

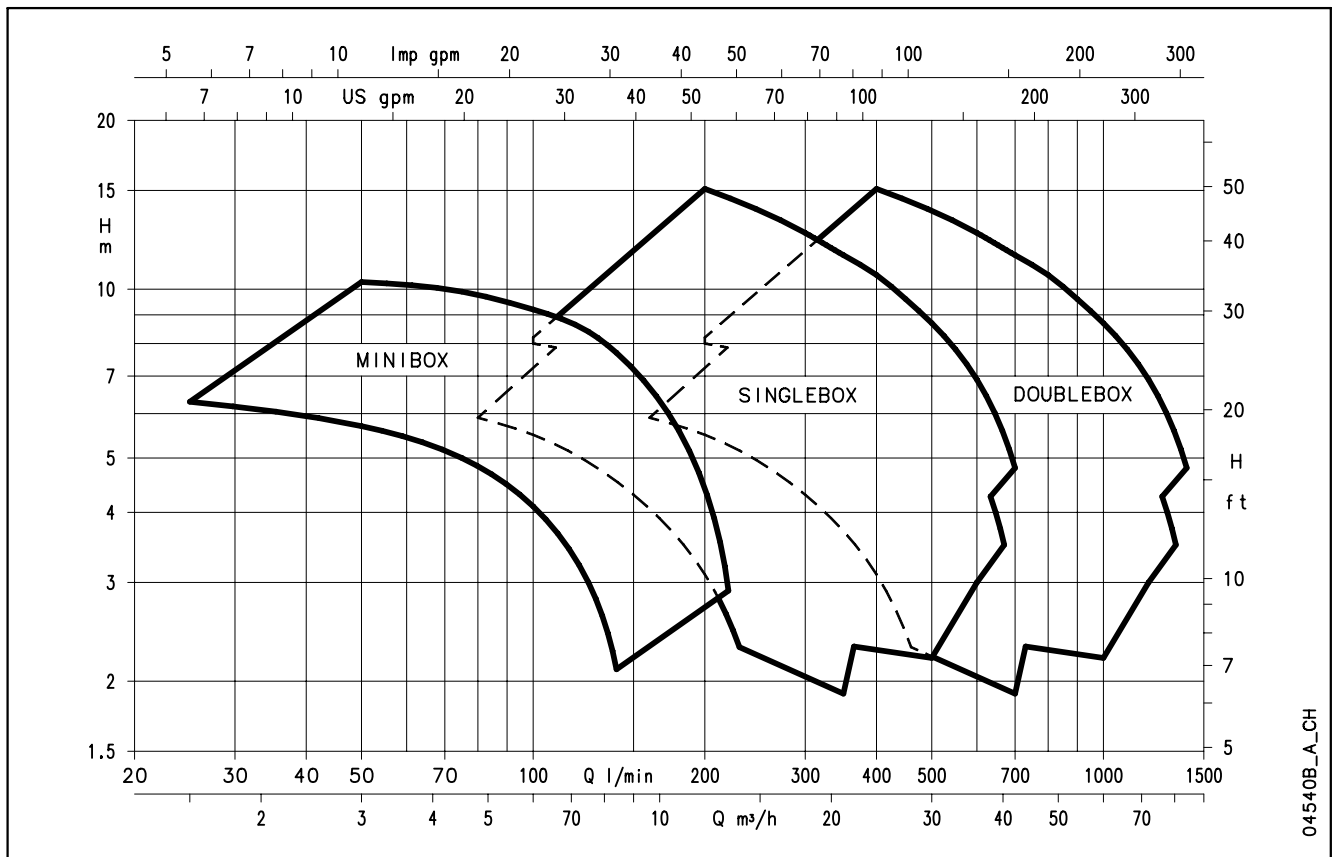


**PREFABRICATED
LIFTING STATIONS
FOR SOLID-
LADEN
WASTE
WATER**



60 Hz

**MINIBOX-SINGLEBOX-DOUBLEBOX
SERIES**



EDITION 03-2004

04540B_A_CH

Lowara



Pre-fabricated Lifting Stations for Clear Water

MINIBOX Series



MARKET SECTORS

RESIDENTIAL

APPLICATIONS

- Removal of clear water (WC excluded) where gravity drainage is impractical.



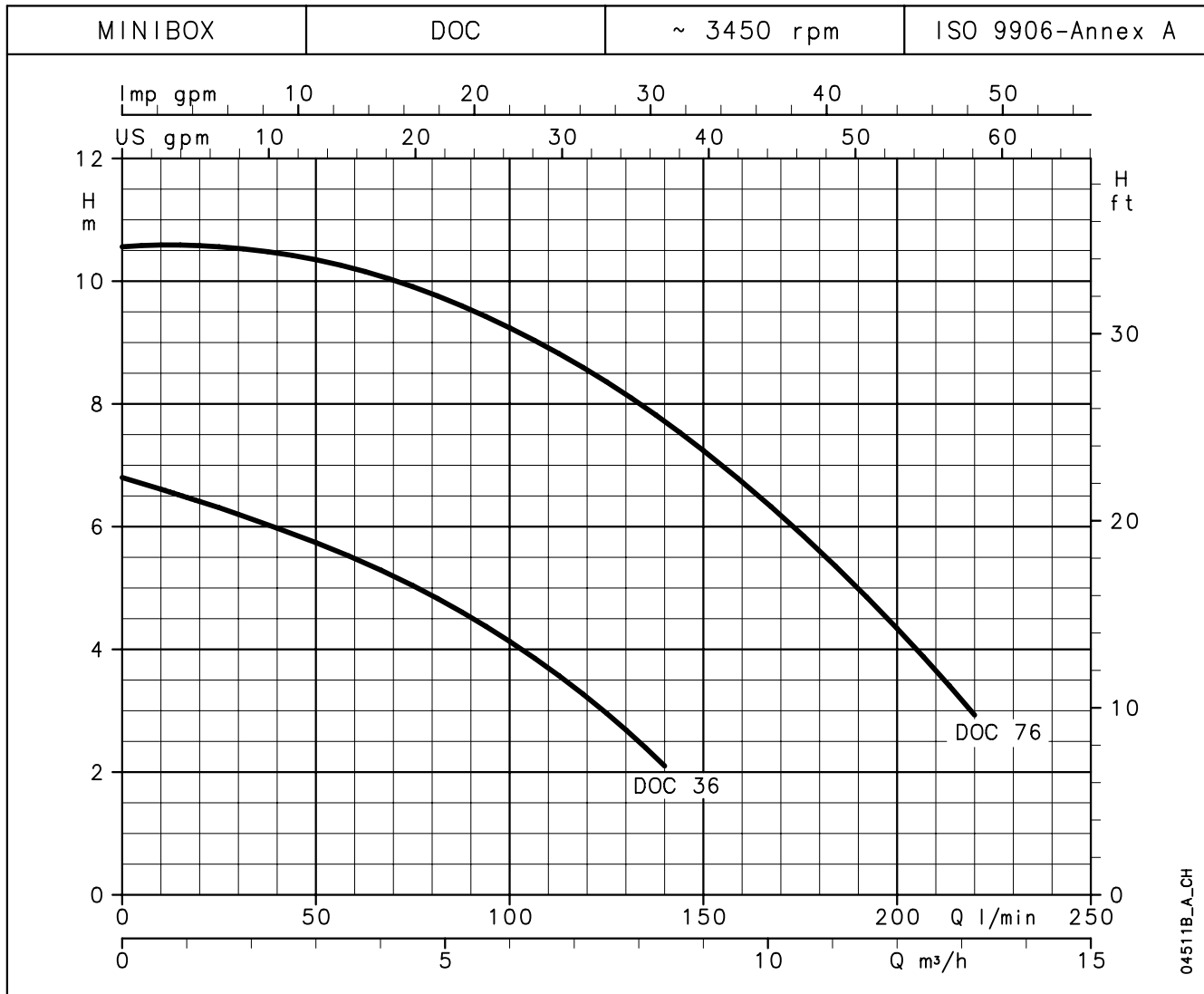
SPECIFICATIONS

- The station is equipped with:
 - **DOC submersible pump**, with flow rate up to 230 l/min and head up to 11 m. Passes suspended solids up to 10 mm diameter. Equipped with float switch for automatic operation.
 - 85-litre high-density polyethylene **tank**.
 - 1 1/4" **flexible pipe** equipped with a check valve; left- or right-hand connection.
 - **Power cord** outlet.
 - Three types of 40-mm diameter pipe inlets.
 - **Screens**.
 - **Basin** to be filled with sand or gravel to filter solid particles.
- The Minibox station can be equipped with a **DOC3** (0.25 kW rating) or a **DOC7** pump (0.55 kW).
- **Installation is quick and easy:** just connect the pipes and plug it in.
- Minibox can be installed on the floor or buried in a suitable structure (to withstand vehicle or foot traffic).

ACCESSORIES

- An **optional watertight lid** (substituting the screens) can be installed for indoor use.

MINIBOX SERIES OPERATING CHARACTERISTICS AT 3450 rpm, 60 Hz



HYDRAULIC PERFORMANCE TABLE AT 60 Hz

PUMP TYPE	RATED POWER		Q = DELIVERY											
			l/min	0	25	50	75	100	125	140	180	220		
		kW	HP	m³/h	0	1,5	3	4,5	6	7,5	8,4	10,8	13,2	
H = TOTAL HEAD METRES COLUMN OF WATER														
DOC36	0,25	0,33		6,8	6,3	5,7	5	4,1	3,0	2,1	-	-	-	-
DOC76	0,55	0,75		10,6	-	10,3	9,9	9,2	8,4	7,7	5,6	2,9	-	-

These performances are valid for liquids with density $\rho = 1.0\text{kg/dm}^3$ and kinematic viscosity $\nu = 1\text{mm}^2/\text{sec}$

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ELECTRICAL DATA (60Hz, 3450 rpm) MINIBOX SERIES

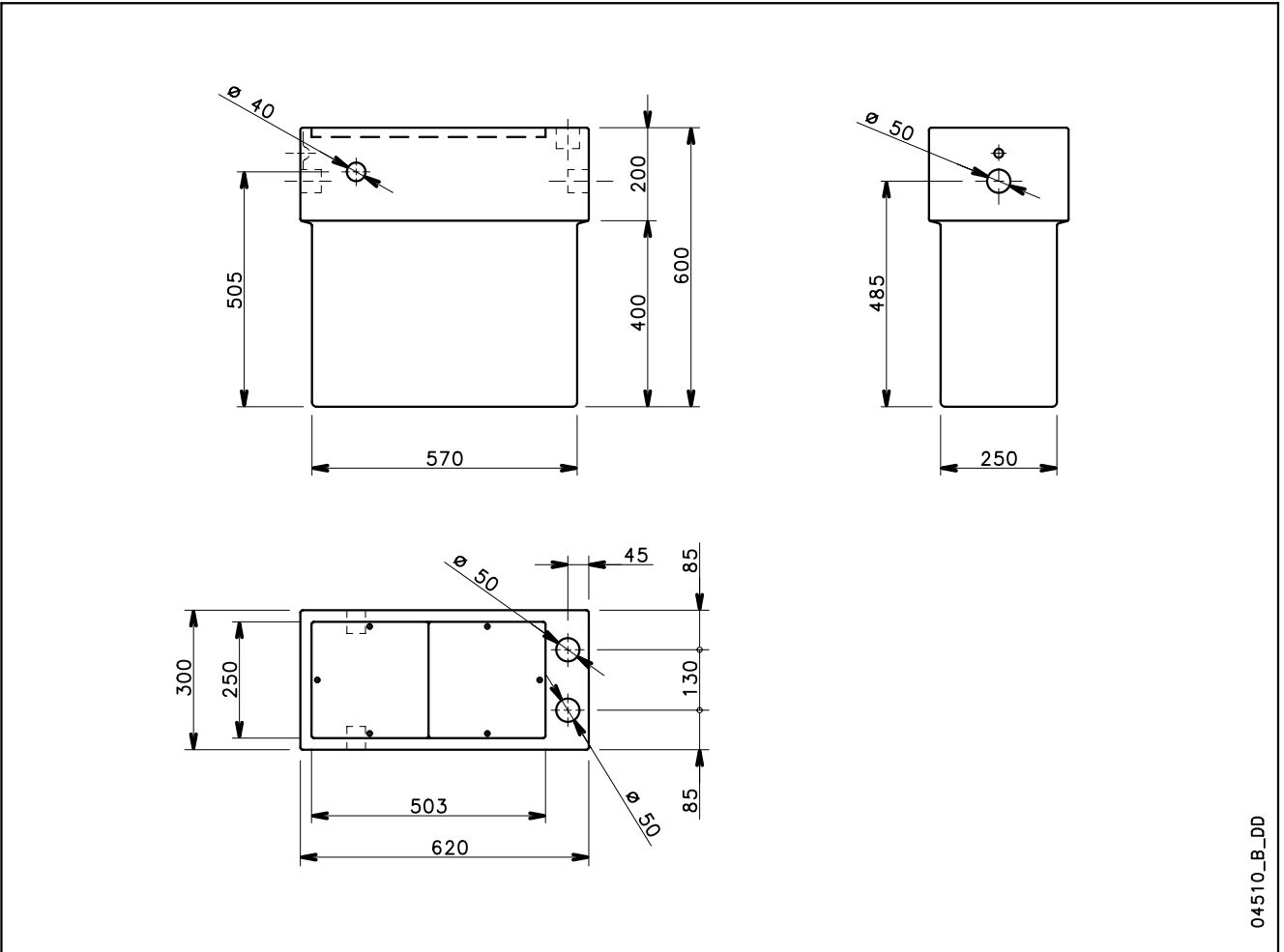
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE	kW	220-230 V A	$\mu\text{F} / 450\text{ V}$
DOC36	0,32	1,47	6,3
DOC76	0,76	3,45	16

*Maximum value in specified range

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE	kW	220-230 V A	380-400 V A
-	-	-	-
-	-	-	-

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**MINIBOX SERIES
DIMENSIONS AND WEIGHTS**



04510_B_DD

Pre-fabricated Sewage Lifting Stations

SINGLEBOX Series



MARKET SECTORS

RESIDENTIAL

APPLICATIONS

- Suitable for delivering sewage to main sewer lines located at a higher level, or where gravity drainage is impractical.



SPECIFICATIONS

- The station is equipped with:
 - **230-litre** high-density polyethylene **basin** featuring screw down lid and removable lid in two versions, with vents or sealed.
 - **Cable glands** for power supply cables (and floats).
 - **2"** delivery **pipe**.
 - **Six inlets** for entry or ventilation, **110 and 125 mm** diameter.
 - **DOMO or DL submersible pump**, vortex or channel type. Grinder version is also available (pump without float or control panel).
 - **Lowering device**.
 - **Vent** or emergency drain plug, ready for installation.
 - **Control panel** QDR type for three-phase versions.

- Versions with **vortex impeller** suitable for:
 - clean water, effluent, sewage containing suspended solids and fibres but not chemically aggressive substances or sand.
- Version with **single or twin-channel impeller** suitable for:
 - clean water, effluent, sewage containing suspended solids but not chemically aggressive substances or sand.
- **Singlebox** can be installed on the floor or buried in a suitable structure.
- **Installation is quick and easy**: for the single-phase versions, just connect the pipes and the power cord; for the three-phase versions, connect also the control panel.
- The **bottom is inclined** to aid pump suction.
- **Easy maintenance**: the pump can be completely extracted from outside.

ACCESSORIES

- Available accessories:
 - Ball-type **check valve**.
 - Emergency **float switch**.
 - **Siren**.
 - **Flashing light**.

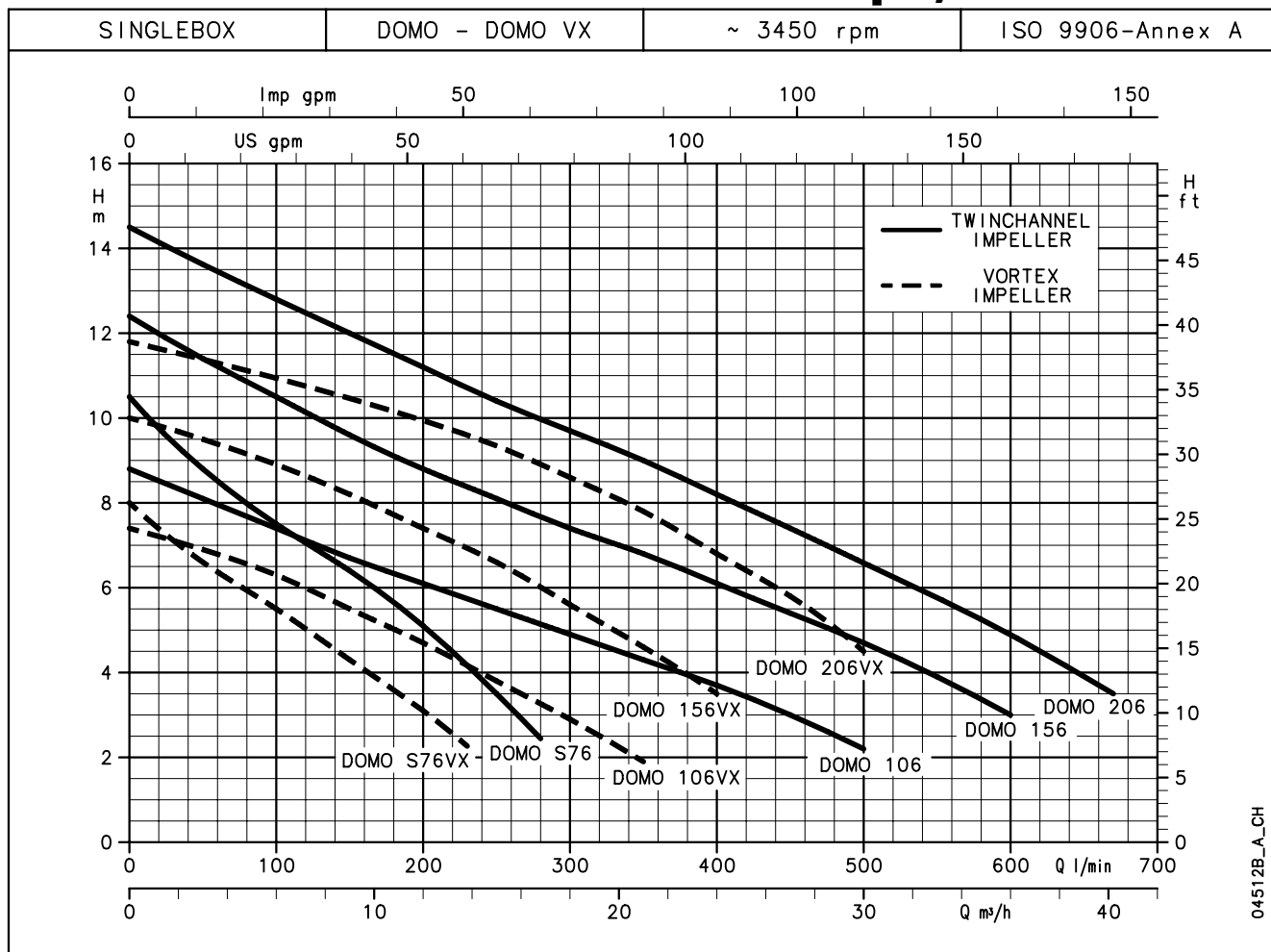
SINGLEBOX TABLE AT 60 Hz

SINGLEBOX		CHARACTERISTICS					FAETURED COMPONENTS			ACCESSORIES					
		kw	HP	Q max (l/min)	H max (m)	Impeller type	Control pannel QDR	Float switch pre-assembled on pump	Float switch (5m cable)	Non-return valve	Emergency float switch	Siren	Flashing light		
FIXED PVC PIPE FITTINGS	SINGLE-PHASE	SINGLEBOX DOMO S76	0.55	0.75	280	10,5	TWIN CHANNEL		X		X	Check with sales network			
		SINGLEBOX DOMO S76VX	0.55	0.75	230	8	VORTEX		X		X				
		SINGLEBOX DOMO106	0.75	1	500	8,8	TWIN CHANNEL		X		X				
		SINGLEBOX DOMO106VX	0.75	1	350	7,4	VORTEX		X		X				
		SINGLEBOX DOMO156	1.1	1.5	600	12,4	TWIN CHANNEL		X		X				
		SINGLEBOX DOMO156VX	1.1	1.5	400	10	VORTEX		X		X				
	THREE-PHASE	SINGLEBOX DOMO S76T	0.55	0.75	280	10,5	TWIN CHANNEL	X		X	X	X	X	X	
		SINGLEBOX DOMO S76VXT	0.55	0.75	230	8	VORTEX	X		X	X	X	X	X	
		SINGLEBOX DOMO106T	0.75	1	500	8,8	TWIN CHANNEL	X		X	X	X	X	X	
		SINGLEBOX DOMO106VXT	0.75	1	350	7,4	VORTEX	X		X	X	X	X	X	
		SINGLEBOX DOMO156T	1.1	1.5	600	12,4	TWIN CHANNEL	X		X	X	X	X	X	
		SINGLEBOX DOMO156VXT	1.1	1.5	400	10	VORTEX	X		X	X	X	X	X	
		SINGLEBOX DOMO206T	1.5	2	670	14,5	TWIN CHANNEL	X		X	X	X	X	X	
		SINGLEBOX DOMO206VXT	1.5	2	500	11,8	VORTEX	X		X	X	X	X	X	
LIFTING DEVICE	SINGLE-PHASE	SINGLEBOX DOMO106	0.75	1	500	8,8	TWIN CHANNEL		X		X	Check with sales network			
		SINGLEBOX DOMO106VX	0.75	1	350	7,4	VORTEX		X		X				
		SINGLEBOX DOMO156	1.1	1.5	600	12,4	TWIN CHANNEL		X		X				
		SINGLEBOX DOMO156VX	1.1	1.5	400	10	VORTEX		X		X				
	THREE-PHASE	SINGLEBOX DOMO106T	0.75	1	500	8,8	TWIN CHANNEL	X		X	X	X	X	X	
		SINGLEBOX DOMO106VXT	0.75	1	350	7,4	VORTEX	X		X	X	X	X	X	
		SINGLEBOX DOMO156T	1.1	1.5	600	12,4	TWIN CHANNEL	X		X	X	X	X	X	
		SINGLEBOX DOMO156VXT	1.1	1.5	400	10	VORTEX	X		X	X	X	X	X	
	THREE-PHASE	SINGLEBOX DOMO206T	1.5	2	670	14,5	TWIN CHANNEL	X		X	X	X	X	X	
		SINGLEBOX DOMO206VXT	1.5	2	500	11,8	VORTEX	X		X	X	X	X	X	
		SINGLE-PHASE	SINGLEBOX DLM806	0.6	0.8	350	10,2	SINGLE CHANNEL		X		X	Check with sales network		
			SINGLEBOX DLM1096	1.1	1.5	600	18,2	SINGLE CHANNEL		X		X			
	SINGLEBOX DLVM1006		1.1	1.5	450	10,2	VORTEX		X		X				
	THREE-PHASE	SINGLEBOX DL806	0.6	0.8	350	10,2	MONOCANALE	X		X	X	X	X	X	
		SINGLEBOX DL906	1.1	1.5	450	13,1	SINGLE CHANNEL	X		X	X	X	X	X	
		SINGLEBOX DL1096	1.1	1.5	600	18,2	SINGLE CHANNEL	X		X	X	X	X	X	
		SINGLEBOX DLV1006	1.1	1.5	450	10,2	VORTEX	X		X	X	X	X	X	
		SINGLEBOX VORTEX6	1.1	1.5	350	9,2	VORTEX	X		X	X	X	X	X	
SINGLEBOX DL1256		1.5	2	700	22,1	SINGLE CHANNEL	X		X	X	X	X	X		
SINGLEBOX DLV1156		1.5	2	550	13,2	VORTEX	X		X	X	X	X	X		

sbox_models6_a_sc

Notes	<p>Single-phase model pumps come with start capacitor, overload protection, float switch and cord with plug.</p> <p>Versions with control panel and accessories are available on request.</p>
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DOMO-DOMO VX SINGLEBOX SERIES OPERATING CHARACTERISTICS AT 3450 rpm, 60 Hz



HYDRAULIC PERFORMANCE TABLE AT 60 Hz

DOMO	PUMP TYPE	RATED POWER		Q = DELIVERY																					
				l/min		100		150		200		250		300		350		400		500		600		670	
				0	100	0	6	0	6	0	12	0	15	0	21	0	24	0	30	0	36	0	40,2		
		kW		HP		H = TOTAL HEAD METRES COLUMN OF WATER																			
	DOMO S76(T)	0,55	0,75	10,5	7,5	6,4	5,1	3,5	2,4	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	DOMO106(T)	0,75	1	8,8	7,4	6,7	6,1	5,5	5,1	4,3	3,7	2,2	-	-	-	-	-	-	-	-	-	-	-		
	DOMO156(T)	1,1	1,5	12,4	-	9,6	8,8	8,1	7,7	6,8	6,1	4,7	3	-	-	-	-	-	-	-	-	-	-		
	DOMO206T	1,5	2	14,5	-	-	11,2	10,4	10	9	8,2	6,6	4,9	3,5	-	-	-	-	-	-	-	-	-		

DOMO VX	PUMP TYPE	RATED POWER		Q = DELIVERY																					
				l/min		80		100		150		200		230		300		350		400		450		500	
				0	80	0	4,8	0	6	0	9	0	12	0	13,8	0	18	0	21	0	24	0	27	0	30
		kW		HP		H = TOTAL HEAD METRES COLUMN OF WATER																			
	DOMO S76VX(T)	0,55	0,75	8	5,9	5,5	4,3	3,1	2,3	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	DOMO106VX(T)	0,75	1	7,4	-	6,3	5,5	4,7	4,2	2,9	1,9	-	-	-	-	-	-	-	-	-	-	-	-		
	DOMO156VX(T)	1,1	1,5	10	-	8,8	8,2	7,4	6,9	5,6	4,6	3,5	-	-	-	-	-	-	-	-	-	-	-		
	DOMO206VXT	1,5	2	11,8	-	-	10,5	9,9	9,6	8,6	7,8	6,8	4,6	4,5	-	-	-	-	-	-	-	-	-		

These performances are valid for liquids with density $\rho = 1.0\text{kg/dm}^3$ and kinematic viscosity $\nu = 1\text{mm}^2/\text{sec}$

sbox_domo-domovx-2p60-en_a_th

ELECTRICAL DATA (60 Hz, 3450 rpm) SINGLEBOX SERIES

PUMP TYPE	INPUT POWER*		CAPACITOR
	SINGLE-PHASE		
	kW	220-230 V A	$\mu\text{F} / 450\text{ V}$
DOMO S76	0,84	4,21	20
DOMO106	1,1	5,39	22
DOMO156	1,56	7,03	30
-	-	-	-
DOMO S76VX	0,84	4,22	20
DOMO106VX	1,1	5,40	22
DOMO156VX	1,57	7,08	30
-	-	-	-

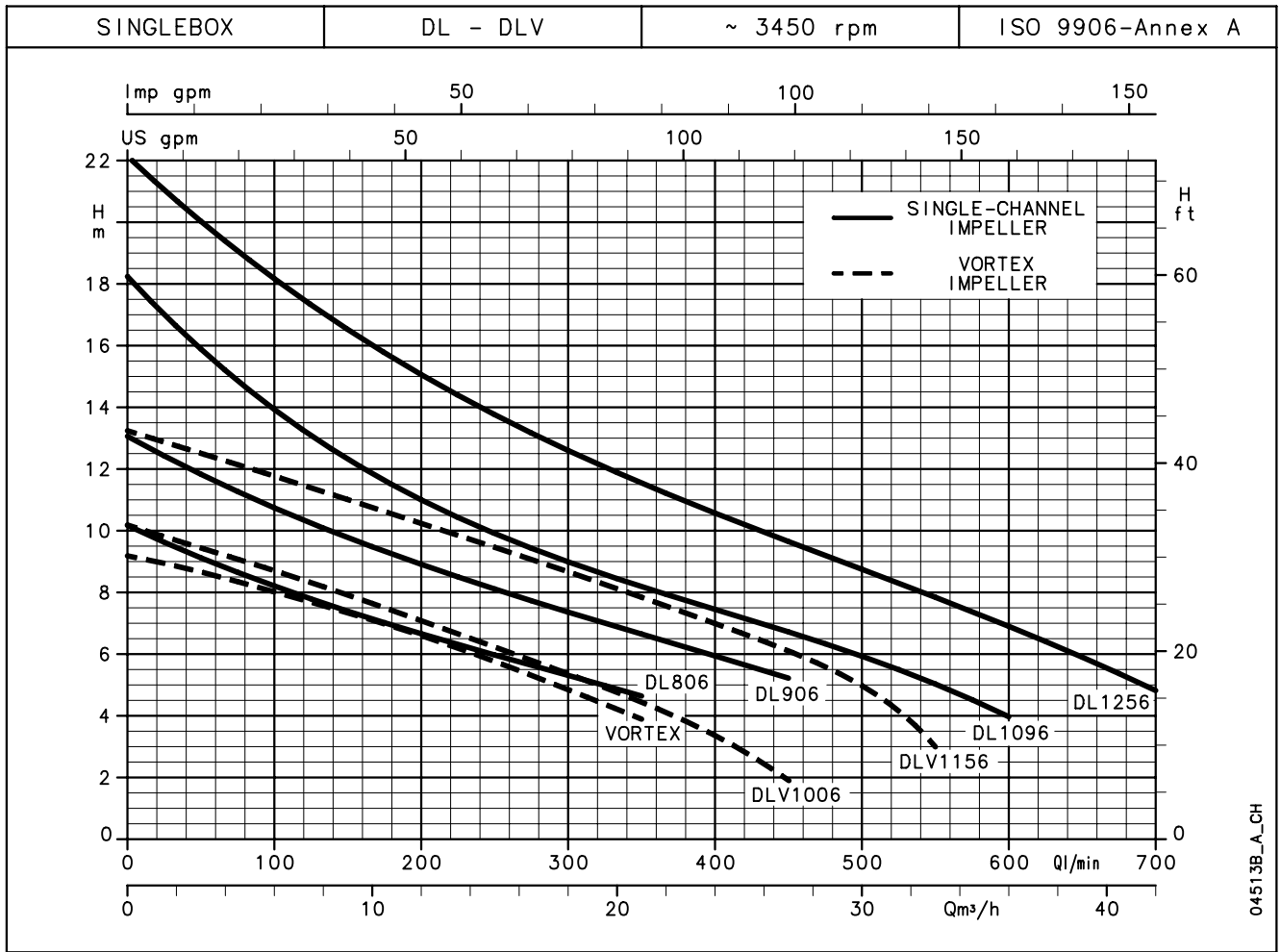
PUMP TYPE	INPUT POWER*		INPUT CURRENT*
	THREE-PHASE		
	kW	220-230 V A (1)	380-400 V A
DOMO S76T	0,73	-	1,32
DOMO106T	1,05	-	1,97
DOMO156T	1,45	-	2,54
DOMO206T	1,79	-	3,23
DOMO S76VXT	0,73	-	1,33
DOMO106VXT	1,05	-	1,98
DOMO156VXT	1,46	-	2,56
DOMO206VXT	1,84	-	3,30

*Maximum value in specified range

(1) Available on request

sbox_domo-domovx-2p60-en_a_te

DL-DLV SINGLEBOX SERIES OPERATING CHARACTERISTICS AT 3450 rpm, 60 Hz



HYDRAULIC PERFORMANCE TABLE AT 60 Hz

DL	PUMP TYPE	RATED POWER		Q = DELIVERY												
				H = TOTAL HEAD METRES COLUMN OF WATER												
				l/min	0	100	150	200	300	350	400	450	500	600	700	
		kW	HP	m ³ /h	0	6	9	12	18	21	24	27	30	36	42	
	DL(M) 806	0,6	0,8	10,2	8,2	7,4	6,7	5,3	4,6	-	-	-	-	-	-	
	DL906	1,1	1,5	13,1	10,7	9,8	8,9	7,4	6,6	5,9	5,2	-	-	-	-	
	DL(M) 1096	1,1	1,5	18,2	-	-	11	9	8,2	7,5	6,7	5,9	4	-	-	
	DL1256	1,5	2	22,1	-	-	15,1	12,6	11,5	10,6	9,6	8,7	6,9	4,8	-	

DLV	PUMP TYPE	RATED POWER		Q = DELIVERY												
				H = TOTAL HEAD METRES COLUMN OF WATER												
				l/min	0	100	150	200	250	300	350	400	450	500	550	
		kW	HP	m ³ /h	0	6	9	12	15	18	21	24	27	30	33	
	VORTEX6	1,1	1,5	9,2	8	7,3	6,6	5,8	4,8	3,9	-	-	-	-	-	
	DLV(M) 1006	1,1	1,5	10,2	-	8	7,1	6,2	5,4	4,4	3,4	2	-	-	-	
	DLV1156	1,5	2	13,2	-	-	10,2	9,5	8,7	7,8	7	6,1	5	3	-	

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$

sbox_dl-dlv-2p60-en_a_th

ELECTRICAL DATA (60 Hz, 3450 rpm) SINGLEBOX SERIES

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE	kW	220-230 V A	$\mu\text{F} / 450 \text{ V}$
DLM806	1,13	5,31	25
-	-	-	-
DLM1096	1,72	7,93	35
-	-	-	-
-	-	-	-
DLVM1006	1,71	7,91	35
-	-	-	-

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE	kW	220-230 V A	380-400 V A
DL806	1,05	3,32	1,92
DL906	1,33	4,02	2,32
DL1096	1,63	4,92	2,84
DL1256	1,95	5,77	3,33
VORTEX6	1,65	4,85	2,80
DLV 1006	1,62	4,90	2,83
DLV 1156	2,23	6,49	3,75

*Maximum value in specified range

sbox_dl-dlv-2p60-en_a_th

Pre-fabricated Sewage Lifting Stations

DOUBLEBOX Series



MARKET SECTORS

RESIDENTIAL

APPLICATIONS

- Suitable for delivering sewage to main sewer lines located at a higher level, or where gravity drainage is impractical.



SPECIFICATIONS

- The station is equipped with:
 - **450-litre** high-density polyethylene **basin** featuring screw down lid and removable lid in two versions, with vents or sealed.
 - **Cable glands** for power supply cables (and floats).
 - **2" delivery pipe.**
 - **Nine inlets** for entry or ventilation, **110 and 125 mm** diameter.
 - **DOMO or DL submersible pump**, vortex or channel type. **GRINDER version is also available** (pump without float or control panel).
 - **Lowering device.**
 - **Vent** or emergency drain plug, ready for installation.
 - **Control panel**, 9QDR2 type for three-phase versions.
- Version with **vortex impeller**

suitable for:

- clean water, effluent, sewage containing suspended solids and filaments but not chemically aggressive substances or sand

- Versions with **single or twin-channel impeller** suitable for:
 - clean water, effluent, sewage containing suspended solids but not chemically aggressive substances or sand.
- **Singlebox** can be installed on the floor or buried in a suitable structure.
- **Installation is quick and easy:** for the single-phase versions, just connect the pipes and the power cord; for the three-phase versions, connect also the control panel.
- The **bottom is inclined** to aid pump suction.
- **Easy maintenance:** the pump can be completely extracted from outside.

ACCESSORIES

- Available accessories:
 - Ball-type **check valve.**
 - Emergency **float switch.**
 - **Siren.**
 - **Flashing light.**

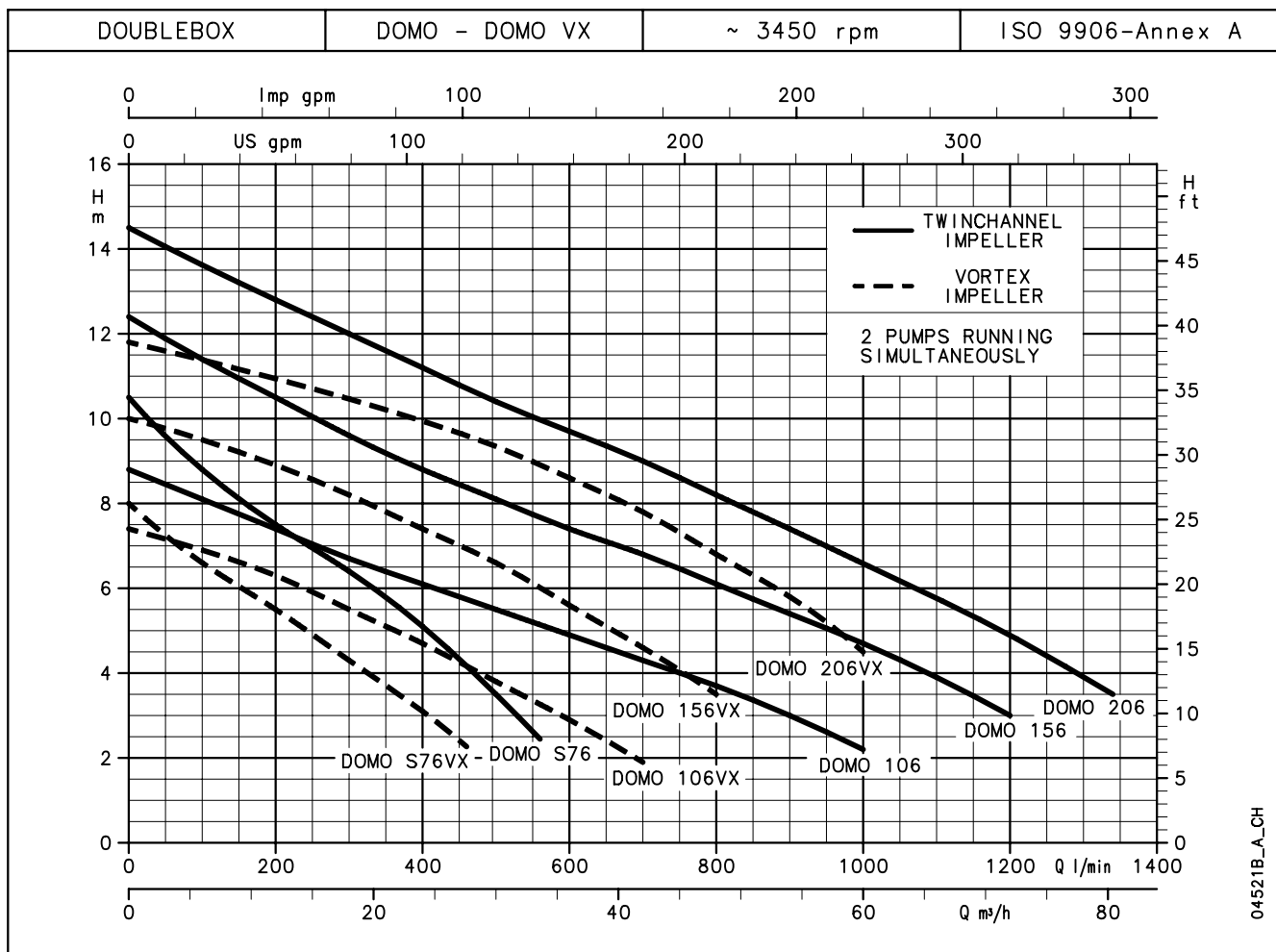
DOUBLEBOX TABLE AT 60 Hz

DOUBLEBOX		CHARACTERISTICS					FAETURED COMPONENTS			ACCESSORIES									
		kw	HP	Q max (l/min)	H max (m)	Impeller type	* Control pannel	Float switch pre-assembled on pump	Float switch (5m cable)	Non-return valve	Emergency float switch	Siren	Flashing light						
DATA REFERS TO 2 PUMPS RUNNING SIMULTANEOUSLY		FIXED PVC PIPE FITTINGS		SINGLE-PHASE		0.55	0.75	560	10,5	TWIN CHANNEL		X		X	Check with sales network				
						0.55	0.75	460	8	VORTEX		X		X					
						0.75	1	1000	8,8	TWIN CHANNEL		X		X					
						0.75	1	700	7,4	VORTEX		X		X					
						1.1	1.5	1200	12,4	TWIN CHANNEL		X		X					
						1.1	1.5	800	10	VORTEX		X		X					
				THREE-PHASE		0.55	0.75	560	10,5	TWIN CHANNEL	X		X	X	X	X	X	X	X
						0.55	0.75	460	8	VORTEX	X		X	X	X	X	X	X	
						0.75	1	1000	8,8	TWIN CHANNEL	X		X	X	X	X	X	X	
						0.75	1	700	7,4	VORTEX	X		X	X	X	X	X	X	
						1.1	1.5	1200	12,4	TWIN CHANNEL	X		X	X	X	X	X	X	
						1.1	1.5	800	10	VORTEX	X		X	X	X	X	X	X	
						1.5	2	1340	14,5	TWIN CHANNEL	X		X	X	X	X	X	X	
						1.5	2	1000	11,8	VORTEX	X		X	X	X	X	X	X	
		LIFTING DEVICE		SINGLE-PHASE		0.75	1	1000	8,8	TWIN CHANNEL		X		X	Check with sales network				
						0.75	1	700	7,4	VORTEX		X		X					
						1.1	1.5	1200	12,4	TWIN CHANNEL		X		X					
						1.1	1.5	800	10	VORTEX		X		X					
				THREE-PHASE		0.75	1	1000	8,8	TWIN CHANNEL	X		X	X	X	X	X		
						0.75	1	700	7,4	VORTEX	X		X	X	X	X	X		
1.1	1.5					1200	12,4	TWIN CHANNEL	X		X	X	X	X	X				
1.1	1.5					800	10	VORTEX	X		X	X	X	X	X				
1.5	2					1340	14,5	TWIN CHANNEL	X		X	X	X	X	X				
1.5	2					1000	11,8	VORTEX	X		X	X	X	X	X				
SINGLE-PHASE						0.6	0.8	700	10,2	SINGLE CHANNEL	X		X	X	X	X	X		
						1.1	1.5	1200	18,2	SINGLE CHANNEL	X		X	X	X	X	X		
				1.1	1.5	900	10,2	VORTEX	X		X	X	X	X	X				
				THREE-PHASE		0.6	0.8	700	10,2	MONOCANALE	X		X	X	X	X	X		
1.1	1.5					900	13,1	SINGLE CHANNEL	X		X	X	X	X	X				
1.1	1.5					1200	18,2	SINGLE CHANNEL	X		X	X	X	X	X				
1.1	1.5	900	10,2			VORTEX	X		X	X	X	X	X						
1.1	1.5	700	9,2			VORTEX	X		X	X	X	X	X						
1.5	2	1400	22,1			SINGLE CHANNEL	X		X	X	X	X	X						
1.5	2	1100	13,2			VORTEX	X		X	X	X	X	X						

dbox_model6_a_sc

Notes	Single-phase model pumps come with start capacitor, overload protection, float switch and cord with plug.
	Versions with control panel and accessories are available on request.* The panel for the single-phase versions is 9QDRM2. The panel for the three-phase versions is 9QDR2.

DOMO-DOMO VX DOUBLEBOX SERIES OPERATING CHARACTERISTICS AT 3450 rpm, 60 Hz



HYDRAULIC PERFORMANCE TABLE AT 60 Hz

DOMO	PUMP TYPE	RATED POWER		Q = DELIVERY											
				l/min	0	200	300	400	500	560	700	800	1000	1200	1340
				m³/h	0	12	18	24	30	33,6	42	48	60	72	80,4
				H = TOTAL HEAD METRES COLUMN OF WATER											
	DOMO S76(T)	2x0.55	2x0.75	10,5	7,5	6,4	5,1	3,5	2,4	-	-	-	-	-	
	DOMO106(T)	2x0.75	2x 1.0	8,8	7,4	6,7	6,1	5,5	5,1	4,3	3,7	2,2	-	-	
	DOMO156(T)	2x 1.1	2x 1.5	12,4	-	9,6	8,8	8,1	7,7	6,8	6,1	4,7	3	-	
	DOMO206T	2x 1.5	2x 2.0	14,5	-	-	11,2	10,4	10	9	8,2	6,6	4,9	3,5	

DOMO VX	PUMP TYPE	RATED POWER		Q = DELIVERY											
				l/min	0	160	200	300	400	460	600	700	800	900	1000
				m³/h	0	9,6	12	18	24	27,6	36	42	48	54	60
				H = TOTAL HEAD METRES COLUMN OF WATER											
	DOMO S76VX(T)	2x0.55	2x0.75	8	5,9	5,5	4,3	3,1	2,3	-	-	-	-	-	
	DOMO106VX(T)	2x0.75	2x 1.0	7,4	-	6,3	5,5	4,7	4,2	2,9	1,9	-	-	-	
	DOMO156VX(T)	2x 1.1	2x 1.5	10	-	8,8	8,2	7,4	6,9	5,6	4,6	3,5	-	-	
	DOMO206VXT	2x 1.5	2x 2.0	11,8	-	-	10,5	9,9	9,6	8,6	7,8	6,8	4,6	4,5	

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$

dbox_domo-domovx-2p60-en_a_th

ELECTRICAL DATA (60 Hz, 3450 rpm) DOUBLEBOX SERIES

PUMP TYPE	INPUT POWER*		CAPACITOR
	SINGLE-PHASE		
	kW	INPUT CURRENT* 220-230 V A	$\mu\text{F} / 450 \text{ V}$
DOMO S76	2x0.84	2x4.21	2x20
DOMO106	2x 1.1	2x5.39	2x22
DOMO156	2x1.56	2x7.03	2x30
-	-	-	-
DOMO S76VX	2x0.84	2x4.22	2x20
DOMO106VX	2x 1.1	2x5.40	2x22
DOMO156VX	2x1.57	2x7.08	2x30
-	-	-	-

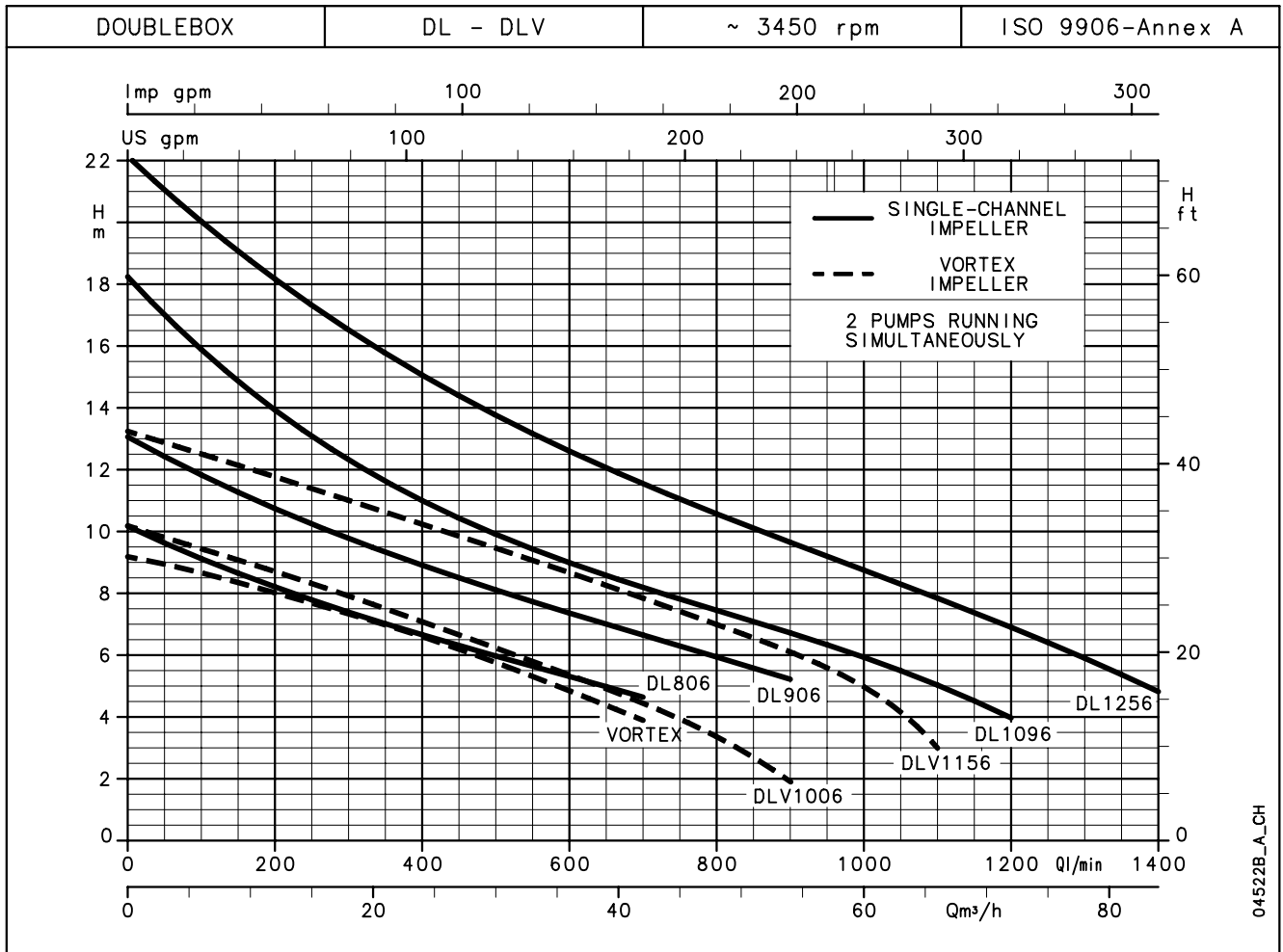
PUMP TYPE	INPUT POWER*		INPUT CURRENT* 220-230 V A (1)	INPUT CURRENT* 380-400 V A
	THREE-PHASE			
	kW	INPUT CURRENT* 220-230 V A (1)	INPUT CURRENT* 380-400 V A	INPUT CURRENT* 380-400 V A
DOMO S76T	2x0.73	-	-	2x1.32
DOMO106T	2x1.05	-	-	2x1.97
DOMO156T	2x1.45	-	-	2x2.54
DOMO206T	2x1.79	-	-	2x3.23
DOMO S76VXT	2x0.73	-	-	2x1.33
DOMO106VXT	2x1.05	-	-	2x1.98
DOMO156VXT	2x1.46	-	-	2x2.56
DOMO206VXT	2x1.84	-	-	2x3.30

*Maximum value in specified range

(1) Available on request

dbox_domo-domovx-2p60-en_a_te

DL-DLV DOUBLEBOX SERIES OPERATING CHARACTERISTICS AT 3450 rpm, 60 Hz



HYDRAULIC PERFORMANCE TABLE AT 60 Hz

DL	PUMP TYPE	RATED POWER		Q = DELIVERY											
				l/min	0	200	300	400	600	700	800	900	1000	1200	1400
				m³/h	0	12	18	24	36	42	48	54	60	72	84
				H = TOTAL HEAD METRES COLUMN OF WATER											
	DL(M) 806	2x0.6	2x0.8	10,2	8,2	7,4	6,7	5,3	4,6	-	-	-	-	-	
	DL906	2x1.1	2x1.5	13,1	10,7	9,8	8,9	7,4	6,6	5,9	5,2	-	-	-	
	DL(M) 1096	2x1.1	2x1.5	18,2	-	-	11	9	8,2	7,5	6,7	5,9	4	-	
	DL1256	2x1.5	2x2.0	22,1	-	-	15,1	12,6	11,5	10,6	9,6	8,7	6,9	4,8	

DLV	PUMP TYPE	RATED POWER		Q = DELIVERY											
				l/min	0	200	300	400	500	600	700	800	900	1000	1100
				m³/h	0	12	18	24	30	36	42	48	54	60	66
				H = TOTAL HEAD METRES COLUMN OF WATER											
	VORTEX6	2x1.1	2x1.5	9,2	8	7,3	6,6	5,8	4,8	3,9	-	-	-	-	
	DLV(M) 1006	2x1.1	2x1.5	10,2	-	8	7,1	6,2	5,4	4,4	3,4	2	-	-	
	DLV1156	2x1.5	2x2.0	13,2	-	-	10,2	9,5	8,7	7,8	7	6,1	5	3	

These performances are valid for liquids with density $\rho = 1.0 \text{ kg/dm}^3$ and kinematic viscosity $\nu = 1 \text{ mm}^2/\text{sec}$

dbox_dl-dlv-2p60-en_a_th

ELECTRICAL DATA (60 Hz, 3450 rpm) DOUBLEBOX SERIES

PUMP TYPE	INPUT POWER*	INPUT CURRENT*	CAPACITOR
SINGLE-PHASE	kW	220-230 V A	$\mu\text{F} / 450 \text{ V}$
DLM806	2x1.13	2x5.31	2x25
-	-	-	-
DLM1096	2x1.72	2x7.93	2x35
-	-	-	-
-	-	-	-
DLVM1006	2x1.71	2x7.91	2x35
-	-	-	-

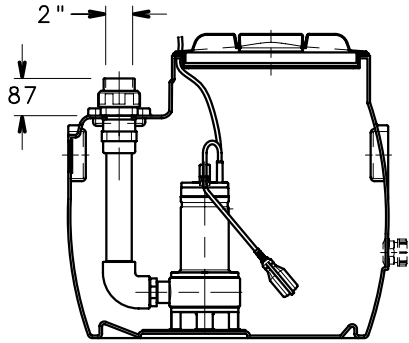
PUMP TYPE	INPUT POWER*	INPUT CURRENT*	INPUT CURRENT*
THREE-PHASE	kW	220-230 V A	380-400 V A
DL806	2x1.05	2x3.32	2x1.92
DL906	2x1.33	2x4.02	2x2.32
DL1096	2x1.63	2x4.92	2x2.84
DL1256	2x1.95	2x5.77	2x3.33
VORTEX6	2x1.65	2x4.85	2x2.80
DLV 1006	2x1.62	2x4.90	2x2.83
DLV 1156	2x2.23	2x6.49	2x3.75

*Maximum value in specified range

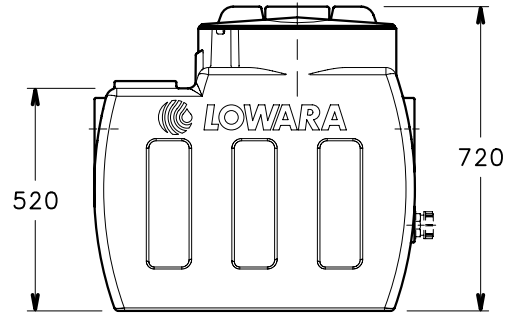
dbox_dl-dlv-2p60-en_a_te

**SINGLEBOX-DOUBLEBOX SERIES
DIMENSIONS AND VERSIONS**

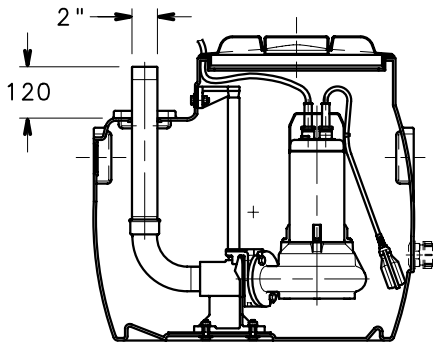
BOX + DELIVERY KIT FOR "DOMO"



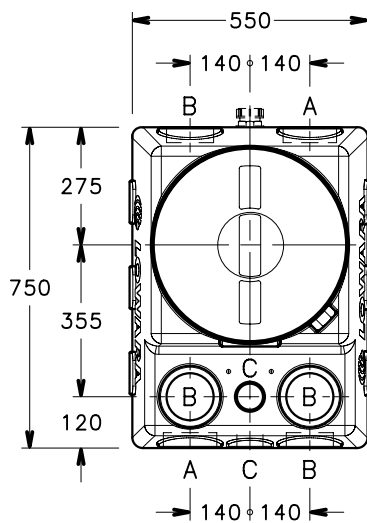
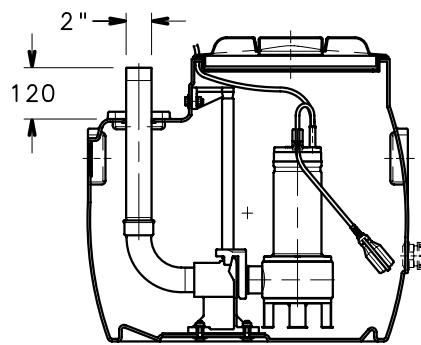
BOX



BOX + LOWERING DEVICE FOR "DL"

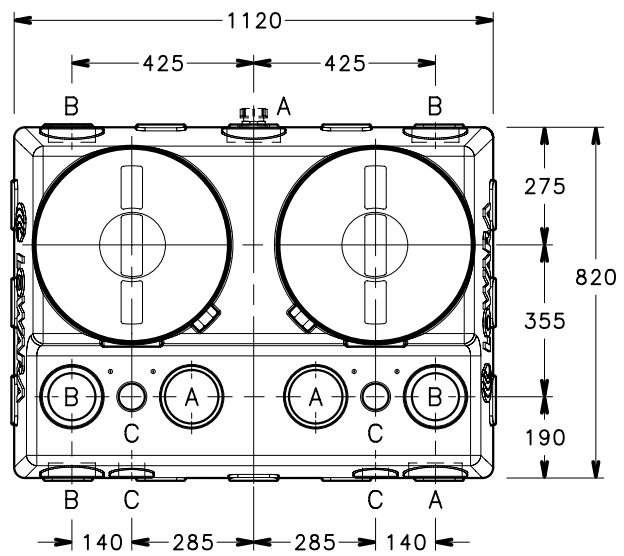


BOX + LOWERING DEVICE FOR "DOMO"



A=∅125
B=∅110
C= ∅61

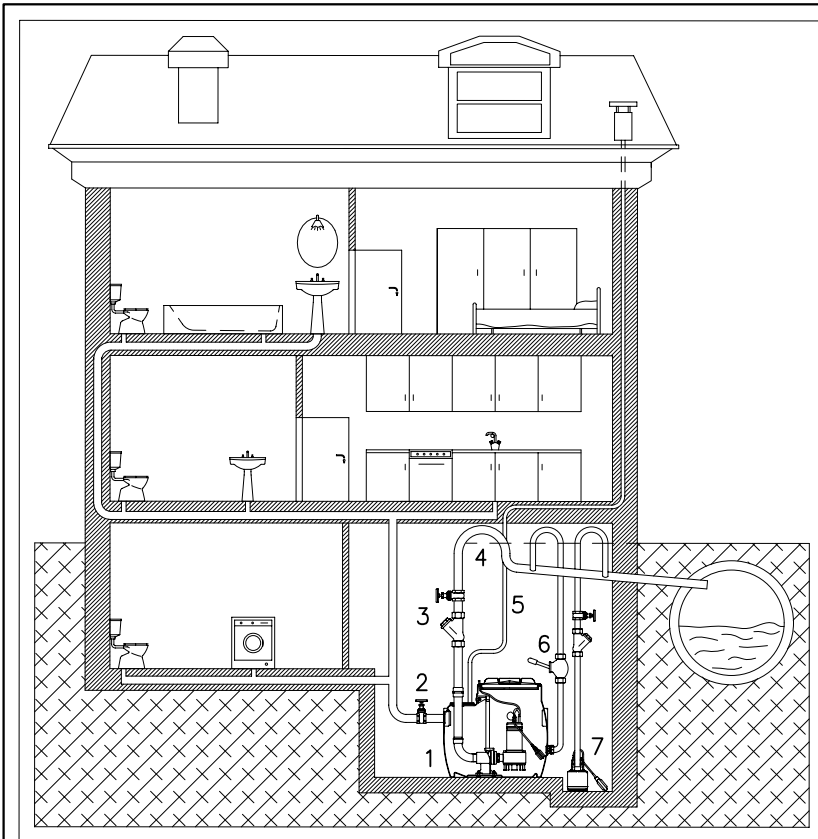
SINGLEBOX



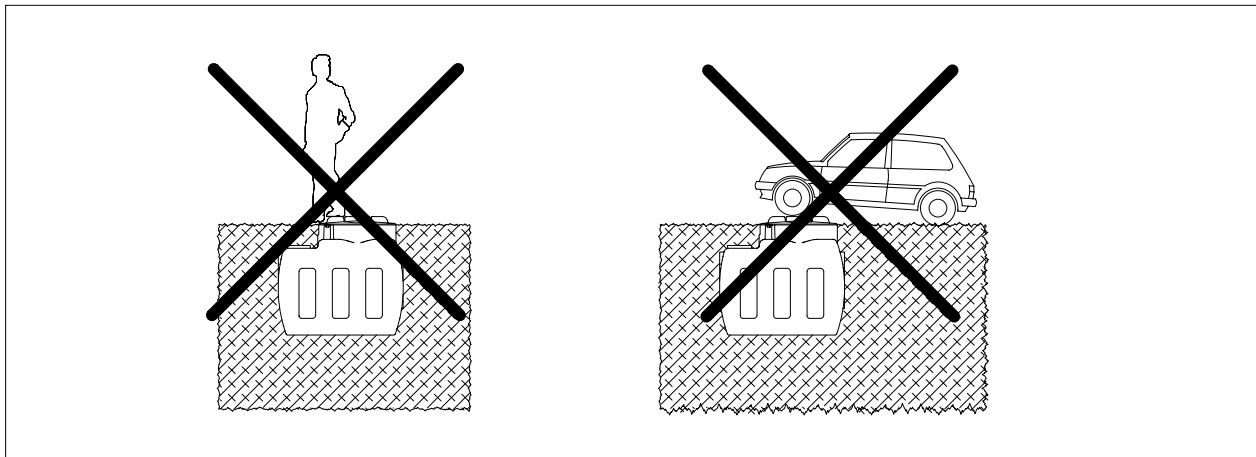
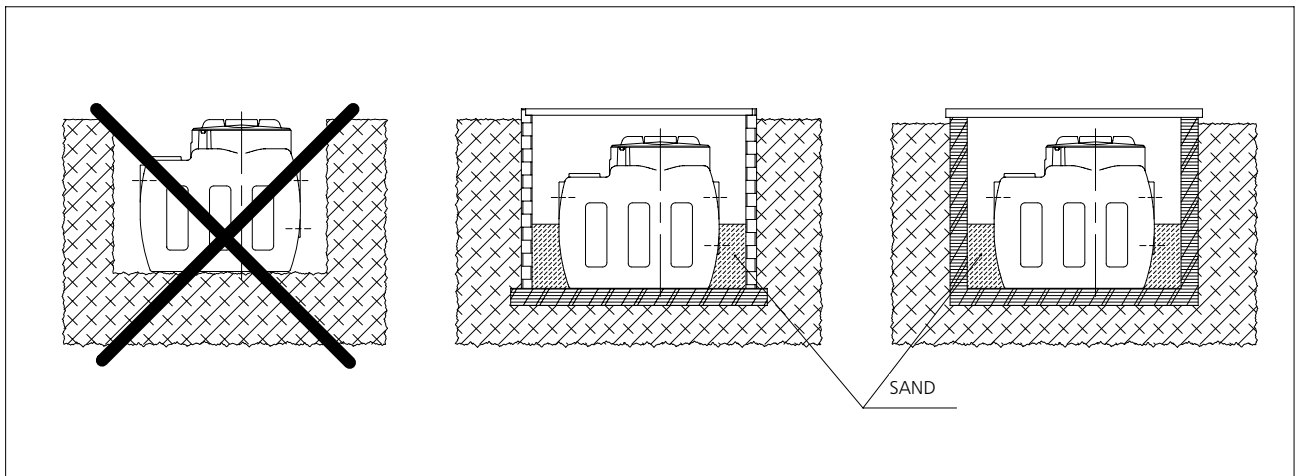
DOUBLEBOX

04514_A_DD

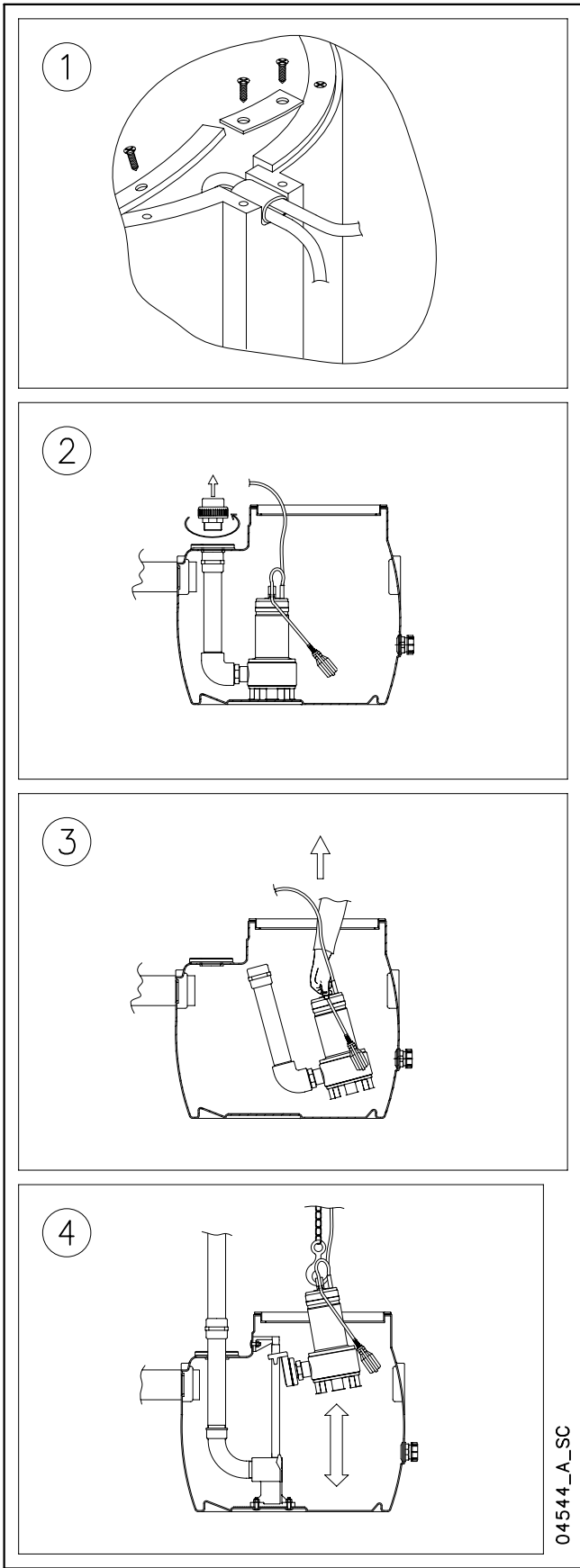
INSTALLATION EXAMPLES



- 1** Lifting station
- 2** Inlet pipe with on-off valve, flexible couplings or pipes, pipe supports
- 3** Outlet pipes with on-off valve, check valve, flexible couplings or pipes, pipe supports
- 4** Trap
- 5** Vent with flexible couplings or pipes, pipe supports
- 6** Emergency drain system with hand-operated diaphragm pump, flexible couplings or pipes, pipe supports
- 7** Auxiliary drain pump with on-off valve, check valve, flexible couplings or pipes and pipe supports



04543_A_SC

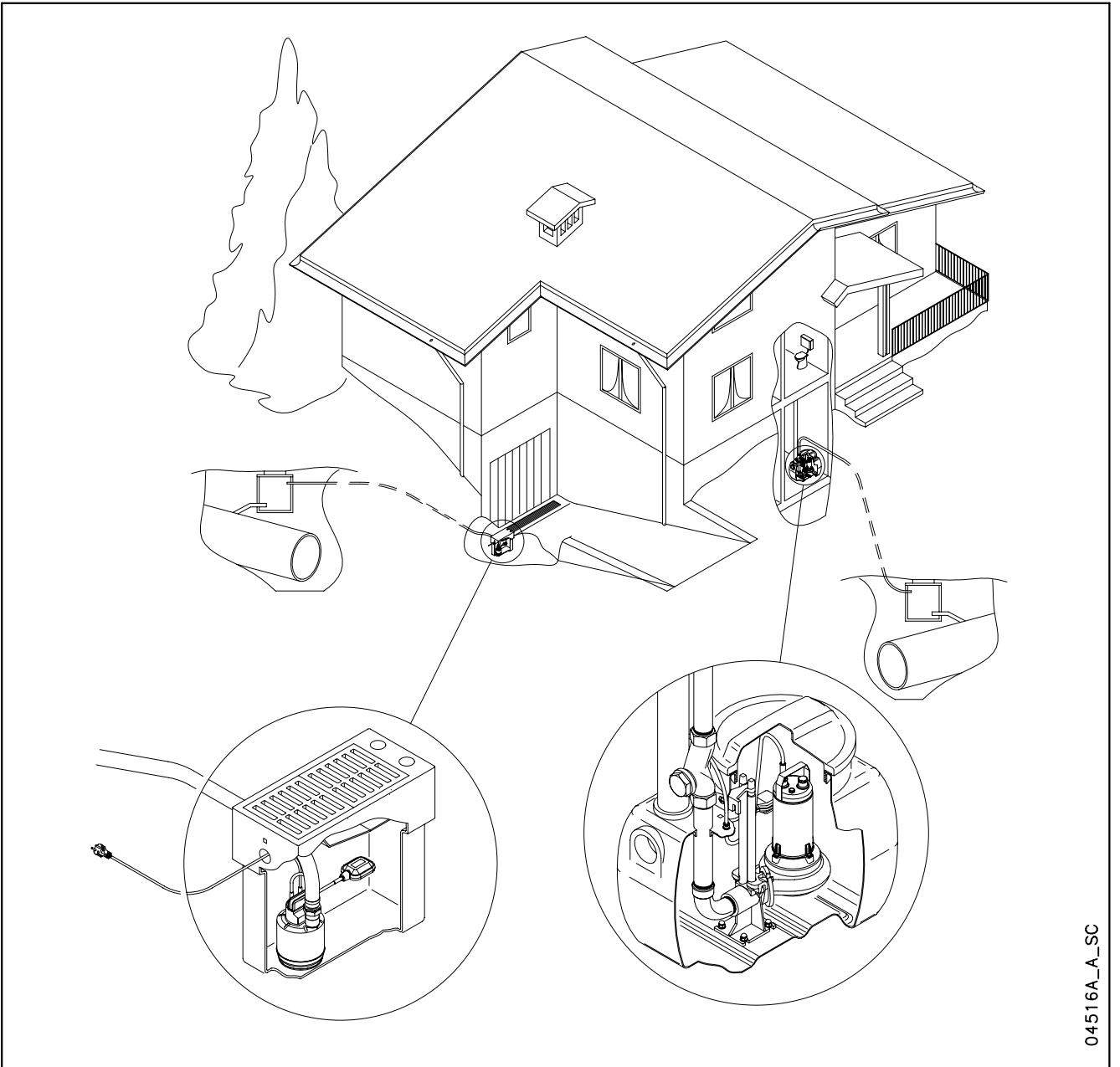


① Innovative system for cable removal from the outside

② ③ Easy pump extraction in systems featuring fixed pipe fittings, involving few operations performed from the outside

④ Easy pump extraction with slide systems

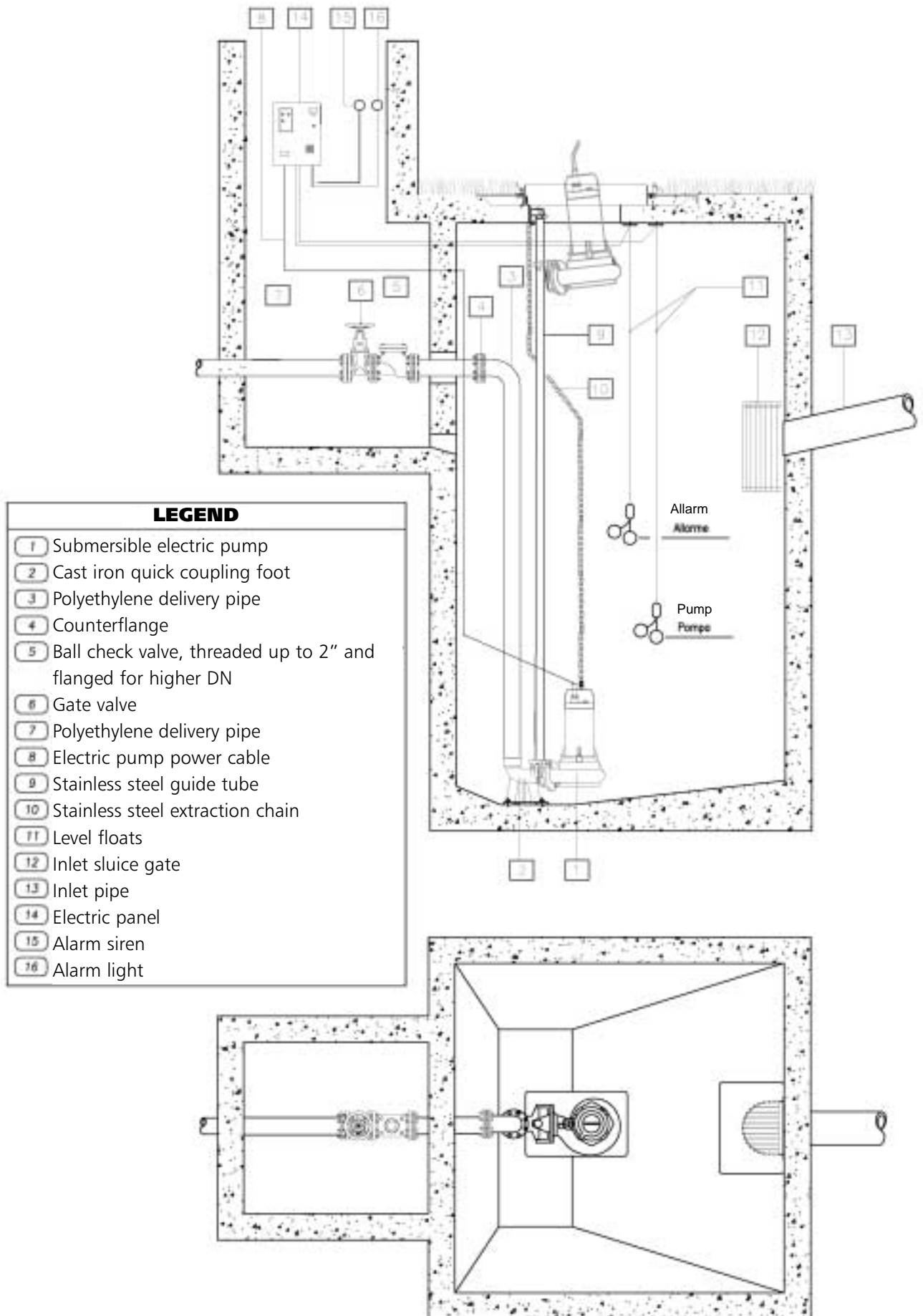
Note: for correct installation see instruction manuals.



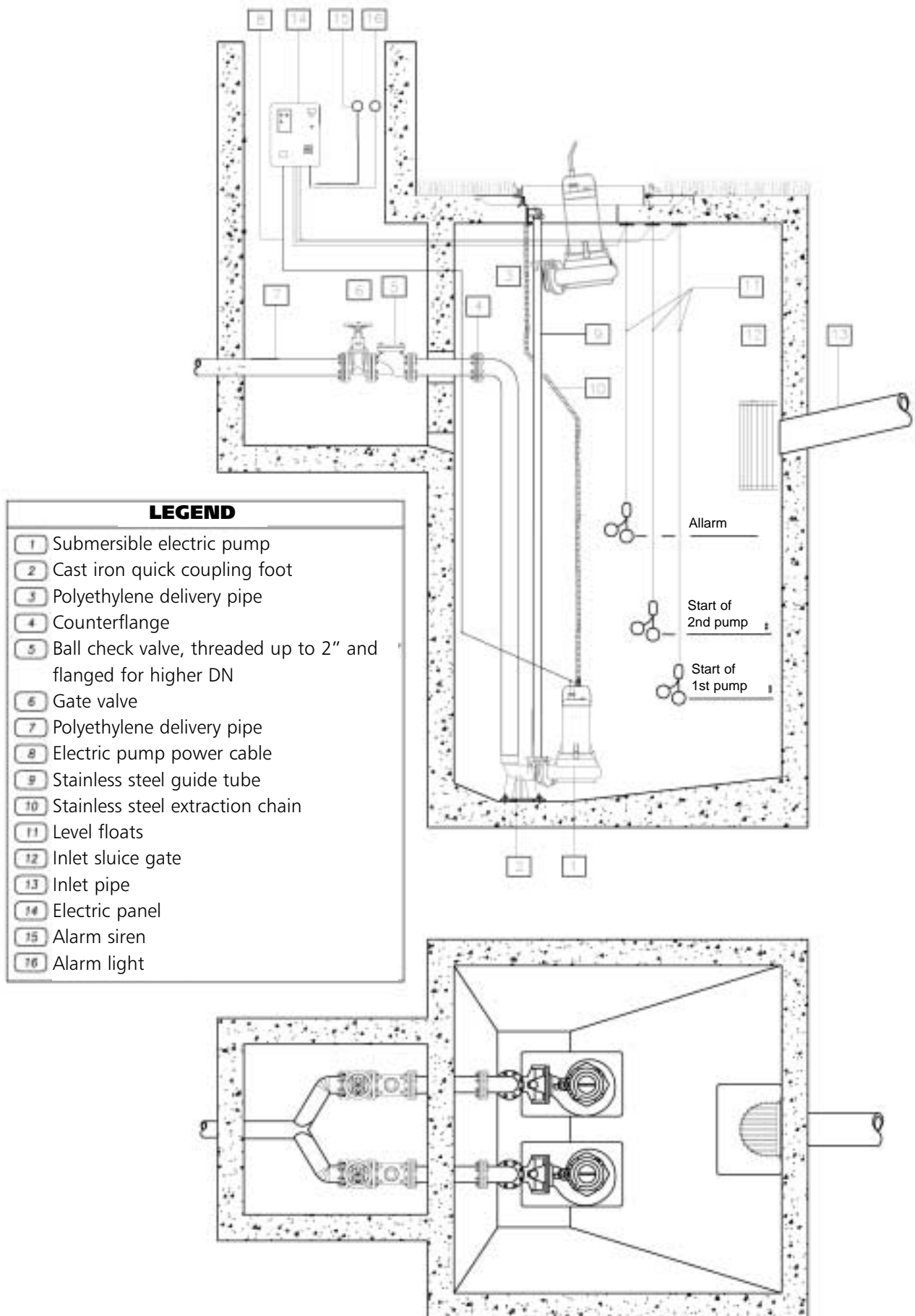
04516A_A_SC

TECHNICAL APPENDIX

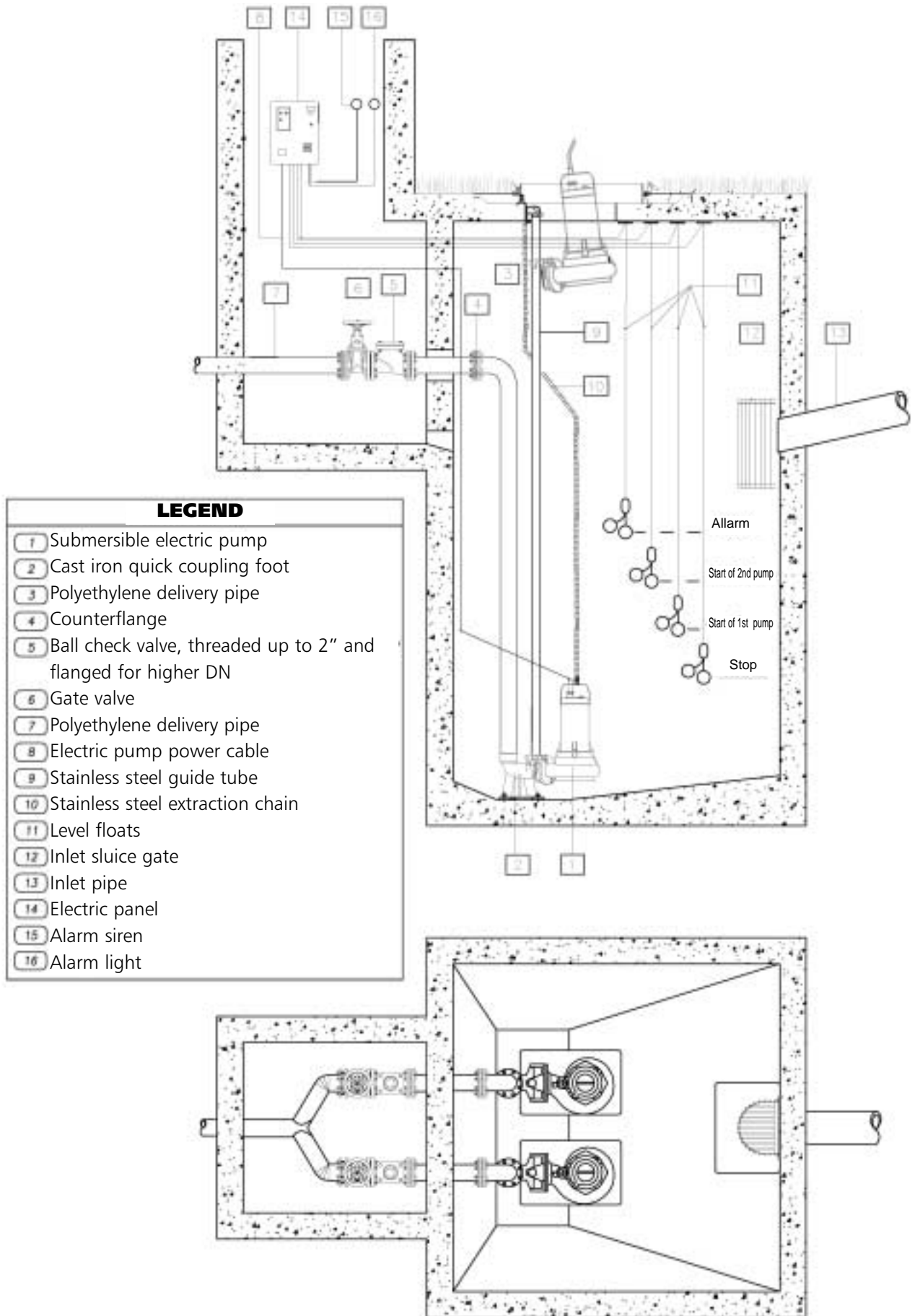
EXAMPLE OF INSTALLATION OF SINGLE-PUMP SYSTEM



EXAMPLE OF INSTALLATION OF TWO-PUMP SYSTEM WITH THREE FLOATS

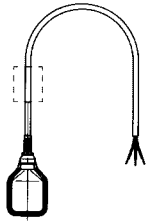


EXAMPLE OF INSTALLATION OF TWO-PUMP SYSTEM WITH FOUR FLOATS



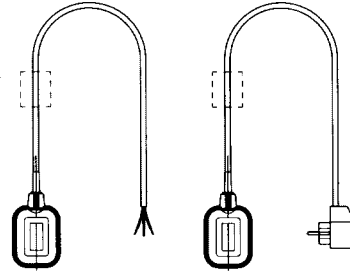
LEVEL CONTROL FLOAT

SMALL MODEL



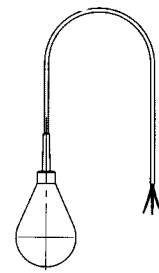
For single function (draining)
 cable length 1.5, 5, 10 m.
 Counterweight available on request for
 version with 5, 10 m cable.

KEY MODEL



For dual function
 (draining/filling)
 cable length 1.5, 5, 10 m.
 Counterweight available on request for
 version with 5, 10 m cable.
 Version with plug and socket for
 single-phase pumps up to 1 kW.

MC MATIC MODEL

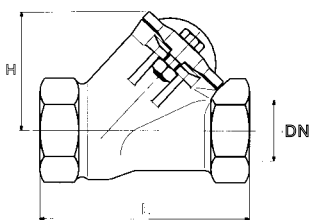


For solids-laden water (without
 mercury).
 Cable length: 15 m.

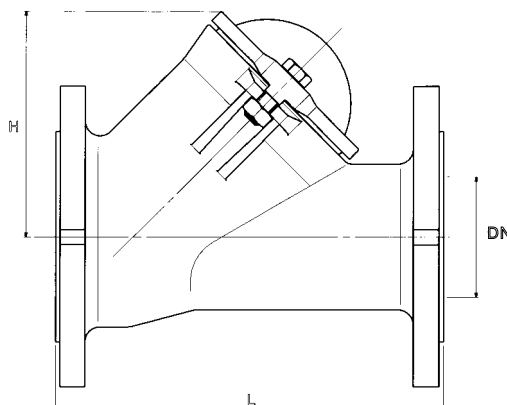
BALL CHECK VALVES FOR SOLIDS-LADEN WATER

No-clog, maximum reliability, low flow resistance.
 Maximum operating pressure: 10 bar.
 Maximum temperature: 85°C.
 Horizontal or vertical operating position.

MODEL	DIMENSIONS (mm)			WEIGHT kg
	BALL Ø	L	H	
Rp 1"1/4	48	140	80	2
Rp 1"1/2	50	140	80	4
Rp 2"	60	200	98	5,5
DN 80	95	260	163	13
DN 100	120	300	210	18
DN 150	175	400	250	37



MODEL 1"1/4 - 1"1/2 - 2"



MODEL 80 - 100 - 150

FLOW RESISTANCE

TABLE OF FLOW RESISTANCE IN 100 m OF A NEW AND STRAIGHT CAST IRON PIPELINE

FLOW RATE		NOMINAL DIAMETER IN mm AND INCHES																			
m ³ /h	l/min.	15 ½"	20 ¾"	25 1"	32 1 ¼"	40 1 ½"	50 2"	65 2 ½"	80 3"	100 4"	125 5"	150 6"	175 7"	200 8"	250 10"	300 12"	350 14"	400 16"			
0,6	10	V	0,94	0,53	0,34	0,21															
		hr	11,8	2,82	1	0,25															
0,9	15	V	1,42	0,8	0,51	0,31															
		hr	25,1	6,04	2,16	0,55															
1,2	20	V	1,89	1,06	0,68	0,41	0,27														
		hr	43,1	10,4	3,72	0,95	0,31														
1,5	25	V	2,36	1,33	0,85	0,52	0,33														
		hr	64,5	15,8	5,68	1,47	0,47														
1,8	30	V	2,83	1,59	1,02	0,62	0,4														
		hr	92	22,3	8	2,09	0,66														
2,1	35	V	3,3	1,86	1,19	0,73	0,46	0,3													
		hr	123	29,8	10,8	2,81	0,89	0,31													
2,4	40	V	3,77	2,12	1,36	0,83	0,53	0,34													
		hr	164	38,2	13,8	2,65	1,15	0,4													
3	50	V	4,72	2,65	1,7	1,04	0,66	0,42													
		hr	246	58,2	21,5	5,6	1,75	0,61													
3,6	60	V	3,18	2,04	1,24	0,8	0,51														
		hr	82	30	8	2,48	0,86														
4,2	70	V	3,72	2,38	1,45	0,93	0,59														
		hr	110	40	10,8	3,33	1,14														
4,8	80	V	4,25	2,72	1,66	1,06	0,68														
		hr	141	51,5	13,9	4,3	1,46														
5,4	90	V		3,06	1,87	1,19	0,76	0,45													
		hr		64	17,5	5,4	1,82	0,46													
6	100	V		3,4	2,07	1,33	0,85	0,5													
		hr		79	21,4	6,6	2,22	0,56													
7,5	125	V		4,25	2,59	1,66	1,06	0,63													
		hr		120	33	10	3,4	0,86													
9	150	V			3,11	1,99	1,27	0,75	0,5												
		hr			47	14,2	4,74	1,21	0,43												
10,5	175	V			3,63	2,32	1,49	0,88	0,58												
		hr			63	19	6,3	1,63	0,57												
12	200	V			4,15	2,65	1,7	1,01	0,66												
		hr			82	24,5	8,1	2,1	0,74												
15	250	V			5,18	3,32	2,12	1,26	0,83	0,53											
		hr			126	37,5	12,3	3,2	1,12	0,36											
18	300	V				3,98	2,55	1,51	1	0,64											
		hr				53	17,3	4,5	1,58	0,51											
24	400	V				5,31	3,4	2,01	1,33	0,85											
		hr				92	29,5	7,8	2,7	0,89											
30	500	V				6,63	4,25	2,51	1,66	1,06	0,68										
		hr				140	44,8	12	4,13	1,36	0,48										
36	600	V				5,1	3,02	1,99	1,27	0,82											
		hr				63	16,9	5,8	1,93	0,68											
42	700	V				5,94	3,52	2,32	1,49	0,95											
		hr				84	22,6	7,8	2,6	0,9											
48	800	V				6,79	4,02	2,65	1,70	1,09	0,75										
		hr				108	29	10	3,35	1,16	0,43										
54	900	V				7,64	4,52	2,99	1,91	1,22	0,85										
		hr				134	36	12,5	4,2	1,45	0,54										
60	1000	V						5,03	3,32	2,12	1,36	0,94									
		hr						44,5	15,2	5,14	1,76	0,66									
75	1250	V						6,28	4,15	2,65	1,70	1,18	0,87								
		hr						68	23	7,9	2,68	1	0,48								
90	1500	V						7,54	4,98	3,18	2,04	1,42	1,04								
		hr						96	32,6	11,2	3,77	1,42	0,68								
105	1750	V						8,79	5,81	3,72	2,38	1,65	1,21	0,93							
		hr						129	43,5	15	5,04	1,9	0,91	0,45							
120	2000	V							6,63	4,25	2,72	1,89	1,39	1,06	0,68						
		hr							56	19,4	6,5	2,43	1,18	0,58	0,16						
150	2500	V							8,29	5,31	3,40	2,36	1,73	1,33	0,85						
		hr							85	30	9,8	3,75	1,79	0,89	0,25						
180	3000	V							9,95	6,37	4,08	2,83	2,08	1,59	1,02	0,71					
		hr							120	42	13,8	5,3	2,53	1,25	0,35	0,15					
300	5000	V								10,62	6,79	4,72	3,47	2,65	1,70	1,18	0,87	0,66			
		hr								124,9	41,3	16,74	7,81	4,03	1,34	0,54	0,25	0,13			
600	10000	V									13,59	9,44	6,93	5,31	3,4	2,36	1,73	1,33			
		hr									161	65	30,2	15,6	5,16	2,09	0,97	0,5			
1200	20000	V													6,79	4,72	3,47	2,65			
		hr													20,1	8,13	3,8	1,95			
1800	30000	V															7,7	5,2	4,0		
		hr															18,07	8,39	4,32		
3000	50000	V																11,8	8,67	6,63	
		hr																49,5	23	11,8	
4500	75000	V																	17,7	13	9,9
		hr																	110,5	51,3	26,4
6000	100000	V																		17,33	13,27
		hr																		90,6	46,6

THE FLOW RESISTANCE MUST BE MULTIPLIED BY:

- 0.8 for stainless steel pipes
- 1.25 for slightly rusted steel pipes
- 1.7 for pipes with deposits that reduce the flow section
- 0.7 for aluminium pipes
- 1.3 for fibre-cement pipes

Hr = FLOW RESISTANCE (m/100 m OF PIPELINE)

V = WATER SPEED (m/sec)

FLOW RESISTANCE
TABLE OF FLOW RESISTANCE IN BENDS, VALVES AND GATES IN cm OF COLUMN OF WATER

WATER SPEED m/sec	SHARP BENDS					SMOOTH BENDS					STANDARD GATE VALVES	FOOT VALVES	CHECK VALVES
	a = 30°	a = 40°	a = 60°	a = 80°	a = 90°	$\frac{d}{R} = 0,4$	$\frac{d}{R} = 0,6$	$\frac{d}{R} = 0,8$	$\frac{d}{R} = 1$	$\frac{d}{R} = 1,5$			
0,10	0,03	0,04	0,05	0,07	0,08	0,007	0,008	0,01	0,0155	0,027	0,030	30	30
0,15	0,06	0,07	0,10	0,14	0,17	0,016	0,019	0,024	0,033	0,06	0,033	31	31
0,2	0,11	0,13	0,18	0,26	0,31	0,028	0,033	0,04	0,058	0,11	0,058	31	31
0,25	0,17	0,21	0,28	0,4	0,48	0,044	0,052	0,063	0,091	0,17	0,090	31	31
0,3	0,25	0,30	0,41	0,6	0,7	0,063	0,074	0,09	0,13	0,25	0,13	31	31
0,35	0,33	0,40	0,54	0,8	0,93	0,085	0,10	0,12	0,18	0,33	0,18	31	31
0,4	0,43	0,52	0,71	1,0	1,2	0,11	0,13	0,16	0,23	0,43	0,23	32	31
0,5	0,67	0,81	1,1	1,6	1,9	0,18	0,21	0,26	0,37	0,67	0,37	33	32
0,6	0,97	1,2	1,6	2,3	2,8	0,25	0,29	0,36	0,52	0,97	0,52	34	32
0,7	1,35	1,65	2,2	3,2	3,9	0,34	0,40	0,48	0,70	1,35	0,70	35	32
0,8	1,7	2,1	2,8	4,0	4,8	0,45	0,53	0,64	0,93	1,7	0,95	36	33
0,9	2,2	2,7	3,6	5,2	6,2	0,57	0,67	0,82	1,18	2,2	1,20	37	34
1,0	2,7	3,3	4,5	6,4	7,6	0,7	0,82	1,0	1,45	2,7	1,45	38	35
1,5	6,0	7,3	10	14	17	1,6	1,9	2,3	3,3	6	3,3	47	40
2,0	11	14	18	26	31	2,8	3,3	4,0	5,8	11	5,8	61	48
2,5	17	21	28	40	48	4,4	5,2	6,3	9,1	17	9,1	78	58
3,0	25	30	41	60	70	6,3	7,4	9	13	25	13	100	71
3,5	33	40	55	78	93	8,5	10	12	18	33	18	123	85
4,0	43	52	70	100	120	11	13	16	23	42	23	150	100
4,5	55	67	90	130	160	14	21	26	37	55	37	190	120
5,0	67	82	110	160	190	18	29	36	52	67	52	220	140

- 1) Flow resistance in bends is due to the contraction of the liquid threads resulting from the change of direction: the development of the bends must therefore be included in the length of the pipeline.
- 2) Flow resistance in valves and gates was determined on the basis of practical tests.

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	imp. gal. per minute imp. gal./min	US gal. per minute US gal./min
1,000	0,0600	2,1189	0,0353	0,2200	0,2640
16,6670	1,0000	35,3147	0,5886	3,6660	4,4030
0,4720	0,0283	1,0000	0,0167	0,1040	0,1250
28,3170	1,6990	60,0000	1,0000	6,2290	7,4800
4,5460	0,2728	9,6326	0,1605	1,0000	1,2010
3,7850	0,2271	8,0209	0,1337	0,8330	1,0000
0,1100	0,0066	0,2339	0,0039	0,0240	0,0290

PRESSURE AND HEAD

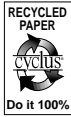
Newton per square metre N/m ²	kiloPascal kPa	bar bar	pound force per square inch psi	metre of water m H ₂ O	millimetre of mercury mm Hg
1,0000	0,0010	1 x 10 ⁵	1,45 x 10 ⁻⁴	1,02 x 10 ⁻⁴	0,0075
1.000,0000	1,0000	0,0100	0,1450	0,1020	7,5000
100.000,0000	100,0000	1,0000	14,5000	10,2000	750,1000
98.067,0000	98,0700	0,9810	14,2200	10,0000	735,6000
6.895,0000	6,8950	0,0690	1,0000	0,7030	51,7200
2.984,0000	2,9840	0,0300	0,4330	0,3050	22,4200
9.789,0000	9,7890	0,0980	1,4200	1,0000	73,4200
133,3000	0,1330	0,0013	0,0190	0,0140	1,0000
3.386,0000	3,3860	0,0338	0,4910	0,3450	25,4000

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
1000,0000	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	3,0480	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	imp. gallon imp. gal.	US gallon US gal	cubic foot ft ³
1,0000	1.000,0000	1 x 10 ⁶	220,0000	264,2000	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	4,5460	4.546,0000	1,0000	1,2010	0,1605
0,0038	3,7850	3.785,0000	0,8327	1,0000	0,1337
0,0283	28,3170	28.317,0000	6,2288	7,4805	1,0000



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cod. 191014431 03/04