



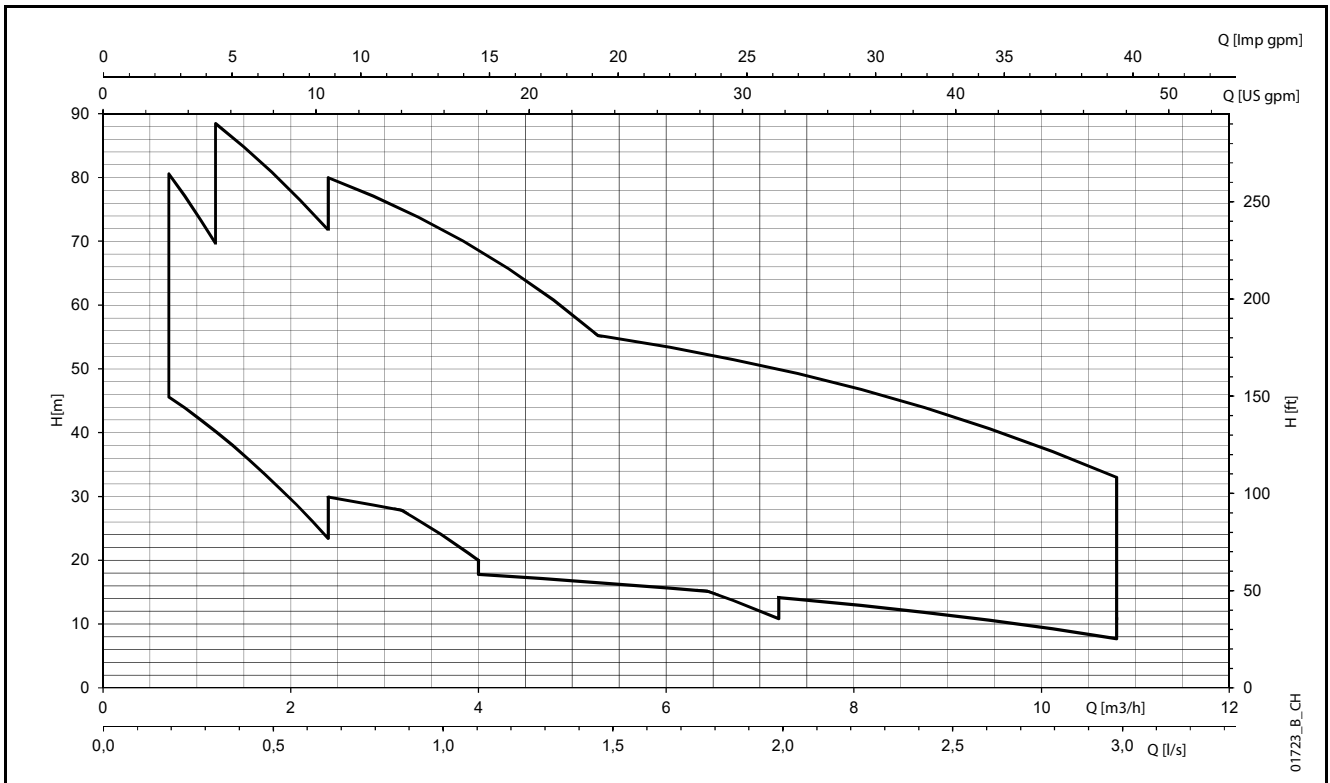
SCUBA Series

CLOSE-COUPLED SUBMERSIBLE ELECTRIC PUMPS

CONTENTS

GENERAL INTRODUCTION	5
IDENTIFICATION CODE, RATING PLATE.....	6
PUMP SECTION AND LIST OF MAIN COMPONENTS.....	7
TABLE OF MATERIALS.....	8
HYDRAULIC PERFORMANCE RANGE	9
1SC SERIES.....	10
3SC SERIES.....	12
5SC SERIES.....	14
8SC SERIES.....	16
ACCESSORIES.....	19
TECHNICAL APPENDIX.....	21

SCUBA SERIES HYDRAULIC PERFORMANCE RANGE



Close-coupled submersible electric pumps SCUBA Series

GENERAL INTRODUCTION



- **Head made of microcasted stainless steel**
- **Plug-in power supply cable and float switch**
- **Potable water version**
- **Noiseless operation**
- **Decentered delivery manifold and balanced lifting eye**
- **Sand abrasion resistant impellers**

MARKET SECTORS

RESIDENTIAL, AGRICULTURE, INDUSTRY.

APPLICATIONS

- Water supply from primary water supply tanks or reservoirs, 6" wells, basins and watercourses.
- Sprinkler irrigation systems.
- Pressure boosting with pump directly inserted in tank or well.
- Rain water harvesting.
- Car washing system.
- Pressurization on board ship
- Air purification/humidification systems
- Filtration systems
- Water recycling systems

CHARACTERISTIC DATA:

- **Delivery:** up to 10,8 m³/h at 2850 rpm.
- **Head:** up to 100 m at 2850 rpm.
- **Motor power:** 0,55 to 2,2 kW.
- **Maximum operating pressure:** 10 bar.
- **Single-phase version:** 220-240 V, 50 Hz 2 poles (2850 rpm).
- With built-in automatic reset overload protection.
- Standard version with built-in capacitor, or external capacitor upon request
- **Three-phase version:** 380-415 V, 50 Hz 2 poles (2850 rpm).
- Overload protection to be provided by user and installed in the control panel (see electric panel section).

OPERATING CONDITIONS

- **Temperature of pumped liquid:**
 - Standard version: 0 to 40°C.
 - Potable water version: 0 to 23°C.
- Vertical/Horizontal installation
- **Maximum immersion depth:** 17 m
- **Maximum permissible quantity of suspended sand:** 25 g/m³
- **Maximum quantity of chloride** at 20°C: 200 PPM
- **Passes solids:**
 - 1SC: up to 1 mm.
 - 3SC, 5SC, 8SC: up to 2 mm

CONSTRUCTION CHARACTERISTICS

- The liquid end is located underneath the electric motor, which is cooled by the pumped liquid.
- Impellers are radial centrifugal type, made of technopolymer.
- Diffusers, outer sleeve, motor casing, suction screen and shaft extension are made of stainless steel.
- Head is made of microcasted stainless steel.
- Ease of installation and maintenance due to plug-in power supply cable and float switch
- Potable water version available upon request.
- The electric motor is protected by a double seal system with an oil chamber.

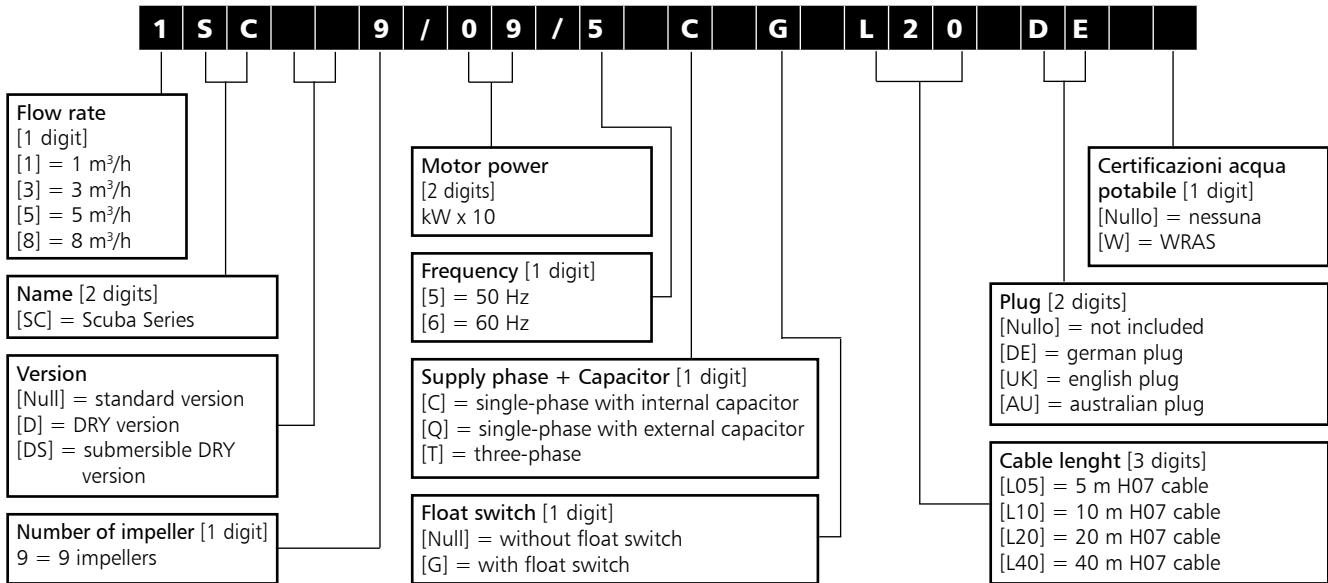
ACCESSORIES

- Kit with anode
- Kit with floating switch
- Control panel with external capacitor
- Control and protection panel

Upon request:

- Installation with float
- Kit with ResiBoost inverter
- 220 - 230V, three-phase version
- Power supply cord available in multiple length
- Potable water certified version available.

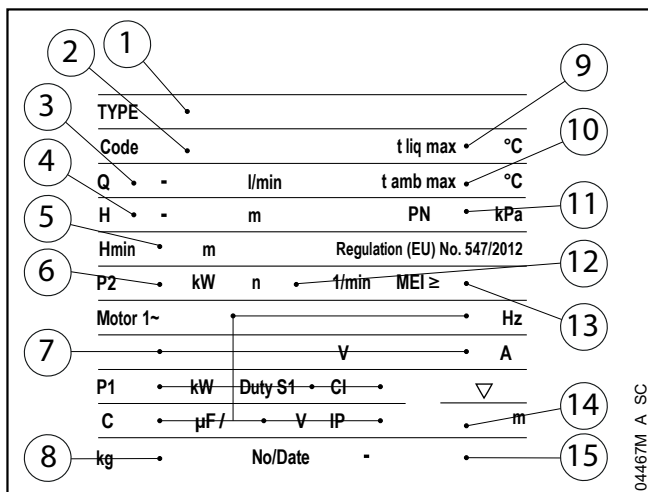
SCUBA SERIES IDENTIFICATION CODE



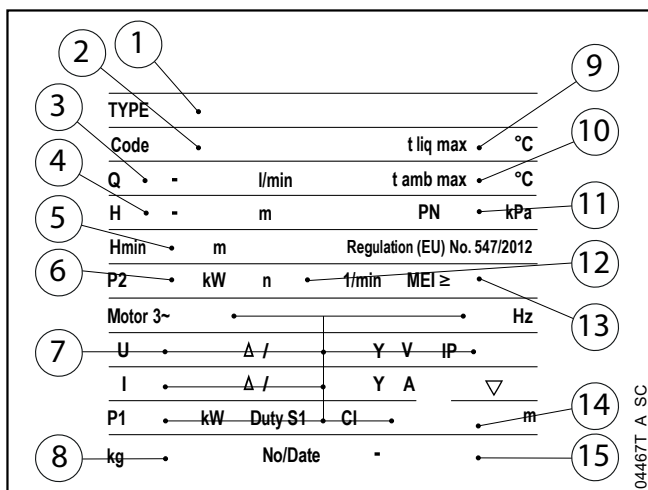
EXAMPLE: 1SC9/09/5 C G L20 DE

Flow rate 1 m³/h, Scuba series electric pump, 9 impellers, motor power 0,9 kW, frequency 50 Hz, single-phase version with internal capacitor, with float switch, 20 m of H07 cable and german plug.

RATING PLATE - SINGLE-PHASE



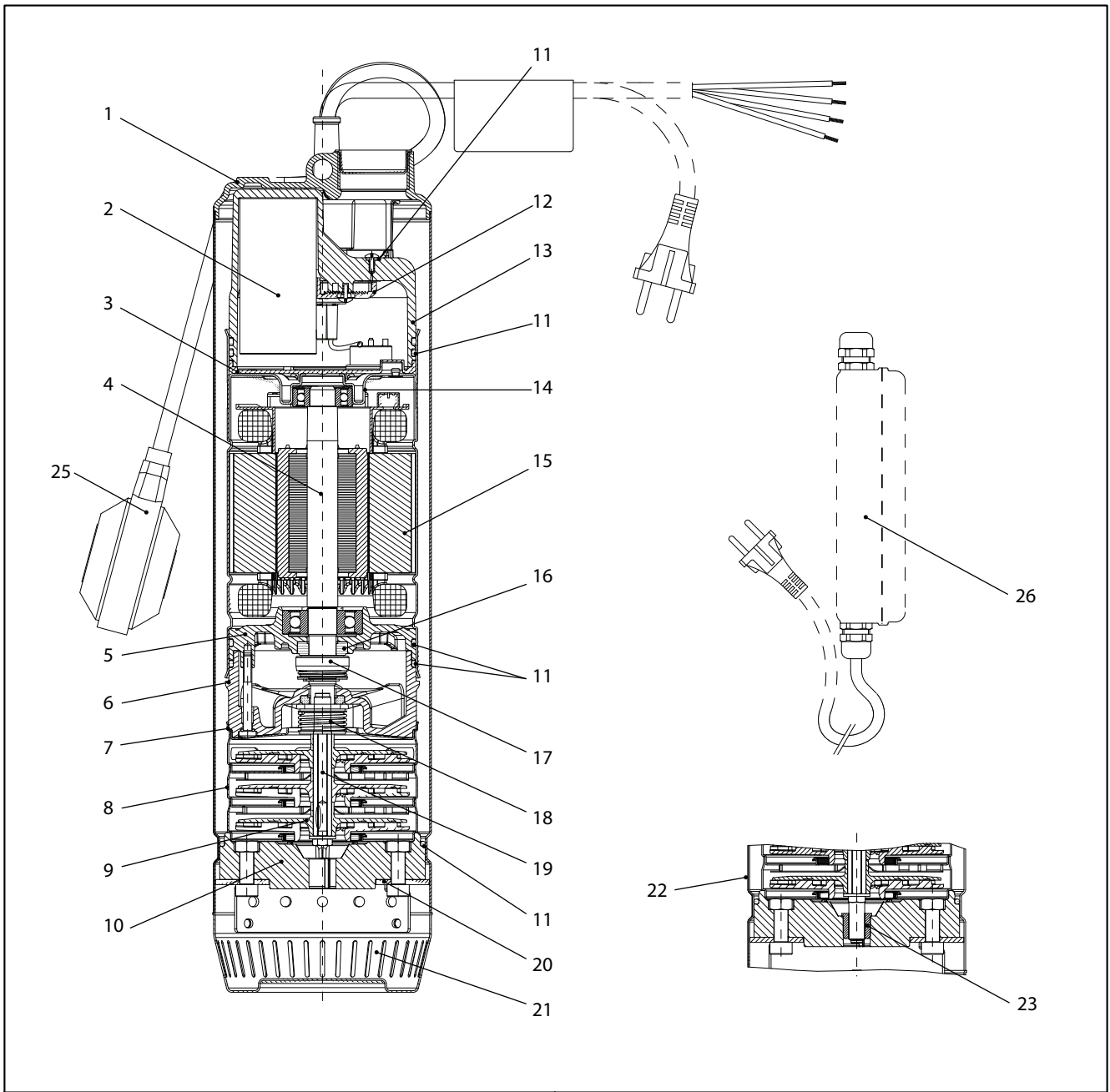
RATING PLATE - THREE-PHASE



LEGEND

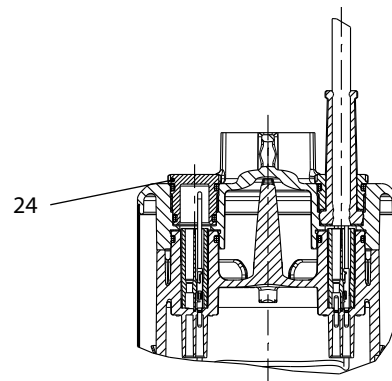
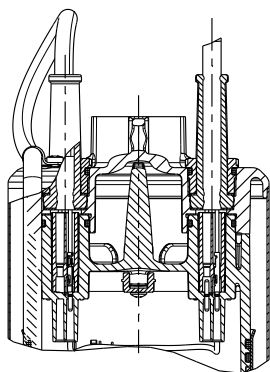
- 1 - Electric pump type
- 2 - Code
- 3 - Delivery range
- 4 - Head range
- 5 - Minimum head
- 6 - Motor nominal power
- 7 - Motor characteristics:
 - Motor type
 - Frequency
 - Supply voltage
 - Absorbed current
 - Absorbed power
 - Type of service S1
 - Thermal class
 - Capacity (single-phase version)
 - Capacitor voltage (single-phase version)
 - Protection class
- 8 - Weight
- 9 - Maximum operating liquid temperature
- 10 - Maximum operating ambient temperature
- 11 - Maximum operating pressure
- 12 - Speed
- 13 - Minimum efficiency index MEI
- 14 - Maximum immersion depth
- 15 - Serial number and manufacturing data

**SCUBA SERIES
PUMP SECTION AND LIST OF MAIN COMPONENTS**



VERSION WITH FLOAT SWITCH

VERSION WITHOUT FLOAT SWITCH



04453B_D_DS

SCUBA SERIES TABLE OF MATERIALS

N°	DENOMINATION	MATERIAL	REFERENCE STANDARD	
			EUROPE	USA
1	Head	Stainless steel	EN 10088-1-GX5CrNi19-10 (1.4308)	ASTM A743 CF8
2	Capacitor			
3	Connection container	PA66-GF25		
4	Motor shaft	Stainless steel	EN 10088-3-X17CrNi16-2 (1.4057)	AISI 431
5	Lower bearing support	Die-cast aluminium		
6	Lower head	Technopolymer		
7	Final bowl	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
8	Diffuser	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
9	Impeller	Technopolymer		
10	Bush bearing bracket	Technopolymer		
11	Elastomers	Nitrile rubber (NBR)		
12	Capacitor housing spacer	PA66-GF25		
13	Upper head	Technopolymer		
14	Upper bearing support	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
15	Sleeve with wound stator	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
16	Internal mech. seal (rotary part)	Carbographite		
17	Internal mech. seal (fixed part)	Steatite		
18	External mech. seal	Silicon carbide / Silicon carbide / NBR		
19	Pump shaft	Stainless steel	EN 10088-3-X17CrNi16-2 (1.4057)	AISI 431
20	Pack locking disk	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
21	Filter	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
22	Sleeve	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
23	Bush bearing (*)	Technopolymer		
24	Plug	Stainless steel	EN 10088-1-X5CrNi18-10 (1.4301)	AISI 304
25	Float switch (**)			
26	QC (***)			

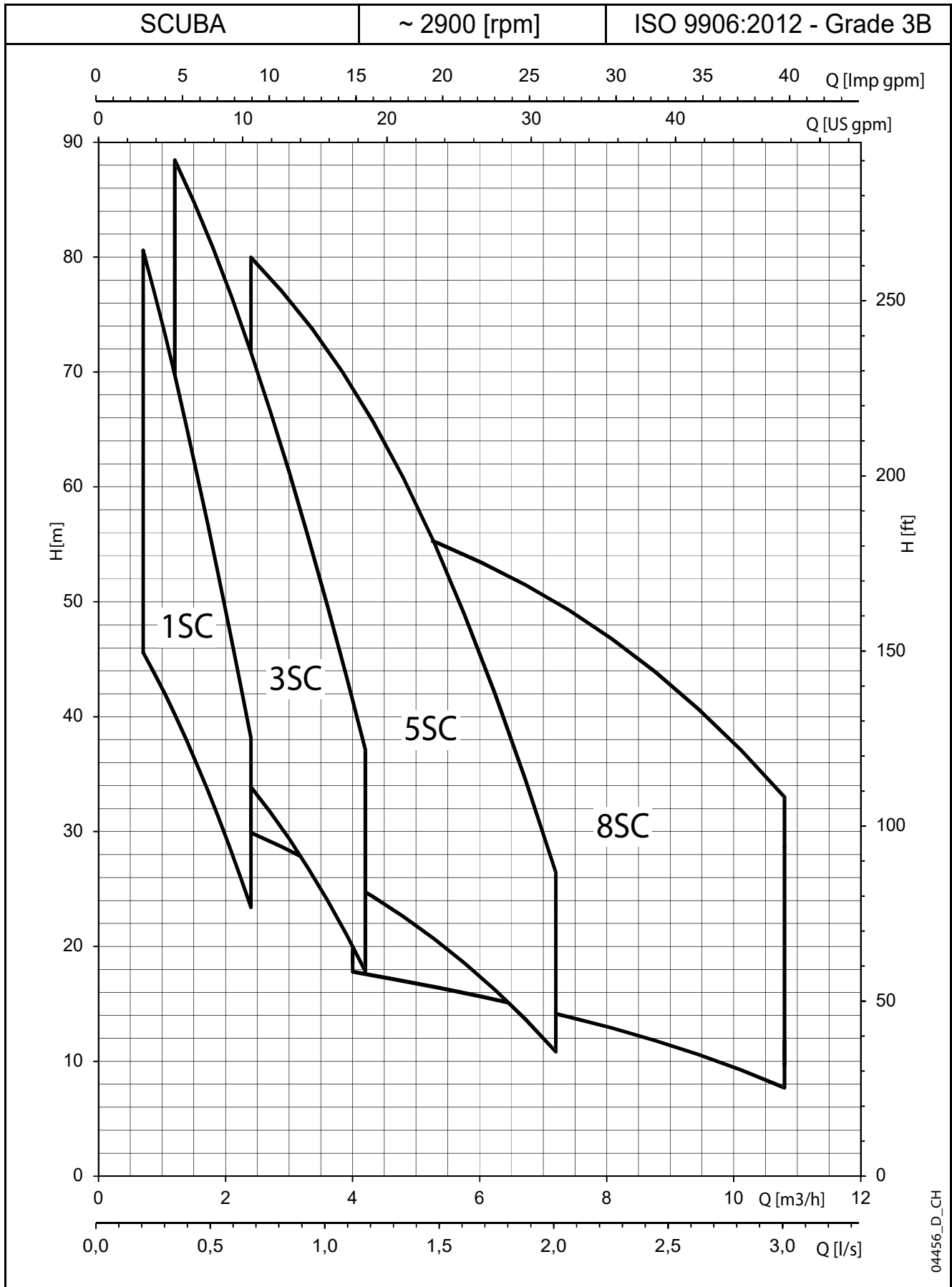
(*) Bush bearing version for models 1SC, 3SC, 5SC from 6 to 9 stages; 8SC from 5 to 6 stages.

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(**) for G version only.

(***) for single-phase without capacitor only.

**SCUBA SERIES
HYDRAULIC PERFORMANCE RANGE**



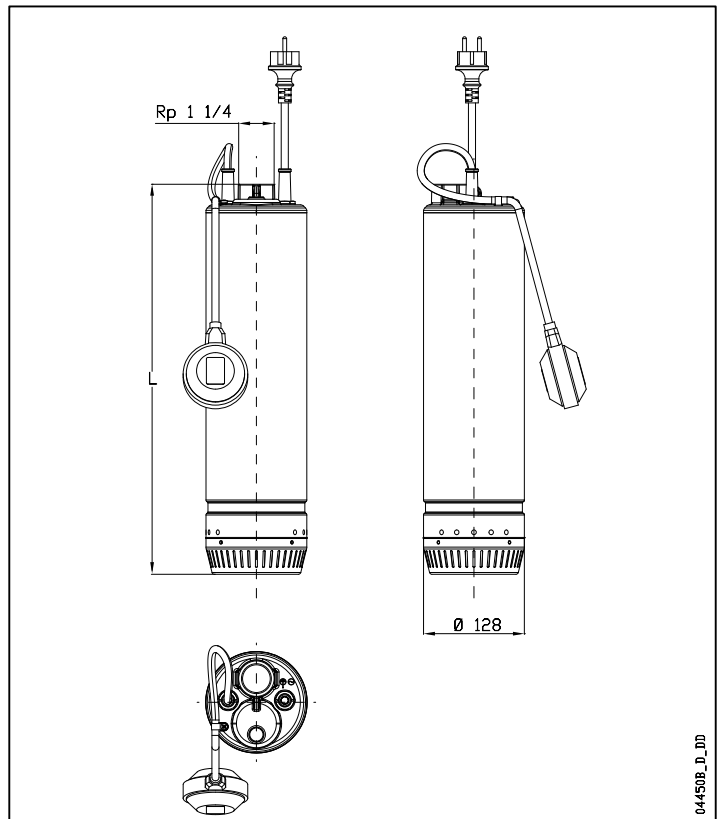
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1SC SERIES DIMENSIONS AND WEIGHTS

PUMP TYPE	N. OF STAGE	DIMENSIONS L mm	WEIGHT kg
1SC6/05/5..	6	554,9	13,4
1SC7/07/5..	7	594,9	16,0
1SC9/09/5..	9	634,9	16,5
1SC6/05/5T	6	554,9	13,9
1SC7/07/5T	7	594,9	16,4
1SC9/09/5T	9	634,9	17,0

PUMP TYPE	SECTION	CABLE TYPE	CABLE LENGHT m
1SC6/05/5..	3G1	H07RN-F	20,0
1SC7/07/5..	3G1,5	H07RN-F	20,0
1SC9/09/5..	3G1,5	H07RN-F	20,0
1SC6/05/5T	4G1	H07RN-F	20,0
1SC7/07/5T	4G1,5	H07RN-F	20,0
1SC9/09/5T	4G1,5	H07RN-F	20,0

Versions with 10 meter cable available on request 1SC-2p50-en_a_td



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HYDRAULIC PERFORMANCE TABLE

PUMP TYPE	RATED POWER		Q = DELIVERY									
			l/min	11.7	15.0	18.3	21.7	25.0	28.3	31.7	35.0	40.0
			0	0.7	0.9	1.1	1.3	1.5	1.7	1.9	2.1	2.4
	kW	HP	H = TOTAL HEAD METRES COLUMN OF WATER									
1SC6/05/5..	0.55	0.75	62.5	55.6	53.0	50.2	47.3	44.0	40.6	36.9	33.1	27.0
1SC7/07/5..	0.75	1	72.3	63.6	60.4	56.9	53.2	49.2	45.1	40.9	36.6	29.9
1SC9/09/5..	0.9	1.2	91.0	80.6	76.5	72.0	67.3	62.3	57.2	51.9	46.5	38.1
1SC6/05/5T	0.55	0.75	59.2	52.0	49.4	46.6	43.6	40.5	37.2	33.8	30.3	25.0
1SC7/07/5T	0.75	1	74.3	67.5	64.7	61.7	58.3	54.7	50.8	46.7	42.5	35.7
1SC9/09/5T	0.9	1.2	90.3	79.5	75.3	70.8	66.0	60.9	55.7	50.3	44.9	36.6

Hydraulic performances in compliance with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

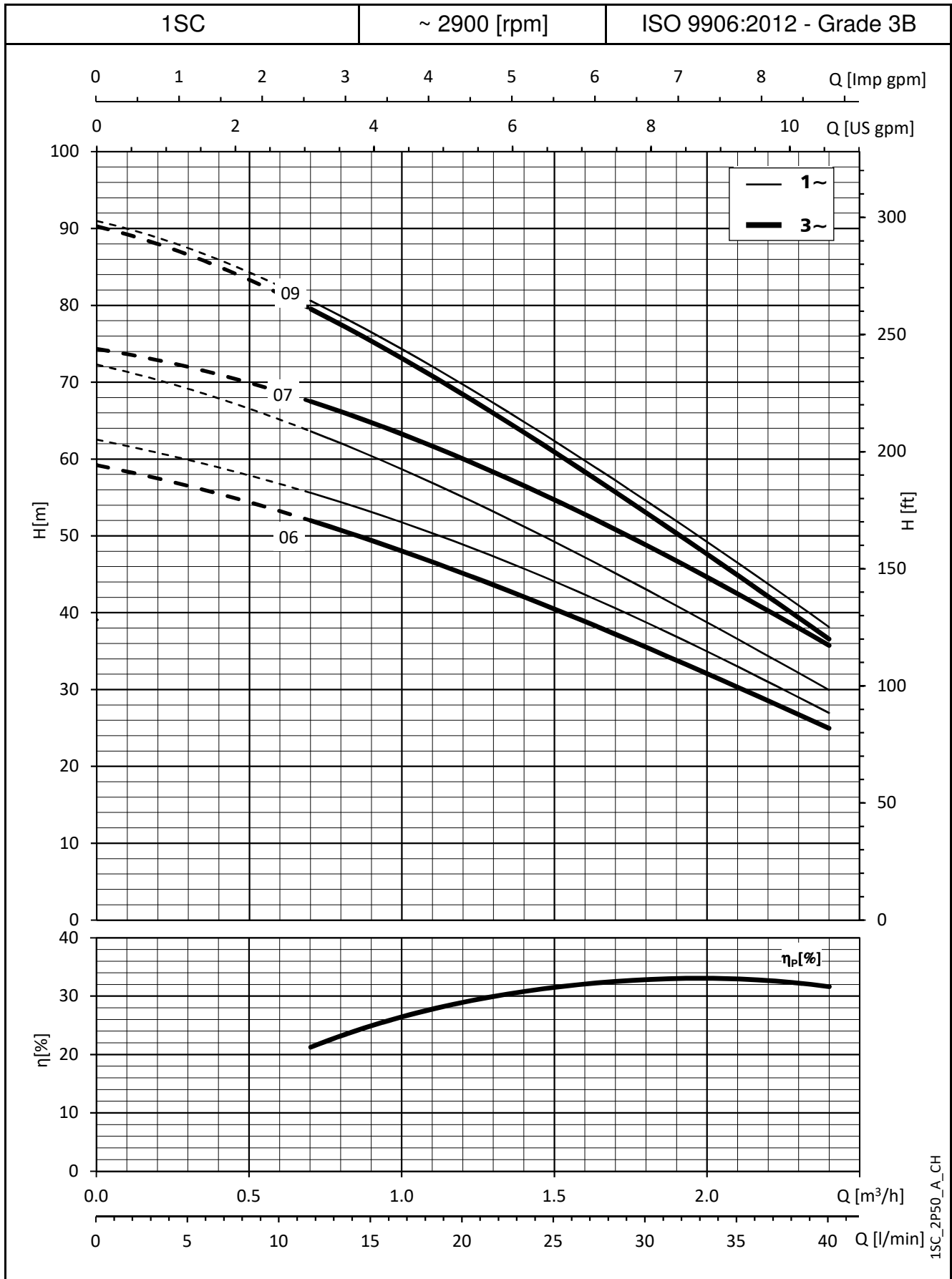
1SC-2p50-en_a_tp

PUMP - CONTROL PANEL COMBINATION TABLE

PUMP TYPE	ABSORBED POWER* (P1 MAX)	ABSORBED CURRENT* 220-240 V	ABSORBED CURRENT* 380-415 V	CAPACITOR μ F / 450 V	QC			ELECTRIC PUMP WEIGHT kg	PANEL TYPE** 380-415 V	
					TYPE	CABLE SECTION			QTD	Q3D
						MOTOR SIDE	POWER SIDE			
1SC6/05/5..	0.91	4.26	-	16.00	0.55	4G1,5	3G1,5	15.1	-	-
1SC7/07/5..	1.08	5.26	-	25.00	0.90	4G1,5	3G1,5	17.6	-	-
1SC9/09/5..	1.27	5.68	-	25.00	0.90	4G1,5	3G1,5	18.2	-	-
1SC6/05/5T	0.87	2.81	1.62	-	-	-	-	-	05-07	05-07
1SC7/07/5T	1.03	4.21	2.43	-	-	-	-	-	07-15	07-15
1SC9/09/5T	1.26	4.38	2.53	-	-	-	-	-	07-15	07-15

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1SC SERIES OPERATING CHARACTERISTICS

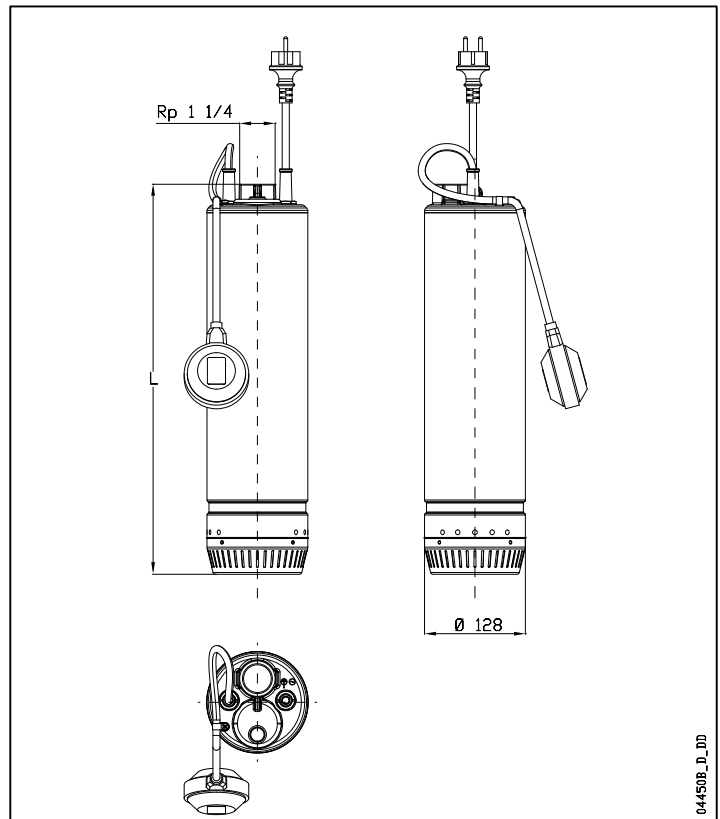


3SC SERIES DIMENSIONS AND WEIGHTS

PUMP TYPE	N. OF STAGE	DIMENSIONS L mm	WEIGHT kg
3SC4/05/5..	4	515	13,5
3SC5/07/5..	5	555	15,0
3SC7/09/5..	7	595	17,0
3SC8/11/5..	8	635	18,0
3SC9/15/5..	9	685	19,6
3SC4/05/5T	4	515	14,0
3SC5/07/5T	5	555	16,0
3SC7/09/5T	7	595	16,3
3SC8/15/5T	8	635	16,8
3SC9/22/5T	9	685	20,6

PUMP TYPE	SECTION	CABLE TYPE	CABLE LENGTH m
3SC4/05/5..	3G1	H07RN-F	20,0
3SC5/07/5..	3G1,5	H07RN-F	20,0
3SC7/09/5..	3G1,5	H07RN-F	20,0
3SC8/11/5..	3G1,5	H07RN-F	20,0
3SC9/15/5..	3G1,5	H07RN-F	20,0
3SC4/05/5T	4G1	H07RN-F	20,0
3SC5/07/5T	4G1,5	H07RN-F	20,0
3SC7/09/5T	4G1,5	H07RN-F	20,0
3SC8/15/5T	4G1,5	H07RN-F	20,0
3SC9/22/5T	4G1,5	H07RN-F	20,0

Versions with 10 meter cable available on request 3SC-2p50-en_a_td



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HYDRAULIC PERFORMANCE TABLE

PUMP TYPE	RATED POWER		Q = DELIVERY									
			l/min	20,0	26,7	33,3	40,0	46,7	53,3	60,0	66,7	70,0
			0	1,2	1,6	2,0	2,4	2,8	3,2	3,6	4,0	4,2
	kW	HP	H = TOTAL HEAD METRES COLUMN OF WATER									
3SC4/05/5..	0,55	0,75	45,4	40,8	38,8	36,5	33,9	31,0	27,7	24,0	20,0	17,8
3SC5/07/5..	0,75	1	56,2	51,1	48,5	45,5	42,2	38,4	34,2	29,6	24,7	22,0
3SC7/09/5..	0,9	1,2	77,2	68,6	64,6	60,1	55,1	49,6	43,8	37,5	30,9	27,4
3SC8/11/5..	1,1	1,5	86,1	75,6	71,5	66,9	61,7	55,9	49,4	42,1	33,8	29,3
3SC9/15/5..	1,5	2	98,4	88,4	83,6	78,0	71,7	64,9	57,6	49,7	41,5	37,2
3SC4/05/5T	0,55	0,75	46,5	42,6	40,7	38,6	36,1	33,2	30,0	26,5	22,6	20,4
3SC5/07/5T	0,75	1	57,5	52,2	49,7	46,9	43,7	40,1	36,1	31,6	26,7	24,1
3SC7/09/5T	0,9	1,2	78,1	70,3	66,8	62,8	58,3	53,1	47,3	40,8	33,6	29,7
3SC8/15/5T	1,5	2	89,1	79,6	75,7	71,2	66,1	60,2	53,5	45,8	37,1	32,3
3SC9/22/5T	2,2	3	99,7	89,0	83,9	78,2	71,9	65,1	57,7	49,9	41,7	37,5

*Maximum values within operating range.

3SC-2p50-en_a_tp

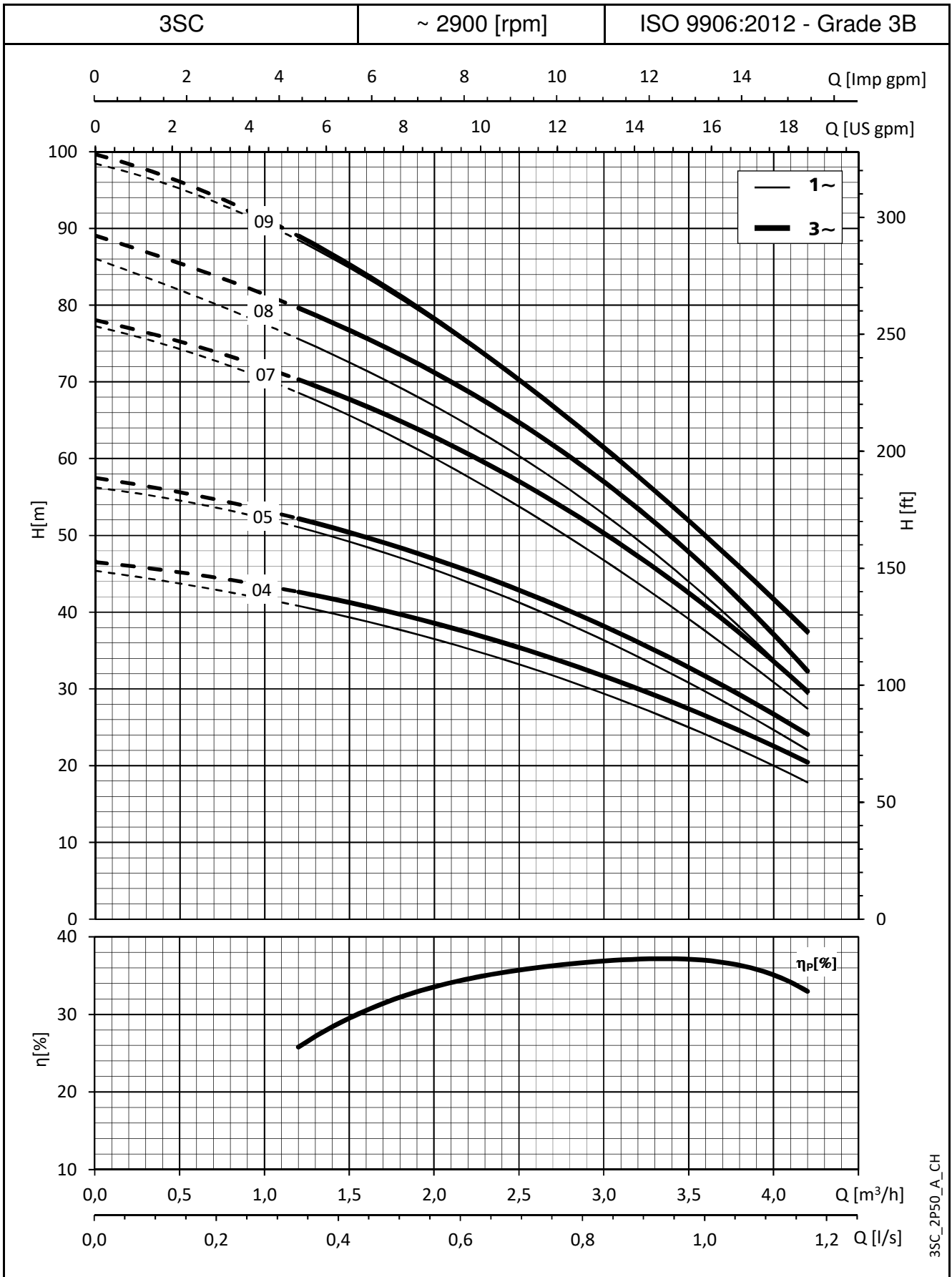
PUMP - CONTROL PANEL COMBINATION TABLE

PUMP TYPE	ABSORBED POWER* (P1 MAX) A	ABSORBED CURRENT* 220-240 V A	ABSORBED CURRENT* 380-415 V A	CAPACITOR µF / 450 V	QC			PANEL TYPE** 380-415 V		
					TYPE	CABLE SECTION MOTOR SIDE	POWER SIDE kg	QTD/..	Q3D/..	
3SC4/05/5..	0.85	4.06	-	16	0.55	4G1,5	3G1,5	14.5	-	-
3SC5/07/5..	1.05	4.80	-	25	0.9	4G1,5	3G1,5	17.0	-	-
3SC7/09/5..	1.31	5.88	-	25	0.9	4G1,5	3G1,5	17.7	-	-
3SC8/11/5..	1.55	6.85	-	30	1.1	4G1,5	3G1,5	19.3	-	-
3SC9/15/5..	1.79	7.94	-	40	1.5	4G1,5	3G1,5	21.9	-	-
3SC4/05/5T	0.79	0.89	1.55	-	-	-	-	-	03-05	03-05
3SC5/07/5T	1.00	1.33	2.30	-	-	-	-	-	05-07	05-07
3SC7/09/5T	1.31	1.49	2.58	-	-	-	-	-	07-15	07-15
3SC8/15/5T	1.49	1.95	3.37	-	-	-	-	-	07-15	07-15
3SC9/22/5T	1.65	2.12	3.68	-	-	-	-	-	07-15	07-15

* Maximum values within operating range

3SC-2p50-en_a_tp

3SC SERIES OPERATING CHARACTERISTICS



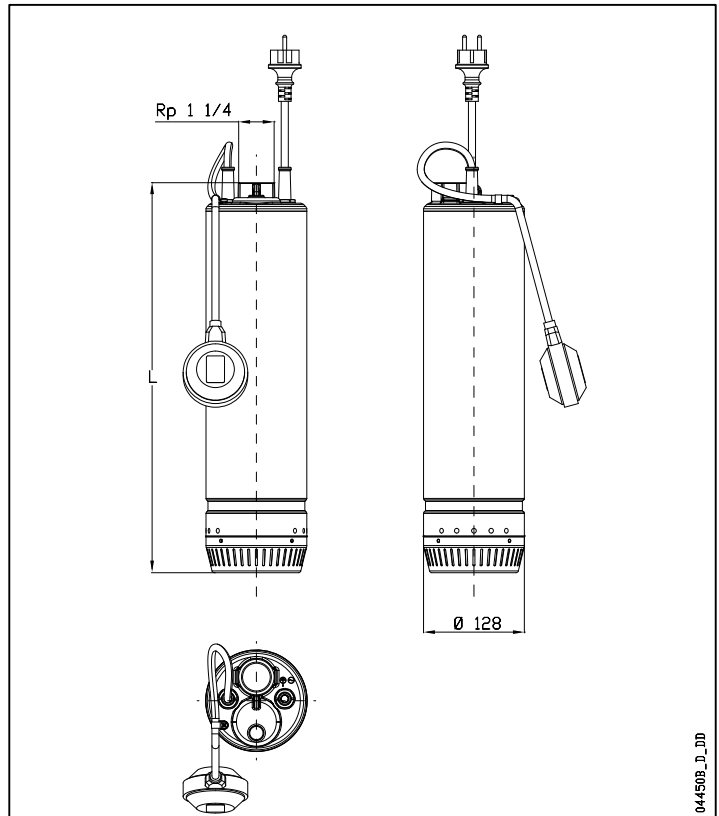
3SC_2P50_A_CH

5SC SERIES DIMENSIONS AND WEIGHTS

PUMP TYPE	N. OF STAGE	DIMENSIONS L mm	WEIGHT kg
5SC3/05/5..	3	495	13,0
5SC4/07/5..	4	535	15,7
5SC5/09/5..	5	555	16,0
5SC6/11/5..	6	595	17,7
5SC8/15/5..	8	665	20,5
5SC3/05/5T	3	495	14,3
5SC4/07/5T	4	535	16,1
5SC5/09/5T	5	555	16,5
5SC6/11/5T	6	595	18,0
5SC7/15/5T	7	625	20,1
5SC8/22/5T	8	665	21,0

PUMP TYPE	SECTION	CABLE TYPE	CABLE LENGTH m
5SC3/05/5..	3G1	H07RN-F	20,0
5SC4/07/5..	3G1,5	H07RN-F	20,0
5SC5/09/5..	3G1,5	H07RN-F	20,0
5SC6/11/5..	3G1,5	H07RN-F	20,0
5SC8/15/5..	3G1,5	H07RN-F	20,0
5SC3/05/5T	4G1	H07RN-F	20,0
5SC4/07/5T	4G1,5	H07RN-F	20,0
5SC5/09/5T	4G1,5	H07RN-F	20,0
5SC6/11/5T	4G1,5	H07RN-F	20,0
5SC7/15/5T	4G1,5	H07RN-F	20,0
5SC8/22/5T	4G1,5	H07RN-F	20,0

Versions with 10 meter cable available on request 5SC-2p50-en_a_td



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HYDRAULIC PERFORMANCE TABLE

POMPA TIPO	POTENZA NOMINALE		Q = PORTATA									
			l/min	40	50	60	70	80	90	100	110	120
			0	2,4	3,0	3,6	4,2	4,8	5,4	6,0	6,6	7,2
	kW	HP	H = PREVALENZA TOTALE IN METRI COLONNA ACQUA									
5SC3/05/5..	0,55	0,75	35,1	29,9	28,4	26,7	24,7	22,6	20,2	17,4	14,3	10,8
5SC4/07/5..	0,75	1	46,3	39,4	37,4	35,2	32,6	29,7	26,3	22,4	18,1	13,3
5SC5/09/5..	0,9	1,2	58,2	48,9	46,4	43,5	40,3	36,7	32,5	27,8	22,4	16,4
5SC6/11/5..	1,1	1,5	69,1	58,3	55,2	51,8	47,8	43,3	38,2	32,4	25,8	18,6
5SC8/15/5..	1,5	2	91,9	77,0	73,0	68,5	63,2	57,0	50,0	41,9	33,0	23,2
5SC3/05/5T	0,55	0,75	35,5	30,4	28,9	27,2	25,4	23,3	20,9	18,2	15,1	11,5
5SC4/07/5T	0,75	1	47,5	41,4	39,6	37,5	35,2	32,4	29,2	25,4	21,2	16,3
5SC5/09/5T	0,9	1,2	59,9	51,5	49,0	46,2	43,1	39,5	35,4	30,7	25,3	19,0
5SC6/11/5T	1,1	1,5	69,0	58,8	56,0	52,6	48,8	44,2	39,0	33,1	26,4	19,1
5SC7/15/5T	1,5	2	81,5	70,9	67,7	63,8	59,2	53,8	47,6	40,5	32,6	24,1
5SC8/22/5T	2,2	3	93,5	80,0	76,3	72,0	66,8	60,8	53,7	45,6	36,4	26,4

*Valori massimi nel campo di funzionamento.

5SC-2p50_a_th

Prestazioni idrauliche conformi ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

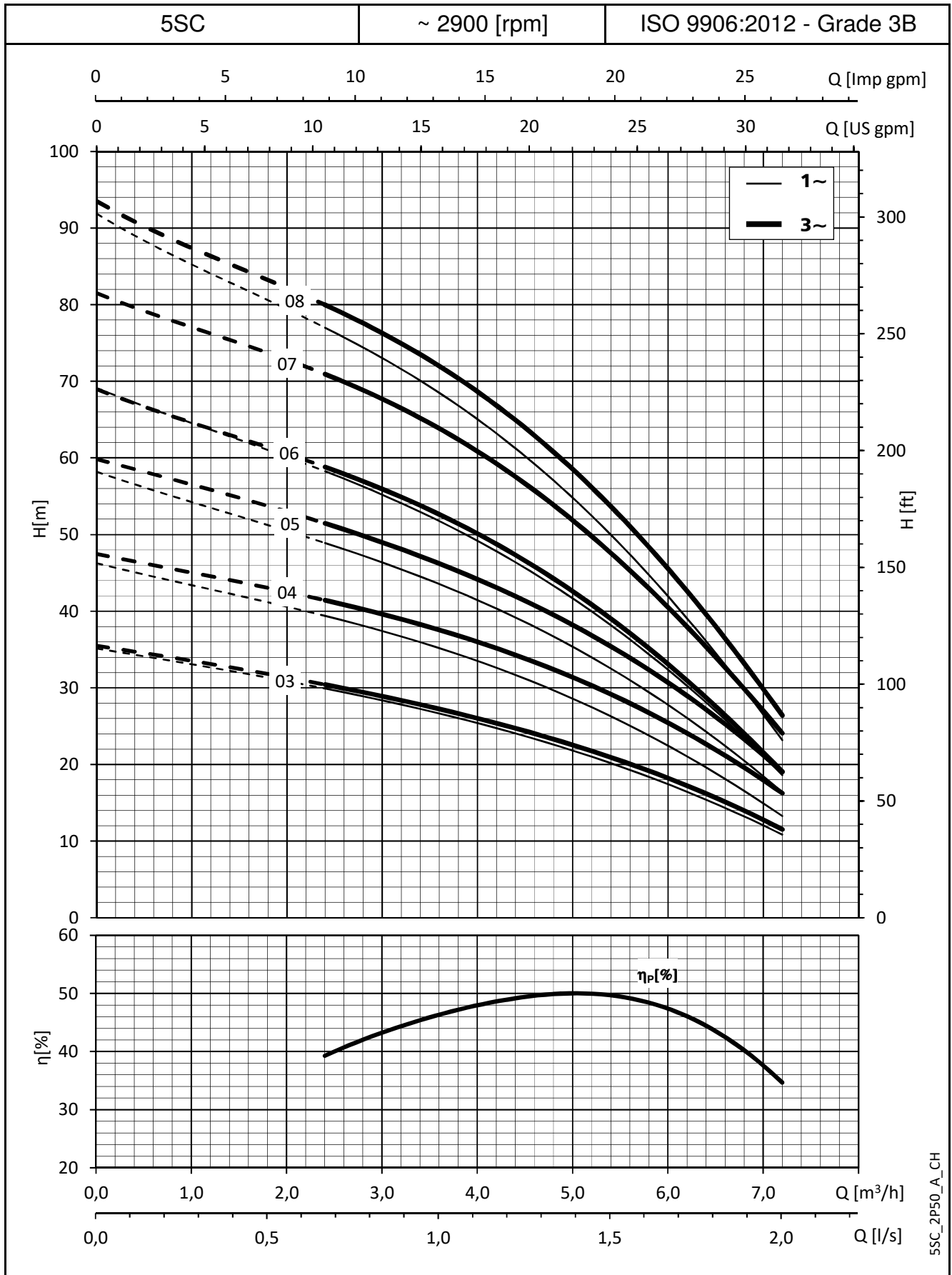
PUMP - CONTROL PANEL COMBINATION TABLE

POMPA TIPO	POTENZA ASSORBITA* (P1 MAX) kW	CORRENTE ASSORBITA* 220-240 V A	CORRENTE ASSORBITA* 380-415 V A	CONDENSATORE µF / 450 V	QC SEZIONE CAVO			PESO ELETTRO POMPA kg	TIPO DI QUADRO** 380-415 V	
					TIPO	LATO MOTORE	LATO LINEA		QTD	Q3D
5SC3/05/5..	0.86	4.08	-	16	0.55	4G1,5	3G1,5	14.2	-	-
5SC4/07/5..	1.10	4.98	-	25	0.9	4G1,5	3G1,5	16.7	-	-
5SC5/09/5..	1.28	5.72	-	25	0.9	4G1,5	3G1,5	17.0	-	-
5SC6/11/5..	1.56	6.90	-	30	1.1	4G1,5	3G1,5	18.7	-	-
5SC8/15/5..	2.04	9.00	-	40	1.5	4G1,5	3G1,5	21.6	-	-
5SC3/05/5T	0.80	2.70	1.56	-	-	-	-	-	03-05	03-05
5SC4/07/5T	1.06	4.07	2.35	-	-	-	-	-	05-07	05-07
5SC5/09/5T	1.27	4.40	2.54	-	-	-	-	-	07-15	07-15
5SC6/11/5T	1.48	4.71	2.72	-	-	-	-	-	07-15	07-15
5SC7/15/5T	1.72	6.18	3.57	-	-	-	-	-	07-15	07-15
5SC8/22/5T	1.92	6.81	3.93	-	-	-	-	-	07-15	07-15

* Valori massimi nel campo di funzionamento

5SC-2p50_a_tp

5SC SERIES OPERATING CHARACTERISTICS



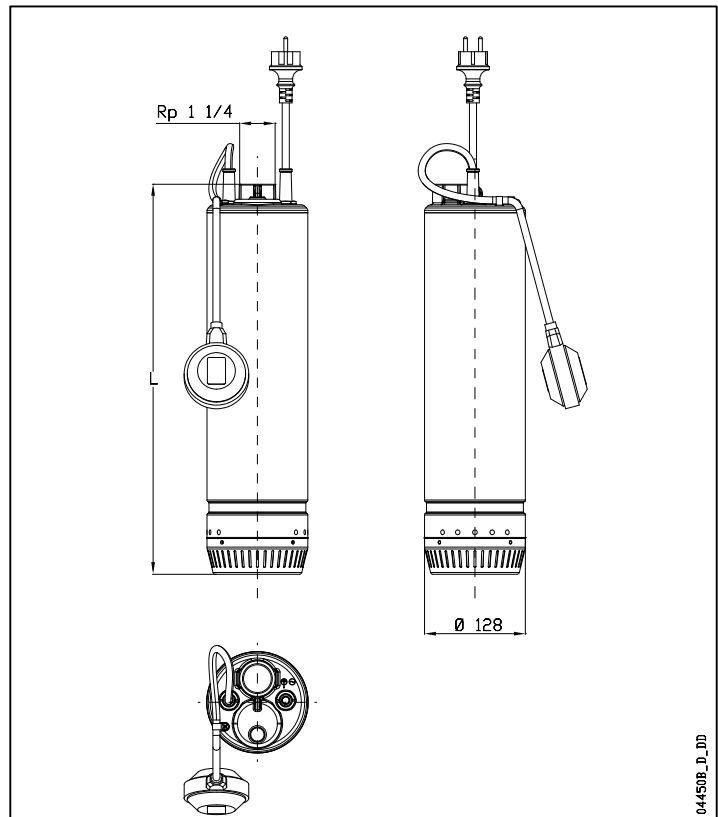
8SC SERIES DIMENSIONS AND WEIGHTS

PUMP TYPE	N. OF STAGE	DIMENSIONS L mm	WEIGHT kg
8SC2/05/5..	2	485	13,7
8SC3/09/5..	3	530	15,5
8SC6/15/5..	6	655	19,0
8SC2/05/5T	2	485	13,4
8SC3/09/5T	3	530	16,0
8SC4/11/5T	4	555	17,0
8SC5/15/5T	5	630	19,3
8SC6/22/5T	6	655	20,6

PUMP TYPE	SECTION	CABLE TYPE	CABLE LENGTH m
8SC2/05/5..	3G1	H07RN-F	20,0
8SC3/09/5..	3G1,5	H07RN-F	20,0
8SC6/15/5..	3G1,5	H07RN-F	20,0
8SC2/05/5T	4G1	H07RN-F	20,0
8SC3/09/5T	4G1,5	H07RN-F	20,0
8SC4/11/5T	4G1,5	H07RN-F	20,0
8SC5/15/5T	4G1,5	H07RN-F	20,0
8SC6/22/5T	4G1,5	H07RN-F	20,0

Versions with 10 meter cable available on request

8SC-2p50-en_a_td



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HYDRAULIC PERFORMANCE TABLE

PUMP TYPE	RATED POWER		Q = DELIVERY									
			l/min	66,7	81,7	96,7	112	127	142	157	172	180
			0	4,0	4,9	5,8	6,7	7,6	8,5	9,4	10,3	10,8
	kW	HP	H = TOTAL HEAD METRES COLUMN OF WATER									
8SC2/05/5..	0,55	0,75	21,1	17,9	17,0	16,1	15,2	14,1	12,9	11,5	9,8	8,8
8SC3/09/5..	0,9	1,2	32,0	27,8	26,7	25,4	24,0	22,3	20,5	18,3	15,8	14,2
8SC6/15/5..	1,5	2	64,5	56,1	53,7	51,1	48,2	45,0	41,2	36,9	31,8	28,6
8SC2/05/5T	0,55	0,75	21,4	18,5	17,7	16,8	15,8	14,7	13,6	12,2	10,6	9,6
8SC3/09/5T	0,9	1,2	32,6	28,7	27,6	26,4	25,1	23,7	22,0	20,0	17,6	16,0
8SC4/11/5T	1,1	1,5	43,4	38,3	36,9	35,4	33,7	31,7	29,3	26,6	23,3	21,2
8SC5/15/5T	1,5	2	55,0	48,6	46,8	44,9	42,5	39,8	36,5	32,6	27,8	24,8
8SC6/22/5T	2,2	3	65,1	57,9	56,1	54,0	51,5	48,6	45,1	40,9	36,0	33,0

*Maximum values within operating range.

8SC-2p50-en_a_tp

Hydraulic performances in compliance with ISO 9906:2012 - Grade 3B (ex ISO 9906:1999 - Annex A)

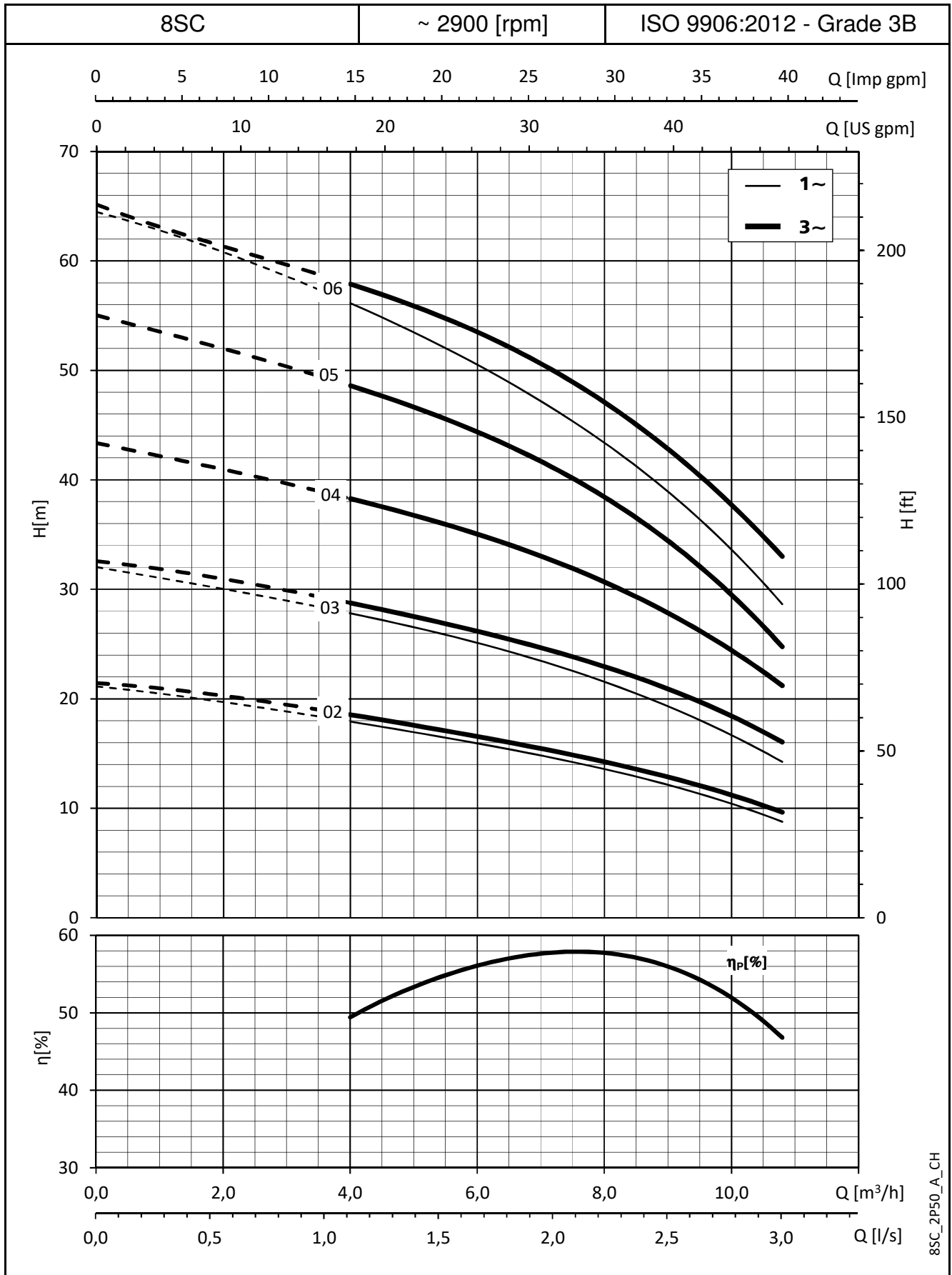
PUMP - CONTROL PANEL COMBINATION TABLE

PUMP TYPE	ABSORBED POWER* (P1 MAX)	ABSORBED CURRENT* 220-240 V	ABSORBED CURRENT* 380-415 V	CAPACITOR	QC			ELECTRIC PUMP WEIGHT kg	PANEL TYPE** 380-415 V	
					TYPE	CABLE SECTION			QTD	Q3D
						MOTOR SIDE	POWER SIDE			
	A	A	A	µF / 450 V						
8SC2/05/5..	0.91	4.25	-	16.00	0.55	4G1,5	3G1,5	14.0	-	-
8SC3/09/5..	1.26	5.66	-	25.00	0.90	4G1,5	3G1,5	19.2	-	-
8SC6/15/5..	2.35	10.36	-	40.00	1.50	4G1,5	3G1,5	20.6	-	-
8SC2/05/5T	0.86	2.81	1.62	-	-	-	-	-	05-07	05-07
8SC3/09/5T	1.25	4.38	2.53	-	-	-	-	-	07-15	07-15
8SC4/11/5T	1.59	4.94	2.85	-	-	-	-	-	07-15	07-15
8SC5/15/5T	1.96	6.58	3.80	-	-	-	-	-	07-15	07-15
8SC6/22/5T	2.26	7.41	4.28	-	-	-	-	-	15-22	15-22

* Maximum values within operating range

8SC-2p50-en_a_tp

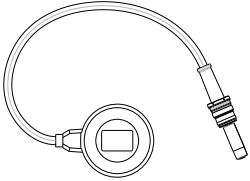
8SC SERIES OPERATING CHARACTERISTICS



8SC_2P50_A_CH

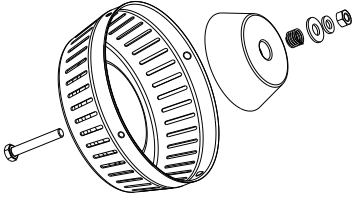
ACCESSORIES

ACCESSORIES FLOAT SWITCH KIT

Model	Part Number	Description
	109400540	Float switch kit for clean water Cable length 535 mm
	109400550	Float switch kit certified for drinking water Cable length 535 mm

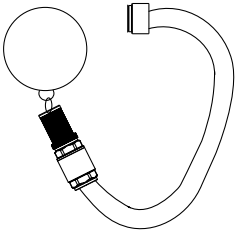
En_Rev_A

SACRIFICIAL ANODE KIT

Model	Part Number	Description
	109400530	Sacrificial anode kit Including zinc anode, strainer and assembly parts and assembly components. Not for drinking water use.

En_Rev_A

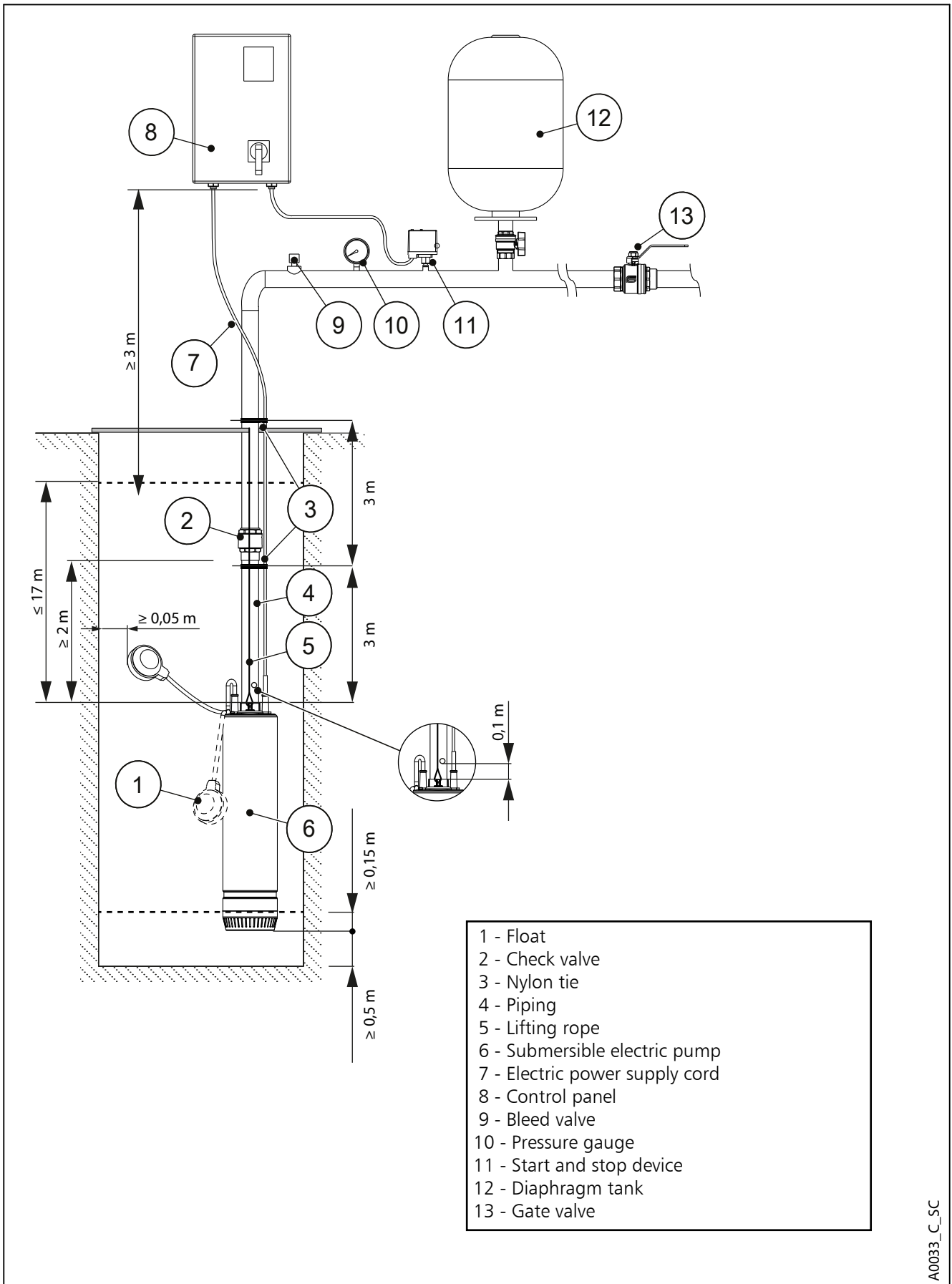
FLOATING SUCTION DEVICE KIT

Model	Part Number	Description
	109400560	Floating suction device kit specific for rainwater collection tanks. It allows suction of clean and free of suspended particles water.

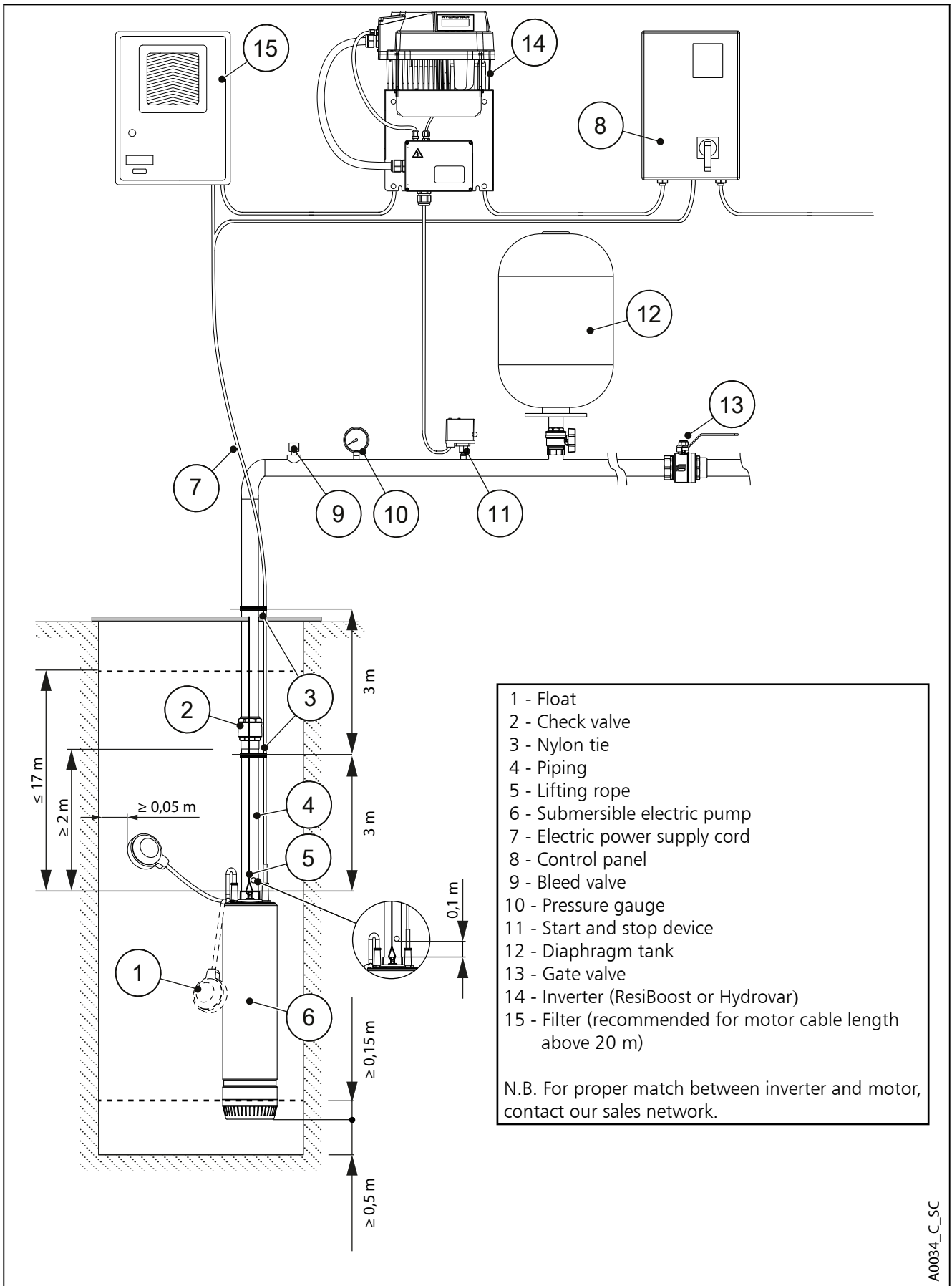
En_Rev_A

TECHNICAL APPENDIX

SUBMERSIBLE ELECTRIC PUMP INSTALLATION DIAGRAM



EXAMPLE OF INSTALLATION OF A SUBMERSIBLE ELECTRIC PUMP CONTROLLED BY AN INVERTER



- 1 - Float
 - 2 - Check valve
 - 3 - Nylon tie
 - 4 - Piping
 - 5 - Lifting rope
 - 6 - Submersible electric pump
 - 7 - Electric power supply cord
 - 8 - Control panel
 - 9 - Bleed valve
 - 10 - Pressure gauge
 - 11 - Start and stop device
 - 12 - Diaphragm tank
 - 13 - Gate valve
 - 14 - Inverter (ResiBoost or Hydrovar)
 - 15 - Filter (recommended for motor cable length above 20 m)
- N.B. For proper match between inverter and motor, contact our sales network.

A0034_C_SC

SCUBA, 50 Hz: SIZING OF ETHYLENE-PROPILENE (EPR) CABLES, DOL (DIRECT ON LINE) STARTING

PUMP TYPE SINGLE-PHASE	RATED POWER		RATED VOLTAGE V	Cos φ	ABSORBED CURRENT A	VOLTAGE DROP %	CABLE GAUGE: 3 x ...mm ²									
	Kw	HP					mm ²	1	1,5	2,5	4	6	10	16	25	
							A max	17	23	32	42	54	75	100	127	
Maximum lenght in metres																
1SC6/05/5..	0,55	0,75	220	0,944	4,11	4		57	85	142	227					
			240	0,940	4,26			60	90	150	240					
1SC7/07/5..	0,75	1	220	0,968	4,83			47	71	118	188	282				
			240	0,968	4,89			51	76	127	203	304				
1SC9/09/5..	0,9	1,2	220	0,979	5,68			40	59	99	158	237				
			240	0,979	5,68			43	65	108	173	259				
3SC4/05/5..	0,55	0,75	220	0,981	3,85			58	87	146	233	349	582			
			240	0,981	4,06			60	90	151	241	362	603			
3SC5/07/5..	0,75	1	220	0,970	4,72			48	72	120	192	288				
			240	0,970	4,80			52	77	129	206	309				
3SC7/09/5..	0,9	1,2	220	0,982	5,88			38	57	95	152	229	381			
			240	0,982	5,88			42	62	104	166	249	416			
3SC8/11/5..	1,1	1,5	220	0,984	6,85			33	49	82	131	196	326	522		
			240	0,984	6,85			36	53	89	142	214	356	570		
3SC9/15/5..	1,5	2	220	0,944	7,94			29	44	73	117	176	294			
			240	0,940	7,94			32	48	80	129					
5SC3/05/5..	0,55	0,75	220	0,968	3,87			59	88	147	235	352				
			240	0,968	4,08			61	91	152	243	365				
5SC4/07/5..	0,75	1	220	0,979	4,95			45	68	113	182	272				
			240	0,979	4,98			49	74	123	197	295				
5SC5/09/5..	0,9	1,2	220	0,981	5,72			39	59	98	157	235	392			
			240	0,981	5,72			43	64	107	171	257	428			
5SC6/11/5..	1,1	1,5	220	0,970	6,90			33	49	82	131	197				
			240	0,970	6,90			36	54	90	143	215				
5SC8/15/5..	1,5	2	220	0,982	9,00		25	37	62	100	149	249				
			240	0,982	9,00		27	41	68	109	163	272				
8SC2/05/5..	0,55	0,75	220	0,984	4,10		55	82	136	218	327	545	872			
			240	0,984	4,25		57	86	143	230	344	574	918			
8SC3/09/5..	0,9	1,2	220	0,970	5,66		40	60	100	160	240	401				
			240	0,970	5,66		44	66	109	175	262					
8SC6/15/5..	1,5	2	220	0,984	10,4		21	32	54	86	129	215	344			
			240	0,984	10,4		23	35	59	94	141	235	375			

Exposed cable laid at a temperature of 30°C, maximum conductor temperature of 80°C.

scuba-2p50M-en_a_te

SCUBA, 50 Hz: SIZING OF ETHYLENE-PROPILENE (EPR) CABLES, DOL (DIRECT ON LINE) STARTING

PUMP TYPE THREE-PHASE	RATED POWER		RATED VOLTAGE V	Cos φ	ABSORBED CURRENT A	VOLTAGE DROP %	CABLE GAUGE: 4 x ...mm ²												
	Kw	HP					mm ²	1	1,5	2,5	4	6	10	16	25				
							A max	17	23	32	42	54	75	100	127				
												Maximum lenght in metres							
1SC6/05/5T	0,55	0,75	220	0,809	2,75	4		128	191	319									
			240	0,809	2,81			137	205	341									
			380	0,809	1,59			382											
			415	0,809	1,62			409											
1SC7/07/5T	0,75	1	220	0,728	3,71			105	158	263	421								
			240	0,728	4,04			106	158	264	422								
			380	0,728	2,14			315											
			415	0,728	2,33			316											
1SC9/09/5T	0,9	1,2	220	0,776	4,16			88	132	220	352								
			240	0,776	4,38			91	137	228	365								
			380	0,776	2,40			264	395										
			415	0,776	2,53			273	410										
3SC4/05/5T	0,55	0,75	220	0,810	2,60		135	203	338	540									
			240	0,810	2,68		143	214	356	570									
			380	0,810	1,50		404	606											
			415	0,810	1,55		427	641											
3SC5/07/5T	0,75	1	220	0,737	3,65		106	158	264	422									
			240	0,737	3,98		106	158	264	422									
			380	0,737	2,11		316	474											
			415	0,737	2,30		316	474											
3SC7/09/5T	0,9	1,2	220	0,793	4,26		84	126	210	336									
			240	0,793	4,47		88	131	219	350									
			380	0,793	2,46		252	378											
			415	0,793	2,58		262	393											
3SC8/15/5T	1,5	2	220	0,809	5,35		66	98	164										
			240	0,809	5,84		66	98	164										
			380	0,809	3,09		196												
			415	0,809	3,37		197												
3SC9/22/5T	2,2	3	220	0,728	5,84		67	100	167	268									
			240	0,728	6,37		67	100	167	267									
			380	0,728	3,37		200												
			415	0,728	3,68		200												

Exposed cable laid at a temperature of 30°C, maximum conductor temperature of 80°C.

scuba1-2p50T-en_a_te

SCUBA, 50 Hz: SIZING OF ETHYLENE-PROPILENE (EPR) CABLES, DOL (DIRECT ON LINE) STARTING

PUMP TYPE THREE-PHASE	RATED POWER		RATED VOLTAGE V	Cos φ	ABSORBED CURRENT A	VOLTAGE DROP %	CABLE GAUGE: 4 x ...mm ²											
	Kw	HP					mm ²	1	1,5	2,5	4	6	10	16	25			
							A max	17	23	32	42	54	75	100	127			
5SC3/05T	0,55	0,75	220	0,776	4,40	4		83	125	208	333							
			240	0,776	4,40			91	136	227	363							
			380	0,776	2,54			249	374									
			415	0,776	2,54			272	408									
5SC4/07T	0,75	1	220	0,810	4,68			75	112	187	300							
			240	0,810	4,68			82	123	204	327							
			380	0,810	2,70			224	337									
			415	0,810	2,70			245	368									
5SC5/09T	0,9	1,2	220	0,737	4,16			93	139	232	371							
			240	0,737	4,16			101	152	253	405							
			380	0,737	2,40			278	416									
			415	0,737	2,40			303	455									
5SC6/11T	1,1	1,5	220	0,793	4,50			80	119	199	319							
			240	0,793	4,50			87	130	217	348							
			380	0,793	2,60			238	357									
			415	0,793	2,60			260	390									
5SC7/15T	1,5	1,5	220	0,833	4,94			69	104	173	276	414						
			240	0,833	4,94			75	113	188	301	452						
			380	0,833	2,85			207	310									
			415	0,833	2,85			226	339									
5SC8/22T	2,2	3	220	0,809	2,81			125	188	313								
			240	0,809	2,81			136	205	341								
			380	0,809	1,62			375										
			415	0,809	1,62			409										
8SC2/05T	0,55	0,75	220	0,728	4,12			95	142	237	379							
			240	0,728	4,12			103	155	258	414							
			380	0,728	2,38			283										
			415	0,728	2,38			309										
8SC3/09T	0,9	1,2	220	0,776	4,40		83	125	208	333								
			240	0,776	4,40		91	136	227	363								
			380	0,776	2,54		249	374										
			415	0,776	2,54		272	408										
8SC4/11T	1,1	1,5	220	0,810	4,68		75	112	187	300								
			240	0,810	4,68		82	123	204	327								
			380	0,810	2,70		224	337										
			415	0,810	2,70		245	368										
8SC5/15T	1,5	2	220	0,737	4,16		93	139	232	371								
			240	0,737	4,16		101	152	253	405								
			380	0,737	2,40		278	416										
			415	0,737	2,40		303	455										
8SC6/22T	2,2	3	220	0,793	4,50		80	119	199	319								
			240	0,793	4,50		87	130	217	348								
			380	0,793	2,60		238	357										
			415	0,793	2,60		260	390										

Exposed cable laid at a temperature of 30°C, maximum conductor temperature of 80°C.

Scubat-cavi-50-en_d_te

WATER REQUIREMENTS IN CIVIL USERS

Determination of the water requirement depends on the type of users and contemporaneity factor. The calculation may be subject to regulations, standards or customs that may vary from country to country. The calculation method shown below is an example based on practical experience, designed to provide a reference value and not a substitute for detailed analytical calculation.

Water requirements in condominiums

The **consumption table** shows the maximum values for each delivery point, depending on the plumbing amenities.

MAXIMUM CONSUMPTION FOR EACH DELIVERY POINT

TYPE	CONSUMPTION (l/min)
Sink	9
Dishwasher	10
Washing machine	12
Shower	12
Bathtub	15
Washbasin	6
Bidet	6
Flush tank WC	6
Controlled flushing system WC	90

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The **sum of the water consumption values** of each delivery point determines the maximum theoretical requirement, which must be reduced according to the **contemporaneity coefficient**, because in actual fact the delivery points are never used all together.

$f = \frac{1}{\sqrt{(0,857 \times Nr \times Na)}}$	Coefficient for apartments with one bathroom and flush tank WC
$f = \frac{1}{\sqrt{(0,857 \times Nr \times Na)}}$	Coefficient for apartments with one bathroom and controlled flushing system WC
$f = \frac{1,03}{\sqrt{(0,545 \times Nr \times Na)}}$	Coefficient for apartments with two bathrooms and flush tank WC
$f = \frac{0,8}{\sqrt{(0,727 \times Nr \times Na)}}$	Coefficient for apartments with two bathrooms and controlled flushing system WC
f= coefficient; Nr= number of delivery points; Na= number of apartments	

The **table of water requirements in civil users** shows the maximum contemporaneity flow-rate values based on the **number of apartments** and the type of WC for apartments with one bathroom and two bathrooms. As regards apartments with one bathroom, 7 drawing points have been taken into consideration, while 11 points have been considered for apartments with two bathrooms. If the number of drawing points or apartments is different, use the formulas to **calculate** the requirement.

TABLE OF WATER REQUIREMENTS IN CIVIL USERS

NUMBER OF APARTMENTS	WITH FLUSH TANK WC		WITH CONTROLLED FLUSHING SYSTEM WC	
	1	2	1	2
	FLOW RATE (l/min)			
1	32	40	60	79
2	45	56	85	111
3	55	68	105	136
4	63	79	121	157
5	71	88	135	176
6	78	97	148	193
7	84	105	160	208
8	90	112	171	223
9	95	119	181	236
10	100	125	191	249
11	105	131	200	261
12	110	137	209	273
13	114	143	218	284
14	119	148	226	295
15	123	153	234	305
16	127	158	242	315
17	131	163	249	325
18	134	168	256	334
19	138	172	263	343
20	142	177	270	352
21	145	181	277	361
22	149	185	283	369
23	152	190	290	378
24	155	194	296	386
25	158	198	302	394
26	162	202	308	401
27	165	205	314	409
28	168	209	320	417
29	171	213	325	424
30	174	217	331	431
35	187	234	357	466
40	200	250	382	498
45	213	265	405	528
50	224	280	427	557
55	235	293	448	584
60	245	306	468	610
65	255	319	487	635
70	265	331	506	659
75	274	342	523	682
80	283	354	540	704
85	292	364	557	726
90	301	375	573	747
95	309	385	589	767
100	317	395	604	787
120	347	433	662	863
140	375	468	715	932
160	401	500	764	996
180	425	530	811	1056
200	448	559	854	1114

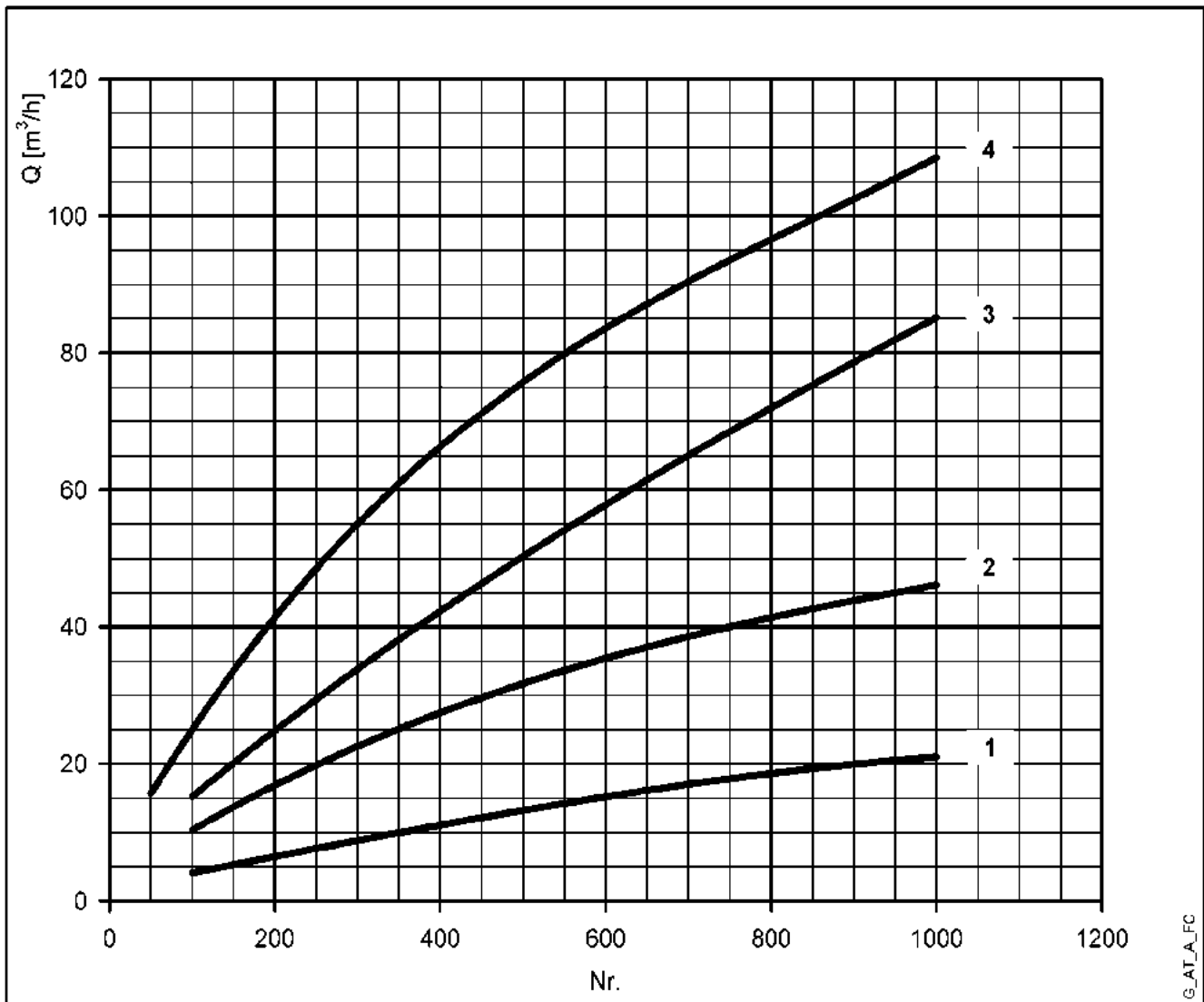
For seaside resorts, a flow rate increased by at least 20% must be considered.

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WATER REQUIREMENTS FOR COMMUNITY BUILDINGS

The requirements of buildings intended for specific uses, such as **offices, residential units, hotels, department stores, nursing homes** and so on, are different from those of condominiums, and both their global daily water consumption and the maximum contemporaneity flow rate are usually greater. The **diagram of water requirements for community buildings** shows the maximum contemporaneity flow rate of some types of communities, for guidance.

These requirements must be determined case by case with the utmost accuracy, using analytical calculation methods, according to particular needs and local provisions.



For seaside resorts, the flow rate must be increased by at least 20%.

1= Offices (N. of people)

2= Department stores (N. of people)

3= Nursing homes (N. of beds)

4= Hotels, residences (N. of beds)

FLOW RESISTANCE

TABLE OF FLOW RESISTANCE IN BENDS, VALVES AND GATES

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

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

G-a-pcv-en_b_th

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

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

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

VOLUMETRIC CAPACITY

Litres per minute l/min	Cubic metres per hour m ³ /h	Cubic feet per hour ft ³ /h	Cubic feet per minute ft ³ /min	Imperial gallon per minute Imp. gal/min	U.S. gallon per minute US gal/min
1,000	0,0600	2,1189	0,0353	0,2200	0,2642
16,6667	1,0000	35,3147	0,5886	3,6662	4,4029
0,4719	0,0283	1,0000	0,0167	0,1038	0,1247
28,3168	1,6990	60,0000	1,0000	6,2288	7,4805
4,5461	0,2728	9,6326	0,1605	1,0000	1,2009
3,7854	0,2271	8,0208	0,1337	0,8327	1,0000

PRESSURE AND HEAD

Newton per square metre N/m ²	kilo Pascal kPa	bar bar	Pound force per square inch psi	Metre of water m H ₂ O	Millimetre of mercury mm Hg
1,0000	0,0010	1 x 10 ⁻⁵	1,45 x 10 ⁻⁴	1,02 x 10 ⁻⁴	0,0075
1 000,0000	1,0000	0,0100	0,1450	0,1020	7,5006
1 x 10 ⁵	100,0000	1,0000	14,5038	10,1972	750,0638
6 894,7570	6,8948	0,0689	1,0000	0,7031	51,7151
9 806,6500	9,8067	0,0981	1,4223	1,0000	73,5561
133,3220	0,1333	0,0013	0,0193	0,0136	1,0000

LENGTH

Millimetre mm	Centimetre cm	Metre m	Inch in	Foot ft	Yard yd
1,0000	0,1000	0,0010	0,0394	0,0033	0,0011
10,0000	1,0000	0,0100	0,3937	0,0328	0,0109
1 000,0000	100,0000	1,0000	39,3701	3,2808	1,0936
25,4000	2,5400	0,0254	1,0000	0,0833	0,0278
304,8000	30,4800	0,3048	12,0000	1,0000	0,3333
914,4000	91,4400	0,9144	36,0000	3,0000	1,0000

VOLUME

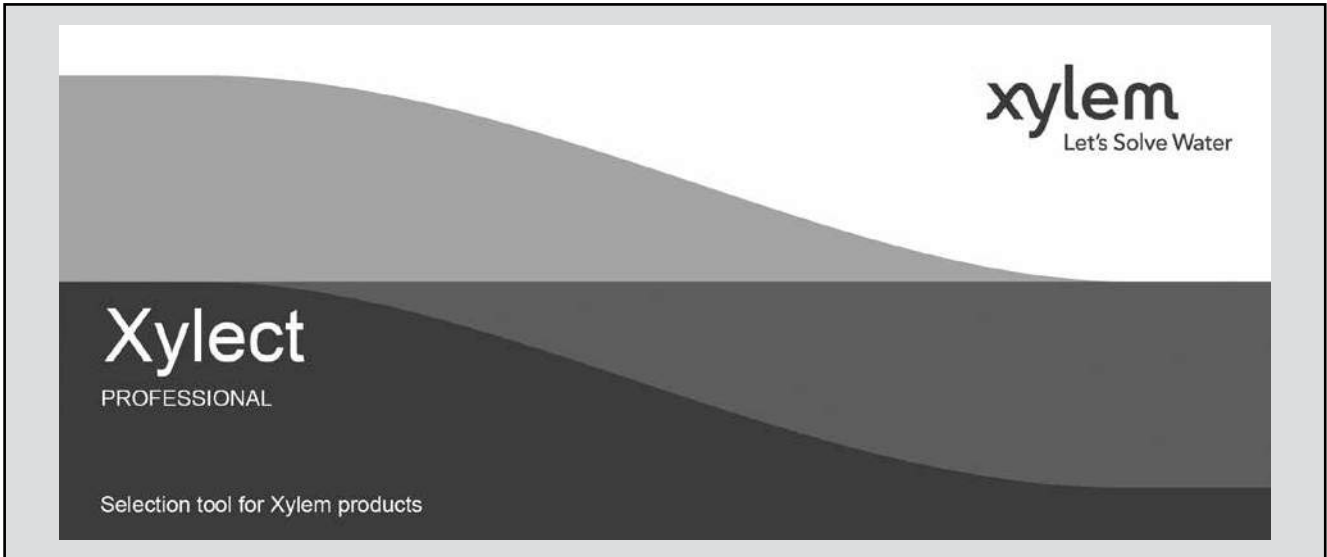
Cubic metre m ³	Litre L	Millilitre ml	Imperial gallon imp. gal.	U.S. gallon US gal.	Cubic foot ft ³
1,0000	1 000,0000	1 x 10 ⁶	219,9694	264,1720	35,3147
0,0010	1,0000	1 000,0000	0,2200	0,2642	0,0353
1 x 10 ⁻⁶	0,0010	1,0000	2,2 x 10 ⁻⁴	2,642 x 10 ⁻⁴	3,53 x 10 ⁻⁵
0,0045	4,5461	4 546,0870	1,0000	1,2009	0,1605
0,0038	3,7854	3 785,4120	0,8327	1,0000	0,1337
0,0283	28,3168	28 316,8466	6,2288	7,4805	1,0000

TEMPERATURE

Water	Kelvin K	Celsius °C	Fahrenheit °F	$^{\circ}\text{F} = ^{\circ}\text{C} \times \frac{9}{5} + 32$ $^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times \frac{5}{9}$
icing	273,1500	0,0000	32,0000	
boiling	373,1500	100,0000	212,0000	

G-at_pp-en_b_sc

**FURTHER PRODUCT SELECTION
AND DOCUMENTATION**
Xylect



Xylect is pump solution selection software with an extensive online database of product information across the entire Lowara range of pumps and related products, with multiple search options and helpful project management facilities. The system holds up-to-date product information on thousands of products and accessories.

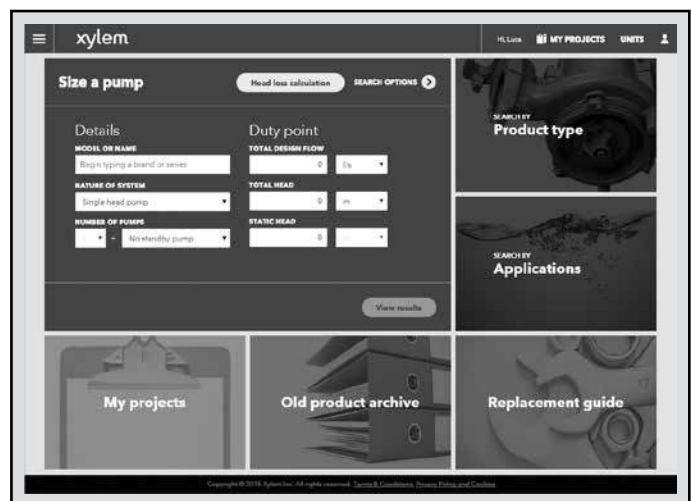
The possibility to search by applications and the detailed information output given makes it easy to make the optimal selection without having detailed knowledge about the Lowara products.

The search can be made by:

- Application
- Product type
- Duty point

Xylect gives a detailed output:

- List with search results
- Performance curves (flow, head, power, efficiency, NPSH)
- Motor data
- Dimensional drawings
- Options
- Data sheet printouts
- Document downloads incl dxf files



The search by application guides users not familiar with the product range to the right choice.

FURTHER PRODUCT SELECTION AND DOCUMENTATION

Xylect



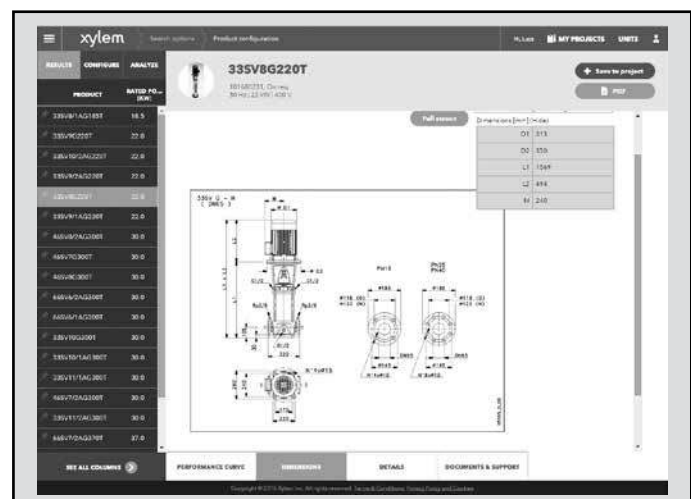
The detailed output makes it easy to select the optimal pump from the given alternatives.

The best way to work with Xylect is to create a personal account. This makes it possible to:

- Set own standard units
- Create and save projects
- Share projects with other Xylect users

Every registered user has a proper space, where all projects are saved.

For more information about Xylect please contact our sales network or visit www.xylect.com.



Dimensional drawings appear on the screen and can be downloaded in dxf format.

Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're a global team unified in a common purpose: creating advanced technology solutions to the world's water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

For more information on how Xylem can help you, go to www.xylem.com.



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