

SALAERA

PD-Series Gas Dryers

POWERED BY NAFION™ TUBING

Perma Pure is now part of Salaera

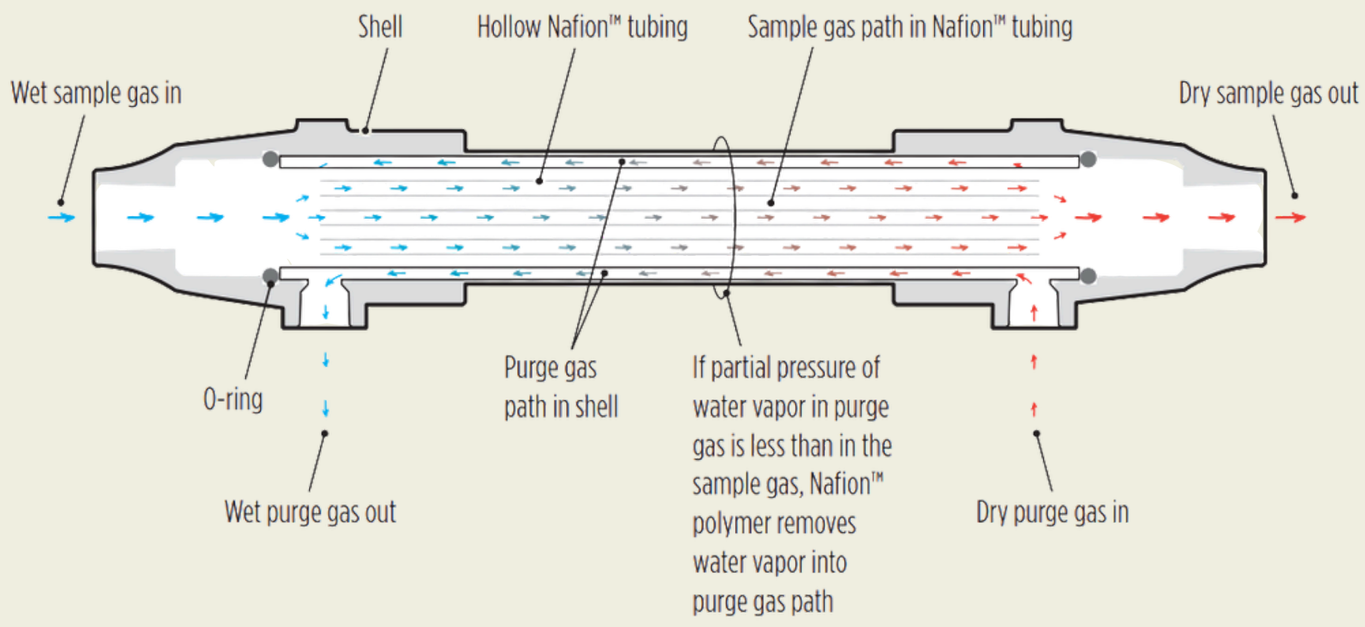
USED ACROSS ALL SECTORS

Powered by Nafion™ tubing, Salaera gas dryers selectively remove water vapor from a gas sample. This ***selectivity for water vapor*** allows our dryers to ***remove more moisture than other gas drying solutions,*** while ***keeping analytes in the gas sample***.

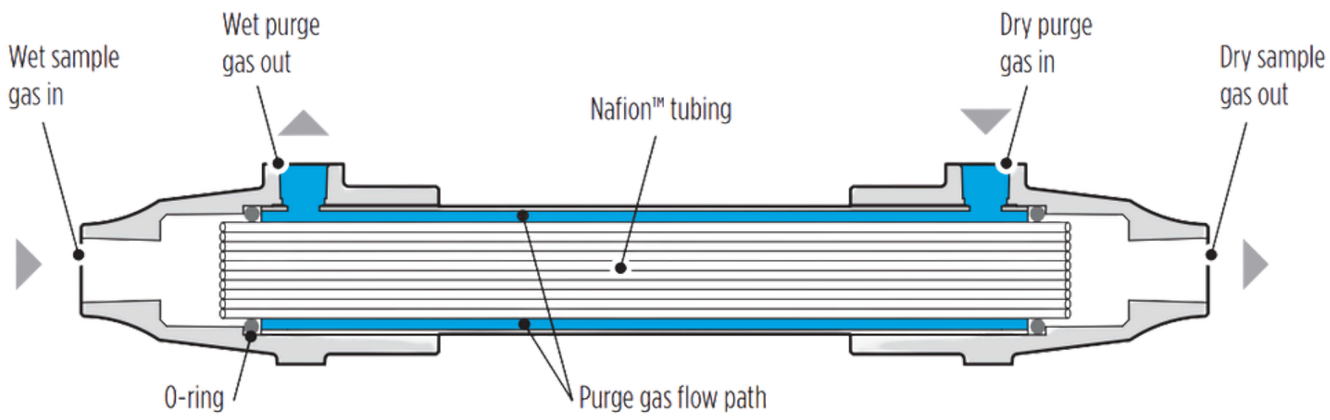
Unlike our other single-tube gas dryers, Polytube Dryer Series (PD-Series) gas dryers contain multiple Nafion™ tubes bundled together allowing for a higher volume of gas movement in a shorter sample path. This makes the PD-Series the ideal choice for high flow rate gas drying applications (***up to 40 lpm***).

Because of this greater surface area of Nafion™ tubing, ***the PD-Series offers our highest drying capacity***.





How it works



Flow your sample gas ***through*** the Nafion™ tubing and flow a dry purge gas ***outside*** the Nafion™ tubing, countercurrent to the sample gas flow.

While the partial pressure of water in the purge gas is less than in the sample gas, Nafion™ polymer will selectively transfer water and water vapor from the sample gas across its membrane and into the purge gas flow, yielding a drier sample gas at the sample gas output.

Learn more about our PD-Series Gas Dryers

Let us help solve your moisture control problems

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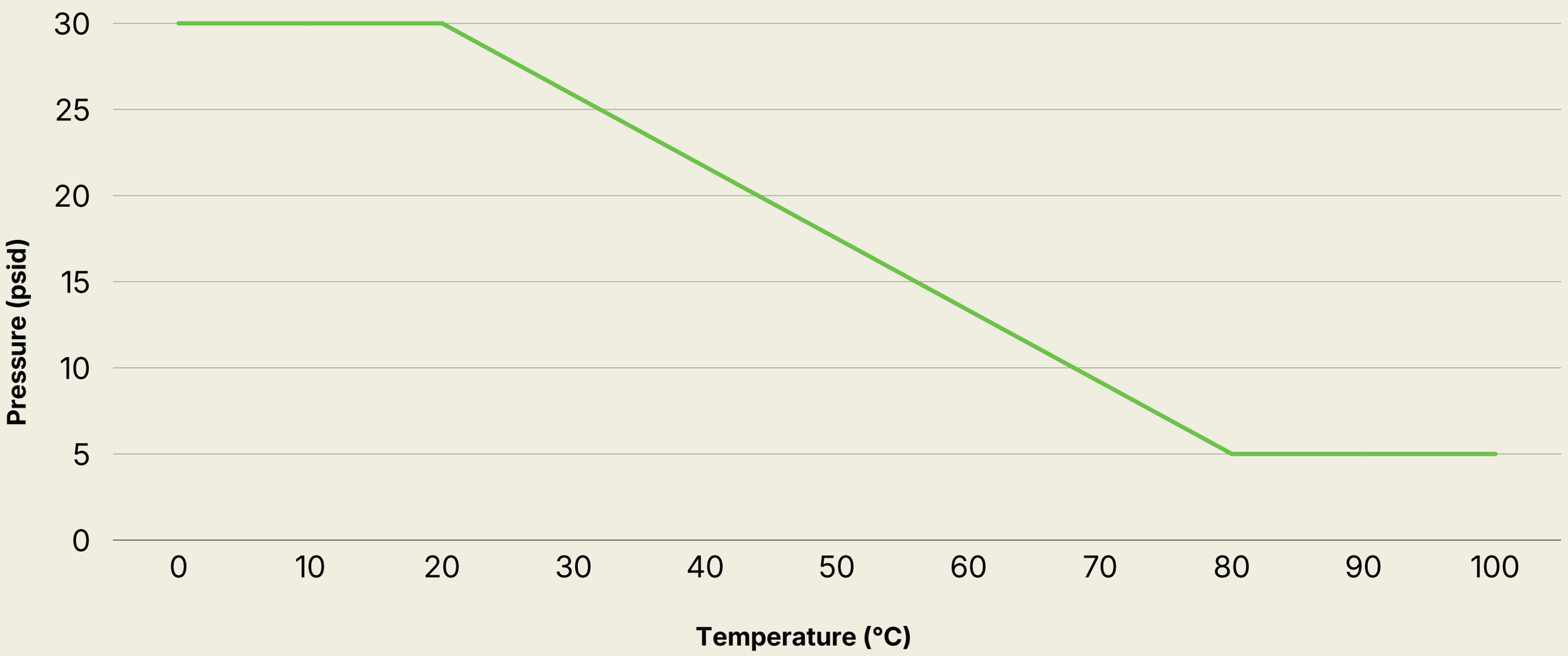
PD-SERIES GAS DRYERS

Specifications

Number of Nafion™ Tubes Inside	50 (PD-50T), 100 (PD-100T), or 200 (PD-200T)
Max Flow Rate	10 lpm (PD-50T), 20 lpm (PD-100T), 40 lpm (PD-200T)
Housing Materials Available	Polypropylene, Fluorocarbon, or Stainless Steel
Max Operating Temperatures	80 °C for polypropylene housing, 100 °C for fluorocarbon or stainless steel housing
Sample Gas Port – End Fittings	Port 1/4″ NPT
Purge Gas Port – End Fittings	Port 1/8″ NPT
Purge Gas Recommendations	• Purge gas must be drier than sample gas • Purge gas can be instrument quality air (max -40 °C dew point) or nitrogen • Purge gas should flow at 2 or 3 times the sample rate ** Alternate methods to using a purge gas are possible, such as recycling the dry sample gas, or pulling vacuum through the purge gas flow path. See website for more information.*

Max Pressure Differential on Nafion™ Tubing



psid (psi-differential) = [sample gas pressure (psig) at inlet] - [sample gas pressure at outlet (psig)]

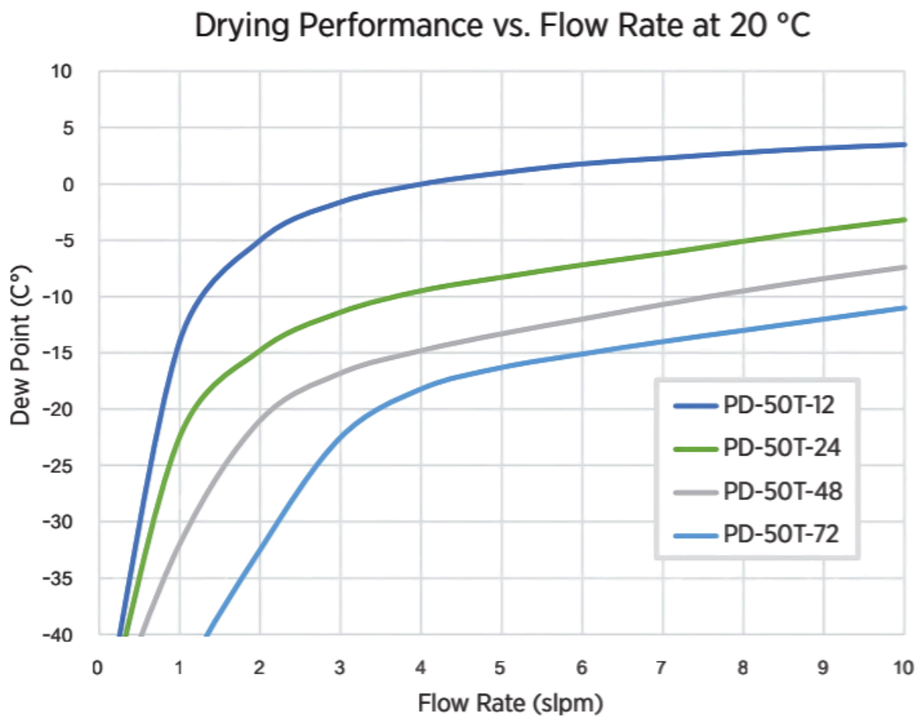
Learn more about Nafion™ Polymer

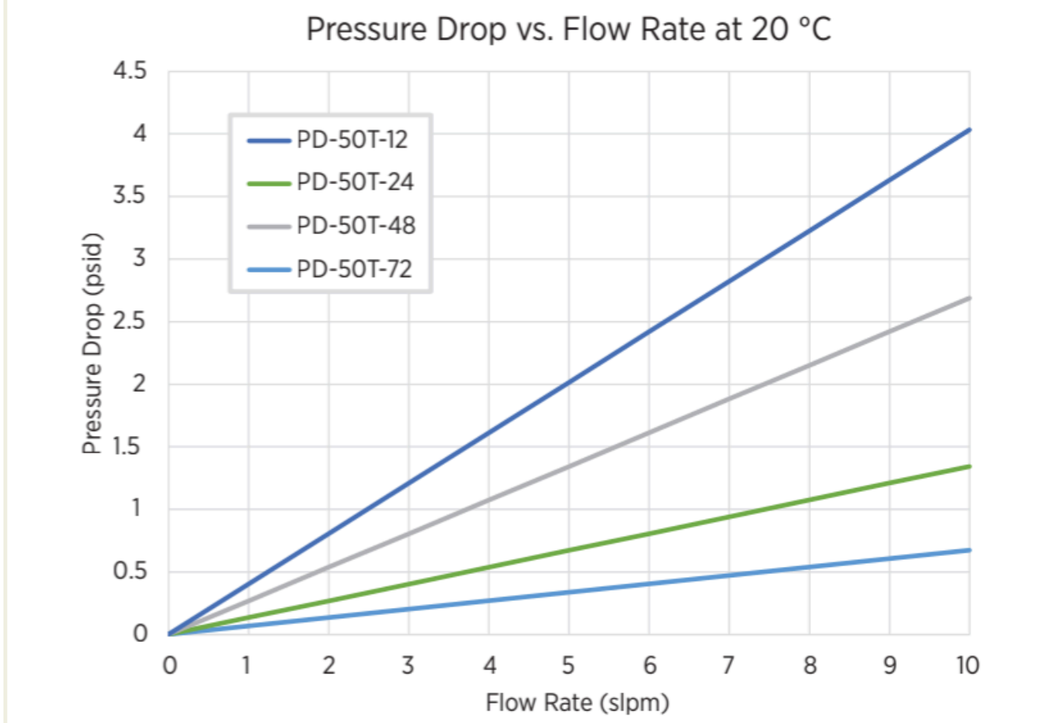
Visit our website to learn more about Nafion™ Polymer's chemical composition and selectivity.

PD-SERIES GAS DRYERS

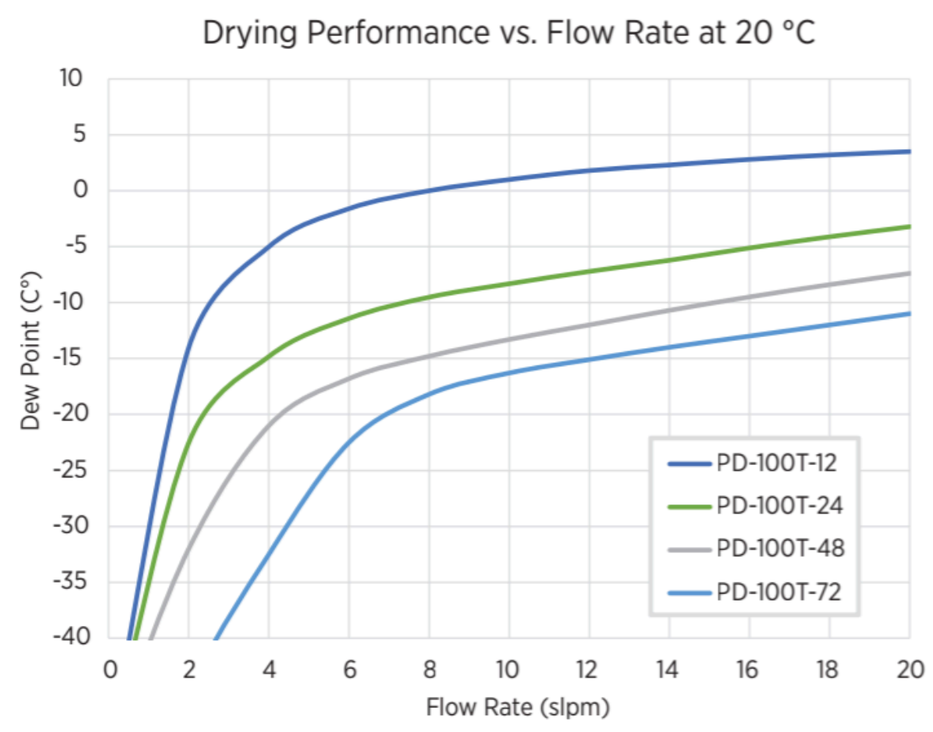
Performance by model

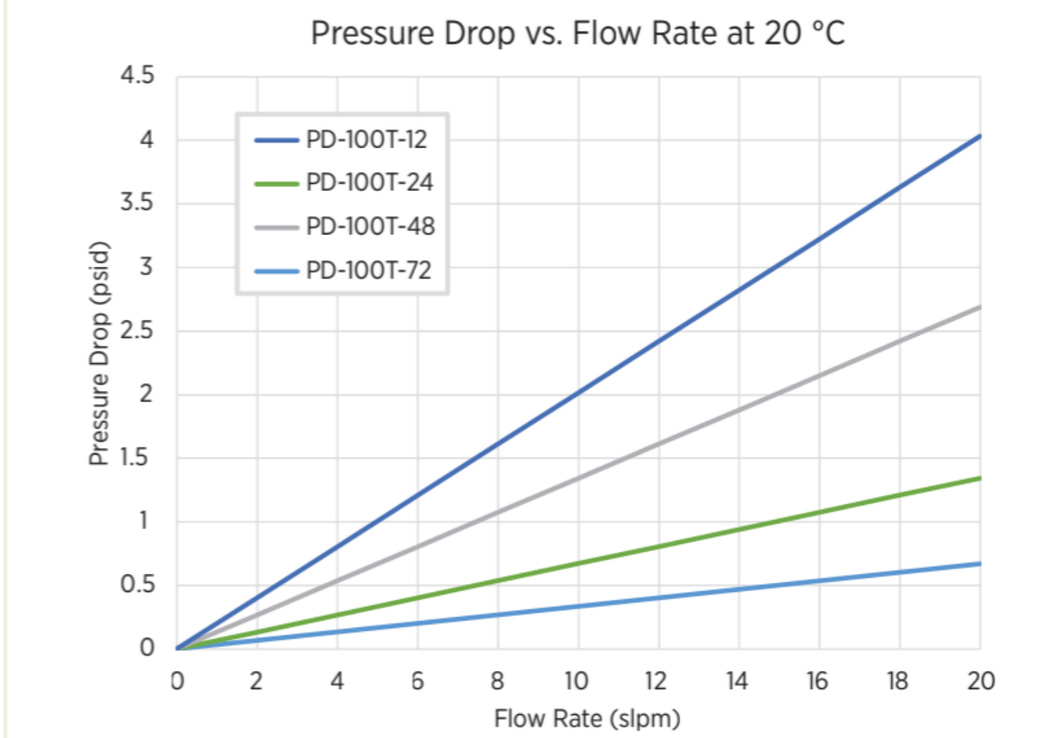
PD-50T MODEL: FLOW RATES UP TO 10 LPM



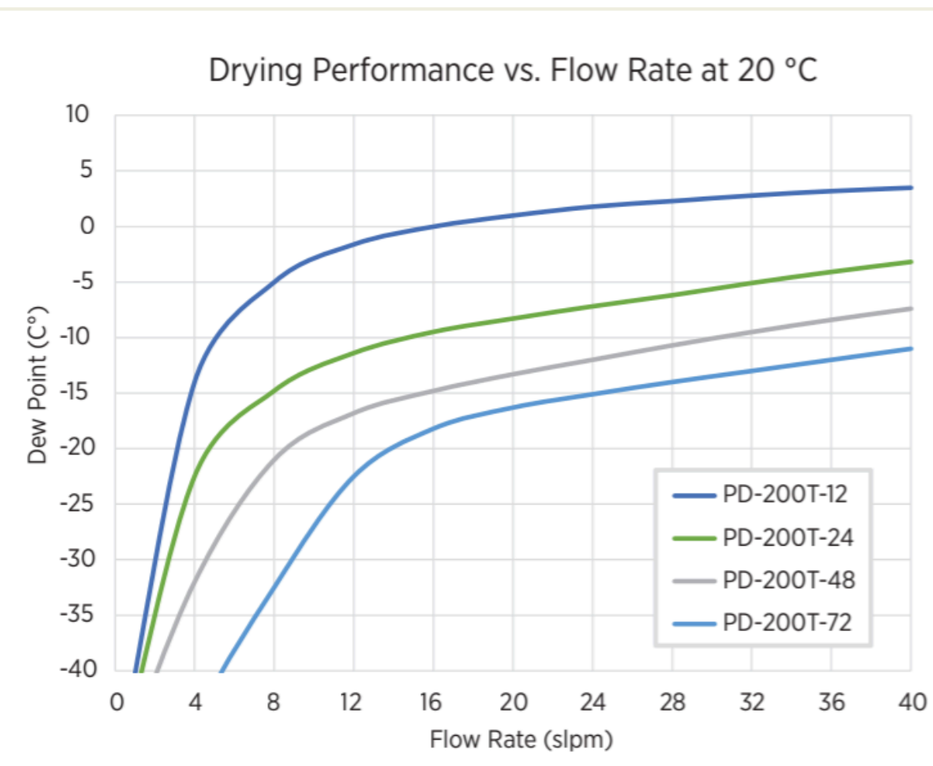


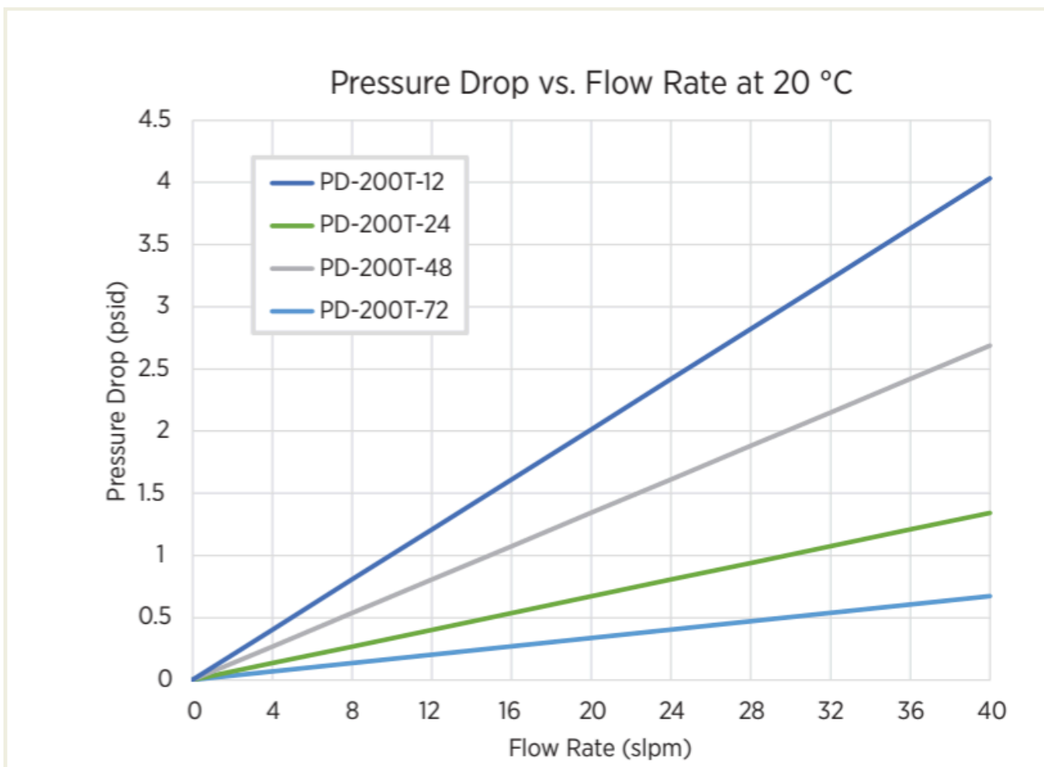
PD-100T MODEL: FLOW RATES UP TO 20 LPM





PD-200T MODEL: FLOW RATES UP TO 40 LPM





The performance curves above are based upon a sample inlet dew point of 20°C and purge flow rate of 2x the sample flow rate. Consult our team for operation with sample gases condensing above ambient temperature. psid (psi-differential) = [sample gas pressure at inlet (psig)] - [sample gas pressure at outlet (psig)], based on atmospheric pressure at outlet.

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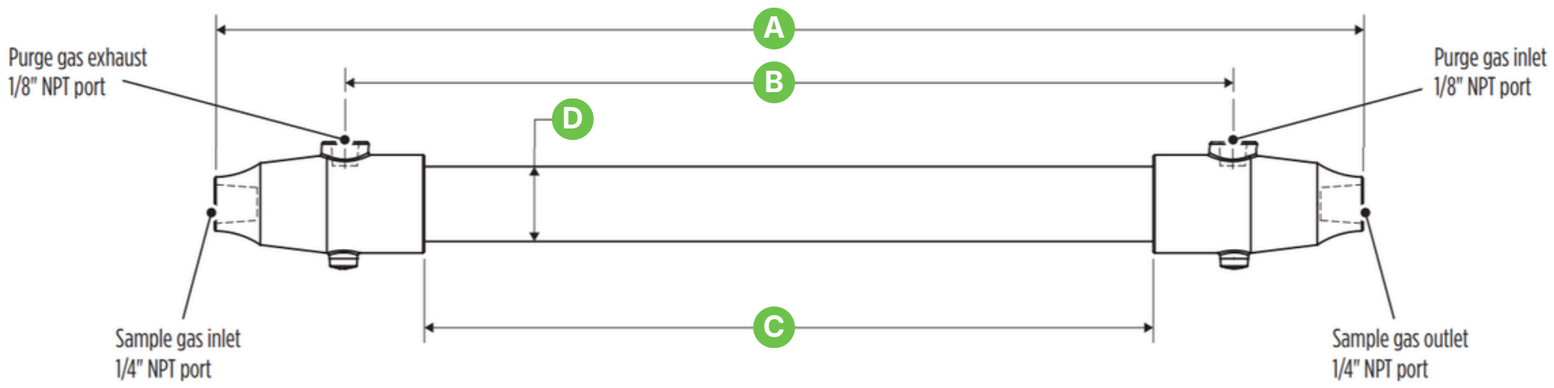
PD-SERIES GAS DRYERS

Material Options

Material code	Materials for end fittings and shell
MPP*	Molded polypropylene fittings, polypropylene shell
MPS	Molded polypropylene fittings, stainless steel shell
MPR	Molded polypropylene fittings, rubber shell
MKA	Molded fluorocarbon fittings, anodized aluminum shell
MKS	Molded fluorocarbon fittings, stainless steel shell
MKR	Molded fluorocarbon fittings, rubber shell
MKC	Molded fluorocarbon fittings, corrugated stainless steel shell
MSA	Machined stainless steel fittings, anodized aluminum shell
MSS	Machined stainless steel fittings and shell
MSR	Machined stainless steel fittings, rubber shell
MSC	Machined stainless steel fittings, corrugated stainless steel shell

Physical Dimensions by Model



Model	A	B	C	D *MPP*, MPS, MKA, MKS, MSA, MSS*	D *MKC, MSC*	D *MPR, MKR, MSR*
PD-50T-12	15.3"	11.8"	9.7"	0.75"	1.04"	1.13"
PD-50T-24	23.3"	19.8"	17.7"	0.75"	1.04"	1.13"
PD-50T-48	47.3"	43.8"	41.7"	0.75"	1.04"	1.13"
PD-50T-72	71.3"	67.8"	65.7"	0.75"	1.04"	1.13"
PD-100T-12	15.3"	11.8"	9.7"	1.00"	1.24"	1.38"
PD-100T-24	23.3"	19.8"	17.7"	1.00"	1.24"	1.38"
PD-100T-48	47.3"	43.8"	41.7"	1.00"	1.24"	1.38"
PD-100T-72	71.3"	67.8"	65.7"	1.00"	1.24"	1.38"
PD-200T-12	15.3"	11.8"	9.7"	1.00"	1.24"	1.38"
PD-200T-24	23.3"	19.8"	17.7"	1.00"	1.24"	1.38"
PD-200T-48	47.3"	43.8"	41.7"	1.00"	1.24"	1.38"
PD-200T-72	71.3"	67.8"	65.7"	1.00"	1.24"	1.38"

**MPP material only available in PD-50T models. Part Number = [Model]-[Material]. For example: PD-50T-12-MPP*

Custom solutions

Our team has decades of design-for-application experience to deliver customizations that ensure best performance for your application. Contact us today to learn more.

ISO 9001

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