







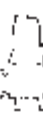










# SUBMERSIBLE PUMPS

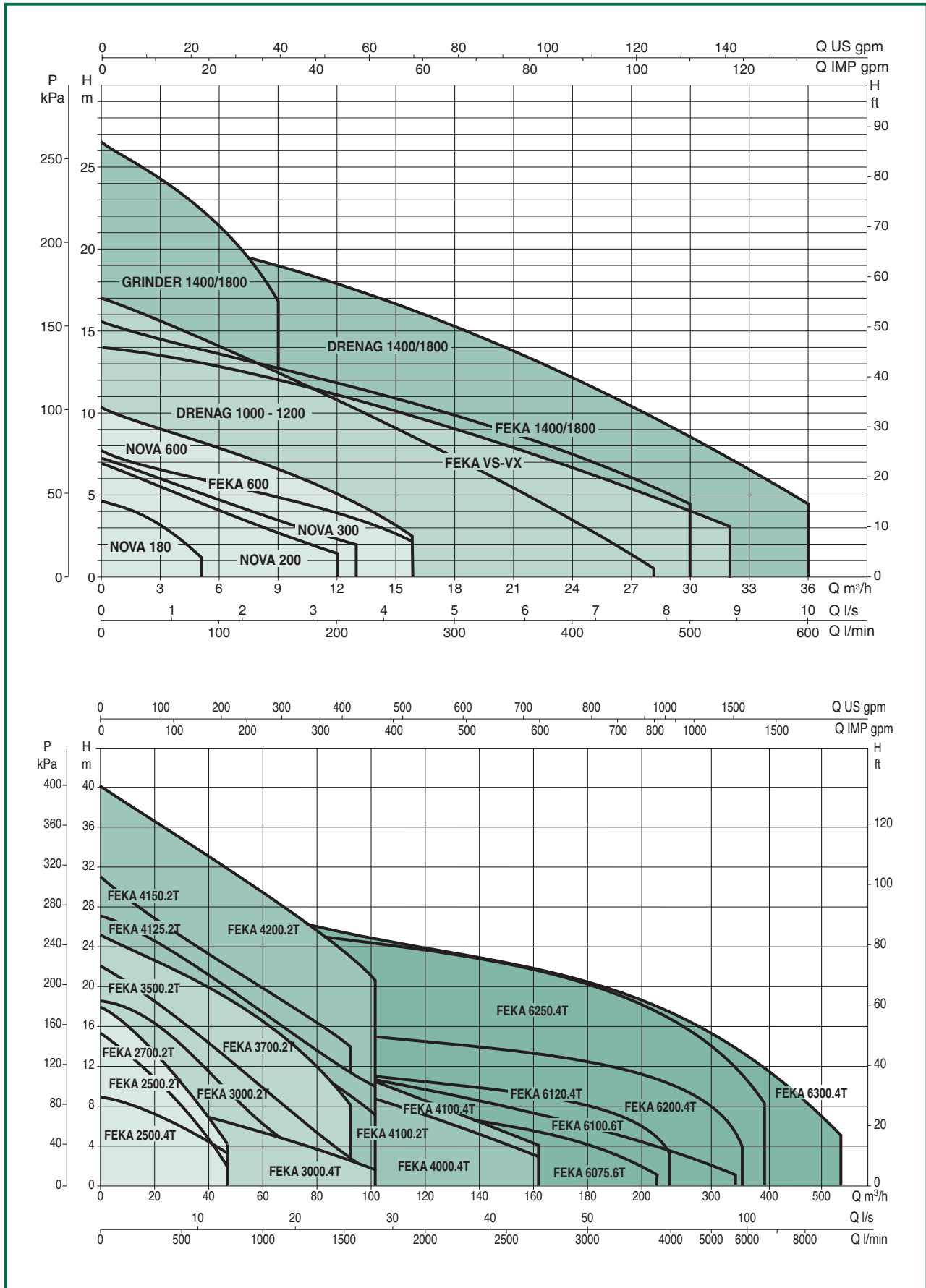
## TABLE OF PERFORMANCE RANGES AND POSSIBLE APPLICATIONS

	NOVA	FEKA 600	FEKA VS	FEKA VX	DRENAG 1000-1200	DRENAG	FEKA	GRINDER	FEKA 2500/3000 4000/6000	NOVABOX 30/300	FEKALIFT	FEKABOX 100	FEKABOX 200	FEKABOX 280	FEKAFOS 200	FEKAFOS 280	FEKAFOS 550
																	
DNA connections										VARI	DN 28 DN 40	DN 50 DN 110	DN110	DN110	DN 110	DN110	DN110
DNM connections	1 1/4" G	1 1/4" G	2" F	2" F	1 1/2" G	2" G	2" G	2" G	DN 65 DN 150	1 1/4" G	DN 25	2" G	2" G	2" G	2" G	2" G	2" G
Flow rate Q (m <sup>3</sup> /h)	16	16	32	32	23	33	30	9	162	7,5	3,9	24	24	24	35	35	65
Head H (m)	10,2	7,4	14	14	17	21,5	15,5	26,5	40	6,9	6,9	9	9	9	9	26,5	26,5
Temperature t (°C)	+50	+50	+50	+50	+50	+55	+55	+55	+55	+50	+60	+50	+50	+50	+50	+55	+55
Ground-water	•	•	•	•	•	•	•		•	•		•	•	•	•	•	•
Rain water	•	•	•	•	•	•	•		•	•		•	•	•	•	•	•
Clean waste water	•	•	•	•	•	•	•		•	•		•	•	•	•	•	•
Dirty waste water		•	•	•			•	•	•		•	•	•	•	•	•	•
Fountain water			•	•	•	•											
River or lake water			•	•	•	•	•		•			•	•	•	•	•	•
Sandy water			•	•	•	•											
A Sewage containing, solids and long fibres									•					•		•	•

# PERFORMANCE RANGE

# SELECTION TABLE

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.



# PERFORMANCE RANGE

# SELECTION TABLE

MODEL		P2 NOMINAL		Q																
SINGLE-PHASE	THREE-PHASE	kW	HP	m³/h																
				0	1	2	3	4,5	5	6	7	7,5	9	10	12	15	18	24	30	36
				l/min																
				0	16,6	33,3	50	75	83,3	100	116,6	125	150	166,6	200	250	300	400	500	600
NOVA 180 M-A *	-	0,22	0,3	4,8	4,3	3,8	3	1,6												
NOVA 180 M-NA *	-	0,22	0,3	4,8	4,3	3,8	3	1,6												
NOVA 200 M-NA *	-	0,22	0,3	6,6	6,2	5,8	5,2	4,6	4,4	4	3,4	3,2	2,6	2,2						
NOVA 300 M-A *	-	0,22	0,3	6,8	6,4	6	5,6	5,1	4,9	4,6	4,2	4	3,4	3	2,2					
NOVA 600 M-A *	-	0,55	0,75	10,2	9,7	9,3	8,9	8,3	8,1	7,8	7,4	7,2	6,6	6,1	5	3,1				
NOVA 600 M-NA *	NOVA 600 T-NA *	0,55	0,75	10,2	9,7	9,3	8,9	8,3	8,1	7,8	7,4	7,2	6,6	6,1	5	3,1				
FEKA 600 M-A *	-	0,55	0,75	7,45	7,1	6,75	6,45	6,1	5,95	5,7	5,45	5,35	4,95	4,7	4,1	2,8				
FEKA 600 M-NA *	FEKA 600 T-NA *	0,55	0,75	7,45	7,1	6,75	6,45	6,1	5,95	5,7	5,45	5,35	4,95	4,7	4,1	2,8				
FEKA VS-VX 550 M-A	-	0,55	0,75	7,4			6,9			6,2					4,1		1,8			
FEKA VS-VX 550 M-NA	FEKA VS-VX 550 T-NA	0,55	0,75	7,4			6,9			6,2					4,1		1,8			
FEKA VS-VX 750 M-A	-	0,75	1	9,6			9,2			8,5					6,7		4,3	1,9		
FEKA VS-VX 750 M-NA	FEKA VS-VX 750 T-NA	0,75	1	9,6			9,2			8,5					6,7		4,3	1,9		
FEKA VS-VX 1000 M-A	-	1,00	1,36	11,8			11,3			10,5					9,0		6,8	4,1		
FEKA VS-VX 1000 M-NA	FEKA VS-VX 1000 T-NA	1,00	1,36	11,8			11,3			10,5					9,0		6,8	4,1		
FEKA VS-VX 1200 M-A	-	1,20	1,60	14			13,4			12,8					11,2		9,0	6,7		
FEKA VS-VX 1200 M-NA	FEKA VS-VX 1200 T-NA	1,20	1,60	14			13,4			12,8					11,2		9,0	6,7		
DRENAG 1000 M-A/M-NA	DRENAG 1000 T-NA	1	1,36	15,3			13,7	13,2	13	12,1	11,5	11,2	10,5	10	8,7	6,8	4,7			
DRENAG 1200 M-A/M-NA	DRENAG 1200 T-NA	1,2	1,6	17			15,4	14,7	14,5	13,8	13,4	13	12,4	11,8	10,7	9	7,3	3,3		
DRENAG 1400 M	-	1,1	1,5	19,2						17	16,5	16,3	15,9	15,6	14,6	13,5	12,1	9	5,5	
-	DRENAG 1800 T	1,5	2	21,5						20	19,8	19,6	19	18,9	18	16,5	15,2	12	8,5	4,5
FEKA 1400 M	-	1,1	1,5	13,9						12	11,6	11,4	11	10,8	9,9	8,9	7,8	5,7	3,4	
-	FEKA 1800 T	1,5	2	15,5						13,7	13,3	13,1	12,8	12	11,8	10,7	9,7	7,3	4,5	
GRINDER 1400 M	-	1,1	1,5	24,5	23,8	22,8	22,3	20,8	20,6	19	17,4	16,8	14,1	13						
-	GRINDER 1800 T	1,52	26,5	25,3			25	24	22,9	22,3	21,6	20,3	19,9	17	16					

\* Available also with special stainless steel motor shaft version (SV).

MODEL	P2 NOMINAL		Q																								
	kW	HP	m³/h																								
			l/min																								
			0	3	6	12	18	24	36	48	60	72	84	96	102	120	138	150	162	180	210	240	270	300	360	420	516
			0	50	100	200	300	400	600	800	1000	1200	1400	1600	1700	2000	2300	2500	2700	3000	3500	4000	4500	5000	6000	7000	8800
FEKA 2500.4 T	1,8	2,5	9	8,85	8,75	8,4	17,8	7,2	5,4	2																	
FEKA 2500.2 T	1,8	2,5	15,5	15,3	14,9	13,6	11,9	10	5,9	3																	
FEKA 2700.2 T	2,2	3	18	17,6	17	15,6	14	12,2	8,3																		
FEKA 3000.4 T	3,7	5	9,5			8,9	8,5	8,2	7,4	6,5	5,6	4,6	3,6	2,4	1,8												
FEKA 3000.2 T	3,7	5	18,7			17,5	16,6	15,4	12,6	9,5	6,4	4															
FEKA 3500.2 T	4,4	6	22,3			20,4	19,1	17,9	15,2	12,8	10	7,5	5	2,5													
FEKA 3700.2 T	5,5	7,5	25		24,1	23,4	22,6	21,9	20,2	18,5	16,5	14	10,8														
FEKA 4000.4 T	6	8	15,3				14,3	13,7	12,9	12	11,2	10,3	9,3	8,8	7,1	5,5	4,3	3									
FEKA 4100.4 T	7,5	10	17				16	15,2	14,7	13,8	12,8	11,8	10,6	10	8,3	6,5	5,2	4									
FEKA 4100.2 T	7,5	10	24				20,4	18,2	16,1	14,3	12,3	10,2	8,4	7,6													
FEKA 4125.2 T	9,2	12,5	27			25,3	24,3	23,5	21,3	19,5	17,3	15,3	13,5	11,8	10,9												
FEKA 4150.2 T	11	15	31		29,3	28	26,8	25,8	23,8	22	20	18,2	16														
FEKA 4200.2 T	15	20	40			38,5	37,8	36,6	34,3	32	29,8	27,6	25	22	20,6												
FEKA 6075.6 T	5,5	7,5	13					9,5	9,0	8,8	8,2	7,8	7,6	7,4	7,1	6,4	6,0	5,2	4,8	2,2							
FEKA 6100.6 T	7,5	10	15					13,5	13,0	12,8	11,8	11,2	10,4	10,2	9,5	8,2	7,8	6,8	6,5	5,0	3,5	2,5	1,2				
FEKA 6120.6 T	8,8	12	14					12,5	11,8	12,5	11,2	10,8	10,4	10,2	10,0	9,4	8,8	8,4	8,1	6,9	5,0	3,2					
FEKA 6150.6 T	11	15	17					15,8	15,2	15,2	14,2	13,8	13,6	13,4	12,4	11,8	11,2	10,4	10,0	8,7	7,7	5,8	4,8				
FEKA 6200.4 T	15	20	20					17,5	16,8	16,5	15,2	14,8	14,4	14,2	13,5	12,8	12,4	11,8	11,0	10,7	9,5	8,0					
FEKA 6250.4 T	18,5	25	31					28,0	27,0	26,5	25,4	24,6	24,0	23,8	23,0	21,6	20,6	20,0	20,0	18,5	16,5	15,0	12,5	10,5			
FEKA 6300.4 T	22	30	34,3					29,8	28,2	27,9	26,2	25,0	24,0	23,8	23,0	21,6	20,6	20,0	19,5	18,0	17,1	16,0	15,0	12,3	10,0	4,8	

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# NOVA - FEKA

## SUBMERSIBLE PUMPS FOR DRAINAGE AND WASTE WATER FOR DOMESTIC USE



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## GENERAL DATA

### Applications

The submersible pump from the NOVA series is designed mainly for automatically operated fixed applications in domestic use, draining basements and garages which are subject to flooding. Thanks to its compact, easy to handle form, it may also be used as a portable pump for emergencies such as lifting water from tanks or rivers, emptying swimming pools, fountains, excavations and underpasses. It is also ideal for gardening and hobbies in general.

The submersible pump from the FEKA series has been designed for lifting sewage from cesspools and is capable of draining suspended solids with dimensions up to 25 mm.

The level switch allows fixed installation and guarantees automatic pump operation.

Available also with special stainless steel motor shaft version (SV).

### Constructional features of the pump

Water-resistant technopolymer pump body, impeller, top body and suction grid.

Stainless steel motor, rotor shaft and screws.

Triple O-ring seals interposed with oil chamber.

### Constructional features of the motor

Continuous duty submersible induction motor. Stator fitted in an airtight stainless steel casing covered by a top body which contains the cabling, microswitch and capacitor. Rotor mounted on oversized greased sealed-for-life ball bearings to ensure silent running and long life. Built-in thermal and current overload protection and a capacitor permanently in circuit in the single-phase version. Three-phase motors should be protected with a suitable overload protection complying with the regulations in force.

Manufactured according to CEI 2-3 and CEI 61-69 standards (EN 60335-2-41).

Motor protection: IP68

Insulation class: F

Standard voltage: single-phase 220-240 V/50 Hz

three-phase 400 V/50 Hz

Standard cables for the single-phase version:

5 metres H05 RN-F NOVA 180 M-A - NOVA 300 M-A

NOVA 600 M-A - FEKA 600 M-A

10 metres H05 RN-F NOVA 180 M-NA - NOVA 200 M-NA

10 metres H07 RN-F NOVA 600 M-NA - FEKA 600 M-NA

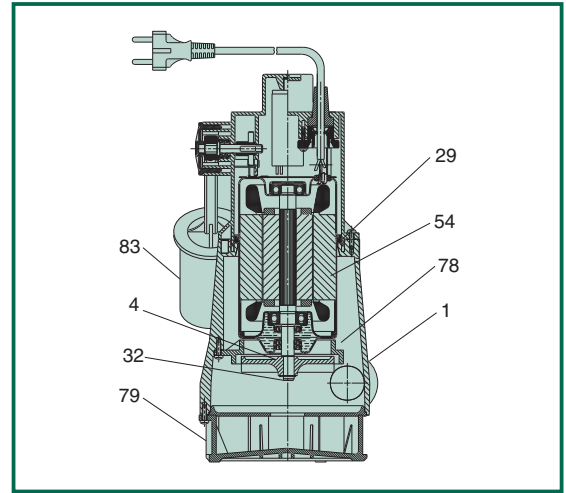
Standard plug for the single-phase version: SCHUKO CEE 7 - VII - UNEL 47166-68

Standard cables for the three-phase version: 5 metres H07 RN-F

# TECHNICAL DATA

N.	PARTS*	MATERIALS
1	PUMP BODY	TECHNOPOLYMER
4	IMPELLER	TECHNOPOLYMER
29	OR GASKET	NBR
32	STOP RING	12E - UNI 7435 STAINLESS
54	TOP BODY	STAINLESS STEEL AISI 304 X5 CrNi 1810 - UNI 6900/71
	ROTOR SHAFT	STAINLESS STEEL AISI 416 X12 CrS13 - UNI 6900/71 FOR SV SHAFT VERSION STAINLESS STEEL AISI 431
78	PRESSURE DISC (FOR NOVA)	TECHNOPOLYMER
79	SUCTION GRID	TECHNOPOLYMER
83	FLOAT	TECHNOPOLYMER

\* In contact with the liquid



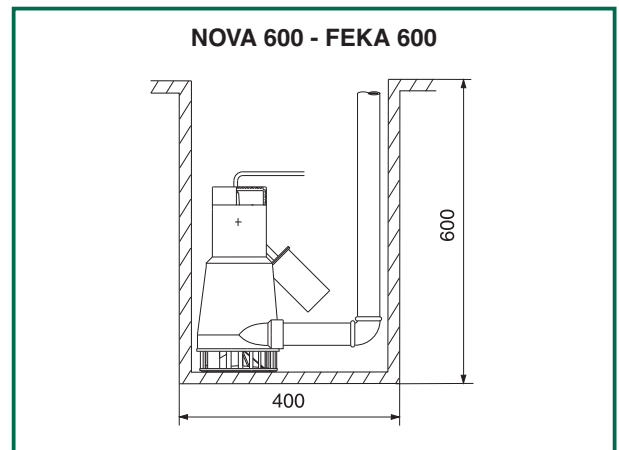
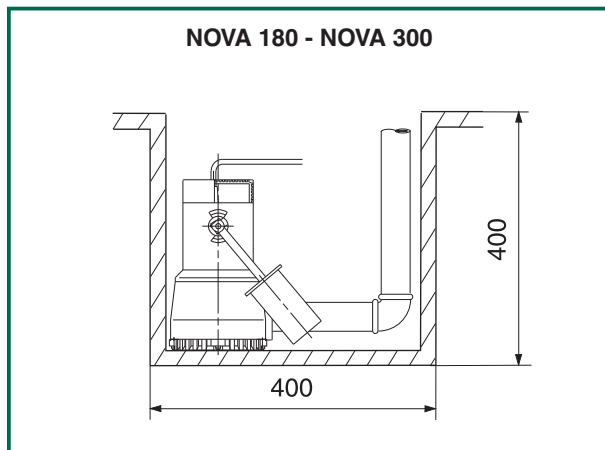
- Operating range: from 1 to 16 m<sup>3</sup>/h with head up to 10,2 metres
- Liquid quality requirements: NOVA cloudy water without fibres  
FEKA sewage from cesspools
- Free passage of solids through the suction grid:
 

NOVA 180 - NOVA 200	5 mm
NOVA 300 - NOVA 600	10 mm
FEKA 600	25 mm
- Minimum draught depth:
 

NOVA 180	77 mm
NOVA 200 - NOVA 180 NA	8 mm
NOVA 300	85 mm
NOVA 600 A - FEKA 600 A	175 mm
NOVA 600 NA - FEKA 600 NA	48 mm
- Liquid temperature range: from 0°C to +35°C for domestic use (EN 60335-2-41)
- Maximum immersion depth: 7 metres
- Maximum dry running time: 1 minute
- Installation: fixed or portable in a vertical position

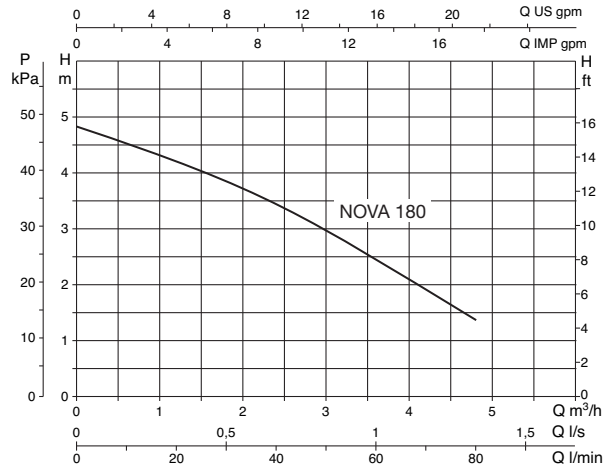
MODEL	WITH FLOAT (A)	WITHOUT FLOAT (NA)
NOVA 180	YES	YES
NOVA 200	NO	YES
NOVA 300	YES	NO
NOVA 600	YES	YES
FEKA 600	YES	YES

- Minimum pit dimensions for fixed installation with automatic operation:



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.

## NOVA 180

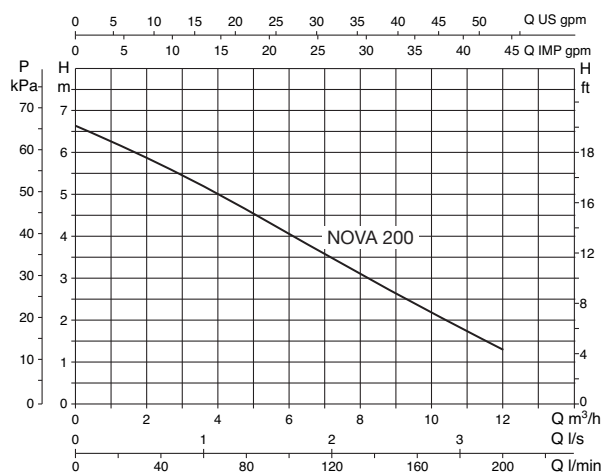
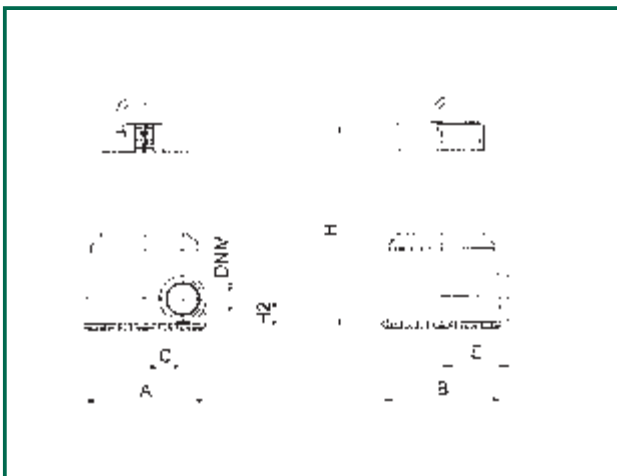


MODEL	A	B	C	D	E	H	H1	H2	LEV. MIN.	LEV. MAX	DNM	PACKING DIMENSIONS			VOLUME m <sup>3</sup>	WEIGHT Kg
												L/A	L/B	H		
<b>NOVA 180 M-A</b>	181	235	46	296	82	253	345	38	77	277	1 1/4" G	287	202	320	0,019	4,6
<b>NOVA 180 M-NA</b>	148	148	46	-	82	253	-	38	-	-	1 1/4" G	287	202	320	0,019	4,5

MODEL	ELECTRICAL DATA							HYDRAULIC DATA (n = 2850 1/min)											
	VOLTAGE 50 Hz	P1 MAX W	P2 NOMINAL		In A	CAPACITOR		Q											
			kW	HP		m³/h	0	1,2	2,4	3,6	4,8								
<b>NOVA 180 M</b>	1x220-240 V ~	190	0,20	0,28	0,9	5	450	l/min	0	20	40	60	80	H (m)	4,8	4,2	3,5	2,4	1,4

\* Available also with special stainless steel motor shaft version (SV).

## NOVA 200



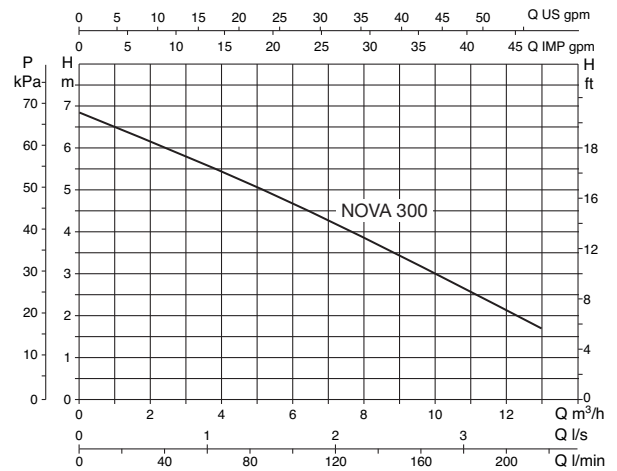
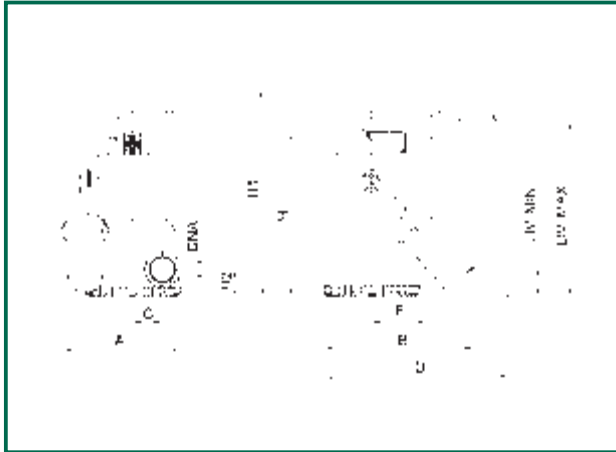
MODEL	A	B	C	E	H	H2	DNM	PACKING DIMENSIONS			VOLUME m <sup>3</sup>	WEIGHT Kg
								L/A	L/B	H		
<b>NOVA 200 M-NA</b>	148	148	46	82	253	38	1 1/4" G	287	202	320	0,019	4,5

MODEL	ELECTRICAL DATA							HYDRAULIC DATA (n = 2850 1/min)															
	VOLTAGE 50 Hz	P1 MAX W	P2 NOMINAL		In A	CAPACITOR		Q															
			kW	HP		m³/h	0	3	4,5	6	7,5	9	12										
<b>NOVA 200 M-NA</b>	1x220-240 V ~	350	0,22	0,3	1,5	8	450	l/min	0	50	75	100	125	150	200	H (m)	6,6	5,2	4,6	4	3,2	2,6	1,4

\* Available also with special stainless steel motor shaft version (SV).

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.

## NOVA 300

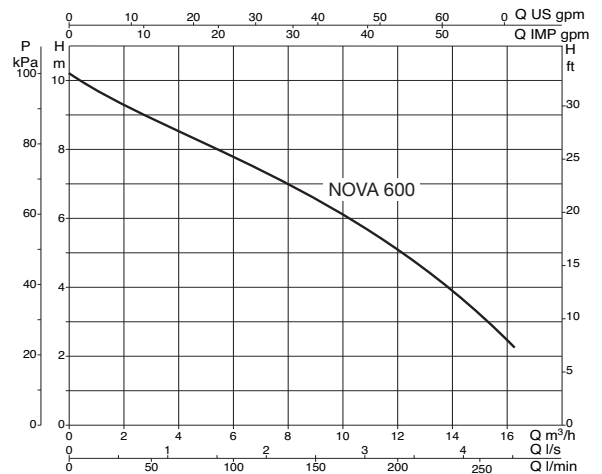
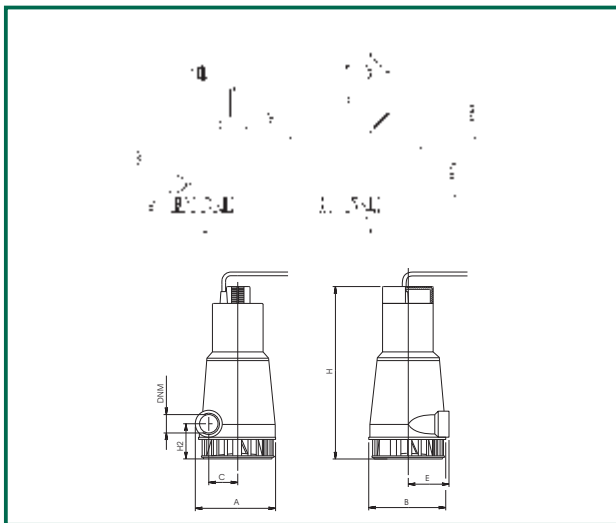


MODEL	A	B	C	D	E	H	H1	H2	LEV. MIN.	LEV. MAX.	DNM	PACKING DIMENSIONS			VOLUME m <sup>3</sup>	WEIGHT Kg
												L/A	L/B	H		
<b>NOVA 300 M-A</b>	181	235	46	296	82	262	354	47	85	285	1 1/4" G	287	202	320	0,019	4,6

MODEL	ELECTRICAL DATA							HYDRAULIC DATA (n ≈ 2850 1/min)																		
	VOLTAGE 50 Hz	P1 MAX W	P2 NOMINAL		In A	CAPACITOR		Q m³/h	Q IMP gpm																	
			kW	HP		μF	Vc		0	3	4,5	6	7,5	9	10,8	12	13,02									
<b>NOVA 300 M-A</b>	1x220-240 V ~	355	0,22	0,3	1,6	8	450	0	50	75	100	125	150	180	200	217	H (m)	6,8	5,6	5,1	4,6	4	3,4	2,7	2,2	1,7

\* Available also with special stainless steel motor shaft version (SV).

## NOVA 600



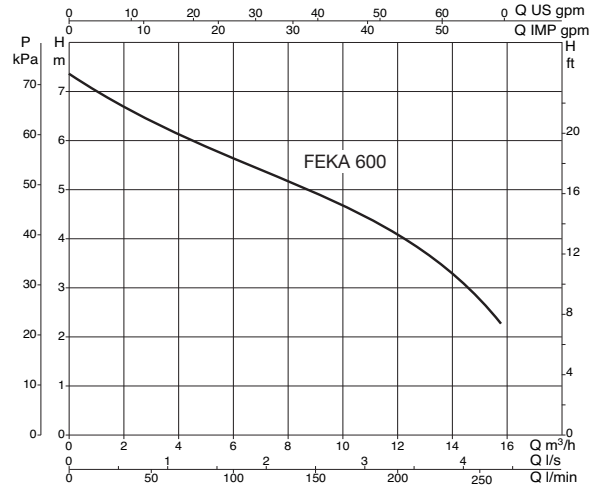
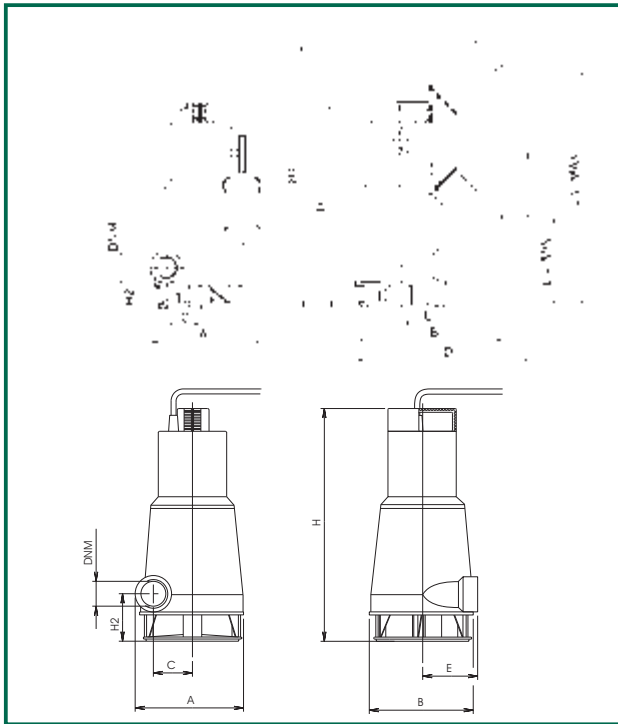
MODEL	A	B	C	D	E	H	H1	H2	LEV. MIN.	LEV. MAX.	DNM	PACKING DIMENSIONS			VOLUME m <sup>3</sup>	WEIGHT Kg
												L/A	L/B	H		
<b>NOVA 600 M-A</b>	193	235	56	296	90	368	443	73	190	390	1 1/4" G	287	202	431	0,025	7
<b>NOVA 600 (M-T)-NA</b>	162	160	56	-	90	368	-	73	-	-	1 1/4" G	287	202	431	0,025	6,7

MODEL	ELECTRICAL DATA							HYDRAULIC DATA (n ≈ 2850 1/min)																			
	VOLTAGE 50 Hz	P1 MAX W	P2 NOMINAL		In A	CAPACITOR		Q m³/h	Q IMP gpm																		
			kW	HP		μF	Vc		0	3	4,5	6	7,5	9	12	15	16,2										
<b>NOVA 600 M</b>	1x220-240 V ~	800	0,55	0,75	3,4	14	450	0	50	75	100	125	150	200	250	270	H (m)	10,2	8,9	8,3	7,8	7,2	6,6	5	3,1	2,3	
<b>NOVA 600 T</b>	3x400 V ~	800	0,55	0,75	1,6	-	-																				

\* Available also with special stainless steel motor shaft version (SV).

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.

## FEKA 600



MODEL	A	B	C	D	E	H	H1	H2	LEV. MIN.	LEV. MAX	DNM	PACKING DIMENSIONS			VOLUME m <sup>3</sup>	WEIGHT Kg
												L/A	L/B	H		
<b>FEKA 600 M-A</b>	193	235	56	296	90	368	443	73	190	390	1 1/4" G	287	202	431	0,025	7
<b>FEKA 600 (M-T)-NA</b>	162	160	56	-	90	368	-	73	-	-	1 1/4" G	287	202	431	0,025	6,7

MODEL	ELECTRICAL DATA						HYDRAULIC DATA (n = 2850 1/min)											
	VOLTAGE 50 Hz	P1 MAX W	P2 NOMINAL		I <sub>n</sub> A	CAPACITOR		Q										
			kW	HP		μF	V <sub>c</sub>	m <sup>3</sup> /h	0	3	4,5	6	7,5	9	12	15	15,9	
<b>FEKA 600 M</b>	1x220-240 V ~	1000	0,55	0,75	4,3	14	450	H (m)	7,45	6,45	6,1	5,7	5,35	4,95	4,1	2,8	2,2	
<b>FEKA 600 T</b>	3x400 V ~	970	0,55	0,75	1,7	-	-											

\* Available also with special stainless steel motor shaft version (SV).