

High Vacuum Starters (PLC)

Makes your high vacuum system even better



The High Vacuum starter is an economic and robust solution yet with all the safety features. The starter is designed to meet practically any demands applicable for a high vacuum system, based on more than 30 years experience. The starter is prepared for a large number of functions, also those which may be desired many years after installation. For example, should it prove to be necessary to install an automatic feed out device, a fire alarm or a bin level indicator due to changed production, the High Vacuum starter is prepared for the task. That's true flexibility.

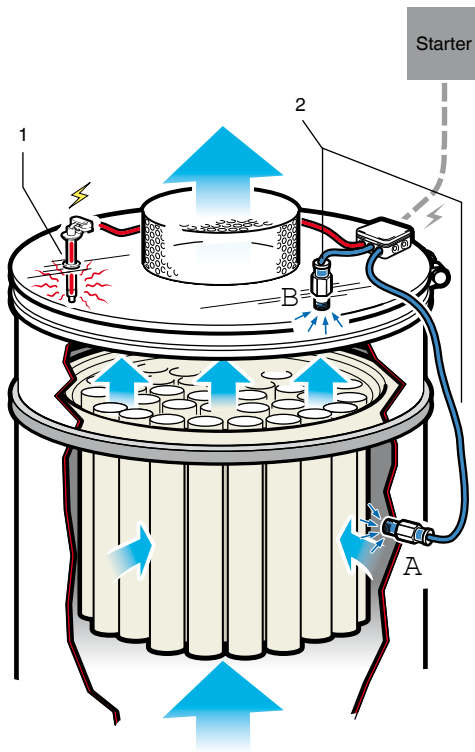
- Fire alarm
- Minimizes power consumption
- Bin Level Indicator

High Vacuum Starter

High Vacuum Starter Features

Feature	High vacuum starter
Service hour meter (Total running hours) (Necessary for correct service of vacuum installation)	Yes
Accepts pilot signal cable for automatic start/stop	Yes. (needs valves equipped with AS-kit)
Supports anti surge control (ASC) if installed in fan type units	Yes (when ASC is installed in the VAC unit)
Supports standard and type RF filter cleaning	Yes
Week timer	Yes
Service warning	Yes
Remote start/standby/stop	Yes (needs remote control box)
Master/slave starter	Yes (needs LCC unit)
Automatic idling for Roots Blower Units (RBU)	Yes
Compressed Air Switch (CAS)	Yes (needs CAS kit)
Remote manual filter cleaning	Yes (needs remote control box)
Fire alarm (For dust collector)	Yes (needs sensor in FlexFilter)
Differential pressure switch (For dust collector)	Yes (needs sensor in FlexFilter)
Bin Level Indicator (For dust collector)	Yes (needs sensor in FlexFilter)
Automatic emptying bin, AEB (For dust collector)	Yes (if AEB kit is installed in the FlexFilter)
Twin Valve Feed out Device, TVFD (For dust collector)	Yes (if TVFD is installed in the dust collector)
Summary alarm	Yes
Control filter (For RBU units)	Yes (needs control filter kit in the RBU unit)
Summary warning signals	Yes
Detailed fault and warning information	Yes

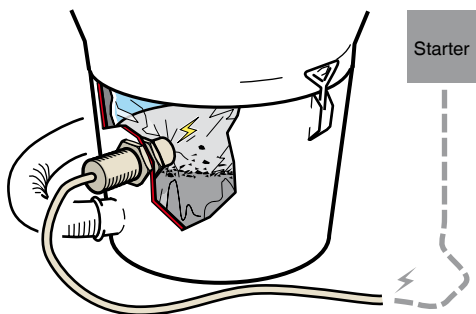
Sample starter features



1. Fire alarm: Monitors temperature

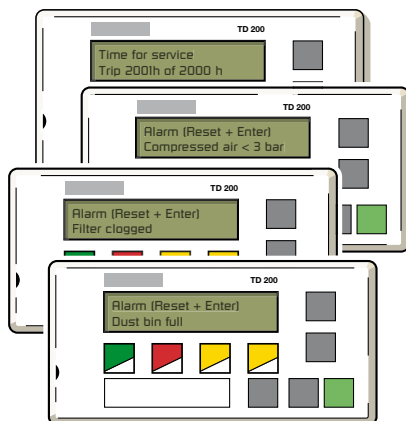
2. Differential Pressure Switch: Pressure is measured at one point before (A) and one after (B) the filter. If the pressure difference is more than 4 kPa / 16 in. W.G. it means that the filter is clogged and a signal is sent to the starter

Bin Level Indicator



The sensor will send a warning signal to the starter when the dust level reaches maximum. If the bin is not emptied the unit will stop after a set time.

Starter's display



The starter's display with sample messages

High Vacuum Starter Features	
Power range	11-55 kW at 50 Hz supply (12 sizes)
3-phase voltage range	13-54 kW (17.5-54 HP) at 60 Hz supply (12 sizes)
Control voltage (Supplied by internal transformer/rectifier)	24 V AC for contactor coils 24 V DC for other control circuits
Main switch interlocked with cabinet door	Yes (Safety feature)
Supports external maintenance switch fitted with an auxiliary control switch	Yes (Safety feature)
Supports start-up valve in vacuum unit (prevents motor overload during start-up)	Yes
Supports thermal switch/fuse in vacuum unit	Yes
IP-class	IP 65

Technical data

Service hour meter:

High Vacuum Starter is equipped with an hour meter inside the enclosure.

The starter shows the total running time on the PLC text display.

Supports pilot signal for automatic start/stop:

The starter is fully prepared for automatic start and stop.

Supports Anti Surge Control:

Support ASC if the vacuum unit is equipped with this feature.

Supports standard and Reverse Flow filter cleaning:

The starter is fully prepared for automatic filter cleaning, standard and RF.

Week timer:

Fully programmable for start and stop time during the week.

Information about remaining running hours before next scheduled service:

Will indicate time to service/need for service. Can be sent to external terminal.

Master/slave starter:

To run two or more units in parallel with start up controlled by a load control sensor.

Automatic idling for Roots Blower Unit (RBU):

To minimize power consumption when the vacuum unit is temporarily not in use.

Compressed Air Switch:

The unit will not start without the correct compressed air supply.

Fire alarm:

Indicates high temperature in the filter.

Differential Pressure Switch:

Monitors the pressure drop over the filter. A warning will indicate pressure drop exceeding ~4 kPa. The timer can be set to stop the unit after a set time.

Bin Level Indicator:

A warning in the display will indicate "full dust bin". After a programmable time the vacuum unit will be stopped.

Automatic Emptying Bin:

The automatic emptying function is programmable from the text display.

Twin Valve Feed out Device:

The automatic emptying function is programmable from the text display.

Summary alarm:

The starter supports a summary alarm (alarm contact) indicating alarm to a superior control system.

Summary warning signals:

Supports a summary warning signal (warning contact) indicating warnings to a superior control system. Action necessary to avoid stopping of the vacuum unit.

Control filter:

Will indicate a too high pressure drop in the control filter.

Detailed fault and warning information:

The starter shows all alarms and warnings in the PLC text display. Alarms and warnings can be set individually.

Model	Article number
Starter High Vacuum (PLC) 1	40124400
Starter High Vacuum (PLC) 2	40124410
Starter High Vacuum (PLC) 3	40124420
Starter High Vacuum (PLC) 4	40124430
Starter High Vacuum (PLC) 5	40124440
Starter High Vacuum (PLC) 6	40124450
Starter High Vacuum (PLC) 7	40124460
Starter High Vacuum (PLC) 8	40124470
Starter High Vacuum (PLC) 9	40124480
Starter High Vacuum (PLC) 10	40124490
Starter High Vacuum (PLC) 11	40124500

Starting method

Nederman High Vacuum Starters come in 11 different sizes, and all use star-delta-starting. This well known method results in the lowest possible starting current, only two times the nominal motor current.

Start-up valve

All Nederman High Vacuum Units are fitted with a start-up valve controlled from the starter. This ensures the vacuum unit starts with absolutely minimum load on the motor.

Vacuum unit temperature

Most Nederman High Vacuum Units are fitted with one or more heat sensors to protect the fan/pump and the starter immediately stops the vacuum unit. The Advanced starter also displays the reason for stopping.

Environmental data

- Easily dismantled for recycling.
- Cadmium-free components.
- Halogen-free cabling and terminals.
- Recyclable >98% (weight) depending on model.