

## **BASIC DRYER / BD SERIES**



The BD 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 BD series offer a total round drying hopper made up of high-quality stainless-steel and is built 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 BD 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
- \* Simplified automatic energy control according 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 simple controller
- \* Easy to clean

TECHNICAL DATA		BD11	BD22	BD44	BD77	BD120	BD170		
Drying hopper	[liter]	11	22	44	77	120	170		
Power supply	[V / Hz]	1N 230 / 50 60							
Installed power	[W]	1000	1000	1000	3300	3300	3300		
Compressed air consumption	[Nm³/h]	4.5	4.0 to 7.5	4.5 to 14.5	4.5 to 25.0	5.5 to 39.0	6.0 to 54.0		
Compressed air supply	[bar]	6 to 10							
Compressed air quality			dew point: 3 to 5°C at 7bar / residual oil conte			nt 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 (without condensation even higher values)							
Height	[mm]	570	720	905	1095	1270	1420		
Width	[mm]	340	375	445	510	560	610		
Depth	[mm]	360	490	590	620	700	750		
Weight	[kg]	18	26	36	44	60	76		

DRYING DATA												
	Time [h]	Temperature [°C]	re Material throughput [kg/h] bulk density 0.65kg/liter; for PET 0.8kg/liter									
			BD11	BD22	BD44	BD77	BD120	BD170				
ABS	2	80	3.6	7.2	14.3	25.0	39.0	55.2				
ASA	3	80	2.4	4.8	9.5	16.7	26.0	36.8				
CAB	2	75	3.6	7.2	14.3	25.0	39.0	55.2				
CP	4	75	1.8	3.6	7.2	12.5	19.5	27.6				
EVA	2	80	3.6	7.2	14.3	25.0	39.0	55.2				
EVOH	5	120	1.4	2.9	5.7	10.0	15.6	22.1				
LCP	4	150	1.8	3.6	7.2	12.5	19.5	27.6				
PA	4	80	1.8	3.6	7.2	12.5	19.5	27.6				
PBTP	3	140	2.4	4.8	9.5	16.7	26.0	36.8				
PC	2	120	3.6	7.2	14.3	25.0	39.0	55.2				
PE	2	85	3.6	7.2	14.3	25.0	39.0	55.2				
PEEK	3	150	2.4	4.8	9.5	16.7	26.0	36.8				
PET	4	180	2.2	4.4	8.8	15.4	24.0	34.0				
PET G	6	75	1.2	2.4	4.8	8.3	13.0	18.4				
PI	3	120	2.4	4.8	9.5	16.7	26.0	36.8				
PMMA	3	80	2.4	4.8	9.5	16.7	26.0	36.8				
POM	3	100	2.4	4.8	9.5	16.7	26.0	36.8				
PP	3	90	2.4	4.8	9.5	16.7	26.0	36.8				
PPS	2	150	3.6	7.2	14.3	25.0	39.0	55.2				
PS	2	80	3.6	7.2	14.3	25.0	39.0	55.2				
PUR/TPU	3	90	2.4	4.8	9.5	16.7	26.0	36.8				
SAN	2	80	3.6	7.2	14.3	25.0	39.0	55.2				
TPE	3	100	2.4	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 solenoid valve (1.10), pressure regulator (1.4), throttle valve (1.11) and capacity control valve (1.12) into the dry air heater (1.7) 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 (1.9) 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 (1.3) 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 capacity control valve (1.12) reacts to this temperature, regulates the air flow and the energy consumption to the required level.

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.

A simple temperature controller and two pushbuttons regulate the drying process and allow the additional control of a Venturiloader for one component.

An optional alarm signal may be used for simple alarming on external devices or applications.

## Available features:

- \* Simple temperature controller
- \* Automatic Standby-Mode to avoid resin degradation
- \* Integrated control for Venturi-loader (one component)
- \* 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

