

# Pump and plant engineering





# Mall LevaPol compact pump station

### for wastewater containing faeces (black water)

- Explosion-protected submersible motor-driven pump in a wet-installed floodable close-coupled design with cutting unit for shearing cuttable solid materials with device category 2G (category as per definition in ATEX guideline 94/9/EC)
- Pump delivery rate: max. 4.2 l/s
- Pump delivery height: max. 34 m
- Stainless steel/cast steel pipeline completely pre-installed in the shaft (including slide valve and backflow preventer)
- Including flushing connection with Storz C coupling
- Pressure pipe ends approx. 200 mm outside the pump unit with a pipe coupling (Plasson) for pressure pipes HDPE DN 50 da63.
- Mall standard switching and control system with simple operation for automatic pump operation incl. display for indicating the fill level and fault messages, integrated acoustic alarm, potential-free high water alarm, unrestricted adjustment facility for switching points, operating hours meter, ammeter, option to connect to control system via digital and analogue inputs/outputs, special functions such as automatic pump alternation, variable staggered start or holiday operation; manual operation likewise possible via the controller.
- Level measurement for the control system as standard with dynamic pressure (open system), if controller max. 10 m away from the pump station; if at a greater distance or if requested other level measuring system possible at extra cost
- Supplied as standard with a cone and cover, class A 15
- Socket design as per DIN 4034-1

Order number	Inner Ø d mm	Number of pumps items	Type of pump	Inlet depth Standard (max.) mm	Total depth mm	Heaviest single weight kg	Total weight kg
Single pump u	mu						
LevaPol-E	1000	1	Cutter pump	1400 (3000)	2200	1,850	2,580
Double pump (	unit						
LevaPol-D	1000	2	Cutter pump	1400 (3000)	2200	1,900	2,670

#### Options

- OPA801 Higher performance submersible motor-driven pump with flow rate max. 5 l/s and flow height max. 45 m (extra cost per pump)
- 417175 Mains-independent alarm device with visual and acoustic alarm signalling

417177 Mains-independent alarm device with integrated GSM modem for transmission of alarm notifications to a mobile phone (customer SIM card) and blocking of pump station by mobile phone

OPA900 Exterior cabinet with alarm lamp for accommodating switching and control system PS1/PS2 LCD up to 4 kW (switching unit pre-installed)

417785 Backflow loop DN 50 incl. pipe trace heating and connection nipple (outer thread with blind cover)

OPA950 Design with backflow loop DN50 and switching and control system in a combined exterior cabinet

- OPA904 Level measurement for controller with explosion-protected hydrostatic level probe (4-20 mA) with 30 m cable with device category 1G (category as per definition in ATEX guideline 94/9/EC) incl. explosion protection barrier (intrinsically safe wiring according to current ATEX regulations) for use in areas at risk of explosion
  - Configuration with controller with 7" TFT touch panel

- Cover, class B 125/D 400/F 900



#### Webcode **M6032**





## for wastewater without faeces (grey water) and drainage water, rainwater and wastewater from separating plants





Animation at: www.mall.info/tv 7

- Submersible motor-driven pump in a wet-installed floodable close-coupled design
- Pump delivery rate: max. 12 l/s

environmental systems

- Pump delivery height: max. 15 m
- Stainless steel/cast steel pipeline completely pre-installed in the shaft (including slide valve and backflow preventer)
- Including flushing connection with Storz C coupling
- Pressure pipe ends approx. 200 mm outside the pump unit with a pipe coupling (Plasson) for pressure pipes HDPE DN 50 da63.
- Mall standard switching and control system with simple operation for automatic pump operation incl. display for indicating the fill level and fault messages, integrated acoustic alarm, potential-free high water alarm, unrestricted adjustment facility for switching points, operating hours meter, ammeter, option to connect to control system via digital and analogue inputs/outputs, special functions such as automatic pump alternation, variable staggered start or holiday operation; manual operation likewise possible via the controller.
- Level measurement for the control system as standard with dynamic pressure (open system), if controller max. 10 m away from the pump station; if at a greater distance or if requested other level measuring system possible at extra cost.
- Supplied as standard with a cone and cover, class A 15
- Socket design as per DIN 4034-1

Order number	Inner Ø d mm	Number of pumps items	Type of pump	Inlet depth standard (max.) mm	Total depth mm	Heaviest single weight kg	Total weight kg
Single pump u	nit						
LevaPur-E	1000	1	Channel impeller pump	1400 (3000)	2200	1,850	2,590
Double pump (	unit						
LevaPur-D	1000	2	Channel impeller pump	1400 (3000)	2200	1,900	2,670

#### Options

OPA701 Design of system with explosion-protected submersible motor-driven pumps with device category 2G, explosion-protected hydrostatic level probe (4-20 mA) with 30 m cable with device category 1G (category as per definition in ATEX guideline 94/9/EC) - incl. explosion protection barrier (intrinsically safe wiring according to current ATEX regulations) for use in areas at risk of explosion and mains-independent alarm device

OPA802 Higher performance submersible motor-driven pump with flow rate max. 15.5 l/s and flow height max. 19 m (extra cost per pump)

417175 Mains-independent alarm device with visual and acoustic alarm signalling

417240 GSM modem for transmission of alarm notifications to a mobile phone (customer SIM card) and blocking of pump station by mobile phone

OPA900 Exterior cabinet with alarm lamp for accommodating switching and control system PS1/PS2 LCD up to 4 kW (switching unit pre-installed)

417785 Backflow loop DN 50 incl. pipe trace heating and connection nipple (outer thread with blind cover)

OPA950 Design with backflow loop DN50 and switching and control system in a combined exterior cabinet

418807 Backflow loop LevaStop DN 50 - design with pipe trace heating and control system PS2 + OAC

OPA904 Level measurement for controller with explosion-protected hydrostatic level probe (4-20 mA) with 30 m cable with device category 1G (category as per definition in ATEX guideline 94/9/EC) - incl. explosion protection barrier (intrinsically safe wiring according to current ATEX regulations) for use in areas at risk of explosion

- Configuration with controller with 7" TFT touch panel
- Cover, class B 125/D 400/F 900





## Mall LevaFlow compact pump station

#### Webcode **M6022**

#### for wastewater without faeces (grey water) and drainage water, rainwater and wastewater from separating plants

- Explosion-protected submersible motor-driven pump in a wet-installed floodable close-coupled design with device category 2G (category as per definition in ATEX guideline 94/9/EC)
- Stainless steel/cast steel pipeline completely pre-installed in the shaft (including slide valve and backflow preventer)
- Including flushing connection with Storz C coupling
- Pressure pipe ends approx. 200 mm outside the pump unit with standard stainless steel flange.
- Mall standard switching and control system with simple operation for automatic pump operation incl. display for indicating the fill level and fault messages, integrated acoustic alarm, potential-free high water alarm, unrestricted adjustment facility for switching points, operating hours meter, ammeter, option to connect to control system via digital and analogue inputs/outputs, special functions such as automatic pump alternation, variable staggered start or holiday operation; manual operation likewise possible via the controller (in versions LevaFlow-E 25 EX\* and LevaFlow-D 25 EX\*, the LevaSmart with 7" TFT touch panel is included).
- Level measurement for controller with explosion-protected hydrostatic level probe (4-20 mA) with device category 1G (category as per definition in ATEX guideline 94/9/EC)
- Supplied as standard with a cover plate and cover, class D 400
- Socket design as per DIN 4034-1
- Please note: A Mall LevaStop backflow loop is additionally required to channel wastewater via the backwater level. See page 69.
- Shaft ladder in stainless steel design with entry aid (lowerable)

Order number	Inner Ø d mm	DN pressure outlet	Nominal size	Number of pumps items	Type of pump	Total depth mm	Heaviest single weight kg	Total weight kg
Single pump unit	t							
LevaFlow-E 10 EX	1500	80	10	1	Channel impeller pump	3070	6,870	8,040
LevaFlow-E 15 EX	1500	100	15	1	Channel impeller pump	3070	6,880	8,040
LevaFlow-E 20 EX	1500	100	20	1	Free-flow pump	3070	6,930	8,060
LevaFlow-E 25 EX*	1500	150	25	1	Free-flow pump	3070	6,940	8,070
Doublo numn uni	+							

#### **Double pump unit**

1500	80	10	2	Channel impeller pump	3070	7,020	8,620
1500	100	15	2	Channel impeller pump	3070	7,030	8,630
1500	100	20	2	Free-flow pump	3070	7,120	8,720
1500	150	25	2	Free-flow pump	3070	7,130	8,730
	1500 1500 1500 1500	150080150010015001001500150	15008010150010015150010020150015025	150080102150010015215001002021500150252	1500         80         10         2         Channel impeller pump           1500         100         15         2         Channel impeller pump           1500         100         20         2         Free-flow pump           1500         150         25         2         Free-flow pump	1500         80         10         2         Channel impeller pump         3070           1500         100         15         2         Channel impeller pump         3070           1500         100         20         2         Free-flow pump         3070           1500         150         25         2         Free-flow pump         3070	1500         80         10         2         Channel impeller pump         3070         7,020           1500         100         15         2         Channel impeller pump         3070         7,030           1500         100         20         2         Free-flow pump         3070         7,120           1500         150         25         2         Free-flow pump         3070         7,130

#### Note

The design of these pump stations is based on typical applications from practice ( $H_{man}$  approx. 7m with specified nominal size/output). In order to ensure optimal pump selection, an object-specific design is recommended in principle.

#### **Options**

417175 Mains-independent alarm device with visual and acoustic alarm signalling

417240 GSM modem for transmission of alarm notifications to a mobile phone (customer SIM card) and blocking of pump station by mobile phone

OPA900 Exterior cabinet with alarm lamp for accommodating switching and control system PS1/PS2 LCD up to 4 kW (switching unit pre-installed)

OPA921 Exterior cabinet with alarm lamp for accommodating the LevaSmart up to 15 kW

- Cover in class A 15/B 125/F 900
- Fall protection equipment
- Configuration with controller with 7" TFT touch panel
- Project-specific telecontrol







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# Mall return loop LevaStop



Animation at: www.mall.info/tv

According to DIN EN 752, flooding due to backwater events in the public sewer network – caused by heavy rainfall or blockages – are – with specified frequencies as planned. It is the responsibility of the owner ensure backflow protection for premises or areas below the

backflow level (usually the top edge of the road). According to DIN 1986-100 and DIN EN 12056-4, the only effective protection against backwater, i.e. independent of technical faults, is the lifting of wastewater above the backwater level.

With a LevaStop backflow loop connected downstream of the lifting unit, the wastewater is routed above the backflow level and trouble-free protection against flooding caused by backflow events in the public sewer network is guaranteed.

- Protection against flooding due to backwater in the public sewer network
- PEHD pipework incl. connection nipple with external thread (e.g. for flushing connection, vacuum breaker or air vent valve)
- Version in separate, lockable outdoor cabinet incl. pipe trace heating and insulation

Order number	Туре	Suitable for pressure line	Inlet / outlet side transition	Switch cabinet dimensions W/H (H visible) mm	Total weight kg
705746	LevaStop 50	PEHD da63 (DN50)	Clamp coupling da63	611 x 2000 (ca. 1400)	20
705747	LevaStop 65	PEHD da75 (DN65)	Clamp coupling da75	611 x 2000 (ca. 1400)	20
705748	LevaStop 80	PEHD da90 (DN80)	Loose flange DN 80 PN 10	806 x 2000 (ca. 1400)	25
705749	LevaStop 100	PEHD da110 (DN100)	Loose flange DN 100 PN 10	806 x 2000 (ca. 1400)	25
417781	LevaStop 125	PEHD da140 (DN125)	Loose flange DN 125 PN 10	806 x 2000 (ca. 1400)	30
417782	LevaStop 150	PEHD da160 (DN150)	Loose flange DN 150 PN 10	806 x 2000 (ca. 1400)	30
417783	LevaStop 200	PEHD da200 (DN200)	Loose flange DN 200 PN 10	1145x2000 (ca. 1400)	60

	Options
0PA911	Version incl. Mall PS1 single pump control (for 1 pump with max. 5.5 kW)
0PA912	Version incl. Mall PS2 dual pump control (for 2 pumps with max. 5.5 kW each)
705756	Backflow loop LevaStop DN 50 – Version with pipe trace heating and control unit PS2 + OAC
705755	LevaStop DN 50 backflow loop (for PW n.grease separators) – Version with pipe trace heating and control unit PS2 + OAC
-	Version with flushing connection consisting of ball valve and Storz C coupling

## Schema Mall return loop LevaStop



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Webcode **M6001 Q** 

# E-Mail to pumpstation@mall.info Pump and plant engineering project questionnaire

Questionnaire on dimension	ning, planning and tender p	reparatio	n	Date			
Project data							
Project type 🛛 Industry	□ Industry/Business □ Municipality						
Project	Postcode/	Town					
Contact							
Company/Authority		Name					
Street			E-mail				
Postcode/Town			Tel./Mobile	e			
Delivery medium / Delivery rat	te		Or as an <u>ALTERNATI</u>	VE to the	<u>e delivery rate,</u> pleas	se provide the f	ollowing information:
□ Wastewater from separating	plants Delivery rate	l/s	Nominal s	ize			
Westswater free of feeded (ar	rou wotor) Delivery rete		No. of was	hbasins	No. of show	vers	No. of floor drains
	beilvery rate	1/5	No. of bat	ntubs	No. of dishv	vashers	No.of washing machines
□ Wastewater containing faeces (b	lack water) Delivery rate	l/s	No. of WC	S	Residents		
Precipitation water	Delivery rate	l/s					
As an ALTERNATIVE to the delivery rate, please indicate the connected surfaces (e.g. paving, roof surfaces (greened or standard), concrete surface, bituminous surface, etc.)			Area in m <sup>2</sup>		Rain event (frequency, duration	Or if kr 1) Rainfal	iown I output I / (s x ha)
In control of control	Mail LevaFlow pump station Mail LevaFlow pump station	Ground lev	el (3) Pi highest point of th	High the province of the provi	entities m	Roadway, us backwater le Sewer Sewer	Ually
② Inlet depth	m 4 Height from the lower edge to sewer connection	m	Cover class (A. B.	D)		Pressure line material (f known)	permanently rising?
□ Single unit	Double unit	Red	undant design	Paral	lel design	□ Yes	
Switching unit		Distan	ce to switchina unit	/ pump	sump?	Backflow loop	provided?
<ul> <li>In the building (internal cabinet)</li> </ul>	□ On site (exterior cabinet)	🗆 Up t	o 10 m		m (exact distance)	□ Yes	□ No