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OWNER'S MANUAL

Wet blast system WET BLAST FLEX

with W-92 booster pump,

SC2048 blast machine, 500 I water tank and

KB-52 wet blast head

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1 Scope of manual

This owner's manual contains information regarding the operation and maintenance of the WET BLAST FLEX wet blast system, consisting of:

- W-92 frame-mounted booster pump with attached filter regulator
- SC2048 pressure blast machine with PT valve and RMS remote control valve
- KB-52 wet blast head
- 500 I water tank
- High-pressure water hose and suction hose.

2 Application and restrictions

The WET BLAST FLEX wet blast system is a blast machine which is connected to a self-priming pump (W-92) and a 500 I water tank. This system is intended for one operator. Water is injected directly into the blast media air flow (nozzle) and atomised via the wet blast head (water volume can be regulated via the needle valve and KB-52 nozzles). The water binds the dust that would normally be created during blasting. The W-92 booster pump is self-priming and is supplied directly from the water tank. The machine can also be used for dry blasting, washing down or air drying thanks to the intelligent control (see Table 2).

3 Description of the equipment

3.1 Components

The WET BLAST FLEX wet blast system in the base frame (see Figure 1) has the following main dimensions:

Length	Width	Height	Weight
2000 mm (without hoses)	800 mm	1500 mm (without crane eyes)	420 kg

The following components and devices are required for wet blasting with the WET BLAST FLEX wet blast system:

- Sufficiently sized air supply for blast machine and
 - W-92 booster pump
- Water supply for 500 I tank (only required for filling up)
- WET BLAST FLEX wet blast system consisting of:
 - \Rightarrow W-92 booster pump
 - \Rightarrow KB-52 wet blast head
 - \Rightarrow SC2048 pressure blast machine with PT valve and RMS remote control valve

- \Rightarrow High-pressure water hose and suction/water hose
- \Rightarrow Water tank (500 litres)

Table 2 shows the processes that can be carried out using the WET BLAST FLEX wet blast system and controlled via the ACS slide valves on the RLX deadman handle with dual function. Figure 1 shows the deadman handle with both ACS slide valves which are used to switch the blast media/water function on and off:

- The slide valve with the red hose is used to open and close the blast media function
- The valve with the blue hose is used to open and close the water function

The function is actuated in each case by sliding/pulling the ACS valve.

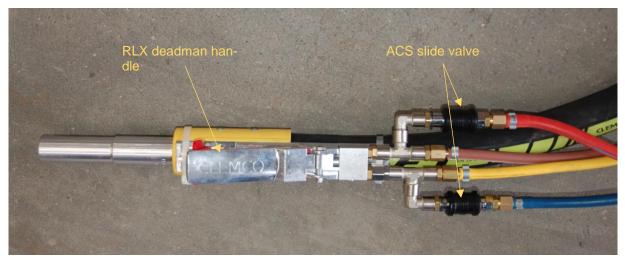


Figure 1: Deadman handle with ACS slide valves

Process	Actuation
Dry blasting (air and blast media)	Press the RLX deadman handle and open the ACS slide valve with the red hose (ACS with blue hose closed)
Washing down (air and water)	Press the RLX deadman handle and open the ACS slide valve with the blue hose (ACS with red hose closed)
Wet blasting (air, water and blast media)	Press the RLX deadman handle and open both ACS slide valves
Air drying	Press the RLX deadman handle and close both ACS slide valves

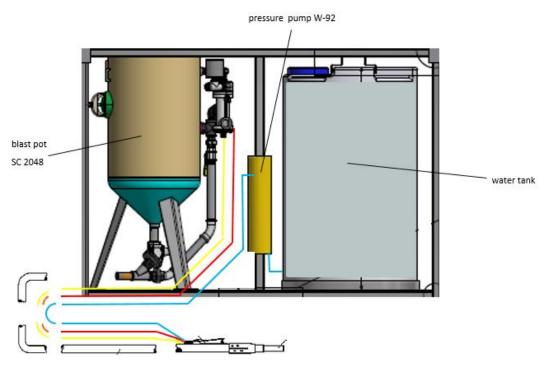
Table 2: Processes

3.2 Description of water tank

The water tank installed in the WET BLAST FLEX (see Figure 2) is made from UV-stabilised polyethylene. It has a capacity of 500 litres and a ³/₄" connection. It includes a scale for reading off the water level.



Figure 2: Illustration of water tank



3.3 Functional principle

Figure 3: WET BLAST FLEX wet blast system

The blast machine and the W-92 booster pump (see Figure 3) are supplied with compressed air in parallel. The compressed air is cleaned in the connection filter and then drives the self-priming water pump via an air motor. The primed and pressurised water is pumped to the KB-52 wet blast head via a high-pressure water hose. The water is injected (ball valve open) into the blast media and air flow via the ring nozzle distributor of the wet blast head, and is atomised in the process. Blast media and dust

are wet/bound with water to enable low-dust/dust-free blasting. The needle valve and the nozzles on the KB-52 wet blast head ensure that the water is metered according to the blast parameters.

4 Operation

4.1 Requirements

The following technical data and maximum values of the WET BLAST FLEX must be observed during operation:

Maximum air inlet pressure for the sandblaster = **12 bar** Theoretical ratio (water pressure to air pressure) = **4 : 1** Water pump flow per double stroke = **75 cm³** Maximum water volume pumped = **15 l/min** Air consumption of the W-92 booster pump at 8 bar = **0.15 m³ / min**

Table 3: Technical data

4.2 Set-up for initial installation and reinstallation

(1) Set down the wet blast sys- tem	 Level surface Near the compressed air system
(2) Install SC2048 pressure blast machine	 Connect air supply Fill with blast media Adjust all relevant parameters (pressure, blast media flow, etc.) Follow the instructions in the SC-2048 pressure blast machine owner's manual!
(3) Wet blast head (KB-52) al- ready installed	 Connect blast hose with nozzle and holder to wet blast head Connect remote control hoses to the machine as well
(4) Install W-92 booster pump	 Compressed air (set compressed air regulator to max. 8 bar)
(5) Install water tank	Unscrew safety lockOpen tank cover

	 Add water (max. 500 l) Close tank cover and screw safety lock back on
(6) Remove air from the system	 Supply compressed air to the W-92 booster pump (open ball valve)
	 Set pump pressure regulator to around 3 bar
	 Open the ball valve on the wet blast head
	 Leave the W-92 booster pump running until only water comes out of the nozzle (no air left in the system)
(7) Put on the protective equip-	 Resistant clothing
ment	 Air-fed helmet with correct connection to the breathing air supply (breathing air filter) and adjustment of the air volume with an air control valve attached to the belt
	 Leather gloves and safety shoes

4.3 Daily set-up

Not necessary if an initial installation or reinstallation has already been performed in accordance with chapter 4.2.

(1) SC2048 pressure blast ma- chine	 Connect air supply Fill with blast media if applicable
	 Check all relevant parameters
	(pressure, blast media flow, etc.)
	Follow the instructions in the SC-2048 pressure blast machine owner's manual!
(2) Water tank	 Ready for use (top up water if necessary)
(3) Remove air from the system	 Supply compressed air to the W-92 booster pump (open ball valve)
	 Set pump pressure regulator to around 3 bar
	 Open the ball valve on the wet blast head
	 Leave the W-92 booster pump running until only water comes out of the nozzle (no air left in the system)
(4) Put on the protective equip- ment	 Resistant clothing

 Air-fed helmet with correct connection to the breathing air supply (breathing air filter) and adjustment of the air volume with an air
control valve attached to the belt
 Leather gloves and safety shoes

4.4 Startup and operation

(1) Wet blasting	 Start the blasting process with air only (press the deadman han- dle)
	 Open the water supply and regulate with the needle valve until a full water mist comes out of the nozzle, increase the air pressure with the regulator if necessary
	 Adjust the blast media supply (open the metering valve using the slide valve on the deadman handle) and the blast media/water quantities
(2) Wash down the blasted parts	 Close the media metering valve using the slide valve on the deadman handle
(3) Dry the blasted parts	 Close the water supply as well (using the slide valve on the deadman handle)
(4) Dry blasting	 Start the blasting process with air only (press the deadman han- dle).
	 Blast media supply (open the metering valve using the slide valve on the deadman handle)

4.5 Shutdown after finishing work

(1) Blast the blast hose until empty and dry it	 Close the media metering valve (close the metering valve us- ing the slide valve on the deadman handle)
	 Blast with air and water for around 10 seconds
	 Close the water supply (deactivate the water pump using the slide valve on the deadman handle)
	 Blast with air until no more water mist comes out of the nozzle.
(2) Close the air supply	 Close the air supply to the water pump and blast machine
	 Close the air supply for the system air
	Follow the instructions in the SC-2048 pressure blast machine owner's manual!

4.6 Shutdown when moving equipment

(1) Blast the blast hose until empty and dry it	 Close the media metering valve (close the metering valve us- ing the slide valve on the deadman handle)
	 Blast with air and water for around 10 seconds
	 Close the water supply (deactivate the water pump using the slide valve on the deadman handle)
	- Blast with air until no more water mist comes out of the nozzle.

5 Maintenance

5.1 General

The **W-92 booster pump** of the WET BLAST FLEX is **maintenance-free**. The other components, however, are subject to wear during operation and must undergo regular maintenance in order to ensure safety and efficiency.

All connections must be closed and the system must be depressurised before starting any maintenance work (see 4.5 and 4.6)!

5.2 Daily check list

(1) KB-52 wet blast head	Check for external and internal wear and leaking water
	\Rightarrow Ring nozzle
	\Rightarrow O-ring
(2) Air filter (on the booster pump)	Clean if dirty (sight glass), make sure equipment is fully depressurised beforehand (see 4.5 and 4.6)
(3) Pressure blast machine, hoses & nozzle	Follow the instructions in the SC-2048 pressure blast machine owner's manual!

5.3 Weekly check list

Check for dirt on the air filter of the W-92 booster pump (sight glass) and clean if necessary. Make sure equipment is fully depressurised beforehand (see 4.5 and 4.6). Drain water from the filter (slightly open drain during operation). *The instructions in the SC-2048 pressure blast machine owner's manual must also be followed!*

5.4 Monthly check list

Check all hose couplings and hoses for wear or breakage and replace them if necessary. Make sure equipment is fully depressurised beforehand (see 4.5 and 4.6). Check water tank for leaks. *The instructions in the SC-2048 pressure blast machine owner's manual must also be followed*!

6 Troubleshooting

This section only refers to possible problems with the wet blast system

Symptom	Possible cause	Remedy
(1) W-92 booster pump is not running.	Ball valve closed on wet blast machine and/or on compressor.	Open.
	Compressed air regulator on booster pump set to 0 bar.	Change regulator setting.
(2) W-92 booster pump is run- ning but no water is coming out of the nozzle.	Water tap and/or ball valve on wet blast machine closed.	Open.
	Water tank empty (when using a suction hose).	Refill water tank.
	Dirt trap on W-92 booster pump blocked.	Open and clean.
	Needle valve closed or blocked (limescale deposits).	Open/remove and clean.
(3) Blast machine	The instructions in the SC-2048 pressure blast machine owner's manual must also be followed!	

7 Replacement parts

7.1 WET BLAST FLEX wet blast machine

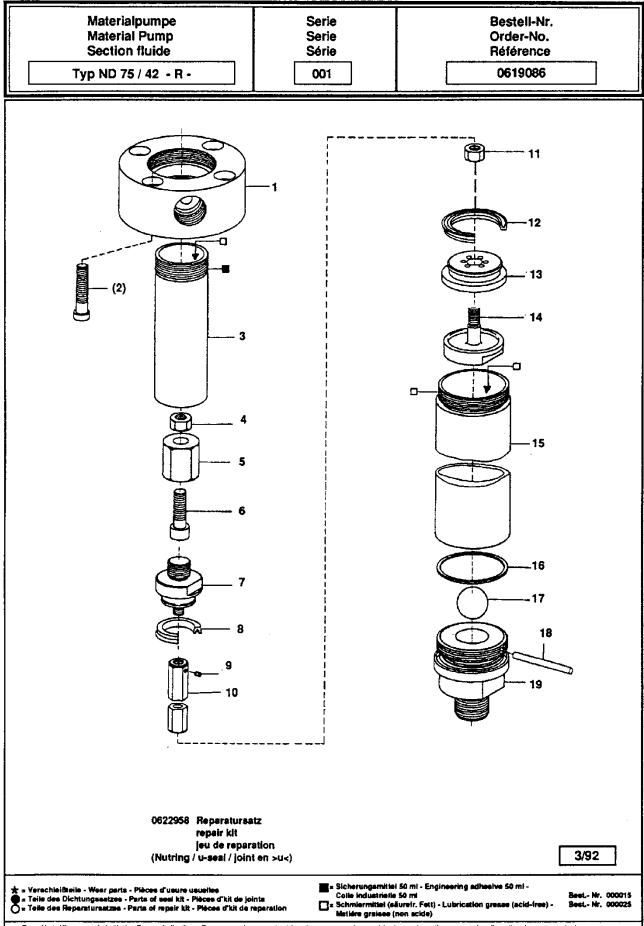


Figure 4: WET BLAST FLEX components

Item	Stock	Description					
	no.						
1	99839D	W-92 booster pump on its own					
2	99375D	1/4" filter for W-92					
3	99769D	1/4" pressure regulator					
4	90285D	1/4" ball valve with internal and external thread					
5	01019D	3/8" - 1/4" reducing nipple					
6	94263D	1/4" plug connection, external					
7	94273D	1/4" elbow no. 90 II					
8	99580D	3/4" - 1/2" elbow RG no. 90					
9	02462D	1/2" double nipple RG					
10	99574D	1/2" dirt trap for W-92					
11	99581D	GKA-12 coupling					
12	94279D	High-pressure hose					
13	24357D	Coupling adapter high-pressure hose					

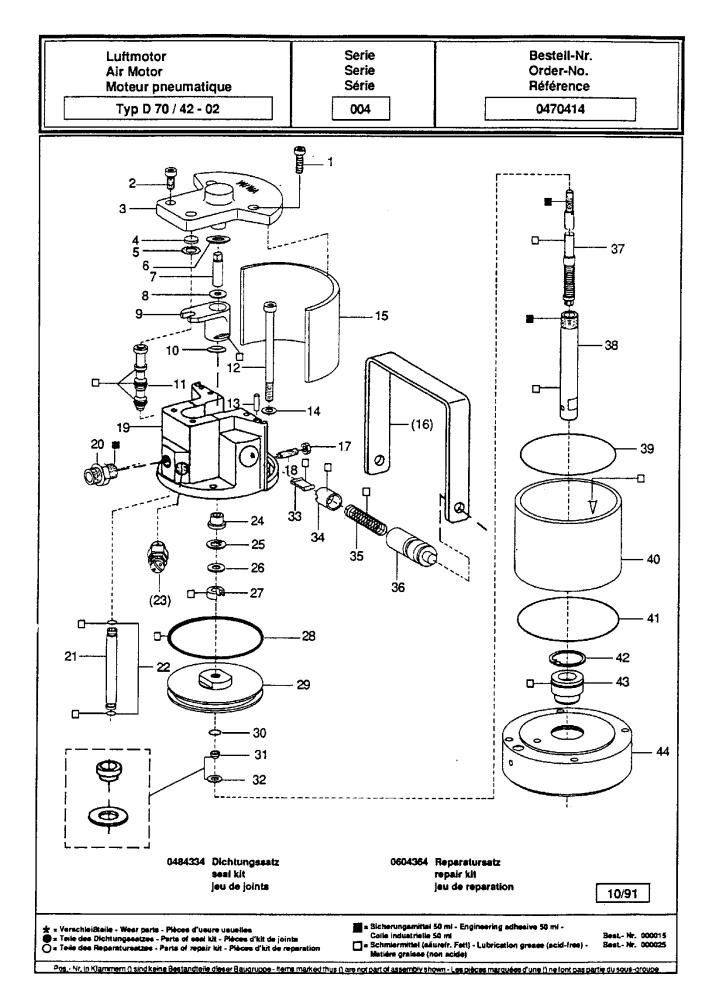
7.2 W-92 booster pump

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17	0486760	1	* 0	Kugel		ball		bile	
18	0486809	1		Zylindersift		cylindrical pin		goupille cylindrique	
19	0618667	1		Gehäuse -BV-		housing		corps	
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7.3 KB-52 wet blast head

7.3.1 KB-52 wet blast head (for blast hoses larger than 19 x 7)

The WET BLAST FLEX uses the KB-52 wet blast head. Rather than being mounted on the front of the nozzle as in its original application, the wet blast head is mounted behind the media metering valve. This ensures that the water does not mix with the blast media before reaching the blast hose.



Figure 5: KB-52 wet blast head with ball valve and needle valve

ltem	Stock no.	Description
1	90369D	KB-52-1 wet blast head complete with 3 nozzles
2	93129D	Housing for KB-52 or KB-52-1 wet blast head
3	90630D	Steel ring for KB-52 (ring nozzle)
4	90371D	Steel ring for KB-52-1
5	100036	KB-52-1 water nozzle with bore hole
6	90372D	KB-52-1 water nozzle without bore hole (2 required)
7	00854D	Seal (blast hose side)
8	94322D	Needle valve for KB-52
9	94349D	Seal (nozzle side)
10	90631D	O-ring for ring nozzle
11	01020D	3/8" double nipple, brass
12	01019D	3/8" - 1/4" reducing nipple, brass
13	99917D	3/8" ball valve, 50 bar
14	90061D	3/8" elbow IE
15	99639D	Double nipple, 2" coarse thread (option to install the wet blast head in the centre of the hose)

Table 5: KB-52 wet blast head with ball valve and needle valve