

METRO

Central Conveying Systems

A centralised conveying system offers substantial operational benefits and cost savings for plastics processors.

Motan is a world leading supplier of complex centralised material feed systems. Each system is designed to suit the customer; i.e. throughput, material types and plant layout are individually taken into account. A wide selection of loaders with a variety of conveying options, controls, blowers and filter techniques allow the creation of the optimum system for the customer's facility.





METRO



HCS 15



MCG 15



HCG 6-2



HCS 10 + METROMIX



MCS 0.5



MCG 1.5

Modularity

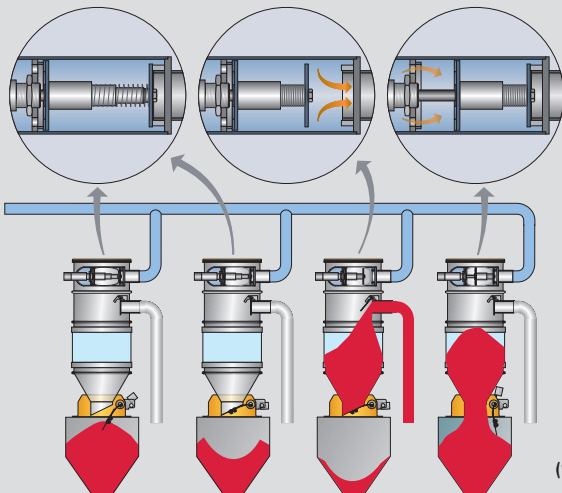
- The Motan METRO range with 0.02 to 1.06 cu ft capacity.
- Modular design allows easy adaptation.
- Machine loaders replace the storage bins on the processing machines.
- The option of either a glass or steel hopper body is available for most loaders.

Material blending

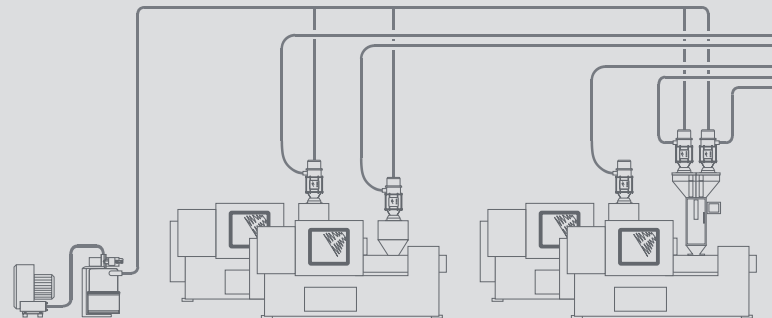
- Two material inlets for individually blending different materials.
- The METROMIX proportioning valve can be retrofitted to a hopper loader or integrated in the material feedlines.

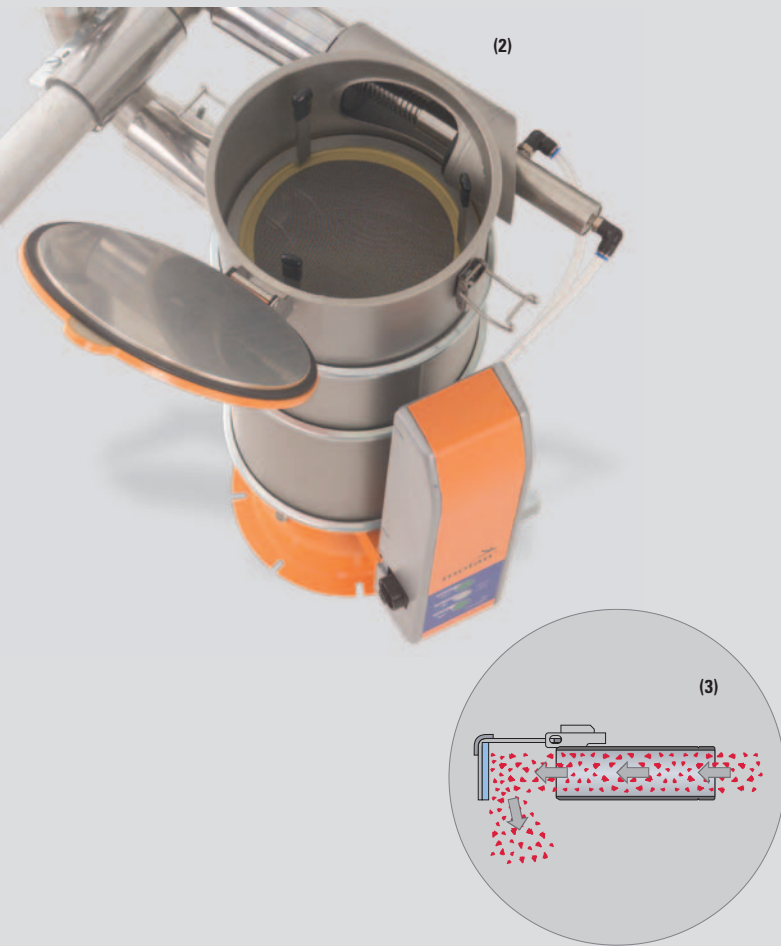
Implosion valve ⁽¹⁾

All Motan material loaders are fitted with a vacuum valve. The valve opens the vacuum line when material is being conveyed and closes with an airtight seal after the conveying phase. The reduced pressure in the loader then causes the implosion valve to open suddenly for a short time. The shock of this implosion cleans the material separation screen after each conveying cycle.



(1)



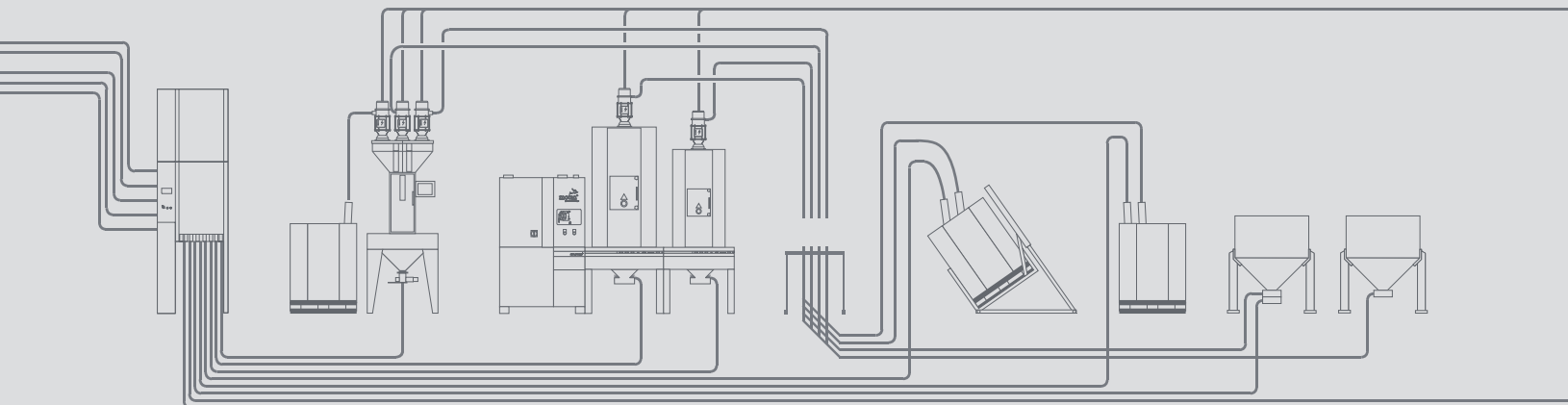
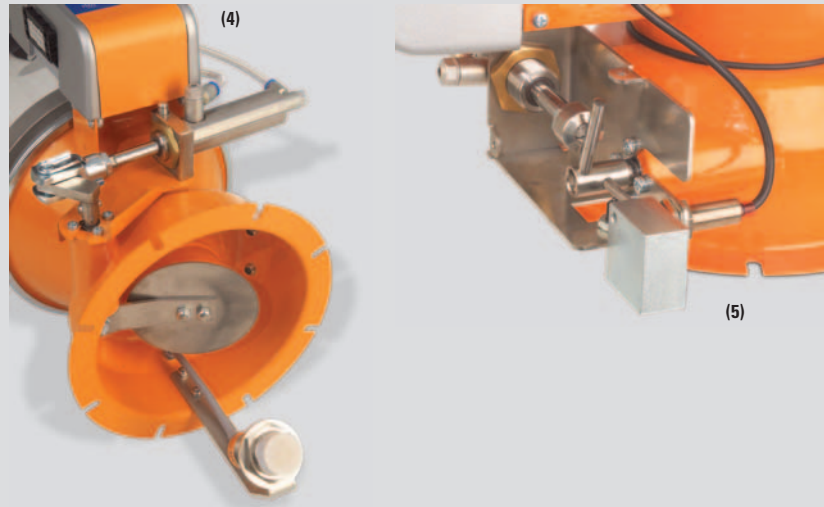


Flexibility and security ⁽²⁾

- Hinged lid, no hoses and valves, easy clean out.
- The stainless steel material separation screen with 500 or 1200 micron requires no tools for removal.
- A filterless loader option is available for certain applications.
- Height adjustable material level sensors monitor the conveying quantity on glass models.
- The control, electrics and pneumatics are enclosed in one housing.
- Abrasion resistance by stainless steel and glass construction.
- A removable material inlet socket with a special inlet flap made of glass is available as an option for extremely abrasive materials.⁽³⁾

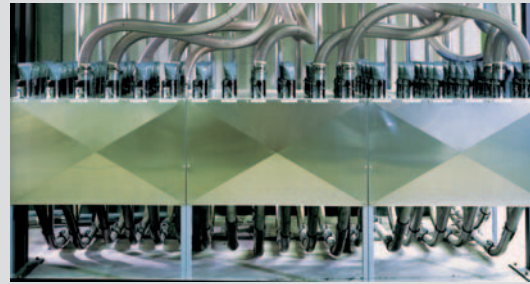
Material discharge

- Airtight housing, ideal for clean room conditions.
- The large material outlet and angled stainless steel discharge flap optimises discharging of the material.⁽⁴⁾
- The combination of suction and impact on closing the flap ensures airtight sealing.
- Position of the flap is externally visible at any time.⁽⁵⁾
- Pneumatic discharge flap for light materials and certain bin loading applications.



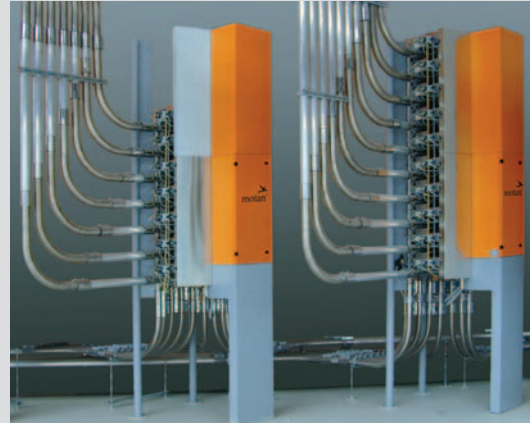
Material distribution

- Motan's material distribution system provides a fast and easy method of distributing material to the machine.
- Optimum security with the fully automatic METRO-LINK material selection and distribution system.



Central vacuum stations

- Various quiet and low maintenance vacuum blowers and pumps also for high material throughputs.
- Centralised dust collection with either cartridge filters or self cleaning units with a large dust collection bin.



Line purging

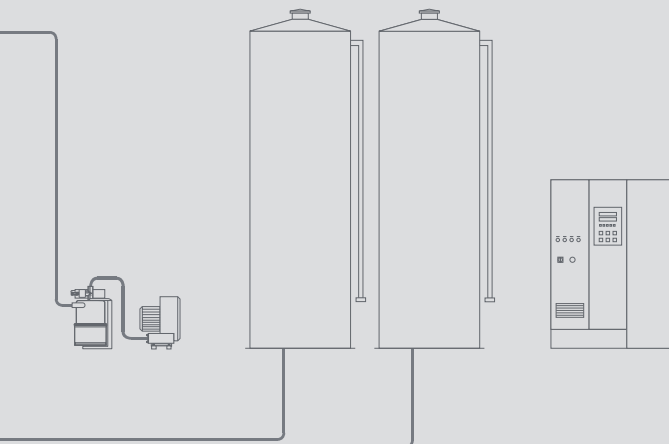
After each conveying cycle, thorough material line purging can be effected:

- essential for the conveying of hygroscopic materials,
 - for fast and trouble-free material changes,
 - prevents line plugging in long vertical line segments
- Choice of purging suction boxes or individual valves.



Dry air conveying

- Closed loop conveying system.
- Losses in conveying air are compensated with dry air.
- Material temperature is maintained.
- No re-absorption of moisture.



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System benefits

- **Material savings**

Typically, at least a 1-2% saving in raw material costs as a result of reduced spillage and contamination.

- **Reduced materials handling labour**

By centralising material storage, the cost of material handling is reduced considerably.

- **Maintenance**

Motan centralised systems not only require less maintenance than stand alone systems, but also lower maintenance costs (e.g. no loader filters).

- **More space**

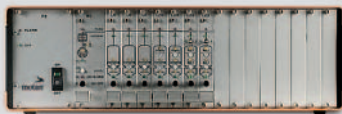
A centralised material feed system releases production floor space for additional moulding machines and results in a tidier, uncluttered facility.

- **Safety and cleanliness**

Reduced material spillage, no cleaning of filters on the machine and raw materials no longer need to be brought to the machine (no fork trucks etc.). Consequently, the production area is a much cleaner and safer place for personnel.

- **Energy savings**

A centralised conveying system uses approximately 20% of the power needed by machine-dedicated stand-alone systems.



SELVAC 2

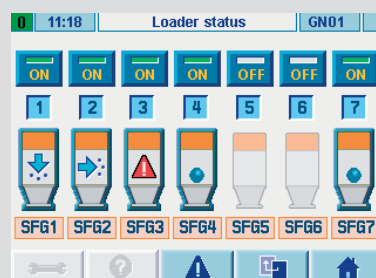


ConveyControl A

Conveying controls

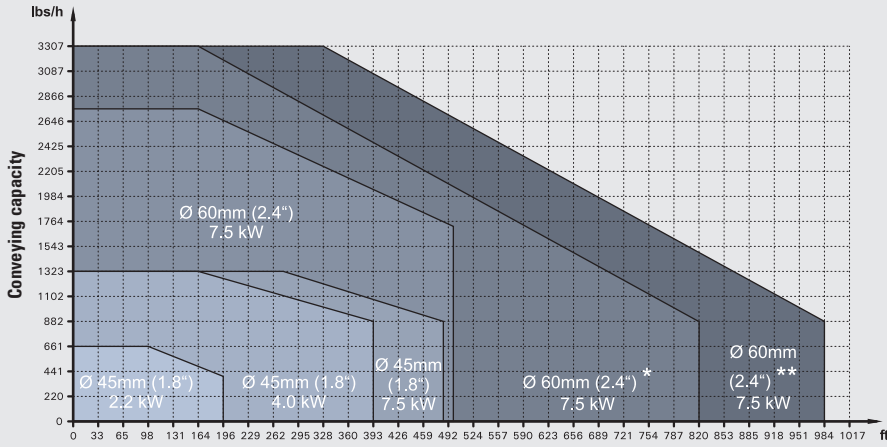
Several different levels of automation are available for controlling the conveying system.

- SELVAC 2: market proven microprocessor based control.
- ConveyControl S: PLC based touch-screen panel with clear and simple graphics.
- ConveyControl A: Siemens S7 PLC providing more flexibility.
- METRONet: the ultimate system toolkit for complex conveying systems – integrated in the Ethernet based CONTROLnet platform.

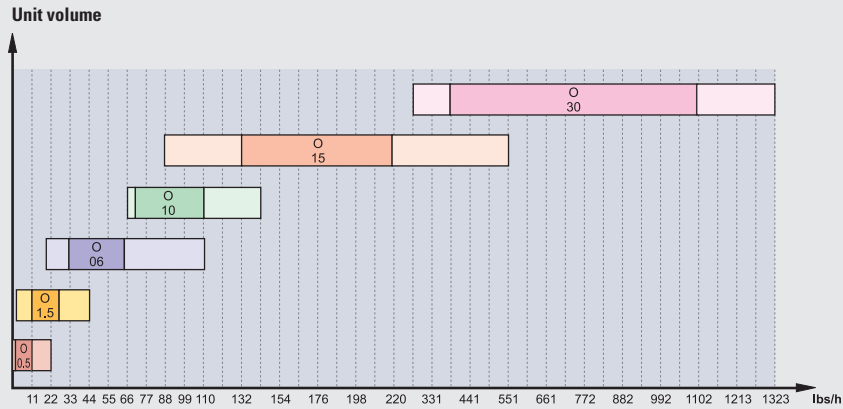


METRONet





Ø = pipe diameter, kW = blower capacity, * side-channel blower, ** vacuum pump



O = Optimum performance range

Technical data	METRO HPS/HPG/HCS/HCG						METRO MPS/MPG/MCS/MCG					
	0.02	0.05	0.21	0.35	0.53	1.06	0.02	0.05	0.21	0.35	0.53	1.06
Feed volume cu ft/cycle	0.02	0.05	0.21	0.35	0.53	1.06	0.02	0.05	0.21	0.35	0.53	1.06
Weight (lbs)	9.9	11.0	21.6	23.2	34.8	36.8	6.4	7.5	20.0	21.6	31.1	33.5
Dimensions (in)												
H	12.17	15.83	23.03	25.55	27.68	31.61	11.93	15.59	22.68	25.20	25.16	29.09
B	8.35	8.35	12.09	12.09	16.02	16.02	8.35	8.35	12.09	12.09	16.02	16.02
d1	5.31	5.31	8.46	8.46	12.36	12.36	5.31	5.31	8.46	8.46	12.36	12.36
d2	1.50/1.77	1.50/1.77	1.50/1.77	1.50/1.77	1.77/2.36	1.77/2.36	1.50/1.77	1.50/1.77	1.50/1.77	1.50/1.77	1.77/2.36	1.77/2.36
d3	1.77	1.77	1.77	1.77	2.36	2.36	1.77	1.77	1.77	1.77	2.36	2.36
Bh	0.28	0.28	0.28	0.28	0.28	0.28						
h2	8.46	8.46	8.46	8.46	8.46	8.46						
h3	6.73	6.73	6.73	6.73	9.29	9.29						
h4	7.68	7.68	7.68	7.68	10.24	10.24						
Bm							0.35	0.35	0.41	0.41	0.49	0.49
m2							3.94	3.94	5.71	5.71	8.27	8.27
m3							1.97	1.97	2.36	2.36	5.12	5.12
m4							2.95	2.95	3.94	3.94	6.61	6.61

Subject to technical changes.

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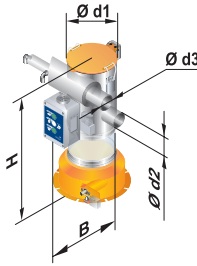
over 90 agencies worldwide

* partners

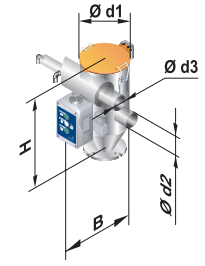
DIN EN ISO 9001:2000 accredited (** in progress)

METRO

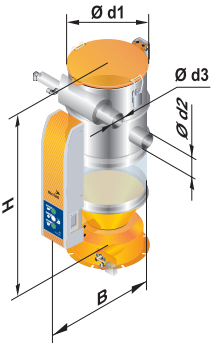
METRO HCG 1.5



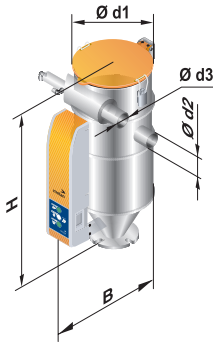
METRO MCS 0.5/1.5



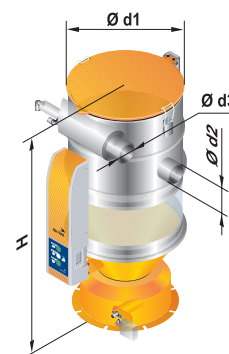
METRO HCG 06/10



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