

# NKV 10-15-20-32-45-65-95

## VERTICAL MULTISTAGE CENTRIFUGAL ELECTRIC PUMPS WITH COUPLING



### TECHNICAL DATA

**Operating range:**

from 4 to 118 m<sup>3</sup>/h with head up to 319 meters.

**Pumped liquid:** clean, without solids or abrasives, non-viscous, non-aggressive, non-crystallized and chemically neutral, with properties similar to water.

**Liquid temperature range:** from -15°C to +120°C.

**Maximum ambient temperature:** +40°C.

**Maximum working pressure:** 25 bar (2500kPa) NKV 10-15-20-65-95  
32 bar (3200kPa) NKV 32-45

**Protection level:** IP 55.

**Insulation class:** F.

**Standard voltage:** single-phase 230/400 V / 50 Hz  
three-phase 400 V Δ / 50 Hz starting from 3.

**Installation:** fixed, vertical mounting.

**Special version on request:**  
other voltages and / or power supply frequencies.  
60 Hz version.

### APPLICATIONS

Vertical multistage centrifugal pump suitable for medium to large user water systems. Recommended for pressurisation units, boiler supply, hot water and cooling water circulation, fire fighting and washing systems, drinking water supply and filling of pressure vessels, sprinkler and watering systems and water purification systems.

### PUMP FEATURES

#### NKV 10-15-20

All the parts in contact with liquid are made of stainless steel.

AISI 304 microcast stainless steel internal pump body, ULTEM diffusers, AISI 431 pump shaft, impellers and pump sleeve in stainless steel AISI 304. External pump body and support in cast iron with cataphoresis paint coating. The cartridge mechanical seal is made of silicon carbide/silicon carbide, maintenance-free, and can be dismantled without removing the motor starting from 5.5 kW. Rigid motor-pump coupling.

#### NKV 32-45-65-95

Impellers, diffusers and sleeve in AISI 304 stainless steel to ensure durability, high efficiency and performance. Pump shaft in stainless steel AISI 431. Pump body and seal holding disc in cast iron with cataphoresis paint coating. Carbon stage body bushing, to ensure durability in case of dry operation. Oversized ball bearings, fitted on the motor support to ensure duration and eliminate axial adjustments. PTFE WRAS approved floating wear ring for consistent performance. Silicon carbide / carbon mechanical seal that can be dismantled without removing the motor starting from 5.5 kW. Rigid motor-pump coupling. Special full stainless steel version on request.

### CONSTRUCTION FEATURES OF THE MOTOR

Closed with external ventilation cooling.

Rotor running on permanently lubricated ball bearings, oversized to ensure low noise and durability.

Motor protection is the responsibility of the user

Manufactured according to CEI 2-3.

Motor frame: NKV 10 - 15 - 20 : B5 - V1

NKV 32 - 45 - 65 - 95: B14 for 4kW and B5 from 5,5kW included.

### DENOMINATION INDEX:

(Example)

NKV 32 / 3 - 2

Range name

Approximate flow in m<sup>3</sup>/h  
at the best efficiency point

Number of stages

Number of reduced impellers

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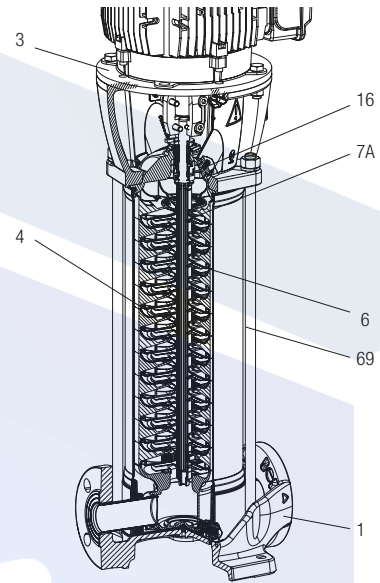
# NKV 10-15-20-32-45-65-95

VERTICAL MULTISTAGE CENTRIFUGAL ELECTRIC PUMPS WITH COUPLING

## MATERIALS NKV 10-15-20

N°	PARTS	MATERIALS *
1	EXTERNAL PUMP BODY	CAST IRON WITH CATAPHORESIS
	INTERNAL PUMP BODY*	STAINLESS STEEL AISI 304
3	SUPPORT	CAST IRON WITH CATAPHORESIS
4	IMPELLER*	STAINLESS STEEL AISI 304
6	DIFUSSER*	TECHNOPOLYMER "ULTEM"
7A	PUMP SHAFT*	STAINLESS STEEL AISI 431
16	MECHANICAL SEAL*	CARTRIDGE SiC/SiC/EPDM
69	EXTERNAL CASING*	STAINLESS STEEL AISI 304

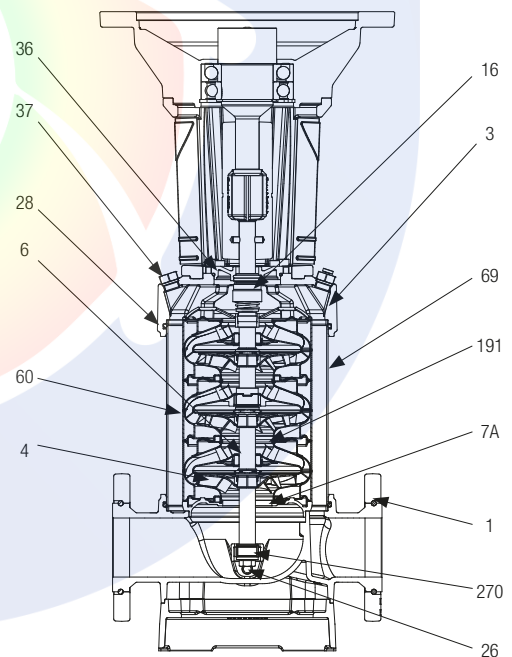
\* In contact with the liquid.



## MATERIALS NKV 32-45-65-95

N°	PARTS	MATERIALS *
1	PUMP BODY	CAST IRON WITH CATAPHORESIS
3	FLANGE	CAST IRON WITH CATAPHORESIS
4	IMPELLER	STAINLESS STEEL AISI 304
6	STAGE BODY AND DIFUSSER	STAINLESS STEEL AISI 304
7A	PUMP SHAFT	STAINLESS STEEL AISI 431
16	MECHANICAL SEAL	SiC, CARBON, EPDM
26	DARIN PLUG	STAINLESS STEEL AISI 304
28	O-RING	EPDM
36	SEAL DISK	STAINLESS STEEL AISI 316
37	LOADING CAP	STAINLESS STEEL AISI 304
60	INTERMEDIATE BEARING	GRAPHITE
69	EXTERNAL CASING	STAINLESS STEEL AISI 304
191	FLOATING ADJUSTMENT RING	PTFE
270	GUIDE BUSHING	TUNGSTEN CARBIDE

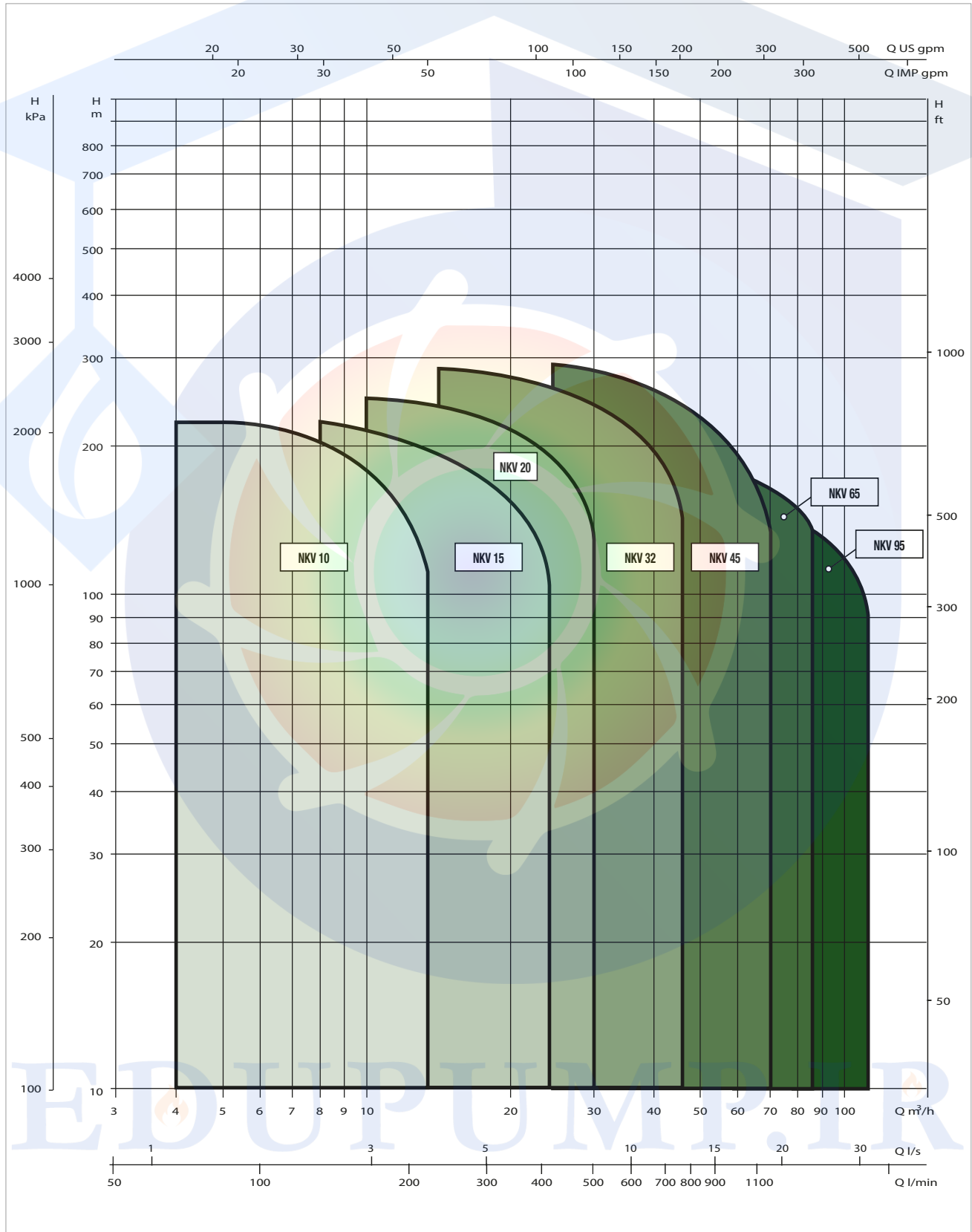
\* In contact with the liquid.



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**PERFORMANCE RANGE**

The performance curves are based on the kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

**GRAPHIC SELECTION TABLE**

# NKV 10-15-20-32-45-65-95

## VERTICAL MULTISTAGE CENTRIFUGAL ELECTRIC PUMPS WITH COUPLING

### SELECTION TABLE - NKV 10

MODEL	Q=m³/h	0	4	8	10	12
	Q=l/min	0	66	132	167	200
NKV 10/2 T	H (m)	20,2	20	18,3	15,8	12,5
NKV 10/3 T		30,3	31	27,5	23,6	18,8
NKV 10/4 T		40,4	41	36,7	31,5	25,1
NKV 10/5 T		50,5	51	45,8	39,4	31,3
NKV 10/6 T		60,5	61	55,0	47,3	37,6
NKV 10/7 T		70,6	72	64,2	55,1	43,8
NKV 10/8 T		80,7	82	73,3	63,0	50,1
NKV 10/9 T		90,8	92	82,5	70,9	56,4
NKV 10/10 T		100,9	102	91,7	78,8	62,6
NKV 10/12 T		121,1	123	110,0	94,5	75,2
NKV 10/14 T		141,3	143	128,3	110,3	87,7
NKV 10/16 T		161,5	164	146,7	126,0	100,2
NKV 10/18 T		181,6	184	165,0	141,8	112,7
NKV 10/20 T		201,8	205	183,3	157,5	125,3
NKV 10/22 T	222	225	202	173,3	137,8	

### SELECTION TABLE - NKV 15

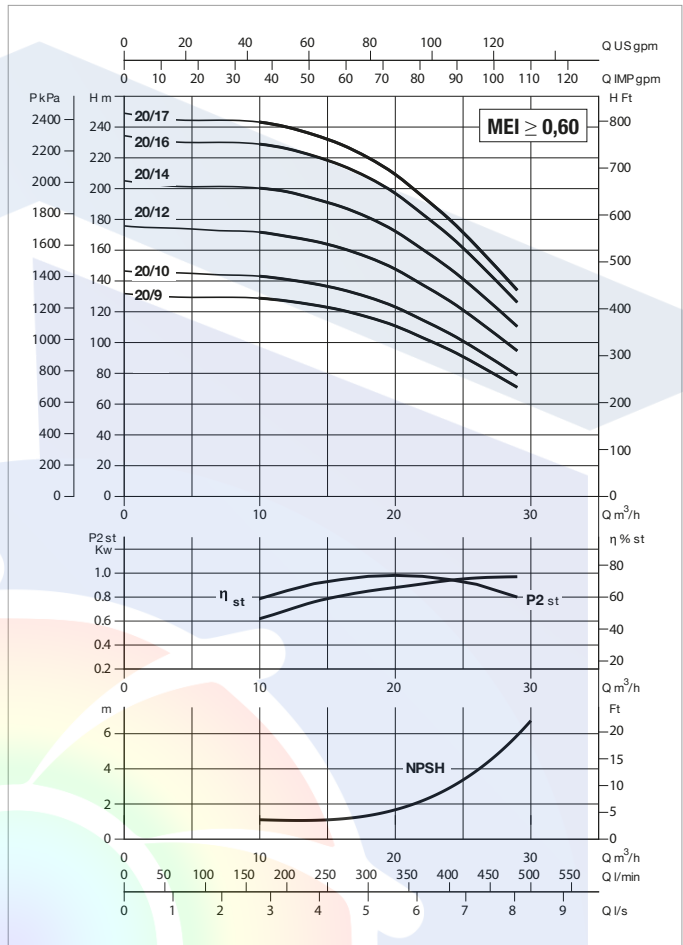
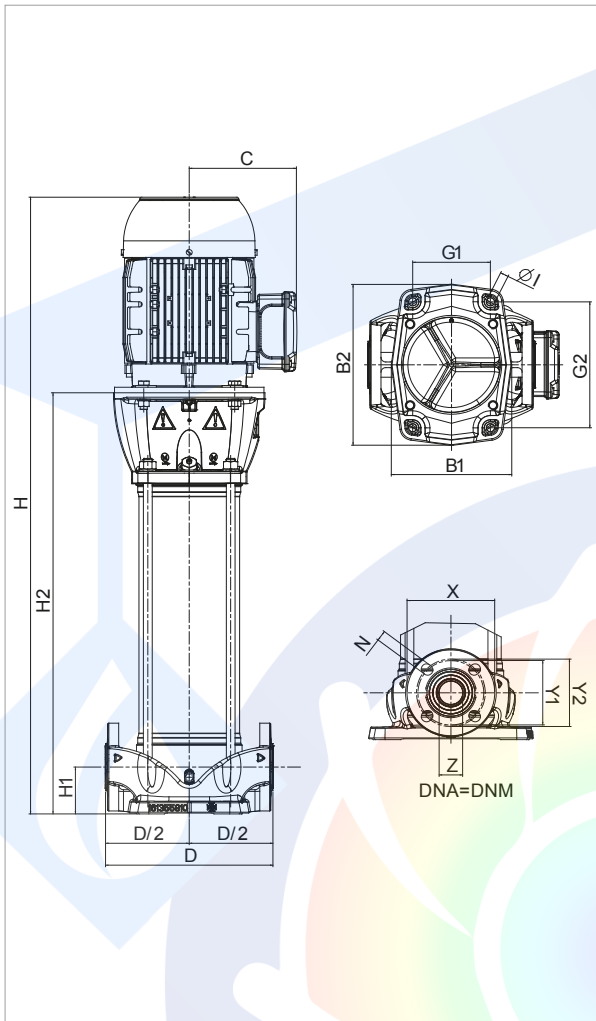
MODEL	Q=m³/h	0	4	8	10	12	14	16	18	20	22	24
	Q=l/min	0	66	132	167	200	233	264	300	334	367	400
NKV 15/2 T	H (m)	27,2	26,7	26	26,1	25,5	24,5	23,2	21,6	19,8	17,4	14,6
NKV 15/3 T		40,8	40,0	40	39,1	38,3	36,8	34,8	32,5	29,7	26,1	21,9
NKV 15/4 T		54,4	53,4	53	52,1	51,0	49,0	46,4	43,3	39,6	34,8	29,2
NKV 15/5 T		68,0	66,7	66	65,2	63,8	61,3	58,1	54,1	49,5	43,5	36,5
NKV 15/6 T		81,6	80,1	79	78,2	76,5	73,6	69,7	64,9	59,4	52,2	43,8
NKV 15/7 T		95,2	93,4	92	91,2	89,3	85,8	81,3	75,8	69,3	60,9	51,1
NKV 15/8 T		108,8	106,8	106	104,3	102,0	98,1	92,9	86,6	79,2	69,6	58,4
NKV 15/9 T		122,4	120,1	119	117,3	114,8	110,3	104,5	97,4	89,1	78,4	65,7
NKV 15/10 T		136,0	133,5	132	130,4	127,5	122,6	116,1	108,2	99,0	87,1	73,0
NKV 15/12 T		163,2	160,2	158	156,4	153,0	147,1	139,3	129,9	118,8	104,5	87,6
NKV 15/14 T		190,4	186,9	185	182,5	178,5	171,6	162,6	151,5	138,6	121,9	102,2
NKV 15/16 T		217,6	213,6	211	208,6	204,0	196,1	185,8	173,2	158,4	139,3	116,8
NKV 15/17 T		231,2	226,9	225	221,6	216,75	208,4	197,4	184	168,3	148	124,1

### SELECTION TABLE - NKV 20

MODEL	Q=m³/h	0	4	8	10	12	14	16	18	20	22	24	26	29
	Q=l/min	0	66	132	167	200	233	264	300	334	367	400	433	483
NKV 20/2 T	H (m)	29,3	28,8	28,8	28,6	28	27,6	26,9	25,9	24,6	22,9	21,2	19,1	15,8
NKV 20/3 T		43,9	43,2	43,1	42,9	42	41,5	40,4	38,8	36,9	34,4	31,8	28,7	23,6
NKV 20/4 T		58,6	57,6	57,5	57,2	56	55,3	53,8	51,8	49,2	45,9	42,4	38,2	31,5
NKV 20/5 T		73,2	71,9	71,9	71,5	71	69,1	67,3	64,7	61,5	57,4	52,9	47,8	39,4
NKV 20/6 T		87,9	86,3	86,3	85,8	85	82,9	80,7	77,7	73,8	68,8	63,5	57,4	47,3
NKV 20/7 T		102,5	100,7	100,6	100,1	99	96,8	94,2	90,6	86,1	80,3	74,1	66,9	55,2
NKV 20/8 T		117,2	115,1	115,0	114,4	113	110,6	107,6	103,6	98,4	91,8	84,7	76,5	63,1
NKV 20/9 T		131,8	129,5	129,4	128,8	127	124,4	121,1	116,5	110,8	103,2	95,3	86,0	70,9
NKV 20/10 T		146,5	143,9	143,8	143,1	141	138,2	134,5	129,5	123,1	114,7	105,9	95,6	78,8
NKV 20/12 T		175,8	172,7	172,5	171,7	169	165,9	161,4	155,4	147,7	137,6	127,1	114,7	94,6
NKV 20/14 T		205,1	201,4	201,3	200,3	198	193,5	188,3	181,3	172,3	160,6	148,2	133,8	110,4
NKV 20/16 T		234,4	230,2	230,0	228,9	226	221,2	215,2	207,2	196,9	183,5	169,4	152,9	126,1
NKV 20/17 T		249	244,6	244,4	243,2	240	235	228,7	220,1	209,2	195	180	162,5	134

# NKV 20 - VERTICAL AXIS MULTISTAGE CENTRIFUGAL ELECTRIC PUMPS FOR CIVIL AND INDUSTRIAL PRESSURIZATION UNITS

Liquid temperature range: da - 15°C TO +120°C - Maximum working pressure: 25 bar (2500 kPa)



For hydraulic efficiency see pag. 291  
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Tolerance of curves to ISO 9906.

MODEL	VOLTAGE 50 Hz	P1 MAX kW	P2 NOMINAL		In A		MOTOR TYPE	Ist A		RPM
			kW	HP	IE2	IE3		IE2	IE3	
NKV 20/9 T	3 x 400 V ~	9,8	11	14,96	22,4	19,4	IE2 / IE3	126,05	147	2930
NKV 20/10 T	3 x 400 V ~	10,9	11	14,96	22,4	19,4	IE2 / IE3	126,05	147	2930
NKV 20/12 T	3 x 400 V ~	13,0	15	20,4	29,5	26,5	IE2 / IE3	189,81	204	2940
NKV 20/14 T	3 x 400 V ~	15,2	15	20,4	29,5	26,5	IE2 / IE3	189,81	204	2940
NKV 20/16 T	3 x 400 V ~	17,1	18,5	25,16	35,5	32	IE2 / IE3	239,91	262	2940
NKV 20/17 T	3 x 400 V ~	18,2	18,5	25,16	35,5	32	IE2 / IE3	239,91	262	2940

MODEL	STAGE N°	B1	B2	G1	G2	I	C		D	D/2	H		H1	H2	DNA = DNM (DN 50)				PACK. DIMENSIONS			VOL. mc	WEIGHT Kg	
							IE2	IE3			IE2	IE3			X	Y	Z	N	L/A	L/B	H		IE2	IE3
NKV 20/9 T	9	201	274	130	215	13,5	255	242	300	150	1218	1248	90	713	165	125	67	18	1360	500	530	0,360	117	137
NKV 20/10 T	10	201	274	130	215	13,5	255	242	300	150	1251	1297,5	90	746	165	125	67	18	1360	500	530	0,360	128	177
NKV 20/12 T	12	201	274	130	215	13,5	255	242	300	150	1317	1396,5	90	812	165	125	67	18	1360	500	530	0,360	141	187
NKV 20/14 T	14	201	274	130	215	13,5	255	242	300	150	1383	1495,5	90	878	165	125	67	18	1650	500	580	0,479	143	194
NKV 20/16 T	16	201	274	130	215	13,5	255	242	300	150	1504	1638,5	90	944	165	125	67	18	1850	500	580	0,479	161	185
NKV 20/17 T	17	201	274	130	215	13,5	255	242	300	150	1817,5	1688	90	1257,5	165	125	67	18	1850	500	580	0,537	162	220

CENTRIFUGAL PUMPS



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با امکان محاسبه آنلاین و انتخاب پمپ

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اطفاء حریق

تهران، سعدی شمالی، خیابان مرادی نور، پلاک ۳۱

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