

HARD-S – filtration of dust and gas



HARD-1000-S



HARD-2000-S



HARD-5000-S

Purpose

HARD-S filtering unit has been developed for cleaning the air from dust-gas contamination, whereby dusts can have dry- and also viscous properties. Among others, it is an ideal solution for:

- filtration of the aerosols arising during spray painting of not large surfaces,
- filtration of the air polluted with dust and gas arising during rubber laser cutting, cutting of materials as plywood, plexi, acrylic and other plastics or grinding the above mentioned materials,
- dust- and gas contamination – arising during polishing of various materials,
- oil laden welding fumes with gas emitted during the welding process,
- ation of the air polluted with fat particles at the kitchen extraction hoods,
- unpleasant aromas in chemistry laboratories,
- vapours arising during upholstery works – among others cutting and gluing.

Structure

HARD-S consists of following elements:

- housing of steel sheet,
- radial fan – cast aluminium housing,
- pre-filter – Paint-Stop spunbond – class G3,

Technical data

| Type | Part no. | Maximum volume flow [m³/h] ¹ | Maximum vacuum [Pa] | Supply voltage [V] | Motor rate [kW] | Acoustic pressure level [dB(A)] from a distance of: | | Weight [kg] | Suction connections ² |
|-------------|----------|---|---------------------|--------------------|-----------------|---|------|-------------|--|
| | | | | | | 1 m | 5 m | | |
| HARD-1000-S | 800092 | 1250 | 1700 | 230 | 0,75 | 70 | 67 | 180 | 1xØ160 mm 2xØ125 mm |
| HARD-2000-S | 800088 | 2000 | 2000 | 230 | 1,5 | 73 | 66,5 | 237 | 1xØ200 mm 2xØ160 mm 2x250x152 mm |
| HARD-5000-S | 800093 | 6500 | 4200 | 3x400 | 5,5 | 76 | 72 | 695 | 1xØ400 mm |

1. Volume flow was specified at clean filters.

2. References for the ERGO LUX extraction arms are on separate catalogue cards.

- pocket filter – class F8,
- high-efficiency HEPA filter – class H13,
- gas absorber – cassettes with granulated active carbon,
- two pressure controls (pressostats) activating the light signalling at the moment of excessive flow resistances of the pocket filter and the high-efficiency filter,
- connections – to mount the extraction arms and discharge hoses (HARD-1000-S and HARD-2000-S), or discharge conduit (HARD-5000-S)
- silencer at the fan outlet,
- hour-meter – for measuring the work time,
- control unit.

Operational use

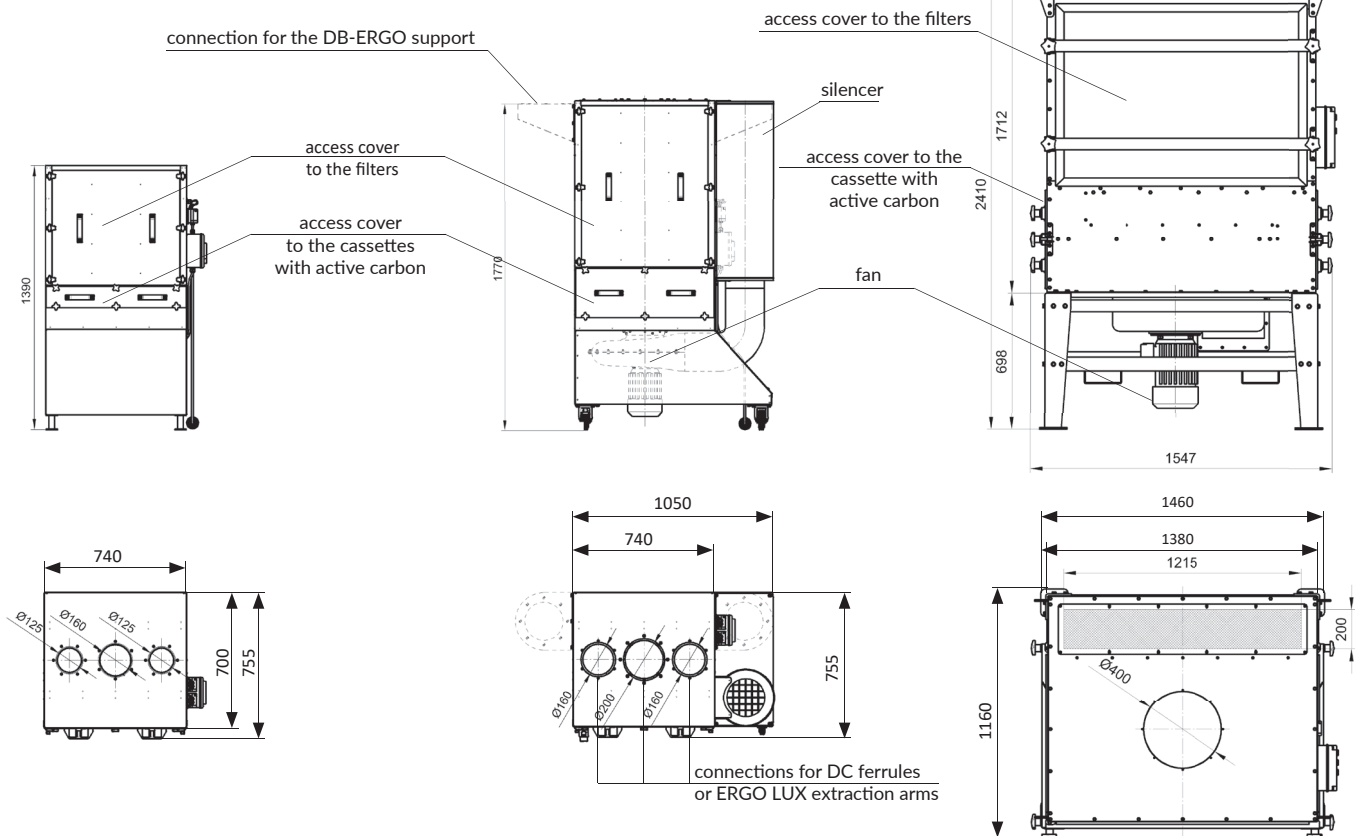
HARD-5000-S ought to be fastened stably to the floor surface. Install the extraction arms, hoses or extraction installation to the connections. In the course of operational use, observe the replacement periods of filters according to indications of signal lamps, activated by pressure controls (pressostat). In case when the given signal lamp lights on, replace the clogged filter for a new. Granulated active carbon must be replaced at the moment when it is losing its absorbing properties (organoleptic observation). For this purpose, observe the hour-meter indications. In application where the air should be expelled outdoors, equip the outlet of the HARD-5000-S with an R-5000 discharge fitting piece, to connect the Ø315 mm ventilation conduit.

HARD-S

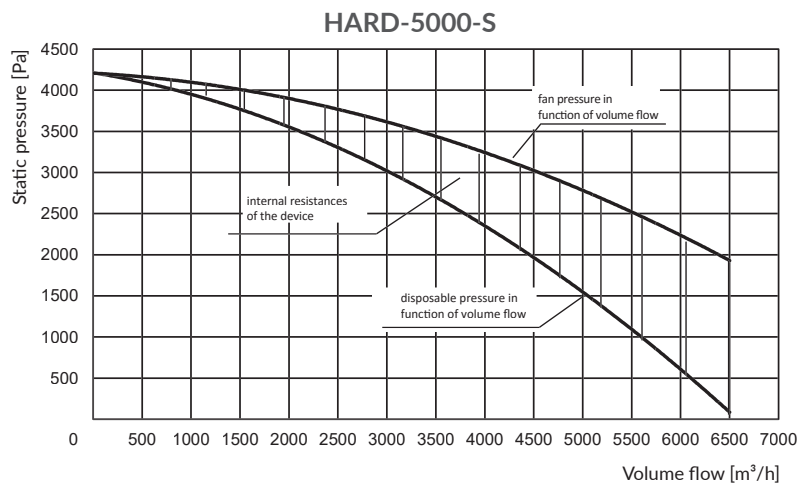
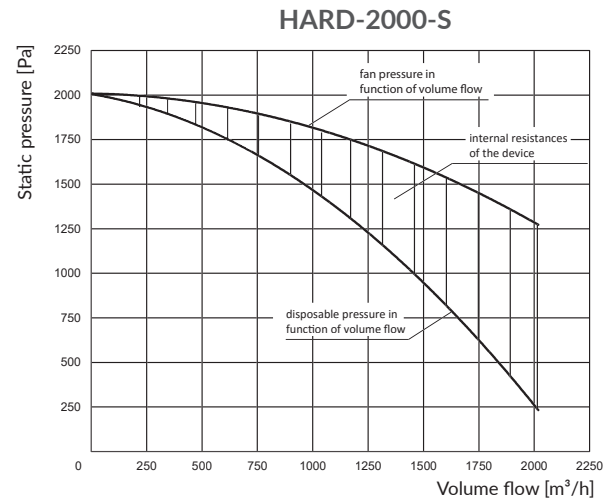
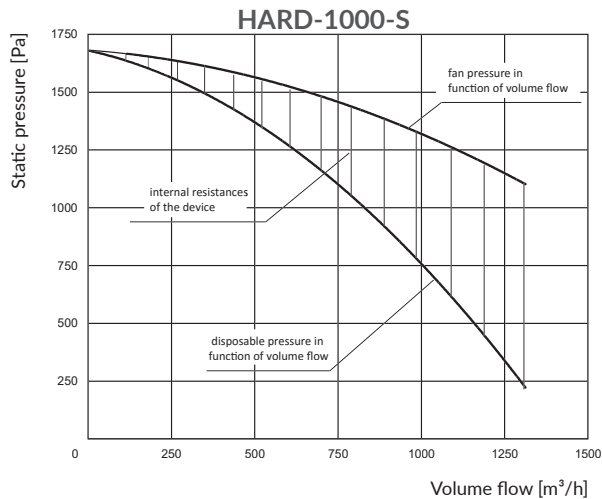
HARD-1000-S

HARD-2000-S

HARD-5000-S

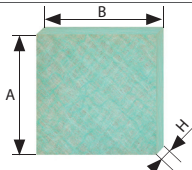


Flow charts

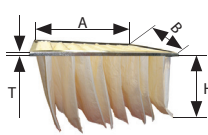


Replaceable filters

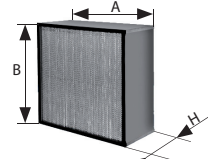
Pre-filter

|  | Type | Part no. | Weight [kg] | Dimensions AxBxH [mm] | Quantity of filters | Class | Filtration material | Purpose |
|---|----------------|----------|-------------|-----------------------|---------------------|-------|--|-------------|
| | PS-HARD-2000-S | 838F76 | 0,5 | 700x740x50 | 1 | G3 | Glass spunbond with progressively growing density. | HARD-1000-S |
| | PS-HARD-5000-S | 838F77 | 0,7 | 720x1030x50 | 1 | G3 | | HARD-2000-S |
| | | | | | | | | HARD-5000-S |


Pocket filter

|  | Type | Part no. | Weight [kg] | Dimensions AxBxHxT [mm] | Quantity of filters | Class | Filtration material | Purpose |
|--|----------------|----------|-------------|-------------------------|---------------------|-------|--|-------------|
| | FK-HARD-2000-S | 838F86 | 2,3 | 610x610x360x20 | 1 | F8 | Polyester spunbond of progressive construction. Filtration efficiency 90%. | HARD-1000-S |
| | FK-HARD-5000-S | 838F82 | 4,5 | 720x1030x550x20 | 1 | F8 | | HARD-2000-S |
| | | | | | | | | HARD-5000-S |

High-efficiency HEPA filter

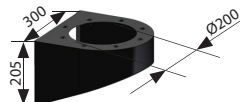
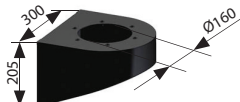
|  | Type | Part no. | Weight [kg] | Dimensions AxBxH [mm] | Quantity of filters | Class | Filtration material | Purpose |
|---|----------------|----------|-------------|-----------------------|---------------------|-------|--|-------------|
| | FW-HARD-1000-S | 838F87 | 5,4 | 610x610x80 | 1 | H13 | Non-hygroscopic card-board of glass-fibre. Filtration efficiency 99,95%. | HARD-1000-S |
| | FW-HARD-2000-S | 838F83 | 18,8 | 610x610x292 | 1 | H13 | | HARD-2000-S |
| | FW-HARD-5000-S | 838F84 | 23,5 | 762x610x292 | 2 | H13 | | HARD-5000-S |

Granulated active carbon filter

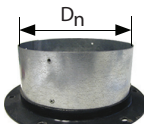
|  | Type | Part no. | Weight overall [kg] | Quantity of cassettes | Remarks | Purpose |
|---|---------------------|----------|---------------------|-----------------------|--|-------------|
| | ORGANOSORB 10CO 4x8 | 874W04 | 20 | 1 | Active carbon ought to be replaced according to the indications of the hour-meter. | HARD-1000-S |
| | | | 20 | 2 | | HARD-2000-S |
| | | | 40 | 2 | | HARD-5000-S |

Additional equipment


Brackets for ERGO extraction arms

| Sort of the bracket | Type | Part no. | Weight [kg] | Appropriate extraction arms | Purpose |
|--|-----------|----------|-------------|-----------------------------|-------------|
|  | DB-ERGO-D | 817W29 | 4 | ERGO-D | HARD-2000-S |
|  | DB-ERGO-L | 817W28 | 4,2 | ERGO-L | HARD-2000-S |

Connection ferrules – to fasten the extraction flexible hoses

|  | Type | Part no. | Dn [mm] | Purpose |
|---|--------|----------|---------|--------------------------|
| | DC-125 | 830Z13 | 125 | HARD-1000-S |
| | DC-160 | 830Z14 | 160 | HARD-1000-S, HARD-2000-S |
| | DC-200 | 830Z15 | 200 | HARD-2000-S |

Outlet fitting piece

|  | Type | Part no. | Weight [kg] | Purpose |
|--|-------------|----------|-------------|--|
| | R-5000 HARD | 829R94 | 6 | To fasten at the outlet of HARD-5000-S unit in order to connect the ventilation conduit. |