



VN NAUTI SERIES



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NAUTI VN Series

Stainless Steel Close-Coupled Multistage Pump

APPLICATIONS

Pressure boosting / Water distribution

Rainwater collection

Irrigation / Gardening / Sprinklers

Dewatering

Wash down unit

Other various installations

FEATURES

Compact close-coupled design, robust and rust resistant

Impellers and diffusers are made of stainless steel in order to achieve durability, superior efficiency and the highest performances

Double mechanical seal separated by an oil chamber for maximum motor protection

*In compliance with FDA - Food, Drug Administration - and the annex to G.U. no. 104 of 20/04/73 for oils in contact with food stuffs

Plug-in type power cable and level control (floater) for easy replacement

Heavy duty over size motor shaft

Stainless steel water proof capsule to protect the motor

Motor cooling is guaranteed by the pumped liquid

PUMP SPECIFICATIONS

Capacities: up to 14 m³/h at 50Hz; up to 16 m³/h at 60Hz

Head: up to 104m at 50Hz; up to 115m at 60Hz

Discharge outlet 1 1/4" Rp

Maximum working pressure: 15 Bar

Maximum immersion depth: 20 m

Liquid temperature range from -5°C to +40°C

The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

Power cable: 20 m cable type H07RN-F is supplied with standard version

Maximum allowable amount of sand 50 g/m³

Maximum solid size up to 2 mm

Continuous operating either in vertical or horizontal position

MOTOR SPECIFICATIONS

Single phase or three phase motor

Asynchronous; 2 pole, IP68 protection, Insulation class F

Standard voltage Single-phase: 50Hz motors 220-240 V ± 5 %; 60Hz motors 220-230V ± 5 %. Thermal protection built into the motor up to 1,1 kW.

Thermal protection provided into the starter panel from 1,5 kW and above.

Three-phase: 50Hz motors 380-415 V ± 5 % at 50Hz; 60Hz motors 220-230V ± 5 % or 380-400V ± 5 %. Thermal protection to be provided into the starter panel by the Installer.

Maximum number starts per hour: 60. Waiting time between two consecutive starts 1 minute.

AVAILABLE ON REQUEST

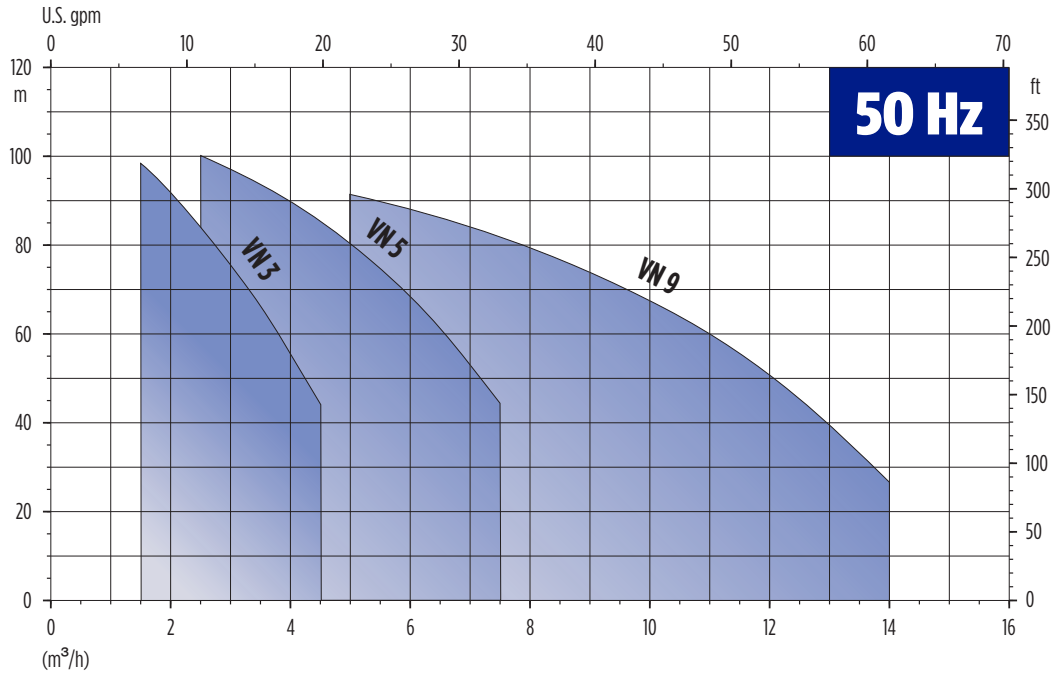
Single-phase models equipped with level control (floater)

Various voltages and frequencies

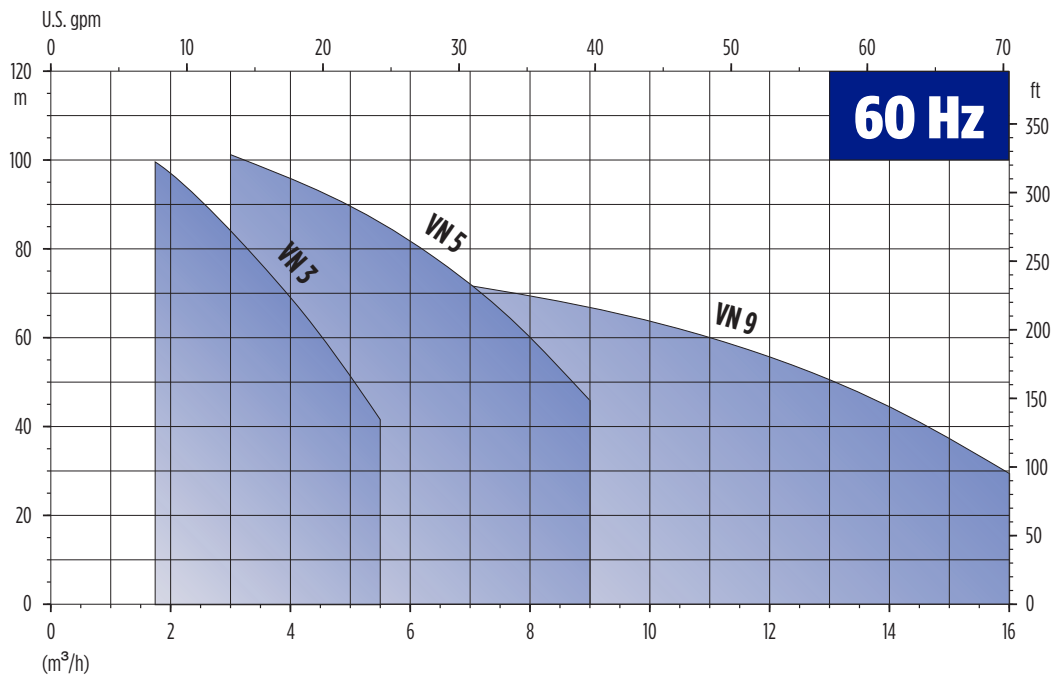
Three-phase 220-230 V

Various power cable lengths

Starter panel for single-phase units



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PUMP IDENTIFICATION CODE

VN 3 / 7 6

- 60 Hz (if empty, 50 Hz)
- Three-phase vers. (if empty, single-phase)
- Number of stage
- Nominal flow in m³/h
- Pump model

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VN 3-5-9

TABLE OF HYDRAULIC PERFORMANCES AT 50 Hz

TYPE OF PUMP	RATED POWER		Q = DELIVERY																
			l/min 0	25,0	33,3	41,7	50,0	58,3	66,7	75,0	83,3	91,7	100,0	116,7	133,3	150,0	166,7	183,3	233,3
	m ³ /h 0	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	7	8	9	10	11	14	16	
	US GMP 0	6,6	8,8	11,0	13,2	15,4	17,6	19,8	22,0	24,2	26,4	30,8	35,2	39,6	44,0	48,4	61,6	70,4	
		H = TOTAL M. HEAD OF WATER COLUMN																	
VN3-4	0,55	0,75	45	40	37,5	34,5	31	27	23	18									
VN3-5	0,75	1	56	49	46	42	38	33	27,5	21,5									
VN3-6	0,75	1	66,5	58	54	49,5	44,5	38,5	32	25									
VN3-7	0,9	1,2	77,5	68	63,5	58	52	45	37,5	29,5									
VN3-8	1,1	1,5	88	77	71,5	65	58	50,5	42	32,5									
VN3-9	1,5	2	100,5	89,5	82,5	76,5	68,5	59,5	50	39,5									
VN3-10	1,5	2	111,5	98,5	91,5	84	75	65,5	55	43									
VN5-4	0,75	1	45,5			40,5	39	38	36,5	35	33	30,5	28	22					
VN5-5	0,9	1,2	57			50,5	49	47,5	45,5	43,5	41	38	35	27,5					
VN5-6	1,1	1,5	68			59,5	58	55,5	53	50,5	47,5	44	40,5	31,5					
VN5-7	1,5	2	80,5			71	69	67	64,5	61	58	54	49,5	39					
VN5-8	1,5	2	91,5			81	78	75,5	72,5	69	65	60,5	55,5	44					
VN5-9	2,2	3	102,5			91	88	85	81,5	77,5	73	68,5	63	49,5					
VN5-10	2,2	3	113,5			100	97	93	89,5	85	80	75	69	53,5					
VN9-3	1,1	1,5	35,5								31,5	31	30,5	29	28	26	24	21,5	11,0
VN9-4	1,5	2	47,5								42,5	42	41	39,5	38	35,5	33	29,5	15
VN9-5	2,2	3	59,5								52,5	52	51	49	47	44	40,5	36,5	18,5
VN9-6	2,2	3	70,5								62	61	60	58	55	51,5	47,5	42	20,5
VN9-7	3	4	82,5								73	71,5	70,5	67,5	64,5	60,5	55,5	49,5	24
VN9-8	3	4	94								82	80,5	79	76	72	67,5	62	55	25
VN9-9	3	4	105								91	89	87,5	84	79,5	74,5	67,5	59,5	26,5

VN 3-5-9

TABLE OF HYDRAULIC PERFORMANCES AT 60 Hz

TYPE OF PUMP	RATED POWER		Q = DELIVERY																	
			l/min 0	25,0	33,3	41,7	50,0	58,3	66,7	75,0	83,3	91,7	100,0	116,7	133,3	150,0	166,7	183,3	233,3	266,7
	m ³ /h 0	1,5	2	2,5	3	3,5	4	4,5	5	5,5	6	7	8	9	10	11	14	16		
	US GMP 0	6,6	8,8	11,0	13,2	15,4	17,6	19,8	22,0	24,2	26,4	30,8	35,2	39,6	44,0	48,4	61,6	70,4		
		H = TOTAL M. HEAD OF WATER COLUMN																		
VN3-3	0,75	1	49		43	40,5	37,5	34,5	31	27,5	23	19								
VN3-4	0,9	1,2	65		55,5	52,5	49	44,5	40	35	29,5	24								
VN3-5	1,1	1,5	80,5		69	65	60	55	49	43	36,5	29								
VN3-6	1,5	2	97		84	79	73,5	67	60,5	53	45	36								
VN3-7	1,5	2	112		97	91	84	77	69	60,5	51	41								
VN5-2	0,75	1	33,5				30	29,5	28,5	28	27	26	25	22	19	15				
VN5-3	0,9	1,2	50				44	43	42	40,5	39	37,5	36	31,5	27	21				
VN5-4	1,1	1,5	65,5				58	56,5	55	53	51	49	46,5	41	34	26				
VN5-5	1,5	2	82,5				73	71,5	69	67	65	62	59	52	44	34				
VN5-6	2,2	3	99				88	86	83,5	81	78	75	71,5	63	53	41				
VN5-7	2,2	3	115				101	99	96	93	89	86	82	72	60	46				
VN9-2	1,1	1,5	34,5										30,5	29,5	29	28	27	25	19	14
VN9-3	1,5	2	51										45,5	44,5	43	41,5	39,5	37,5	28,5	20
VN9-4	2,2	3	68										60,5	59	57	55	52,5	49,5	37,5	26
VN9-5	3	4	84,5										74	72	69,5	67	64	60,5	45	30

MATERIALS/FLUIDS COMPATIBILITY

Pos.	Parts Descriptions	Type	MATERIAL	
			AISI	DIN / EN
10.00	Discharge head	Stainless steel	304	1.4301
20.00	Outer case with suction head	Stainless steel	304	1.4301
30.00	Motor housing	Stainless steel	304	1.4301
30.01 / 30.04	Covers/flanges motor casing	Stainless steel	304	1.4301
30.05 / 30.06	Upper mechanical seal	Ceramic / Carbon / NBR	-	-
30.06	Lower mechanical seal	Silicon Carbide / Carbon / NBR	-	-
30.08	Pump shaft	Stainless steel	304	1.4301
30.09	Screws and washers	Stainless steel	304	1.4301
40.00 / 40.01 / 40.03	Diffuser/s	Stainless steel	304	1.4301
40.02	Floating neck ring assembly	PTFE / PPS	-	-
50.00 / 50.01	Impeller/s with spacers	Stainless steel	304	1.4301



VN Series Performance Curves and Technical Data

VN 3 50Hz

VN 5 50Hz

VN 9 50Hz

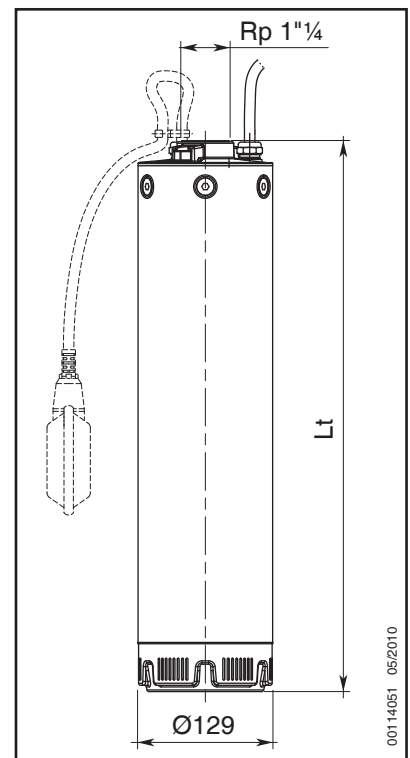
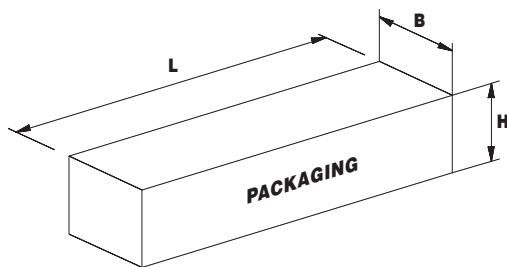
VN 3 50Hz

TECHNICAL DATA

Pump model		NUMBER OF STAGES	MOTOR POWER		INPUT POWER	CAPACITOR		RATED CURRENT	
Single-phase	Three-phase		kW	HP		μF	V	Single-phase 220-240V 50Hz	Three-phase 380-415V 50Hz
					kW				
VN 3/4	-	4	0.55	0.75	0.84	20	450	4.1	-
VN 3/5	-	5	0.75	1	0.99	20	450	4.7	-
VN 3/6	-	6	0.75	1	1.15	20	450	5.2	-
VN 3/7	-	7	0.9	1.2	1.34	30	450	6.7	-
VN 3/8	VN 3/8T	8	1.1	1.5	1.50	30	450	7.2	2.7
VN 3/9	VN 3/9T	9	1.5	2	1.73	35	450	9.2	3.1
VN 3/10	VN 3/10T	10	1.5	2	1.89	35	450	9.8	3.2

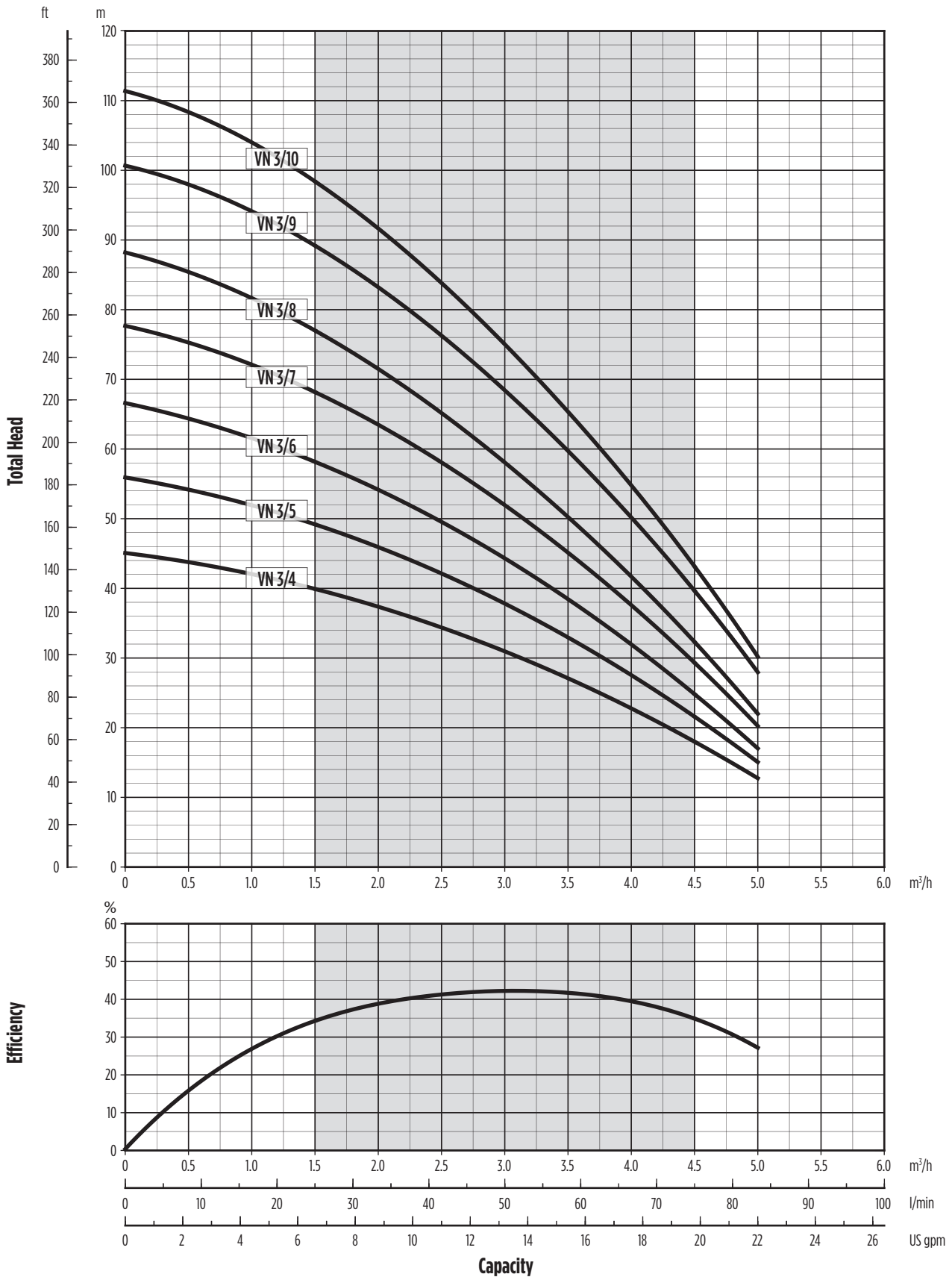
DIMENSIONS AND WEIGHTS

Pump model			PACKAGING				
Single-phase	Three-phase	Lt mm	L mm	B mm	H mm	Weight (kg)	
						Single-phase	Three-phase
VN 3/4	-	480	720	230	175	16.0	-
VN 3/5	-	504	720	230	175	18.0	-
VN 3/6	-	528	720	230	175	18.5	-
VN 3/7	-	552	720	230	175	20.0	-
VN 3/8	VN 3/8T	576	720	230	175	20.5	19.5
VN 3/9	VN 3/9T	650	800	230	195	23.5	21.5
VN 3/10	VN 3/10T	674	800	230	195	24.0	22.0



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PERFORMANCE CURVES 50HZ



The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

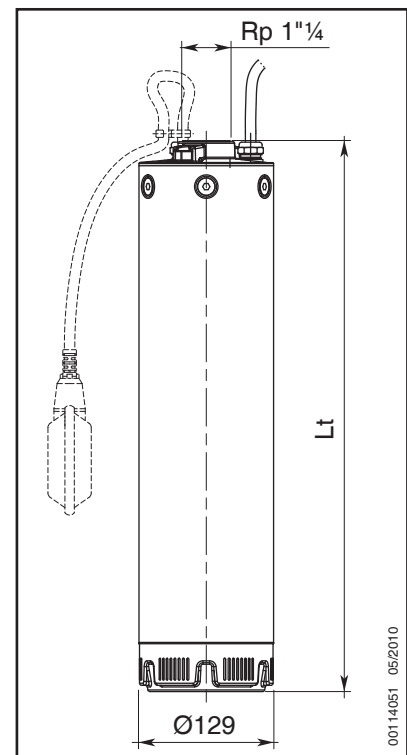
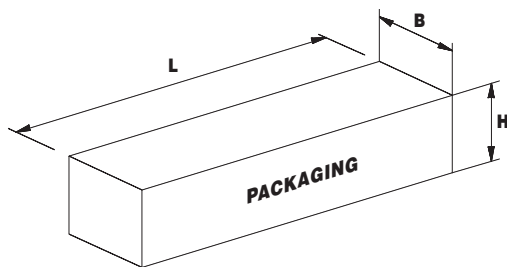
VN 5 50Hz

TECHNICAL DATA

Pump model		NUMBER OF STAGES	MOTOR POWER		INPUT POWER	CAPACITOR		RATED CURRENT	
Single-phase	Three-phase		kW	HP		kW	μF	V	Single-phase
					220-240V 50Hz				380-415V 50Hz
VN 5/4	-	4	0.75	1	1.07	20	450	5.0	-
VN 5/5	-	5	0.9	1.2	1.34	30	450	6.6	-
VN 5/6	VN 5/6T	6	1.1	1.5	1.56	30	450	7.4	2.7
VN 5/7	VN 5/7T	7	1.5	2	1.86	35	450	9.7	3.2
VN 5/8	VN 5/8T	8	1.5	2	2.08	35	450	10.5	3.5
VN 5/9	VN 5/9T	9	2.2	3	2.35	45	450	10.7	5.0
VN 5/10	VN 5/10T	10	2.2	3	2.56	45	450	11.5	5.2

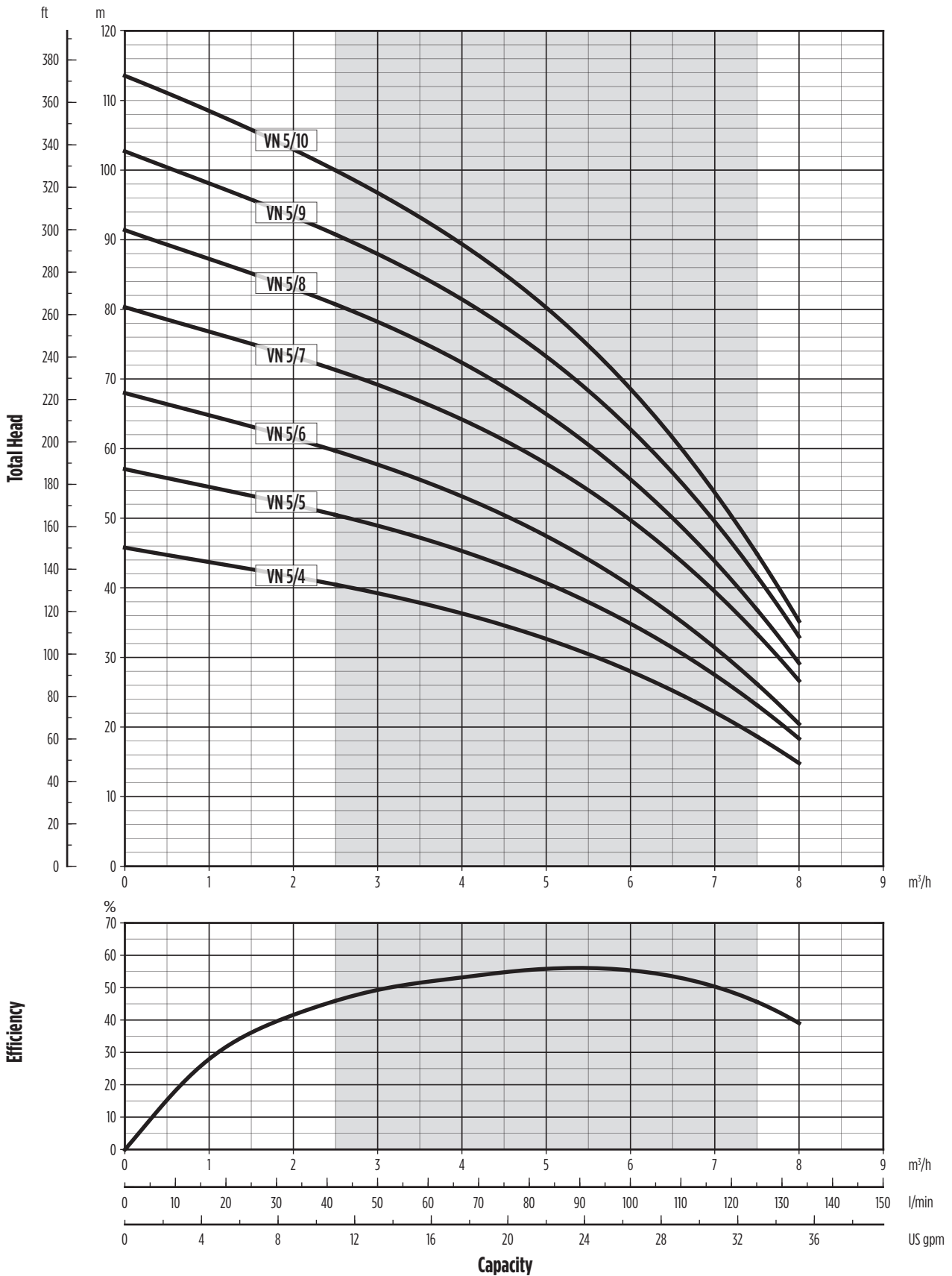
DIMENSIONS AND WEIGHTS

Pump model			PACKAGING				
Single-phase	Three-phase	Lt mm	L mm	B mm	H mm	Weight (kg)	
						Single-phase	Three-phase
VN 5/4	-	480	720	230	175	17.5	-
VN 5/5	-	504	720	230	175	19.0	-
VN 5/6	VN 5/6T	528	720	230	175	19.5	18.5
VN 5/7	VN 5/7T	602	800	230	195	22.5	20.5
VN 5/8	VN 5/8T	626	800	230	195	23.0	21.0
VN 5/9	VN 5/9T	650	800	230	195	25.0	23.5
VN 5/10	VN 5/10T	674	800	230	195	25.5	24.0



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PERFORMANCE CURVES 50HZ



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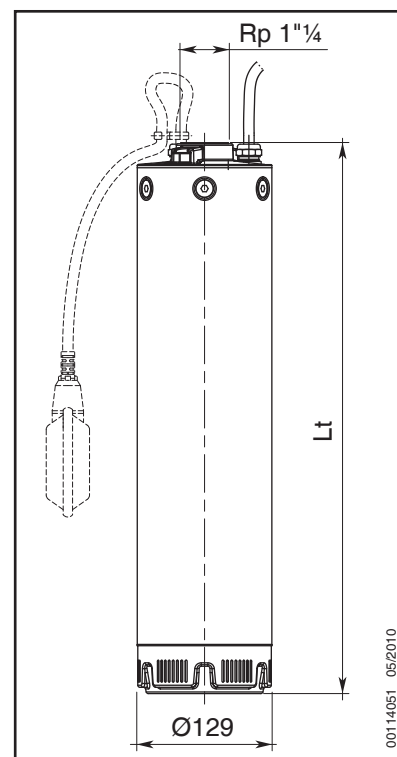
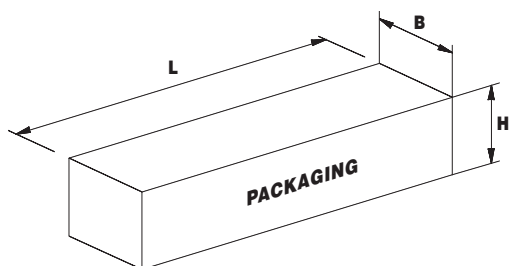
VN 9 50Hz

TECHNICAL DATA

Pump model		NUMBER OF STAGES	MOTOR POWER		INPUT POWER	CAPACITOR		RATED CURRENT	
Single-phase	Three-phase		kW	HP		kW	μF	V	Single-phase 220-240V 50Hz
					VN 9/3				
VN 9/4	VN 9/4T	4	1.5	2	1.86	35	450	9.7	3.2
VN 9/5	VN 9/5T	5	2.2	3	2.30	45	450	10.5	5.0
VN 9/6	VN 9/6T	6	2.2	3	2.68	45	450	11.9	5.4
-	VN 9/7T	7	3	4	3.16	-	-	-	5.9
-	VN 9/8T	8	3	4	3.54	-	-	-	6.3
-	VN 9/9T	9	3	4	3.91	-	-	-	6.8

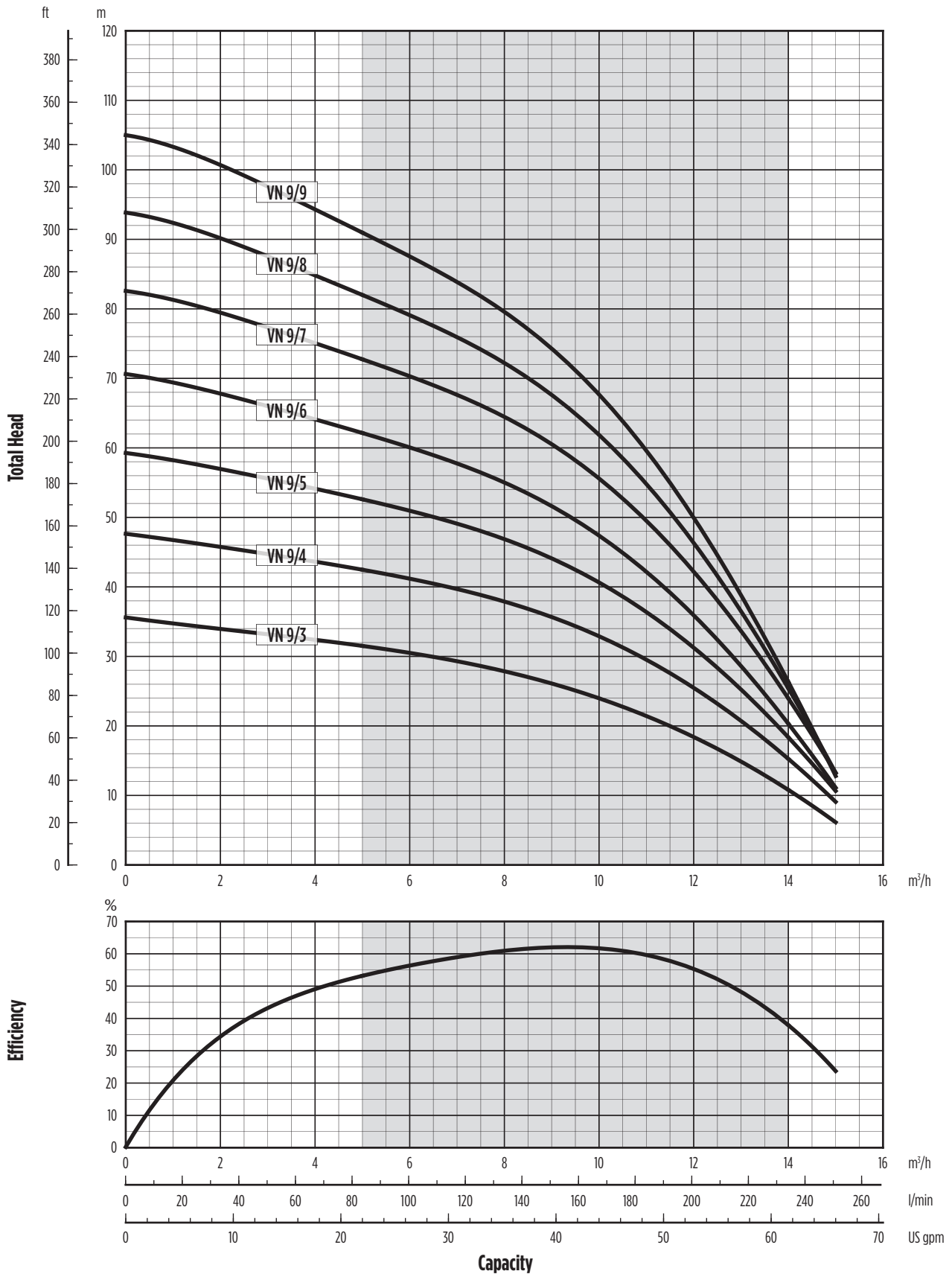
DIMENSIONS AND WEIGHTS

Pump model			PACKAGING				
Single-phase	Three-phase	Lt mm	L mm	B mm	H mm	Weight (kg)	
						Single-phase	Three-phase
VN 9/3	-	504	720	230	175	18.5	-
VN 9/4	VN 9/4T	584	720	230	175	21.5	19.5
VN 9/5	VN 9/5T	614	800	230	195	23.5	22.0
VN 9/6	VN 9/6T	644	800	230	195	24.5	22.5
-	VN 9/7T	674	800	230	195	-	24.5
-	VN 9/8T	704	800	230	195	-	25.0
-	VN 9/9T	734	800	230	195	-	25.5



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PERFORMANCE CURVES 50HZ



The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

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VN Series Performance Curves and Technical Data

VN 3 60Hz

VN 5 60Hz

VN 9 60Hz

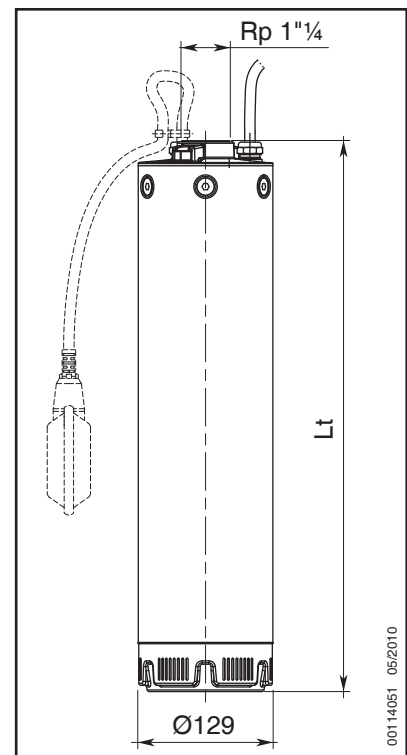
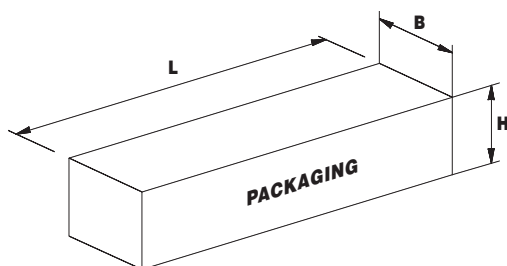
VN 3 60Hz

TECHNICAL DATA

Pump model		NUMBER OF STAGES	MOTOR POWER		INPUT POWER	CAPACITOR		RATED CURRENT		
Single-phase	Three-phase		kW	HP		μF	V	Single-phase	Three-phase	
									220-230V	220-230V
VN 3/36	-	3	0.75	1	1.05	20	450	5.2	-	-
VN 3/46	VN 3/4T6	4	0.9	1.2	1.30	20	450	6.2	4.5	2.6
VN 3/56	VN 3/5T6	5	1.1	1.5	1.61	25	450	8.0	5.2	3.0
VN 3/66	VN 3/6T6	6	1.5	2	1.99	35	450	9.2	6.2	3.6
VN 3/76	VN 3/7T6	7	1.5	2	2.26	35	450	10.4	6.8	3.9

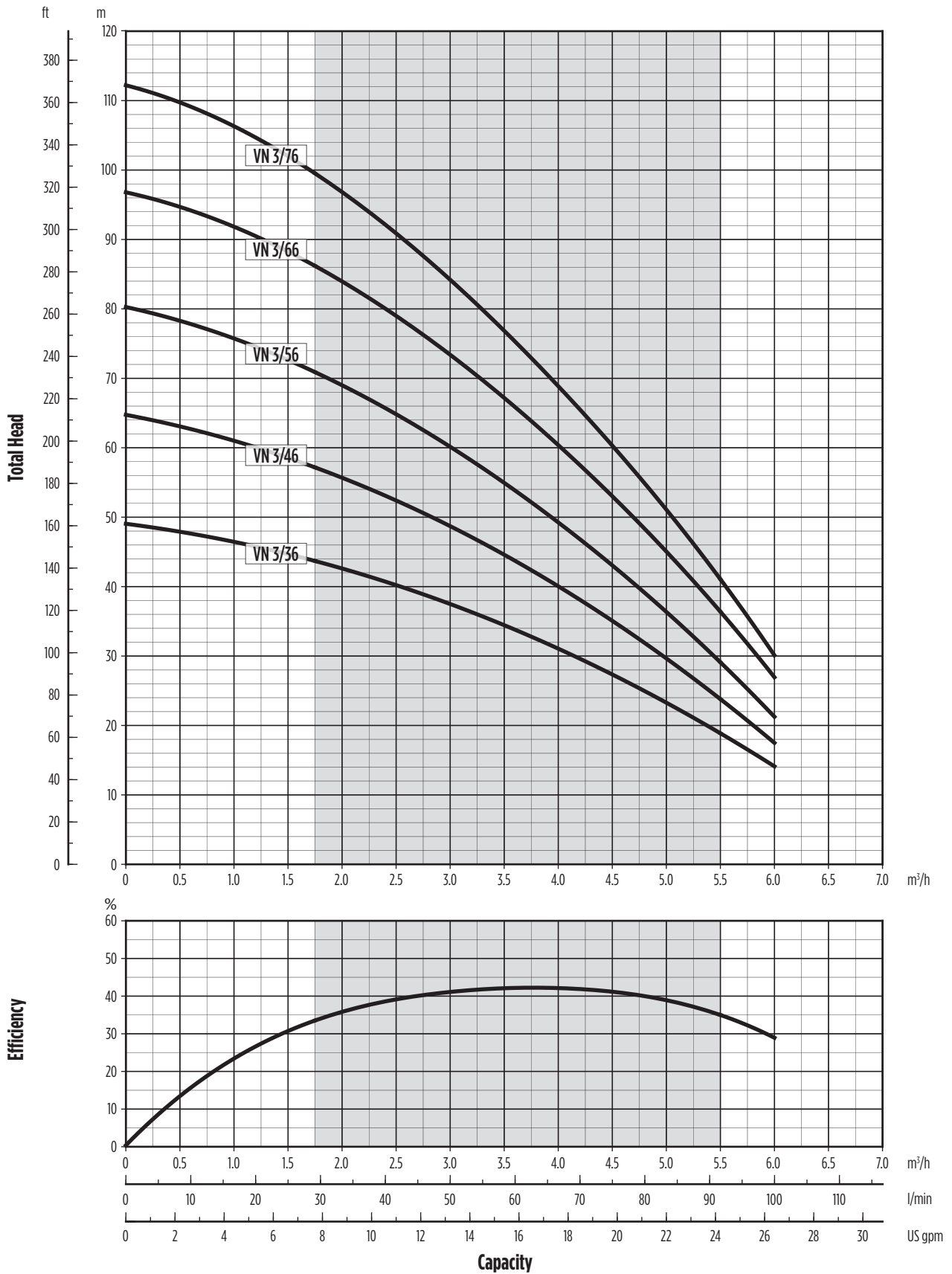
DIMENSIONS AND WEIGHTS

Pump model			PACKAGING				
Single-phase	Three-phase	Lt mm	L mm	B mm	H mm	Weight (kg)	
						Single-phase	Three-phase
VN 3/36	-	456	720	230	175	15.5	-
VN 3/46	VN 3/4T6	480	720	230	175	16.0	16.5
VN 3/56	VN 3/5T6	504	720	230	175	18.0	17.0
VN 3/66	VN 3/6T6	578	720	230	175	20.5	18.5
VN 3/76	VN 3/7T6	602	800	230	195	21.0	19.0



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PERFORMANCE CURVES 60HZ



The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

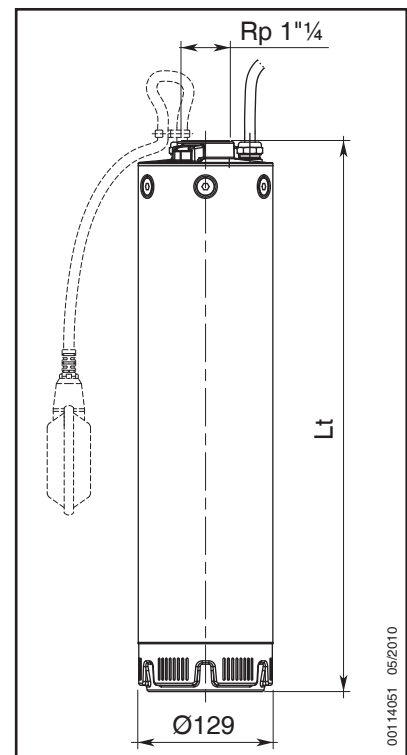
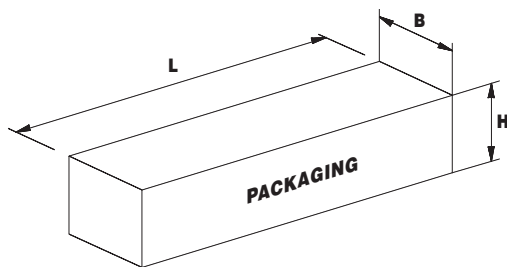
VN 5 60Hz

TECHNICAL DATA

Pump model		NUMBER OF STAGES	MOTOR POWER		INPUT POWER	CAPACITOR		RATED CURRENT		
Single-phase	Three-phase		kW	HP		μF	V	Single-phase	Three-phase	
					220-230V			220-230V	380-400V	
VN 5/26	-	2	0.75	1	1.00	20	450	5.0	-	-
VN 5/36	VN 5/3T6	3	0.9	1.2	1.35	20	450	6.4	4.7	2.7
VN 5/46	VN 5/4T6	4	1.1	1.5	1.78	25	450	8.6	5.5	3.2
VN 5/56	VN 5/5T6	5	1.5	2	2.26	35	450	10.4	6.8	3.9
-	VN 5/6T6	6	2.2	3	2.78	-	-	-	9.9	5.7
-	VN 5/7T6	7	2.2	3	3.16	-	-	-	10.6	6.1

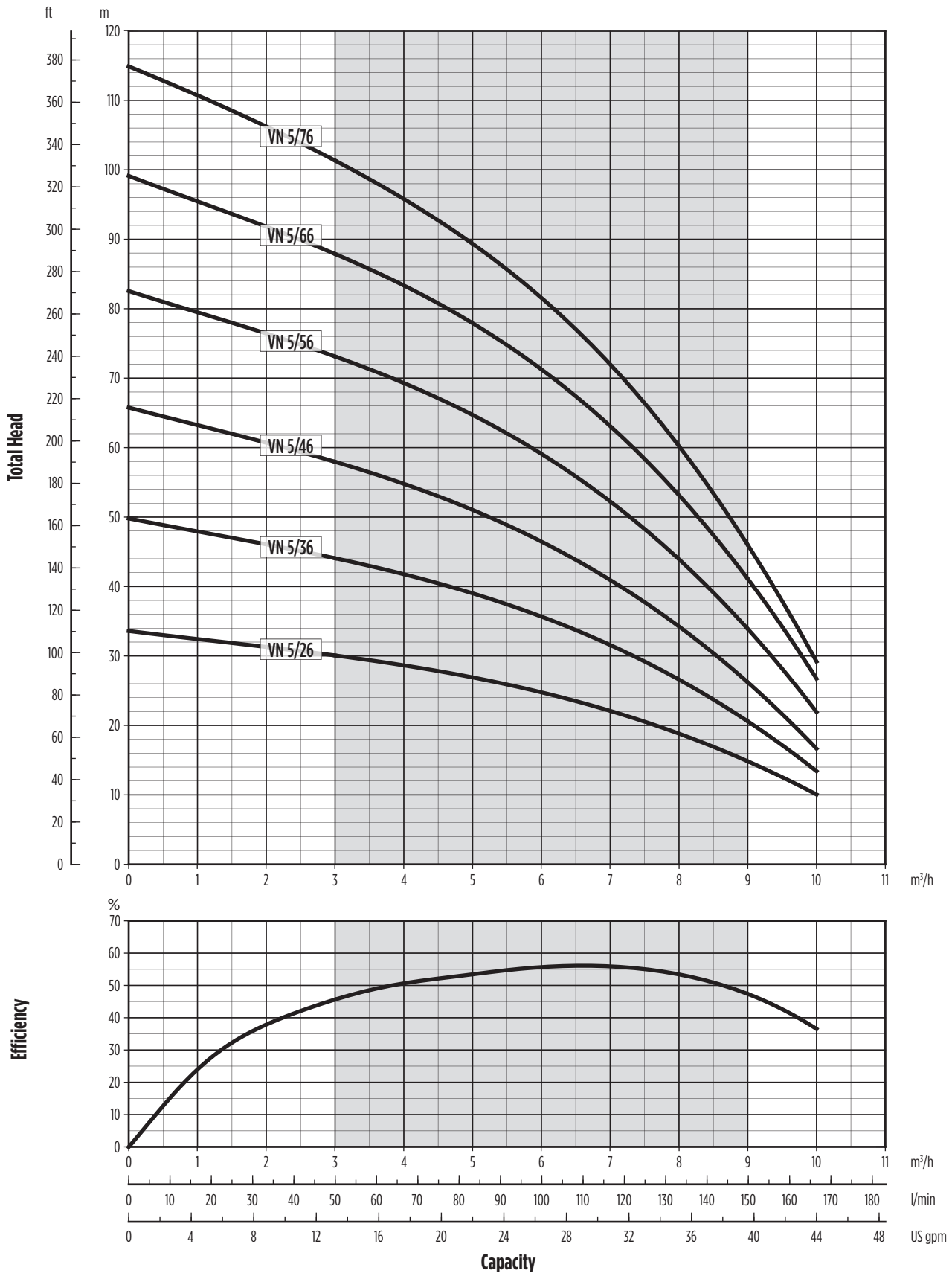
DIMENSIONS AND WEIGHTS

Pump model			PACKAGING				
Single-phase	Three-phase	Lt mm	L mm	B mm	H mm	Weight (kg)	
						Single-phase	Three-phase
VN 5/26	-	432	720	230	175	15.0	-
VN 5/36	VN 5/3T6	456	720	230	175	15.5	15.5
VN 5/46	VN 5/4T6	480	720	230	175	17.5	16.0
VN 5/56	VN 5/5T6	554	720	230	175	20.5	18.5
-	VN 5/6T6	578	720	230	175	-	21.0
-	VN 5/7T6	602	800	230	195	-	21.5



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PERFORMANCE CURVES 60HZ



The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

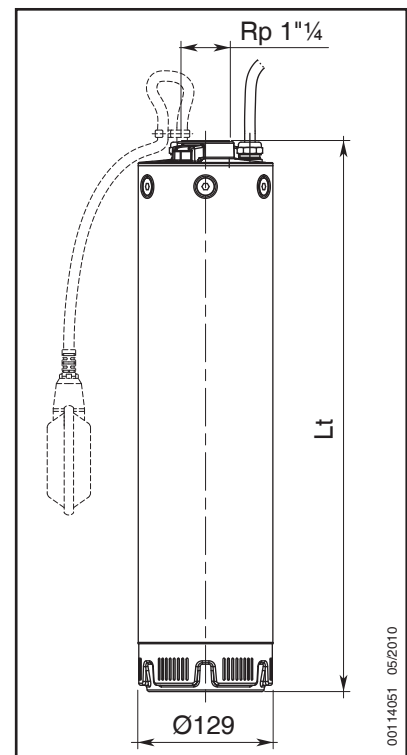
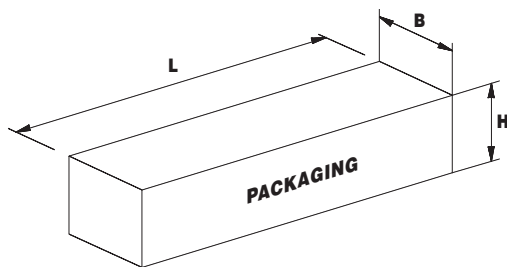
VN 9 60Hz

TECHNICAL DATA

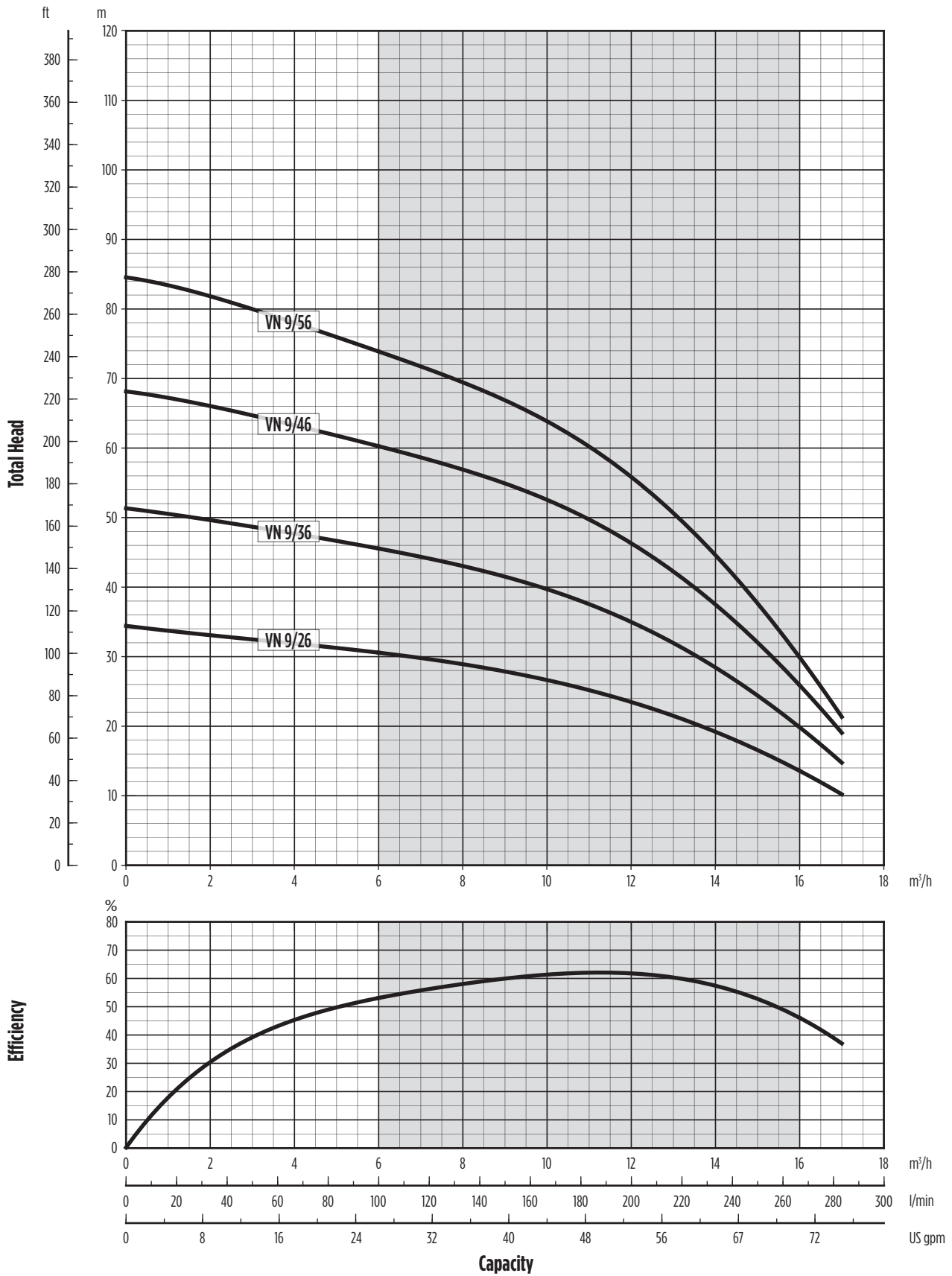
Pump model		NUMBER OF STAGES	MOTOR POWER		INPUT POWER	CAPACITOR		RATED CURRENT		
Single-phase	Three-phase		kW	HP		µF	V	Single-phase	Three-phase	
					220-230V			220-230V	380-400V	
VN 9/26	VN 9/2T6	2	1.1	1.5	1.59	25	450	7.9	5.0	2.9
VN 9/36	VN 9/3T6	3	1.5	2	2.36	35	450	10.8	7.1	4.1
-	VN 9/4T6	4	2.2	3	3.17	-	-	-	10.6	6.1
-	VN 9/5T6	5	3	4	3.75	-	-	-	11.8	6.8

DIMENSIONS AND WEIGHTS

Pump model			PACKAGING				
Monofase	Three-phase	Lt mm	L mm	B mm	H mm	Weight (kg)	
						Monofase	Three-phase
VN 9/26	VN 9/2T6	474	720	230	175	16.5	15.5
VN 9/36	VN 9/3T6	504	720	230	175	19.5	17.5
-	VN 9/4T6	584	720	230	175	-	20.5
-	VN 9/5T6	614	720	230	195	-	22.0



PERFORMANCE CURVES 60HZ



The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B



VN Series

Pump Section and

List of Main Components

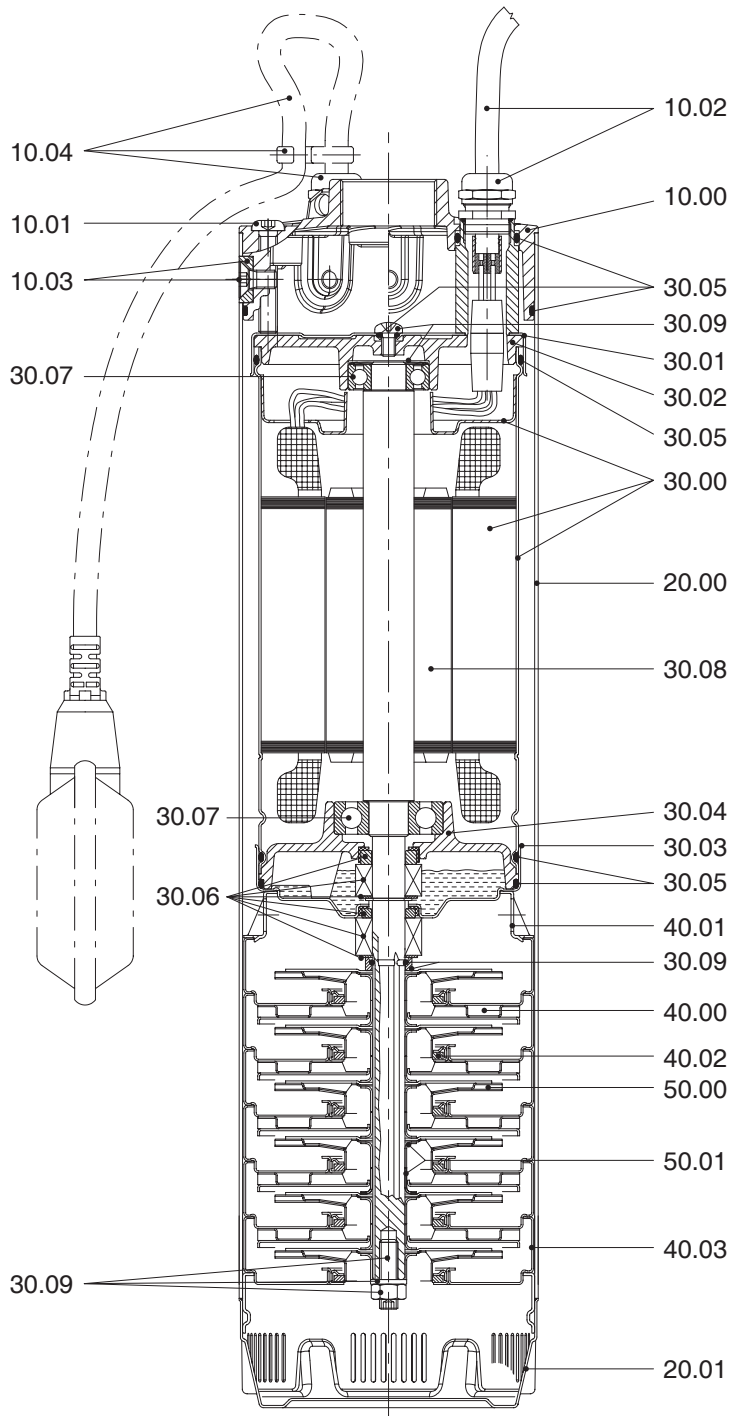
VN 3

VN 5

VN 9

Pump section and List of Main components

VN 3 - 5 - 9



Ref. N.	Description
10.00	Discharge head
10.01	Screws for pre-loading assembly
10.02	Power cable assembly
10.03	Screws and inserts
10.04	Level control assembly
20.00	Outer case with suction head
20.01	Suction strainer
30.00	Motor housing and stator
30.01	Upper motor cover
30.02	Upper bearing housing
30.03	Lower motor cover
30.04	Lower bearing cover
30.05	O-Rings
30.06	Mechanical seals
30.07	Ball bearings
30.08	Rotor and pump shaft
30.09	Screws, nut and washers
40.00	Stage housing and diffuser
40.01	Spacer
40.02	Floating neck ring assembly
40.03	Initial stage housing
50.00	Impeller
50.01	Impeller spacers

1) For VN 9, Diffusers = Impellers + 1. Ex. VN 9/4 = 4 impellers and 5 diffusers.

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