

SPCO[®]
makes life easier



VM, VMC, VMN
Vertical Multistage
Centrifugal Pump, 60Hz

Approvals

		CB TEST CERTIFICATE		Ref. Certificate No. CH-8876
IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME				
Issued by:	Electrosuisse			
Product:	Horizontal and vertical multistage pumps			
Applicant:	Swiss Pump Company AG	Moosweg 36 CH-3645 Gwatt (Thun)	Switzerland	
Manufacturer:	Swiss Pump Company AG	Moosweg 36 CH-3645 Gwatt (Thun)	Switzerland	
Factory:	Swiss Pump Company AG	Moosweg 36 CH-3645 Gwatt (Thun)	Switzerland	
Rating and principal characteristics:	3 x 230 - 277/348 - 480V~, 50/60Hz; 220-230V~, 50/60Hz; 127-220-240V~, 60Hz class I, IP55			
Trade mark (if any):	Swiss Pump Company AG (SPCO)			
Model/Type reference:	HM..., CHL..., VM..., CDL..., ND..., CC..., PD..., MB..., QB..., SMP..., CCP..., SCP... see appendix type list in test report			
Additional information:	---			
Sample of product tested to be in conformity with IEC:	60335-1(ed.4);am1;am2 60335-2-41(ed.3);am1;am2	National differences: EU Group Differences; EU Special National Conditions; EU A-Deviations		
Test Report Ref. No.:	06-HG-0218.01 + .02 + .03 + .05			
This CB Test Certificate is issued by the National Certification Body:				
Electrosuisse Luppenstrasse 1, CH-8320 Fehraltorf				
Signed by: Erich Obrist 2010-07-27				
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Vertical Multistage Pumps

English - SPCO High Pressure Pumps VM, VMN, VMC with pumping pressure up to 280 meter and flow up to 180 m³/h. All essential parts like shaft, impellers and intermediate chambers are fully stainless steel AISI 304 (W-Nr. 1.43.01). On request the complete pump can be supplied in stainless steel or with higher grad stainless steel AISI 316 (W-Nr. 1.44.01). Usually the pumps are equipped with mechanical seals tungsten carbide/carbon. Special seals are applied according to the pumping liquid. The pumps have got high efficiency.

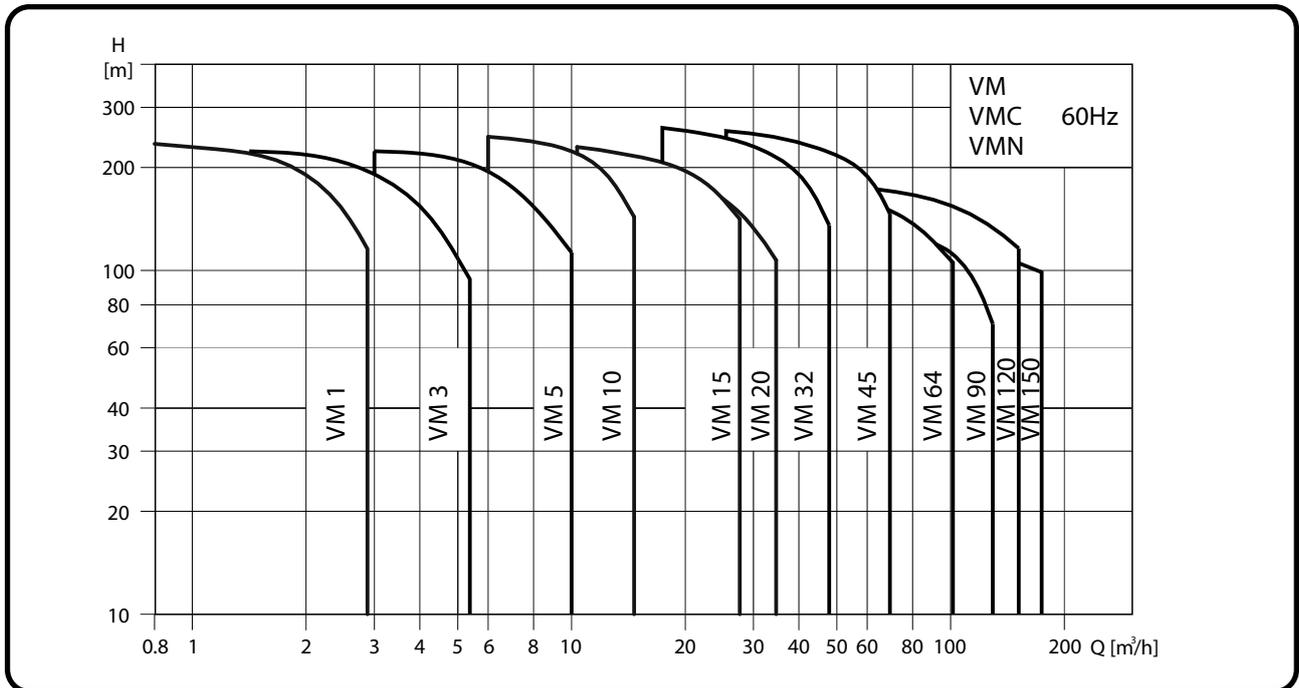
Deutsch - SPCO Hochdruckpumpen der Baureihe VM, VMN, VMC mit Förderhöhen bis zu 280 Metern und Fördermengen bis zu 180 m³/h. Sämtliche wesentlichen Teile, wie zum Beispiel die Welle, Laufräder und Zwischenkammern sind komplett aus Edelstahl AISI 304 (W-Nr. 1.43.01) gefertigt. Die Pumpen sind auch komplett in Edelstahl oder sogar in höheren Legierungen AISI 316 (W-Nr. 1.44.01) lieferbar. Standardgemäss kommen die Gleitringdichtungen Kohle – Hartmetall zum Einsatz oder andere Materialpaarungen entsprechend dem Fördermedium. Die Pumpen zeichnen sich durch einen hohen Wirkungsgrad, geringen Platzbedarf und Wartungsfreiheit aus.

Français - Les pompes de haute pression de l'assortiment VM, VMN, VMC avec hauteurs de propulsion jusqu'à 280 mètres et puissance de propulsion jusqu'à 180 m³/h. Toutes les pièces principales comme par exemple l'axe, les roues libres et les espaces intermédiaires sont entièrement fabriquées en acier inoxydable AISI 304 (W-No. 1.43.01). Les pompes sont également livrables en acier inoxydable uniquement ou même en alliages AISI 316 plus hauts (W-No. 1.44.01). De façon standard, les joints mécanique en charbon et métal dur sont activés ou d'autres, de matériaux correspondant à la propulsion moyenne. Les pompes se distinguent par un haut degré d'efficacité, une demande d'espace moindre et sont libres de maintenance.

Italiano - SPCO – Pompe ad alta pressione VM – VMN – VMC, capaci di prevalenze fino a 280m e portate fino a 180 m³/h. La costruzione prevede ACCIAIO INOX AISI 304 (W-Nr. 1.43.01) per le parti essenziali come giranti, albero e camere intermedie. A richiesta possono essere fornite completamente in ACCIAIO INOX AISI 316 (W-Nr. 1.44.01). La tenuta meccanica standard prevede controfaccie in carburo di tungsteno e grafite. Tenute meccaniche speciali sono previste per liquidi diversi dall'acqua. Le pompe garantiscono un alto rendimento, esenti da manutenzione e risparmio di spazio nell'installazione.

Performance Scope

The performance curve applies to the VM, VMC and VMN version of the pump.



Product range

Range	VM1	VM3	VM5	VM10	VM15	VM20	VM32	VM45	VM64	VM90	VM120	VM150
Nominal flow [m ³ /h]	1.2	3.6	6	12	18	24	38	54	77	108	140	180
Flow range[m ³ /h]	0.8~2.9	1.5~5.4	3~10	6~15.5	10.5~28	12.5~35	18~48	26~70	36~102	54~146	60~160	75~180
Max. pressure [bar]	23.5	23.3	23	24.5	23.5	20.5	27	26	17.8	15.9	18.5	15.3
Motor power [kW]	0.37~3.0	0.37~4.0	0.55~7.5	0.75~11	1.5~18.5	2.2~18.5	2.2~30	5.5~45	7.5~45	11~45	18.5~75	18.5~75
Fluid temperature [°C]	-15 to +120											
Type												
VM	•	•	•	•	•	•	•	•	•	•	•	•
VMC / VMN	•	•	•	•	•	•	•	•	•	•	•	•
VM Pipe Connection												
Flange	DN25 DN32	DN25 DN32	DN25 DN32	DN40	DN50	DN50	DN65	DN80	DN100	DN100	DN125	DN125
VMC / VMN Pipe Connection												
Flange	DN25 DN32	DN25 DN32	DN25 DN32	DN40	DN50	DN50	DN65	DN80	DN100	DN100	DN125	DN125
Victaulic Connection	R1¼ DN32	R1¼ DN32	R1¼ DN32	R2 DN50	R2 DN50	R2 DN50						

Pump

VM, VMC, VMN is a kind of vertical non-self priming vertical multistage pump of in line design, flange or with Victaulic coupling with equally sized suction and discharge ports. Stage construction with stainless steel impellers, chambers and pressure casing. Pump stub shaft and motor shaft of the IEC- standards motor are directly close coupled. All pumps are equipped with a cartridge type mechanical seal for easy maintenance.

This kind of pump have different pump sizes and various numbers of stages to provide the flow and the pressure required.

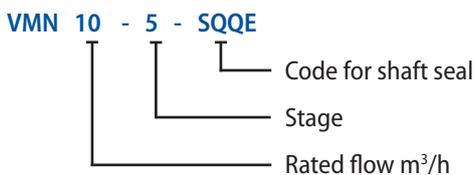
Application

VM, VMC and VMN pumps is a kind of multifunctional products. It can be used to convey various medium from tap water to industrial liquid at different temperature and with different flow rate and pressure.

VM type is applicable to conveying non-corrosive liquid, while VMN and VMC is suitable for slightly corrosive liquid.

- Water supply and pressure boosting: Pressure boosting in buildings, hotels, residential complexes Pressure booster stations, supply of water networks Pressure boosting for industrial water supply.
- Light industry: Washing and cleaning systems, Car washing facilities, Fire fighting systems, Process water systems, Machine tools (cooling lubricants).
- Heating, Ventilation and Air-Conditioning: Boilers, Induction heating, Heat exchangers, Refrigerators, Cooling towers and systems, Temperature control systems.
- Irrigation and Agriculture: Greenhouses, Sprinkler irrigation, Field irrigation (flooding).
- Water Treatment: Water softeners and de-mineralization, Reverse Osmosis systems, Distillation systems, Filtration, Ultra-filtration systems.

Definition of Model



VM Vertical multistage centrifugal pump

VMC Flow passage components stainless steel 304

VMN Flow passage components stainless steel 316

Motor

The pump is fitted with a totally enclosed , fan cooled squirrel-cage 2 pole high efficiency motor.

- Protection class: IP55
- Insulation class: F
- Ambient temperature: Max. + 50 °C

Motor Type				Nominal current in [A]									
Pole	HP	kW	Flange	Frame	1ø		3ø		3ø		3ø		
					110 / 220V	220-240V	Δ 220-255V	Y 380-440V	Δ 380-480V	Y 660-830V	Δ 460 V	Y	
2	0.5	0.37	B14	71A	6.2 / 3.1	—	1.7 - 1.7	1.0 - 1.0	—	—	—	—	
	0.75	0.55		71B	8.0 / 4.0	—	2.4 - 2.4	1.4 - 1.4	—	—	—	—	
	1.0	0.75		80A	10.4 / 5.2	—	3.1 - 3.1	1.8 - 1.8	—	—	—	—	
	1.5	1.1		80B	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	—	—	
	HP	kW		Frame			Δ 220-277V	Y 380-480V	Δ 380-480V	Y 660-830V			
	2.0	1.5		90S	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	—	—	
	3.0	2.2		90L	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	—	—	
	4.0	3.0		100L	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	—	—	
	5.5	4.0		112M	—	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	—	—	
	7.5	5.5		132S	—	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	—	—	
	10	7.5	132S	—	—	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	—	—		
	15	11	160M	—	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—		
	20	15	160M	—	—	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	—	—		
	25	18.5	160L	—	—	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—		
	30	22	180M	—	—	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—		
	HP	kW	Frame			Δ 220-240V	Y 380-415V	Δ 380-415V	Y 660-720V	Δ 460 V	Y		
	40	30	200L	—	—	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A		
	50	37	200L	—	—	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N / A		
	60	45	225M	—	—	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N / A		
	75	55	250M	—	—	174.0 - 159.5	100.5 - 92.0	100.5 - 92.0	57.9 - 53.0	96.0	N / A		
100	75	280S	—	—	235.8 - 216.2	136.1 - 124.7	136.1 - 124.7	78.4 - 71.9	127.0	N / A			

Mechanical Seals

Standard Cartridge type Mechanical seal made of Silicon Carbide/Silicon Carbide/ EPDM or Viton.

Based on the type of application, alternative materials are available for the seal and the elastomers.

The cartridge type mechanical seal can be replaced in minutes without special tools and without dismantling the pump.

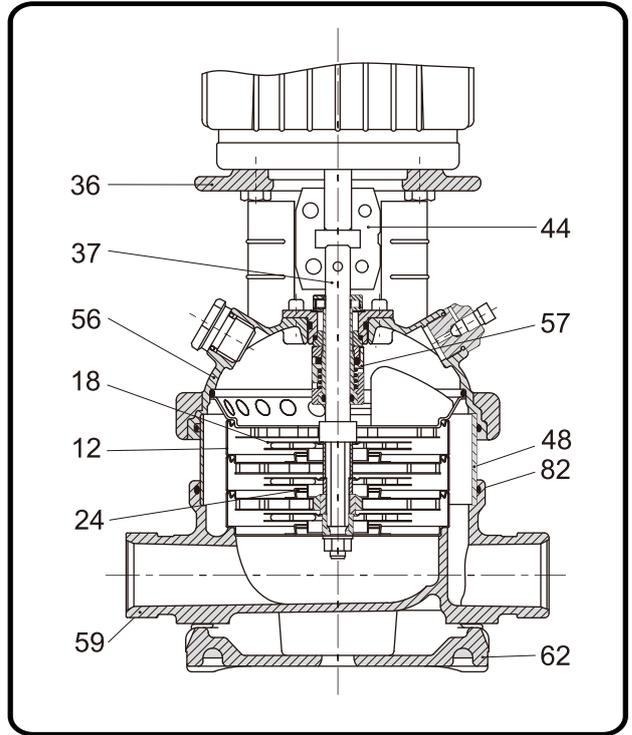
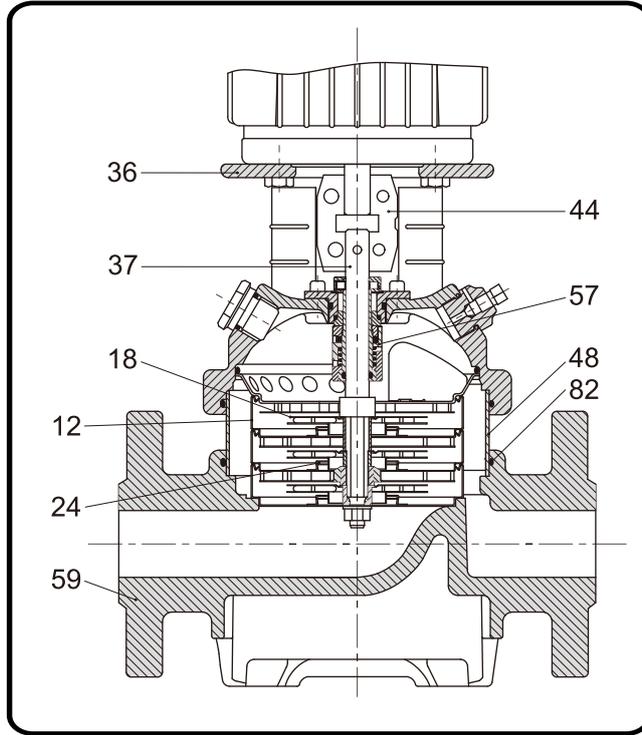


Seal Type	VM/VMC/VMN		
	1/3/5/10/15/20 /32/45/64/90	Model 120/150	
		0.5-60HP	75-100HP
Mechanical Seals			
S: O-ring seal Cartridge type	•	•	
B: Rubber below seal Cartridge type			•
QQ	•	•	•
UU	Optional	Optional	
QB	Optional	Optional	
UB	Optional	Optional	
Seals			
EPDM	•	•	•
Viton	Optional	Optional	Optional

- Q: Silicon carbide
- U: Tungsten carbide
- B: Carbon

VM 1,3,5,10,15,20

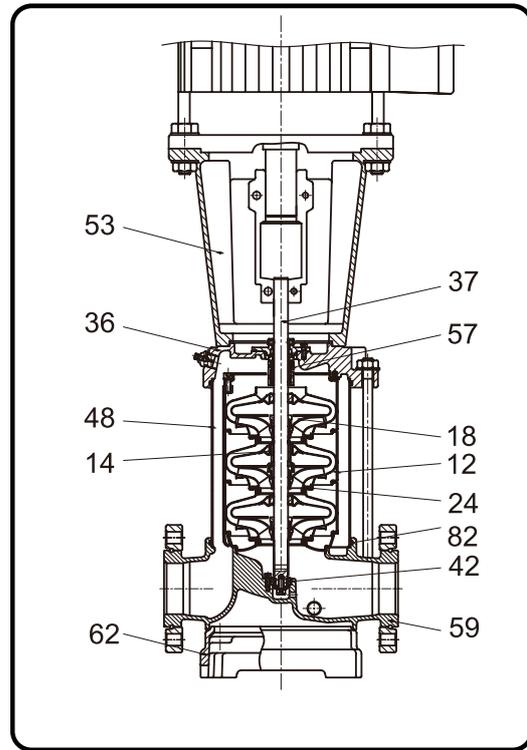
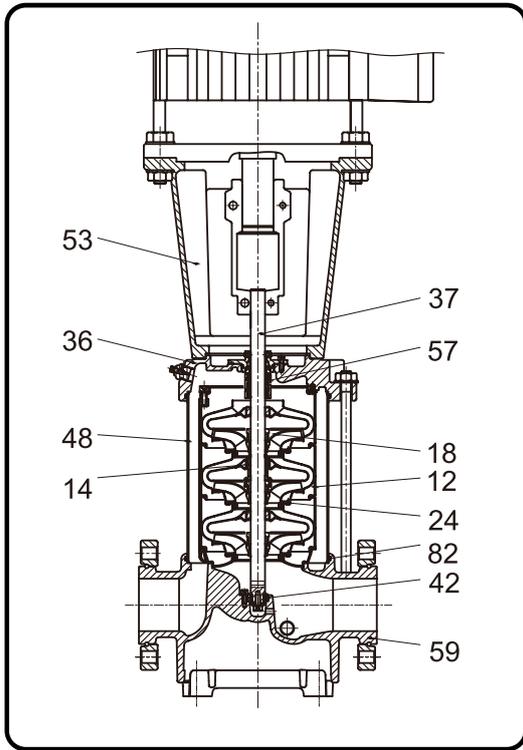
VMC, VMN 1,3,5,10,15,20



Type			VM 1,3,5,10,15,20		VMC 1,3,5,10,15,20		VMN 1,3,5,10,15,20	
No.	Name	Material	Europ	USA	Europ	USA	Europ	USA
36	Pump head	cast iron	EN-GJL-200	ASTM25B	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
56	Pump head cover	stainless steel	NA		1.4301	AISI 304	1.4401	AISI316
18	Impeller	stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI316
37	Shaft	stainless steel	1.4057	AISI 431	1.4057	AISI 431	1.4401	AISI316
48	Outer sleeve	stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI316
82	O-ring for outer sleeve	EPDM						
12	Chamber	stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI316
24	Neck ring	PTFE	PTFE					
59	Base	cast iron	EN-GJL-200	ASTM25B	NA			
		stainless steel	NA		1.4301	AISI 304	1.4401	AISI316
62	Base plate	cast iron	NA		EN-GJL-200	ASTM25B	EN-GJL-200	ASTM25B
44	Coupling	Sintered Material						
57	Mechanical seal	cartridge type	cartridge type					

VM 32,45,64,90

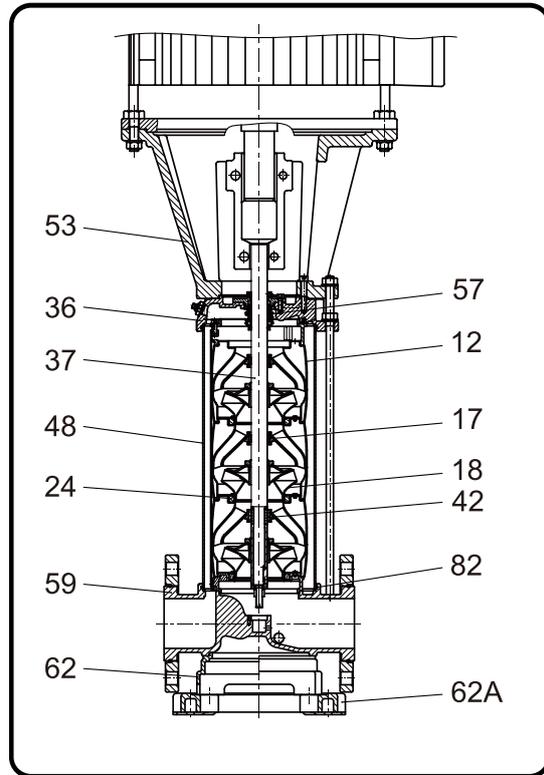
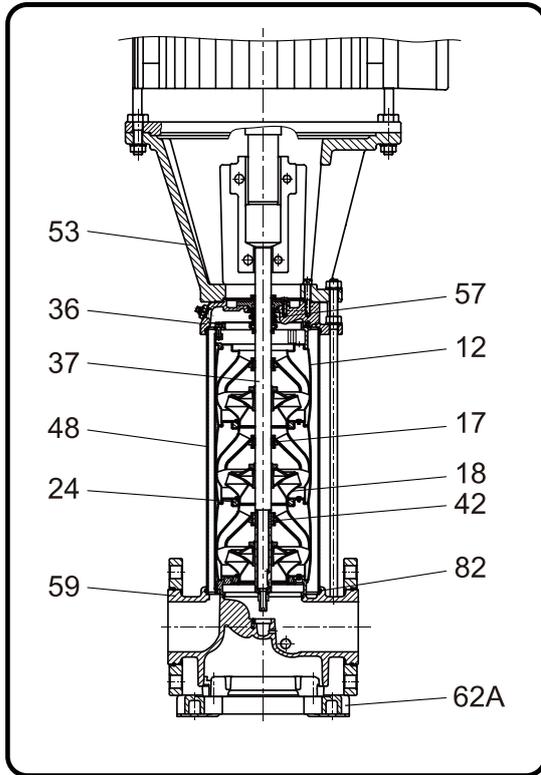
VMC, VMN 32,45,64,90



Type			VM 32,45,64,90		VMC 32,45,64,90		VMN 32,45,64,90	
No.	Name	Material	Europ	USA	Europ	USA	Europ	USA
36	Pump head	cast iron	EN-GJL-250	ASTM35B				
		stainless steel			1.4301	AISI 304	1.4401	AISI316
53	Motor Bracket	cast iron	EN-GJL-250	ASTM35B	EN-GJL-250	ASTM35B	EN-GJL-250	ASTM35B
18	Impeller	stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI316
37	Shaft	stainless steel	1.4057	AISI 431	1.4057	AISI 431	1.4401	AISI316
48	Outer sleeve	stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI316
82	O-ring for outer sleeve	EPDM						
12	Chamber	stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI316
24	Nick ring	Carbon Fiber+POB+ PTFE						
59	Base	cast iron	EN-GJL-250	ASTM35B	NA			
		stainless steel	NA		1.4301	AISI 304	1.4401	AISI316
62	Base plate	Cast Iron	NA		EN-GJL-250	ASTM35B	EN-GJL-250	ASTM35B
57	Mechanical seal	Cartridge type						
14	Bearing ring	Bronze					POB+Graphit+PTFE	
42	Bottom bearing ring	Tungsten Carbide						

VM 120, 150

VMC, VMN 120, 150



Type			VM 120,150		VMC 120,150		VMN 120,150	
No.	Name	Material	Europ	USA	Europ	USA	Europ	USA
36	Pump head	cast iron	EN-GJL-250	ASTM35B				
		stainless steel			1.4301	AISI 304	1.4401	AISI316
53	Motor Bracket 15-60HP	cast iron	EN-GJL-250	ASTM35B	EN-GJL-250	ASTM35B	EN-GJL-250	ASTM35B
	Motor Bracket 75-100HP	cast iron	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
17	Bearing ring	PTFE	PTFE					
18	Impeller	stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI316
37	Shaft	stainless steel	1.4057	AISI 431	1.4057	AISI 431	1.4401	AISI316
48	Outer sleeve	stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI316
82	O-ring for outer sleeve	EPDM						
12	Chamber	stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI316
24	Nick ring	PTFE						
59	Base	cast iron	EN-GJL-250	ASTM35B	NA			
		stainless steel	NA		1.4301	AISI 304	1.4401	AISI316
62	Base plate	Cast Iron	NA		EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
62A		Cast Iron	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
57	Mechanical seal	Cartridge type						
42	Bottom bearing ring	Sic/Sic						

Max. inlet and working pressure

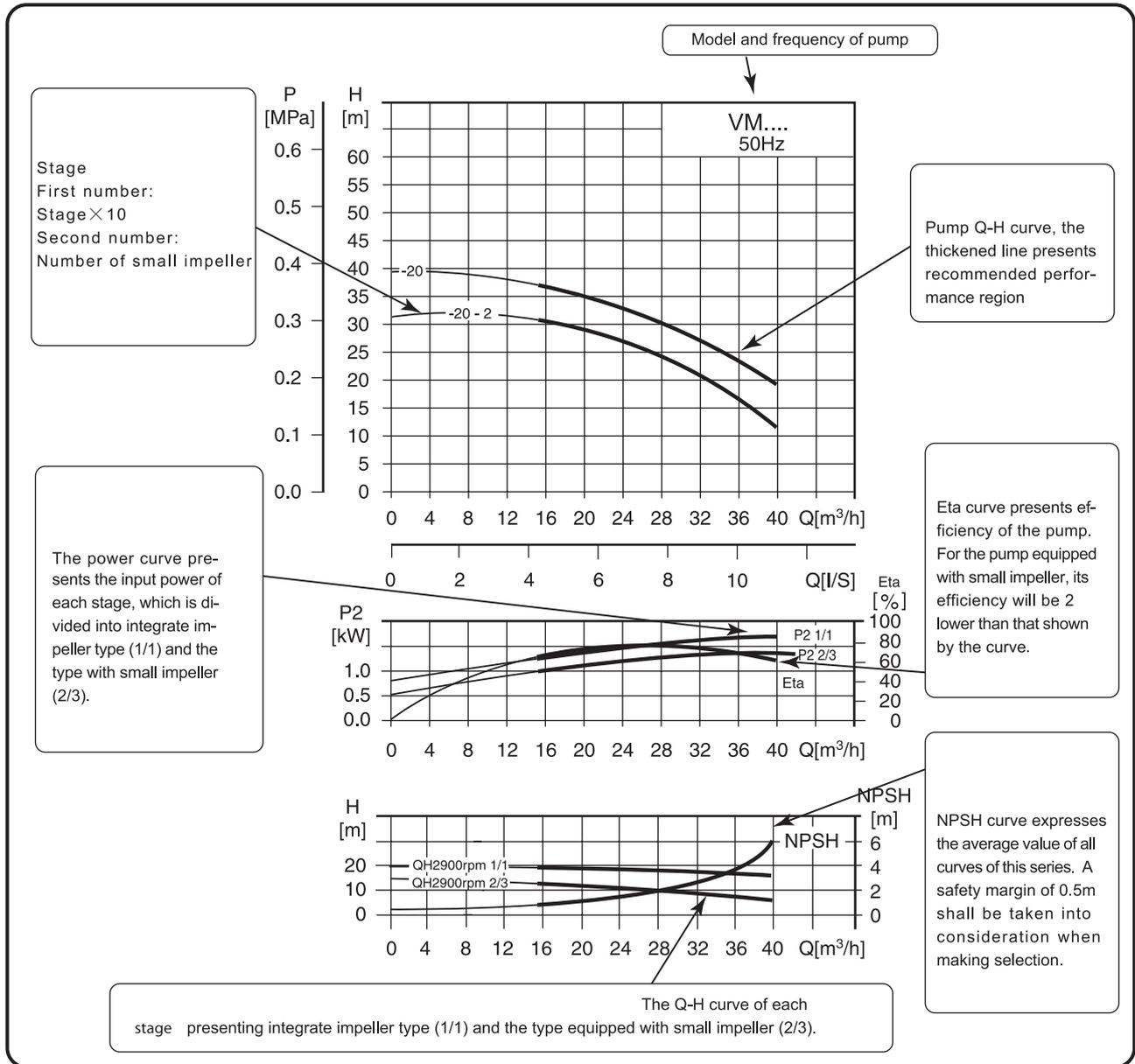
The following table shows the maximum permissible inlet pressure. However; the current inlet pressure + the pressure against a closed valve must always be lower than the maximum permissible operating pressure.

If the maximum permissible operating pressure is exceeded, the bearing in the motor may be damaged and the life of the shaft seal reduced

Pump type	Flange & PJE				Oval Flange		
	Stages	Max. Operating Pressure	Stages	Max. Inlet Pressures	Stages	Max. Operating Pressure	Max. Inlet Pressures
VM(C/N)1	2 - 27	25 bar	2 - 25	10 bar	2 - 17	16 bar	10 bar
			27 - 25	15 bar			-
VM(C/N)3	2 - 25	25 bar	2 - 15	10 bar	2 - 15	16 bar	10 bar
			17 - 25	15 bar			-
VM(C/N)5	2 - 24	25 bar	2 - 9	10 bar	2 - 16	16 bar	10 bar
			10 - 24	15 bar			-
VM(C/N)10	1 - 10	16 bar	1 - 5	8 bar	1 - 10	10 bar	8 bar
	12 - 17	25 bar	6 - 17	10 bar			-
VM(C/N)15	1 - 8	16 bar	1 - 2	8 bar	1 - 5	10 bar	8 bar
	9 - 12	25 bar	3 - 12	10 bar			-
VM(C/N)20	1 - 7	16 bar	1 - 12	8 bar	1 - 5	10 bar	8 bar
	8 - 10	25 bar	2 - 10	10 bar			-
VM(C/N)32	(1-1) - 5	16 bar	(1-1) - 2	4 bar			-
	(6-2) - (10-2)	30 bar	(3-2) - 6	10 bar			-
			(7-2) - (10-2)	15 bar			-
VM(C/N)45	(1-1) - 4	16 bar	(1-1) - 1	4 bar			-
	(5-2) - 7	30 bar	(2-2) - 3	10 bar			-
			(4-2) - 7	15 bar			-
VM(C/N)64	(1-1) - 3	16 bar	(1-1) - 7	4 bar			-
	(4-2) - (5-2)	30 bar	1 - (2-1)	10 bar			-
				2 - (5-2)	15 bar	-	
VM(C/N)90	(1-1) - 3	16 bar	(1-1) - (2-2)	10 bar			-
	(4-2)	30 bar	(2-1) - (4-2)	15 bar			-
VM(C/N)120	1 - (5-2)	30 bar	1 - (4-2)	10 bar			-
			(2-2) - (3-1)	15 bar			-
			3 - (5-2)	20 bar			-
VM(C/N)150	(1-1) - (4-2)	30 bar	(1-1) - (5-2)	10 bar			-
			1 - 2	15 bar			-
			(3-2) - (4-2)	20 bar			-

• Rule to follow: the inlet pressure + the pressure against a closed valve < Max. operating pressure.

Performance Curves



Conditions for the performance curves:

1. All the performance curves are based on the measured values of a motor 3x380V ~ 415V at a constant speed of 2900 rpm.
2. Curve tolerance in conformity with ISO9906, appendix A.
3. Measurement is done with 20 °C air-free water, kinematic viscosity of 1mm²/sec.
4. The operation of pump shall refer to the performance region indicated by the thickened curve to prevent overheating due to too small flow rate or overload of motor due to too large flow rate.

Minimum inlet pressure NPSH

Calculation of the inlet pressure “H” is recommended in these situations:

- The liquid temperature is high.
- The flow is significantly higher than the rated flow.
- Water is drawn from depths.
- Water is drawn through long pipes.
- Inlet conditions are poor.

To avoid cavitation, make sure that there is a minimum pressure on the suction side of the pump. The maximum suction lift “H” in feet can be calculated as follows:

$$H = P_b - \text{NPSHR} - H_f - H_v - H_s$$

P_b = Barometric pressure in feet absolute.

(Barometric pressure can be set to 33.9 feet. At sea level. In closed systems, p_b indicates system pressure in feet.)

NPSHR = Net Positive Suction Head Required in feet.

(To be read from the NPSHR curve at the highest flow the pump will be delivering.)

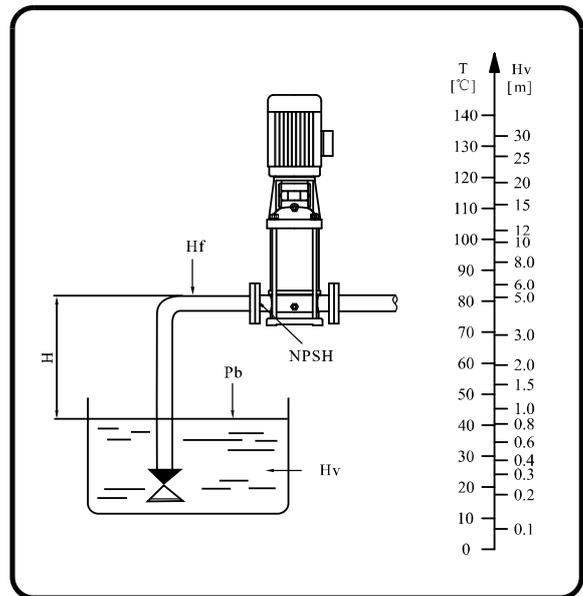
H_f = Friction loss in suction pipe in feet. (At the highest flow the pump will be delivering.)

H_v = Vapor pressure in feet. (To be read from the vapor pressure scale. “ H_v ” depends on the liquid temperature “ T_m ”).

H_s = Safety margin = minimum 2.0 feet.

If the “H” calculated is positive, the pump can operate at a suction lift of maximum “H” feet.

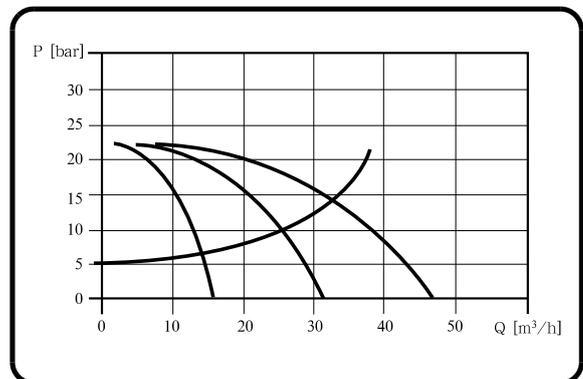
If the “H” calculated is negative, an inlet pressure of minimum “H” feet is required.



Check and ensure that the pump is not at cavitation state.

Note: In order to avoid cavitation never, select a pump whose duty point lies too far to the right on the NPSHR curve.

Always check the NPSHR value of the pump at the highest possible flow.



Two pumps or more can be connected in parallel running if necessary.

Pumped Liquids

VM, VMC, VMN pumps can handle a wide variety of liquids, each with its own characteristic.

VM, VMC

Non-corrosive liquids

For fluid transfer, circulation and pressure boosting of cold or hot clean water.

VMN

Industrial liquids

Light acids

The fluids covered in the list are not complete. Data on the application limits of different pump materials when handling any of the listed fluids are considered to be the best choices. However, the table is intended as a general guide only, and cannot replace actual testing of the pumped fluids and pump materials under specific working conditions.

When choosing the pump version, sufficient attention should be given to the flow medium, such as density, solidification point, viscosity as well as ex-protection requirement. The limits of applicability of the pumps, based on pressure and temperature must also be considered.

Recommended

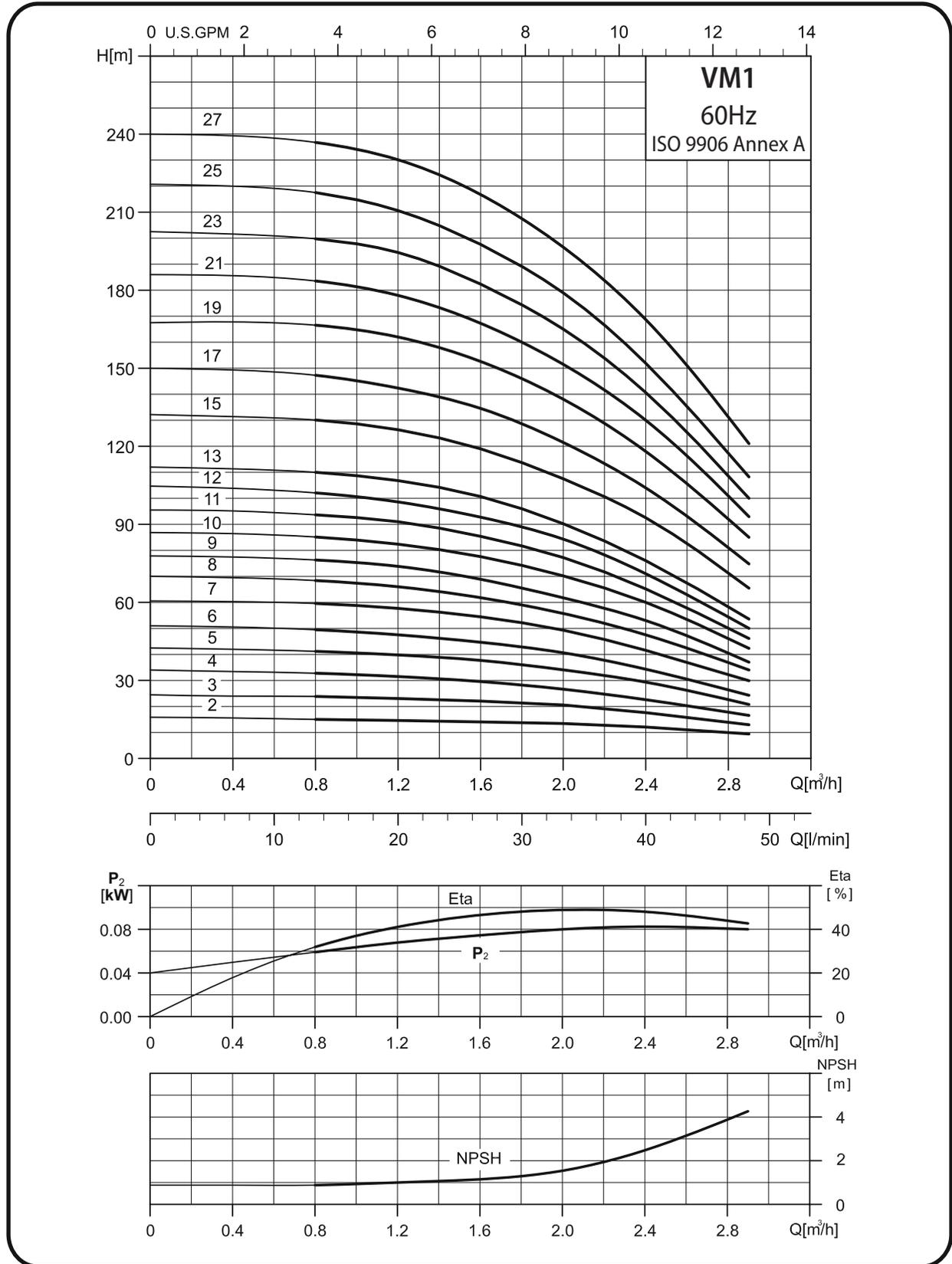
Pumped fluid	Fluid Concentration, temperature	VM / VMC		VMN	
		EPDM	Viton	EPDM	Viton
Acetic acid anhydride	25°C			•	
Alkaline cleaner		•			
Aluminium sulphate	10%, 25°C				•
Ammonia water (A. hydroxide)	20%, 40°C	•			
Ammonia hydrogen carbonate	10%, 40°C	•		•	
Benzoic acid	10%, 90°C				•
Boric acid	Unsaturated solution, 60°C				•
Butanol	60°C	•			
Calcium acetate	30%, 50°C	•			
Calcium hydroxide	Saturated solution, 50°C	•			
Chromic acid	1%, 20°C				•
Condensate	90°C	•			
Copper sulphate	Unsaturated solution, 60°C				•
Deionic (fully desalinated water)	50°C			•	
Ethanol	100%, 20°C	•			
Ethylene glycol/Diethylene glycol	40%, 70°C	•	•	•	•
Fixer	25°C				•
Formic acid	5%, 20°C			•	

Pumped fluid	Fluid Concentration, temperature	VM / VMC		VMN	
		EPDM	Viton	EPDM	Viton
Fruit juice	50°C				•
Glycerine	50%, 50°C	•			
Heating oil (Light)		•			•
Hydraulic oil	100%, 100°C		•		
Isopropanol		•			
Lactic acid	10%, 20°C				•
Linoleic acid	100%, 20°C	•			
Linseed oil	60°C		•		
Liqueur	60°C				•
Maize oil	80°C		•		
Maleic acid	50%, 50°C				•
Methanol	100%, 20°C	•			
Motor oil	100%, 80°C	•			
Oil-water-mixture	100°C		•		
Oxalic acid	1%, 20°C			•	
Peanut oil	100%, 80°C		•		
Phosphoric acid	20%, 20°C			•	
Polyglycols	90°C		•		•
Polyethylene glycols	40%, 70°C	•			
Potassium carbonate	10%, 60°C	•			
Potassium hydrogen carbonate	10%, 60°C	•			
Potassium permanganate	5%, 20°C			•	
Potassium sulphate	Unsaturated solution, 80°C			•	
Rapeseed oil	100%, 80°C		•		
Silicone oil	100%		•		
Sodium carbonate	10%, 60°C			•	
Sodium hydroxide	25%, 50°C			•	
Sodium nitrate	Unsaturated solution, 80°C			•	
Sodium phosphate	5%, 100°C			•	
Sodium sulphate	10%, 60°C			•	
Sulphuric acid	5%, 25°C				•
Water					
Swimming pool water	35°C	• VMC		•	
Deionic	50°C			•	
Distilled water	50°C			•	
Decarbonated water				•	
Soft water				•	
Heating water				•	
Boiler water				•	
Pure water				•	
Rinsing water		• VMC		•	

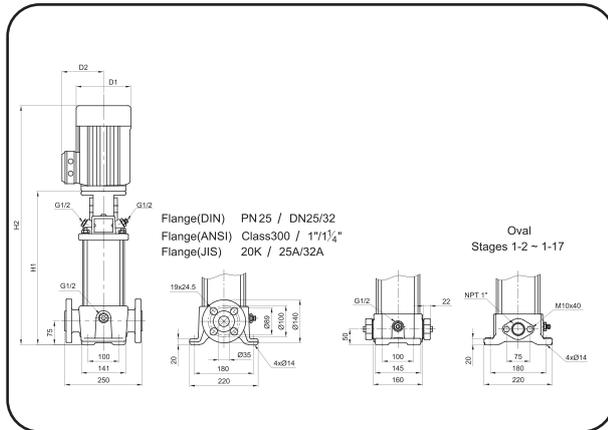
VM1 / VMC1 / VMN1

Performance Curves

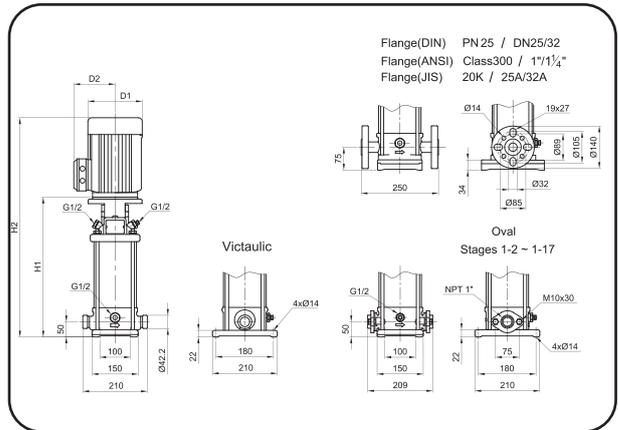
The performance curve applies to the VM, VMC and VMN version of the pump.



Dimensions and Weight - VM 1



Dimensions and Weight - VMC/N 1



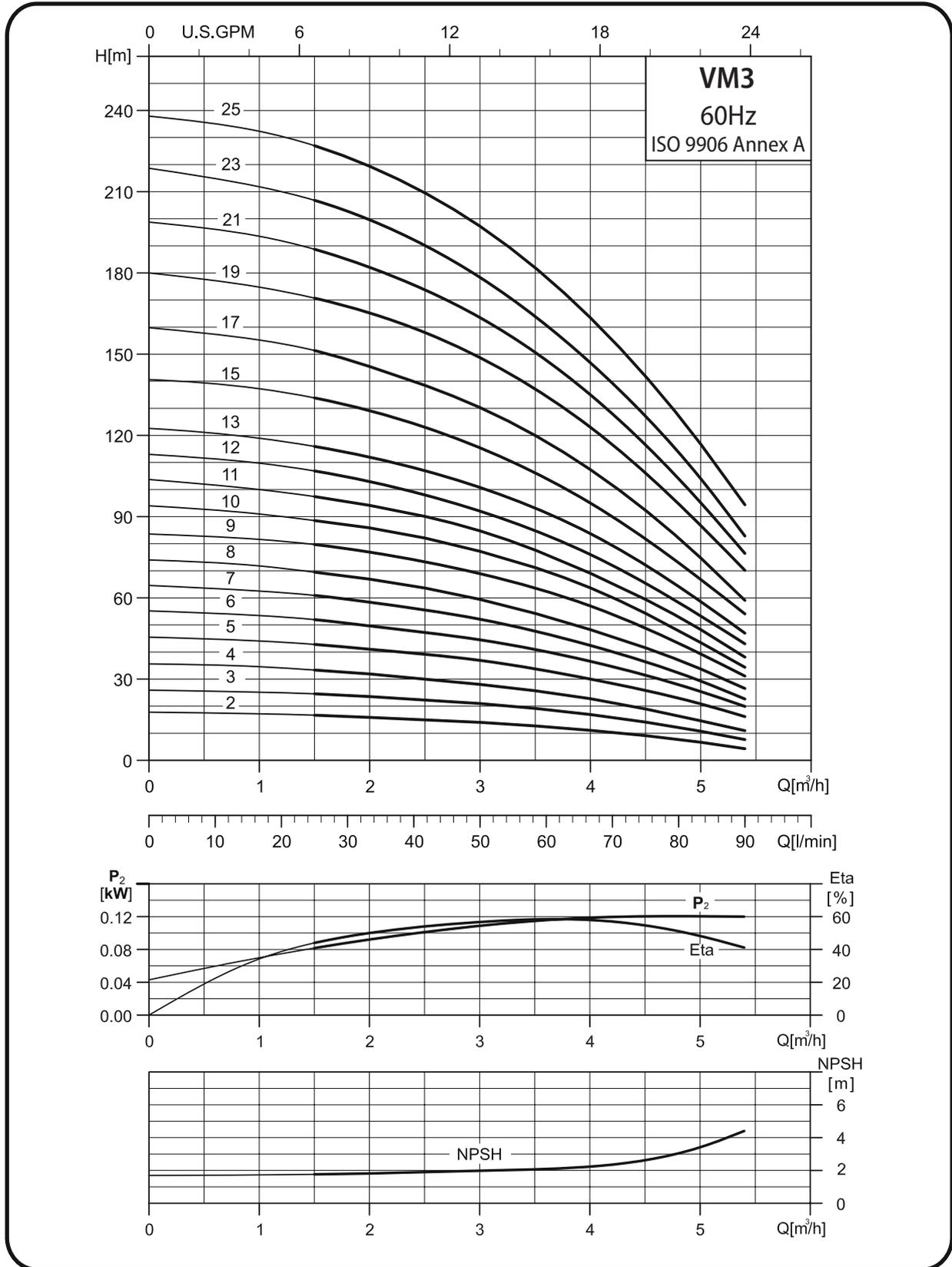
60Hz	Motor		Nominal current [A]						Dimension[mm]						Net weight [kg]	
	P2		1ø		3ø		3ø		DIN flange		OVAL		D1	D2	DIN flange	OVAL
	[kW]	[HP]	110V / 220V	220-240V	Δ 220-255V	Y380-440V	Δ 380-480V	Y660-830V	H1	H2	H1	H2				
VM1-2	0.37	0.5	6.2 / 3.1	—	1.7 - 1.7	1.0 - 1.0	—	—	279	474	254	449	141	115	23.4	19.3
VM1-3	0.37	0.5	6.2 / 3.1	—	1.7 - 1.7	1.0 - 1.0	—	—	279	474	254	449	141	115	23.4	19.3
VM1-4	0.37	0.5	6.2 / 3.1	—	1.7 - 1.7	1.0 - 1.0	—	—	297	492	272	467	141	115	23.8	19.7
VM1-5	0.55	0.75	8.0 / 4.0	—	2.4 - 2.4	1.4 - 1.4	—	—	315	510	290	485	141	115	24.7	20.6
VM1-6	0.55	0.75	8.0 / 4.0	—	2.4 - 2.4	1.4 - 1.4	—	—	333	528	308	503	141	115	25.0	20.9
VM1-7	0.75	1.0	10.4 / 5.2	—	3.1 - 3.1	1.8 - 1.8	—	—	357	592	332	567	141	115	27.5	23.4
VM1-8	0.75	1.0	10.4 / 5.2	—	3.1 - 3.1	1.8 - 1.8	—	—	375	610	350	585	141	115	27.9	23.8
VM1-9	0.75	1.0	10.4 / 5.2	—	3.1 - 3.1	1.8 - 1.8	—	—	393	628	368	603	141	115	28.3	24.2
VM1-10	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	411	700	386	675	177	141	35.4	31.3
VM1-11	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	429	718	404	693	177	141	35.8	31.7
VM1-12	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	447	736	422	711	177	141	36.1	32.0
VM1-13	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	465	754	440	729	177	141	36.5	32.4
Pump type	[kW]	[HP]	110V / 220V	220-240V	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	H1	H2	H1	H2	D1	D2	DIN flange	OVAL
VM1-15	1.5	2.0	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	517	812	492	787	177	141	41.3	37.2
VM1-17	1.5	2.0	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	553	848	528	823	177	141	42.0	37.9
VM1-19	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	589	884	—	—	177	141	44.6	—
VM1-21	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	625	920	—	—	177	141	45.3	—
VM1-23	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	661	956	—	—	177	141	46.1	—
VM1-25	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	697	992	—	—	177	141	46.8	—
VM1-27	3	4.0	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	737	1053	—	—	197	147	56.5	—

60Hz	Motor		Nominal current [A]						Dimension[mm]						Net weight [kg]				
	P2		1ø		3ø		3ø		Vactaulic		DIN flange		OVAL		D1	D2	Vactaulic	DIN flange	OVAL
	[kW]	[HP]	110V / 220V	220-240V	Δ 220-255V	Y380-440V	Δ 380-480V	Y660-830V	H1	H2	H1	H2	H1	H2					
VMC(N)1-2	0.37	0.5	6.2 / 3.1	—	1.7 - 1.7	1.0 - 1.0	—	—	257	452	282	477	257	452	141	115	19.3	20.2	17.1
VMC(N)1-3	0.37	0.5	6.2 / 3.1	—	1.7 - 1.7	1.0 - 1.0	—	—	257	452	282	477	257	452	141	115	19.3	20.3	17.1
VMC(N)1-4	0.37	0.5	6.2 / 3.1	—	1.7 - 1.7	1.0 - 1.0	—	—	275	470	300	495	275	470	141	115	19.7	20.6	17.5
VMC(N)1-5	0.55	0.75	8.0 / 4.0	—	2.4 - 2.4	1.4 - 1.4	—	—	293	488	318	513	293	488	141	115	20.6	21.5	18.4
VMC(N)1-6	0.55	0.75	8.0 / 4.0	—	2.4 - 2.4	1.4 - 1.4	—	—	311	506	336	531	311	506	141	115	20.9	21.9	18.7
VMC(N)1-7	0.75	1.0	10.4 / 5.2	—	3.1 - 3.1	1.8 - 1.8	—	—	335	570	360	595	335	570	141	115	23.3	24.2	21.1
VMC(N)1-8	0.75	1.0	10.4 / 5.2	—	3.1 - 3.1	1.8 - 1.8	—	—	353	588	378	613	353	588	141	115	23.7	24.6	21.5
VMC(N)1-9	0.75	1.0	10.4 / 5.2	—	3.1 - 3.1	1.8 - 1.8	—	—	371	606	396	631	371	606	141	115	24.0	25.0	21.9
VMC(N)1-10	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	389	678	414	703	389	678	177	141	31.1	32.1	29.0
VMC(N)1-11	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	407	696	432	721	407	696	177	141	31.5	32.5	29.4
VMC(N)1-12	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	425	714	450	739	425	714	177	141	32.3	32.8	29.7
VMC(N)1-13	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	443	732	468	757	443	732	177	141	37.1	33.2	30.1
Pump type	[kW]	[HP]	110V / 220V	220-240V	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	H1	H2	H1	H2	H1	H2	D1	D2	Vactaulic	DIN flange	OVAL
VMC(N)1-15	1.5	2.0	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	495	790	520	815	495	790	177	141	37.9	38.1	35.0
VMC(N)1-17	1.5	2.0	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	531	826	556	851	531	826	177	141	36.9	38.8	35.7
VMC(N)1-19	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	567	862	592	887	—	—	177	141	40.4	41.3	—
VMC(N)1-21	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	603	898	628	923	—	—	177	141	41.2	42.1	—
VMC(N)1-23	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	639	934	664	959	—	—	177	141	41.9	42.9	—
VMC(N)1-25	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	675	970	700	995	—	—	177	141	42.6	43.6	—
VMC(N)1-27	3	4.0	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	716	1032	741	1057	—	—	197	147	51.9	52.9	—

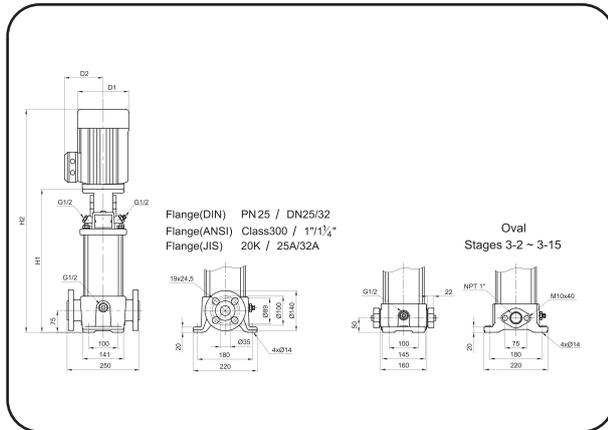
VM3 / VMC3 / VMN3

Performance Curves

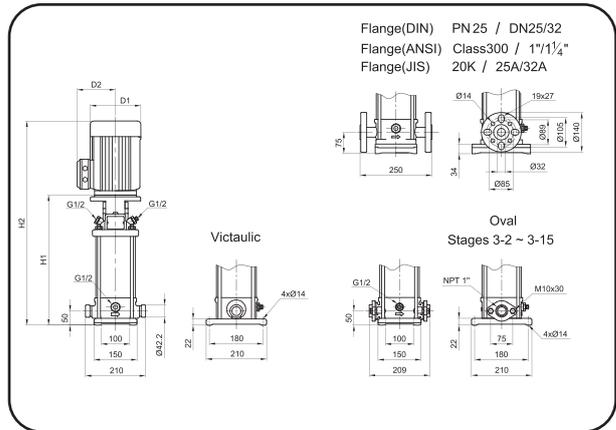
The performance curve applies to the VM, VMC and VMN version of the pump.



Dimensions and Weight - VM 3



Dimensions and Weight - VMC/N 3



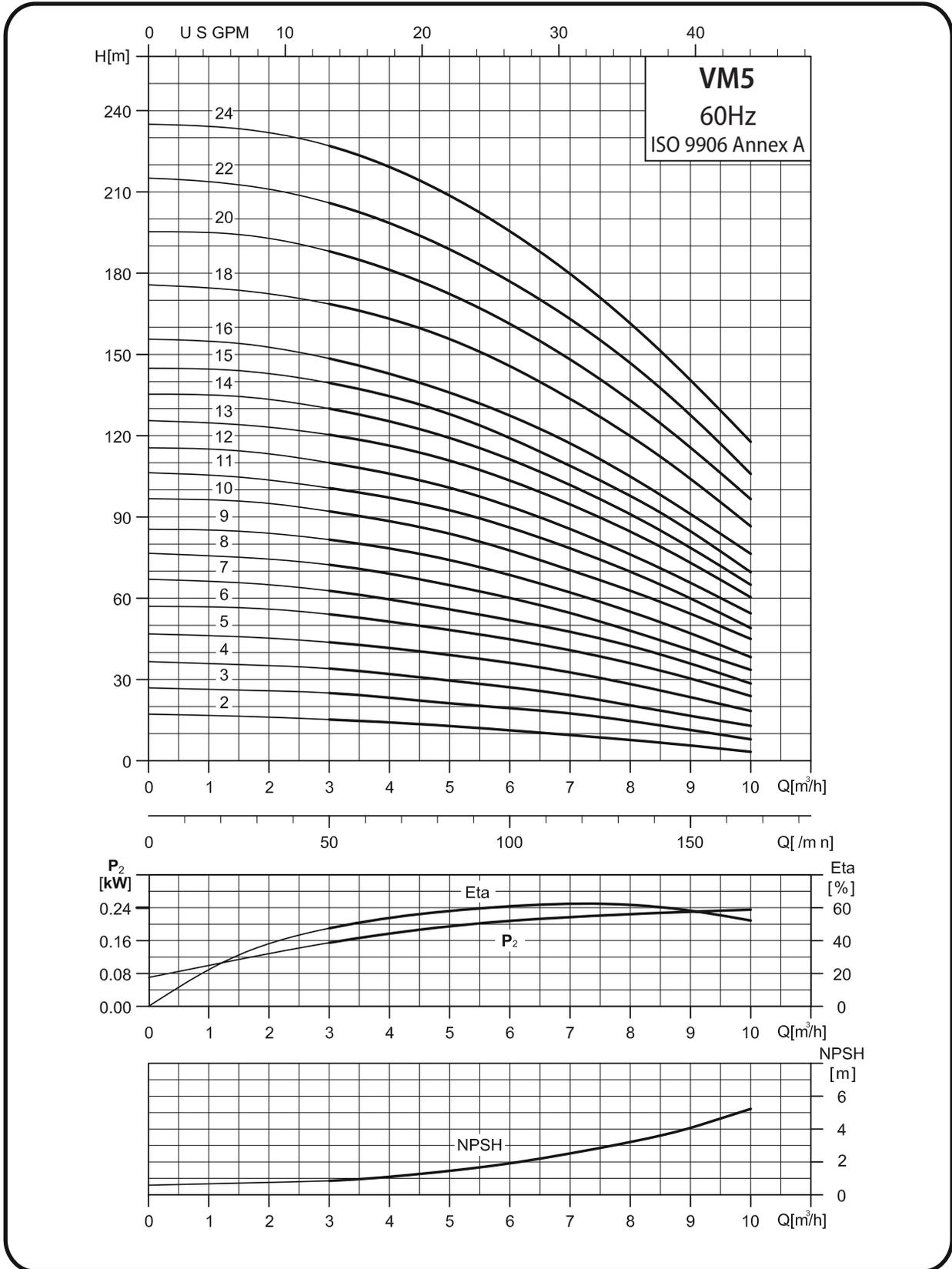
60Hz	Motor		Nominal current [A]					Dimension[mm]						Net weight [kg]		
	P2		1ø		3ø		3ø		DIN flange		OVAL		D1	D2	DIN flange	OVAL
	[kW]	[HP]	110V / 220V	220-240V	Δ 220-255V	Y380-440V	Δ 380-480V	Y660-830V	H1	H2	H1	H2	D1	D2	DIN flange	OVAL
VM 3-2	0.37	0.5	6.2 / 3.1	—	1.7 - 1.7	1.0 - 1.0	—	—	279	474	254	449	141	115	23.4	19.3
VM 3-3	0.55	0.75	8.0 / 4.0	—	2.4 - 2.4	1.4 - 1.4	—	—	279	474	254	449	141	115	23.9	19.8
VM 3-4	0.55	0.75	8.0 / 4.0	—	2.4 - 2.4	1.4 - 1.4	—	—	297	492	272	467	141	115	24.3	20.2
VM 3-5	0.75	1.0	10.4 / 5.2	—	3.1 - 3.1	1.8 - 1.8	—	—	321	556	296	531	141	115	26.8	22.7
VM 3-6	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	339	628	314	603	177	141	33.9	29.8
VM 3-7	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	357	646	332	621	177	141	34.3	30.2
VM 3-8	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	375	664	350	639	177	141	34.6	30.5
VM 3-9	1.5	2.0	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	409	704	384	679	177	141	39.1	35.0
VM 3-10	1.5	2.0	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	427	722	402	697	177	141	39.5	35.4
VM 3-11	1.5	2.0	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	445	740	420	715	177	141	39.9	35.8
VM 3-12	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	463	758	438	733	177	141	42.0	37.9
VM 3-13	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	481	776	456	751	177	141	42.4	38.3
VM 3-15	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	517	812	492	787	177	141	43.1	39.0
VM 3-17	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	553	848	—	—	177	141	43.8	—
VM 3-19	3	4.0	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	593	909	—	—	197	147	53.5	—
VM 3-21	3	4.0	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	629	945	—	—	197	147	53.9	—
VM 3-23	3	4.0	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	665	981	—	—	197	147	55.0	—
VM 3-25	4	5.5	—	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	701	1027	—	—	220	161	59.7	—

60Hz	Motor		Nominal current [A]					Dimension[mm]						Net weight [kg]					
	P2		1ø		3ø		3ø		Vactaulic		DIN flange		OVAL		D1	D2	Vactaulic	DIN flange	OVAL
	[kW]	[HP]	110V/220V	220-240V	Δ 220-255V	Y380-440V	Δ 380-480V	Y660-830V	H1	H2	H1	H2	H1	H2	D1	D2	Vactaulic	DIN flange	OVAL
VMC(N)3-2	0.37	0.5	6.2 / 3.1	—	1.7 - 1.7	1.0 - 1.0	—	—	257	452	282	477	257	452	141	115	19.3	20.2	17.1
VMC(N)3-3	0.55	0.75	8.0 / 4.0	—	2.4 - 2.4	1.4 - 1.4	—	—	257	452	282	477	257	452	141	115	19.8	20.8	17.6
VMC(N)3-4	0.55	0.75	8.0 / 4.0	—	2.4 - 2.4	1.4 - 1.4	—	—	275	470	300	495	275	470	141	115	20.2	21.1	18.0
VMC(N)3-5	0.75	1	10.4 / 5.2	—	3.1 - 3.1	1.8 - 1.8	—	—	299	534	324	559	299	534	141	115	22.6	23.5	20.4
VMC(N)3-6	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	317	606	342	631	317	606	177	141	29.7	30.6	27.5
VMC(N)3-7	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	335	624	360	649	335	624	177	141	30.0	31.0	27.9
VMC(N)3-8	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	353	642	378	667	353	642	177	141	30.4	31.3	28.2
VMC(N)3-9	1.5	2.0	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	387	682	412	707	387	682	177	141	34.9	35.9	32.8
VMC(N)3-10	1.5	2.0	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	405	700	430	725	405	700	177	141	35.3	36.2	33.1
VMC(N)3-11	1.5	2.0	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	423	718	448	743	423	718	177	141	35.7	36.5	33.4
VMC(N)3-12	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	441	736	466	761	441	736	177	141	37.9	38.8	35.7
VMC(N)3-13	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	459	754	484	779	459	754	177	141	38.3	39.2	36.1
VMC(N)3-15	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	495	790	520	815	495	790	177	141	38.9	39.9	36.8
VMC(N)3-17	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	531	826	556	851	—	—	177	141	39.7	40.6	—
VMC(N)3-19	3	4.0	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	572	888	597	913	—	—	197	147	49.0	49.9	—
VMC(N)3-21	3	4.0	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	608	924	633	949	—	—	197	147	49.7	50.7	—
VMC(N)3-23	3	4.0	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	644	960	669	985	—	—	197	147	50.5	51.4	—
VMC(N)3-25	4	5.5	—	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	680	1006	705	1031	—	—	220	161	55.2	56.1	—

VM5 / VMC5 / VMN5

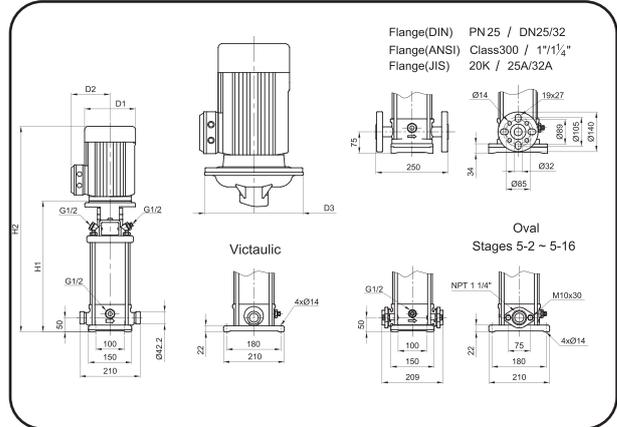
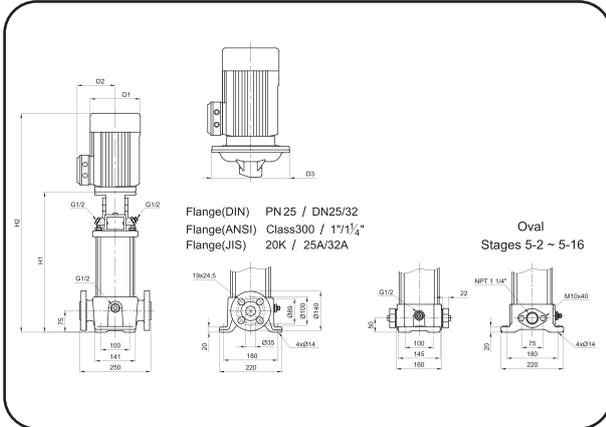
Performance Curves

The performance curve applies to the VM, VMC and VMN version of the pump.



Dimensions and Weight - VM 5

Dimensions and Weight - VMC/N 5



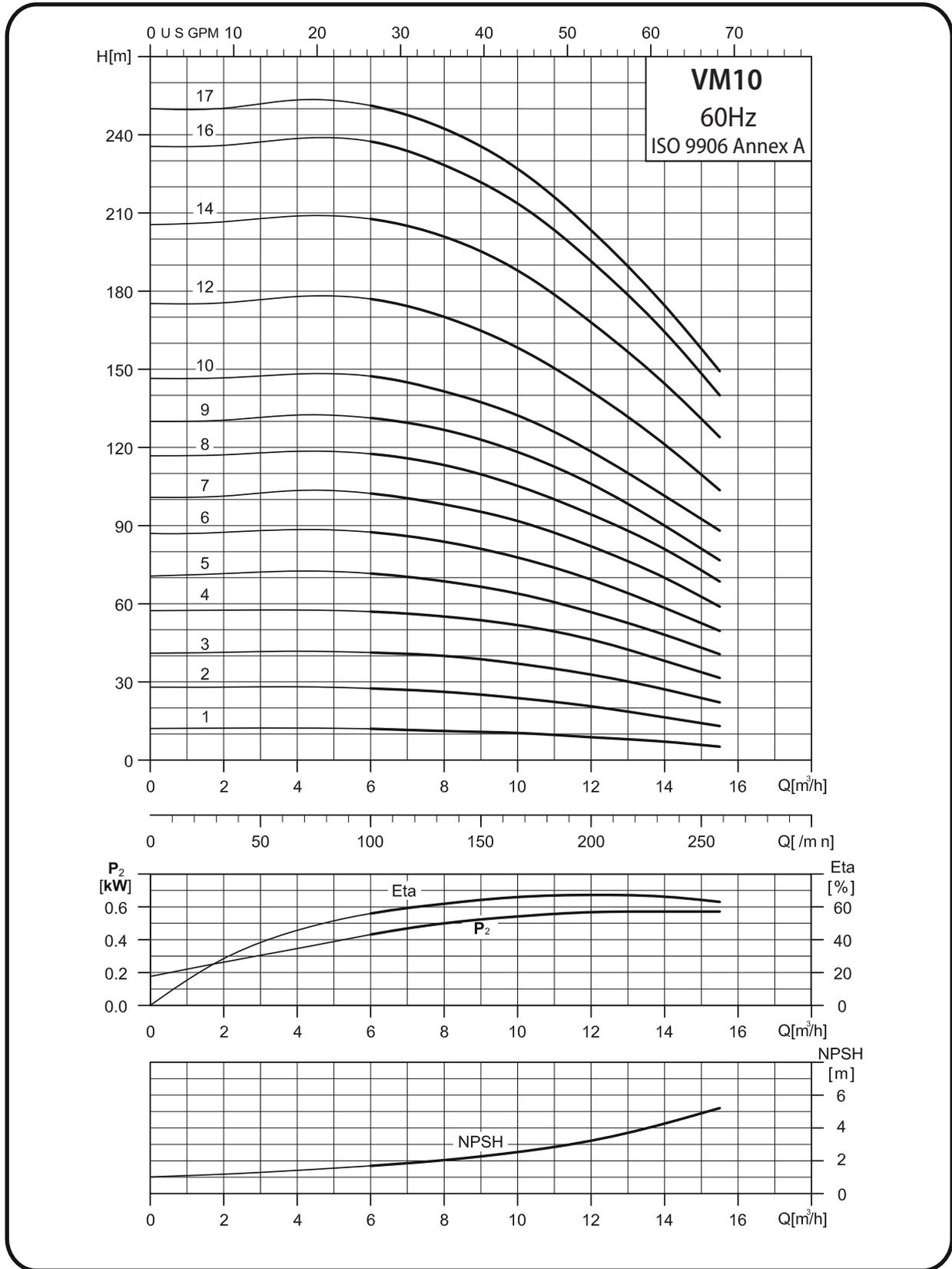
60Hz	Motor		Nominal current [A]						Dimension[mm]						Net weight [kg]		
	P2		1Ø		3Ø		3Ø		DIN flange		OVAL		D1	D2	D3	DIN flange	OVAL
	[kW]	[HP]	110V/220V	220-240V	Δ 220-255V	Y380-440V	Δ 380-480V	Y660-830V	H1	H2	H1	H2					
Pump type	[kW]	[HP]															
VM5-2	0.55	0.75	8.0 / 4.0	—	2.4 - 2.4	1.4 - 1.4	—	—	279	474	254	449	141	115	—	23.8	19.5
VM5-3	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	312	601	287	576	177	141	—	33.1	28.8
VM5-4	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	339	628	314	603	177	141	—	33.6	29.3
Pump type	[kW]	[HP]															
VM5-5	1.5	2.0	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	382	677	357	652	177	141	—	38.2	33.9
VM5-6	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	409	704	384	679	177	141	—	40.6	36.3
VM5-7	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	436	731	411	706	177	141	—	41.1	36.8
VM5-8	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	463	758	438	733	177	141	—	41.6	37.3
VM5-9	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	490	785	465	760	177	141	—	42.1	37.8
VM5-10	3	4.0	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	521	837	496	812	197	147	—	51.6	47.3
VM5-11	3	4.0	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	548	864	523	839	197	147	—	52.1	47.8
VM5-12	3	4.0	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	575	891	550	866	197	147	—	52.6	48.3
VM5-13	4	5.5	—	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	602	928	577	903	220	161	—	57.1	52.8
VM5-14	4	5.5	—	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	629	955	604	930	220	161	—	57.7	53.4
VM5-15	4	5.5	—	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	656	982	631	957	220	161	—	58.1	53.8
VM5-16	4	5.5	—	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	683	1009	658	984	220	161	—	58.7	54.4
VM5-18	5.5	7.5	—	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	767	1129	—	—	235	197	300	80.6	—
VM5-20	5.5	7.5	—	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	821	1183	—	—	235	197	300	81.8	—
VM5-22	5.5	7.5	—	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	875	1237	—	—	235	197	300	82.7	—
VM5-24	7.5	10	—	—	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	929	1334	—	—	235	197	300	89.6	—

60Hz	Motor		Nominal current [A]						Dimension[mm]						Net weight [kg]					
	P2		1Ø		3Ø		3Ø		Vactaulic		DIN flange		OVAL		D1	D2	D3	Vactaulic	DIN flange	OVAL
	[kW]	[HP]	110V/220V	220-240V	Δ 220-255V	Y380-440V	Δ 380-480V	Y660-830V	H1	H2	H1	H2	H1	H2						
Pump type	[kW]	[HP]																		
VMC(N)5-2	0.55	0.75	8.0 / 4.0	—	2.4 - 2.4	1.4 - 1.4	—	—	257	452	282	477	257	452	141	115	—	19.7	20.6	17.4
VMC(N)5-3	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	290	579	315	604	290	579	177	141	—	29.0	30.0	26.8
VMC(N)5-4	1.1	1.5	—	7.6 - 8.9	4.5 - 4.2	2.6 - 2.4	—	—	317	606	342	631	317	606	177	141	—	29.6	30.5	27.3
Pump type	[kW]	[HP]																		
VMC(N)5-5	1.5	2.0	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	360	655	385	680	360	655	177	141	—	34.3	35.3	32.1
VMC(N)5-6	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	387	682	412	707	387	682	177	141	—	36.6	37.6	34.4
VMC(N)5-7	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	414	709	439	734	414	709	177	141	—	37.1	38.1	34.9
VMC(N)5-8	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	441	736	466	761	441	736	177	141	—	37.7	38.6	35.4
VMC(N)5-9	2.2	3.0	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	468	763	493	788	468	763	177	141	—	38.2	39.2	35.9
VMC(N)5-10	3	4.0	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	500	816	525	841	500	816	197	147	—	47.4	48.3	45.1
VMC(N)5-11	3	4.0	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	527	843	552	868	527	843	197	147	—	47.9	48.8	45.6
VMC(N)5-12	3	4.0	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	554	870	579	895	554	870	197	147	—	48.4	49.4	46.2
VMC(N)5-13	4	5.5	—	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	581	907	606	932	581	907	220	161	—	53.0	53.9	50.7
VMC(N)5-14	4	5.5	—	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	608	934	633	959	608	934	220	161	—	53.5	54.5	51.3
VMC(N)5-15	4	5.5	—	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	635	961	660	986	635	961	220	161	—	54.1	55.0	51.8
VMC(N)5-16	4	5.5	—	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	662	988	687	1013	662	988	220	161	—	54.6	55.6	52.4
VMC(N)5-18	5.5	7.5	—	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	745	1107	770	1132	—	—	235	197	300	76.5	77.5	—
VMC(N)5-20	5.5	7.5	—	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	799	1161	824	1186	—	—	235	197	300	77.8	78.7	—
VMC(N)5-22	5.5	7.5	—	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	853	1215	878	1240	—	—	235	197	300	78.6	79.6	—
VMC(N)5-24	7.5	10	—	—	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	907	1312	932	1337	—	—	235	197	300	85.6	86.5	—

VM10 / VMC10 / VMN10

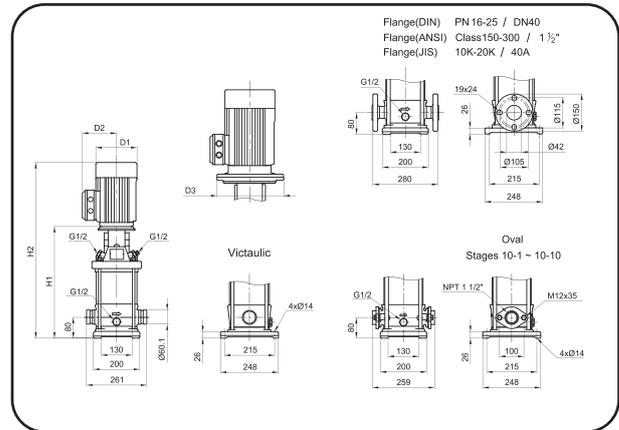
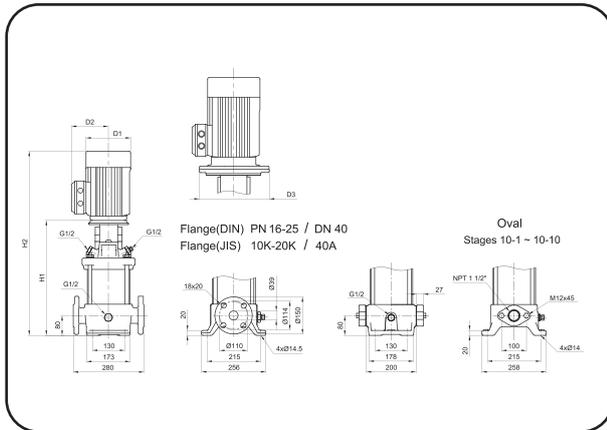
Performance Curves

The performance curve applies to the VM, VMC and VMN version of the pump.



Dimensions and Weight - VM 10

Dimensions and Weight - VMC/N 10



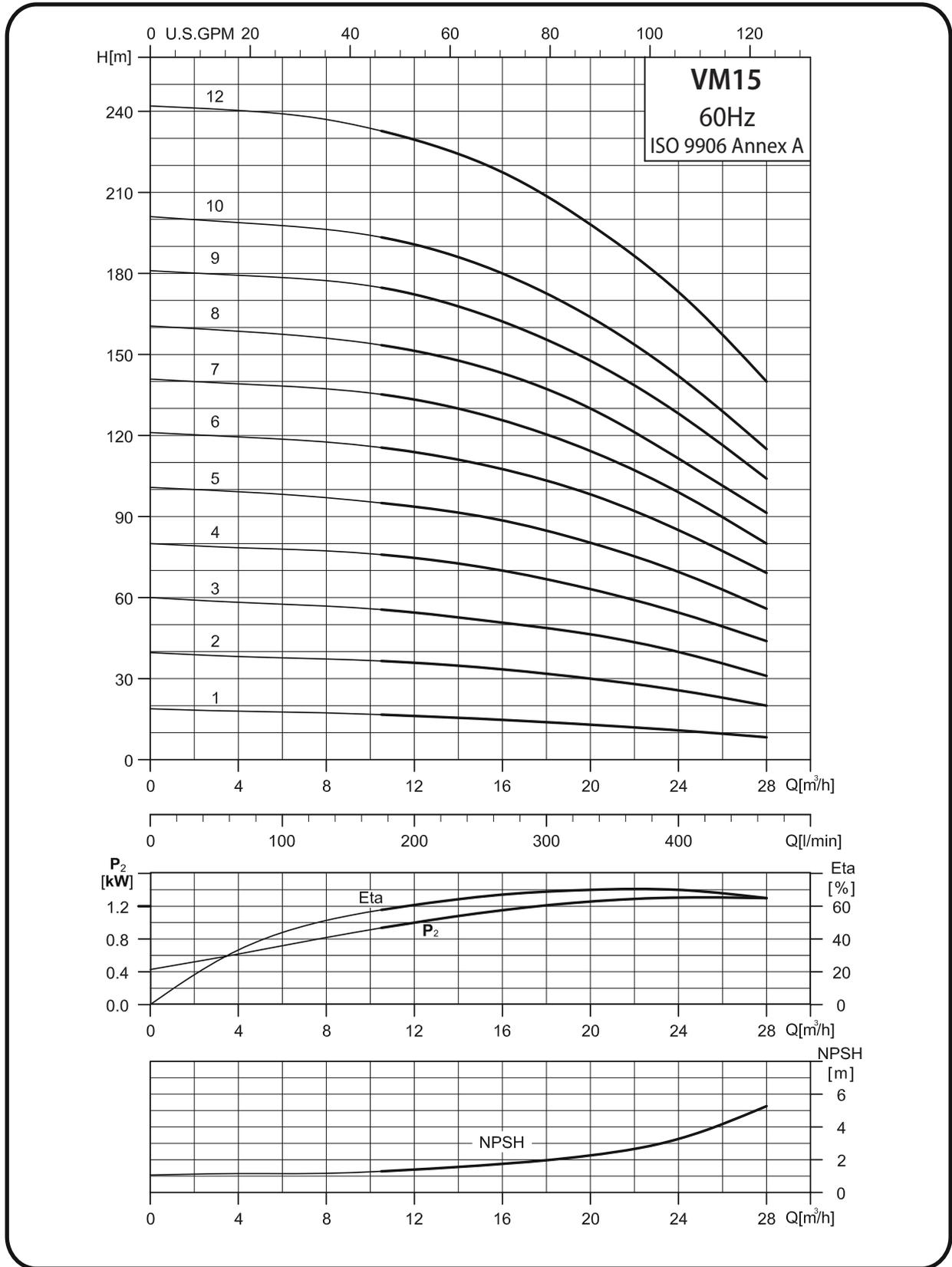
60Hz	Motor		Nominal current [A]						Dimension[mm]						Net weight [kg]		
	P2		1ø		3ø		3ø		DIN flange		OVAL		D1	D2	D3	DIN flange	OVAL
Pump type	[kW]	[HP]	110V/220V	220-240V	Δ 220-255V	Y380-440V	Δ 380-480V	Y660-830V	H1	H2	H1	H2	D1	D2	D3	DIN flange	OVAL
VM10-1	0.75	1	10.4 / 5.2	—	3.1 - 3.1	1.8 - 1.8	—	—	347	582	347	582	141	115	—	38.0	34.6
Pump type	[kW]	[HP]	110V/220V	220-240V	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	H1	H2	H1	H2	D1	D2	D3	DIN flange	OVAL
VM10-2	1.5	2	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	363	658	363	658	177	141	—	49.0	45.6
VM10-3	2.2	3	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	393	688	393	688	177	141	—	51.9	48.5
VM10-4	3	4	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	428	744	428	744	197	147	—	62.1	58.7
VM10-5	3	4	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	458	774	458	774	197	147	—	63.1	59.7
VM10-6	4	5.5	—	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	488	814	488	814	220	161	—	68.2	64.8
VM10-7	5.5	7.5	—	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	550	912	550	912	235	197	300	96.1	92.7
VM10-8	5.5	7.5	—	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	580	942	580	942	235	197	300	97.2	93.8
VM10-9	5.5	7.5	—	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	610	972	610	972	235	197	300	98.2	94.8
VM10-10	7.5	10	—	—	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	640	1045	640	1045	235	197	300	105.2	101.8
VM10-12	7.5	10	—	—	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	700	1105	—	—	235	197	300	107.2	—
VM10-14	11	15	—	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	837	1282	—	—	269	215	350	140.5	—
VM10-16	11	15	—	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	897	1342	—	—	269	215	350	142.6	—
VM10-17	11	15	—	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	927	1372	—	—	269	215	350	143.7	—

60Hz	Motor		Nominal current [A]						Dimension[mm]						Net weight [kg]					
	P2		1ø		3ø		3ø		Victaulic		DIN flange		OVAL		D1	D2	D3	Vactaulic	DIN flange	OVAL
Pump type	[kW]	[HP]	110V/220V	220-240V	Δ 220-255V	Y380-440V	Δ 380-480V	Y660-830V	H1	H2	H1	H2	H1	H2	D1	D2	D3	Vactaulic	DIN flange	OVAL
VMC(N)10-1	0.75	1	10.4 / 5.2	—	3.1 - 3.1	1.8 - 1.8	—	—	357	592	357	592	357	592	141	115	—	34.1	34.0	32.5
Pump type	[kW]	[HP]		220-240V	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	H1	H2	H1	H2	H1	H2	D1	D2	D3	Vactaulic	DIN flange	OVAL
VMC(N)10-2	1.5	2	—	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	373	668	373	668	373	668	177	141	—	45.1	45.0	43.5
VMC(N)10-3	2.2	3	—	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	403	698	403	698	403	698	177	141	—	47.9	47.8	46.3
VMC(N)10-4	3	4	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	438	754	438	754	438	754	197	147	—	57.3	57.2	55.7
VMC(N)10-5	3	4	—	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	468	784	468	784	468	784	197	147	—	58.4	58.2	56.7
VMC(N)10-6	4	5.5	—	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	498	824	498	824	498	824	220	161	—	63.4	63.3	61.8
VMC(N)10-7	5.5	7.5	—	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	560	922	560	922	560	922	235	197	300	92.5	92.4	90.9
VMC(N)10-8	5.5	7.5	—	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	590	952	590	952	590	952	235	197	300	93.6	93.4	91.9
VMC(N)10-9	5.5	7.5	—	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	620	982	620	982	620	982	235	197	300	94.6	94.4	92.9
VMC(N)10-10	7.5	10	—	—	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	650	1055	650	1055	650	1055	235	197	300	101.5	101.4	99.9
VMC(N)10-12	7.5	10	—	—	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	710	1115	710	1115	—	—	235	197	300	103.6	103.4	—
VMC(N)10-14	11	15	—	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	847	1292	847	1292	—	—	269	215	350	137.2	137.0	—
VMC(N)10-16	11	15	—	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	907	1352	907	1352	—	—	269	215	350	139.2	139.1	—
VMC(N)10-17	11	15	—	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	937	1382	937	1382	—	—	269	215	350	140.4	140.2	—

VM15 / VMC15 / VMN15

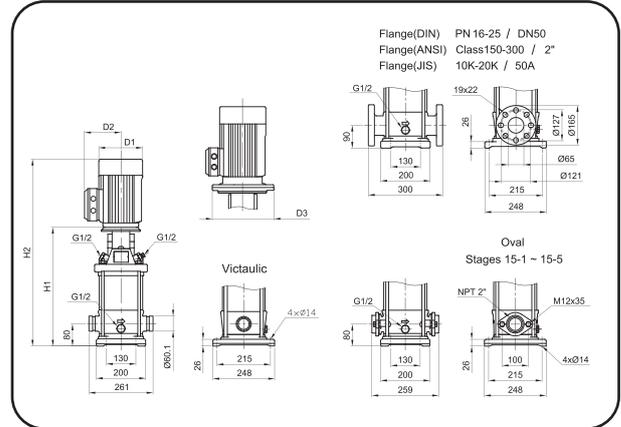
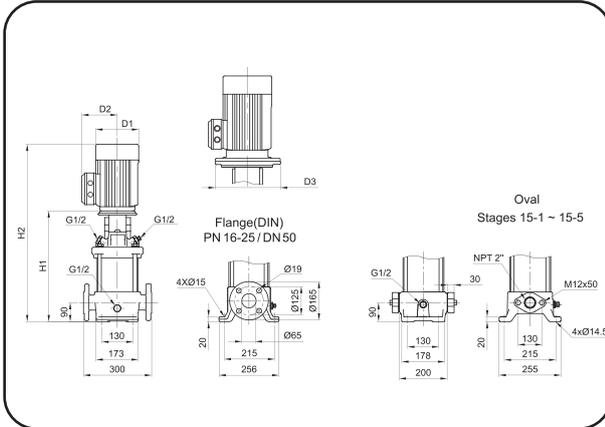
Performance Curves

The performance curve applies to the VM, VMC and VMN version of the pump.



Dimensions and Weight - VM 15

Dimensions and Weight - VMC/N 15



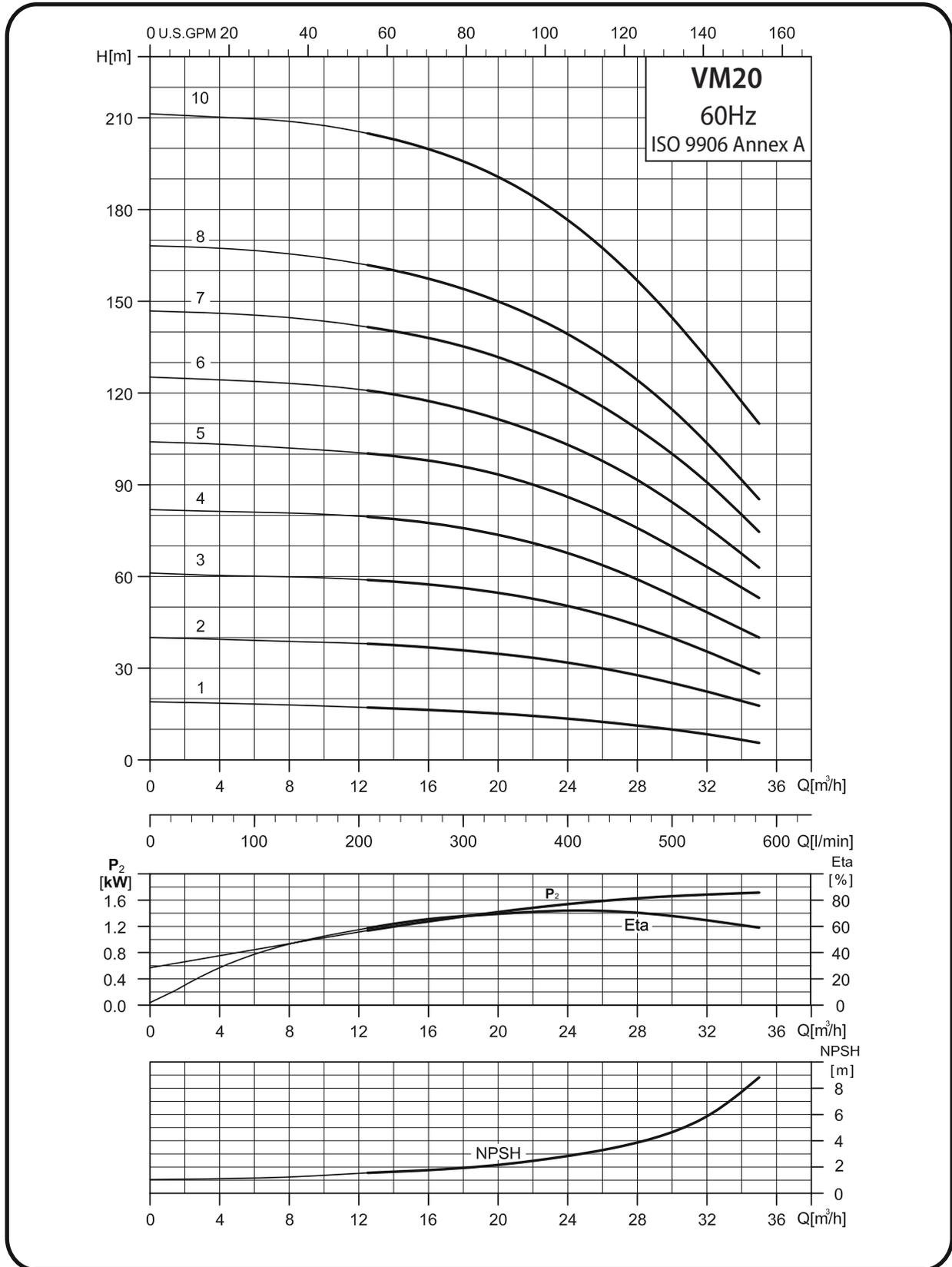
60Hz	Motor		Nominal current [A]					Dimension[mm]						Net weight [kg]		
	P2		1ø	3ø		3ø		DIN flange		OVAL		D1	D2	D3	DIN flange	OVAL
Pump	[kW]	[HP]	220-240V	Δ 220-277V	Y380-480V Δ	Δ 380-480V	Y660-830V	H1	H2	H1	H2					
VM15-1	1.5	2	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	415	710	415	710	177	141	—	53.6	52.0
VM15-2	3	4	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	420	736	420	736	197	147	—	64.9	63.3
VM15-3	4	5.5	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	465	791	465	791	220	161	—	70.3	68.7
VM15-4	5.5	7.5	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	542	904	542	904	235	197	300	98.7	97.1
VM15-5	7.5	10	—	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	587	992	587	992	235	197	300	106.0	104.4
VM15-6	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	709	1154	—	—	269	215	350	138.7	—
VM15-7	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	754	1199	—	—	269	215	350	140.2	—
VM15-8	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	799	1244	—	—	269	215	350	141.6	—
VM15-9	15	20	—	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	844	1334	—	—	269	215	350	153.7	—
VM15-10	15	20	—	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	889	1379	—	—	269	215	350	155.2	—
VM15-12	18.5	25	—	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	979	1519	—	—	318	241	350	192.0	—

60Hz	Motor		Nominal current [A]					Dimension[mm]						Net weight [kg]					
	P2		1ø	3ø		3ø		Vactaulic		DIN flange		OVAL		D1	D2	D3	Vactaulic	DIN flange	OVAL
Pump type	[kW]	[HP]	220-240V	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	H1	H2	H1	H2	H1	H2						
VMC(N)15-1	1.5	2	9.6 - 9.7	5.9 - 6.1	3.4 - 3.5	—	—	403	698	413	708	403	698	177	141	—	45.6	46.3	42.7
VMC(N)15-2	3	4	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	408	724	418	734	408	724	197	147	—	56.1	56.7	53.1
VMC(N)15-3	4	5.5	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	453	779	463	789	453	779	220	161	—	61.5	62.1	58.5
VMC(N)15-4	5.5	7.5	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	530	892	540	902	530	892	235	197	300	91.0	91.6	88.0
VMC(N)15-5	7.5	10	—	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	575	980	585	990	575	980	235	197	300	98.3	99.0	95.3
VMC(N)15-6	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	697	1142	707	1152	—	—	269	215	350	131.4	132.0	—
VMC(N)15-7	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	742	1187	752	1197	—	—	269	215	350	132.8	133.4	—
VMC(N)15-8	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	787	1232	797	1242	—	—	269	215	350	134.2	134.8	—
VMC(N)15-9	15	20	—	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	832	1322	842	1332	—	—	269	215	350	146.4	147.0	—
VMC(N)15-10	15	20	—	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	877	1367	887	1377	—	—	269	215	350	147.9	148.5	—
VMC(N)15-12	18.5	25	—	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	967	1507	977	1517	—	—	318	241	350	184.5	182.2	—

VM20 / VMC20 / VMN20

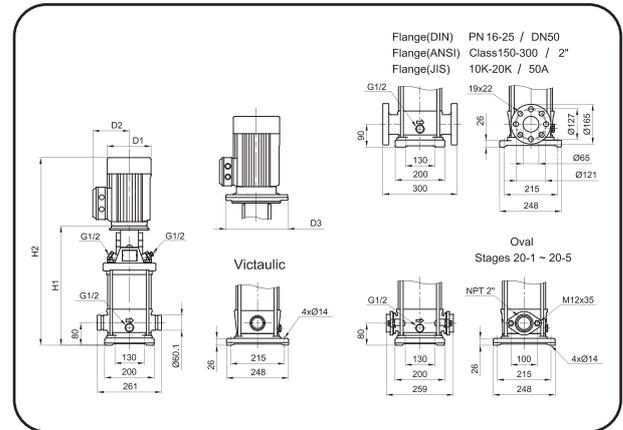
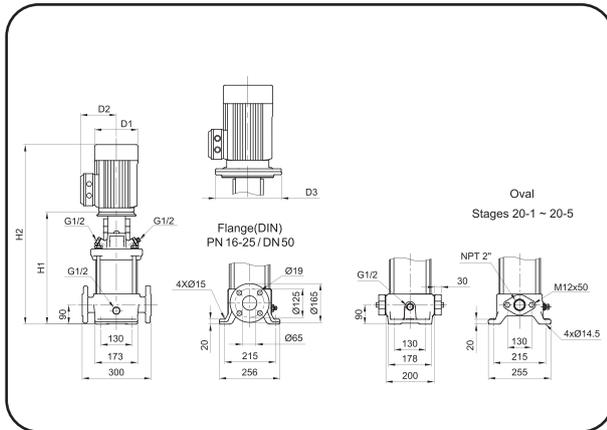
Performance Curves

The performance curve applies to the VM, VMC and VMN version of the pump.



Dimensions and Weight - VM 20

Dimensions and Weight - VMC/N 20



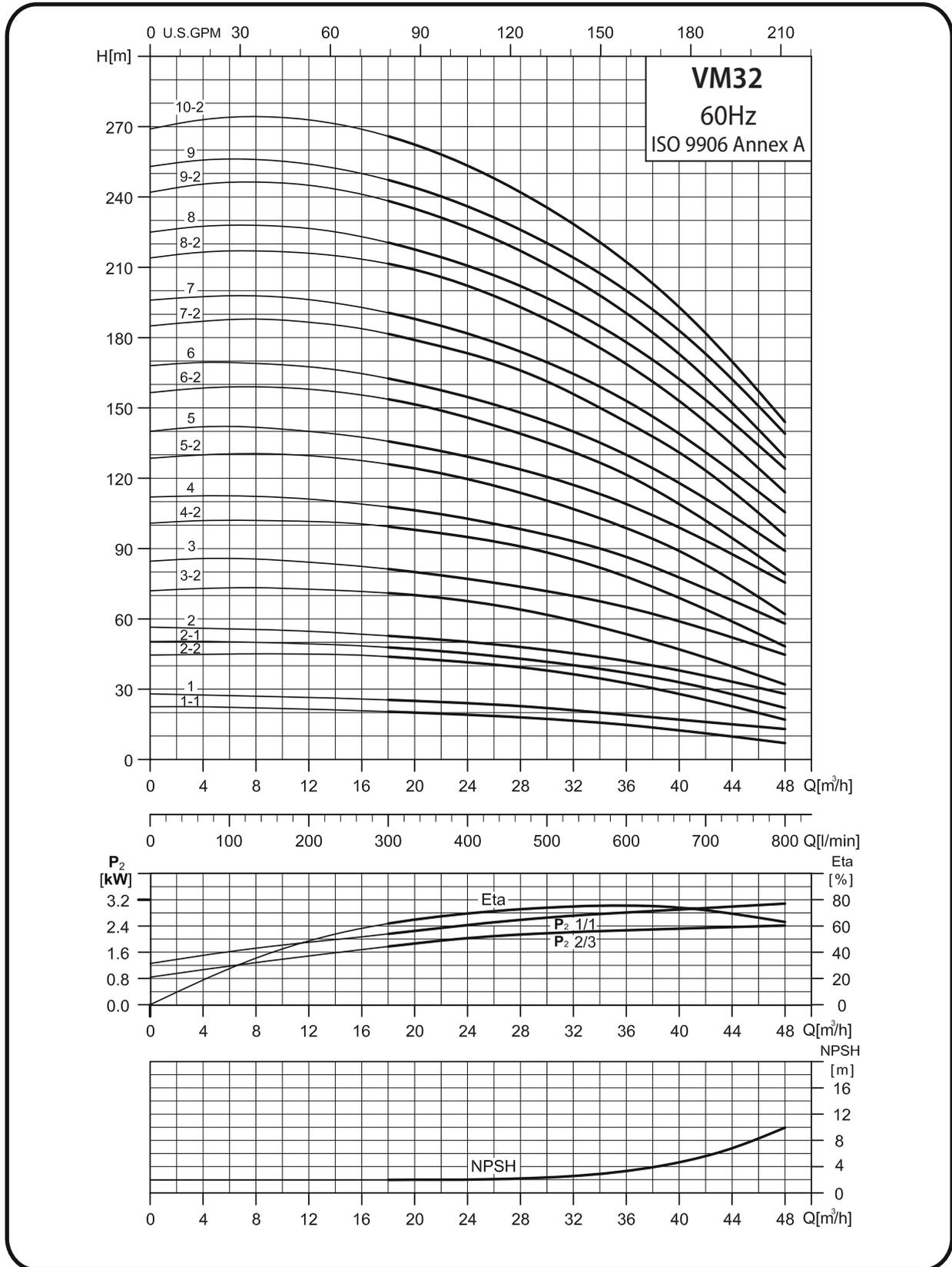
60Hz	Motor		Nominal current [A]					Dimension[mm]						Net weight [kg]	
	P2	1ø	3ø		3ø	3ø	DIN flange		OVAL		D1	D2	D3	DIN flange	OVAL
			Δ 220-277V	Y380-480V			H1	H2	H1	H2					
VM 20-1	2.2	3	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	415	710	415	710	177	141	—	55.4	53.8
VM 20-2	4	5.5	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	420	746	420	746	220	161	—	68.9	67.3
VM 20-3	5.5	7.5	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	497	859	497	859	235	197	300	97.4	95.8
VM 20-4	7.5	10	—	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	542	947	542	947	235	197	300	104.6	102.9
VM 20-5	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	664	1109	664	1109	269	215	350	137.2	135.6
VM 20-6	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	709	1154	—	—	269	215	350	138.7	—
VM 20-7	15	20	—	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	754	1244	—	—	269	215	350	150.9	—
VM 20-8	15	20	—	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	799	1289	—	—	269	215	350	152.3	—
VM 20-10	18.5	25	—	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	889	1429	—	—	318	241	350	189.0	—

60Hz	Motor		Nominal current [A]					Dimension[mm]						Net weight [kg]					
	P2	1ø	3ø		3ø	3ø	Vactaulic		DIN flange		OVAL		D1	D2	D3	Vactaulic	DIN flange	OVAL	
			Δ 220-277V	Y380-480V			H1	H2	H1	H2	H1	H2							
Pump type	[kW]	[HP]	220-240V	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	H1	H2	H1	H2	H1	H2	D1	D2	D3	Vactaulic	DIN flange	OVAL
VMC(N) 20-1	2.2	3	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	405	700	415	710	405	700	177	141	—	47.4	48.1	44.4
VMC(N) 20-2	4	5.5	—	14.2 - 13.0	8.2 - 7.5	8.4 - 7.2	4.8 - 4.2	410	736	420	746	410	736	220	161	—	60.1	60.7	57.1
VMC(N) 20-3	5.5	7.5	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	487	849	497	859	487	849	235	197	300	89.6	90.2	86.6
VMC(N) 20-4	7.5	10	—	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	532	937	542	947	532	937	235	197	300	96.9	97.5	93.9
VMC(N) 20-5	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	654	1099	664	1109	654	1099	269	215	350	129.9	130.5	126.9
VMC(N) 20-6	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	699	1144	709	1154	—	—	269	215	350	131.4	132.0	—
VMC(N) 20-7	15	20	—	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	744	1234	754	1244	—	—	269	215	350	143.5	144.1	—
VMC(N) 20-8	15	20	—	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	789	1279	799	1289	—	—	269	215	350	144.9	145.5	—
VMC(N) 20-10	18.5	25	—	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	879	1419	889	1429	—	—	318	241	350	181.7	182.3	—

VM32 / VMC32 / VMN32

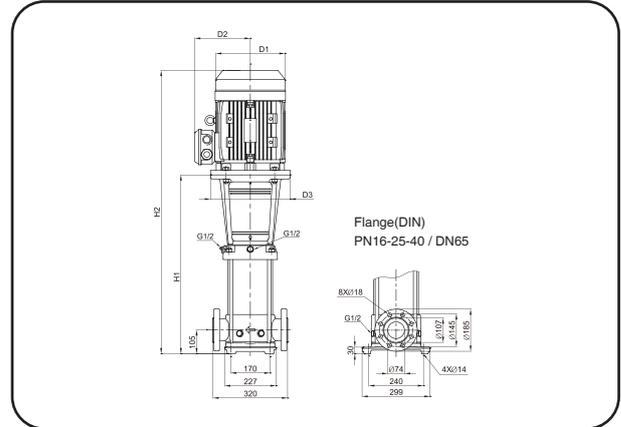
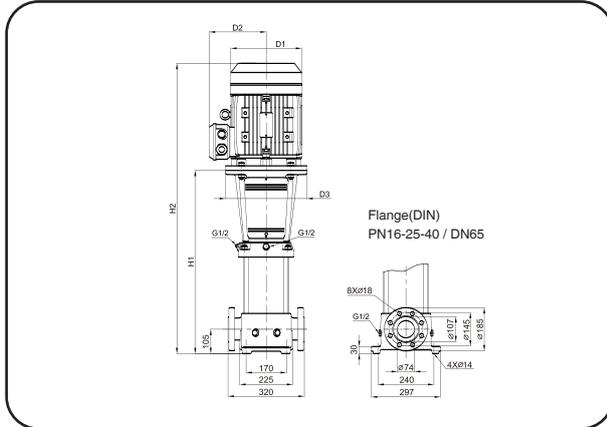
Performance Curves

The performance curve applies to the VM, VMC and VMN version of the pump.



Dimensions and Weight - VM 32

Dimensions and Weight - VMC/N 32



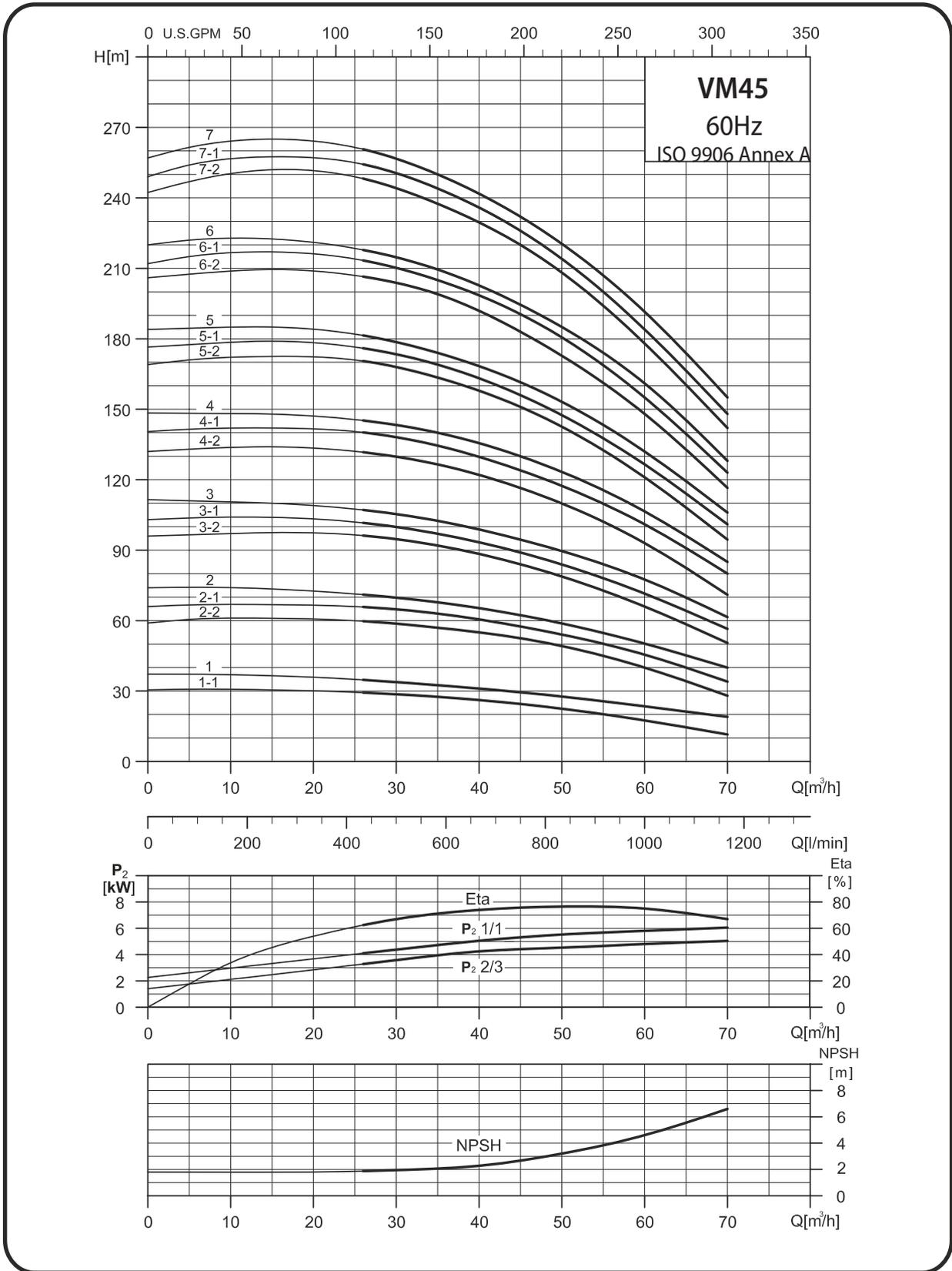
60Hz	Motor		Nominal current [A]							Dimension[mm]					Net weight [kg]
	P2		1ø	3ø		3ø		3ø			DIN flange		D1	D2	D3
Pump type	[kW]	[HP]	220-240V	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	Δ 460V	Y	H1	H2	D1	D2	D3	DIN flange
VM 32-1-1	2.2	3	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	—	—	504	799	177	141	280	74.3
VM 32-1	3.0	4	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	—	—	504	820	197	147	280	82.5
VM 32-2-2	5.5	7.5	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	—	—	574	936	235	197	300	106.4
VM 32-2-1	5.5	7.5	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	—	—	574	936	235	197	300	106.4
VM 32-2	7.5	10	—	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	—	—	574	979	235	197	300	112.3
VM 32-3-2	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—	754	1199	269	215	350	151.6
VM 32-3	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—	754	1199	269	215	350	151.6
VM 32-4-2	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—	824	1269	269	215	350	154.7
VM 32-4	15	20	—	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	—	—	824	1314	269	215	350	165.4
VM 32-5-2	15	20	—	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	—	—	894	1384	269	215	350	168.5
VM 32-5	18.5	25	—	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	894	1434	318	241	350	202.3
VM 32-6-2	18.5	25	—	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	964	1504	318	241	350	205.3
VM 32-6	18.5	25	—	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	964	1504	318	241	350	205.3
VM 32-7-2	22	30	—	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—	1034	1574	318	241	350	221.2
VM 32-7	22	30	—	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—	1034	1574	318	241	350	221.2
Pump type	[kW]	[HP]	Δ 220-240V	Y380-415V	Δ 380-415V	Y660-720V	Δ 460V	Y	H1	H2	D1	D2	D3	DIN flange	
VM 32-8-2	30	40	—	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	1104	1764	390	295	400	328.1
VM 32-8	30	40	—	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	1104	1764	390	295	400	328.1
VM 32-9-2	30	40	—	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	1174	1834	390	295	400	330.8
VM 32-9	30	40	—	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	1174	1834	390	295	400	330.8
VM 32-10-2	30	40	—	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	1244	1904	390	295	400	333.5

60Hz	Motor		Nominal current [A]							Dimension[mm]					Net weight [kg]
	P2		1ø	3ø		3ø		3ø			DIN flange		D1	D2	D3
Pump type	[kW]	[HP]	220-240V	Δ 220-240V	Y380-440V	Δ 380-480V	Y660-720V	Δ 460V	Y	H1	H2	D1	D2	D3	DIN Flange
VMC(N) 32-1-1	2.2	3	13.8 - 12.5	8.6 - 7.9	5.0 - 4.6	—	—	—	—	504	799	177	141	280	69.3
VMC(N) 32-1	3.0	4	—	11.4 - 10.5	6.6 - 6.1	6.5 - 6.1	3.8 - 3.5	—	—	504	820	197	147	280	77.4
VMC(N) 32-2-2	5.5	7.5	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	—	—	574	936	235	197	300	101.3
VMC(N) 32-2-1	5.5	7.5	—	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	—	—	574	936	235	197	300	101.3
VMC(N) 32-2	7.5	10	—	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	—	—	574	979	235	197	300	107.2
VMC(N) 32-3-2	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—	754	1199	269	215	350	146.5
VMC(N) 32-3	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—	754	1199	269	215	350	146.5
VMC(N) 32-4-2	11	15	—	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—	824	1269	269	215	350	149.6
VMC(N) 32-4	15	20	—	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	—	—	824	1314	269	215	350	160.3
VMC(N) 32-5-2	15	20	—	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	—	—	894	1384	269	215	350	163.4
VMC(N) 32-5	18.5	25	—	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	894	1434	318	241	350	197.3
VMC(N) 32-6-2	18.5	25	—	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	964	1504	318	241	350	200.4
VMC(N) 32-6	18.5	25	—	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	964	1504	318	241	350	200.4
VMC(N) 32-7-2	22	30	—	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—	1034	1574	318	241	350	216.2
VMC(N) 32-7	22	30	—	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—	1034	1574	318	241	350	216.2
Pump type	[kW]	[HP]	Δ 220-240V	Y380-415V	Δ 380-415V	Y660-720V	Δ 460V	Y	H1	H2	D1	D2	D3	DIN flange	
VMC(N) 32-8-2	30	40	—	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	1104	1764	390	295	400	323.1
VMC(N) 32-8	30	40	—	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	1104	1764	390	295	400	323.1
VMC(N) 32-9-2	30	40	—	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	1174	1834	390	295	400	325.9
VMC(N) 32-9	30	40	—	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	1174	1834	390	295	400	325.9
VMC(N) 32-10-2	30	40	—	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	1244	1904	390	295	400	328.5

VM45 / VMC45 / VMN45

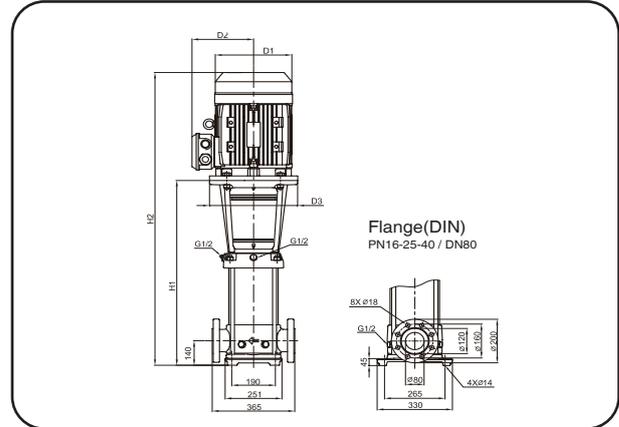
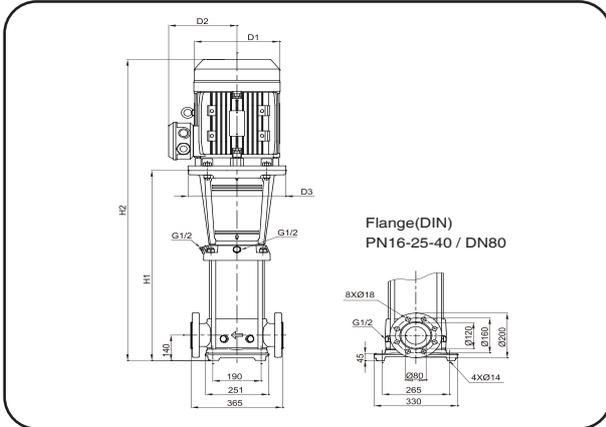
Performance Curves

The performance curve applies to the VM, VMC and VMN version of the pump.



Dimensions and Weight - VM 45

Dimensions and Weight - VMC/N 45



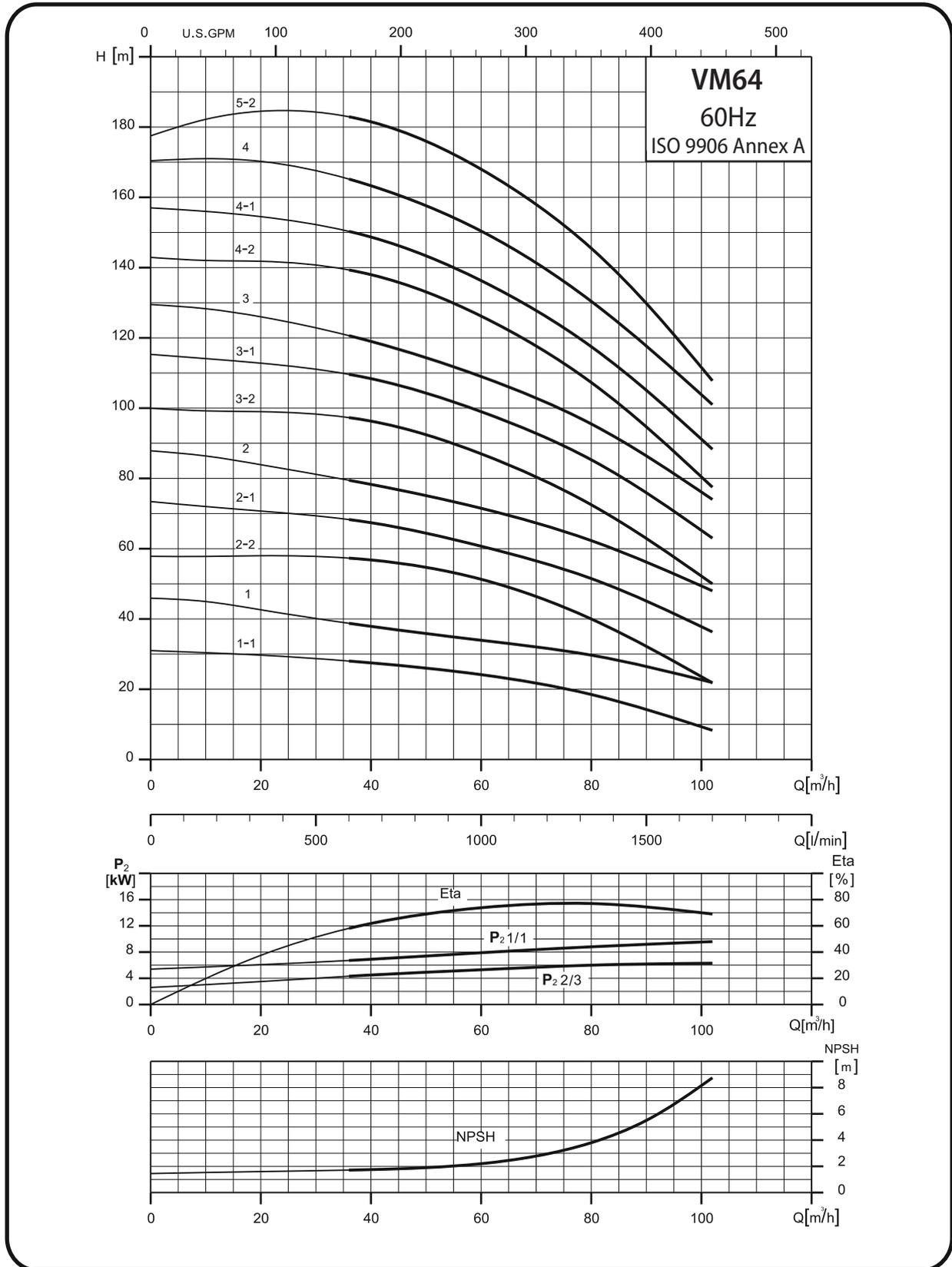
60Hz	Motor		Nominal current [A]						Dimension[mm]					Net weight [kg]
	P2		3Ø		3Ø		3Ø		DIN flange		D1	D2	D3	
Pump type	[kW]	[HP]	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	Δ 460V	Y	H1	H2	D1	D2	D3	DIN flange
VM 45-1-1	5.5	7.5	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	—	—	561	923	235	197	300	113.9
VM 45-1	7.5	10	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	—	—	561	966	235	197	300	119.8
VM 45-2-2	11	15	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—	751	1196	269	215	350	159.7
VM 45-2-1	11	15	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—	751	1196	269	215	350	159.7
VM 45-2	15	20	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	—	—	751	1241	269	215	350	170.4
VM 45-3-2	18.5	25	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	831	1371	318	241	350	208.0
VM 45-3-1	18.5	25	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	831	1371	318	241	350	208.0
VM 45-3	18.5	25	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	831	1371	318	241	350	208.0
VM 45-4-2	22	30	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—	911	1451	318	241	350	224.5
Pump type	[kW]	[HP]	Δ 220-240V	Y380-415V	Δ 380-415V	Y660-720V	Δ 460V	Y	H1	H2	D1	D2	D3	DIN flange
VM 45-4-1	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N/A	911	1571	390	295	400	328.1
VM 45-4	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N/A	911	1571	390	295	400	328.1
VM 45-5-2	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N/A	991	1651	390	295	400	331.9
VM 45-5-1	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N/A	991	1651	390	295	400	331.9
VM 45-5	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N/A	991	1651	390	295	400	331.9
VM 45-6-2	37	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N/A	1071	1731	390	295	400	353.7
VM 45-6-1	37	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N/A	1071	1731	390	295	400	353.7
VM 45-6	37	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N/A	1071	1731	390	295	400	353.7
VM 45-7-2	45	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N/A	1151	1841	446	325	450	433.6
VM 45-7-1	45	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N/A	1151	1841	446	325	450	433.6
VM 45-7	45	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N/A	1151	1841	446	325	450	433.6

60Hz	Motor		Nominal current [A]						Dimension[mm]					Net weight [kg]
	P2		3Ø		3Ø		3Ø		DIN flange		D1	D2	D3	
Pump type	[kW]	[HP]	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	Δ 460V	Y	H1	H2	D1	D2	D3	DIN flange
VMC(N) 45-1-1	5.5	7.5	18.5 - 15.8	10.7 - 9.1	10.7 - 9.4	6.2 - 5.4	—	—	559	921	235	197	300	105.1
VMC(N) 45-1	7.5	10	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	—	—	559	964	235	197	300	111.0
VMC(N) 45-2-2	11	15	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—	749	1194	269	215	350	150.9
VMC(N) 45-2-1	11	15	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—	749	1194	269	215	350	150.9
VMC(N) 45-2	15	20	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	—	—	749	1239	269	215	350	161.6
VMC(N) 45-3-2	18.5	25	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	829	1369	318	241	350	199.2
VMC(N) 45-3-1	18.5	25	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	829	1369	318	241	350	199.2
VMC(N) 45-3	18.5	25	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	829	1369	318	241	350	199.2
VMC(N) 45-4-2	22	30	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—	909	1449	318	241	350	215.7
Pump type	[kW]	[HP]	Δ 220-240V	Y380-415V	Δ 380-415V	Y660-720V	Δ 460V	Y	H1	H2	D1	D2	D3	DIN flange
VMC(N) 45-4-1	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N/A	909	1569	390	295	400	319.3
VMC(N) 45-4	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N/A	909	1569	390	295	400	319.3
VMC(N) 45-5-2	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N/A	989	1649	390	295	400	323.1
VMC(N) 45-5-1	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N/A	989	1649	390	295	400	323.1
VMC(N) 45-5	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N/A	989	1649	390	295	400	323.1
VMC(N) 45-6-2	37	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N/A	1069	1729	390	295	400	344.9
VMC(N) 45-6-1	37	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N/A	1069	1729	390	295	400	344.9
VMC(N) 45-6	37	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N/A	1069	1729	390	295	400	344.9
VMC(N) 45-7-2	45	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N/A	1149	1839	446	325	450	424.8
VMC(N) 45-7-1	45	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N/A	1149	1839	446	325	450	424.8
VMC(N) 45-7	45	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N/A	1149	1839	446	325	450	424.8

VM64 / VMC64 / VMN64

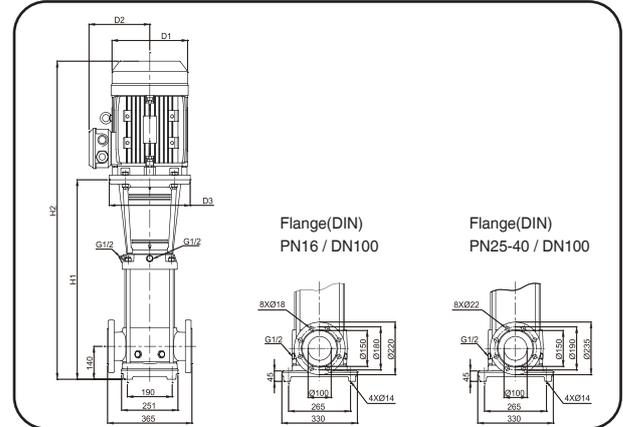
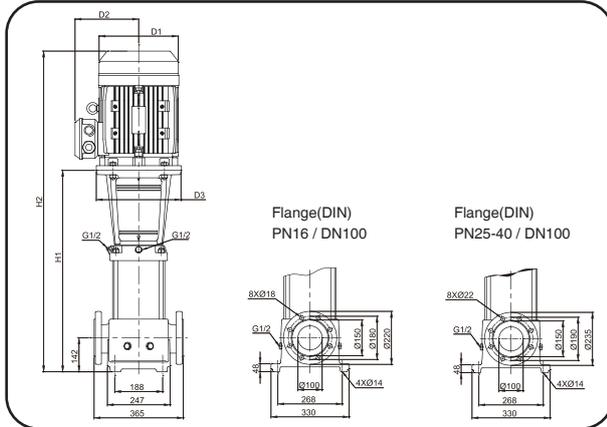
Performance Curves

The performance curve applies to the VM, VMC and VMN version of the pump.



Dimensions and Weight - VM 64

Dimensions and Weight - VMC/N 64



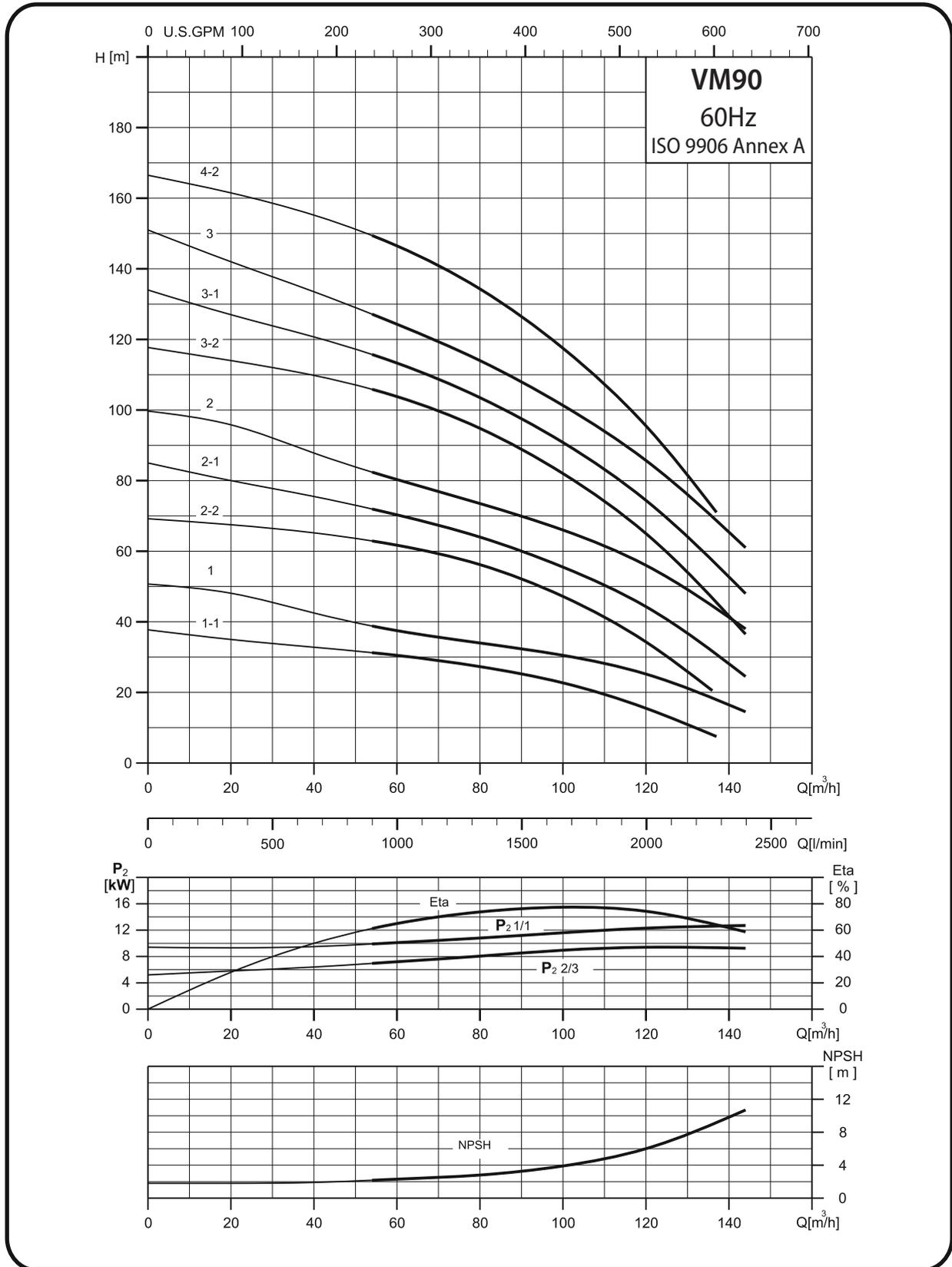
60Hz	Motor		Nominal current [A]						Dimension[mm]					Net weight [kg]
	P2		3ø		3ø		3ø		DIN flange		D1	D2	D3	
Pump type	[kW]	[HP]	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	Δ 460V	Y	H1	H2	D1	D2	D3	DIN flange
VM 64-1-1	7.5	10	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	—	—	563	968	235	197	300	113.5
VM 64-1	11	15	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—	673	1118	269	215	350	149.7
VM 64-2-2	15	20	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	—	—	756	1246	269	215	350	164.5
VM 64-2-1	18.5	25	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	756	1296	318	241	350	198.3
VM 64-2	22	30	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—	756	1296	318	241	350	211.0
VM 64-3-2	22	30	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—	838	1378	318	241	350	215.6
Pump type	[kW]	[HP]	Δ 220-240V	Y380-415V	Δ 380-415V	Y660-720V	Δ 460V	Y	H1	H2	D1	D2	D3	DIN flange
VM 64-3-1	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	838	1498	390	295	400	319.2
VM 64-3	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	838	1498	390	295	400	319.2
VM 64-4-2	37	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N / A	921	1581	390	295	400	341.2
VM 64-4-1	37	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N / A	921	1581	390	295	400	341.2
VM 64-4	45	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N / A	925	1615	446	325	450	417.4
VM 64-5-2	45	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N / A	1007	1697	446	325	450	421.4

60Hz	Motor		Nominal current [A]						Dimension[mm]					Net weight [kg]
	P2		3ø		3ø		3ø		DIN flange		D1	D2	D3	
Pump type	[kW]	[HP]	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	Δ 460V	Y	H1	H2	D1	D2	D3	DIN flange
VMC(N) 64-1-1	7.5	10	24.7 - 21.6	14.3 - 12.5	14.4 - 12.8	8.3 - 7.4	—	—	563	968	235	197	300	106.5
VMC(N) 64-1	11	15	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—	673	1118	269	215	350	142.7
VMC(N) 64-2-2	15	20	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	—	—	756	1246	269	215	350	157.5
VMC(N) 64-2-1	18.5	25	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	756	1296	318	241	350	191.3
VMC(N) 64-2	22	30	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—	756	1296	318	241	350	204.0
VMC(N) 64-3-2	22	30	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—	838	1378	318	241	350	208.1
Pump type	[kW]	[HP]	Δ 220-240V	Y380-415V	Δ 380-415V	Y660-720V	Δ 460V	Y	H1	H2	D1	D2	D3	DIN flange
VMC(N) 64-3-1	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	838	1498	390	295	400	311.7
VMC(N) 64-3	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	838	1498	390	295	400	311.7
VMC(N) 64-4-2	37	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N / A	921	1581	390	295	400	333.7
VMC(N) 64-4-1	37	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N / A	921	1581	390	295	400	333.7
VMC(N) 64-4	45	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N / A	925	1615	446	325	450	409.8
VMC(N) 64-5-2	45	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N / A	1007	1697	446	325	450	413.8

VM90 / VMC90 / VMN90

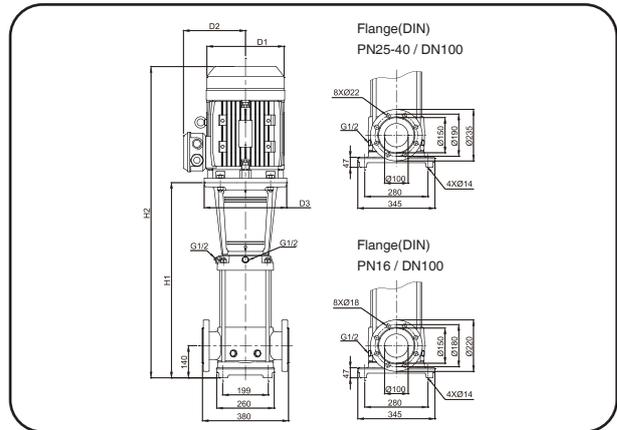
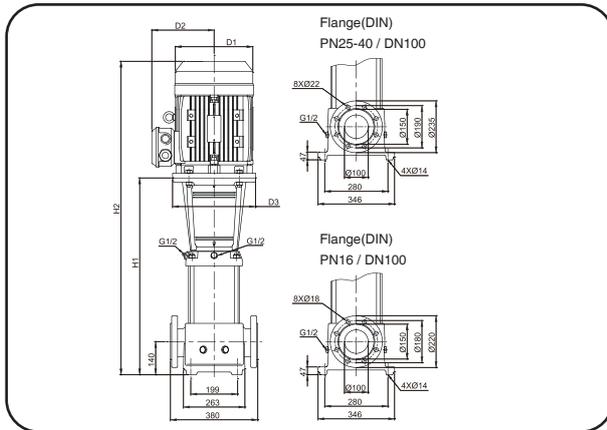
Performance Curves

The performance curve applies to the VM, VMC and VMN version of the pump.



Dimensions and Weight - VM90

Dimensions and Weight - VMC/N90



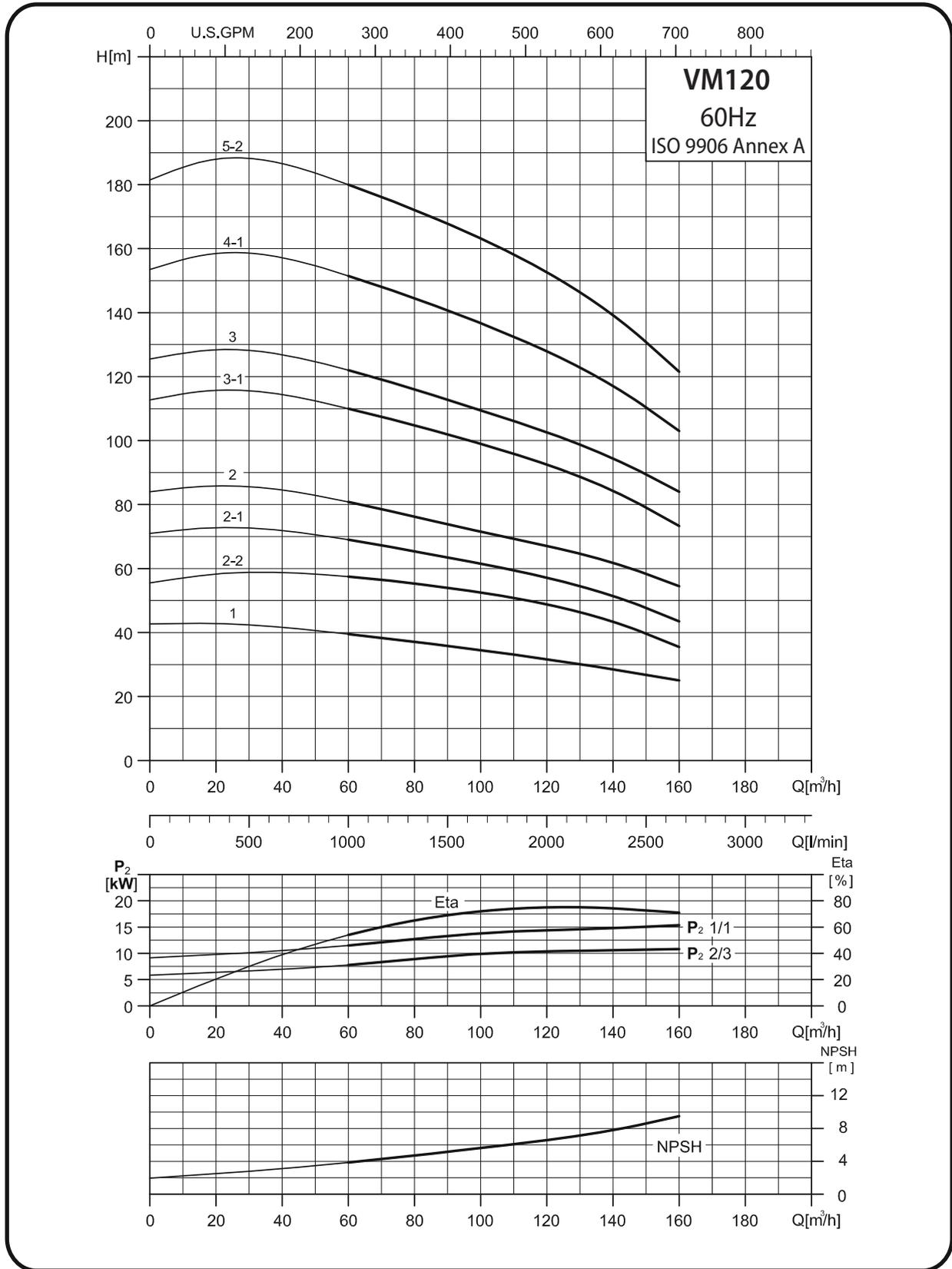
60Hz	Motor		Nominal current [A]						Dimension[mm]			Net weight [kg]		
	P2		3ø		3ø		3ø		DIN flange		D1	D2	D3	DIN flange
Pump type	[KW]	[HP]	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	Δ 460V	Y	H1	H2				
VM 90-1-1	11	15	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—	682	1127	269	215	350	157.1
VM 90-1	15	20	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	—	—	682	1172	269	215	350	167.7
VM 90-2-2	18.5	25	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	774	1314	318	241	350	207.0
VM 90-2-1	22	30	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—	774	1314	318	241	350	219.7
Pump type	[KW]	[HP]	Δ 220-240V	Y380-415V	Δ 380-415V	Y660-720V	Δ 460V	Y	H1	H2	D1	D2	D3	DIN flange
VM 90-2	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	774	1434	390	295	400	323.3
VM 90-3-2	37	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N / A	866	1526	390	295	400	346.6
VM 90-3-1	37	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N / A	866	1526	390	295	400	346.6
VM 90-3	45	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N / A	866	1556	446	325	450	422.7
VM 90-4-2	45	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N / A	958	1648	446	325	450	427.9

60Hz	Motor		Nominal current [A]						Dimension[mm]			Net weight [kg]		
			3ø		3ø		3ø		DIN flange		D1	D2	D3	DIN flange
Pump type	[KW]	[HP]	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	Δ 460V	Y	H1	H2				
VMC(N) 90-1-1	11	15	37.0 - 33.9	21.4 - 19.6	21.5 - 20.6	12.4 - 11.9	—	—	686	1131	269	215	350	153.5
VMC(N) 90-1	15	20	48.5 - 40.7	28.0 - 23.5	28.5 - 24.9	16.4 - 14.3	—	—	686	1176	269	215	350	164.1
VMC(N) 90-2-2	18.5	25	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	778	1318	318	241	350	203.2
VMC(N) 90-2-1	22	30	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—	778	1318	318	241	350	216
Pump type	[KW]	[HP]	Δ 220-240V	Y380-415V	Δ 380-415V	Y660-720V	Δ 460V	Y	H1	H2	D1	D2	D3	DIN flange
VMC(N) 90-2	30	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	778	1438	390	295	400	319.6
VMC(N) 90-3-2	37	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N / A	870	1530	390	295	400	342.8
VMC(N) 90-3-1	37	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N / A	870	1530	390	295	400	342.8
VMC(N) 90-3	45	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N / A	870	1560	446	325	450	418.9
VMC(N) 90-4-2	45	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N / A	962	1652	446	325	450	425.9

VM120 / VMC120 / VMN120

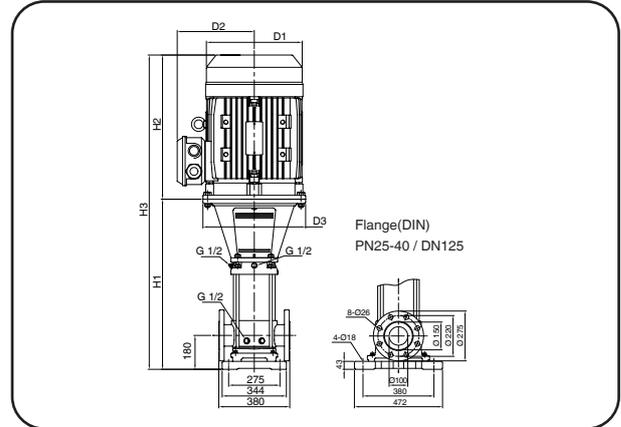
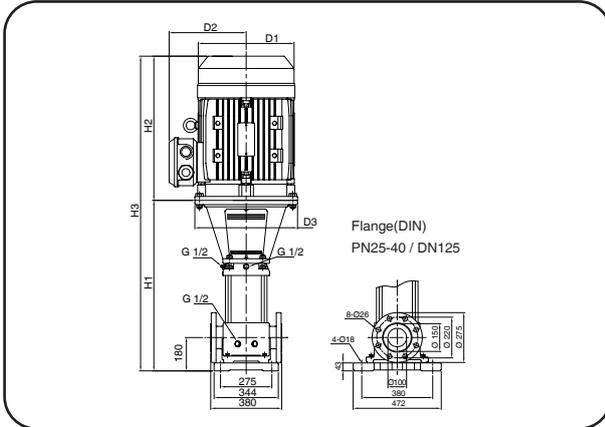
Performance Curves

The performance curve applies to the VM, VMC and VMN version of the pump.



Dimensions and Weight - VM120

Dimensions and Weight - VMC/N120



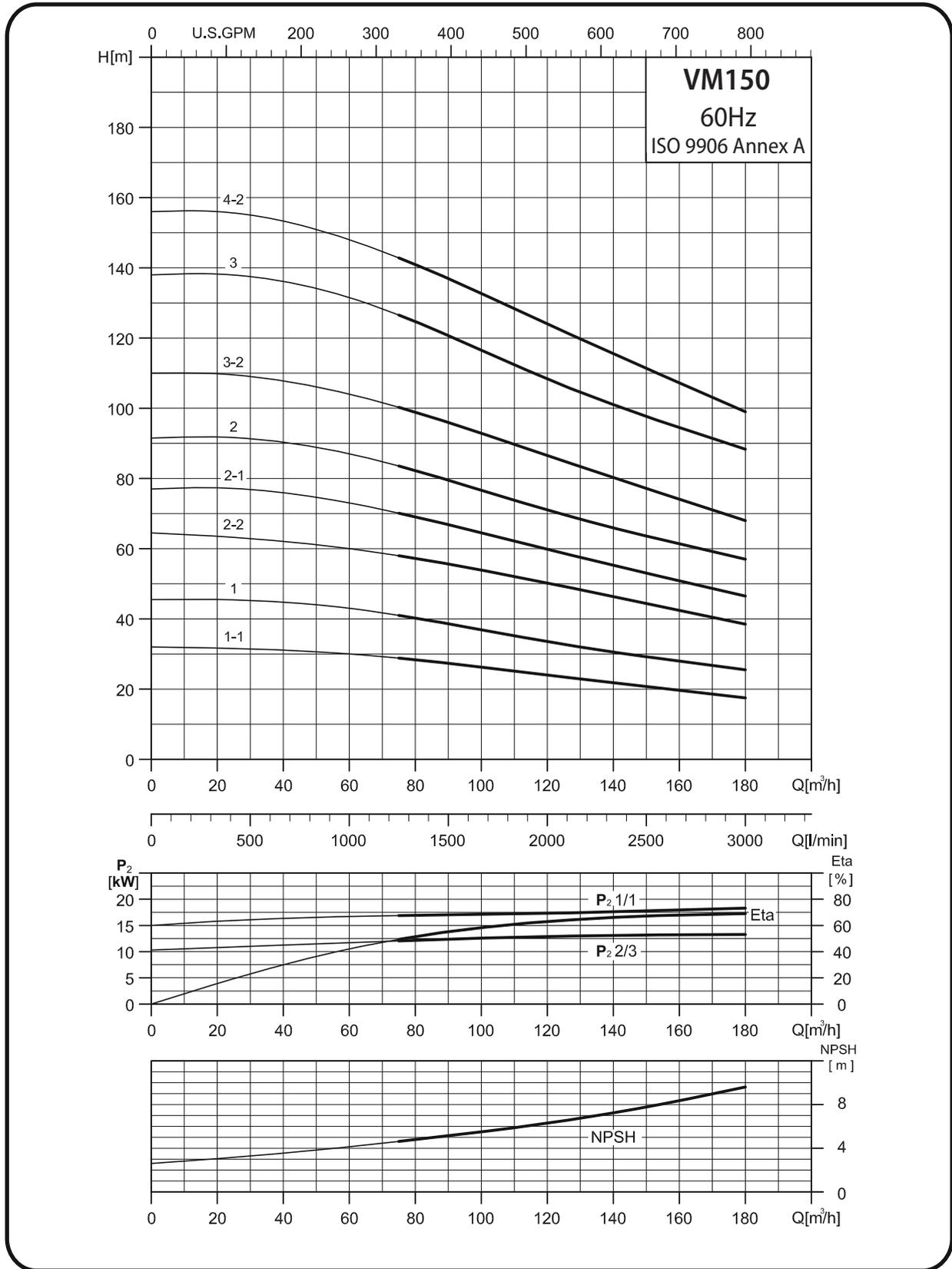
60Hz	Motor		Nominal current [A]					Dimension[mm]						Net weight [kg]	
	P2		3ø		3ø			DIN flange			D1	D2	D3	DIN flange	
	[kW]	[HP]	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	Δ 460V	Y	H1	H2					H3
VM 120-1	18.5	25	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	834	540	1374	318	241	350	239.1
Pump type	[kW]	[HP]	Δ 220-240V	Y380-415V	Δ 380-415V	Y660-720V	Δ 460V	Y	H1	H2	H3	D1	D2	D3	DIN flange
VM 120-2-2	30.0	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	990	660	1650	390	295	400	365.5
VM 120-2-1	30.0	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	990	660	1650	390	295	400	365.5
VM 120-2	37.0	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N / A	990	660	1650	390	295	400	383.5
VM 120-3-1	45.0	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N / A	1149	690	1839	446	325	450	469.5
VM 120-3	55.0	75	174.0 - 159.5	100.5 - 92.0	100.5 - 92.0	57.9 - 53.0	96.0	N / A	1175	770	1945	485	355	550	589.8
VM 120-4-1	75.0	100	235.8 - 216.2	136.1 - 124.7	136.1 - 124.7	78.4 - 71.9	127.0	N / A	1331	845	2176	550	410	550	716.2
VM 120-5-2	75.0	100	235.8 - 216.2	136.1 - 124.7	136.1 - 124.7	78.4 - 71.9	127.0	N / A	1486	845	2331	550	410	550	726.2

60Hz	Motor		Nominal current [A]					Dimension[mm]						Net weight [kg]	
	P2		3ø		3ø			DIN flange			D1	D2	D3	DIN flange	
	[kW]	[HP]	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	Δ 460V	Y	H1	H2					H3
VMC(N) 120-1	18.5	25	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	837	540	1377	318	241	350	219.2
Pump type	[kW]	[HP]	Δ 220-240V	Y380-415V	Δ 380-415V	Y660-720V	Δ 460V	Y	H1	H2	H3	D1	D2	D3	DIN flange
VMC(N) 120-2-2	30.0	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	993	660	1653	390	295	400	349.8
VMC(N) 120-2-1	30.0	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	993	660	1653	390	295	400	349.8
VMC(N) 120-2	37.0	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N / A	993	660	1653	390	295	400	367.9
VMC(N) 120-3-1	45.0	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N / A	1152	690	1842	446	325	450	454.0
VMC(N) 120-3	55.0	75	174.0 - 159.5	100.5 - 92.0	100.5 - 92.0	57.9 - 53.0	96.0	N / A	1178	770	1948	485	355	550	574.4
VMC(N) 120-4-1	75.0	100	235.8 - 216.2	136.1 - 124.7	136.1 - 124.7	78.4 - 71.9	127.0	N / A	1334	845	2179	550	410	550	701.0
VMC(N) 120-5-2	75.0	100	235.8 - 216.2	136.1 - 124.7	136.1 - 124.7	78.4 - 71.9	127.0	N / A	1489	845	2334	550	410	550	711.0

VM150 / VMC150 / VMN150

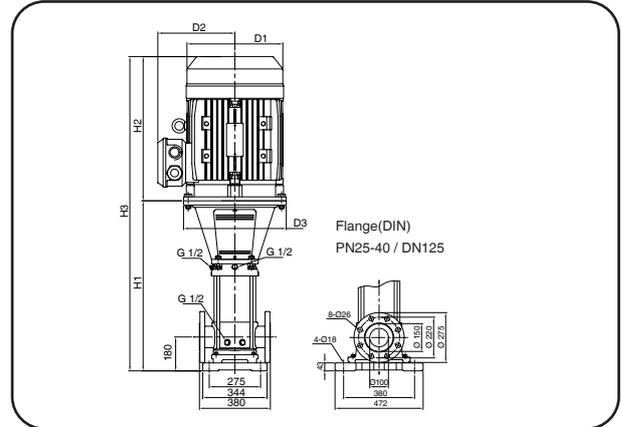
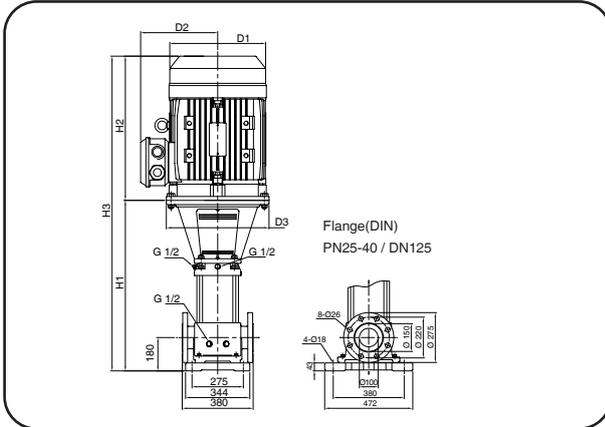
Performance Curves

The performance curve applies to the VM, VMC and VMN version of the pump.



Dimensions and Weight - VM150

Dimensions and Weight - VMC/N150



60Hz	Motor		Nominal current [A]						Dimension[mm]						Net weight [kg]
	P2		3ø		3ø		3ø		DIN flange			D1	D2	D3	DIN flange
	[kW]	[HP]	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	Δ 460V	Y	H1	H2	H3	D1	D2	D3	DIN flange
Pump type	[kW]	[HP]	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	Δ 460V	Y	H1	H2	H3	D1	D2	D3	DIN flange
VM 150-1-1	18.5	25	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	834	540	1374	318	241	350	239.0
VM 150-1	22.0	30	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—	834	540	1374	318	241	350	251.8
Pump type	[kW]	[HP]	Δ 220-240V	Y380-415V	Δ 380-415V	Y660-720V	Δ 460V	Y	H1	H2	H3	D1	D2	D3	DIN flange
VM 150-2-2	30.0	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	990	660	1650	390	295	400	365.4
VM 150-2-1	37.0	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N / A	990	660	1650	390	295	400	383.4
VM 150-2	45.0	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N / A	994	690	1684	446	325	450	459.5
VM 150-3-2	55.0	75	174.0 - 159.5	100.5 - 92.0	100.5 - 92.0	57.9 - 53.0	96.0	N / A	1175	770	1945	485	355	550	589.7
VM 150-3	75.0	100	235.8 - 216.2	136.1 - 124.7	136.1 - 124.7	78.4 - 71.9	127.0	N / A	1175	845	2020	550	410	550	706.2
VM 150-4-2	75.0	100	235.8 - 216.2	136.1 - 124.7	136.1 - 124.7	78.4 - 71.9	127.0	N / A	1331	845	2176	550	410	550	716.2

60Hz	MotorP2		Nominal current [A]						Dimension[mm]						Net weight [kg]
	P2		3ø		3ø		3ø		DIN flange			D1	D2	D3	DIN flange
	[kW]	[HP]	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	Δ 460V	Y	H1	H2	H3	D1	D2	D3	DIN flange
Pump type	[kW]	[HP]	Δ 220-277V	Y380-480V	Δ 380-480V	Y660-830V	Δ 460V	Y	H1	H2	H3	D1	D2	D3	DIN flange
VMC(N) 150-1-1	18.5	25	59.7 - 49.3	34.5 - 28.5	34.6 - 28.9	19.9 - 16.6	—	—	837	540	1377	318	241	350	222.7
VMC(N) 150-1	22.0	30	70.4 - 58.5	40.7 - 33.8	41.1 - 34.3	23.7 - 19.8	—	—	837	540	1377	318	241	350	235.7
Pump type	[kW]	[HP]	Δ 220-240V	Y380-415V	Δ 380-415V	Y660-720V	Δ 460V	Y	H1	H2	H3	D1	D2	D3	DIN flange
VMC(N) 150-2-2	30.0	40	97.2 - 89.1	56.1 - 51.4	56.1 - 51.4	32.3 - 29.6	52.6	N / A	993	660	1653	390	295	400	349.1
VMC(N) 150-2-1	37.0	50	118.2 - 108.4	68.3 - 62.5	68.3 - 62.5	39.3 - 36.0	64.3	N / A	993	660	1653	390	295	400	367.1
VMC(N) 150-2	45.0	60	143.5 - 131.5	82.8 - 75.9	82.8 - 75.9	47.7 - 43.7	78.2	N / A	997	690	1687	446	325	450	443.3
VMC(N) 150-3-2	55.0	75	174 - 159.5	100.5 - 92.0	100.5 - 92.0	57.9 - 53.0	96.0	N / A	1178	770	1948	485	355	550	573.5
VMC(N) 150-3	75.0	100	235.8 - 216.2	136.1 - 124.7	136.1 - 124.7	78.4 - 71.9	127.0	N / A	1178	845	2023	550	410	550	690.1
VMC(N) 150-4-2	75.0	100	235.8 - 216.2	136.1 - 124.7	136.1 - 124.7	78.4 - 71.9	127.0	N / A	1334	845	2179	550	410	550	699.2

Pipework connections

For pipework connection, various sets of counter flanges and couplings are available.

Counter flanges for VM(C/N)

A set consists of one counter flange, one gasket, bolts, nuts, washers

Counter flange	Flange type	Nominal Flange Diameter	Description	Rated Pressure	Pipework connection
 DN 26 / PN20-40	VM(C)FW 1 VM(C)FW 3 VM(C)FW 5	DN 26	Threaded	25-40 bar	BPT 1"
 DN 32 / PN20-40		DN 32	Threaded	25-40 bar	BPT 1 1/4"
 DN 40	VM(C)FW 90	DN 40	Threaded	25-40 bar	BPT 1 1/2"
 DN 50	VM(C)FW 106 VM(C)FW 128	DN 50	Threaded	25-40 bar	BPT 2"
 DN 65	VM(C)FW 122	DN 65	Threaded	25-40 bar	BPT 2 1/2"
 DN 80	VM(C)FW 146	DN 80	Threaded	25-40 bar	BPT 3"
 DN 100 PN11	VM(C)FW 154 VM(C)FW 186	DN 100	Threaded	10 bar	BPT 4"
 DN 100 / PN20-40		DN 100	Threaded	25-40 bar	BPT 4"
 DN 125	VM(C)FW 198 VM(C)FW 240	DN 125	Threaded	25-40 bar	BPT 5"

The material of counter flange is in $\text{Steel } \text{A50C3}$, SS 304 and SS 316 available.

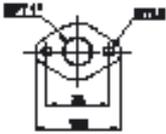
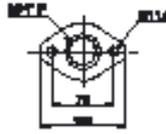
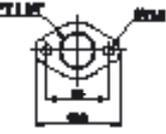
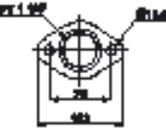
PJE couplings for VMC(N)

A set consists of two coupling halves, one gasket, one pipe stud(threaded), bolts and nuts

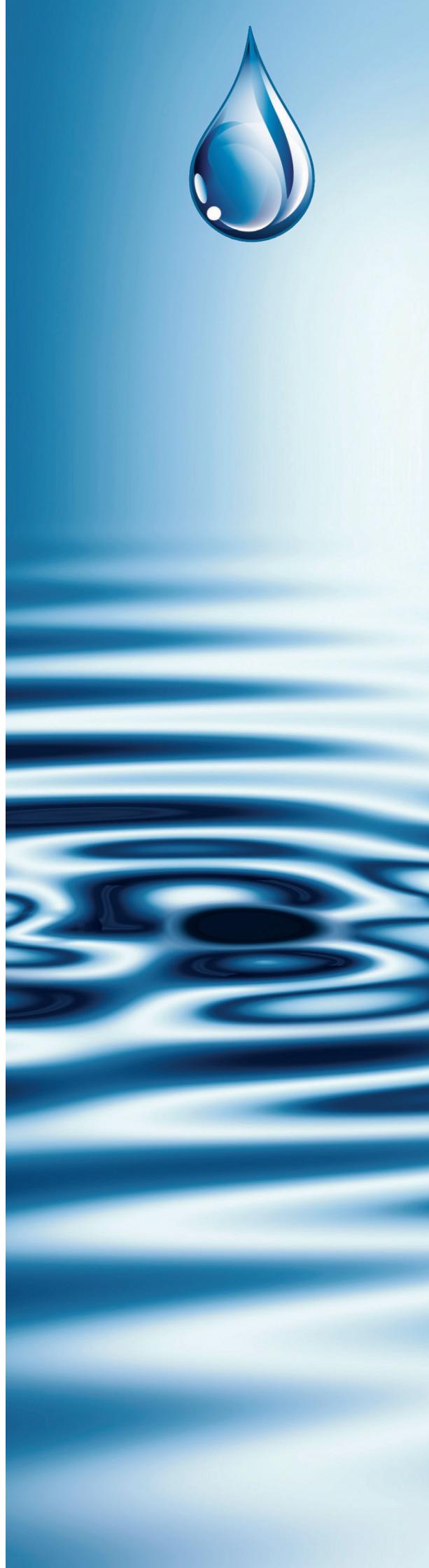
Viscosity-connection	Pump type	Coupling & pipe stud	Max Pressure	Description	Rubber	Flange's connection
	VMC 1 / 3 / 5	254-05	30 bar	Threaded	EPDM	R 1 1/4"
	VMN 1 / 3 / 5	258-05				
	VMC 10 / 16 / 25	254-05	70 bar	Threaded	EPDM	R 2"
	VMN 10 / 16 / 25	258-05				

Oval flanges for VM(C/N)

A set consists of one OVAL flange, one gasket, two bolts

Coupler design	Description	Max Pressure	Rated	Flange's connection
 VM 1-3	 VM(C/N) 1-3	30 bar	Max Automatic	NPT 1"
 VM 5	 VM(C/N) 5			
 VM 10	 VM(C/N) 10	30 bar	Max Automatic	NPT 1 1/4"
 VM 15-25	 VM(C/N) 15-25			

The material of coupler is in  Steel 45C,  304 and  316 available.





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