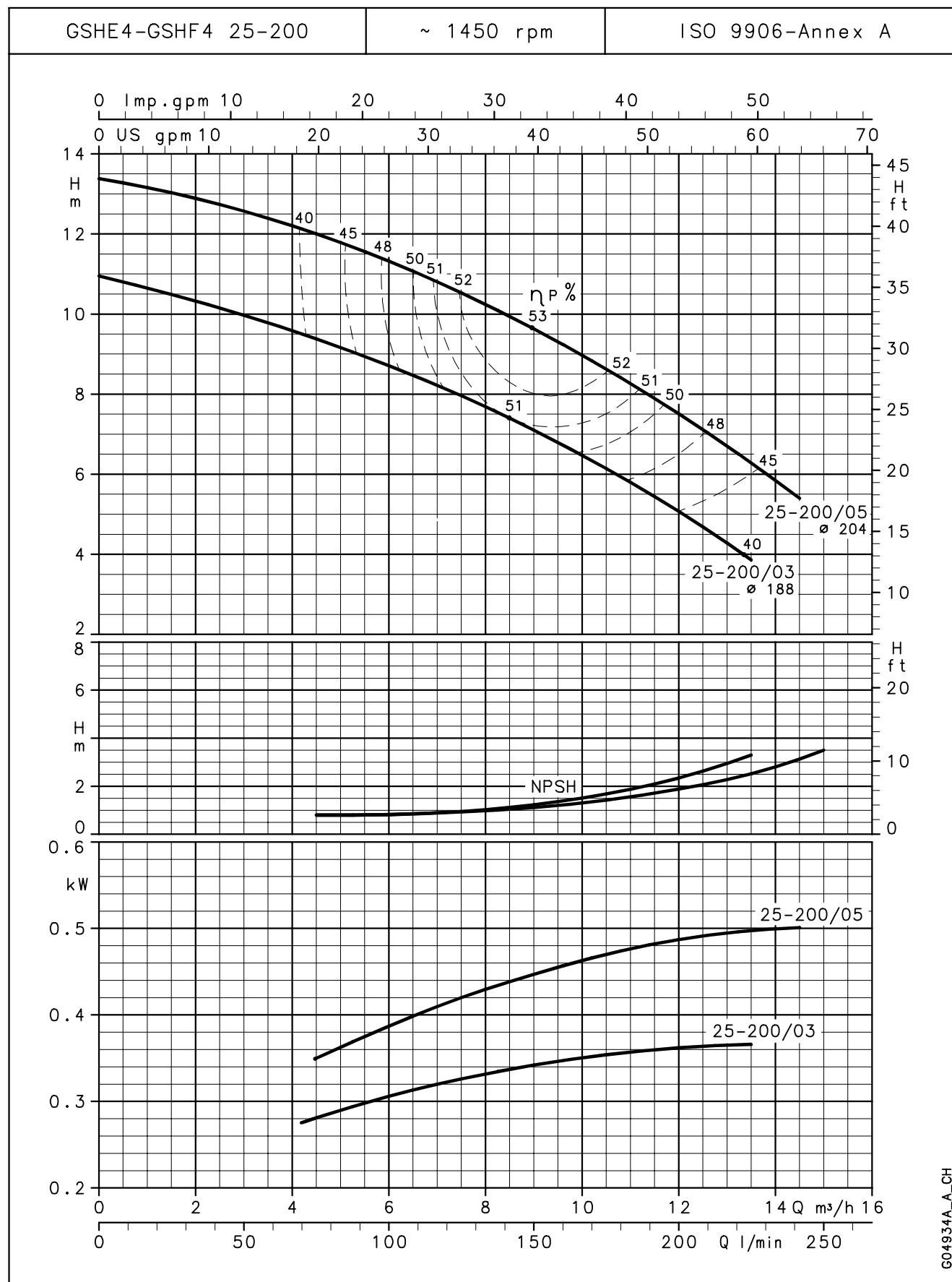
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
 These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



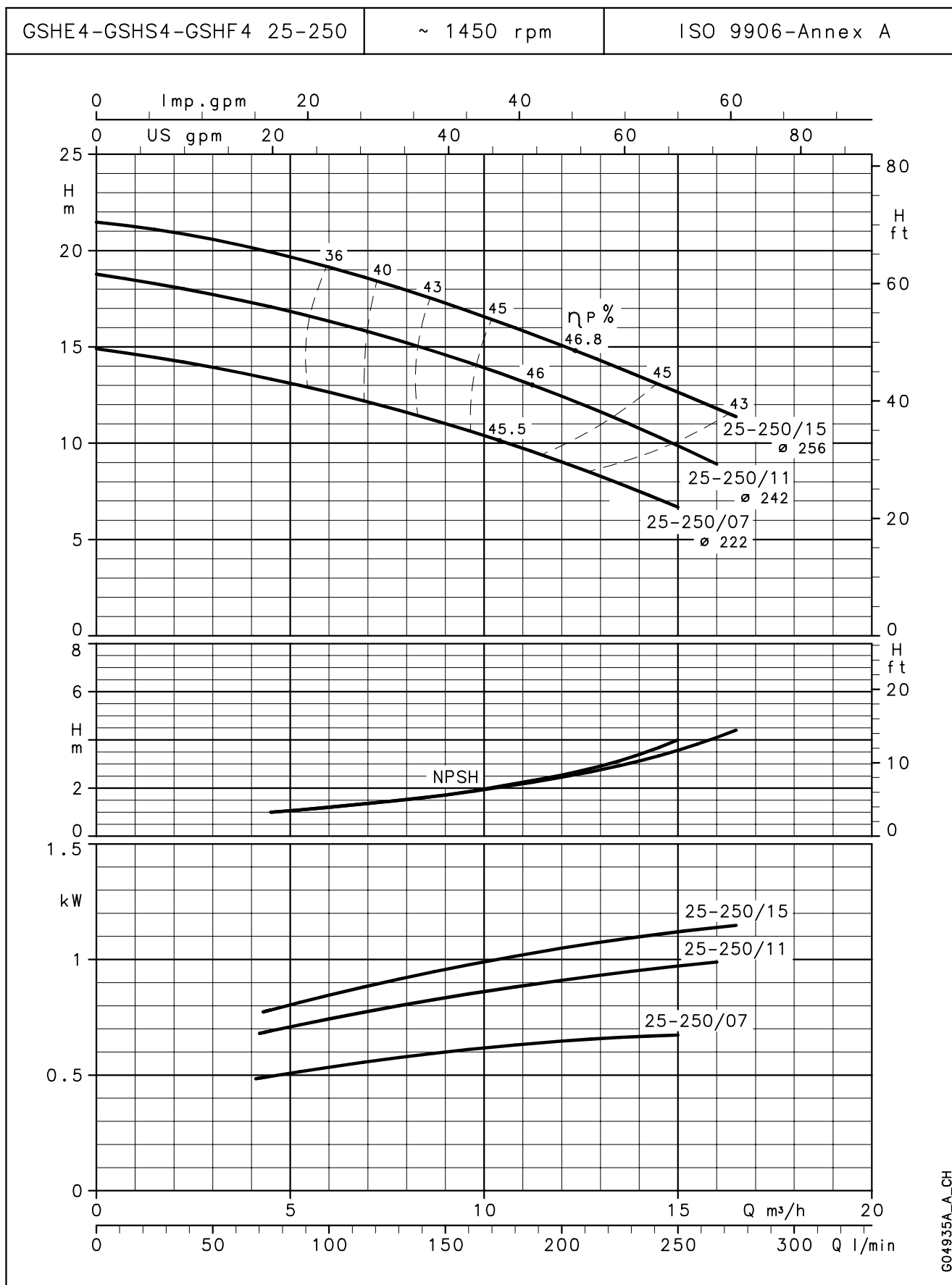
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



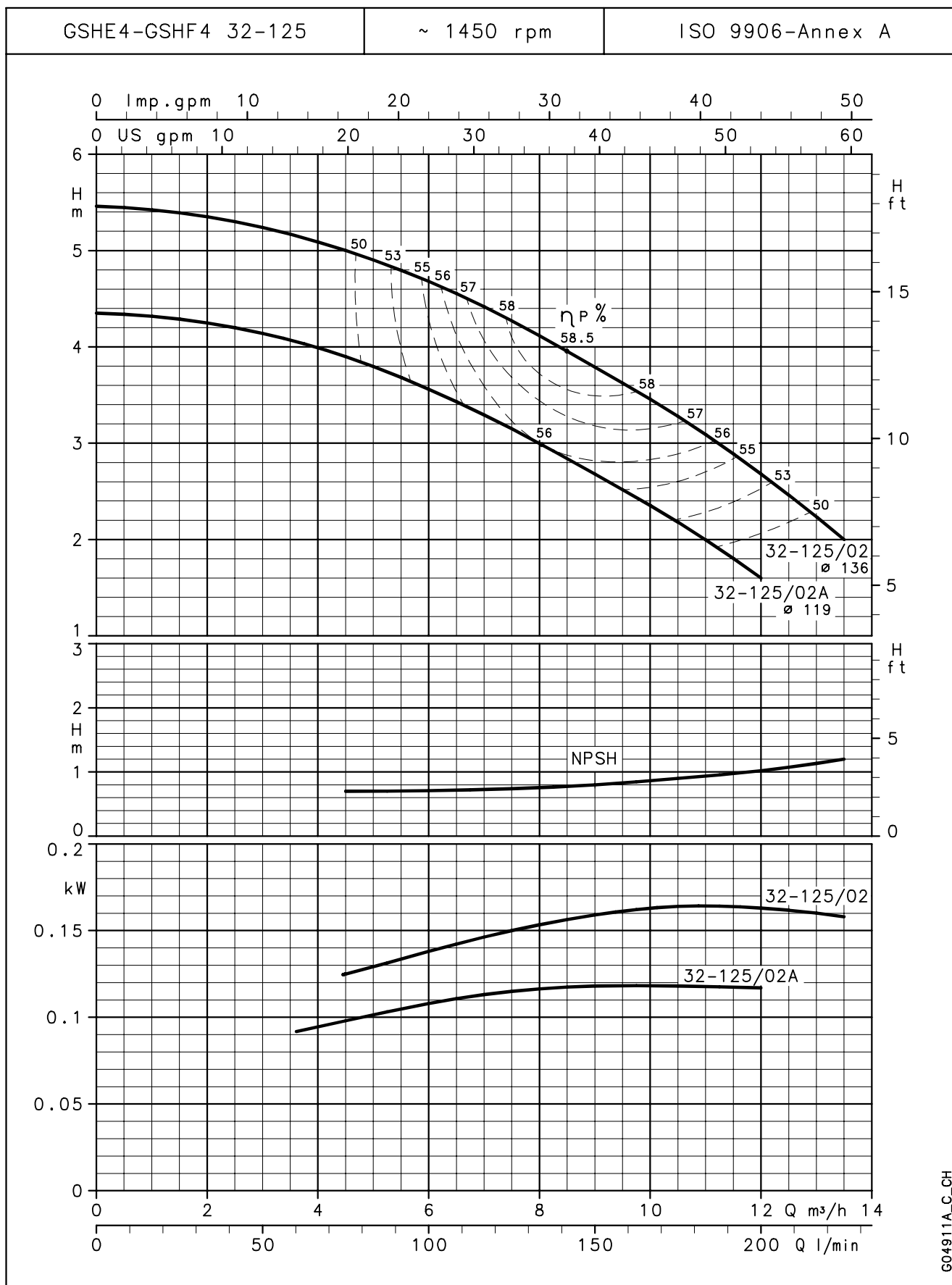
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHS4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



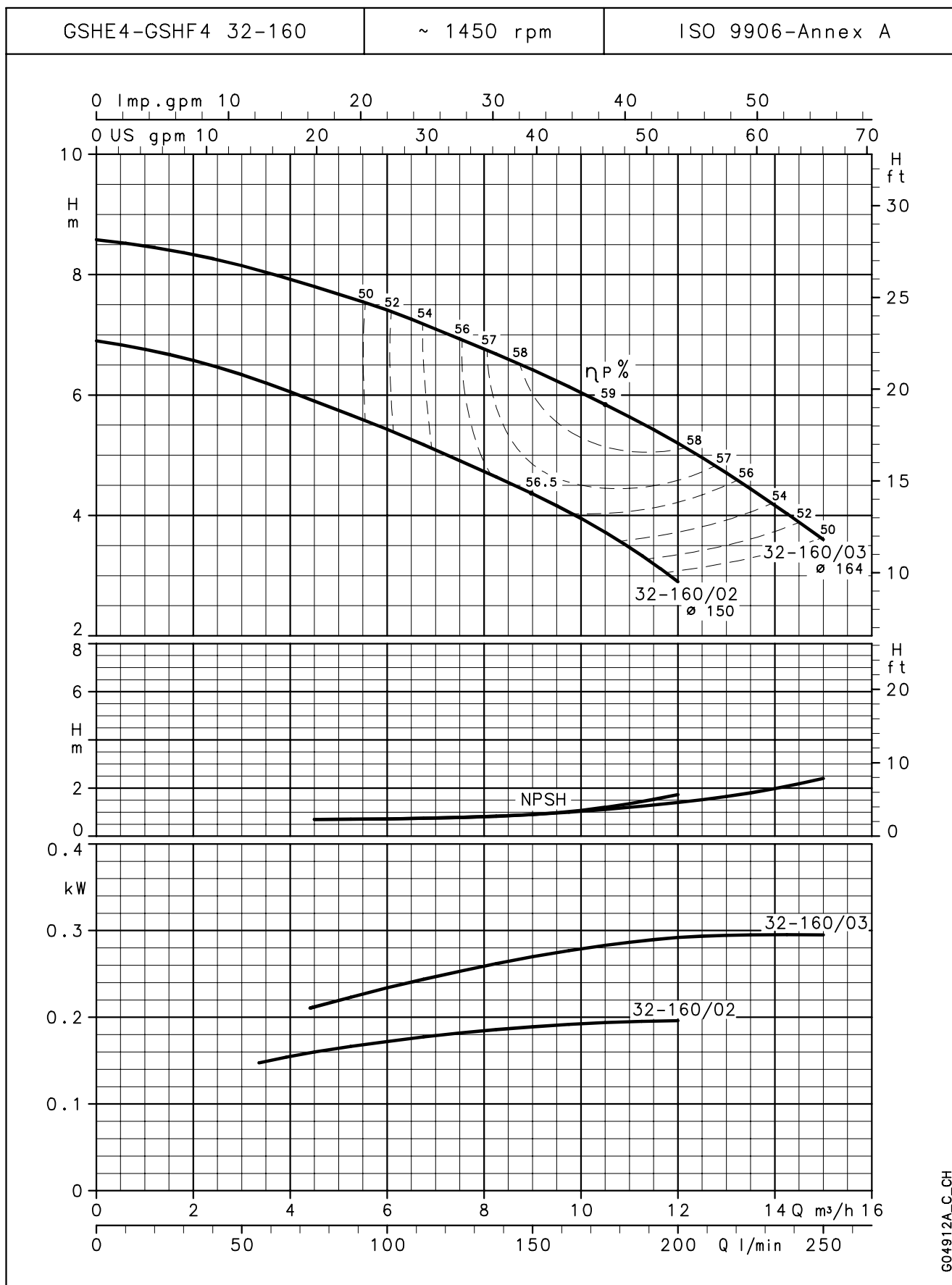
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
 These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

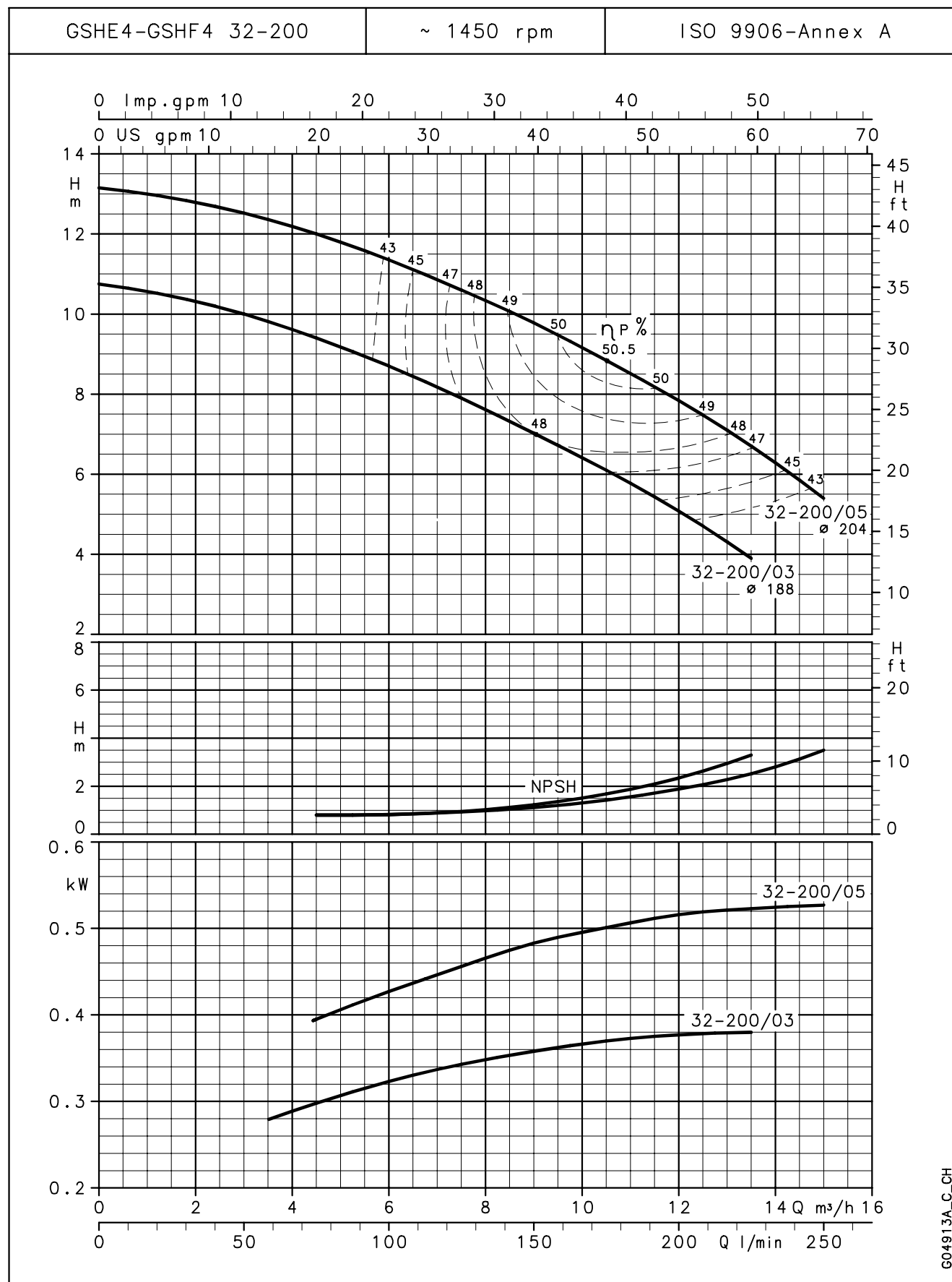
# **GSHE4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

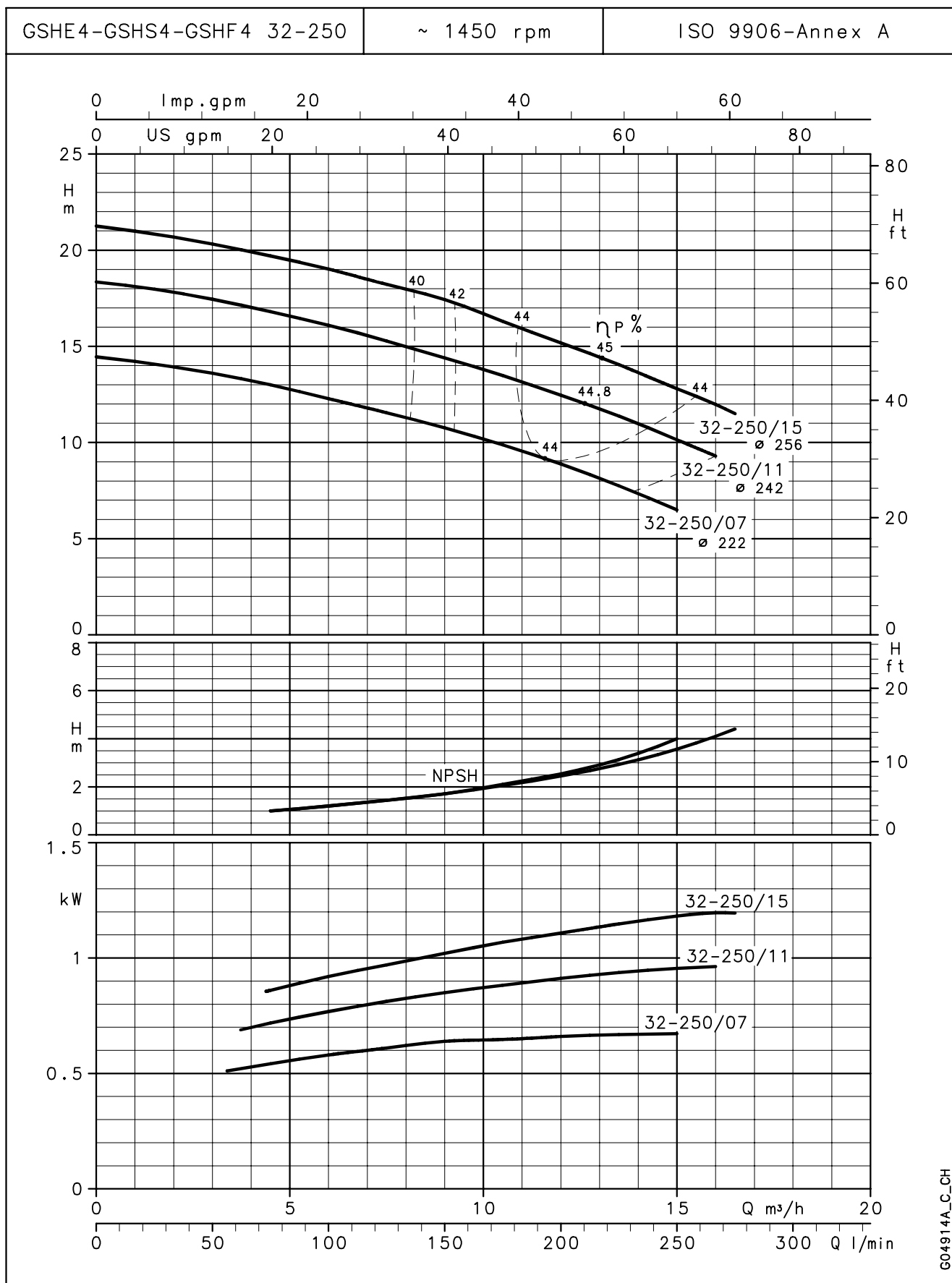


# **GSHE4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



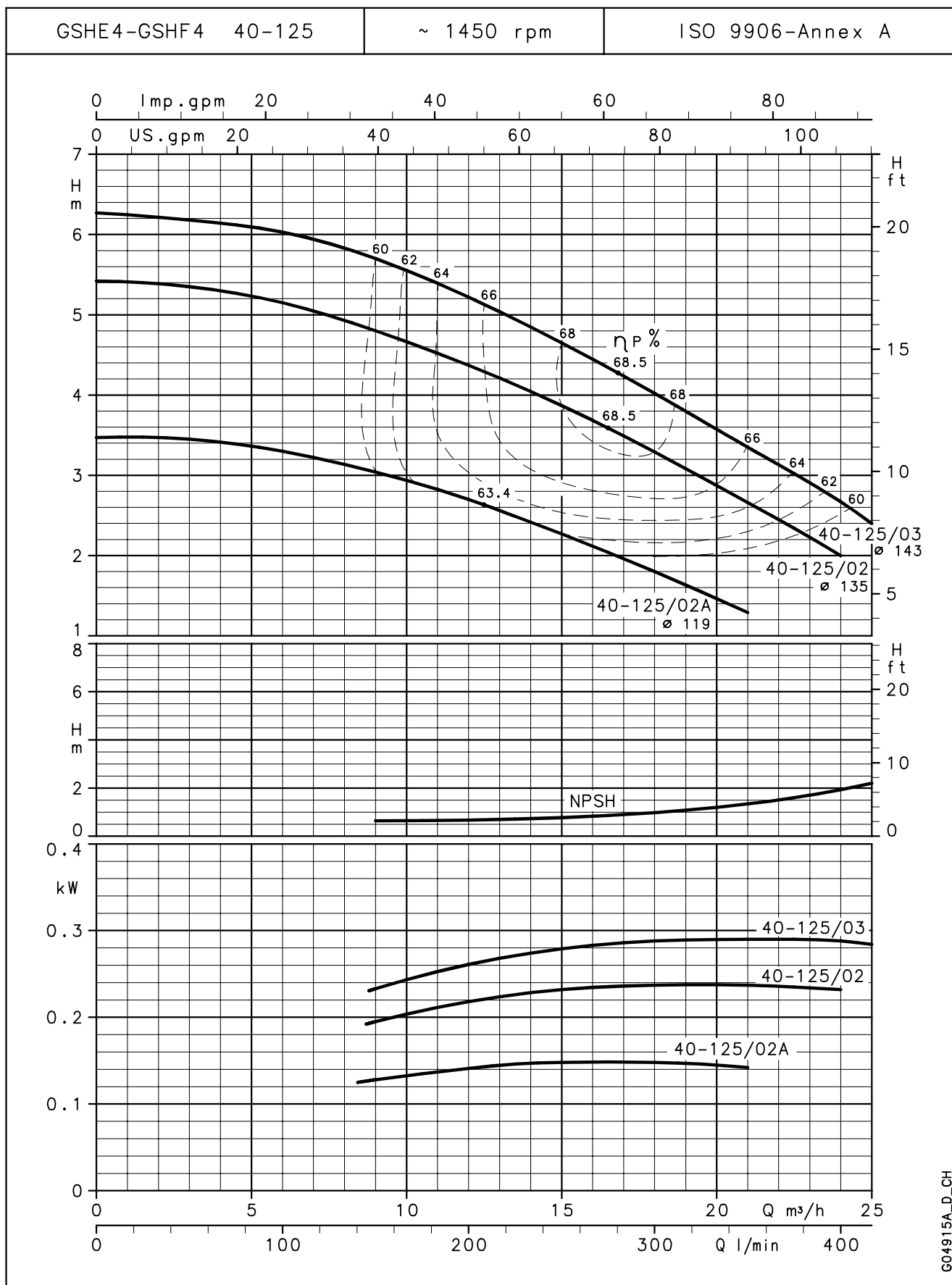
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
 These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHS4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



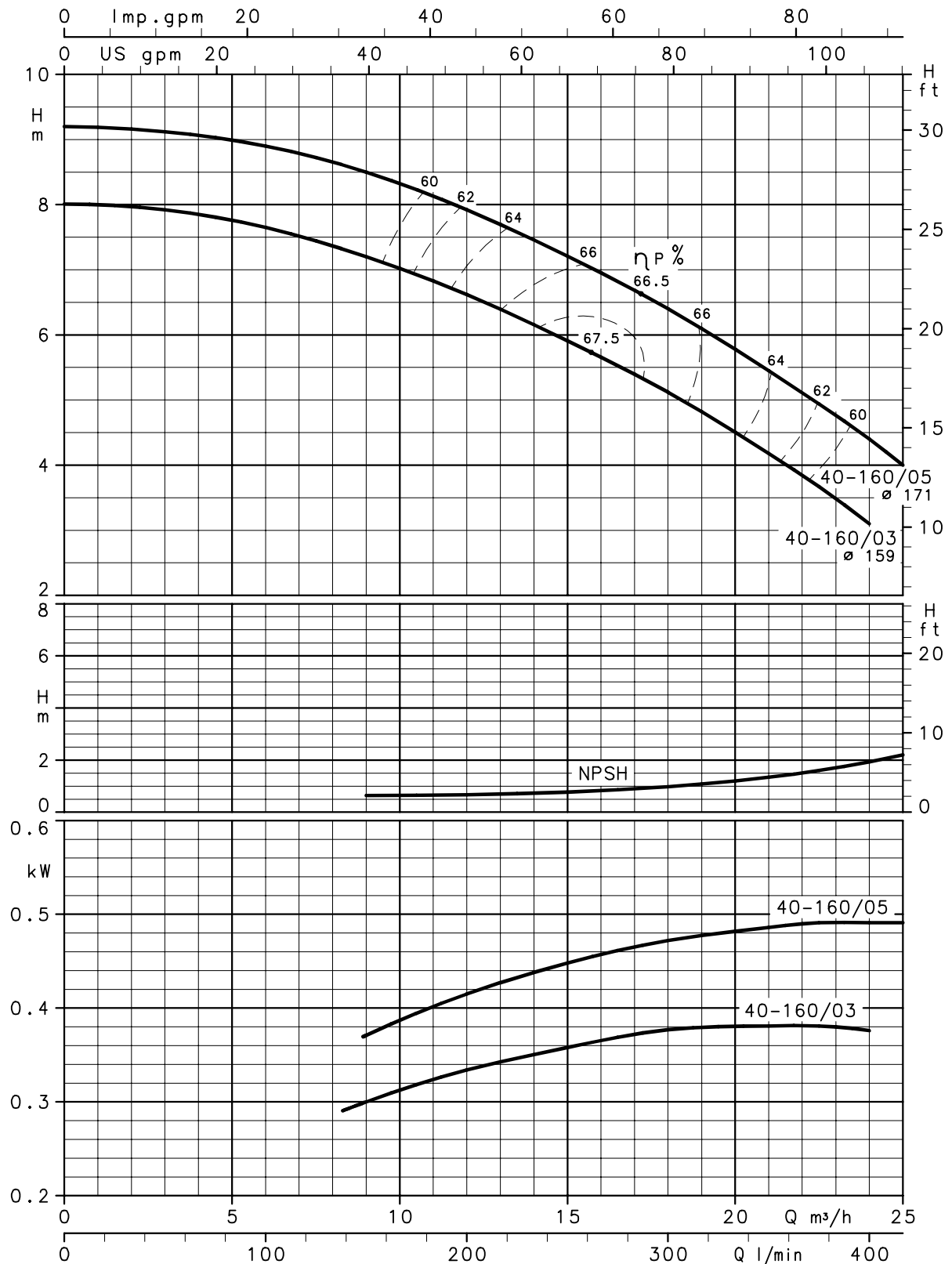
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**

GSHE4-GSHF4 40-160

~ 1450 rpm

ISO 9906-Annex A



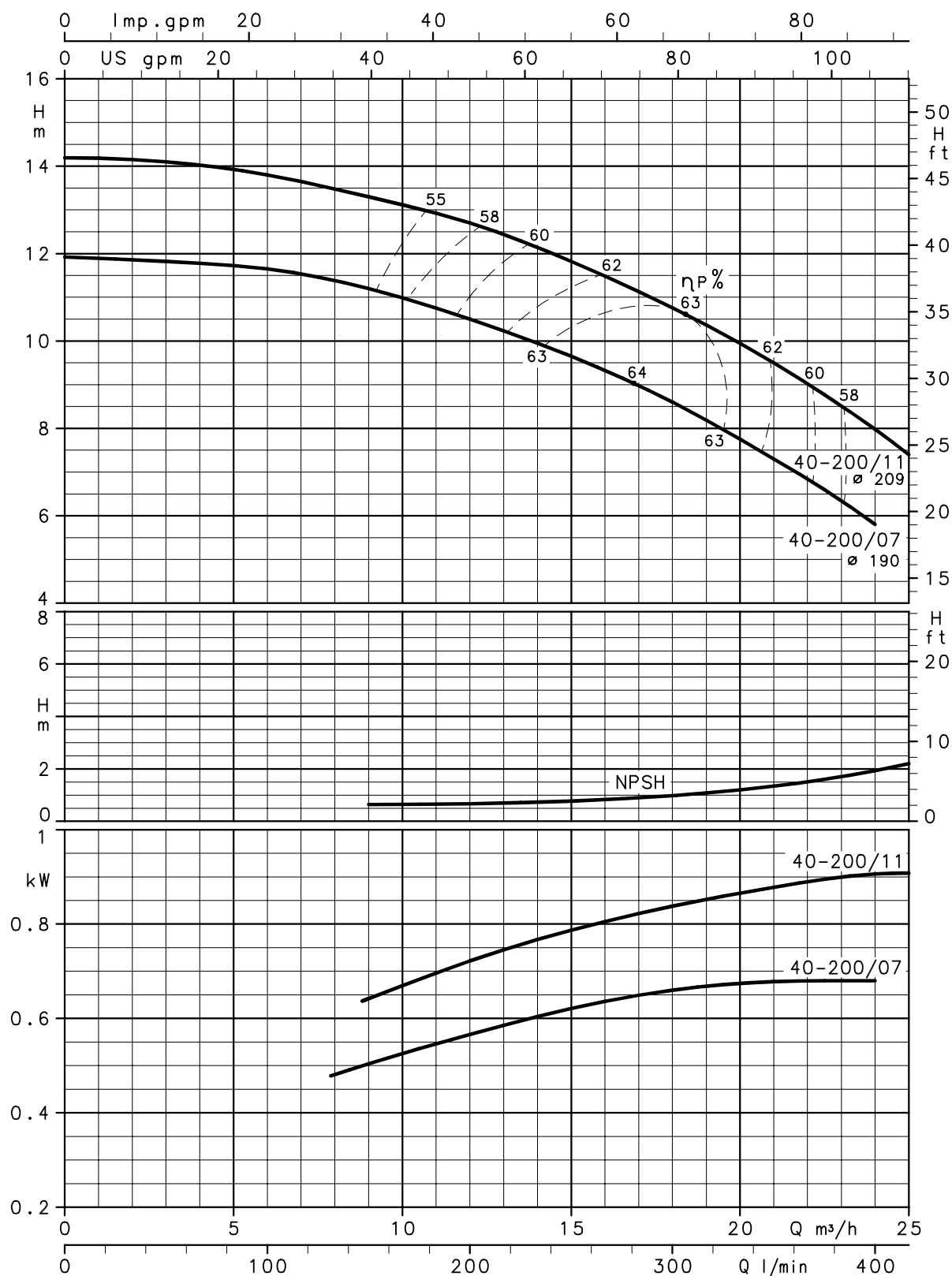
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHS4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**

GSHE4-GSHS4-GSHF4 40-200

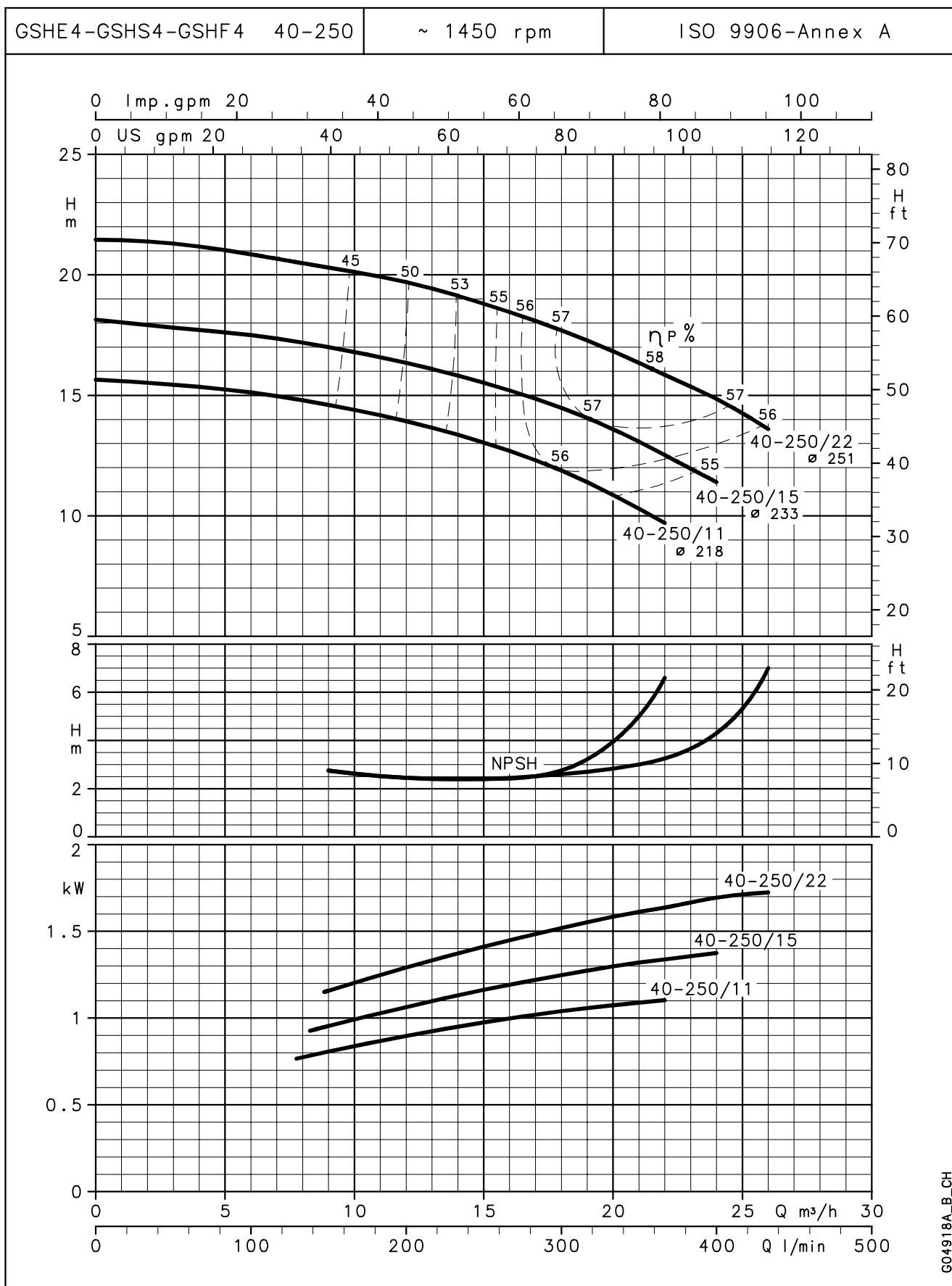
~ 1450 rpm

ISO 9906-Annex A



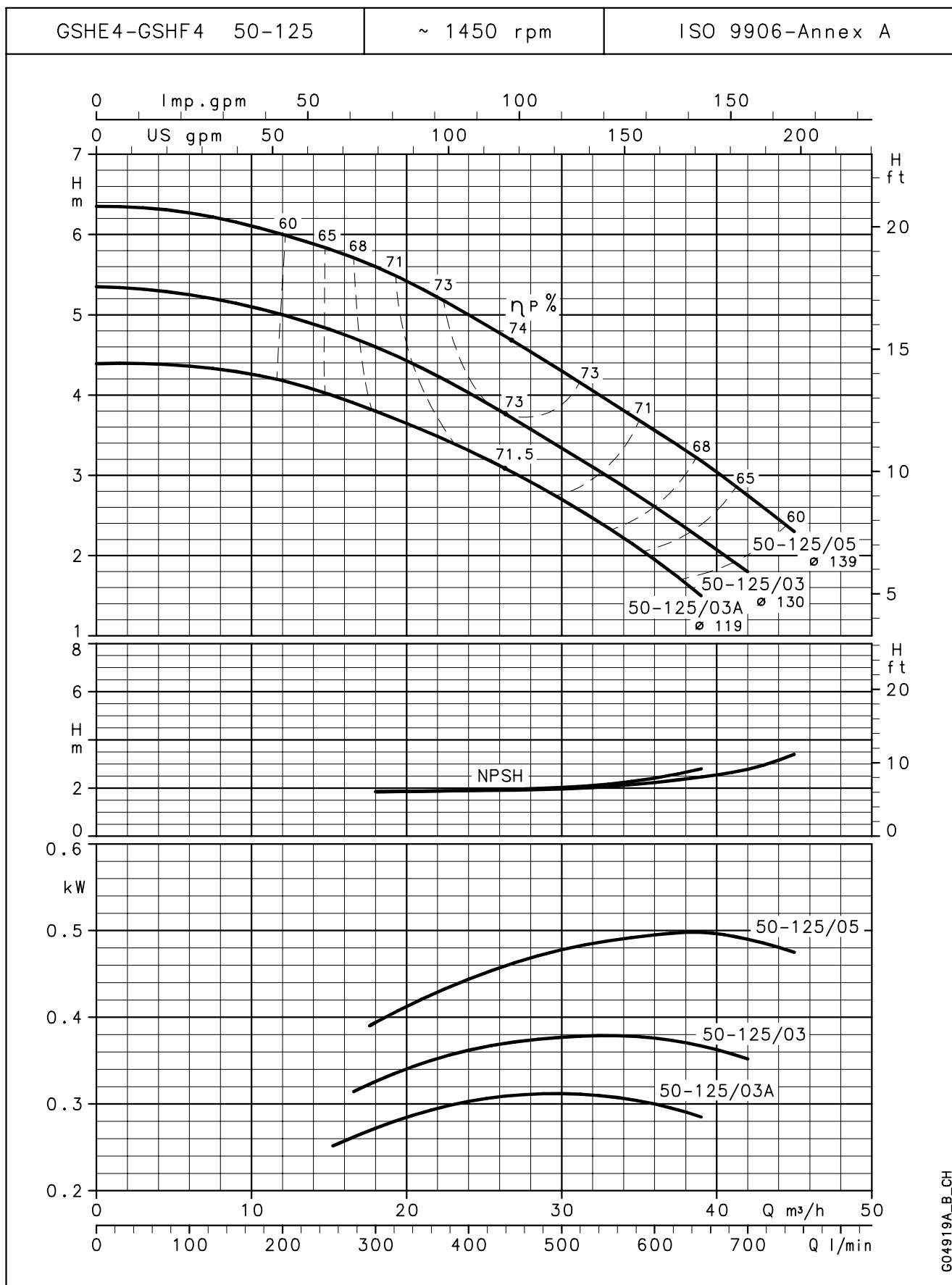
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHS4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
 These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



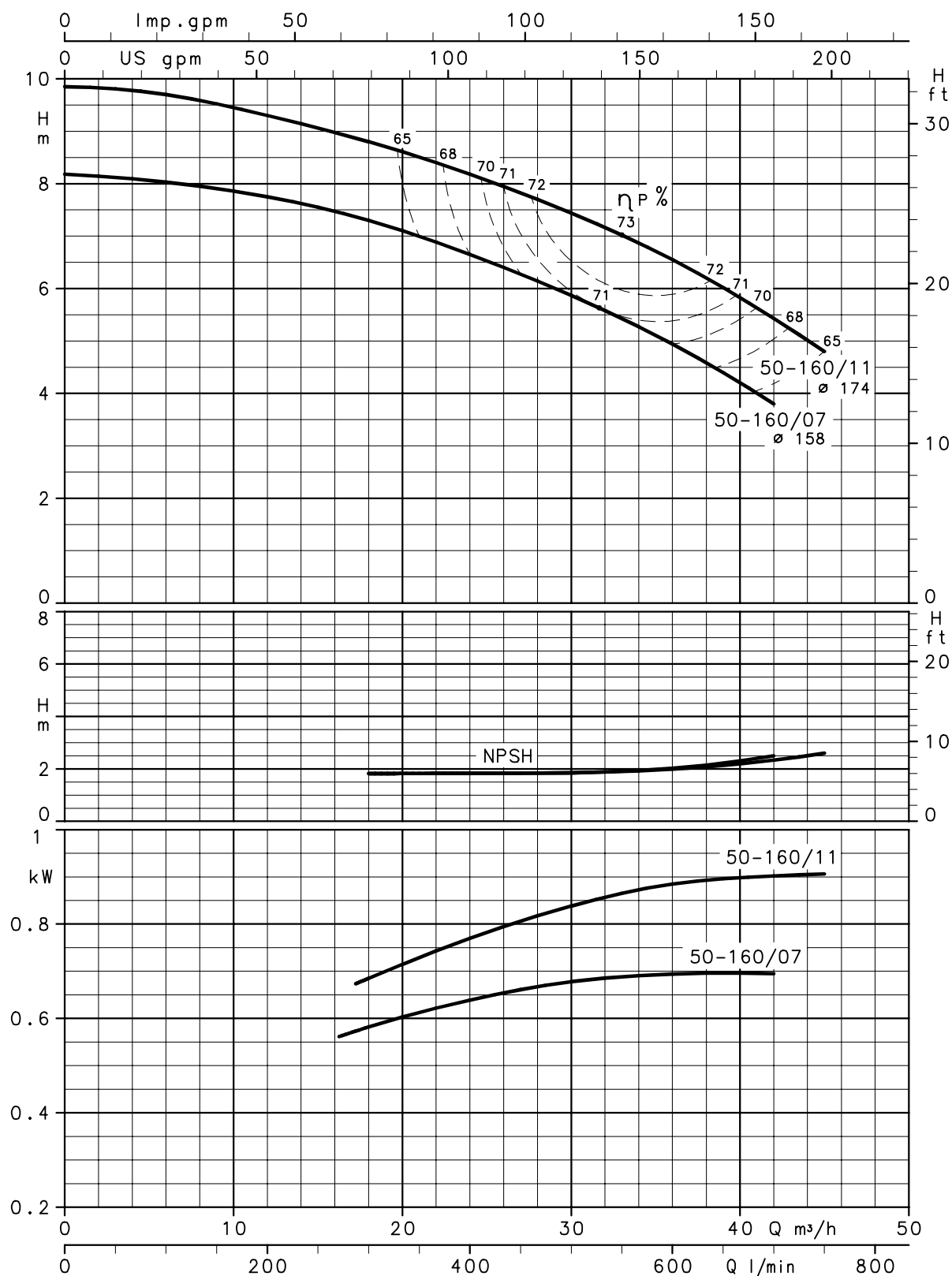
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHS4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**

GSHE4-GSHS4-GSHF4 50-160

~ 1450 rpm

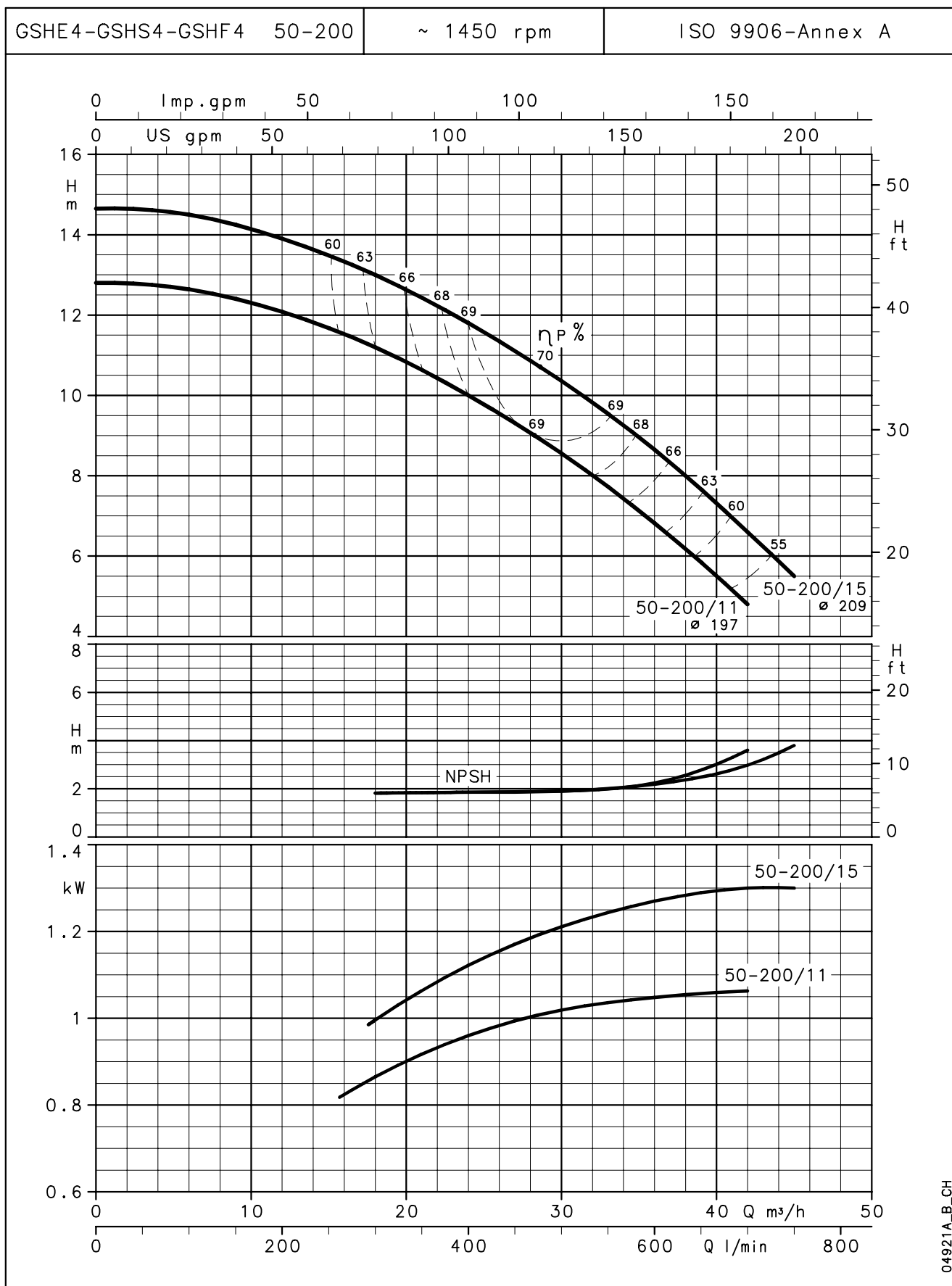
ISO 9906-Annex A



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .



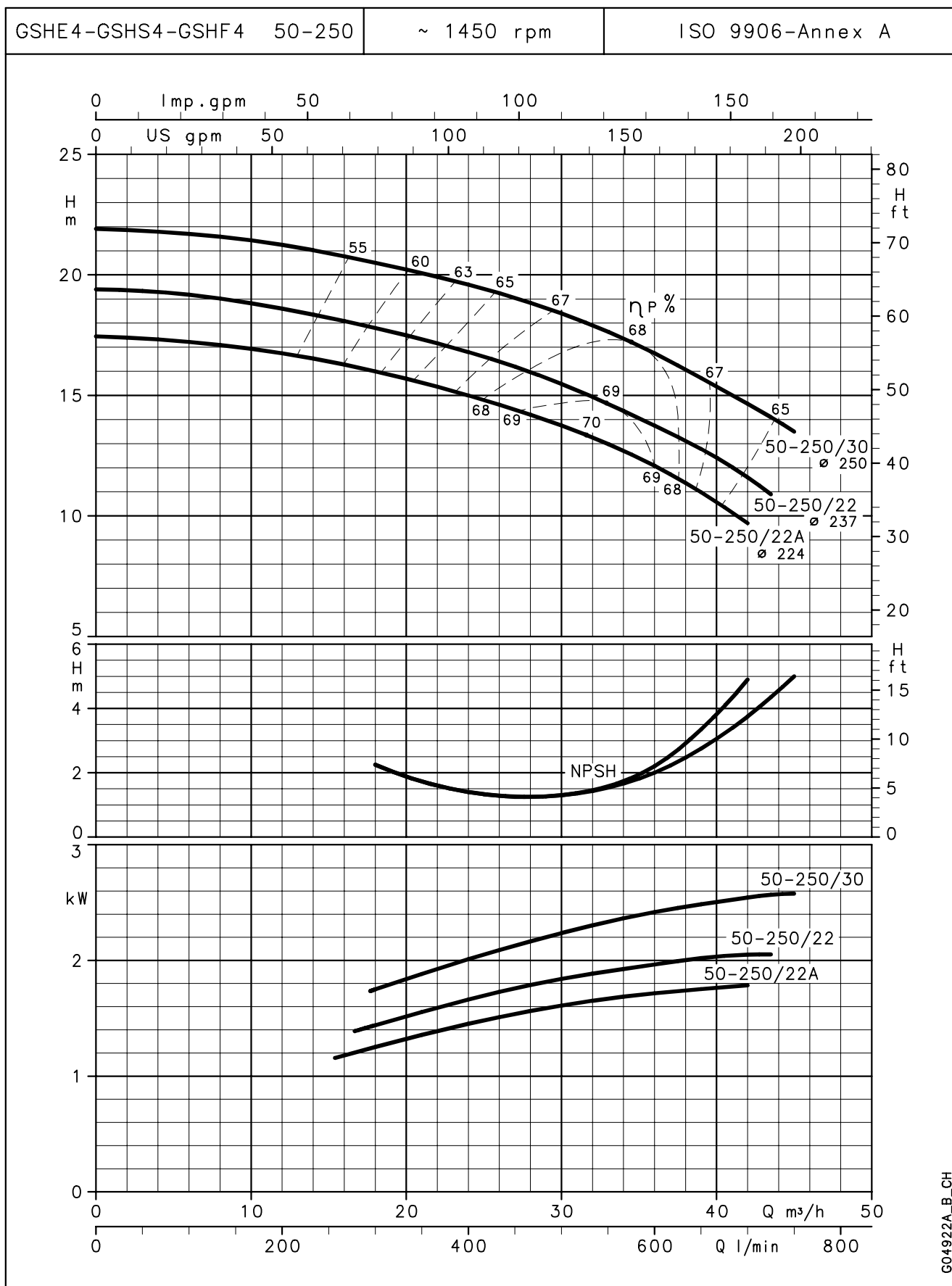
# **GSHE4-GSHS4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHS4-GSHF4 SERIES**

## **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



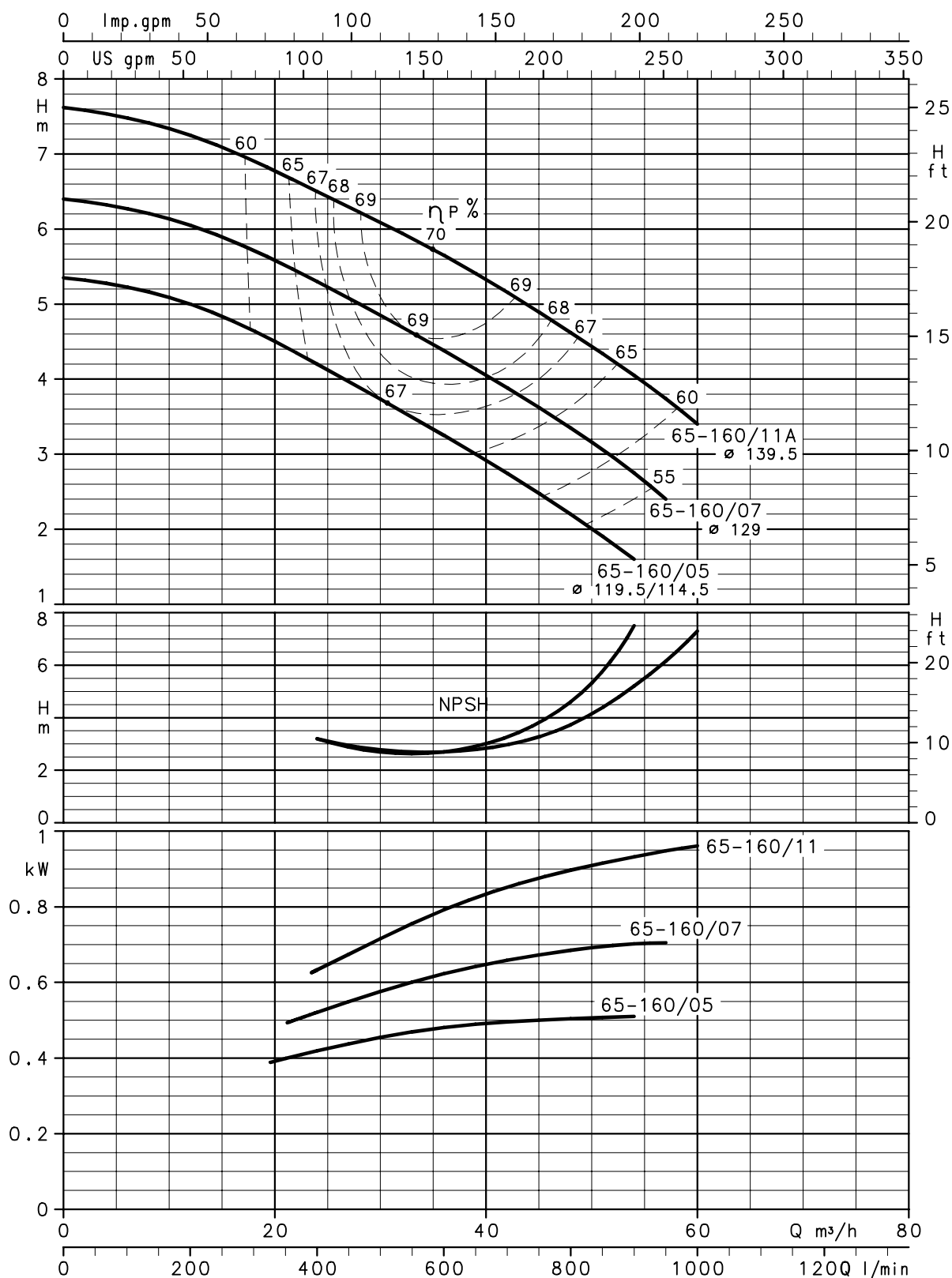
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHS4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**

GSHE4-GSHS4-GSHF4 65-160

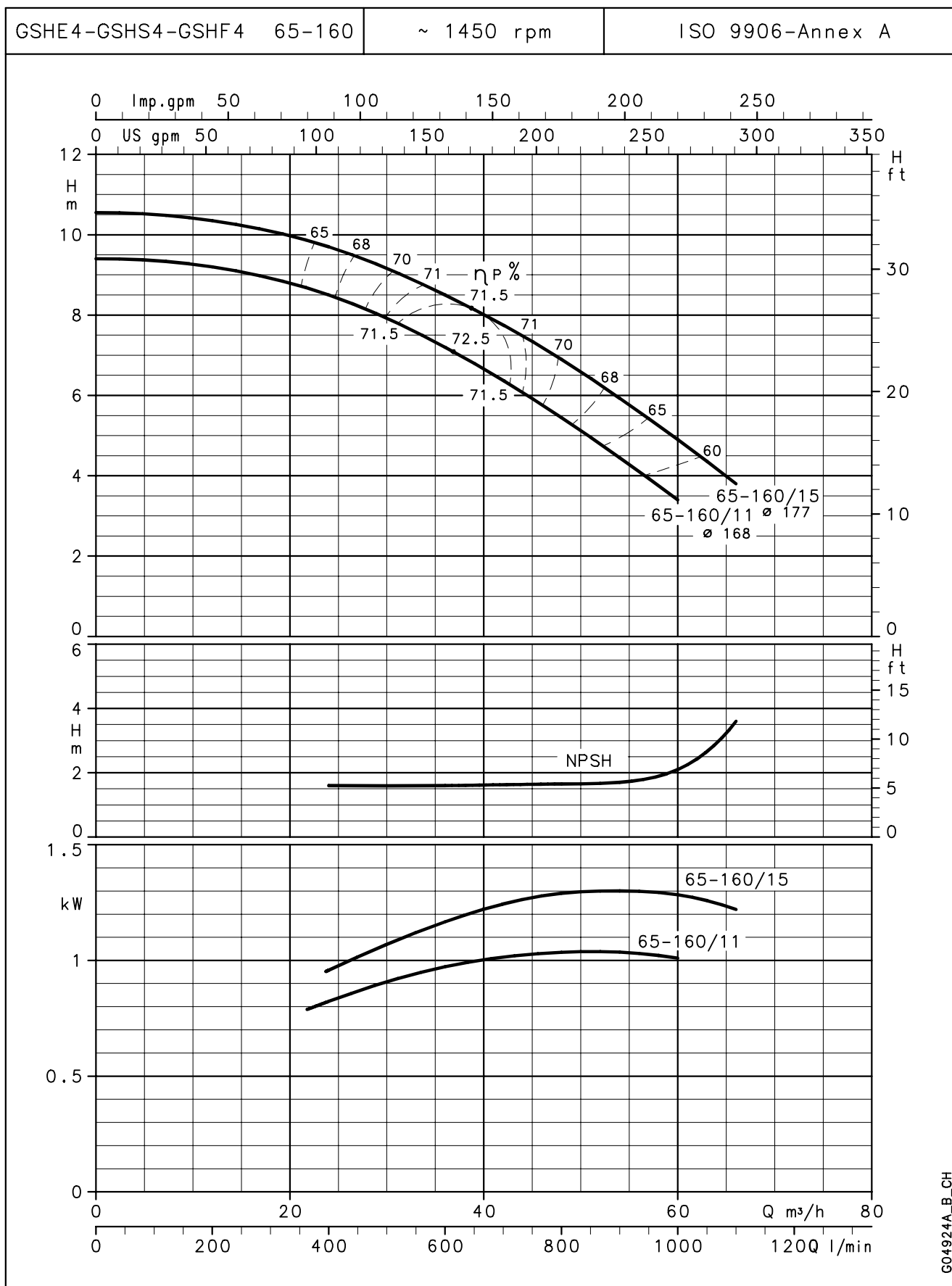
~ 1450 rpm

ISO 9906-Annex A



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHS4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



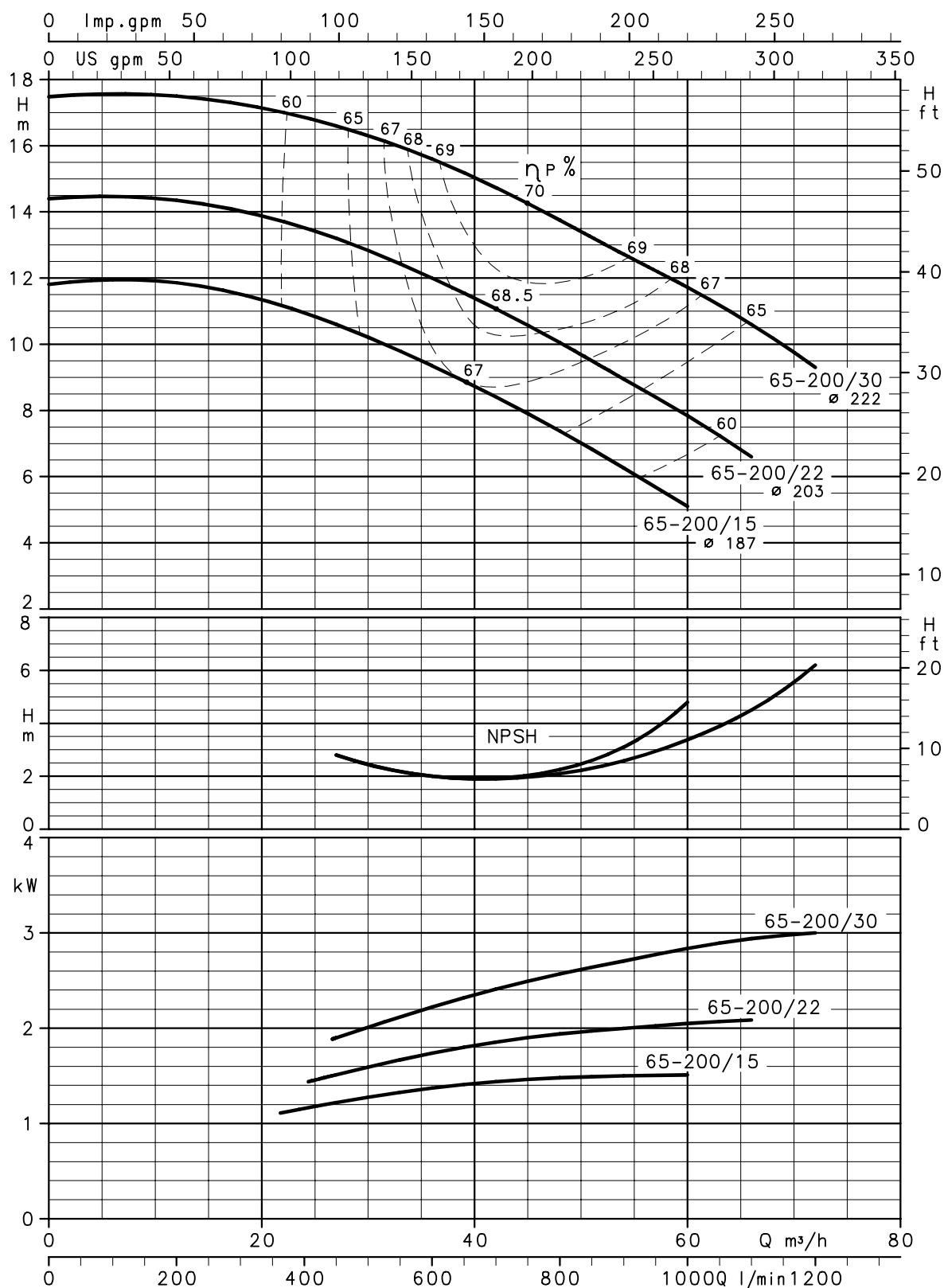
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHS4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**

GSHE4-GSHS4-GSHF4 65-200

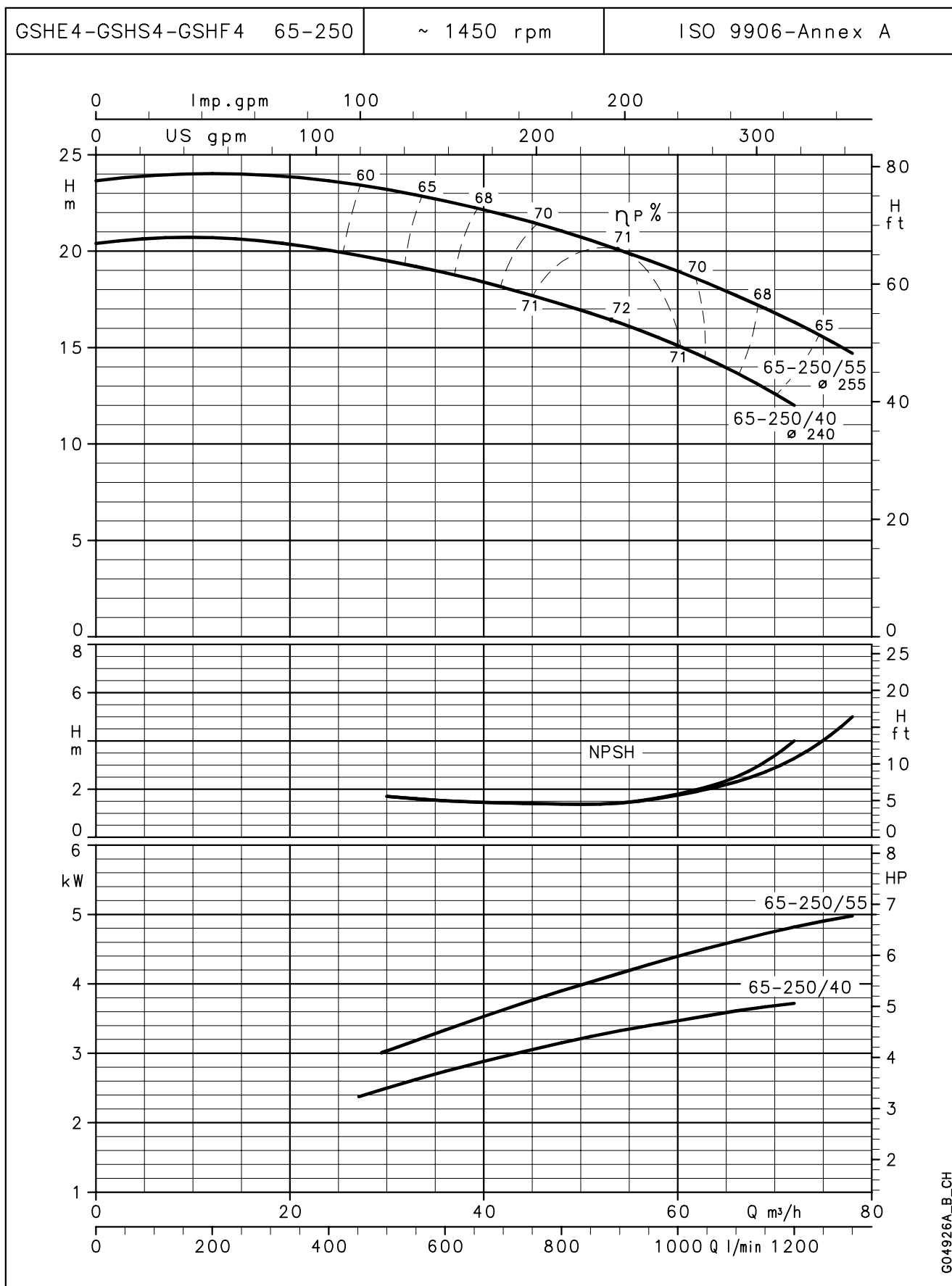
~ 1450 rpm

ISO 9906-Annex A



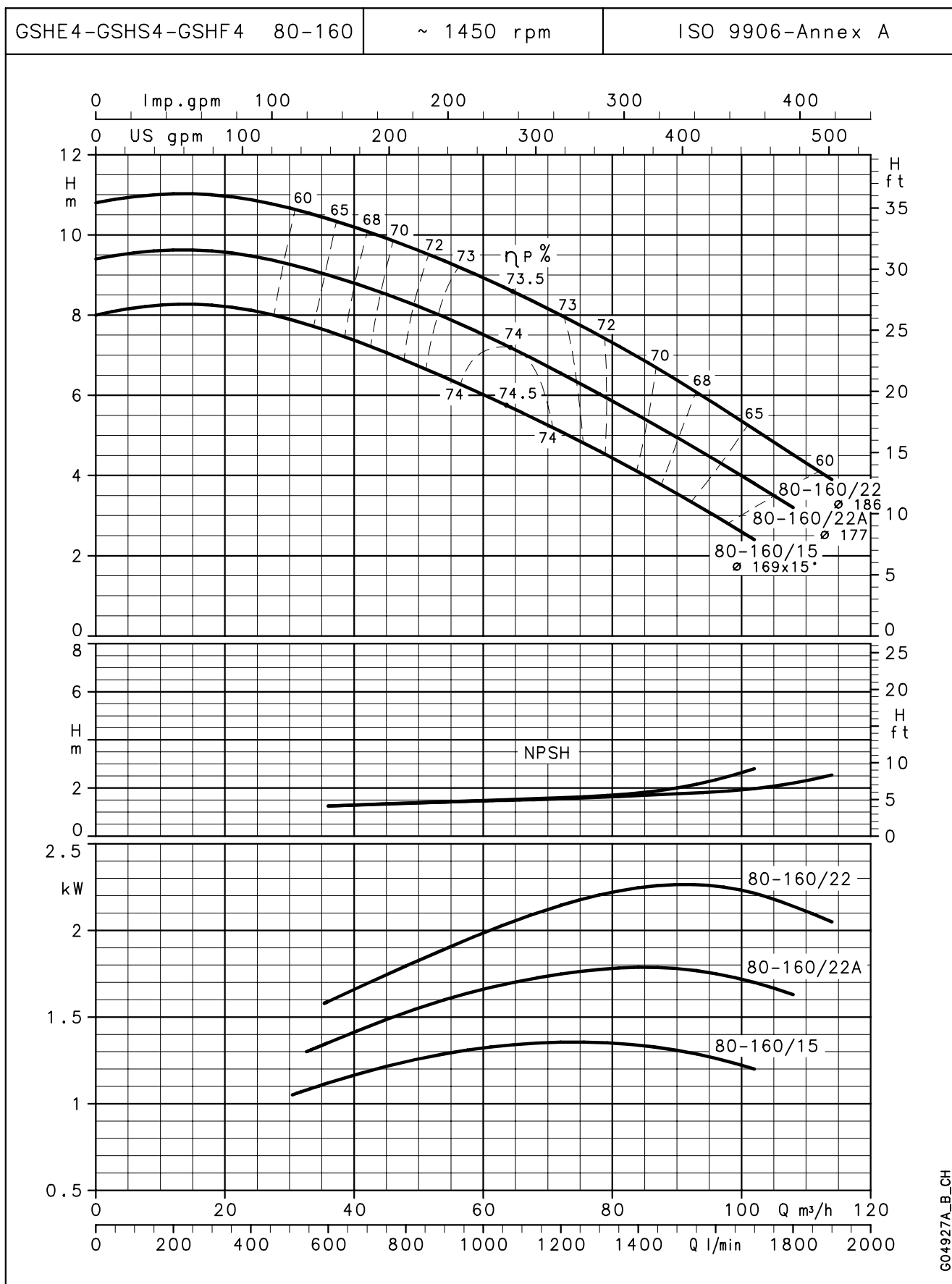
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHS4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



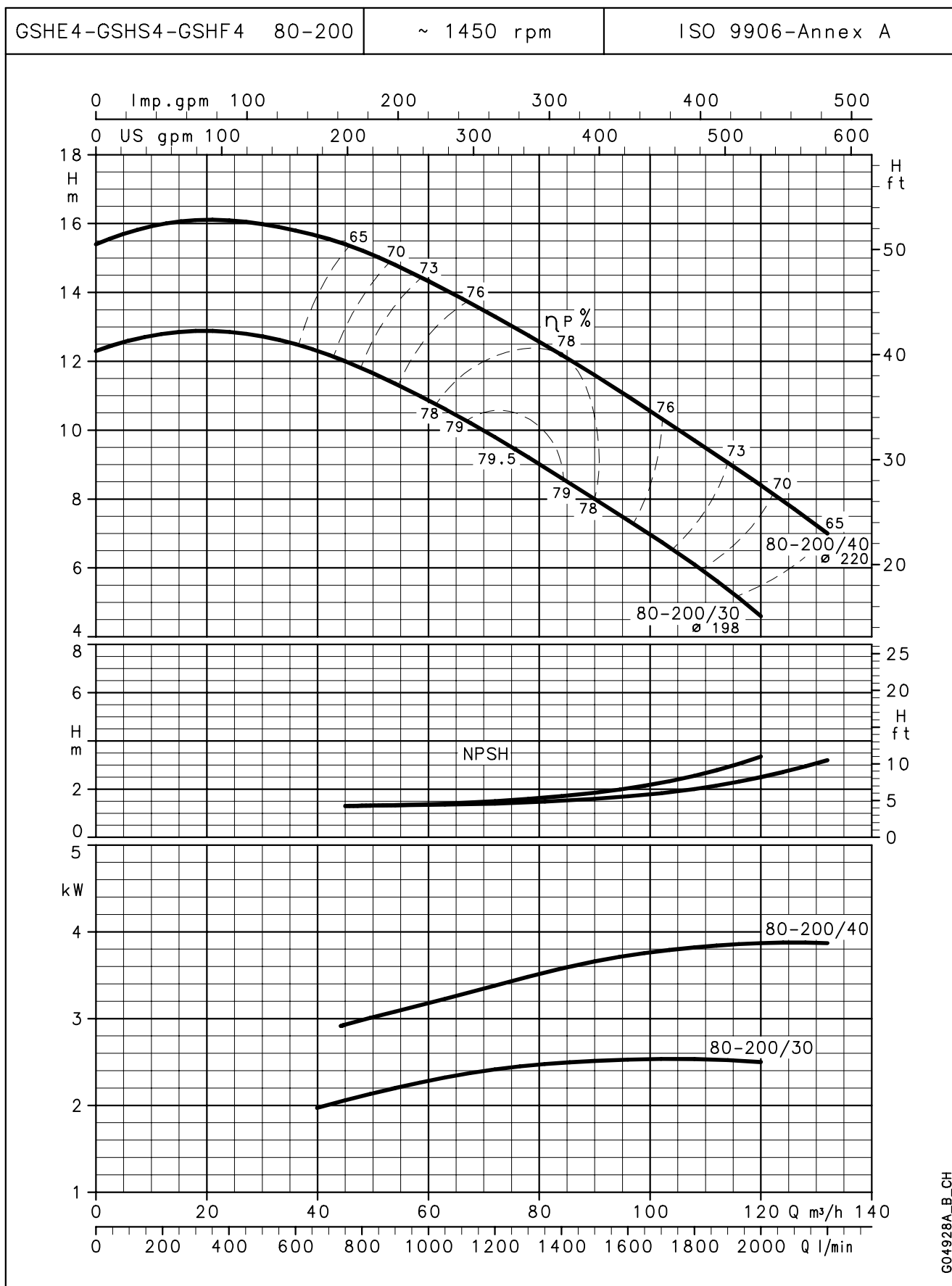
The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHS4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

# **GSHE4-GSHS4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**



The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .

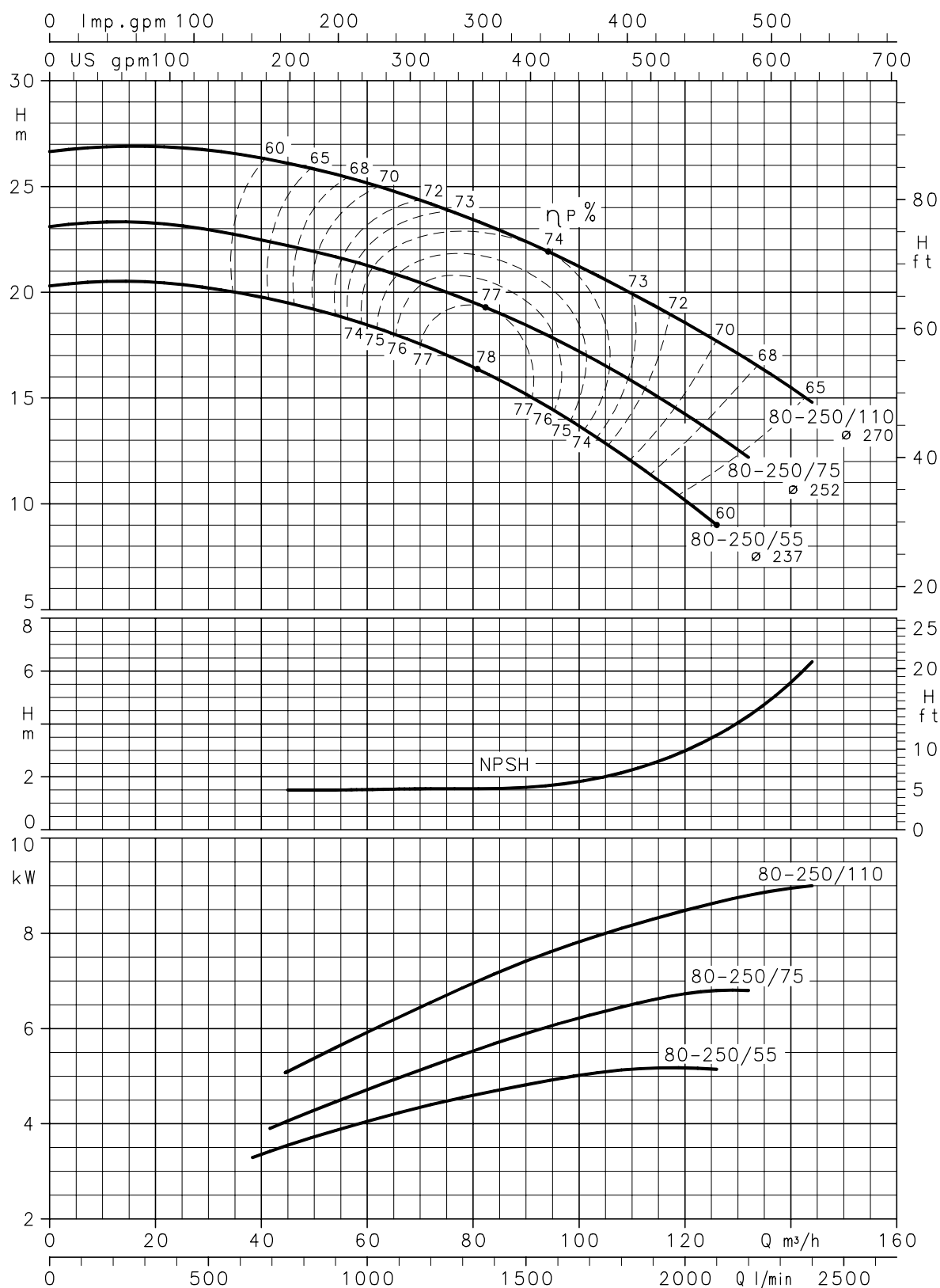


# **GSHE4-GSHS4-GSHF4 SERIES** **OPERATING CHARACTERISTICS AT 50 Hz, 4 POLES**

GSHE4-GSHS4-GSHF4 80-250

~ 1450 rpm

ISO 9906-Annex A

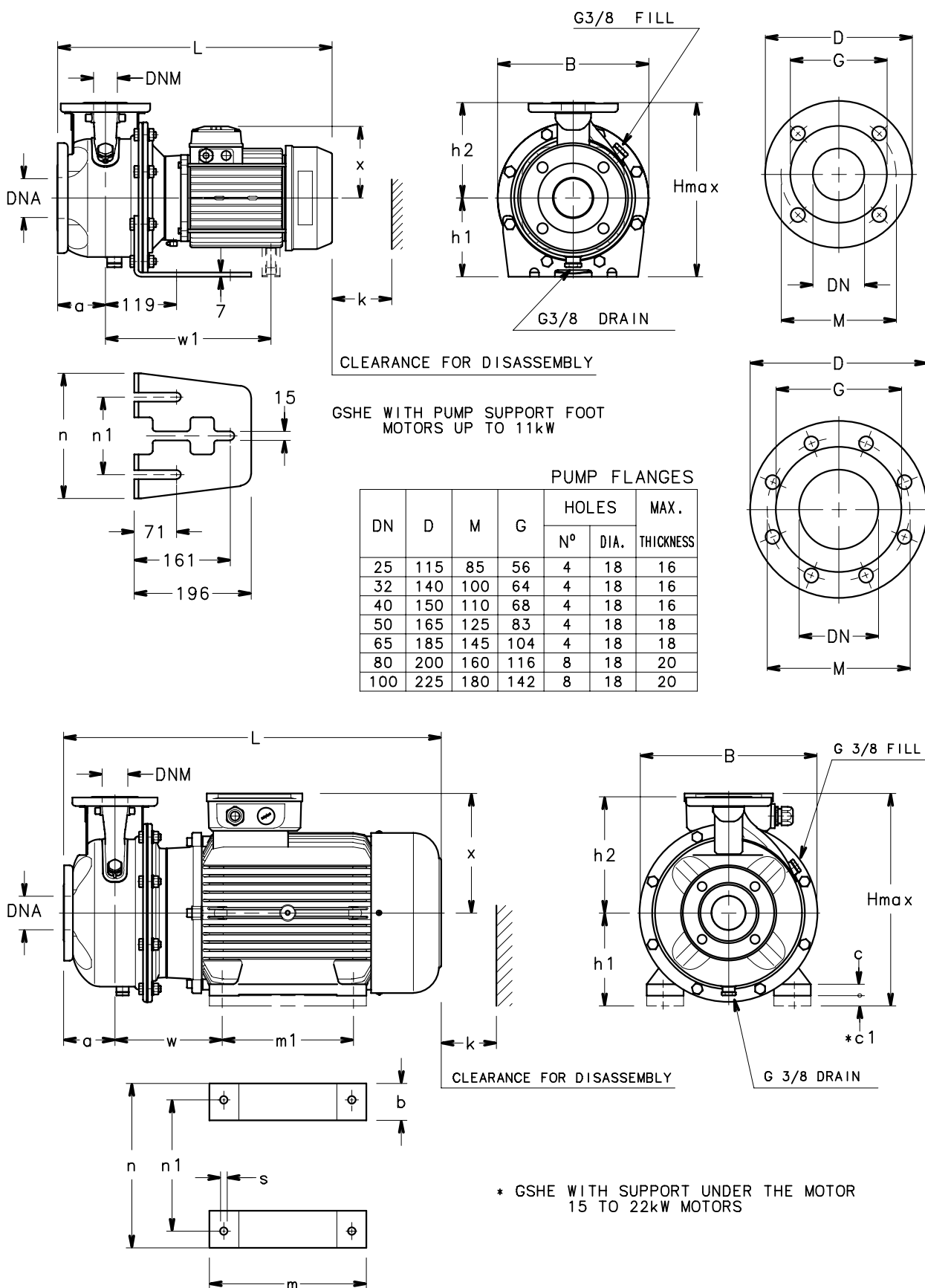


The NPSH values are laboratory values; for practical use we suggest increasing these values by 0,5 m.  
These performances are valid for liquids with density  $\rho = 1,0 \text{ Kg/dm}^3$  and kinematic viscosity  $\nu = 1 \text{ mm}^2/\text{sec}$ .



# **DIMENSIONS AND WEIGHTS**

## GSHE SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



GO4903D-EN\_E\_DD

## GSHE SERIES

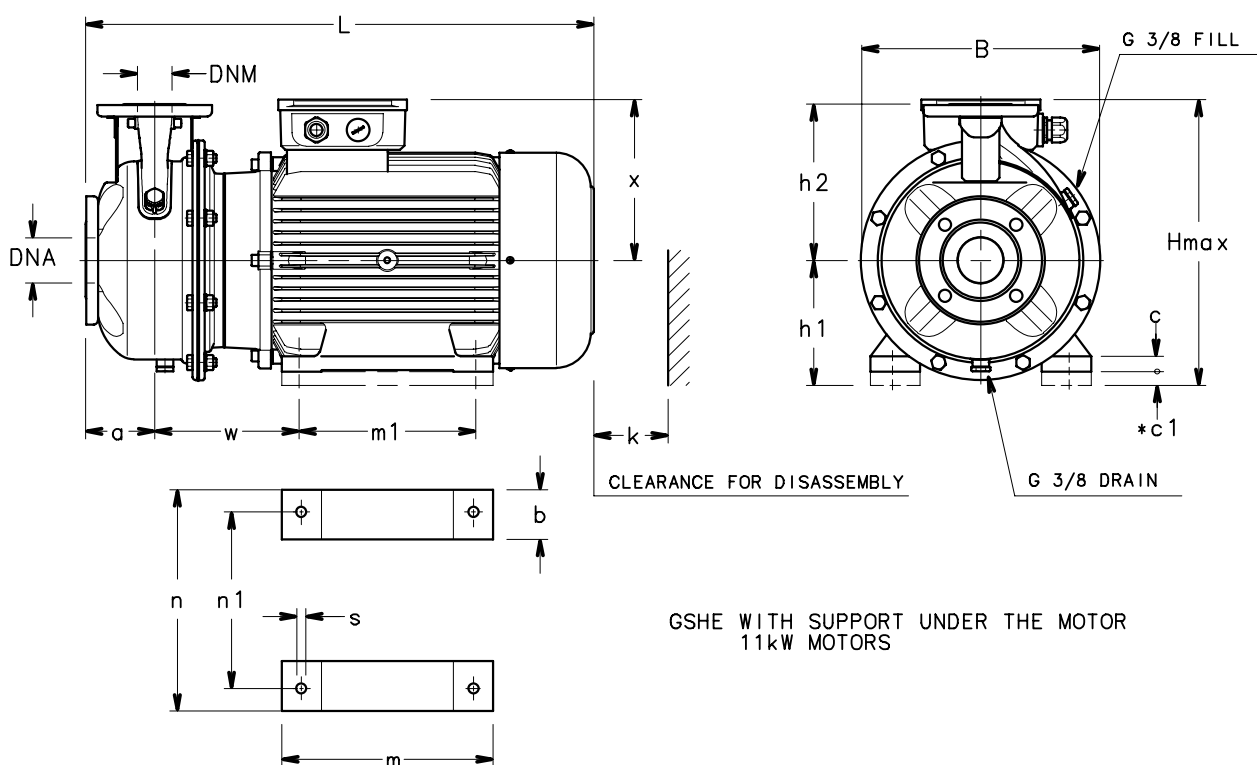
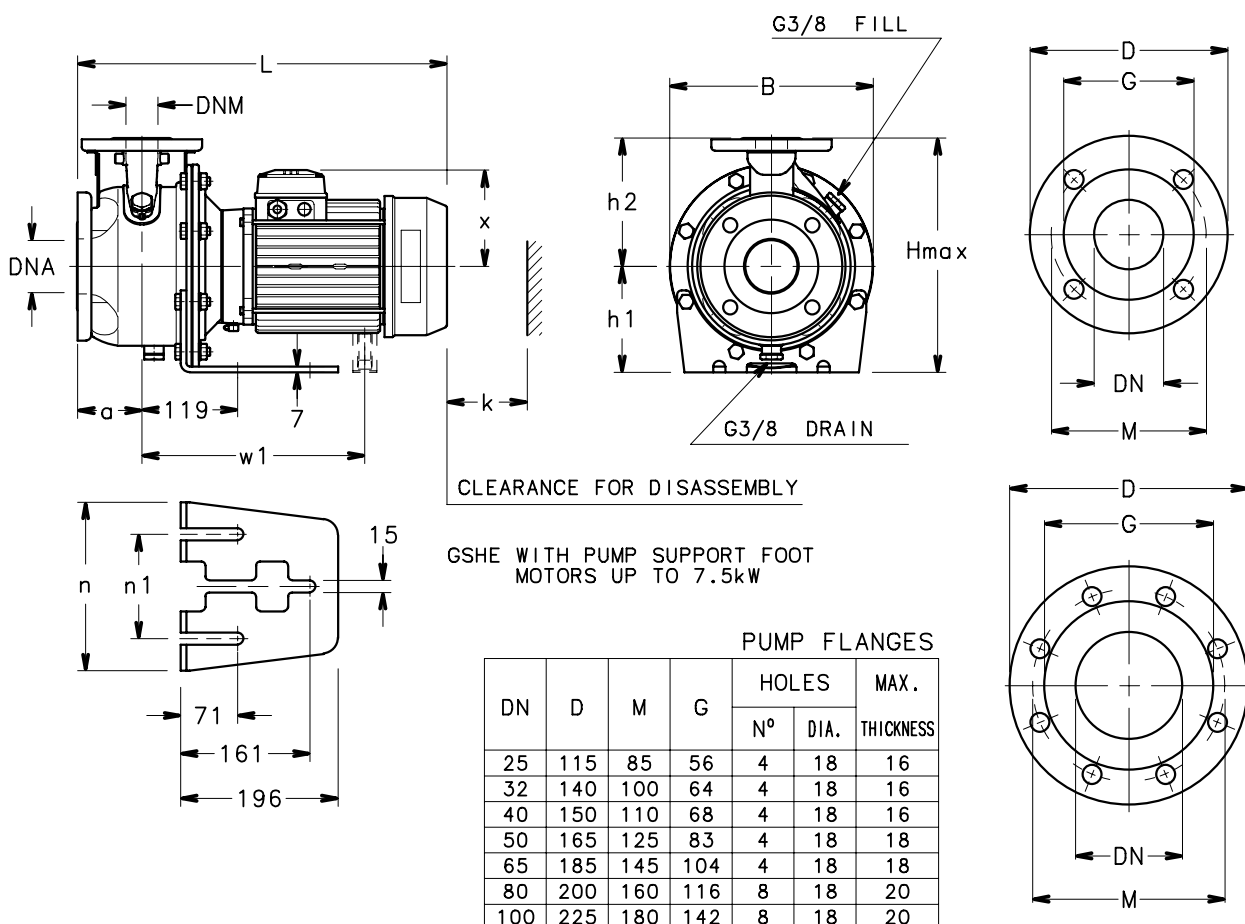
### DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES

PUMP TYPE	DIMENSIONS (mm)																B	H	L	k	WEIGHT
	PUMP						SUPPORT														
	DNM	DNA	a	h2	w	w1	x	b	c	*c1	h1	m	m1	n	n1	s					
GSHE 25-125/07/D	25	50	80	140	-	-	129	-	-	-	160	-	-	190	130	-	218	300	443	98	18,6
GSHE 25-125/11/D	25	50	80	140	-	-	129	-	-	-	160	-	-	190	130	-	218	300	443	98	20,6
GSHE 25-160/15/D	25	50	80	160	-	-	129	-	-	-	160	-	-	210	130	-	253	320	443	98	24,4
GSHE 25-160/22/C	25	50	80	160	-	-	134	-	-	-	160	-	-	210	130	-	253	320	478	98	29
GSHE 25-200/30/P	25	50	80	180	-	-	134	-	-	-	160	-	-	230	130	-	284	340	478	98	38
GSHE 25-200/40/P	25	50	80	180	-	-	154	-	-	-	160	-	-	230	130	-	284	340	499	98	41
GSHE 25-250/55/P	25	50	100	225	-	-	168	-	-	-	180	-	-	265	130	-	345	405	553	98	66
GSHE 25-250/75/P	25	50	100	225	-	305	191	-	-	-	180	-	-	265	130	-	345	405	567	98	84
GSHE 25-250/110/P	25	50	100	225	-	343	191	-	-	-	180	-	-	265	130	-	345	405	605	98	92
GSHE 32-125/07/D	32	50	80	140	-	-	129	-	-	-	112	-	-	190	130	-	218	252	443	98	18,6
GSHE 32-125/11/D	32	50	80	140	-	-	129	-	-	-	112	-	-	190	130	-	218	252	443	98	20,6
GSHE 32-160/15/D	32	50	80	160	-	-	129	-	-	-	132	-	-	210	130	-	253	292	443	98	24,4
GSHE 32-160/22/C	32	50	80	160	-	-	134	-	-	-	132	-	-	210	130	-	253	292	478	98	29
GSHE 32-200/30/P	32	50	80	180	-	-	134	-	-	-	160	-	-	230	130	-	284	340	478	98	38
GSHE 32-200/40/P	32	50	80	180	-	-	154	-	-	-	160	-	-	230	130	-	284	340	499	98	41
GSHE 32-250/55/P	32	50	100	225	-	-	168	-	-	-	180	-	-	265	130	-	345	405	553	98	66
GSHE 32-250/75/P	32	50	100	225	-	305	191	-	-	-	180	-	-	265	130	-	345	405	567	98	84
GSHE 32-250/110/P	32	50	100	225	-	343	191	-	-	-	180	-	-	265	130	-	345	405	605	98	92
GSHE 40-125/11/D	40	65	80	140	-	-	129	-	-	-	112	-	-	190	130	-	218	252	443	100	21,6
GSHE 40-125/15/D	40	65	80	140	-	-	129	-	-	-	112	-	-	190	130	-	218	252	443	100	22,4
GSHE 40-125/22/C	40	65	80	140	-	-	134	-	-	-	112	-	-	190	130	-	218	252	478	100	30
GSHE 40-160/30/P	40	65	80	160	-	-	134	-	-	-	132	-	-	210	130	-	253	292	478	100	32
GSHE 40-160/40/P	40	65	80	160	-	-	154	-	-	-	132	-	-	210	130	-	253	292	499	100	40
GSHE 40-200/55/P	40	65	100	180	-	-	168	-	-	-	160	-	-	230	130	-	284	340	553	100	52
GSHE 40-200/75/P	40	65	100	180	-	305	191	-	-	-	160	-	-	230	130	-	284	340	567	100	65
GSHE 40-250/92/P	40	65	100	225	-	343	191	-	-	-	180	-	-	265	130	-	345	405	605	107	89
GSHE 40-250/110/P	40	65	100	225	-	343	191	-	-	-	180	-	-	265	130	-	345	405	605	107	94
GSHE 40-250/150/P	40	65	100	225	208	-	240	49	5	20	180	304	210	304	254	15	345	420	694	107	130
GSHE 50-125/22/C	50	65	100	160	-	-	134	-	-	-	132	-	-	210	130	-	253	292	498	104	30
GSHE 50-125/30/P	50	65	100	160	-	-	134	-	-	-	132	-	-	210	130	-	253	292	498	104	33
GSHE 50-125/40/P	50	65	100	160	-	-	154	-	-	-	132	-	-	210	130	-	253	292	519	104	40
GSHE 50-160/55/P	50	65	100	180	-	-	168	-	-	-	160	-	-	210	130	-	253	340	553	104	52
GSHE 50-160/75/P	50	65	100	180	-	305	191	-	-	-	160	-	-	210	130	-	253	340	567	104	67
GSHE 50-200/92/P	50	65	100	200	-	343	191	-	-	-	160	-	-	245	130	-	310	360	605	104	84
GSHE 50-200/110/P	50	65	100	200	-	343	191	-	-	-	160	-	-	245	130	-	310	360	605	104	88
GSHE 50-250/150/P	50	65	100	225	208	-	240	49	5	20	180	304	210	304	254	15	345	420	694	107	131
GSHE 50-250/185/P	50	65	100	225	208	-	240	49	5	20	180	304	254	304	254	15	345	420	694	107	144
GSHE 50-250/220/P	50	65	100	225	208	-	240	49	5	20	180	304	254	304	254	15	345	420	694	107	147
GSHE 65-160/40/P	65	80	100	200	-	-	154	-	-	-	160	-	-	245	130	-	310	360	519	130	56
GSHE 65-160/55/P	65	80	100	200	-	-	168	-	-	-	160	-	-	245	130	-	310	360	553	130	63
GSHE 65-160/75/P	65	80	100	200	-	305	191	-	-	-	160	-	-	245	130	-	310	360	567	130	80
GSHE 65-160/92/P	65	80	100	200	-	343	191	-	-	-	160	-	-	245	130	-	310	360	605	130	95
GSHE 65-160/110/P	65	80	100	200	-	343	191	-	-	-	160	-	-	245	130	-	310	360	605	130	102
GSHE 65-200/150/P	65	80	100	225	208	-	240	49	5	20	180	304	210	304	254	15	310	420	694	130	131
GSHE 65-200/185/P	65	80	100	225	208	-	240	49	5	20	180	304	254	304	254	15	310	420	694	130	141
GSHE 65-200/220/P	65	80	100	225	208	-	240	49	5	20	180	304	254	304	254	15	310	420	694	130	151
GSHE 80-160/110/P	80	100	125	225	-	343	191	-	-	-	180	-	-	265	130	-	345	405	630	160	94
GSHE 80-160/150/P	80	100	125	225	208	-	240	49	5	20	180	304	210	304	254	15	345	420	719	160	128
GSHE 80-160/185/P	80	100	125	225	208	-	240	49	5	20	180	304	254	304	254	15	345	420	719	160	139
GSHE 80-200/220/P	80	100	125	250	208	-	240	49	5	20	180	304	254	304	254	15	345	430	719	160	156

\* Motor shim on request

gsh-gshe-2p50-en\_e\_td

## GSHE4 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES



## GSHE4 SERIES

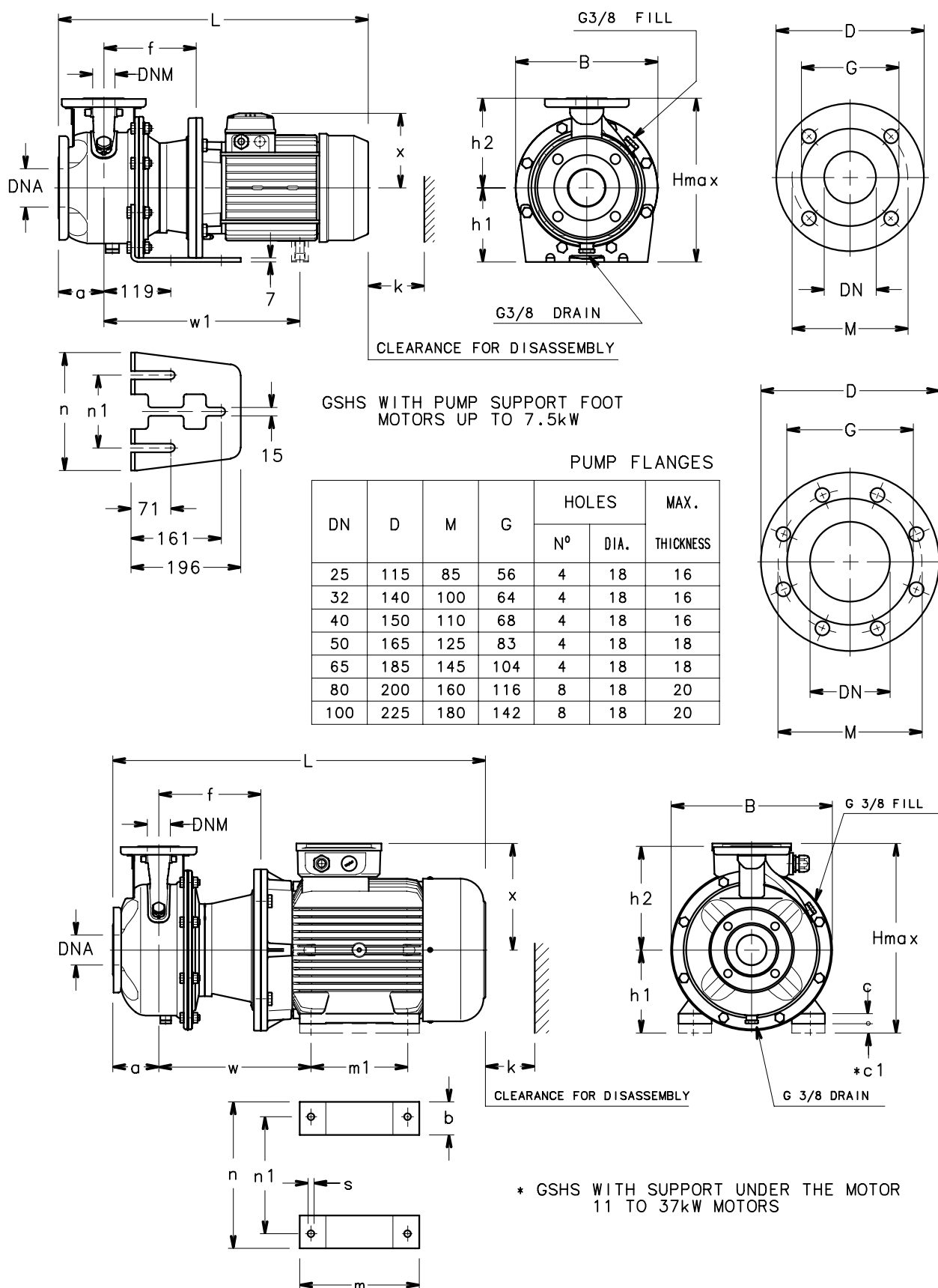
### DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES

PUMP TYPE	DIMENSIONS (mm)																B	H	L	k	WEIGHT
	PUMP								SUPPORT												
	DNM	DNA	a	h2	w	w1	x	b	c	*c1	h1	m	m1	n	n1	s					
																	max			kg	
GSHE4 25-125/02A/A	25	50	80	140	-	-	121	-	-	-	160	-	-	190	130	-	218	300	411	98	15
GSHE4 25-125/02/A	25	50	80	140	-	-	121	-	-	-	160	-	-	190	130	-	218	300	411	98	16
GSHE4 25-160/02/A	25	50	80	160	-	-	121	-	-	-	160	-	-	210	130	-	253	320	411	98	18
GSHE4 25-160/03/A	25	50	80	160	-	-	121	-	-	-	160	-	-	210	130	-	253	320	411	98	19
GSHE4 25-200/03/A	25	50	80	180	-	-	121	-	-	-	160	-	-	230	130	-	284	340	411	98	26
GSHE4 25-200/05/A	25	50	80	180	-	-	129	-	-	-	160	-	-	230	130	-	284	340	443	98	27
GSHE4 25-250/07/C	25	50	100	225	-	-	128	-	-	-	180	-	-	265	130	-	345	405	431	98	42
GSHE4 25-250/11/P	25	50	100	225	-	-	134	-	-	-	180	-	-	265	130	-	345	405	498	98	49
GSHE4 25-250/15/P	25	50	100	225	-	-	134	-	-	-	180	-	-	265	130	-	345	405	498	98	51
GSHE4 32-125/02A/A	32	50	80	140	-	-	121	-	-	-	112	-	-	190	130	-	218	252	411	98	15
GSHE4 32-125/02/A	32	50	80	140	-	-	121	-	-	-	112	-	-	190	130	-	218	252	411	98	16
GSHE4 32-160/02/A	32	50	80	160	-	-	121	-	-	-	132	-	-	210	130	-	253	292	411	98	18
GSHE4 32-160/03/A	32	50	80	160	-	-	121	-	-	-	132	-	-	210	130	-	253	292	411	98	19
GSHE4 32-200/03/A	32	50	80	180	-	-	121	-	-	-	160	-	-	230	130	-	284	340	411	98	26
GSHE4 32-200/05/A	32	50	80	180	-	-	129	-	-	-	160	-	-	230	130	-	284	340	443	98	27
GSHE4 32-250/07/C	32	50	100	225	-	-	128	-	-	-	180	-	-	265	130	-	345	405	431	98	42
GSHE4 32-250/11/P	32	50	100	225	-	-	134	-	-	-	180	-	-	265	130	-	345	405	498	98	49
GSHE4 32-250/15/P	32	50	100	225	-	-	134	-	-	-	180	-	-	265	130	-	345	405	498	98	51
GSHE4 40-125/02A/A	40	65	80	140	-	-	121	-	-	-	112	-	-	190	130	-	218	252	411	100	16
GSHE4 40-125/02/A	40	65	80	140	-	-	121	-	-	-	112	-	-	190	130	-	218	252	411	100	17
GSHE4 40-125/03/A	40	65	80	140	-	-	121	-	-	-	112	-	-	190	130	-	218	252	411	100	18
GSHE4 40-160/03/A	40	65	80	160	-	-	121	-	-	-	132	-	-	210	130	-	253	292	411	100	20
GSHE4 40-160/05/A	40	65	80	160	-	-	129	-	-	-	132	-	-	210	130	-	253	292	443	100	24
GSHE4 40-200/07/C	40	65	100	180	-	-	128	-	-	-	160	-	-	230	130	-	285	340	431	100	27
GSHE4 40-200/11/P	40	65	100	180	-	-	134	-	-	-	160	-	-	230	130	-	285	340	498	100	35
GSHE4 40-250/11/P	40	65	100	225	-	-	134	-	-	-	180	-	-	265	130	-	345	405	498	107	47
GSHE4 40-250/15/P	40	65	100	225	-	-	134	-	-	-	180	-	-	265	130	-	345	405	498	107	61
GSHE4 40-250/22/P	40	65	100	225	-	-	168	-	-	-	180	-	-	265	130	-	345	405	522	107	65
GSHE4 50-125/03A/A	50	65	100	160	-	-	121	-	-	-	132	-	-	210	130	-	253	292	431	104	20
GSHE4 50-125/03/A	50	65	100	160	-	-	121	-	-	-	132	-	-	210	130	-	253	292	431	104	20
GSHE4 50-125/05/A	50	65	100	160	-	-	129	-	-	-	132	-	-	210	130	-	253	292	463	104	26
GSHE4 50-160/07/C	50	65	100	180	-	-	128	-	-	-	160	-	-	210	130	-	253	340	431	104	30
GSHE4 50-160/11/P	50	65	100	180	-	-	134	-	-	-	160	-	-	210	130	-	253	340	498	104	40
GSHE4 50-200/11/P	50	65	100	200	-	-	134	-	-	-	160	-	-	245	130	-	310	360	498	104	48
GSHE4 50-200/15/P	50	65	100	200	-	-	134	-	-	-	160	-	-	245	130	-	310	360	498	104	51
GSHE4 50-250/22A/P	50	65	100	225	-	-	168	-	-	-	180	-	-	265	130	-	345	405	522	107	56
GSHE4 50-250/22/P	50	65	100	225	-	-	168	-	-	-	180	-	-	265	130	-	345	405	522	107	56
GSHE4 50-250/30/P	50	65	100	225	-	-	168	-	-	-	180	-	-	265	130	-	345	405	553	107	62
GSHE4 65-160/05/A	65	80	100	200	-	-	129	-	-	-	160	-	-	245	130	-	310	360	463	130	32
GSHE4 65-160/07/C	65	80	100	200	-	-	128	-	-	-	160	-	-	245	130	-	310	360	431	130	36
GSHE4 65-160/11A/P	65	80	100	200	-	-	134	-	-	-	160	-	-	245	130	-	310	360	498	130	44
GSHE4 65-160/11/P	65	80	100	200	-	-	134	-	-	-	160	-	-	245	130	-	310	360	498	130	45
GSHE4 65-160/15/P	65	80	100	200	-	-	134	-	-	-	160	-	-	245	130	-	310	360	498	130	48
GSHE4 65-200/15/P	65	80	100	225	-	-	134	-	-	-	180	-	-	245	130	-	310	405	498	130	56
GSHE4 65-200/22/P	65	80	100	225	-	-	168	-	-	-	180	-	-	245	130	-	310	405	522	130	64
GSHE4 65-200/30/P	65	80	100	225	-	-	168	-	-	-	180	-	-	245	130	-	310	405	553	130	64
GSHE4 65-250/40/P	65	80	100	250	-	315	168	-	-	-	200	-	-	265	130	-	345	450	598	140	84
GSHE4 65-250/55/P	65	80	100	250	-	343	191	-	-	-	200	-	-	265	130	-	345	450	605	140	97
GSHE4 80-160/15/P	80	100	125	225	-	-	134	-	-	-	180	-	-	265	130	-	345	405	523	160	55
GSHE4 80-160/22A/P	80	100	125	225	-	-	168	-	-	-	180	-	-	265	130	-	345	405	547	160	63
GSHE4 80-160/22/P	80	100	125	225	-	-	168	-	-	-	180	-	-	265	130	-	345	405	547	160	66
GSHE4 80-200/30/P	80	100	125	250	-	-	168	-	-	-	180	-	-	265	130	-	345	430	578	160	69
GSHE4 80-200/40/P	80	100	125	250	-	315	168	-	-	-	180	-	-	265	130	-	345	430	623	160	88
GSHE4 80-250/55/P	80	100	125	280	-	343	191	-	-	-	200	-	-	303	210	-	383	480	630	160	102
GSHE4 80-250/75/P	80	100	125	280	-	343	191	-	-	-	200	-	-	303	210	-	383	480	630	160	106
GSHE4 80-250/110/P	80	100	125	280	208	-	240	49	5	40	200	304	210	304	254	15	383	480	719	160	145

\* Motor shim on request

gsh-gshe4-4p50-en\_e\_td

## GSHS SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



GO4953D-EN\_E\_DD



## GSHS SERIES

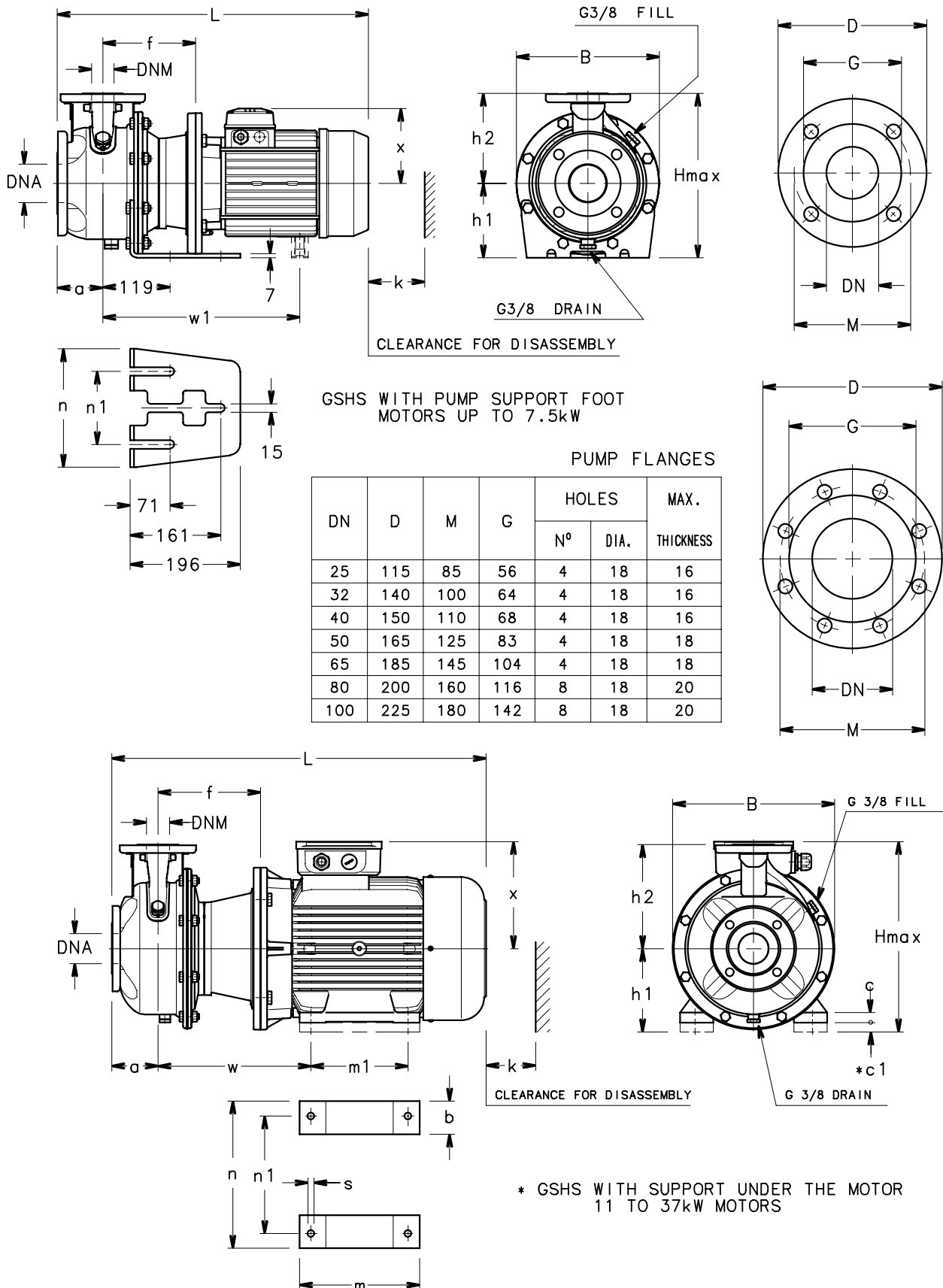
### DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES

PUMP TYPE	DIMENSIONS (mm)																		B	H	L	k	WEIGHT
	PUMP								SUPPORT														
	DNM	DNA	a	f	h2	w	w1	x	b	c	*c1	h1	m	m1	n	n1	s						
																		max				kg	
GSHS 25-125/07/D	25	50	80	155	140	-	-	129	-	-	-	160	-	-	190	130	-	218	300	498	98	24	
GSHS 25-125/11/D	25	50	80	155	140	-	-	129	-	-	-	160	-	-	190	130	-	218	300	498	98	25	
GSHS 25-160/15/D	25	50	80	155	160	-	-	129	-	-	-	160	-	-	210	130	-	253	320	498	98	27	
GSHS 25-160/22/C	25	50	80	155	160	-	-	134	-	-	-	160	-	-	210	130	-	253	320	533	98	33	
GSHS 25-200/30/P	25	50	80	165	180	-	-	134	-	-	-	160	-	-	230	130	-	284	340	543	98	44	
GSHS 25-200/40/P	25	50	80	165	180	-	-	154	-	-	-	160	-	-	230	130	-	284	340	564	98	51	
GSHS 25-250/55/P	25	50	100	192	225	-	399	168	-	-	-	180	-	-	265	130	-	345	405	667	98	77	
GSHS 25-250/75/P	25	50	100	192	225	-	397	191	-	-	-	180	-	-	265	130	-	345	405	659	98	91	
GSHS 25-250/110/P	25	50	100	222	225	330	-	240	49	5	20	180	304	210	304	254	15	350	420	816	98	130	
GSHS 32-125/07/D	32	50	80	155	140	-	-	129	-	-	-	112	-	-	190	130	-	218	252	498	98	24	
GSHS 32-125/11/D	32	50	80	155	140	-	-	129	-	-	-	112	-	-	190	130	-	218	252	498	98	25	
GSHS 32-160/15/D	32	50	80	155	160	-	-	129	-	-	-	132	-	-	210	130	-	253	292	498	98	27	
GSHS 32-160/22/C	32	50	80	155	160	-	-	134	-	-	-	132	-	-	210	130	-	253	292	533	98	33	
GSHS 32-200/30/P	32	50	80	165	180	-	-	134	-	-	-	160	-	-	230	130	-	284	340	543	98	44	
GSHS 32-200/40/P	32	50	80	165	180	-	-	154	-	-	-	160	-	-	230	130	-	284	340	564	98	51	
GSHS 32-250/55/P	32	50	100	192	225	-	399	168	-	-	-	180	-	-	265	130	-	345	405	667	98	77	
GSHS 32-250/75/P	32	50	100	192	225	-	397	191	-	-	-	180	-	-	265	130	-	345	405	659	98	91	
GSHS 32-250/110/P	32	50	100	222	225	330	-	240	49	5	20	180	304	210	304	254	15	350	420	816	98	130	
GSHS 40-125/11/D	40	65	80	155	140	-	-	129	-	-	-	112	-	-	190	130	-	218	252	498	100	26	
GSHS 40-125/15/D	40	65	80	155	140	-	-	129	-	-	-	112	-	-	190	130	-	218	252	498	100	26	
GSHS 40-125/22/C	40	65	80	155	140	-	-	134	-	-	-	112	-	-	190	130	-	218	252	533	100	32	
GSHS 40-160/30/P	40	65	80	165	160	-	-	134	-	-	-	132	-	-	210	130	-	253	292	543	100	42	
GSHS 40-160/40/P	40	65	80	165	160	-	-	154	-	-	-	132	-	-	210	130	-	253	292	564	100	48	
GSHS 40-200/55/P	40	65	100	192	180	-	399	168	-	-	-	160	-	-	230	130	-	300	340	667	100	63	
GSHS 40-200/75/P	40	65	100	192	180	-	397	191	-	-	-	160	-	-	230	130	-	300	340	659	100	80	
GSHS 40-250/110A/P	40	65	100	222	225	330	-	240	49	5	20	180	304	210	304	254	15	350	420	816	107	129	
GSHS 40-250/110/P	40	65	100	222	225	330	-	240	49	5	20	180	304	210	304	254	15	350	420	816	107	129	
GSHS 40-250/150/P	40	65	100	222	225	330	-	240	49	5	20	180	304	210	304	254	15	350	420	816	107	142	
GSHS 50-125/22/C	50	65	100	155	160	-	-	134	-	-	-	132	-	-	210	130	-	253	292	553	104	36	
GSHS 50-125/30/P	50	65	100	165	160	-	-	134	-	-	-	132	-	-	210	130	-	253	292	563	104	37	
GSHS 50-125/40/P	50	65	100	165	160	-	-	154	-	-	-	132	-	-	210	130	-	253	292	584	104	48	
GSHS 50-160/55/P	50	65	100	192	180	-	399	168	-	-	-	160	-	-	210	130	-	300	340	667	104	62	
GSHS 50-160/75/P	50	65	100	192	180	-	397	191	-	-	-	160	-	-	210	130	-	300	340	659	104	81	
GSHS 50-200/110A/P	50	65	100	222	200	330	-	240	49	5	20	180	304	210	304	254	15	350	420	816	104	126	
GSHS 50-200/110/P	50	65	100	222	200	330	-	240	49	5	20	180	304	210	304	254	15	350	420	816	104	130	
GSHS 50-250/150/P	50	65	100	222	225	330	-	240	49	5	20	180	304	210	304	254	15	350	420	816	107	148	
GSHS 50-250/185/P	50	65	100	222	225	330	-	240	49	5	20	180	304	254	304	254	15	350	420	816	107	156	
GSHS 50-250/220/P	50	65	100	222	225	330	-	240	49	5	20	180	304	254	304	254	15	350	420	816	107	162	
GSHS 65-160/40/P	65	80	100	165	200	-	-	154	-	-	-	160	-	-	245	130	-	310	360	584	130	60	
GSHS 65-160/55/P	65	80	100	192	200	-	399	168	-	-	-	160	-	-	245	130	-	310	360	667	130	78	
GSHS 65-160/75/P	65	80	100	192	200	-	397	191	-	-	-	160	-	-	245	130	-	310	360	659	130	93	
GSHS 65-160/110A/P	65	80	100	222	200	330	-	240	49	5	20	180	304	210	304	254	15	350	420	816	130	116	
GSHS 65-160/110/P	65	80	100	222	200	330	-	240	49	5	20	180	304	210	304	254	15	350	420	816	130	120	
GSHS 65-200/150/P	65	80	100	222	225	330	-	240	49	5	20	180	304	210	304	254	15	350	420	816	130	147	
GSHS 65-200/185/P	65	80	100	222	225	330	-	240	49	5	20	180	304	254	304	254	15	350	420	816	130	153	
GSHS 65-200/220/P	65	80	100	222	225	330	-	240	49	5	20	180	304	254	304	254	15	350	420	816	130	167	
GSHS 65-250/300/C	65	80	100	228	250	361	-	317	82	30	-	200	370	305	385	318	18	402	517	985	140	290	
GSHS 65-250/370/C	65	80	100	228	250	361	-	317	82	30	-	200	370	305	385	318	18	402	517	985	140	322	
GSHS 80-160/110/P	80	100	125	222	225	330	-	240	49	5	20	180	304	210	304	254	15	350	420	841	160	116	
GSHS 80-160/150/P	80	100	125	222	225	330	-	240	49	5	20	180	304	210	304	254	15	350	420	841	160	152	
GSHS 80-160/185/P	80	100	125	222	225	330	-	240	49	5	20	180	304	254	304	254	15	350	420	841	160	160	
GSHS 80-200/220/P	80	100	125	222	250	330	-	240	49	5	20	180	304	254	304	254	15	350	430	841	160	162	
GSHS 80-200/300/C	80	100	125	228	250	361	-	317	82	30	-	200	370	305	385	318	18	402	517	985	160	312	
GSHS 80-200/370/C	80	100	125	228	250	361	-	317	82	30	-	200	370	305	385	318	18	402	517	985	160	317	

\* Motor shim on request

gsh-gshs-2p50-en\_f\_td

## GSHS4 SERIES DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES



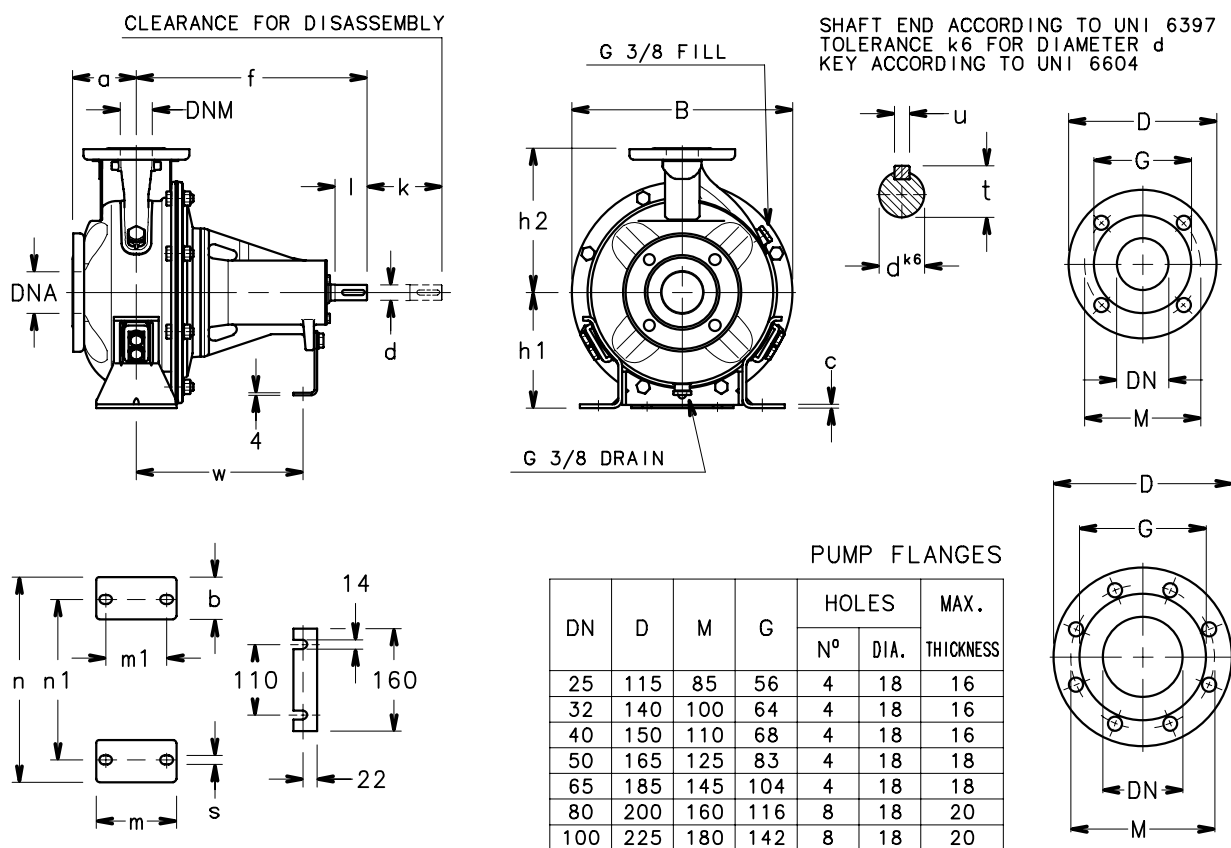
## **GSHS4 SERIES** **DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES**

PUMP TYPE	DIMENSIONS (mm)																	B	H	L	k	WEIGHT
	PUMP								SUPPORT													
	DNM	DNA	a	f	h2	w	w1	x	b	c	*c1	h1	m	m1	n	n1	s					
GSHS4 25-250/07/C	25	50	100	155	225	-	-	128	-	-	-	180	-	-	265	130	-	345	405	486	98	42
GSHS4 25-250/11/P	25	50	100	155	225	-	-	134	-	-	-	180	-	-	265	130	-	345	405	553	98	49
GSHS4 25-250/15/P	25	50	100	155	225	-	-	134	-	-	-	180	-	-	265	130	-	345	405	553	98	50
GSHS4 32-250/07/C	32	50	100	155	225	-	-	128	-	-	-	180	-	-	265	130	-	345	405	486	98	42
GSHS4 32-250/11/P	32	50	100	155	225	-	-	134	-	-	-	180	-	-	265	130	-	345	405	553	98	49
GSHS4 32-250/15/P	32	50	100	155	225	-	-	134	-	-	-	180	-	-	265	130	-	345	405	553	98	50
GSHS4 40-200/07/C	40	65	100	155	180	-	-	128	-	-	-	160	-	-	230	130	-	284	340	486	100	31
GSHS4 40-200/11/P	40	65	100	155	180	-	-	134	-	-	-	160	-	-	230	130	-	284	340	553	100	37
GSHS4 40-250/11/P	40	65	100	155	225	-	-	134	-	-	-	180	-	-	265	130	-	345	405	553	107	51
GSHS4 40-250/15/P	40	65	100	155	225	-	-	134	-	-	-	180	-	-	265	130	-	345	405	553	107	64
GSHS4 40-250/22/P	40	65	100	165	225	-	-	168	-	-	-	180	-	-	265	130	-	345	405	587	107	68
GSHS4 50-160/07/C	50	65	100	155	180	-	-	128	-	-	-	160	-	-	210	130	-	253	340	486	104	30
GSHS4 50-160/11/P	50	65	100	155	180	-	-	134	-	-	-	160	-	-	210	130	-	253	340	553	104	36
GSHS4 50-200/11/P	50	65	100	155	200	-	-	134	-	-	-	160	-	-	245	130	-	310	360	553	104	49
GSHS4 50-200/15/P	50	65	100	155	200	-	-	134	-	-	-	160	-	-	245	130	-	310	360	553	104	52
GSHS4 50-250/22A/P	50	65	100	165	225	-	-	168	-	-	-	180	-	-	265	130	-	345	405	587	107	58
GSHS4 50-250/22/P	50	65	100	165	225	-	-	168	-	-	-	180	-	-	265	130	-	345	405	587	107	59
GSHS4 50-250/30/P	50	65	100	165	225	-	-	168	-	-	-	180	-	-	265	130	-	345	405	618	107	65
GSHS4 65-160/05/A	65	80	100	155	200	-	-	129	-	-	-	160	-	-	245	130	-	310	360	518	130	34
GSHS4 65-160/07/C	65	80	100	155	200	-	-	128	-	-	-	160	-	-	245	130	-	310	360	486	130	38
GSHS4 65-160/11A/P	65	80	100	155	200	-	-	134	-	-	-	160	-	-	245	130	-	310	360	553	130	46
GSHS4 65-160/11/P	65	80	100	155	200	-	-	134	-	-	-	160	-	-	245	130	-	310	360	553	130	48
GSHS4 65-160/15/P	65	80	100	155	200	-	-	134	-	-	-	160	-	-	245	130	-	310	360	553	130	51
GSHS4 65-200/15/P	65	80	100	155	225	-	-	134	-	-	-	180	-	-	245	130	-	310	405	553	130	54
GSHS4 65-200/22/P	65	80	100	165	225	-	-	168	-	-	-	180	-	-	245	130	-	310	405	587	130	71
GSHS4 65-200/30/P	65	80	100	165	225	-	-	168	-	-	-	180	-	-	245	130	-	310	405	618	130	72
GSHS4 65-250/40/P	65	80	100	165	250	-	380	168	-	-	-	200	-	-	265	130	-	345	450	663	140	97
GSHS4 65-250/55/P	65	80	100	192	250	-	435	191	-	-	-	200	-	-	265	130	-	345	450	697	140	104
GSHS4 80-160/15/P	80	100	125	155	225	-	-	134	-	-	-	180	-	-	265	130	-	345	405	578	160	59
GSHS4 80-160/22A/P	80	100	125	165	225	-	-	168	-	-	-	180	-	-	265	130	-	345	405	612	160	67
GSHS4 80-160/22/P	80	100	125	165	225	-	-	168	-	-	-	180	-	-	265	130	-	345	405	612	160	67
GSHS4 80-200/30/P	80	100	125	165	250	-	-	168	-	-	-	180	-	-	265	130	-	345	430	643	160	72
GSHS4 80-200/40/P	80	100	125	165	250	-	380	168	-	-	-	180	-	-	265	130	-	345	430	688	160	88
GSHS4 80-250/55/P	80	100	125	192	280	-	435	191	-	-	-	200	-	-	303	210	-	383	480	722	160	107
GSHS4 80-250/75/P	80	100	125	192	280	-	435	191	-	-	-	200	-	-	303	210	-	383	480	722	160	113
GSHS4 80-250/110/P	80	100	125	222	280	330	-	240	49	5	40	200	304	210	304	254	15	383	480	841	160	153

\* Motor shim on request

gsh-gshs4-4p50-en\_e\_td

## GSHF BARE SHAFT SERIES DIMENSIONS AND WEIGHTS AT 50 Hz

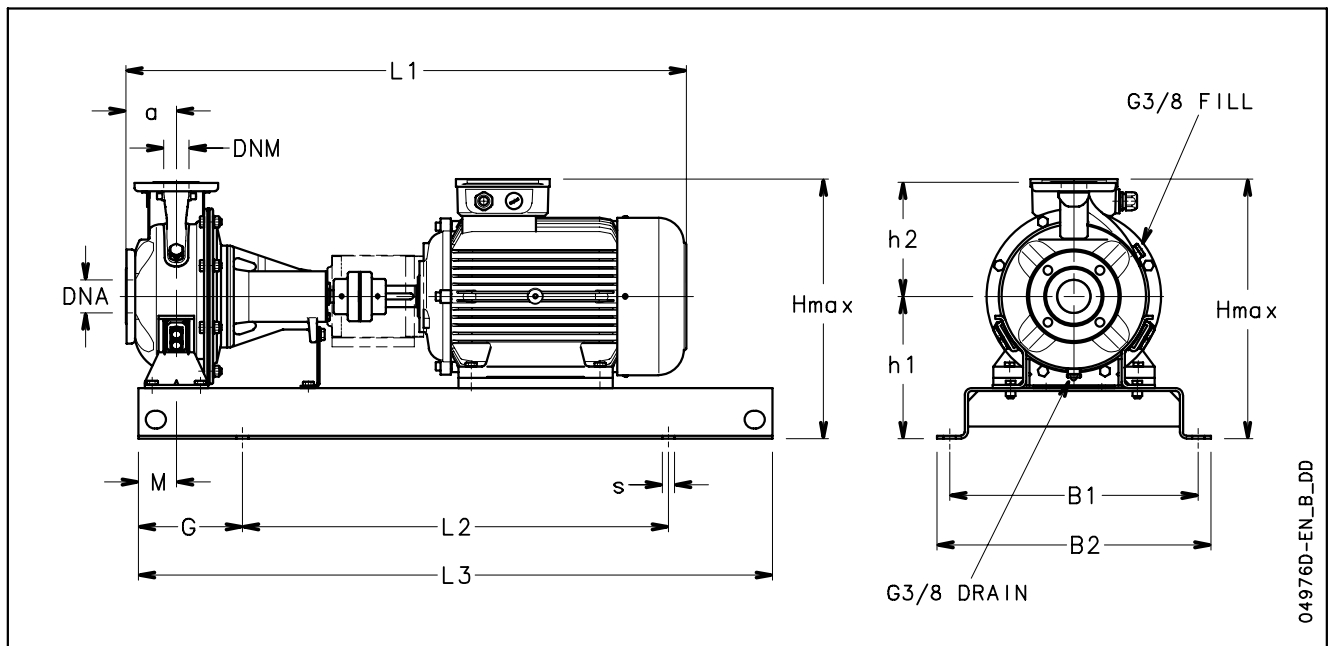


## **GSHF BARE SHAFT SERIES** **DIMENSIONS AND WEIGHTS AT 50 Hz**

PUMP TYPE	DIMENSIONS (mm)																		B	k	WEIGHT
	PUMP						SUPPORT								SHAFT						
	DNM	DNA	a	f	h1	h2	b	c	m	m1	n	n1	s	w	d	l	t	u			
GSHF 25-125	25	50	80	360	112	140	47	3	100	70	190	140	14	260	24	50	27	8	218	98	14
GSHF 25-160	25	50	80	360	132	160	48	3	100	70	240	190	14	260	24	50	27	8	253	98	17
GSHF 25-200	25	50	80	360	160	180	47	3	100	70	240	190	14	260	24	50	27	8	284	98	20
GSHF 25-250	25	50	100	360	180	225	54	6	125	95	320	250	14	260	24	50	27	8	345	98	34
GSHF 32-125	32	50	80	360	112	140	47	3	100	70	190	140	14	260	24	50	27	8	218	98	14
GSHF 32-160	32	50	80	360	132	160	48	3	100	70	240	190	14	260	24	50	27	8	253	98	17
GSHF 32-200	32	50	80	360	160	180	47	3	100	70	240	190	14	260	24	50	27	8	284	98	20
GSHF 32-250	32	50	100	360	180	225	54	6	125	95	320	250	14	260	24	50	27	8	345	98	34
GSHF 40-125	40	65	80	360	112	140	47	3	100	70	210	160	14	260	24	50	27	8	218	100	16
GSHF 40-160	40	65	80	360	132	160	48	3	100	70	240	190	14	260	24	50	27	8	253	100	18
GSHF 40-200	40	65	100	360	160	180	50	3	100	70	265	212	14	260	24	50	27	8	284	100	20
GSHF 40-250	40	65	100	360	180	225	54	6	125	95	320	250	14	260	24	50	27	8	345	107	33
GSHF 50-125	50	65	100	360	132	160	48	3	100	70	240	190	14	260	24	50	27	8	253	104	17
GSHF 50-160	50	65	100	360	160	180	48	3	100	70	265	212	14	260	24	50	27	8	253	104	24
GSHF 50-200	50	65	100	360	160	200	40	6	100	70	265	212	14	260	24	50	27	8	310	104	30
GSHF 50-250	50	65	100	360	180	225	54	6	125	95	320	250	14	260	24	50	27	8	345	107	37
GSHF 65-160	65	80	100	360	160	200	48	6	125	95	280	212	14	260	24	50	27	8	310	130	31
GSHF 65-200	65	80	100	360	180	225	65	15	125	95	320	250	14	260	24	50	27	8	310	130	42
GSHF 65-250	65	80	100	470	200	250	80	18	160	120	360	280	18	340	32	80	35	10	345	140	55
GSHF 80-160	80	100	125	360	180	225	54	6	125	95	320	250	14	260	24	50	27	8	345	160	37
GSHF 80-200	80	100	125	470	180	250	65	15	125	95	345	280	14	340	32	80	35	10	345	160	55
GSHF 80-250	80	100	125	470	200	280	80	18	160	120	400	315	18	340	32	80	35	10	383	160	67

gsh-gshf-en\_c\_td

# **GSHF BASE-MOUNTED SERIES** **DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES**

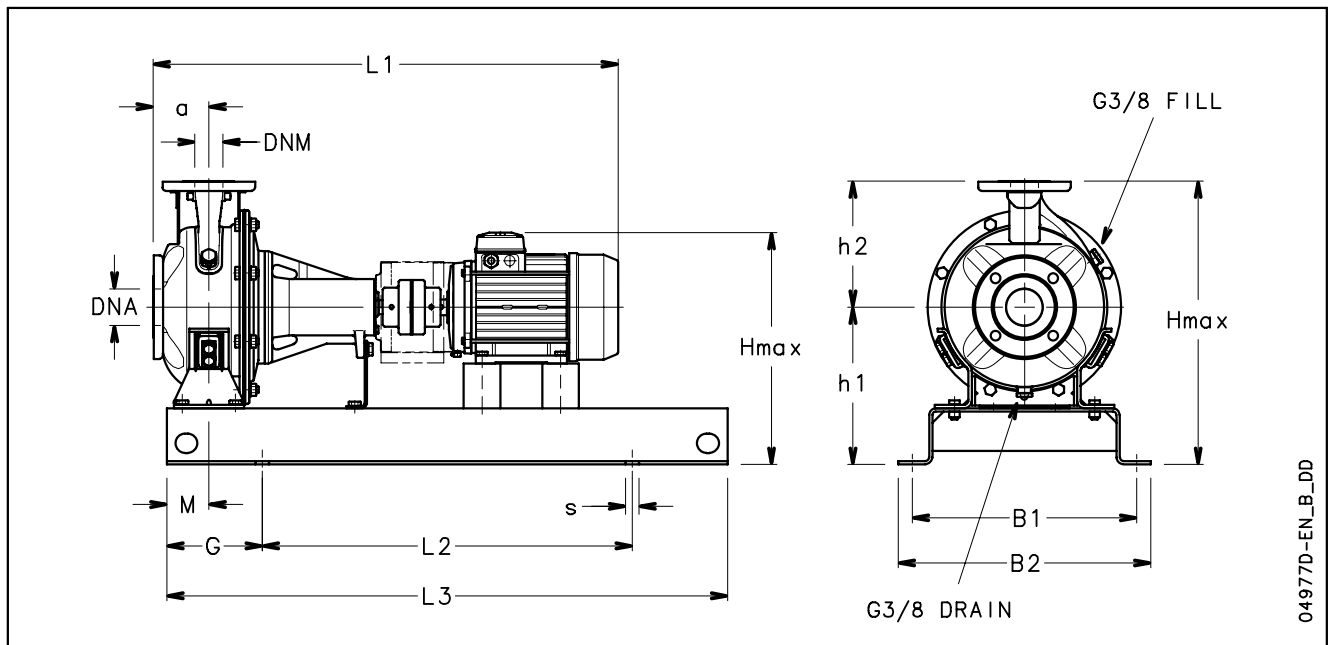


## **GSHF BASE-MOUNTED SERIES** **DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES**

PUMP TYPE	DIMENSIONS (mm)														S	WEIGHT	COUPLING
	DNM	DNA	a	B1	B2	L1	L2	L3	G	M	h1	h2	Hmax	FOR SCREWS	kg	TYPE	
GSHF 25-125/07/D	25	50	80	320	360	746	540	800	130	60	212	140	352	M16	67	A2	
GSHF 25-125/11/D	25	50	80	320	360	746	540	800	130	60	212	140	352	M16	69	A2	
GSHF 25-160/15/P	25	50	80	350	390	791	600	900	150	60	232	160	392	M16	73	A3	
GSHF 25-160/22/P	25	50	80	350	390	791	600	900	150	60	232	160	392	M16	75	A3	
GSHF 25-200/30/P	25	50	80	350	390	822	600	900	150	60	260	180	440	M16	95	B1	
GSHF 25-200/40/P	25	50	80	350	390	825	600	900	150	60	260	180	440	M16	97	B1	
GSHF 25-250/55/P	25	50	100	440	490	910	740	1120	190	75	280	225	505	M20	130	C1	
GSHF 25-250/75/P	25	50	100	440	490	910	740	1120	190	75	280	225	505	M20	134	C1	
GSHF 25-250/110/P	25	50	100	490	540	1067	840	1250	205	75	280	225	520	M20	181	C2	
GSHF 32-125/07/D	32	50	80	320	360	746	540	800	130	60	212	140	352	M16	67	A2	
GSHF 32-125/11/D	32	50	80	320	360	746	540	800	130	60	212	140	352	M16	69	A2	
GSHF 32-160/15/P	32	50	80	350	390	791	600	900	150	60	232	160	392	M16	73	A3	
GSHF 32-160/22/P	32	50	80	350	390	791	600	900	150	60	232	160	392	M16	75	A3	
GSHF 32-200/30/P	32	50	80	350	390	822	600	900	150	60	260	180	440	M16	95	B1	
GSHF 32-200/40/P	32	50	80	350	390	825	600	900	150	60	260	180	440	M16	97	B1	
GSHF 32-250/55/P	32	50	100	440	490	910	740	1120	190	75	280	225	505	M20	130	C1	
GSHF 32-250/75/P	32	50	100	440	490	910	740	1120	190	75	280	225	505	M20	134	C1	
GSHF 32-250/110/P	32	50	100	490	540	1067	840	1250	205	75	280	225	520	M20	181	C2	
GSHF 40-125/11/D	40	65	80	350	390	746	600	900	150	60	212	140	352	M16	70	A2	
GSHF 40-125/15/P	40	65	80	350	390	791	600	900	150	60	212	140	352	M16	74	A3	
GSHF 40-125/22/P	40	65	80	350	390	791	600	900	150	60	212	140	352	M16	77	A3	
GSHF 40-160/30/P	40	65	80	350	390	822	600	900	150	60	232	160	392	M16	92	B1	
GSHF 40-160/40/P	40	65	80	350	390	825	600	900	150	60	232	160	400	M16	96	B1	
GSHF 40-200/55/P	40	65	100	400	450	910	660	1000	170	60	260	180	451	M20	123	C1	
GSHF 40-200/75/P	40	65	100	400	450	910	660	1000	170	60	260	180	451	M20	128	C1	
GSHF 40-250/110A/P	40	65	100	490	540	1067	840	1250	205	75	280	225	520	M20	167	C2	
GSHF 40-250/110/P	40	65	100	490	540	1067	840	1250	205	75	280	225	520	M20	170	C2	
GSHF 40-250/150/P	40	65	100	490	540	1067	840	1250	205	75	280	225	520	M20	175	C2	
GSHF 50-125/22/P	50	65	100	350	390	811	600	900	150	60	232	160	392	M16	84	A3	
GSHF 50-125/30/P	50	65	100	350	390	842	600	900	150	60	232	160	392	M16	92	B1	
GSHF 50-125/40/P	50	65	100	350	390	845	600	900	150	60	232	160	400	M16	95	B1	
GSHF 50-160/55/P	50	65	100	400	450	910	660	1000	170	60	260	180	451	M20	120	C1	
GSHF 50-160/75/P	50	65	100	400	450	910	660	1000	170	60	260	180	451	M20	122	C1	
GSHF 50-200/110A/P	50	65	100	440	490	1067	740	1120	190	60	260	200	500	M20	145	C2	
GSHF 50-200/110/P	50	65	100	440	490	1067	740	1120	190	60	260	200	500	M20	150	C2	
GSHF 50-250/150/P	50	65	100	490	540	1067	840	1250	205	75	280	225	520	M20	165	C2	
GSHF 50-250/185/P	50	65	100	490	540	1067	840	1250	205	75	280	225	520	M20	170	C2	
GSHF 50-250/220/C	50	65	100	490	540	1127	840	1250	205	75	280	225	559	M20	246	D1	
GSHF 65-160/40/P	65	80	100	400	450	845	660	1000	170	75	260	200	460	M20	133	B1	
GSHF 65-160/55/P	65	80	100	400	450	845	660	1000	170	75	260	200	460	M20	150	C1	
GSHF 65-160/75/P	65	80	100	400	450	845	660	1000	170	75	260	200	460	M20	154	C1	
GSHF 65-160/110A/P	65	80	100	490	540	1067	840	1250	205	75	260	200	500	M20	162	C2	
GSHF 65-160/110/P	65	80	100	490	540	1067	840	1250	205	75	260	200	500	M20	162	C2	
GSHF 65-200/150/P	65	80	100	490	540	1067	840	1250	205	75	280	225	520	M20	185	C2	
GSHF 65-200/185/P	65	80	100	490	540	1067	840	1250	205	75	280	225	520	M20	190	C2	
GSHF 65-200/220/C	65	80	100	490	540	1127	840	1250	205	75	280	225	559	M20	274	D1	
GSHF 65-250/300/C	65	80	100	550	610	1340	940	1400	230	90	310	250	627	M24	367	E1	
GSHF 65-250/370/C	65	80	100	550	610	1340	940	1400	230	90	310	250	627	M24	403	E1	
GSHF 80-160/110/P	80	100	125	490	540	1092	840	1250	205	75	280	225	520	M20	198	C2	
GSHF 80-160/150/P	80	100	125	490	540	1092	840	1250	205	75	280	225	520	M20	209	C2	
GSHF 80-160/185/P	80	100	125	490	540	1092	840	1250	205	75	280	225	520	M20	220	C2	
GSHF 80-200/220/C	80	100	125	490	540	1262	840	1250	205	75	280	250	559	M20	302	D2	
GSHF 80-200/300/C	80	100	125	550	610	1365	940	1400	230	75	310	250	627	M24	373	E1	
GSHF 80-200/370/C	80	100	125	550	610	1365	940	1400	230	75	310	250	627	M24	402	E1	
GSHF 80-250/450/C	80	100	125	550	610	1454	940	1400	230	90	365	280	749	M24	501	E1	
GSHF 80-250/550/C	80	100	125	600	660	1563	1060	1600	270	90	390	280	792	M24	582	F1	
GSHF 80-250/750/C	80	100	125	670	730	1670	1200	1800	300	90	420	280	892	M24	700	G1	

# **GSHF4 BASE-MOUNTED SERIES**

## **DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES**



04977D-EN\_B\_DD

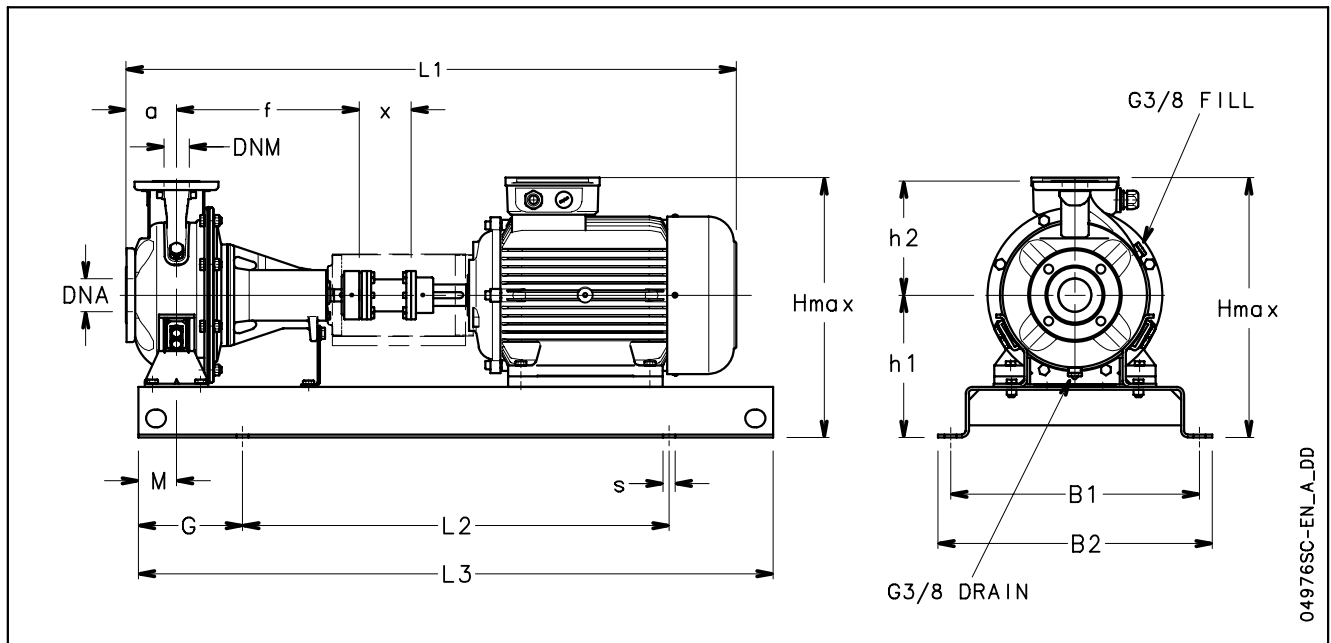


## GSHF4 BASE-MOUNTED SERIES

### DIMENSIONS AND WEIGHTS AT 50 Hz, 4 POLES

PUMP TYPE	DIMENSIONS (mm)														s FOR	WEIGHT	COUPLING
	DNM	DNA	a	B1	B2	L1	L2	L3	G	M	h1	h2	Hmax	SCREWS	kg	TYPE	
GSHF4 25-125/02A/A	25	50	80	320	360	704	540	800	130	60	212	140	352	M16	72	A1	
GSHF4 25-125/02/A	25	50	80	320	360	704	540	800	130	60	212	140	352	M16	72	A1	
GSHF4 25-160/02/A	25	50	80	320	360	704	540	800	130	60	232	160	392	M16	74	A1	
GSHF4 25-160/03/A	25	50	80	320	360	704	540	800	130	60	232	160	392	M16	74	A1	
GSHF4 25-200/03/A	25	50	80	320	360	704	540	800	130	60	260	180	440	M16	78	A1	
GSHF4 25-200/05/A	25	50	80	320	360	746	540	800	130	60	260	180	440	M16	80	A2	
GSHF4 25-250/07/C	25	50	100	400	450	734	660	1000	170	75	280	225	505	M20	98	A2	
GSHF4 25-250/11/P	25	50	100	400	450	811	660	1000	170	75	280	225	505	M20	106	A3	
GSHF4 25-250/15/P	25	50	100	400	450	811	660	1000	170	75	280	225	505	M20	108	A3	
GSHF4 32-125/02A/A	32	50	80	320	360	704	540	800	130	60	212	140	352	M16	72	A1	
GSHF4 32-125/02/A	32	50	80	320	360	704	540	800	130	60	212	140	352	M16	72	A1	
GSHF4 32-160/02/A	32	50	80	320	360	704	540	800	130	60	232	160	392	M16	74	A1	
GSHF4 32-160/03/A	32	50	80	320	360	704	540	800	130	60	232	160	392	M16	74	A1	
GSHF4 32-200/03/A	32	50	80	320	360	704	540	800	130	60	260	180	440	M16	78	A1	
GSHF4 32-200/05/A	32	50	80	320	360	746	540	800	130	60	260	180	440	M16	80	A2	
GSHF4 32-250/07/C	32	50	100	400	450	734	660	1000	170	75	280	225	505	M20	98	A2	
GSHF4 32-250/11/P	32	50	100	400	450	811	660	1000	170	75	280	225	505	M20	106	A3	
GSHF4 32-250/15/P	32	50	100	400	450	811	660	1000	170	75	280	225	505	M20	108	A3	
GSHF4 40-125/02A/A	40	65	80	320	360	704	540	800	130	60	212	140	352	M16	57	A1	
GSHF4 40-125/02/A	40	65	80	320	360	704	540	800	130	60	212	140	352	M16	57	A1	
GSHF4 40-125/03/A	40	65	80	320	360	704	540	800	130	60	212	140	352	M16	58	A1	
GSHF4 40-160/03/A	40	65	80	320	360	704	540	800	130	60	232	160	392	M16	60	A1	
GSHF4 40-160/05/A	40	65	80	320	360	746	540	800	130	60	232	160	392	M16	62	A2	
GSHF4 40-200/07/C	40	65	100	350	390	734	600	900	150	60	260	180	440	M16	70	A2	
GSHF4 40-200/11/P	40	65	100	350	390	811	600	900	150	60	260	180	440	M16	78	A3	
GSHF4 40-250/11/P	40	65	100	400	450	811	660	1000	170	75	280	225	505	M20	105	A3	
GSHF4 40-250/15/P	40	65	100	400	450	811	660	1000	170	75	280	225	505	M20	108	A3	
GSHF4 40-250/22/P	40	65	100	400	450	888	660	1000	170	75	280	225	505	M20	131	B1	
GSHF4 50-125/03A/A	50	65	100	320	360	724	540	800	130	60	232	160	392	M16	59	A1	
GSHF4 50-125/03/A	50	65	100	320	360	724	540	800	130	60	232	160	392	M16	59	A1	
GSHF4 50-125/05/A	50	65	100	320	360	766	540	800	130	60	232	160	392	M16	61	A2	
GSHF4 50-160/07/C	50	65	100	350	390	734	600	900	150	60	260	180	440	M16	69	A2	
GSHF4 50-160/11/P	50	65	100	350	390	811	600	900	150	60	260	180	440	M16	77	A3	
GSHF4 50-200/11/P	50	65	100	350	390	811	600	900	150	60	260	200	460	M16	88	A3	
GSHF4 50-200/15/P	50	65	100	350	390	811	600	900	150	60	260	200	460	M16	91	A3	
GSHF4 50-250/22A/P	50	65	100	400	450	888	660	1000	170	75	280	225	505	M20	132	B1	
GSHF4 50-250/22/P	50	65	100	400	450	888	660	1000	170	75	280	225	505	M20	132	B1	
GSHF4 50-250/30/P	50	65	100	400	450	888	660	1000	170	75	280	225	505	M20	136	B1	
GSHF4 65-160/05/A	65	80	100	350	390	766	600	900	150	75	260	200	460	M16	84	A2	
GSHF4 65-160/07/C	65	80	100	350	390	734	600	900	150	75	260	200	460	M16	86	A2	
GSHF4 65-160/11A/P	65	80	100	400	450	811	600	1000	170	75	260	200	460	M20	94	A3	
GSHF4 65-160/11/P	65	80	100	400	450	811	660	1000	170	75	260	200	460	M20	94	A3	
GSHF4 65-160/15/P	65	80	100	400	450	811	660	1000	170	75	260	200	460	M20	97	A3	
GSHF4 65-200/15/P	65	80	100	400	450	811	660	1000	170	75	280	225	505	M20	109	A3	
GSHF4 65-200/22/P	65	80	100	440	490	888	740	1120	190	75	280	225	505	M20	133	B1	
GSHF4 65-200/30/P	65	80	100	440	490	888	740	1120	190	75	280	225	505	M20	137	B1	
GSHF4 65-250/40/P	65	80	100	440	490	1031	740	1120	190	90	310	250	550	M20	178	C3	
GSHF4 65-250/55/P	65	80	100	440	490	1058	740	1120	190	90	310	250	550	M20	193	C4	
GSHF4 80-160/15/P	80	100	125	400	450	836	660	1000	170	75	280	225	505	M20	127	A3	
GSHF4 80-160/22A/P	80	100	125	440	490	913	740	1120	190	75	280	225	505	M20	143	B1	
GSHF4 80-160/22/P	80	100	125	440	490	913	740	1120	190	75	280	225	505	M20	143	B1	
GSHF4 80-200/30/P	80	100	125	440	490	1023	740	1120	190	75	280	250	530	M20	162	C3	
GSHF4 80-200/40/P	80	100	125	440	490	1056	740	1120	190	75	280	250	530	M20	171	C3	
GSHF4 80-250/55/P	80	100	125	490	540	1083	840	1250	205	90	310	280	590	M20	194	C4	
GSHF4 80-250/75/P	80	100	125	490	540	1083	840	1250	205	90	310	280	590	M20	198	C4	
GSHF4 80-250/110/P	80	100	125	490	540	1202	840	1250	205	90	310	280	590	M20	256	C5	

## GSHF SC SERIES MOUNTED ON BASE DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES



## **GSHF SC SERIES MOUNTED ON BASE** **DIMENSIONS AND WEIGHTS AT 50 Hz, 2 POLES**

PUMP TYPE	DIMENSIONS (mm)															s FOR	WEIGHT	COUPLING TYPE
	DNM	DNA	a	B1	B2	L1	L2	L3	G	M	h1	h2	Hmax	f	x	SCREWS	kg	
GSHF 32-125/07/D SC	32	50	80	320	360	845	540	800	130	60	212	140	352	360	100	M16	69	A2S
GSHF 32-125/11/D SC	32	50	80	320	360	845	540	800	130	60	212	140	352	360	100	M16	71	A2S
GSHF 32-160/15/P SC	32	50	80	350	390	889	600	900	150	60	232	160	392	360	100	M16	75	A3S
GSHF 32-160/22/P SC	32	50	80	350	390	889	600	900	150	60	232	160	392	360	100	M16	77	A3S
GSHF 32-200/30/P SC	32	50	80	350	390	920	600	900	150	60	260	180	440	360	100	M16	97	B1S
GSHF 32-200/40/P SC	32	50	80	350	390	923	600	900	150	60	260	180	440	360	100	M16	99	B1S
GSHF 32-250/55/P SC	32	50	100	440	490	1007	740	1120	190	75	280	225	505	360	100	M20	132	C1S
GSHF 32-250/75/P SC	32	50	100	440	490	1007	740	1120	190	75	280	225	505	360	100	M20	136	C1S
GSHF 32-250/110/P SC	32	50	100	490	540	1164	840	1250	205	75	280	225	520	360	100	M20	183	C2S
GSHF 40-125/11/D SC	40	65	80	350	390	845	600	900	150	60	212	140	352	360	100	M16	72	A2S
GSHF 40-125/15/P SC	40	65	80	350	390	889	600	900	150	60	212	140	352	360	100	M16	76	A3S
GSHF 40-125/22/P SC	40	65	80	350	390	889	600	900	150	60	212	140	352	360	100	M16	79	A3S
GSHF 40-160/30/P SC	40	65	80	350	390	920	600	900	150	60	232	160	392	360	100	M16	94	B1S
GSHF 40-160/40/P SC	40	65	80	350	390	923	600	900	150	60	232	160	400	360	100	M16	98	B1S
GSHF 40-200/55/P SC	40	65	100	400	450	1007	660	1000	170	60	260	180	451	360	100	M20	125	C1S
GSHF 40-200/75/P SC	40	65	100	400	450	1007	660	1000	170	60	260	180	451	360	100	M20	130	C1S
GSHF 40-250/110A/P SC	40	65	100	490	540	1164	840	1250	205	75	280	225	520	360	100	M20	169	C2S
GSHF 40-250/110/P SC	40	65	100	490	540	1164	840	1250	205	75	280	225	520	360	100	M20	172	C2S
GSHF 40-250/150/P SC	40	65	100	490	540	1164	840	1250	205	75	280	225	520	360	100	M20	177	C2S
GSHF 50-125/22/P SC	50	65	100	350	390	909	600	900	150	60	232	160	392	360	100	M16	86	A3S
GSHF 50-125/30/P SC	50	65	100	350	390	940	600	900	150	60	232	160	392	360	100	M16	94	B1S
GSHF 50-125/40/P SC	50	65	100	350	390	943	600	900	150	60	232	160	400	360	100	M16	97	B1S
GSHF 50-160/55/P SC	50	65	100	400	450	1007	660	1000	170	60	260	180	451	360	100	M20	122	C1S
GSHF 50-160/75/P SC	50	65	100	400	450	1007	660	1000	170	60	260	180	451	360	100	M20	124	C1S
GSHF 50-200/110A/P SC	50	65	100	440	490	1164	740	1120	190	60	260	200	500	360	100	M20	147	C2S
GSHF 50-200/110/P SC	50	65	100	440	490	1164	740	1120	190	60	260	200	500	360	100	M20	152	C2S
GSHF 50-250/150/P SC	50	65	100	490	540	1164	840	1250	205	75	280	225	520	360	100	M20	167	C2S
GSHF 50-250/185/P SC	50	65	100	490	540	1164	840	1250	205	75	280	225	520	360	100	M20	172	C2S
GSHF 50-250/220/C SC	50	65	100	490	540	1224	840	1250	205	75	280	225	559	360	100	M20	248	D1S
GSHF 65-160/40/P SC	65	80	100	400	450	943	660	1000	170	75	260	200	460	360	100	M20	135	B1S
GSHF 65-160/55/P SC	65	80	100	400	450	1007	660	1000	170	75	260	200	460	360	100	M20	152	C1S
GSHF 65-160/75/P SC	65	80	100	400	450	1007	660	1000	170	75	260	200	460	360	100	M20	156	C1S
GSHF 65-160/110A/P SC	65	80	100	490	540	1164	840	1250	205	75	260	200	500	360	100	M20	164	C2S
GSHF 65-160/110/P SC	65	80	100	490	540	1164	840	1250	205	75	260	200	500	360	100	M20	164	C2S
GSHF 65-200/150/P SC	65	80	100	490	540	1164	840	1250	205	75	280	225	520	360	100	M20	187	C2S
GSHF 65-200/185/P SC	65	80	100	490	540	1164	840	1250	205	75	280	225	520	360	100	M20	192	C2S
GSHF 65-200/220/C SC	65	80	100	490	540	1224	840	1250	205	75	280	225	559	360	100	M20	276	D1S
GSHF 65-250/300/C SC	65	80	100	550	610	1477	940	1400	230	90	310	250	627	470	140	M24	370	E1S
GSHF 65-250/370/C SC	65	80	100	550	610	1477	940	1400	230	90	310	250	627	470	140	M24	406	E1S
GSHF 80-160/110/P SC	80	100	125	490	540	1189	840	1250	205	75	280	225	520	360	100	M20	200	C2S
GSHF 80-160/150/P SC	80	100	125	490	540	1189	840	1250	205	75	280	225	520	360	100	M20	211	C2S
GSHF 80-160/185/P SC	80	100	125	490	540	1189	840	1250	205	75	280	225	520	360	100	M20	222	C2S
GSHF 80-200/220/C SC	80	100	125	490	540	1359	840	1250	205	75	280	250	559	470	100	M20	304	D2S
GSHF 80-200/300/C SC	80	100	125	550	610	1502	940	1400	230	75	310	250	627	470	140	M24	376	E1S
GSHF 80-200/370/C SC	80	100	125	550	610	1502	940	1400	230	75	310	250	627	470	140	M24	405	E1S
GSHF 80-250/450/C SC	80	100	125	550	610	1591	940	1400	230	90	365	280	749	470	140	M24	504	E1S
GSHF 80-250/550/C SC	80	100	125	600	660	1700	1060	1600	270	90	390	280	792	470	140	M24	587	F1S
GSHF 80-250/750/C SC	80	100	125	670	730	1807	1200	1800	300	90	420	280	892	470	140	M24	706	G1S

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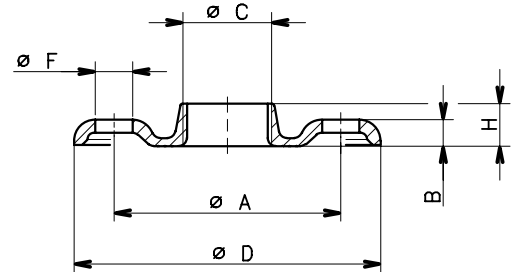


# ACCESSORIES

## DIMENSIONS OF ROUND THREADED COUNTERFLANGES ACCORDING TO EN 1092-1

DN	ø C	DIMENSIONS (mm)				HOLES		PN
		ø A	B	ø D	H	ø F	N°	
25	Rp 1	85	10	115	16	14	4	16
32	Rp 1¼	100	13	140	16	18	4	16
40	Rp 1½	110	14	150	19	18	4	16
50	Rp 2	125	16	165	24	18	4	16
65	Rp 2½	145	16	185	23	18	4	16
80	Rp 3	160	17	200	27	18	8	16
100	Rp 4	180	18	220	31	18	8	16

sh-ctf-tonde-f-en\_b\_td

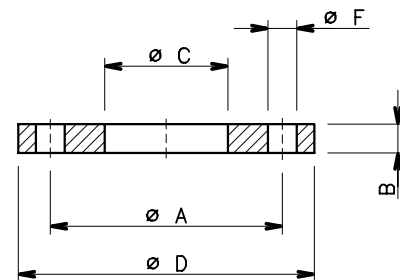


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## DIMENSIONS OF ROUND WELD-ON COUNTERFLANGES ACCORDING TO EN 1092-1

DN	ø C	DIMENSIONS (mm)			HOLES		PN
		ø A	B	ø D	ø F	N°	
65	77	145	18	185	18	4	16
80	90	160	20	200	18	8	16
100	115,5	180	22	220	18	8	16

sh-ctf-tonde-s-en\_b\_td

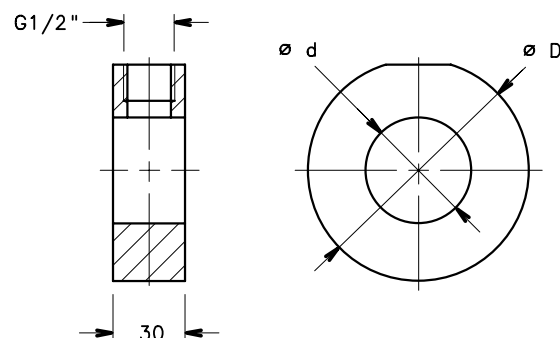


04431\_A\_DD

## AISI 304 FLANGE WITH PRESSURE GAUGE CONNECTOR

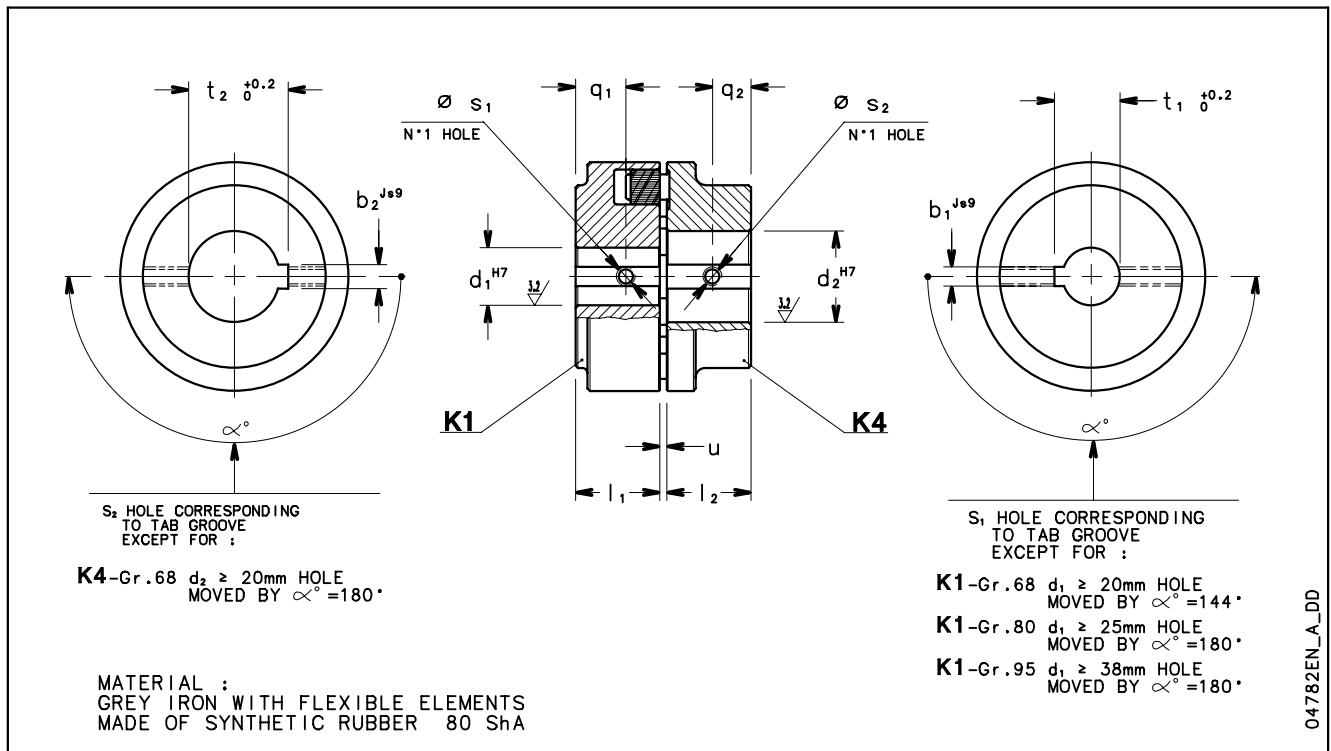
DESIGNATION	DIMENSIONS (mm)	
	d	D
25	29	70
32	36	82
40	44	92
50	54	107
65	69	127
80	85	142
100	105	162

fh-fla-manom-en\_a\_td



04781\_A\_DD

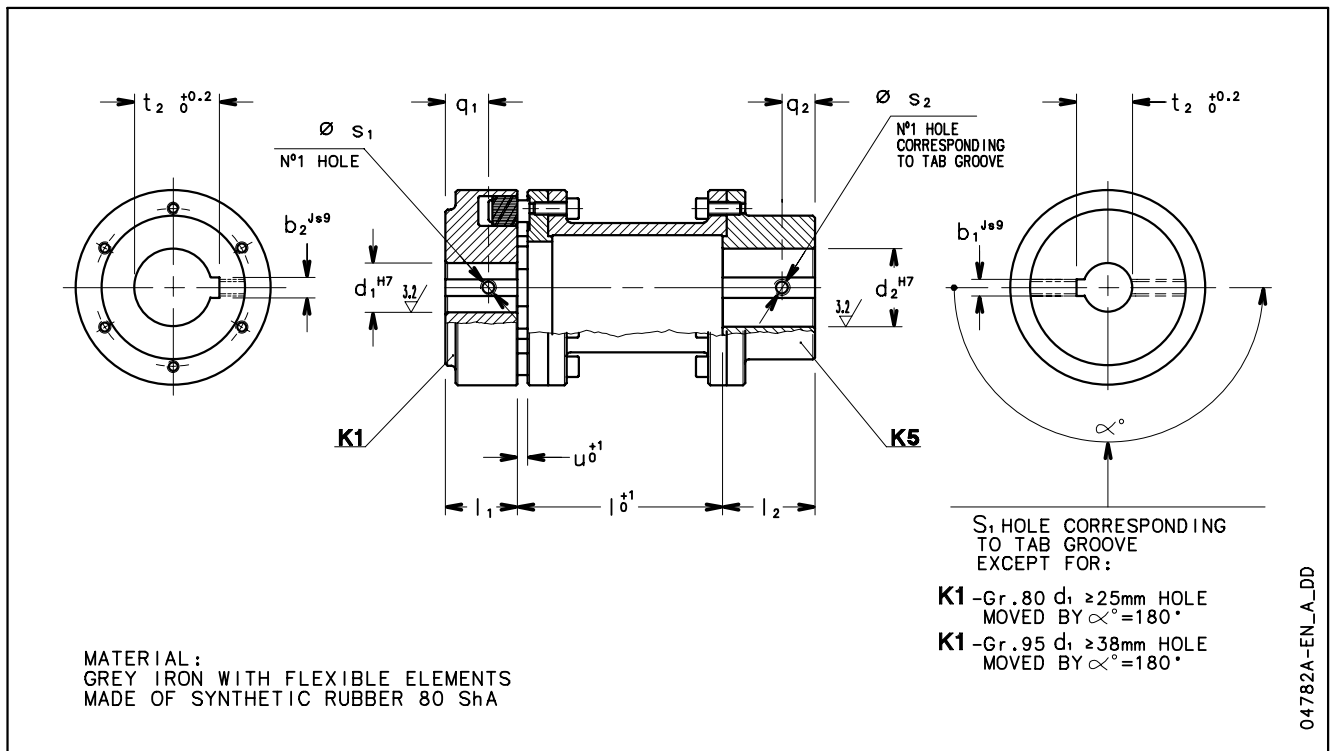
## FLEXIBLE COUPLING DIMENSIONS



REF.	DENOMINATION	DIMENSIONS (mm)												
		K1						K4						
		PUMP-SIDE HALF COUPLING						MOTOR-SIDE HALF COUPLING						
		SIZE x d <sub>1</sub> x d <sub>2</sub>	d <sub>1</sub> <sup>H7</sup>	l <sub>1</sub>	b <sub>1</sub> <sup>js9</sup>	t <sub>1 0</sub> <sup>+0.2</sup>	s <sub>1</sub>	q <sub>1</sub>	u	d <sub>2</sub> <sup>H7</sup>	l <sub>2</sub>	b <sub>2</sub> <sup>js9</sup>	t <sub>2 0</sub> <sup>+0.2</sup>	s <sub>2</sub>
A1	B 68 x 24 x 14	24	20	8	27,3	M6	10	2 ÷ 4	14	20	5	16,3	M6	8
A2	B 68 x 24 x 19	24	20	8	27,3	M6	10	2 ÷ 4	19	20	6	21,8	M6	8
A3	B 68 x 24 x 24	24	20	8	27,3	M6	10	2 ÷ 4	24	20	8	27,3	M6	8
B1	B 80 x 24 x 28	24	30	8	27,3	M6	19	2 ÷ 4	28	30	8	31,3	M6	12
C1	B 95 x 24 x 38	24	35	8	27,3	M6	20	2 ÷ 4	38	35	10	41,3	M6	15
C2	B 95 x 24 x 42	24	35	8	27,3	M6	20	2 ÷ 4	42	35	12	45,3	M6	15
C3	B 95 x 32 x 28	32	35	10	35,3	M6	20	2 ÷ 4	28	35	8	31,3	M6	15
C4	B 95 x 32 x 38	32	35	10	35,3	M6	20	2 ÷ 4	38	35	10	41,3	M6	15
C5	B 95 x 32 x 42	32	35	10	35,3	M6	20	2 ÷ 4	42	35	12	45,3	M6	15
D1	B 110 x 24 x 48	24	40	8	27,3	M6	22	2 ÷ 4	48	40	14	51,8	M6	18
D2	B 110 x 32 x 48	32	40	10	35,3	M6	22	2 ÷ 4	48	40	14	51,8	M6	18
E1	B 125 x 32 x 55	32	50	10	35,3	M8	30	2 ÷ 4	55	50	16	59,3	M8	20
F1	B 140 x 32 x 60	32	55	10	35,3	M8	13	2 ÷ 4	60	55	18	64,4	M8	22
G1	B 160 x 32 x 65	32	60	10	35,3	M10	13	2 ÷ 6	65	60	18	69,4	M10	25

shf-giunto-elastico-en\_c\_td

## SPACER COUPLING DIMENSIONS

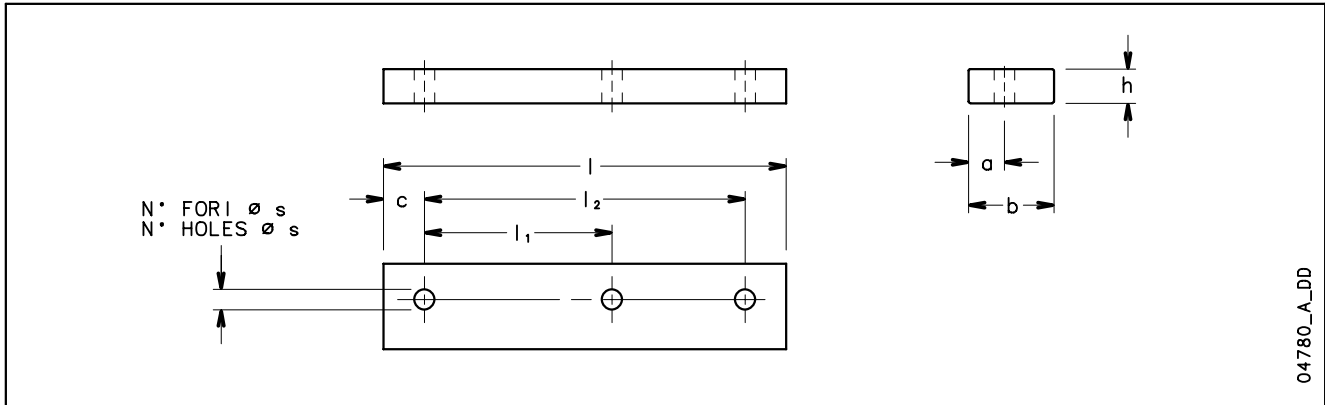


REF.	DENOMINATION	DIMENSIONS (mm)													
		K1							K5						
		PUMP-SIDE HALF COUPLING							MOTOR-SIDE HALF COUPLING						
	SIZE x l x d <sub>1</sub> x d <sub>2</sub>	$l_0^{+1}$	$d_1^{H7}$	$l_1$	$b_1^{js9}$	$t_1^{+0.2}$	$s_1$	$q_1$	$u$	$d_2^{H7}$	$l_2$	$b_2^{js9}$	$t_2^{+0.2}$	$s_2$	$q_2$
A2S	H 80-100 x 24 x 19	100	24	30	8	27,3	M6	19	5	19	45	6	21,8	M6	15
A3S	H 80-100 x 24 x 24	100	24	30	8	27,3	M6	19	5	24	45	8	27,3	M6	15
B1S	H 80-100 x 24 x 28	100	24	30	8	27,3	M6	19	5	28	45	8	31,3	M6	15
C1S	H 95-100 x 24 x 38	100	24	35	8	27,3	M6	20	5	38	45	10	41,3	M6	20
C2S	H 95-100 x 24 x 42	100	24	35	8	27,3	M6	20	5	42	45	12	45,3	M6	20
D1S	H 110-100 x 24 x 48	100	24	40	8	27,3	M6	22	5	48	50	14	51,8	M6	25
D2S	H 110-100 x 32 x 48	100	32	40	10	35,3	M6	22	5	48	50	14	51,8	M6	25
E1S	H 125-140 x 32 x 55	140	32	50	10	35,3	M8	30	5	55	50	16	59,3	M8	25
F1S	H 140-140 x 32 x 60	140	32	55	10	35,3	M8	13	5	60	65	18	64,4	M8	30
G1S	H 160-140 x 32 x 65	140	32	60	10	35,3	M10	13	6	65	70	18	69,4	M10	35

sh-giunto-elastico-con-sp-en\_c\_td



## MOTOR SHIM FOR GSH VERSIONS



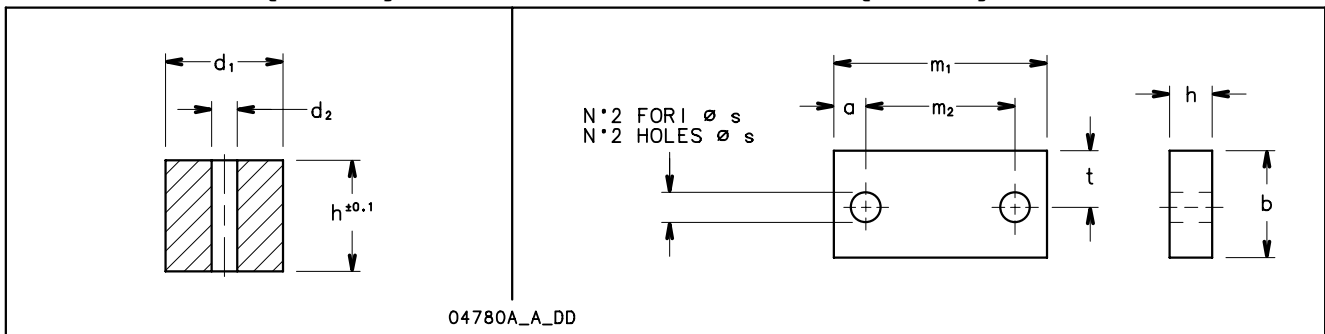
04780\_A\_DD

DENOMINATION					DIMENSIONS (mm)				HOLES	
b	x	h	x	l	a	l <sub>1</sub>	l <sub>2</sub>	c	N°	Ø s
35	12	125			17	100	-	12,5	2	10
35	20	125			17	100	-	12,5	2	10
40	8	180			17	140	-	20	2	14
40	10	155			20	100	125	15	3	10
40	12	155			20	100	125	15	3	10
40	12	180			17	140	-	20	2	14
40	20	180			17	140	-	20	2	14
40	30	155			20	100	125	15	3	10
40	40	180			17	140	-	20	2	14
50	8	226			21	140	178	24	3	14
50	20	226			21	140	178	24	3	14
50	20	304			25	210	254	25	3	16
50	30	304			25	210	254	25	3	16
80	30	360			26,5	-	311	24,5	2	18
90	30	406			30	-	349	28,5	2	22

sp-piatti-mot-shf-en\_c\_td

## CYLINDRICAL MOTOR SHIM (GSHF)

## PUMP SHIM (GSHF)



04780A\_A\_DD

DIMENSIONS (mm)			
DESIGNATION			d <sub>2</sub>
d <sub>1</sub>	x	h	
45		41	10
45		61	10
45		89	10
55		52	12
55		70	12
55		80	12
55		90	12
55		100	12
65		60	16
65		68	16
65		78	16
65		80	16
65		88	16

sp-tondi-mot-shf-en\_b\_td

DIMENSIONS (mm)							
DESIGNATION				a	m <sub>2</sub>	Ø s	t
b	x	h	m <sub>1</sub>				
40	10	160		25	110	14	16,5
40	20	160		25	110	14	16,5
40	25	160		25	110	14	16,5
40	30	160		25	110	14	16,5
70	20	125		15	95	14	37,5
80	10	160		20	120	18	42,5
80	25	160		20	120	18	42,5
80	30	160		20	120	18	42,5

sp-pompa-shf-en\_b\_td



# **TECHNICAL APPENDIX**

## TYPICAL APPLICATIONS OF GSH SERIES ELECTRIC PUMPS

### *Water Purification:*

De-ionized water  
Water Treatment  
Filtration  
Commercial Pools

### *Food and Drink:*

Food processing  
Bottle washing  
Citrus Processing  
Dish washing  
Brewing  
Sanitary ware

### *Medical:*

Laser cooling  
Medical chillers  
Sanitary equipment

### *Heating, Ventilating & Air Conditioning (HVAC)*

Condensate return  
Air scrubbers  
Water re-circulation  
Cooling towers  
Cooling systems  
Temperature control  
Chillaer  
Induction heating  
Heat exchangers  
Water heating  
Booster packages

### *Graphics:*

Film washing  
Cooling of presses

### *Plastics:*

Extrusion machines  
Temperature control  
Manufacture of polymers

### *Waste Management:*

Waste treatment  
Pollution control

### *Machine Tools:*

Degreasing  
Parts washing  
Machine centres  
Chemical treatment  
Heat treatment

### *Vehicle Maintenance:*

Car washing  
Lorry or Truck wash  
Wheel or tyre washing  
Airplane washing

### *Marine:*

Water on board ships  
Boat design (wave machines)

### *Agriculture:*

Irrigation  
Greenhouses  
Poultry Washing  
Cotton humidifiers

### *Computers:*

Washing of circuit boards

### *Laundry:*

Commercial washing

### *General Industry:*

Spray Booths  
Light chemical transfer  
Booster systems  
Fire fighting

## NPSH

The minimum operating values that can be reached at the pump suction end are limited by the onset of cavitation.

Cavitation is the formation of vapour-filled cavities within liquids where the pressure is locally reduced to a critical value, or where the local pressure is equal to, or just below the vapour pressure of the liquid.

The vapour-filled cavities flow with the current and when they reach a higher pressure area the vapour contained in the cavities condenses. The cavities collide, generating pressure waves that are transmitted to the walls. These, being subjected to stress cycles, gradually become deformed and yield due to fatigue. This phenomenon, characterized by a metallic noise produced by the hammering on the pipe walls, is called incipient cavitation.

The damage caused by cavitation may be magnified by electrochemical corrosion and a local rise in temperature due to the plastic deformation of the walls. The materials that offer the highest resistance to heat and corrosion are alloy steels, especially austenitic steel. The conditions that trigger cavitation may be assessed by calculating the total net suction head, referred to in technical literature with the acronym NPSH (Net Positive Suction Head).

The NPSH represents the total energy (expressed in m.) of the liquid measured at suction under conditions of incipient cavitation, excluding the vapour pressure (expressed in m.) that the liquid has at the pump inlet.

To find the static height  $h_z$  at which to install the machine under safe conditions, the following formula must be verified:

$$h_p + h_z \geq (\text{NPSH}_r + 0.5) + h_f + h_{pv} \quad (1)$$

where:

- $h_p$**  is the absolute pressure applied to the free liquid surface in the suction tank, expressed in m. of liquid;  $h_p$  is the quotient between the barometric pressure and the specific weight of the liquid.
- $h_z$**  is the suction lift between the pump axis and the free liquid surface in the suction tank, expressed in m.;  $h_z$  is negative when the liquid level is lower than the pump axis.
- $h_f$**  is the flow resistance in the suction line and its accessories, such as: fittings, foot valve, gate valve, elbows, etc.
- $h_{pv}$**  is the vapour pressure of the liquid at the operating temperature, expressed in m. of liquid.  $h_{pv}$  is the quotient between the  $P_v$  vapour pressure and the liquid's specific weight.
- 0,5** is the safety factor.

The maximum possible suction head for installation depends on the value of the atmospheric pressure (i.e. the elevation above sea level at which the pump is installed) and the temperature of the liquid.

To help the user, with reference to water temperature (4° C) and to the elevation above sea level, the following tables show the drop in hydraulic pressure head in relation to the elevation above sea level, and the suction loss in relation to temperature.

Water temperature (°C)	20	40	60	80	90	110	120
Suction loss (m)	0,2	0,7	2,0	5,0	7,4	15,4	21,5

Elevation above sea level (m)	500	1000	1500	2000	2500	3000
Suction loss (m)	0,55	1,1	1,65	2,2	2,75	3,3

Friction loss is shown in the tables at pages 103-104 of this catalogue. To reduce it to a minimum, especially in cases of high suction head (over 4-5 m.) or within the operating limits with high flow rates, we recommend using a suction line having a larger diameter than that of the pump's suction port. It is always a good idea to position the pump as close as possible to the liquid to be pumped.

Make the following calculation:

Liquid: water at ~15°C  $\gamma = 1 \text{ kg/dm}^3$

Flow rate required: 30 m<sup>3</sup>/h

Head for required delivery: 43 m.

Suction lift: 3,5 m.

The selection is an GFHE 40-200/75 pump whose NPSH required value is, at 30 m<sup>3</sup>/h, di 2,5 m.

For water at 15 °C

$$h_p = P_a / \gamma = 10,33\text{m}, h_{pv} = P_v / \gamma = 0,174\text{m} (0,01701 \text{ bar})$$

The  $H_f$  flow resistance in the suction line with foot valves is ~ 1,2 m.

By substituting the parameters in formula (1) with the numeric values above, we have:

$$10,33 + (-3,5) \geq (2,5 + 0,5) + 1,2 + 0,17$$

from which we have: 6,8 > 4,4

The relation is therefore verified.

## TECHNICAL APPENDIX VAPOUR PRESSURE PS VAPOUR PRESSURE AND $\rho$ DENSITY OF WATER TABLE

t °C	T K	ps bar	$\rho$ kg/dm <sup>3</sup>	t °C	T K	ps bar	$\rho$ kg/dm <sup>3</sup>	t °C	T K	ps bar	$\rho$ kg/dm <sup>3</sup>
0	273,15	0,00611	0,9998	55	328,15	0,15741	0,9857	120	393,15	1,9854	0,9429
1	274,15	0,00657	0,9999	56	329,15	0,16511	0,9852	122	395,15	2,1145	0,9412
2	275,15	0,00706	0,9999	57	330,15	0,17313	0,9846	124	397,15	2,2504	0,9396
3	276,15	0,00758	0,9999	58	331,15	0,18147	0,9842	126	399,15	2,3933	0,9379
4	277,15	0,00813	1,0000	59	332,15	0,19016	0,9837	128	401,15	2,5435	0,9362
5	278,15	0,00872	1,0000	60	333,15	0,1992	0,9832	130	403,15	2,7013	0,9346
6	279,15	0,00935	1,0000	61	334,15	0,2086	0,9826	132	405,15	2,867	0,9328
7	280,15	0,01001	0,9999	62	335,15	0,2184	0,9821	134	407,15	3,041	0,9311
8	281,15	0,01072	0,9999	63	336,15	0,2286	0,9816	136	409,15	3,223	0,9294
9	282,15	0,01147	0,9998	64	337,15	0,2391	0,9811	138	411,15	3,414	0,9276
10	283,15	0,01227	0,9997	65	338,15	0,2501	0,9805	140	413,15	3,614	0,9258
11	284,15	0,01312	0,9997	66	339,15	0,2615	0,9799	145	418,15	4,155	0,9214
12	285,15	0,01401	0,9996	67	340,15	0,2733	0,9793	155	428,15	5,433	0,9121
13	286,15	0,01497	0,9994	68	341,15	0,2856	0,9788	160	433,15	6,181	0,9073
14	287,15	0,01597	0,9993	69	342,15	0,2984	0,9782	165	438,15	7,008	0,9024
15	288,15	0,01704	0,9992	70	343,15	0,3116	0,9777	170	443,15	7,920	0,8973
16	289,15	0,01817	0,9990	71	344,15	0,3253	0,9770	175	448,15	8,924	0,8921
17	290,15	0,01936	0,9988	72	345,15	0,3396	0,9765	180	453,15	10,027	0,8869
18	291,15	0,02062	0,9987	73	346,15	0,3543	0,9760	185	458,15	11,233	0,8815
19	292,15	0,02196	0,9985	74	347,15	0,3696	0,9753	190	463,15	12,551	0,8760
20	293,15	0,02337	0,9983	75	348,15	0,3855	0,9748	195	468,15	13,987	0,8704
21	294,15	0,24850	0,9981	76	349,15	0,4019	0,9741	200	473,15	15,550	0,8647
22	295,15	0,02642	0,9978	77	350,15	0,4189	0,9735	205	478,15	17,243	0,8588
23	296,15	0,02808	0,9976	78	351,15	0,4365	0,9729	210	483,15	19,077	0,8528
24	297,15	0,02982	0,9974	79	352,15	0,4547	0,9723	215	488,15	21,060	0,8467
25	298,15	0,03166	0,9971	80	353,15	0,4736	0,9716	220	493,15	23,198	0,8403
26	299,15	0,03360	0,9968	81	354,15	0,4931	0,9710	225	498,15	25,501	0,8339
27	300,15	0,03564	0,9966	82	355,15	0,5133	0,9704	230	503,15	27,976	0,8273
28	301,15	0,03778	0,9963	83	356,15	0,5342	0,9697	235	508,15	30,632	0,8205
29	302,15	0,04004	0,9960	84	357,15	0,5557	0,9691	240	513,15	33,478	0,8136
30	303,15	0,04241	0,9957	85	358,15	0,5780	0,9684	245	518,15	36,523	0,8065
31	304,15	0,04491	0,9954	86	359,15	0,6011	0,9678	250	523,15	39,776	0,7992
32	305,15	0,04753	0,9951	87	360,15	0,6249	0,9671	255	528,15	43,246	0,7916
33	306,15	0,05029	0,9947	88	361,15	0,6495	0,9665	260	533,15	46,943	0,7839
34	307,15	0,05318	0,9944	89	362,15	0,6749	0,9658	265	538,15	50,877	0,7759
35	308,15	0,05622	0,9940	90	363,15	0,7011	0,9652	270	543,15	55,058	0,7678
36	309,15	0,05940	0,9937	91	364,15	0,7281	0,9644	275	548,15	59,496	0,7593
37	310,15	0,06274	0,9933	92	365,15	0,7561	0,9638	280	553,15	64,202	0,7505
38	311,15	0,06624	0,9930	93	366,15	0,7849	0,9630	285	558,15	69,186	0,7415
39	312,15	0,06991	0,9927	94	367,15	0,8146	0,9624	290	563,15	74,461	0,7321
40	313,15	0,07375	0,9923	95	368,15	0,8453	0,9616	295	568,15	80,037	0,7223
41	314,15	0,07777	0,9919	96	369,15	0,8769	0,9610	300	573,15	85,927	0,7122
42	315,15	0,08198	0,9915	97	370,15	0,9094	0,9602	305	578,15	92,144	0,7017
43	316,15	0,09639	0,9911	98	371,15	0,9430	0,9596	310	583,15	98,70	0,6906
44	317,15	0,09100	0,9907	99	372,15	0,9776	0,9586	315	588,15	105,61	0,6791
45	318,15	0,09582	0,9902	100	373,15	1,0133	0,9581	320	593,15	112,89	0,6669
46	319,15	0,10086	0,9898	102	375,15	1,0878	0,9567	325	598,15	120,56	0,6541
47	320,15	0,10612	0,9894	104	377,15	1,1668	0,9552	330	603,15	128,63	0,6404
48	321,15	0,11162	0,9889	106	379,15	1,2504	0,9537	340	613,15	146,05	0,6102
49	322,15	0,11736	0,9884	108	381,15	1,3390	0,9522	350	623,15	165,35	0,5743
50	323,15	0,12335	0,9880	110	383,15	1,4327	0,9507	360	633,15	186,75	0,5275
51	324,15	0,12961	0,9876	112	385,15	1,5316	0,9491	370	643,15	210,54	0,4518
52	325,15	0,13613	0,9871	114	387,15	1,6362	0,9476	374,15	647,30	221,20	0,3154
53	326,15	0,14293	0,9862	116	389,15	1,7465	0,9460				
54	327,15	0,15002	0,9862	118	391,15	1,8628	0,9445				

G-at\_nps\_h\_a\_sc

## TABLE OF FLOW RESISTANCE IN 100 m OF STRAIGHT CAST IRON PIPELINE (HAZEN-WILLIAMS FORMULA C=100)

FLOW RATE		NOMINAL DIAMETER in mm and INCHES																	
m <sup>3</sup> /h	l/min		15	20	25	32	40	50	65	80	100	125	150	175	200	250	300	350	400
			1/2"	3/4"	1"	1 1/4"	1 1/2"	2	2 1/2"	3"	4"	5"	6"	7"	8"	10"	12"	14"	16"
0,6	10	v	0,94	0,53	0,34	0,21	0,13			The hr values must be multiplied by: 0.71 for galvanized or painted steel pipes 0.54 for stainless steel or copper pipes 0.47 for PVC or PE pipes									
		hr	16	3,94	1,33	0,40	0,13												
0,9	15	v	1,42	0,80	0,51	0,31	0,20												
		hr	33,9	8,35	2,82	0,85	0,29												
1,2	20	v	1,89	1,06	0,68	0,41	0,27	0,17											
		hr	57,7	14,21	4,79	1,44	0,49	0,16											
1,5	25	v	2,36	1,33	0,85	0,52	0,33	0,21											
		hr	87,2	21,5	7,24	2,18	0,73	0,25											
1,8	30	v	2,83	1,59	1,02	0,62	0,40	0,25											
		hr	122	30,1	10,1	3,05	1,03	0,35											
2,1	35	v	3,30	1,86	1,19	0,73	0,46	0,30											
		hr	162	40,0	13,5	4,06	1,37	0,46											
2,4	40	v		2,12	1,36	0,83	0,53	0,34	0,20										
		hr		51,2	17,3	5,19	1,75	0,59	0,16										
3	50	v		2,65	1,70	1,04	0,66	0,42	0,25										
		hr		77,4	26,1	7,85	2,65	0,89	0,25										
3,6	60	v		3,18	2,04	1,24	0,80	0,51	0,30										
		hr		108	36,6	11,0	3,71	1,25	0,35										
4,2	70	v		3,72	2,38	1,45	0,93	0,59	0,35										
		hr		144	48,7	14,6	4,93	1,66	0,46										
4,8	80	v		4,25	2,72	1,66	1,06	0,68	0,40										
		hr		185	62,3	18,7	6,32	2,13	0,59										
5,4	90	v			3,06	1,87	1,19	0,76	0,45	0,30									
		hr			77,5	23,3	7,85	2,65	0,74	0,27									
6	100	v			3,40	2,07	1,33	0,85	0,50	0,33									
		hr			94,1	28,3	9,54	3,22	0,90	0,33									
7,5	125	v			4,25	2,59	1,66	1,06	0,63	0,41									
		hr			142	42,8	14,4	4,86	1,36	0,49									
9	150	v				3,11	1,99	1,27	0,75	0,50	0,32								
		hr				59,9	20,2	6,82	1,90	0,69	0,23								
10,5	175	v				3,63	2,32	1,49	0,88	0,58	0,37								
		hr				79,7	26,9	9,07	2,53	0,92	0,31								
12	200	v				4,15	2,65	1,70	1,01	0,66	0,42								
		hr				102	34,4	11,6	3,23	1,18	0,40								
15	250	v				5,18	3,32	2,12	1,26	0,83	0,53	0,34							
		hr				154	52,0	17,5	4,89	1,78	0,60	0,20							
18	300	v					3,98	2,55	1,51	1,00	0,64	0,41							
		hr					72,8	24,6	6,85	2,49	0,84	0,28							
24	400	v					5,31	3,40	2,01	1,33	0,85	0,54	0,38						
		hr					124	41,8	11,66	4,24	1,43	0,48	0,20						
30	500	v					6,63	4,25	2,51	1,66	1,06	0,68	0,47						
		hr					187	63,2	17,6	6,41	2,16	0,73	0,30						
36	600	v						5,10	3,02	1,99	1,27	0,82	0,57	0,42					
		hr						88,6	24,7	8,98	3,03	1,02	0,42	0,20					
42	700	v						5,94	3,52	2,32	1,49	0,95	0,66	0,49					
		hr						118	32,8	11,9	4,03	1,36	0,56	0,26					
48	800	v						6,79	4,02	2,65	1,70	1,09	0,75	0,55					
		hr						151	42,0	15,3	5,16	1,74	0,72	0,34					
54	900	v						7,64	4,52	2,99	1,91	1,22	0,85	0,62					
		hr						188	52,3	19,0	6,41	2,16	0,89	0,42					
60	1000	v						5,03	3,32	2,12	1,36	0,94	0,69	0,53					
		hr						63,5	23,1	7,79	2,63	1,08	0,51	0,27					
75	1250	v						6,28	4,15	2,65	1,70	1,18	0,87	0,66					
		hr						96,0	34,9	11,8	3,97	1,63	0,77	0,40					
90	1500	v						7,54	4,98	3,18	2,04	1,42	1,04	0,80					
		hr						134	48,9	16,5	5,57	2,29	1,08	0,56					
105	1750	v						8,79	5,81	3,72	2,38	1,65	1,21	0,93					
		hr						179	65,1	21,9	7,40	3,05	1,44	0,75					
120	2000	v							6,63	4,25	2,72	1,89	1,39	1,06	0,68				
		hr							83,3	28,1	9,48	3,90	1,84	0,96	0,32				
150	2500	v							8,29	5,31	3,40	2,36	1,73	1,33	0,85				
		hr							126	42,5	14,3	5,89	2,78	1,45	0,49				
180	3000	v								6,37	4,08	2,83	2,08	1,59	1,02	0,71			
		hr								59,5	20,1	8,26	3,90	2,03	0,69	0,28			
210	3500	v									7,43	4,76	3,30	2,43	1,86	1,19	0,83		
		hr									79,1	26,7	11,0	5,18	2,71	0,91	0,38		
240	4000	v									8,49	5,44	3,77	2,77	2,12	1,36	0,94		
		hr									101	34,2	14,1	6,64	3,46	1,17	0,48		
300	5000	v										6,79	4,72	3,47	2,65	1,70	1,18		
		hr										51,6	21,2	10,0	5,23	1,77	0,73		
360	6000	v										8,15	5,66	4,16	3,18	2,04	1,42		
		hr										72,3	29,8	14,1	7,33	2,47	1,02		
420	7000	v											6,61	4,85	3,72	2,38	1,65	1,21	
		hr											39,6	18,7	9,75	3,29	1,35	0,64	
480	8000	v											7,55	5,55	4,25	2,72	1,89	1,39	
		hr											50,7	23,9	12,49	4,21	1,73	0,82	
540	9000	v											8,49	6,24	4,78	3,06	2,12	1,56	1,19
		hr											63,0	29,8	15,5	5,24	2,16	1,02	0,53
600	10000	v												6,93	5,31	3,40	2,36	1,73	1,33
		hr												36,2	18,9	6,36	2,62	1,24	0,65

G-at-pct\_a\_th

hr = flow resistance for 100m of straight pipeline (m)

V = water speed (m/s)

## FLOW RESISTANCE

### TABLE OF FLOW RESISTANCE IN BENDS, VALVES AND GATES

The flow resistance is calculated using the equivalent pipeline length method according to the table below:

ACCESSORY TYPE	DN											
	25	32	40	50	65	80	100	125	150	200	250	300
	Equivalent pipeline length (m)											
45° bend	0,2	0,2	0,4	0,4	0,6	0,6	0,9	1,1	1,5	1,9	2,4	2,8
90° bend	0,4	0,6	0,9	1,1	1,3	1,5	2,1	2,6	3,0	3,9	4,7	5,8
90° smooth bend	0,4	0,4	0,4	0,6	0,9	1,1	1,3	1,7	1,9	2,8	3,4	3,9
Union tee or cross	1,1	1,3	1,7	2,1	2,6	3,2	4,3	5,3	6,4	7,5	10,7	12,8
Gate	-	-	-	0,2	0,2	0,2	0,4	0,4	0,6	0,9	1,1	1,3
Non return valve	1,1	1,5	1,9	2,4	3,0	3,4	4,7	5,9	7,4	9,6	11,8	13,9

G-a-pcv\_a\_th

The table is valid for the Hazen Williams coefficient  $C = 100$  (cast iron pipework). For steel pipework, multiply the values by 1.41. For stainless steel, copper and coated cast iron pipework, multiply the values by 1.85.

When the **equivalent pipeline length** has been determined, the flow resistance is obtained from the table of flow resistance.

The values given are guideline values which are bound to vary slightly according to the model, especially for gate valves and non-return valves, for which it is a good idea to check the values supplied by the manufacturers.



## VOLUMETRIC CAPACITY

Litres per minute l/min	Cubic metres per hour m <sup>3</sup> /h	Cubic feet per hour ft <sup>3</sup> /h	Cubic feet per minute ft <sup>3</sup> /min	Imp. gal. per minute Imp. gal./min	US gal. per minute Us gal./min
<b>1,0000</b>	0,0600	2,1189	0,0353	0,2200	0,2642
16,6667	<b>1,0000</b>	35,3147	0,5886	3,6662	4,4029
0,4719	0,0283	<b>1,0000</b>	0,0167	0,1038	0,1247
28,3168	1,6990	60,0000	<b>1,0000</b>	6,2288	7,4805
4,5461	0,2728	9,6326	0,1605	<b>1,0000</b>	1,2009
3,7854	0,2271	8,0208	0,1337	0,8327	<b>1,0000</b>

## PRESSURE AND HEAD

Newton per square metre N/m <sup>2</sup>	kilo Pascal kPa	bar bar	Pound force per square inch psi	metre of water m H <sub>2</sub> O	millimetre of mercury mm Hg
<b>1,0000</b>	0,0010	1 x 10 <sup>-5</sup>	1.45 x 10 <sup>-4</sup>	1.02 x 10 <sup>-4</sup>	0,0075
1000,0000	<b>1,0000</b>	0,0100	0,1450	0,1020	7,5006
1 x 10 <sup>5</sup>	100,0000	<b>1,0000</b>	14,5038	10,1972	750,0638
6894,7570	6,8948	0,0689	<b>1,0000</b>	0,7031	51,7151
9806,6500	9,8067	0,0981	1,4223	<b>1,0000</b>	73,5561
133,3220	0,1333	0,0013	0,0193	0,0136	<b>1,0000</b>

## LENGTH

millimetre mm	centimetre cm	metre m	inch in	foot ft	yard yd
<b>1,0000</b>	0,1000	0,0010	0,0394	0,0033	0,0011
10,0000	<b>1,0000</b>	0,0100	0,3937	0,0328	0,0109
1000,0000	100,0000	<b>1,0000</b>	39,3701	3,2808	1,0936
25,4000	2,5400	0,0254	<b>1,0000</b>	0,0833	0,0278
304,8000	30,4800	0,3048	12,0000	<b>1,0000</b>	0,3333
914,4000	91,4400	0,9144	36,0000	3,0000	<b>1,0000</b>

## VOLUME

cubic metre m <sup>3</sup>	litre litro	millilitre ml	imp. Gallon imp. gal.	US gallon US gal.	cubic foot ft <sup>3</sup>
<b>1,0000</b>	1000,0000	1 x 10 <sup>6</sup>	219,9694	264,1720	35,3147
0,0010	<b>1,0000</b>	1000,0000	0,2200	0,2642	0,0353
1 x 10 <sup>-6</sup>	0,0010	<b>1,0000</b>	2.2 x 10 <sup>-4</sup>	2.642 x 10 <sup>-4</sup>	3.53 x 10 <sup>-5</sup>
0,0045	4,5461	4546,0870	<b>1,0000</b>	1,2009	0,1605
0,0038	3,7854	3785,4120	0,8327	<b>1,0000</b>	0,1337
0,0283	28,3168	28316,8466	6,2288	7,4805	<b>1,0000</b>

G-at\_pp-en\_a\_sc





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