

**SPCO**  
makes life easier



**VM, VMC, VMN**

Vertical Multistage  
Centrifugal Pumps, 50Hz

# Approvals

IEC		IECEE CB SCHEME		CB TEST CERTIFICATE		Ref. Certificate No.	
						CH-3431	
IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME							
Issued by:	Electrosuisse						
Product:	Horizontal and vertical multi-stage pumps						
Applicant:	Swiss Pump Company AG	Schönenstrasse 48	Switzerland				
Manufacturer:	Swiss Pump Company AG	CH-3645 Thun-Gwatt	Switzerland				
Factory:	Swiss Pump Company AG	CH-3645 Thun-Gwatt	Switzerland				
Rating and principal characteristics:	220 - 240V~, 50/60Hz, 0.27 - 1.5kW (class I, IP55, (see appendix 1) 3 x 200 - 480V~, 50/60Hz, 0.18 - 30kW, class I, IP55						
Trade mark (if any):	SPCC						
Model/Type reference:	HM ... CH ... KM ... GD ... ND ... DC ... (see appendix 1)						
Additional information:	-						
Sample of product tested to be in conformity with IEC:	90396-1 (4.4um)		90396-2 (1) (4.3um)		National differences: EU Group Differences, EU Special national Conditions, EU A-Deviations		
Test Report Ref. No.:	96-HQ-0218.01 + 02						
This CB Test Certificate is issued by the National Certification Body:							
Electrosuisse Luppenstrasse 1, CH-8320 Fehraltorf, Switzerland						electrosuisse >>>	
Signed by: Hans Fleischmann						<i>Hans Fleischmann</i>	
Date of issue: 2006-11-16							



THE INTERNATIONAL CERTIFICATION NETWORK

## CERTIFICATE

IQNet and SQS  
hereby certify that the organisation

**Swiss Pump Company AG**  
3645 Thun-Gwatt  
Switzerland

Certified area  
**Whole Company**

Field of activity  
**Design, development, manufacture and sale of products  
for the transportation of liquids**

has implemented and maintains a  
**Management System**  
which fulfills the requirements of the following standard(s)

**ISO 9001:2008**

Scope No(s): 17, 18, 19  
Issued on: 2012-02-20  
Validity date: 2015-02-19  
Registration Number: **CH-32160**

  
 Michael Drechsel  
President of IQNet

  
 Roland Glauser  
Managing Director SQS



IQNet Partners\*:  
AFNOR Spain APNOR Certification France AIB-Vincotte International Belgium ANCE Mexico APCER Portugal CCC Cyprus  
CISQ Italy CQC China CQM China CQR Czech Republic Cw Cert Canada DQS Holding GmbH Germany SSI Denmark  
ELOT Greece FCV Brazil FONDONORMA Venezuela ICONTEC Colombia IMC Mexico INNORPI Tunisia  
Inspecta Certification Finland IRAM Argentina IQA Japan IQS Korea MSZT Hungary NENAS AS Norway NSAI Ireland  
PCBC Poland Quality Austria Austria RR Russia SH Israel SIQ Slovenia SIRM QAS International Malaysia SQS Switzerland SRAC Romania  
TEST St Petersburg Russia TSE Turkey TQS Serbia

IQNet is represented in the USA by: APNOR Certification, CISQ, DQS Holding GmbH and NSAI Inc.  
\* The list of IQNet partners is valid at the time of issue of this certificate. Updated information is available under www.iqnet-certification.com



## General Data

Performance scope	page	5
Product range		5
Pump		6
Application		6
Definition of model		6
Motor		7
Mechanical seals		7
Material VM, VMC, VMN 1,3,5,10,15,20		8
Material VM, VMC, VMN 32, 45, 64, 90		9
Material VM, VMC, VMN 120, 150		10
Max. inlet pressure		11
Max. working pressure		11
Performance curve		12
Min. inlet pressure NPSH		13
Operation in parallel		13
Pumped liquids		14

## Technical Data

VM, VMC, VMN 1	page	16
VM, VMC, VMN 3		18
VM, VMC, VMN 5		20
VM, VMC, VMN 10		22
VM, VMC, VMN 15		24
VM, VMC, VMN 20		26
VM, VMC, VMN 32		28
VM, VMC, VMN 45		30
VM, VMC, VMN 64		32
VM, VMC, VMN 90		34
VM, VMC, VMN 120		36
VM, VMC, VMN 150		38

## Vertical Multistage Pumps

**English** - SPCO High Pressure Pumps VM, VMN, VMC with pumping pressure up to 280 meter and flow up to 180 m<sup>3</sup>/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.

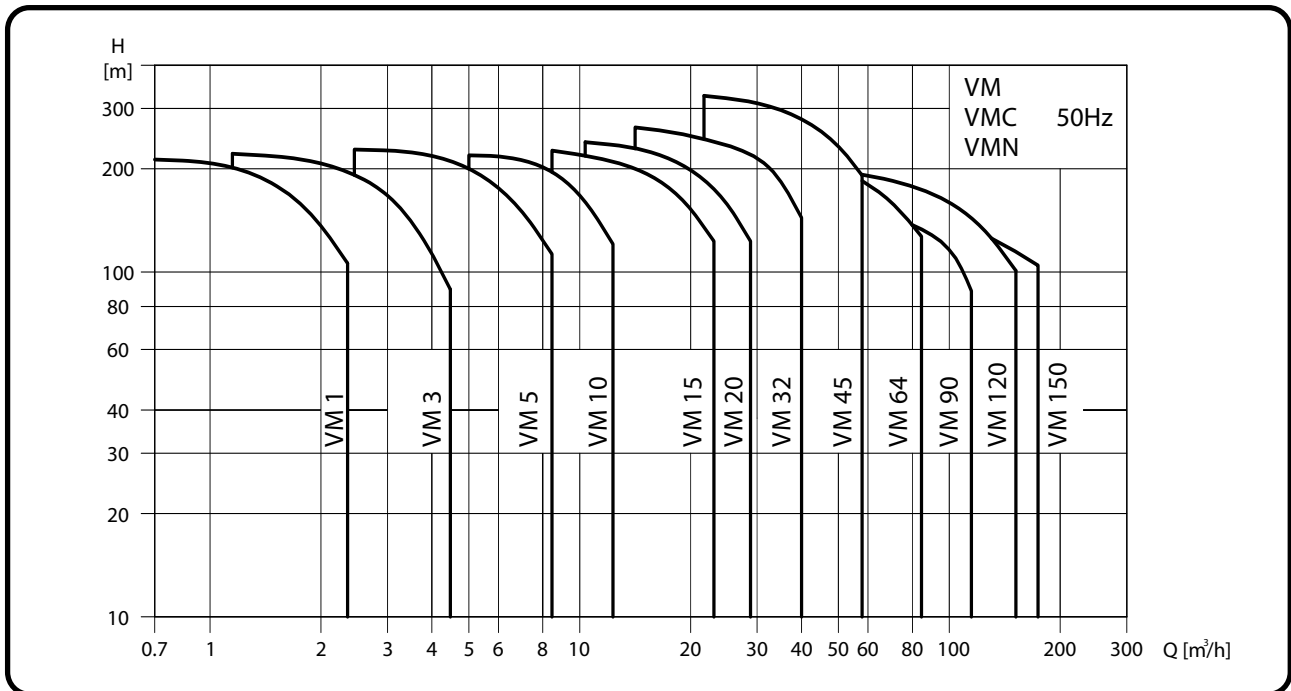
**Deutsch** - SPCO Hochdruckpumpen der Baureihe VM, VMN, VMC mit Förderhöhen bis zu 280 Metern und Fördermengen bis zu 180 m<sup>3</sup>/h. Sämtliche wesentlichen Teile, wie zum Beispiel die Welle, Laufräder und Zwischenkammern sind komplett aus Edelstahl AISI 304 (W-Nr. 1.43.01) gefertigt. Die Pumpen 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 m<sup>3</sup>/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 m<sup>3</sup>/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 controfacce 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 <sup>3</sup> /h]	1	3	5	10	15	20	32	45	64	90	120	150
Flow range[m <sup>3</sup> /h]	0.7~2.4	1.2~4.5	2.5~8.5	5~13	8.5~23.5	10.5~29	15~40	22~58	30~85	45~120	60~160	75~820
Max. pressure [bar]	21.5	23	24	21.5	23	24.3	27.5	33	21.8	20	20.4	18.7
Motor power [kW]	0.37~2.2	0.37~3.0	0.37~5.5	0.37~7.5	1.1~15	1.1~18.5	1.5~30	3.0~45	4.0~45	5.5~45	11~75	11~75
Fluid temperature [°C]	-15 to +120											
<b>Type</b>												
VM	•	•	•	•	•	•	•	•	•	•	•	•
VMC / VMN	•	•	•	•	•	•	•	•	•	•	•	•
<b>VM Pipe Connection</b>												
Flange	DN25 DN32	DN25 DN32	DN25 DN32	DN40	DN50	DN50	DN65	DN80	DN100	DN100	DN125	DN125
<b>VMC / VMN Pipe Connection</b>												
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.

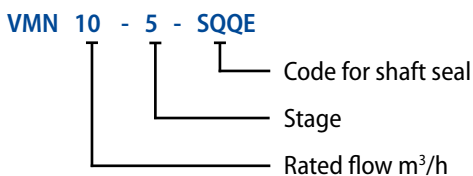
## Application

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. + 52 °C
- Standard voltage: 3x220-240 / 380-415V  
3x380-415V

Motor Type					Nominal current [A]			
HP	KW	Pole	Flange	Frame	3 x 220 V	3 x 240 V	3 x 380 V	3 x 415 V
0.5	0.37	2	B14	71	1.7	2	1.1	1.3
0.75	0.55			71	2.5	2.8	1.5	1.7
1.0	0.75			80	3.5	3.9	2.1	2.3
1.5	1.1			90S	4.4	4.7	2.7	2.9
2.0	1.5			90S	5.9	5.7	3.4	3.3
3.0	2.2			90L	8.5	8	4.9	4.6
4.0	3.0			100L	11.4	11.4	6.6	6.6
5.5	4.0			112M	15.4	16.3	8.9	9.4
7.5	5.5			B5	132S	20.8	20.8	12
10	7.5		132M		27.4	26.7	15.8	15.4
15	11		160M				21.2	20
20	15		160M				27.7	25.5
25	18.5		160L				35.2	32.4
30	22		180M				41.3	38.2
40	30		180L				54.2	50.4
50	37		200L				70.8	65.6
60	45		200L				83.1	79.2

## Mechanical Seals

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

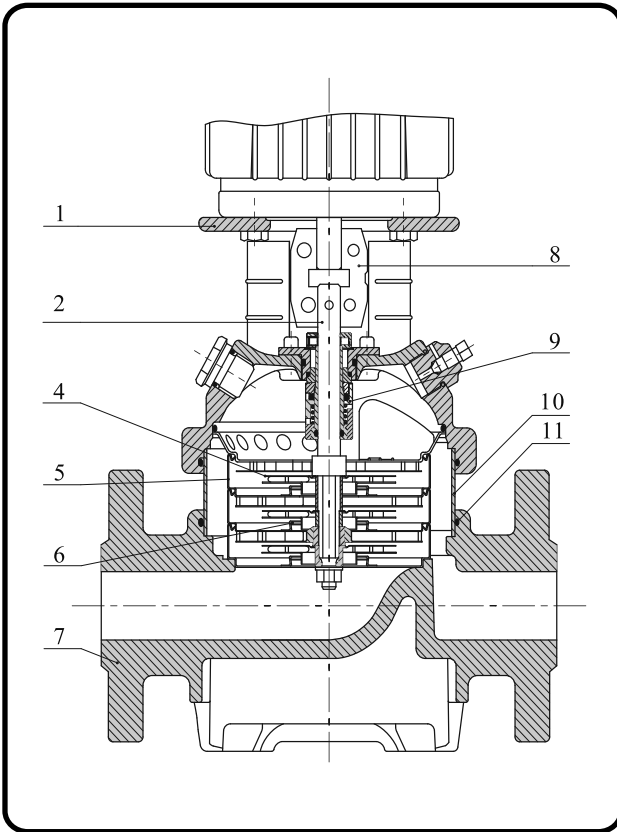
Based on the type of application, alternative materials are available for the seal and the elastomers.

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

Seal Type	VM	VMC	VMN
<b>Mechanical Seals</b>			
Cartridge seal	•	•	•
QQ	•	•	•
UU	Optional	Optional	Optional
QB	Optional	Optional	Optional
UB	Optional	Optional	Optional
<b>Seals</b>			
EPDM	•	•	•
Viton	•	•	•

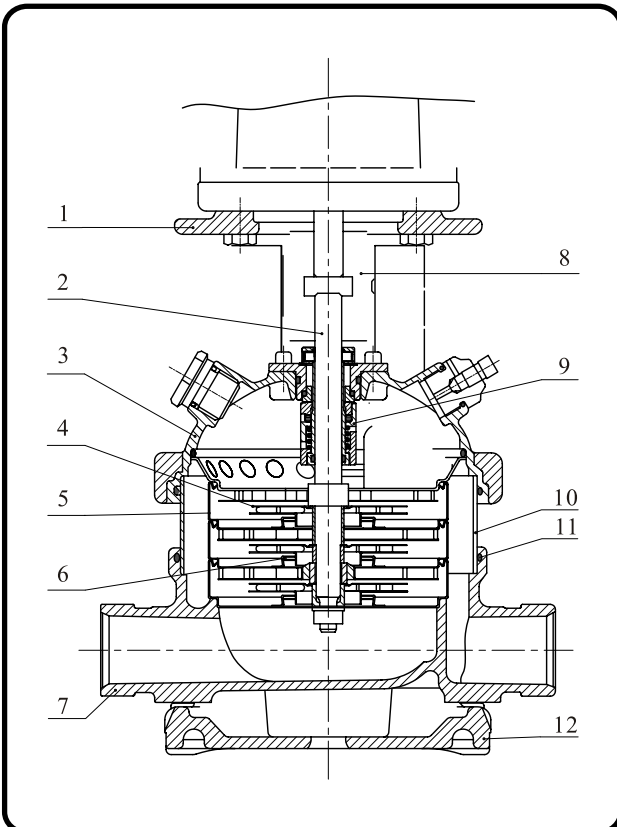
- Q: Silicon carbide
- U: Tungsten carbide
- B: Carbon

## Section drawing VM 1,3,5,10,15,20 and material list



No.	Name	Material	AISI / ASTM
1	Pump head	cast iron	ASTM25B
2	Shaft	stainless steel	AISI 431 AISI 316L
4	Impeller	stainless steel	AISI 304 AISI 316L
5	Chamber	stainless steel	AISI 304 AISI 316L
6	Neck ring	PTFE	
7	Base	cast iron	ASTM25B
8	Coupling	Fe-Cu-C	
9	Mechanical seal	cartridge type	
10	Outer sleeve	stainless steel	AISI 304 AISI 316L
11	O-ring for outer sleeve	EPDM	

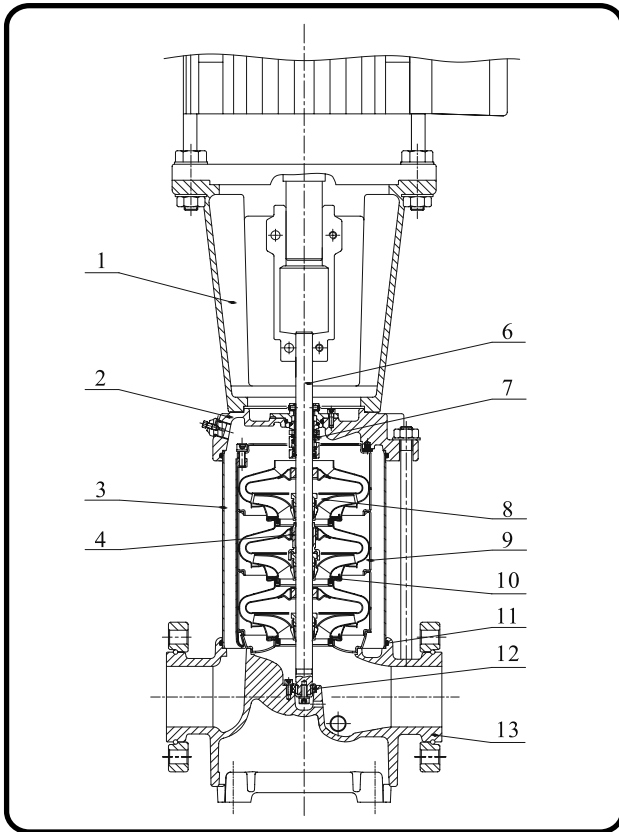
## Section drawing VMC, VMN 1,3,5,10,15,20 and material list



No.	Name	Material	AISI / ASTM
1	Pump head	cast iron	ASTM25B
2	Shaft	stainless steel	AISI 431 AISI 316L
4	Impeller	stainless steel	AISI 304 AISI 316L
5	Chamber	stainless steel	AISI 304 AISI 316L
6	Neck ring	PTFE	
8	Coupling	Fe-Cu-C	
9	Mechanical seal	cartridge type	
10	Outer sleeve	stainless steel	AISI 304 AISI 316L
11	O-ring for outer sleeve	EPDM	
<b>VMC</b>			
3	Pump head cover	stainless steel	AISI 304
7	Base	stainless steel	AISI 304
12	Base plate	cast iron	ASTM25B
<b>VMN</b>			
3	Pump head cover	stainless steel	AISI 316
7	Base	stainless steel	AISI 316
12	Base plate	cast iron	ASTM25B

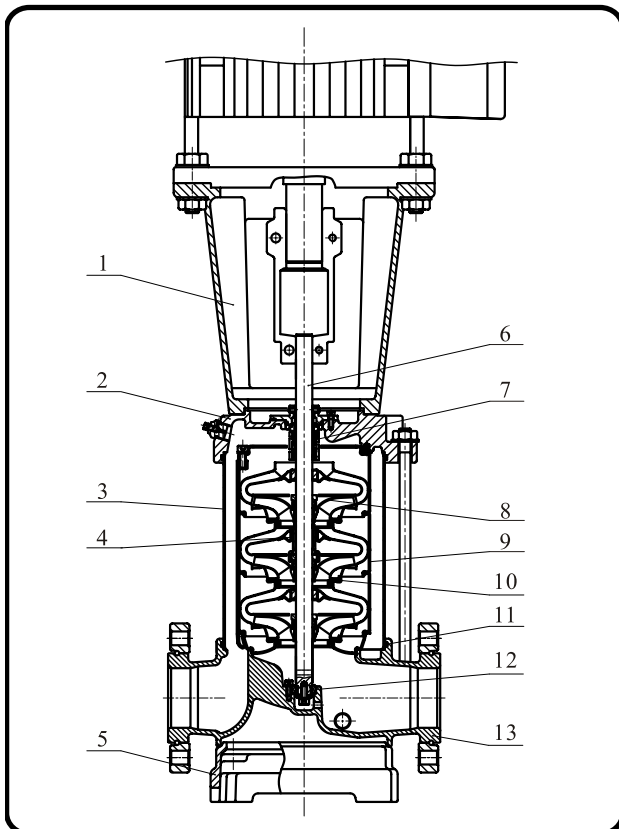


## Section drawing VM 32,45,64,90 and material list



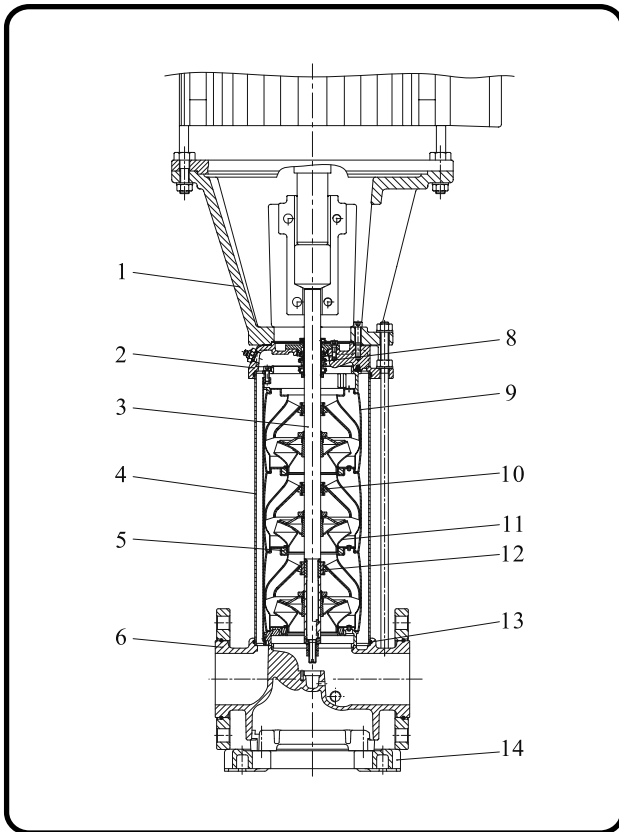
No.	Name	Material	AISI / ASTM
1	Motor bracket	cast iron	ASTM25B
2	Pump head	cast iron	ASTM35B
3	Outer sleeve	stainless steel	AISI 304 AISI 316L
4	Bearing ring	bronze	
6	Shaft	stainless steel	AISI 431 AISI 316L
7	Mechanical seal	cartridge type	
8	Impeller	stainless steel	AISI 304 AISI 316L
9	Chamber	stainless steel	AISI 304 AISI 316L
10	Neck ring	carbon fiber	
11	O-ring for outer sleeve	EPDM	
12	Bottom bearing ring	tungsten carbide	
13	Base	cast iron	ASTM35B

## Section drawing VMC, VMN 32,45,64,90 and material list



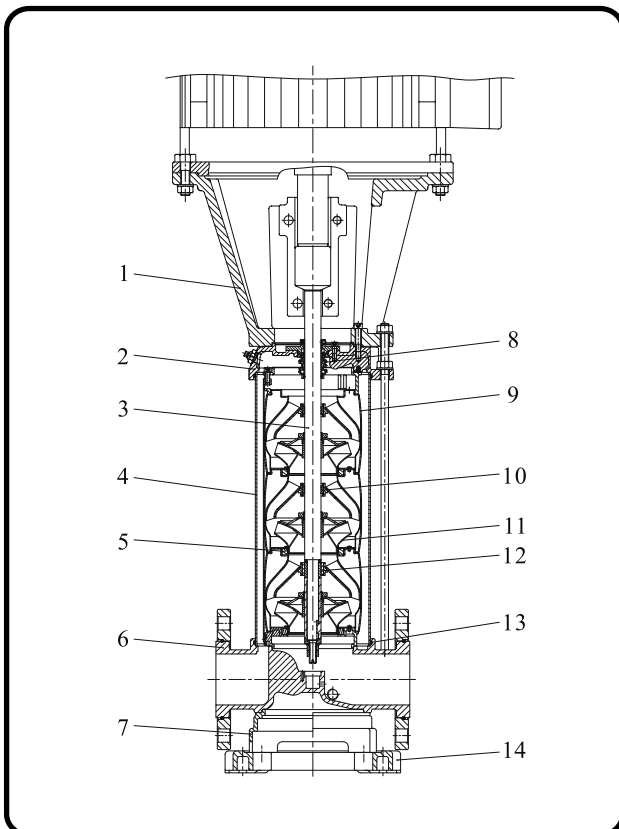
No.	Name	Material	AISI / ASTM
1	Motor bracket	cast iron	ASTM25B
3	Outer sleeve	stainless steel	AISI 304 AISI 316L
6	Shaft	stainless steel	AISI 431 AISI 316L
7	Mechanical seal	cartridge type	
8	Impeller	stainless steel	AISI 304 AISI 316L
9	Chamber	stainless steel	AISI 304 AISI 316L
10	Neck ring	carbon fiber	
11	O-ring for outer sleeve	EPDM	
12	Bottom bearing ring	tungsten carbide	
<b>VMC</b>			
2	Pump head	stainless steel	AISI 304
4	Bearing ring	bronze	
5	Base plate	cast iron	ASTM35B
13	Base	stainless steel	AISI 304
<b>VMN</b>			
2	Pump head	stainless steel	AISI 316
4	Bearing ring	POB+graphite+PTFE	
5	Base plate	cast iron	ASTM35B
13	Base	stainless steel	AISI 316

## Section drawing VM 120, 150 and material list



No.	Name	Material	AISI / ASTM
1	Motor bracket	cast iron	ASTM35B
2	Pump head	cast iron	ASTM35B
3	Shaft	stainless steel	AISI 431 AISI 316L
4	Outer sleeve	stainless steel	AISI 431 AISI 316L
5	Neck ring	PTFE	
6	Base	cast iron	ASTM35B
8	Mechanical seal	cartridge type	
9	Chamber	stainless steel	AISI 304 AISI 316L
10	Bearing ring	PTFE	
11	Impeller	stainless steel	AISI 304 AISI 316L
12	Bottom bearing ring	SIC / SIC	
13	O-ring for outer sleeve	EPDM	
14	Base plate	cast iron	ASTM65-45-12

## Section drawing VMC, VMN 120, 150 and material list



No.	Name	Material	AISI / ASTM
1	Motor bracket	cast iron	ASTM35B
3	Shaft	stainless steel	AISI 431 AISI 316L
4	Outer sleeve	stainless steel	AISI 431 AISI 316L
5	Neck ring	PTFE	
8	Mechanical seal	cartridge type	
9	Chamber	stainless steel	AISI 304 AISI 316L
10	Bearing ring	PTFE	
11	Impeller	stainless steel	AISI 304 AISI 316L
12	Bottom bearing ring	SIC / SIC	
13	O-ring for outer sleeve	EPDM	
14	Base plate	cast iron	ASTM65-45-12
<b>VMC</b>			
2	Pump head	stainless steel	AISI 304
6	Base	stainless steel	AISI 304
7	Base plate	cast iron	ASTM65-45-12
<b>VMN</b>			
2	Pump head	stainless steel	AISI 316
6	Base	stainless steel	AISI 316
7	Base plate	cast iron	ASTM65-45-12

## Max. inlet pressure

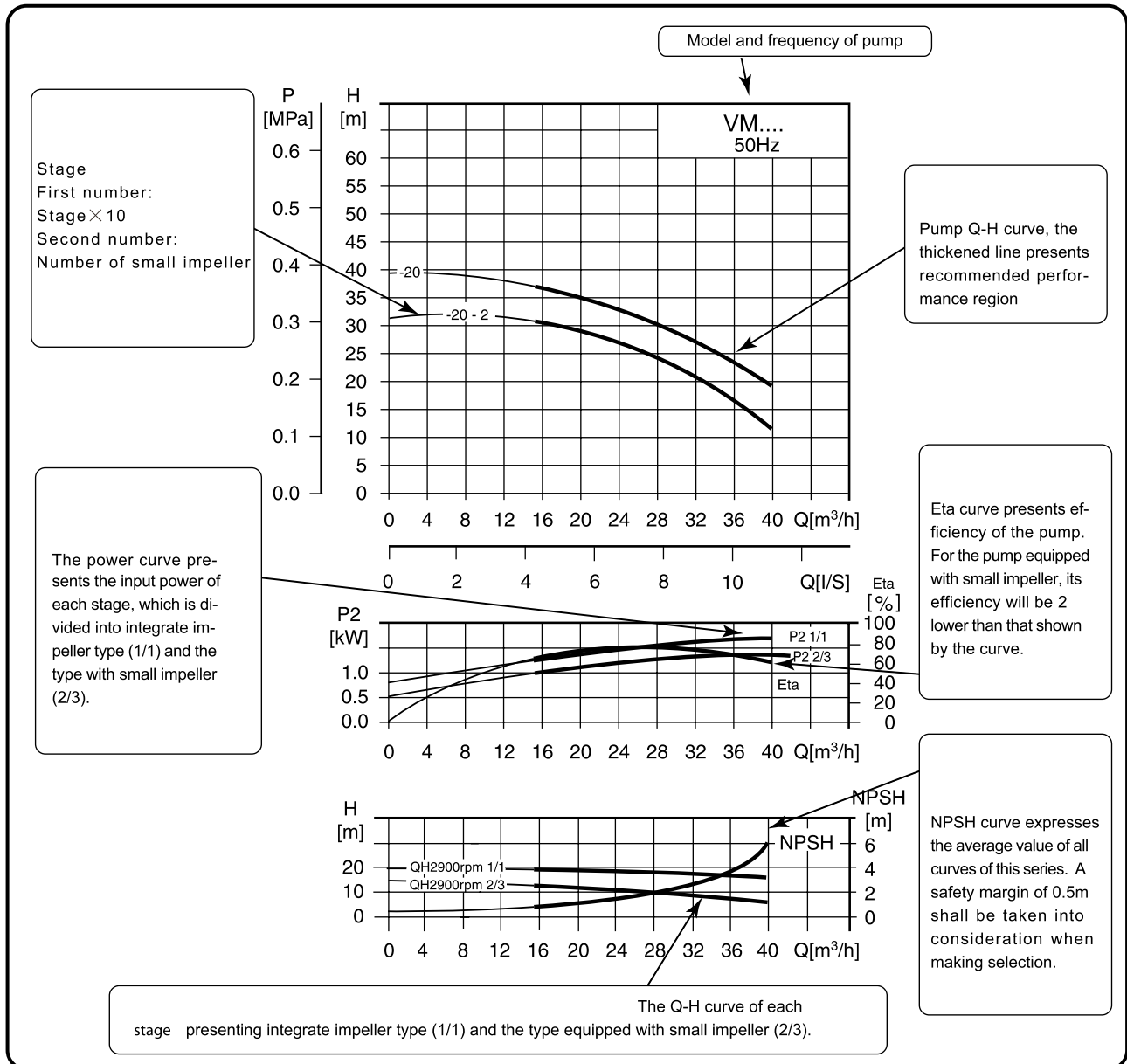
Model	Max. inlet pressure
VM, VMC, VMN 1	
VM, VMC, VMN 1-2 ~ 1-36	10 bar
VM, VMC, VMN 3	
VM, VMC, VMN 3-2 ~ 3-29	10 bar
VM, VMC, VMN 3-31 ~ 3-36	15 bar
VM, VMC, VMN 5	
VM, VMC, VMN 5-2 ~ 5-16	10 bar
VM, VMC, VMN 5-18 ~ 5-36	15 bar
VM, VMC, VMN 10	
VM, VMC, VMN 10-1 ~ 10-6	8 bar
VM, VMC, VMN 10-7 ~ 10-22	10 bar
VM, VMC, VMN 15	
VM, VMC, VMN 15-1 ~ 15-3	8 bar
VM, VMC, VMN 15-4 ~ 15-17	10 bar
VM, VMC, VMN 20	
VM, VMC, VMN 20-1 ~ 20-3	8 bar
VM, VMC, VMN 20-4 ~ 20-17	10 bar
VM, VMC, VMN 32	
VM, VMC, VMN 32-1-1 ~ 32-4	4 bar
VM, VMC, VMN 32-5-2 ~ 32-10	10 bar
VM, VMC, VMN 32-11-2 ~ 32-14	15 bar
VM, VMC, VMN 45	
VM, VMC, VMN 45-1-1 ~ 45-2	4 bar
VM, VMC, VMN 45-3-2 ~ 45-5	10 bar
VM, VMC, VMN 45-6-2 ~ 45-13-2	15 bar
VM, VMC, VMN 64	
VM, VMC, VMN 64-1-1 ~ 64-2-2	4 bar
VM, VMC, VMN 64-2-1 ~ 64-4-2	10 bar
VM, VMC, VMN 64-4-1 ~ 64-8-1	15 bar
VM, VMC, VMN 90	
VM, VMC, VMN 90-1-1 ~ 90-1	4 bar
VM, VMC, VMN 90-2-1 ~ 90-3-2	10 bar
VM, VMC, VMN 90-3 ~ 90-6	15 bar
VM, VMC, VMN 120	
VM, VMC, VMN 120-1 ~ 120-2-1	10 bar
VM, VMC, VMN 120-2 ~ 120-5-1	15 bar
VM, VMC, VMN 120-6-1 ~ 120-7	20 bar
VM, VMC, VMN 150	
VM, VMC, VMN 150-1-1 ~ 150-1	10 bar
VM, VMC, VMN 150-2-1 ~ 150-4-2	15 bar
VM, VMC, VMN 150-5-2 ~ 150-6	20 bar

## Max. working pressure

Model	Max. operating pressure
VM, VMC, VMN 1	
VM, VMC, VMN 1-2 ~ 1-36	25 bar
VM, VMC, VMN 3	
VM, VMC, VMN 3-2 ~ 3-36	25 bar
VM, VMC, VMN 5	
VM, VMC, VMN 5-2 ~ 5-36	25 bar
VM, VMC, VMN 10	
VM, VMC, VMN 10-1 - 10-16	16 bar
VM, VMC, VMN 10-17 ~ 10-22	25 bar
VM, VMC, VMN 15	
VM, VMC, VMN 15-1 ~ 15-10	16 bar
VM, VMC, VMN 15-12 ~ 15-17	25 bar
VM, VMC, VMN 20	
VM, VMC, VMN 20-1 ~ 20-10	16 bar
VM, VMC, VMN 20-12 ~ 20-17	25 bar
VM, VMC, VMN 32	
VM, VMC, VMN 32-1-1 ~ 32-7	16 bar
VM, VMC, VMN 32-8-2 ~ 32-14	30 bar
VM, VMC, VMN 45	
VM, VMC, VMN 45-1-1 ~ 45-5	16 bar
VM, VMC, VMN 45-6-2 ~ 45-11	30 bar
VM, VMC, VMN 45-12-2 ~ 45-13-2	33 bar
VM, VMC, VMN 64	
VM, VMC, VMN 64-1-1 ~ 64-5	16 bar
VM, VMC, VMN 64-6-2 ~ 64-8-1	30 bar
VM, VMC, VMN 90	
VM, VMC, VMN 90-1-1 ~ 90-4	16 bar
VM, VMC, VMN 90-5-2 ~ 90-6	30 bar
VM, VMC, VMN 120	
VM, VMC, VMN 120-1 ~ 120-7	30 bar
VM, VMC, VMN 150	
VM, VMC, VMN 150-1-1 ~ 150-6	30 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 1mm<sup>2</sup> /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

In case that the pressure in pump is lower than the steam pressure used to convey liquid, the cavitations will occur. To avoid cavitations, a minimum pressure at the inlet side of the pump shall be guaranteed. The maximum suction stroke can be calculated with following formula:

$$H = P_b \times 10.2 - \text{NPSH} - H_f - H_v - H_s$$

$P_b$  = atmosphere pressure [bar] (can be set as 1bar)

In a closed system,  $P_b$  means system pressure [bar]

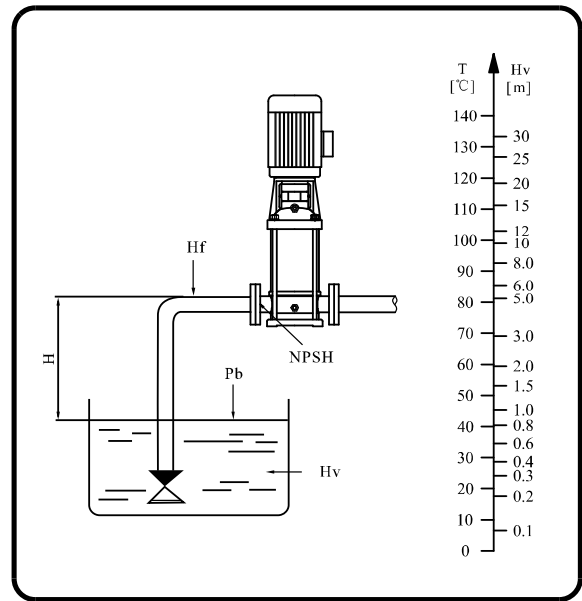
NPSH= Net positive suction head [m], It can be read out from the point of possible max. flow rate shown on NPSH curve

$H_f$  = Pipeline loss at the inlet [m]

$H_v$  = Steam pressure [m]

$H_s$  = Safety margin Minimum 0.5m delivery head

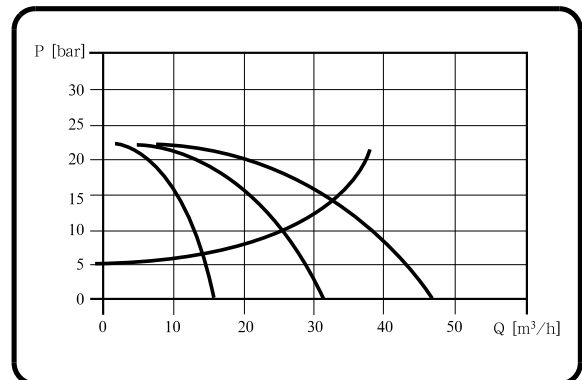
If the calculated result  $H$  is positive, the pump may run under the max. suction stroke  $H$ . In case the calculated result  $H$  is negative, a delivery head of min. inlet pressure is necessary.



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

## Operation in parallel

- Connecting several pumps in a parallel running mode will benefit the reliability of the system compared to a single pump system.
- Applicable to different working states required by a variable flow system.
- Increasing the availability of water supply if a pump fails: only a part of the system flow is effected.



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

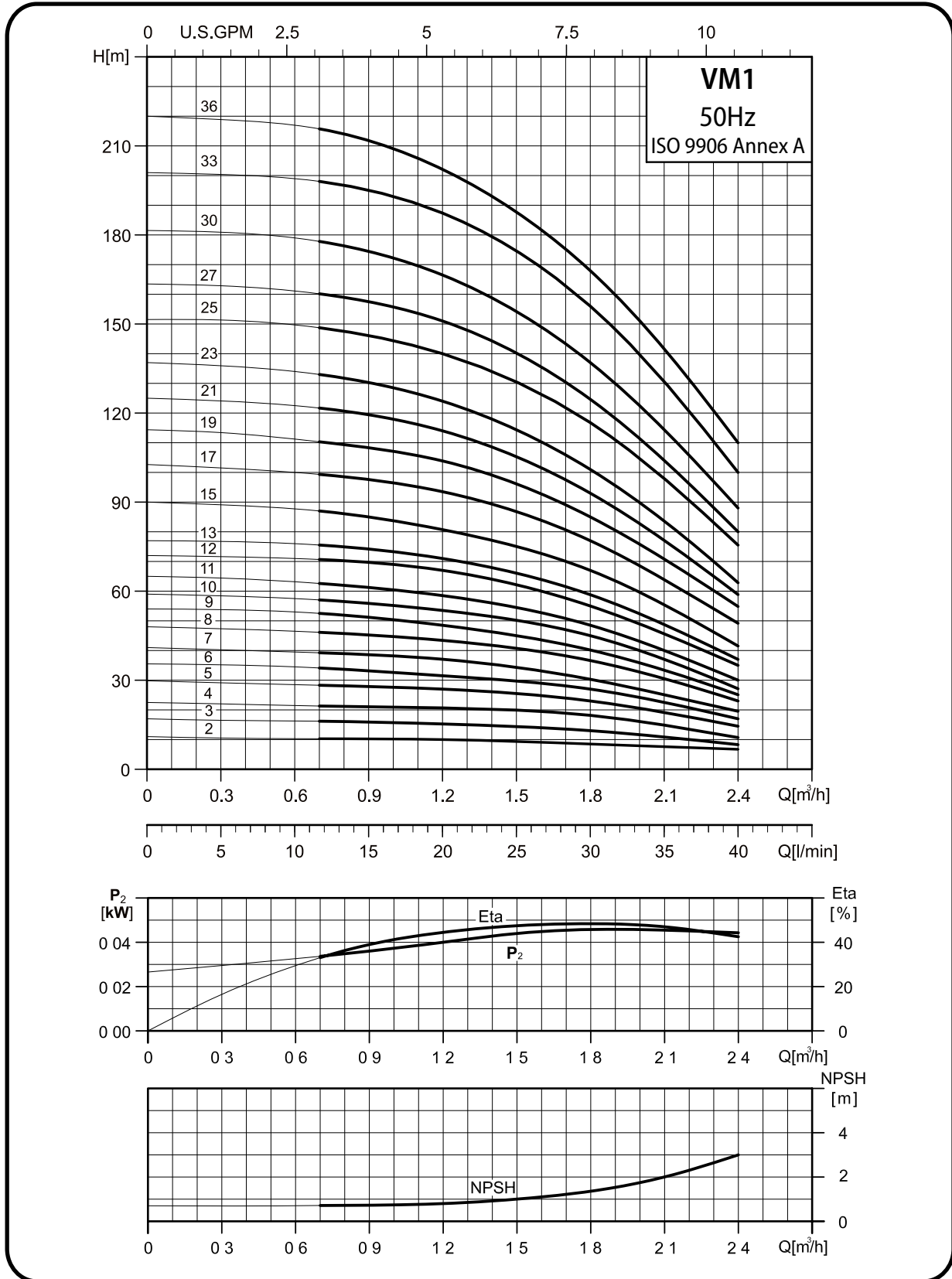
Pumped fluid	Fluid Concentration, temperature	VM / VMC		VMN	
		EPDM	Viton	EPDM	Viton
Acetic acid anhydride	25°C			•	
Alkaline cleaner		•			
Aluminium sulphate	10%, 25°C				•
Ammonia water (A. hydroxide)	20%, 40°C	•			
Ammonia hydrogen carbonate	10%, 40°C	•		•	
Benzoic acid	10%, 90°C				•
Boric acid	Unsaturated 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				•
<b>Water</b>					
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

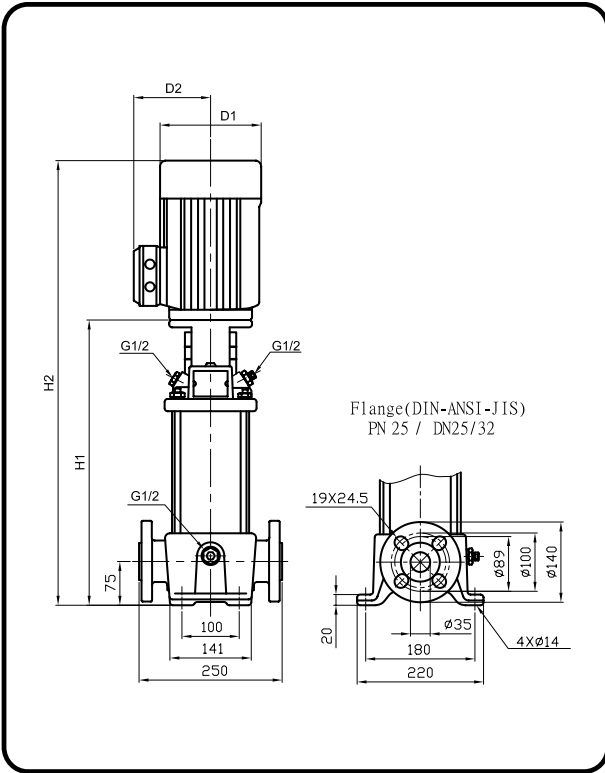
## Performance Curves

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





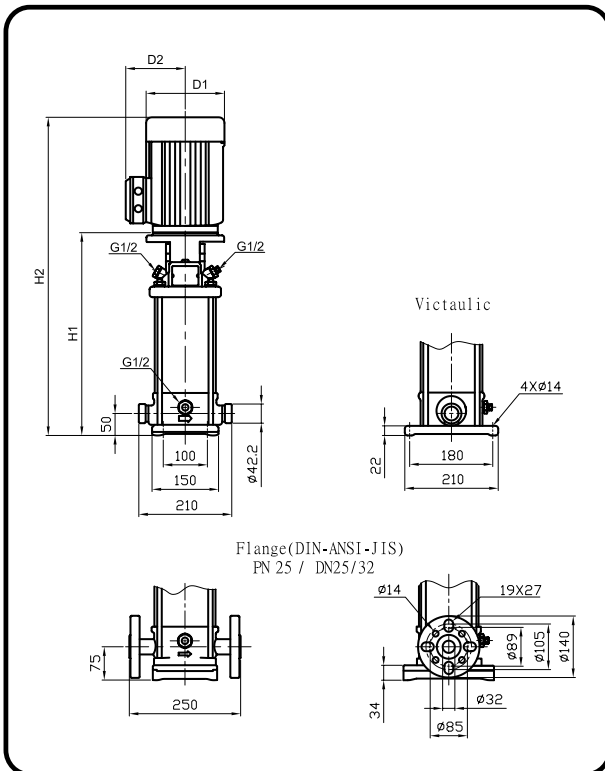
## Dimensional sketch - VM1



## Dimensions and Weight - VM1

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]				Net weight [kg]
		H1	H2	D1	D2	
VM 1-2	0.37	279	470	141	109	23.0
VM 1-3	0.37	279	470	141	109	23.0
VM 1-4	0.37	297	488	141	109	23.0
VM 1-5	0.37	315	506	141	109	24.0
VM 1-6	0.37	333	524	141	109	24.0
VM 1-7	0.37	351	542	141	109	25.0
VM 1-8	0.55	369	560	141	109	26.0
VM 1-9	0.55	387	578	141	109	26.0
VM 1-10	0.55	405	596	141	109	26.0
VM 1-11	0.55	423	614	141	109	27.0
VM 1-12	0.75	447	678	141	109	29.0
VM 1-13	0.75	465	696	141	109	29.0
VM 1-15	0.75	501	732	141	109	30.0
VM 1-17	1.1	537	768	141	109	33.0
VM 1-19	1.1	573	804	141	109	34.0
VM 1-21	1.1	609	840	141	109	35.0
VM 1-23	1.1	645	876	141	109	36.0
VM 1-25	1.5	697	972	175	140	42.9
VM 1-27	1.5	733	1008	175	140	43.7
VM 1-30	1.5	787	1062	175	140	44.8
VM 1-33	2.2	841	1116	175	140	47.9
VM 1-36	2.2	895	1170	175	140	49.1

## Dimensional sketch VMC1 / VMN1



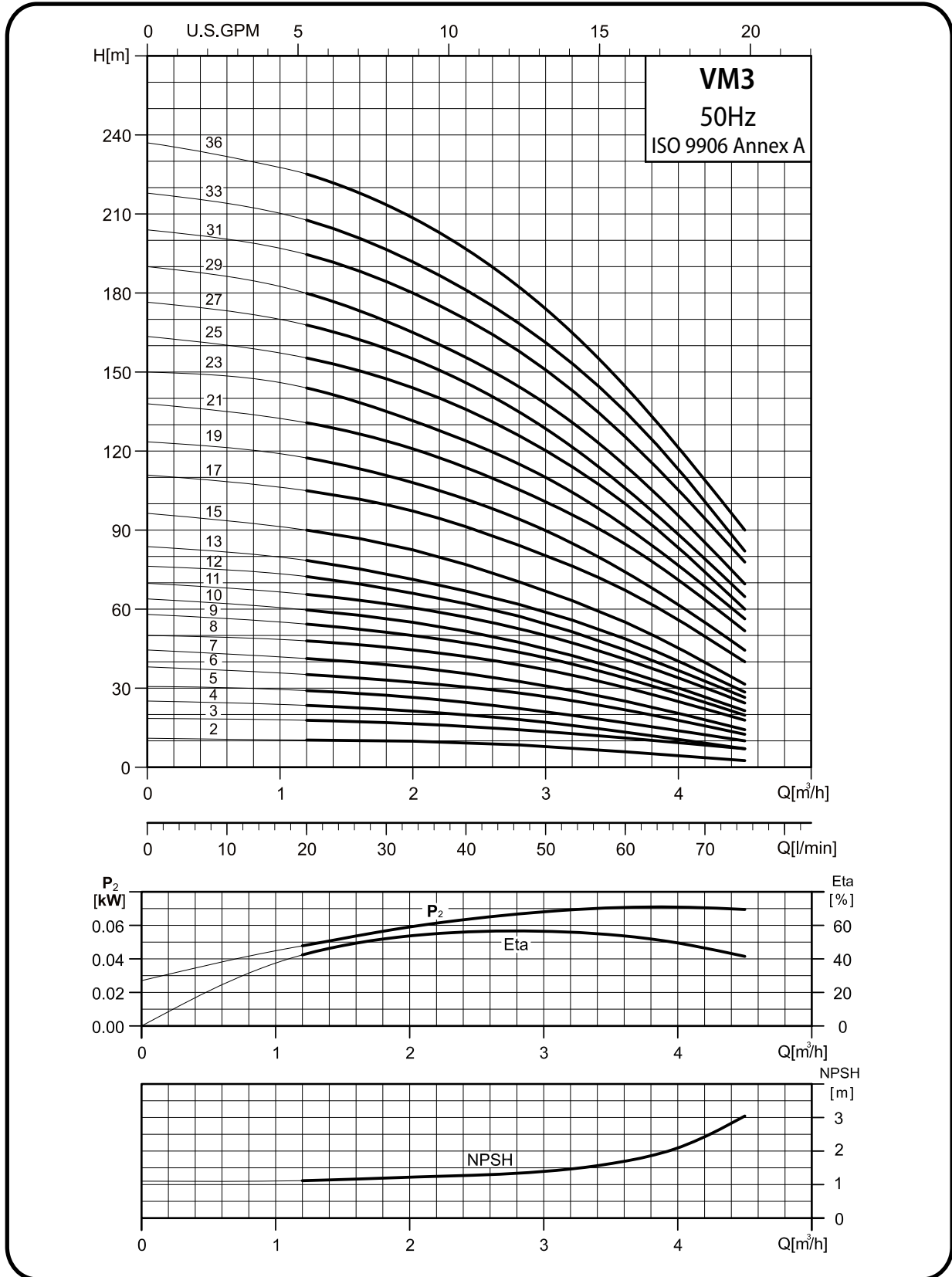
## Dimensions and Weight VMC1 / VMN1

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]						Net weight [kg]	
		Victaulic		DIN flange		D1	D2	Victaulic	DIN flange
		H1	H2	H1	H2				
VMC / VMN 1-2	0.37	257	448	282	473	141	109	16	20
VMC / VMN 1-3	0.37	257	448	282	473	141	109	16	21
VMC / VMN 1-4	0.37	275	466	300	491	141	109	17	21
VMC / VMN 1-5	0.37	293	484	318	509	141	109	17	21
VMC / VMN 1-6	0.37	311	502	336	527	141	109	18	22
VMC / VMN 1-7	0.37	329	520	354	545	141	109	18	22
VMC / VMN 1-8	0.55	347	538	372	563	141	109	19	23
VMC / VMN 1-9	0.55	365	556	390	581	141	109	20	24
VMC / VMN 1-10	0.55	383	574	408	599	141	109	20	24
VMC / VMN 1-11	0.55	401	592	426	617	141	109	20	24
VMC / VMN 1-12	0.75	425	656	450	681	141	109	23	27
VMC / VMN 1-13	0.75	443	674	468	699	141	109	23	28
VMC / VMN 1-15	0.75	479	710	504	735	141	109	24	28
VMC / VMN 1-17	1.1	515	746	540	771	141	109	27	31
VMC / VMN 1-19	1.1	551	782	576	807	141	109	28	32
VMC / VMN 1-21	1.1	587	818	612	843	141	109	29	33
VMC / VMN 1-23	1.1	623	854	648	879	141	109	30	34
VMC / VMN 1-25	1.5	675	950	700	975	175	140	37.5	41.0
VMC / VMN 1-27	1.5	711	986	736	1011	175	140	38.2	41.8
VMC / VMN 1-30	1.5	765	1040	790	1065	175	140	39.4	42.9
VMC / VMN 1-33	2.2	819	1094	844	1119	175	140	42.5	46.0
VMC / VMN 1-36	2.2	873	1148	898	1173	175	140	43.6	47.2

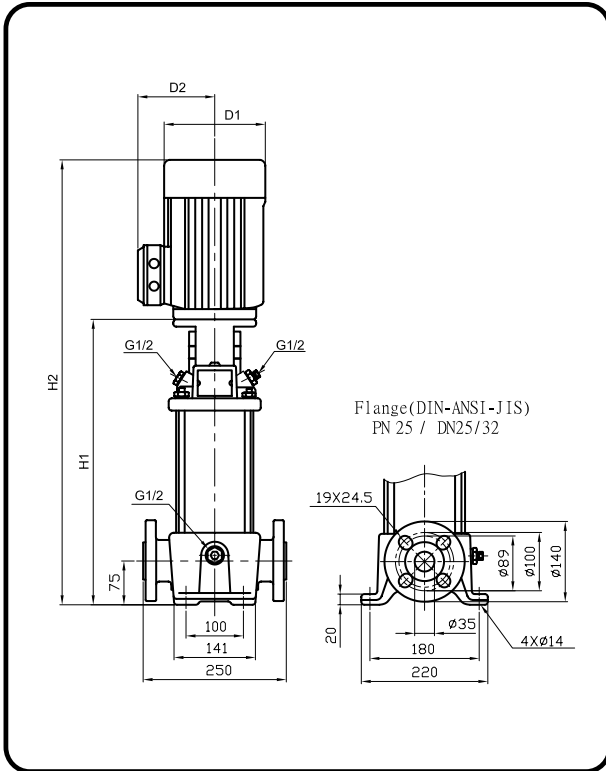
# VM3 / VMC3 / VMN3

## Performance Curves

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



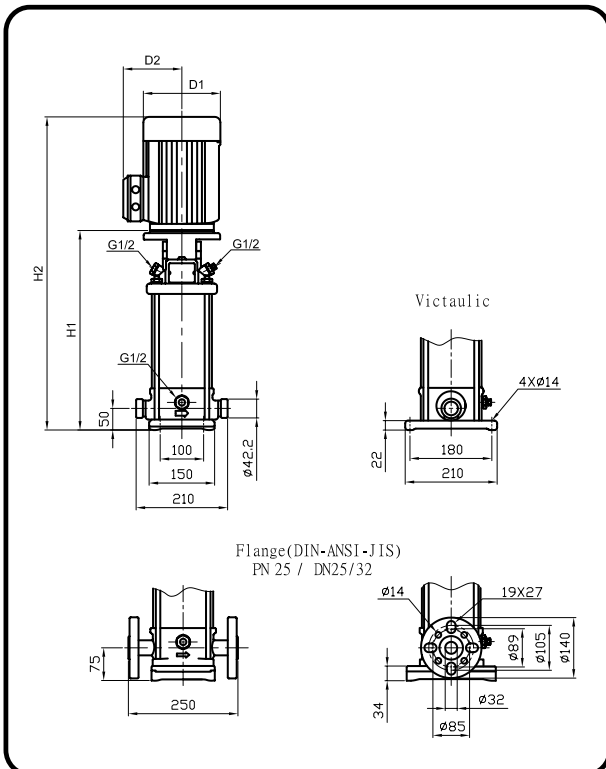
## Dimensional sketch - VM3



## Dimensions and Weight - VM3

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]				Net weight [kg]
		H1	H2	D1	D2	
VM 3-2	0.37	279	470	141	109	23
VM 3-3	0.37	279	470	141	109	23
VM 3-4	0.37	297	488	141	109	23
VM 3-5	0.37	315	506	141	109	24
VM 3-6	0.55	333	524	141	109	25
VM 3-7	0.55	351	542	141	109	25
VM 3-8	0.75	375	606	141	109	27
VM 3-9	0.75	393	624	141	109	28
VM 3-10	0.75	411	642	141	109	28
VM 3-11	1.1	429	660	141	109	31
VM 3-12	1.1	447	678	141	109	31
VM 3-13	1.1	465	696	141	109	31
VM 3-15	1.1	501	732	141	109	32
VM 3-17	1.5	553	828	175	140	39.9
VM 3-19	1.5	589	864	175	140	40.7
VM 3-21	2.2	625	900	175	140	43.4
VM 3-23	2.2	661	936	175	140	44.2
VM 3-25	2.2	697	972	175	140	44.9
VM 3-27	2.2	733	1008	175	140	45.7
VM 3-29	2.2	769	1044	175	140	46.4
VM 3-31	3	809	1129	196	148	53.9
VM 3-33	3	845	1165	196	148	54.7
VM 3-36	3	899	1219	196	148	55.8

## Dimensional sketch VMC3 / VMN3



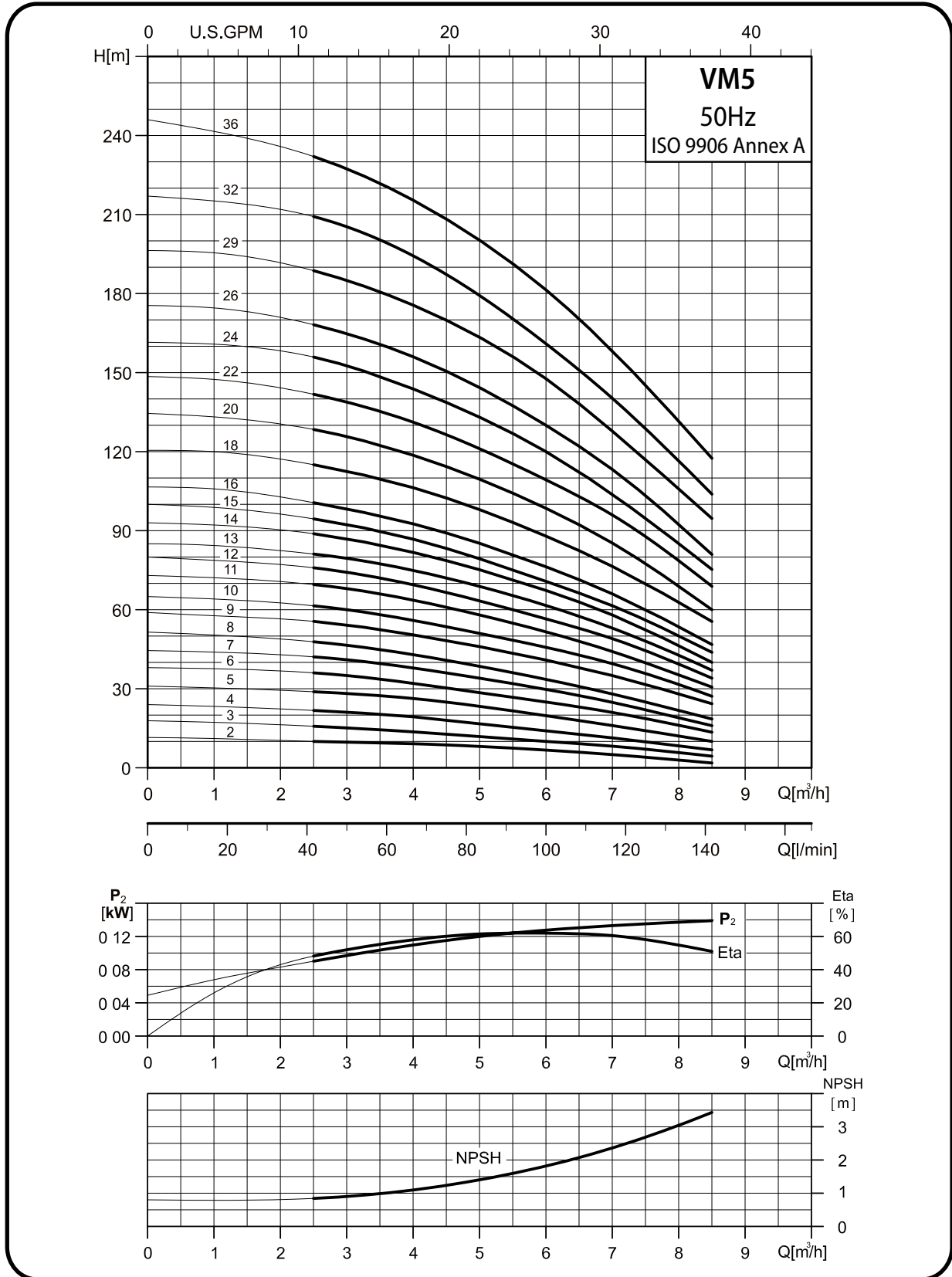
## Dimensions and Weight VMC3 / VMN3

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]						Net weight [kg]	
		Victaulic		DIN flange		D1	D2	Victaulic	DIN flange
		H1	H2	H1	H2				
VMC / VMN 3-2	0.37	257	448	282	473	141	109	16	19
VMC / VMN 3-3	0.37	257	448	282	473	141	109	16	19
VMC / VMN 3-4	0.37	275	466	300	491	141	109	17	19
VMC / VMN 3-5	0.37	293	484	318	509	141	109	17	20
VMC / VMN 3-6	0.55	311	502	336	527	141	109	18	21
VMC / VMN 3-7	0.55	329	520	354	545	141	109	19	21
VMC / VMN 3-8	0.75	353	584	378	609	141	109	21	24
VMC / VMN 3-9	0.75	371	602	396	627	141	109	22	24
VMC / VMN 3-10	0.75	389	620	414	645	141	109	22	25
VMC / VMN 3-11	1.1	407	638	432	663	141	109	25	27
VMC / VMN 3-12	1.1	425	656	450	681	141	109	25	28
VMC / VMN 3-13	1.1	443	674	468	699	141	109	26	28
VMC / VMN 3-15	1.1	479	710	504	735	141	109	26	29
VMC / VMN 3-17	1.5	531	806	556	831	175	140	34.5	38.1
VMC / VMN 3-19	1.5	567	842	592	867	175	140	35.3	38.8
VMC / VMN 3-21	2.2	603	878	628	903	175	140	38	41.6
VMC / VMN 3-23	2.2	639	914	664	939	175	140	38.8	42.3
VMC / VMN 3-25	2.2	675	950	700	975	175	140	39.5	43.1
VMC / VMN 3-27	2.2	711	986	736	1011	175	140	40.3	43.8
VMC / VMN 3-29	2.2	747	1022	772	1047	175	140	41	44.6
VMC / VMN 3-31	3	787	1107	812	1132	196	148	48.2	51.8
VMC / VMN 3-33	3	823	1143	848	1168	196	148	49.1	52.5
VMC / VMN 3-36	3	877	1197	902	1222	196	148	50.1	53.7

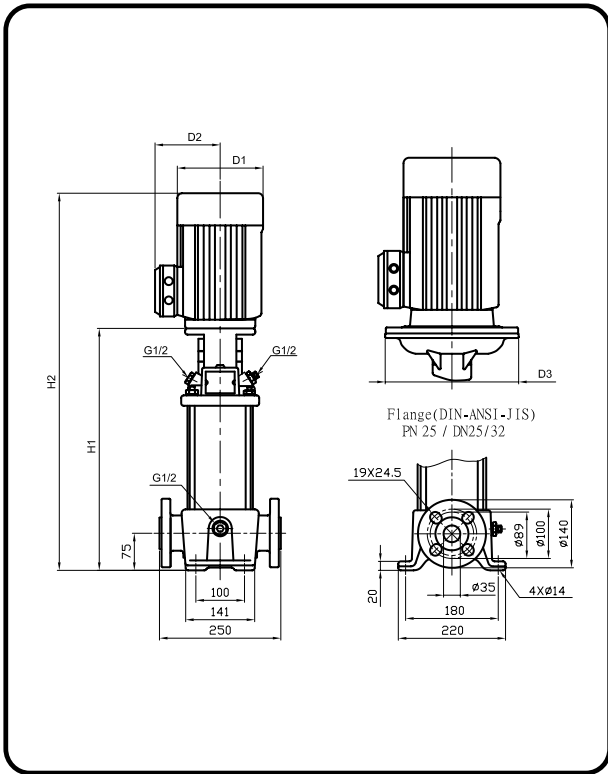
# VM5 / VMC5 / VMN5

## Performance Curves

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



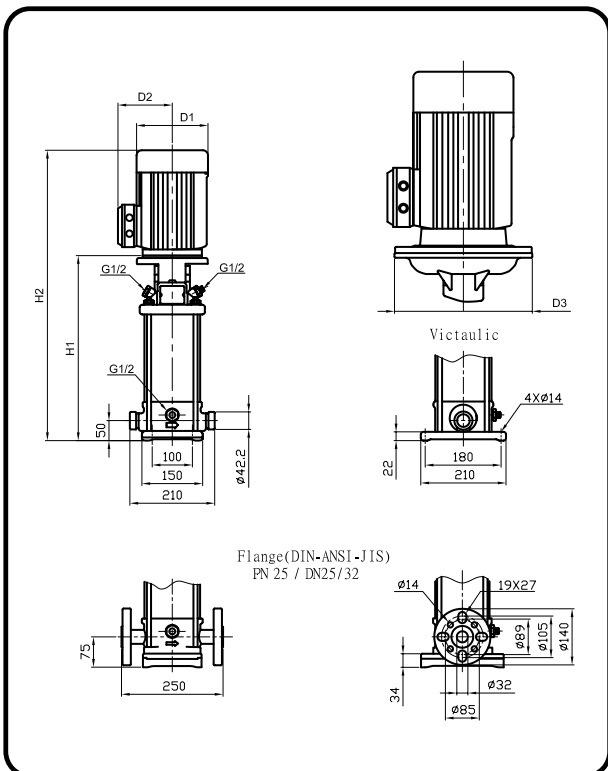
## Dimensional sketch - VM5



## Dimensions and Weight - VM5

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]					Net weight [kg]
		H1	H2	D1	D2	D3	
VM 5-2	0.37	279	470	141	109	--	23
VM 5-3	0.55	306	497	141	109	--	24
VM 5-4	0.55	333	524	141	109	--	25
VM 5-5	0.75	366	597	141	109	--	27
VM 5-6	1.1	393	624	141	109	--	30
VM 5-7	1.1	420	651	141	109	--	30
VM 5-8	1.1	447	678	141	109	--	31
VM 5-9	1.5	490	765	175	140	--	38.32
VM 5-10	1.5	517	792	175	140	--	38.9
VM 5-11	2.2	544	819	175	140	--	41.46
VM 5-12	2.2	571	846	175	140	--	42.04
VM 5-13	2.2	598	873	175	140	--	42.61
VM 5-14	2.2	625	900	175	140	--	43.18
VM 5-15	2.2	652	927	175	140	--	43.75
VM 5-16	2.2	679	954	175	140	--	44.33
VM 5-18	3	737	1057	196	148	--	52.2
VM 5-20	3	791	1111	196	148	--	53.4
VM 5-22	4	845	1180	219	162	--	61.5
VM 5-24	4	899	1234	219	162	--	62.6
VM 5-26	4	953	1288	219	162	--	63.8
VM 5-29	4	1034	1369	219	162	--	65.5
VM 5-32	5.5	1145	1505	234	199	300	85.9
VM 5-36	5.5	1253	1613	234	199	300	88.2

## Dimensional sketch VMC5 / VMN5



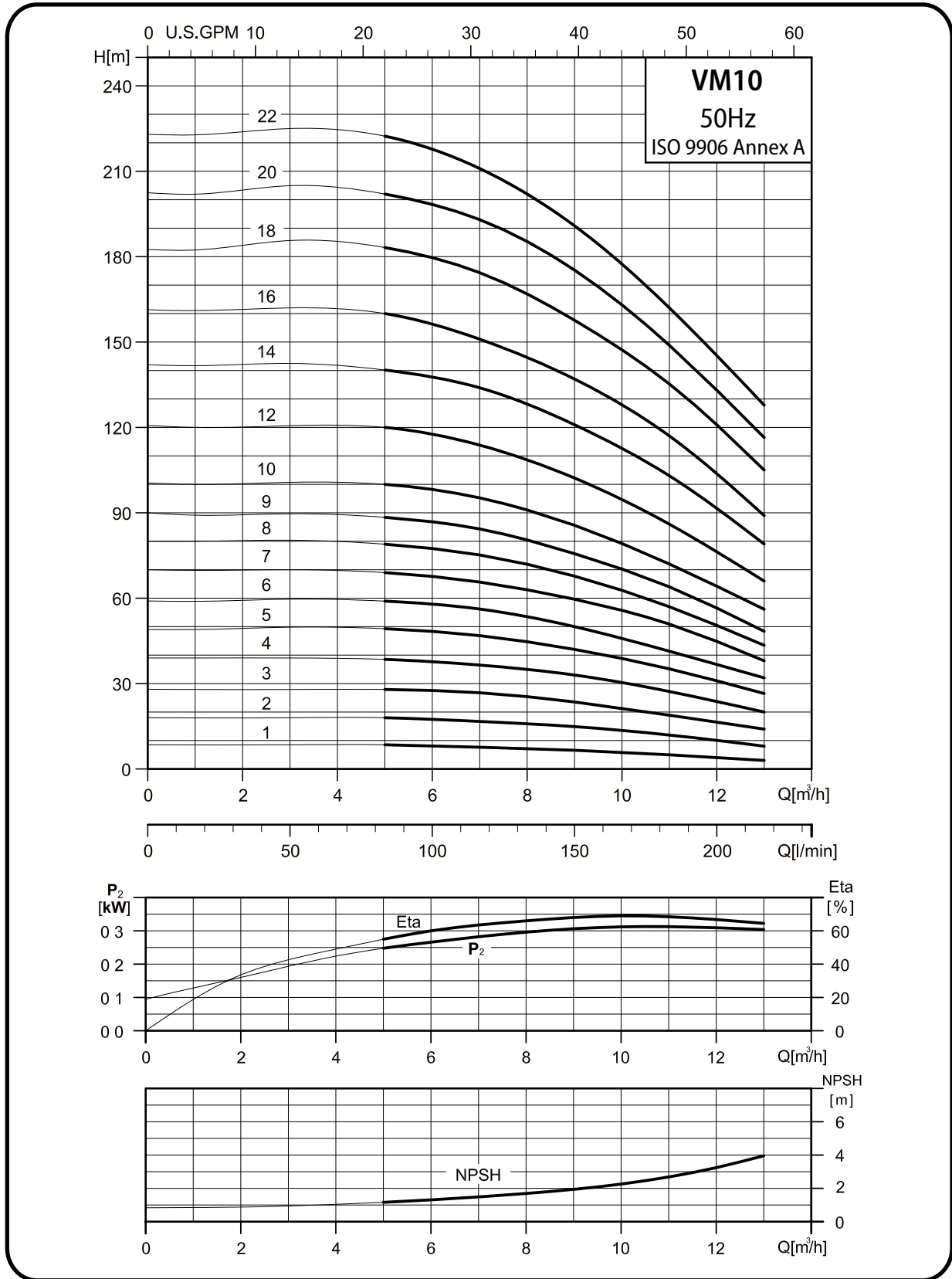
## Dimensions and Weight VMC5 / VMN5

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]							Net weight [kg]	
		Victaulic		DIN flange		D1	D2	D3	Victaulic	DIN flange
		H1	H2	H1	H2					
VMC / VMN 5-2	0.37	257	448	282	473	141	109	--	16	21
VMC / VMN 5-3	0.55	284	475	309	500	141	109	--	18	22
VMC / VMN 5-4	0.55	311	502	336	527	141	109	--	18	22
VMC / VMN 5-5	0.75	344	575	369	600	141	109	--	21	25
VMC / VMN 5-6	1.1	371	602	396	627	141	109	--	24	28
VMC / VMN 5-7	1.1	398	629	423	654	141	109	--	24	28
VMC / VMN 5-8	1.1	425	656	450	681	141	109	--	25	29
VMC / VMN 5-9	1.5	468	743	493	768	175	140	--	32.49	36.48
VMC / VMN 5-10	1.5	495	770	520	795	175	140	--	33.52	37.06
VMC / VMN 5-11	2.2	522	797	547	822	175	140	--	36.1	39.63
VMC / VMN 5-12	2.2	549	824	574	849	175	140	--	36.7	40.2
VMC / VMN 5-13	2.2	576	851	601	876	175	140	--	37.23	40.77
VMC / VMN 5-14	2.2	603	878	628	903	175	140	--	37.8	41.34
VMC / VMN 5-15	2.2	630	905	655	930	175	140	--	38.37	41.91
VMC / VMN 5-16	2.2	657	932	682	957	175	140	--	38.95	42.49
VMC / VMN 5-18	3	715	1035	740	1060	196	148	--	46.5	50.1
VMC / VMN 5-20	3	769	1089	794	1114	196	148	--	47.7	51.2
VMC / VMN 5-22	4	823	1158	848	1183	219	162	--	55.8	59.4
VMC / VMN 5-24	4	877	1212	902	1237	219	162	--	57	60.5
VMC / VMN 5-26	4	931	1266	956	1291	219	162	--	58.1	61.6
VMC / VMN 5-29	4	1012	1347	1037	1372	219	162	--	59.8	63.4
VMC / VMN 5-32	5.5	1123	1483	1148	1508	234	199	300	80.2	83.7
VMC / VMN 5-36	5.5	1231	1591	1256	1616	234	199	300	82.5	86

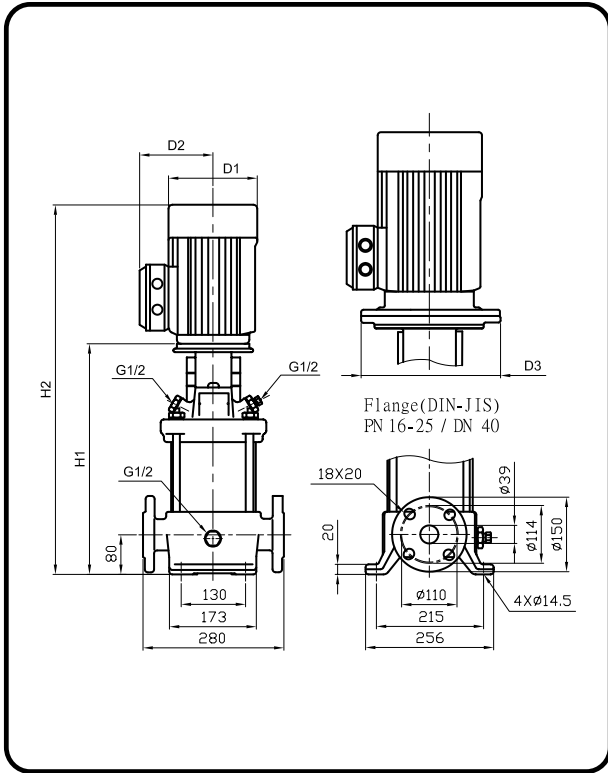
# VM10 / VMC10 / VMN10

## Performance Curves

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



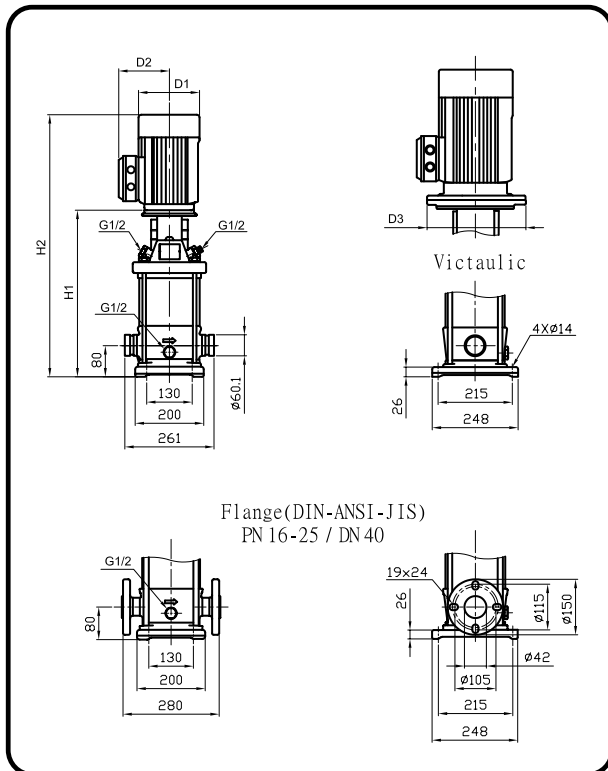
## Dimensional sketch - VM10



## Dimensions and Weight - VM10

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]					Net weight [kg]
		H1	H2	D1	D2	D3	
VM 10-1	0.37	343	534	141	109	--	34
VM 10-2	0.75	347	578	141	109	--	36
VM 10-3	1.1	377	608	141	109	--	39
VM 10-4	1.5	423	698	175	140	--	48.19
VM 10-5	2.2	453	728	175	140	--	51.21
VM 10-6	2.2	483	758	175	140	--	52.22
VM 10-7	3	518	838	196	148	--	60.5
VM 10-8	3	548	868	196	148	--	51.5
VM 10-9	3	578	898	196	148	--	62.5
VM 10-10	4	608	943	219	162	--	70.5
VM 10-12	4	668	1003	219	162	--	72.6
VM 10-14	5.5	760	1120	234	199	300	98.5
VM 10-16	5.5	820	1180	234	199	300	100.5
VM 10-18	7.5	880	1280	234	199	300	111.6
VM 10-20	7.5	940	1340	234	199	300	113.6
VM 10-22	7.5	1000	1400	234	199	300	115.7

## Dimensional sketch VMC10 / VMN10



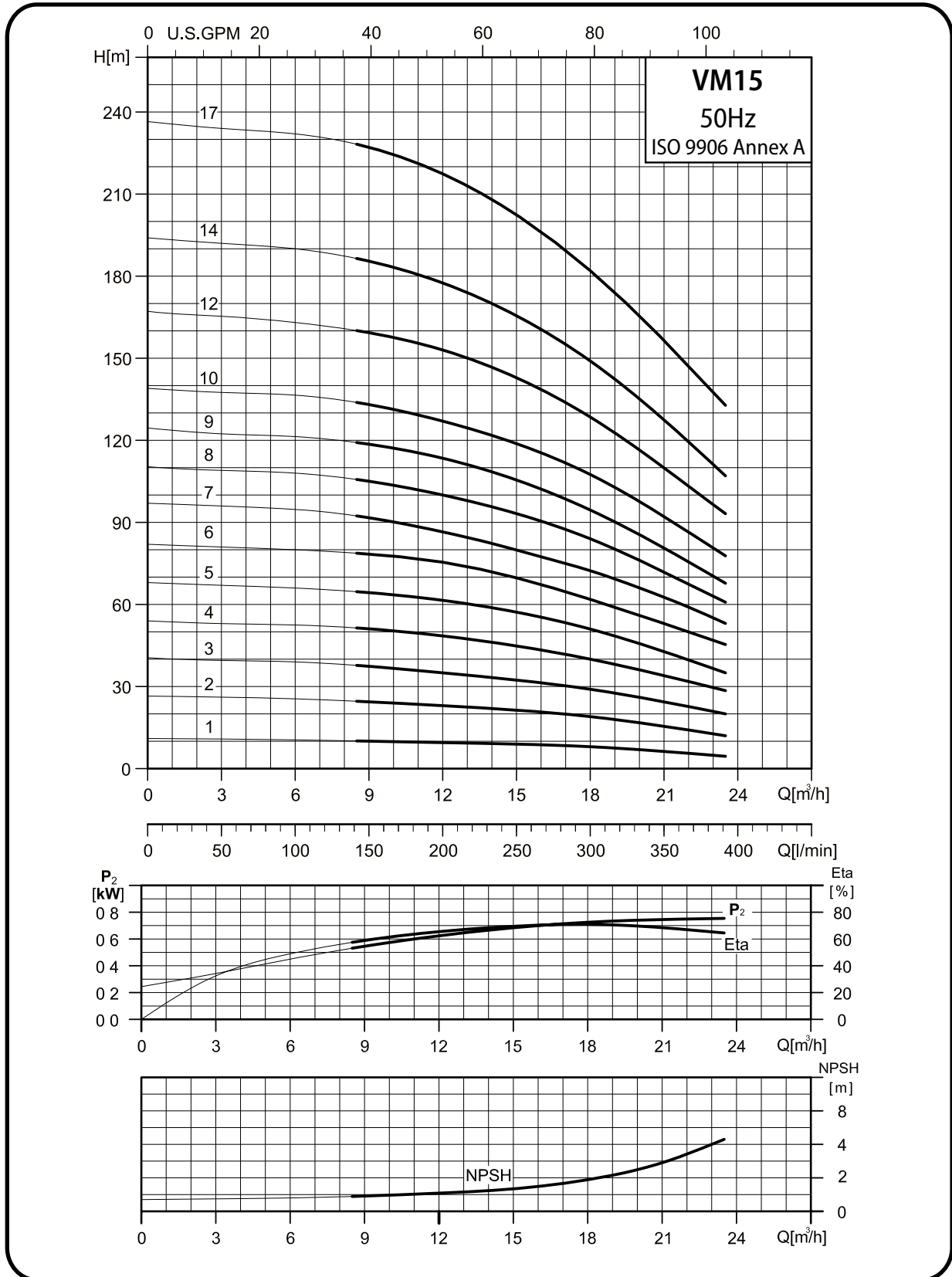
## Dimensions and Weight VMC10 / VMN10

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]							Net weight [kg]	
		Victaulic		DIN flange		D1	D2	D3	Victaulic	DIN flange
H1	H2	H1	H2							
VMC / VMN 10-1	0.37	353	544	353	544	141	109	--	28	32
VMC / VMN 10-2	0.75	357	588	357	588	141	109	--	31	34
VMC / VMN 10-3	1.1	387	618	387	618	141	109	--	34	38
VMC / VMN 10-4	1.5	433	708	433	708	175	140	--	43.6	47.1
VMC / VMN 10-5	2.2	463	738	463	738	175	140	--	46.6	50.1
VMC / VMN 10-6	2.2	493	768	493	768	175	140	--	47.6	51.1
VMC / VMN 10-7	3	528	848	528	848	196	148	--	54.4	57.9
VMC / VMN 10-8	3	558	878	558	878	196	148	--	55.4	59.0
VMC / VMN 10-9	3	588	908	588	908	196	148	--	56.5	60.0
VMC / VMN 10-10	4	618	953	618	953	219	162	--	64.5	68.0
VMC / VMN 10-12	4	678	1013	678	1013	219	162	--	66.5	70.0
VMC / VMN 10-14	5.5	770	1130	770	1130	234	199	300	93.4	96.9
VMC / VMN 10-16	5.5	830	1190	830	1190	234	199	300	95.4	99.0
VMC / VMN 10-18	7.5	890	1290	890	1290	234	199	300	106.5	110.0
VMC / VMN 10-20	7.5	950	1350	950	1350	234	199	300	108.5	112.0
VMC / VMN 10-22	7.5	1010	1410	1010	1410	234	199	300	110.6	114.1

# VM15 / VMC15 / VMN15

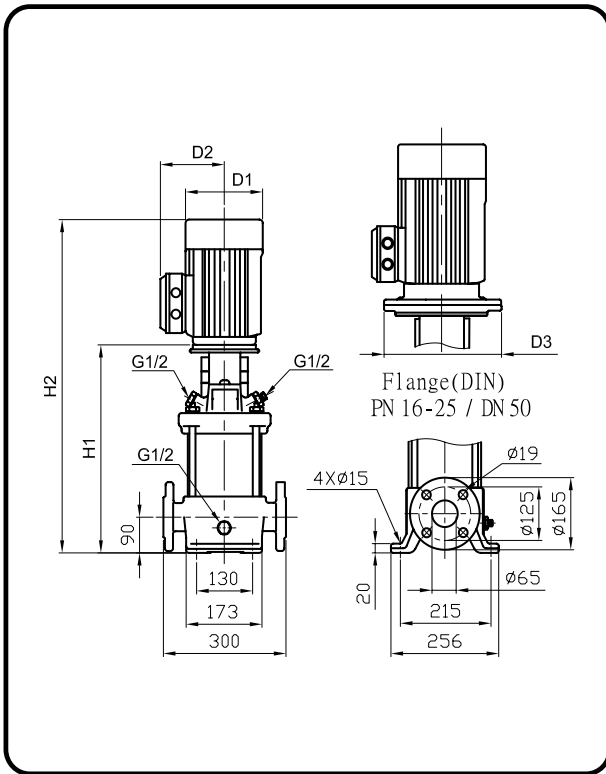
## Performance Curves

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





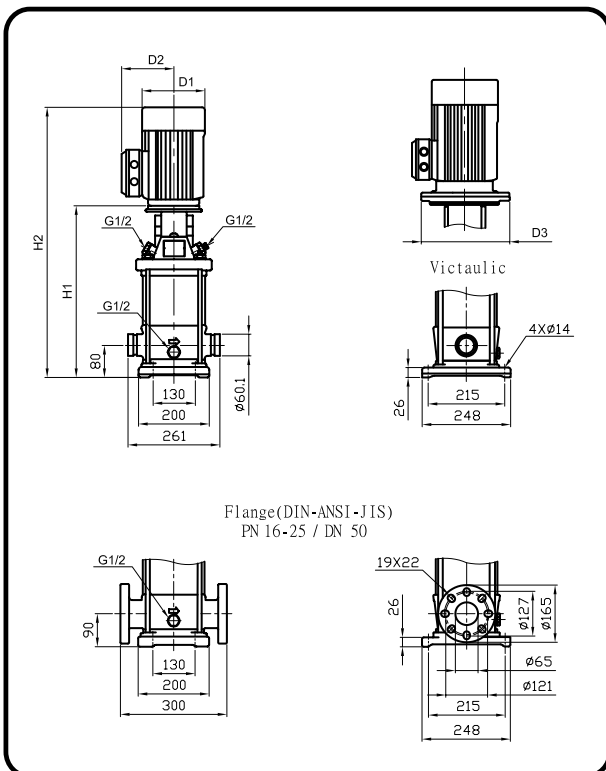
## Dimensional sketch - VM15



## Dimensions and Weight - VM15

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]					Net weight [kg]
		H1	H2	D1	D2	D3	
VM 15-1	1.1	400	631	141	109	--	42
VM 15-2	2.2	415	690	175	140	--	52.59
VM 15-3	3	465	785	196	148	--	61.3
VM 15-4	4	510	845	219	162	--	69.7
VM 15-5	4	555	890	219	162	--	71.7
VM 15-6	5.5	632	992	234	199	300	96.3
VM 15-7	5.5	677	1037	234	199	300	97.7
VM 15-8	7.5	722	1122	234	199	300	108.1
VM 15-9	7.5	767	1167	234	199	300	109.5
VM 15-10	11	889	1334	268	215	350	140.6
VM 15-12	11	979	1424	268	215	350	143.4
VM 15-14	11	1069	1514	268	215	350	146.2
VM 15-17	15	1204	1693	268	215	350	161.4

## Dimensional sketch VMC15 / VMN15



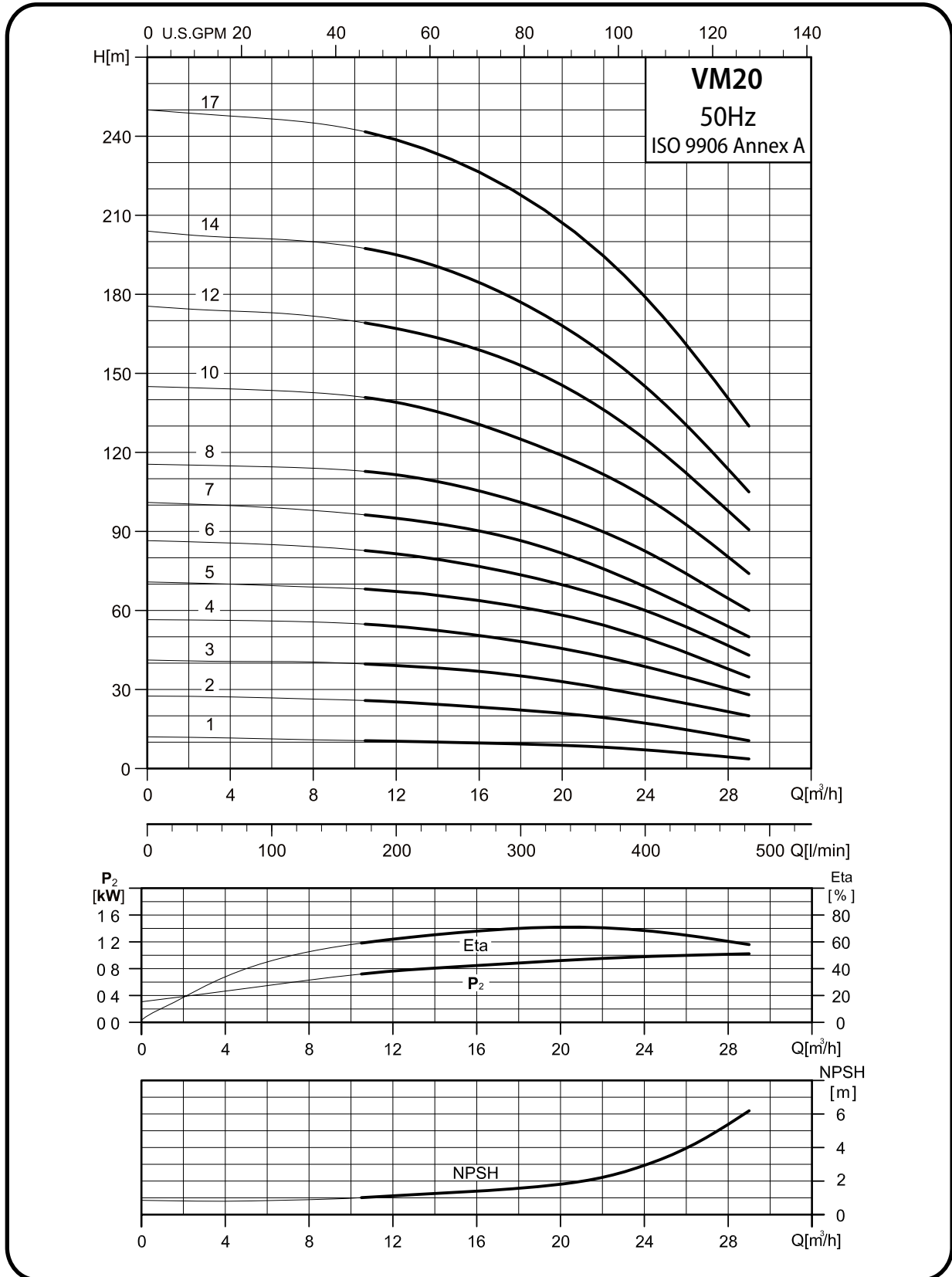
## Dimensions and Weight VMC15 / VMN15

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]							Net weight [kg]	
		Victaulic		DIN flange		D1	D2	D3	Victaulic	DIN flange
		H1	H2	H1	H2					
VMC / VMN 15-1	1.1	387	618	397	628	141	109	--	34	42
VMC / VMN 15-2	2.2	403	678	413	688	175	140	--	44.3	48.8
VMC / VMN 15-3	3	453	773	463	783	196	148	--	51.5	56.0
VMC / VMN 15-4	4	498	833	508	843	219	162	--	59.9	64.4
VMC / VMN 15-5	4	543	878	553	888	219	162	--	61.3	65.8
VMC / VMN 15-6	5.5	620	980	630	990	234	199	300	87.6	92.1
VMC / VMN 15-7	5.5	665	1025	675	1035	234	199	300	89.0	93.5
VMC / VMN 15-8	7.5	710	1110	720	1120	234	199	300	99.4	103.9
VMC / VMN 15-9	7.5	755	1155	765	1165	234	199	300	100.8	105.3
VMC / VMN 15-10	11	877	1322	887	1332	268	215	350	132.4	136.9
VMC / VMN 15-12	11	967	1412	977	1422	268	215	350	135.2	139.7
VMC / VMN 15-14	11	1057	1502	1067	1512	268	215	350	138.0	142.5
VMC / VMN 15-17	15	1192	1681	1202	1691	268	215	350	153.2	157.7

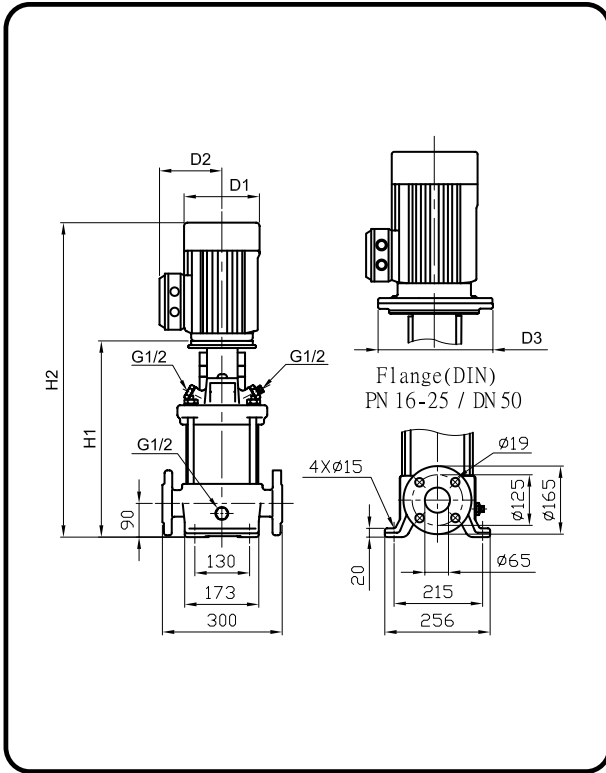
# VM20 / VMC20 / VMN20

## Performance Curves

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



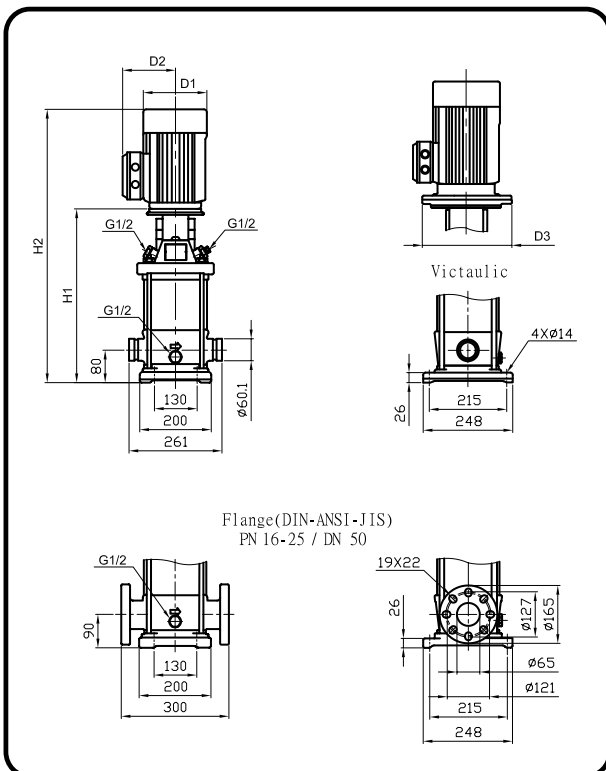
## Dimensional sketch - VM20



## Dimensions and Weight - VM20

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]					Net weight [kg]
		H1	H2	D1	D2	D3	
VM 20-1	1.1	400	631	141	109	--	42
VM 20-2	2.2	415	690	175	140	--	52.68
VM 20-3	4	465	800	219	162	--	68.4
VM 20-4	5.5	542	902	234	199	300	93.6
VM 20-5	5.5	587	947	234	199	300	95
VM 20-6	7.5	632	1032	234	199	300	105.4
VM 20-7	7.5	677	1077	234	199	300	106.8
VM 20-8	11	799	1244	268	215	350	137.9
VM 20-10	11	889	1334	268	215	350	140.7
VM 20-12	15	979	1468	268	215	350	154.5
VM 20-14	15	1069	1558	268	215	350	157.3
VM 20-17	18.5	1204	1739	317	242	400	196.4

## Dimensional sketch VMC20 / VMN20



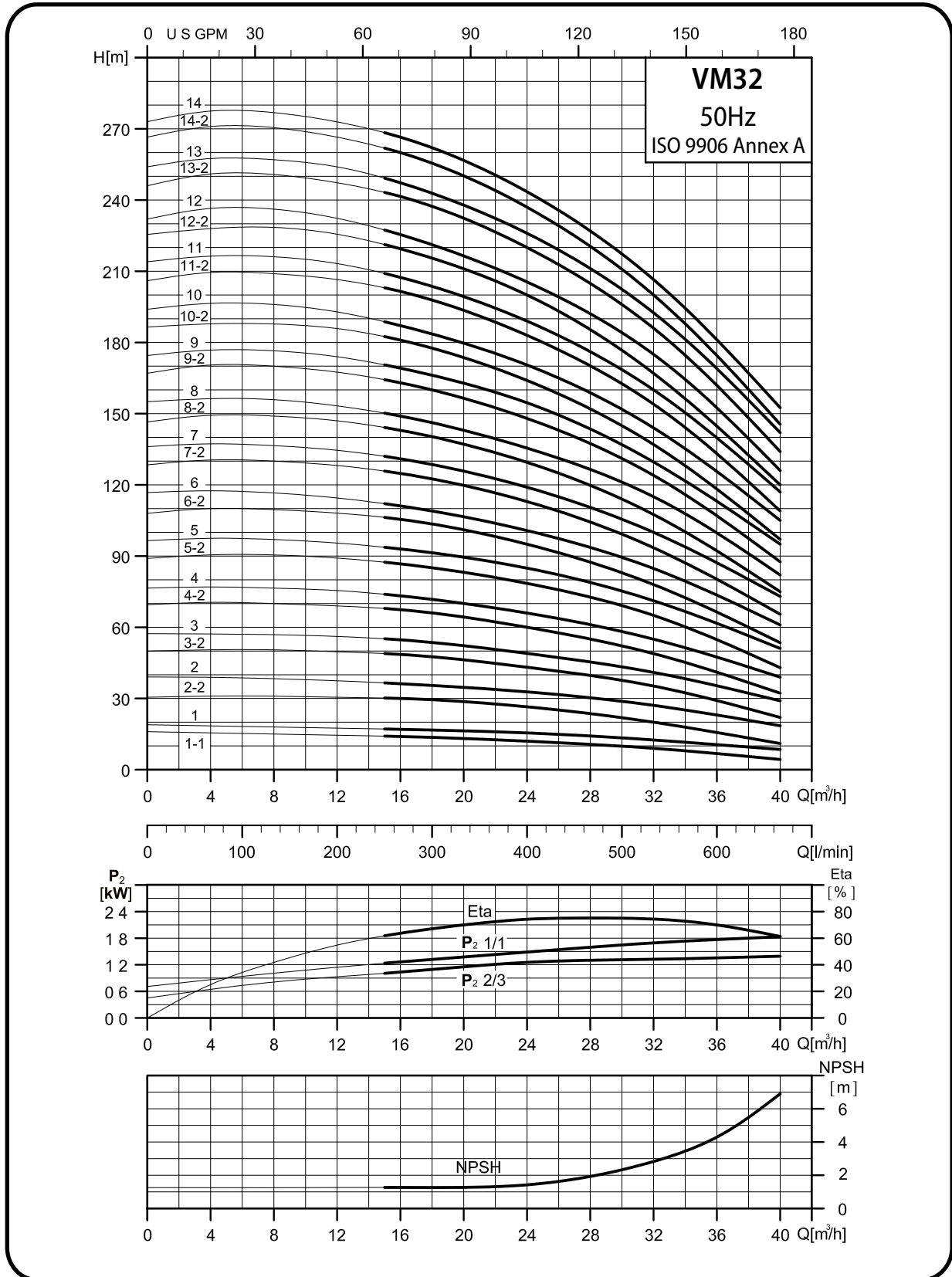
## Dimensions and Weight VMC20 / VMN20

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]							Net weight [kg]	
		Victaulic		DIN flange		D1	D2	D3	Victaulic	DIN flange
		H1	H2	H1	H2					
VMC / VMN 20-1	1.1	387	618	397	628	141	109	--	34	39
VMC / VMN 20-2	2.2	403	678	413	688	175	140	--	44.3	48.8
VMC / VMN 20-3	4	453	788	463	798	219	162	--	58.5	63
VMC / VMN 20-4	5.5	530	890	540	900	234	199	300	84.8	89.3
VMC / VMN 20-5	5.5	575	935	585	945	234	199	300	86.2	90.7
VMC / VMN 20-6	7.5	620	1020	630	1030	234	199	300	96.6	101.1
VMC / VMN 20-7	7.5	665	1065	675	1075	234	199	300	98	102.5
VMC / VMN 20-8	11	787	1232	797	1242	265	215	350	129.6	134.1
VMC / VMN 20-10	11	877	1322	887	1332	265	215	350	132.4	136.9
VMC / VMN 20-12	15	967	1456	977	1466	265	215	350	146.2	150.7
VMC / VMN 20-14	15	1057	1546	1067	1556	265	215	350	149	153.5
VMC / VMN 20-17	18.5	1192	1727	1202	1737	317	242	400	188.2	192.7

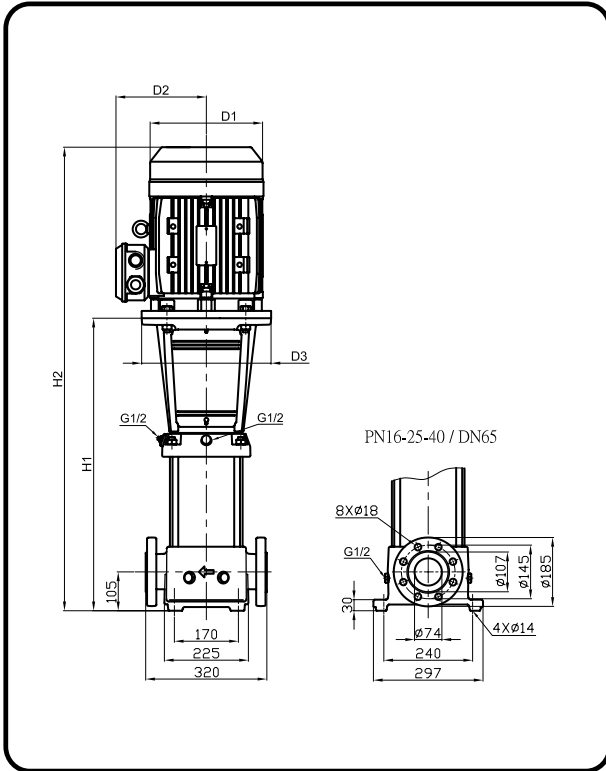
# VM32 / VMC32 / VMN32

## Performance Curves

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



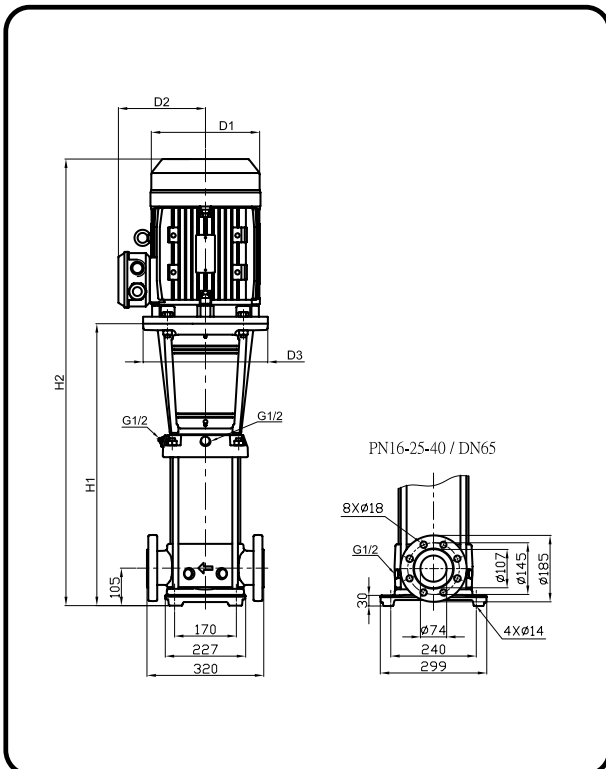
## Dimensional sketch - VM32



## Dimensions and Weight - VM32

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]					Net weight [kg]
		H1	H2	D1	D2	D3	
VM 32-1-1	1.5	503.5	779	175	140	--	69.5
VM 32-1	2.2	503.5	779	175	140	--	71.52
VM 32-2-2	3	573.5	894	196	148	--	80.5
VM 32-2	4	573.5	909	219	162	--	87.5
VM 32-3-2	5.5	643.5	1004	234	199	300	104.4
VM 32-3	5.5	643.5	1004	234	199	300	104.4
VM 32-4-2	7.5	713.5	1114	234	199	300	116.4
VM 32-4	7.5	713.5	1114	234	199	300	116.4
VM 32-5-2	11	893.5	1339	268	215	350	153
VM 32-5	11	893.5	1339	268	215	350	153
VM 32-6-2	11	963.5	1409	268	215	350	156
VM 32-6	11	963.5	1409	268	215	350	156
VM 32-7-2	15	1034	1523	268	215	350	170
VM 32-7	15	1034	1523	268	215	350	170
VM 32-8-2	15	1104	1593	268	215	350	173
VM 32-8	15	1104	1593	268	215	350	173
VM 32-9-2	18.5	1174	1709	317	242	400	211
VM 32-9	18.5	1174	1709	317	242	400	211
VM 32-10-2	18.5	1244	1779	317	242	400	213
VM 32-10	18.5	1244	1779	317	242	400	214
VM 32-11-2	22	1314	1893	317	242	400	227
VM 32-11	22	1314	1893	317	242	400	227
VM 32-12-2	22	1384	1963	317	242	400	229
VM 32-12	22	1384	1963	317	242	400	229
VM 32-13-2	30	1454	2077	317	290	400	317
VM 32-13	30	1454	2077	317	290	400	317
VM 32-14-2	30	1524	2147	317	290	400	320
VM 32-14	30	1524	2147	317	290	400	320

## Dimensional sketch VMC32 / VMN32



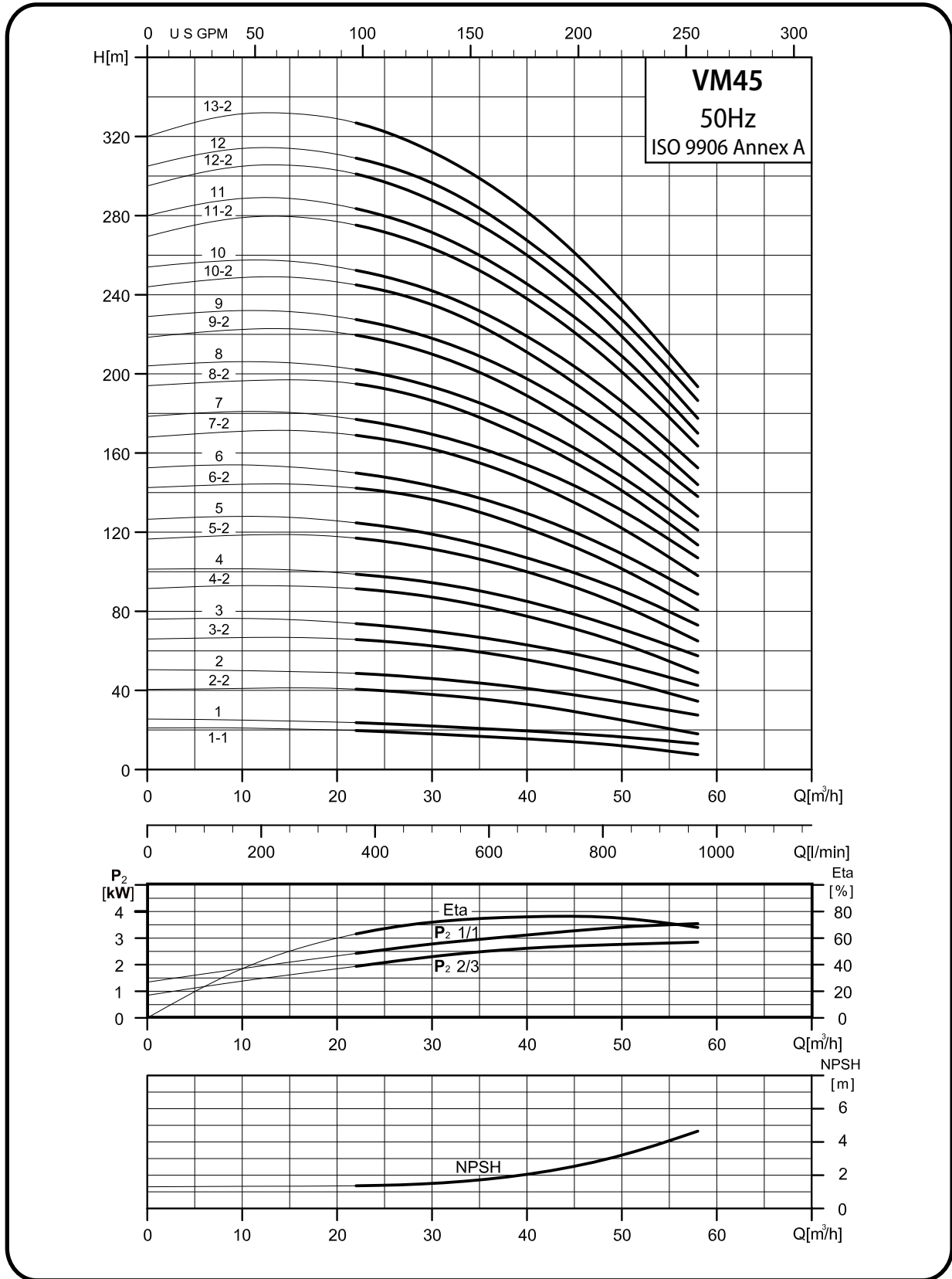
## Dimensions and Weight VMC32 / VMN32

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]					Net weight [kg]
		H1	H2	D1	D2	D3	
VMC / VMN 32-1-1	1.5	503.5	779	175	140	--	64.64
VMC / VMN 32-1	2.2	503.5	779	175	140	--	66.66
VMC / VMN 32-2-2	3	573.5	894	196	148	--	75.6
VMC / VMN 32-2	4	573.5	909	219	162	--	82.6
VMC / VMN 32-3-2	5.5	643.5	1004	234	199	300	99.5
VMC / VMN 32-3	5.5	643.5	1004	234	199	300	99.5
VMC / VMN 32-4-2	7.5	713.5	1114	234	199	300	111.5
VMC / VMN 32-4	7.5	713.5	1114	234	199	300	111.6
VMC / VMN 32-5-2	11	893.5	1294	268	215	350	148.1
VMC / VMN 32-5	11	893.5	1294	268	215	350	148.2
VMC / VMN 32-6-2	11	963.5	1409	268	215	350	151.1
VMC / VMN 32-6	11	963.5	1409	268	215	350	151.2
VMC / VMN 32-7-2	15	1034	1523	268	215	350	165.2
VMC / VMN 32-7	15	1034	1523	268	215	350	165.2
VMC / VMN 32-8-2	15	1104	1593	268	215	350	168.4
VMC / VMN 32-8	15	1104	1593	268	215	350	168.4
VMC / VMN 32-9-2	18.5	1174	1709	317	242	400	206
VMC / VMN 32-9	18.5	1174	1709	317	242	400	206.1
VMC / VMN 32-10-2	18.5	1244	1779	317	242	400	208.6
VMC / VMN 32-10	18.5	1244	1779	317	242	400	208.7
VMC / VMN 32-11-2	22	1314	1893	317	242	400	222
VMC / VMN 32-11	22	1314	1893	317	242	400	222
VMC / VMN 32-12-2	22	1384	1963	317	242	400	224.6
VMC / VMN 32-12	22	1384	1963	317	242	400	224.6
VMC / VMN 32-13-2	30	1454	2077	317	290	400	312.5
VMC / VMN 32-13	30	1454	2077	317	290	400	312.5
VMC / VMN 32-14-2	30	1524	2147	317	290	400	315.1
VMC / VMN 32-14	30	1524	2147	317	290	400	315.1

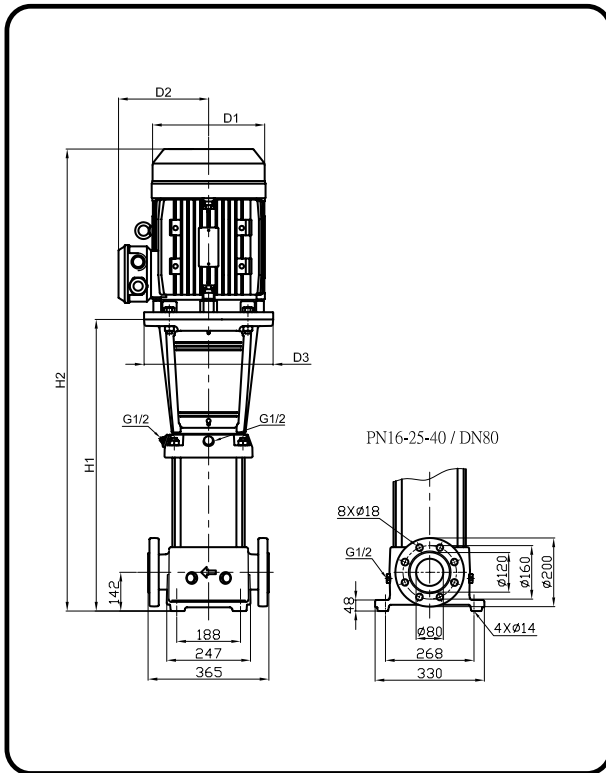
# VM45 / VMC45 / VMN45

## Performance Curves

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



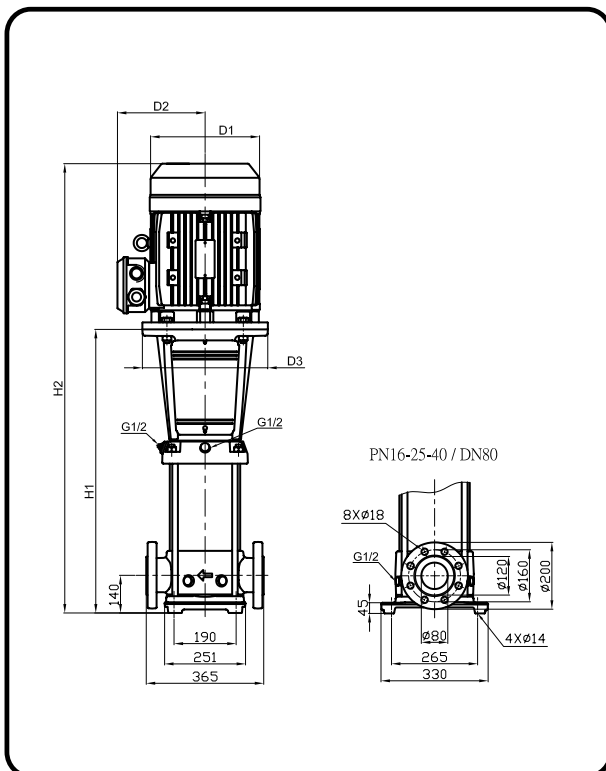
## Dimensional sketch - VM45



## Dimensions and Weight - VM45

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]					Net weight [kg]
		H1	H2	D1	D2	D3	
VM 45-1-1	3	560.5	880.5	196	148	280	87.79
VM 45-1	4	560.5	895.5	219	162	280	94.8
VM 45-2-2	5.5	640.5	1001	234	199	300	112.33
VM 45-2	7.5	640.5	1041	234	199	300	121.35
VM 45-3-2	11	830.5	1276	268	215	350	158.58
VM 45-3	11	830.5	1276	268	215	350	158.6
VM 45-4-2	15	910.5	1400	268	215	350	173.25
VM 45-4	15	910.5	1400	268	215	350	173.27
VM 45-5-2	18.5	990.5	1526	317	242	350	211.92
VM 45-5	18.5	990.5	1526	317	242	350	211.94
VM 45-6-2	22	1071	1650	317	242	350	226.35
VM 45-6	22	1071	1650	317	242	350	226.37
VM 45-7-2	30	1151	1774	317	290	400	315.26
VM 45-7	30	1151	1774	317	290	400	315.28
VM 45-8-2	30	1231	1854	317	290	400	318.93
VM 45-8	30	1231	1854	317	290	400	318.95
VM 45-9-2	30	1311	1934	317	290	400	322.6
VM 45-9	37	1311	2036	398	365	400	391.62
VM 45-10-2	37	1391	2116	398	365	400	395.2
VM 45-10	37	1391	2116	398	365	400	395.22
VM 45-11-2	45	1471	2196	398	365	450	426.8
VM 45-11	45	1471	2196	398	365	450	426.82
VM 45-12-2	45	1551	2276	398	365	450	430.4
VM 45-12	45	1551	2276	398	365	450	430.42
VM 45-13-2	45	1631	2356	398	365	450	434

## Dimensional sketch VMC45 / VMN45



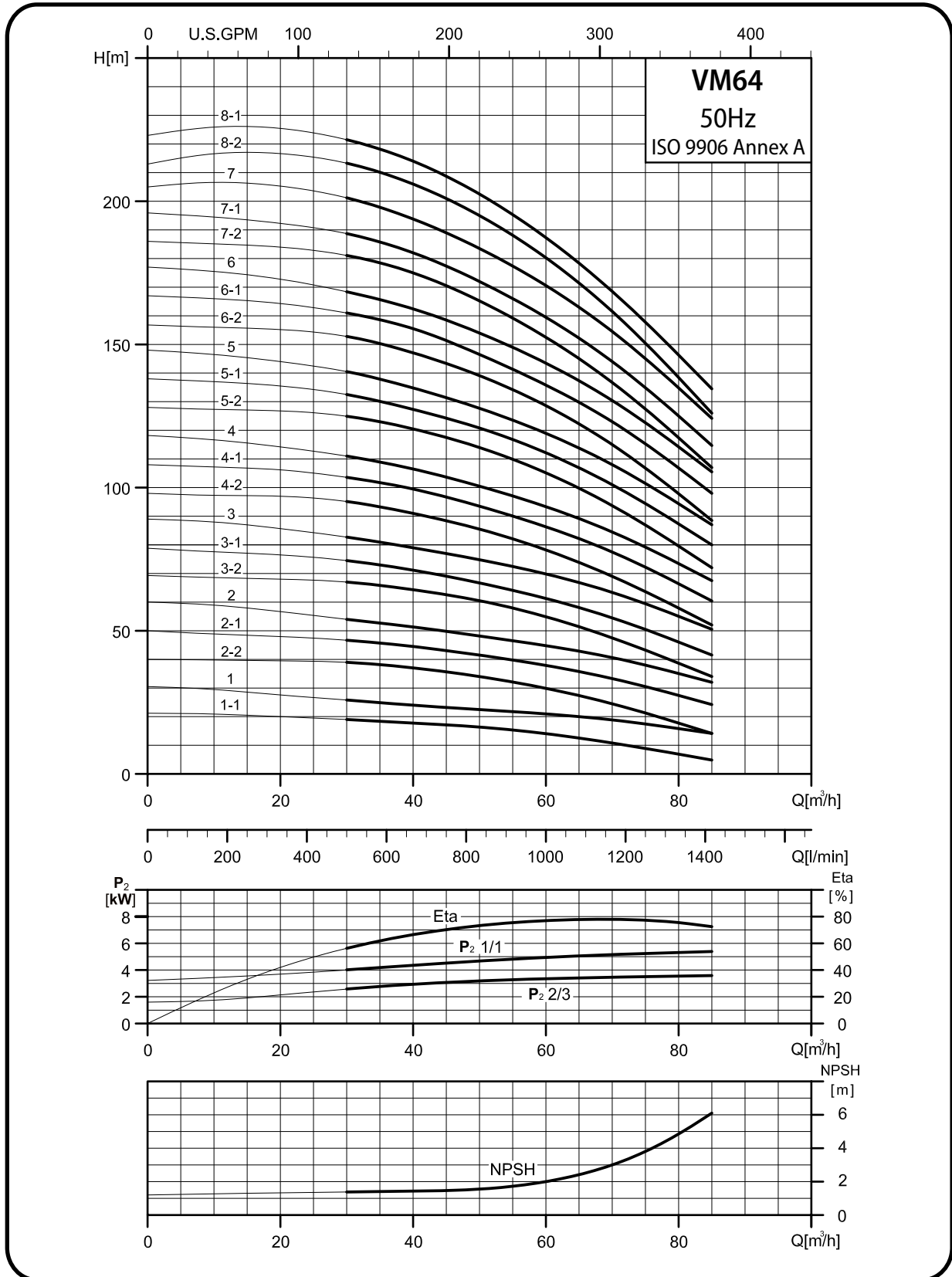
## Dimensions and Weight VMC45 / VMN45

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]					Net weight [kg]
		H1	H2	D1	D2	D3	
VMC / VMN 45-1-1	3	559	879	196	148	280	79.25
VMC / VMN 45-1	4	559	894	219	162	280	86.26
VMC / VMN 45-2-2	5.5	639	999	234	199	300	103.79
VMC / VMN 45-2	7.5	639	1039	234	199	300	112.81
VMC / VMN 45-3-2	11	829	1274	268	215	350	150.04
VMC / VMN 45-3	11	829	1274	268	215	350	150.06
VMC / VMN 45-4-2	15	909	1398	268	215	350	164.71
VMC / VMN 45-4	15	909	1398	268	215	350	164.73
VMC / VMN 45-5-2	18.5	989	1524	317	242	350	203.38
VMC / VMN 45-5	18.5	989	1524	317	242	350	203.4
VMC / VMN 45-6-2	22	1069	1648	317	242	350	217.81
VMC / VMN 45-6	22	1069	1648	317	242	350	217.83
VMC / VMN 45-7-2	30	1149	1772	317	290	400	306.72
VMC / VMN 45-7	30	1149	1772	317	290	400	306.74
VMC / VMN 45-8-2	30	1229	1852	317	290	400	310.39
VMC / VMN 45-8	30	1229	1852	317	290	400	310.41
VMC / VMN 45-9-2	30	1309	1932	317	290	400	383.06
VMC / VMN 45-9	37	1309	2034	398	365	400	383.08
VMC / VMN 45-10-2	37	1389	2114	398	365	400	386.66
VMC / VMN 45-10	37	1389	2114	398	365	400	386.68
VMC / VMN 45-11-2	45	1469	2194	398	365	450	418.26
VMC / VMN 45-11	45	1469	2194	398	365	450	418.28
VMC / VMN 45-12-2	45	1549	2274	398	365	450	421.86
VMC / VMN 45-12	45	1549	2274	398	365	450	421.88
VMC / VMN 45-13-2	45	1629	2354	398	365	450	425.46

# VM64 / VMC64 / VMN64

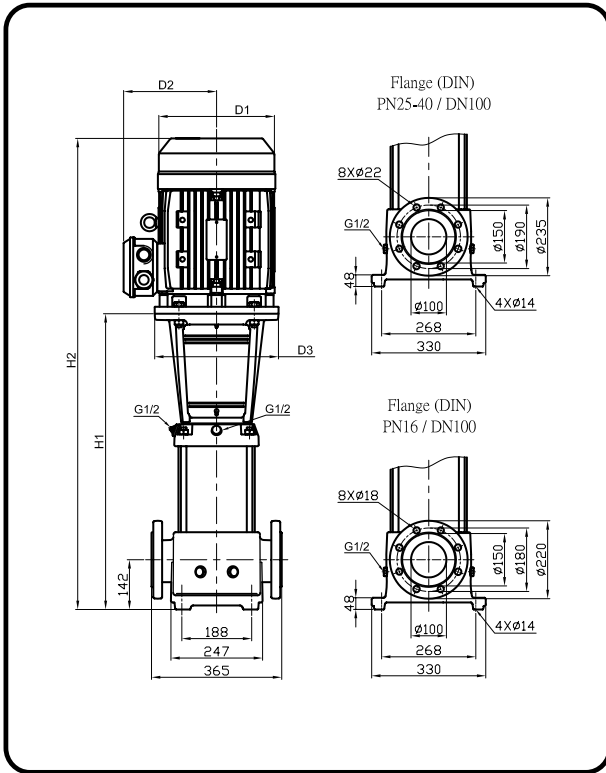
## Performance Curves

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





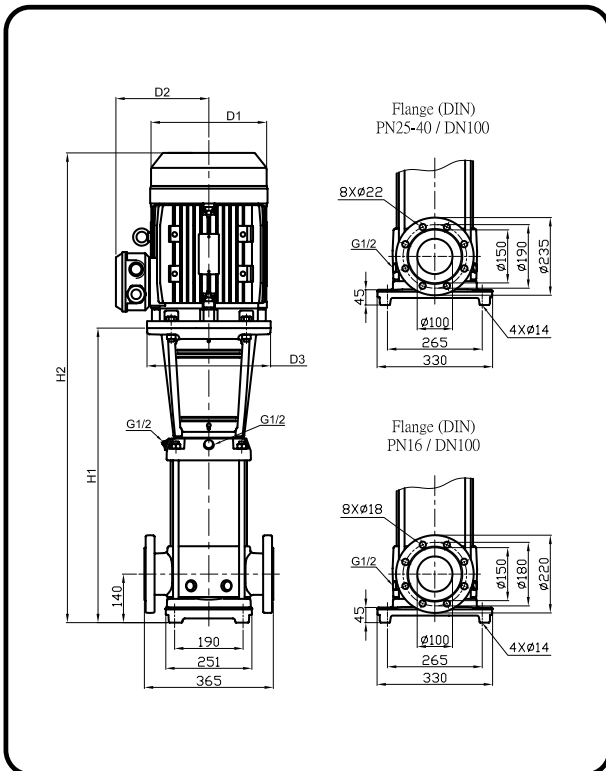
## Dimensional sketch - VM64



## Dimensions and Weight - VM64

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]					Net weight [kg]
		H1	H2	D1	D2	D3	
VM 64-1-1	4	563	898	219	162	280	88.76
VM 64-1	5.5	563	923	234	199	300	102.64
VM 64-2-2	7.5	645.5	1046	234	199	300	115.58
VM 64-2-1	11	755.5	1201	268	215	350	149.16
VM 64-2	11	755.5	1201	268	215	350	149.16
VM 64-3-2	15	838	1327	268	215	350	164.62
VM 64-3-1	15	838	1327	268	215	350	164.62
VM 64-3	18.5	838	1373	317	242	350	199.62
VM 64-4-2	18.5	920.5	1456	317	242	350	203.52
VM 64-4-1	22	920.5	1500	317	242	350	214.28
VM 64-4	22	920.5	1500	317	242	350	214.28
VM 64-5-2	30	1003	1626	317	290	400	303.43
VM 64-5-1	30	1003	1626	317	290	400	303.43
VM 64-5	30	1003	1626	317	290	400	303.43
VM 64-6-2	30	1086	1709	317	290	400	307.29
VM 64-6-1	37	1086	1811	398	365	400	376.29
VM 64-6	37	1086	1811	398	365	400	376.29
VM 64-7-2	37	1168	1893	398	365	400	380.24
VM 64-7-1	37	1168	1893	398	365	400	380.24
VM 64-7	45	1172	1897	398	365	450	408.24
VM 64-8-2	45	1255	1980	398	365	450	412.24
VM 64-8-1	45	1255	1980	398	365	450	412.24

## Dimensional sketch VMC64 / VMN64



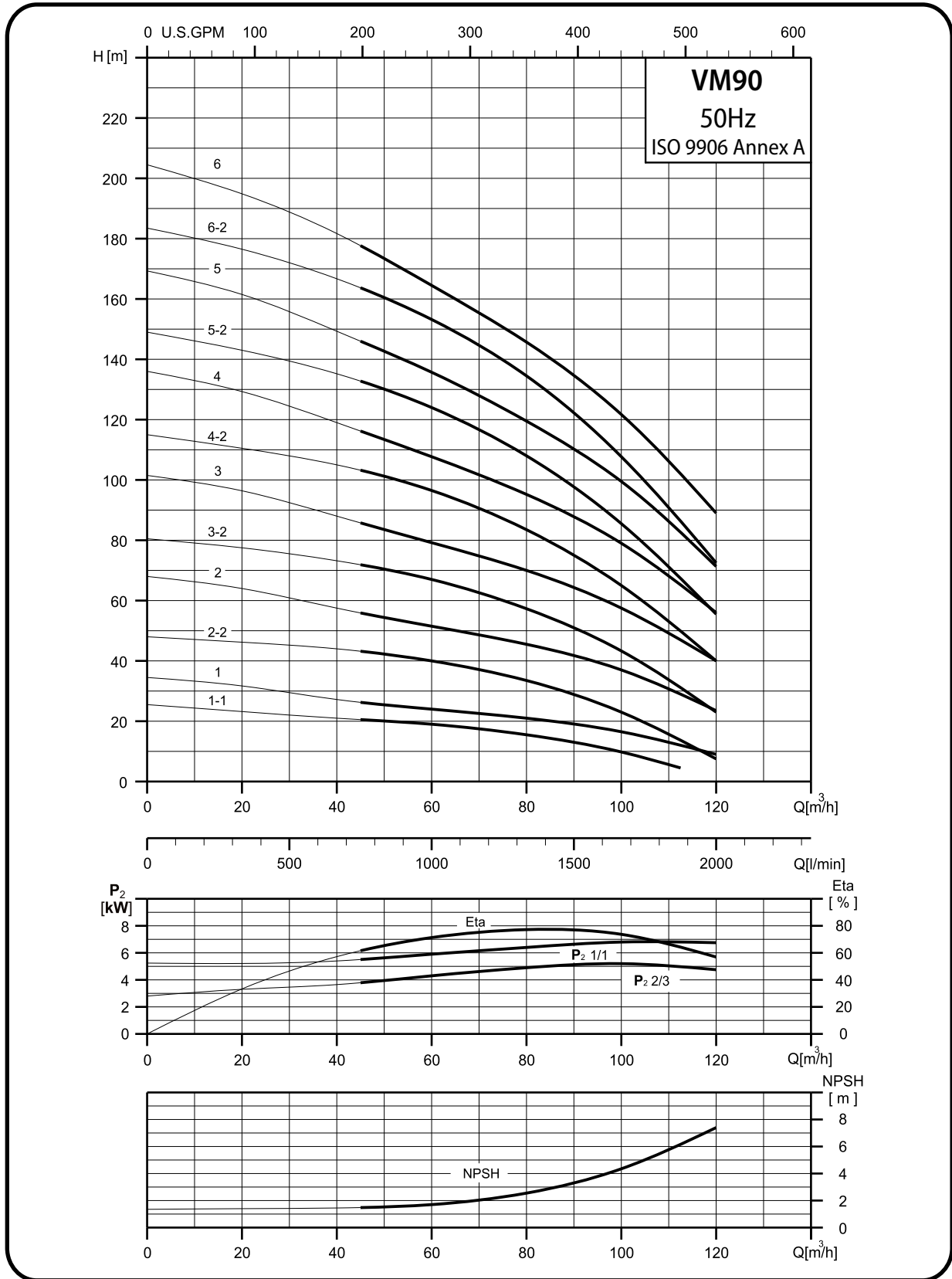
## Dimensions and Weight VMC64 / VMN64

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]					Net weight [kg]
		H1	H2	D1	D2	D3	
VMC / VMN 64-1-1	4	563	898	219	162	280	81.94
VMC / VMN 64-1	5.5	563	923	234	199	300	95.82
VMC / VMN 64-2-2	7.5	645.5	1046	234	199	300	108.75
VMC / VMN 64-2-1	11	755.5	1201	268	215	350	142.33
VMC / VMN 64-2	11	755.5	1201	268	215	350	142.33
VMC / VMN 64-3-2	15	838	1327	268	215	350	157.34
VMC / VMN 64-3-1	15	838	1327	268	215	350	157.34
VMC / VMN 64-3	18.5	838	1373	317	242	350	192.34
VMC / VMN 64-4-2	18.5	920.5	1456	317	242	350	196.21
VMC / VMN 64-4-1	22	920.5	1500	317	242	350	206.97
VMC / VMN 64-4	22	920.5	1500	317	242	350	206.97
VMC / VMN 64-5-2	30	1003	1626	317	290	400	296.09
VMC / VMN 64-5-1	30	1003	1626	317	290	400	296.09
VMC / VMN 64-5	30	1003	1626	317	290	400	296.09
VMC / VMN 64-6-2	30	1086	1709	317	290	400	299.97
VMC / VMN 64-6-1	37	1086	1811	398	365	400	368.97
VMC / VMN 64-6	37	1086	1811	398	365	400	368.97
VMC / VMN 64-7-2	37	1168	1893	398	365	400	372.88
VMC / VMN 64-7-1	37	1168	1893	398	365	400	372.88
VMC / VMN 64-7	45	1172	1897	398	365	450	400.88
VMC / VMN 64-8-2	45	1255	1980	398	365	450	404.91
VMC / VMN 64-8-1	45	1255	1980	398	365	450	404.91

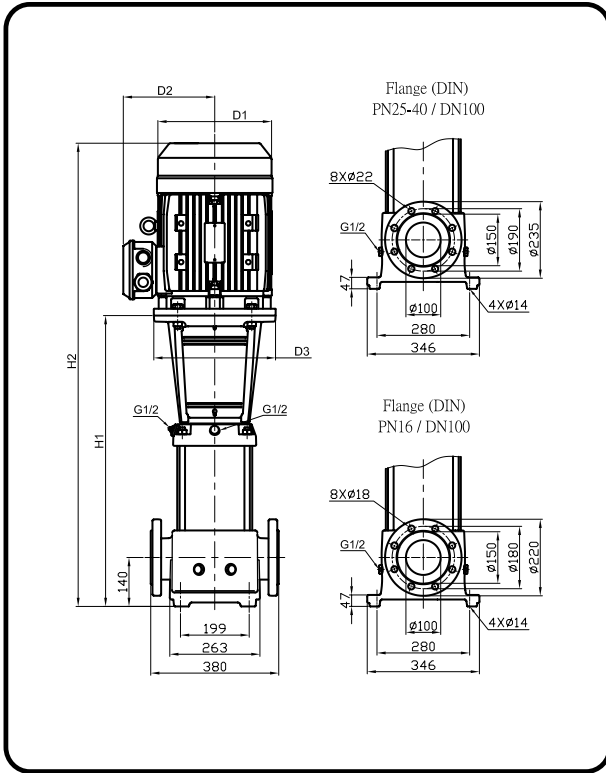
# VM90 / VMC90 / VMN90

## Performance Curves

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



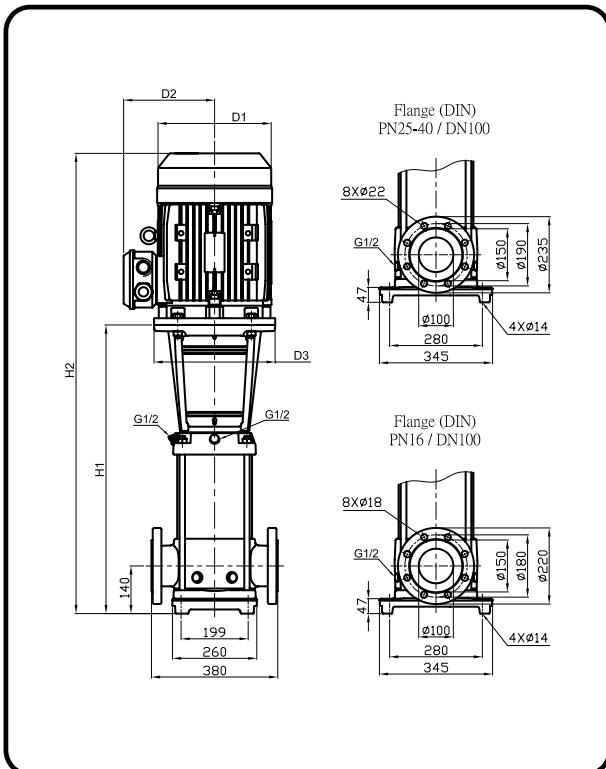
## Dimensional sketch - VM90



## Dimensions and Weight - VM90

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]					Net weight [kg]
		H1	H2	D1	D2	D3	
VM 90-1-1	5.5	572	932	234	199	300	116.06
VM 90-1	7.5	572	972	234	199	300	125.08
VM 90-2-2	11	774	1219	268	215	350	163.82
VM 90-2	15	774	1263	268	215	350	174.86
VM 90-3-2	18.5	866	1401	317	242	350	214.94
VM 90-3	22	866	1445	317	242	350	225.74
VM 90-4-2	30	958	1581	317	290	400	316.08
VM 90-4	30	958	1581	317	290	400	316.12
VM 90-5-2	37	1050	1775	398	365	400	391.48
VM 90-5	37	1050	1775	398	365	400	391.52
VM 90-6-2	45	1142	1867	398	365	450	424.58
VM 90-6	45	1142	1867	398	365	450	424.62

## Dimensional sketch VMC90 / VMN90



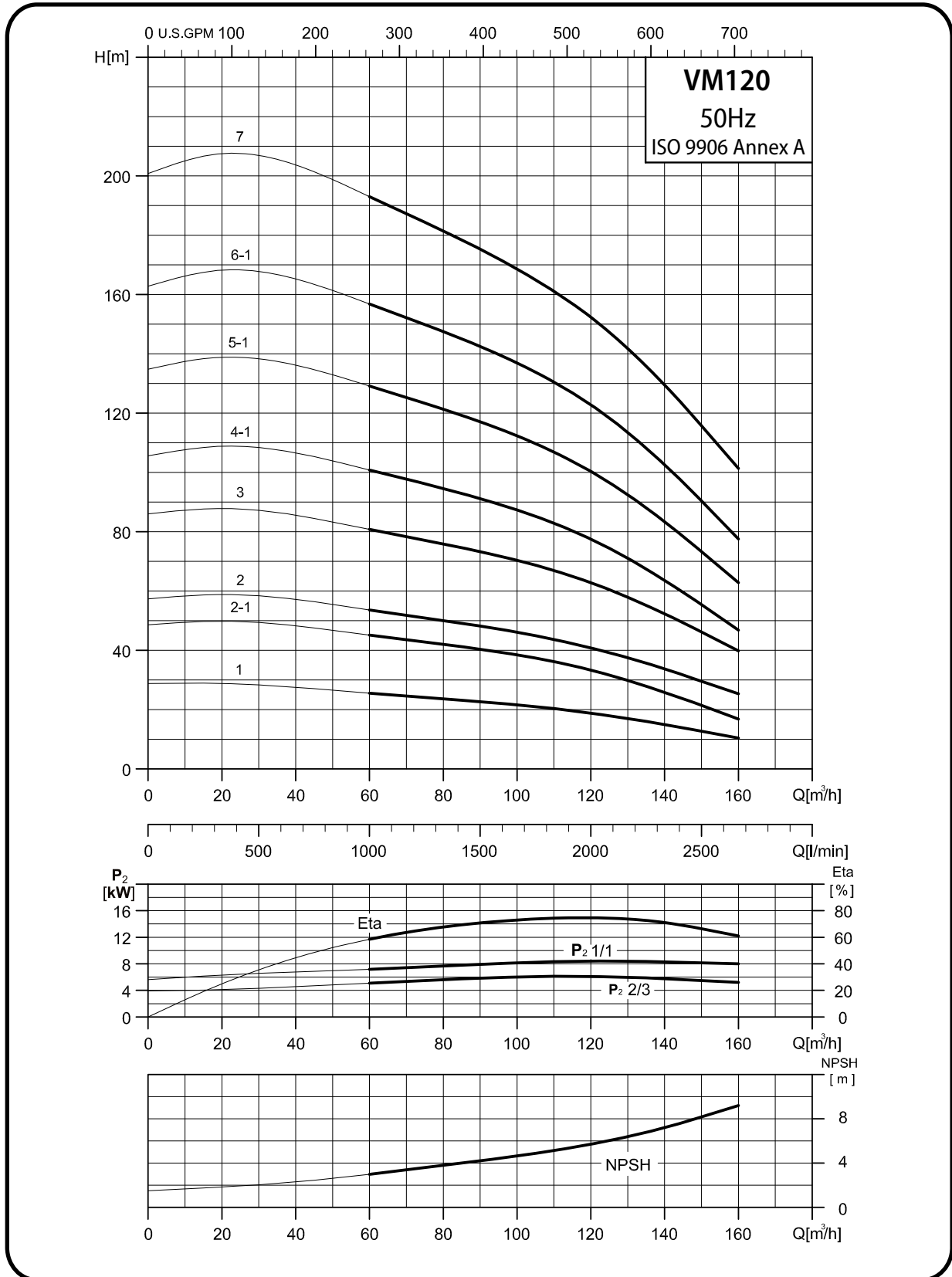
## Dimensions and Weight VMC90 / VMN90

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]					Net weight [kg]
		H1	H2	D1	D2	D3	
VMC / VMN90-1-1	5.5	576	936	234	199	300	106.3
VMC / VMN90-1	7.5	576	976	234	199	300	115.32
VMC / VMN90-2-2	11	778	1223	268	215	350	153.92
VMC / VMN90-2	15	778	1267	268	215	350	164.96
VMC / VMN90-3-2	18.5	870	1405	317	242	350	205
VMC / VMN90-3	22	870	1449	317	242	350	215.8
VMC / VMN90-4-2	30	962	1585	317	290	400	305.98
VMC / VMN90-4	30	962	1585	317	290	400	306.02
VMC / VMN90-5-2	37	1054	1779	398	365	400	381.82
VMC / VMN90-5	37	1054	1779	398	365	400	381.86
VMC / VMN90-6-2	45	1146	1871	398	365	450	414.66
VMC / VMN90-6	45	1146	1871	398	365	450	414.7

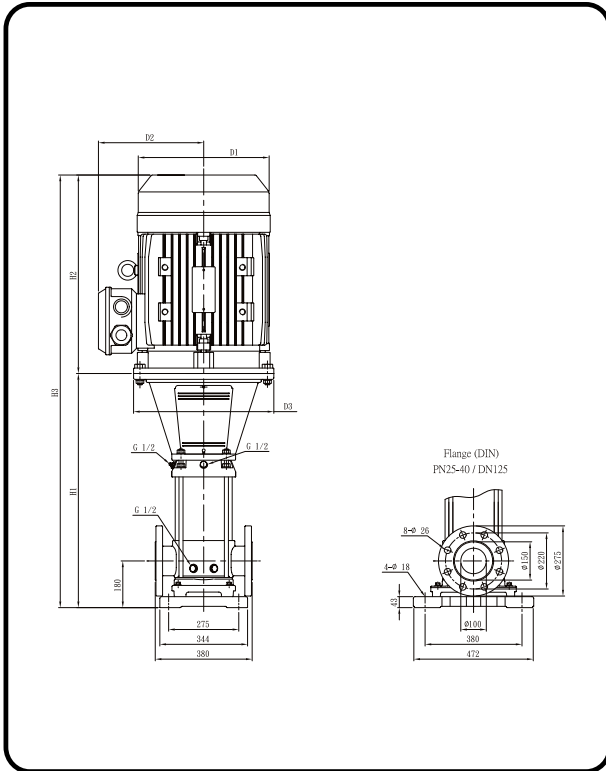
# VM120 / VMC120 / VMN120

## Performance Curves

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



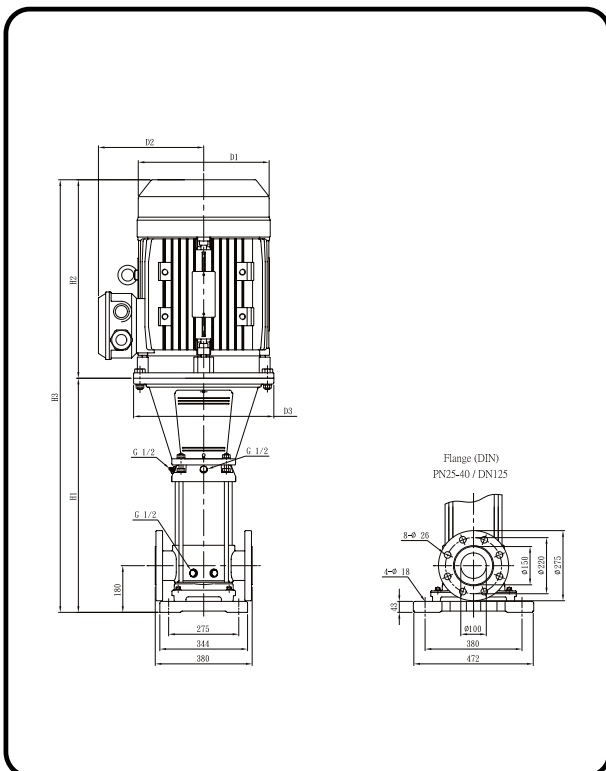
## Dimensional sketch - VM120



## Dimensions and Weight - VM120

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]						Net weight [kg]
		H1	H2	H3	D1	D2	D3	
VM 120-1	11	834	505	1339	318	245	350	196.76
VM 120-2-1	18.5	989.5	550	1540	318	245	350	241.52
VM 120-2	22	989.5	580	1570	358	265	350	288.08
VM 120-3	30	1145	660	1805	420	295	400	358.26
VM 120-4-1	37	1300	660	1961	420	295	400	367.94
VM 120-5-1	45	1460	690	2150	470	325	450	448.72
VM 120-6-1	55	1642	770	2412	510	355	550	572.61
VM 120-7	75	1797	845	2642	580	410	550	744.96

## Dimensional sketch VMC120 / VMN120



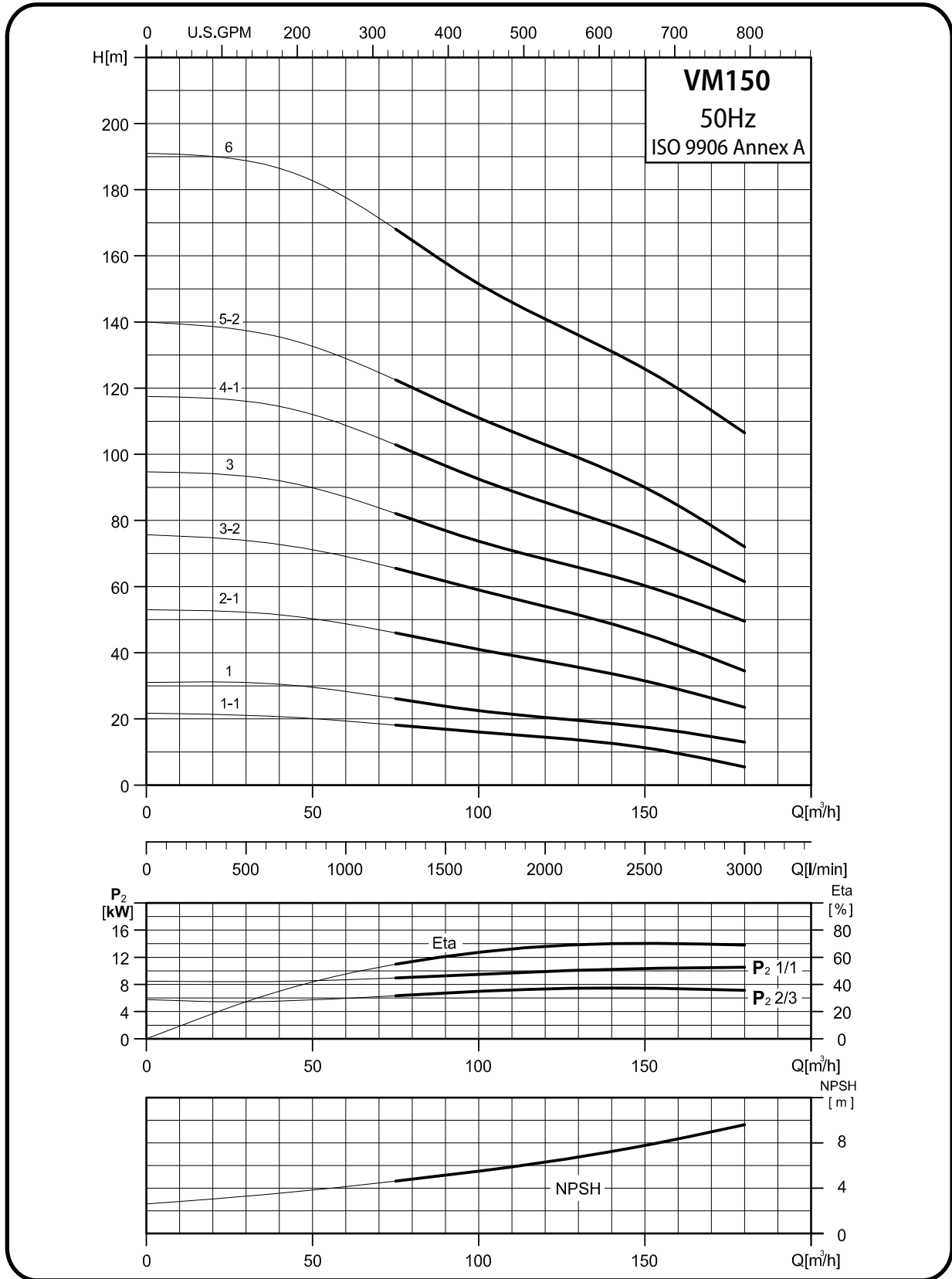
## Dimensions and Weight VMC120 / VMN120

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]						Net weight [kg]
		H1	H2	H3	D1	D2	D3	
VMC / VMN 120-1	11	837	505	1342	318	245	350	181.42
VMC / VMN 120-2-1	18.5	993	550	1543	318	245	350	226.32
VMC / VMN 120-2	22	993	580	1573	358	265	350	272.88
VMC / VMN 120-3	30	1149	660	1809	420	295	400	343.14
VMC / VMN 120-4-1	37	1304	660	1964	420	295	400	353.02
VMC / VMN 120-5-1	45	1463	690	2153	470	325	450	433.82
VMC / VMN 120-6-1	55	1645	770	2415	510	355	550	558.06
VMC / VMN 120-7	75	1800	845	2645	580	410	550	730.49

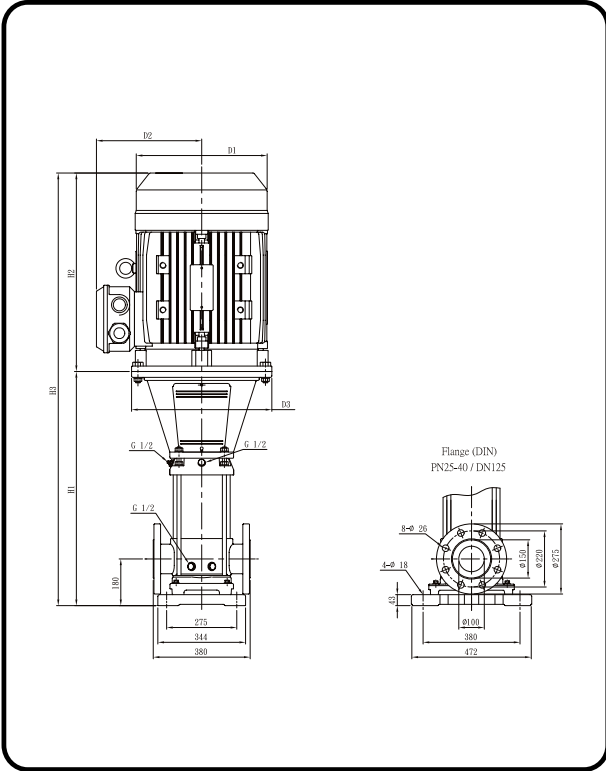
# VM150 / VMC150 / VMN150

## Performance Curves

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



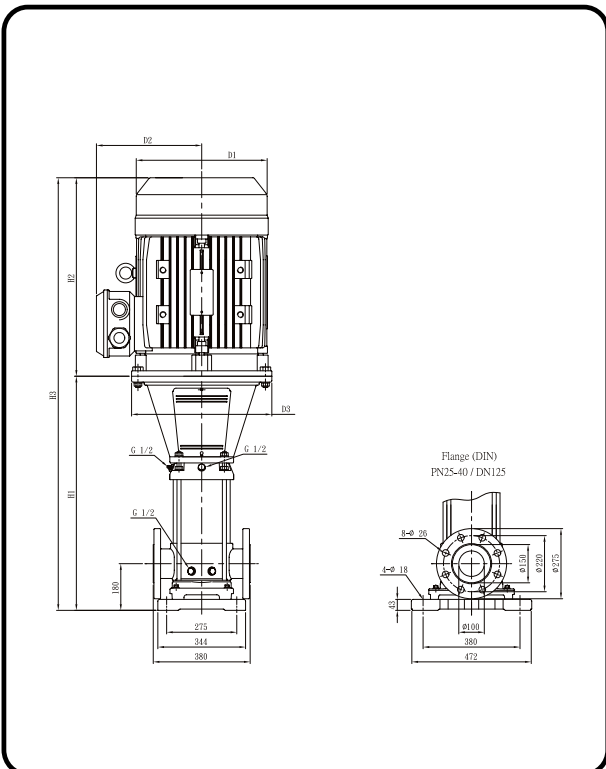
## Dimensional sketch - VM150



## Dimensions and Weight - VM150

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]						Net weight [kg]
		H1	H2	H3	D1	D2	D3	
VM 150-1-1	11	834	505	1339	318	245	350	196.70
VM 150-1	15	834	510	1344	318	245	350	206.82
VM 150-2-1	22	989.5	580	1570	358	265	350	284.21
VM 150-3-2	30	1145	660	1805	420	295	400	358.02
VM 150-3	37	1145	660	1805	420	295	400	371.12
VM 150-4-1	45	1305	690	1995	470	325	450	438.82
VM 150-5-2	55	1486	770	2256	510	355	550	562.86
VM 150-6	75	1642	845	2487	580	410	550	734.86

## Dimensional sketch VMC150 / VMN150



## Dimensions and Weight VMC150 / VMN150

Model	Motor P <sub>2</sub> [kW]	Dimension [mm]						Net weight [kg]
		H1	H2	H3	D1	D2	D3	
VMC / VMN 150-1-1	11	837	505	1342	318	245	350	170.82
VMC / VMN 150-1	15	837	510	1347	318	245	350	180.92
VMC / VMN 150-2-1	22	993	580	1573	358	256	350	268.43
VMC / VMN 150-3-2	30	1149	660	1808	420	295	400	342.42
VMC / VMN 150-3	37	1148	660	1808	420	295	400	355.42
VMC / VMN 150-4-1	45	1308	690	1998	470	325	450	423.22
VMC / VMN 150-5-2	55	1489	770	2259	510	355	550	547.76
VMC / VMN 150-6	75	1645	845	2490	580	410	550	719.76









Swiss Pump Company AG  
Moosweg 36  
CH - 3645 Thun - Gwatt  
Switzerland  
Tel. +41 33 223 11 00  
Fax +41 33 223 11 22  
mail@swisspump.com

[www.swisspump.com](http://www.swisspump.com)