



Designed to Perform. Built to Last.

DURATHERM NPS

Positive and Negative Pressure Temperature Control System Up to 180°F (82°C)



Mokon's Duratherm NPS circulating water temperature control system maximizes performance with temperatures up to 180°F (82°C). The Duratherm NPS has the ability to provide positive or negative pressure temperature control to your process, and can reduce downtime if a fluid leak occurs.

Model	Pump	Flow Rate and Pressure		Heating Capacity (kW)			Process Connection	Supply/Drain Connection	Approximate Dimensions (L x W x H)	Shipping Weight (Approx. lbs.)
		POSITIVE MODE	NEGATIVE MODE	9	18	24				
TOTAL AMPS*										
DT-NPS	3/4 Hp	Up to 25 GPM @ 25 PSI	Up to 17 GPM	13	24	32	1" NPT	1/2" NPT	32" x 17" x 28"	210
DR-NPS	1-1/2 Hp	Up to 40 GPM @ 32 PSI	Up to 27 GPM	14	25	33	1-1/2" NPT	1/2" NPT	32" x 17" x 28"	210
DN-NPS	3 Hp	Up to 60 GPM @ 34 PSI	Up to 36 GPM	16	27	35	1-1/2" NPT	1/2" NPT	32" x 17" x 28"	210
DO-NPS	5 Hp	Up to 80 GPM @ 38 PSI	Up to 52 GPM	18	29	37	1-1/2" NPT	1/2" NPT	38" x 17" x 28"	225

*460/3/60 (for 230V, double the listed amps).

Easy to Use

Designed to be used in the same manner as a circulating water system, the system requires no special piping, hoses or utilities. By simply moving a three-way flow control valve on the back of the cabinet, the system is changed from a positive pressure to a negative pressure system in an instant. The system's reservoir acts as a fluid supply source and air separation device, making the venting of the system automatic. The presence of a make-up water solenoid means the water in the tank is self-leveling. Easily removable cabinet panels provide access to internal components, making routine maintenance and adjustments simple and fast.

"Negative" Pressure Benefits

Being negative isn't always a bad thing. With Mokon's Duratherm NPS, negative pressure creates a vacuum, essentially pulling air and water out of the mold instead of pushing it through the system. There are many benefits with this method, including:

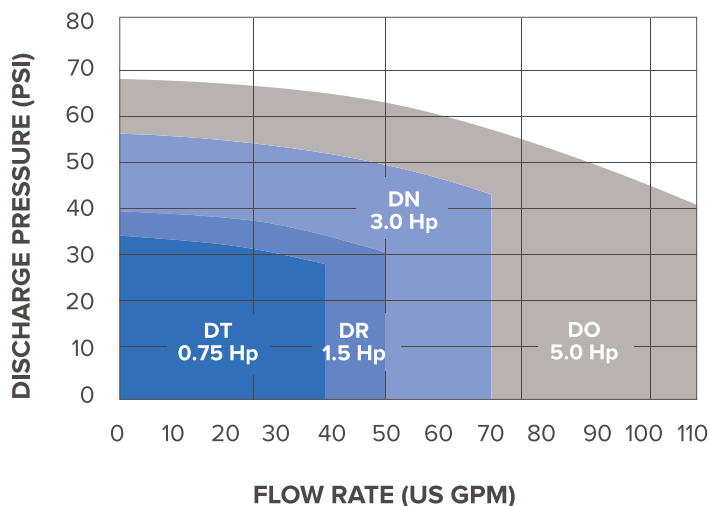
- Repairs can be deferred until a more convenient time
- The risk of hot fluid spray is reduced, improving worker safety
- Less downtime means manpower and equipment are maximized, increasing productivity



Standard Features

- Single zone configurations
- Compact, portable design
- Stainless steel pump, composite impeller and silicon-carbide seal
- Horizontal stainless steel heater canister with unique turbulent flow diverter
- Small hold-up volume and energy-efficient heater design
- 1/16 DIN non-proprietary microprocessor-based controller in easily accessible panel
- Fluid high temperature shut-off switch
- 2.1 gallon carbon steel reservoir with auto make-up valve
- Carbon steel venturi jet pump and valving to create and control negative pressure conditions
- Pressure relief valve
- Automatic air purge
- Cast brass fluid connections securely mounted to cabinet
- Suction and discharge pressure gauges
- Removable panel for easy access to heater
- Heavy-duty removable casters for portability
- Powder-coated finish
- cULus 508A labeled electrical subpanel

Pump Curve



Technical data shown is subject to change without notice. The company will endeavor to supply the equipment as illustrated but reserves the right to make dimensional and other design changes as required.

Common Options and Accessories

- Alarms – audible and visual
- Bronze jet pump
- Closed loop circuitry
- Common supply and drain connections
- Control options – remote setpoint and re-transmission, communication ports
- Cooling or chiller circuits
- Door disconnect switch (standard on some models)
- Emergency "crash" cooling control
- Heat exchangers
- Heat remover design
- High/low heater operation (manual or automatic)
- Manifolds
- Modulating valves
- NEMA/Type 4, 4X, and 12
- Other voltages, phases, frequencies
- Power cord (standard on some models)
- Pressure regulator
- Process line fluid purge via air connection
- Redundant heater contactor
- Remote start/stop and control panels
- Solid state contactors/relays and SCR
- Stainless steel cabinets, fluid circuits and tanks
- TEFC motor
- UL and CSA certifications
- Valve process bypass

Product Testing and Warranty

All Mokon temperature control systems are qualified for service by rigid, simulated field tests, and are 100% factory calibrated and run tested. Mokon offers these extended warranties as standard on the Duratherm NPS system:

- 3 years on system
- 5 years on microprocessor controller and safeties
- Lifetime seals, piping and manifold

Controls

A non-proprietary microprocessor-based controller provides dual LCD indication of your process fluid setpoint and actual temperature to ensure process control accuracy. A variety of options and accessories to meet specific customer needs are available.



Designed to Perform. Built to Last.

2150 Elmwood Avenue
Buffalo, New York 14207

P (716) 876-9951
F (716) 874-8048
E sales@mokon.com

mokon.com

