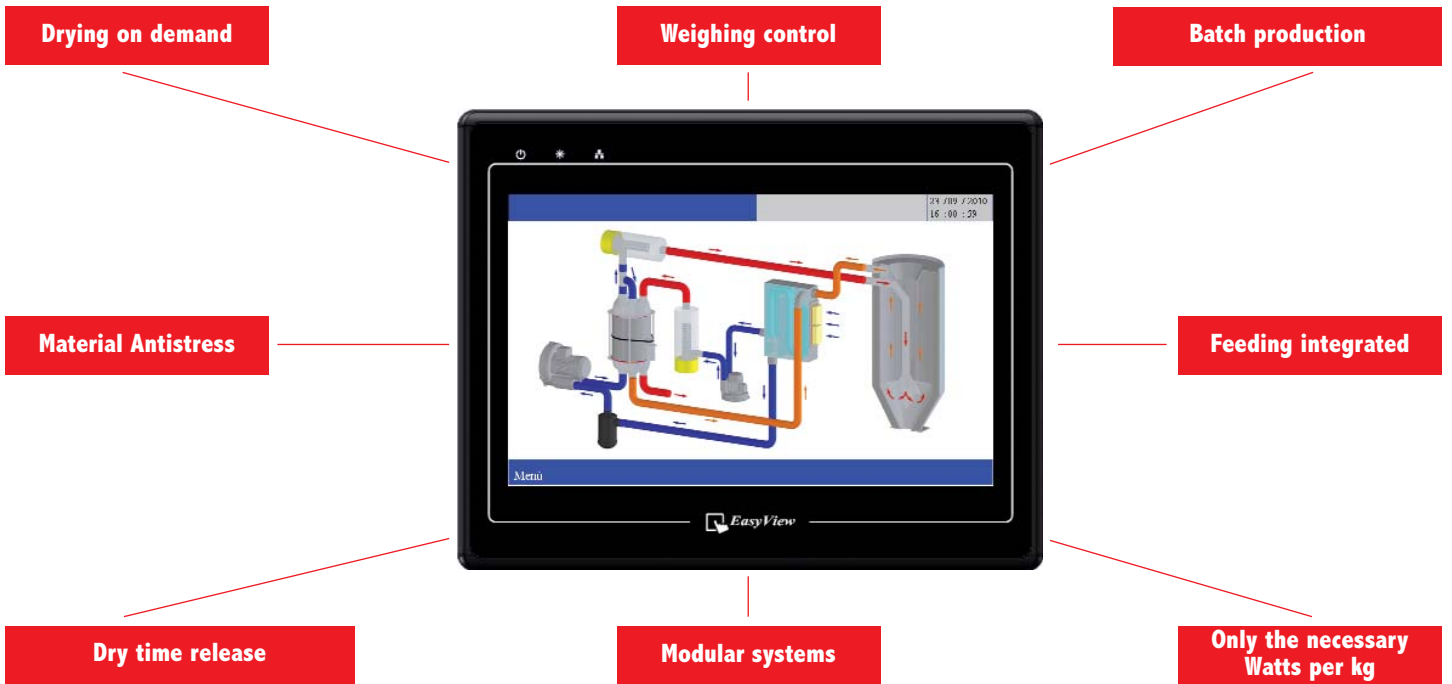


# Dryer

- **Dehumidifiers serie DAC - DW  
DWCompact - D/DP**
- **Central Drying & Feeding systems**
- **Supervision**
- **Extrusion & PET systems**



PLASTIC  
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**To facilitate setting of the drying systems, a material database is integrated in the control as an additional function. The database includes a data pool with parameters of about 50 standard materials and can accommodate other additional materials recipe specified by the customer.**

Plastic Material	Chemical Description	Bulk Density kg/dm <sup>3</sup>	Drying Time h	Drying Temperature °C	Nominal Air Flow m <sup>3</sup> /kg	Final Moisture % in weight	Typ. Starting Moisture % in weight
ABS (extrusion grade)	AcryloButadienStyrene	0,55	3-4	80-85	2,2	< 0,015	<0,2
ABS (moulding grade)	AcryloButadienStyrene	0,55	2-3	85	2	< 0,020	<0,2
CA (2)	Cellulose Acetate	0,70	2-3	70	2	< 0,020	<0,7
CAB	Cellulose Acetate/Butirrate	0,60	2-3	70	2	< 0,020	<0,6
EVA (2)	EthylenVinilAcetate	0,60	2-3	90-105	1,8	-	-
EVOH	EthylenVinilAlcool	0,60	2-3	90-105	2	-	-
LCP (1) (3)	Liquid CrystalsPolymer	0,80	3-4	150	2,2	<0,01	<0,05
PA 11-12 (3) (*) - Nylon	PolyAmide, Nylon	0,60	3-5	70-80	2	0,15-0,02*	0,6-1,2*
PA 6, 46, 66 (3) (*) - Nylon	PolyAmide	0,60	4-6	70-80	2	0,15-0,02*	0,6-1,2*
PAI	PolyArylenImide	0,85	6-8	180	2	<0,02	-
PAR (1) (3)	PolyArylate	0,70	5-6	120	2	<0,02	-
PBT (1) (3)	PolyButyilenTerephtalate	0,80	3-4	130-140	2,2	<0,02	<0,15
PC (3)	PolyCarbonate	0,65	2-3	120	2	<0,02	<0,3
PC/ABS	Abs/Polycarbonate	0,65	3	100	2	< 0,020	<0,1
PC/PBT	PolyCarbonate/PBT	0,75	3-4	110	2,2	-	-
PE, HDPE cable(*) (alogen free, α)	Polyethylene	0,70	4-10	60	2,5	<0,04*	<0,08
PE, HDPE, LDPE (7)	Polyethylene	0,50	1	85	1,6	<0,01	<0,02
PE, HDPE, LDPE black 3%	Polyethylene + carbonBlack 3%	0,55	2-3	80	1,8	<0,01	-
PE, HDPE, LDPE black 40%	Polyethylene + carbonBlack 50%	0,70	2-3	80-90	2	<0,02	<0,2
PEEK (1) (3)	PolyEtherEtherKetone	0,80	3-4	150-160	2,2	<0,05	<0,1
PEI (1) (3)	PolyEtherImide	0,75	4-5	140-160	2,5	<0,01	<0,2
PEN (1) (3)	PolyEthyleNaphtalene	0,85	5-6	150-170	3	<0,005	-
PES	PolyetherSulfone	0,80	3-4	150-180	2	<0,05	0,35
PET fiber textile (1) (3) (8)	PolyEthylenTerephtalate	0,84	5-6	160-180	3	<0,003	<0,2
PET bottl.-tech.l fiber-sheet (1) (3)	PolyEthylenTerephtalate	0,84	5-6	160-180	3	<0,003	<0,2
PET injection molding (1) (3)	PolyEthylenTerephtalate	0,85	3-4	130-140	2	<0,02	<0,2
PET PCR (1) (2) (3) (8)	Recycled PET- Post Consumer Regrid	0,35	4-5	130-140	3	<0,008	<0,3
PETG (4) (6)	PolyEthylenTerephtalateGlycol	0,74	4-5	65	3,5	<0,01	<0,1
PMMA - Acrylic	PolyMetilMethacrylate	0,65	3-4	80	3	<0,02	<0,3
POM - Acetalic - (homopolymer)	PolyOxiMethylene	0,85	1	90-100	2	-	<0,1
PP talk 40%	PolyPropylene	0,65	2-3	90	2	<0,02	-
PPO (3)	PolyPropylene	0,65	2-3	90	2	<0,02	-
PPS (1) (3)	PolyPropylene	0,65	2-3	90	2	<0,02	-

# Dehumidifiers serie DAC

Small compressed air dryers, **equipped with two cartridges of molecular sieves**, in which air flow is alternately exchanged from one tower to the other one. DAC dryers enhance great performances in the treatment of hygroscopic engineering materials.

The series includes 4 sizes of dryers, covering a capacity from **6 to 100 dm<sup>3</sup>**, suitable to carry out throughputs **up to 25 Kg/h**. These small dryers take advantage from both the effusion of compressed air onto the atmospheric pressure and from the treatment of compressed air by means of molecular sieves, in order to reach **Dew Point values to -25 °C up -50°C**. DAC series dryers are ideal to be installed directly on the top of small and medium injection moulding machines, representing also a liable solution in the medical sphere, thanks to the set of dedicated applications.

Important advantages of the standard version:

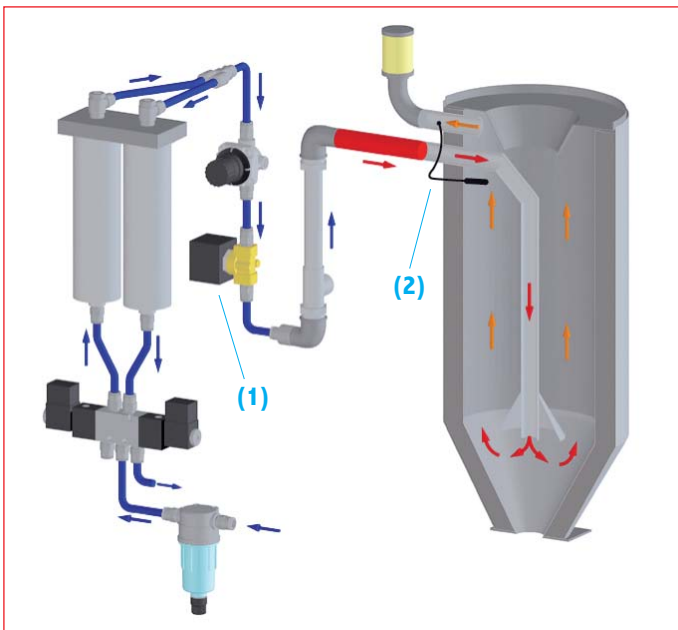
- Easier programmation, **setting only two parameters** (material type & machine hourly consumption)
- **Mould maintenance** cycles reduced of 30%
- **Automatic anti-stress** device, enable to parcel process air, preventing overheating of material granules resident inside the hopper, as well as energy and compressed air wasting **(2)**

## Standard devices:

- Microprocessor LCD display panel control
- Drying time management valve with automatic setting of airflow, according to the material throughput **(1)**
- Weekly timer
- RS485 ModBus Communication interface
- Visual alarm
- Manual sliding gate
- Filter for oil separation
- Plug for external dew point connection

## Options:

- HC hand control
- Dew Point device integrated
- Portable Dew Point device
- Venturi feeder
- Pyrex base (DAC6 -15)
- Base with discharge (DAC 30-100)
- Medical version
- Carbon filter for DAC air inlet



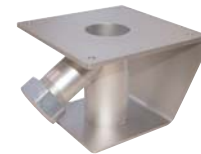
Venturi feeder



HC hand control



Base with discharge B



Base con scarico B

		<b>DAC6</b>	<b>DAC15</b>	<b>DAC30</b>	<b>DAC50</b>	<b>TURBO DAC75</b>	<b>TURBO DAC100</b>
Hopper capacity	dm <sup>3</sup>	6	15	30	50	75	100
Process airflow	Nm <sup>3</sup> /h	2-6	5-15	7-20	7-20	15-40	15-40
Process temperature	°C	50-150	50-150	50-150	50-150	60-150	60-150
Heating power	kW	0,65	0,65	0,95	0,95	1	1
Total power	kW	0,7	0,7	1	1	1,1	1,1
Energy consumption at 80 °C	kW	0,04-0,09	0,07-0,22	0,11- 0,29	0,11-0,29	0,27-0,73	0,27-0,73
Compressed air pressure	bar	6-8	6-8	6-8	6-8	6-8	6-8
Power supply	V/Hz	230/1/50-60	230/1/50-60	230/1/50-60	230/1/50-60	230/1/50-60	230/1/50-60
Dimensions WxDxH	mm	374x313x454	436x360x605	483x416x678	531x457x908	667x675x969	667x675x1179
Weight	kg	10	16	20	23	58	62

# Dehumidifiers serie DW

**DW dehumidifiers series**, equipped with honeycomb desiccant rotor technology represent a new top level performance in dehumidifying systems, optimizing energy consumption and energy maximum efficiency and duty versatility.

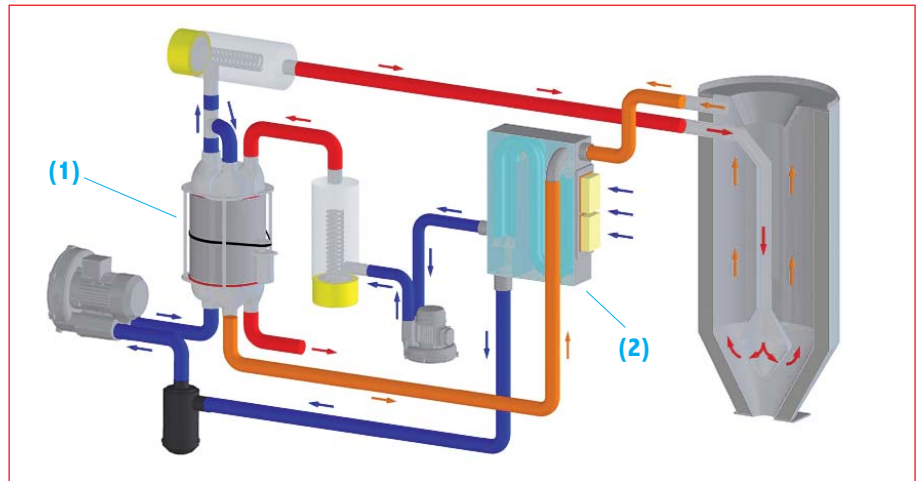
**Models DW** maintain a constant Dew Point value to - 25 °C up 50 °C thanks to the desiccant molecular sieves rotor technology with air flow rate from 30 to 600 m<sup>3</sup>/h. Special peculiar characteristics of this new series make it suitable to be used on medical and food applications (fields, sectors), ensuring great advantages and upstanding features recognizable also in the base version.

## Standard Feature:

- Microprocessor control unit with LCD display, easier programmation, setting only two parameters (material type & machine hourly consumption)
- Molecular sieves honeycomb rotor technology (1)
- PID electronic control of process temperature with automatic presetting of the safety temperature
- Integrated energy saving devise (2)
- Internal stainless steel heating chamber insulated
- Side channel blowers for process & regeneration
- Process filter
- Regeneration filter
- Weekly timer
- Solid state relays (SSR) for heating the process
- RS485 ModBus
- Warnings lamp
- Multi-hoppers DTM interface

## Options:

- Air Process flow rate control by inverter
- Dew point instrument monitoring and control system with alarm
- Operator touch screen panel
- Acoustic alarm
- Hand controller HC
- Clogged filter pressure switch
- Dedicated process air temperature safety control
- Portable Dew Point
- Plug for external Dew Point connection  
<75 °C >150°C recommend heater exchanger for temp.



DW model with honeycomb rotor

		DW30	DW60	DW100	DW160	DW200	DW300	DW400	DW600
Air flow	m <sup>3</sup> /h	30	60	100	160	200	300	400	600
Process temperature	MT °C	70-150	70-150	70-150	70-150	70-150	70-150	70-150	70-150
	HT °C	70-190	70-190	70-190	70-190	70-190	70-190	70-190	70-190
Blower power of process	kW	0,45	0,4	0,75	1,1	1,6	3	4	5,5
Blower power of regeneration	kW	0,1	0,2	0,2	0,4	0,4	0,37	0,37	0,37
Power heating process	MT kW	1,2	2	2	3,5	5	7,5	7,5	15
	HT kW	-	-	3,5	5	9	15	15	22,5
Power heating regeneration	kW	0,8	2	2	3,5	3,5	5	9	9
Installed power total	MT kW	2,55	4,6	5	8,5	10,5	16	21	30
	HT kW	-	-	6,5	10	14,5	23,5	28,5	37,5
Power supply	V/Hz	230/1/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60
Dimensions WxDxH	mm	540x834x842	540x1062x1294	540x1062x1294	540x1062x1294	540x1062x1294	950x1095x1858	950x1095x1858	950x1095x1858
Weight	kg	80	140	150	175	185	350	400	450

# Dehumidifiers serie DWCompact

The new compact dryer series **DWC** use honeycomb desiccant rotor that guarantees a superior process performance to the drying process with few parameters set by the operator.

DWC integrate the hopper and feeding system to adjust the production according the requests of the moulding machine considering all the drying factors. This new range of DWC include 3 models from 70 to 280 mc/h and can individually operate or centralized for the preparation of more materials controlled by one touch screen. Dew Point -25°C up to 50 °C.

## Beside the standard features the DWC include:

- Air Process flow rate control by inverter
- Machine & hopper feeding control
- Material level control by load cells
- Material anti stress control
- Drying time release
- Batch production
- Modular systems

## Options:

- Touch screen
- Dew Point device
- DWC feeders
- DWC Multi-Touch



Touch control unit up to 8 multi DWC



		<b>DWC150</b>	<b>DWC250</b>	<b>DWC500</b>
Hopper capacity	dm <sup>3</sup>	150	250	500
Process airflow max	m <sup>3</sup> /h	30-70	60-140	100-280
Process temperature	MT °C	70-140	70-140	70-140
Blower power of process	kW	0,4	0,75	1,6
Blower power of regeneration	kW	0,2	0,2	0,4
Power heating process	MT kW	1,5	2	5
Power heating regeneration	kW	1,5	2	3,5
Installed power total	MT kW	3,6	4,95	10,5
Receiver material		LDM10	LDM10	LDM25
Power supply	V/Hz	400/3/50-60	400/3/50-60	400/3/50-60
Dimensions WxDxH	mm	660x1312x1718	660x1312x2208	825x1477x2423
Weight	kg	220	240	300

# Dehumidifiers serie D

Plastic Systems **D** series desiccant dryers are designed and implemented in order to remove moisture absorbed in hygroscopic thermoplastic granular materials. The range include a series of models, with process air flow ranging from **80m<sup>3</sup>/h up to 500m<sup>3</sup>/h**, suitable to satisfy every requirement in production. With dew point up to - 50°C.

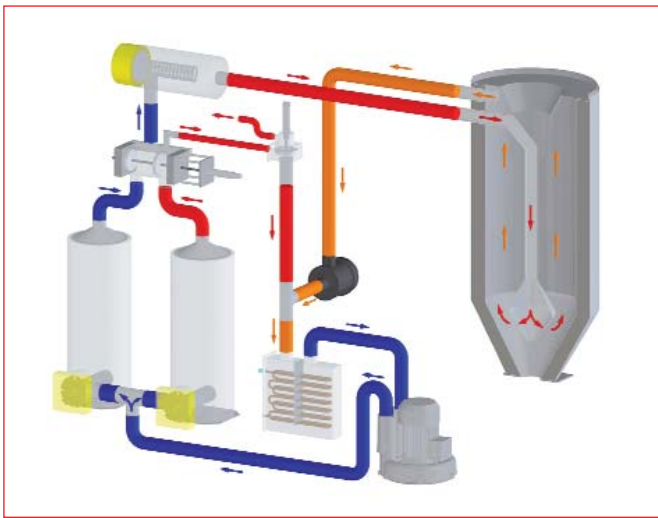
The main technical features of the standard desiccant units are: machine automatic running with daily-weekly timer; microprocessor control panel with LCD or **PLC** display and keypad (optional); the main components are in contact with process air made in stainless steel; high-head lownoise side-channel blowers; filters for air with high filtering capacity; safety protections to save components from over-heating; end-user interface with keypad, **LCD or “Touch Screen” display**; possibility to couple the desiccant dryer with a wide range of maintenance hoppers, from 15 up to 1500 litres; stainless steel hoppers with thickness of insulation from 60 to 100 mm.

### Standard version main technical features:

- **Only two parameters** to set the working process (material type & consumption/h)
- **Cooling stop’** device, to set automatically stop time, avoiding thermo-degradation of material granules in process
- Mono- or multi- hoppers systems design, with **DTM drying time management** interface
- Close loop regeneration circuit equipped with temperature control, enhancing a lower energy consumption, with energy saving up to 50% (DP version)

### Options:

- Operator touch screen panel
- Acoustic alarm
- Hand controller HC
- Clogged filter pressure switch
- Dedicated process air temperature safety control
- Portable Dew Point
- Plug for external Dew Point connection
- Dew Point control



Twin towers model

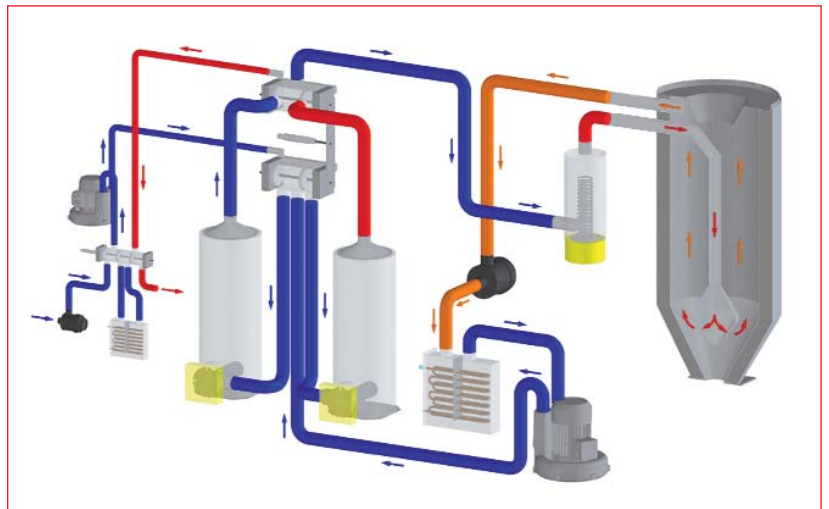


			<b>D800</b>	<b>D801</b>	<b>D802</b>	<b>D803</b>	<b>D804</b>	<b>D805</b>
Air flow		m <sup>3</sup> /h	80	120	150	300	400	500
Process temperature	MT	°C	70-150	70-150	70-150	70-150	70-150	70-150
	HT		70-190	70-190	70-190	70-190	70-190	70-190
Blower power of process		kW	0.75	1.3	1.6	3	5,5	5.5
Power heating process	MT	kW	2	3.5	3.5	7.2	10.8	14.4
	HT		3.5	5	5	10.8	14.4	18
Power heating regeneration		kW	1,5	1,5	2	5	5	5
Installed power total	MT	kW	4.25	6,3	7,1	15,2	21,3	24,9
	HT		5.75	7,8	8,6	18,8	24,9	28,5
Power supply		V/Hz	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60
Dimensions WxDxH		mm	540x1062x1294	540x1062x1294	540x1062x1294	950x1095x1858	950x1095x1858	950x1095x1858
Weight		kg	110	120	135	280	350	370

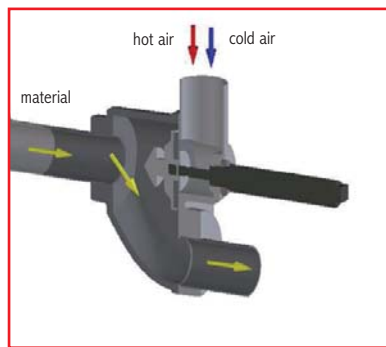
# Deumidificatori serie DP

Plastic Systems **DP** series desiccant dryers are designed and implemented in order to remove moisture absorbed in hygroscopic thermoplastic granular materials. The series includes a large scale of models, with process air flow ranging from **80m<sup>3</sup>/h up to 5000m<sup>3</sup>/h**, suitable to satisfy every requirement in production. Hi-tech technological solutions and constant screening have brought to obtain the best performance in terms of high efficiency in use of molecular sieves, enhancing also a lower energy consumption.

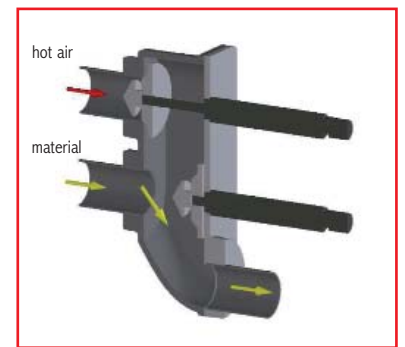
The main technical features of the standard desiccant units are: machine automatic running with daily-weekly timer; microprocessor control panel with LCD or **PLC** display and keypad (according to the model); main components in contact with process air made in stainless steel; high-head lownoise side-channel blowers; filters for air with high filtering capacity; safety protections to save components from over-heating; end-user interface with keypad, **LCD or "Touch Screen" display**; possibility to couple the desiccant dryer with a wide range of maintenance hoppers, from 15 up to 15000 litres; stainless steel hoppers with thickness of insulation from 60 to 100 mm.



Twin towers with close loop regeneration



Closed pipe cleaning



Double closed pine cleaning

DTM multi-hoppers

		<b>D803P</b>	<b>D804P</b>	<b>D805P</b>	<b>D806P</b>	<b>D808P</b>	<b>D810P</b>
Air flow	m <sup>3</sup> /h	300	400	500	600	750	1000
Process temperature	MT	70-150	70-150	70-150	70-150	70-150	70-150
	HT	70-190	70-190	70-190	70-190	70-190	70-190
Blower power of process	kW	3	5,5	5,5	5,5	7,5	8,5
Blower power of regeneration	kW	0,4	0,4	0,4	0,85	0,85	0,85
Power heating process	MT*	7,2	10,8	14,4	18	18	27
	HT*	10,8	14,4	18	27	27	40,5
Power heating regeneration	kW	5	5	5	12	12	12
Installed power total	MT	15,6	21,7	25,3	36,35	38,35	48,35
	HT	19,2	25,3	28,9	45,35	47,35	61,85
Power supply	V/Hz	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60
Dimensions WxDxH	mm	950x1095x1858	950x1095x1858	950x1095x1858	1210x1850x2180	1210x1850x2180	1210x1850x2180
Weight	kg	350	410	440	1450	1480	1520

\* heating booster on board hopper

# Accessories series DW & D/DP

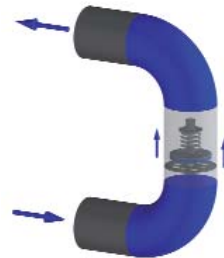
Plastic systems complete his range of dryers with advantages performance gadget for centralized application.



Multi-hoppers systems are equipped with **“Visu”** simplified operator interface, to visualize process and working temperature, as well as safety temperature with double probe automatic setting and **type of material in process inside the dehumidifying hopper.**



**DTM** drying time management **to manage airflow rate** according to production output in each dehumidifying hopper, simplifying the two parameters (material type and throughput) programming operations. Through this device the two parameters (material type and throughput) can be set directly from the dryer display or from HC hand control. Process and safety temperature are automatically set by microprocessor.



integrated by pass valve between delivery & return dry air

**Anti-Stress** through this device airflow rate is automatically reduced according to the machine throughput, enhancing a lower energy consumption. Original parameters are automatically reset at machine full working capacity.

			<b>D815P</b>	<b>D818P</b>	<b>D820P</b>	<b>D824P</b>	<b>D830P</b>	<b>D840P</b>
Air flow		m <sup>3</sup> /h	1350	1450	2000	2200	2500	2800
Process temperature	MT	°C	70-150	70-150	-	-	-	-
	HT		70-190	70-190	70-190	70-190	70-190	70-190
Blower power of process		kW	12,5	15	18	12,5+12,5	15+15	18+18
Blower power of regeneration		kW	1,5	1,5	4	4	4	4
Power heating process	MT*	kW	40,5	40,5	no	no	no	no
	HT*		54	54	67,5	81	81	108
Power heating regeneration		kW	18	18	24	24	24	24
Installed power total	MT	kW	72,5	75	no	no	no	no
	HT		86	88,5	113,5	134	139	172
Power supply		V/Hz	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60
Dimensions WxDxH		mm	1210x1850x2180	1210x1850x2180	1650x1700x2220	1650x1700x2220	1650x1700x2220	1650x1700x2220
Weight		kg	1530	1550	1650	1700	2000	2150

\* heating booster on board hopper



# Central Drying & Feeding systems

The drying system can be floor standing or positioned on a mezzanine. A typical system includes larger dehumidifying units supplying dry air to multiple groups of hoppers.

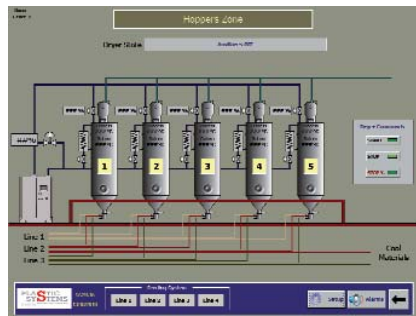
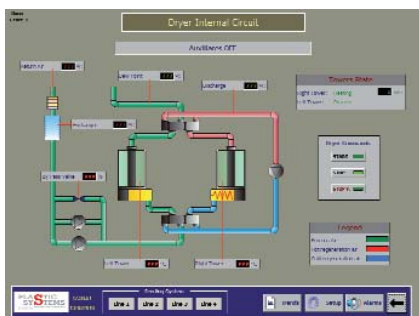
Individual heating units can be fitted to each drying hopper to allow several materials to be dried at different temperatures within the same system.

Material selection is generally made via manual or automatic manifold



## Supervision

More and more care has been taken over the control of our auxiliaries (dryers, feeders, dosing units, etc.) by improving our Supervision system. This system has a graphical interface that enables to visualize and monitor the status of the different units (filling, functioning, alarms and historical trends), to set the main parameters and to arrange the different types of materials used in the plant through a Material Database (it contains data about supplier, stockage time, drying temperature and other information). A special program (available as option) enables the remote control of Supervisor PC via modem: an authorized computer can be connected to the customer's Supervisor PC and view Plastic Systems Supervisor windows.



## Estrusion systems

Plastic Systems offers a wide range of auxiliaries and treatment systems for extrusion lines, as well as software to monitor and set-up all machines. The close cooperation with **OEM** allows Plastic Systems to adopt the most competitive and personalized solutions to manufacture tubes, films, profiles, cables, fibres and other products, with the purpose of meeting the customer's requirements.



Dehumidifier with **Moved** Crystallizer



## Impianti PET

Plastic Systems è in grado di fornire una vasta gamma di ausiliari e sistemi di trattamento per impianti di estrusione, ai quali si possono integrare software per il comando e la supervisione di tutti gli apparati.

La stretta collaborazione con costruttori **OEM** consente di ottenere soluzioni adeguate per la manifattura di tubi, film, profilati, cavi fibre e altri prodotti che riescono a soddisfare le esigenze del cliente.



PLASTIC  
SYSTEMS  
ADVANCED PLASTIC SOLUTIONS

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