SURGE TANK P20 V4

INTRODUCTION AND WARRANTY

These operating instructions contain all necessary information for problem-free assembly, start up and trouble-free operation.

We accept liability under the terms and conditions of our warranty if the operating instructions are followed.

Please obtain our permission in advance, if the equipment is to be used under operating conditions that deviate from the applications for which it was intended.

Maintenance work or alterations may only be carried out by our mechanics during the period in which the appliance is under guarantee, or after our permission.

The operator is responsible for correct installation, operation and maintenance.

The surge tank P 20 V4 is a pressure container in the sense of EC Directive 93/c 246/01 and should <u>only</u> be used for Group III fluids in accordance with Section 8 of this Directive.

INSTALLATION

The surge tank (1) must be installed horizontally (with the R 1/4 connection pointing upwards) in the vicinity of the pump on a rising pipe (2) as short as possible.

The R1/4 connection should be fitted to the compressed air line by means of a stop valve or a two-way ball valve (3) in order to prevent any compressed air flowing back in the pressure line when $p_{fluid} > p_{air pressure}$.

Install the surge tank in such a way that the fluid chamber is connected to the fluid pressure line.

A shut-off valve (4) has been installed for maintenance purposes.



Subject to change

Prepared by	07.05.96	
Checked by	07.05.96	
E00 000 04	in a second second of 0	~

USER INFORMATION	
- OPERATING INSTRUCTIONS -	

Page 1 of 4

Issued 09.99

B 19.60.05-B

F22.060.01, issued on 01.98

START UP

All surge tank are tested for operation with an anti-corrosion liquid after factory assembly.

The residue of this anti-corrosion liquid as well as contaminants that are unavoidable during the assembly of the system, should be thoroughly flushed out with a suitable solvent (flushing detergent) prior to start up.

OPERATION

1. Safety information

- Do not loosen any screws of any operational installation with a surge tank without relieving the pressure of the accumulator first.

2. Operational information

The fluid pressure must be slightly higher than the air pressure to achieve the best possible inertia-free reaction from the surge tank.

The best results are achieved when the air pressure is 1 bar below the fluid pressure.

For fluid pressures > 9 bar the max. permissible inlet pressure should always be set at 8 bar.

The air chamber is pressurized when the upward line is shut off (shut-off value (4)) and air is fed to the fluid chamber (open seal screw (5)).

Subsequently, fill the fluid chamber of the surge tank by opening the shut-off device.

The seal screw is closed after some fluid has been discharged.

If the pressure in the air chamber is higher than the fluid pressure, it can be reduced with the air bleed screw (6).

CLEANING AND MAINTENANCE

The surge tank should be flushed before prolonged shutdown (holidays) and each fluid change, and the detergent left in the system until the next time it is used.

Back out the air bleeding screw (6) a few millimeters to relieve pressure from the air chamber.

The fluid/solvent is flushed out by opening the seal screw (5).

The molded diaphragm can be changed after the pressure in the surge tank is relieved. Place the molded diaphragm in the lower housing with the NBR (black) side and the smaller washer upward.

The upper housing is attached to the lower housing with M10 cylinder head screws. Tighten the screws to 20 Nm.

Because the molded diaphragm may settle, it is recommended that the tightening torque is checked after a week; retighten the screws if necessary.

TROUBLESHOOTING

Problem	No damping	Fluid escapes
Location	of pulsation	through air bleed screw
Air chamber	Check air pressure p _{air} below p _{fluid}	Fatigue rupture of the diaphragm (replacement)

We recommend recording the data of the surge tank from the original nameplate here.

GRACO VERFAHRE	ENSTECH	NIK GMBH	DUISBURGER STRATE 7
TYP P20 V4	TS	80 °C	V 4 L J-JJ047 BIELEFELD
HERSTELL-NR	PS	<u>20 bar</u>	BAUJAHR

Documentation and	d directives to be complied v	<u>vith</u>	
ZH 1/406	Directives for fluid sprayers (Hauptverband der gewerblich Carl Heymans Verlag KG, Kö	spraying equipment), Octobo nen Berufsgenossenschafter öln	er 1987 า
VBG 23	Processing paints 1979 Hauptverband der gewerblich Carl Heymans Verlag KG, Kö	nen Berufsgenossenschafter öln	1
VbF	Directive for flammable fluids Vereinigung der TechnÜber Carl Heymans Verlag KG, Co	s, 1982 rwachungs-Vereine e.V., Ess ologne, Germany	sen
Ex-RL	Explosion Protection – Directiv Druckerei Winter, P.O. Box 1	ves of the Unions for the Cher 06/150, Heidelberg 1, Germ	mical Industries 1986 any
Data Sheet	Dangerous Materials (brochu Bayerisches Landesinstitut fü	ire) 1982 ùr Arbeitsschutz	
Data Sheets	Dangerous materials (vols. 1 to 5) 1986 Kühn, Birett Druckerei Laub, Elztal-Dallau		
DruckbehV	EC Directive 93/C 246/01		
Associated docum	entation		
- Techn. Product De	scription B.19.60.0	5-P	
		GRACO N.V. Industrieterrein « Oude Bur Loc. 2206 – Slakweidestraa 3630 Maasmechelen – Bel Telephone : 32 89 770 700	nders » at 31 gium Fax : 32 89 770 777
	- 4		В.19.60.05-В
			D.10.00.00-D

GRACO

SURGE TANK P20 V4

An air operated diaphragm surge tank for liquid materials. In particular paints with a viscosity within the range of 30 to 1500 mm 2/s (cSt) at operating temperatures.

- In special cases the range can be extended, but only after permission.

Description

Essentially, the surge tank consists of an upper housing (1), a molded diaphragm (3) and a lower housing (2).

The flexible diaphragm separates the fluid chamber from the air chamber.

The surge tank is especially suitable for use in fluid lines, compensating for variations in pump pressure.

A rapid reaction of the accumulator is achieved, due to the air pressure that serves as a damping element.

The materials of the wetted parts are suitable for use with water-based paints.



Replaces issue	of 09.99			Page 1 of 2
Prepared by	07.05.96	USER INFORMATION	Issued	02.00
Checked by	08.05.96	- TECHN. PRODUCT DESCRIPTION -	B.19	.60.05-P
F22 060 01 iss	ued on 01 08	3		

F22.060.01, issued on 01.98

Technical data

Model	Part No.	
SST 1.4571/AI	79670 001005	

The molded diaphragm 76197 039001 is a replacement part.

Maximum working pressure	20	Bar
Maximum air inlet pressure	8	Bar
Minimum fluid temperature	10	°C
Maximum fluid temperature	80	C°
Tank volume	4	L
Compressed gas	Air	(nitrogen in the case of oil hydraulics)
Tightening torque M 10 screws	20	Nm

The surge tank is a pressure container in the sense of EC Directive 93/C 246/01.

Materials (wetted parts)



Pos	Description	Material
1	Housing, lower	SST 1.4571
2	Diaphragm	PTFE
3	Washer	SST 1.4541
4	Screw	A2
5	Seal screw	A4

Dimensions



Build-up position: standing

Footnote

This technical product description also serves as a replacement parts list.

<u>Associated documentation</u> User Manual	B.19.60.05-B	GRACO N.V. Industrieterrein « Oud Loc. 2206 – Slakweide 3630 Maasmechelen - Telephone : 32 89 770	e Bunders » estraat 31 - Belgium) 700 Fax : 32 89 770
	- 2 -		B.19.60.05-P

GRACO STANDARD WARRANTY

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale by an authorized Graco distributor to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the repaid return of equipment claimed to be defective to an authorized Graco distributor for verification of claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

Graco does not extend its warranty to accessories, appliances, materials or components which are sold by Graco but are not manufactured by Graco and makes no guarantee, however implied, with regard to the brand capability and suitability for a certain purpose. These parts sold by Graco but not manufactured by Graco (such as electric motors, switches, hoses, etc.) are covered by the warranties of the respective manufacturers. Graco will support the buyer in enforcing any warranty claim with the proviso that in no event can Graco be made liable for indirect, incidental, special or consequential damages which arise from the supply of appliances by Graco under the conditions governed by these provisions, or the supply, performance or use of any products or other goods which are sold under the conditions governed by these or the part of Graco or for any other reason.

GRACO N.V. Industrieterrein "Oude Bunders" Loc. 2206 - Slakweidestraat 31 3630 Maasmechelen – Belgium Tel.: 32 89 770 700 Fax: 32 89 770

