NovaDrier™ Membrane Resin Dryer

The patented air flow design and proprietary membrane guarantees -40° dew point process air year round and uses 1/3 the compressed air of conventional compressed air dryers.

The NovaDrier, is the most popular small resin dryer on the market, with thousands sold, and proven to dry ALL thermoplastic resins. Conventional compressed air dryers can't match the drying performance of the membrane dryer because they never attain a -40° dew point; and they use up to 3X's as much compressed air as the NovaDrier.

ND-25 NovaDrier™

- **-40° Dew Point Process Air Year Round**
  The result is properly dried material... in every climate – all the time!
- **Energy Efficient**
  Uses 1/3 the compressed air when compared to conventional compressed air dryers or add-on membrane models.
- **New, Easy-To-Use Control**
  Larger numerals and easier to change settings.
- **Desiccant-Free Operation**
  Provides higher part quality because there are no dew point spikes or deviations and no desiccant dust to contaminate the resin.
- **No Moving Parts - Minimal Maintenance**
  Changing two coalescing filter elements once per year is the only scheduled maintenance.
- **5-Year Warranty**
  For the lowest cost of ownership.

ND-25 NovaDrier™ showing new location of air filter.

Plus

- Desiccant-free drying for all thermoplastics
- Constant -40° or lower dew point process air in less than 4 minutes
- Works with any source of compressed air... refrigerated or pre-dried air is not required
- Energy Saver standard on ND-100 through ND-200
- Standard process temperatures up to 350°F. (177°C)
- Stainless steel hopper standard through 150 lb (68 Kg) capacity
- Dew point meter
- Slide-gate drainport and slide-gate discharge on all hoppers
- Microprocessor temperature controller
- Machine-mount or stand-mount models
- Insulated hopper on all models
- Over-temperature indicator
- Low air pressure indicator
- Return air pellet screen
- 5-year warranty

NOVATEC

The Membrane

Makes The Difference!

Thousands of membrane filaments actually remove water vapor from the airstream. The dew point is reduced to at least -40° in all kinds of weather 24/7/365...using unrefrigerated compressed air.

Old technology "compressed air dryers" are not really dryers! They do not remove water vapor from the air.

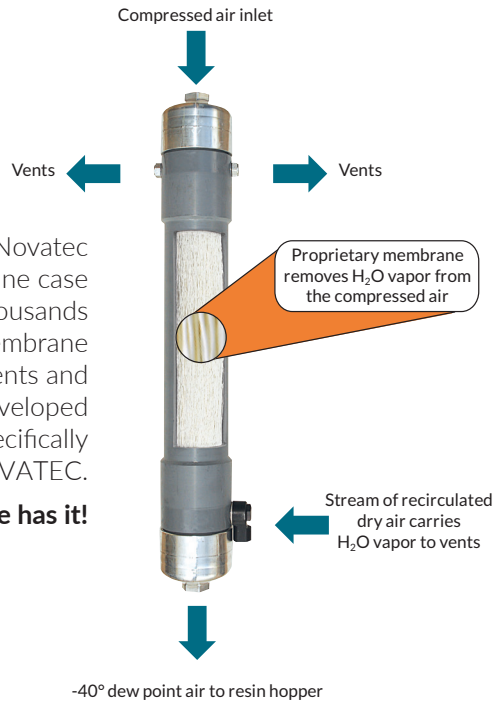
NovaDrier proprietary membrane ensures properly dried resin year round

How A Membrane Works...

The principle is simple – the design is proprietary.

- Compressed air in
- Water vapor is separated from the compressed air
- A stream of dry air drives water vapor away
- 40° dew point process air to drying hopper

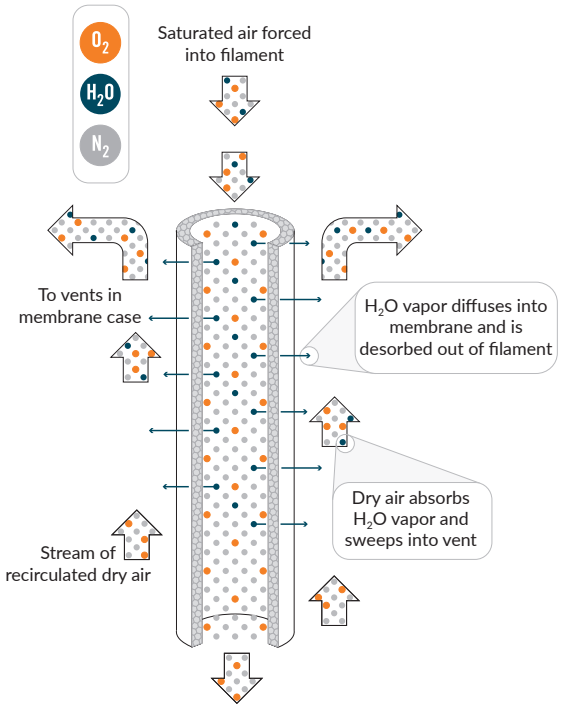
The Membrane Assembly



The Novatec membrane case contains thousands of membrane filaments and was developed specifically for NOVATEC.

No one else has it!

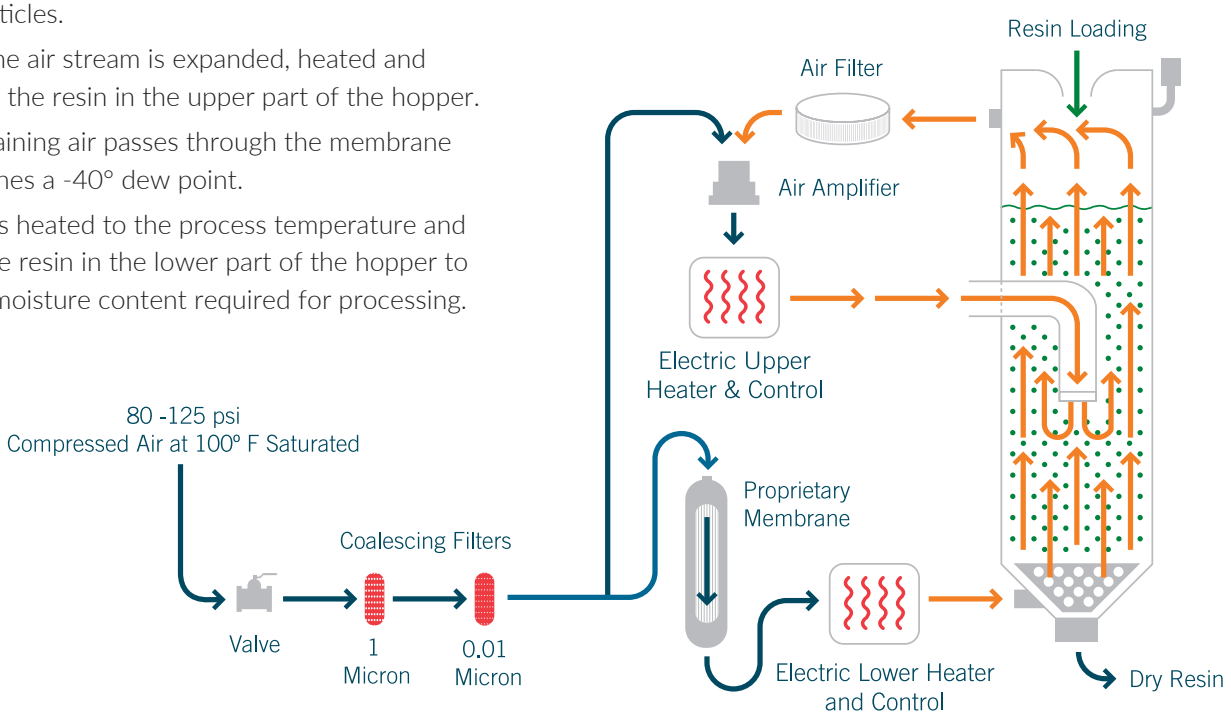
NovaDrier Membrane Filament



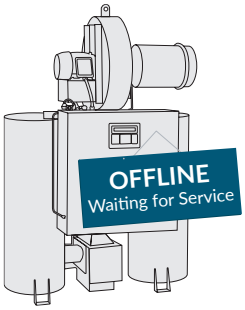
The patented NovaDrier™ design **cannot be copied!**

- Two coalescing filters remove oil, water droplets and small particles.
- Part of the air stream is expanded, heated and pre-dries the resin in the upper part of the hopper.
- The remaining air passes through the membrane and reaches a -40° dew point.
- That air is heated to the process temperature and brings the resin in the lower part of the hopper to the low moisture content required for processing.

Patented NovaDrier Air Flow (Patent# 6,584,701)



NovaDrier™ outperforms other dryer types



Desiccant dryers – high maintenance

- Moving valves wear out
- Desiccant needs to be replaced
- 4-hour startup time
- Dew point spikes and deviations

Compressed air "dryers" without membrane

- NEVER produce -40° process air
- Only reduces the dew point of incoming air by about 40-50° F
- Consume about 3-times more compressed air than a NovaDrier.
- Have to be taken off-line during warm months
- A compressed air dryer without a membrane is not a full-fledged dryer

Compressed air "dryers" with add-on membrane

- Increases energy usage by about 250%
- Require the processor to install an external membrane.
- Usually not filtration protected and can be easily contaminated

The Membrane Dryer

any air, any season, any material

Membrane Dryer Produces -40° Dew Point Air Year Round

Compare the MEMBRANE DRYER with other dryer types...

PERFORMANCE

The Membrane Dryer:

- Operates at full capacity on normal compressed air.
- Always produces -40° dew point (or less) process air.

The result:
Properly dried material... YEAR ROUND!

Compressed Air "Dryer" Without Membrane:

- Require cool, pre-dried incoming air at 100 psi.
- NEVER produce -40° dew point process air.

The result:
Variation in resin dryness and product characteristics.

ENERGY USAGE

The Membrane Dryer:

- Reduces compressed air consumption with patented design.
- Requires only 80 psi for full capacity operation.

The result:
Reduced energy costs.

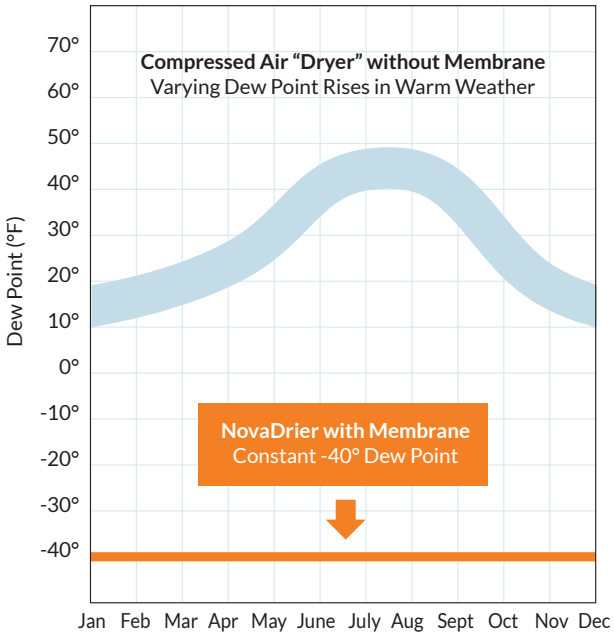
Compressed Air "Dryer" Without Membrane:

- Use nearly 2 times the compressed air compared to the NovaDrier.

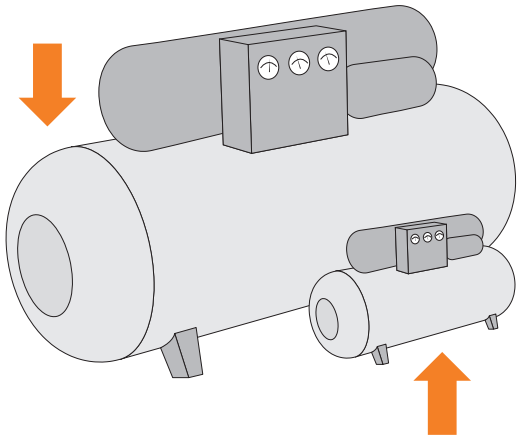
Add-On Membrane Models:

- Use nearly 3 times the compressed air compared to the NovaDrier.

The result:
Much higher energy costs.



Compressed Air "Dryers"
Conventional single-pass design wastes compressed air and increases energy costs.



NovaDrier Membrane Resin Dryer
Uses 1/2 – 1/3 the compressed air.

Resin Contamination

The Membrane Dryer:

DESICCANT-FREE OPERATION

Non-desiccant operation means:

- Uniform dew point year round
- No valves
- No desiccant to contaminate resin
- No desiccant replacement

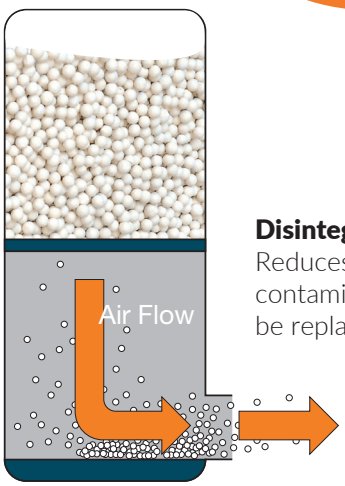
The result:
Uniform dew point without resin contamination... meaning higher part quality.

Desiccant Bed Dryers:

- Dew point spikes and variation
- Desiccant begins to disintegrate as soon as it is put into service
- Reduced effectiveness of the drying process
- Desiccant dust can contaminate the resin

The result:
Lack of part uniformity.

Desiccant Free Operation



Disintegrating Desiccant
Reduces efficiency, can contaminate resin and must be replaced regularly.

Maintenance/Downtime

The Membrane Dryer:
Change 2 filter elements once per year!

- No moving parts.
- No desiccant to change.
- No complications... turn the power on, set the temperatures and you have -40° dew point air in 4 minutes.

The result:
Minimal cost for parts and near-zero maintenance.

Desiccant Dryers:

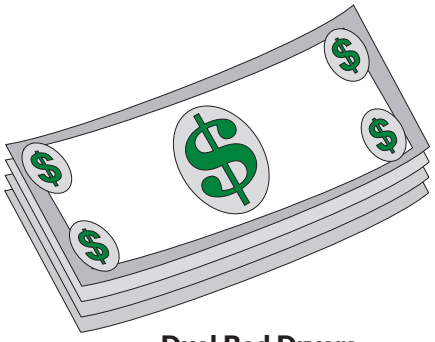
- A multitude of moving parts to be replaced.
- Desiccant which requires constant vigilance and replacement.

Non-Membrane Compressed Air Dryers:

- Downtime in the summer because of improperly dried resin

The result:
Higher costs and lost production time.

NovaDrier
Membrane dryers cost pennies/day.

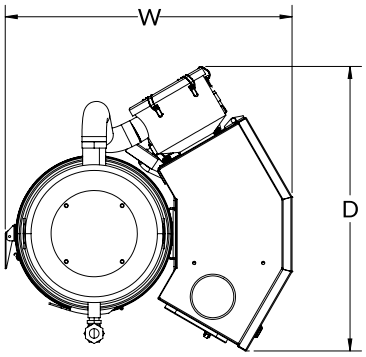


Dual Bed Dryers
Desiccant dryers and conventional compressed air dryers have high maintenance and downtime costs.

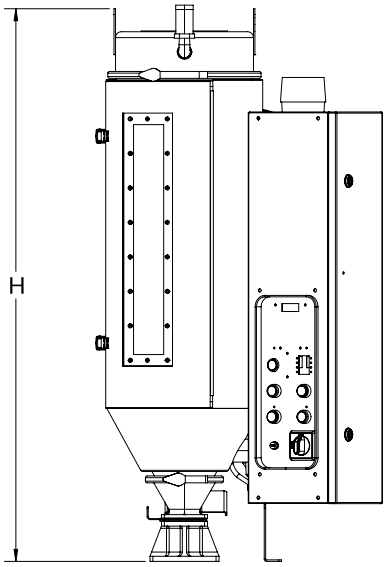
Specifications:

Model	††Throughput Capacity		Compressed Air Flow		Electric *Demand **Usage		H		W		D		†Shipping Weight		Hopper Volume		Hopper Capacity	
	lb/hr	kg/hr	SCFM	NM^3/hr	kW	kW	in	cm	in	cm	in	cm	lb	kg	ft^3	liters	lb	kg
ND-7	7	3.2	2.6	4.1	1.8	0.21	39	99	21	53	25	64	235	107	0.5	14	20	9
ND-25	25	11.3	5.7	9.2	1.8	0.46	48	122	25	64	25	64	324	147	1.85	52	60	27
ND-50	50	22.7	11.9	19.1	6.1	1.0	59	150	30	76	25	64	370	168	4.2	120	150	68
ND-75	75	34	17.0	28.1	6.1	1.5	75	190	30	76	25	64	520	236	6.1	173	225	100
ND-100	100	45.5	24.8	39.9	10.6	2.0	71	181	38	95	37	94	670	305	10.3	292	400	182
ND-150	150	68	39.9	64.2	13.3	3.2	77	196	46	116	40	102	790	360	15.7	446	600	272
ND-200	200	91	53	93	18.6	4.1	85	215	46	116	40	102	850	386	21	595	800	363

Standard Voltage: 115/1/50-60 on ND-7 & ND-25 • 460/3/60 on ND-50 through ND-200.
*Total connected load. **Usage at 180° F. (82° C). † Without stand. †† Throughput based on polycarbonate pellets at 38 lb/ft^3.



Bolt hole patterns:
4.75" sq. for ND-7 through ND-75, 6" sq. for ND-100 through ND-200



OPTIONS

- **Seven-Day Timer:** Available on all models
- **Short Run Diffuser Tube:** Available on ND-25 through ND-75
- **Stainless Steel Contact Surfaces Inside Hopper:** For ND-100 through ND-200 (Standard on ND-25 through ND-75)
- **Alternate Voltage:**
  220/1/50-60 for ND-7 through ND-75 (No Charge)
  415//3/50 for ND-25 through ND-200 (No Charge)
  575/1/60 for ND-25 through ND-200

ACCESSORIES

- **Hopper Extension:** For ND-25 through ND-100
- **Floor Stand:** For ND-25 through ND-200
- **Casters, five inch, set of 4**
- **Vacuum Take-off Box & Vacuum Purge Valve:** Request information

Open access stand facilitates unloading of resin

Stand:
FS-ND-1

Casters: (set of 4)
ashm13

Baltimore, MD 21225 USA 410-789-4811 | Fax: 410-789-4638 | 1-800-BESTDRY (800-237-8379) | sales@novatec.com | **www.novatec.com**

Form # ND 14 OCTOBER 2021