ADP SERIES
Desiccant Wheel Dryers

Technical Specifications

Since 1957, AEC has been the leader in drying equipment for the plastics processing industry. The ADP Series Desiccant Wheel Dryer leverages the AEC legacy and expertise to provide a system that is suited for most drying applications including extrusion, injection molding, and blow molding.

Desiccant wheel dryers are the new generation of desiccant dehumidifying dryers. They are far more efficient, more compact, and require less maintenance. Traditional dehumidifying dryers use a large volume of molecular sieves in pellet form composed of at least 30% of clay, which tends to degrade very easily over time. The desiccant wheel instead is completely different where the pure molecular sieve is applied to a synthetic substrate rolled into a cylinder forming a honeycomb structure and covered by a steel protection.

Features

Standard Features

- Dryer installed separate from the drying hopper
- Drying temperatures up to 365°F/185°C
- Constant and adjustable dew points down to -58°F/-50°C
- Energy usage shown on HMI
- No need for compressed air
- No need for cooling water
- Adjustable process air flow
- Material selection table with pre-set or programmable drying parameters
- Visual and audible alarm
- Weekly timer
- High resolution 7" vertical touchscreen and proven, proprietary PLC technology
- Smart Mode: automatic adaption of the drying process to the production needs by monitoring the return air temperature - no waste of energy or material overdrying
- MPM (Material Protection Management): protects the material from over drying and degradation by monitoring the loading system or return air temperature
- SLS (Safety Loading System): prevents undried material from reaching the production machine by monitoring the drying time
- 5 year warranty on the desiccant wheel, 1 year warranty on parts
- 460V/3 ph/60 hz

Optional Features

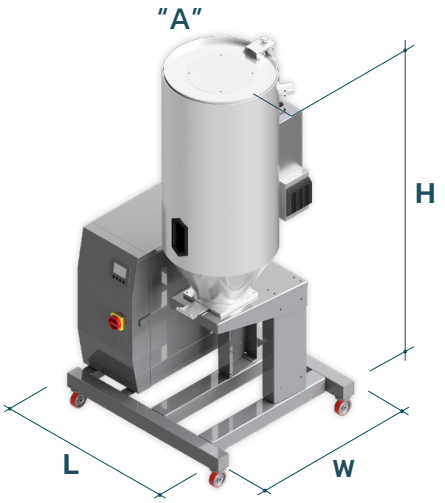
- Internal dew point sensor
- Automatic throughput control with HALO
- Remote control
- Filter sensor to detect filter clogging
- Selection of take off boxes with different diameters
- Integrated brushless conveying system "feeding kit"
- Alternative voltages (230V, 575V)
- Modbus RTU communications

Dimensions

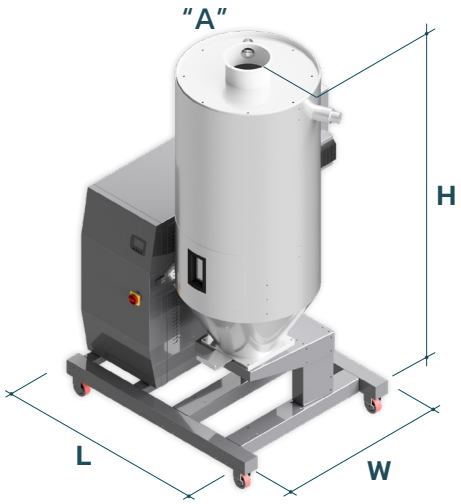
Dryer & Drying Hopper Combinations

Model	Hoppers Ft³	Dimensions in Inches			Air Hose in.	Lid Flange Diameter "A" in.
		L	W	H		
ADP-50	AH75 - 2.6	37	33.5	67.7	2	11"
ADP-50	AH100 - 3.5	37	33.5	77.8	2	
ADP-50	AH150 - 5.3	37	33.5	80.7	2	
ADP-80	AH100 - 3.5	37	33.5	77.8	2	
ADP-80	AH150 - 5.3	37	33.5	80.7	2	
ADP-80	AH200 -7.1	37	33.5	92.3	2	
ADP-160	AH200 -7.1	56.7	45.5	90.5	2.5	
ADP-160	AH300 - 10.6	56.7	45.5	94.4	2.5	
ADP-160	AH400 - 14.1	56.7	45.5	103.8	2.5	
ADP-160	AH600 - 21.2	66.1	45.7	105.7	2.5	
ADP-250	AH300 - 10.6	56.7	45.5	94.4	2.5	
ADP-250	AH400 - 14.1	56.7	45.5	103.8	2.5	
ADP-250	AH600 - 21.2	66.1	45.7	105.7	2.5	
ADP-250	AH800 - 28.3	66.1	46.5	119.9	2.5	
ADP-400	AH600 - 21.2	72	49.2	106.4	4.5	
ADP-400	AH800 - 28.3	72	49.2	120.7	4.5	
ADP-400	AH1200 - 42.2	72	49.2	144.1	4.5	

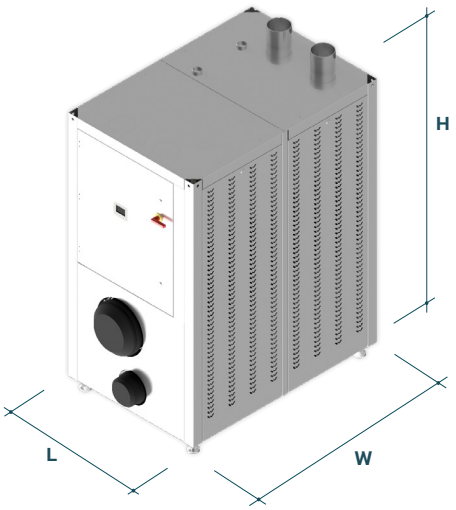
Hoppers 75L - 200L



Hoppers 300L - 1200L



Model	L in.	W in.	H in.	Air Hose in.
ADP 630	25.6	62	62	4.5
ADP 900	43.1	78.9	63.3	6.3
ADP 1200	43.1	78.9	63.3	6.3
ADP 1700	45.9	81.3	88.4	8.7
ADP 2500	2 x 43.1	2 x 78.9	2 x 63.3	6.3 x 2
ADP 3400	2 x 45.0	2 x 81.3	2 x 88.4	8.7 x 2



Specfications

ADP Model	UNIT	ADP-50	ADP-80	ADP-160	ADP-250	ADP-400
Process air flow • Cubic Feet per Minute CFM/Cubic Meters per Hour CMH	Min [ft3/ min]/CMH	12/20	18/30	44/75	71/121	106/180
	Max [ft3/min]	29.5/50	47/80	94/160	147/250	236/401
Regeneration air flow • Cubic Feet per Minute CFM/Cubic Meters per Hour CMH	Min [ft3/min]	3/5	5.9/10	5.9/10	5.9/10	35.5/60
	Max [ft3/min]	8.9/15	35.5/60	35.5/60	53/90	88.5/150
MIN Processing Temperature	[°F]/C	122/50	131/55	131/55	131/55	131/55
MAX Processing Temperature Standard (MT)	[°F]/C	365/185	365/185	365/185	302/150	302/150
MAX Processing Temperature HT = high temp	[°F]/C	*	*	*	365/185	365/185
DEWPOINT	[°F]/C	-49/-45	-49/-45	-58/-50	-58/-50	-58/-50
Drying heater - standard temperature power	[kW]	2.5	3.5	7	7	14
Drying heater - high temperature power	[kW]	2.5	3.5	7	14.02	21.03
Regeneration heater power	[kW]	1.5	1.5	3.5	3.5	7
Heating and regeneration blowers power	[kW]	0.22	0.52	1.64	2.5	3.95
Total combined power - standard temperature	[kW]	4.2	5.5	12.1	13.0	25.0
Total combined power - high temperature	[kW]	4.2	5.5	12.1	20.0	32.0
Power supply voltage	(V)	3 phase 460V 50/60Hz	3 phase 460V 50/60Hz	3 phase 460V 50/60Hz	3 phase 460V 50/60Hz	3 phase 460V 50/60Hz
Full load amps Standard Temp	(A)	9.1	9.9	17.9	21.5	40.5
Full load amps High Temp	(A)	9.1	9.9	17.9	31	49.5
Inlet / Outlet hose diameter	[in], cm	2, 5.1	2, 5.1	2.5, 6.4	2.5, 6.4	4.5, 11.4
Regeneration hose diameter	[in], cm	1.5, 3.8	1.5, 3.8	2, 5.1	2, 5.1	2.5, 6.4
Dryer weight	[lbs], kg	102, 46.3	104, 47.2	302, 137	320, 145	598, 271.3

Specfications

ADP Model	UNIT	ADP-630	ADP-900	ADP-1200	ADP-1700	ADP-2500	ADP-3400
Process air flow • Cubic Feet per Minute CFM/Cubic Meters per Hour CMH	Min [ft3/min]/CMH	177/301	200/340	265/450	530/900	530/900	530/900
	Max [ft3/min]/CMH	371/630	530/900	706/1200	1000/1700	1472/2501	2040/3400
Regeneration air flow • Cubic Feet per Minute CFM/Cubic Meters per Hour CMH	Min [ft3/min]/CMH	47/80	41/70	41/70	142/241	82/139	284/482
	Max [ft3/min]/CMH	142/241	200/340	265/400	354/601	530/900	708/1202
MIN Processing Temperature	[°F]/C	131/55	131/55	131/55	131/55	131/55	131/55
MAX Processing Temperature Standard (MT)	[°F]/C	302/150	302/150	302/150	302/150	302/150	302/150
MAX Processing Temperature HT = high temp	[°F]/C	365/185	365/185	365/185	365/185	365/185	365/185
DEWPOINT	[°F]/C	-58/-50	-58/-50	-58/-50	-58/-50	-58/-50	-58/-50
Drying heater - standard temperature power	[kW]	21.5	35	41.9	56	84.3	112
Drying heater - high temperature power	[kW]	35.1	41.9	56	77.03	111.8	145
Regeneration heater power	[kW]	10.5	14	21.03	27.8	42.1	55
Heating and regeneration blowers power	[kW]	6.79	9.7	14.9	22.3	29.8	45
Total combined power - standard temperature	[kW]	38.8	58.7	77.8	106.1	156.2	213
Total combined power - high temperature	[kW]	52.4	65.6	91.9	127.1	183.7	255
Power supply voltage	(V)	3 phase 460V 50/60Hz	3 phase 460V 50/60Hz	3 phase 460V 50/60Hz	3 phase 460V 50/60Hz	3 phase 460V 50/60Hz	
Full load amps Standard Temp	(A)	61	99	134	187	268	374
Full load amps High Temp	(A)	80 (70)	108	153	215	305	430
Inlet / Outlet hose diameter	[in], cm	4.5, 11.4	6.3, 16	6.3, 16	8.7, 22.1	8.7, 22.1	2x8.7, 22.1
Regeneration hose diameter	[in], cm	2.5, 6.4	2x2.5, 2x6.4	2x2.5, 2x6.4	3x2.5, 3x6.4	4x2.5, 4x6.4	3x2.5, 3x6.4
Dryer weight	[lbs], kg	609, 276	1332, 604	1453, 659	2084, 945	2x1453, 2x659	4168, 1890