



ProTec Polymer Processing GmbH
Conveying



Conveying Units by ProTec Polymer Processing will Mobilize Your Material!

For many years, ProTec Polymer Processing GmbH (former MANN+HUMMEL ProTec GmbH) has been known as a reliable and experienced partner to the plastics industry. The company's world renowned brands SOMOS® and OHL stand for efficient material handling and ready to use recycling plants. Conveying equipment by ProTec has been tried, tested and proven all around the world for decades. Discover the expertise and innovative force that will also help you to increase your production capacity!

Our FG 200 model range - specially suited to the requirements in the area of injection molding - has already become indispensable for the economic production in a wide range of industries:

- Component parts and finished goods (components for the construction of cars and engines, home and gardening equipment, toys, furniture, sports equipment, medical and sanitary products)
- Packaging (bags, bottles, transport containers).

The powerful conveying units by ProTec Polymer Processing were specially designed for top requirements in the area of granular or dusty bulk materials. Their power ensures that automatic loading of containers, scales, mixers, dosing units, drying systems and processing machines runs smoothly and efficiently. This is why the application of our equipment is so successful in a wide range of industries: plastics, rubber, recycling and food, as well as the chemical and pharmaceutical industry.

A large number of FG-200 features - such as the tried and tested transparent and wear-resistant PA container, the functional suction and conveying principle, the blower that can be either integrated or stand alone, and the extremely long service life - provide a variety of tailor-made applications and efficient production possibilities.

See for yourself that at ProTec Polymer Processing you are dealing with specialists in the area of conveying equipment.

Why not give us a call? Our team will be happy to assist you.

Flexibility is Our Principle of Success

Your advantages when using FG 200 conveying equipment

Our conveying units stand out because the injection molding applications can be easily managed and individually adjusted. Depending on the area of application, there is a choice of either transparent polyamide containers or containers made of stainless steel. The tried and tested polyamide containers allow you to assess the conveying process at a glance. Despite this, they are still extremely suitable for conveying abrasive plastics (e. g. with glass fiber content) and impress with a long service life with high throughputs.

The material hoppers have a modular design which makes them extremely flexible and adjustable to the injection molding process.

Due to their low weight of approx. 10 kg, cleaning the conveying units is quick and easy. This has a particular positive effect on time and costs when materials are changed often and/or small batches are produced.

On the prominent 7 segment display, the tool setter can see the status of the conveying unit clearly and even from a distance.

The units can be equipped, among other options, with an automatic dedusting operation (compressed air) that can be timed via the μ P control.

The following options are available:

- Material hopper in two materials available
- Flap lid (can also be retrofitted)
- Conveying lines
- High temperature-resistant model (HT/for transported material with temperatures of up to 150 °C)
- Integrated or external level indicator
- Special voltages
- Machine funnel
- Intake lid
- Volume extension for material hoppers
- Tube batches
- Suction nozzle
- Dosing flaps
- Dosing attachment
- Fault indicator
- Detachable control

Please contact our staff for further options or adjustment possibilities!

FG 200 fulfils customer wishes on the dot

Perfect conveying solutions are tailor-made to suit your operation conditions. Thanks to modular subassemblies, even a minimum spare parts store will suffice, even when using different device types. Not only will it save you time and space, it will also create resources for other important tasks. It goes without saying, that a modular design ensures an extremely efficient service. Short delivery times are a guarantee that strategies in your company can be quickly implemented. This means that you can present the right solutions to your customers in no time. And once the equipment is on site, nothing will impede a quick start. The magic word is „plug and play“.

The basic equipment of every conveying unit consists of a conveying hopper with integrated conveying air filter, an integrated or separate blower, a conveying tube with a suction nozzle and a matching control device, as well as a network cable.

The granulate conveying stations of the FG 200 model series come in two different models: polyamide or stainless steel. For separating the transported materials from the conveying air, the conveying stations are equipped with a filter bag or a filter panel.



Conveying unit FG 204.1/31

The Easy Way to a New Conveying Unit

The order code is generated as follows:

Example for assembling the FG 200 series

Conveying unit/station FG 2 _ _ . / _ _ VE

Product _____

FG = Conveying unit/station

Model series _____

2 = FG 200, material hopper ø 200 mm

Device type _____

0 = Conveying unit with fitted blower, central filter
 2 = Individual conveying station for separate blower station with µP control

Filter type _____

1 = Cloth filter without dedusting
 3 = Filter panel with/without dedusting (compressed air)
 4 = Cloth filter with dedusting (compressed air)

Blower _____

0 = Stand-alone blower station 1.1 kW
 1 = Fitted turbine blower 0.8 kW
 2 = Stand-alone blower station 2 kW
 4 = Stand-alone blower station 4 kW

Material of material hopper _____

1 = PA, low
 2 = PA, high
 3 = VA, low
 4 = VA, high
 6 = VA, high, for hot granulate

Type of electr. system _____

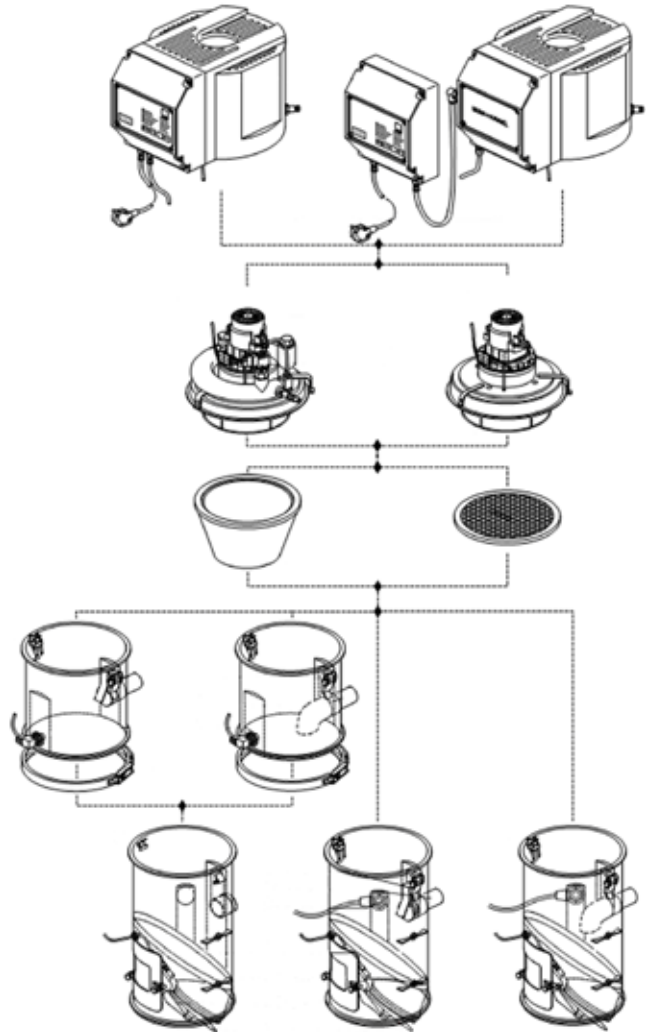
1 = µP control
 2 = Separate µP control (+ clamping box)

Volume extension _____

VE = Volume extension of the particular material hopper

FG 204.1/21 therefore means:

Conveying unit with a material hopper ø 200 mm; fitted blower; cloth filter without dedusting; blower capacity 0.8 kW; container PA high; µP control



Max. Throughput Rate of an Injection Molding Machine

Auger diameter in mm	Maximum cubic capacity in cm ³	Maximum throughput rate* in kg/h
18	28	5.3
22	42	7.9
25	61	11.5
30	88	16.6
35	135	25.5
40	201	38.0
45	296	55.9

Auger diameter in mm	Maximum cubic capacity in cm ³	Maximum throughput rate* in kg/h
50	393	74.3
55	432	81.6
60	678	128.1
65	862	162.9
70	1,077	203.6
75	1,325	250.4
80	1,608	303.9

* Capacity based on the example of a standard Polystyrol/PS (density 1.05 g/cm³)

Selection of Conveyors for Dryers of the T/TF series

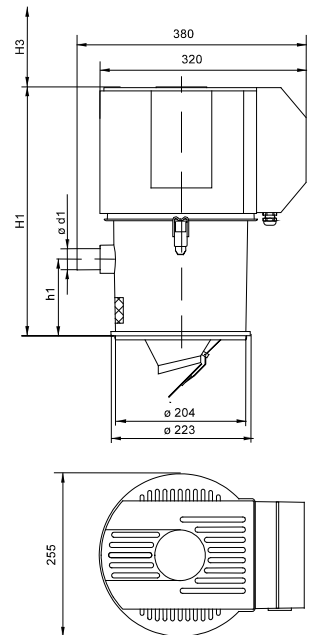
Conveying device type	201.1/11	204.1/11	204.1/31
Material type	Granulate	Granulate/Ground material	Granulate/Ground material
Dryer type	T/TF	T/TF	T/TF
Maximum temperature transported material in °C	< 85	< 85	> 85
Container type	PA	PA	VA



Conveying unit FG 201.1/11

Dimensions:

H1 without volume extension: 600 mm
 H3 min. height filter change: 200 mm
 h1 material inlet spigot: 180 mm
 d1 material inlet spigot diameter: 38 mm

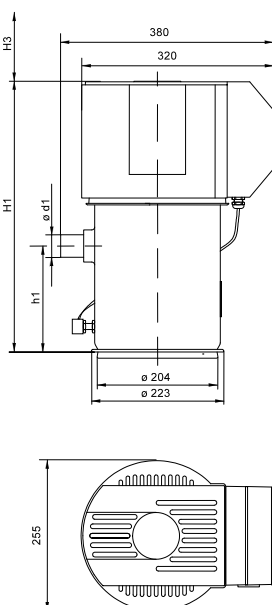


Ambient conditions:

Max. ambient conditions during operation: +5 up to +50°C
 Relative humidity at +20 °C: < 80 %

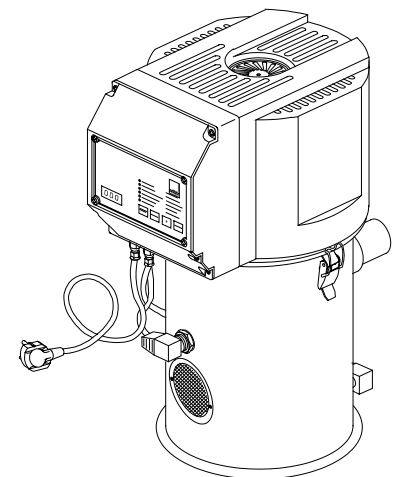
Electrical data:

Network connection: 1/N PE AC 50/60Hz 230V
 Nom. blower capacity: 650/800 W
 Current consumption: 4 A
 Protection category: IP 20



Dimensions:

H1 without volume extension: 600 mm
 H3 min. height filter change: 200 mm
 h1 material inlet spigot: 180 mm
 d1 material inlet spigot diameter: 38 mm



Conveying unit FG 204.1/31

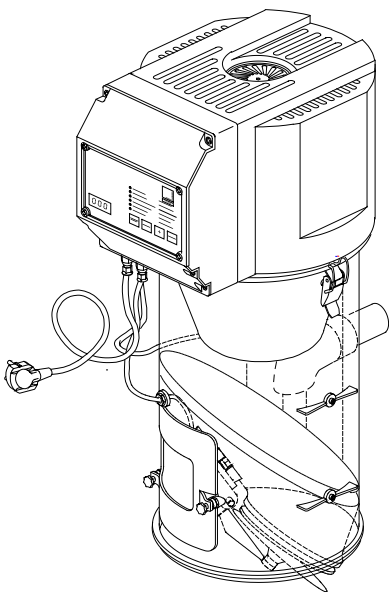
Selection of Conveyors for Injection Molding Machines

Conveyor unit type	201.1/11	204.1/11	204.1/21	204.1/21 VE
Material type	Granulate	Granulate/Ground mat.	Granulate/Ground mat.	Granulate/Ground mat.
Maximum Temperature transported material in °C	< 85	< 85	< 85	<85
Max. Throughput in kg/h	25	25	66	80
Container type	PA	PA	PA	PA
Volume of conveyor unit container in l	2.5	2.5	3.5	3.5
Volume of machine hopper in l	2	2	2	7
Transport path in m	10	10	10	10

Throughputs measured at 30 cycles/hour • Transport height max. 5 m • Bulk density of the tested materials 0.6 g/dm³

Conveyor unit type	204.1/41 VE	223.0/62	223.2/62	223.4/62
Material type	Granulate/Ground mat.	Granulate/Ground mat.	Granulate/Ground mat.	Granulate/Ground mat.
Maximum Temperature transported material in °C	< 120	< 160	< 160	< 160
Max. Throughput in kg/h	90	100	150	300
Container type	VA	VA	VA	VA
Volume of conveyor unit container in l	4	4	4	4
Volume of machine hopper in l	9	2	2	2
Separate blower in kW	-	1.1	2	4
Transport path in m	10	30	50	50

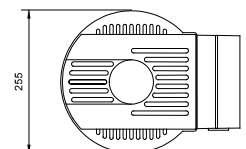
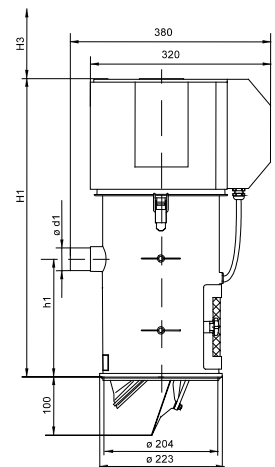
Throughputs measured at 30 cycles/hour • Transport height max. 5 m • Bulk density of the tested materials 0.6 g/dm³

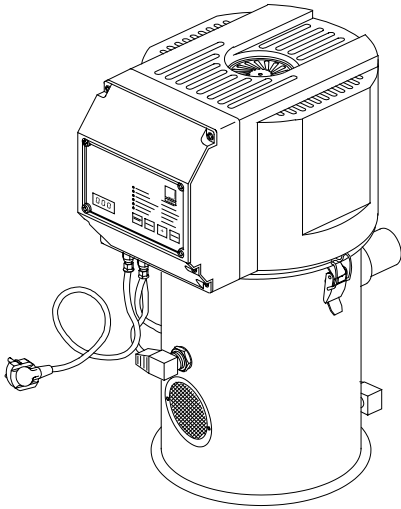


Conveying unit FG 204.1/21

Dimensions:

H1 without/with volume extension: 550/750 mm
H3 min. height filter change: 200 mm
h1 without/with volume extension: 210/410 mm
d1 material inlet spigot diameter: 38 mm

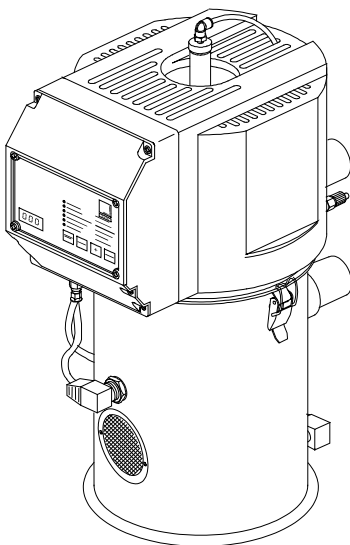
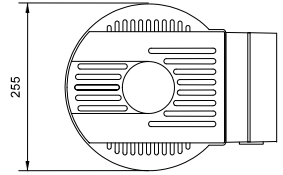
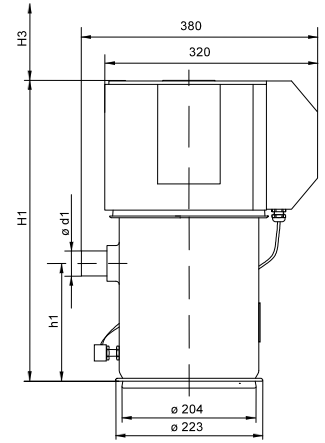




Conveying unit FG 204.1/41

Dimensions:

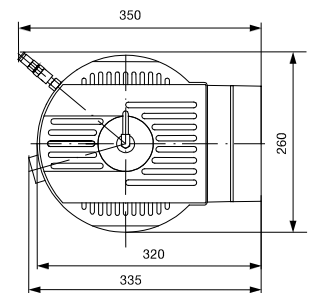
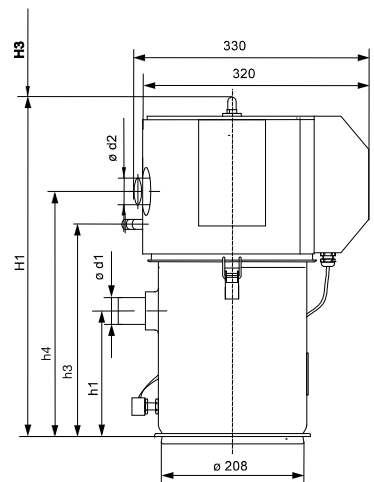
H1 without/with volume extension: 540/740 mm
 H3 min. height filter change: 200 mm
 h1 without/with volume extension: 180/380 mm
 d1 material inlet spigot diameter: 38 mm



Conveying unit FG 223.0/62

Dimensions:

H1 without/with volume extension: 556/696 mm
 H3 min. height filter change: 200 mm
 h1 without/with volume extension: 180/380 mm
 h3 without volume extension: 376 mm
 h4 without volume extension: 423 mm
 d1/d2 material inlet spigot diameter: 38 mm



ProTec Polymer Processing - Always at Your Side

Globally networked sales and service structure

Not only do we strive to offer our customers demanding products in the highest quality, but we also strive to ensure that these products are efficiently utilized and that the optimal production conditions are created.

We advise and assess in advance, however we do not transfer responsibility once we've been commissioned. Instead we forward this to our extensively trained service team that makes an on-site visit to ensure that all equipment and systems are optimally serviced and set up.

We do not only provide this service in Germany, but worldwide as well. A network consisting of our own employees – and complemented by the well-trained staff members from our trusted representative offices – is quickly mobilized to be on-site not only when things “get dicey” but also for regular service visits from time to time.



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