

Series
NK



■ **Applications**

Duct electrical heaters are designed for heating of intake air in rectangular ventilating system. The heaters are applied for air heating in ventilation and air conditioning systems in various premises.

■ **Design**

The casing and the terminal box are made of galvanized steel plate and the heating elements are of stainless steel. Additional ribbing is provided to increase the heat

exchange surface. NK duct heaters are equipped with two overheating protection thermostats:

- ▶ basic protection with automatic restart (operating temperature +50°C). After cooling the thermostat closes the control circuit of the heater automatically.
- ▶ emergency protection with manual restart (operating temperature above +90°C). In case of response the power supply to the heater is allowed after the manual emergency reset only.

Each standard size has several electric power capacity options. Higher capacity can be attained by means of installation of the heaters in series.

■ **Mounting**

▶ The heater design ensures its mounting by means of flange connection. The air flow direction shall match the pointer on the filter. The duct heaters can be installed in any position except for with the electric control unit below to prevent condensate penetration and wiring short circuit.

▶ The mounting shall be performed in such a way as to enable the uniform air stream distribution along the entire cross section.

▶ The air filter shall be installed at the heater inlet to protect the heating elements against pollution.

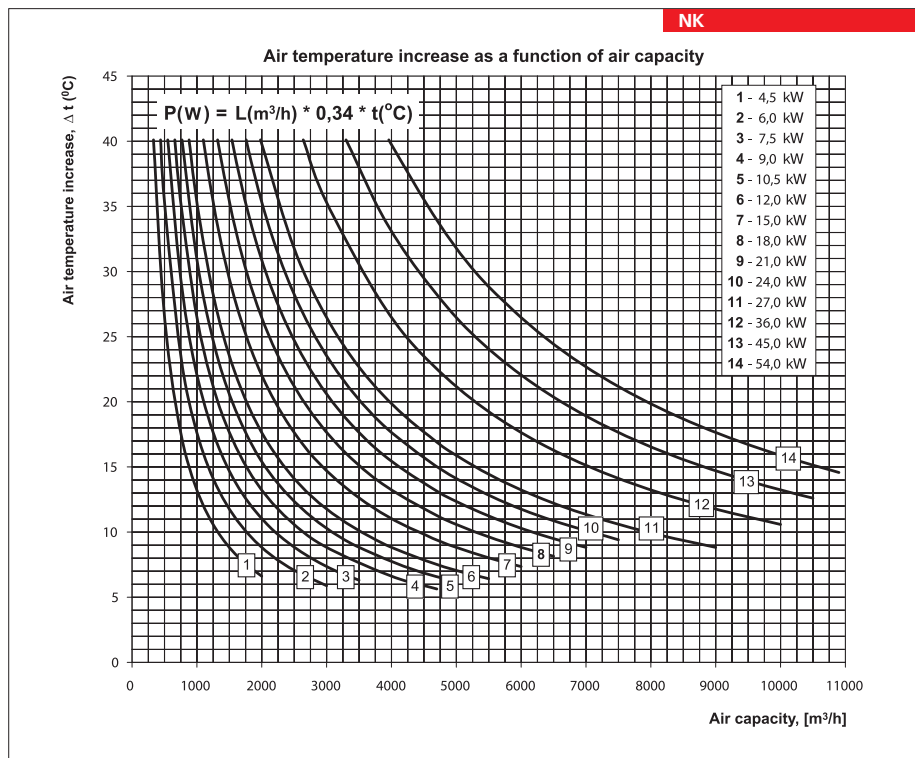
▶ We recommend to keep such distance between the heater and other system elements which is no less than the heater diagonal, i.e. the distance from one angle to another in its air passage part.

▶ The duct heaters are designed for the minimum air flow 1.5 m/s and the operating air temperature 40 °C. In case of speed control option ensure the minimum air flow through the heater.

▶ Power supply to the heater shall be disabled if the fan is not running.

▶ To ensure the correct and safe heater operation the automation system can be applied to ensure the complex control and protection:

- ✓ automatic control of heating elements capacity and air heating temperature;
- ✓ checking filter condition by means of differential pressure sensor;
- ✓ power supply disabling in case of the supply fan shutdown or airflow speed decrease as well as in case of the built-in overheating thermostats operation;
- ✓ shutoff of ventilating system with blowing of electrical heating elements.



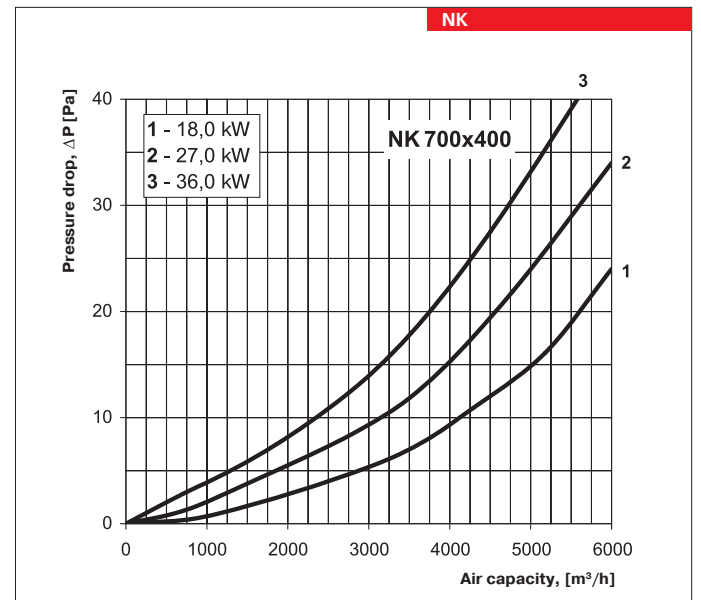
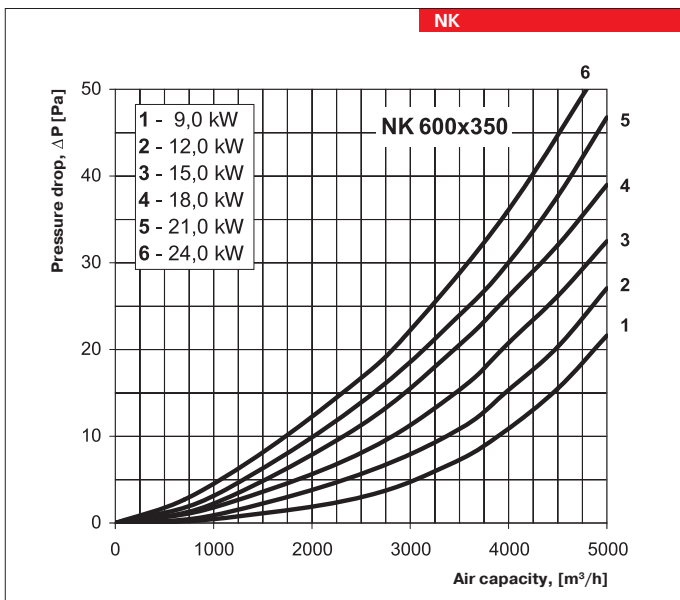
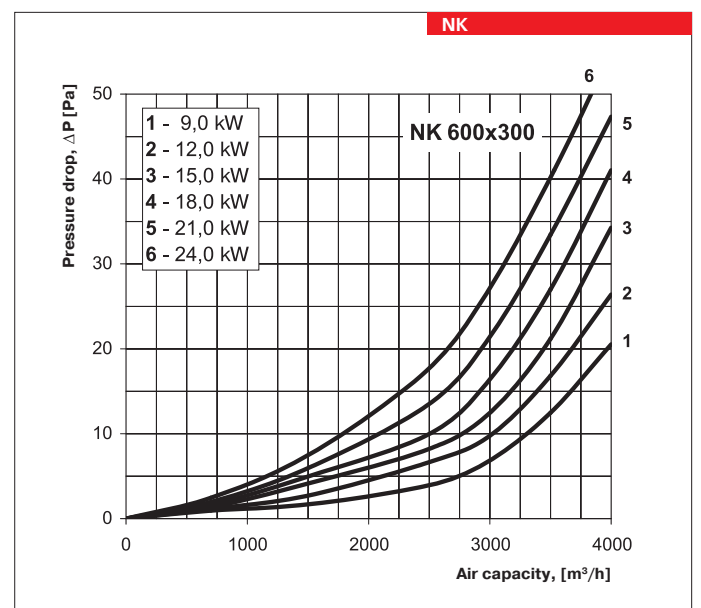
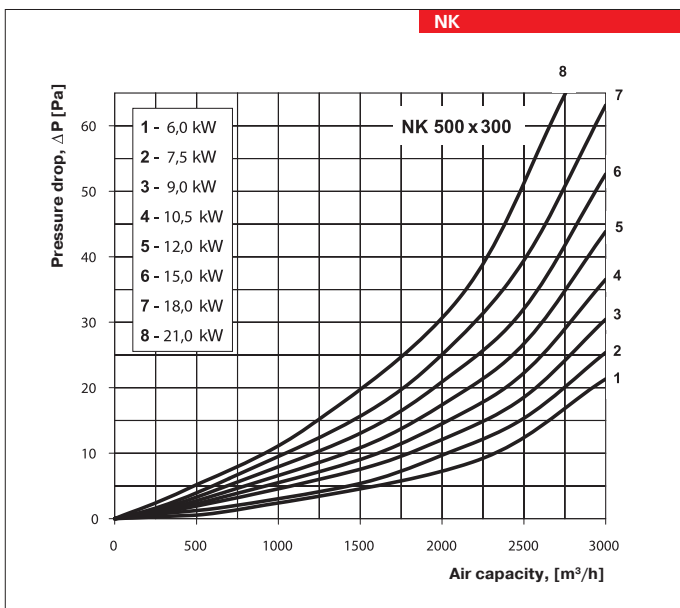
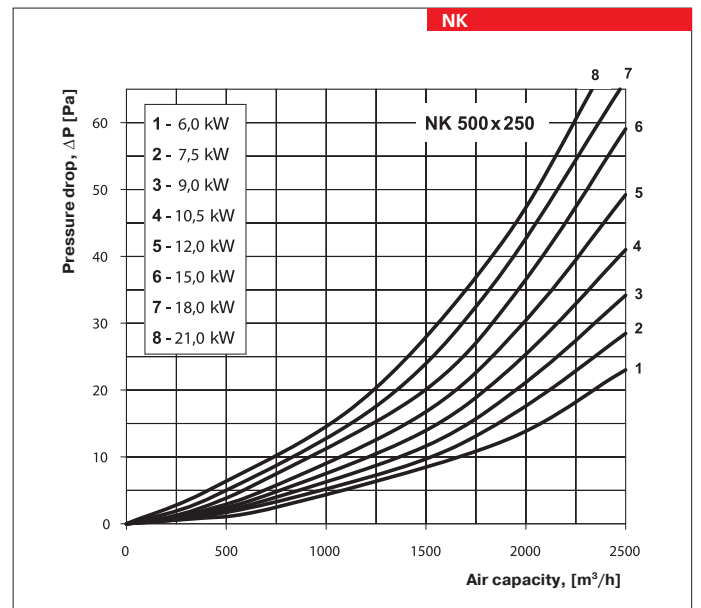
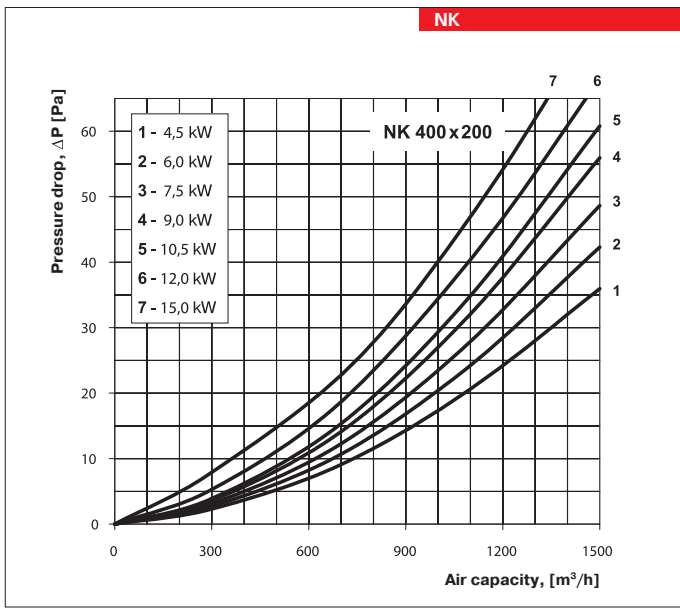
Designation key:

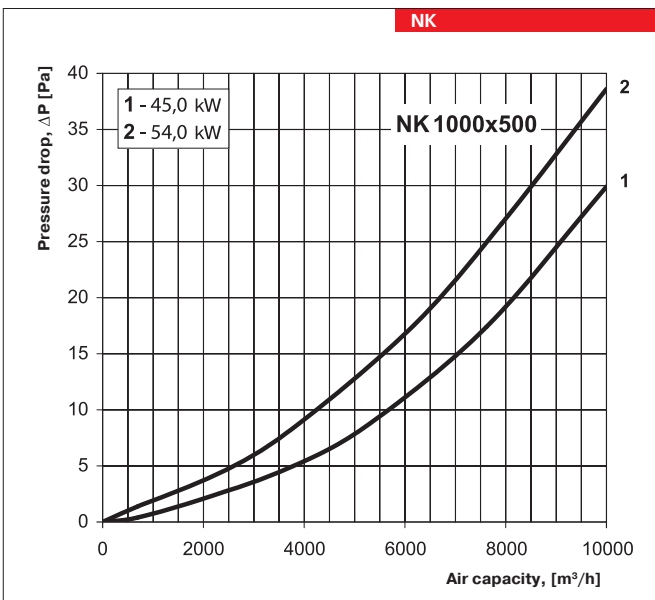
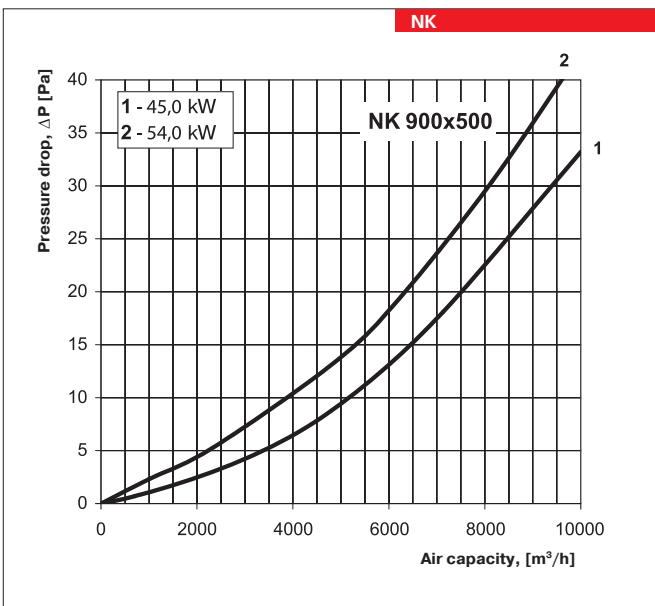
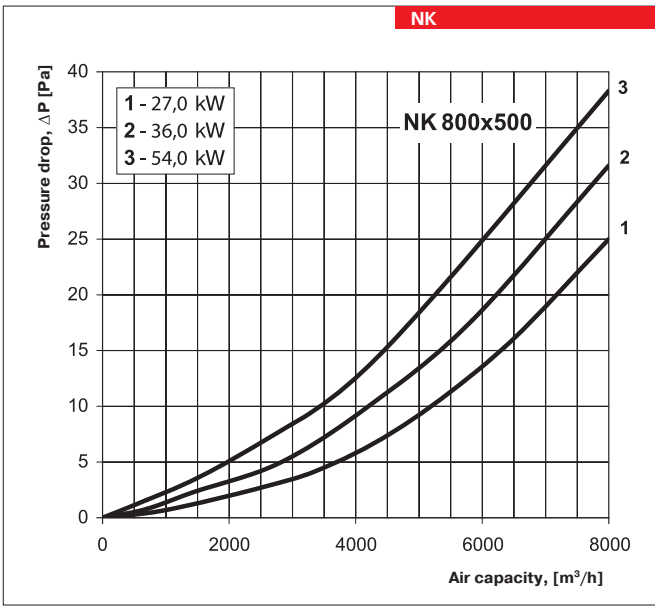
Series	Flange designation (WxH) [mm]	Coil heating capacity [kW]	Phase
NK	400x200; 500x250; 500x300; 600x300; 600x350; 700x400; 800x500; 900x500; 1000x500.	4,5; 6; 7,5; 9; 10,5; 12; 18; 21; 24; 27; 36; 45; 54	3 – three phases

Technical data:

	Minimum air capacity [m³/h]	Current [A]	Voltage [V]	Power [kW]	Number of heating coils x capacity [kW]
NK 400x200-4,5-3	330	6,5	400	4,5	3x1,5
NK 400x200-6,0-3	440	8,7	400	6,0	3x2,0
NK 400x200-7,5-3	550	10,9	400	7,5	3x2,5
NK 400x200-9,0-3	660	13,0	400	9,0	3x3,0
NK 400x200-10,5-3	770	15,2	400	10,5	3x3,5
NK 400x200-12,0-3	880	17,4	400	12,0	3x4,0
NK 400x200-15,0-3	1100	21,7	400	15,0	3x5,0
NK 500x250-6,0-3	440	8,7	400	6,0	3x2,0
NK 500x250-7,5-3	550	10,9	400	7,5	3x2,5
NK 500x250-9,0-3	660	13,0	400	9,0	3x3,0
NK 500x250-10,5-3	770	15,2	400	10,5	3x3,5
NK 500x250-12,0-3	880	17,4	400	12,0	3x4,0
NK 500x250-15,0-3	1100	21,7	400	15,0	3x5,0
NK 500x250-18,0-3	1320	26,0	400	18,0	3x6,0
NK 500x250-21,0-3	1540	30,0	400	21,0	3x7,0
NK 500x300-6,0-3	440	8,7	400	6,0	3x2,0
NK 500x300-7,5-3	550	10,9	400	7,5	3x2,5
NK 500x300-9,0-3	660	13,0	400	9,0	3x3,0
NK 500x300-10,5-3	770	15,2	400	10,5	3x3,5
NK 500x300-12,0-3	880	17,4	400	12,0	3x4,0
NK 500x300-15,0-3	1100	21,7	400	15,0	3x5,0
NK 500x300-18,0-3	1320	26,0	400	18,0	3x6,0
NK 500x300-21,0-3	1540	30,0	400	21,0	3x7,0
NK 600x300-9,0-3	660	13,0	400	9,0	3x3,0
NK 600x300-12,0-3	880	17,4	400	12,0	3x4,0
NK 600x300-15,0-3	1100	21,7	400	15,0	3x5,0
NK 600x300-18,0-3	1320	26,0	400	18,0	3x6,0
NK 600x300-21,0-3	1540	30,0	400	21,0	3x7,0
NK 600x300-24,0-3	1760	34,7	400	24,0	3x8,0
NK 600x350-9,0-3	660	13,0	400	9,0	3x3,0
NK 600x350-12,0-3	880	17,4	400	12,0	3x4,0
NK 600x350-15,0-3	1100	21,7	400	15,0	3x5,0
NK 600x350-18,0-3	1320	26,0	400	18,0	3x6,0
NK 600x350-21,0-3	1540	30,0	400	21,0	3x7,0
NK 600x350-24,0-3	1760	34,7	400	24,0	3x8,0
NK 700x400-18-3	1320	26,0	400	18,0	6x3,0
NK 700x400-27-3	1980	39,0	400	27,0	9x3,0
NK 700x400-36-3	2640	52,0	400	36,0	12x3,0
NK 800x500-27-3	1980	39,0	400	27,0	9x3,0
NK 800x500-36-3	2640	52,0	400	36,0	12x3,0
NK 800x500-54-3	3960	78,0	400	54,0	18x3,0
NK 900x500-45-3	3300	65,0	400	45,0	15x3,0
NK 900x500-54-3	3960	78,0	400	54,0	18x3,0
NK 1000x500-45-3	3300	65,0	400	45,0	15x3,0
NK 1000x500-54-3	3960	78,0	400	54,0	18x3,0

HEATERS





Overall dimensions:

Type	Dimensions [mm]								Mass [kg]
	B	B1	B2	B3	H	H1	H2	L	
NK 400x200-4,5-3	400	420	440	540	200	220	240	200	6,5
NK 400x200-6,0-3	400	420	440	540	200	220	240	200	6,5
NK 400x200-7,5-3	400	420	440	540	200	220	240	200	6,5
NK 400x200-9,0-3	400	420	440	540	200	220	240	200	6,5
NK 400x200-10,5-3	400	420	440	540	200	220	240	200	6,5
NK 400x200-12,0-3	400	420	440	540	200	220	240	200	6,5
NK 400x200-15,0-3	400	420	440	540	200	220	240	200	6,5
NK 500x250-6,0-3	500	520	540	640	250	270	290	200	7,65
NK 500x250-7,5-3	500	520	540	640	250	270	290	200	7,65
NK 500x250-9,0-3	500	520	540	640	250	270	290	200	7,65
NK 500x250-10,5-3	500	520	540	640	250	270	290	200	7,65
NK 500x250-12,0-3	500	520	540	640	250	270	290	200	7,65
NK 500x250-15,0-3	500	520	540	640	250	270	290	200	7,65
NK 500x250-18,0-3	500	520	540	640	250	270	290	200	7,65
NK 500x300-6,0-3	500	520	540	640	300	320	340	200	8,2
NK 500x300-7,5-3	500	520	540	640	300	320	340	200	8,2
NK 500x300-9,0-3	500	520	540	640	300	320	340	200	8,2
NK 500x300-10,5-3	500	520	540	640	300	320	340	200	8,2
NK 500x300-12,0-3	500	520	540	640	300	320	340	200	8,2
NK 500x300-15,0-3	500	520	540	640	300	320	340	200	8,2
NK 500x300-18,0-3	500	520	540	640	300	320	340	200	8,2
NK 500x300-21,0-3	500	520	540	640	300	320	340	200	8,2
NK 600x300-9,0-3	600	620	640	740	300	320	340	200	9,4
NK 600x300-12,0-3	600	620	640	740	300	320	340	200	9,4
NK 600x300-15,0-3	600	620	640	740	300	320	340	200	9,4
NK 600x300-18,0-3	600	620	640	740	300	320	340	200	9,4
NK 600x300-21,0-3	600	620	640	740	300	320	340	200	9,4
NK 600x300-24,0-3	600	620	640	740	300	320	340	200	9,4
NK 600x350-9,0-3	600	620	640	740	350	370	390	200	9,75
NK 600x350-12,0-3	600	620	640	740	350	370	390	200	9,75
NK 600x350-15,0-3	600	620	640	740	350	370	390	200	9,75
NK 600x350-18,0-3	600	620	640	740	350	370	390	200	9,75
NK 600x350-21,0-3	600	620	640	740	350	370	390	200	9,75
NK 600x350-24,0-3	600	620	640	740	350	370	390	200	9,75
NK 700x400-18-3	700	720	740	840	400	420	440	390	14
NK 700x400-27-3	700	720	740	840	400	420	440	510	18,5
NK 700x400-36-3	700	720	740	840	400	420	440	750	25
NK 800x500-27-3	800	820	840	940	500	520	540	390	19
NK 800x500-36-3	800	820	840	940	500	520	540	510	23,5
NK 800x500-54-3	800	820	840	940	500	520	540	750	30
NK 900x500-45-3	900	920	940	1040	500	520	540	750	31
NK 900x500-54-3	900	920	940	1040	500	520	540	750	33,5
NK 1000x500-45-3	1000	1020	1040	1140	500	520	540	750	33
NK 1000x500-54-3	1000	1020	1040	1140	500	520	540	750	36

