



# INTELLIGENT DRYER / ID-SERIES



The ID-series of qip GmbH represent the next generation of compressed air resin dryers. Beside the major advantage that no desiccant is required to generate dry air for the drying process, the ID-series offer a total round drying hopper made of high-quality stainless-steel and without any air inlet pipe. This minimizes the cleaning effort in case of material changes and releases further possibilities for material processing. The heated air is lead into the drying hopper at the bottom along the outer perimeter and causes an efficient and consistent heat-up process. A very compact design and the possibility to install the unit directly on the production machine or on a mobile frame turns the ID-series into an excellent and preferential system to dry small and medium material throughputs.

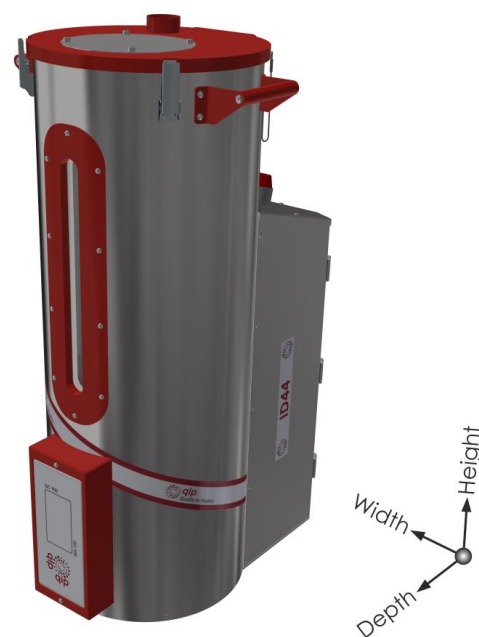
## Benefits:

- ✳ **Free of desiccant**
- ✳ **3-years full warranty on parts and workmanship**
- ✳ **Maintenance-free**
- ✳ **Constant drying performance for life time**
- ✳ **Automatic energy control, optimized to actual material throughput**
- ✳ **Low operating costs**
- ✳ **Space-saving and optimized design for mounting directly on extruder**
- ✳ **Drying hopper and sheet metal parts made of high-quality stainless-steel**
- ✳ **Simple to install and to start-up**
- ✳ **Intuitive and self-explanatory operation through colored touch screen**
- ✳ **Easy to clean**

TECHNICAL DATA		ID22	ID44	ID77	ID120	ID170
Drying hopper	[liter]	22	44	77	120	170
Power supply	[V / Hz]	1N 230 / 50 ... 60				
Installed power	[W]	1000	1000	3300	3300	3300
Compressed air consumption	[Nm³/h]	3.0 to 7.5	3.5 to 14.5	4.0 to 25.0	4.5 to 39.0	5.0 to 54.0
Compressed air supply	[bar]	6 to 10				
Compressed air quality		dew point: 3 to 5°C at 7bar / residual oil content max. 0.1ppm				
Drying temperature	[°C]	20 to 180 (higher drying temperatures on request)				
Permitted ambient temperature	[°C]	+20 to +60				
Permitted ambient humidity	[% RH]	80 (no condensation)				
Height	[mm]	720	905	1095	1270	1420
Width	[mm]	375	445	510	560	610
Depth	[mm]	490	590	620	700	750
Weight	[kg]	29	38	50	69	85

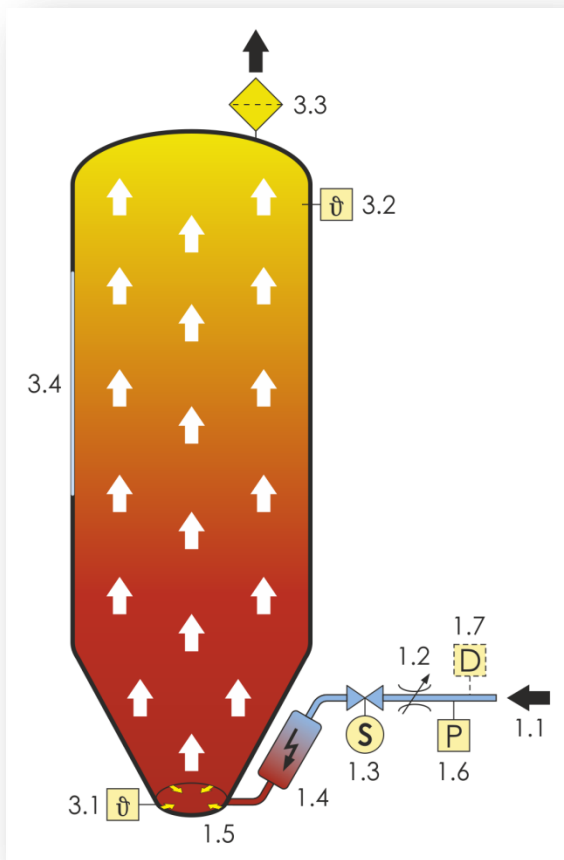
## DRYING DATA

	Time [h]	Temp. [°C]	Material throughput [kg/h]				
			ID22	ID44	ID77	ID120	ID170
ABS	2	80	7.2	14.3	25.0	39.0	55.2
ASA	3	80	4.8	9.5	16.7	26.0	36.8
CAB	2	75	7.2	14.3	25.0	39.0	55.2
CP	4	75	3.6	7.2	12.5	19.5	27.6
EVA	2	80	7.2	14.3	25.0	39.0	55.2
EVOH	5	120	2.9	5.7	10.0	15.6	22.1
LCP	4	150	3.6	7.2	12.5	19.5	27.6
PA	4	80	3.6	7.2	12.5	19.5	27.6
PBTP	3	140	4.8	9.5	16.7	26.0	36.8
PC	2	120	7.2	14.3	25.0	39.0	55.2
PE	2	85	7.2	14.3	25.0	39.0	55.2
PEEK	3	150	4.8	9.5	16.7	26.0	36.8
PET	4	180	4.4	8.8	15.4	24.0	34.0
PET G	6	75	2.4	4.8	8.3	13.0	18.4
PI	3	120	4.8	9.5	16.7	26.0	36.8
PMMA	3	80	4.8	9.5	16.7	26.0	36.8
POM	3	100	4.8	9.5	16.7	26.0	36.8
PP	3	90	4.8	9.5	16.7	26.0	36.8
PFS	2	150	7.2	14.3	25.0	39.0	55.2
PS	2	80	7.2	14.3	25.0	39.0	55.2
PUR/TPU	3	90	4.8	9.5	16.7	26.0	36.8
SAN	2	80	7.2	14.3	25.0	39.0	55.2
TPE	3	100	4.8	9.5	16.7	26.0	36.8





## How it works:



Pre-dried compressed air (1.1) is supplied by a quick connector. It flows through pressure regulator (1.2) and servo valve (1.3) into the dry air heater where it is heated up to drying temperature. Due to the expansion to atmospheric level, the air becomes very dry. The hot and dry air streams through the distributor ring (1.5) into the lower part of the hopper, rises from bottom to top, thereby heating up and drying the resin inside the dryer to finally leave through the air outlet filter (3.3) to the ambient.

A pressure switch (1.6) monitors the air supply and immediately shuts down the heater in case of a fault to protect it against thermal overloads.

A sensor (3.2) verifies the temperature in the upper part of the drying hopper which alters accordingly to the current material throughput. The microprocessor control analyzes that temperature, regulates the air flow and optimizes the energy consumption to the required level.

Another sensor (3.1) measures the temperature of the resin at the material outlet of the drying hopper and initiates the controller to affect the air flow regulation to guarantee a proper drying process.

An optional dew point sensor (1.7) may be used to check the humidity of the compressed air and to alarm the operator in case of a bad value.

The material level in the drying hopper may visually be checked through a generously sized sight glass (3.4). A generously sized service door with sight glass is available on bigger hopper sizes as standard and facilitates the cleaning process in case of material changes. A service door on smaller hopper sizes is available optional.

An integrated microprocessor controller with colored display and touch screen regulates the drying process and allows the additional control of Vacuum- and Venturi-loaders for one and

two components. Multiple interface connections (TTY, RS485, RS232, USB, Ethernet ...) may be used to communicate with and get controlled by various production machines, for data and alarm recording, for implementation into PDA-systems (production data acquisition systems) and for access through web-client to monitor and control dryer's operation. An optional alarm signal may be used for simple alarming on external devices or applications.

## Available features:

- \* Microprocessor controller with colored display and touch screen
- \* Pre-programmed and freely programmable drying data base
- \* Weekly timer for drying and/or loading processes
- \* Automatic Standby-Mode to avoid resin degradation
- \* Integrated control for Vacuum- and Venturi-loaders for one and two components
- \* Additional Power- and Boost-Mode to dry challenging resins
- \* USB-port for data recording as a standard
- \* TTY-, RS485-, CAN- and Ethernet port to communicate with production machines and PDA-systems (product data acquisition systems)
- \* ModbusTCP-protocol available as a standard
- \* Alarm indication through integrated strobe light and optional alarm contact
- \* No air inlet pipe in drying hopper
- \* Hinged hopper lid with securing devices
- \* Inner hopper and sheet metal components made of high-quality stainless steel
- \* High-class hopper insulation
- \* Generously sized sight glass for visual monitoring of material level
- \* Service door with sight glass available on hopper sizes with 120 liters and more as standard (on smaller hoppers as an option)
- \* Sturdy steel-handles for manual and crane lifting
- \* Comprehensive accessories available