

# METRO

## System benefits

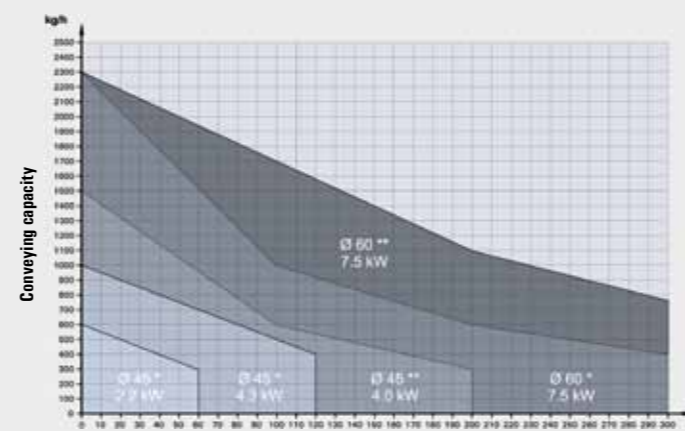
- Material savings**  
 Typically, at least a 1-2% saving in raw material costs as a result of reduced spillage and contamination.
- Reduced materials handling labour**  
 By centralising material storage, the cost of material handling is reduced considerably.
- Maintenance**  
 motan centralised systems 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.

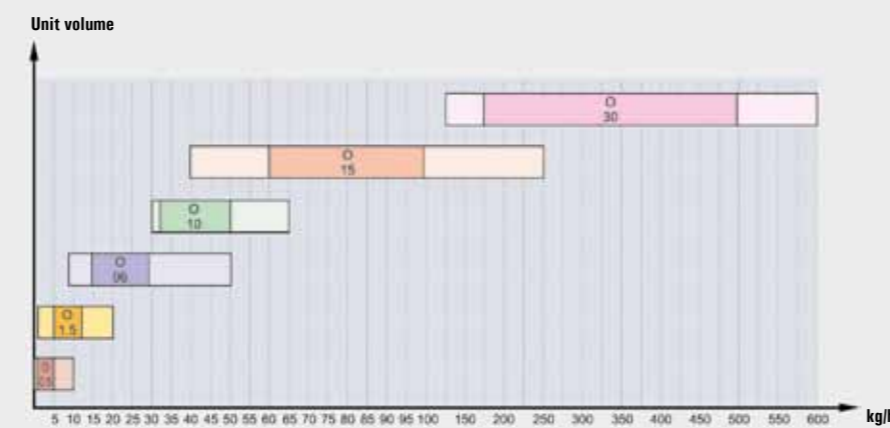
## Conveying controls

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

- SELVAC 2:** market proven microprocessor based control.
- METROnet light:** standardised system when starting off in the Ethernet and Web technology based CONTROLnet platform.
- METROnet:** the ultimate system toolkit for complex conveying systems with a Siemens S7 PLC.



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



Ø = Optimum performance range

Technical data	METRO HPS/HPG/HCS/HCG						METRO MPS/MPG/MCS/MCG					
	0.5	1.5	6	10	15	30	0.5	1.5	6	10	15	30
Feed volume litres/cycle	0.5	1.5	6	10	15	30	0.5	1.5	6	10	15	30
Weight (kg)	4.5	5	9.8	10.5	18.0	19.0	4.0	4.5	9.8	10.5	15.5	16.5
Dimensions (mm)												
H	309	402	605	669	723	823	303	396	596	660	658	758
B	212	212	307	307	407	407	212	212	307	307	407	407
d1	135	135	215	215	315	315	135	135	215	215	315	315
d2	38/45	38/45	38/45/60	38/45/60	45/60	45/60	38/45	38/45	38/45/60	38/45/60	45/60	45/60
d3	45	45	45	45	60	60	45	45	45	45	60	60
Bh	7	7	7	7	7	7						
h2	215	215	215	215	280	280						
h3	171	171	171	171	236	236						
h4	195	195	195	195	260	260						
Bm							9	9	10.5	10.5	12.5	12.5
m2							100	100	145	145	210	210
m3							50	50	60	60	130	130
m4							75	75	100	100	168	168

Subject to technical changes.

China, Beijing  
Tel. +86 10 8588-6968  
sales@motan-colortronic.com.cn

Germany, Bünde  
Tel. +49 5223 68544-0  
Fax +49 5223 68544-11  
info@motan-colortronic.de

India, Chennai  
Tel. +91 44 2247-2423  
Fax +91 44 2247-2422  
info@motan-colortronic.co.in

Switzerland, Hunzenschwil  
Tel. +41 62 889 29-29  
Fax +41 62 889 29-00  
info@motan-colortronic.ch

China, Guangzhou  
Tel. +86 20 2886-6688-8081  
Fax +86 20 2222-0333  
sales@motan-colortronic.com.cn

Germany, Friedrichsdorf  
Tel. +49 6175 792-167  
Fax +49 6175 792-284  
info@motan-colortronic.de

Italy, Tortona (AL)  
Tel. +39 0131-872 933  
Fax +39 0131-872 941  
info@motan-colortronic.it

Thailand, Bangkok  
Tel. +66 2 717-1088  
Fax +66 2 717-1080  
info@motan.co.th

China, Taicang  
Tel. +86 512 5357-7066  
Fax +86 512 5357-7055  
sales@motan-colortronic.com.cn

Germany, Isny  
Tel. +49 7562 76-0  
Fax +49 7562 76-111  
info@motan-colortronic.de

Japan\*, Hiroshima  
Tel. +81 82 928-6150  
Fax +81 82 928-9954  
info@semco.jp

USA, Plainwell  
Tel. +1 269 685-1050  
Fax +1 269 685-1059  
motanusa@motan-inc.com

France, Evry  
Tel. +33 1 608 690-18  
Fax +33 1 608 690-29  
info@motan-colortronic.fr

Great Britain\*, Chesterfield  
Tel. +44 1 246 260 222  
Fax +44 1 246 455 420  
sales@motan-colortronic.co.uk

Singapore  
Tel. +65 6873-7666  
Fax +65 6873-7555  
info@motan-colortronic.com.sg

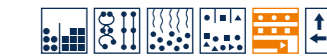
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# METRO



# Conveying



## METRO Central conveying systems for granulate

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.



SELVAC 2



METROnet Bus



METROnet light



METROnet



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think materials management





# METRO

## Modularity

- The motan METRO range with 0.5 to 30 litres 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.

## Gentle material conveying

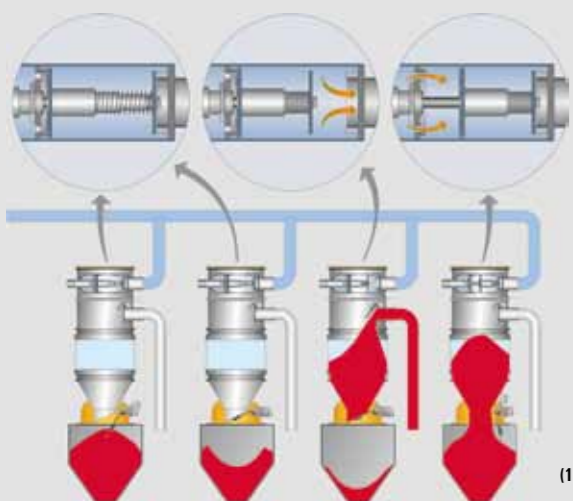
- With IntelliFlow air velocity control, the material-protective velocity can be individually adjusted for every hopper loader and every conveying distance.

## Wear protection

- For critical applications the METRO FC material flow control unit will regulate the granulate conveying speed.
- IntelliFlow protects through individually selectable conveying velocities.
- In the material feed lines, glass bends and wear-resistant components are used in the loaders.

## Implosion valve <sup>(1)</sup>

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)



(2)

## Flexibility and security <sup>(2)</sup>

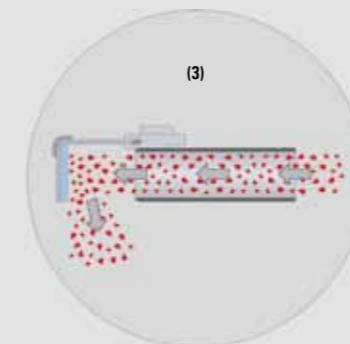
- Hinged lid, no hoses and valves, easy clean out.
- The stainless steel material screen with 500 or 1200 micron requires no tools for removal.
- A filterless loader option is available for certain applications.
- Height adjustable material level sensors monitor the conveying quantity on glass models.
- 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. <sup>(3)</sup>

## Material discharge

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



(4)



(3)

## 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 METROLINK material selection and distribution system.

## Central vacuum stations

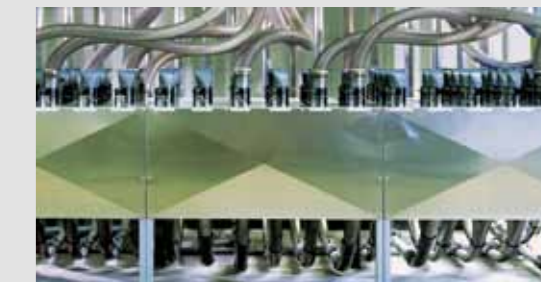
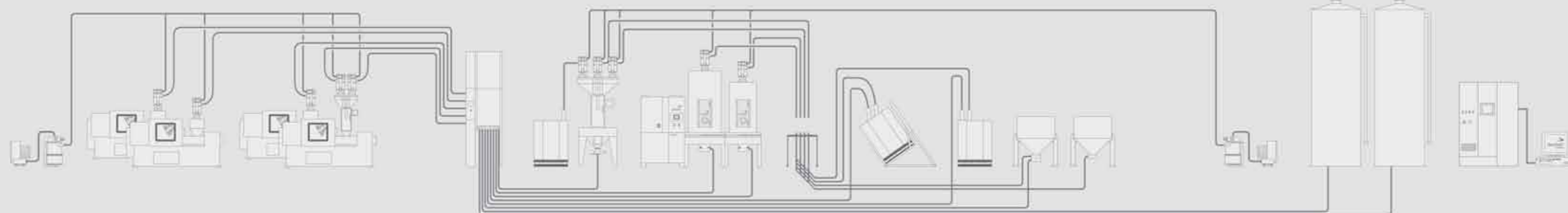
- Various quiet and low maintenance vacuum blowers and pumps also for high material throughputs.
- At blower failure automatic switch-over to standby blower.
- Frequency-controlled conveying blower for gentle material conveying.
- Centralised dust collection with either cartridge filters or self cleaning 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.



Material coupling station



METROLINK



Central vacuum stations



Suction box