AMCAL
INDUSTRIAL PUMP SOLUTIONS

KSB
DATA BOOKLET

UPA

6 inch - UPA 150C
8 inch - UPA 200, UPA 200B
10 inch - UPA 250C
12 - 14 inch - UPA 300, UPA 350

Type Series Booklet

KSB

Legal information/Copyright

Type Series Booklet UPA

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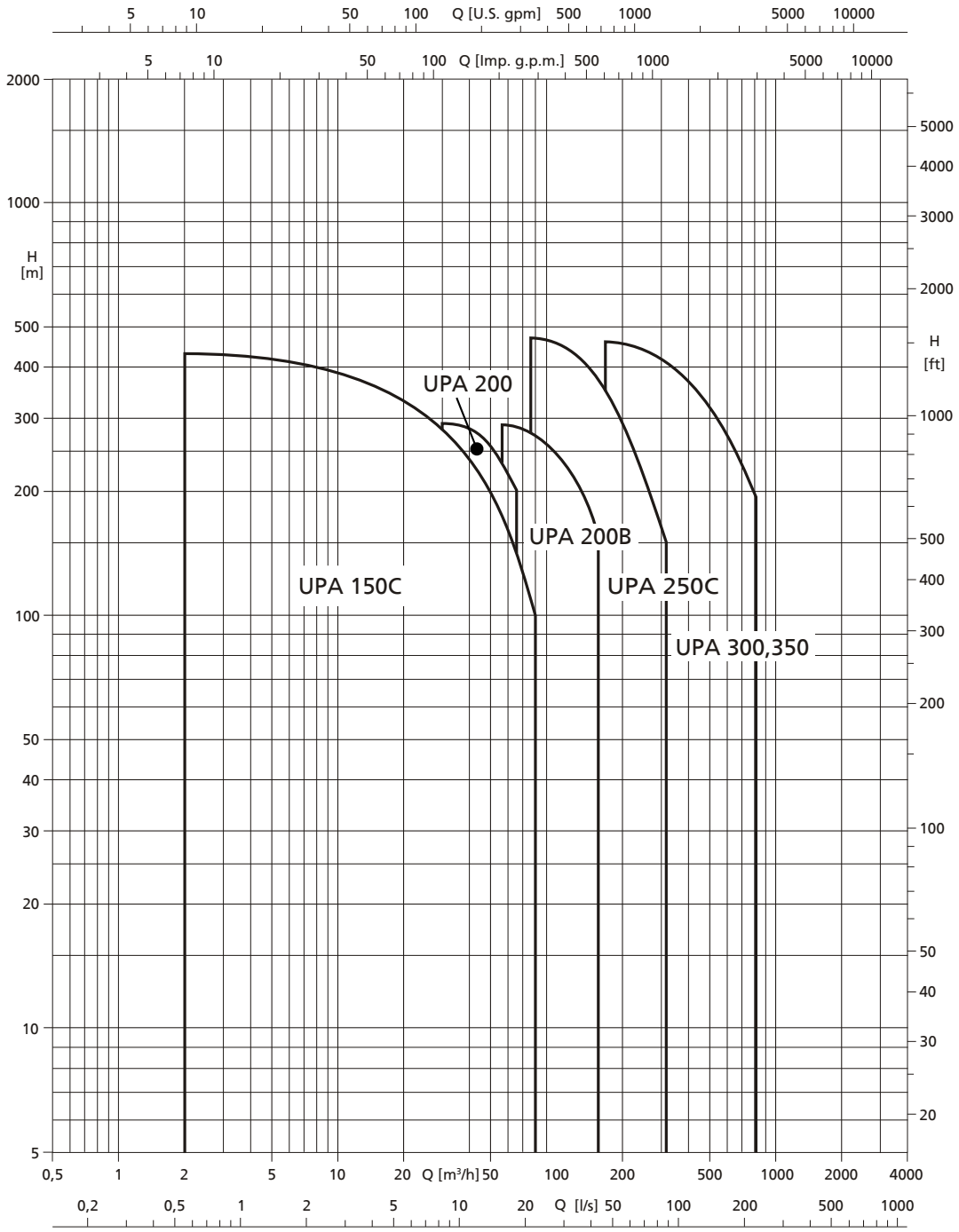
Water Supply

Submersible Borehole Pumps

General overview, 50 Hz



Overview of submersible motors

The following submersible motors are available:

Selection table

Well diameter	Motor size	Voltage range	Rated power	Number of poles	
				2 poles	4 poles
4 inch	1~ Franklin DN 100	Up to 1 kV	0.37 to 2.2 kW	✓	-
	3~ Franklin DN 100	Up to 1 kV	0.37 to 7.5 kW	✓	-
6 inch	UMA 150E [1)]	Up to 1 kV	5.5 to 37 kW	✓	-
8 inch	UMA 200D	Up to 1 kV	37 to 90 kW	✓	-
10 inch	UMA 250D	Up to 1 kV	85 to 190 kW	✓	-
12 inch	UMA 300D	Up to 1 kV	250 to 400 kW	✓	-
		Up to 1 kV	175 to 280 kW	-	✓
	TCD	1 to 3 kV	170 to 300 kW	✓	-
14 inch	14D	Up to 1 kV	250 to 600 kW	✓	-
		Up to 1 kV	150 to 400 kW	-	✓
	VBD	1 to 3 kV	140 to 400 kW	✓	-
	VMD	1 to 3 kV	170 to 400 kW	-	✓
16 inch	XBD	1 to 3 kV	400 to 830 kW	✓	-
		3 to 6 kV	260 to 700 kW	✓	-
	XMD	1 to 3 kV	280 to 500 kW	-	✓
		3 to 6 kV	220 to 450 kW	-	✓
19 inch	ZBD	1 to 3 kV	650 to 1000 kW	✓	-
		3 to 6 kV	650 to 1000 kW	✓	-
	ZMD	1 to 3 kV	400 to 800 kW	-	✓
		3 to 6 kV	400 to 800 kW	-	✓
24 inch	EBD	1 to 3 kV	900 to 1600 kW	✓	-
		3 to 6 kV	900 to 1600 kW	✓	-
	EMD	1 to 3 kV	900 to 2000 kW	-	✓
		3 to 6 kV	900 to 2000 kW	-	✓

Further motor data for the UMA asynchronous motor see type series booklet No. 3455.51

Further motor data for the UMA-S synchronous motor see type series booklet No. 3455.52

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1) Also available as UMA-S 150E synchronous motor for operation on a frequency inverter.

UPA 150C

Main applications

- Spray irrigation systems
- General irrigation systems
- Pressure boosting
- Lowering groundwater levels
- Domestic water supply
- Air-conditioning systems
- Water supply systems

Fluids handled

- Drinking water
- Cooling water
- River water, lake water and groundwater
- Max. permissible sand content of the fluid 50 g/m³

Operating data

Operating properties

Characteristic		Value
Flow rate	Q [m³/h]	≤ 79
	Q [l/s]	≤ 22
Head	H [m]	≤ 440
Fluid temperature	T [°C]	≤ +50
Speed	n [rpm]	≤ 2900
Well diameter	D [mm]	150
	D [″]	6

Design details

Design

- Centrifugal pump
- Single-stage or multistage
- Single-entry
- Ring-section design
- Rigid connection between pump and motor

Type of installation

- Vertical installation
- Horizontal installation (depending on the number of stages)

Drive

Asynchronous motor:

- With squirrel cage motor for submerged use
- Standard connection to NEMA
- Frequency 50 Hz
- IP68 enclosure
- DOL starting or star-delta starting
- Frequency of starts
  - DN 100: 20 start per hour
  - UMA 150E: 15 starts per hour
- Winding J1 (PVC) or, for higher temperatures, J2 (VPE / XLPE)

Synchronous motor:

- Interior (buried) permanent magnet synchronous motor (IPMSM)
- IP68 enclosure
- Standard connection to NEMA
- Winding J2 (VPE / XLPE)
- Frequency of starts ≤ 15 starts per hour

Electrical connection

- Delivered ex-factory with 1 or 2 motor leads (including earth conductor and internal earthing)
- Extension cable connected with water-tight cable connector
- Motor lead and extension cable suitable for drinking water use

Impeller type

- Radial or mixed flow versions

Bearings

- Radial plain bearings
- Pump bearings lubricated by fluid handled; motor bearings lubricated by water fill
- Axial thrust is balanced by a tilting-pad thrust bearing in the motor (lower end)
- Intermediate bearing in every stage

Connections

- Pump screw-ended or flanged
- With lift check valve or connection branch

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Designation

Example: UPA 150C - 16 / 9

Designation key

Code	Description
UPA	Pump type series
150	Nominal size [mm]
C	Design status
16	Flow rate at best efficiency point [m^3/h]
9	Number of stages

Materials

Material selection for UPA 150C pumps

Component	Material variant	
	C1	C2
Impeller	CrNi steel (1.4301)	CrNiMo steel (1.4404)
Suction casing / body of the lift check valve	CrNiMo steel (1.4408)	
Screws, bolts and nuts	CrNiMo steel (A4)	
Stage casing	CrNi steel (1.4301)	CrNiMo steel (1.4404)
Shaft	CrNi steel (1.4305)	CrNiMo steel (1.4401)

Material selection for UMA 150E motors, DN 100

Component		Material variant	
		C1	C2
Bearing carrier	DN 100	CrNi steel (1.4301)	CrNiMo steel (1.4404)
	UMA 150E	CrNi steel (1.4301)	CrNiMo steel (1.4571)
Stator case	DN 100	CrNi steel (1.4301)	CrNiMo steel (1.4571)
	UMA 150E	CrNi steel (1.4301)	CrNiMo steel (1.4571)
Shaft	DN 100	CrNi steel (1.4305)	CrNiMo steel (1.4460)
	UMA 150E	CrNi steel (1.4021)[2] / CrNiMo steel (1.4462)[3]	CrNiMo steel (1.4462)

Product benefits

- High operating reliability and long service life due to reinforced suction strainer, robust drive lantern and lift check valve made of investment cast stainless steel, laser-welded impellers and protection against thrust reversal
- High operating reliability as all components are made of high-quality stainless steel.
- Optimised hydraulic design enables high efficiencies.
- High efficiencies in combination with UMA-S150E synchronous motor
- High flexibility by vertical, horizontal and angular installation options
- Reliable operation by anti-jam lift check valve
- Highly flexible operating range through adjustment of motor dimensions
- Easy to install with service-friendly hydraulic system design

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2) For motors < 18.5 kW
3) For motors ≥ 18.5 kW

Product information

Product information as per Regulation No. 547/2012 (for 4" and 6" water pumps) implementing "Ecodesign" Directive 2009/125/EC

- Minimum efficiency index: see data sheet
- The benchmark for the most efficient water pumps is MEI ≥ 0.70.
- Year of construction: see data sheet
- Manufacturer's name or trade mark, commercial registration number and place of manufacture: see data sheet or order documentation
- Product's type and size identificator: see data sheet
- Hydraulic pump efficiency (%) with trimmed impeller: see data sheet
- Pump performance curves, including efficiency characteristics: see documented characteristic curve
- The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with full impeller diameter. Trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.
- Operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.
- Information relevant for disassembly, recycling or disposal at end of life: see installation/operating manual
- Information on benchmark efficiency or benchmark efficiency graph for MEI = 0.70 (0.40) for the pump based on the model shown in the Figure are available at: http://www.europump.org/efficiencycharts

Product information as per Regulation No. 1907/2006 (REACH)

For information as per chemicals Regulation (EC) No. 1907/2006 (REACH), see http://www.ksb.com/reach.

Information on characteristic curves

The characteristic curves shown are intended to allow pre-selection. Refer to the quotation for the precise selection data.

- Tolerance to ISO 9906 Cl. 2B, > 10 kW
- Tolerance to ISO 9906 Cl. 3B, < 10 kW
- Threaded end to DIN ISO 228, Part 1
- Flanged end to DIN EN 1092

H_v Head losses in the lift check valve. The head losses H_v in the lift check valve are not included in the pump characteristic curves.

η_p Pump efficiency (without lift check valve)

NPSH Net positive suction head required by pump

Certifications

Overview

Label	Effective in:	Comment
	All countries	Certified quality management to ISO 9001
	France	Approved in accordance with the French drinking water regulation

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Technical data

Selection chart

n = 2900 rpm

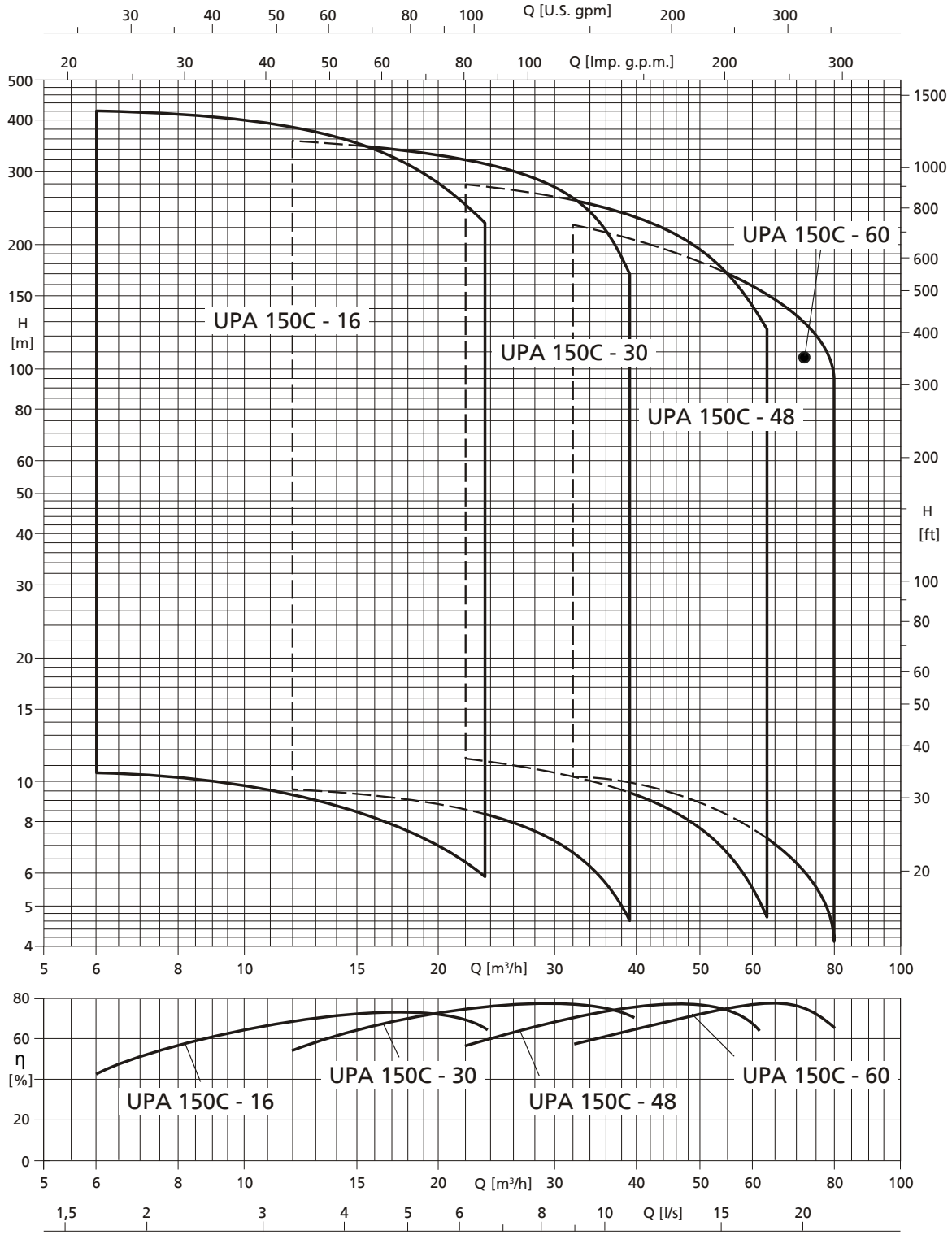

Fig. 1: Selection chart UPA 150C

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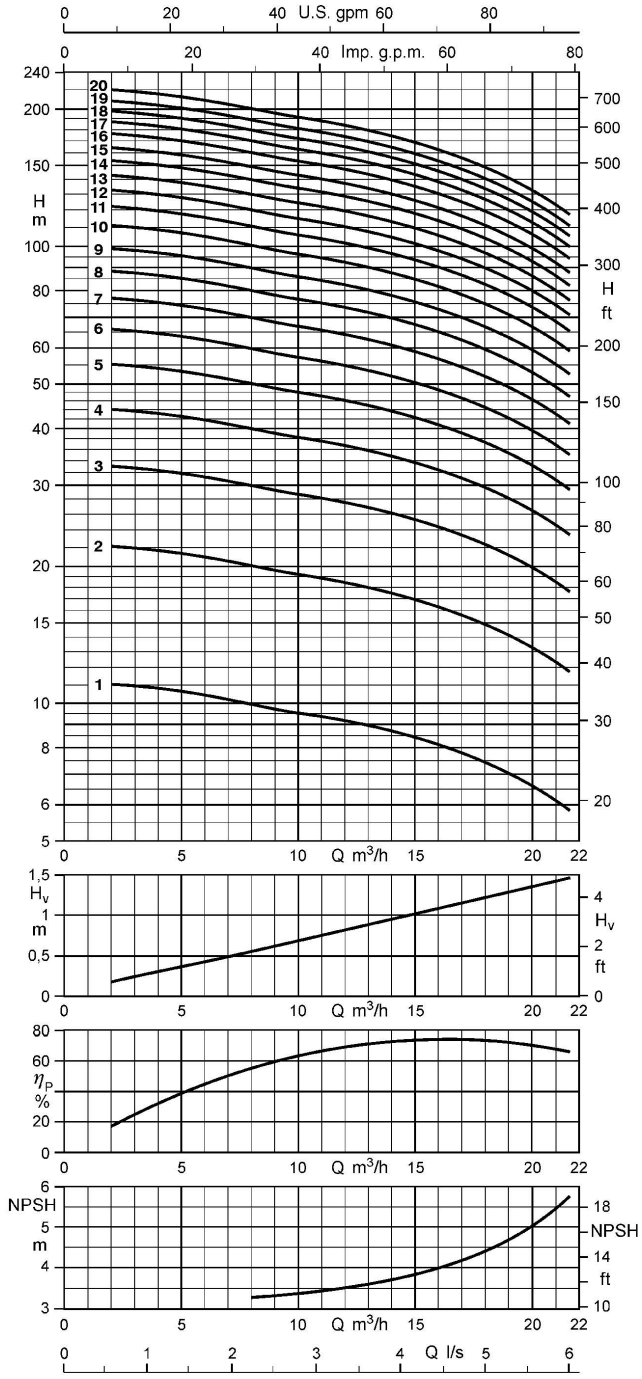
UPA 150C - 16/..., number of stages 1 - 20



Connection types

Standard pump end = G 2 $^1/_2$

Possible connection types:

- Threaded connection
  - G 3
  - G 4
- Flanged connection
  - DN 50
  - DN 65
  - DN 80

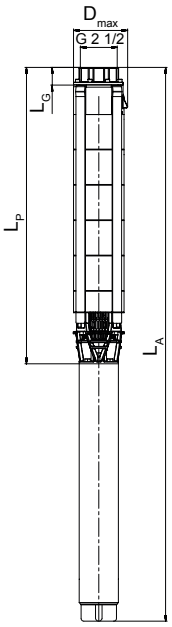
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

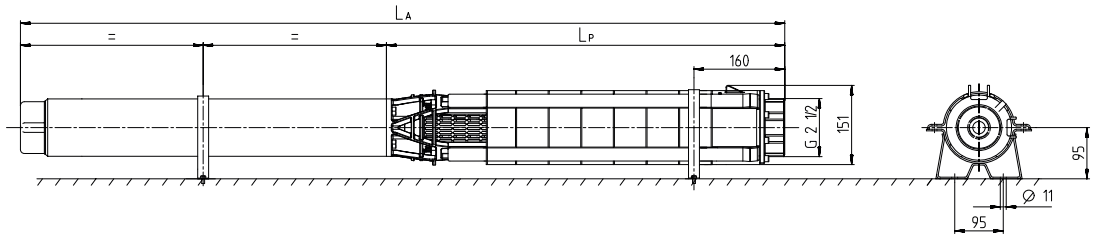
Values for calculating the dimensions if using a different pump end:

- G 2 $^1/_2$:
  L_{G*} = 40 mm
  $D_{max*} \triangleq D_{max}$
- G 3:
  L_{G*} = 48 mm
  $D_{max*} \triangleq D_{max}$
- G 4:
  L_{G*} = 93 mm
  $D_{max*} \triangleq D_{max}$
- DN 50:
  L_{G*} = 77 mm
  D_{max*} = 165 mm
- DN 65:
  L_{G*} = 77 mm
  D_{max*} = 185 mm
- DN 80:
  L_{G*} = 77 mm
  D_{max*} = 200 mm



Operating range

Q_{min} = 5 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 150C - 16 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

UPA 150C - 16	DN motor					UMA motor						Type of installation	
	L_P	L_A	L_G 4)	D_{max} DOL	Total weight	L_P	L_A	L_G 4)	D_{max} DOL	D_{max} Y - Δ	Total weight	Vertical	Horizontal 5)
	[mm]	[mm]	[mm]	[mm]	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]		
16/1	336	607	40	139	16	-	-	-	-	-	-	✗	✗
16/2	397	718	40	139	19	-	-	-	-	-	-	✗	✗
16/3	457	810	40	139	23	-	-	-	-	-	-	✗	✗
16/4	518	926	40	139	26	-	-	-	-	-	-	✗	✗
16/5	578	986	40	139	27	-	-	-	-	-	-	✗	✗
16/6	639	1159	40	139	33	-	-	-	-	-	-	✗	✗
16/7	699	1352	40	139	42	731	1410	40	142	142	58	✗	✗
16/8	760	1413	40	139	43	791	1470	40	142	142	61	✗	✗
16/9	820	1473	40	139	45	852	1531	40	142	142	62	✗	✗
16/10	881	1612	40	139	50	912	1611	40	142	142	65	✗	✗
16/11	941	1672	40	139	51	973	1672	40	142	142	67	✗	✗
16/12	1002	1733	40	139	53	1033	1732	40	142	142	68	✗	✗
16/13	1062	1793	40	139	54	1094	1793	40	142	142	69	✗	✗
16/14	-	-	-	-	-	1154	1883	40	142	142	74	✗	✗
16/15	-	-	-	-	-	1215	1944	40	142	142	75	✗	✗
16/16	-	-	-	-	-	1275	2004	40	142	142	76	✗	✗
16/17	-	-	-	-	-	1336	2145	40	142	142	86	✗	✗
16/18	-	-	-	-	-	1396	2205	40	142	142	87	✗	✗
16/19	-	-	-	-	-	1457	2266	40	142	142	89	✗	✗
16/20	-	-	-	-	-	1517	2326	40	142	142	90	✗	✗

Technical data

UPA 150C - 16	Pump	Motor					Motor lead, flat	
	Head Q = 0 m^3/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm^2]	[mm^2]
DN motor								
1 + DN 100-0.75	11,2	0,75	30 (30)	2,0	70,0	0,77	4 × 1,5	-
2 + DN 100-1.5	22	1,50	30 (30)	3,9	73,0	0,78	4 × 1,5	-
3 + DN 100-2.2	32,5	2,20	30 (30)	5,5	75,0	0,77	4 × 1,5	-
4 + DN 100-3.0	44	3,00	30 (30)	7,5	76,0	0,77	4 × 1,5	-
5 + DN 100-3.0	54	3,00	30 (30)	7,5	76,0	0,77	4 × 1,5	-
6 + DN 100-3.7	65	3,70	30 (30)	9,0	78,0	0,78	4 × 1,5	-
7 + DN 100-5.5	79	5,50	30 (20)	12,6	79,0	0,81	4 × 1,5	-
8 + DN 100-5.5	90	5,50	30 (20)	12,6	79,0	0,81	4 × 1,5	-
9 + DN 100-5.5	100	5,50	30 (20)	12,6	79,0	0,81	4 × 1,5	-
10 + DN 100-7.5	110	7,50	30 (20)	17,1	79,0	0,81	4 × 1,5	-
11 + DN 100-7.5	121	7,50	30 (20)	17,1	79,0	0,81	4 × 1,5	-
12 + DN 100-7.5	131	7,50	30 (20)	17,1	79,0	0,81	4 × 1,5	-
13 + DN 100-7.5	140	7,50	30 (20)	17,1	79,0	0,81	4 × 1,5	-
UMA motor								
7 + UMA 150E 5/21	80	4,50	41 (38)	12,2	76,5	0,70	4 × 2,5	3/4 × 2,5
8 + UMA 150E 5/21	91	5,00	39 (35)	12,9	76,5	0,73	4 × 2,5	3/4 × 2,5
9 + UMA 150E 5/21	102	5,50	37 (32)	13,8	76,1	0,76	4 × 2,5	3/4 × 2,5
10 + UMA 150E 7/21	113	6,50	36 (31)	16,3	77,0	0,74	4 × 2,5	3/4 × 2,5
11 + UMA 150E 7/21	124	7,00	33 (28)	17,2	77,0	0,77	4 × 2,5	3/4 × 2,5
12 + UMA 150E 7/21	134	7,50	31 (25)	18,1	77,0	0,78	4 × 2,5	3/4 × 2,5
13 + UMA 150E 7/21	145	7,50	31 (25)	18,1	77,0	0,78	4 × 2,5	3/4 × 2,5
14 + UMA 150E 9/21	157	8,50	32 (27)	20,3	78,5	0,77	4 × 2,5	3/4 × 2,5
15 + UMA 150E 9/21	168	9,00	30 (24)	21,2	78,3	0,79	4 × 2,5	3/4 × 2,5
16 + UMA 150E 9/21	178	9,30	29 (23)	21,7	78,1	0,79	4 × 2,5	3/4 × 2,5
17 + UMA 150E 13/21	193	10,50	35 (30)	26,1	80,6	0,72	4 × 2,5	3/4 × 2,5
18 + UMA 150E 13/21	204	11,00	34 (29)	26,8	80,6	0,74	4 × 2,5	3/4 × 2,5
19 + UMA 150E 13/21	215	11,50	33 (27)	27,6	80,5	0,75	4 × 2,5	3/4 × 2,5
20 + UMA 150E 13/21	225	12,00	31 (26)	28,4	80,5	0,76	4 × 2,5	3/4 × 2,5

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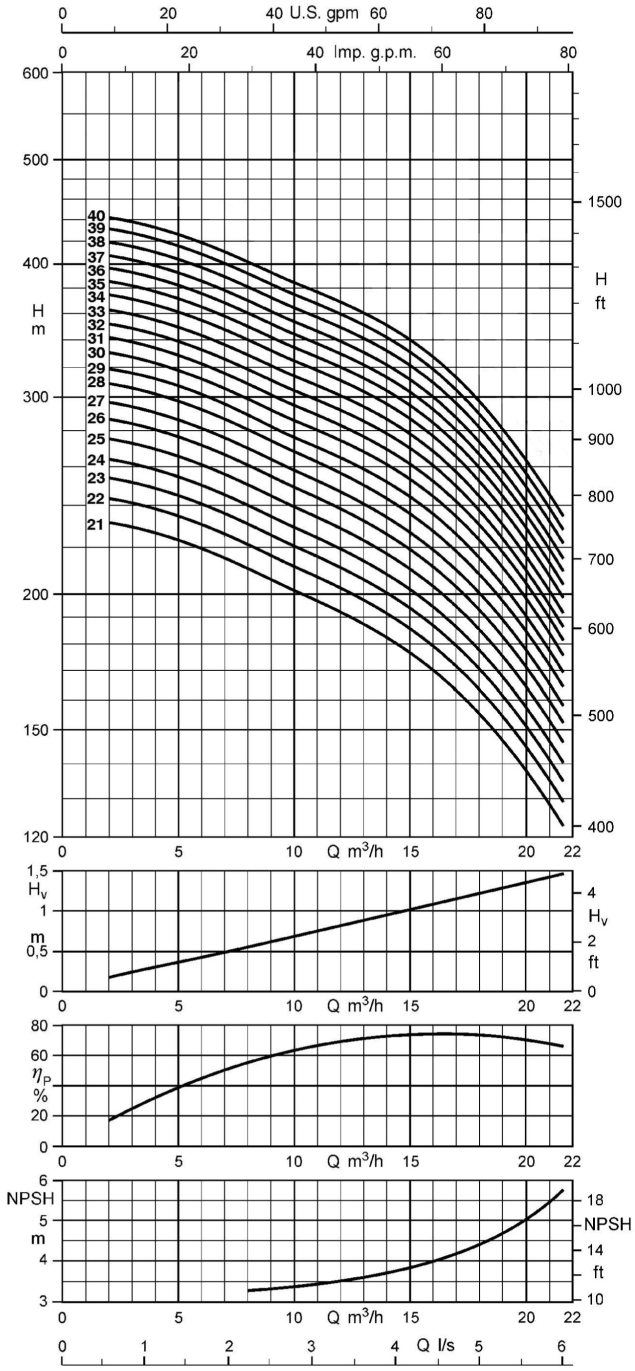
4) Length of pump end fitted as standard
5) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.

UPA 150C - 16/..., number of stages 21 - 40



Connection types

Standard pump end = G 2 $^1/_2$

Possible connection types:

- Threaded connection
  - G 3
  - G 4
- Flanged connection
  - DN 50
  - DN 65
  - DN 80

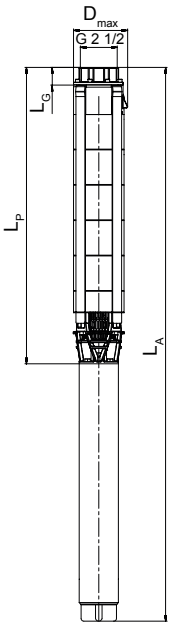
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

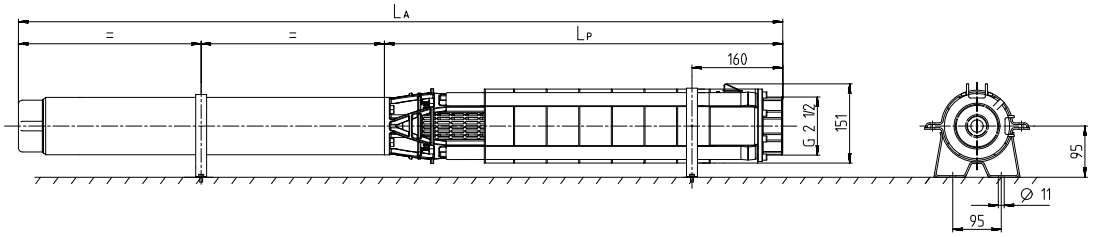
Values for calculating the dimensions if using a different pump end:

- G 2 $^1/_2$:
  L_{G*} = 40 mm
  $D_{max*} \triangleq D_{max}$
- G 3:
  L_{G*} = 48 mm
  $D_{max*} \triangleq D_{max}$
- G 4:
  L_{G*} = 93 mm
  $D_{max*} \triangleq D_{max}$
- DN 50:
  L_{G*} = 77 mm
  D_{max*} = 165 mm
- DN 65:
  L_{G*} = 77 mm
  D_{max*} = 185 mm
- DN 80:
  L_{G*} = 77 mm
  D_{max*} = 200 mm



Operating range

Q_{min} = 5 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 150C - 16 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

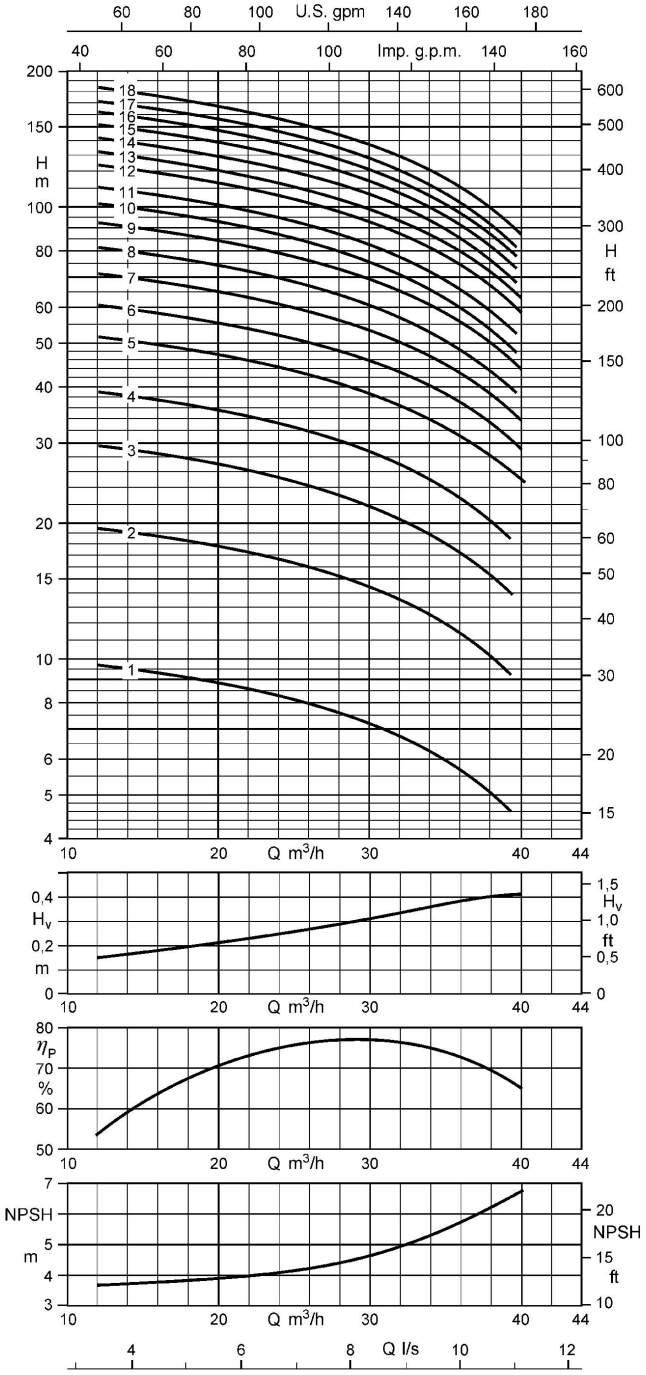
UPA 150C - 16	DN motor					UMA motor						Type of installation	
	L_P	L_A	L_G 6)	D_{max} DOL	Total weight	L_P	L_A	L_G 6)	D_{max} DOL	D_{max} Y - Δ	Total weight	Vertical	Horizontal 7)
	[mm]	[mm]	[mm]	[mm]	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]		
16/21	-	-	-	-	-	1578	2387	40	142	142	91	✗	✗
16/22	-	-	-	-	-	1638	2447	40	142	142	93	✗	✗
16/23	-	-	-	-	-	1699	2508	40	142	142	94	✗	✗
16/24	-	-	-	-	-	1759	2613	40	142	142	100	✗	✗
16/25	-	-	-	-	-	1820	2674	40	142	142	101	✗	✗
16/26	-	-	-	-	-	1880	2734	40	142	142	102	✗	✗
16/27	-	-	-	-	-	1941	2840	40	142	142	109	✗	✗
16/28	-	-	-	-	-	2001	2900	40	142	142	110	✗	✗
16/29	-	-	-	-	-	2062	2961	40	142	142	111	✗	✗
16/30	-	-	-	-	-	2122	3021	40	142	142	113	✗	-8)
16/31	-	-	-	-	-	2183	3082	40	142	142	114	✗	-8)
16/32	-	-	-	-	-	2243	3142	40	142	142	115	✗	-8)
16/33	-	-	-	-	-	2304	3293	40	142	142	126	✗	-8)
16/34	-	-	-	-	-	2364	3353	40	142	142	127	✗	-8)
16/35	-	-	-	-	-	2425	3414	40	142	142	128	✗	-8)
16/36	-	-	-	-	-	2485	3474	40	142	142	130	✗	-8)
16/37	-	-	-	-	-	2546	3535	40	142	142	131	✗	-8)
16/38	-	-	-	-	-	2606	3595	40	142	142	133	✗	-8)
16/39	-	-	-	-	-	2667	3761	40	142	142	145	✗	-8)
16/40	-	-	-	-	-	2727	3821	40	142	142	146	✗	-8)

Technical data

UPA 150C - 16	Pump	Motor					Motor lead, flat	
	Head Q = 0 m^3/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm^2]	[mm^2]
UMA motor								
21 + UMA 150E 13/21	236	13,00	28 (22)	30,1	80,3	0,78	4 × 2,5	3/4 × 2,5
22 + UMA 150E 13/21	246	13,00	28 (22)	30,1	80,3	0,78	4 × 2,5	3/4 × 2,5
23 + UMA 150E 13/21	256	13,00	28 (22)	30,1	80,3	0,78	4 × 2,5	3/4 × 2,5
24 + UMA 150E 15/21	269	14,00	32 (26)	31,7	81,5	0,78	4 × 4,0	3/4 × 2,5
25 + UMA 150E 15/21	280	15,00	29 (23)	33,4	81,3	0,80	4 × 4,0	3/4 × 2,5
26 + UMA 150E 15/21	290	15,00	29 (23)	33,4	81,3	0,80	4 × 4,0	3/4 × 2,5
27 + UMA 150E 18/21	305	16,00	31 (25)	38,0	82,1	0,74	4 × 4,0	3/4 × 2,5
28 + UMA 150E 18/21	315	16,50	30 (24)	38,8	82,1	0,75	4 × 4,0	3/4 × 2,5
29 + UMA 150E 18/21	326	17,00	29 (22)	39,6	82,0	0,76	4 × 4,0	3/4 × 2,5
30 + UMA 150E 18/21	336	17,50	28 (21)	40,4	81,9	0,76	4 × 4,0	3/4 × 2,5
31 + UMA 150E 18/21	347	18,00	26 (19)	41,2	81,8	0,77	4 × 4,0	3/4 × 2,5
32 + UMA 150E 18/21	357	18,50	25 (18)	42,1	81,6	0,78	4 × 4,0	3/4 × 2,5
33 + UMA 150E 22/21	373	20,00	32 (26)	45,9	83,4	0,75	4 × 4,0	3/4 × 2,5
34 + UMA 150E 22/21	383	20,00	32 (26)	45,9	83,4	0,75	4 × 4,0	3/4 × 2,5
35 + UMA 150E 22/21	394	21,00	30 (24)	47,6	83,3	0,77	4 × 4,0	3/4 × 2,5
36 + UMA 150E 22/21	404	22,00	28 (21)	49,2	83,1	0,78	4 × 4,0	3/4 × 2,5
37 + UMA 150E 22/21	415	22,00	28 (21)	49,2	83,1	0,78	4 × 4,0	3/4 × 2,5
38 + UMA 150E 22/21	425	22,00	28 (21)	49,2	83,1	0,78	4 × 4,0	3/4 × 2,5
39 + UMA 150E 26/21	441	24,00	34 (28)	53,6	84,7	0,76	4 × 6,0	3/4 × 4,0
40 + UMA 150E 26/21	451	24,00	34 (28)	53,6	84,7	0,76	4 × 6,0	3/4 × 4,0

6) Length of pump end fitted as standard
7) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
8) On request

UPA 150C - 30/..., number of stages 1 - 18



Connection types

Standard pump end = G 3

Possible connection types:

- Threaded connection
  - G 4
- Flanged connection
  - DN 65
  - DN 80

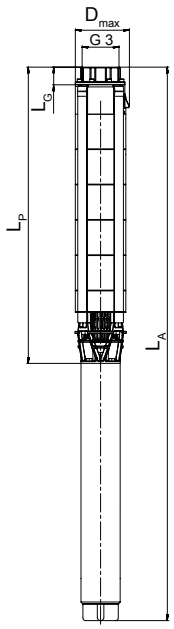
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

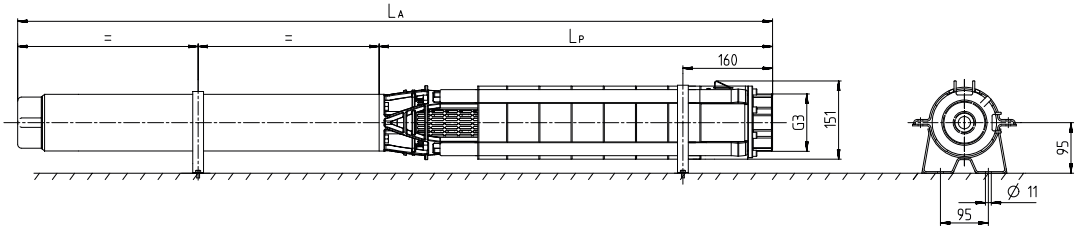
Values for calculating the dimensions if using a different pump end:

- G 3:
  L_{G*} = 48 mm
  $D_{max*} \triangleq D_{max}$
- G 4:
  L_{G*} = 93 mm
  $D_{max*} \triangleq D_{max}$
- DN 65:
  L_{G*} = 77 mm
  D_{max*} = 185 mm
- DN 80:
  L_{G*} = 77 mm
  D_{max*} = 200 mm



Operating range

Q_{min} = 12 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 150C - 30 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

UPA 150C - 30	DN motor					UMA motor						Type of installation	
	L_P	L_A	L_G [9]	D_{max} DOL	Total weight	L_P	L_A	L_G [9]	D_{max} DOL	D_{max} Y - Δ	Total weight	Vertical	Horizontal [10]
	[mm]	[mm]	[mm]	[mm]	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]		
30/1	389	686	48	139	17	-	-	-	-	-	-	✗	✗
30/2	485	838	48	139	22	-	-	-	-	-	-	✗	✗
30/3	581	989	48	139	26	-	-	-	-	-	-	✗	✗
30/4	677	1197	48	139	31	-	-	-	-	-	-	✗	✗
30/5	773	1426	48	139	41	805	1484	48	146	148	58	✗	✗
30/6	869	1522	48	139	42	901	1580	48	146	148	60	✗	✗
30/7	965	1696	48	139	48	997	1696	48	146	148	63	✗	✗
30/8	-	-	-	-	-	1093	1792	48	146	148	65	✗	✗
30/9	-	-	-	-	-	1189	1918	48	146	148	69	✗	✗
30/10	-	-	-	-	-	1285	2014	48	146	148	71	✗	✗
30/11	-	-	-	-	-	1381	2110	48	146	148	72	✗	✗
30/12	-	-	-	-	-	1477	2286	48	146	148	82	✗	✗
30/13	-	-	-	-	-	1573	2382	48	146	148	84	✗	✗
30/14	-	-	-	-	-	1669	2478	48	146	148	85	✗	✗
30/15	-	-	-	-	-	1765	2574	48	146	148	87	✗	✗
30/16	-	-	-	-	-	1861	2715	48	147	148	93	✗	✗
30/17	-	-	-	-	-	1957	2811	48	147	148	95	✗	✗
30/18	-	-	-	-	-	2053	2952	48	147	148	101	✗	✗

Technical data

UPA 150C - 30	Pump	Motor					Motor lead, flat	
	Head Q = 0 m³/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm²]	[mm²]
DN motor								
1 + DN 100-1.1	10,6	1,10	30 (30)	2,8	74,0	0,78	4 × 1,5	-
2 + DN 100-2.2	21,5	2,20	30 (30)	5,5	75,0	0,77	4 × 1,5	-
3 + DN 100-3.0	32,0	3,00	30 (30)	7,5	76,0	0,77	4 × 1,5	-
4 + DN 100-3.7	43,0	3,70	30 (30)	9,0	78,0	0,78	4 × 1,5	-
5 + DN 100-5.5	55,0	5,50	30 (20)	12,6	79,0	0,81	4 × 1,5	-
6 + DN 100-5.5	66,0	5,50	30 (20)	12,6	79,0	0,81	4 × 1,5	-
7 + DN 100-7.5	76,0	7,50	30 (20)	17,1	79,0	0,81	4 × 1,5	-
UMA motor								
5 + UMA 150E 5/21	56	4,50	41 (38)	12,2	76,5	0,70	4 × 2,5	3/4 × 2,5
6 + UMA 150E 5/21	67	5,50	37 (32)	13,8	76,1	0,76	4 × 2,5	3/4 × 2,5
7 + UMA 150E 7/21	78	6,50	36 (31)	16,3	77,0	0,74	4 × 2,5	3/4 × 2,5
8 + UMA 150E 7/21	88	7,00	33 (28)	17,2	77,0	0,77	4 × 2,5	3/4 × 2,5
9 + UMA 150E 9/21	100	8,00	34 (30)	19,4	78,7	0,76	4 × 2,5	3/4 × 2,5
10 + UMA 150E 9/21	110	9,00	30 (24)	21,2	78,3	0,79	4 × 2,5	3/4 × 2,5
11 + UMA 150E 9/21	120	9,30	29 (23)	21,7	78,1	0,79	4 × 2,5	3/4 × 2,5
12 + UMA 150E 13/21	134	11,00	34 (29)	26,8	80,6	0,74	4 × 2,5	3/4 × 2,5
13 + UMA 150E 13/21	144	11,50	33 (27)	27,6	80,5	0,75	4 × 2,5	3/4 × 2,5
14 + UMA 150E 13/21	154	12,50	30 (24)	29,2	80,4	0,77	4 × 2,5	3/4 × 2,5
15 + UMA 150E 13/21	165	13,00	28 (22)	30,1	80,3	0,78	4 × 2,5	3/4 × 2,5
16 + UMA 150E 15/21	176	14,50	30 (24)	32,51	81,4	0,79	4 × 4,0	3/4 × 2,5
17 + UMA 150E 15/21	186	15,00	29 (23)	33,4	81,3	0,80	4 × 4,0	3/4 × 2,5
18 + UMA 150E 18/21	200	16,00	31 (25)	38,0	82,1	0,74	4 × 4,0	3/4 × 2,5

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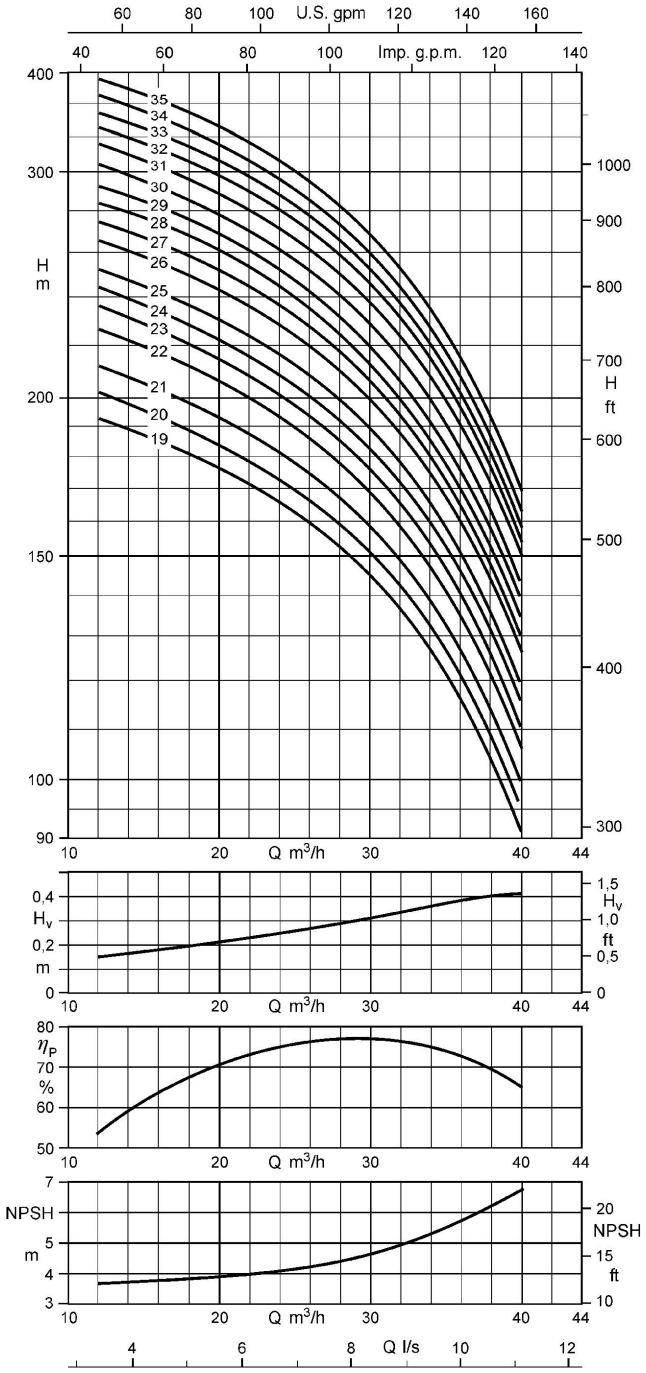
9) Length of pump end fitted as standard
10) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.

UPA 150C - 30/..., number of stages 19 - 35



Connection types

Standard pump end = G 3

Possible connection types:

- Threaded connection
  - G 4
- Flanged connection
  - DN 65
  - DN 80

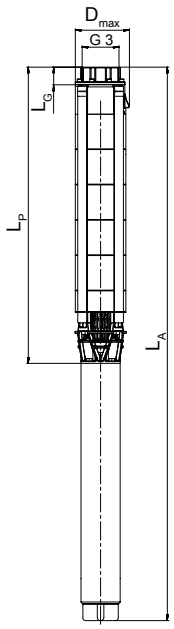
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

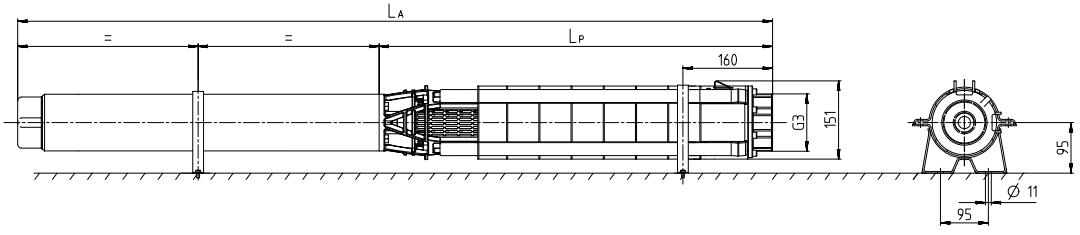
Values for calculating the dimensions if using a different pump end:

- G 3:
  L_{G*} = 48 mm
  $D_{max*} \triangleq D_{max}$
- G 4:
  L_{G*} = 93 mm
  $D_{max*} \triangleq D_{max}$
- DN 65:
  L_{G*} = 77 mm
  D_{max*} = 185 mm
- DN 80:
  L_{G*} = 77 mm
  D_{max*} = 200 mm



Operating range

Q_{min} = 12 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 150C - 30 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

UPA 150C - 30	DN motor					UMA motor						Type of installation	
	L_P	L_A	L_G [11]	D_{max} DOL	Total weight	L_P	L_A	L_G [11]	D_{max} DOL	D_{max} Y - Δ	Total weight	Vertical	Horizontal [12]
	[mm]	[mm]	[mm]	[mm]	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]		
30/19	-	-	-	-	-	2149	3048	48	147	148	102	✗	- [13]
30/20	-	-	-	-	-	2245	3144	48	147	148	104	✗	- [13]
30/21	-	-	-	-	-	2341	3240	48	147	148	105	✗	- [13]
30/22	-	-	-	-	-	2437	3426	48	147	148	116	✗	- [13]
30/23	-	-	-	-	-	2533	3522	48	147	148	117	✗	- [13]
30/24	-	-	-	-	-	2629	3618	48	147	148	119	✗	- [13]
30/25	-	-	-	-	-	2725	3714	48	147	148	121	✗	- [13]
30/26	-	-	-	-	-	2821	3915	48	149	149	133	✗	- [13]
30/27	-	-	-	-	-	2917	4011	48	149	149	135	✗	- [13]
30/28	-	-	-	-	-	3013	4107	48	149	149	136	✗	- [13]
30/29	-	-	-	-	-	3109	4203	48	149	149	138	✗	- [13]
30/30	-	-	-	-	-	3205	4299	48	149	149	140	✗	- [13]
30/31	-	-	-	-	-	3301	4495	48	149	149	151	✗	- [13]
30/32	-	-	-	-	-	3397	4591	48	149	149	153	✗	- [13]
30/33	-	-	-	-	-	3493	4687	48	149	149	154	✗	- [13]
30/34	-	-	-	-	-	3589	4783	48	149	149	156	✗	- [13]
30/35	-	-	-	-	-	3685	4959	48	149	149	164	✗	- [13]

Technical data

UPA 150C - 30	Pump	Motor					Motor lead, flat	
	Head $Q = 0\ m^3/h$	Rated power	Max. fluid temperature $v \geq 0{,}2$ m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm^2]	[mm^2]
UMA motor								
19 + UMA 150E 18/21	210	17,00	29 (22)	39,6	82,0	0,76	4 × 4,0	3/4 × 2,5
20 + UMA 150E 18/21	220	18,00	26 (19)	41,2	81,8	0,77	4 × 4,0	3/4 × 2,5
21 + UMA 150E 18/21	230	18,50	25 (18)	42,1	81,6	0,78	4 × 4,0	3/4 × 2,5
22 + UMA 150E 22/21	244	20,00	32 (26)	45,9	83,4	0,75	4 × 4,0	3/4 × 2,5
23 + UMA 150E 22/21	254	21,00	30 (24)	47,6	83,3	0,77	4 × 4,0	3/4 × 2,5
24 + UMA 150E 22/21	265	22,00	28 (21)	49,2	83,1	0,78	4 × 4,0	3/4 × 2,5
25 + UMA 150E 22/21	275	22,00	28 (21)	49,2	83,1	0,78	4 × 4,0	3/4 × 2,5
26 + UMA 150E 26/21	289	24,00	34 (28)	53,6	84,7	0,76	4 × 6,0	3/4 × 4,0
27 + UMA 150E 26/21	299	24,00	34 (28)	53,6	84,7	0,76	4 × 6,0	3/4 × 4,0
28 + UMA 150E 26/21	309	25,00	32 (26)	55,2	84,5	0,77	4 × 6,0	3/4 × 4,0
29 + UMA 150E 26/21	320	26,00	31 (25)	56,9	84,4	0,78	4 × 6,0	3/4 × 4,0
30 + UMA 150E 26/21	330	26,00	31 (25)	56,9	84,4	0,78	4 × 6,0	3/4 × 4,0
31 + UMA 150E 30/21	345	28,00	32 (26)	63,6	84,3	0,75	4 × 6,0	3/4 × 4,0
32 + UMA 150E 30/21	355	29,00	31 (25)	65,2	84,2	0,76	4 × 6,0	3/4 × 4,0
33 + UMA 150E 30/21	365	30,00	30 (23)	66,8	84,2	0,77	4 × 6,0	3/4 × 4,0
34 + UMA 150E 30/21	376	30,00	30 (23)	66,8	84,2	0,77	4 × 6,0	3/4 × 4,0
35 + UMA 150E 37/22	389	32,00	44 (38)	73,4	83,9	0,75	3/4 × 4,0 [14]	3/4 × 4,0

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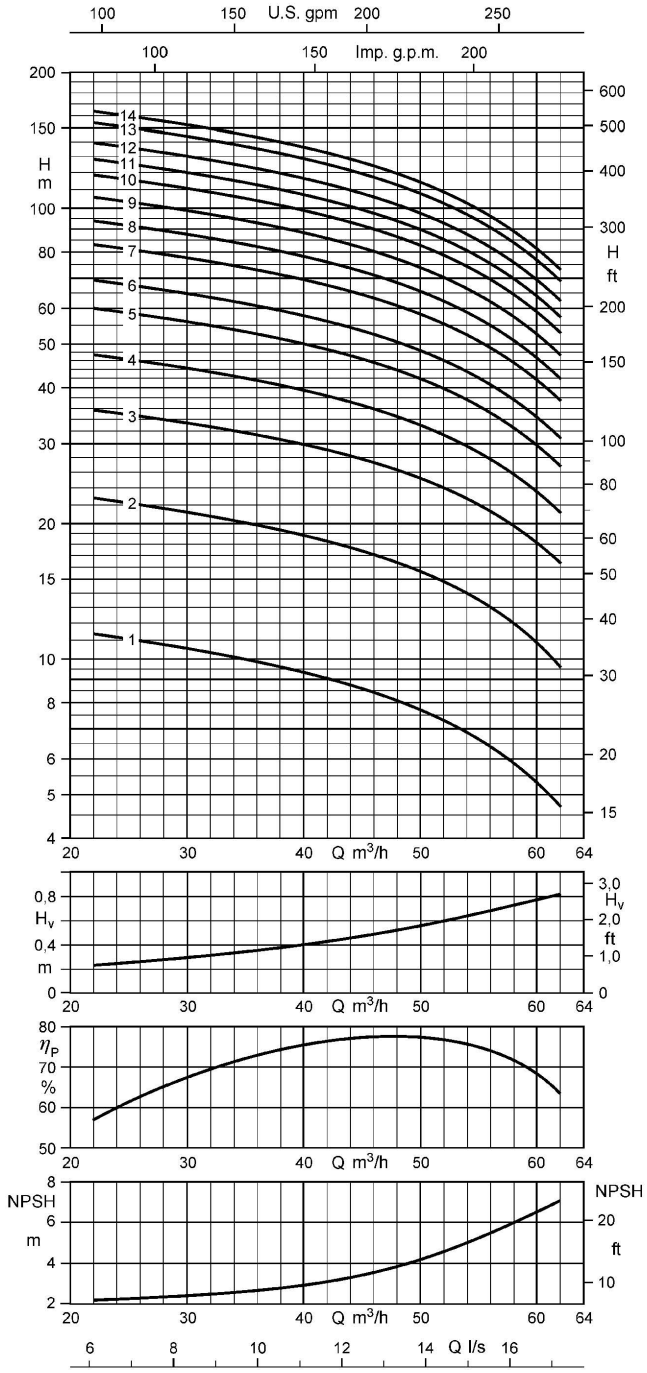
11) Length of pump end fitted as standard
12) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
13) On request
14) Parallel cable

UPA 150C - 48/..., number of stages 1 - 14



Connection types

Standard pump end = G 3

Possible connection types:

- Threaded connection
  - G 4
- Flanged connection
  - DN 65
  - DN 80

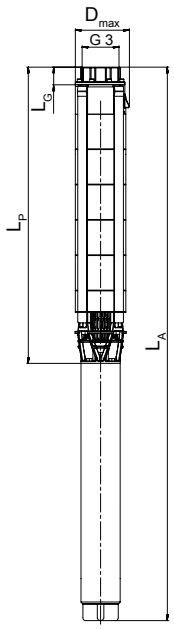
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

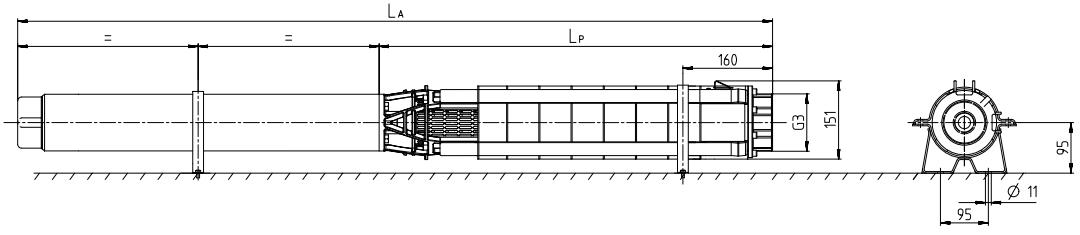
Values for calculating the dimensions if using a different pump end:

- G 3:
  L_{G*} = 48 mm
  $D_{max*} \triangleq D_{max}$
- G 4:
  L_{G*} = 93 mm
  $D_{max*} \triangleq D_{max}$
- DN 65:
  L_{G*} = 77 mm
  D_{max*} = 185 mm
- DN 80:
  L_{G*} = 77 mm
  D_{max*} = 200 mm



Operating range

Q_{min} = 22 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 150C - 48 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

UPA 150C - 48	DN motor					UMA motor						Type of installation	
	L_P	L_A	L_G [15]	D_{max} DOL	Total weight	L_P	L_A	L_G [15]	D_{max} DOL	D_{max} Y - Δ	Total weight	Vertical	Horizontal [16]
	[mm]	[mm]	[mm]	[mm]	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]		
48/1	406	759	48	139	23	-	-	-	-	-	-	✗	✗
48/2	519	927	48	139	27	-	-	-	-	-	-	✗	✗
48/3	632	1284,5	48	139	42	663	1342	48	143	146	58,3	✗	✗
48/4	745	1475,5	48	139	47	776	1475	48	143	146	32,6	✗	✗
48/5	-	-	-	-	-	889	1618	48	143	146	67,9	✗	✗
48/6	-	-	-	-	-	1002	1731	48	143	146	70,1	✗	✗
48/7	-	-	-	-	-	1115	1924	48	143	146	80,4	✗	✗
48/8	-	-	-	-	-	1228	2037	48	143	146	82,7	✗	✗
48/9	-	-	-	-	-	1341	2195	48	145	146	89,9	✗	✗
48/10	-	-	-	-	-	1454	2353	48	145	146	96,2	✗	✗
48/11	-	-	-	-	-	1567	2466	48	145	146	98,5	✗	✗
48/12	-	-	-	-	-	1680	2579	48	145	146	100,7	✗	✗
48/13	-	-	-	-	-	1793	2782	48	145	146	112	✗	✗
48/14	-	-	-	-	-	1906	2895	48	145	146	114,3	✗	✗

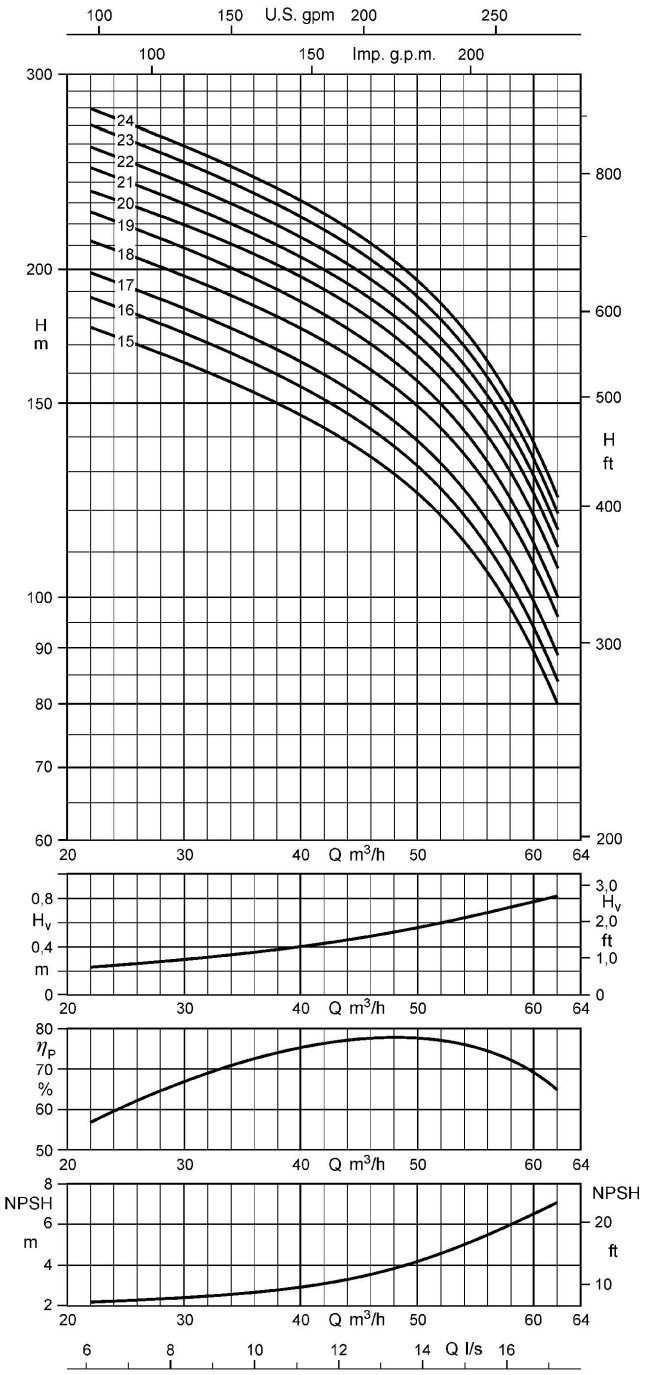
Technical data

UPA 150C - 48	Pump	Motor					Motor lead, flat	
	Head Q = 0 m^3/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm^2]	[mm^2]
DN motor								
1 + DN 100-2.2	13,2	2,20	30 (30)	5,5	75,0	0,77	4 × 1,5	-
2 + DN 100-3.0	26,5	3,00	30 (30)	7,5	76,0	0,77	4 × 1,5	-
3 + DN 100-5.5	41,0	5,50	30 (20)	12,6	79,0	0,81	4 × 1,5	-
4 + DN 100-7.5	54,0	7,50	30 (20)	17,1	79,0	0,81	4 × 1,5	-
UMA motor								
3 + UMA 150E 5/21	42	5,00	39 (35)	12,9	76,5	0,73	4 × 2,5	3/4 × 2,5
4 + UMA 150E 7/21	55	6,50	36 (31)	16,3	77,0	0,74	4 × 2,5	3/4 × 2,5
5 + UMA 150E 9/21	69	8,00	34 (30)	19,4	78,7	0,76	4 × 2,5	3/4 × 2,5
6 + UMA 150E 9/21	81	9,30	29 (23)	21,7	78,1	0,79	4 × 2,5	3/4 × 2,5
7 + UMA 150E 13/21	97	11,50	33 (27)	27,6	80,5	0,75	4 × 2,5	3/4 × 2,5
8 + UMA 150E 13/21	109	12,50	30 (24)	29,2	80,4	0,77	4 × 2,5	3/4 × 2,5
9 + UMA 150E 15/21	123	14,50	30 (24)	32,5	81,4	0,79	4 × 4,0	3/4 × 2,5
10 + UMA 150E 18/21	138	16,00	31 (25)	38,0	82,1	0,74	4 × 4,0	3/4 × 2,5
11 + UMA 150E 18/21	151	17,50	28 (21)	40,4	81,9	0,76	4 × 4,0	3/4 × 2,5
12 + UMA 150E 18/21	163	18,50	25 (18)	42,1	81,6	0,78	4 × 4,0	3/4 × 2,5
13 + UMA 150E 22/21	179	21,00	30 (24)	47,6	83,3	0,77	4 × 4,0	3/4 × 2,5
14 + UMA 150E 22/21	191	22,00	28 (21)	49,2	83,1	0,78	4 × 4,0	3/4 × 2,5

3400.5/10-EN

15) Length of pump end fitted as standard
16) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.

UPA 150C - 48/..., number of stages 15 - 24



Connection types

Standard pump end = G 3

Possible connection types:

- Threaded connection
  - G 4
- Flanged connection
  - DN 65
  - DN 80

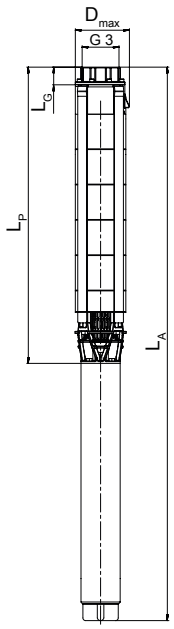
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

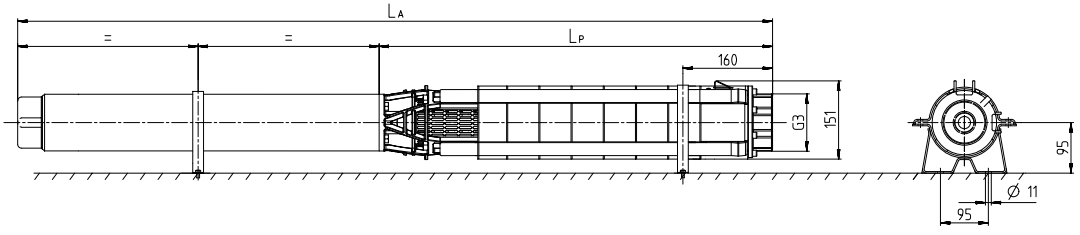
Values for calculating the dimensions if using a different pump end:

- G 3:
  L_{G*} = 48 mm
  $D_{max*} \triangleq D_{max}$
- G 4:
  L_{G*} = 93 mm
  $D_{max*} \triangleq D_{max}$
- DN 65:
  L_{G*} = 77 mm
  D_{max*} = 185 mm
- DN 80:
  L_{G*} = 77 mm
  D_{max*} = 200 mm



Operating range

Q_{min} = 22 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 150C - 48 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

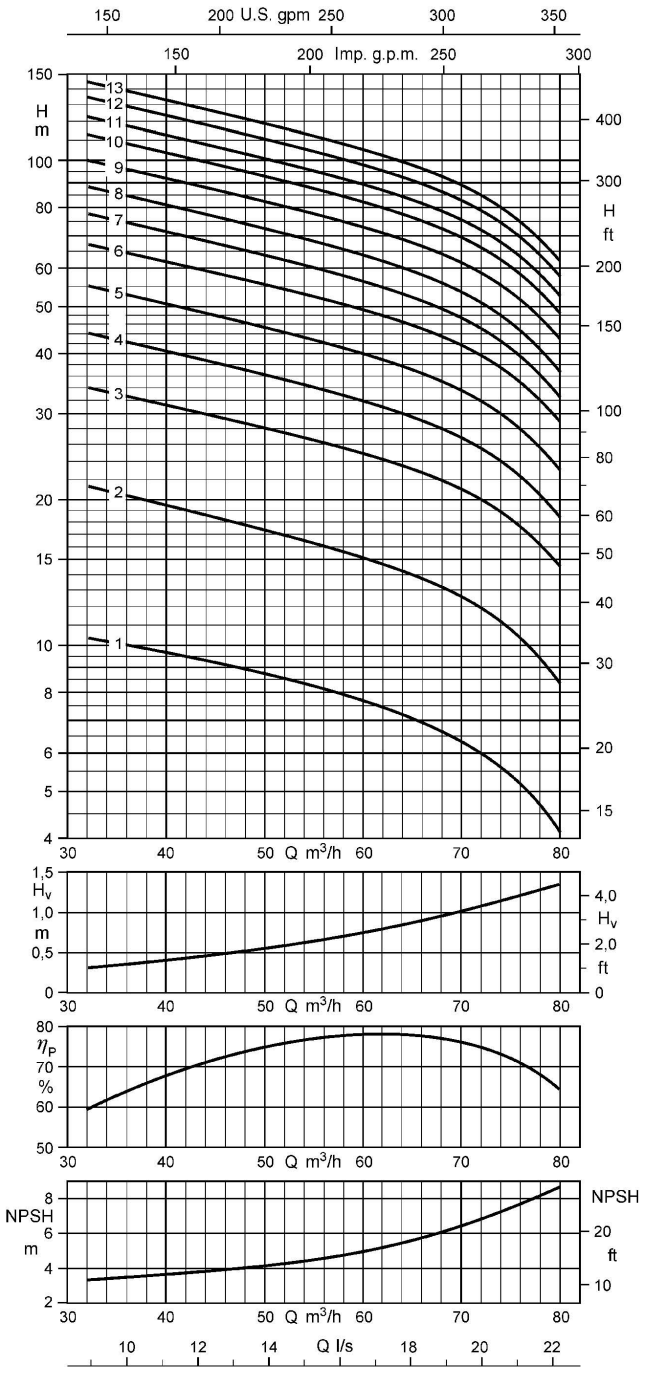
UPA 150C - 48	DN motor					UMA motor						Type of installation	
	L_P	L_A	L_G [17]	D_{max} DOL	Total weight	L_P	L_A	L_G [17]	D_{max} DOL	D_{max} Y - Δ	Total weight	Vertical	Horizontal [18]
	[mm]	[mm]	[mm]	[mm]	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]		
48/15	-	-	-	-	-	2019	3113	48	146	147	128	✗	- [19]
48/16	-	-	-	-	-	2132	3226	48	146	147	130	✗	- [19]
48/17	-	-	-	-	-	2245	3339	48	146	147	132	✗	- [19]
48/18	-	-	-	-	-	2358	3552	48	146	147	144	✗	- [19]
48/19	-	-	-	-	-	2471	3665	48	146	147	147	✗	- [19]
48/20	-	-	-	-	-	2584	3858	48	145	147	156	✗	- [19]
48/21	-	-	-	-	-	2697	3971	48	145	147	158	✗	- [19]
48/22	-	-	-	-	-	2810	4084	48	145	147	160	✗	- [19]
48/23	-	-	-	-	-	2923	4197	48	145	147	163	✗	- [19]
48/24	-	-	-	-	-	3036	4310	48	145	147	165	✗	- [19]

Technical data

UPA 150C - 48	Pump	Motor					Motor lead, flat	
	Head Q = 0 m^3/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm^2]	[mm^2]
UMA motor								
15 + UMA 150E 26/21	207	24,00	34 (28)	53,6	84,7	0,76	4 × 6,0	3/4 × 4,0
16 + UMA 150E 26/21	219	26,00	31 (25)	56,9	84,4	0,78	4 × 6,0	3/4 × 4,0
17 + UMA 150E 26/21	232	26,00	31 (25)	56,9	84,4	0,78	4 × 6,0	3/4 × 4,0
18 + UMA 150E 30/21	248	29,00	31 (25)	65,2	84,2	0,76	4 × 6,0	3/4 × 4,0
19 + UMA 150E 30/21	261	30,00	30 (23)	66,8	84,2	0,77	4 × 6,0	3/4 × 4,0
20 + UMA 150E 37/22	276	32,00	44 (38)	73,4	83,9	0,75	3/4 × 4,0 [20]	3/4 × 4,0
21 + UMA 150E 37/22	289	33,00	43 (37)	75,0	83,8	0,76	3/4 × 4,0 [20]	3/4 × 4,0
22 + UMA 150E 37/22	301	35,00	40 (34)	78,2	83,6	0,77	3/4 × 4,0 [20]	3/4 × 4,0
23 + UMA 150E 37/22	314	36,00	39 (32)	79,9	83,4	0,78	3/4 × 4,0 [20]	3/4 × 4,0
24 + UMA 150E 37/22	327	37,00	38 (31)	81,6	83,3	0,79	3/4 × 4,0 [20]	3/4 × 4,0

17) Length of pump end fitted as standard
18) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
19) On request
20) Parallel cable

UPA 150C - 60/..., number of stages 1 - 13



Connection types

Standard pump end = G 3

Possible connection types:

- Threaded connection
  - G 4
- Flanged connection
  - DN 65
  - DN 80

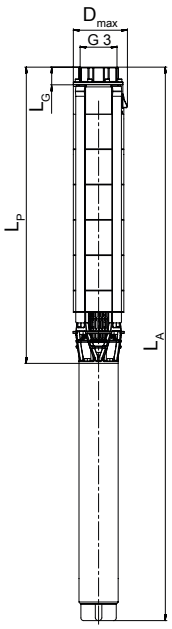
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

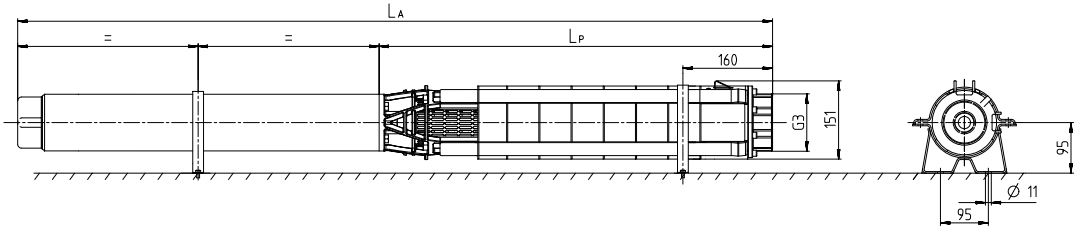
Values for calculating the dimensions if using a different pump end:

- G 3:
  L_{G*} = 48 mm
  $D_{max*} \triangleq D_{max}$
- G 4:
  L_{G*} = 93 mm
  $D_{max*} \triangleq D_{max}$
- DN 65:
  L_{G*} = 77 mm
  D_{max*} = 185 mm
- DN 80:
  L_{G*} = 77 mm
  D_{max*} = 200 mm



Operating range

Q_{min} = 32 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 150C - 60 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

UPA 150C - 60	DN motor					UMA motor						Type of installation	
	L_P	L_A	L_G [21]	D_{max} DOL	Total weight	L_P	L_A	L_G [21]	D_{max} DOL	D_{max} Y - Δ	Total weight	Vertical	Horizontal [22]
	[mm]	[mm]	[mm]	[mm]	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]		
60/1	406	759	48	139	22	-	-	-	-	-	-	✘	✘
60/2	519	1039	48	139	31	-	-	-	-	-	-	✘	✘
60/3	632	1363	48	139	45	663	1362	48	143	146	60,2	✘	✘
60/4	745	1476	48	139	47	776	1475	48	143	146	62,5	✘	✘
60/5	-	-	-	-	-	889	1618	48	143	146	67,8	✘	✘
60/6	-	-	-	-	-	1002	1811	48	143	146	78	✘	✘
60/7	-	-	-	-	-	1115	1924	48	143	146	80,3	✘	✘
60/8	-	-	-	-	-	1228	2082	48	145	146	87,6	✘	✘
60/9	-	-	-	-	-	1341	2240	48	145	146	93,8	✘	✘
60/10	-	-	-	-	-	1454	2443	48	145	146	105,1	✘	✘
60/11	-	-	-	-	-	1567	2556	48	145	146	107,4	✘	✘
60/12	-	-	-	-	-	1680	2774	48	146	147	120,6	✘	✘
60/13	-	-	-	-	-	1793	2887	48	146	147	122,9	✘	✘

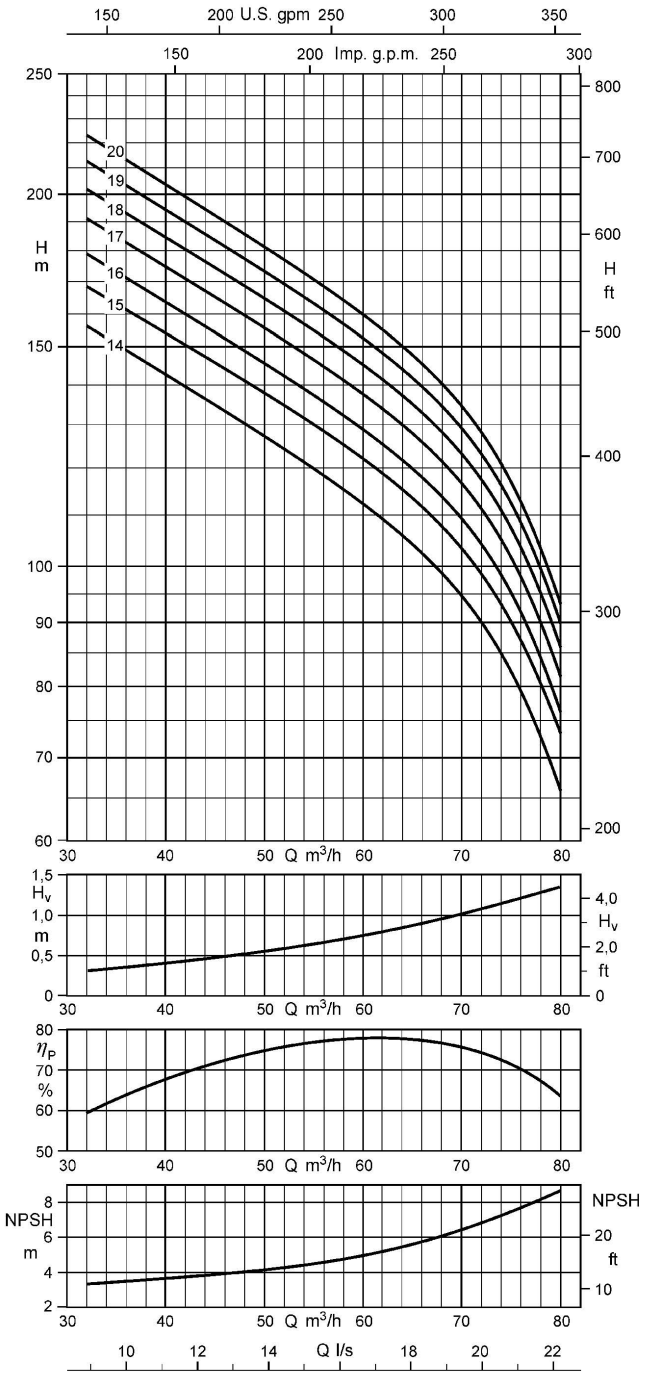
Technical data

UPA 150C - 60	Pump	Motor					Motor lead, flat	
	Head Q = 0 m^3/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm^2]	[mm^2]
DN motor								
1 + DN 100-2.2	13,4	2,20	30 (30)	5,5	75,0	0,77	4 × 1,5	-
2 + DN 100-3.7	27	3,70	30 (30)	9,0	78,0	0,78	4 × 1,5	-
3 + DN 100-7.5	41	7,50	30 (20)	17,1	79,0	0,81	4 × 1,5	-
4 + DN 100-7.5	53	7,50	30 (20)	17,1	79,0	0,81	4 × 1,5	-
UMA motor								
3 + UMA 150E 7/21	42	6,00	38 (34)	15,5	78,0	0,72	4 × 2,5	3/4 × 2,5
4 + UMA 150E 7/21	55	7,50	31 (25)	18,1	77,0	0,78	4 × 2,5	3/4 × 2,5
5 + UMA 150E 9/21	69	9,30	29 (23)	21,7	78,1	0,79	4 × 2,5	3/4 × 2,5
6 + UMA 150E 13/21	84	11,50	33 (27)	27,6	80,5	0,75	4 × 2,5	3/4 × 2,5
7 + UMA 150E 13/21	97	13,00	28 (22)	30,1	80,3	0,78	4 × 2,5	3/4 × 2,5
8 + UMA 150E 15/21	111	15,00	29 (23)	33,4	81,3	0,80	4 × 4,0	3/4 × 2,5
9 + UMA 150E 18/21	125	17,50	28 (21)	40,4	81,9	0,76	4 × 4,0	3/4 × 2,5
10 + UMA 150E 22/21	140	20,00	32 (26)	45,9	83,4	0,75	4 × 4,0	3/4 × 2,5
11 + UMA 150E 22/21	153	21,00	30 (24)	47,6	83,3	0,77	4 × 4,0	3/4 × 2,5
12 + UMA 150E 26/21	168	23,00	35 (30)	52,0	84,8	0,75	4 × 6,0	3/4 × 4,0
13 + UMA 150E 26/21	181	25,00	32 (26)	55,2	84,5	0,77	4 × 6,0	3/4 × 4,0

3400.5/10-EN

21) Length of pump end fitted as standard
22) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.

UPA 150C - 60/..., number of stages 14 - 20



Connection types

Standard pump end = G 3

Possible connection types:

- Threaded connection
  - G 4
- Flanged connection
  - DN 65
  - DN 80

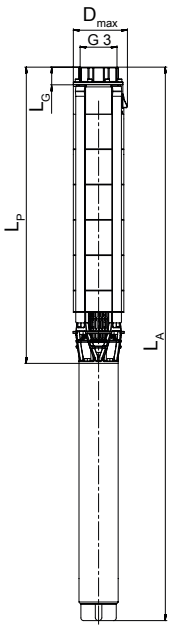
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

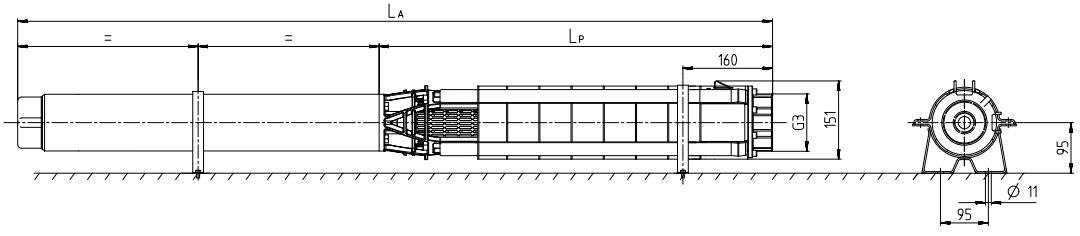
Values for calculating the dimensions if using a different pump end:

- G 3:
  L_{G*} = 48 mm
  $D_{max*} \triangleq D_{max}$
- G 4:
  L_{G*} = 93 mm
  $D_{max*} \triangleq D_{max}$
- DN 65:
  L_{G*} = 77 mm
  D_{max*} = 185 mm
- DN 80:
  L_{G*} = 77 mm
  D_{max*} = 200 mm



Operating range

Q_{min} = 32 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 150C - 60 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

UPA 150C - 60	DN motor					UMA motor						Type of installation	
	L_P	L_A	L_G [23]	D_{max} DOL	Total weight	L_P	L_A	L_G [23]	D_{max} DOL	D_{max} Y - Δ	Total weight	Vertical	Horizontal [24]
	[mm]	[mm]	[mm]	[mm]	[kg]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]		
60/14	-	-	-	-	-	1906	3000	48	146	147	125,1	✗	– [25]
60/15	-	-	-	-	-	2019	3213	48	146	147	137	✗	– [25]
60/16	-	-	-	-	-	2132	3326	48	146	147	140	✗	– [25]
60/17	-	-	-	-	-	2245	3519	48	145	147	149	✗	– [25]
60/18	-	-	-	-	-	2358	3632	48	145	147	151	✗	– [25]
60/19	-	-	-	-	-	2471	3745	48	145	147	154	✗	– [25]
60/20	-	-	-	-	-	2584	3858	48	145	147	156	✗	– [25]

Technical data

UPA 150C - 60	Pump	Motor					Motor lead, flat	
	Head Q = 0 m³/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm²]	[mm²]
UMA motor								
14 + UMA 150E 26/21	194	26,00	31 (25)	56,9	84,4	0,78	4 × 6,0	3/4 × 4,0
15 + UMA 150E 30/21	210	29,00	31 (25)	65,2	84,2	0,76	4 × 6,0	3/4 × 4,0
16 + UMA 150E 30/21	223	30,00	30 (23)	66,8	84,2	0,77	4 × 6,0	3/4 × 4,0
17 + UMA 150E 37/22	237	33,00	43 (37)	75,0	83,8	0,76	3/4 × 4,0 [26]	3/4 × 4,0
18 + UMA 150E 37/22	251	35,00	40 (34)	78,2	83,6	0,77	3/4 × 4,0 [26]	3/4 × 4,0
19 + UMA 150E 37/22	264	36,00	39 (32)	79,9	83,4	0,78	3/4 × 4,0 [26]	3/4 × 4,0
20 + UMA 150E 37/22	277	37,00	38 (31)	81,6	83,3	0,79	3/4 × 4,0 [26]	3/4 × 4,0

3400.5/10-EN

23) Length of pump end fitted as standard
24) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
25) On request
26) Parallel cable

Scope of supply

Depending on the model, the following items are included in the scope of supply:

- Pump set with motor lead
- Back-up name plate

Optional:

- Extension cable optional: connected or supplied but not fitted
- Cable connector
- Cable clips
- Pedestals
- Cooling shroud, suction shroud or pressure shroud
- Supporting clamps and mounting clamps
- Electrical protection equipment
- Automatic control units

Accessories

Pump accessories

Overview of pump accessories

Description	Connection / length	Quantity	Mat. No.	[kg]
Pump end, Flanged	DN 50, PN 16 - 40	Per piece	01116438	3,3
	DN 65, PN 16 - 40	Per piece	01116439	3,6
	DN 80, PN 16 - 40	Per piece	01116440	4,1
Pump end, Screw-ended	G3"	Per piece	01124645	0,9
	G4"	Per piece	01124644	1,4
Supporting and installation clamps	R 2" / DN 50	Per pair	95000294	3,4
	R 2 1/2" / DN 65	Per pair	95000296	12
	R 3" / DN 80	Per pair	95000298	12
	R 4" / DN 100	Per pair	95000300	21
Pedestals, shaft centreline height 95 mm for UMA 150E motor		Per set	01117821	1,5
Cable tie, Size 1		Per piece	01088095	0,04
Power cable, round, drinking water (with earth conductor)	4 x 1,5 mm^2	Per metre	90068174	0,18
	4 x 2,5 mm^2	Per metre	90068175	0,259
	4 x 4 mm^2	Per metre	90068176	0,356
	4 x 6 mm^2	Per metre	90068177	0,6
	4 x 10 mm^2	Per metre	90068178	1,1
	4 x 16 mm^2	Per metre	90068179	1,22
	4 x 25 mm^2	Per metre	90068180	1,8
	4 x 35 mm^2	Per metre	90068181	2,3
	4 x 50 mm^2	Per metre	90068182	3,2
	4 x 70 mm^2	Per metre	90068183	4,4
Power cable, drinking water (without earth conductor)	3 x 1.5 mm^2	Per metre	90068148	0,1
	3 x 2.5 mm^2	Per metre	90068149	0,2
	3 x 4 mm^2	Per metre	90068150	0,2
	3 x 6 mm^2	Per metre	90068151	0,3
	3 x 10 mm^2	Per metre	90068152	0,6
	3 x 16 mm^2	Per metre	90068153	0,8
	3 x 25 mm^2	Per metre	90068154	1,1
	3 x 35 mm^2	Per metre	90068155	1,4
	3 x 50 mm^2	Per metre	90068156	2,1
	3 x 70 mm^2	Per metre	90068157	2,8
Cable kit for 3~ motors DN 100, 4-core, flat, 4 x 1.5 mm^2[27)], for material variants C1 and C2	L = 5 m	Per set	1712501	0,7
	L = 10 m	Per set	1712502	1,3
	L = 15 m	Per set	1712503	2,07
	L = 20 m	Per set	1712504	2,74
	L = 25 m	Per set	1712505	3,3
	L = 30 m	Per set	1712506	4,1
	L = 35 m	Per set	1712507	4,77
	L = 40 m	Per set	1712508	5,54

27) Specify the material number of the pump when ordering.

Description	Connection / length	Quantity	Mat. No.	[kg]
Cable kit for 3~ motors DN 100, 4-core, round, 4 x 1.5 mm²[227)], for material variant C1	L = 5 m	Per set	1431841	0,7
	L = 10 m	Per set	1435407	1,3
	L = 15 m	Per set	1435408	2,07
	L = 20 m	Per set	1435409	2,74
	L = 25 m	Per set	1435410	3,3
	L = 30 m	Per set	1435411	4,1
	L = 35 m	Per set	1435412	4,77
	L = 40 m	Per set	1435413	5,54
Cable connector size 28 For 1 × motor lead to 1 × extension cable			95005106	0,5
Cable connector size 28 includes connection and sealing For 1 × motor lead to 1 × extension cable			90049385	0,5
Cable connector size 35 For 1 × motor lead to 1 × extension cable			90049397	0,6
Cable connector size 35 includes connection and sealing For 1 × motor lead to 1 × extension cable			90049387	0,6
Cable connector size 43 For 1 × motor lead to 1 × extension cable			90049399	0,8
Cable connector size 43 For 2 × motor leads to 1 × extension cable			90049400	0,8
Cable connector size 43 includes connection and sealing For 1 × motor lead to 1 × extension cable			90049389	0,8
Cable connector size 43 includes connection and sealing For 2 × motor leads to 1 × extension cable			90049390	0,8
Cable connector size 53 For 2 × motor leads to 1 × extension cable			90049401	1
Cable connector size 53 includes connection and sealing For 1 × motor lead to 1 × extension cable			90049391	1
Dry running protection device Fully automatic operation (with 1 relay and 3 electrodes)		Per set	90009554	2
Dry running protection device Semi-automatic operation (with 1 relay, 1 pressure switch)		Per set	90009553	2
Control cabinet UPA Control For DOL starting, temperature-compensated, insulating enclosure With 4 PG cable glands for round cables 3 immersion electrodes and integrated selector switch for "Dry running protection" or "Water level control" operation, as well as with thermal overcurrent relay with phase failure protection, for motor sizes:				
1~230 V	**3~400 V**			
-	0,37 kW	-	40980887	3,5
-	0,55 + 0,75 kW	-	40980889	3,5
-	1,10 + 1,50 kW	-	40980891	3,5
0,55 kW	-	-	40980893	3,5
0,75 kW	2,20 kW	-	40980895	3,5
1,10 kW	3,00 + 3,70 kW	-	40980897	3,5
1,50 kW	-	-	40980899	3,5
2,20 kW	5,50 kW	-	40984811	3,5
-	7,50 kW	-	90052649	3,5
-	UMA 150E - 5/21	-	40984811	3,5
-	UMA 150E - 7/21	-	90052649	3,5
Lightning protection For 3~400 V		Per set	00533299	0,3
Pressure controller 0 - 8 bar		Per piece	01151586	1

Motor accessories

	Description	Mat. No.	[kg]
	Fill check kit, for checking and topping up the motor fill after prolonged storage for UMA 150D, UMA 150E, UMA 200D, UMA 250D	90066762	0,25

Automatic control units

	Description	Mat. No.	[kg]
	Cervomatic EDP.2 automatic control unit	01185581	2,5
	Controlmatic E automatic control unit	90053395	1,3

Cooling shroud made of stainless steel 1.4301

	UPA 150C	Motor type 3~ 400 V		Cooling shroud					Suction strainer		
		DN 100	UMA 150E	Ø × length	Vertical installation		Horizontal installation (including pedestals)		Ø × length	Mat. No.	[kg]
		[kW]	[kW]	[mm]	Mat. No.	[kg]	Mat. No.	[kg]	[mm]		
	16/... 30/...	≤ 1,5	-	Ø 160 (180) × 450	01138258	2,5	01138255	4,9	Ø 160 × 158	01138982	0,5
		≤ 2,2	-	Ø 160 (180) × 500	01138259	2,7	01138256	5,1	Ø 160 × 158	01138982	0,5
		≤ 3,0	-	Ø 160 (180) × 625	01138260	3,8	01138317	6,2	Ø 160 × 158	01138982	0,5
		≤ 5,5	-	Ø 160 (180) × 800	01138261	3,9	01138318	6,3	Ø 160 × 158	01138982	0,5
		≤ 7,5	-	Ø 160 (180) × 1000	01315559	6,4	-	-	Ø 160 × 158	01138982	0,5
		-	≤ 9,3	Ø 180 (200) × 800	01584802	5,5	01584805	7,9	Ø 180 × 192	01138984	0,6
		-	≤ 18,5	Ø 180 (200) × 1000	01584806	6	01584817	9,6	Ø 180 × 192	01138984	0,6
		-	≤ 26,0	Ø 180 (200) × 1250	01584818	8,6	01584819	12,2	Ø 180 × 192	01138984	0,6
		-	≤ 37,0	Ø 180 (200) × 1500	01584820	10,6	01584821	14,2	Ø 180 × 192	01138984	0,6
	48/... 60/...	≤ 2,2	-	Ø 180 (200) × 500	01138262	3,7	01138319	6,1	Ø 180 × 192	01138984	0,6
		≤ 3,0	-	Ø 180 (200) × 625	01138263	4	01138320	6,4	Ø 180 × 192	01138984	0,6
		≤ 5,5	-	Ø 180 (200) × 800	01138264	5,5	01138321	7,9	Ø 180 × 192	01138984	0,6
		≤ 7,5	-	Ø 180 (200) × 1000	01315560	7,5	-	-	Ø 180 × 192	01138984	0,6
		-	≤ 9,3	Ø 200 (220) × 800	01584822	5,8	01584823	8,5	Ø 200 × 192	01138985	0,8
		-	≤ 18,5	Ø 200 (220) × 1000	01584842	6,3	01584843	10,3	Ø 200 × 192	01138985	0,8
		-	≤ 26,0	Ø 200 (220) × 1250	01584844	11	01584845	15	Ø 200 × 192	01138985	0,8
		-	≤ 37,0	Ø 200 (220) × 1500	01584846	12,4	01584867	16,4	Ø 200 × 192	01138985	0,8

Cooling shroud in material variant C2 on request

UPA 200, 200B, 250C

Main applications

- Water supply systems
- Spray irrigation systems
- Mining
- General irrigation systems
- Pressure boosting
- Fire-fighting systems
- Lowering groundwater levels

Fluids handled

- Drinking water
- Cooling water
- River water, lake water and groundwater
- Seawater[28)]
- Max. permissible sand content of the fluid 50 g/m³

Operating data

Operating properties

Characteristic		Value
Flow rate	Q [m³/h]	≤ 330
	Q [l/s]	≤ 92
Head	H [m]	≤ 460
Fluid temperature	T [°C]	≤ +50
Speed	n [rpm]	≤ 2900
Well diameter	D [mm]	200/250
	D [″]	8/10

Design details

Design

- Centrifugal pump
- Single-stage or multistage
- Single-entry
- Ring-section design
- Rigid connection between pump and motor

Type of installation

- Vertical installation
- Horizontal installation (depending on the number of stages)

Drive

Asynchronous motor:

- With squirrel cage motor for submerged use
- Standard connection to NEMA
- Frequency 50 Hz
- IP68 enclosure
- DOL starting or star-delta starting
- Frequency of starts
  - UMA 150E: 15 starts per hour
  - UMA 200D, UMA 250D: 10 starts per hour
  - UMA 300D: 5 starts per hour
- Winding J1 (PVC) or, for higher temperatures, J2 (VPE / XLPE)

Synchronous motor:

- Interior (buried) permanent magnet synchronous motor (IPMSM)
- IP68 enclosure
- Standard connection to NEMA
- Winding J2 (VPE / XLPE)
- Frequency of starts ≤ 15 starts per hour

Electrical connection

- Delivered ex-factory with 1 or 2 motor leads (including earth conductor and internal earthing)
- Extension cable connected with water-tight cable connector
- Motor lead and extension cable suitable for drinking water use

Impeller type

- Radial or mixed flow versions

Bearings

- Radial plain bearings
- Pump bearings lubricated by fluid handled; motor bearings lubricated by water fill
- Axial thrust is balanced by a tilting-pad thrust bearing in the motor (lower end)
- 1 intermediate bearing in the pump, depending on the pump size and the number of stages

28) Only for pumps in material variant C3 (duplex)

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Connections

- Pump screw-ended or flanged
- With lift check valve or connection branch

Designation

Example: UPA 200B - 80B / 5d

Designation key

Code	Description
UPA	Pump type series
200	Minimum well diameter [mm]
B	Design status
80	Flow rate at best efficiency point [m^3/h]
B	Impeller material (e.g. B = bronze)
5	Number of stages
d	Trimmed impellers

Materials

Material selection for UPA 200 pumps

Component	Material variant	
	G	B
Casing	Grey cast iron (EN-GJL-200)	Bronze (CC480K-DW)
Impeller	Glass fibre reinforced Noryl (PPO)	
Screws, bolts and nuts	CrNiMo steel (A4-70)	
Shaft	Chrome steel (1.4021)	CrNiMo steel (1.4462)

Material selection for UPA 200B and 250C pumps

Component		Material variant		
		G	B	C3
Casing		Grey cast iron (EN-GJL-250)	Bronze (CC480K-DW)	CrNiMo steel (1.4517)
Impeller	200B	Glass fibre reinforced Noryl (PPO) / bronze (CC480K-DW)		CrNiMo steel (1.4517)
	250C	Bronze (CC480K-DW)		CrNiMo steel (1.4517)
Screws, bolts and nuts		CrNiMo steel (A4-70)		CrNiMo steel (1.4462)
Shaft		Chrome steel (1.4021)	CrNiMo steel (1.4462)	CrNiMo steel (1.4462)

Material selection for UMA 150E, 200D, 250D, 300D motors

Component		Material variant			
		G	C1	C2	C3
Casing	150E	-	CrNi steel (1.4301)	CrNiMo steel (1.4571)	CrNiMo steel (1.4539)
	200D	Grey cast iron (EN-GJL-200)	-	CrNiMo steel (1.4408)	CrNiMo steel (1.4539)
	250D	Grey cast iron (EN-GJL-200)	-	CrNiMo steel (1.4408)	CrNiMo steel (1.4539)
	300D	Grey cast iron (EN-GJL-250)	-	-	CrNiMo steel (1.4517)
Screws, bolts and nuts	150E	-	CrNiMo steel (A4-70)	CrNiMo steel (A4-70)	CrNiMo steel (1.4539)
	200D	CrNiMo steel (A4-70)	-	CrNiMo steel (A4-70)	CrNiMo steel (1.4539)
	250D	CrNiMo steel (A4-70)	-	CrNiMo steel (A4-70)	CrNiMo steel (1.4539)
	300D	CrNiMo steel (1.4571)	-	-	CrNiMo steel (1.4462)
Shaft	150E	-	CrNi steel (1.4021)[29] / CrNiMo steel (1.4462)[30]	CrNiMo steel (1.4462)	CrNiMo steel (1.4462)
	200D	CrNiMo steel (1.4460)	-	CrNiMo steel (1.4462)	CrNiMo steel (1.4462)
	250D	CrNiMo steel (1.4460)	-	CrNiMo steel (1.4462)	CrNiMo steel (1.4462)
	300D	CrNiMo steel (1.4462)	-	-	CrNiMo steel (1.4462)

29) For motors < 18.5 kW
30) For motors ≥ 18.5 kW

Coating and preservation

Only for pump sets in material variant grey cast iron.

- 2-component high-build coating, epoxy resin base paint
  - Coating structure: primer and top coat
  - Film thickness: 100 to 150 µm
  - Colour: ultramarine blue (RAL 5002)

Product benefits

- High efficiencies through optimised hydraulic design
- High operating reliability and a long service life by integrated sand separator, robust wear rings and enclosed pump bearings
- Reliable operation by anti-jam lift check valve
- High flexibility by vertical, horizontal and angular installation options
- Durable, completely maintenance-free design with hydrodynamic bearings
- Easy to install with service-friendly hydraulic system design
- Low noise level

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Product information

Product information as per Regulation No. 1907/2006 (REACH)

For information as per chemicals Regulation (EC) No. 1907/2006 (REACH), see http://www.ksb.com/reach.

Information on characteristic curves

The characteristic curves shown are intended to allow pre-selection. Refer to the quotation for the precise selection data.

- Tolerance to ISO 9906 Cl. 2B, > 10 kW
- Tolerance to ISO 9906 Cl. 3B, < 10 kW
- Threaded end to DIN ISO 228, Part 1
- Flanged end to DIN EN 1092

H_v Head losses in the lift check valve. The head losses H_v in the lift check valve are not included in the pump characteristic curves.

η_p Pump efficiency (without lift check valve)

NPSH Net positive suction head required by pump

Certifications

Overview

Label	Effective in:	Comment
International Organization for Standardization ISO 9001	All countries	Certified quality management to ISO 9001
Attestation de conformité Sanitaire ACS 31)	France	French drinking water approval

31) Valid for pump materials G and B and motor materials G, C1, C2 and C3

Technical data

Selection chart

n = 2900 rpm

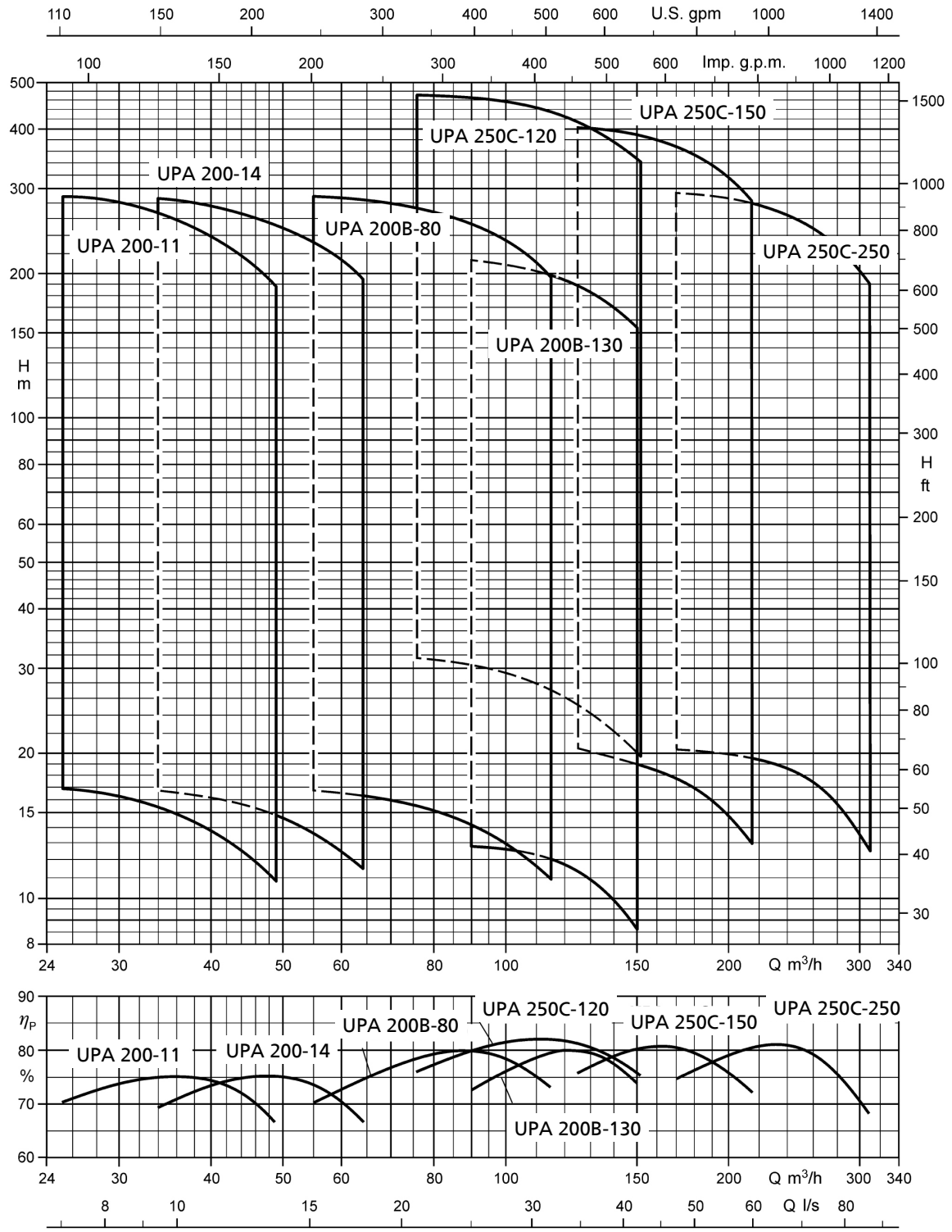

Fig. 2: Selection chart UPA 200, 200B, 250C
Selection charts or characteristic curves for UPA in material variant C3 (duplex) only on request.

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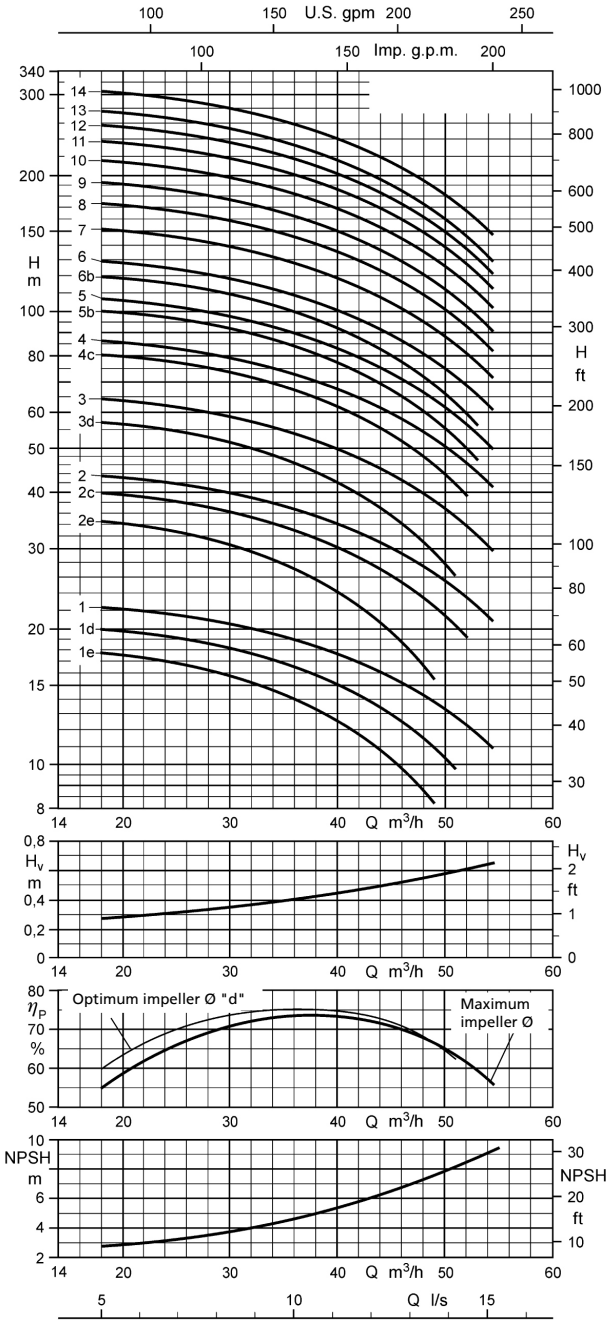
UPA 200 - 11 / ...



Types of connection

Standard pump end = G 3

Connection types:

- Flanged connection
  - DN 80

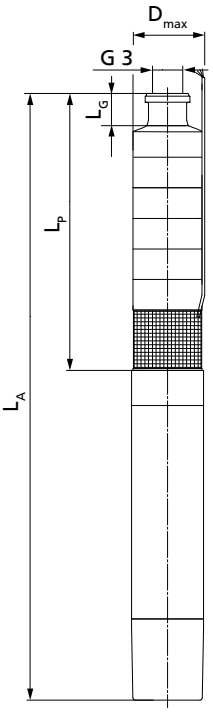
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

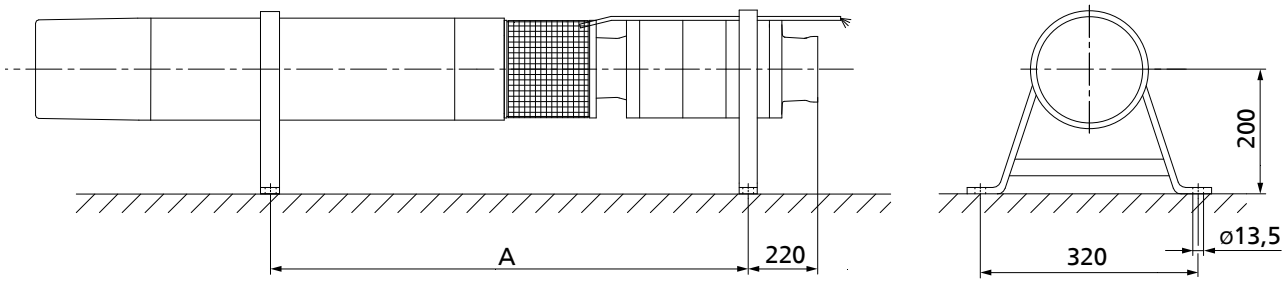
Values for calculating the dimensions if using a different pump end:

- G 3:
  L_{G*} = 200 mm
  $D_{max*} \triangleq D_{max}$
- DN 80:
  L_{G*} = 200 mm
  D_{max*} = 200 mm



Operating range

Q_{min} = 8 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 200 - 11 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

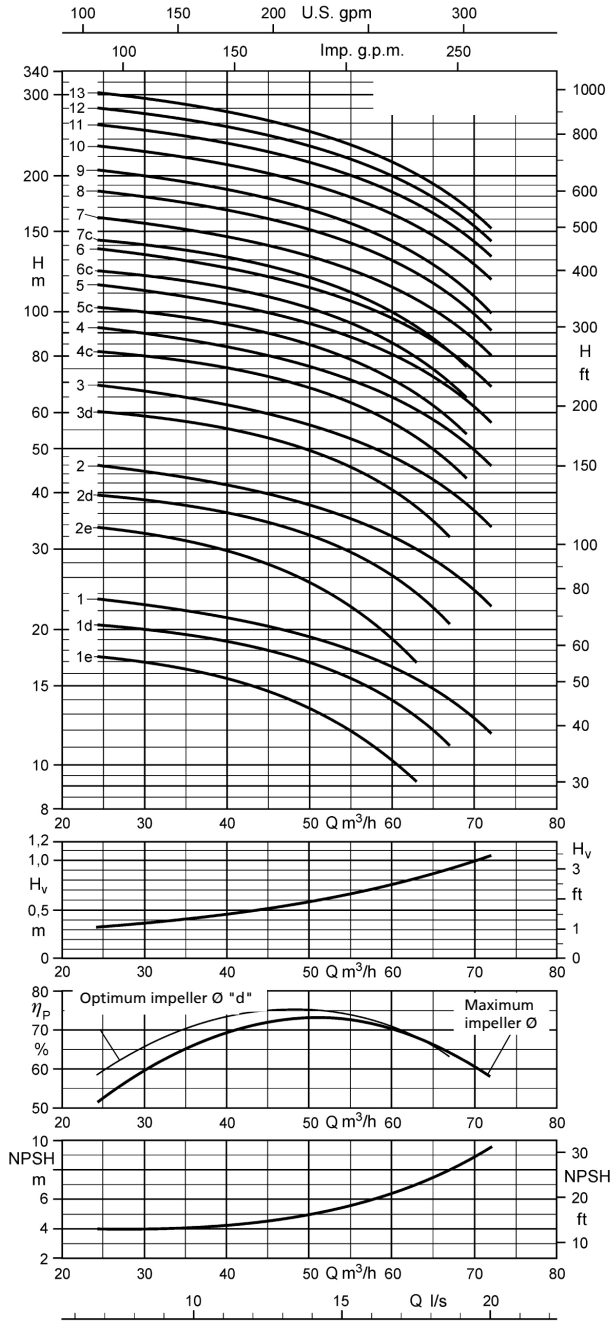
UPA 200 - 11	A	L_P	L_A	L_G [32]	D_{max}		Total weight			Type of installation	
					DOL	Y - Δ	Material variant				
							G	B	C3	Vertical	Horizontal [33]
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[kg]	[kg]		
1e + UMA 150E 5/21	635	515	1194	200	192	195	75	80	-	✗	✗
1d + UMA 150E 5/21	635	515	1194	200	192	195	75	80	-	✗	✗
1 + UMA 150E 5/21	635	515	1194	200	192	195	75	80	-	✗	✗
2e + UMA 150E 5/21	700	580	1259	200	192	195	79	85	-	✗	✗
2c + UMA 150E 5/21	700	580	1259	200	192	195	79	85	-	✗	✗
2 + UMA 150E 7/21	710	580	1279	200	192	195	81	87	-	✗	✗
3d + UMA 150E 7/21	775	645	1344	200	192	195	85	92	-	✗	✗
3 + UMA 150E 9/21	790	645	1374	200	192	195	88	95	-	✗	✗
4c + UMA 150E 13/21	895	710	1519	200	192	195	100	108	-	✗	✗
4 + UMA 150E 13/21	895	710	1519	200	192	195	100	108	-	✗	✗
5b + UMA 150E 13/21	960	775	1584	200	192	195	104	112	-	✗	✗
5 + UMA 150E 15/21	980	775	1629	200	193	195	109	117	-	✗	✗
6b + UMA 150E 15/21	1045	840	1694	200	193	195	113	122	-	✗	✗
6 + UMA 150E 18/21	1070	840	1739	200	193	195	117	126	-	✗	✗
7 + UMA 150E 22/21	1180	905	1894	200	193	195	130	140	-	✗	✗
8 + UMA 150E 26/21	1295	970	2064	200	194	196	146	156	-	✗	✗
9 + UMA 150E 26/21	1360	1035	2129	200	194	196	150	161	-	✗	✗
10 + UMA 150E 30/21	1475	1100	2294	200	194	196	164	176	-	✗	✗
11 + UMA 150E 37/22	-	1165	2439	200	196	196	175	188	-	✗	– [34]
12 + UMA 150E 37/22	-	1230	2504	200	196	196	179	193	-	✗	– [34]
13 + UMA 150E 37/22	-	1295	2569	200	196	196	184	197	-	✗	– [34]
14 + UMA 200D 45/21	1755	1360	2590	200	199	199	244	258	-	✗	✗

Technical data

UPA 200 - 11	Pump	Motor					Motor lead, flat	
	Head $Q = 0\ m^3/h$	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm²]	[mm²]
1e + UMA 150E 5/21	19	2,5	45 (42)	10,0	69,2	0,53	4 × 2,5	3/4 × 2,5
1d + UMA 150E 5/21	20	2,5	45 (42)	10,0	69,2	0,53	4 × 2,5	3/4 × 2,5
1 + UMA 150E 5/21	23	3,5	44 (41)	10,9	74,9	0,62	4 × 2,5	3/4 × 2,5
2e + UMA 150E 5/21	36	4,5	41 (38)	12,2	76,5	0,70	4 × 2,5	3/4 × 2,5
2c + UMA 150E 5/21	41	5,5	37 (32)	13,8	76,1	0,76	4 × 2,5	3/4 × 2,5
2 + UMA 150E 7/21	45	6,0	38 (34)	15,5	78,0	0,72	4 × 2,5	3/4 × 2,5
3d + UMA 150E 7/21	59	7,0	33 (28)	17,2	77,0	0,77	4 × 2,5	3/4 × 2,5
3 + UMA 150E 9/21	66	9,0	30 (24)	21,2	78,3	0,79	4 × 2,5	3/4 × 2,5
4c + UMA 150E 13/21	83	10,0	37 (32)	25,3	80,6	0,71	4 × 2,5	3/4 × 2,5
4 + UMA 150E 13/21	89	12,0	31 (26)	28,4	80,5	0,76	4 × 2,5	3/4 × 2,5
5b + UMA 150E 13/21	103	12,5	30 (24)	29,2	80,4	0,77	4 × 2,5	3/4 × 2,5
5 + UMA 150E 15/21	110	14,5	30 (34)	32,5	81,4	0,79	4 × 4,0	3/4 × 2,5
6b + UMA 150E 15/21	123	15,0	29 (23)	33,4	81,3	0,80	4 × 4,0	3/4 × 2,5
6 + UMA 150E 18/21	133	17,5	28 (21)	40,4	81,9	0,76	4 × 4,0	3/4 × 2,5
7 + UMA 150E 22/21	155	21,0	30 (24)	47,6	83,3	0,77	4 × 4,0	3/4 × 2,5
8 + UMA 150E 26/21	178	24,0	34 (28)	53,6	84,7	0,76	4 × 6,0	3/4 × 4,0
9 + UMA 150E 26/21	199	26,0	31 (25)	56,9	84,4	0,78	4 × 6,0	3/4 × 4,0
10 + UMA 150E 30/21	222	29,0	31 (25)	65,2	84,2	0,76	4 × 6,0	3/4 × 4,0
11 + UMA 150E 37/22	245	32,0	44 (38)	73,4	83,9	0,75	3/4 × 4,0 [35]	3/4 × 4,0
12 + UMA 150E 37/22	266	35,0	40 (34)	78,2	83,6	0,77	3/4 × 4,0 [35]	3/4 × 4,0
13 + UMA 150E 37/22	286	37,0	38 (31)	81,6	83,3	0,79	3/4 × 4,0 [35]	3/4 × 4,0
14 + UMA 200D 45/21	315	42,0	30 (25)	85,0	86,1	0,83	3/4 × 6,0 [36]	3/4 × 6,0

32) Length of pump end fitted as standard
33) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
34) On request
35) Parallel cable
36) Delta configuration in cable connector or control cabinet

UPA 200 - 14 / ...



Types of connection

Standard pump end = G 3

Connection types:

- Flanged connection
  - DN 80

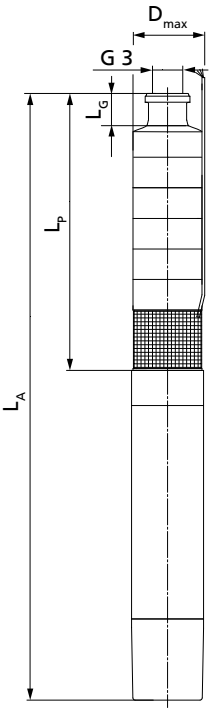
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

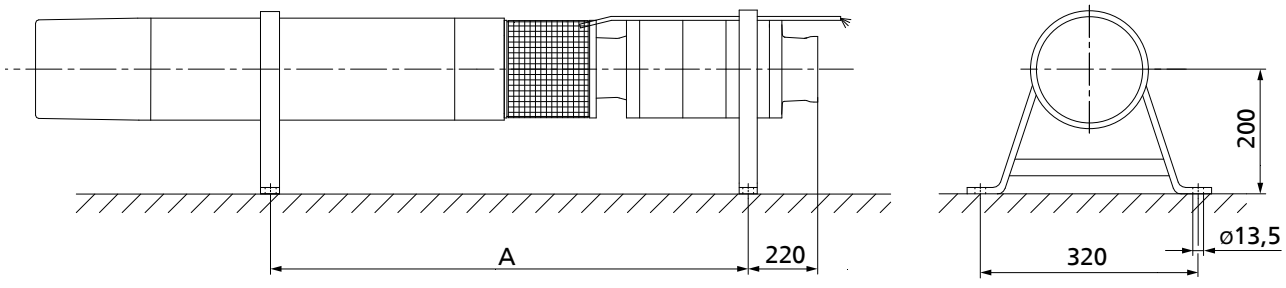
Values for calculating the dimensions if using a different pump end:

- G 3:
  L_{G*} = 200 mm
  $D_{max*} \triangleq D_{max}$
- DN 80:
  L_{G*} = 200 mm
  D_{max*} = 200 mm



Operating range

Q_{min} = 10 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 200 - 14 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

UPA 200 - 14	A	L_P	L_A	L_G[37]	D_{max}		Total weight			Type of installation	
					DOL	Y - Δ	Material variant				
							G	B	C3	Vertical	Horizontal[38]
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[kg]	[kg]		
1e + UMA 150E 5/21	650	530	1209	200	192	195	76	81	-	✗	✗
1d + UMA 150E 5/21	650	530	1209	200	192	195	76	81	-	✗	✗
1 + UMA 150E 5/21	650	530	1209	200	192	195	76	81	-	✗	✗
2e + UMA 150E 7/21	740	610	1309	200	192	195	83	89	-	✗	✗
2d + UMA 150E 7/21	740	610	1309	200	192	195	83	89	-	✗	✗
2 + UMA 150E 9/21	755	610	1339	200	192	195	86	92	-	✗	✗
3d + UMA 150E 13/21	875	690	1499	200	192	195	99	106	-	✗	✗
3 + UMA 150E 13/21	875	690	1499	200	192	195	99	106	-	✗	✗
4c + UMA 150E 15/21	975	770	1624	200	193	195	109	117	-	✗	✗
4 + UMA 150E 18/21	1000	770	1669	200	193	195	113	121	-	✗	✗
5c + UMA 150E 18/21	1080	850	1749	200	193	195	118	127	-	✗	✗
5 + UMA 150E 22/21	1125	850	1839	200	193	195	127	136	-	✗	✗
6c + UMA 150E 22/21	1205	930	1919	200	193	195	132	142	-	✗	✗
6 + UMA 150E 26/21	1255	930	2024	200	194	196	143	153	-	✗	✗
7c + UMA 150E 26/21	1335	1010	2104	200	194	196	148	159	-	✗	✗
7 + UMA 150E 30/21	1385	1010	2204	200	194	196	158	169	-	✗	✗
8 + UMA 150E 37/22	-	1090	2364	200	196	196	170	182	-	✗	–[39]
9 + UMA 150E 37/22	-	1170	2444	200	196	196	176	188	-	✗	–[39]
10 + UMA 200D 45/21	1645	1250	2480	200	199	199	237	250	-	✗	✗
11 + UMA 200D 55/21	1780	1330	2670	200	199	199	262	277	-	✗	✗
12 + UMA 200D 55/21	1860	1410	2750	200	199	199	267	282	-	✗	✗
13 + UMA 200D 55/21	1940	1490	2830	200	199	199	272	288	-	✗	✗

Technical data

UPA 200 - 14	Pump	Motor					Motor lead, flat	
	Head $Q = 0\ m^3/h$	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm²]	[mm²]
1e + UMA 150E 5/21	18	3,0	45 (42)	10,4	72,7	0,57	4 × 2,5	3/4 × 2,5
1d + UMA 150E 5/21	21	3,5	44 (41)	10,9	74,9	0,62	4 × 2,5	3/4 × 2,5
1 + UMA 150E 5/21	25	4,5	41 (38)	12,2	76,5	0,70	4 × 2,5	3/4 × 2,5
2e + UMA 150E 7/21	35	6,0	38 (34)	15,5	78,0	0,72	4 × 2,5	3/4 × 2,5
2d + UMA 150E 7/21	42	7,0	33 (28)	17,2	77,0	0,77	4 × 2,5	3/4 × 2,5
2 + UMA 150E 9/21	50	8,5	32 (27)	20,3	78,5	0,77	4 × 2,5	3/4 × 2,5
3d + UMA 150E 13/21	65	10,5	35 (30)	26,1	80,6	0,72	4 × 2,5	3/4 × 2,5
3 + UMA 150E 13/21	75	12,5	30 (24)	29,2	80,4	0,77	4 × 2,5	3/4 × 2,5
4c + UMA 150E 15/21	90	14,5	30 (24)	32,5	81,4	0,79	4 × 4,0	3/4 × 2,5
4 + UMA 150E 18/21	101	17,0	29 (22)	39,6	82,0	0,76	4 × 4,0	3/4 × 2,5
5c + UMA 150E 18/21	113	18,0	26 (19)	41,2	81,8	0,77	4 × 4,0	3/4 × 2,5
5 + UMA 150E 22/21	126	21,0	30 (24)	47,6	83,3	0,77	4 × 4,0	3/4 × 2,5
6c + UMA 150E 22/21	136	22,0	28 (21)	49,2	83,1	0,78	4 × 4,0	3/4 × 2,5
6 + UMA 150E 26/21	151	25,0	32 (26)	55,2	84,5	0,77	4 × 6,0	3/4 × 4,0
7c + UMA 150E 26/21	159	26,0	31 (25)	56,9	84,4	0,78	4 × 6,0	3/4 × 4,0
7 + UMA 150E 30/21	177	30,0	30 (23)	66,8	84,2	0,77	4 × 6,0	3/4 × 4,0
8 + UMA 150E 37/22	202	34,0	41 (35)	76,6	83,7	0,77	3/4 × 4,0[40]	3/4 × 4,0
9 + UMA 150E 37/22	225	37,0	38 (31)	81,6	83,3	0,79	3/4 × 4,0[40]	3/4 × 4,0
10 + UMA 200D 45/21	255	44,0	30 (24)	89,0	86,0	0,84	3/4 × 6,0[41]	3/4 × 6,0
11 + UMA 200D 55/21	283	48,0	33 (27)	98,0	87,2	0,82	3/4 × 6,0[41]	3/4 × 6,0
12 + UMA 200D 55/21	307	52,0	30 (24)	104,0	87,1	0,83	3/4 × 6,0[41]	3/4 × 6,0
13 + UMA 200D 55/21	331	55,0	27 (21)	109,0	86,9	0,84	3/4 × 6,0[41]	3/4 × 6,0

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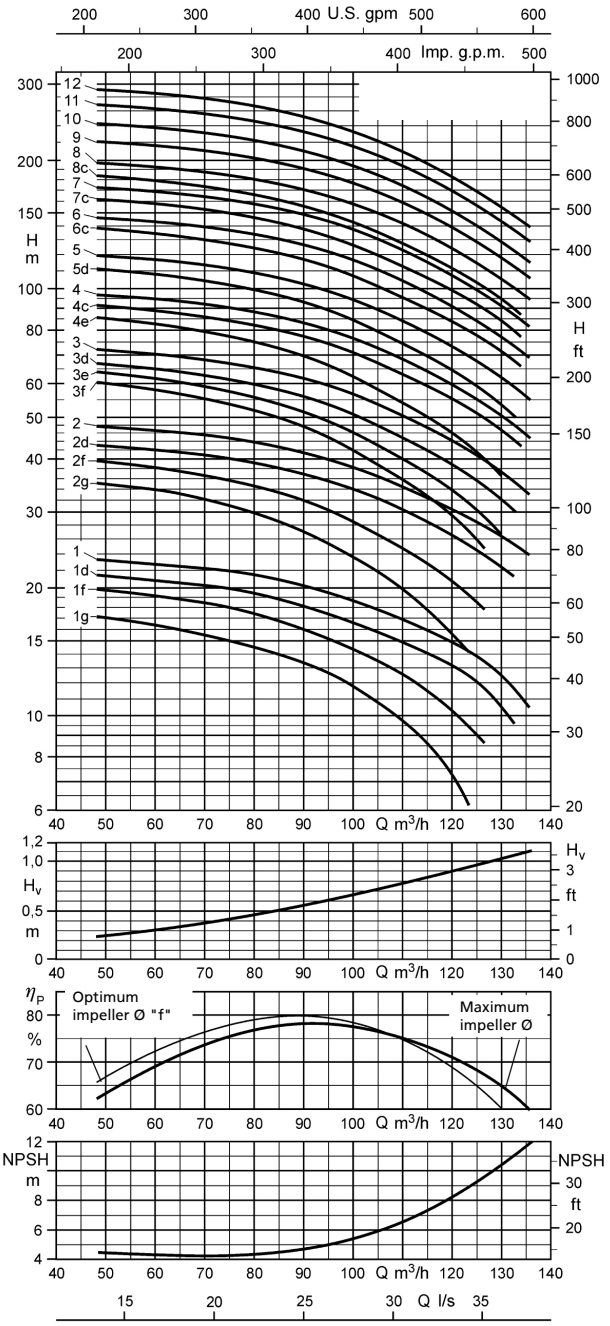
37) Length of pump end fitted as standard
38) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
39) On request
40) Parallel cable
41) Delta configuration in cable connector or control cabinet

UPA 200B - 80 / ...



Operating range

Q_{min} = 15 m³/h
Q_{max}= end of stage curve

Types of connection

Standard pump end = G 5

Connection types:

- Flanged connection
  - DN 125

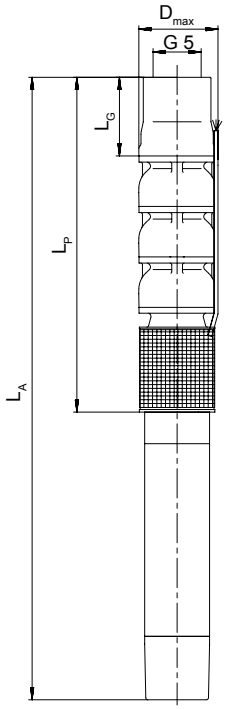
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

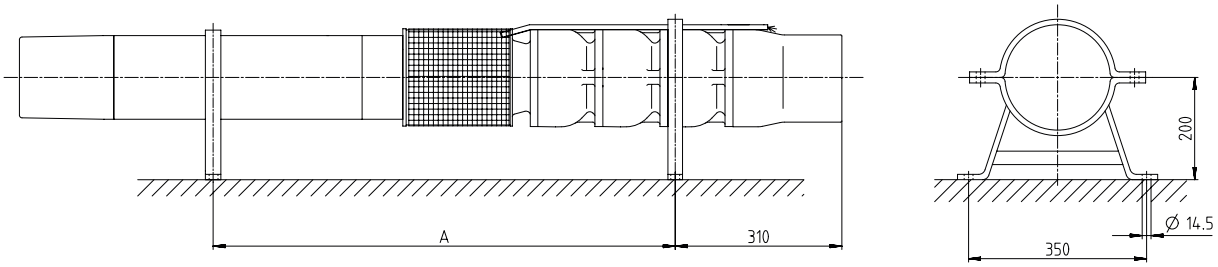
For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

Values for calculating the dimensions if using a different pump end:

- G 5:
  L_{G*} = 200 mm
  $D_{max*} \triangleq D_{max}$
- DN 125:
  L_{G*} = 150 mm
  D_{max*} = 250 mm (PN 10/16)
  D_{max*} = 270 mm (PN 25/40)





Dimensions of UPA 200B - 80 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

UPA 200B - 80	A	L_P	L_A	L_G [42]	D_{max}		Total weight			Type of installation	
					DOL	Y - Δ	Material variant				
							G	B	C3	Vertical	Horizontal [43]
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[kg]	[kg]		
1g + UMA 150E 5/21	610	582	1261	200	193	196	81	88	89	✗	✗
1f + UMA 150E 7/21	620	582	1281	200	193	196	83	90	91	✗	✗
1d + UMA 150E 7/21	620	582	1281	200	193	196	83	90	91	✗	✗
1 + UMA 150E 9/21	635	582	1311	200	193	196	86	93	94	✗	✗
2g + UMA 150E 13/21	810	714	1523	200	193	196	104	114	115	✗	✗
2f + UMA 150E 13/21	810	714	1523	200	193	196	104	114	115	✗	✗
2d + UMA 150E 15/21	830	714	1568	200	194	196	109	119	120	✗	✗
2 + UMA 150E 18/21	855	714	1613	200	194	196	113	123	124	✗	✗
3f + UMA 150E 18/21	985	846	1745	200	194	196	124	135	136	✗	✗
3e + UMA 150E 18/21	985	846	1745	200	194	196	124	135	136	✗	✗
3d + UMA 150E 22/21	1030	846	1835	200	194	196	133	144	145	✗	✗
3 + UMA 150E 22/21	1030	846	1835	200	194	196	133	144	145	✗	✗
4e + UMA 150E 26/21	1215	978	2072	200	195	198	154	167	169	✗	✗
4c + UMA 150E 30/21	1265	978	2172	200	195	198	164	177	179	✗	✗
4 + UMA 150E 30/21	1265	978	2172	200	195	198	164	177	179	✗	✗
5d + UMA 150E 37/22	-	1110	2384	200	198	198	182	197	199	✗	– [44]
5 + UMA 150E 37/22	-	1110	2384	200	198	198	182	197	199	✗	– [44]
6c + UMA 200D 45/21	1550	1242	2475	200	201	201	249	266	268	✗	✗
6 + UMA 200D 45/21	1550	1242	2475	200	201	201	249	266	268	✗	✗
7c + UMA 200D 55/21	1735	1374	2715	200	201	201	280	298	301	✗	✗
7 + UMA 200D 55/21	1735	1374	2715	200	201	201	280	298	301	✗	✗
8c + UMA 200D 55/21	1865	1506	2845	200	201	201	290	311	313	✗	✗
8 + UMA 200D 65/21	1930	1506	2975	200	205	205	313	334	336	✗	✗
9 + UMA 200D 75/21	-	1638	3200	200	205	205	340	362	365	✗	– [44]
10 + UMA 200D 75/21	-	1770	3330	200	205	205	350	374	377	✗	– [44]
11 + UMA 200D 90/21	-	1902	3645	200	211	211	394	420	423	✗	– [44]
12 + UMA 200D 90/21	-	2034	3775	200	211	211	404	432	436	✗	– [44]

Technical data

UPA 200B - 80	Pump	Motor					Motor lead, flat	
	Head Q = 0 m³/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm²]	[mm²]
1g + UMA 150E 5/21	20	5,5	37 (32)	13,8	76,1	0,76	4 × 2,5	3/4 × 2,5
1f + UMA 150E 7/21	24	6,0	38 (34)	15,5	78,0	0,72	4 × 2,5	3/4 × 2,5
1d + UMA 150E 7/21	25	7,5	31 (25)	18,1	77,0	0,78	4 × 2,5	3/4 × 2,5
1 + UMA 150E 9/21	27	8,0	34 (30)	19,4	78,7	0,76	4 × 2,5	3/4 × 2,5
2g + UMA 150E 13/21	39	10,5	35 (30)	26,1	80,6	0,72	4 × 2,5	3/4 × 2,5
2f + UMA 150E 13/21	44	12,0	31 (26)	28,4	80,5	0,76	4 × 2,5	3/4 × 2,5
2d + UMA 150E 15/21	48	14,5	30 (24)	32,5	81,4	0,79	4 × 4,0	3/4 × 2,5
2 + UMA 150E 18/21	53	16,0	31 (25)	38,0	82,1	0,74	4 × 4,0	3/4 × 2,5
3f + UMA 150E 18/21	67	16,0	31 (25)	38,0	82,1	0,74	4 × 4,0	3/4 × 2,5
3e + UMA 150E 18/21	70	18,0	26 (19)	41,2	81,8	0,77	4 × 4,0	3/4 × 2,5
3d + UMA 150E 22/21	73	20,0	32 (26)	45,9	83,4	0,75	4 × 4,0	3/4 × 2,5
3 + UMA 150E 22/21	78	22,0	28 (21)	49,2	83,1	0,78	4 × 4,0	3/4 × 2,5
4e + UMA 150E 26/21	94	24,0	34 (28)	53,6	84,7	0,76	4 × 6,0	3/4 × 4,0
4c + UMA 150E 30/21	99	28,0	32 (26)	53,6	84,3	0,75	4 × 6,0	3/4 × 4,0
4 + UMA 150E 30/21	104	30,0	30 (23)	66,8	84,2	0,77	4 × 6,0	3/4 × 4,0
5d + UMA 150E 37/22	122	33,0	43 (37)	75,0	83,8	0,76	3/4 × 4,0 [45]	3/4 × 4,0
5 + UMA 150E 37/22	129	37,0	38 (31)	81,6	83,3	0,79	3/4 × 4,0 [45]	3/4 × 4,0
6c + UMA 200D 45/21	150	44,0	30 (24)	89,0	86,0	0,84	3/4 × 6,0 [46]	3/4 × 6,0
6 + UMA 200D 45/21	158	45,0	27 (20)	90,0	86,0	0,84	3/4 × 6,0 [46]	3/4 × 6,0
7c + UMA 200D 55/21	176	50,0	31 (25)	101,0	87,2	0,83	3/4 × 6,0 [46]	3/4 × 6,0
7 + UMA 200D 55/21	185	54,0	28 (22)	108,0	87,0	0,84	3/4 × 6,0 [46]	3/4 × 6,0
8c + UMA 200D 55/21	200	55,0	26 (20)	109,0	86,9	0,84	3/4 × 6,0 [46]	3/4 × 6,0
8 + UMA 200D 65/21	213	62,0	30 (23)	123,0	87,7	0,83	3/4 × 10 [46]	3/4 × 10

42) Length of pump end fitted as standard
43) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
44) Horizontal installation on request and only with pedestals in special design
45) Parallel cable
46) Delta configuration in cable connector or control cabinet

UPA 200B - 80	Pump	Motor					Motor lead, flat	
	Head $Q = 0\ m^3/h$	Rated power	Max. fluid temperature $v \geq 0{,}2$ m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm²]	[mm²]
9 + UMA 200D 75/21	239	70,0	27 (20)	143,0	87,4	0,81	3/4 × 10 [46)]	3/4 × 10
10 + UMA 200D 75/21	264	75,0	22 (15)	151,0	87,3	0,83	3/4 × 10 [46)]	3/4 × 10
11 + UMA 200D 90/21	292	86,0	27 (20)	173,0	88,1	0,82	3/4 × 16 [46)]	3/4 × 16
12 + UMA 200D 90/21	317	90,0	23 (16)	181,0	88,0	0,82	3/4 × 16 [46)]	3/4 × 16

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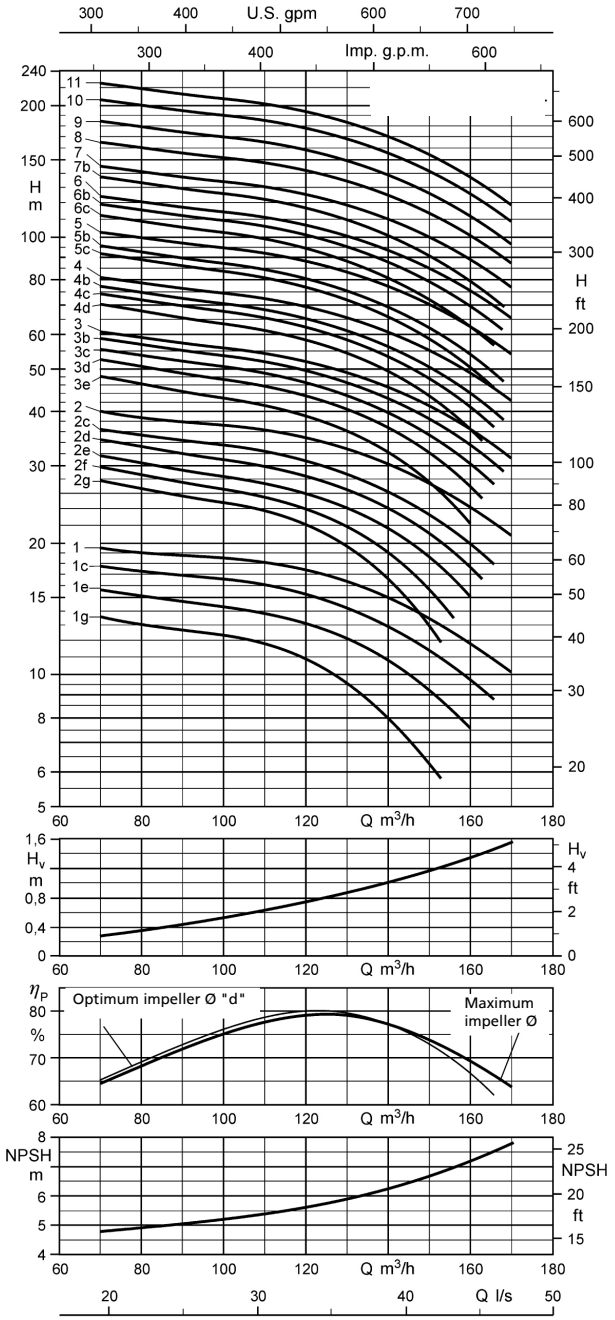
UPA 200B - 130 / ...



Types of connection

Standard pump end = G 5

Connection types:

- Flanged connection
  - DN 125

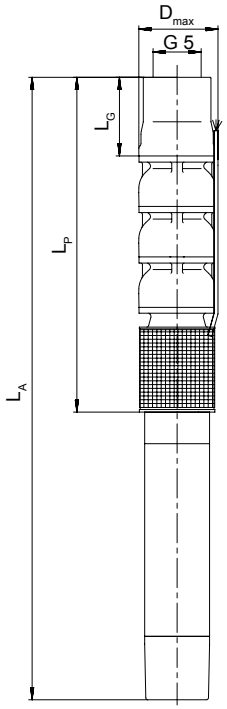
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

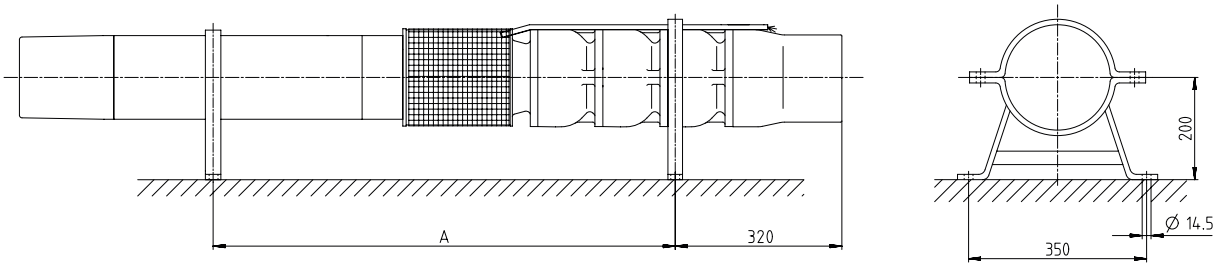
Values for calculating the dimensions if using a different pump end:

- G 5:
  L_{G*} = 200 mm
  $D_{max*} \triangleq D_{max}$
- DN 125:
  L_{G*} = 150 mm
  D_{max*} = 250 mm (PN 10/16)
  D_{max*} = 270 mm (PN 25/40)



Operating range

Q_{min} = 15 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 200B - 130 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

UPA 200B - 130	A	L_P	L_A	L_G [47]	D_{max}		Total weight			Type of installation	
					DOL	Y - Δ	Material variant				
							G	B	C3	Vertical	Horizontal [48]
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[kg]	[kg]		
1g + UMA 150E 5/21	615	595	1274	200	193	196	80	88	89	✗	✗
1e + UMA 150E 7/21	625	595	1294	200	193	196	82	90	91	✗	✗
1c + UMA 150E 7/21	625	595	1294	200	193	196	82	90	91	✗	✗
1 + UMA 150E 9/21	640	595	1324	200	193	196	85	93	94	✗	✗
2g + UMA 150E 13/21	825	740	1549	200	193	196	104	113	115	✗	✗
2f + UMA 150E 13/21	825	740	1549	200	193	196	104	113	115	✗	✗
2e + UMA 150E 13/21	825	740	1549	200	193	196	104	113	115	✗	✗
2d + UMA 150E 15/21	845	740	1594	200	194	196	109	118	120	✗	✗
2c + UMA 150E 15/21	845	740	1594	200	194	196	109	118	120	✗	✗
2 + UMA 150E 18/21	870	740	1639	200	194	196	113	122	124	✗	✗
3e + UMA 150E 18/21	1015	885	1784	200	194	196	123	134	136	✗	✗
3d + UMA 150E 22/21	1060	885	1874	200	194	196	132	143	145	✗	✗
3c + UMA 150E 22/21	1060	885	1874	200	194	196	132	143	145	✗	✗
3b + UMA 150E 26/21	1110	885	1979	200	195	198	143	154	156	✗	✗
3 + UMA 150E 26/21	1110	885	1979	200	195	198	143	154	156	✗	✗
4d + UMA 150E 30/21	1305	1030	2224	200	195	198	164	177	179	✗	✗
4c + UMA 150E 30/21	1305	1030	2224	200	195	198	164	177	179	✗	✗
4b + UMA 150E 30/21	1305	1030	2224	200	195	198	164	177	179	✗	✗
4 + UMA 150E 37/22	-	1030	2304	200	198	198	171	184	186	✗	-[49]
5c + UMA 150E 37/22	-	1175	2449	200	198	198	184	198	201	✗	-[49]
5b + UMA 150E 37/22	-	1175	2449	200	198	198	184	198	201	✗	-[49]
5 + UMA 200D 45/21	1470	1175	2405	200	201	201	238	252	255	✗	✗
6c + UMA 200D 45/21	1615	1320	2550	200	201	201	248	265	269	✗	✗
6b + UMA 200D 55/21	1670	1320	2660	200	201	201	268	285	289	✗	✗
6 + UMA 200D 55/21	1670	1320	2660	200	201	201	268	285	289	✗	✗
7b + UMA 200D 55/21	1815	1465	2805	200	201	201	279	297	301	✗	✗
7 + UMA 200D 65/21	1880	1465	2935	200	205	205	302	320	324	✗	✗
8 + UMA 200D 75/21	-	1610	3170	200	205	205	328	349	353	✗	-[49]
9 + UMA 200D 75/21	-	1755	3315	200	205	205	339	361	366	✗	-[49]
10 + UMA 200D 90/21	-	1900	3640	200	211	211	382	406	411	✗	-[49]
11 + UMA 200D 90/21	-	2045	3785	200	211	211	393	419	425	✗	-[49]

Technical data

UPA 200B - 130	Pump	Motor					Motor lead, flat	
	Head Q = 0 m³/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm²]	[mm²]
1g + UMA 150E 5/21	17	5,5	37 (32)	13,8	76,1	0,76	4 × 2,5	3/4 × 2,5
1e + UMA 150E 7/21	20	6,5	36 (31)	16,3	77,0	0,74	4 × 2,5	3/4 × 2,5
1c + UMA 150E 7/21	23	7,5	31 (25)	18,1	77,0	0,78	4 × 2,5	3/4 × 2,5
1 + UMA 150E 9/21	25	9,0	30 (24)	21,2	78,3	0,79	4 × 2,5	3/4 × 2,5
2g + UMA 150E 13/21	34	11,0	34 (29)	26,8	80,6	0,74	4 × 2,5	3/4 × 2,5
2f + UMA 150E 13/21	37	11,5	33 (27)	27,6	80,5	0,75	4 × 2,5	3/4 × 2,5
2e + UMA 150E 13/21	39	13,0	28 (22)	30,1	80,3	0,78	4 × 2,5	3/4 × 2,5
2d + UMA 150E 15/21	42	14,0	32 (26)	31,7	81,5	0,78	4 × 4,0	3/4 × 2,5
2c + UMA 150E 15/21	44	15,0	29 (23)	33,4	81,3	0,80	4 × 4,0	3/4 × 2,5
2 + UMA 150E 18/21	48	17,0	29 (22)	39,6	82,0	0,76	4 × 4,0	3/4 × 2,5
3e + UMA 150E 18/21	58	18,5	25 (18)	42,1	81,6	0,78	4 × 4,0	3/4 × 2,5
3d + UMA 150E 22/21	63	21,0	30 (24)	47,6	83,3	0,77	4 × 4,0	3/4 × 2,5
3c + UMA 150E 22/21	66	22,0	28 (21)	49,2	83,1	0,78	4 × 4,0	3/4 × 2,5
3b + UMA 150E 26/21	70	24,0	34 (28)	53,6	84,7	0,76	4 × 6,0	3/4 × 4,0
3 + UMA 150E 26/21	72	25,0	32 (26)	55,2	84,5	0,77	4 × 6,0	3/4 × 4,0
4d + UMA 150E 30/21	84	28,0	32 (26)	63,6	84,3	0,75	4 × 6,0	3/4 × 4,0
4c + UMA 150E 30/21	89	30,0	30 (23)	66,8	84,2	0,77	4 × 6,0	3/4 × 4,0
4b + UMA 150E 30/21	92	30,0	30 (23)	66,8	84,2	0,77	4 × 6,0	3/4 × 4,0
4 + UMA 150E 37/22	96	34,0	41 (35)	76,6	83,7	0,77	3/4 × 4,0 [50]	3/4 × 4,0
5c + UMA 150E 37/22	110	37,0	38 (31)	81,6	83,3	0,79	3/4 × 4,0 [50]	3/4 × 4,0

47) Length of pump end fitted as standard
48) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
49) Horizontal installation on request and only with pedestals in special design
50) Parallel cable

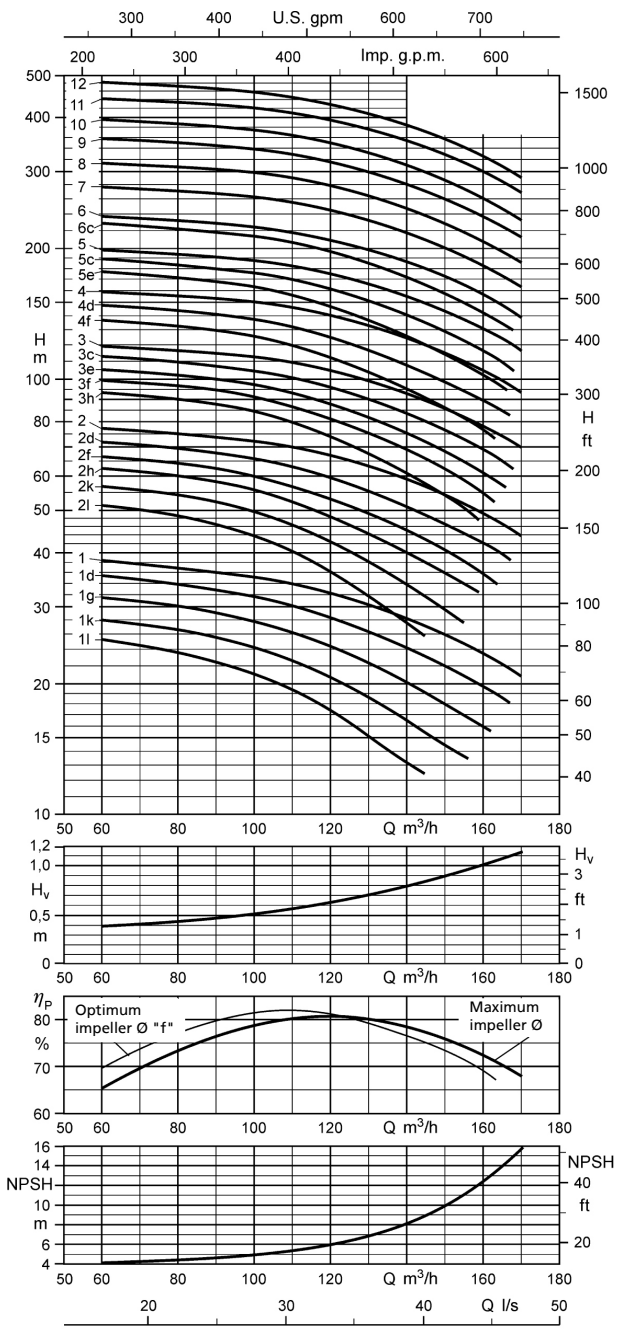
UPA 200B - 130	Pump	Motor					Motor lead, flat	
	Head $Q = 0\ m^3/h$	Rated power	Max. fluid temperature $v \geq 0{,}2$ m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm^2]	[mm^2]
5b + UMA 150E 37/22	114	37,0	38 (31)	81,6	83,3	0,79	3/4 × 4,0 [50]	3/4 × 4,0
5 + UMA 200D 45/21	122	44,0	30 (24)	89,0	86,0	0,84	3/4 × 6,0 [51]	3/4 × 6,0
6c + UMA 200D 45/21	135	45,0	28 (21)	90,0	86,0	0,84	3/4 × 6,0 [51]	3/4 × 6,0
6b + UMA 200D 55/21	142	48,0	32 (27)	98,0	87,2	0,82	3/4 × 6,0	3/4 × 6,0
6 + UMA 200D 55/21	146	52,0	30 (24)	104,0	87,1	0,83	3/4 × 6,0 [51]	3/4 × 6,0
7b + UMA 200D 55/21	164	55,0	27 (21)	109,0	86,9	0,84	3/4 × 6,0 [51]	3/4 × 6,0
7 + UMA 200D 65/21	171	60,0	31 (25)	120,0	87,8	0,83	3/4 × 10,0 [51]	3/4 × 10,0
8 + UMA 200D 75/21	196	70,0	27 (21)	143,0	87,4	0,81	3/4 × 10,0 [51]	3/4 × 10,0
9 + UMA 200D 75/21	219	75,0	23 (15)	151,0	87,3	0,83	3/4 × 10,0 [51]	3/4 × 10,0
10 + UMA 200D 90/21	245	86,0	27 (20)	173,0	88,1	0,82	3/4 × 16,0 [51]	3/4 × 16,0
11 + UMA 200D 90/21	267	90,0	23 (16)	181,0	88,0	0,82	3/4 × 16,0 [51]	3/4 × 16,0

3400.5/10-EN

51) Delta configuration in cable connector or control cabinet

3400.5/10-EN

UPA 250C - 120 / ...



Types of connection

Standard pump end = G 6

Connection types:

- Flanged connection
  - DN 150

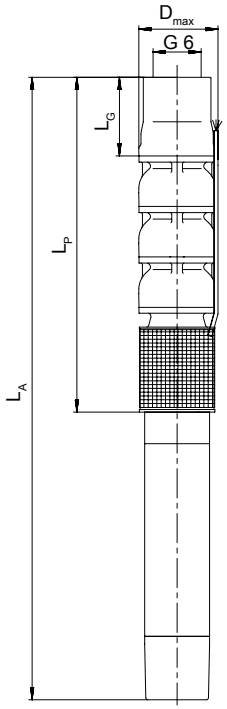
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

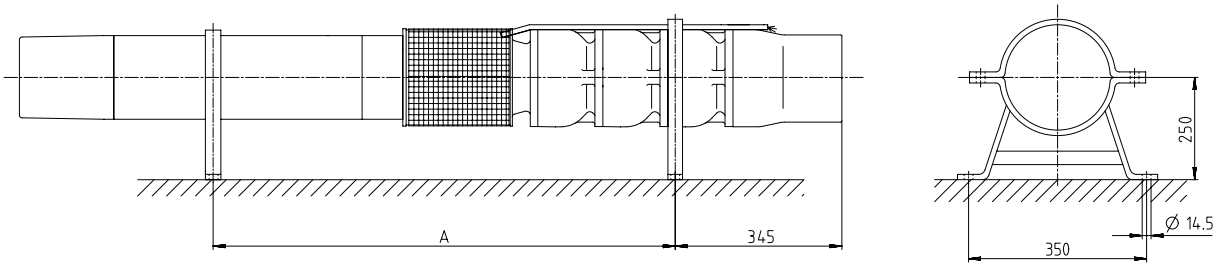
Values for calculating the dimensions if using a different pump end:

- G 6:
  L_{G*} = 229 mm
  $D_{max*} \triangleq D_{max}$
- DN 150:
  L_{G*} = 179 mm
  D_{max*} = 285 mm (PN 10/16)
  D_{max*} = 300 mm (PN 25/40)



Operating range

Q_{min} = 20 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 250C - 120 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

UPA 250C - 120	A	L_P	L_A	L_G [52]	D_{max}		Total weight			Type of installation	
					DOL	Y - Δ	Material variant				
							G	B	C3	Vertical	Horizontal [53]
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[kg]	[kg]		
1l + UMA 150E 9/21	700	681	1410	229	230	232	117	129	132	✗	✗
1k + UMA 150E 13/21	740	681	1490	229	230	232	125	137	140	✗	✗
1g + UMA 150E 13/21	740	681	1490	229	230	232	125	137	140	✗	✗
1d + UMA 150E 15/21	765	681	1535	229	230	232	130	142	145	✗	✗
1 + UMA 150E 18/21	785	681	1580	229	230	232	134	146	149	✗	✗
2l + UMA 150E 18/21	935	828	1727	229	230	232	157	173	173	✗	✗
2k + UMA 150E 22/21	980	828	1817	229	230	232	166	182	182	✗	✗
2h + UMA 150E 26/21	1030	828	1922	229	232	233	177	193	193	✗	✗
2f + UMA 150E 26/21	1030	828	1922	229	232	233	177	193	193	✗	✗
2d + UMA 150E 30/21	1080	828	2022	229	232	233	187	203	203	✗	✗
2 + UMA 150E 37/22	-	828	2102	229	233	233	194	210	210	✗	– [54]
3h + UMA 150E 37/22	-	975	2249	229	233	233	220	240	236	✗	– [54]
3f + UMA 150E 37/22	-	975	2249	229	233	233	220	240	236	✗	– [54]
3e + UMA 200D 45/21	1245	975	2205	229	235	235	274	294	290	✗	✗
3c + UMA 200D 45/21	1245	975	2205	229	235	235	274	294	290	✗	✗
3 + UMA 200D 55/21	1300	975	2315	229	235	235	294	314	310	✗	✗
4f + UMA 200D 55/21	1450	1122	2465	229	235	235	318	341	334	✗	✗
4d + UMA 200D 65/21	1515	1122	2595	229	239	239	341	364	357	✗	✗
4 + UMA 200D 75/21	1560	1122	2685	229	239	239	357	380	373	✗	✗
5e + UMA 200D 75/21	1705	1269	2830	229	239	239	380	407	397	✗	✗
5c + UMA 200D 75/21	1705	1269	2830	229	239	239	380	407	397	✗	✗
5 + UMA 200D 90/21	-	1269	3010	229	244	244	412	439	429	✗	– [54]
6c + UMA 250D 110/21	1835	1416	2945	229	257	257	508	540	525	✗	✗
6 + UMA 250D 110/21	1835	1416	2945	229	257	257	508	540	525	✗	✗
7 + UMA 250D 132/21	-	1563	3220	229	257	257	576	611	592	✗	– [54]
8 + UMA 250D 160/21	-	1710	3480	229	257	266	636	675	653	✗	– [54]
9 + UMA 250D 190/21	-	1857	3775	229	266	280	710	753	727	✗	– [54]
10 + UMA 250D 190/21	-	2004	3925	229	266	280	733	780	751	✗	– [54]
11 + UMA 300D 250/22	-	2151	4225	229	304	304	886	936	898	✗	– [54]
12 + UMA 300D 250/22	-	2298	4370	229	304	304	909	963	922	✗	– [54]

Technical data

UPA 250C - 120	Pump	Motor					Motor lead, flat	
	Head Q = 0 m³/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm²]	[mm²]
1l + UMA 150E 9/21	29	9,0	30 (24)	21,2	78,3	0,79	4 × 2,5	3/4 × 2,5
1k + UMA 150E 13/21	32	10,5	35 (30)	26,1	80,6	0,72	4 × 2,5	3/4 × 2,5
1g + UMA 150E 13/21	36	12,0	31 (26)	28,4	80,5	0,76	4 × 2,5	3/4 × 2,5
1d + UMA 150E 15/21	40	14,0	32 (26)	31,7	81,5	0,78	4 × 4,0	3/4 × 2,5
1 + UMA 150E 18/21	43	16,5	30 (24)	38,8	82,1	0,75	4 × 4,0	3/4 × 2,5
2l + UMA 150E 18/21	57	18,0	26 (19)	41,2	81,8	0,77	4 × 4,0	3/4 × 2,5
2k + UMA 150E 22/21	62	21,0	30 (24)	47,6	83,3	0,77	4 × 4,0	3/4 × 2,5
2h + UMA 150E 26/21	68	24,0	34 (28)	53,6	84,7	0,76	4 × 6,0	3/4 × 4,0
2f + UMA 150E 26/21	72	26,0	31 (25)	56,9	84,4	0,78	4 × 6,0	3/4 × 4,0
2d + UMA 150E 30/21	79	29,0	31 (25)	65,2	84,2	0,76	4 × 6,0	3/4 × 4,0
2 + UMA 150E 37/22	84	34,0	41 (35)	76,6	83,7	0,77	3/4 × 4,0 [55]	3/4 × 4,0
3h + UMA 150E 37/22	99	35,0	40 (34)	78,2	83,6	0,77	3/4 × 4,0 [55]	3/4 × 4,0
3f + UMA 150E 37/22	106	37,0	38 (31)	81,6	83,3	0,79	3/4 × 4,0 [55]	3/4 × 4,0
3e + UMA 200D 45/21	113	42,0	31 (25)	85,0	86,1	0,83	3/4 × 6,0 [56]	3/4 × 6,0
3c + UMA 200D 45/21	122	45,0	27 (20)	90,0	86,0	0,84	3/4 × 6,0 [56]	3/4 × 6,0
3 + UMA 200D 55/21	125	52,0	30 (24)	104,0	87,1	0,83	3/4 × 6,0 [56]	3/4 × 6,0
4f + UMA 200D 55/21	145	54,0	29 (23)	108,0	87,0	0,84	3/4 × 6,0 [56]	3/4 × 6,0
4d + UMA 200D 65/21	158	60,0	31 (25)	120,0	87,8	0,83	3/4 × 10,0 [56]	3/4 × 10,0
4 + UMA 200D 75/21	168	70,0	27 (21)	143,0	87,4	0,81	3/4 × 10,0 [56]	3/4 × 10,0
5e + UMA 200D 75/21	189	70,0	27 (21)	143,0	87,4	0,81	3/4 × 10,0 [56]	3/4 × 10,0

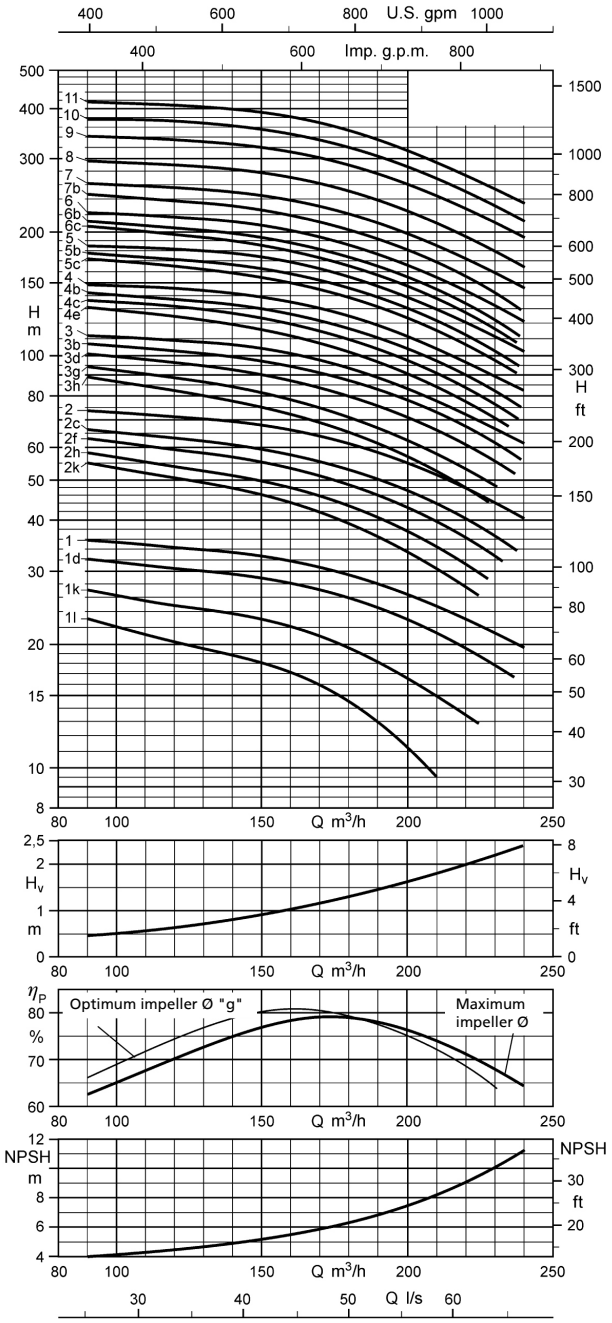
52) Length of pump end fitted as standard
53) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
54) Horizontal installation on request and only with pedestals in special design
55) Parallel cable
56) Delta configuration in cable connector or control cabinet

UPA 250C - 120	Pump	Motor					Motor lead, flat	
	Head $Q = 0\ m^3/h$	Rated power	Max. fluid temperature $v \geq 0{,}2$ m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm^2]	[mm^2]
5c + UMA 200D 75/21	203	75,0	22 (14)	151,0	87,3	0,83	3/4 × 10,0[56]	3/4 × 10,0
5 + UMA 200D 90/21	209	86,0	27 (20)	173,0	88,1	0,82	3/4 × 16,0[56]	3/4 × 16,0
6c + UMA 250D 110/21	247	95,0	27 (20)	191,0	88,7	0,81	3/4 × 25,0[56]	3/4 × 25,0
6 + UMA 250D 110/21	251	105,0	23 (15)	208,0	88,6	0,83	3/4 × 25,0[56]	3/4 × 25,0
7 + UMA 250D 132/21	293	120,0	24 (16)	229,0	89,2	0,85	3/4 × 25,0[56]	3/4 × 25,0
8 + UMA 250D 160/21	335	140,0	24 (16)	268,0	89,5	0,85	3/4 × 25,0[55]	3/4 × 35,0
9 + UMA 250D 190/21	380	155,0	25 (17)	309,0	90,0	0,81	3/4 × 35,0[55][57]	3/4 × 50,0[57]
10 + UMA 250D 190/21	420	175,0	20 (11)	341,0	89,9	0,83	3/4 × 35,0 [55][57]	3/4 × 50,0[57]
11 + UMA 300D 250/22	471	195,0	58 (52)	366,0	90,6	0,85	2×3×70 + 1×35[55][58]	2×3×70 + 1×35 [58]
12 + UMA 300D 250/22	513	215,0	56 (50)	398,0	90,7	0,86	2×3×70 + 1×35 [55][58]	2×3×70 + 1×35[58]

57) 1 × 3-core, flat and 1 × 4-core, round
58) 2 × 3-core, flat and 1 × 1-core, round

3400.5/10-EN

UPA 250C - 150 / ...



Types of connection

Standard pump end = G 6

Connection types:

- Flanged connection
  - DN 150

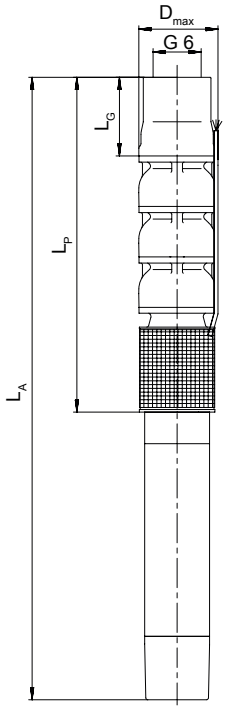
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

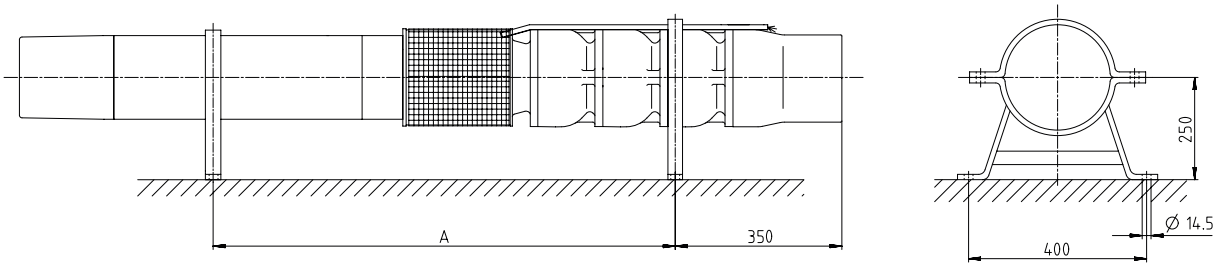
Values for calculating the dimensions if using a different pump end:

- G 6:
  L_{G*} = 229 mm
  $D_{max*} \triangleq D_{max}$
- DN 150:
  L_{G*} = 179 mm
  D_{max*} = 285 mm (PN 10/16)
  D_{max*} = 300 mm (PN 25/40)



Operating range

Q_{min} = 30 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 250C - 150 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

UPA 250C - 150	A	L_P	L_A	L_G[59]	D_{max}		Total weight			Type of installation	
					DOL	Y - Δ	Material variant				
							G	B	C3	Vertical	Horizontal[60]
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[kg]	[kg]		
1l + UMA 150E 13/21	745	690	1499	229	230	232	123	135	140	✗	✗
1k + UMA 150E 15/21	765	690	1544	229	230	232	128	140	145	✗	✗
1d + UMA 150E 18/21	790	690	1589	229	230	232	132	144	149	✗	✗
1 + UMA 150E 22/21	835	690	1679	229	230	232	141	153	158	✗	✗
2k + UMA 150E 30/21	1095	846	2040	229	232	233	186	202	205	✗	✗
2h + UMA 150E 30/21	1095	846	2040	229	232	233	186	202	205	✗	✗
2f + UMA 150E 37/22	-	846	2120	229	233	233	193	209	212	✗	-[61]
2c + UMA 150E 37/22	-	846	2120	229	233	233	193	209	212	✗	-
2 + UMA 200D 45/21	1110	846	2075	229	235	235	247	263	266	✗	✗
3h + UMA 200D 45/21	1270	1002	2235	229	235	235	269	288	290	✗	✗
3g + UMA 200D 55/21	1325	1002	2345	229	235	235	289	308	310	✗	✗
3d + UMA 200D 55/21	1325	1002	2345	229	235	235	289	308	310	✗	✗
3b + UMA 200D 65/21	1390	1002	2475	229	239	239	312	331	333	✗	✗
3 + UMA 200D 65/21	1390	1002	2475	229	239	239	312	331	333	✗	✗
4e + UMA 200D 75/21	1590	1158	2720	229	239	239	351	373	373	✗	✗
4c + UMA 200D 75/21	1590	1158	2720	229	239	239	351	373	373	✗	✗
4b + UMA 200D 90/21	-	1158	2900	229	244	244	383	405	405	✗	-
4 + UMA 200D 90/21	-	1158	2900	229	244	244	383	405	405	✗	-
5c + UMA 250D 110/21	1730	1314	2845	229	257	257	477	503	501	✗	✗
5b + UMA 250D 110/21	1730	1314	2845	229	257	257	477	503	501	✗	✗
5 + UMA 250D 110/21	1730	1314	2845	229	257	257	477	503	501	✗	✗
6c + UMA 250D 132/21	-	1470	3130	229	257	257	543	573	569	✗	-[61]
6b + UMA 250D 132/21	-	1470	3130	229	257	257	543	573	569	✗	-[61]
6 + UMA 250D 132/21	-	1470	3130	229	257	257	543	573	569	✗	-[61]
7b + UMA 250D 160/21	-	1626	3395	229	257	266	602	635	629	✗	-[61]
7 + UMA 250D 190/21	-	1626	3545	229	266	280	653	686	680	✗	-[61]
8 + UMA 250D 190/21	-	1782	3700	229	266	280	675	711	704	✗	-[61]
9 + UMA 300D 250/22	-	1938	4010	229	304	304	826	865	851	✗	-[61]
10 + UMA 300D 250/22	-	2094	4165	229	304	304	848	891	874	✗	-[61]
11 + UMA 300D 250/22	-	2250	4325	229	304	304	870	916	898	✗	-[61]

Technical data

UPA 250C - 150	Pump	Motor					Motor lead, flat	
	Head Q = 0 m³/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm²]	[mm²]
1l + UMA 150E 13/21	27	11,0	34 (29)	26,8	80,6	0,74	4 × 2,5	3/4 × 2,5
1k + UMA 150E 15/21	32	14,0	32 (26)	31,7	81,5	0,78	4 × 4,0	3/4 × 2,5
1d + UMA 150E 18/21	38	18,5	25 (18)	42,1	81,6	0,78	4 × 4,0	3/4 × 2,5
1 + UMA 150E 22/21	41	22,0	28 (21)	49,2	83,1	0,78	4 × 4,0	3/4 × 2,5
2k + UMA 150E 30/21	64	28,0	32 (26)	63,6	84,3	0,75	4 × 6,0	3/4 × 4,0
2h + UMA 150E 30/21	68	30,0	30 (23)	66,8	84,2	0,77	4 × 6,0	3/4 × 4,0
2f + UMA 150E 37/22	73	34,0	41 (35)	76,6	83,7	0,77	3/4 × 4,0[62]	3/4 × 4,0
2c + UMA 150E 37/22	77	37,0	38 (31)	81,6	83,3	0,79	3/4 × 4,0[62]	3/4 × 4,0
2 + UMA 200D 45/21	82	44,0	28 (22)	89,0	86,0	0,84	3/4 × 6,0[63]	3/4 × 6,0
3h + UMA 200D 45/21	99	45,0	27 (20)	90,0	86,0	0,84	3/4 × 6,0[63]	3/4 × 6,0
3g + UMA 200D 55/21	105	50,0	31 (25)	101,0	87,2	0,83	3/4 × 6,0[63]	3/4 × 6,0
3d + UMA 200D 55/21	112	55,0	27 (20)	109,0	86,9	0,84	3/4 × 6,0[63]	3/4 × 6,0
3b + UMA 200D 65/21	118	62,0	30 (24)	123,0	87,7	0,83	3/4 × 10,0[63]	3/4 × 10,0
3 + UMA 200D 65/21	121	65,0	27 (20)	129,0	87,7	0,84	3/4 × 10,0[63]	3/4 × 10,0
4e + UMA 200D 75/21	146	72,0	26 (19)	146,0	87,4	0,82	3/4 × 10,0[63]	3/4 × 10,0
4c + UMA 200D 75/21	152	75,0	22 (15)	151,0	87,3	0,83	3/4 × 10,0[63]	3/4 × 10,0
4b + UMA 200D 90/21	158	82,0	28 (21)	167,0	88,2	0,81	3/4 × 16,0[63]	3/4 × 16,0
4 + UMA 200D 90/21	162	88,0	25 (18)	177,0	88,1	0,82	3/4 × 16,0[63]	3/4 × 16,0
5c + UMA 250D 110/21	192	100,0	25 (18)	199,0	88,6	0,82	3/4 × 25,0[63]	3/4 × 25,0
5b + UMA 250D 110/21	197	105,0	23 (15)	208,0	88,6	0,83	3/4 × 25,0[63]	3/4 × 25,0

59) Length of pump end fitted as standard
60) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
61) Horizontal installation on request and only with pedestals in special design
62) Parallel cable
63) Delta configuration in cable connector or control cabinet

UPA 250C - 150	Pump	Motor					Motor lead, flat	
	Head $Q = 0\ m^3/h$	Rated power	Max. fluid temperature $v \geq 0{,}2$ m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm^2]	[mm^2]
5 + UMA 250D 110/21	202	110,0	19 (10)	215,0	88,5	0,84	3/4 × 25,0[63]	3/4 × 25,0
6c + UMA 250D 132/21	230	120,0	25 (18)	229,0	89,2	0,85	3/4 × 25,0[63]	3/4 × 25,0
6b + UMA 250D 132/21	236	125,0	23 (14)	237,0	89,1	0,86	3/4 × 25,0[63]	3/4 × 25,0
6 + UMA 250D 132/21	241	132,0	19 (10)	249,0	89,0	0,86	3/4 × 25,0[63]	3/4 × 25,0
7b + UMA 250D 160/21	275	145,0	21 (12)	276,0	89,4	0,85	3/4 × 25,0[62]	3/4 × 35,0
7 + UMA 250D 190/21	286	160,0	24 (16)	317,0	90,0	0,81	3/4 × 35,0[62][64]	3/4 × 50,0[64]
8 + UMA 250D 190/21	325	180,0	18 (8)	349,0	89,8	0,83	3/4 × 35,0[62][64]	3/4 × 50,0[64]
9 + UMA 300D 250/22	373	210,0	57 (51)	389,0	90,7	0,86	2×3×70 + 1×35[62][65]	2×3×70 + 1×35[65]
10 + UMA 300D 250/22	413	230,0	55 (48)	424,0	90,7	0,87	2×3×70 + 1×35[62][65]	2×3×70 + 1×35[65]
11 + UMA 300D 250/22	453	250,0	52 (45)	458,0	90,7	0,87	2×3×70 + 1×35[62][65]	2×3×70 + 1×35[65]

64) 1 × 3-core, flat and 1 × 4-core, round
65) 2 × 3-core, flat and 1 × 1-core, round

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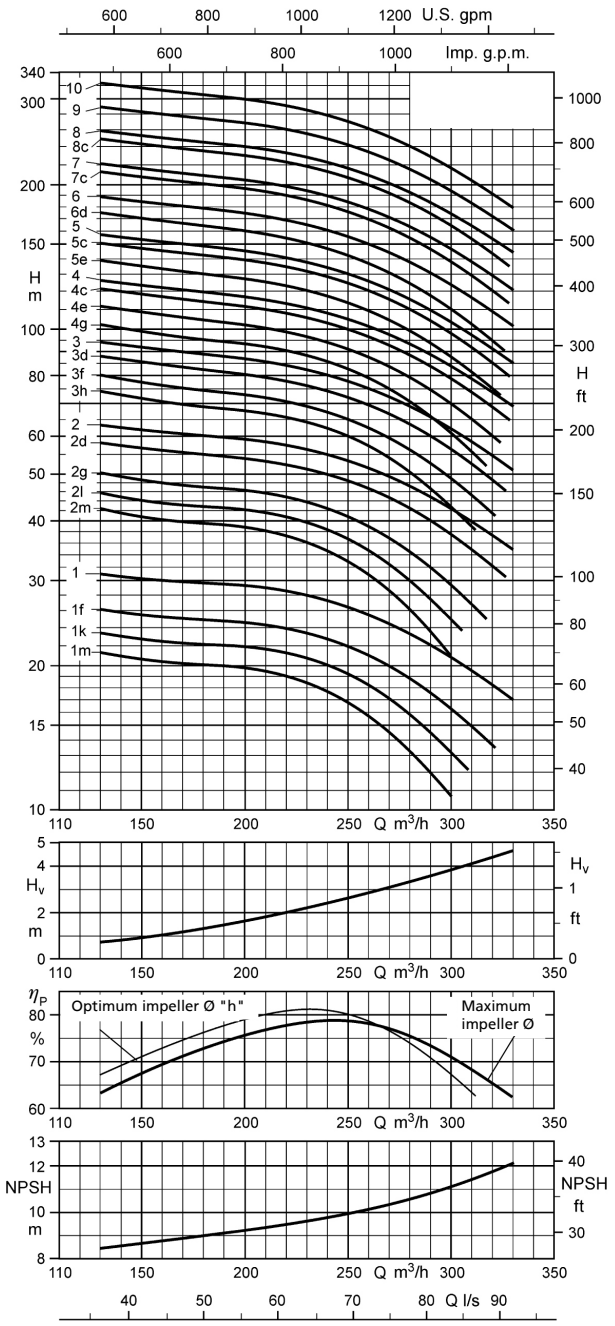
UPA 250C - 250 / ...



Types of connection

Standard pump end = G 6

Connection types:

- Flanged connection
  - DN 150

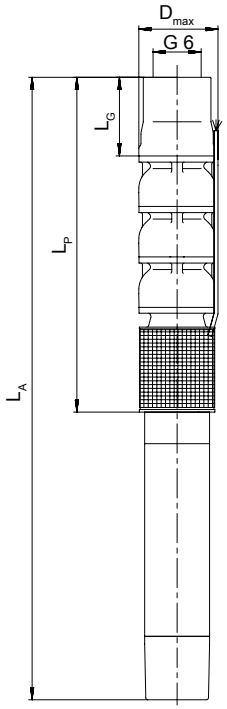
Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

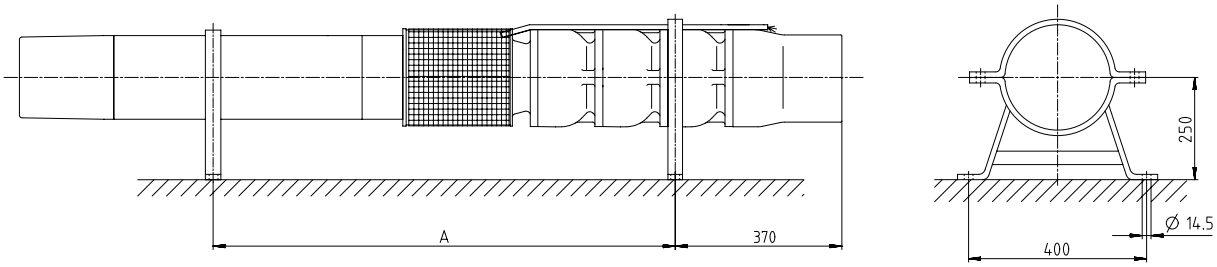
Values for calculating the dimensions if using a different pump end:

- G 6:
  L_{G*} = 229 mm
  $D_{max*} \triangleq D_{max}$
- DN 150:
  L_{G*} = 179 mm
  D_{max*} = 285 mm (PN 10/16)
  D_{max*} = 300 mm (PN 25/40)



Operating range

Q_{min} = 50 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 250C - 250 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

UPA 250C - 250	A	L_P	L_A	L_G[66]	D_{max}		Total weight			Type of installation	
					DOL	Y - Δ	Material variant				
							G	B	C3	Vertical	Horizontal[67]
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[kg]	[kg]		
1k + UMA 150E 18/21	790	709	1608	229	230	230	131	143	149	✗	✗
1f + UMA 150E 22/21	835	709	1698	229	230	230	140	152	158	✗	✗
1 + UMA 150E 26/21	885	709	1803	229	232	233	151	163	169	✗	✗
2l + UMA 150E 37/22	-	884	2158	229	233	233	193	208	211	✗	-
2g + UMA 150E 37/22	-	884	2158	229	233	233	193	208	211	✗	-
2d + UMA 200D 45/21	1130	884	2115	229	235	235	247	262	265	✗	✗
2 + UMA 200D 55/21	1185	884	2225	229	235	235	267	282	285	✗	✗
3h + UMA 200D 55/21	1360	1059	2400	229	235	235	288	307	308	✗	✗
3f + UMA 200D 65/21	1425	1059	2530	229	239	239	311	330	331	✗	✗
3d + UMA 200D 75/21	1470	1059	2620	229	239	239	327	346	347	✗	✗
3 + UMA 200D 75/21	1470	1059	2620	229	239	239	327	346	347	✗	✗
4g + UMA 200D 75/21	1645	1234	2795	229	239	239	352	375	374	✗	✗
4e + UMA 200D 90/21	-	1234	2975	229	244	244	384	407	406	✗	-
4c + UMA 250D 110/21	1630	1234	2765	229	257	257	454	477	476	✗	✗
4 + UMA 250D 110/21	1630	1234	2765	229	257	257	454	477	476	✗	✗
5e + UMA 250D 110/21	1805	1409	2940	229	257	257	476	502	499	✗	✗
5c + UMA 250D 132/21	-	1409	3070	229	257	257	520	546	543	✗	-[68]
5 + UMA 250D 132/21	-	1409	3070	229	257	257	520	546	543	✗	-[68]
6d + UMA 250D 132/21	-	1584	3245	229	257	257	541	571	567	✗	-[68]
6 + UMA 250D 160/21	-	1584	3355	229	257	266	578	608	604	✗	-[68]
7c + UMA 250D 190/21	-	1759	3680	229	266	280	651	684	678	✗	-[68]
7 + UMA 250D 190/21	-	1759	3680	229	266	280	651	684	678	✗	-[68]
8c + UMA 300D 250/22	-	1934	4005	229	304	304	802	838	825	✗	-[68]
8 + UMA 300D 250/22	-	1934	4005	229	304	304	802	838	825	✗	-[68]
9 + UMA 300D 250/22	-	2109	4180	229	304	304	823	863	848	✗	-[68]
10 + UMA 300D 300/22	-	2284	4535	229	282	282	923	966	951	✗	-[68]

Technical data

UPA 250C - 250	Pump	Motor					Motor lead, flat	
	Head Q = 0 m³/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm²]	[mm²]
1k + UMA 150E 18/21	29	18,5	25 (18)	42,1	81,6	0,78	4 × 4,0	3/4 × 2,5
1f + UMA 150E 22/21	32	21,0	30 (24)	47,6	83,3	0,77	4 × 4,0	3/4 × 2,5
1 + UMA 150E 26/21	38	26,0	31 (25)	56,9	84,4	0,78	4 × 6,0	3/4 × 4,0
2l + UMA 150E 37/22	55	35,0	40 (34)	78,2	83,6	0,77	3/4 × 4,0[69]	3/4 × 4,0
2g + UMA 150E 37/22	60	37,0	38 (31)	81,6	83,3	0,79	3/4 × 4,0 [69]	3/4 × 4,0
2d + UMA 200D 45/21	70	45,0	27 (20)	90,0	86,0	0,84	3/4 × 6,0[70]	3/4 × 6,0
2 + UMA 200D 55/21	75	52,0	30 (24)	104,0	87,1	0,83	3/4 × 6,0[70]	3/4 × 6,0
3h + UMA 200D 55/21	87	55,0	27 (20)	109,0	86,9	0,84	3/4 × 6,0[70]	3/4 × 6,0
3f + UMA 200D 65/21	94	62,0	30 (24)	123,0	87,7	0,83	3/4 × 10,0[70]	3/4 × 10,0
3d + UMA 200D 75/21	103	68,0	28 (21)	140,0	87,5	0,81	3/4 × 10,0[70]	3/4 × 10,0
3 + UMA 200D 75/21	109	75,0	24 (16)	151,0	87,3	0,83	3/4 × 10,0[70]	3/4 × 10,0
4g + UMA 200D 75/21	120	75,0	22 (15)	151,0	87,3	0,83	3/4 × 10,0[70]	3/4 × 10,0
4e + UMA 200D 90/21	131	86,0	27 (20)	173,0	88,1	0,82	3/4 × 16,0[70]	3/4 × 16,0
4c + UMA 250D 110/21	142	95,0	26 (19)	191,0	88,7	0,81	3/4 × 25,0[70]	3/4 × 25,0
4 + UMA 250D 110/21	147	105,0	24 (16)	208,0	88,6	0,83	3/4 × 25,0[70]	3/4 × 25,0
5e + UMA 250D 110/21	164	110,0	21 (12)	215,0	88,5	0,84	3/4 × 25,0[70]	3/4 × 25,0
5c + UMA 250D 132/21	176	120,0	25 (17)	229,0	89,2	0,85	3/4 × 25,0[70]	3/4 × 25,0
5 + UMA 250D 132/21	182	125,0	22 (13)	237,0	89,1	0,86	3/4 × 25,0[70]	3/4 × 25,0
6d + UMA 250D 132/21	204	132,0	18 (8)	249,0	89,0	0,86	3/4 × 25,0[70]	3/4 × 25,0
6 + UMA 250D 160/21	218	150,0	19 (9)	284,0	89,3	0,86	3/4 × 25,0[69]	3/4 × 35,0
7c + UMA 250D 190/21	248	170,0	22 (13)	333,0	89,9	0,82	3/4 × 35,0[69]	3/4 × 50,0
7 + UMA 250D 190/21	256	180,0	19 (9)	349,0	89,8	0,83	3/4 × 35,0[69][71]	3/4 × 50,0[71]

66) Length of pump end fitted as standard
67) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
68) Horizontal installation on request and only with pedestals in special design
69) Parallel cable
70) Delta configuration in cable connector or control cabinet
71) 1 × 3-core, flat and 1 × 4-core, round

UPA 250C - 250	Pump	Motor					Motor lead, flat	
	Head $Q = 0\ m^3/h$	Rated power	Max. fluid temperature $v \geq 0{,}2$ m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm^2]	[mm^2]
8c + UMA 300D 250/22	288	195,0	58 (52)	366,0	90,6	0,85	2×3×70 + 1×35[69)72)]	2×3×70 + 1×35[72)]
8 + UMA 300D 250/22	299	210,0	57 (51)	389,0	90,7	0,86	2×3×70 + 1×35[69)72)]	2×3×70 + 1×35[72)]
9 + UMA 300D 250/22	335	235,0	54 (48)	430,0	90,7	0,87	2×3×70 + 1×35[69)72)]	2×3×70 + 1×35[72)]
10 + UMA 300D 300/22	374	260,0	56 (50)	482,0	91,2	0,86	6×1×95 + 1×95[69)73)]	6×1×95 + 1×95[73)]

Scope of supply

Depending on the model, the following items are included in the scope of supply:

- Pump set with motor lead
- Back-up name plate

Optional:

- Extension cable optional: connected or supplied but not fitted
- Cable connector
- Cable clips
- Pedestals
- Cooling shroud, suction shroud or pressure shroud
- Supporting clamps and mounting clamps
- Electrical protection equipment
- Automatic control units

72) 2 × 3-core, flat and 1 × 1-core, round
73) 7×1-core, round

UPA 300, 350

Main applications

- Water supply systems
- Spray irrigation systems
- Mining
- General irrigation systems
- Pressure boosting
- Fire-fighting systems
- Lowering groundwater levels

Fluids handled

- Drinking water
- Cooling water
- River water, lake water and groundwater
- Seawater[74)]
- Max. permissible sand content of the fluid 50 g/m³

Operating data

Operating properties

Characteristic		Value
Flow rate	Q [m³/h]	≤ 840
	Q [l/s]	≤ 234
Head	H [m]	≤ 480
Fluid temperature	T [°C]	≤ +50
Speed	n [rpm]	≤ 2900
Well diameter	D [mm]	300/350
	D [″]	12/14

Design details

Design

- Centrifugal pump
- Single-stage or multistage
- Single-entry
- Ring-section design
- Rigid connection between pump and motor

Type of installation

- Vertical installation
- Horizontal installation (depending on the number of stages)

Drive

- Three-phase asynchronous motor
- With squirrel cage motor for submerged use
- Frequency 50 Hz
- IP68 enclosure
- DOL starting or star-delta starting
- Frequency of starts
  - UMA 200D, UMA 250D: 10 starts per hour
  - UMA 300D: 5 starts per hour
- Winding J1 (PVC) or, for higher temperatures, J2 (VPE / XLPE)

Electrical connection

- Delivered ex-factory with 1 or 2 motor leads (including earth conductor and internal earthing)
- Extension cable connected with water-tight cable connector
- Motor lead and extension cable suitable for drinking water use

Impeller type

- Mixed flow hydraulic system with trimmable impellers

Bearings

- Radial plain bearings
- Pump bearings lubricated by fluid handled; motor bearings lubricated by water fill
- Axial thrust is balanced by a tilting-pad thrust bearing in the motor (lower end)
- 1 or 2 intermediate bearing(s) in the pump, depending on the pump size and the number of stages

Connections

- Pump screw-ended or flanged
- With lift check valve or connection branch

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74) Only for pumps in material variant C3 (duplex)

Designation

Example: UPA 300 - 94 / 5 b

Designation key

Code	Description
UPA	Pump type series
300	Minimum well diameter [mm]
94	Flow rate at best efficiency point [l/s]
5	Number of stages
b	Trimmed impellers

Materials

Material selection for UPA 300 and 350 pumps

Component	Material variant		
	G	B	C3
Casing	Grey cast iron (EN-GJL-200) / nodular cast iron (JS 1030)	Bronze (CC480K-DW) / aluminium bronze (CC333G-GS)	CrNiMo steel (1.4517)
Impeller	Bronze (CC480K-DW)		CrNiMo steel (1.4517)
Screws, bolts and nuts	CrNiMo steel (A4-70)		CrNiMo steel (1.4462)
Shaft	Chrome steel (1.4021)	CrNiMo steel (1.4462)	CrNiMo steel (1.4462)

Material selection for UMA 200D, 250D, 300D motors

Component		Material variant		
		G	C2	C3
Casing	200D	Grey cast iron (EN-GJL-200)	CrNiMo steel (1.4408)	CrNiMo steel (1.4539)
	250D	Grey cast iron (EN-GJL-200)	CrNiMo steel (1.4408)	CrNiMo steel (1.4539)
	300D	Grey cast iron (EN-GJL-250)	-	CrNiMo steel (1.4517)
Screws, bolts and nuts	200D	CrNiMo steel (A4-70)	CrNiMo steel (A4-70)	CrNiMo steel (1.4539)
	250D	CrNiMo steel (A4-70)	CrNiMo steel (A4-70)	CrNiMo steel (1.4539)
	300D	CrNiMo steel (A4-70)	-	CrNiMo steel (1.4462)
Shaft	200D	CrNiMo steel (1.4462)	CrNiMo steel (1.4462)	CrNiMo steel (1.4462)
	250D	CrNiMo steel (1.4462)	CrNiMo steel (1.4462)	CrNiMo steel (1.4462)
	300D	CrNiMo steel (1.4462)	-	CrNiMo steel (1.4462)

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Coating and preservation

Only for pump sets in material variant grey cast iron.

- 2-component high-build coating, epoxy resin base paint
  - Coating structure: primer and top coat
  - Film thickness: 100 to 150 µm
  - Colour: ultramarine blue (RAL 5002)

Product benefits

- High efficiencies through optimised hydraulic design
- High operating reliability and a long service life by integrated sand separator, robust wear rings and enclosed pump bearings
- Reliable operation by anti-jam lift check valve
- High flexibility by vertical, horizontal and angular installation options
- Durable, completely maintenance-free design with hydrodynamic bearings
- Easy to install with service-friendly hydraulic system design
- Low noise level

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Product information

Product information as per Regulation No. 1907/2006 (REACH)

For information as per chemicals Regulation (EC) No. 1907/2006 (REACH), see http://www.ksb.com/reach.

Information on characteristic curves

The characteristic curves shown are intended to allow pre-selection. Refer to the quotation for the precise selection data.

- Tolerance to ISO 9906 Cl. 2B, > 10 kW
- Threaded end to DIN ISO 228, Part 1
- Flanged end to DIN EN 1092

H_v Head losses in the lift check valve. The head losses H_v in the lift check valve are not included in the pump characteristic curves.

η_p Pump efficiency (without lift check valve)

NPSH Net positive suction head required by pump

Certifications

Overview

Label	Effective in:	Comment
International Organization for Standardization ISO 9001	All countries	Certified quality management to ISO 9001
Attestation de Conformité Sanitaire ACS 75)	France	French drinking water approval

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75) Valid for pump materials G and B and motor materials G, C1, C2 and C3

Technical data

Selection chart

n = 2900 rpm

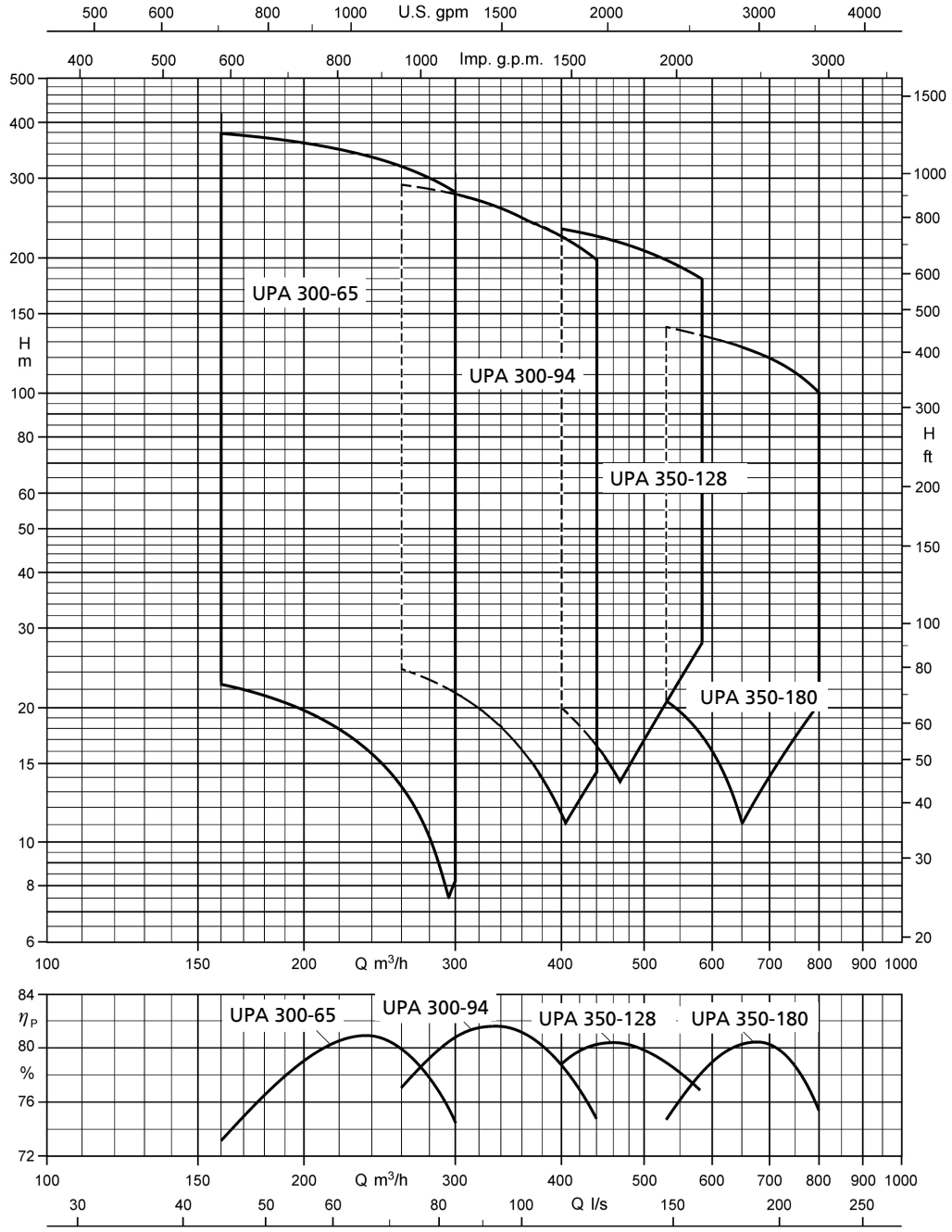

Fig. 3: Selection chart UPA 300, 350
Selection charts or characteristic curves for UPA in material variant C3 (duplex) only on request.

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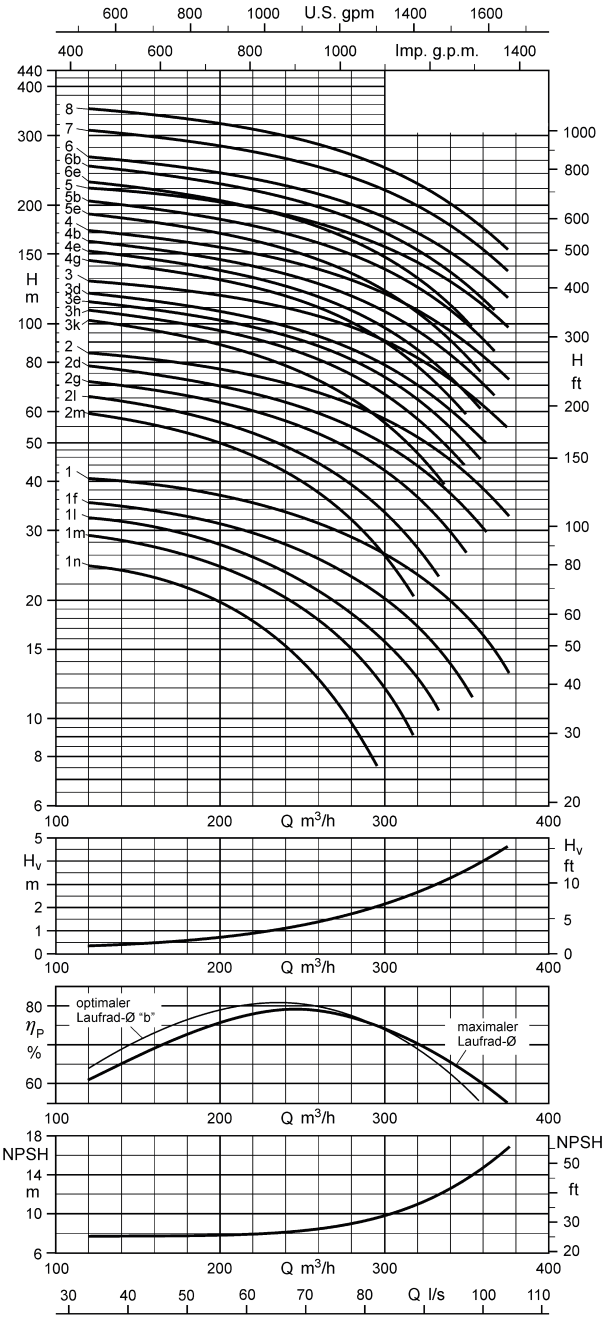
UPA 300 - 65 / ...



Operating range

Q_{min} = 50 m³/h
Q_{max}= end of stage curve

Types of connection

Standard pump end = G 6

Connection types:

- Flanged connection
  - DN 150

Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

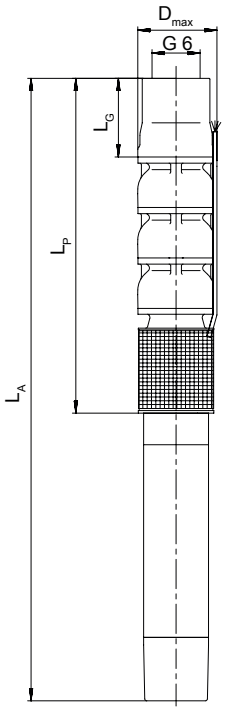
Values for calculating the dimensions if using a different pump end:

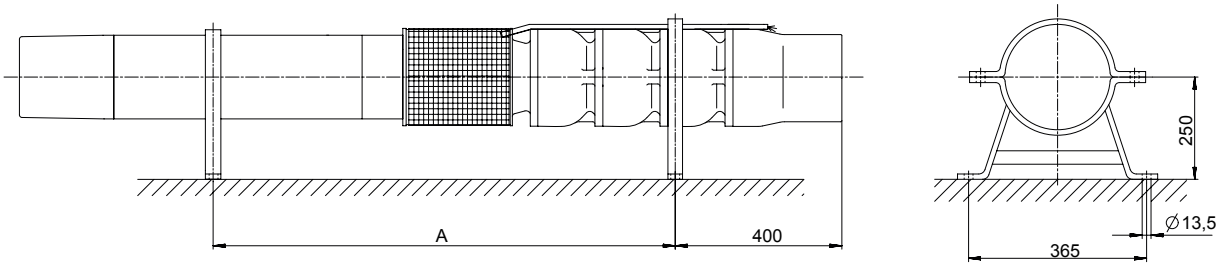
Pump design with lift check valve:

- G 6:
  L_{G*} = 255 mm
  $D_{max*} \triangleq D_{max}$
- DN 150:
  L_{G*} = 220 mm (PN 10/16)
  L_{G*} = 228 mm (PN 25/40)
  D_{max*} = 285 mm (PN 10/16)
  D_{max*} = 300 mm (PN 25/40)

Version with connection nozzle:

- G 6:
  L_{G*} = 150 mm
  $D_{max*} \triangleq D_{max}$
- DN 150:
  L_{G*} = 140 mm (PN 10/16)
  L_{G*} = 148 mm (PN 25/40)
  D_{max*} = 285 mm (PN 10/16)
  D_{max*} = 300 mm (PN 25/40)





Dimensions of UPA 300 - 65 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

UPA 300 - 65	A	L_P [76]	L_A [76]	L_G [77]		D_{max}		Total weight			Type of installation	
						DOL	Y - Δ	Material variant				
				With lift check valve	With connection nozzle			G	B	C3	Vertical	Horizontal [78]
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[kg]	[kg]		
1n + UMA 200D 37/21	945	735	1875	255	150	276	276	221	235	245	✗	✗
1m + UMA 200D 37/21	945	735	1875	255	150	276	276	221	235	245	✗	✗
1l + UMA 200D 37/21	945	735	1875	255	150	276	276	221	235	245	✗	✗
1f + UMA 200D 37/21	945	735	1875	255	150	276	276	221	235	245	✗	✗
1 + UMA 200D 37/21	945	735	1875	255	150	276	276	221	235	245	✗	✗
2m + UMA 200D 45/21	1155	900	2130	255	150	276	276	265	284	294	✗	✗
2l + UMA 200D 45/21	1155	900	2130	255	150	276	276	265	284	294	✗	✗
2g + UMA 200D 55/21	1210	900	2240	255	150	276	276	285	304	315	✗	✗
2d + UMA 200D 65/21	1275	900	2370	255	150	275	275	308	327	338	✗	✗
2 + UMA 200D 75/21	1320	900	2460	255	150	275	275	324	343	353	✗	✗
3k + UMA 200D 75/21	1485	1065	2625	255	150	275	275	361	387	398	✗	✗
3h + UMA 200D 90/21	-	1065	2805	255	150	278	278	393	419	431	✗	-
3e + UMA 200D 90/21	-	1065	2805	255	150	278	278	393	419	431	✗	-
3d + UMA 250D 110/21	1500	1095	2624	255	150	289	289	463	489	496	✗	✗
3 + UMA 250D 110/21	1500	1095	2624	255	150	289	289	463	489	496	✗	✗
4g + UMA 250D 110/21	1665	1260	2789	255	150	289	289	492	522	528	✗	✗
4e + UMA 250D 132/21	1730	1260	2919	255	150	289	289	536	566	572	✗	✗
4b + UMA 250D 132/21	1730	1260	2919	255	150	289	289	536	566	572	✗	✗
4 + UMA 250D 160/21	-	1260	3029	255	150	289	289	573	603	609	✗	– [79]
5e + UMA 250D 160/21	-	1425	3194	255	150	289	289	603	637	645	✗	– [79]
5b + UMA 250D 190/21	-	1425	3344	255	150	298	311	654	688	696	✗	– [79]
5 + UMA 300D 250/22	-	1425	3498	255	150	325	325	779	813	819	✗	– [79]
6e + UMA 250D 190/21	-	1590	3509	255	150	298	311	682	721	728	✗	– [79]
6b + UMA 300D 250/22	-	1590	3663	255	150	325	325	807	846	851	✗	– [79]
6 + UMA 300D 250/22	-	1590	3663	255	150	325	325	807	846	851	✗	– [79]
7 + UMA 300D 300/22	-	1755	4008	255	150	304	304	913	957	964	✗	– [79]
8 + UMA 300D 300/22	-	1920	4173	255	150	304	304	942	990	997	✗	– [79]

Technical data

UPA 300 - 65	Pump	Motor					Motor lead, flat	
	Head Q = 0 m³/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm²]	[mm²]
1n + UMA 200D 37/21	30	16,0	44 (42)	43,5	83,0	0,64	3/4 × 6,0 [80]	3/4 × 6,0
1m + UMA 200D 37/21	35	20,0	43 (40)	48,5	84,6	0,71	3/4 × 6,0 [80]	3/4 × 6,0
1l + UMA 200D 37/21	39	23,0	41 (38)	53,0	85,2	0,75	3/4 × 6,0 [80]	3/4 × 6,0
1f + UMA 200D 37/21	42	27,0	38 (34)	59,0	85,5	0,79	3/4 × 6,0 [80]	3/4 × 6,0
1 + UMA 200D 37/21	48	34,0	32 (26)	70,0	85,4	0,83	3/4 × 6,0 [80]	3/4 × 6,0
2m + UMA 200D 45/21	71	40,0	32 (27)	82,0	86,2	0,82	3/4 × 6,0 [80]	3/4 × 6,0
2l + UMA 200D 45/21	77	45,0	28 (21)	90,0	86,0	0,84	3/4 × 6,0 [80]	3/4 × 6,0
2g + UMA 200D 55/21	83	54,0	29 (23)	108,0	87,0	0,84	3/4 × 6,0 [80]	3/4 × 6,0
2d + UMA 200D 65/21	91	60,0	30 (25)	120,0	87,8	0,83	3/4 × 10,0 [80]	3/4 × 10,0
2 + UMA 200D 75/21	98	70,0	27 (20)	143,0	87,4	0,81	3/4 × 10,0 [80]	3/4 × 10,0
3k + UMA 200D 75/21	118	72,0	25 (18)	146,0	87,4	0,82	3/4 × 10,0 [80]	3/4 × 10,0
3h + UMA 200D 90/21	124	82,0	28 (22)	167,0	88,2	0,81	3/4 × 16,0 [80]	3/4 × 16,0
3e + UMA 200D 90/21	130	88,0	26 (18)	177,0	88,1	0,82	3/4 × 16,0 [80]	3/4 × 16,0
3d + UMA 250D 110/21	137	95,0	26 (19)	191,0	88,7	0,81	3/4 × 25,0 [80]	3/4 × 25,0
3 + UMA 250D 110/21	147	110,0	20 (11)	215,0	88,5	0,84	3/4 × 25,0 [80]	3/4 × 25,0
4g + UMA 250D 110/21	167	110,0	19 (10)	215,0	88,5	0,84	3/4 × 25,0 [80]	3/4 × 25,0
4e + UMA 250D 132/21	174	120,0	25 (17)	229,0	89,2	0,85	3/4 × 25,0 [80]	3/4 × 25,0
4b + UMA 250D 132/21	186	130,0	20 (10)	245,0	89,1	0,86	3/4 × 25,0 [80]	3/4 × 25,0
4 + UMA 250D 160/21	196	145,0	21 (12)	276,0	89,4	0,85	3/4 × 25,0 [81]	3/4 × 35,0 [82]
5e + UMA 250D 160/21	217	145,0	20 (11)	276,0	89,4	0,85	3/4 × 25,0 [81]	3/4 × 35,0 [82]

76) UPA 300 - 65 in C3 material variant: Subtract 5 mm.
77) Length of pump end fitted as standard
78) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
79) Horizontal installation on request and only with pedestals in special design
80) Delta configuration in cable connector or control cabinet
81) Parallel cable
82) 1×3-core, flat and 1×4-core, round

UPA 300 - 65	Pump	Motor					Motor lead, flat	
	Head $Q = 0\ m^3/h$	Rated power	Max. fluid temperature $v \geq 0{,}2$ m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm²]	[mm²]
5b + UMA 250D 190/21	235	165,0	22 (13)	325,0	90,0	0,82	3/4 × 35,0[82)]	3/4 × 50,0[82)]
5 + UMA 300D 250/22	252	190,0	59 (53)	359,0	90,5	0,85	2×3×70 + 1×35[81)83)]	2×3×70 + 1×35[83)]
6e + UMA 250D 190/21	261	180,0	19 (9)	349,0	89,8	0,83	3/4 × 35,0[81)82)]	3/4 × 50,0[82)]
6b + UMA 300D 250/22	287	205,0	57 (51)	382,0	90,6	0,86	2×3×70 + 1×35[81)83)]	2×3×70 + 1×35[83)]
6 + UMA 300D 250/22	300	225,0	55 (49)	414,0	90,7	0,87	2×3×70 + 1×35[81)83)]	2×3×70 + 1×35[83)]
7 + UMA 300D 300/22	351	265,0	56 (49)	491,0	91,2	0,86	6×1×95 + 1×95[81)84)]	6×1×95 + 1×95[84)]
8 + UMA 300D 300/22	399	300,0	53 (46)	546,0	91,2	0,87	6×1×95 + 1×95[81)84)]	6×1×95 + 1×95[84)]

83) 2×3-core, flat and 1×1-core, round
84) 7×1-core, round

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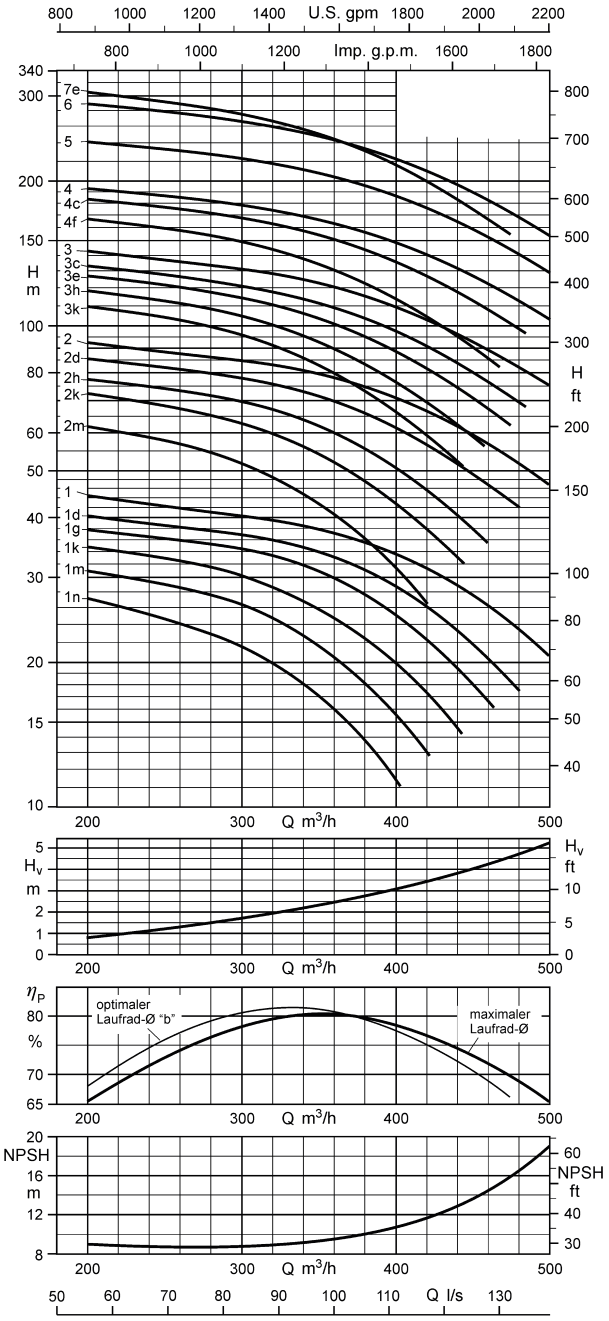
UPA 300 - 94 / ...



Operating range

Q_{min} = 70 m³/h
Q_{max}= end of stage curve

Types of connection

Standard pump end = G 8

Connection types:

- Flanged connection
  - DN 200

Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

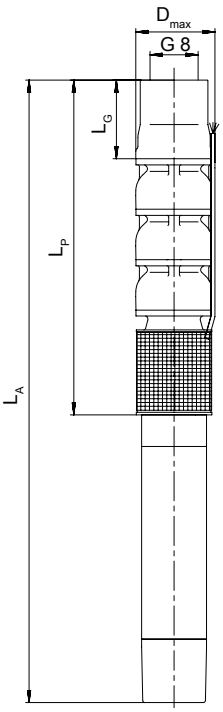
Values for calculating the dimensions if using a different pump end:

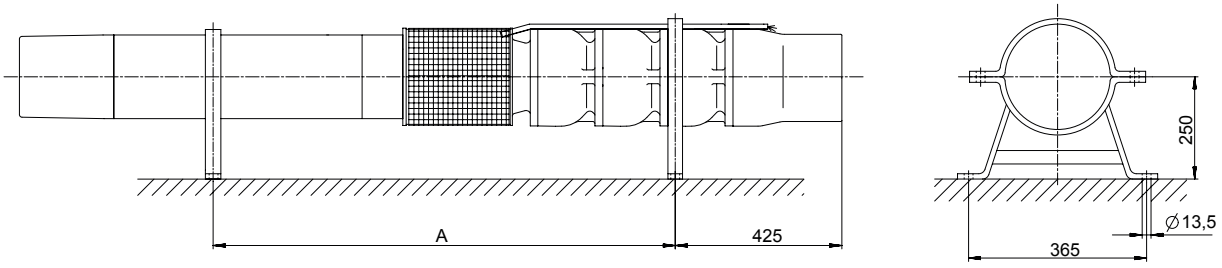
Pump design with lift check valve:

- G 8:
  L_{G*} = 290 mm
  $D_{max*} \triangleq D_{max}$
- DN 200:
  L_{G*} = 240 mm (PN 10/16)
  L_{G*} = 244 mm (PN 25)
  D_{max*} = 340 mm (PN 10/16)
  D_{max*} = 360 mm (PN 25)

Version with connection nozzle:

- G 8:
  L_{G*} = 200 mm
  $D_{max*} \triangleq D_{max}$
- DN 200:
  L_{G*} = 134 mm (PN 10/16)
  L_{G*} = 138 mm (PN 25)
  D_{max*} = 340 mm (PN 10/16)
  D_{max*} = 360 mm (PN 25)





Dimensions of UPA 300 - 94 / ... [mm]

Dimensions, weights and installation type depending on the motor [mm]

UPA 300 - 94	A	L_P	L_A	L_G[85]		D_{max}		Total weight			Type of installation	
						DOL	Y - Δ	Material variant				
				With lift check valve	With connection nozzle			G	B	C3	Vertical	Horizontal[86]
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[kg]	[kg]		
1n + UMA 200D 37/21	960	775	1915	290	200	286	286	235	252	276	✗	✗
1m + UMA 200D 37/21	960	775	1915	290	200	286	286	235	252	276	✗	✗
1k + UMA 200D 37/21	960	775	1915	290	200	286	286	235	252	276	✗	✗
1g + UMA 200D 45/21	1005	775	2005	290	200	286	286	251	268	292	✗	✗
1d + UMA 200D 45/21	1005	775	2005	290	200	286	286	251	268	292	✗	✗
1 + UMA 200D 55/21	1060	775	2115	290	200	286	286	271	288	312	✗	✗
2m + UMA 200D 65/21	1300	950	2420	290	200	285	285	335	359	372	✗	✗
2k + UMA 200D 75/21	1345	950	2510	290	200	285	285	351	375	388	✗	✗
2h + UMA 200D 90/21	-	950	2690	290	200	288	288	383	407	420	✗	-
2d + UMA 250D 110/21	1360	980	2509	290	200	299	299	453	477	498	✗	✗
2 + UMA 250D 110/21	1360	980	2509	290	200	299	299	453	477	498	✗	✗
3k + UMA 250D 110/21	1535	1155	2684	290	200	299	299	484	514	535	✗	✗
3h + UMA 250D 132/21	1600	1155	2814	290	200	299	299	528	558	579	✗	✗
3e + UMA 250D 132/21	1600	1155	2814	290	200	299	299	528	558	579	✗	✗
3c + UMA 250D 160/21	1655	1155	2924	290	200	299	308	565	595	616	✗	✗
3 + UMA 250D 190/21	-	1155	3074	290	200	308	321	616	646	667	✗	-[87]
4f + UMA 250D 190/21	-	1330	3249	290	200	308	321	650	684	703	✗	-[87]
4c + UMA 300D 250/22	-	1330	3403	290	200	331	331	775	809	829	✗	-[87]
4 + UMA 300D 250/22	-	1330	3403	290	200	331	331	775	809	829	✗	-[87]
5 + UMA 300D 300/22	-	1505	3758	290	200	311	311	886	925	946	✗	-[87]
6 + UMA 300D 400/22	-	1680	4053	290	200	311	311	970	1014	1032	✗	-[87]
7e + UMA 300D 400/22	-	1855	4228	290	200	311	311	1001	1051	1069	✗	-[87]

Technical data

UPA 300 - 94	Pump	Motor					Motor lead, flat	
							Number × cross-section of cores	
	Head Q = 0 m³/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor		
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm²]	[mm²]
1n + UMA 200D 37/21	34	29,0	37 (32)	62,0	85,6	0,80	3/4 × 6,0[88]	3/4 × 6,0
1m + UMA 200D 37/21	38	32,0	34 (29)	67,0	85,5	0,82	3/4 × 6,0[88]	3/4 × 6,0
1k + UMA 200D 37/21	43	36,0	30 (25)	73,0	85,3	0,84	3/4 × 6,0[88]	3/4 × 6,0
1g + UMA 200D 45/21	47	42,0	31 (25)	85,0	86,1	0,83	3/4 × 6,0[88]	3/4 × 6,0
1d + UMA 200D 45/21	51	45,0	27 (20)	90,0	86,0	0,84	3/4 × 6,0[88]	3/4 × 6,0
1 + UMA 200D 55/21	54	54,0	29 (23)	108,0	87,0	0,84	3/4 × 6,0[88]	3/4 × 6,0
2m + UMA 200D 65/21	78	62,0	29 (23)	123,0	87,7	0,83	3/4 × 10,0[88]	3/4 × 10,0
2k + UMA 200D 75/21	90	74,0	25 (18)	149,0	87,3	0,83	3/4 × 10,0[88]	3/4 × 10,0
2h + UMA 200D 90/21	96	82,0	28 (22)	167,0	88,2	0,81	3/4 × 16,0[88]	3/4 × 16,0
2d + UMA 250D 110/21	105	95,0	26 (19)	191,0	88,7	0,81	3/4 × 25,0[88]	3/4 × 25,0
2 + UMA 250D 110/21	112	110,0	20 (10)	215,0	88,5	0,84	3/4 × 25,0[88]	3/4 × 25,0
3k + UMA 250D 110/21	138	110,0	20 (10)	215,0	88,5	0,84	3/4 × 25,0[88]	3/4 × 25,0
3h + UMA 250D 132/21	146	125,0	24 (15)	237,0	89,1	0,86	3/4 × 25,0[88]	3/4 × 25,0
3e + UMA 250D 132/21	155	130,0	20 (11)	245,0	89,1	0,86	3/4 × 25,0[88]	3/4 × 25,0
3c + UMA 250D 160/21	162	145,0	20 (11)	276,0	89,4	0,85	3/4 × 25,0[89]	3/4 × 35,0
3 + UMA 250D 190/21	172	165,0	22 (14)	325,0	90,0	0,82	3/4 × 35,0[89][90]	3/4 × 50,0[90]
4f + UMA 250D 190/21	204	175,0	19 (10)	341,0	89,9	0,83	3/4 × 35,0[89][90]	3/4 × 50,0[90]
4c + UMA 300D 250/22	222	205,0	57 (52)	382,0	90,6	0,86	2×3×70 + 1×35[89][91]	2×3×70 + 1×35[91]
4 + UMA 300D 250/22	232	225,0	55 (49)	414,0	90,7	0,87	2×3×70 + 1×35[89][91]	2×3×70 + 1×35[91]
5 + UMA 300D 300/22	290	280,0	54 (48)	516,0	91,2	0,86	6×1×95 + 1×95[89][92]	6×1×95 + 1×95[92]
6 + UMA 300D 400/22	348	335,0	52 (45)	619,0	91,4	0,86	6×1×95 + 1×95[89][92]	6×1×95 + 1×95[92]
7e + UMA 300D 400/22	371	315,0	54 (47)	586,0	91,4	0,85	6×1×95 + 1×95[89][92]	6×1×95 + 1×95[92]

85) Length of pump end fitted as standard
86) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
87) Horizontal installation on request and only with pedestals in special design
88) Delta configuration in cable connector or control cabinet
89) Parallel cable
90) 1×3-core, flat and 1×4-core, round
91) 2×3-core, flat and 1×1-core, round
92) 7×1-core, round

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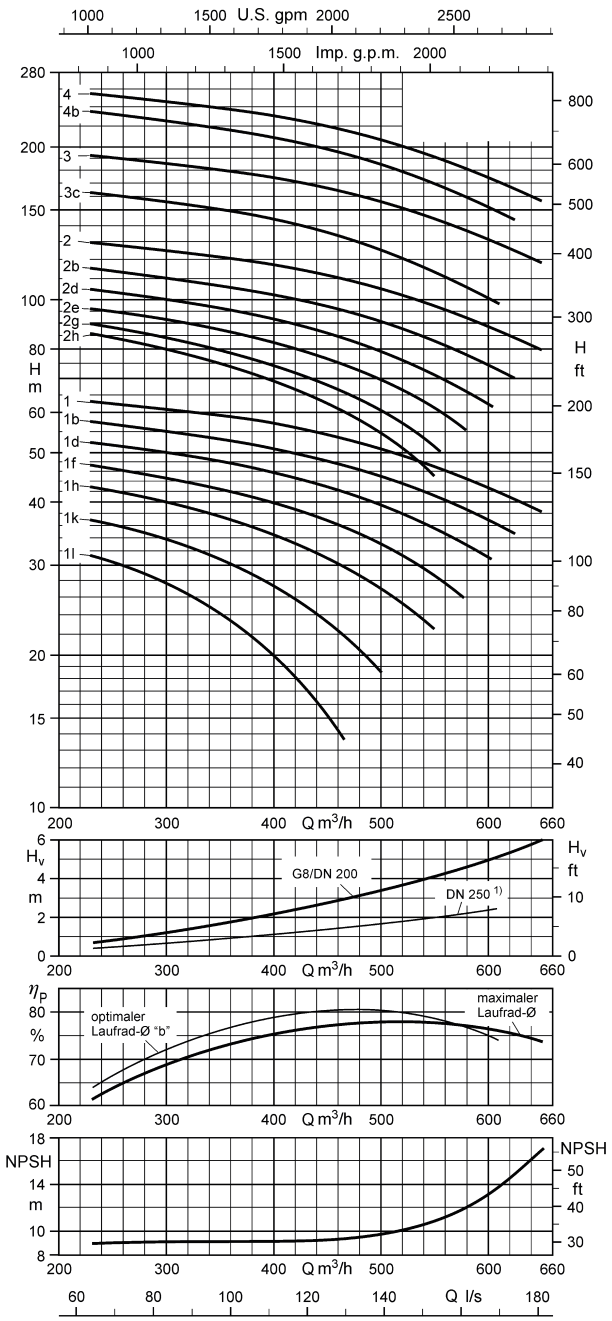
UPA 350 - 128 / ...



Types of connection

Standard pump end = G 8

Connection types:

- Flanged connection
  - DN 200

Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

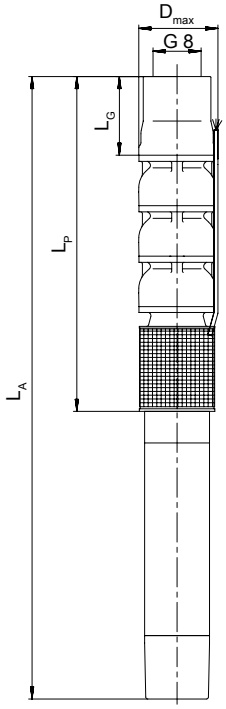
Values for calculating the dimensions if using a different pump end:

Pump design with lift check valve:

- G 8:
  L_{G*} = 328 mm
  $D_{max*} \triangleq D_{max}$
- DN 200:
  L_{G*} = 278 mm (PN 10/16)
  D_{max*} = 340 mm (PN 10/16)

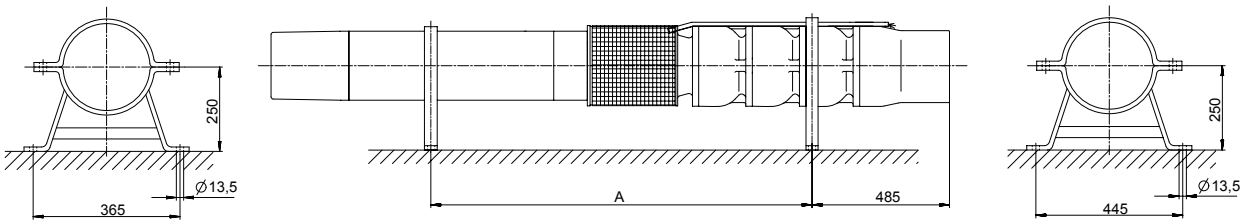
Version with connection nozzle:

- G 8:
  L_{G*} = 169 mm
  $D_{max*} \triangleq D_{max}$
- DN 200:
  L_{G*} = 123 mm (PN 10/16)
  D_{max*} = 340 mm (PN 10/16)



Operating range

Q_{min} = 100 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 350 - 128 / ... [mm]

3400.5/10-EN

Dimensions, weights and installation type depending on the motor [mm]

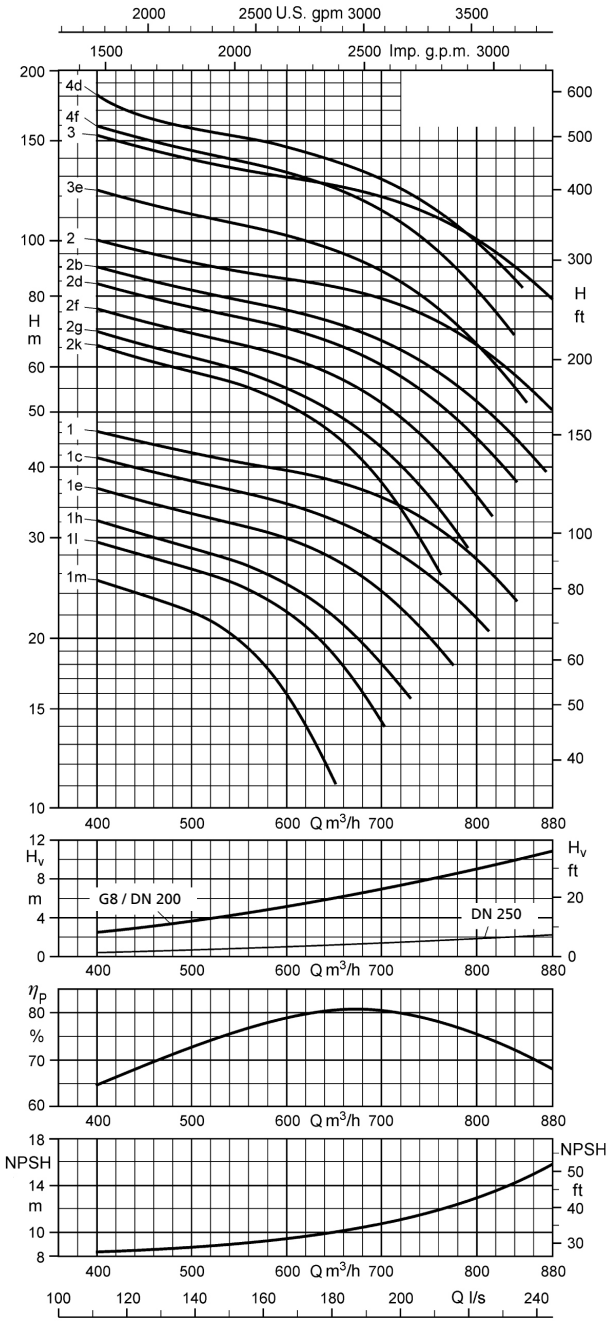
UPA 350 - 128	A	L_P	L_A	L_G [93]		D_{max}		Total weight			Type of installation	
						DOL	Y - Δ	Material variant				
				With lift check valve	With connection nozzle			G	B	C3	Vertical	Horizontal [94]
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[kg]	[kg]		
1l + UMA 200D 37/21	1020	898	2038	328	169	322	322	274	298	315	✗	✗
1k + UMA 200D 45/21	1065	898	2128	328	169	322	322	290	314	331	✗	✗
1h + UMA 200D 55/21	1120	898	2238	328	169	322	322	310	334	351	✗	✗
1f + UMA 200D 65/21	1185	898	2368	328	169	320	320	333	357	374	✗	✗
1d + UMA 200D 75/21	1230	898	2458	328	169	320	320	349	373	390	✗	✗
1b + UMA 200D 90/21	-	898	2638	328	169	324	324	381	405	422	✗	-
1 + UMA 250D 110/21	1215	898	2427	328	169	334	334	451	475	493	✗	✗
2h + UMA 250D 110/21	1415	1098	2627	328	169	334	334	497	532	542	✗	✗
2g + UMA 250D 132/21	1480	1098	2757	328	169	334	334	541	576	586	✗	✗
2e + UMA 250D 132/21	1480	1098	2757	328	169	334	334	541	576	586	✗	✗
2d + UMA 250D 160/21	1535	1098	2867	328	169	334	343	578	613	623	✗	✗
2b + UMA 250D 190/21	-	1098	3017	328	169	343	357	629	664	674	✗	-[95]
2 + UMA 300D 250/22	-	1108	3181	328	169	360	360	754	789	800	✗	-[95]
3c + UMA 300D 250/22	-	1308	3381	328	169	360	360	799	839	849	✗	-[95]
3 + UMA 300D 300/22	-	1308	3561	328	169	341	341	877	917	929	✗	-[95]
4b + UMA 300D 400/22	-	1508	3881	328	169	341	341	972	1019	1029	✗	-[95]
4 + UMA 300D 400/22	-	1508	3881	328	169	341	341	972	1019	1029	✗	-[95]

Technical data

UPA 350 - 128	Pump	Motor					Motor lead, flat	
	Head Q = 0 m^3/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm^2]	[mm^2]
1l + UMA 200D 37/21	40	35,0	31 (25)	72,0	85,3	0,83	3/4 × 6,0[96]	3/4 × 6,0
1k + UMA 200D 45/21	45	44,0	28 (22)	89,0	86,0	0,84	3/4 × 6,0[96]	3/4 × 6,0
1h + UMA 200D 55/21	52	55,0	27 (20)	109,0	86,9	0,84	3/4 × 6,0[96]	3/4 × 6,0
1f + UMA 200D 65/21	57	64,0	28 (22)	127,0	87,7	0,84	3/4 × 10,0[96]	3/4 × 10,0
1d + UMA 200D 75/21	63	75,0	23 (15)	151,0	87,3	0,83	3/4 × 10,0[96]	3/4 × 10,0
1b + UMA 200D 90/21	69	88,0	25 (18)	177,0	88,1	0,82	3/4 × 16,0[96]	3/4 × 16,0
1 + UMA 250D 110/21	75	105,0	22 (14)	208,0	88,6	0,83	3/4 × 25,0[96]	3/4 × 25,0
2h + UMA 250D 110/21	104	110,0	19 (10)	215,0	88,5	0,84	3/4 × 25,0[96]	3/4 × 25,0
2g + UMA 250D 132/21	109	120,0	24 (16)	229,0	89,2	0,85	3/4 × 25,0[96]	3/4 × 25,0
2e + UMA 250D 132/21	117	132,0	18 (9)	249,0	89,0	0,86	3/4 × 25,0[96]	3/4 × 25,0
2d + UMA 250D 160/21	126	150,0	18 (9)	284,0	89,3	0,86	3/4 × 25,0[97]	3/4 × 35,0[98]
2b + UMA 250D 190/21	138	175,0	19 (10)	341,0	89,9	0,83	3/4 × 35,0[97][98]	3/4 × 50,0[98]
2 + UMA 300D 250/22	153	210,0	57 (51)	389,0	90,7	0,86	2×3×70 + 1×35[97][99]	2×3×70 + 1×35[99]
3c + UMA 300D 250/22	196	240,0	54 (47)	439,0	90,7	0,87	2×3×70 + 1×35[97][99]	2×3×70 + 1×35[99]
3 + UMA 300D 300/22	228	300,0	52 (45)	546,0	91,2	0,87	6×1×95 + 1×95[97][100]	6×1×95 + 1×95[100]
4b + UMA 300D 400/22	280	355,0	50 (42)	652,0	91,4	0,86	6×1×95 + 1×95[97][100]	6×1×95 + 1×95[100]
4 + UMA 300D 400/22	302	400,0	45 (35)	728,0	91,2	0,87	6×1×95 + 1×95[97][100]	6×1×95 + 1×95[100]

93) Length of pump end fitted as standard
94) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
95) Horizontal installation on request and only with pedestals in special design
96) Delta configuration in cable connector or control cabinet
97) Parallel cable
98) 1×3-core, flat and 1×4-core, round
99) 2×3-core, flat and 1×1-core, round
100) 7×1-core, round

UPA 350 - 180 / ...



Types of connection

Standard pump end = G 8

Connection types:

- Flanged connection
  - DN 200

Alternative pump ends are possible.
The length of the pump set L_A and the diameter D_{max} depend on the pump end.

For an alternative pump end the length of the pump set L_{A*} is calculated as follows:

$L_{A*} = L_A - L_G + L_{G*}$

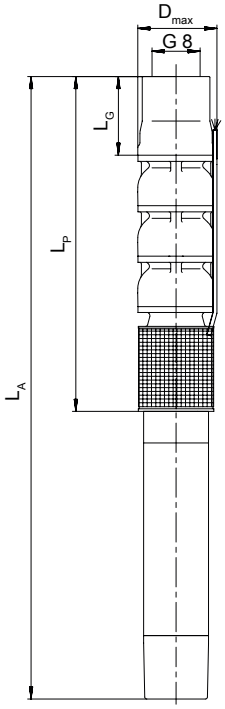
Values for calculating the dimensions if using a different pump end:

Pump design with lift check valve:

- G 8:
  L_{G*} = 328 mm
  $D_{max*} \triangleq D_{max}$
- DN 200:
  L_{G*} = 278 mm (PN 10/16)
  D_{max*} = 340 mm (PN 10/16)

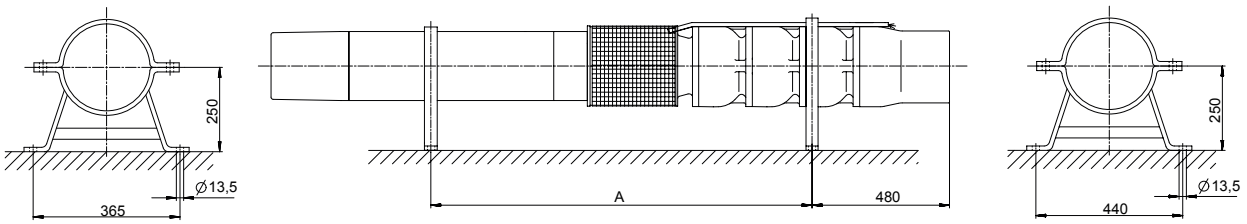
Version with connection nozzle:

- G 8:
  L_{G*} = 169 mm
  $D_{max*} \triangleq D_{max}$
- DN 200:
  L_{G*} = 123 mm (PN 10/16)
  D_{max*} = 340 mm (PN 10/16)



Operating range

Q_{min} = 120 m³/h
Q_{max}= end of stage curve



Dimensions of UPA 350 - 180 / ... [mm]

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Dimensions, weights and installation type depending on the motor [mm]

UPA 350 - 180	A	L_P	L_A	L_G [101]		D_{max}		Total weight			Type of installation	
						DOL	Y - Δ	Material variant				
				With lift check valve	With connection nozzle			G	B	C3	Vertical	Horizontal [102]
	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[kg]	[kg]	[kg]		
1m + UMA 200D 55/21	1120	898	2238	328	169	322	322	317	342	351	✗	✗
1l + UMA 200D 65/21	1185	898	2368	328	169	320	320	340	365	374	✗	✗
1h + UMA 200D 65/21	1185	898	2368	328	169	320	320	340	365	374	✗	✗
1e + UMA 200D 75/21	1230	898	2458	328	169	320	320	356	381	390	✗	✗
1c + UMA 200D 90/21	-	898	2638	328	169	324	324	388	413	422	✗	-
1 + UMA 250D 110/21	1215	898	2427	328	169	334	334	458	483	493	✗	✗
2k + UMA 250D 132/21	1480	1098	2757	328	169	334	334	546	578	587	✗	✗
2g + UMA 250D 132/21	1480	1098	2757	328	169	334	334	546	578	587	✗	✗
2f + UMA 250D 160/21	1535	1098	2867	328	169	334	343	583	615	624	✗	✗
2d + UMA 250D 190/21	-	1098	3017	328	169	343	357	634	666	675	✗	–[103]
2b + UMA 250D 190/21	-	1098	3017	328	169	343	357	634	666	675	✗	–[103]
2 + UMA 300D 250/22	-	1108	3181	328	169	360	360	759	791	798	✗	–[103]
3e + UMA 300D 250/22	-	1308	3381	328	169	360	360	801	840	846	✗	–[103]
3 + UMA 300D 400/22	-	1308	3681	328	169	341	341	931	970	976	✗	–[103]
4f + UMA 300D 400/22	-	1508	3881	328	169	341	341	974	1021	1025	✗	–[103]
4d + UMA 300D 400/22	-	1508	3881	328	169	341	341	974	1021	1025	✗	–[103]

Technical data

UPA 350 - 180	Pump	Motor					Motor lead, flat	
	Head Q = 0 m^3/h	Rated power	Max. fluid temperature v ≥ 0,2 m/s (0,0 m/s)	Rated current	Efficiency	Power factor	Number × cross-section of cores	
	H_0	P_N	T_{max}	I_N	η_M	cos φ	DOL	Y - Δ
	[m]	[kW]	[°C]	[A]	[%]		[mm^2]	[mm^2]
1m + UMA 200D 55/21	41	54,0	29 (23)	108,0	87,0	0,84	3/4 × 6,0[104]	3/4 × 6,0
1l + UMA 200D 65/21	45	62,0	30 (24)	123,0	87,7	0,83	3/4 × 10,0[104]	3/4 × 10,0
1h + UMA 200D 65/21	49	65,0	28 (21)	129,0	87,7	0,84	3/4 × 10,0[104]	3/4 × 10,0
1e + UMA 200D 75/21	55	75,0	24 (16)	151,0	87,3	0,83	3/4 × 10,0[104]	3/4 × 10,0
1c + UMA 200D 90/21	62	86,0	27 (20)	173,0	88,1	0,82	3/4 × 16,0[104]	3/4 × 16,0
1 + UMA 250D 110/21	66	100,0	25 (17)	199,0	88,6	0,82	3/4 × 25,0[104]	3/4 × 25,0
2k + UMA 250D 132/21	95	130,0	22 (13)	245,0	89,1	0,86	3/4 × 25,0[104]	3/4 × 25,0
2g + UMA 250D 132/21	100	132,0	18 (9)	249,0	89,0	0,86	3/4 × 25,0[104]	3/4 × 25,0
2f + UMA 250D 160/21	111	150,0	20 (11)	284,0	89,3	0,86	3/4 × 25,0[105]	3/4 × 35,0[106]
2d + UMA 250D 190/21	121	165,0	22 (14)	325,0	90,0	0,82	3/4 × 35,0[105][106]	3/4 × 50,0[106]
2b + UMA 250D 190/21	128	180,0	18 (9)	349,0	89,8	0,83	3/4 × 35,0[105][106]	3/4 × 50,0[106]
2 + UMA 300D 250/22	137	210,0	57 (51)	389,0	90,7	0,86	2×3×70 + 1×35[105][107]	2×3×70 + 1×35[107]
3e + UMA 300D 250/22	173	240,0	53 (47)	439,0	90,7	0,87	2×3×70 + 1×35[105][107]	2×3×70 + 1×35[107]
3 + UMA 300D 400/22	205	320,0	54 (47)	595,0	91,4	0,85	6×1×95 + 1×95[105][108]	6×1×95 + 1×95[108]
4f + UMA 300D 400/22	226	310,0	54 (47)	580,0	91,4	0,85	6×1×95 + 1×95[105][108]	6×1×95 + 1×95[108]
4d + UMA 300D 400/22	245	345,0	51 (44)	634,0	91,4	0,86	6×1×95 + 1×95[105][108]	6×1×95 + 1×95[108]

101) Length of pump end fitted as standard
102) To reliably dissipate the motor heat of pump sets installed in a horizontal position, sufficient flow velocity past the motor is necessary. A cooling shroud, hood or similar must be used.
103) Horizontal installation on request and only with pedestals in special design
104) Delta configuration in cable connector or control cabinet
105) Parallel cable
106) 1×3-core, flat and 1×4-core, round
107) 2×3-core, flat and 1×1-core, round
108) 7×1-core, round

Scope of supply

Depending on the model, the following items are included in the scope of supply:

- Pump set with motor lead
- Back-up name plate

Optional:

- Extension cable optional: connected or supplied but not fitted
- Cable connector
- Cable clips
- Pedestals
- Cooling shroud, suction shroud or pressure shroud
- Supporting clamps and mounting clamps
- Electrical protection equipment
- Automatic control units

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Accessories for sizes UPA 200 to UPA 350

Installation parts

Selection table

Description			Mat. No.	Weight [kg]
Set of pedestals for horizontal installation, comprising: 2 pedestals and fastening elements				
	Galvanised steel (S235 JRG2+Z)	UPA 200 with UMA 150E motor	90017255	2,5
		UPA 200 with UMA 200D motor	01046640	2,5
	CrNi steel (1.4301)	UPA 200B with UMA 150E motor	01061866	2,5
		UPA 200B with UMA 200D motor	01061867	2,5
		UPA 250C with UMA 150E motor	01061868	2,5
		UPA 250C with UMA 200D motor	01061869	2,5
		UPA 250C with UMA 250D motor	01061870	2,5
	Galvanised steel (S235 JRG2+Z)	UPA 300-65 with UMA 200D motor	01046644	7,8
		UPA 300-94 with UMA 200D motor	01046645	7,8
		UPA 350 with UMA 200D motor	01046646	8,0
		UPA 300-65 with UMA 250D motor	01053905	16,0
		UPA 300-94 with UMA 250D motor	01053906	16,0
		UPA 350 with UMA 250D motor	01053907	17,2
	Bolts for fastening the pedestals to the foundation are not included in the scope of supply; they must be provided at the site.			
	Pedestals for pump sets in material variant C3 (duplex) on request.			
Centring device for UMA 150E and UMA 200D, for use in wells of up to DN 350				
	Plastic (PE)	Up to DN 250	90047662	-
		Up to DN 300	90047663	-
		Up to DN 350	90047664	-
Cooling, suction and pressure shroud Material: CrNiMo steel or galvanised steel			On request	
Adapter from screwed end to flange, PN 10/40, with 2 recesses in the flange, offset by 90°				
	G 3 to DN 80, CrNiMo steel	H = 180 mm, D = 200 mm	95000233	5,6
Pair **of supporting and installation clamps** for the following riser sizes, incl. fastening elements, material: painted steel				
	R 3 / DN 80	L = 600 mm, F = 17,5 kN	95000298	12
	R 4 / DN 100	L = 700 mm, F = 24,5 kN	95000300	21
	R 5 / DN 125	L = 800 mm, F = 31,0 kN	95000302	29
	R 6 / DN 150	L = 800 mm, F = 31,0 kN	95000304	29
	R 8 / DN 200	L = 900 mm, F = 108 kN	95000307	70
	2 pairs are required for installation and dismantling.			

Motor accessories

	Description	Mat. No.	[kg]
	Fill check kit, for checking and topping up the motor fill after prolonged storage for UMA 150D, UMA 150E, UMA 200D, UMA 250D	90066762	0,25

Electrical accessories

Selection table

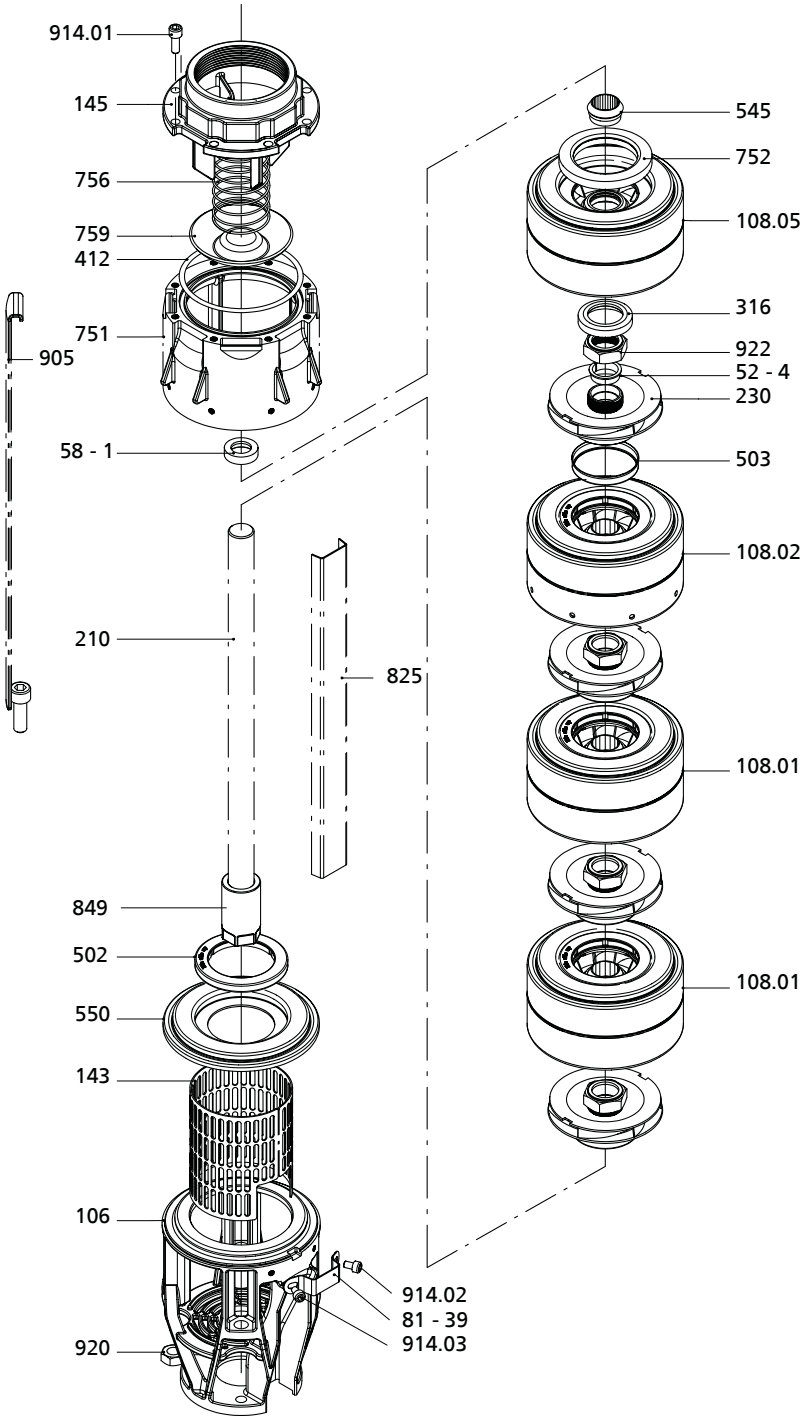
Description			Mat. No.	Weight [kg]
Extension cable, blue, rubber-sheathed cable for drinking water applications, maximum ambient temperatures +50 °C				
	G RD GWT - J, 4-core, round, with earth conductor Values indicated per meter	4 x 1,5 mm²	90068174	0,18
		4 x 2,5 mm²	90068175	0,259
		4 x 4 mm²	90068176	0,356
		4 x 6 mm²	90068177	0,475
		4 x 10 mm²	90068178	0,837
		4 x 16 mm²	90068179	1,22

Description				Mat. No.	Weight [kg]
	G RD GWT - J, 4-core, round, with earth conductor Values indicated per meter		4 x 25 mm²	90068180	1,77
			4 x 35 mm²	90068181	2,304
			4 x 50 mm²	90068182	3,185
			4 x 70 mm²	90068183	4,364
	G FL GWT - O, 3-core, flat, without earth conductor Values indicated per meter		3 x 1.5 mm²	90068148	0,11
			3 x 2.5 mm²	90068149	0,171
			3 x 4 mm²	90068150	0,252
			3 x 6 mm²	90068151	0,319
			3 x 10 mm²	90068152	0,486
			3 x 16 mm²	90068153	0,75
			3 x 25 mm²	90068154	1,107
			3 x 35 mm²	90068155	1,438
			3 x 50 mm²	90068156	2,054
			3 x 70 mm²	90068157	2,76
Shielded Hydrofirm (T) cable					
		S07BC4B - F	3 x 6 / 6 KON	01101358	-
		S07BC4B - F	3 x 16 / 16 KON	01101360	-
		S07BC4B - F	3 x 35 + 3G16 / 3	01101361	-
Cable connector, non-separable, including sealing compound, for connecting 1 extension cable to 1 or 2 motor leads					
	Size 28 for connection to:				
	1 motor lead	Supplied but not fitted		95005106	0,5
		Connected and sealed at the factory		90049385	0,5
	Size 35 for connection to:				
	1 motor lead	Supplied but not fitted		90049397	0,6
		Connected and sealed at the factory		90049387	0,6
	Size 43 for connection to:				
	1 motor lead	Supplied but not fitted		90049399	0,8
		Connected and sealed at the factory		90049389	0,8
	2 motor leads	Supplied but not fitted		90049400	0,8
		Connected and sealed at the factory		90049390	0,8
	Sizes 53 and 78 for connection			On request	
Cable clip for fastening the cable to the riser					
	Size 1 (rubber strap / plastic studs), for up to 1 cable, flat, 3 x 6 mm² or 4 x 6 mm² and 1 cable, round, 4 x 6 mm²			01088095	0,04
	Sizes 2 - 11 (metal strap / screw band with tension screw / rubber cable protector), for larger cross-sections up to 70 mm²			On request	-
	Cable clips for pump sets in material variant B (special), C3 (duplex) on request.				
	Use 1 cable clip each per cable and per 3 m of riser pipe.				
Dry running protection equipment (supply voltage 220 V / 240 V) for					
	Semi-automatic operation (1 relay, 1 pushbutton + 2 electrodes)			90009553	2
	Fully automatic operation (1 relay + 3 electrodes)			90009554	2
	Plus 1 control current line, blue, 1 x 1.5 mm² for each electrode; values indicated per metre			01096713	0,1
Pressure controller, insulating enclosure (membrane type), 1 to 8 bar, with pressure connection G 3/8				01151586	1
Pt100 temperature monitoring equipment for use in submersible motors to protect the windings from overheating. Comprises:					
	Pt100 temperature sensor with 10 m cable 4 x 0.5 mm² for motor_	UMA 150E material variant C1, C2		01532593	1,1
		UMA 150E material variant C3		01532594	1,1
		UMA 200D, UMA 250D material variant G, C2		90063006	1,1
		UMA 200D, UMA 250D material variant C3		On request	-
	Display / switchgear (supply voltage V = 110/220 V)			90064446	0,32
	Control cable, blue, round 4 x 0.5 mm²		Per metre	01049403	0,08
Immersion electrodes					
		Set of electrodes: 3 electrodes made of stainless steel		40980055	0,3
		Set of electrodes: 1 electrode made of stainless steel		40980056	0,1

Related Documents

List of components

List of UPA 150C components



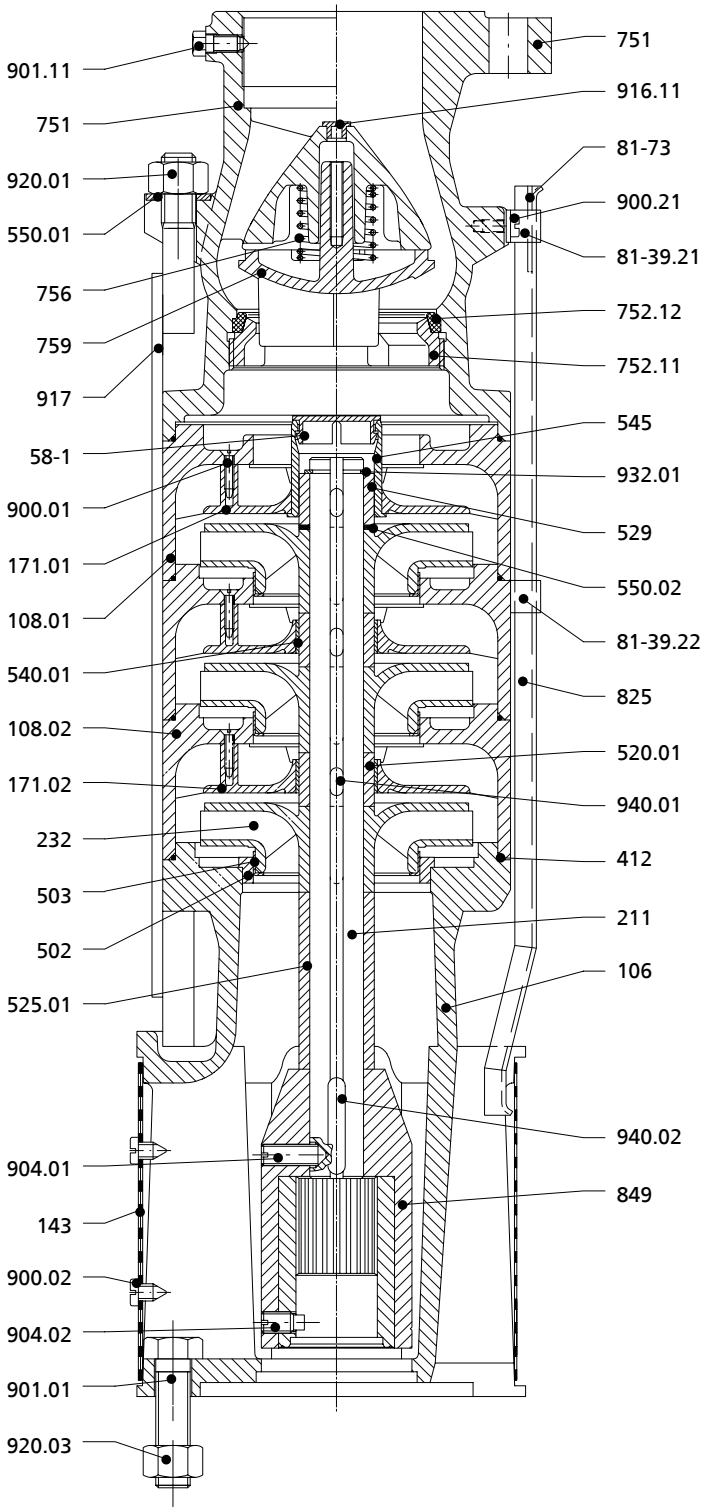
List of UPA 150C components

Quantity	Part No.	Description	Scope of supply	Recommended in addition:
1 per stage	52-4	Locking sleeve	-	-
1	58-1	Protecting plug	-	-
Depending on the length of the pump and the number of cable guards	81-39	Cable clip	-	914.02
1	106	Suction casing	-	-
1 per stage	108.01	Stage casing	502, 545	-
1 per stage	108.02	Stage casing with drilled holes	502, 545	-
1	108.05	Upper stage casing	752, 545	316
1	143	Suction strainer	-	914.03
1	145	Adapter	-	412, 914.01
1	210	Shaft	849	-
1 per stage	230	Impeller	503	52-4, 922
1 per stage	230 [109)]	Impeller, complete set	503, 52-4, 922	-
1	316	Bearing [110)]	-	108.05
1	412	O-ring [110)]	-	914.01
1 per stage	502	Casing wear ring [110)]	-	503
1 per stage	503	Impeller wear ring [110)]	-	502
1 per stage	545	Bearing bush [110)]	-	-
1	550	Disc	-	502
1	751	Valve body	-	412
1	752	Valve seat	-	-
1	756	Valve spring	-	-
1	759	Valve disc	-	-
1	759	Valve disc, complete set [110)]	412, 752, 756, 914.01	-
1 per cable	825	Cable guard	-	81-39, 914.02, 914.03
4	905	Metal strap	-	920
8	914.01	Hexagon socket head cap screw [110)]	-	-
2 x depending on the length of the pump and the number of cable guards	914.02	Hexagon socket head cap screw M5 × 8	-	-
1	914.03	Hexagon socket head cap screw M5 × 25	-	-
4	920	Nut	-	-
1 per stage	922 [109)]	Impeller nut	-	-

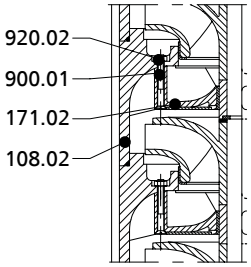
109) Special tool required for assembly
110) Recommended spare parts

List of UPA 200 components

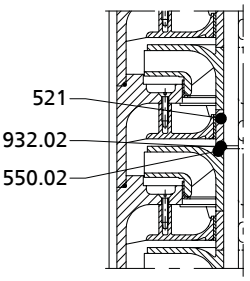
List of UPA 200 components, material variant G



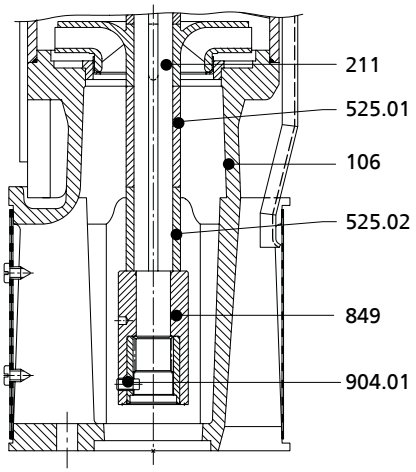
UPA 200 with connection to a UMA 200D motor



Diffuser fastening for UPA 200-14



Axial thrust balancing for pumps with ≥ 11 stages



UPA 200 with connection to a UMA 150E motor

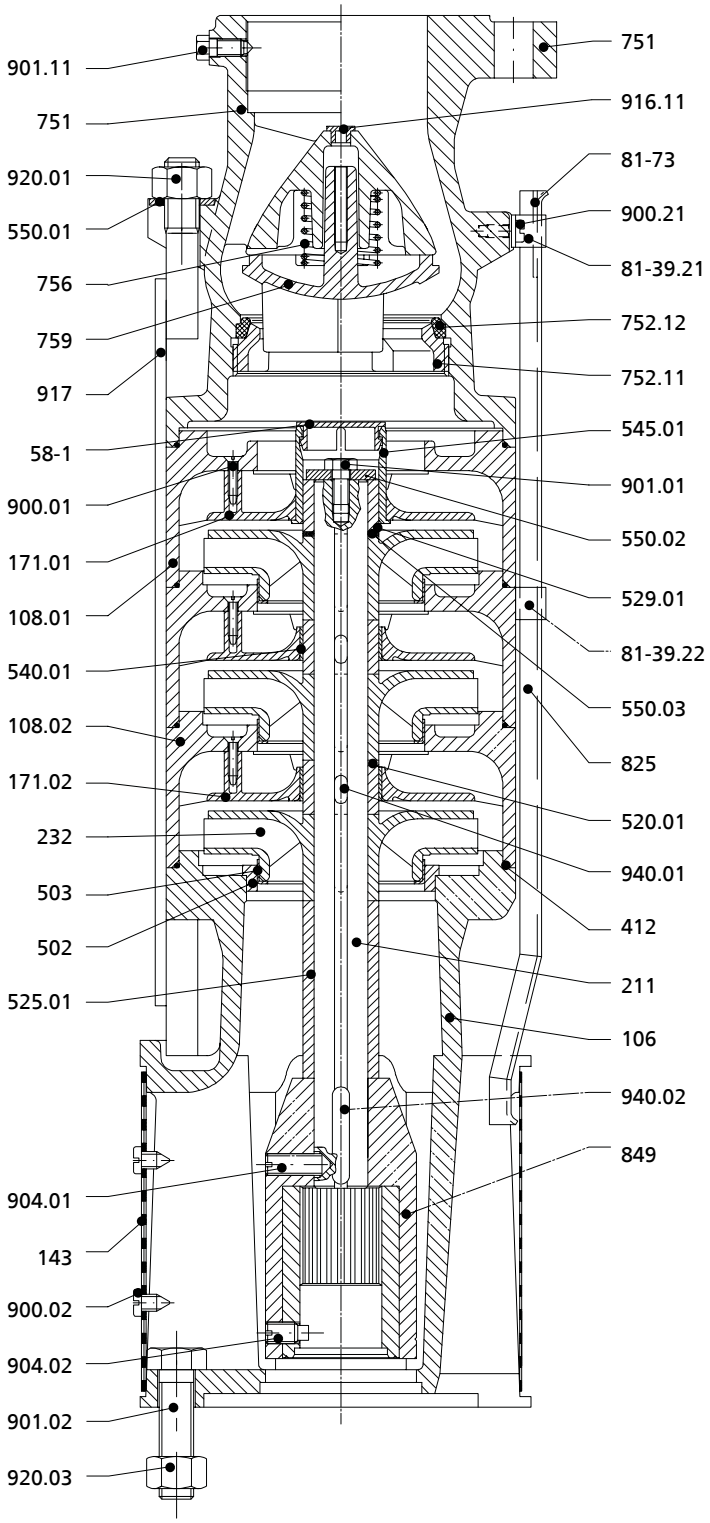
List of UPA 200 components, material variant G

Quantity	Part No.	Description	Scope of supply	Additionally recommended:
1	58-1	Protecting plug[111)]	-	-
1 per cable	81-39.21	Clamp	-	900.21
1 per cable	81-39.22	Disc	-	-
1 per cable	81-73	Cable support	-	-
1	106	Suction casing	Incl. 502	143, 412, 900.02
1	108.01	Stage casing (last stage)[111)]	Incl. 171.01, 545, 900.01 or 900.01+920.02	412, 58-1
Number of stages -1	108.02	Stage casing	Incl. 171.02, 540.01, 900.01 or 900.01+920.02	412
1	143	Suction strainer[111)]	-	900.02
1	171.01	Diffuser (last stage)	Incl. 108.01	-
Number of stages -1	171.02	Diffuser	-	900.01 or 900.01+920.02
1	211	Pump shaft	-	550.02, 932.01/.02, 940.01/.02
Number of stages	232	Clockwise impeller (radial)	Incl. 503	-
Number of stages +1	412	O-ring[111)]	-	-
1	502[112)]	Casing wear ring[111)]	-	-
Number of stages	503	Impeller wear ring[111)]	-	-
Number of stages -1	520.01	Sleeve[111)]	-	-
1	521[113)]	Stage sleeve[111)]	-	550.02, 932.02
1	525.01	Spacer sleeve	-	550.02, 932.01
1	525.02	Spacer sleeve	-	-
1	529	Bearing sleeve	-	545, 550.02, 932.01
Number of stages -1	540.01	Bush[111)]	-	-
1	545	Bearing bush	-	529, 58-1
4	550.01	Disc[111)]	-	-
10	550.02[113)]	Disc	-	-
1	751	Valve body	Incl. 752.11/.12, 756, 759, 901.11, 916.11	-
1	752.11	Valve seat	-	752.12
1	752.12	Valve seat (rubber)	-	-
1	756	Valve spring	-	-
1	759	Valve disc	-	-
1 per cable	825	Cable guard	-	81-39.21/.22, 81-73, 900.21
1	849	Sleeve coupling	-	904.01, 904.02, 940.02
Number of stages x 3	900.01	Bolt/screw	-	-
2	900.02	Bolt/screw[111)]	-	-
2	900.21	Bolt/screw	-	-
4	901.01	Hexagon head bolt	-	-
2	901.11	Hexagon head bolt	-	-
1	904.01	Grub screw[111)]	-	-
1	904.02[114)]	Grub screw[111)]	-	-
1	916.11	Plug	-	-
4	917	Metal strap	-	550.01, 920.01
4	920.01	Nut	-	-
Number of stages x 3	920.02[115)]	Nut (diffuser)	-	-
4	920.03	Nut	-	-
1	932.01	Circlip[111)]	-	-

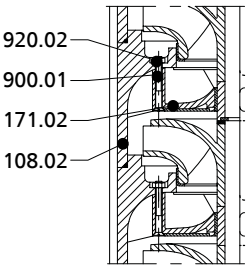
111) Recommended spare parts
112) Only for UPA 200-11
113) Only for pump sets with axial thrust balancing
114) Only for UMA 200D
115) Only for UPA 200-14

Quantity	Part No.	Description	Scope of supply	Additionally recommended:
1	932.02[113)]	Circlip[111)]	-	-
Number of stages	940.01	Key[111)]	-	-
1	940.02[114)]	Key[111)]	-	-

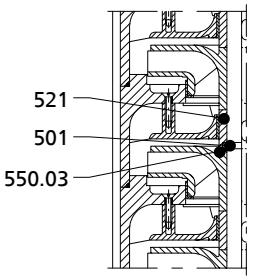
List of UPA 200 components, material variant B



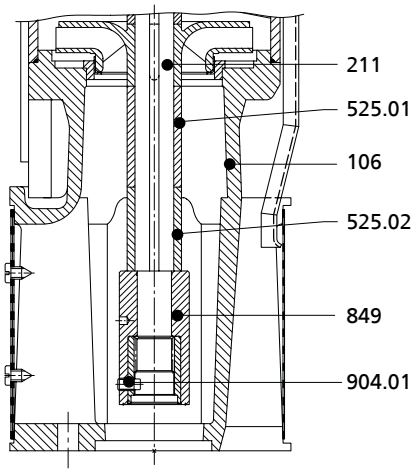
UPA 200 with connection to a UMA 200D motor



Diffuser fastening for UPA 200-14



Axial thrust balancing for pumps with ≥ 11 stages



UPA 200 with connection to a UMA 150E motor

3400.5/10-EN

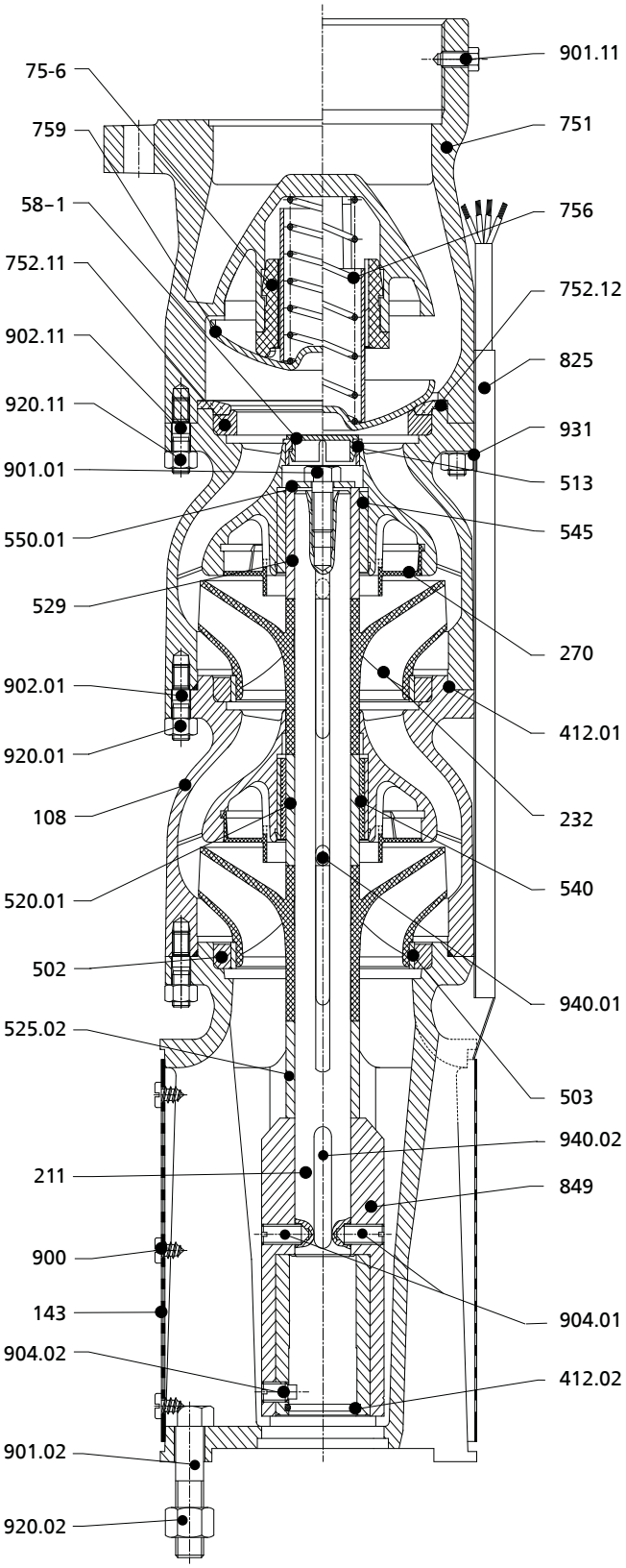
List of UPA 200 components, material variant B

Quantity	Part No.	Description	Scope of supply	Additionally recommended:
1	58-1	Protecting plug[116)]	-	-
1 per cable	81-39.21	Clamp	-	900.21
1 per cable	81-39.22	Disc	-	900.21
1 per cable	81-73	Cable support	-	-
1	106	Suction casing	Incl. 502	143, 412, 900.02
1	108.01	Stage casing (last stage)[116)]	Incl. 171.01, 545.01, 900.01 or 900.01+920.02	412, 58-1
Number of stages -1	108.02	Stage casing	Incl. 171.02, 540.01, 900.01 or 900.01+920.02	412
1	143	Suction strainer[116)]	-	900.02
1	171.01	Diffuser (last stage)	Incl. 108.01	-
Number of stages -1	171.02	Diffuser	-	540.01, 900.01 or 900.01+920.02
1	211	Pump shaft	-	501, 550.03, 940.01/.02
Number of stages	232	Clockwise impeller (radial)	Incl. 503	-
Number of stages +1	412	O-ring[116)]	-	-
1	501[117)]	Segmental ring[116)]	-	550.03
1	502[118)]	Casing wear ring[116)]	-	-
Number of stages	503	Impeller wear ring[116)]	-	-
Number of stages -1	520.01	Sleeve[116)]	-	-
1	521[117)]	Stage sleeve[116)]	-	501, 550.03
1	525.01	Spacer sleeve	-	-
1	525.02	Spacer sleeve	-	-
1	529.01	Bearing sleeve[116)]	-	545.01, 550.03
Number of stages -1	540.01	Bush[116)]	-	-
1	545.01	Bearing bush	-	529.01, 58-1
4	550.01	Disc	-	-
1	550.02	Disc	-	-
10	550.03[117)]	Disc[116)]	-	-
1	751	Valve body	Incl. 752.11/.12, 756, 759, 901.11, 916.11	-
1	752.11	Valve seat	-	752.12
1	752.12	Valve seat (rubber)	-	-
1	756	Valve spring	-	-
1	759	Valve disc	-	-
1 per cable	825	Cable guard	-	81-39.21/.22, 81-73, 900.21
1	849	Sleeve coupling	-	904.01, 904.02, 940.02
Number of stages x 3	900.01	Bolt/screw	-	-
2	900.02	Bolt/screw[116)]	-	-
2	900.21	Bolt/screw	-	-
1	901.01	Hexagon head bolt[116)]	-	
4	901.02	Hexagon head bolt	-	-
2	901.11	Hexagon head bolt	-	-
1	904.01	Grub screw[116)]	-	-
1	904.02[119)]	Grub screw[116)]	-	-
1	916.11	Plug	-	-
4	917	Metal strap	-	550.01, 920.01
4	920.01	Nut	-	-
Number of stages x 3	920.02[120)]	Nut (diffuser)	-	-

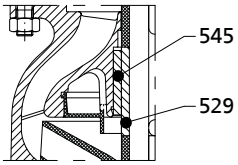
116) Recommended spare parts
117) Only for pump sets with axial thrust balancing
118) Only for UPA 200-11
119) Only for UMA 200D
120) Only for UPA 200-14

Quantity	Part No.	Description	Scope of supply	Additionally recommended:
4	920.03	Nut	-	-
Number of stages	940.01	Key[116)]	-	-
1	940.02[119)]	Key[116)]	-	-

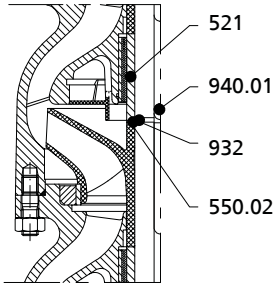
List of UPA 200B components



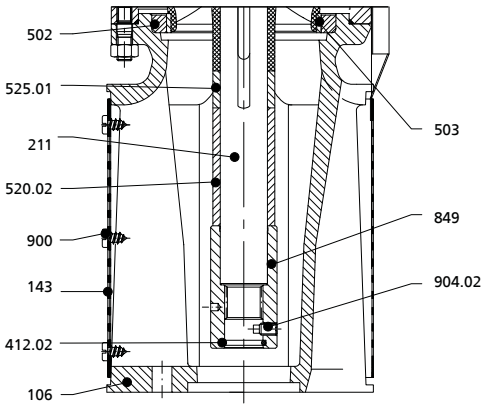
UPA 200B with connection to a UMA 200D motor



Intermediate bearing in the first stage
for pumps with ≥ 8 stages



Axial thrust balancing in the pump:
1 × for ≤ 10 stages; 2 × for ≥ 11 stages



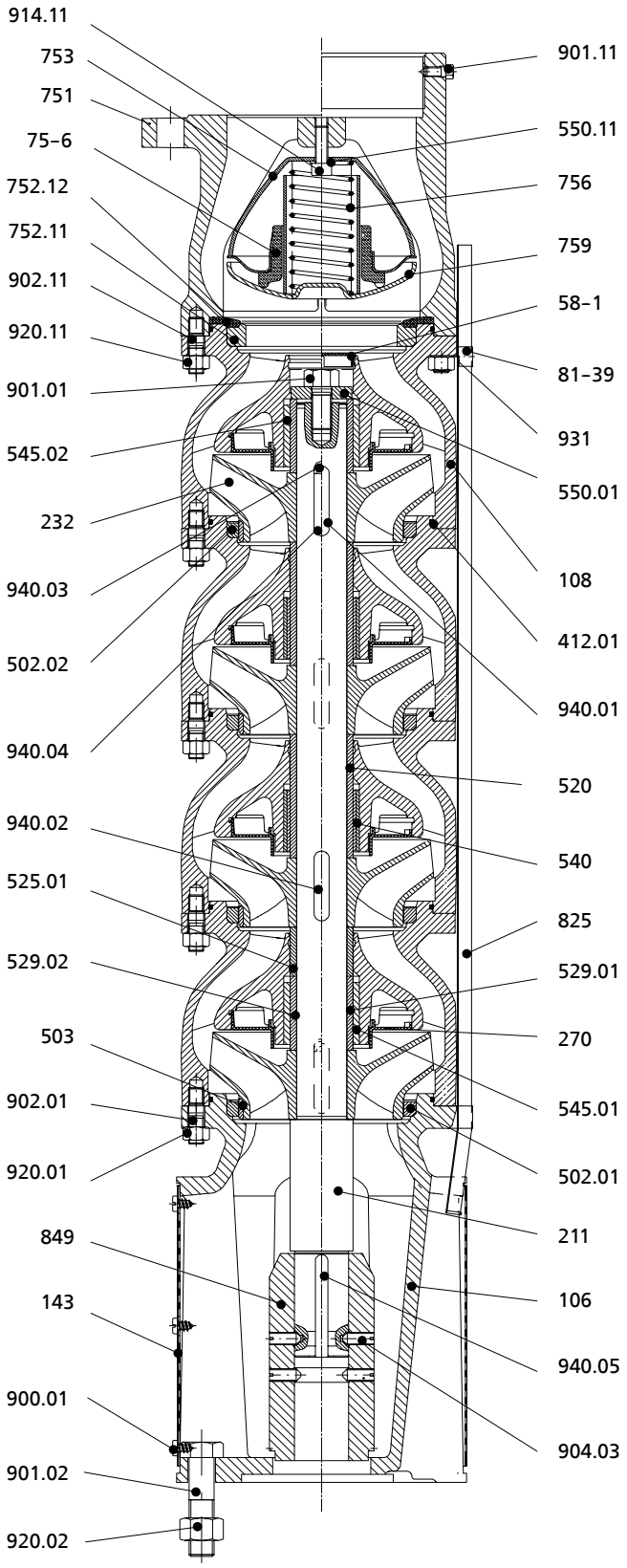
UPA 200B with connection to a UMA 150E motor

121) Recommended spare parts
122) For UMA 150E only
123) Only for pump sets with axial thrust balancing
124) Only for UMA 200D
125) 2 pieces for pumps ≥ 8 stages

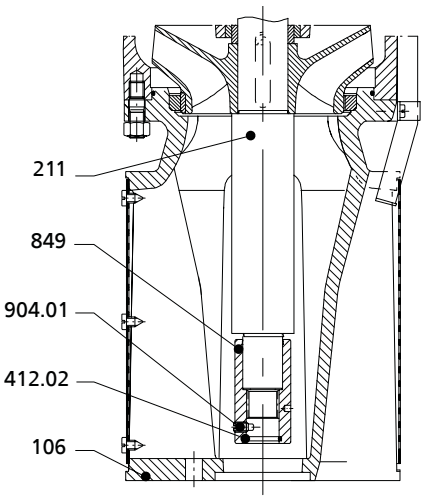
List of UPA 200B components

Quantity	Part No.	Description	Scope of supply	Recommended in addition:
1	58-1	Protecting plug [121)]	-	513
1	75-6	Valve disc guide	Incl. 752.12, 756, 759	-
1	106	Suction casing	Incl. 502	143, 412.01, 900
1	108	Stage casing (last stage)	Incl. 270, 545, 752.11, 902.01	412.01, 58-1, 513, 920.01
Number of stages -1	108	Stage casing	Incl. 270, 502, 540, 902.01	412.01, 920.01
1	143	Suction strainer [121)]	-	900
1	211	Pump shaft	-	550.01, 932, 940.01/.02
Number of stages	232	Clockwise impeller	Incl. 503	550.02
Number of stages	270	Deflector	-	-
Number of stages	412.01	O-ring [121)]	-	-
1	412.02	O-ring [121)]	-	-
Number of stages	502	Casing wear ring [121)]	-	503
Number of stages	503	Impeller wear ring [121)]	-	502
1	513	Replacement ring	-	-
Number of stages -1	520.01	Sleeve	-	540
1	520.02 [122)]	Sleeve	-	-
1	521 [123)]	Stage sleeve	-	-
1	525.01 [122)]	Spacer sleeve	-	-
1	525.02 [124)]	Spacer sleeve	-	-
1 [125)]	529	Bearing sleeve [121)]	-	545
Number of stages -1	540	Bush	-	520.01
1 [125)]	545	Bearing bush [121)]	-	529
1	550.01	Disc [121)]	-	-
10	550.02 [123)]	Disc [121)]	-	-
1	751	Valve body	Incl. 75-6, 752.11/.12, 756, 759, 901.11, 902.11	920.11
1	752.11	Valve seat	-	752.12
1	752.12	Valve seat (rubber)	-	-
1	756	Valve spring	-	-
1	759	Valve disc	-	752.12
1 per cable	825	Cable guard	-	931
1	849	Sleeve coupling	-	904.01, 904.02, 940.02
3	900	Screw/bolt [121)]	-	-
1	901.01	Hexagon head bolt	-	-
4	901.02 [124)]	Hexagon head bolt	-	-
2	901.11	Hexagon head bolt	-	-
Number of stages x 8	902.01	Stud	-	-
8	902.11	Stud	-	-
2	904.01 [124)]	Grub screw [121)]	-	-
1	904.02	Grub screw [121)]	-	-
Number of stages x 8	920.01	Nut	-	-
4	920.02 [124)]	Nut	-	-
8	920.11	Nut	-	-
1 per cable	931	Lock washer	-	-
1	932 [123)]	Circlip [121)]	-	-
Number of stages	940.01	Key [121)]	-	-
1	940.02 [124)]	Key [121)]	-	-

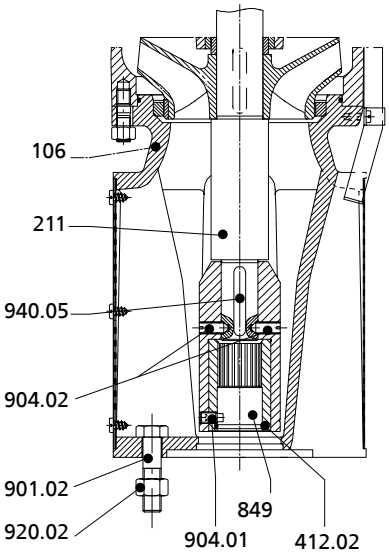
List of UPA 250C components



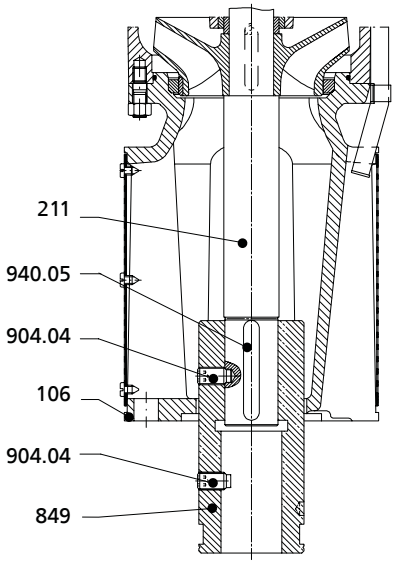
UPA 250C with connection to a UMA 250D motor



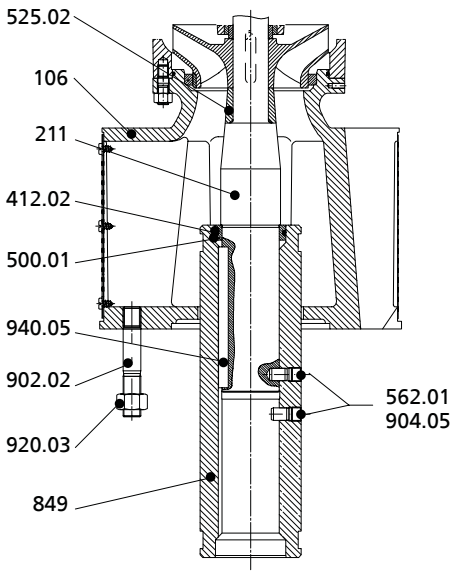
Connection to a 150E motor



Connection to a UMA 200D motor



Connection to a UMA 300D motor



Connection to a 14D / VBD motor

List of UPA 250C components

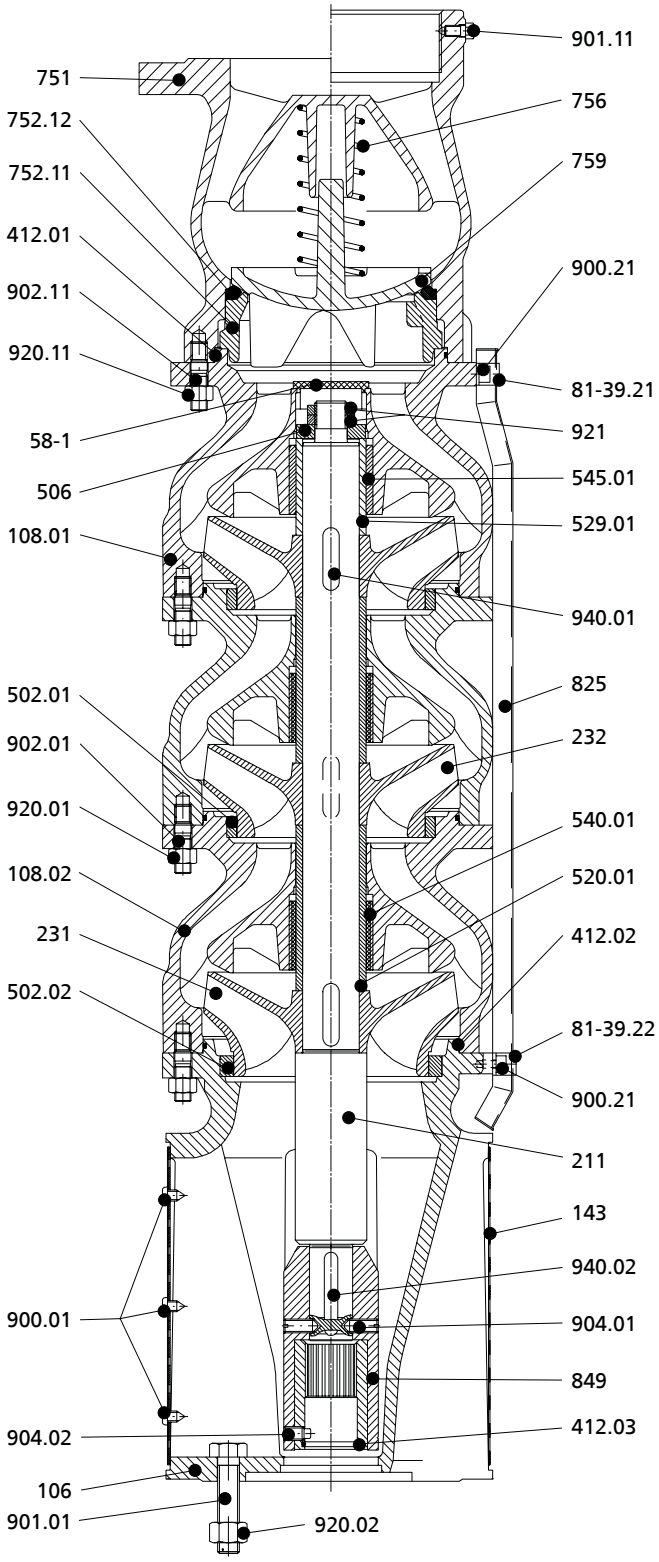
Quantity	Part No.	Description	Scope of supply	Recommended in addition:
1	58-1	Protecting plug [126)]	-	-
1	75-6	Valve disc guide	Incl. 550.11, 752.12, 753, 756, 759, 914.11	-
1 per cable	81-39	Cable clip	-	-
1	106	Suction casing	Incl. 412.01, 502.01, 502.02	143, 900.01
1	108	Stage casing (last stage)	Incl. 270, 412.01, 545.01/.02, 752.11, 902.01	58-1, 920.01
Number of stages -1	108	Stage casing	Incl. 270, 412.01, 502.01/.02, 540, 545.01/.02, 902.01	920.01
1	143	Suction strainer [126)]	-	900.01
1	211	Pump shaft	-	940
Number of stages	232	Clockwise impeller	Incl. 503	-
Number of stages	270	Deflector	-	-
Number of stages +1	412.01	O-ring [126)]	-	-
1	412.02	O-ring [126)]	-	-
1	500.01	Ring	-	412.02
Number of stages	502.01	Casing wear ring [126)]	-	-
Number of stages	502.02	Casing wear ring [126)]	-	503
Number of stages	503	Impeller wear ring [126)]	-	502.02
Number of stages - number of pump bearings [127)]	520.01	Sleeve [126)]	-	540
Number of pump bearings [127)]	525.01	Spacer sleeve	-	-
1	525.02	Spacer sleeve	-	-
Number of pump bearings [127)]	529.01	Bearing sleeve [126)]	-	545.01
Number of pump bearings [127)]	529.02	Bearing sleeve [126)]	-	545.02
Number of stages - number of pump bearings [127)]	540	Bush [126)]	-	520
Number of pump bearings [127)]	545.01	Bearing bush [126)]	-	529.01
Number of pump bearings [127)]	545.02	Bearing bush [126)]	-	529.02
1	550.01	Disc	-	-
1	550.11	Disc	-	-
2	562.01	Parallel pin [126)]	-	-

126) Recommended spare parts
127) Up to 3 stages: 1 bearing; 4 and more stages: 2 bearings

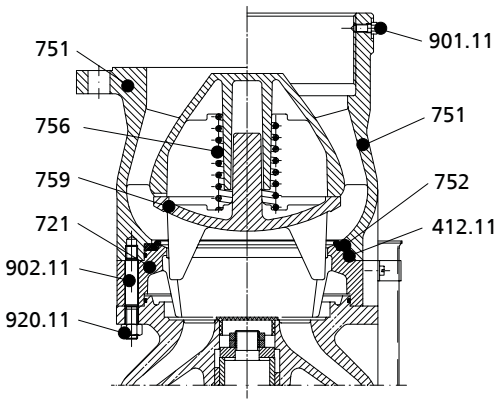
Quantity	Part No.	Description	Scope of supply	Recommended in addition:
1	751	Valve body	Incl. 412.01, 752.12, 901.11, 902.11	920.11
1	752.11	Valve seat	-	752.12
1	752.12	Valve seat (rubber) [126]	-	-
1	753	Valve plug	Incl. 550.11, 752.12, 75-6, 756, 759, 914.11	-
1	756	Valve spring	Incl. 550.11, 752.12, 753, 75-6, 759, 914.11	-
1	759	Valve disc	Incl. 550.11, 752.12, 753, 75-6, 756, 914.11	-
1 per cable	825	Cable guard	-	-
1	849	Sleeve coupling	-	412.02, 562.01, 904, 940.05
3	900.01	Screw/bolt [126]	-	-
1	901.01	Hexagon head bolt	-	-
4	901.02	Hexagon head bolt	-	-
1	901.11	Hexagon head bolt	-	-
Number of stages x 8 [128]	902.01	Stud	-	-
Number of stages x 12 [129]	902.01	Stud	-	-
8	902.02	Stud	-	-
8 [128]	902.11	Stud	-	-
12 [129]	902.11	Stud	-	-
1	904.01	Grub screw [126]	-	-
2	904.02	Grub screw [126]	-	-
4	904.03	Grub screw [126]	-	-
2	904.04	Grub screw [126]	-	-
2	904.05	Grub screw [126]	-	-
1	914.11	Hexagon socket head cap screw	-	-
Number of stages x 8 [128]	920.01	Nut	-	-
Number of stages x 12 [129]	920.01	Nut	-	-
4	920.02	Nut	-	-
8	920.03	Nut	-	-
8 [128]	920.11	Nut	-	-
12 [129]	920.11	Nut	-	-
1 per cable	931	Lock washer	-	-
Number of stages	940.01	Key [126]	-	-
Number of stages - number of pump bearings [127]	940.02	Key [126]	-	-
Number of pump bearings [127]	940.03	Key [126]	-	-
Number of pump bearings [127]	940.04	Key [126]	-	-
1	940.05	Key [126]	-	-

128) For pump sets with ≤ 8 stages
129) For pump sets with ≥ 9 stages

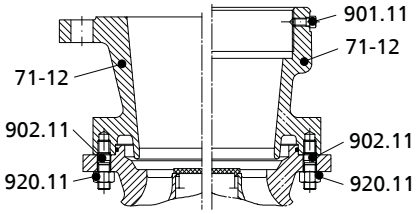
List of UPA 300 components



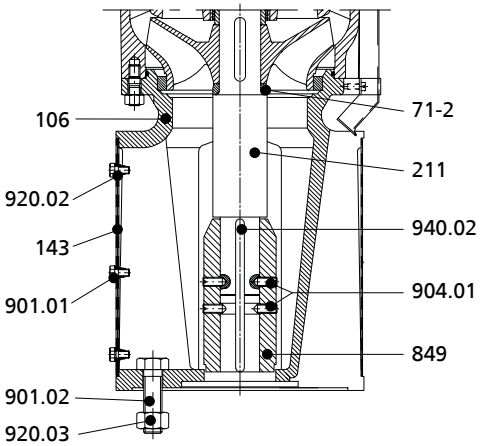
UPA 300 with connection to a UMA 200D motor



Pump end UPA 300-94



Version with connection nozzles



UPA 300 with connection to a UMA 250D or UMA 300D motor

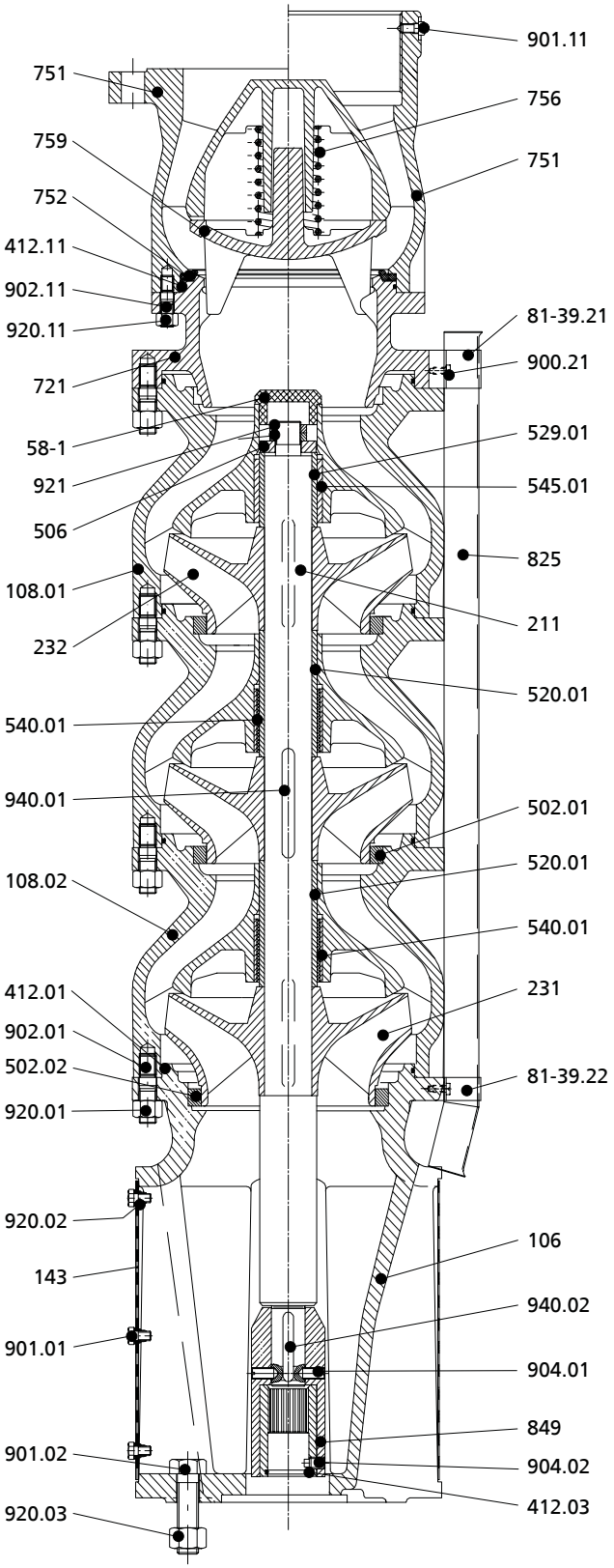
3400.5/10-EN

130) Recommended spare parts
131) Only for UPA 300-65
132) Only for UPA 300-94
133) Only for UMA 200D
134) Only for UMA 250D

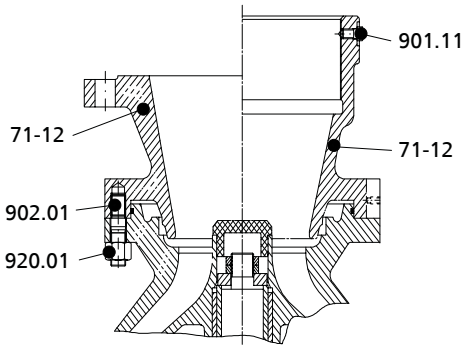
List of UPA 300 components

Quantity	Part No.	Description	Scope of supply	Recommended in addition:
1	58-1	Protecting plug [130)]	-	-
1	71-2	Collar	-	-
1	71-12	Connection nozzle	Incl. 901.11, 902.11	920.11
1 per cable	81-39.21/.22	Cable clip	-	900.21
1	106	Suction casing	Incl. 502.02, 412.02	143, 900.01, 901.02
1	108.01	Stage casing (last stage)	Incl. 412.01, 545.01, 902.01	58-1
Number of stages -1	108.02	Stage casing	Incl. 412.02, 502.01, 540.01, 902.01	-
1	143	Suction strainer [130)]	Incl. 920.02	900.01, 901.01
1	211	Pump shaft	-	506, 940.01/.02, 921
1	231	Suction stage impeller	-	940.01
Number of stages -1	232	Clockwise impeller	-	940.01
1	412.01[131)]	O-ring [130)]	-	-
Number of stages -1	412.01 [132)]	O-ring [130)]	-	-
Number of stages	412.02 [131)]	O-ring [130)]	-	-
1	412.03 [133)]	O-ring [130)]	-	-
1	412.11	O-ring [130)]	-	-
Number of stages -1	502.01	Casing wear ring [130)]	-	-
1	502.02	Casing wear ring [130)]	-	-
1	506	Retaining ring	-	-
Number of stages -1	520.01	Sleeve	-	-
1	529.01	Bearing sleeve [130)]	-	545.01
Number of stages -1	540.01	Bush	-	-
1	545.01	Bearing bush [130)]	-	529.01
1	721	Adapter	Incl. 412.11	752
1	751	Valve body	Incl. 752.11/.12, 756, 759, 901.11, 902.11	920.11
1	752.11	Valve seat	-	752.12
1	752.12	Valve seat (rubber)	-	752.11
1	756	Valve spring	-	-
1	759	Valve disc	-	752.12
1 per cable	825	Cable guard	-	81-39.21/.22, 900.21
1	849	Sleeve coupling	-	904.01, 904.02, 940.02
3	900.01 [133)]	Screw/bolt [130)]	-	-
4 per cable	900.21	Screw/bolt [130)]	-	-
4	901.01 [133)]	Hexagon head bolt	-	-
3	901.01[134)]	Hexagon head bolt [130)]	-	-
4	901.02 [134)]	Hexagon head bolt	-	-
2	901.11	Hexagon head bolt	-	-
Number of stages x 12	902.01	Stud	-	920.01
8	902.11 [131)]	Stud	-	920.11
12	902.11 [132)]	Stud	-	920.11
2	904.01	Grub screw [130)]	-	-
4	904.01 [134)]	Grub screw [130)]	-	-
1	904.02 [133)]	Grub screw [130)]	-	-
Number of stages x 12	920.01	Nut	-	-
4	920.02 [133)]	Nut	-	-
3	920.02 [134)]	Nut [130)]	-	-
4	920.03 [134)]	Nut	-	-
8	920.11 [131)]	Nut	-	-
12	920.11 [132)]	Nut	-	-
2	921	Shaft nut [130)]	-	-
Number of stages	940.01	Key [130)]	-	-
1	940.02	Key [130)]	-	-

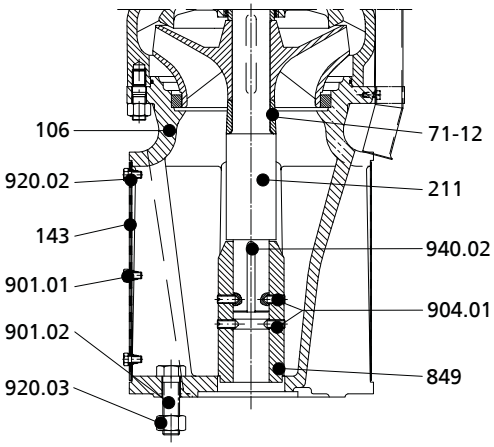
List of UPA 350 components



UPA 350 with connection to a UMA 200D motor



Connection nozzle



UPA 350 with connection to a UMA 250D or UMA 300D motor

135) Recommended spare parts
136) Only for UMA 200D
137) Only for UMA 200D and 250D
138) Only for UMA 250D

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List of UPA 350 components

Quantity	Part No.	Description	Scope of supply	Recommended in addition:
1	58-1	Protecting plug [135)]	-	-
1	71-2	Collar	-	-
1	71-12	Connection nozzle	Incl. 901.11, 902.01	920.01
1 per cable	81-39.21/.22	Cable clip	-	900.21
1	106	Suction casing	Incl. 502.01, 412.01	143, 901.01
1	108.01	Stage casing (last stage)	Incl. 412.01, 545.01, 902.01	58-1
Number of stages -1	108.02	Stage casing	Incl. 412.02, 502.01, 540.01, 902.01	-
1	143	Suction strainer [135)]	Incl. 920.02	901.01
1	211	Pump shaft	-	506, 940.01/.02, 921
1	231	Suction stage impeller	-	940.01
Number of stages -1	232	Clockwise impeller	-	940.01
Number of stages -1	412.01	O-ring [135)]	-	-
1	412.03[136)]	O-ring [135)]	-	-
1	412.11	O-ring [135)]	-	-
Number of stages -1	502.01	Casing wear ring [135)]	-	-
1	502.02	Casing wear ring [135)]	-	-
1	506	Retaining ring	-	-
Number of stages -1	520.01	Sleeve	-	-
1	529.01	Bearing sleeve [135)]	-	545.01
Number of stages -1	540.01	Bush	-	-
1	545.01	Bearing bush [135)]	-	529.01
1	721	Adapter	Incl. 412.11, 902.01	920.01
1	751	Valve body	Incl. 752, 756, 759, 901.11, 902.11	920.11
1	752	Valve seat	-	-
1	756	Valve spring	-	-
1	759	Valve disc	-	752
1 per cable	825	Cable guard	-	81-39.21/.22, 900.21
1	849	Sleeve coupling	-	904.01, 904.02, 940.02
4 per cable	900.21	Screw/bolt [135)]	-	-
3	901.01	Hexagon head bolt [135)]	-	-
4	901.02 [137)]	Hexagon head bolt	-	-
2	901.11	Hexagon head bolt [135)]	-	-
Number of stages x 12	902.01	Stud	-	920.01
12	902.11	Stud	-	920.11
2	904.01	Grub screw [135)]	-	-
4	904.01[138)]	Grub screw [135)]	-	-
1	904.02 [136)]	Grub screw [135)]	-	-
Number of stages x 12	920.01	Nut	-	-
3	920.02	Nut [135)]	-	-
4	920.03[137)]	Nut		
12	920.11	Nut	-	-
2	921	Shaft nut [135)]	-	-
Number of stages	940.01	Key [135)]	-	-
1	940.02	Key [135)]	-	-

Power cables

Main applications

- For use with drinking water applications
- Motor lead for submersible motors, cable laid under water
- Extension cable for the motor lead, cable laid freely exposed to air

Operating data

Operating properties

Characteristic		Value
Rated voltage	V_N [V]	≤ 1000
Ambient temperature	T [°C]	≤ 50
Immersion depth	IM [m]	≤ 500

Designation

Example:
ZN 1391 - G FL GWT -J 4G25 - Cu-Rubber

Designation key

Code	Description	
ZN	Works standard	
G	Insulation, rubber	
FL	Type of power cable	
	FL	Flat
	RD	Round
GWT	Suitable for drinking water	
J	Information about earth conductor	
	J	With earth conductor
	O	Without earth conductor
4G25	Number of cores	
	4G25	With earth conductor, 4-core, cross-section 25 mm²
	3x25	Without earth conductor, 3-core, cross-section 25 mm²
Cu-rubber	Material	

Design details

- 3-core or 4-core rubber-sheathed cable

  Comprising:
  - Stranded copper conductor
  - Bare
  - Core insulation and outer sheath made of a special EPR-based rubber compound (ethylene propylene rubber)
  - Blue

Cable designs

Cable type	Characteristic
Flat cable	
	3 cores, flat
	4 cores, flat
Round cable	
	1 core, round
	4 cores, round

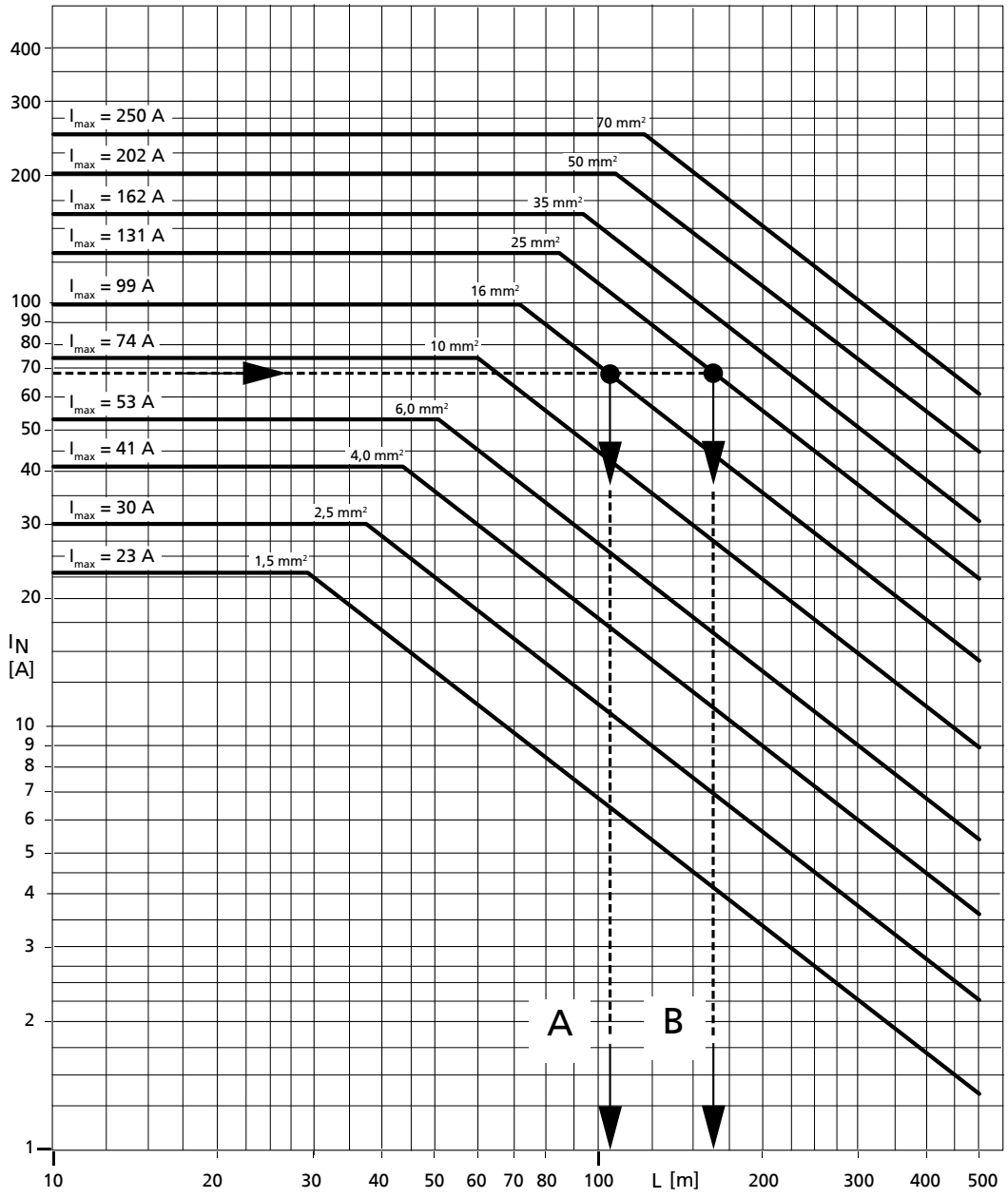
Selection information

Permissible cable lengths for starting method: DOL

Applies to 1 cable or 2 cables in parallel [139)]

Conditions:

- V = 400 V; ΔV = 3 %; T ≤ 30 °C; laid freely exposed to air and in contact with surfaces



Example A
I_N = 68 A
Cable design: 1 x 16 mm²
Cable length: **L ≤ 105 m**

Example B
I_N = 68 A
Cable design: 1 x 25 mm²
Cable length: **L ≤ 165 m**

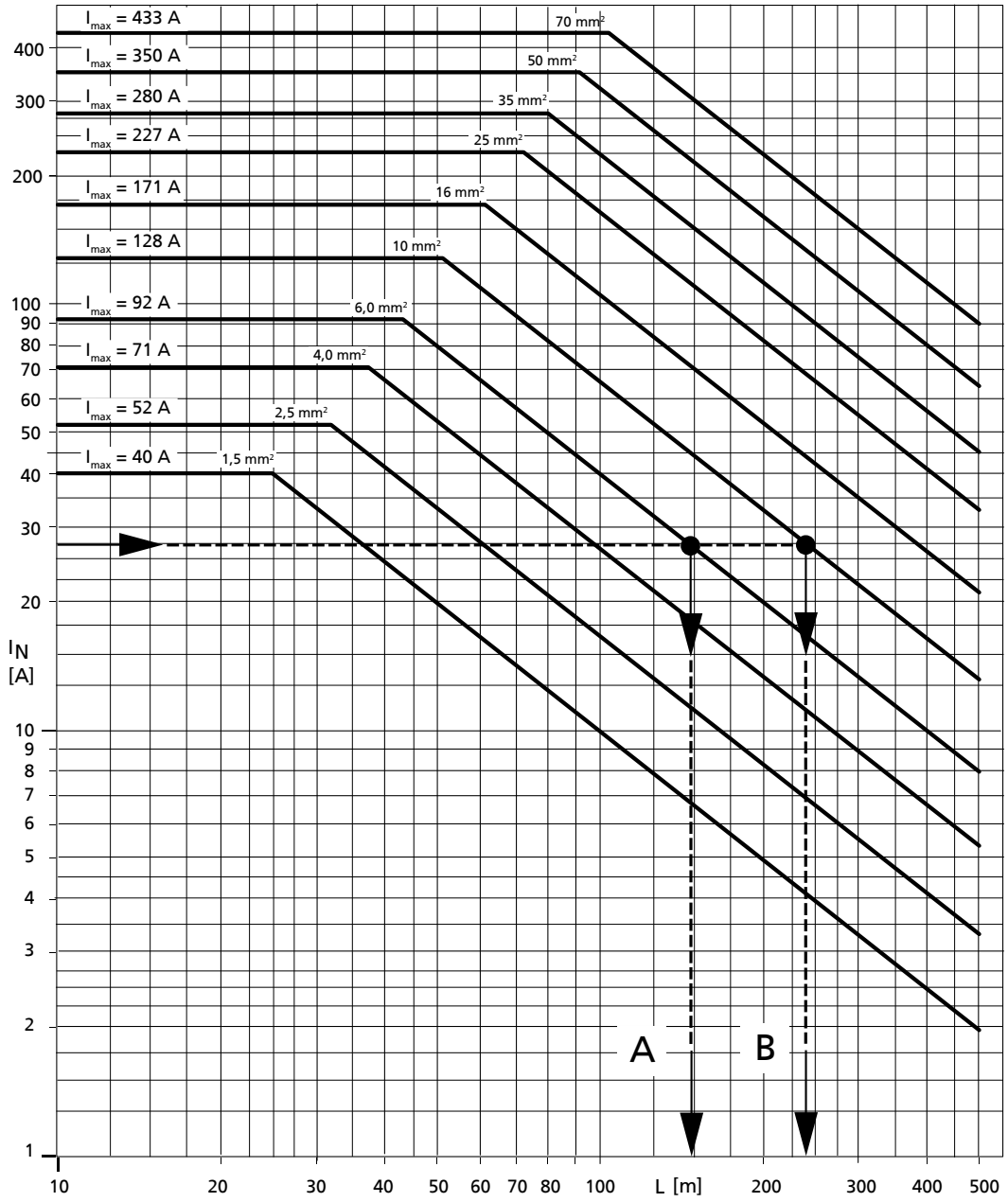
139) For parallel cables the value is doubled to obtain the permissible length.

Permissible cable lengths for starting method: YΔ

Applies to 2 cables

Conditions:

- V = 400 V; ΔV = 3 %; T ≤ 30 °C; laid freely exposed to air and in contact with surfaces



Example A
I_N = 27 A
Cable design: 2 x 6.0 mm²
Cable length: **L ≤ 145 m**

Example B
I_N = 27 A
Cable design: 2 x 10 mm²
Cable length: **L ≤ 235 m**

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Voltage drop in the extension cable

When calculating the required conductor cross-section q not only I_N, but also the voltage drop ΔV along the cable length L (distance from motor to control unit) must be taken into account. Proper functioning of our submersible motors requires ΔV ≤ 3 % of the supply voltage V.
If ΔV > 3 %, a larger conductor cross-section must be used.
The voltage drop is calculated using the following equations:

Starting method DOL/autotransformer

- 1 cable:

$$\Delta U = \frac{3{,}1 \times L \times I_N \times \cos \varphi}{q \times U} \quad [\%]$$

- 2 cables in parallel (II):

$$\Delta U = \frac{1{,}55 \times L \times I_N \times \cos \varphi}{q \times U} \quad [\%]$$

Starting method YΔ (2 cables):

$$\Delta U = \frac{2{,}1 \times L \times I_N \times \cos \varphi}{q \times U} \quad [\%]$$

-

Power loss ΔP:

$$\Delta P = \frac{\Delta U}{(\cos \varphi)^2} \quad [\%]$$

-

Key

Code	Description
L	Single cable length [m]
I_N	Rated current [A]:
cos φ	Power factor at 4/4 load
q	Conductor cross-section [mm²]
U	Supply voltage [V]

Maximum permissible rated motor current

For ambient temperature t ≤ 30 °C

Starting method	Used as ...	I_{max} [A] for the following conductor cross-sections [mm²]										
		1,5	2,5	4	6	10	16	25	35	50	70	95
DOL (1 cable or 2 cables in parallel)	Motor lead	29	38	52	67	94	125	166	205	256	316	517
	Extension cable	23	30	41	53	74	99	131	162	202	250	409
YΔ (2 cables)	Motor lead	50	66	90	116	163	217	288	355	443	547	895
	Extension cable	40	52	71	92	128	171	227	280	350	433	708

Dimensions and weights

Selection table: dimensions [mm]

Core type		Conductor cross-section [mm²]										
		1,5	2,5	4	6	10	16	25	35	50	70	95
●●●	Height	5,2 $^{+1,0}$	6,1 $^{+1,5}$	7,0 $^{+2,0}$	7,6 $^{+2,2}$	9,3 $^{+2,2}$	11,2 $^{+2,3}$	13,0 $^{+2,5}$	14,6 $^{+2,9}$	17,0 $^{+3,0}$	19,3 $^{+2,7}$	-
	Width	11,0 $^{+2,0}$	13,2 $^{+2,3}$	15,5 $^{+3,5}$	17,4 $^{+3,6}$	21,5 $^{+3,5}$	26,7 $^{+4,3}$	31,6 $^{+3,9}$	35,5 $^{+5,0}$	42,1 $^{+4,9}$	48,4 $^{+3,6}$	-
●●●●	Height	5,2 $^{+1,0}$	6,1 $^{+1,5}$	-	7,6 $^{+2,2}$	9,3 $^{+2,2}$	11,2 $^{+2,3}$	13,0 $^{+2,5}$	-	-	-	-
	Width	14,5 $^{+2,7}$	17,5 $^{+2,5}$	-	23,5 $^{+3,0}$	29,0 $^{+3,5}$	35,0 $^{+2,4}$	41,5 $^{+4,5}$	-	-	-	-
◉	Diameter	5,3 $^{+1,1}$	-	-	-	-	-	-	13,8 $^{+3,6}$	16,0 $^{+3,8}$	18,5 $^{+3,6}$	21,9 $^{+1,5}$
●● ●●	Diameter	10,0 $^{+2,0}$	12,0 $^{+1,9}$	13,9 $^{+2,0}$	15,7 $^{+2,1}$	21,1 $^{+2,1}$	24,5 $^{+4,3}$	29,7 $^{+4,3}$	33,3 $^{+5,5}$	39,0 $^{+5,6}$	44,2 $^{+5,8}$	-

Selection table: weight [kg/m]

Core type	Conductor cross-section [mm²]										
	1,5	2,5	4	6	10	16	25	35	50	70	95
●●●	0,110	0,171	0,252	0,319	0,486	0,750	1,107	1,438	2,054	2,760	-
●●●●	0,165	0,237	-	0,440	0,704	1,026	1,457	-	-	-	-
◉	0,051	-	-	-	-	-	-	0,499	0,699	0,940	1,140
●● ●●	0,180	0,259	0,356	0,475	0,837	1,220	1,770	2,304	3,185	4,364	-

Cable connector

Application

For providing a sealed, water-tight connection between extension cables and motor leads of submersible motors.

- Ambient temperature: T ≤ + 50 °C
- Immersion depth: ≤ 500 m

Selection table

The table below only shows the cables **on stock**. Connectors for other cables on request.

Selection table

Motor lead	Extension cable [mm²]									
[mm²]	1,5	2,5	4	6	10	16	25	35	50	70
	Cable connector size									
●●●	●●●									
1,5 / 2,5	28	28	28	35	35	43	53	53	-	-
4	-	35	35	35	35	43	53	53	-	-
6	-	-	35	35	35	43/29f	53/29f	53/29f	-	-
10	-	-	-	43	43/29f	43/29f	53/29f	53/29f	-	-
16	-	-	-	-	-	53	53	53	66	66
25	-	-	-	-	-	-	66	66	66	66
35	-	-	-	-	-	-	-	66	66	66
50	-	-	-	-	-	-	-	66	66	66
70	-	-	-	-	-	-	-	-	-	66
●●●●	●● ●●									
1,5 / 2,5	28	28	28	35	35	43	53	53	-	-
4	-	35	35	35	35	43	53	53	-	-
6	-	-	35	35	35	43	53	53	-	-
10	-	-	-	43	43	43	53	53	-	-
16	-	-	-	-	-	53	53	53	66	66
25	-	-	-	-	-	-	66	66	66	66
●●● + ●●●● or ●●●● + ●●●●	●● ●●									
1,5	28	28	28	35	35	-	-	-	-	-
2,5	35	35	35	35	35	-	-	-	-	-
4	-	-	35	35	35	43	-	-	-	-
6	-	-	-	43	43	43	53	53	66	66
10	-	-	-	66	66	66	66	66	66	66
16	-	-	-	-	-	66	66	66	66	66
25	-	-	-	-	-	-	78	78	78	-
●● ●●	●● ●●									
1,5 / 2,5 / 4	28	28	28	28	35	43	-	-	-	-
6	28	28	28	28	35	43	53	53	-	-
10	-	-	35	35	35	43	53	53	-	-
16	-	-	-	-	43	43	53	53	66	66
25	-	-	-	-	-	53	53	53	66	78
35	-	-	-	-	-	-	-	53	66	78
50	-	-	-	-	-	-	-	-	66	78
70	-	-	-	-	-	-	-	-	-	78
●	●									
35	-	-	-	-	-	-	-	35	-	-
50	-	-	-	-	-	-	-	-	35	-
70	-	-	-	-	-	-	-	-	-	35

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Key

Cable symbols	Description	Cable designation
	1-core, round	G RD GWT - O 1 G
	4-core, round	G RD GWT - J 4 G
	3-core, flat	G FL GWT - O 3x ...
	4-core, flat	G FL GWT - J 4G ...

Cable clips

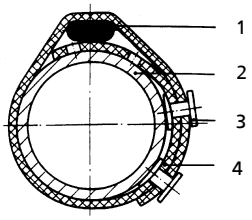
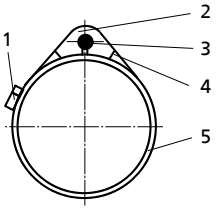
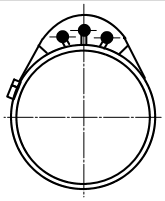
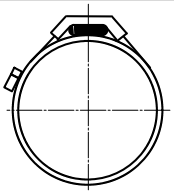
Applications

- Securing cables at the riser / discharge pipe.
- Suitable for use in normal or slightly aggressive water.
- Versions for use in more aggressive water (e.g. seawater) on request.

Selection table

Cable			Cable clip size	Weight	Required strap length L [mm] per cable clip for the following risers													
Type	Number x ∅ of cores [mm]			[kg]	G 1 1/4 / DN 32	G 1 1/2 / DN 40	G 2 / DN 50	DN 65	G 3 / DN 80	G 4 / DN 100	G 5 / DN 125	G 6 / DN 150	DN 175	G 8 / DN 200	DN 250	DN 300	DN 350	DN 400
Flat	3 x 1.5 to 3 x 6,0	4 x 1.5 to 4 x 6.0	1	0,01	270	280	320	360	400	450	500	600	-	-	-	-	-	-
	3 x 10 to 3 x 70	4 x 10 to 4 x 70	11	0,01	-	-	350	400	450	550	650	800	950	1100	1300	1500	1700	1900
Round	3 x 1.5 to 3 x 6.0	4 x 1.5 to 4 x 6.0	1	0,01	270	280	320	360	400	450	500	600	-	-	-	-	-	-
	3 x 10	4 x 10	2	0,08	-	-	350	400	450	550	650	800	950	1100	1300	1500	1700	1900
	3 x 16 3 x 25	4 x 16	3a	0,19	-	-	350	400	450	550	650	800	950	1100	1300	1500	1700	1900
	3 x 35 3 x 50	4 x 25 4 x 35	3	0,19	-	-	-	450	500	600	700	850	1000	1150	1350	1550	1750	1950
	3 x 70	4 x 50	3b	0,19	-	-	-	450	500	600	700	850	1000	1150	1350	1550	1750	1950
	3 x 95	4 x 70 4 x 95	4	0,55	-	-	-	-	-	650	750	900	1050	1200	1400	1600	1800	2000
	3 cables 1 x 50		7	0,6	-	-	-	-	-	700	800	950	1100	1250	1450	1650	1850	2050
	3 cables 1 x 70		8	0,6		-	-	-	-	700	800	950	1100	1250	1450	1650	1850	2050
	3 cables 1 x 95		6	0,6		-	-	-	-	700	800	950	1100	1250	1450	1650	1850	2050
	3 cables 1 x 120 3 cables 1 x 150		9	0,6		-	-	-	-	700	800	950	1100	1250	1450	1650	1850	2050

Cable clip sizes

Size 1	Sizes 2, 3, 3a, 3b, 4	Sizes 6 to 9	Size 11
			
1 = cable 2 = riser 3 = plastic stud 4 = rubber strap	1 = screw band with tension screw (re-usable) 2 = cable guard 3 = cable 4 = metal strap 5 = riser		

Flow velocity past the motor

Application

- Required motor cooling

Flow velocity past the motor
v = 0 m/s

The flow velocity past the motor is not defined. The heat is dissipated freely. This heat dissipation must not be influenced or hindered by any structures, and a supply of fresh water must be provided at all times.

- Example: pump set freely suspended in a vertical position inside a large tank

Flow velocity past the motor
v > 0.2 m/s
v > 0.5 m/s

The flow velocity past the motor is defined for the installation conditions, see table below. Decisive factors are the inside well diameter or the inside shroud diameter, the operating data and the outside dimensions of the pump.

- Example: pump set installed in a vertical position above the screen/filter in a well; values in accordance with the table below.
- Example: pump set installed in a horizontal position in a tank, fitted with a cooling shroud, or pump set installed in a vertical position in a pump sump, fitted with a cooling shroud; values in accordance with the table below

Maximum permissible inside diameter of the well or shroud

Flow rate	Flow velocity	Inside diameter of the well or shroud [mm]				
Q [m³/h]	v [m/s]	For UMA 150D UMA 150E UMA-S 150E	For UMA 200D UMA-S 200D	For UMA 250D	For UMA 300D	For 14D
15	≥ 0,2	≤ 215	-	-	-	-
	≥ 0,5	≤ 175	-	-	-	-
25	≥ 0,2	≤ 255	-	-	-	-
	≥ 0,5	≤ 195	-	-	-	-
50	≥ 0,2	≤ 330	≤ 350	-	-	-
	≥ 0,5	≤ 235	≤ 265	-	-	-
75	≥ 0,2	≤ 390	≤ 410	≤ 430	-	-
	≥ 0,5	≤ 270	≤ 300	≤ 330	-	-
100	≥ 0,2	≤ 445	≤ 460	≤ 480	-	-
	≥ 0,5	≤ 300	≤ 325	≤ 355	-	-
125	≥ 0,2	≤ 490	≤ 510	≤ 525	-	-
	≥ 0,5	≤ 330	≤ 350	≤ 380	-	-
150	≥ 0,2	≤ 535	≤ 550	≤ 565	≤ 590	-
	≥ 0,5	≤ 355	≤ 380	≤ 400	≤ 430	-
175	≥ 0,2	≤ 575	≤ 590	≤ 605	≤ 625	-
	≥ 0,5	≤ 380	≤ 400	≤ 420	≤ 450	-
200	≥ 0,2	≤ 615	≤ 625	≤ 640	≤ 660	≤ 690
	≥ 0,5	≤ 405	≤ 420	≤ 445	≤ 470	≤ 510
250	≥ 0,2	≤ 680	≤ 690	≤ 705	≤ 725	≤ 750
	≥ 0,5	≤ 445	≤ 460	≤ 480	≤ 505	≤ 540
300	≥ 0,2	≤ 745	≤ 755	≤ 765	≤ 780	≤ 800
	≥ 0,5	≤ 485	≤ 500	≤ 515	≤ 540	≤ 570
350	≥ 0,2	-	≤ 810	≤ 820	≤ 835	≤ 860
	≥ 0,5	-	≤ 530	≤ 550	≤ 570	≤ 600
400	≥ 0,2	-	≤ 865	≤ 875	≤ 890	≤ 910
	≥ 0,5	-	≤ 565	≤ 580	≤ 605	≤ 630
500	≥ 0,2	-	≤ 960	≤ 970	≤ 985	≤ 1000
	≥ 0,5	-	≤ 625	≤ 640	≤ 660	≤ 690
600	≥ 0,2	-	≤ 1050	≤ 1055	≤ 1070	≤ 1090
	≥ 0,5	-	≤ 680	≤ 695	≤ 710	≤ 740
800	≥ 0,2	-	≤ 1205	≤ 1215	≤ 1225	≤ 1240
	≥ 0,5	-	≤ 775	≤ 790	≤ 805	≤ 830
1000	≥ 0,2	-	≤ 1345	≤ 1350	≤ 1360	≤ 1370
	≥ 0,5	-	≤ 865	≤ 875	≤ 890	≤ 910
1200	≥ 0,2	-	-	-	≤ 1485	≤ 1500

Flow rate	Flow velocity	Inside diameter of the well or shroud [mm]				
Q [m³/h]	v [m/s]	For UMA 150D UMA 150E UMA-S 150E	For UMA 200D UMA-S 200D	For UMA 250D	For UMA 300D	For 14D
1200	≥ 0,5	-	-	-	≤ 965	≤ 980
1400	≥ 0,2	-	-	-	≤ 1600	≤ 1610
	≥ 0,5	-	-	-	≤ 1030	≤ 1050
1600	≥ 0,2	-	-	-	≤ 1705	≤ 1720
	≥ 0,5	-	-	-	≤ 1100	≤ 1120
1800	≥ 0,2	-	-	-	≤ 1805	≤ 1820
	≥ 0,5	-	-	-	≤ 1165	≤ 1180
2000	≥ 0,2	-	-	-	≤ 1900	≤ 1910
	≥ 0,5	-	-	-	≤ 1225	≤ 1240

09/04/2020

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