

CONVEYING

METRO G med

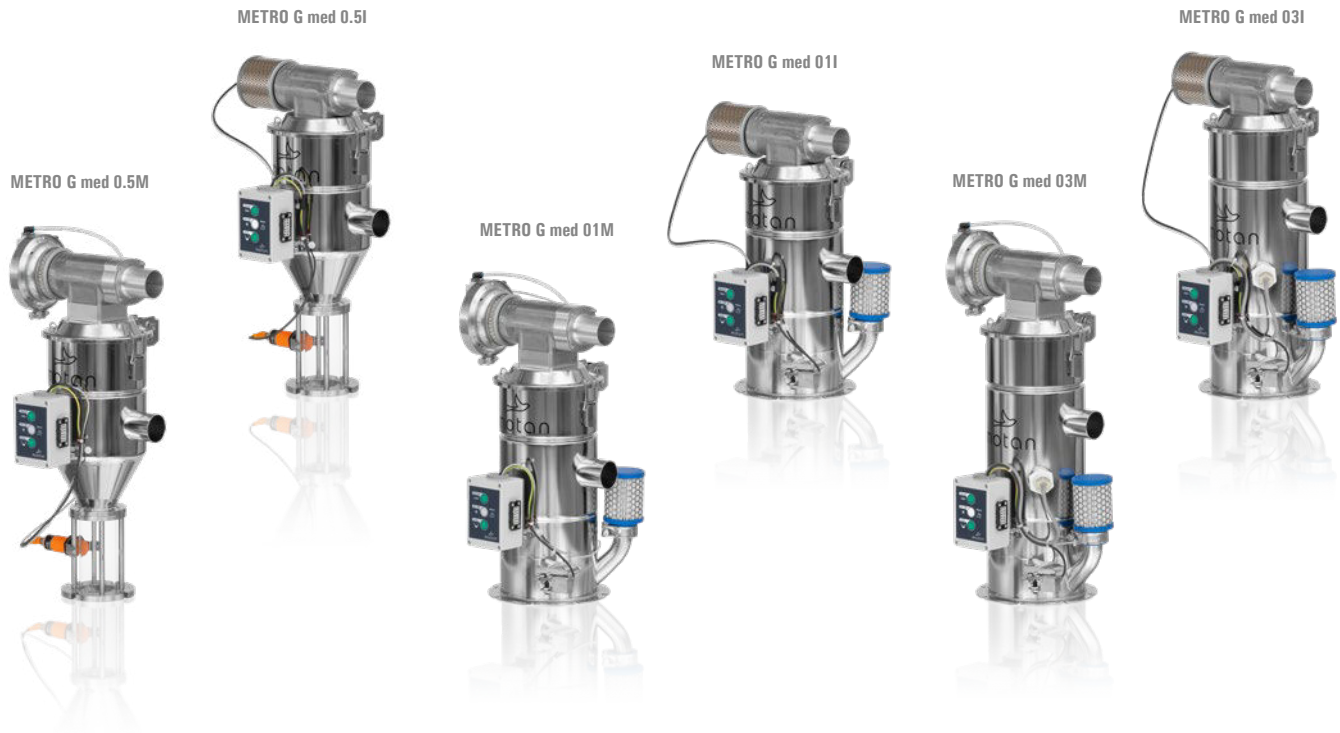
Medical material loaders for granulate



ZERO LOSS

METRO G med

MEDICAL MATERIAL LOADERS FOR GRANULATE



METRO G med material loaders have been specially developed to meet the needs of plastics processors in the medical and pharmaceutical industries and comply with all the strict hygiene requirements according to FDA 21 CFR regulations.

The top priority in the design of the material loaders was the high surface quality of the electro-polished stainless-steel body, ease of cleaning and process reliability. Therefore, strong stainless-steel material sieves, special filters with high quality seals are used which are suitable for clean room applications.

Extensive family of material loaders

The extensive family of material loaders allows for an optimal selection for any required material throughput. The units are available in 0.5, 1, 3, 6 and 30 liter volumes. In addition to these different unit sizes, different vacuum valve combinations enable an individual solution tailored to your needs.

Electropolished stainless-steel

All material loaders bodies are designed to be as smooth as possible, are made of stainless-steel 1.4301 (V2A) and finally electropolished. This allows you contamination-free operation and easy cleaning due to the high surface quality.

Hygienic design

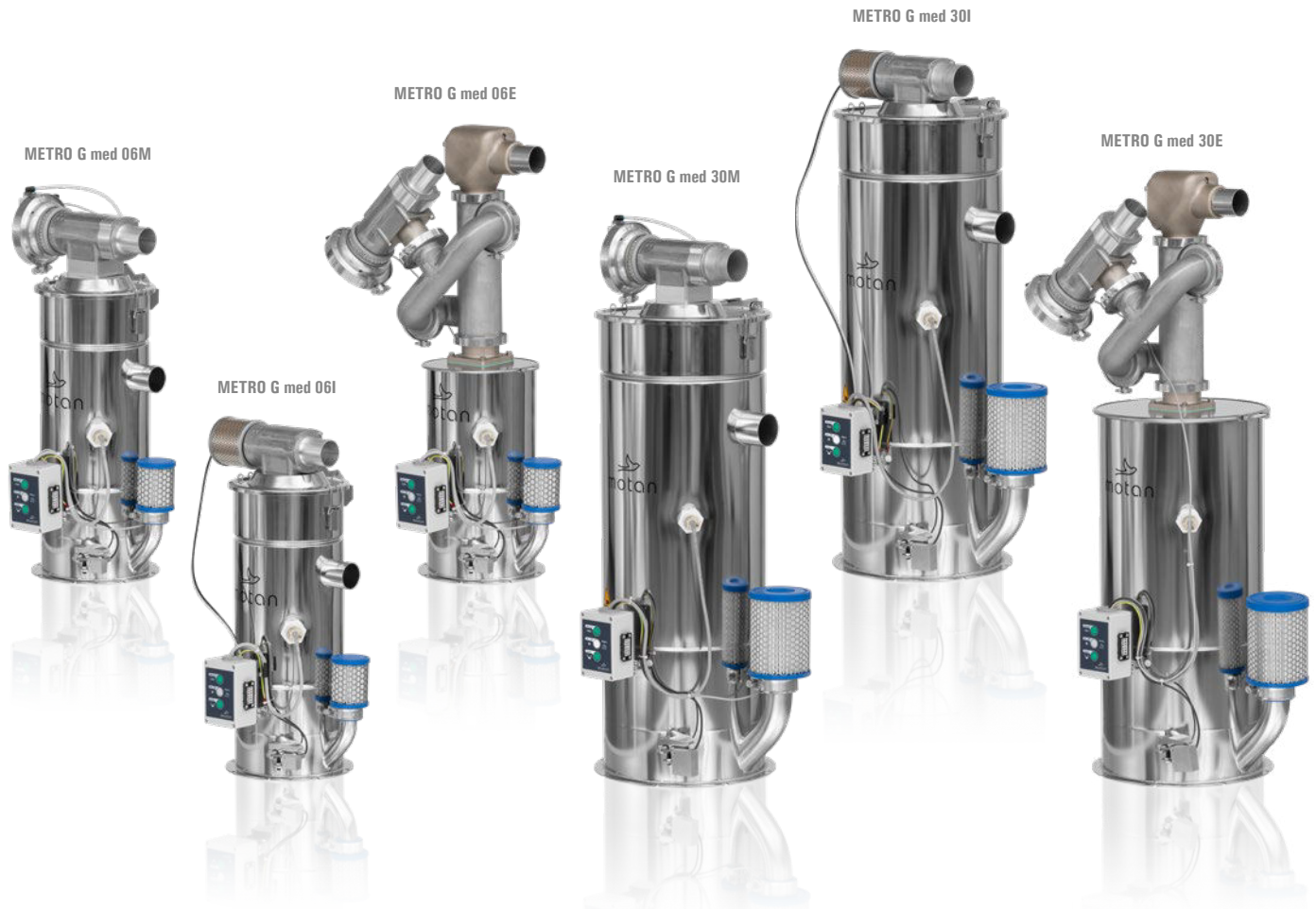
All surfaces in contact with the product are made of stainless steel or FDA-compliant plastics and thus the METRO G med hopper loader meets all requirements according to FDA 21 CFR.

- Surfaces that come into contact with granulate have a maximum roughness of 0.8 $\mu\text{m Ra}$
- Optimal cleanability: no dust corners, rounded transitions, completely removable discharge flap
- Filtered ventilation air (FDA-compliant HEPA H13 air filter)
- Detailed documentation of all components used in the construction of the material loader

Machine loader version

Also a machine loader version is available for conveying hygroscopic materials with small throughputs or when space is limited. The discharge module of the device has no discharge flap and is mounted directly on the feed throat of the processing machine.

The advantage is that you do not need a machine hopper and can work with a small supply of material. This is especially important for dried materials and the material dwell time is reduced to a minimum.



Implosion vacuum valve

The strong stainless-steel sieve is automatically cleaned by implosion after each conveying. This guarantees constant and reliable material conveying and reduces the maintenance costs for the unit.

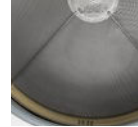
Due to the high-quality seals used in the METRO G med, the material loader operates reliably, and the environment remains dust-free. The HEPA H13 implosion filter is supplied as a standard and enables use in the clean room.

Membrane implosion vacuum valve

The membrane implosion vacuum valve offers the same functions as the implosion vacuum valve but works without compressed air. Instead, the vacuum required for the switching process comes from the conveying system, which opens and closes the valve. This valve is therefore ideally suited for use in clean room applications.

Dedusting unit

The dedusting unit removes dust from high performance engineering plastics directly at the hopper loader, sending them to the central dust filter via the air flow. These expensive materials, now dust-free, can be processed without further delay. The HEPA H13 implosion filter installed as standard enables the machine to be used in clean rooms.

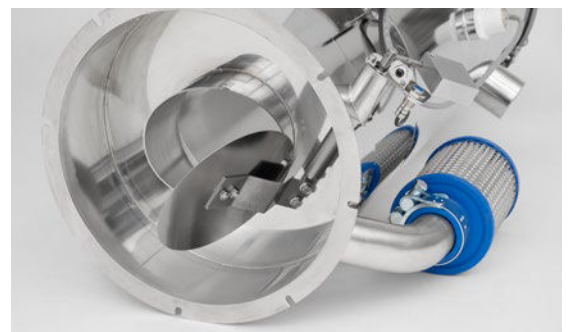




Material inlet flap

The material loader inlet flaps make sure that multiple loaders can work together properly in a system. They limit the amount of vacuum required for a group of loaders connected to a coupling station. Thus, no check valves need to be installed in the material flow at the coupling station which would result in a reduction of conveying capacity and increased material abrasion.

An additional benefit of the plasma-nitrided inlet flap is that it acts as a deflector plate at the material inlet, protecting the body of the unit from wear.



Stainless-steel discharge flap

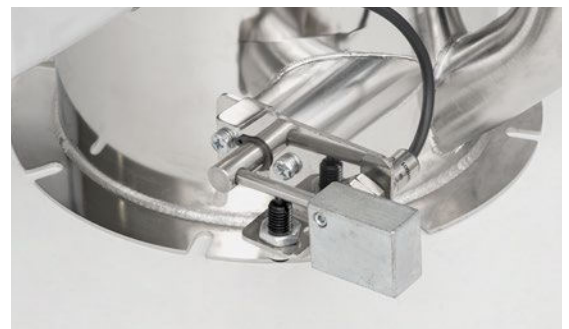
The large material outlet with a stainless-steel discharge flap is abrasion-resistant and meets all requirements for applications in the medical and pharmaceutical industries.

The angled design ensures complete emptying of the material loader after each conveying cycle.



Discharge flap with spring damper

A discharge flap with spring damper prevents the flap from completely closing when it is not under vacuum. If there are granulate on the discharge flap at the beginning of pneumatic conveying, these are first sucked away. With increasing vacuum, the flap is then pressed against the spring and will close completely.



Discharge flap with counterweight

The counterweight of the discharge flap is mounted on the outside so that the current status of the conveying cycle is visible at all times. Due to this easy accessibility, service work can be carried out uncomplicatedly and quickly.



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Level sensor

A level sensor is installed as standard in all material loaders from three liters. The sensor ensures an efficient conveying process by conveying the optimum capacity with each conveying cycle.



Loader lid with safety interlock

All METRO G med material loaders have a lid with a safety interlock that secures it in the open position. This allows to clean the unit easily and safely.



Material loader control box

All METRO G med material loaders are equipped with the C control box. This is our most advanced control box with alarm and status display, on / off button and other functions directly on the unit.



Material conveying controls

METROnet AE and AN is the ultimate networkable system toolkit for complex material conveying systems with either a soft PLC or an S7 PLC with WEBpanel and decentralized CAN bus nodes for connecting peripherals.

All METROnet controllers are fully integrated into the CONTROLnet platform and can be connected to other controllers via Ethernet.



CONTROLnet

CONTROLnet is an integrated control platform for the operation, monitoring and management of all steps of raw materials handling. It offers you an extremely versatile plant control and helps you to meet the constantly increasing demands on product quality and cost efficiency.

LINKnet 3.0 – Plant and information system

LINKnet 3.0, a fully customizable plant overview visualisation for the transparent representation of your motan plant in a SIMATIC Win CC environment. LINKnet 3.0 supports the following tasks:

- Operation
- Monitoring
- Logging
- Archiving

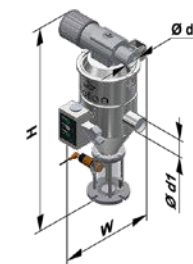


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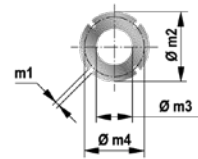
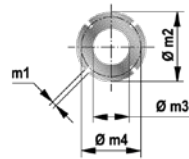
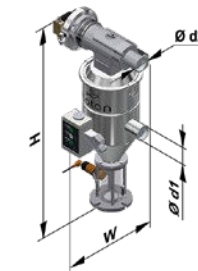
TECHNICAL DATA

Technical data		
Hopper loader type ...	METRO G med 0.5I	METRO G med 0.5M
Fill volume - litres/cycle	0.5	0.5
Weight (kg)	7.5	10
Mesh width - filter (µm)	500 (option 1200)	
Compressed air (bar)	4-6	-
Dimensions (mm)		
H	579	631
H (with open lid)	680	680
W	311	311
Ø d1	50	50
Ø d2	50	50
m1	10.5	10.5
Ø m2	130	130
Ø m3	43	43
Ø m4	100	100

METRO G med 0.5I



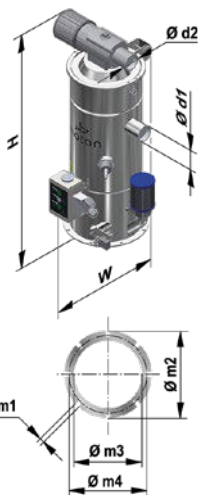
METRO G med 0.5M



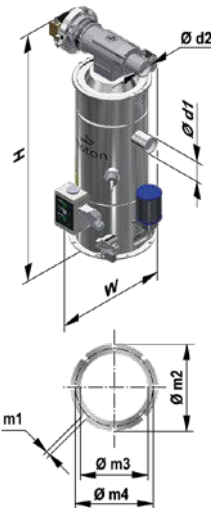
Technical data										
Hopper loader type ...	METRO G med 01I	METRO G med 01M	METRO G med 03I	METRO G med 03M	METRO G med 06I	METRO G med 06M	METRO G med 06E	METRO G med 30I	METRO G med 30M	METRO G med 30E
Volume - litres/cycle	1	1	3	3	6	6	6	30	30	30
Weight (kg)	8	9.5	9	10.5	10.5	12	15	19.5	21	24.5
Mesh width - filter (µm)	500 (Option 1200)									
Compressed air (bar)	4-6	-	4-6	-	4-6	-	-	4-6	-	-
Dimensions (mm)										
H	496	546	583	635	646	697	837	964	1114	1112
H (with open lid)	597	597	685	685	778	778	-	1196	1196	-
W	311	311	311	311	343	343	308	446	446	410
Ø d1	50	50	50	50	50	50	50	60	60	50
Ø d2	50	50	50	50	50	50	50	60	60	50
m1	7	7	7	7	7	7	7	7	7	7
Ø m2	215	215	215	215	240	240	240	340	340	340
Ø m3	170	170	170	170	200	200	200	300	300	300
Ø m4	195	195	195	195	225	225	225	325	325	325

Subject to technical changes.

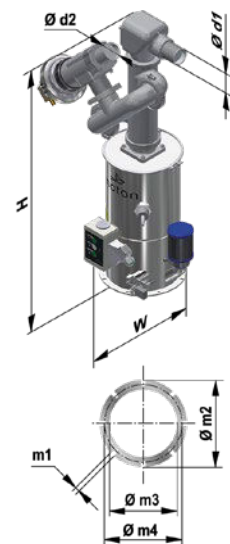
METRO G med 01/03/06/30I



METRO G med 01/03/06/30M



METRO G med 01/03/06/30E



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