

## General

Suction lines are user-friendly preassembled units for connecting the suction side of a metering pump to the medium to be supplied. The main functional element is a foot valve which prevents the primed quantity from returning into the tank and which helps to ensure accurate operation of the metering pump or makes metering of small quantities possible at all. To protect the valves, a suction filter is provided.

Flexible or rigid suction lines adjustable to the required length are available. They can also be supplied with integrated level controls for alarm signaling and protection against dry operation. The level probe in the form of a Reed contact is triggered by the magnet of a float. The contact is made with an increasing level. For versions SA and SG, the break point is approx. 50 mm above the lowest suction point, for versions NB, ND and GA, it is about 30 mm. The alarm signaling equipment available for some versions switches about 60 mm above the break point. Thus it is possible to provide new chemical in time before the pump is stopped to be protected against dry operation due to an empty tank. Pure level controls based on the same function are also available. These level controls are equipped with a d 3.5 jack and can be connected directly to the solenoid metering pump without interposing a level relay.

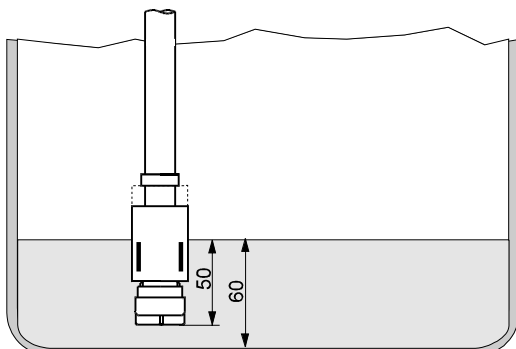
## Suction lines for lost (non-returnable) containers

Especially for lost containers with screw cover (K-60 thread), two types of suction lines are available. Type GA consists of a suction pipe without valve and a simple low level indication, and type GF-2 is fitted with two floats for alarm signaling and low level indication, a suction pipe with foot valve and two return connections for the outlet of the relief valve and a possibly connected automatic degassing device. The lengths of these two versions can be adjusted so that they can be used for different sizes of containers.

The suction lines and level controls can be supplied in acid and alkali-proof plastic materials.

For special applications, it is also possible to provide foot valves separately with cemented, threaded or tubing connections.

## Technical data



Flow rates for suction lines and foot valves during pulsating operation.

DN 4: up to 25 l/h  
 DN 6: up to 50 l/h  
 DN 10: up to 200 l/h  
 DN 15: up to 400 l/h  
 DN 25: up to 1,000 l/h

Electrical load of the float switch:

U<sub>max</sub>: 50 V DC; 50 V AC

I<sub>max</sub>: 0.5 A

P<sub>max</sub>: \*12 VA

\* In the case of inductive loads, use contact protective relay.

## Types of suction lines

- SA** Flexible PVC suction line with foot valve and ceramic counterweight, tubing Ø 4/6 (DN 4) or 6/12 (DN6), tubing length 2.5 m.
- SC** Rigid PVC suction line with foot valve, adjustable length, tubing connection 4/6 (DN4) or 6/12 (DN 6), incl. 1.5 m tubing.
- SG** Rigid PVC suction line with foot valve and PP float switch, adjustable length, tubing connection 4/6 (DN4) or 6/12 (DN6) incl. 1.5 m tubing.

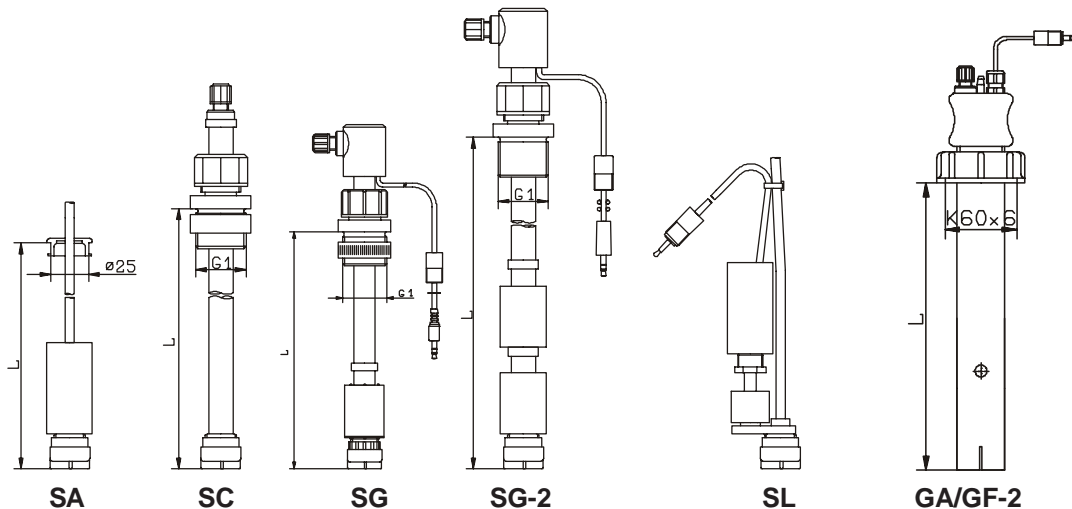
- SG-2** Rigid PVC suction line with foot valve, adjustable length, level control and alarm signaling with two PP float switches, tubing connection 4/6 (DN4) or 6/12 (DN6), incl. 1.5 m tubing.
- SL** Flexible PVC suction line with foot valve and PP float switch, tubing Ø 4/6 (DN4), length 2.5 m.
- GA** Rigid PVC suction line with float switch, without foot valve, Ø 40 mm protective pipe with K 60 cover, adjustable length, tubing connection 4/6 (DN4).
- GF-2** Rigid PVC suction line with two float switches and foot valve, Ø 40 mm protective pipe with K 60 cover, adjustable length, two hose liners (tubing Ø 4 mm) for returning of chemical and tubing connection 4/6 (DN 4) for suction connection.

**Types of level controls**

- NB** Flexible level control with ceramic counterweight and PVC or PP float switch, adjustable, overall length of the connecting cable 2.5 m (soft PVC, other materials upon request).
- NB-2** Flexible level control with ceramic counterweight and double PVC float switch, overall length of the connecting cable 2.5 m (soft PVC, other materials upon request).
- ND** Rigid level control, adjustable length, with PVC float switches, overall length of the connecting cable 2.5 m.

**Types of foot valves**

- FB** Foot valve, PVC or stainless steel, with hose liner
- FC** Foot valve, PVC, with cemented sleeve
- FD** Foot valve, stainless steel or PVDF, with internal thread

**Selection tables for suction lines**

**Suction lines, rigid version**

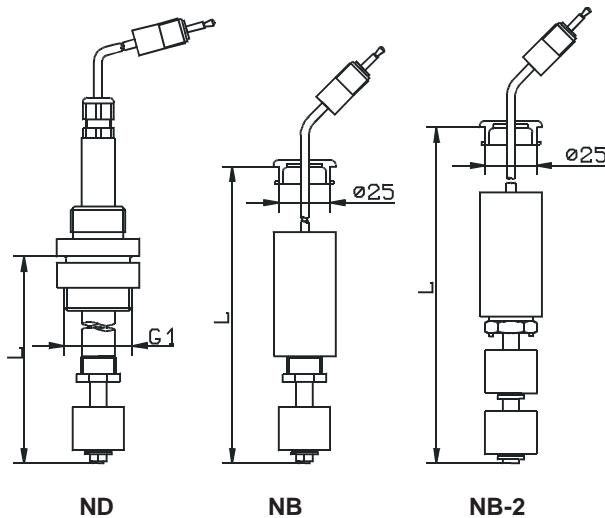
Length adjustable up to:	Tank size		Nominal size / type					
			DN 4			DN 6		
	open	closed	SC	SG	SG-2	SC	SG	SG - 2
435		45l	12224553	12233237	12233217	---	---	---
540		60l	12231880	12233238	12233218	12232909	12233245	12233226
750		100l	12226148	12233239	12233219	12231882	12233246	12233223
800		200l	12232763	12233240	12233125	12232764	12233247	12233227
900	100l	300l	12224554	12233241	12233220	12231883	12233248	12233224
970			12232905	12233242	12233228	12232906	12233249	12233229
1125	200+300l	500l	12224555	12233243	12233221	12231884	12233250	12232961
1250	500l	1,000l	12234534	12234536	12234538	12234535	12234537	12234539
1400	1,000l		12242556	12233244	12233222	12231885	12233251	12233225

**Flexible suction lines**

Tubing length	Type / Nominal size		
	SA	SL	SL
2500 mm	DN 4 12224451	DN 6 12224761	DN 4 12228503

**Suction lines for lost containers, rigid version**

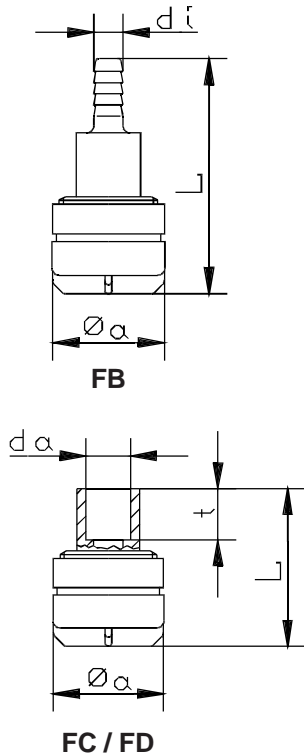
Length adjustable up to:	Type / Nominal size		
	GA	GF - 2	GF - 2
460 mm	DN 4 12234434	DN 4 12235041	DN 4 12234530
630 mm	12234529	12234469	12234435

**Level controls**

**Rigid level control**

Length adjustable up to:	Tank size		Type ND
	open	closed	
200 mm			12233723
435 mm		45l	12228076
580 mm			12231891
750 mm		100l	12228077
900 mm	100l	300l	12228078
1125 mm	200+300l	500l	12228079
1400 mm	1,000l		12228080

**Flexible level control**

Cable length	Float material	Type	
		NB	NB-2
2500 mm	PVC	12228048	12234528

**Foot valves**


DN	Type	Dimensions				Part No.	
		a	L	d	t	PVC	1.4571
4	FB	26	60	4	-	-	12226219
	FC		33	6	8	12224380	-
	FD		*55/37	G1/4	14	*12229468	-
6	FB	30	63	6	-	12225279	-
	FC		43	12	14	12224397	-
	FD		*45/56	G1/4	19	*12229767	12224398
10	FB	50	94	9	-	12225394	12226227
	FC		65	16	15	12224411	-
	FD		63	G1/2	18	-	12224412
15	FB	70	126	16	-	12225396	12226239
	FC		88	20	16	12224435	-
	FD		88	G1/2	15	-	12224436
25	FB	90	158	25	-	12226240	12226241
	FC		109	32	22	12224423	-
	FD		109	G1	20	-	12224424

Level relay for connection of level control to motor-driven pump 41078753

Accessories for rigid suction lines and level control

- screw cover K 60 x 6 Part No.: 19800
- tubing, PVC, Ø 4/6 (DN 4) Part No.: 97181
- tubing, PVC, Ø 6/12 (DN6) Part No.: 97120

\* type FD in PVDF