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Operation Manual

Mobile Dustfree Pressure Air Blasting System

HSP-20

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Revision: 01.2015

Table of contents

1 Scope of manual ____ *3*

2 Application and restrictions ____ *3*

3 Description of Equipment ____ *3*

3.1 Components ____ **3**

3.2 Air consumption (nozzle Ø 4,5mm) ____ **4**

3.3 How the system works ____ **5**

4. Installation ____ *6*

4.1 Set up for initial installation or re-installation ____ **6**

4.2 Daily set up ____ **7**

4.3 Operation ____ **8**

4.4 Shut down ____ **8**

4.5 Shut down when moving equipment ____ **8**

5. Maintenance ____ *9*

5.1 General ____ **9**

5.2 Daily check list, but also after max. 8h working time ____ **9**

5.3 Weekly check list, but also after max. 50 h working time ____ **9**

6 Trouble shooting ____ *10*

6.1 Special informations ____ **12**

6.1.1 Protection against electrostatic charges ____ 12

6.1.2 Rest hazards ____ 12

7 Replacement parts ____ *13*

7.1 System ____ **13**

7.1.1 Blast Head EDBH 50 ____ 15

8 Vacuum cleaner „STARMIX“GS2078 GI ____ *16*

1 Scope of manual

This manual covers set-up , operation and maintenance of the mobile dust free blasting machine HSP-20 .Additionally the owners manual for the „Starmix“ –vacuum cleaner, TYP GS2078GI must be considered.

2 Application and restrictions

This dust free blast machine is mainly applied for blast cleaning of parts, which cannot be blasted in a cabinet or blast room due to their size, weight or long distance for transportation. The design allows local blast cleaning on a part without the escape of abrasive, dust or debris into the environment. In order to protect the blaster, persons or equipment nearby independent from the above the following additional limitations are existing:

Persons without special protective clothing are not allowed to stay in a 10m perimeter from the blasting activities.

Damageable equipment should be removed in a perimeter of 10m

Suitable blast media:

- Glasbeads, Aluminum Oxide etc. - size max. 0.8mm

No lifetime warranty when using Aluminium Oxide!

- Steelgrit - size max. 0.4mm

The blast machine is rated for maximum working pressure of 8 bar.

3 Description of Equipment

3.1 Components

picture 1: HSP-20

Figure 1 shows the major components

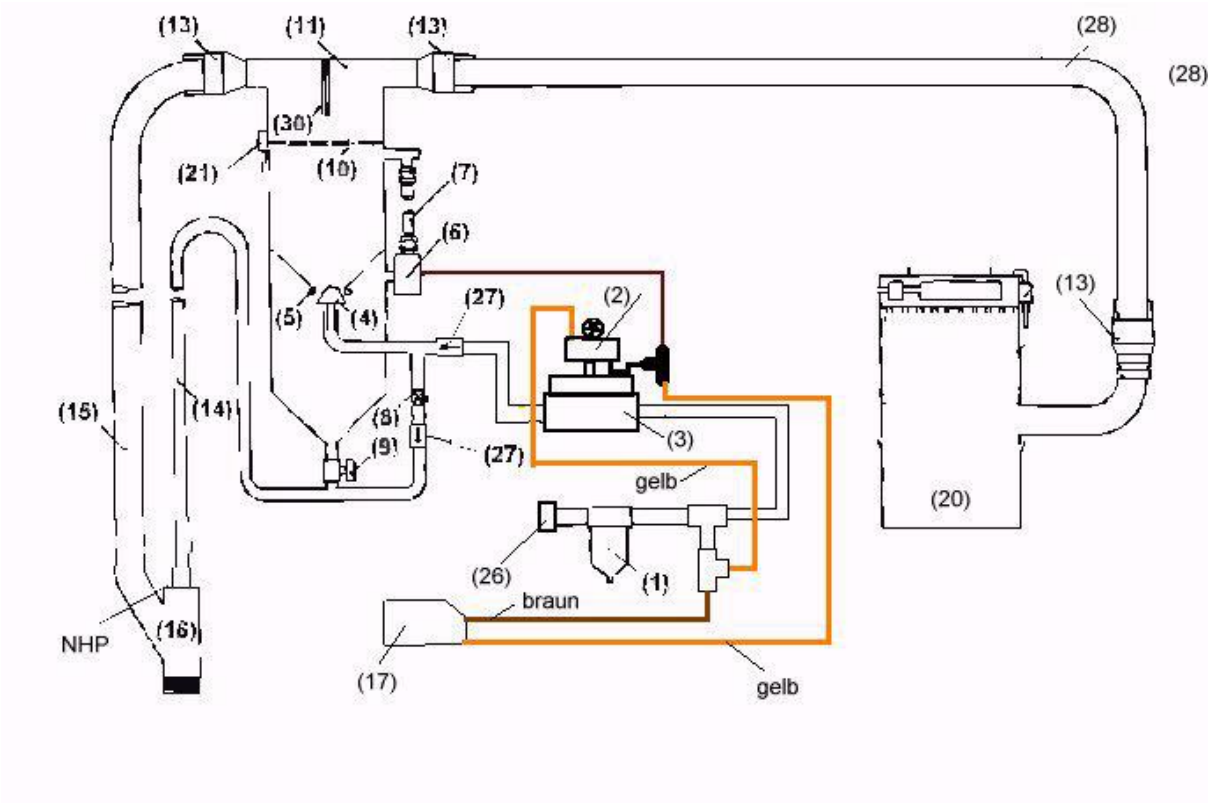
Chassis *(L* x W x H = 1.120 x 560 x 1.700 mm, weight ca. 115 kg) including mounted

  - Blast pot and silo
  - Vacuum cleaner with accessories
- *Blast pot with integrated silo*
  - Volume of blast pot and silo 18 litre each.
  - Max. working pressure 8 bar.
  - Abrasive metering valve MP - ½“.
  - Removable screen.
  - Separator
- *Vacuum cleaner*
- *Moisture separator 1/2“ HMS*
- *Air manifold with KAG 12 coupling*
- *Blast head EDBH-50*
  - Boron carbide nozzle - size 4,5mm
  - Flat brush mouth piece
- *Hoses between pot silo and blast head*
  - PVC-suction hose 41mm with coupling
  - Blast hose 13 x 7.5 mm and 19 x 7mm with coupling
- Pneumatic foot valve for start and easy stop of blast operation by remote control hoses

3.2 Air consumption (nozzle Ø 4,5mm)

Working pressure (bar)	2,6	4.9	7.0
Volume (m^3/min)	0.6	0.9	1.3

3.3 How the system works



picture 2: Pneumatic schema

When the air supply is on, compressed air enters the air manifold via the moisture separator (item 1) By pressing the foot pedal (item 17), the blast pot is set under pressure. Pop-up valve (Pos. 4) will close. The blast process starts. The working pressure is adjusted with the pressure regulator (item 3).
The vacuum cleaner has to be switched on by pressing the “ON” switch and the recovery process starts. After hitting the surface, abrasive and debris are drawn into the blast head (item 16) and guided (suction hose item 15) to the separator (item 30). The coarse re-usable media is screened and falls into the silo. The dust will be forced through the suction hose into the vacuum cleaner. If the foot pedal (item 17) is released, the blasting process interrupts (the pot is depressurized).The blast media in the silo falls through the filling port in to the pot.

4. Installation

4.1 Set up for initial installation or re-installation

(1) *Place the blast machine.*	Firm and even ground
(2) Installing air supply and removing condensed water and dirt from the air line.	– Start the compressor and bring it up to operating temperature (5 to 10 min.). **Only use compressors whose rating do not exceed 8 bar!** – Attach an air line (appropriate dimension) with all necessary gaskets in place to the air outlet of the compressor and safety lock the couplings. **Escaping air is dangerous and lowers efficiency!** – Carefully open the air valve of the compressor to blow debris and moisture out the attached air line. – Close the air valve. – Connect the air line to the blast machine and safety lock it. For troublefree blasting we recommend an air supply free of oil and water (air cooler with cyclone and automatic drain).
(3) Connect the blast hose, suction hose and the remote control hoses.	– Connect the blast and suction hose to the blast machine and safety lock them. – Mount suction hose (item 15) to abrasive cyclon HSP and suction head. – Check that all gaskets are in place. – Connect both twinline hoses (yellow / brown and red / blue) to the **corresponding** twinline hoses coming from the blast machine. **Attention! A reversed connection causes malfunction and danger of injuries!**
(4) Put on safety equipment	– Abrasive-resistant clothing. – Eye protection, for example goggles with safety glass. – Leather gloves.
(5) Removing condensed water	– Open the air valve of the compressor – Adjust drain on moisture separator so that a constant stream, of liquid and air is expelled under pressure. – Fully open the metering valve (item 3)

	– Set vacuum cleaner to ON at set 2 – Hold the foot pedal (17) depressed for about 3 minutes (the pot is pressurized and air comes out the nozzle), in order to remove moist. – Release the foot pedal (17)

4.2 Daily set up

Not necessary, if an initial installation or re-installation was performed (see section 4.1)

(1) *Install an air supply.*	– Start the compressor and bring it up to operating temperature (5 to 10 min.). **Only use compressors whose rating do not exceed 8 bar!** – Connect an air line to the compressor's air outlet and remove moist. – Install all necessary gaskets and safety lock the couplings. **Escaping air is dangerous and lowers efficiency!** – Connect the air line to the blast machine and safety lock it.
(2) Put on the protective equipment.	– Abrasive-resistant clothing. – Eye protection, for example goggles with safety glass. – Leather gloves.
(3) Removing condensed water from the blast pot	– **Attention! – Make sure there is no blast media in the pot** – Open the air valve of the compressor – Adjust drain on moisture separator so that a constant stream, of liquid and air is expelled under pressure. – Fully open the metering valve – Set vacuum cleaner to ON at set 2 – Hold the foot pedal (17) depressed for about 3 minutes (the pot is pressurized and air comes out the nozzle), in order to remove moist. – Release the foot pedal (17)

4.3 Operation

(1) Load abrasive into the system	**Only when the blast machine is fully empty** – Close abrasive metering valve (9) (turn the metering knob to the right . – Pour (max 10 l) abrasive on an even surface . – Set vacuum cleaner to ON at set 2 – Press the foot pedal and suck the media with the blast head (16) (by that media will be cleaned)
(2) Media metering. (2 persons are necessary).	– Place the blast head **vertically** on the work surface. – Set vacuum cleaner to ON at set 2 – Press foot pedal – Second person slowly opens the metering valve until enough blast media comes out the nozzle (blast pattern and noise). – Release foot pedal (17) for interrupting the blast process.
(3) Operation.	– vacuum cleaner has to be set ON – Place the blast head **vertically** on the work surface – Press foot pedal (the blast process starts). – Slowly move the blast head according to the blast progress. – Release foot pedal (17) for interrupting the blast process.

4.4 Shut down

(1) Completely remove abrasive	**To prevent blockage from moist abrasive (longer stand still of blast machine)** – Reduce working pressure to max. 0,5 bar . – Turn on vacuum cleaner – Fully open the media metering valve – Press the foot pedal – Empty the abrasive through the blast head into a container

4.5 Shut down when moving equipment

No special actions required

5. Maintenance

5.1 General

During operation blast machines are exposed to wear. In order to ensure safe operation and high efficiency the blast machines should be maintained according to the following check lists.
Prior to maintenance, make sure that the air valve of the compressor is closed and the whole system is de-pressurized!

5.2 Daily check list, but also after max. 8h working time

(1) The pot.	– Unscrew the O-ring seat. – Check by hand the gasket (5) and the pop-up valve (4) of the filling port for wear
(2) Air, suction and blast hose.	– Check the hoses for sharp bends, causing high loss of energy and rapid wear. **No vehicles should pass over hoses!** – Check the gaskets of the couplings.
(3) Nozzle.	– Check the nozzle gasket and replace it at the first sign of wear. – Check the nozzle for wear and replace it if necessary.
(4) accessories.	– Check the moisture separator for moist (see point 5.3 (1)). – Check the fittings of the remote control hoses at the 3/ 2 way valve for tight fit
(5) vacuum cleaner.	See separate owners manual for vacuum cleaner (page.17-19).

5.3 Weekly check list, but also after max. 50 h working time

(1) Moisture separator.	Remove and check the filter element. If necessary clean the filter and the sight glass with soap and warm water and dry it with compressed air. **A dirty filter causes loss of pressure in the system!**
(2) Air, suction and blast hoses.	– Check all couplings and screws for wear or breakage and replace them if necessary. – Check the whole blast hose by hand for soft spots (reduced wall thickness) and replace it **immediately** when soft spots are detected. – Check the air line (air supply) and replace it when it is worn.

	– Check the gaskets of couplings for wear and replace them if necessary.

6 Trouble shooting

Problem	***Probable cause***	***Remedy***
(1) No air and no abrasive come out the nozzle.	Turned off compressor.	Turn on compressor.
	Blocked moisture separator.	Check and clean.
	3 / 2 way valve doesn´t work	– Check for loose connections.
(2) Air, but no abrasive comes out the nozzle.	Closed metering valve.	Open it.
	Moist abrasive blocks the flow of abrasive at the bottom of the pot.	– Several times open and close choke valve rapidly. – Remove o-ring seat and clean the pot
	Not enough air volume.	Use a bigger compressor.
(3) Irregular flow of abrasive comes out the nozzle.	Incorrectly adjusted abrasive metering valve.	Check adjustments.
	Choke valve not fully opened.	Check and fully open it.
	Blocked metering valve.	Open and clean metering valve.
(4) Too much abrasive comes out the nozzle.	Metering valve too much opened.	Check and correct adjustments if necessary.
	Choke valve not fully opened.	Check and fully open it.
(5) Pop-up valve doesn't remain closed.	Not enough air volume or pressure.	– Check air pressure of the compressor with a needle gauge. – Close the choke valve. When the pop-up valve does not seal the filling port completely, there is not enough air volume.

(6) Pop-up valve does not close after depressing.	Worn pop-up valve and / or gasket.	Replace the pop-up valve and / or the gasket.
	Blocked guide for the pop-up valve.	– Open o-ring seat – Remove the pop-up valve and clean the blast machine.
(7) Blast machine does not depressurise when the foot pedal is released.	Blocked 3/2 way valve	Clean
(8) Poor suction (abrasive is not completely drawn into the blast machine and escapes).	Not enough air volume or pressure.	– Check air pressure of the compressor with a needle gauge. – If necessary use a bigger compressor.
	Blocked moisture separator.	Check and clean.
	Defective gaskets.	The following gaskets should be checked for wear and replaced: – Separator
(9) Vacuum cleaner cannot be switched on.		Check separate owners manual

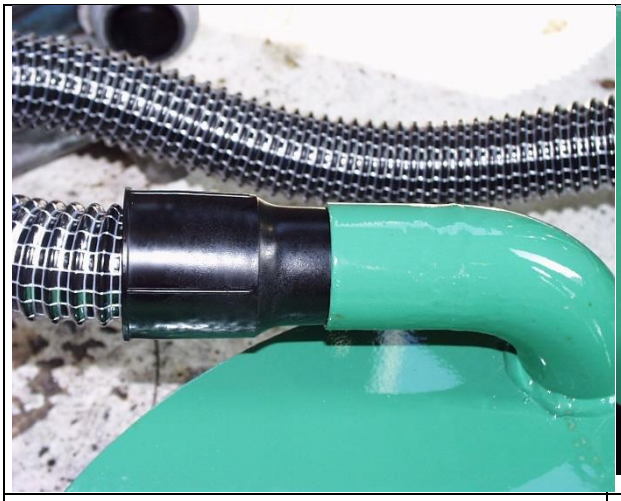
6.1 Special informations

6.1.1 Protection against electrostatic charges

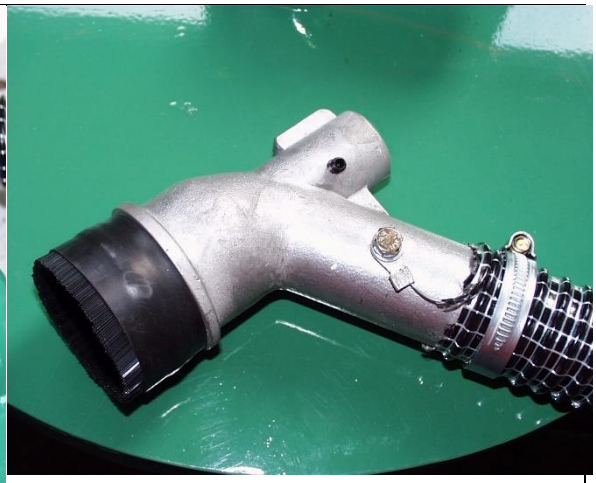
-During blast process could appear electrostatic tensions.
-This machine dissipates the tensions over the bus bar of the vacuum cleaner (transition resistance, neutral wire)
-For a safe conduction respective grounding for the other components must be attended the following:

Assembly „Vacuum cleaner - -abrasive cyclon HSP“	
Adapter vacuum cleaner - hose	No special measure
hose	Hose over all conducting==> No special measure
Adapter hose- vacuum cleaner	Of conductible plastics / put contact adipose on the inner side of metal muffle
Assembly „abrasive cyclon HSP –suction head	
Adapter „abrasive cyclon HSP-suction hose“	Of conductible plastics / put contact adipose on the inner side of metal muffle
Hose end to side of abrasive cyclon HSP	coil ca. 10 mm without jacket and turned to back (screwed in into adapter –left-handed thread) (see picture 3)
Hose	Hose over all electroconductive==> no special adopted measures
Connection suction hose- -suction head	coil ca. 10 mm without jacket with cable lug and fixed with an earth screw on the suction head. (see picture 4)

This construction of the HSP 20 is not qualified for explosive spaces.



Picture 3



Picture 4

6.1.2 Rest hazards

- The design allows local blast cleaning on a part without the escape of abrasive, dust or debris into the environment.
- When the blasting head is not put on proper (for example in case of canting the blasting head or stumbling of the blaster) abrasive and dust could escape.

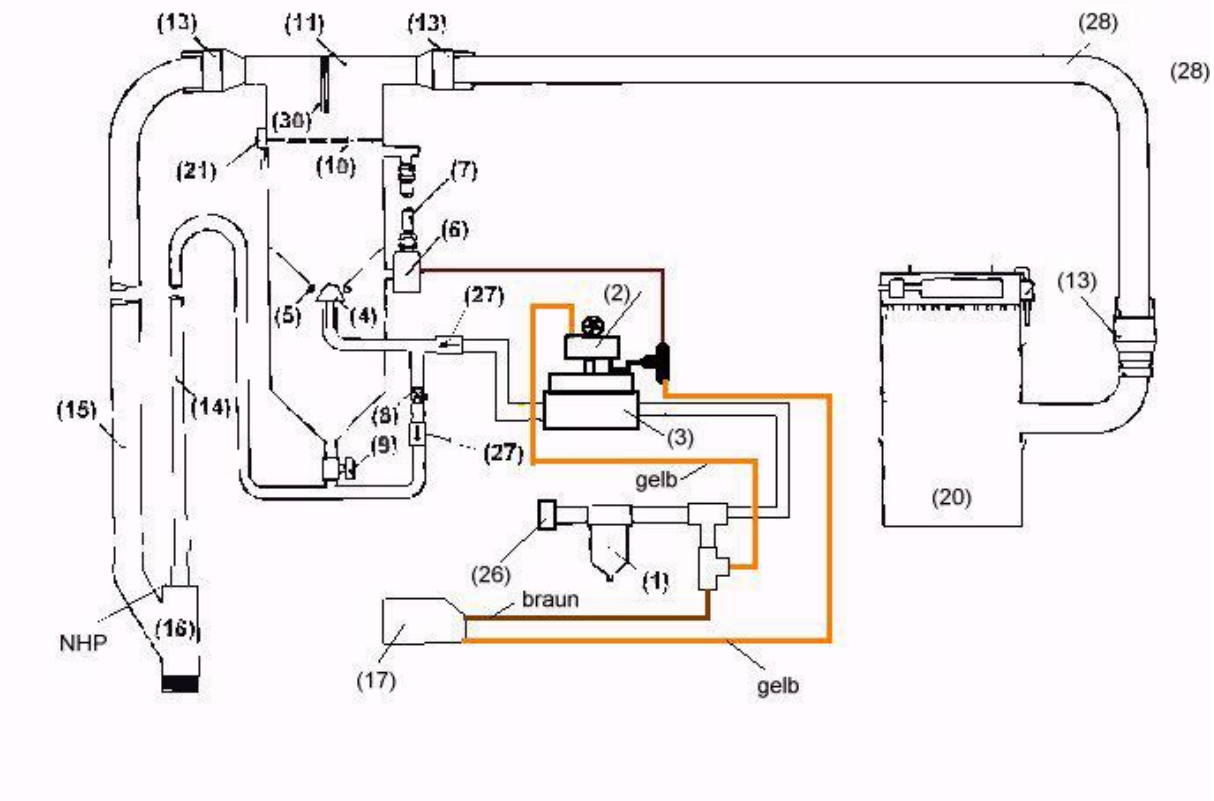
Therefor the following additional requirements / limitations was specified:

- Persons without special protective clothing are not allowed to stay in a 10m perimeter from the blasting activities.

- Damageable equipment should be removed in a perimeter of 10m

7 Replacement parts

7.1 *System*

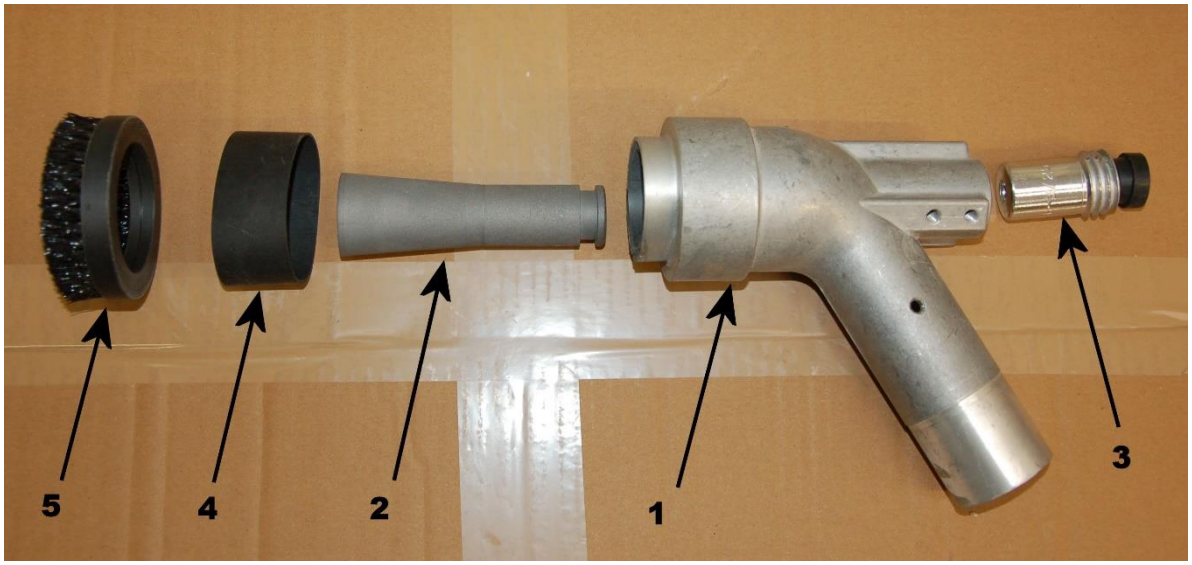


picture 5 : replacement parts HSP-20

Pos.	*Part. No.*	*Model*	*Description*
(-)	100670	HSP-20	Mobile dust free blast unit complete
(1)	90256D	½“ HMS	Moisture separator
(2)	99406D	3/2 way valve	Valve without magnet
(3)	10709D	½“	Pilot regulator
(-)	100061	¼“	Pressure regulator with gauge
(4)	01242D	MP-2- ¼“	Pop-up valve with shaft
(5)	01245D	MP-5	O-Ring
(-)	90251D		Gasket O-Ring seat 1028,1628
(-)	100680		Hose clamp 32-50
(-)	90077D		Hose clamp 25-40
(6)	02512I	½“	Outlet valve
(7)	04301	19x7mm (1m)	Pressure release hose
(8)	01241D	½“	Choke valve
(9)	24376D	MP-1/2“	Metering valve
(-)	12434Z		Separator gasket
(10)	90662D		Screen insert for 1628,1648

(11)	99801D		Abrasive cyclone HSP
(13)	100679		Fitting for suction hoses
(14)	04257D	5 m	Blast hose 13x7.5mm
(-)	93236D		HEP - 0 nozzle holder 13 x 7mm
(-)	90269D		NHP - 0 nozzle holder13 x 7mm
(15)	100677		Suction hose PVC 41mm
(16)	100457	EDBH-50	Suction head
(17)	24456D		Foot valve 3 Way for HSP
-	90941D	¼“	Silencer
(19)	12475A	1/8“	PVC hose
(20)	100671	Typ GS2078 GI	Vacuum cleaner „Starmix“
(21)	100149		lock
(26)	90002D	KAG12	Air coupling
(27)	90604D	1/2“	Non return valve
(28)			Suction hose from Starmix
(-)	90789D	3/4“	T-pcs No. 130
(-)	90004D	1/2“	T-pcs No. 130
(-)	90305D	1/2“	Elbow No. 3
(-)	90303D	1/2“	Elbow No. 2A
(-)	90494D	1/2“	Union No.: 341
(-)	90304D	1/2“	Double nipple No.: 280
(-)	02025D	MS 1/4“	T-pcs No. 130
(-)	02808D	1/4“ MS	Double nipple
(-)	90078D		Clamp 11-13
(-)	100672		Wheel
(-)	100673		Stearing wheel with Stop function
(-)	90080D	5m	Remote control hose

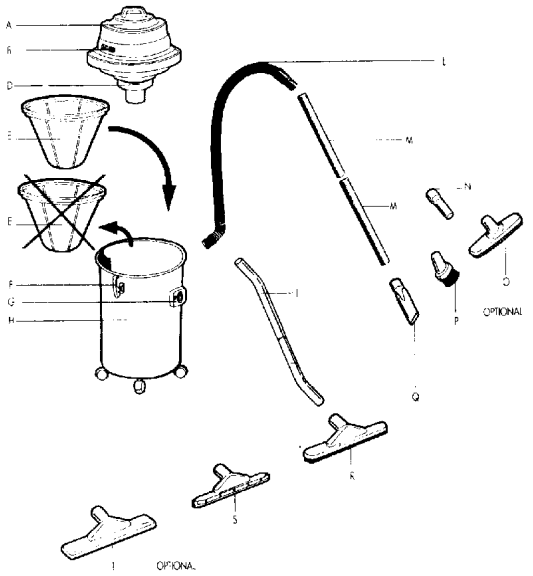
7.1.1 Blast Head EDBH 50



Picture 6 (=picture 4): Replacement parts EDBH 50

Pos.	*Part. No.*	*Model*	*Description*
(1)	100457A	EDBH-50	Blast head only
(-)	93071	M6x10	Screw
(2)	99943D	TC für EDBH 50	Difusor
(3)	94211D	4.5mm CB-3/25	Boron carbide nozzle
(4)	100476		Rubber ring
(5)	100459		Flat brush for EDBH-50

8 Vacuum cleaner „STARMIX“GS2078 GI



N.B. I disegni degli apparecchi sotto riportati sono puramente indicativi

N.B. Drawings above reported are merely indicative

N.B. Les dessins des appareils reportes ci-dessous sont purement indicatifs.

N.B. Die oben aufgeführten Zeichnungen sind nur Indikativ

N.B. Los dibujos que siguen a continuación son meramente indicativos.

N.B. Bovenstaande tekeningen zijn enkel ter verduidelijking.

N.B. Tegningene over er indikative.

N.B. Yläpuolella olevat kuvat ovat ainoastaan viiteelisiä.

I DESCRIZIONE E MONTAGGIO

A - Blocco motore.
B - Interruttore.
D - Galleggiante: impedisce al liquido aspirato di invadere il blocco motore.
E - Filtro in poliestere da inserire nel fusto per aspirare polvere e da togliere per aspirare liquidi.
F - Ganci per il serraggio del blocco motore sul fusto.
G - Bocchettone di aspirazione.
H - Fusto.
I - Doppia curva.
L - Tuboflex 2,5 m.
M - Tubo.
N - Riduzione PVC.
O - Spazzola PVC.
P - Pennello PVC.
Q - Lancia piatta.
R - Spazzola polvere.
S - Spazzola ventosa.
T - Spazzola moquette.

ATTENZIONE
Per mantenere in perfetta efficienza l'apparecchio per l'aspirazione di polvere è necessario pulire il filtro in poliestere scuotendolo dopo ogni utilizzo.

GB DESCRIPTION AND ASSEMBLY

A - Motor block.
B - Switch.
D - Float: its purpose is to avoid that liquid may goes inside motor block during suction.
E - Polyester filter to set into the tank to pick up dust, and to remove for liquid suction.
F - Hooks for tightening of motor block to tank.
G - Suction inlet.
H - Tank.
I - Double bend.
L - Flexible hose.
M - Tube.
N - PVC adaptor.
O - PVC brush.
P - PVC round brush.
Q - Flat lance.
R - Dust tool
S - Wet tool.
T - Carpet tool.

ATTENTION
In order to keep in good efficiency the machine it is useful to clean the polyester filter after each utilization.

F DESCRIPTION ET MONTAGE

A - Bloc moteur.
B - Interrupteur.
D - Flotteur pour empêcher le liquide aspiré de penetrer dans le bloc moteur.
E - Filtre en polyester à insérer dans la cuve pour aspirer la poussière et à enlever pour l'aspiration des liquides.
F - Crochets pour le serrage du bloc moteur sur la cuve.
G - Connecteur d'aspiration.
H - Cuve.
I - Canne double courbé.
L - Tuyau flexible.
M - Tuyau.
N - Reduction PVC.
O - Balai PVC.
P - Brosse ronde PVC.
Q - Lance plate.
R - Suceur poussière.
S - Suceur eau.
T - Suceur moquette.

ATTENTION
Pour assurer une parfaite efficacité d'aspiration des poussières, il est nécessarie de nettoyer le filtre en polyester de l'appareil en le secouant après chaque utilisation

D BESCHREIBUNG UND MONTAGE

A - Motorkopf.
B - EIN/AUS-Schalter.
D - Schwimmer: Er verhindert, daß während des Saugens Flüssigkeit in den Motorkopf eintritt.
E - Polyesterfilter nur zum Trockensaugen; vor dem Naßsaugen unbedingt zu entfernen!
F - Befestigungsklammern.
G - Saugstutzen.
H - Behälter.
I - Saugrohr zweifach
L - Saugschlauch.
M - Verlängerungsrohr.
N - Reduzierstücke PVC.
O - Bürstendüse PVC.
P - Rundbürste PVC.
Q - Fugendüse.
R - Trockensaugdüse.
S - Wassersaugdüse.
T - Teppich Saugdüse

ACHTUNG
Um die Leistungsfähigkeit des Gerätes zu erhalten, wird empfohlen, den Polyesterfilter nach jedem Gebrauch zu reinigen.

E DESCRIPCION Y MONTAJE

A - Bloque del motor (cabezal).
B - Interruptor.
D - Boya. Su función consiste en evitar que el líquido recogido penetre al motor durante la aspiración.
E - Filtro de polyester para colocarlo en el depósito durante la aspiración de polvo. Cuando aspiremos líquidos es necessario retirarlo.
F - Ganchos para cerrar el bloque del motor con el depósito. (Cierre cabezal)
G - Entrada de aspiracion. (Boca de aspiración).
H - Depósito exterior.
I - Doble curva.
L - Manguera Flexible.
M - Tubo.
N - Adaptador de PVC.
O - Cepillo de PVC.
P - Cepillo redondo de PVC.
Q - Boquilla plana.
R - Boquilla de polvo.
S - Boquilla de líquidos.
T - Boquilla de moquetas.

ATENCION
Para conseguir una mayor eficiencia del aspirador es conveniente limpiar el filtro de polyester después de cada uso.

N MONTERINGSBESKRIVELSE

A - Motortopp.
B - Bryter.
D - Flottør som lukker slik at væske ikke suges inn i motortoppen.
E - Polyesterfilter for plassering i tank.
F - Klips som holder motortopp til tank.
G - Sugestuss.
H - Tank.
I - Dobbel bend
L - Sugeslange.
M - Sugerør.
N - Overgangsstykke PVC.
O - Børstemunnstykke.
P - Rundbørste.
Q - Fugemunnstykke.
R - Støvmunnstykke.
S - Vannmunstykke.
T - Teppemunstykke.

VIKTIG
For å beholde god sugeeffekt, bør polyesterfilteret rengjøres regelmessig.

NL BESCHRIJVING EN MONTAGE

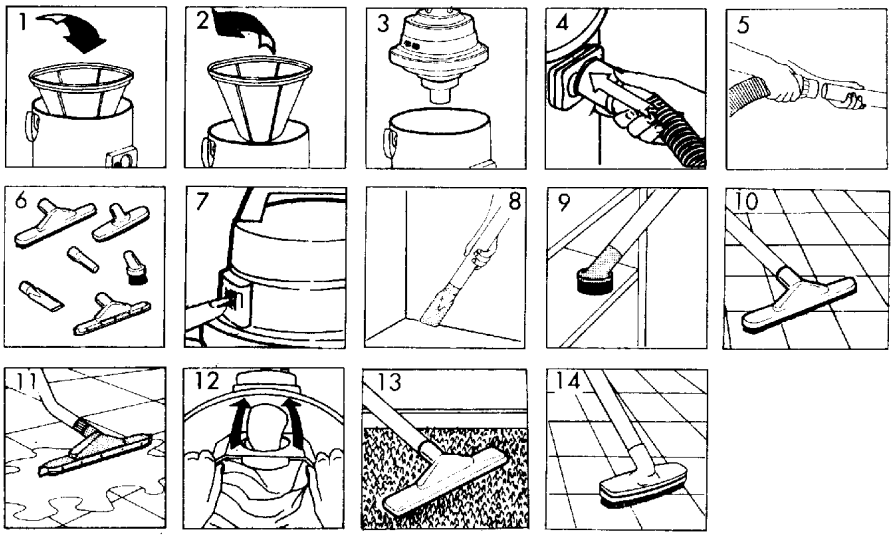
A - Motorkop.
B - Aan/uit schakelaar.
D - Vlotter: deze moet voorkomen dat er water in de motorkop terecht komt tijdens het werken.
E - Polyester standaard filter. Deze dient altijd in het toestel te zitten bij het opzuigen van stof, U moet hem echter verwijderen om water op te zuigen!
F - Spanklem voor motorkop.
G - Ketelingang.
H - Ketel.
I - Dubbel gebogenbuis.
L - Slang.
M - Verlengbuis.
N - Reduzeerstuk PVC.
O - Borstel zuigmond.
P - Ronde borstel.
Q - Kierzuiger.
R - Zuigmond stof.
S - Zuigmond water.
T - Zuigmond tapijt.

OPGELET
Om het rendement van uw toestel optimaal te houden, dient U regelmatig het polyester standaard filter te reinigen door het uit te kloppen en/of met een zachte borstel af te vegen.

SF ERITTELY JA KOKOAMISOHJEET

A - Moottori kansi.
B - Katraisija.
D - Uimiri; uimurin virheetön toiminta on tärkeä että nestettä ei pääse imuroinnin aikana moottorille.
E - Polyesterisuodatin asetetaan säiliöön imuroitaessa kuivaa. Polyesterisuodatin poistetaan imuroitaessa nestettä.
F - Moottoriosa kiinnitetään hakasilla säiliöön.
G - Imuyhde.
H - Säiliö.
I - Kaksoiskajra.
L - Joustava imuletku.
M - Ruostumattomat imuputket.
N - PVC liitin.
O - PVC harja.
P - PVC pyöreä harjasuulake.
Q - Rakosuulake.
R - Pölysuulake.
S - Vesisuulake.
T - Mattosuulake.

TÄRKEÄÄ
Imutehon moiteettoman toiminnan takaamiseksi on hyvä tapa puhdistaa plyesterisuodatin (vakiosuodatin) jokaisen imurointikerran jälkeen.



F

ASPIRATION POUSSIERE / MODE D'EMPLOI

- Insérer le filtre en tissu dans la cuve (Fig. 1).
- Monter la tête sur la cuve et la bloquer avec les crochets. (Fig. 3).
- Insérer le tube flexible dans le connecteur. (Fig. 4).
- Insérer à l'extrémité du tube flexible la rallonge. (Fig. 5).
- Choisir et relier l'accessoire le plus adapté.(Fig. 6).
- Allumer l'appareil après avoir branché la fiche à une prise. (Fig. 7).
- Exemple d'utilisation d'une lance plate. (Fig. 8).
- Exemple d'utilisation du brosse ronde (Fig. 9).
- Exemple d'utilisation de la brosse équipée pour les carrelages. (Fig. 10).
- Si on prévoit l'utilisation du filtre en papier, l'indroduire dans la cuve en l'insérant sur le déflecteur. (Fig. 12).

ASPIRATION DES LIQUIDES/MODE D'EMPLOI

- Enlever le filtre en tissu de la cuve. (Fig. 2).
- Monter la tête sur la cuve en la bloquant avec les crochets. (Fig. 3).
- Insérer le tube flexible dans le connecteur. (Fig. 4).
- Insérer à l'extrémité du tube flexible la rallonge. (Fig. 5).
- Relier le suceur eau (Fig. 6).
- Allumer l'appareil après avoir branché la fiche à une prise. (Fig. 7).
- Exemple d'utilisation du suceur eau. (Fig. 11).

EMPLOI DES ACCESSOIRES EN OPTION

- Exemple d'utilisation du suceur moquette (Fig. 13).
- Exemple d'utilisation du balai PVC (Fig. 14).

INDICATIONS A OBSERVER SCRUPULEUSEMENT

- Les composants de l'emballage peuvent constituer des dangers potentiels (exemple: le sac en plastique) qui doivent être maintenus hors de portée des enfants et autres personnes ou animaux non responsables de leurs actes.
- Toute utilisation autre que celle indiquée sur le présent manuel peut constituer un danger qui peut donc être évité.
- Quand l'appareil est en fonctionnement, il faut éviter de mettre l'orifice d'aspiration près d'une partie délicate du corps comme les yeux, la bouche ou les oreilles.
- Avant l'utilisation, l'appareil doit être monté correctement dans son ensemble.
- Vérifier que la prise murale soit conforme à la fiche de l'appareil.
- Vérifier que la valeur de la tension indiquée sur le bloc moteur corresponde à la source d'énergie à laquelle on entend relier l'appareil.
- Ne pas aspirer de substances inflammables (exemple: cendres de cheminée), des poussières explosives ou dangereuses pour la santé.
- Ne pas laisser l'appareil en fonctionnement sans surveillance.
- Enlever toujours la fiche de la prise de courant avant d'effectuer quelque intervention que ce soit sur l'appareil, ou quand celui-ci reste sans surveillance ou à la portée des enfants ou des personnes non responsables de leurs actes.
- Ne pas tirer ou soulever l'appareil en utilisant le cable électrique.
- Ne pas immerger l'appareil dans l'eau pour le nettoyage ni le laver avec un jet d'eau.
- Contrôler scrupuleusement si le cable électrique, la fiche ou des parties isolées de l'appareil ne soient pas endommagées et dans un tel cas ne pas utiliser l'appareil mais s'adresser au Service après vente pour sa réparation.
- Dans le cas où une rallonge électrique viendrait à être utilisée, il faut s'assurer que cet ajout soit sur des surfaces sèches et protégées des projections éventuelles d'eau.
- S'assurer que le flotteur, position C, qui a la fonction d'arrêter l'aspiration quand la cuve se trouve complètement pleine de liquide ou dans le cas d'un renversement de l'appareil, ne présente aucun endommagement ou obstruction qui puisse empêcher la montée de ce flotteur.
- En cas de renversement, il faut recommander de relever l'appareil avant de l'éteindre.
- Eteindre immédiatement l'appareil en cas d'écoulement de liquide ou de mousse.
- Ne pas utiliser l'appareil pour aspirer l'eau de récipients, éviers, bassins, etc.
- Ne pas utiliser des solvants ou des détergents agressifs.
- L'entretien et les réparations doivent être assurés par des personnes spécialisées; les pièces qui éventuellement sont endommagées seront remplacées par des pièces de rechange d'origine.
- Le fabricant décline toute responsabilité pour des dommages causés aux personnes, animaux ou choses par suite de manque de respect de ces instructions ou si l'appareil a été utilisé d'une façon anormale.

D

TROCKENSAUGEN / BEDIENUNGSHINWEISE

- Textilfilter in Behälter einsetzen (Abb.1).
- Motorkopf auf Behälter setzen und mit den Klammern befestigen (Abb.3).
- Saugschlauch am Saugstutzen anschließen (Abb. 4).
- Saugrohre auf Saugschlauch stecken (Abb.5).
- Entsprechendes Zubehör auswählen und anschließen (Abb.6).
- Stecker in Steckdose stecken, dann Gerät einschalten (Abb. 7).
- Beispiel für den Gebrauch der Fugendüse (Abb. 8).
- Beispiel für den Gebrauch der Rundbürste (Abb. 9).
- Beispiel für den Gebrauch der Bürste zur Bodenreinigung (Abb. 10).
- Papierfilter auf den im Gerät befindlichen Stutzen schieben (Abb. 12).

NASS-SAUGEN / BEDIENUNGSHINWEISE

- Textilfilter abnehmen (Abb. 2).
- Motorkopf auf den Tank setzen und mit Klammern befestigen (Abb. 3).
- Schlauch am Saugstutzen anschließen (Abb. 4).
- Saugrohre an Schlauch anschließen (Abb. 5).
- Verbinde die Wassersaugdüse (Abb. 6).
- Stecker in Steckdose stecken, dann Gerät einschalten (Abb. 7).
- Beispiel für den Gebrauch der Wassersaugdüse (Abb. 11).

GEBRAUCH VON SONDERZUBEHÖR

- Beispiel für den Gebrauch der Teppich Saugdüse (Abb. 13).
- Beispiel für den Gebrauch der PVC Bürste (Abb. 14).

INFORMATIONEN FÜR DEN EINSATZ UND IHRE SICHERHEIT

- Verpackungsteile können gefährlich sein (z.B. die Plastikhülle) - daher unerreichbar für Kinder, für andere Personen, die sich ihrer Handlungen nicht bewußt sind, oder für Tiere aufbewahren.
- Jeder Gebrauch des Gerätes, der in dieser Anleitung nicht beschrieben ist, kann gefährlich sein und muß daher vermieden werden.
- Wenn das Gerät arbeitet, sorfältig darauf achten, daß die Saugdüse nicht an eine empfindliche Körperstelle gehalten wird, wie Augen, Mund oder Ohren.
- Vor dem Gebrauch muß das Gerät mit allen Teilen korrekt zusammensgesetzt werden.
- Überprüfen Sie, ob Steckdose und Gerätestecker zusammenpassen.
- Das Gerät nur dann anschließen, wenn die auf dem Typenschild angegebene Spannung mit der Netzspannung übereinstimmt.
- Das Gerät niemals in der Nähe entflammbarer, explosiver oder giftiger Substanzen benutzen (z.B. Kaminasche).
- Vor jeder Wartung, Reinigung, dem Filterwechsel und nach dem Gebrauch Gerät ausschalten und Netzstecker ziehen. Gerät nicht unbeaufsichtigt lassen, nicht in der Reichweite von Kindern oder Personen lassen, die sich ihrer Handlungen nicht bewußt sind.
- Niemals das Gerät an der Anschlußleitung ziehen oder hochheben.
- Das Gerät zur Reinigung nicht in Wasser tauchen oder mit einem Wasserstrahl reinigen.
- Sorfältig überprüfen, ob die Netzanschlußleitung, das Gehäuse oder andere Teile des Gerätes beschädigt sind; falls ja, das Gerät keinesfalls benutzen und Reparatur beim Kundendienst veranlassen.
- Falls elektrische Verlängerungen benutzt werden, immer sicherstellen, daß diese für die entsprechende Anwendung geeignet sind.
- Niemals das Gerät benutzen, um Wasser aus Behältern, Waschbecken, Wannen, etc. zu saugen.
- Das in Betrieb befindliche Gerät niemals unbeaufsichtigt lassen
- Stellen Sie sicher, daß der Schwimmer, Pos. C; nicht beschädigt oder blockiert ist, oder das Gerät umkippt.
- Falls das Gerät umgekippt ist, Gerät sofort ausschalten, Netzstecker ziehen und erst dann das Gerät richtig aufstellen.
- Das Gerät sofort ausschalten und Netzstecker ziehen, wenn Flüssigkeit oder Schaum austritt.
- Keine aggressiven Lösungsmittel oder Reiningungsmittel verwenden.
- Service und Reparaturen dürfen nur durch qualifiziertes Personal ausgeführt werden. Defekte Teile des Gerätes dürfen nur mit Originalteilen ersetzt werden.
- Der Hersteller ist nicht verantwortlich für jedweden Schaden an Personen oder Gegenständen, verursacht durch falschen Gebrauch des Gerätes oder durch Nichtbeachten der in dieser Anleitung gegebenen Instruktionen.