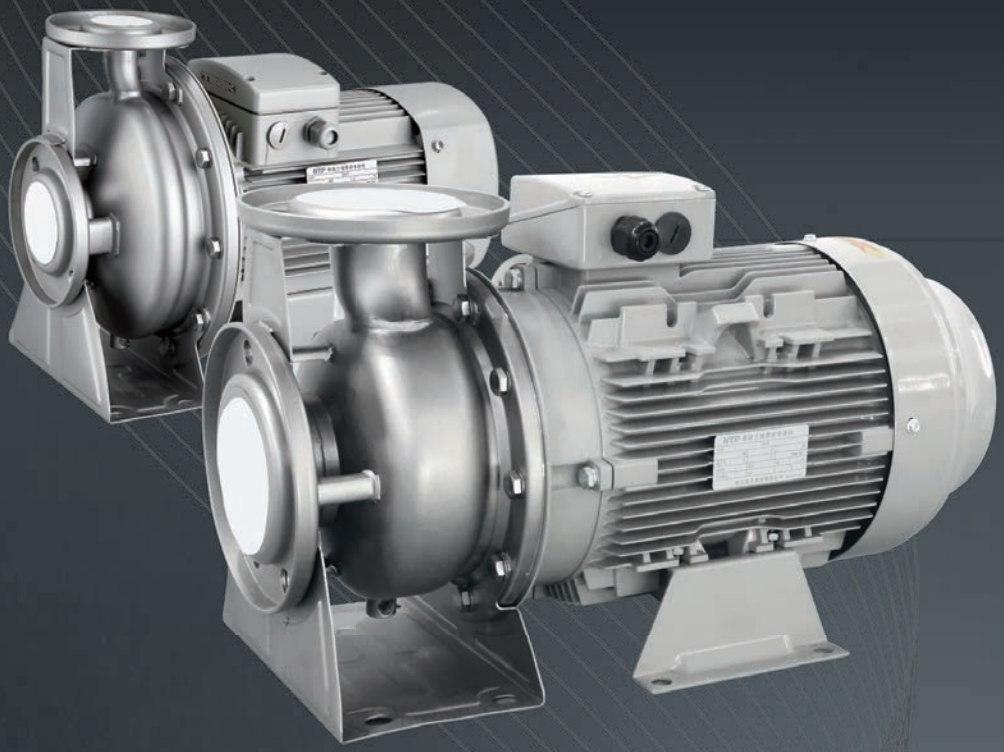


SMD

HORZONTAL SINGLE-STAGE CENTRIFUGAL PUMP

50Hz

TESK

ashirvad by aloxis

JOHNTECH PUMPS

AMANDA PUMPS

Introduction

SMD,SMC is a stainless steel horizontal single-stage centrifugal pump, which conveys the liquid by rotating the impeller with the centrifugal force. It mainly consists of spindle, impeller, diffuser, pump casing, mechanical seal combined into the pump body and motor connection.

SMD,SMC series use stainless steel plate technology such as stamping, bulging and welding and pull-back design, for impeller, coupling and motor to be pulled out without connecting pump body and pipeline system. The SMD series is a one-piece design with an extended shaft connection for the motor while the SMC series is a rigid connection design for the standard motor.

Pump materal

Stainless steel : AISI 304 · AISI 316

Pump operating conditions

Pumping liquids which are thin, clean, non-flammable, non-combustible or non-explosive liquids, not containing solid particles or fibers.

Maximum ambient temperature: +40 °C

Maximum altitude above sea level: 1000 m

Motor

- SMD: with non-standard special motor
- SMC: with totally enclosed, fan-cooled, 2-pole standard motors
- Enclosure class: IP55
- Insulation class: F

Voltage: 3x220-240/380-415V
1x220-240V

Available with single-phase motors(0.37kW-2.2kW)

Liquid temperature °C

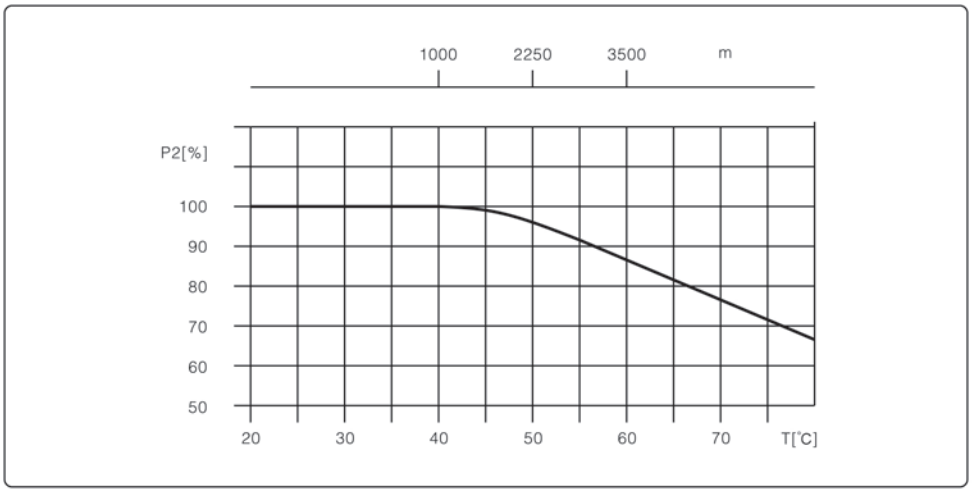
- Normal temperature pump: -15°C to +70°C
- Hot temperature pump: -15°C to +100°C

Performance curves

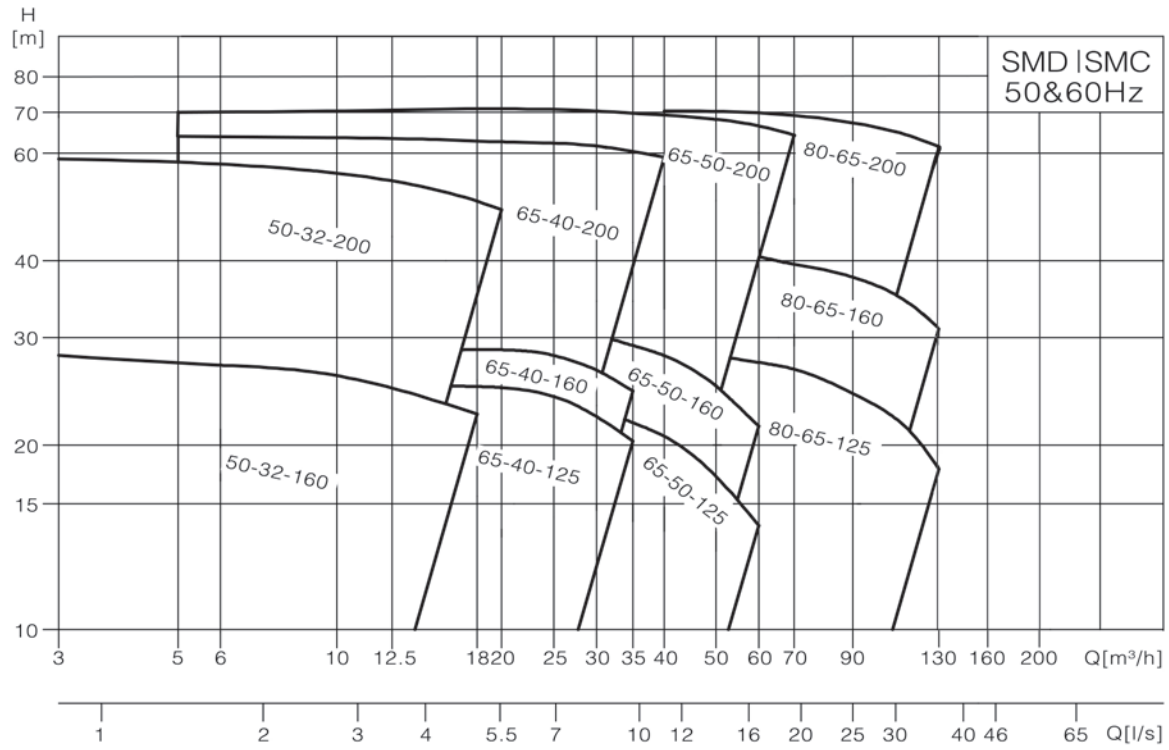
- The motors used for the measurements are based on 2900rpm or 2950 rpm
- Tolerances to ISO 9906
- Measurements have been made with airless water at a temperature of 20 °C
- The curves apply to the following kinematic viscosity: = 1 mm^2/s
- Select a best efficiency of the pump which is operating within the bold curve of the pump performance.

Ambient temperature

If the ambient temperature exceeds the 40 °C or the pump is installed at an altitude exceeding 1000 m, the motor output power P2 will decrease. In such cases, it necessary to use a motor with a higher rated output.



Pump performance range



Minimum inlet pressure, NPSH

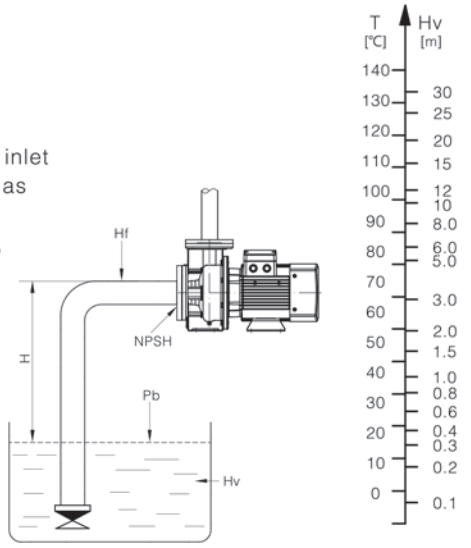
Cavitation may occur if the following conditions exist during the operation of the water pump:

- The water tank or pool is lower than the water pump inlet;

High liquid temperature;

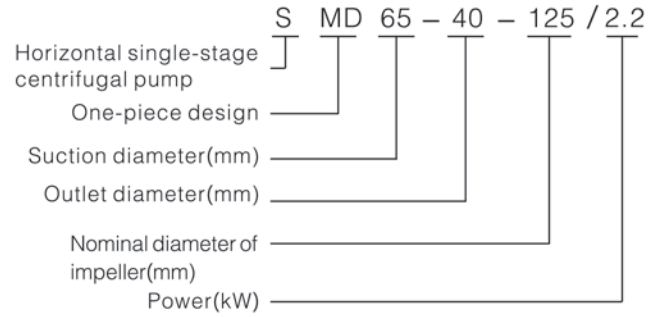
- Actual flow significantly greater the rated flow;
- Pressure in the pump lower than the vaporization pressure of the conveying liquid.
- To avoid cavitation, make sure there is a minimum pressure on the inlet side of the pump. The maximum suction rage H (m) can be calculated as follows:

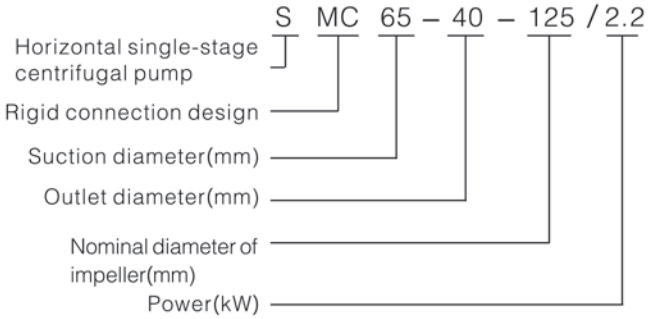
Pb=Atmospheric pressure (atmospheric pressure can be set to 1bar), in closed system, Pb is system pressure
Hf=Net positive suction head (can be read from the maximum possible flow rate of the pump on the NPSH curve)
Hf=Pipeline loss at inlet
Hv=Vaporization pressure
Hs=Safety margin=Minimum 0.5m head
If the calculated value of H is positive, the pump can be operated at the maximum suction rage H.
If the calculated H is negative, there must be a head with minimum inlet pressure H.



Minimum inlet pressure

Model specification





Applications

Water supply
- Water filter
- Supercharging
- Pressurization of hotels
- Industrial pressurization

Industrial boosting
- Cleaning system
- High pressure flushing system
- Firefighting system
- Car cleaning equipment

Industrial liquid transport
- Cooling air conditioning system
- Boiler feed water
- Condensing system and cooling tower
- Machine tool cooling lubrication system

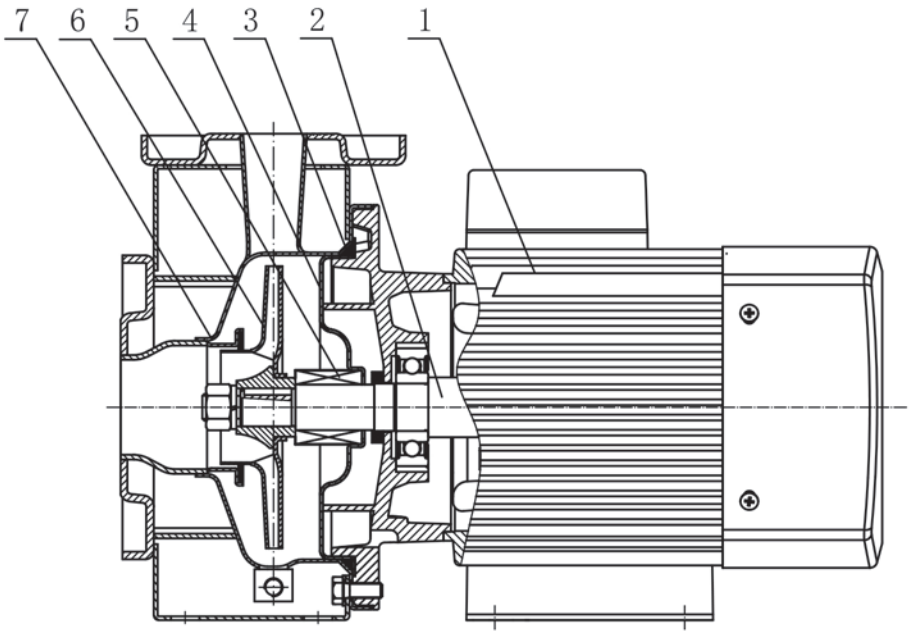
Water treatment
- Ultrafiltration system
- Reverse osmosis system
- Distillation system
- Separator
- Swimming pool

Irrigation
- Regional irrigation
- Sprinkler irrigation
- Drip irrigation
- Greenhouse irrigation

Parameter

No.	Model	Q [m³/h]	H [m]	n [r/min]	Voltage	
						3×380V
						P[kW]
2	SMD/SMC50-32-160/1.5	12.5	20	2900		1.5
3	SMD/SMC50-32-160/2.2	12.5	25			2.2
4	SMD/SMC50-32-200/3	12.5	32			3
5	SMD/SMC50-32-200/4	12.5	42			4
6	SMD/SMC50-32-200/5.5	12.5	54			5.5
10	SMD/SMC65-40-160/4	25	28			4
11	SMD/SMC65-40-200/5.5	25	36			5.5
12	SMD/SMC65-40-200/7.5	25	46			7.5
14	SMD/SMC65-40-200/11	25	62	2950		11
15	SMD/SMC65-50-125/3	50	13	2900		3
16	SMD/SMC65-50-125/4	50	18			4
17	SMD/SMC65-50-160/5.5	50	25			5.5
18	SMD/SMC65-50-160/7.5	50	32			7.5
19	SMD/SMC65-50-200/9.2	50	40			9.2
20	SMD/SMC65-50-200/11	50	48	2950		11
21	SMD/SMC65-50-200/15	50	58			15
22	SMD/SMC65-50-200/18.5	50	68			18.5
24	SMD/SMC80-65-125/7.5	100	18	2900		7.5
25	SMD/SMC80-65-125/9.2	100	23			9.2
26	SMD/SMC80-65-160/11	100	27			11
27	SMD/SMC80-65-160/15	100	36			15
28	SMD/SMC80-65-200/18.5	100	45			18.5
29	SMD/SMC80-65-200/22	100	53			22

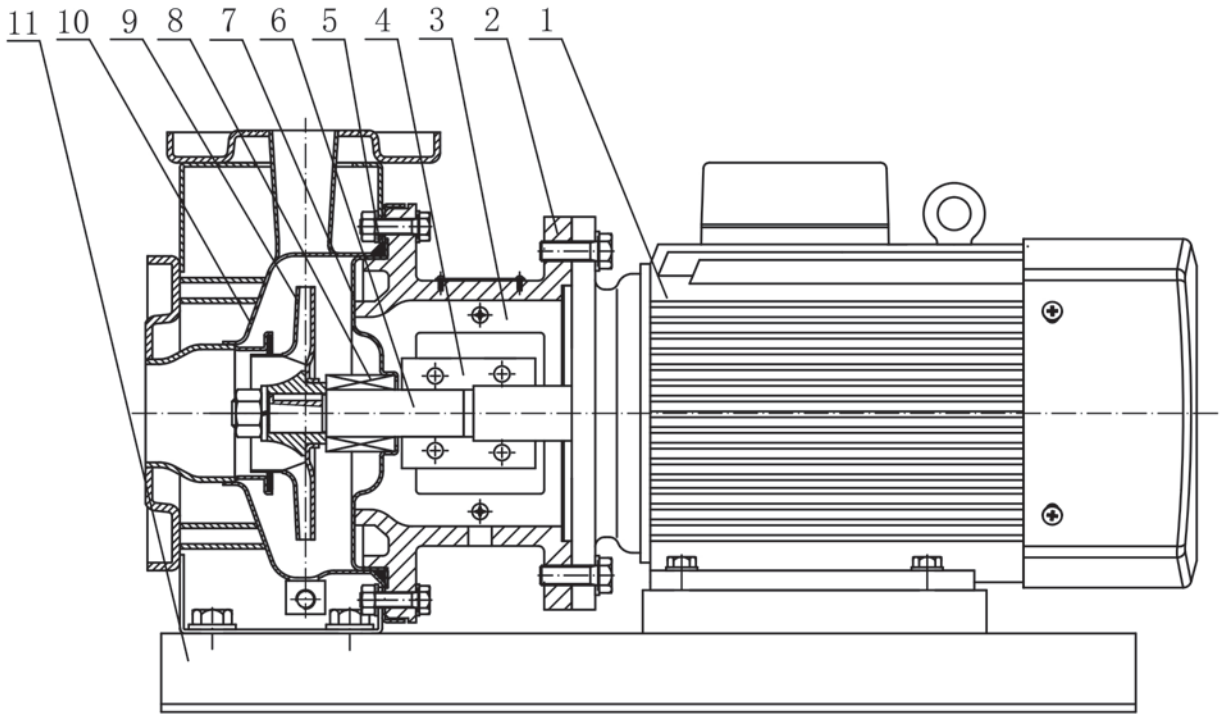
Structure SMD2,4,8,12,16,20



Materials SMD2,4,8,12,16,20

No.	Spare parts	Material	GB	EN/DIN	AISI/ASTM
1	Motor	/	/	/	/
2	Extend shaft	Stainless steel	GB/T2087806Cr19Ni10	EN 10088 1.4301	AISI304
3	O ring	NBR	/	/	/
4	Lining	Stainless steel	/	/	/
5	Mechanical seal	/	/	/	/
6	Impeller	Stainless steel	GB/T2087806Cr19Ni10	EN 10088 1.4301	AISI304
7	Pump casing	Stainless steel	GB/T2087806Cr19Ni10	EN 10088 1.4301	AISI304

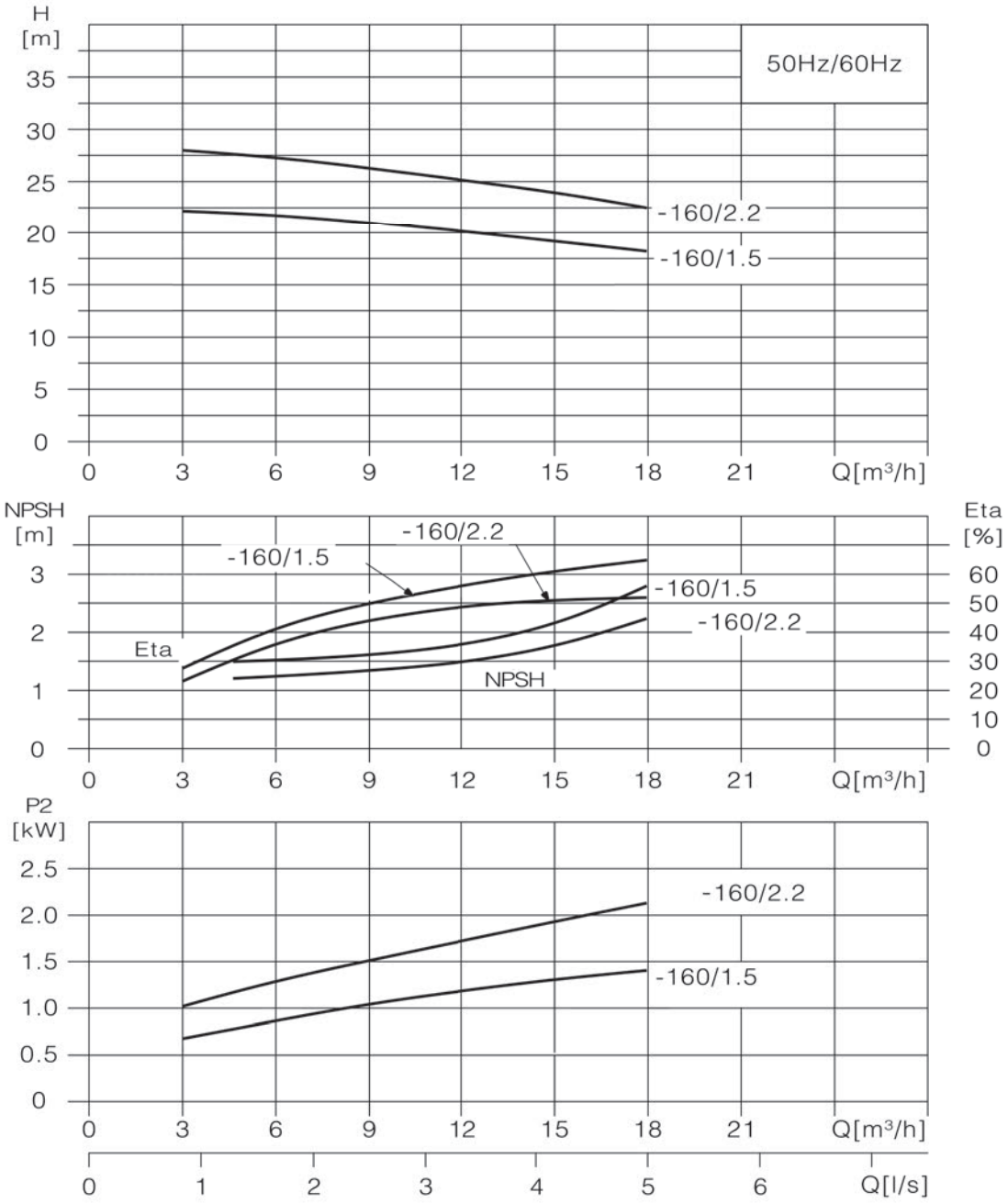
Structure SMC2,4,8,12,16,20



Materials SMC2,4,8,12,16,20

No.	Spare parts	Material	GB	EN/DIN	AISI/ASTM
1	Motor	/	/	/	/
2	Pump bracket	Cast iron	GB/T9439-HT200	EN1561-GJL-200	ASTM-A84 25B
3	Coupling guard	Stainless steel	GB/T20878-06Cr19Ni10	EN10088-1.1301	AISI304
4	Coupling	Cast iron	GB/T1348-QT500-7	EN1563-GJS-500-7	ASTMA53665-45-12
5	O ring	NBR	/	/	/
6	Pump shaft	Stainless steel	GB/T20878-06Cr19Ni10	EN10088-1.1301	AISI304
7	Seal seat	/	GB/T20878-06Cr19Ni10	EN10088-1.1301	AISI304
8	Mechanical seal	/	/	/	/
9	Impeller	Stainless steel	GB/T20878-06Cr19Ni10	EN10088-1.1301	AISI304
10	Pump casing	Stainless steel	GB/T20878-06Cr19Ni10	EN10088-1.1301	AISI304
11	Bottom seat	Steel	GB/T700-Q235	EN10025-S235JR	ASTM A283GRC

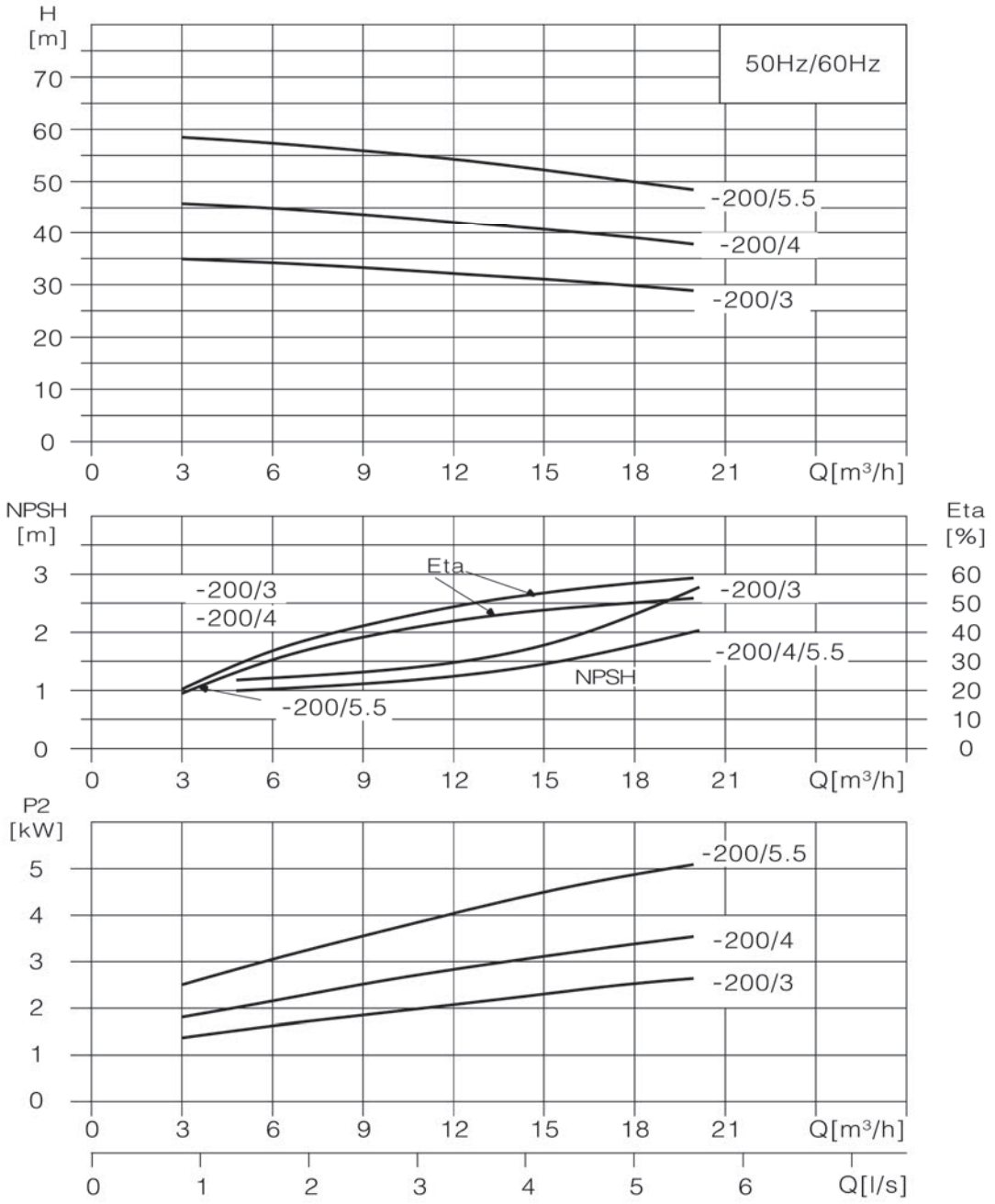
Performance curve



Performance data

Pump model	Power (kW)	Power (HP)	Q (m³/h)	3	6.3	9	12.5	15	18
SMD,SMC50-32-160/1.5	1.5	2	H (m)	22.5	22	21	20	19	17.8
SMD,SMC50-32-160/2.2	2.2	3		28	27	26.3	25	24	22.2

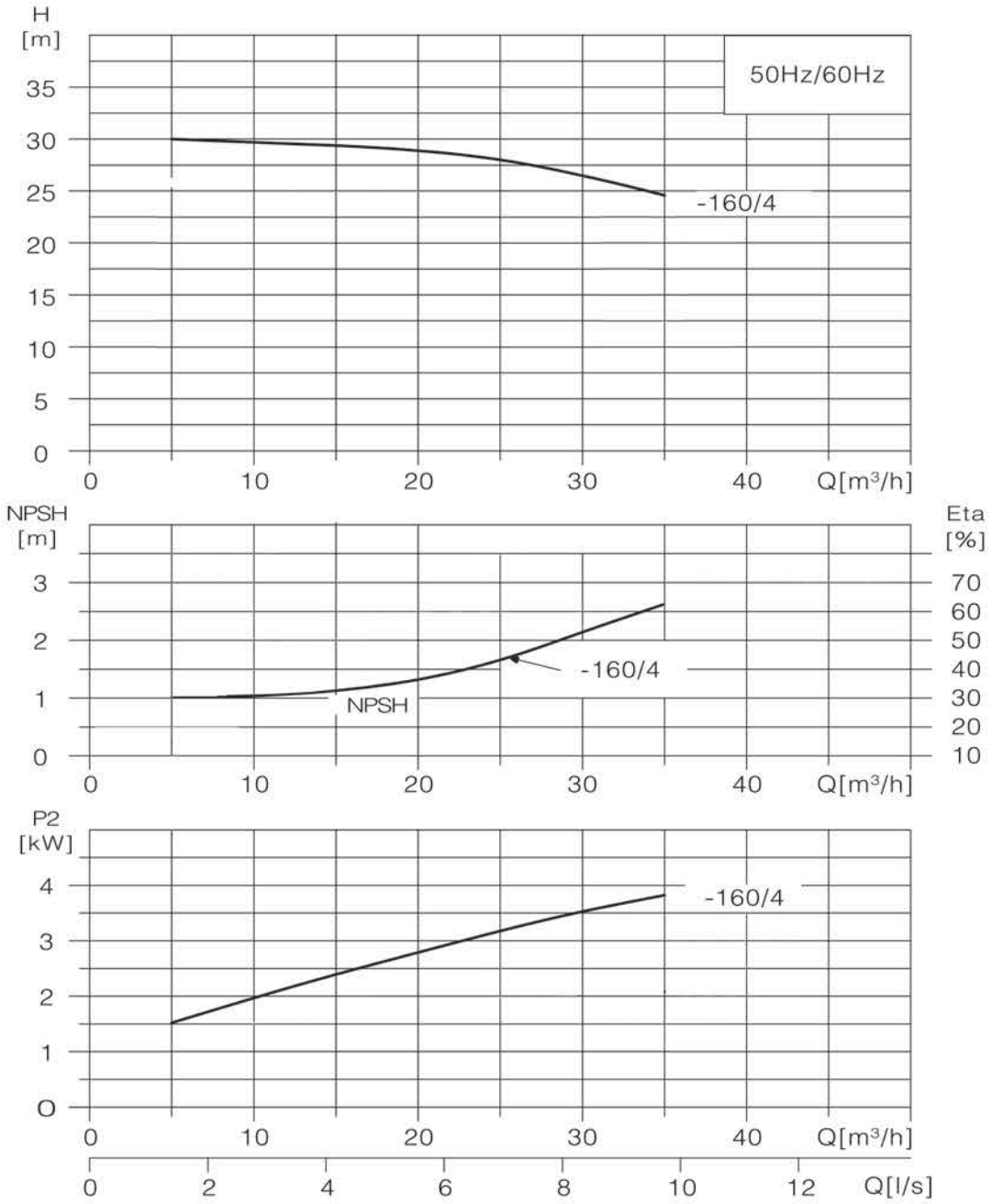
Performance curve



Performance data

Pump model	Power (kW)	Power (HP)	Q (m³/h)	3	6.3	9	12.5	15	18	20
SMD,SMC50-32-200/3	3	4	H (m)	34.9	34.1	33.3	32	30.9	29.6	28.7
SMD,SMC50-32-200/4	4	5.5		45.7	44.8	43.7	42	40.6	38.8	37.5
SMD,SMC50-32-200/5.5	5.5	7.5		58.5	57.2	56	54	52.4	49.8	48.3

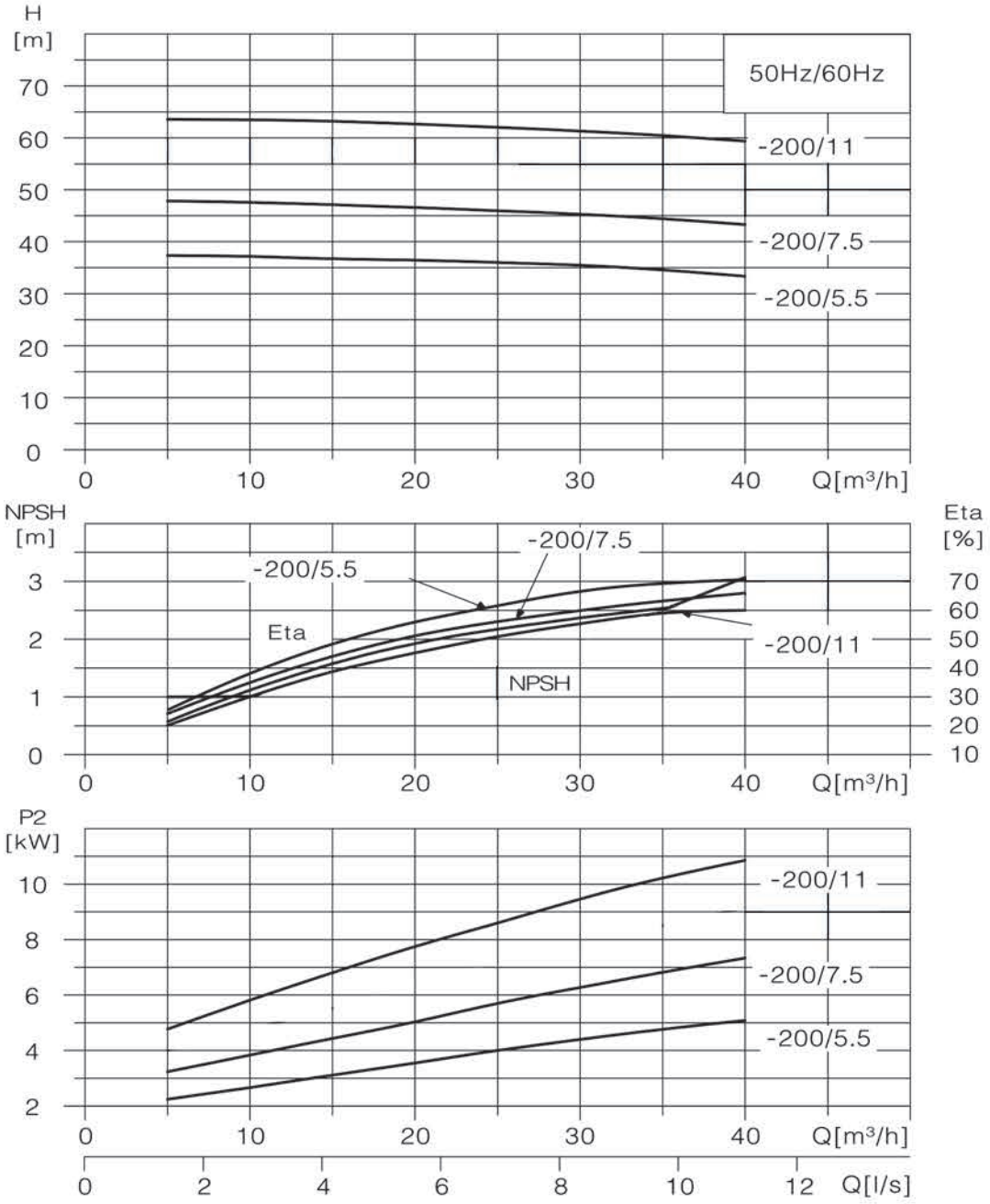
Performance curve



Performance data

Pump model	Power		Q (m³/h)	5	10	15	20	25	30	35
	(kW)	(HP)								
SMD,SMC65-40-160/4	4	5.5	H(m)	30.1	29.7	29.3	28.9	28	26.3	24.3

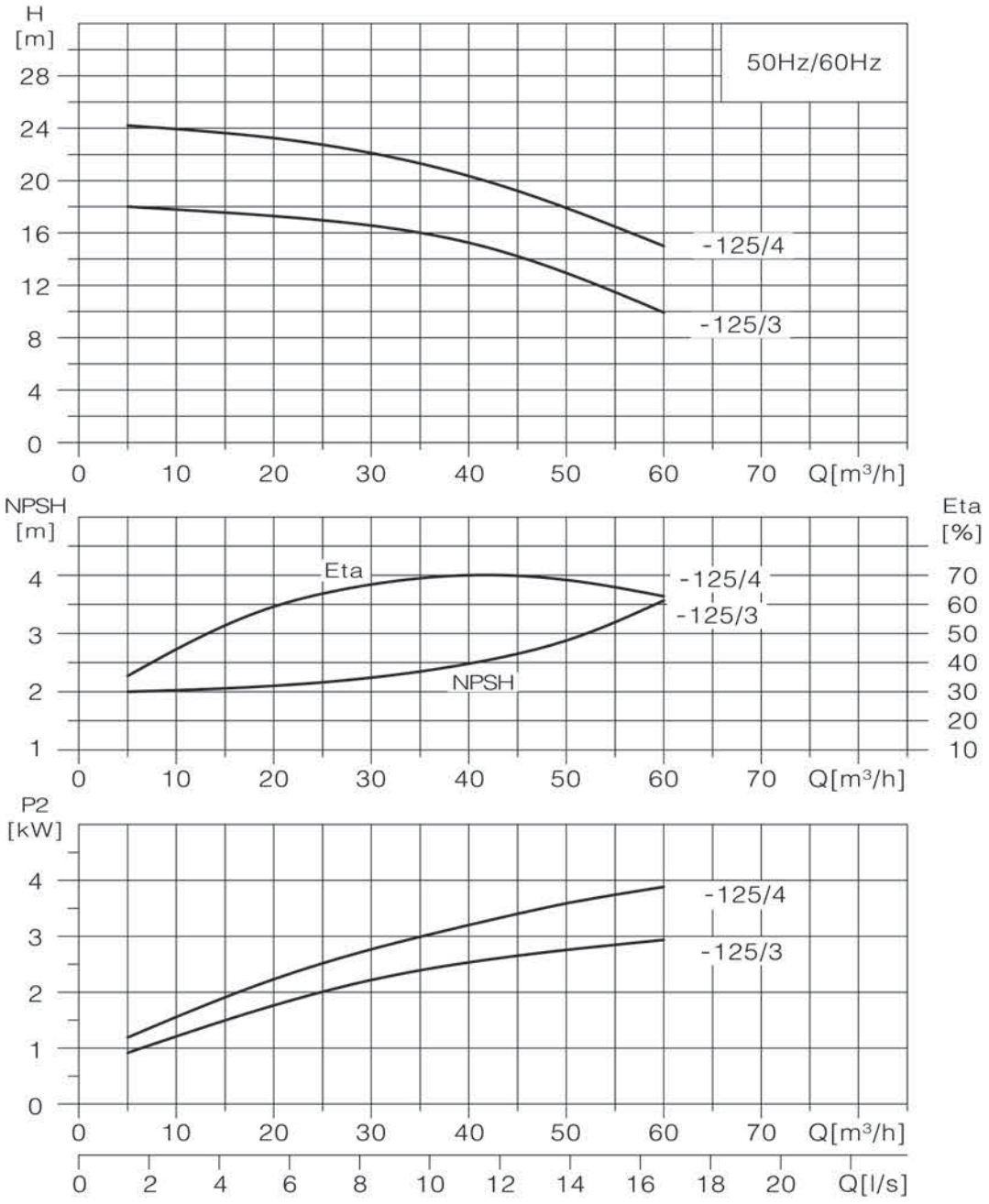
Performance curve



Performance data

Pump model	Power (kW)	Power (HP)	Q (m³/h)	5	10	15	20	25	30	35	40
SMD,SMC65-40-200/5.5	5.5	7.5	H (m)	37.5	37.2	36.7	36.4	36	35.5	34.5	33.1
SMD,SMC65-40-200/7.5	7.5	10		48.1	47.5	47	46.6	46	45.2	44.4	43.1
SMD,SMC65-40-200/11	11	15		64.1	63.5	63	62.5	62	61.5	60.4	58.8

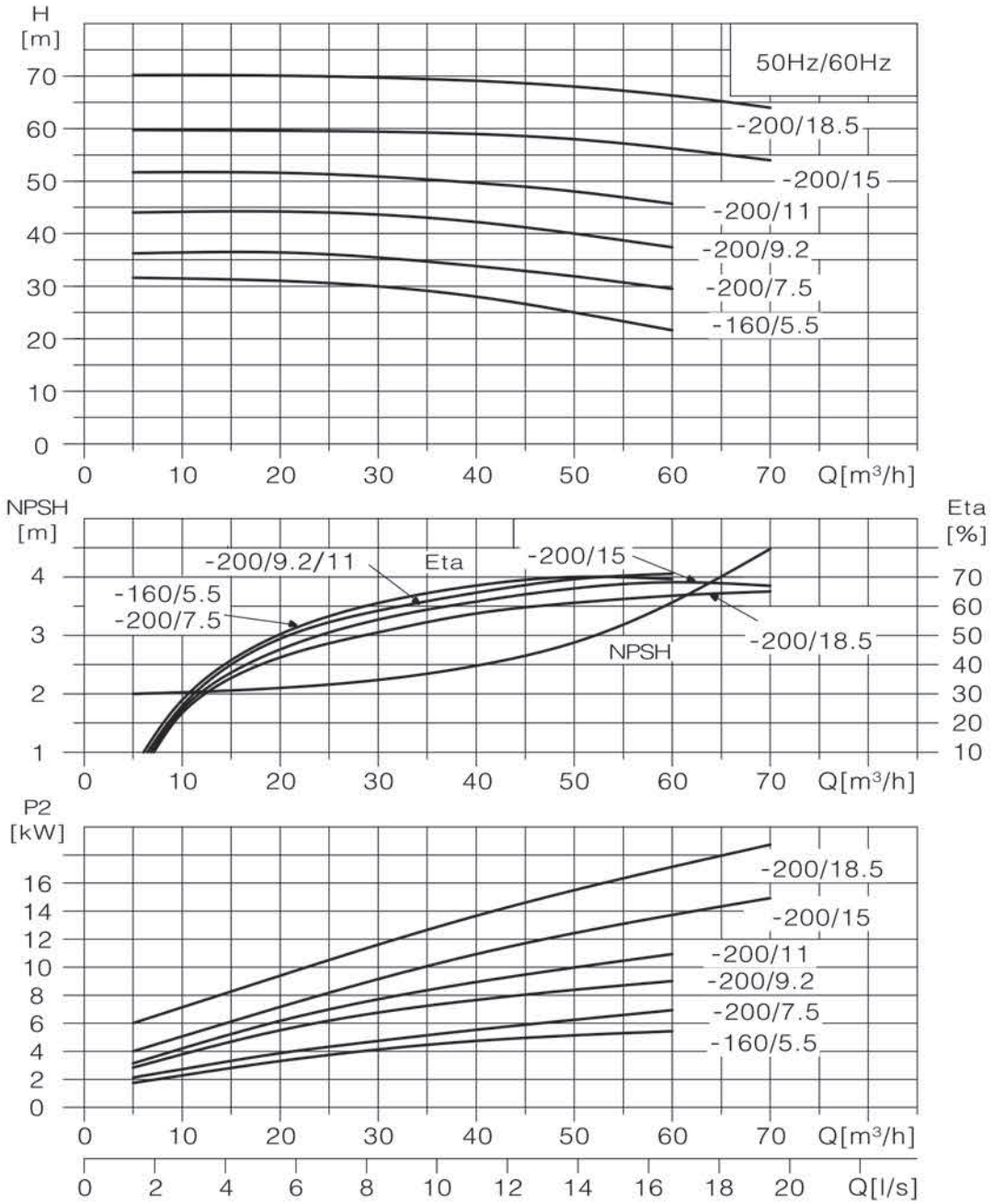
Performance curve



Performance data

Pump model	Power (kW)	Power (HP)	Q (m³/h)	5	10	20	30	40	50	60
SMD,SMC65-50-125/3	3	4	H (m)	18.1	17.9	17.2	16.4	15.1	13	9.9
SMD,SMC65-50-125/4	4	5.5		24.3	24.3	23.6	22.6	20.7	18	14.7

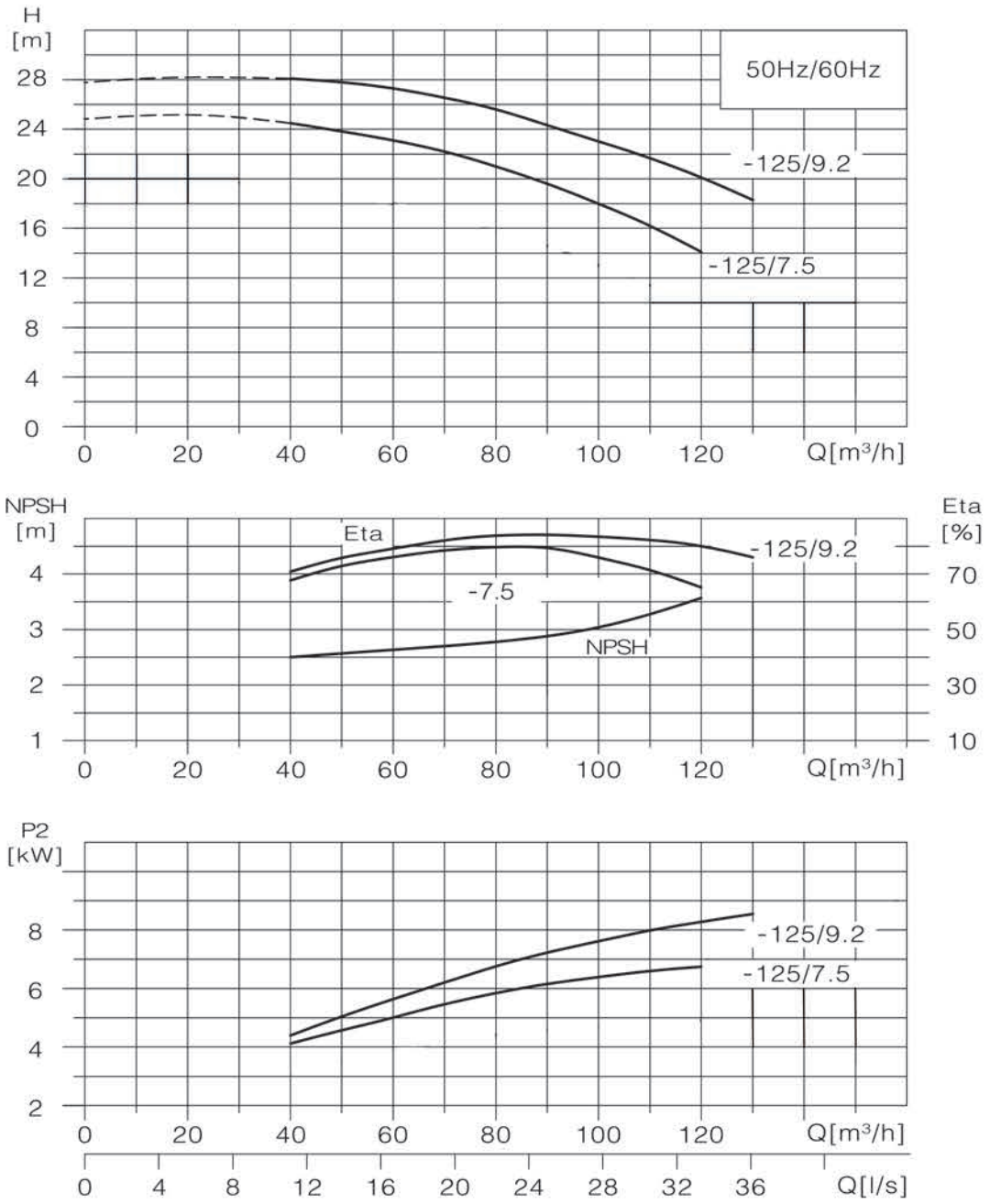
Performance curve



Performance data

Pump model	Power		Q (m³/h)	5	10	20	30	40	50	60	70
	(kW)	(HP)									
SMD,SMC65-50-160/5.5	5.5	7.5		31.7	31.6	31	30	28	25	21.3	
SMD,SMC65-50-160/7.5	7.5	10		36.4	36.7	36.4	35.6	34.1	32	29.4	
SMD,SMC65-50-200/9.2	9.2	12.5	H	43.6	43.6	43.5	43	42	40	37.3	
SMD,SMC65-50-200/11	11	15	(m)	51.6	51.6	51	50	49.3	48	45.4	
SMD,SMC65-50-200/15	15	20		59.8	59.8	59.6	59.5	59	58	56	52.8
SMD,SMC65-50-200/18.5	18.5	25		70.3	70.3	70.1	70	69.1	68	66.2	63.8

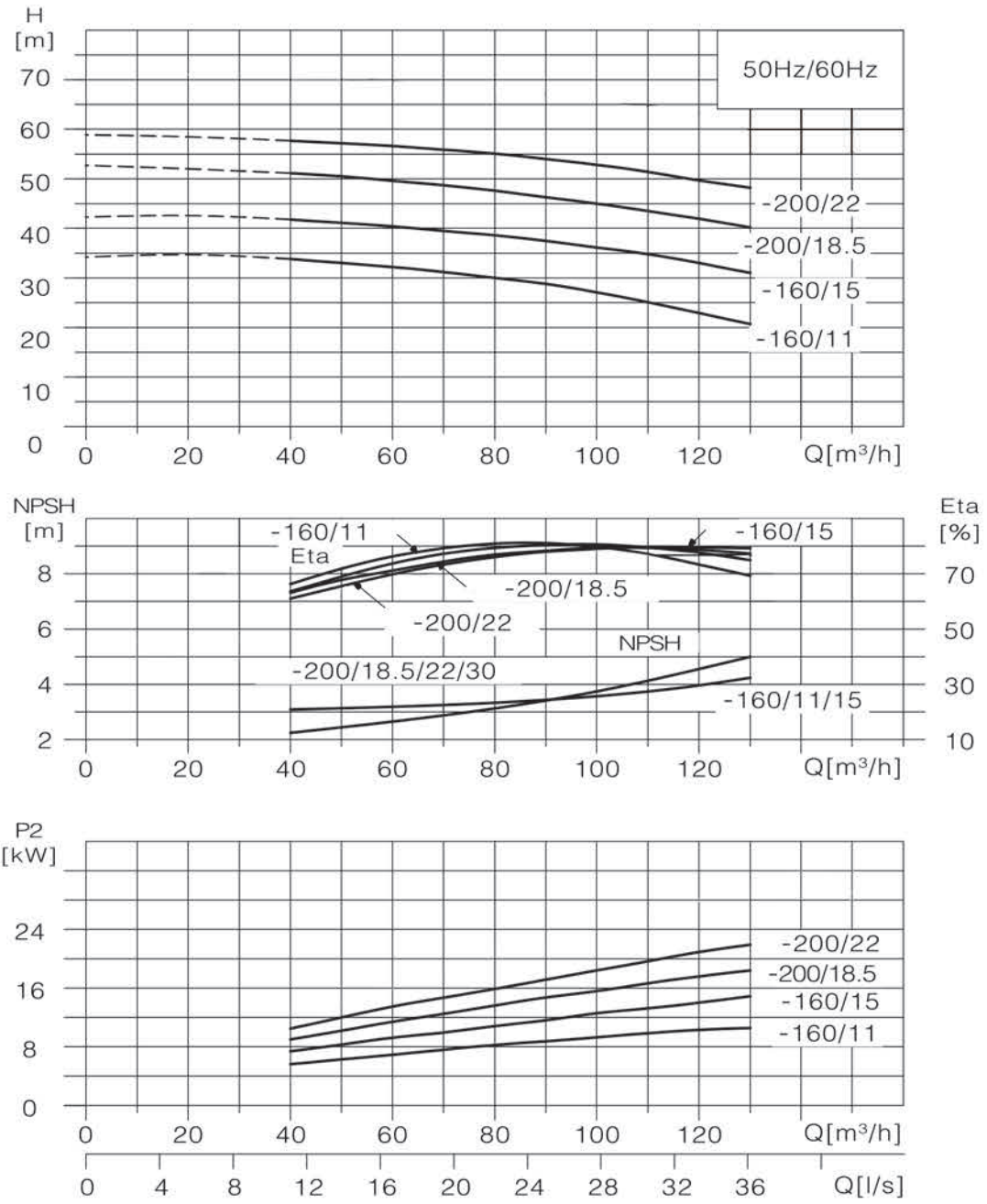
Performance curve



Performance data

Pump model	Power (kW)	Power (HP)	Q (m³/h)	40	50	60	70	80	90	100	110	120	130
SMD,SMC80-65-125/7.5	7.5	10	H (m)	24.6	23.9	23.1	22.2	21	19.6	18	16.2	13.9	
SMD,SMC80-65-125/9.2	9.2	12.5		28.2	27.9	27.3	26.6	25.7	24.3	23	21.8	19.9	18.1

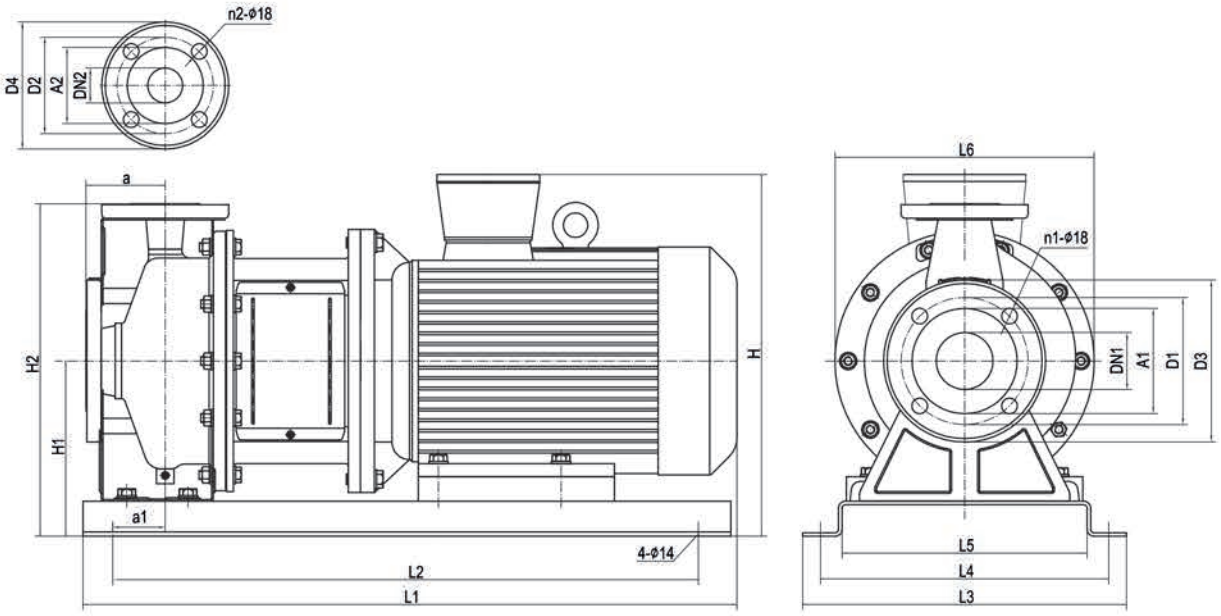
Performance curve



Performance data

Pump model	Power (kW)	Power (HP)	Q (m³/h)	40	50	60	70	80	90	100	110	120	130
SMD,SMC80-65-160/11	11	15	H (m)	34	33.1	32.2	31.3	29.9	28.8	27	25.1	22.7	20.5
SMD,SMC80-65-160/15	15	20		41.9	41.2	40.4	39.5	38.6	37.6	36	34.8	32.8	30.8
SMD,SMC80-65-200/18.5	18.5	25		51.1	50.6	49.6	48.7	47.6	46.3	45	43.5	42	40
SMD,SMC80-65-200/22	22	30		57.8	57.3	56.8	55.9	55.1	54	53	51.6	49.5	48

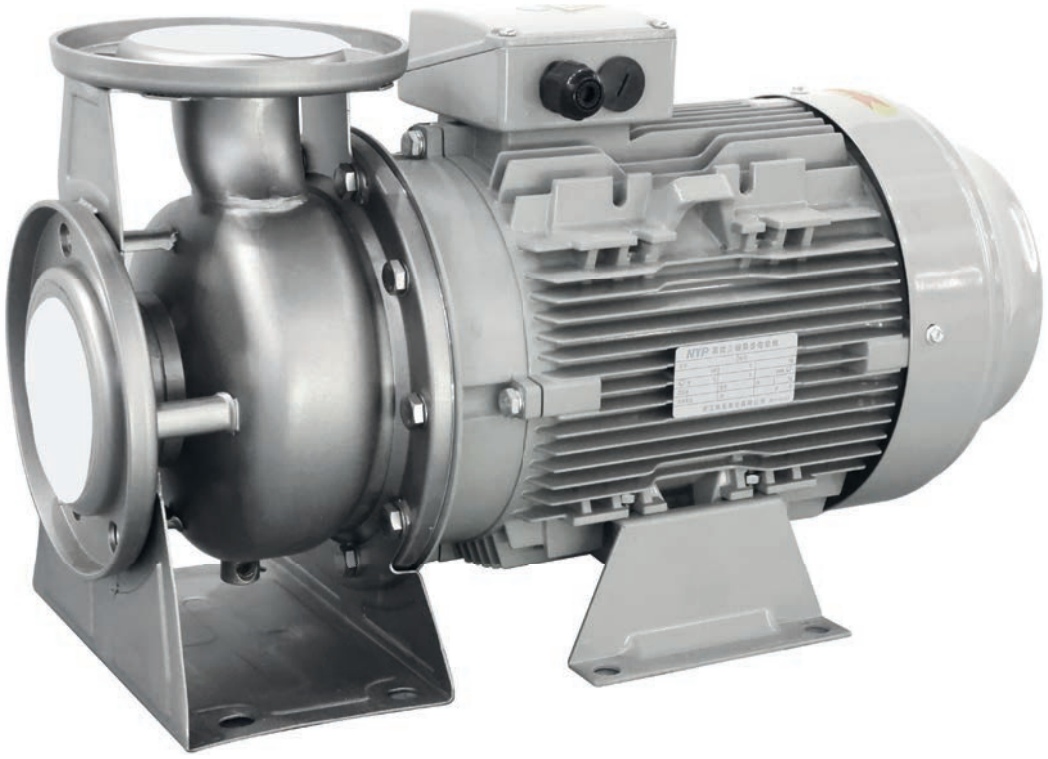
Installation dimensions and weight



Model	Dimension (mm)																					Weight
	DN1	DN2	A1	A2	D1	D2	D3	D4	n1	n2	a	a1	H	H1	H2	L1	L2	L3	L4	L5	L6	(kg)
SMD50-32-160/1.5	50	32	98	75	125	100	160	139	4	4	80	46	307	152	296	500	430	280	240	192	210	40
SMD50-32-160/2.2	50	32	98	75	125	100	160	139	4	4	80	46	307	152	296	500	430	280	240	192	210	43
SMD50-32-200/3	50	32	98	75	125	100	160	139	4	4	84	42	370	200	386	557	460	330	290	242	300	58
SMD50-32-200/4	50	32	98	75	125	100	160	139	4	4	84	47	393	200	386	567	480	330	290	242	300	64
SMD50-32-200/5.5	50	32	98	75	125	100	160	139	4	4	84	50	413	200	386	680	580	370	330	280	300	84
SMD65-40-160/4	65	40	118	84	145	110	185	145	4	4	80	45	345	152	294	564	480	330	290	242	250	58
SMD65-40-200/5.5	65	40	118	84	145	110	185	145	4	4	100	50	413	200	380	700	580	370	330	280	300	85
SMD65-40-200/7.5	65	40	118	84	145	110	185	145	4	4	100	50	413	200	380	700	580	370	330	280	300	89
SMD65-40-200/11	65	40	118	84	145	110	185	145	4	4	100	50	456	200	380	810	690	420	380	330	350	168
SMD65-50-125/3	65	50	118	98	145	125	185	160	4	4	86	45	342	172	338	560	468	330	290	242	250	54
SMD65-50-125/4	65	50	118	98	145	125	185	160	4	4	86	45	365	172	338	582	490	330	290	242	250	60
SMD65-50-160/5.5	65	50	118	98	145	125	185	160	4	4	100	50	413	200	380	700	580	370	330	280	300	85
SMD65-50-200/7.5	65	50	118	98	145	125	185	160	4	4	100	50	413	200	380	700	580	370	330	280	300	89

SMD Installation dimension and weight

Model	Dimension (mm)																				Weight
	DN1	DN2	A1	A2	D1	D2	D3	D4	n1	n2	a	a1	H	H1	H2	L1	L2	L3	L4	L5	L6	(kg)
SMD65-50-200/9.2	65	50	118	98	145	125	185	160	4	4	100	50	413	200	380	760	580	370	330	280	300	92
SMD65-50-200/11	65	50	118	98	145	125	185	160	4	4	100	50	456	200	380	810	690	420	380	330	350	171
SMD65-50-200/15	65	50	118	98	145	125	185	160	4	4	100	50	456	200	380	810	690	420	380	330	350	183
SMD65-50-200/18.5	65	50	118	98	145	125	185	160	4	4	100	50	456	200	380	850	730	420	380	330	350	201
SMD80-65-125/7.5	80	65	130	118	160	145	200	185	8	4	100	50	413	200	380	710	590	370	330	280	300	90
SMD80-65-125/9.2	80	65	130	118	160	145	200	185	8	4	100	50	413	200	380	770	590	370	330	280	300	97
SMD80-65-160/11	80	65	130	118	160	145	200	185	8	4	100	50	456	200	400	810	690	420	380	330	350	173
SMD80-65-160/15	80	65	130	118	160	145	200	185	8	4	100	50	456	200	400	810	690	420	380	330	350	185
SMD80-65-200/18.5	80	65	130	118	160	145	200	185	8	4	100	50	476	220	445	850	730	420	380	330	350	203
SMD80-65-200/22	80	65	130	118	160	145	200	185	8	4	100	50	500	220	445	910	780	455	415	365	400	235



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TESK

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