

Application

Pumps NTV are intended for forced circulation of water in low-pressure hot water systems of central heating. Construction of that Series allows two-step control of flow.

Pumped liquid

- clean, soft and chemically inactive water (potable) without any content of mechanical impurities
- mixture of water and glycol at the rate 1 : 1
- special liquid for solar cells with its max. density of 1,050 kg.m⁻³

Construction

Pumps NTV are of close-coupled glandless design, provided with an electric motor being cooled with a pumped liquid.

Material options

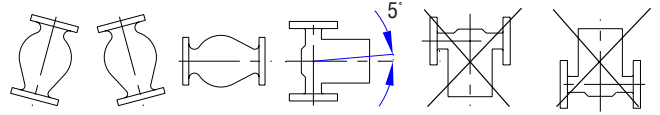
Pump main parts are produced of following materials:

Pump casing	- grey cast iron
Impeller	- brass
Shaft, partition and can	- stainless steel
Bearings	- carbon

Arrangement and positioning

Pumps NTV may be mounted into straight piping - inclined as desired, however, the electric motor axis should always be horizontal, with max. deviation of +5°.

Wiring shall conform to respective standards.



Valves and checking pressure gauges should be installed in front of the pump and behind it.

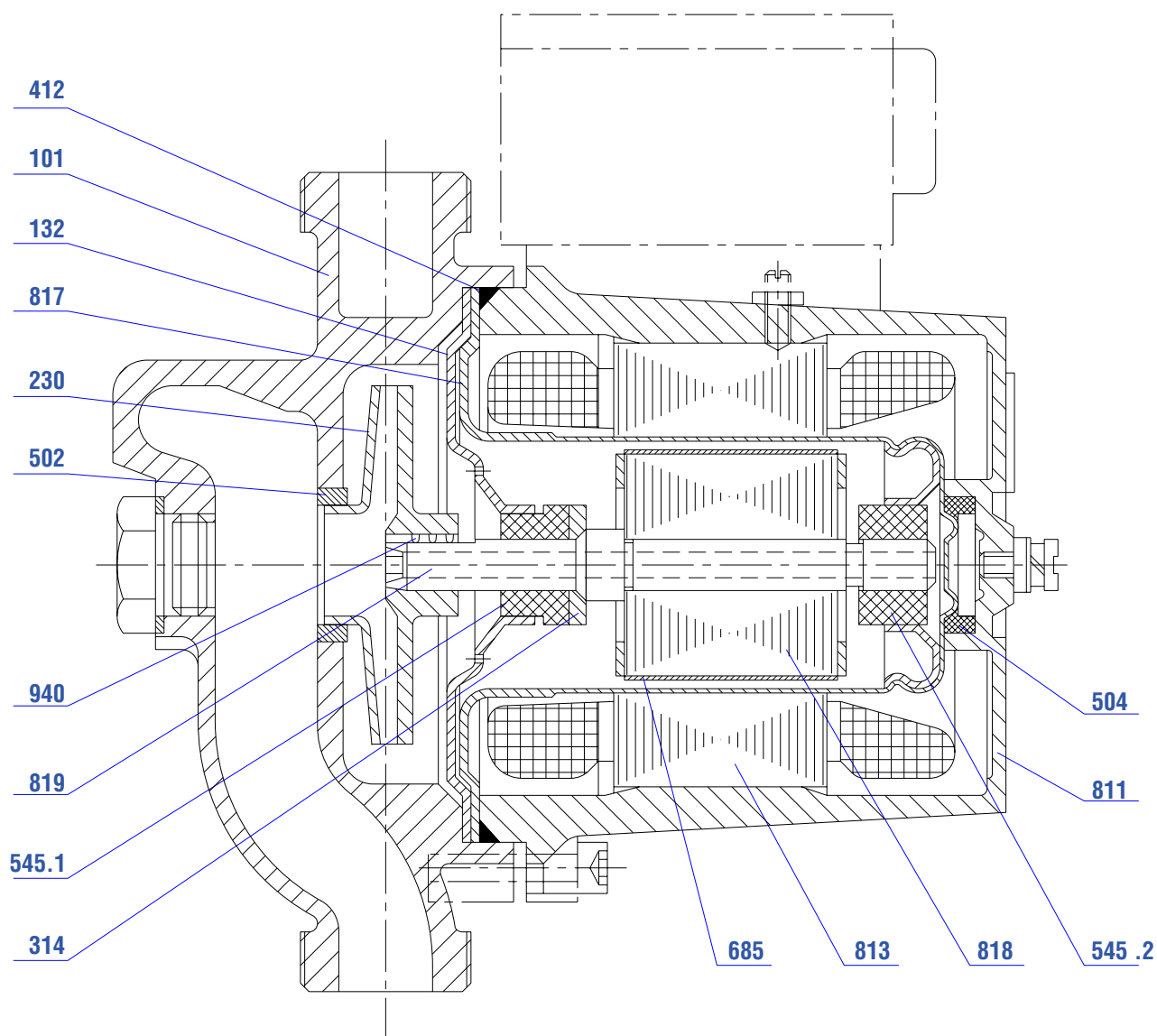
Piping near by the pump should be clamped thoroughly, to prevent transmission of forces having been generated by piping expansion or due to installation faults onto the pump.

It is not recommended to place the pump at the lowest or the highest spots of a heating system. At the lowest spot there its fouling and clogging may happen, then at the highest spot there its aerating could appear.

Accessories of small circulators NTV

Smallest types of circulators 20-NTV and 25-NTV may be provided with ball cocks serving as shut-off elements for both suction and discharge sides. Ball cocks may be installed into piping in various positions - as desired. They may be delivered on a special request.

Informatory sectional arrangement

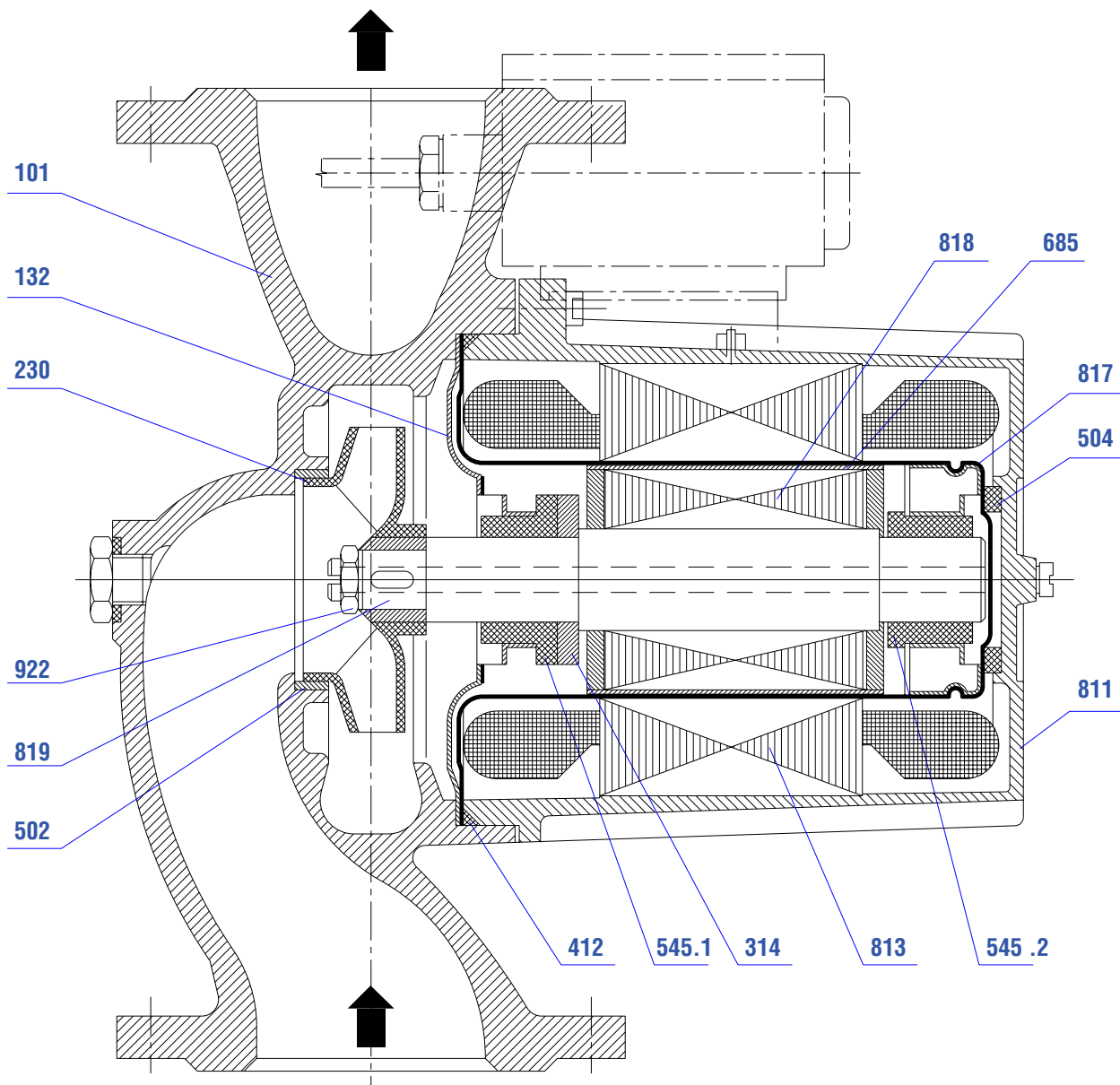


20-NTV až 25-NTV

Numbering of positions according to DIN 24 250

101	Pump casing	504	Distance ring	817	Can
132	Partition	545.1	Bearing bush	818	Electric motor rotor
230	Impeller	545.2	Bearing bush	819	Shaft
314	Ring carrier	685	Protective bush	940	Clamping strip
412	Packing ring	811	Electric motor shell		
502	Wear ring	813	Electric motor stator		

Informatory sectional arrangement



40-NTV ÷ 80-NTV

Numbering of positions according to DIN 24 250

101 Pump casing
 132 Partition
 230 Impeller
 314 Ring carrier
 412 Packing ring
 502 Wear ring

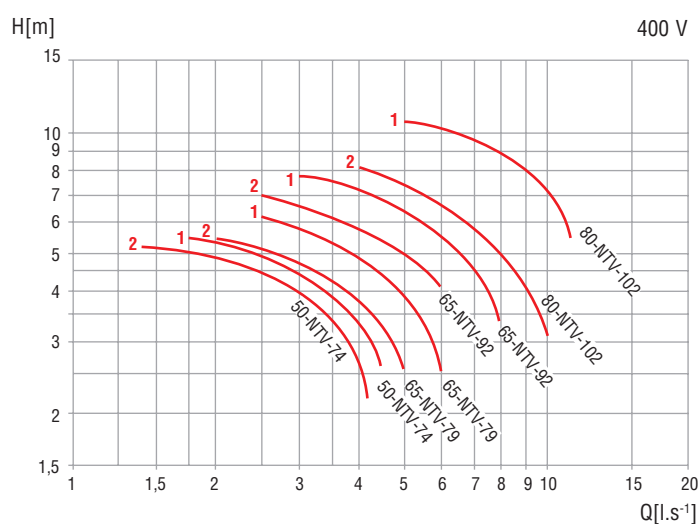
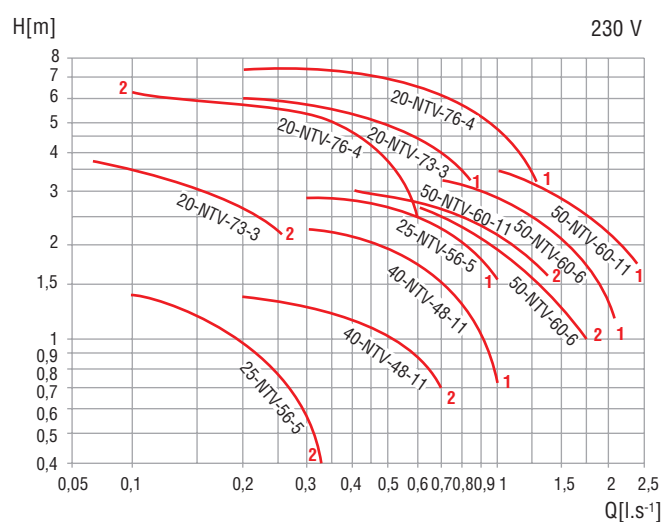
504 Distance ring
 545.1 Bearing bush
 545.2 Bearing bush
 685 Protective bush
 811 Electric motor shell
 813 Electric motor stator

817 Can
 818 Electric motor rotor
 819 Shaft
 922 Shaft nut

Performance data

Pump type		20-NTV-73-3	20-NTV-76-4	25-NTV-56-5	40-NTV-48-11	40-NTV-60-6	50-NTV-60-6	50-NTV-60-11	50-NTV-74-13	65-NTV-79-14	65-NTV-92-12	80-NTV-102-16
Basic speed of rotation	n (min ⁻¹)	2590	2700	2600	2780	2750	2750	2700	2850	2810	2740	2720
Power input	P ₁ (W)	80-106	90-176	46-55	38-40	80-105	75-93	90-116	310-420	400-500	560-770	880-1360
Reduced speed of rotation	n (min ⁻¹)	1650	2200	1600	2120	2200	2200	2300	2600	2600	2400	2330
Power input	P ₁ (W)	43-52	65-140	28-32	23-24	55-80	55-77	70-104	200-290	300-400	420-600	720-1000
Current for motor protection (Circuit breaker setting-up)	I (A)	0.5*	0.8	0.3*	0.2*	0.6	0.6	0.7	1.2	1.3	2	2.7
Max. temperature of a pumped liquid	t (°C)	120	120	120	120	120	120	120	110	110	110	110
Max. ambient temperature on request	t (°C)	50	50	35	35	35	35	35	40	40	40	40
	t (°C)	-	-	50	50	50	50	50	50	50	50	50
Suction branch dia.	DN (mm)	20	20	25	40	40	50	50	50	65	65	80
Discharge branch dia.	DN (mm)	20	20	25	40	40	50	50	50	65	65	80
Max. working pressure as standard on request	p (MPa)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	p (MPa)	-	1.0	-	1.0	1.0	1.0	1.0	1.0	1.0	-	-
Electric motor												
Voltage	U (V)	230	230	230	230	230	230	230	400	400	400	400
Frequency	f (Hz)	50	50	50	50	50	50	50	50	50	50	50
Maximum sound power level	L _{PA} (dB _A)	40	40	38	40	45	45	45	53	53	53	53
Pump-set weight	m (kg)	4.9	4.7	4.7	8	10	10.3	16	16	19	23	26

Pump selection chart

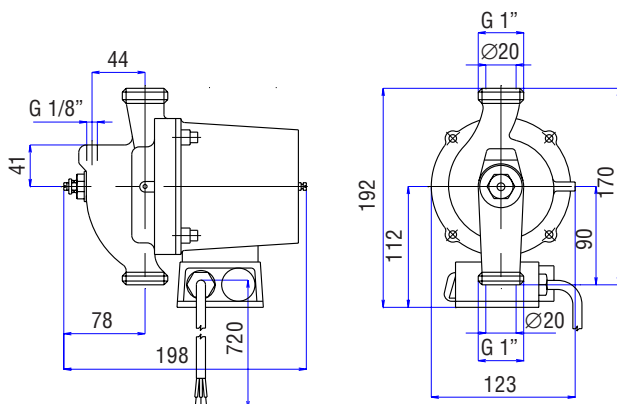


Curves marked with number 1 correspond to position „MAX“ of change-over switch - pump works with its full output.
Curves marked with number 2 correspond to position „MIN“ of change-over switch - pump works with its reduced output.

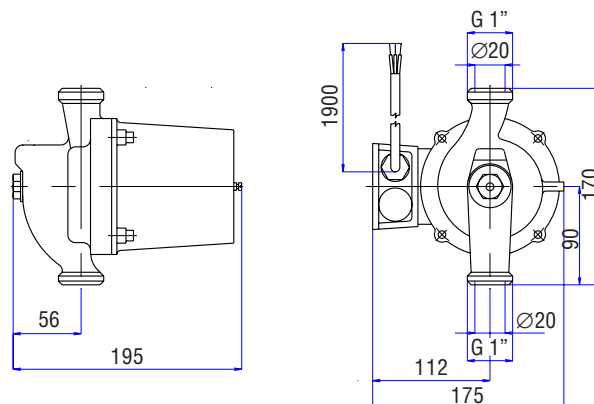
Heat water circulators NTV

Dimensions

20-NTV-73



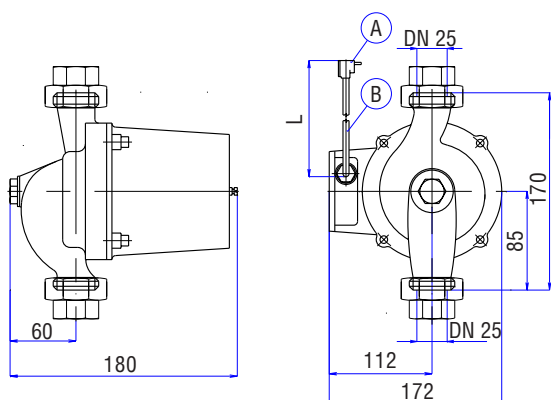
20-NTV-76



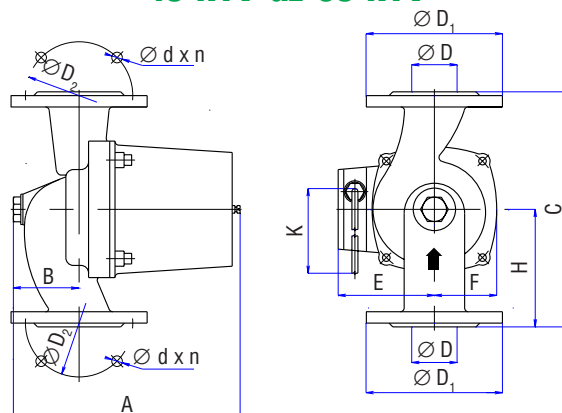
Pump 20-NTV-73-3 is intended for installation into straight piping or heating circulating pump-sets for central heating serving one flat.

Pump 20-NTV-76-4 „SOLAR“ for installation into straight piping is intended for forced circulation of anti-freeze and anti-corrosive liquids or hot water.

25-NTV-56



40-NTV až 80-NTV



Workmanship A:

cable with plug length 2,100 mm for ambient temperature 35 °C

Workmanship B:

cable without plug length 2,000 mm for ambient temperature 50 °C

Pump Series	A	B	C	E	F	H	K *)	Branches				
								ØD	ØD ₁	ØD ₂	Ød	n
40-NTV-48-11	195	64	220	112	60	110	2100	40	128	100	14	4
40-NTV-60-6	215	64										
50-NTV-60-6	225	71	240	125	80	140	1900	50	138	110	14	4
50-NTV-60-11												
50-NTV-74-13	265	90	300	140	100	150	2000	70	158	130	18	4
65-NTV-79-14												
65-NTV-92-12	300	115	380	140	110	190	2000	80	188	150	18	4
80-NTV-102-16												

n = number of holes Ø d.

Dimensions of both branches flanges (D) are intended for PN 6, with raised face.

*) With pumps of Series 20-NTV, 25-NTV and 40-NTV there are two types of electric cable terminations. With ambient temperature 35 °C - a cable with a plug, with ambient temperature 50 °C - silicone cable without a plug. Pump other Series are supplied without a plug.