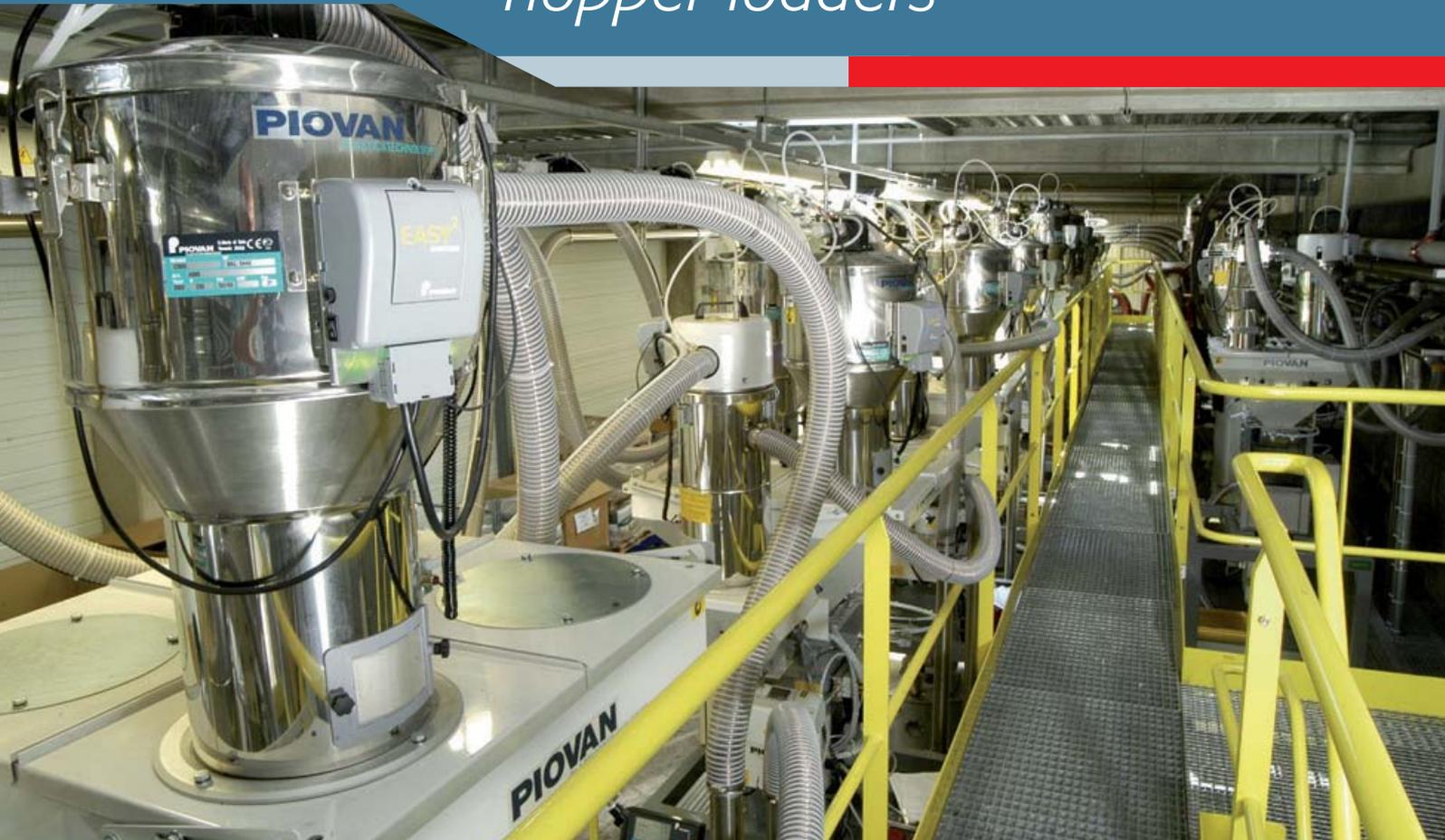


# Single phase and three phase hopper loaders



English

The Piován range of single phase and three phase hopper loaders allows for automatic granule conveying to drying hoppers, volumetric and gravimetric dosers, and processing machines. In the three phase version, they can operate independently or be part of a centralised Easy2System conveying system.



**PIOVAN**

*Customers. The core of our innovation*

▶ Distinctive features for optimum conveying performance



The range of S single phase hopper loaders and the series of C granule receivers share some distinctive technical features for flexible and efficient management of every production department.

- > **No risk of material contamination or corrosion**, ensured by granule receivers entirely in polished stainless steel, with accurate finishing of the interiors and plasma welding
- > **Absence of granule stagnation**; the design ensures uniform flow of the granules.
- > **Maximum performance at every loading cycle**, thanks to the hermetic lid and sealing
- > Functioning in **total safety**, with automatic stop after a pre-selectable number of unsuccessful loading cycles
- > **Ease of cleaning**, with access from the lid or from the inspection door
- > Suitable for **all production demands**, with different typologies of filters according to the material used and the additional possibility to work in a wide range of temperature.

# Single phase and three phase hopper loaders



## S single phase models

The S single phase hopper loaders **incorporate the vacuum motor**. They can convey **up to 200 kg/h of material** and the **distance** can reach **20 m**.

The S series loaders are equipped with a **new keypad control** which includes a powerful microprocessor. The display and keyboard grant a simple and quick access to all the functions. **The RS485 serial communication port** (modbus protocol) is included as standard.

The high reliability of the Piovan single phase loaders is ensured by two devices included in the standard configuration, considerably increasing the vacuum pump's life:

- > **soft start function**, which reduces the wear out of the brushes and the risk of damaging the motor
- > **warning signals** indicating the necessity to replace the brushes.

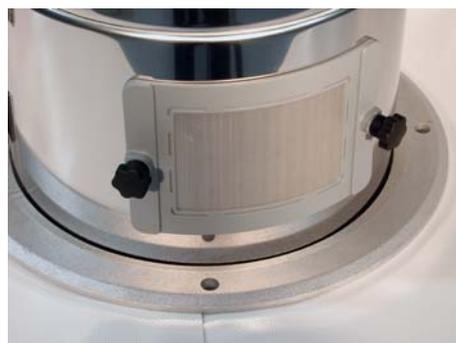


### Standard version

- > 1 kW double step vacuum motor
- > paper or fabric filter
- > **automatic filter cleaning** device (by means of compressed air)
- > filter cleaning air exhaust and **inspection door** with stainless steel mesh protection
- > magnetic level sensor
- > control box with keypad, including the serial port and **LEDs for the indication of working status and alarms**
- > aluminum flange which allows the 360° rotation for a flexible positioning

### Options

- > VP proportioning valve
- > acoustic alarm



## The simple solution for recycling regrind

The electro-pneumatic proportioning valve VP conveys virgin and regrind material. It has the function of mixing the two materials in variable percentages, conveyed from different distances. Setting of the parameters is possible by means of a control keypad.



# Single phase and three phase hopper loaders



## The potentiality of the three phase models

In the case of higher conveying requirements, Plovan offers the **C granule receivers**, with a volume from 1,5 to 140 dm<sup>3</sup> in the standard version, and fitted with an independent three phase vacuum unit.



Material receiver  
equipped with vacuum valve



Cartridge filter



Material receiver  
with stainless steel grid filter

### Standard version

- > paper, fabric or metal grid filter in the receiver
- > **automatic filter cleaning** device (by means of compressed air or vacuum break valve)
- > **control box with LED lights**, Easy2System type
- > magnetic level sensor

### Options

- > remote control keypad
- > control keypad with serial port
- > acoustic alarm
- > VP proportioning valve



C15 with cartridge filter



C15 with stainless  
steel grid filter



C 10

The **F vacuum pumps**, with a power ranging from 1.5 up to 11 kW, cover a **production range of up to 1500 kg/h** and a transport distance of 100 m maximum



F416/2, F44/2 and F44 with CF filters

The F vacuum units offer the following advantages:

- > **Maintenance-free** motors
- > **Noise level lower than 75 dB(A)**
- > **High filtering efficiency**
- > **Quick and simplified filter cleaning operations**
- > Vertical design solution requiring **little floor space**

The vacuum pumps can be equipped with the FZ cartridge filter or particularly compact and efficient filtering systems CF1, CF2 and CF3. The CF filter combines the cyclonic effect with dust separation and are recommended in the case particularly dusty materials are conveyed.



F416/2 with CF3 filter

The CF filters can be fitted with:

- > **vacuum break valve** for automatic filter cleaning (on request on CF1, standard on CF 2 and CF3)
- > **sight glass** on the dust collection unit (standard on CF2 and CF3)
- > **filter clogging pressure switch** (option)
- > **post-cooler** for hot material conveying (option).



Dust collector bin of the CF3 filter



Cartridge filter in the CF3

# Single phase and three phase hopper loaders



## Flexible and powerful control

The control of the F three phase loaders has been developed on the **Easy2System management logic**, and can thus work independently or be included in a centralised conveying system. On request, the three phase models can be equipped with a remote control keypad, which is available in the version with or without serial port.

The hopper loaders are completely **factory pre-set** and ready to start once connected electrically. The loading time is calibrated for optimal functioning and a filter cleaning cycle is pre-set. The control box of all the models includes **green and yellow LED's, signalling the functioning status of the hopper loader and possible alarms.**



C10 vacuum receiver with keypad

The **control keypad** of both single and three phase hopper loaders allows for customisation of the unit's functioning and setting the following parameters:

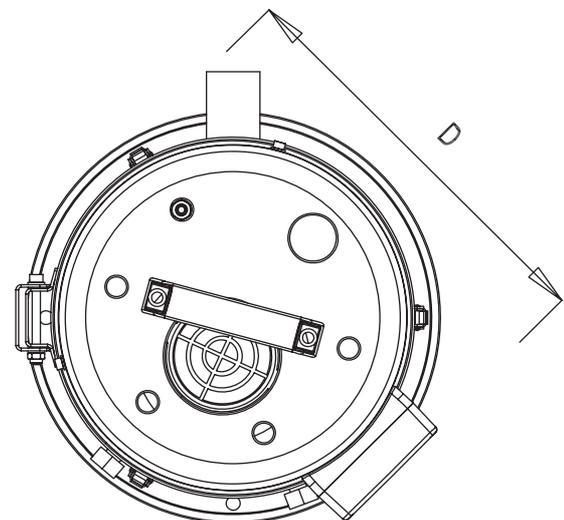
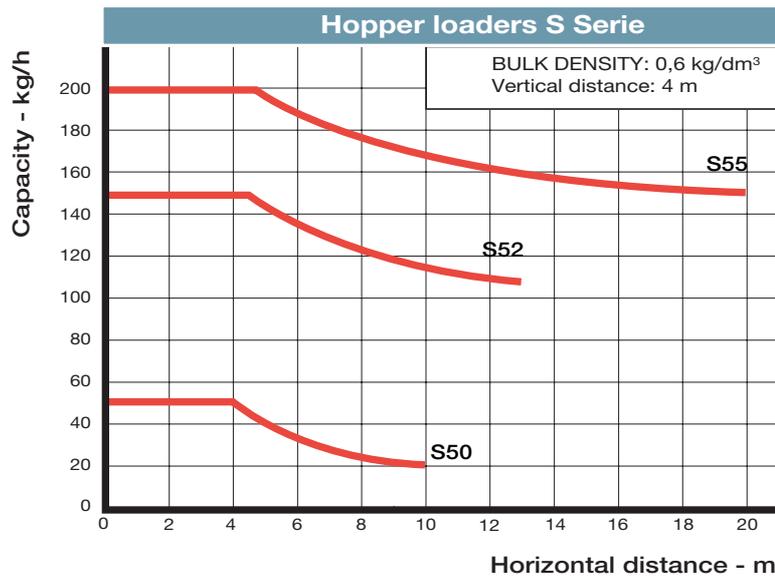
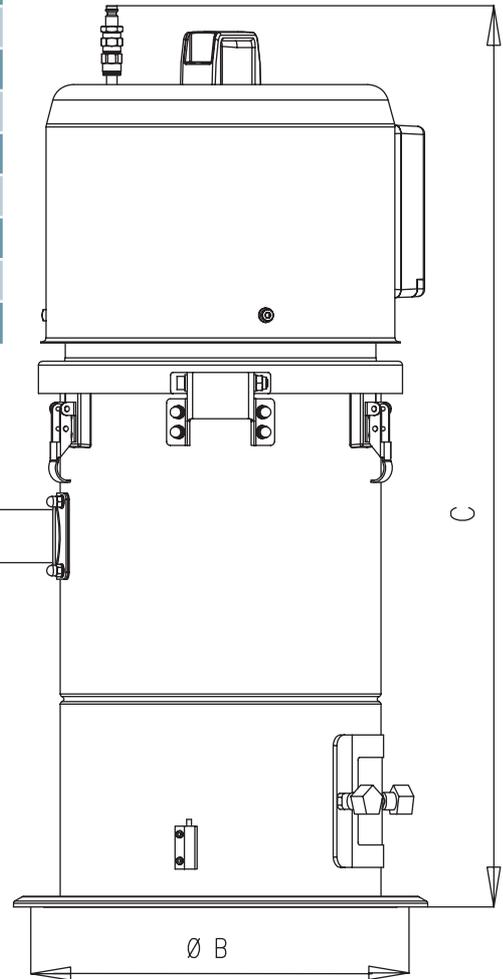
- > conveying times
- > pause times between the loading cycles (to adjust the consumption of regrind accumulated in the granulator beside the machine)
- > functioning of the VP proportioning valve
- > maximum number of unsuccessful loading cycles
- > filter cleaning mode (before and/or after the conveying cycle)
- > functioning of the pipe cleaning valve.



Fitted keypad

# Technical data - vacuum receivers

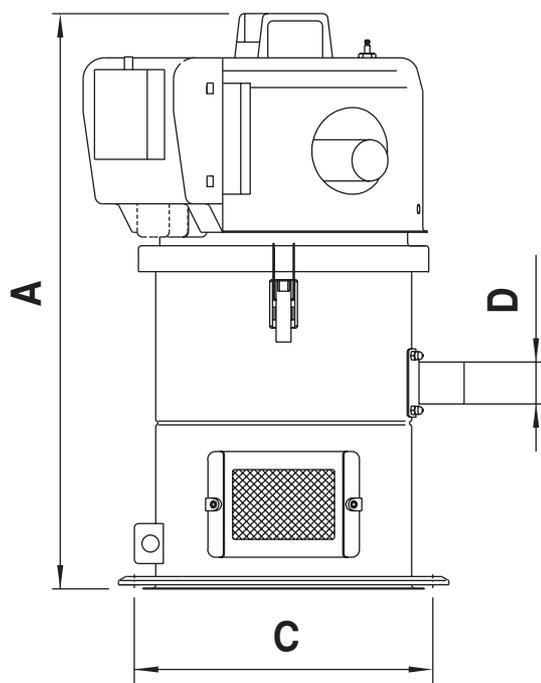
SINGLE-PHASE LOADERS		S50	S52	S55
Voltage/Frequency	V/Hz	230/50-60		
Motor power	W	1000		
Volume	dm <sup>3</sup>	1.5	5	10
Static vacuum	kPa	21		
Maximum noise level	dB(A)	83		
Dimension A	mm	40	40	40
Dimension B	mm	185	280	280
Dimension C	mm	450	595	680
Dimension D	mm	245	310	310
Weight	kg	9	11.5	12



# Single phase and three phase hopper loaders

## Technical Data - receivers

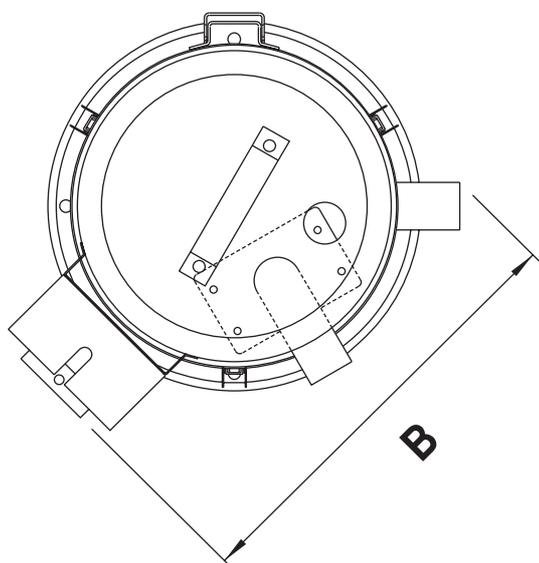
RECEIVERS		C 2	C 3	C 5	C 10
Voltage/Frequency	V / Hz	230 / 50-60			
Air pressure required	bar	6 ÷ 8			
Air consumption	NI/cycle	0,5	6* / 0,5**		
Capacity	dm <sup>3</sup>	1,5	3	5	10
A	mm	478	503	563* / 658**	648* / 753**
B	mm	310	365	365	365
C	mm	185	185	280	280
D	mm	40	40 / 50**	40 / 50**	40 / 50**
Weight	kg	8	9	11	11



C 15	C 30	C 50	C 100	C 140
230 / 50-60				
6 ÷ 8				
0,5				
15	30	50	100	140
953	1063	1183	1110	1235
490	490	490	720	720
280	280	280	450	450
40 / 50 / 60	40 / 50 / 60	40 / 50 / 60	50 / 60 / 76	50 / 60 / 76
16	17	18	40	42

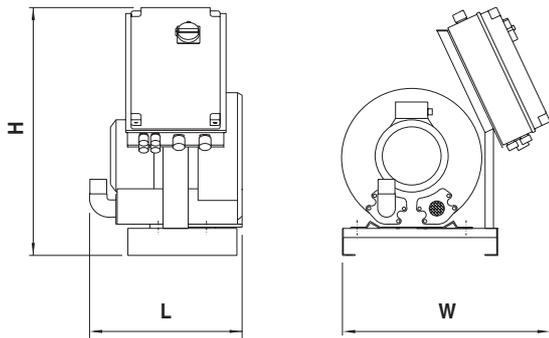
\* Version with filter cleaning by compressed air

\*\* Version with filter cleaning by vacuum-break valve

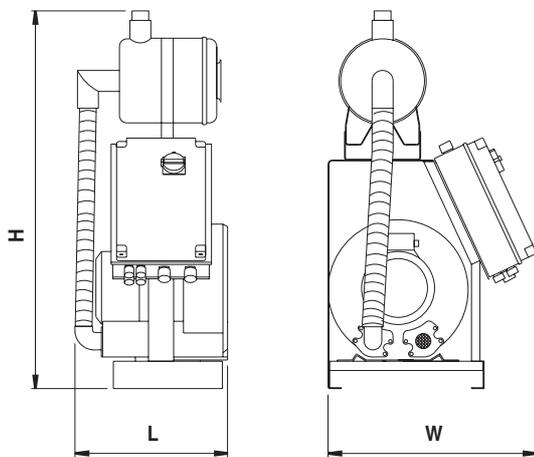




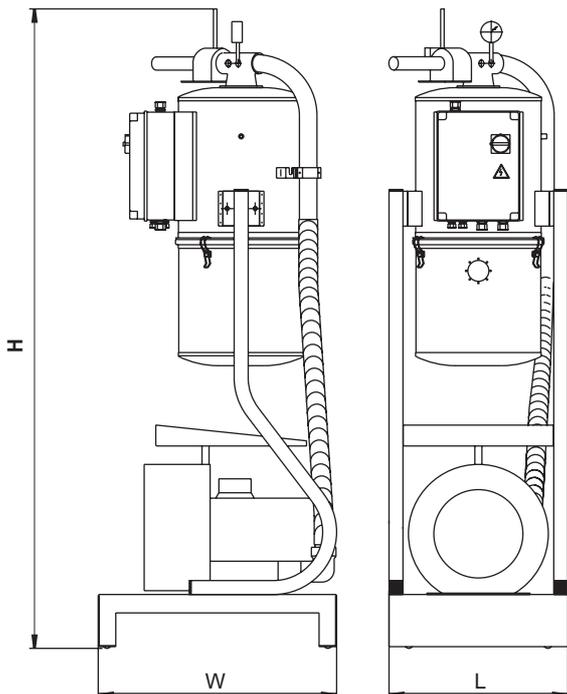
# Single phase and three phase hopper loaders



Vacuum unit

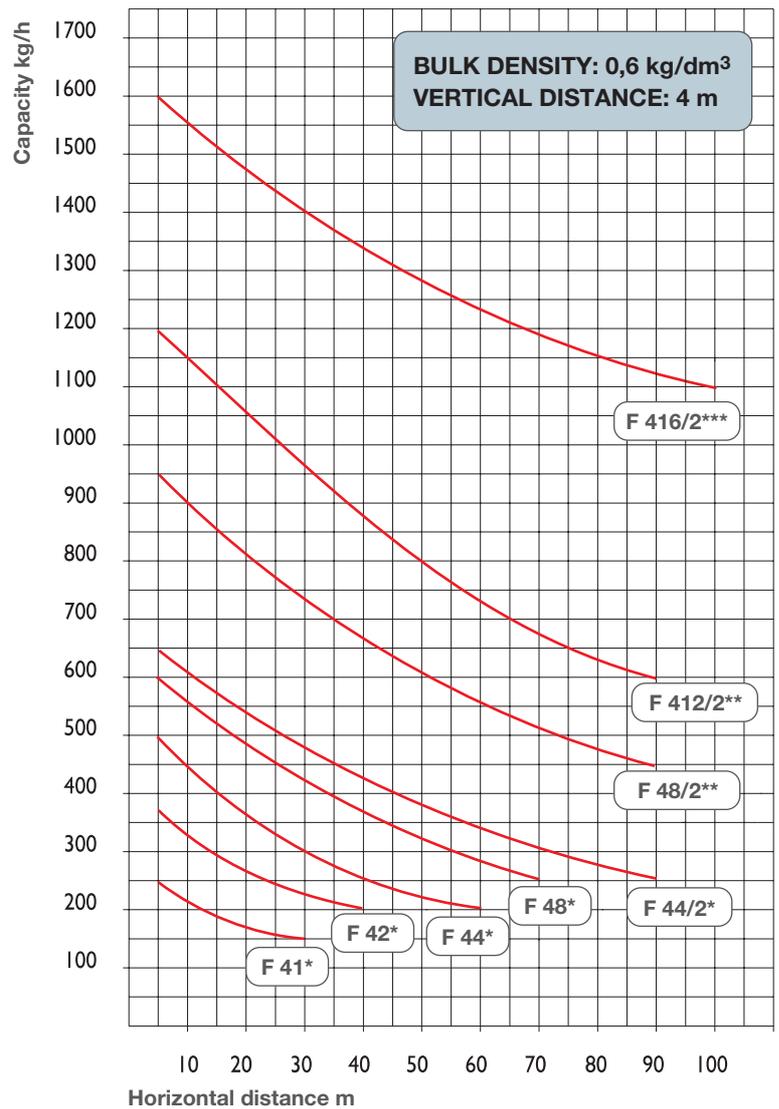


Vacuum unit with FZ filter



Vacuum unit with CF filters

## TRANSPORT CAPACITY



\* 40 mm Vacuum and material line diameter

\*\* 50 mm Vacuum and material line diameter

\*\*\* 60 mm Vacuum and material line diameter

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