### **RESIN DRYERS** MPC & NPD SERIES 50 to 4000 lb./hr. capacity

### High Performance Products For The Plastics Industry Backed By A 2 Year Warranty

NOVATEC 50 to 4000 lb./hr. capacity Resin Dryers are energy efficient, dual tower desiccant bed dryers with - 40°F dew point air guaranteed and a choice of microprocessor or electromechanical controls.

### MPC SERIES DRYERS

utilize the NOVATEC MCD-1002 microprocessor which provides advanced diagnostic and control features.

Photo: MPC-100 with 400 lb. Insulated Hopper



# Heavy Duty Construction and Advanced Features for Years of Reliable Service.

Photo: MPC-100 (rear view) Easy access two stage cyclonic filter High efficiency centrifugal blower removes fines to 1 micron **TEFC** motor Cooling coil (optional) Heavy duty electric valve actuator Failsafe over temperature alarm and shut-Process CFM Monitor down **Regeneration Filter** Monitor High efficiency Incoloy sheath tubular heaters...(remote mount process heater optional) Heavy duty tubular valve linkage with roller bearings Externally mounted process and regeneration heaters for easy High temperature positive seal-Casters access ing 4-way valve (optional)

## **NPD SERIES**

dryers provide the same high quality construction features as the MPC SERIES and utilize and electromechanical controller with solid state temperature control.



Photo: NPD-100

# **OPPERS** Convenience, easy access and energy savings don't stop with our dryers. NOVATEC hoppers are loaded with the same kinds of innovative features.

Loader pattern on lid with

3 sight glasses, 1500 to

Piano hinged door with

door latches and strikes

silicone door gasket Easy opening heavy duty

18,000 lb. capacity

cover plate

No exposed insulation...sealed

Modular construction up to 1000 lb. capacity Adjustable guick release stainless steel band clamps with safety latch 2 sight glasses 600 to 1000 lb. capacity Modular design allows 360° orientation and LH/RH opening door Stainless steel to 150 lb. capacity Carbon steel 200 to 18,000 lb. capacity Tubular Air Diffuser (Patent #5,054,208) to 1000 lb. capacity Rigid discharge casting for strength and stability Stainless steel slidegate Cast aluminum discharge adapter to 1000 lb. capacity Optional floor stand available on all hoppers Floor stand casters optional on 60 to 1000 lb. hoppers

Photo: Modular Insulated Hopper 400 lb. capacity

## Hopper Door Inlet Discharge

			Door		Inlet	Dis	scharge	
Capacity	0.D.*	Height	(	Dpening	Outlet	Α	dapter	Weight**
(lb.)	Α	В	C		D	Е	F	(lb.)
Nominal dimensions in inches								
60	16.0	40.6	2.8	10x10	4.0	6.0	2.125	60
100	16.0	48.6	2.8	10x10	4.0	6.0	2.125	70
150	16.0	56.6	2.8	10x10	4.0	6.0	2.125	80
200	24.2	50.1	2.8	14x14	4.0	7.5	4.125	105
300	24.2	58.1	2.8	14x14	4.0	7.5	4.125	115
400	24.2	66.1	2.8	14x14	4.0	7.5	4.125	125
600	32.2	70.1	3.0	18x18	4.0	7.5	4.125	170
800	32.2	78.1	3.0	18x18	4.0	7.5	4.125	195
1000	32.2	81.1	3.0	18x18	4.0	7.5	4.125	200
1500	38.2	97.1	8.0	22x28	6.0	9.25	6.0	450
2000	44.2	120.1	8.0	22x28	6.0	9.25	6.0	550
2000	44.2	120.1	11.0	22x28	8.0	9.25	6.0	550
2500	46.2	117.2	11.0	22x28	8.0	9.25	6.0	600
3000	48.2	118.2	11.0	22x28	8.0	9.25	6.0	820
4000	50.2	143.1	11.0	22x28	8.0	9.25	6.0	1100
6000	60.2	148.1	11.0	24x36	8.0	9.25	6.0	2000
8000	68.2	151.2	15.0	24x36	12.0	11.0	8.0	3000
10,000	78.0	145.3	15.0	24x36	12.0	11.0	8.0	
12,000	72.0	167.1	15.0	24x36	12.0	11.0	8.0	upon
18,000	96.0	188.7	20.0	24x36	16.0	15.25	12.0	request

between two steel walls 4 Borosilicate sight glass with silicone grommet withstands 510°C, 3" O.D. Smooth interior...no internal projections Inlet thermometer "Even-Flow" steel air diffuser cone-1500 lb. and up Material drain out (stainless steel slide gate for flow control up to 1000 lb.) Optional drawer magnet Optional take-off box **Optional Precision Slide Gate OPTIONS:** Insulation

> Hand operated wheel and screw drive insures positive closure.



Photo: Carbon Steel, Insulated Hopper 1500 lb. capacity

- Vacuum take-off box
- Drawer magnet
- Outlet thermometer
- Precision slide gate
- Extra sight glasses
- Customized mounting plate
- Bolt-on hinged cover plate
- Floor stands
- Casters for floor stands



Standard Hoppers 1500-18,000 lb. capacity



\*Add 2" to 0.D. for Insulated Hoppers \*\* Net weight, non-insulated



<u>VIEW H-H</u> 1500 to 18,000 lb.

# **CONTROLLERS** Choose either electromechanical or microprocessor controls

### STANDARD ELECTROMECHANICAL **CONTROLLER WITH SOLID STATE** TEMPERATURE CONTROL

- Over-temperature alarm and shutdown with indication
- Autotune PID temperature control with dual LED display
- Calibration feature and setpoint secure switch
- Full function graphic display

#### he MCD-3000 is our new easier-to-use standard microprocessor for all **Novatec Dryers**

- For use on our MPC, CDM, MPOD, G-Series and MDM Dryers as well as Multi **Conveying Systems**
- 40 character alpha-numeric LCD Display
- Equals or surpasses electro-mechanical controllers for exceptional reliability
- Over-temperature alarm and shut-down
- Continuous monitoring of dew point with dew point changeover
- Back-lit display for easy viewing
- Will control two separate Process Heaters simultaneously







he MCD-1002 Microprocessor **Controller for MPC, CDM, MPOD and G-Series Dryers** 

- 80 character alpha-numeric vacuum fluorescent display
- Over 50 status screens and alarms
- Automatic system check
- Bed changeover on dew point or time
- Dew point measurement from  $-40^{\circ}$ F to  $+10^{\circ}$ F (optional  $-112^{\circ}$ F to  $+32^{\circ}$ F)
- Demand regeneration heat and cool control
- Regeneration/process filter status state

# **DRYER SPECIFICATIONS**

	Process Rate	Overall Nominal Dimensions		KVA@ 300°F 400°F		Process Air Duct Diameter	Weight	
Model	lb./hr.	Width	Depth	Height				
MPC/NPD-50	50	40″	37″	60″	9.5	13	3 7/8	340
MPC/NPD-100	100	58″	41″	62″	16.6	19.6	3 7/8	490
MPC/NPD-150	150	58″	41″	62″	16.6	19.6	3 7/8	515
MPC/NPD-220	220	58"	47″	62″	23.8	28.3	3 7/8	530
MPC/NPD-300	300	71″	56″	80″	32.7	40.2	5 7/8	725
MPC/NPD-500	500	71″	56″	80″	41.4	56.3	5 7/8	825
MPC/NPD-750	750	87″	58″	87″	58.5	88.4	7 7/8	1100
MPC/NPD-1000	1000	87″	80″	87″	80.9	95.8	7 7/8	1500
MPC/NPD-1250	1250	112″	63″	113″	98.7	128.5	7 7/8	3000
MPC/NPD-1500	1500	123″	66″	115″	116.0	145.9	7 7/8	3750
MPC/NPD-2000	2000	150″	125″	127″	184.2	229.4	11 7/8	
MPC/NPD-2500	2500	160″	150″	125″	231.9	315.9	11 7/8	upon
MPC/NPD-3000	3000	202″	128″	135″	286.0	369.9	11 7/8	request
MPC/NPD-4000	4000	210″	165″	135″	458.3	584.3	15 7/8 📕	

Standard Voltage:

Controller Voltage:

**Outlet Dew Point:** 

Outlet Air Temp. (Std.):

230v/3ph/60cy or 460v/3ph/60cy - All models Other voltages optional 115v/1ph/60cy - All models 300°F. (400°F optional) - All models - 40°F. guaranteed - All models

All information contained in this bulletin is subject to change without notice.

### NOVATEC'S CLOSED LOOP DRYING SYSTEM: PROVEN BEST YEAR AFTER YEAR

In the NOVATEC "closed loop" drying system moisture laden air exits from the hopper (1) passes through a flexible hose (2) and enters the two-stage filter (3) where virtually all fines carried from the hopper are trapped. The clean air then passes through a 4-way valve which diverts it to the on-line tower (4). The air then passes downward through a thick layer of desiccant (5). Unlike competitive units with thin "donut" desiccant beds and embedded heaters, the solid bed design of Novatec Dryers insures maximum air contact time, resulting in guaranteed minimum dew points of -40°F. The clean, dry air then passes through another 4-way valve (6) which directs it to the process air heater (7) which heats the air to the temperature selected for the material being processed (10). Another flexible hose (8) delivers the clean, dry air to the hopper (1) where the air diffuser (9), insures uniform drying without channeling.

Simultaneously, the desiccant in the second tower (11) is being regenerated. Ambient air is drawn through the reactivation filter (12) and heated by the reactivation heater (13). The heated air then passes through the lower valve (6) which directs it into the off-line tower and through the desiccant (14). The heated air purges the trapped moisture from the desiccant, exits through the upper valve (4) and is released into the atmosphere.

When the regeneration cycle is complete, the regeneration heater and blower are de-energized and the sesiccant is allowed to cool statically before the next

### SUGGESTED EXPOSURE SELECTION CHART

Material	Temperature (F°)	Exposure Time (hours)*
ABS	180°	3-4
Acrylic	190°	3-4
Acetate	120°-150°	2-3
Barex-210	180°	5-6
Butyrate	120°-150°	2-3
Nylon	170°	2-6
PBT	250°-275°	3-4
PET	350°	6-8
Polycarbonate	250°	3-4
Polyethylene w/C.blk. (35%)	160°	6-12
Polyurethane	180°-200°	3-5
SAN	180°	4-6
Vinyl (PVC)	160°	1-2 1/2
PETG	150°	3-4

\*Low end of exposure time is for injection molding of non-critical parts, or where surface finish is not of particular importance. Upper end is for extrusion or critical parts, or where unusually high starting moisture contents are encountered. Exposure times above are generally accepted guidelines. For more specific information consult resin manufacturers.



adsorption cycle begins. Unlike competitive units where the regeneration blower runs continuously using moist ambient air to cool the desiccant. Novatec's static cooling concept prevents any moisture build-up and completely eliminates dew point "bumps" during changeover.

Static cooling also results in long cycle times, a minimum of 4 hours per tower, which greatly reduces power consumption during regeneration, reduces maintenance and component wear to minimum levels, and significantly extends desiccant life.



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