



Fig.: NR8016-v2 for 16 zones



Fig.: NR8024 for 24 zones

evoControl[®]

- Multifunctional hotrunner process control and diagnosis device from 12 up to 32 zones
- Comfortable, easy to understand touch-screen operation
- Precise temperature control with all necessary hotrunner functions
- Comes standard with complete mould diagnosis function

Available options :

- Integrated valve gate control with fluid cylinders (hydraulic or pneumatic)
- Mould cooling monitoring
- Remote control via WiFi
- Interface to injection moulding machine TTY, OPC-UA to come soon

Application :

All needed functions for a precise temperature control and process monitoring of hotrunner injection moulds in one device : Temperature control and complete mould diagnosis functions come standard, optionally with integrated valve gate control. Control and operation of your cooling unit also soon available. Existing devices can be upgraded at any time.

All units are usable regardless to the mould manufacturer.

Design :

Control computer, signal processing electronics and heating power supply all combined in one rugged metal casing, 2 sizes for different numbers of zones.

Load-fuses are mounted on the side and thus provide an easy access in case of failure. Touchscreen for comfortable and simple control and operation of all zones.

Function :

Temperature control

Adaptive, process computer based temperature control with automatic adaptation to the controlled system assures very precise temperature control for quick hot-tips as well as for slow manifold heaters. Many control parameters can be set-up specifically, this makes the controller an ideal unit for complex and difficult moulds.

Touchpanel operation

The bright, large touch-screen permits an easy, quick overview on all important functions and control parameters. On request, it shows all zones together, groups of zones or every zone in detail. In any situation, only relevant information is shown to avoid a cluttered screen overload.

Touchscreen operation is almost identical with the bigger systems up to 120 zones, so that operators can transition easily between them.

Touchscreen hotrunnercontroller NR8000

Specific hotrunner functions

Beside the very precise temperature control of every zone, numerous hotrunner program functions can be chosen, for all zones together or for every single zone as appropriate. The most important ones are :

Soft-start During soft-start, the controller unit works with reduced temperature and power setting (factory-defaults: 50% / 80°C / 5min). Cold heaters are gently pre-heated, moisture is expelled.

Guided heat-up :

All zones can be heated-up together - avoids hot-tips being at set-point temperature before the slower manifold zones and prevents stress inside the mould during start-up.

Stand-by operation :

Each heating-zone is equipped with a second temperature set-point. By pressing the "stand-by"- button or closing an external contact, all zones simultaneously are switched over to the second set-point, which may be used for stand-by operation.

Boost: Single-time override of the desired temperature-value melts „frozen“ nozzles.

Autogrouping / Autonaming: Several zones can freely be combined to a group, automatically by intensity or manually, also automatically numbered.

Separate ON/OFF keys

After switching on the device, mould heating can be activated with a separate "Heating ON/OFF" switch. This allows to oversee first calmly all mould parameters before starting heating of the mould.

Process survey functions

Load current monitoring for every zone independently, 2 programmable alarms per zone, sensor and heater breakage are

detected automatically and will be displayed on the screen. If sensor breakage happens, the controller can be switched over to constant power. Coupling of this zone to any other zone with working thermocouple is also possible. Beside those alarms, many other process parameters can be set-up and surveyed as well.

As a protection of mould and hotrunner against overheating, a overtemperature cut-off switch (50°C above the highest set-point) is build in.

External alarm output

The 2 alarms on every zone are combined by a floating contact as common alarm output for the whole unit and wired to an external alarm connector on the back side. This permits a connection with external units such as an injection moulding machine or central production alarm system. The external stand-by input is wired on this connector as well.

Mould analysis function

The unit comes standard with a mould wiring analysis to check the correct assignment of heater and sensor cables to the same zone. Beside this, comfortable and detailed tracing of curves to follow the evolution of selected control-parameters with time.

Mould memory

Management of all configuration data of every zone in a comfortable mould memory system, this eases start-up after a die-change. Also storage of parameter curves for ISO-conform quality data management

USB-Data export

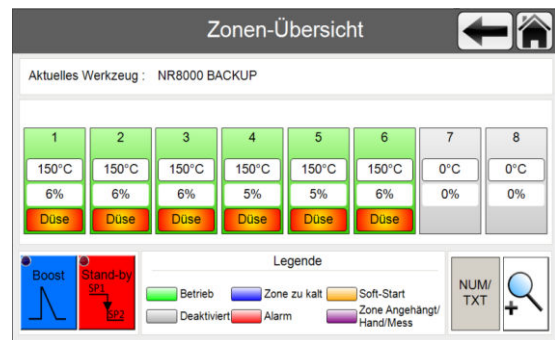
Diagnosis result and mould memory data can easily be downloaded as a csv-file on a USB-stick and further worked out or printed with any usual spreadsheet-PC software.

Touchscreen hotrunnercontroller NR8000

Examples touch-screen NOLDEN SmartTouchSystem STS

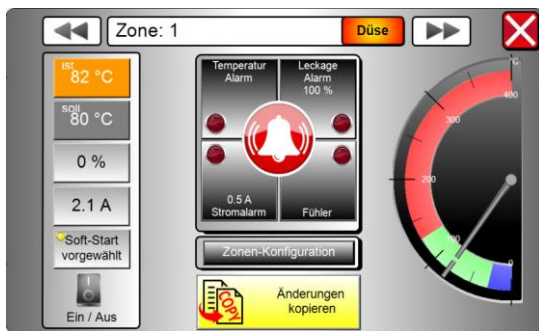


Choose main functions in the **"Homescreen"**

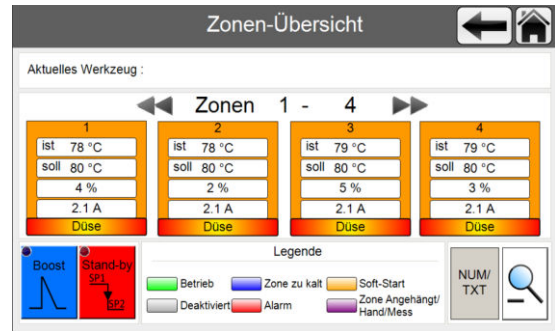


Most important screen for operation : **Overview all zones**

Know everything about one zone? **Zone detail view**



More details? **Group of zones** for a selected area



Hands-on data entry features, where needed....



... and comfortable program- and diagnosis functions



Touchscreen hotrunnercontroller NR8000

Easy language set-up to adapt to every user...



and clear warnings against errors !



Specification :

Mains voltage

230/400V +/-10%, 3~, 48...63Hz

Nominal rating / nominal current

17,25kW / 3 x 25A total (depending on the total number of zones)

Heating load per zone

Max. 3,6kW/16A

Fuses

16AFF, 6,3x32mm, heaters
5AmT, 5x20mm, controller

Power control

0 - 100% proportional,
zero-voltage switching

Automatic soft-start

(factory default settings)
Power-setting 50% / temperature 80°C / time 5 min

Touch-screen

Sensitive (projected capacitive) 7" touch-screen with pollution-resistant glass-surface, displays actual values and set-points, load-current, alarms, mould memory and configuration parameters.

External stand-by/**Alarm exit:**

7 pin connector:
2 floating relay contacts for alarms, max. 230V, 3A, floating input for external stand-by, works on all zones together, wired in parallel with internal „Stand-by“-key on the front panel.

Process-high-alarm

0...400°C programmable, default value +50°C

Low current-alarm

0,0 ... 19,9A programmable,
default value 1A minimum current

Sensor input

Fe-CuNi type (J) 0...400°C

Other types on request

Sensor and heater connection

24-pin industrial heavy duty standard-connector
16A/400V, pin assignment following NR-norm,
other pin assignments available

Precision

0,25% FS

Insulation voltage

2,5kV mains / controller

Dimensions

410 x 370 x 190mm (WxDxH, 8 to 16 zones)
410 x 370 x 355mm (WxDxH, 24 and 32 zones)

Colour

Structured RAL3000 casing,
Silk gloss RAL9005 display front + rear

Weight (depending on number of zones)

NR8012 : ca. 15 kg

NR8024 : ca. 22 kg

Designation	Art.-Nr.
NR 8012-v2	83812v2.200
NR 8016-v2	83816v2.200
NR 8024-v2	83824v2.300
NR 8032-v2	83832v2.300