CONVEYING EQUIPMENT
Conveying Systems for Plastics Processing Plants
FEEDMAX S 3-net
Single Material Loader

Optimized single loader for flexible conveying of smaller material volumes of up to 80 kg/h in permanent operation. Peak performance of up to 250 kg/h.

» Robust stainless steel construction
All components in contact with material are made of stainless steel and are therefore perfectly suited for critical and abrasive applications.

» Polyester filter with blow-back cleaning
To achieve a longer lifetime a polyester filter was used. The cloth-like filter surface is ensuring that any intake and accumulation of dust particles is made impossible. This filter is never losing its shape, and it is held in position during the entire conveying cycle, ensuring an absolutely unproblematic buildup of vacuum.

» Wand
Included in the standard package is a 780 mm long wand with air vents for the adjustment of the material load, as well as a 5 m PVC hose.

» ambiLED
Light signal in different colors at the hinged lid for the visualization of internal operating conditions.

» Granulator operating mode
Adjustable timer function for the emptying of a granulator regrind bin.

» TEACHBOX basic (Option)
Teach pendant for remote access when the loader is mounted on blenders or tall machine hoppers. Via the touch display, the control of up to 24 material loaders is possible.

» Proportional valve (Option)
The proportional valve for the conveying of two components is externally attached to the material inlet. The dosing relation can be set easily via a potentiometer.
FEEDMAX basic/FEEDMAX plus
Central Material Loaders

These units combine the advantages of a single loader with those of central material loaders.

FEEDMAX basic is a practical, newly designed appliance with the appearance of a single loader, and has to be combined with high-performance blowers, so that it can reach a higher material throughput and handle material conveyance over longer distances.

FEEDMAX plus, based on the central loaders with pneumatic discharge shut-off valves, offers the possibility of controlling up to 24 devices using the TEACHBOX basic touch-screen remote control – even in combination with FEEDMAX basic.

» Material contacting components of stainless steel.
» Vacuum connection with sealing surface.
» Hinged lid with integrated screen.
» Inlet with proper wall thickness, special steel precision casting.
» ambiLED status display.

net5 system – TEACHBOX basic

The graphical surface of the TEACHBOX basic allows for the control of up to 24 conveying stations, up to two vacuum circuits. Beyond that, the control of filter stations and suction valves is possible.

Linked units are identified automatically. These units are displayed on a highres 4.7” touch-screen: for simple operator guidance and process parameter display.

» Clearly arranged screen view
  Clear graphical display of units, including status display.

» Versatile setting possibilities
  Settings for conveying, vacuum, and dryer can be easily changed (depending on the preset user rights).

» Display and administration of
  – up to 24 FEEDMAX S 3-net
  – up to FEEDMAX basic and FEEDMAX plus
  – up to 2 vacuum lines and 1 back-up blower
The FEEDMAX B series loaders are built for highest functionality and demanding applications. The modular design of these vacuum loaders guarantees specific adjustment to meet individual customer requirements, as well as for simple cleaning.

**Complete flexibility**
Stainless steel line size reducers can be easily interchanged to maximize flexibility.

**Superior wear resistance**
Pneumatically actuated cast stainless steel material and vacuum valves for highly abrasive feeding applications.

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Modular assemblies with fully accessible quick release band clamps can be easily cleaned and interchanged.

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and pluggable control cable for all network control systems.

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### VS BLOWER STATIONS AND GM CENTRAL CONVEYING

<table>
<thead>
<tr>
<th>Blower/Pump Model</th>
<th>Pump Type</th>
<th>VS Four Station Conveying</th>
<th>GM Central-Conveying</th>
<th>Power [kW]</th>
<th>max. Airflow [m³@50Hz]</th>
<th>max. Pressure [mbar@50Hz]</th>
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<tbody>
<tr>
<td>03</td>
<td>Side channel blower single stage</td>
<td>•</td>
<td>•</td>
<td>1.6</td>
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<td>200 (5.9)</td>
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<td>360 (10.6)</td>
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<tr>
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<td>•</td>
<td>7.5</td>
<td>500 (294)</td>
<td>400 (11.8)</td>
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<td>27</td>
<td>Claw pump</td>
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<td>•</td>
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<td>140 (83)</td>
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<td>300 (176)</td>
<td>700 (20.6)</td>
</tr>
</tbody>
</table>

**CENTRAL FILTER STATIONS FOR VS AND GM**

**CS Cyclone Filter Station**

- **2-stage filtration system**
  In first stage pre-filtration takes place by means of the cyclone effect and in the second stage, micro filtration occurs by means of a polyester micro filter.

- **Effective dust blow-off and user-friendliness**
  The filter surface is cleaned by means of implosion, and the dust is blown into a dust collection bag. For visual inspection, the dust container is executed in robust glass.

**XMB Filter Station**

- **2-stage filtration system**
  In first stage pre-filtration takes place by means of the cyclone effect and in the second stage, micro filtration occurs with a polyester micro-filter having 3 m² of surface area.

- **User-friendly**
  The dust container can be removed during operation for emptying.

- **Choice of dust container**
  The dust collection area is kept pressureless through a shut-off valve in the discharge cone of the filter and therefore allows the use of any dust collection container, e.g. a plastic bag.

**MACHINE HOPPER FOR FEEDMAX**

Machine hoppers ranging in size from 3 l to 60 l guarantee the optimum volume of the material inventory to the total material throughput and thus, the performance of the entire system.

- **Stainless steel construction with sight glass**
  Sight glass for abrasive uses as well as visual control of the material flow.

- **Assembly**
  Slotted holes in the flange allow easy attachment for various mounting hole patterns.
The M7.3 IPC network control system was developed for the administration of medium to complex network configurations with up to 320 network participants. Every participant is connected via a bus module to the network and can be configured for a specific task. This guarantees the maximum flexibility for the set up of customized material handling systems.

» M7.3 IPC touch-screen
The high-resolution touch-screen simplifies user control, as well as the adjustment of process parameters and allows the user a comprehensive view of all attached units.

» Line server LS-B30T
Provides for the control of up to 31 freely configurable bus modules, which can be connected in parallel to one CAN-Bus line. All functions which are available for the respective bus modules can be managed and controlled from the line server. A complete system can have up to 8 individual CAN-Bus lines.

» Bus module BM-4/4
Provides individual control of vacuum loaders, blower stations, central filters, dry air valves, purging valves, etc. Any function can be assigned to the 4 digital inputs and outputs of the bus modules and therefore, gives the system virtually unlimited possibilities of configurability for each particular application.
**Material Based Representation**

Visualization of the conveying system using lines to represent the respective material flow of the entire system.

- **Clear representation**
  The partially complex single material flow is displayed with a few symbols.

- **Simple changeover**
  Switch to vacuum line representation or other displays.

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**Vacuum Loader Display**

- **Adjustment of the loading time**
  Adjustment can be made at any time in the edit mode.

- **Conveying sequence**
  In the presence of a purging valve adjustment of the optimum loading sequence.

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**M7.3 IPC NETWORKED DRYING SYSTEMS**

The M7.3 IPC control system permits the connection of DRYMAX battery dryers with network cards to the central M7.3 IPC control system. This allows the visualization of internal parameters and conditions on the generously dimensioned M7.3 IPC control screen as well as the entry of temperature values for the various connected drying hoppers.

- **Connection**
  of up to 32 battery dryers with 240 drying hoppers.

- **Optimized control**
  Manages internal process of the dryer with failure analysis.

- **Dew point recording**
  In the presence of a dew point sensor the actual values are captured and recorded over a 12 hour time period.

- **Management of material data**
  Includes all drying hoppers attached to the networked dryer.

- **Central error display**
  All error messages are transferred to the M7.3 IPC control and centrally displayed.
M7.3 IPC
CODED MATERIAL SOURCE LICENCE
AND BATCH ADMINISTRATION

Choosing the wrong material for a drying hopper in the course of a material change procedure is not only leading to weak drying results, but can also have fatal consequences for the production of parts. To minimize this risk, and after having activated a licence, the M7.3 IPC network control can monitor this process. For the clearance of the conveying process, the operator has to define the material change at the control device, and afterwards to confirm the material source and the suction lance via barcode scan. If this is done correctly, the charging process starts. If not, an error message is displayed, and the charging process (with the wrong material) is not executed. This function can even be extended applying the WiMaTRACE batch monitoring function.

CODEMAX – RFID COUPLING STATION

The coded Coupling Station CODEMAX avoids the erroneous connection of the wrong material to the processing machine.

> RFID coding
A transponder, working on the basis of "Radio Frequency Identification" (RFID), permits remote recognition of a 64-bit identifier. By means of this technology, electrostatic charges which are inherent to the material conveying process cannot cause damage to the electrical components.

M7.3 IPC – CONNECTION TO ERP SYSTEMS

All relevant control data and parameters can be transferred to a company wide enterprise resource planning (ERP) and process data monitoring (PDM) system via the open standard protocol OPC.

For the connection to a PDM system the M7.3 IPC control system is optionally equipped with an OPC Interface Licence, which enables the communication between an external computer and the control system. A customer supplied OPC client accepts the required data from the M7.3 IPC control system and manipulates it internally. The data exchange happens via the Ethernet interface.
The modular design of the WITTMANN M7.3 IPC hardware and software components and the arbitrary configuration enable the flexible realization of various special applications, like the equal load and automatic switchover between vacuum pumps, the controlled assignment of material sources to machines.

The use of high-quality installation material guarantees long life and trouble-free operation. The conveying of abrasive materials is accomplished preferably with glass elbows. The high performance net5 system and M7.3 IPC network controls are designed for highest durability. An important part of a highly reliable system is the professional and proper assembly of conveying tubes and connections. This includes the professional mounting of conveying tubes and connections.

"No two central material handling systems are equal." – As varied as production facilities, so are the requirements on the central material handling system. Innovative product solutions are required more than ever before and can be achieved through the highly efficient WITTMANN controls.

"One-stop shopping." The extensive and innovative peripheral equipment program from WITTMANN allows the realization of demanding complete systems and the assignment of responsibility for the proper interaction of the single components. For service, a single phone call will cover the entire spectrum of WITTMANN products.