



# CUT series

Submersible  
Sewage Pump  
with Cutter Plate

**3, 5, 7.5 & 10 HP**



# Barmesa<sup>®</sup> Pumps

Quality Pumps Since 1953

Barmesa *Roto-Blade* series cutter pump is a solids handling submersible pump with a **unique tungsten carbide tipped impeller and high chrome serrated cutter plate** for slicing of solids with Barmesa's *Roto-Blade* action.

### Feature

- ▶ Solids handling operation with cutting action.
- ▶ Robust construction.
- ▶ Double mechanical seal in oil chamber.
- ▶ Built in motor protection.

### Applications

- ▶ Municipal wet pit stations
- ▶ Retail stores
- ▶ Restaurants
- ▶ Sewer bypass
- ▶ Nursing homes
- ▶ Housing developments
- ▶ Prisons
- ▶ Hospitals
- ▶ Pulp and paper mills
- ▶ Industrial processing
- ▶ Food processing
- ▶ Farming
- ▶ Campgrounds
- ▶ Hotels



Slide Rail Coupling  
QL-100  
(optional)

### Specifications

Liquid temperature		32~104 °F (0~40 °C)
Submersible depth		8 m
Motor part	Frequency	60 Hz
	RPM	1750
	Type	Air-filled watertight
	Protector	Built-in overload
	Insulation	Class B
	Protection	IP 68
Pump Part	Bearing	Ball
	Mechanical seal	Dual
	Impeller	Solids handling, semi-open

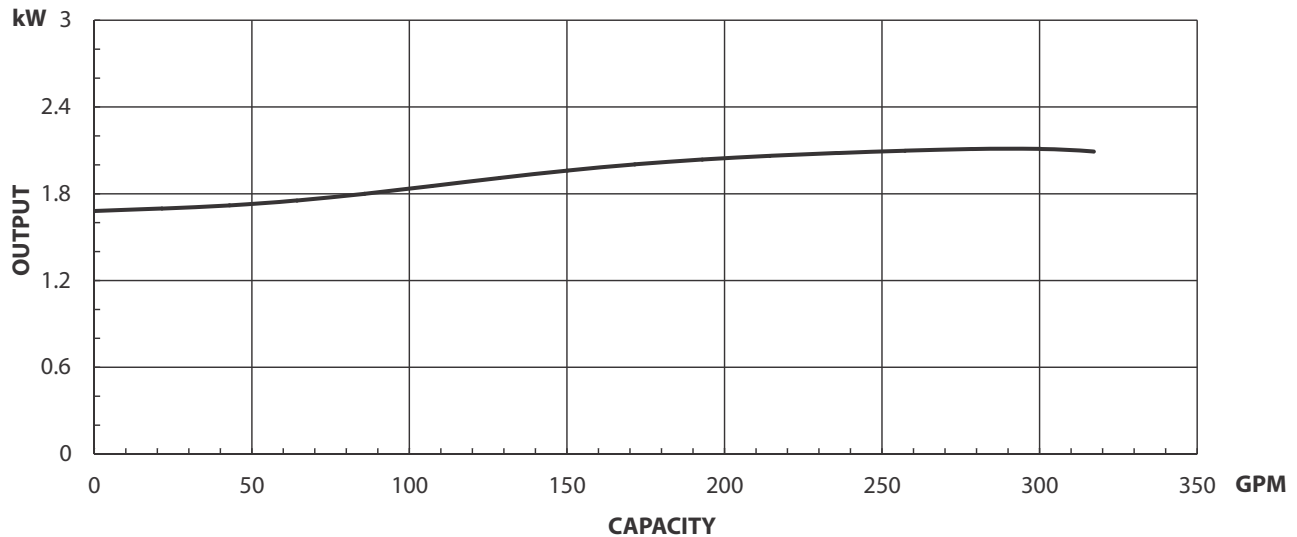
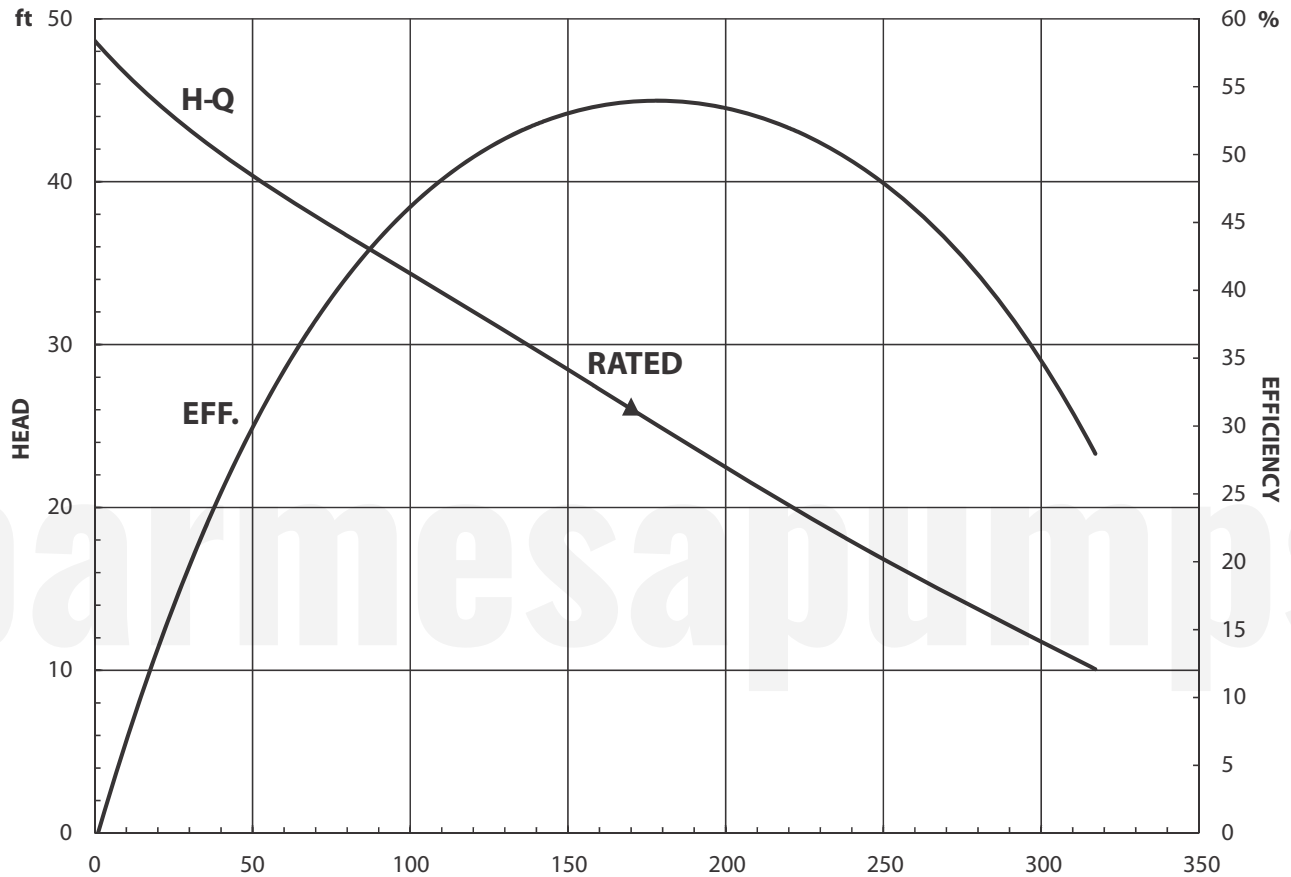
### Data chart

MODEL	OUTPUT		DISCHARGE	F.L.A.		RATED		UL CORD (4C)			SPHERICAL SLD HNDLG	WEIGHT (lb)	Q.D.C.
	HP	kW		230 V	460 V	HEAD (ft)	GPM	(ft)	SIZE	TYPE			
CUT303	3	2.2	4"	9	-	26.2	185	40	14 AWG	STOW	2.2"	165	QL-100
CUT304				-	4.6								
CUT503	5	3.7	4"	14	-	36.1	235	40	14 AWG	STOW	3.15"	198	QL-100
CUT504				-	7.2								
CUT753	7.5	5.6	4"	20	-	42.6	235	40	12 AWG	STOW	2.68"	308	QL-100
CUT754				-	10								
CUT1003	10	7.5	4"	26.6	-	52.5	235	40	10 AWG	STOW	2.68"	363	QL-100
CUT1004				-	13.6								

\* Weight without cable.

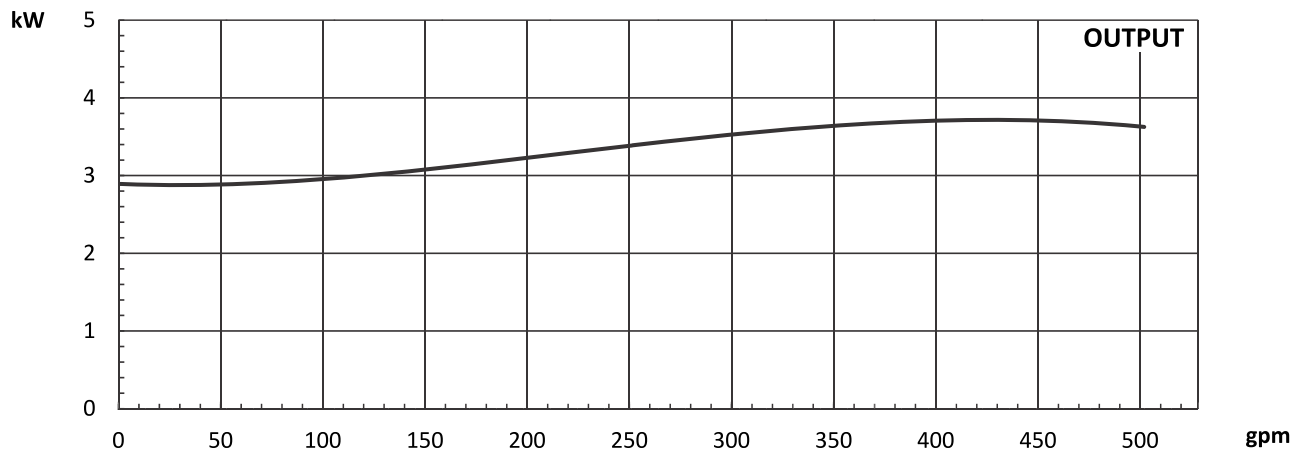
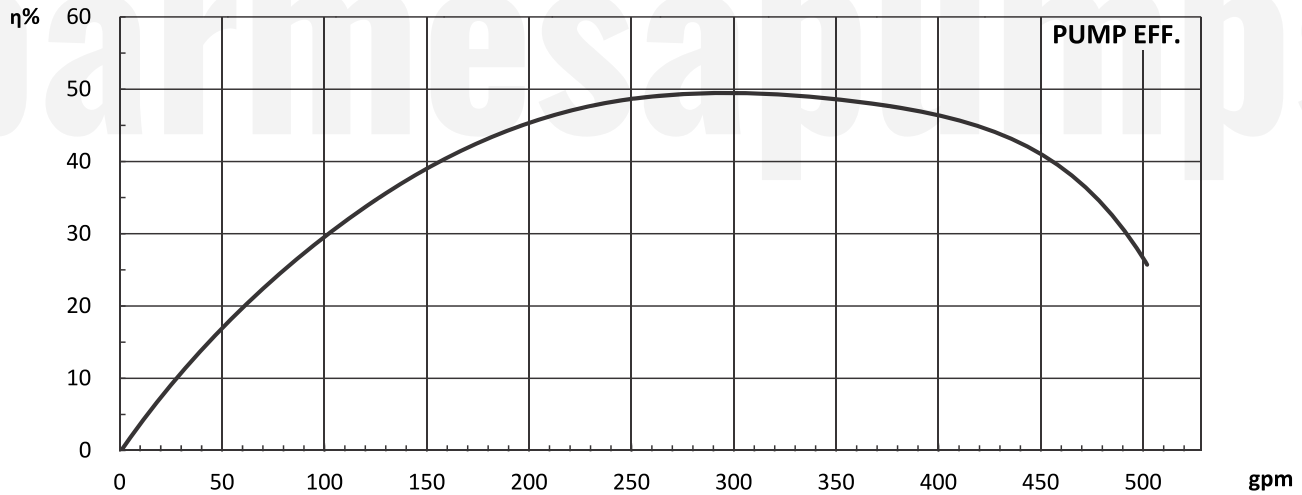
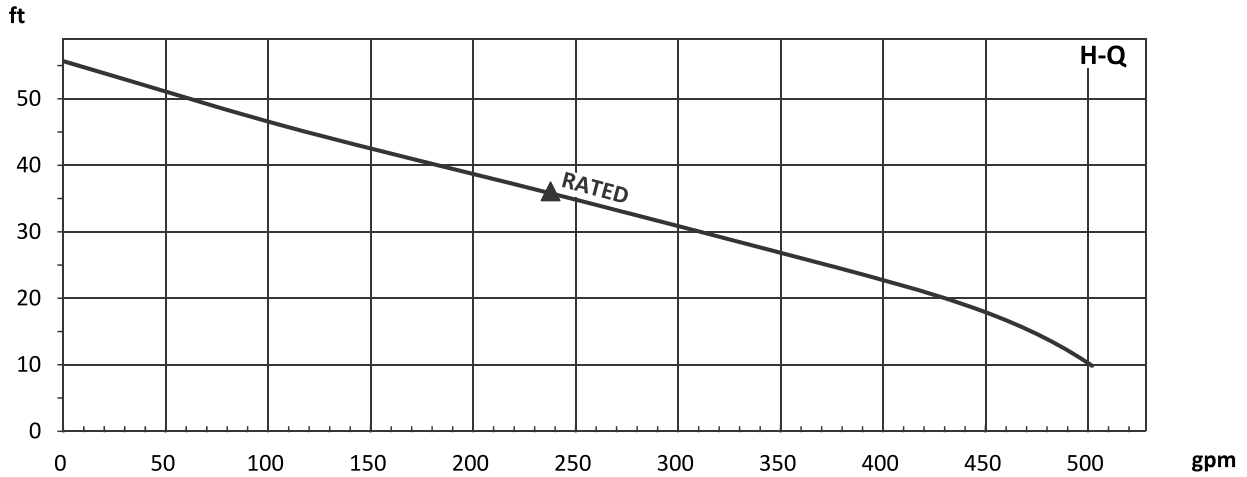
# Performance curve

<b>MODEL</b>	<b>CUT303 / CUT304</b>								<b>RATED</b>		
<b>FREQUENCY</b>	<b>60 Hz</b>								<b>HEAD</b>	<b>26.2 ft</b>	<b>8 m</b>
<b>DISCHARGE</b>	<b>4 INCHES / 100 mm</b>								<b>CAPACITY</b>	<b>185 GPM</b>	<b>700 LPM</b>
<b>OUTPUT</b>	<b>3 HP / 2.2 kW</b>								<b>POLE / RPM</b>	<b>4 P / 1750 RPM</b>	
<b>PHASE/VOLTAGE</b>	<b>3Ø</b>	<b>208 V</b>	<b>220 V</b>	<b>230 V</b>	<b>380 V</b>	<b>400 V</b>	<b>440 V</b>	<b>460 V</b>	<b>START METHOD</b>	<b>DIRECT ON LINE</b>	
<b>F.L.A.</b>	<b>A</b>	<b>9.3</b>	<b>9.2</b>	<b>9</b>	<b>5</b>	<b>4.9</b>	<b>4.5</b>	<b>4.5</b>	<b>INSULATION CLASS</b>	<b>CLASS B</b>	



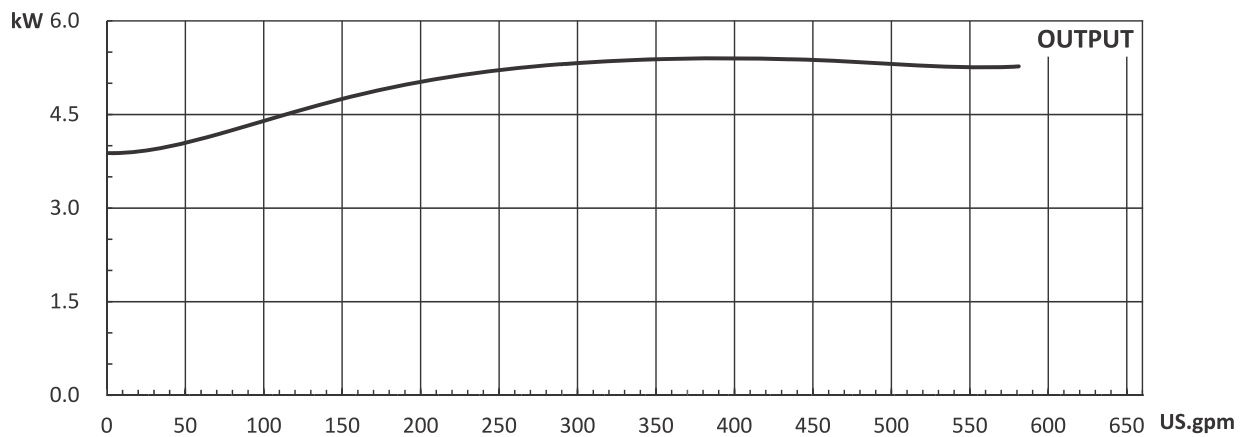
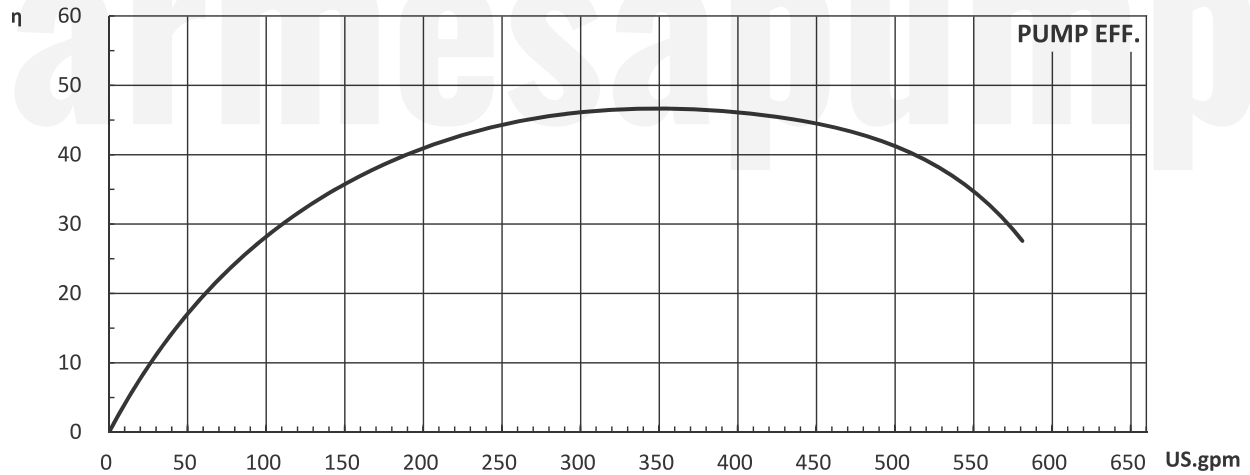
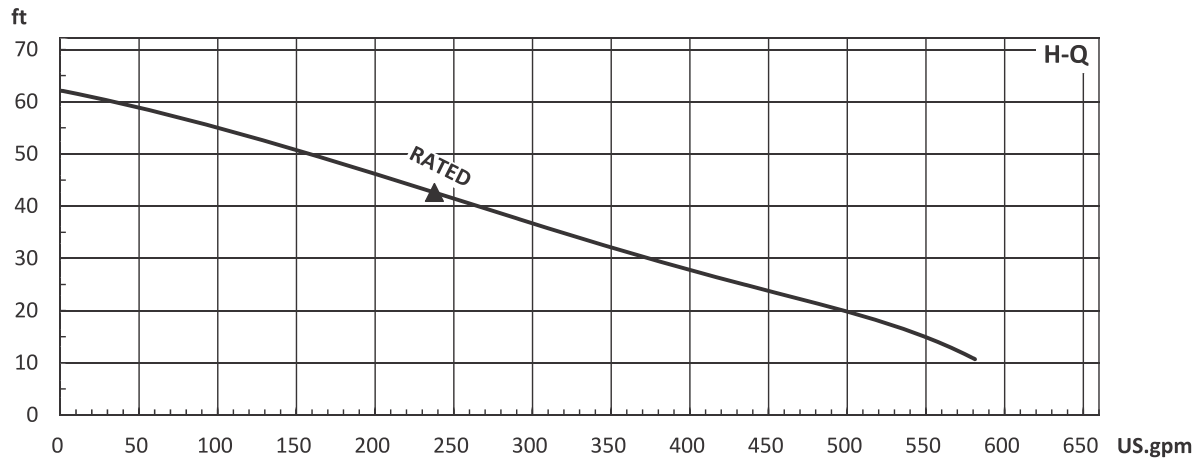
# Performance curve

MODEL	CUT503 / CUT504									RATED	
FREQUENCY	60 Hz								HEAD	36.1 ft	11 m
DISCHARGE	4 INCHES / 100 mm								CAPACITY	235 GPM	900 LPM
OUTPUT	5 HP / 3.7 kW								POLE / RPM	4 P / 1750 RPM	
PHASE/VOLTAGE	3Ø	208 V	220 V	230 V	380 V	400 V	440 V	460 V	-	START METHOD	DIRECT ON LINE
F.L.A.	A	15	14.4	14	8	7.9	7.3	7.2	-	INSULATION CLASS	CLASS B



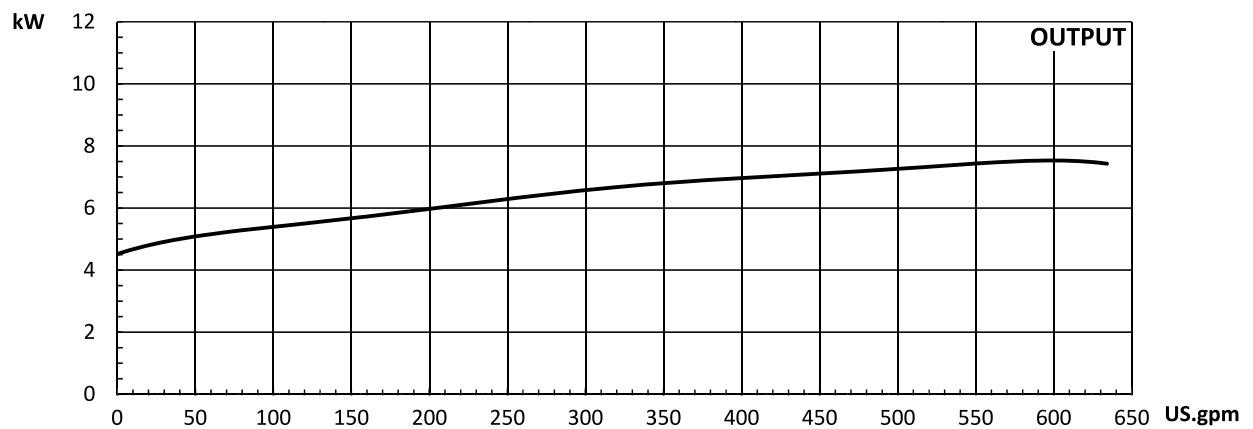
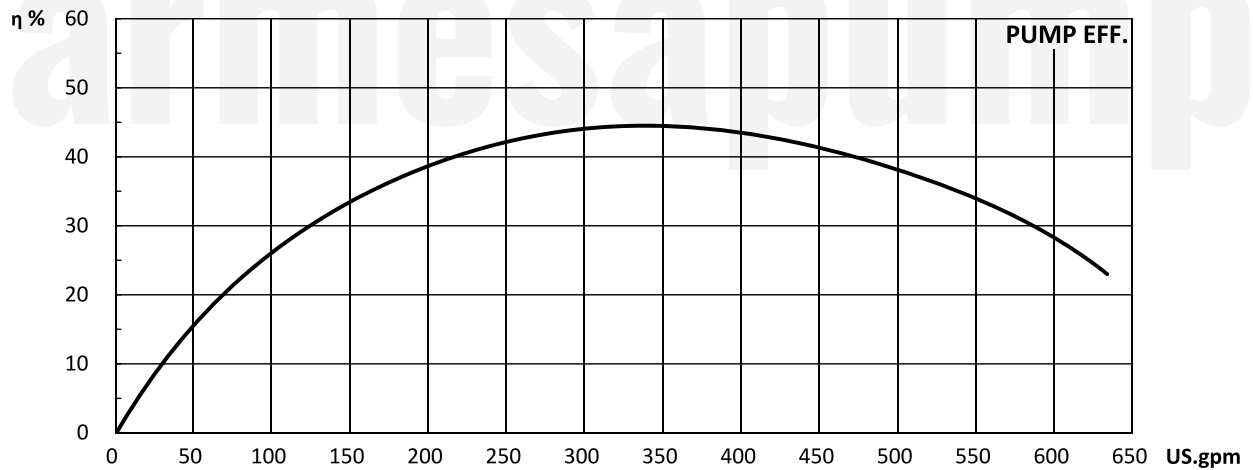
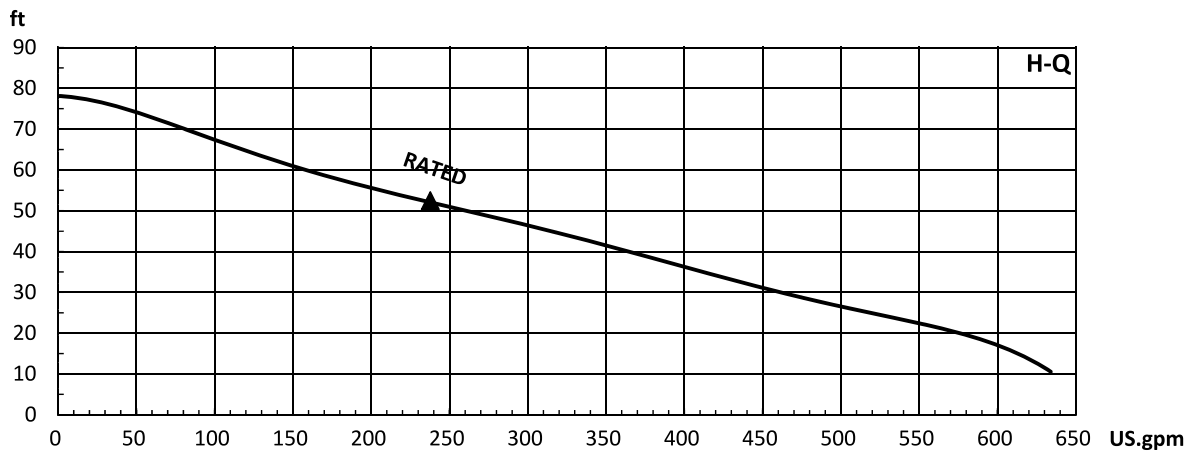
# Performance curve

<b>MODEL</b>	<b>CUT753 / CUT754</b>									<b>RATED</b>	
<b>FREQUENCY</b>	<b>60 Hz</b>									<b>HEAD</b>	<b>42.6 ft</b>   <b>13 m</b>
<b>DISCHARGE</b>	<b>4 INCHES / 100 mm</b>									<b>CAPACITY</b>	<b>235 GPM</b>   <b>900 LPM</b>
<b>OUTPUT</b>	<b>7.5 HP / 5.5 kW</b>									<b>POLE / RPM</b>	<b>4 P / 1750 RPM</b>
<b>PHASE/VOLTAGE</b>	<b>3Ø</b>	<b>208 V</b>	<b>220 V</b>	<b>230 V</b>	<b>380 V</b>	<b>400 V</b>	<b>440 V</b>	<b>460 V</b>	-	<b>START METHOD</b>	<b>DIRECT ON LINE</b>
<b>F.L.A.</b>	<b>A</b>	<b>21.5</b>	<b>21</b>	<b>20</b>	<b>10.6</b>	<b>10.4</b>	<b>10.2</b>	<b>10</b>	-	<b>INSULATION CLASS</b>	<b>CLASS B</b>

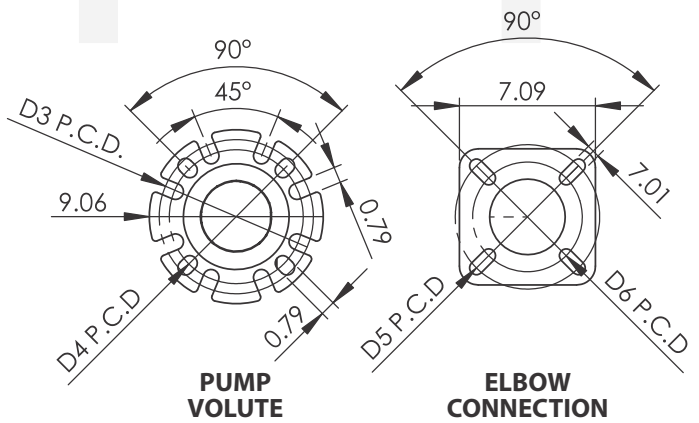
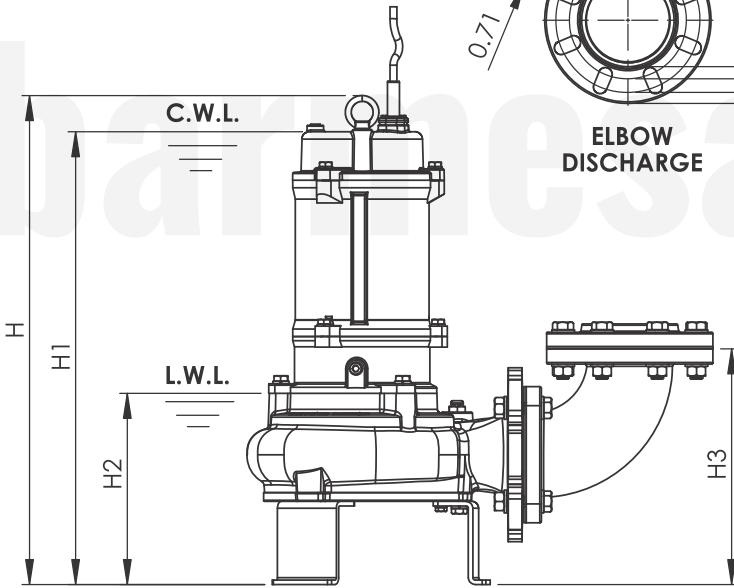
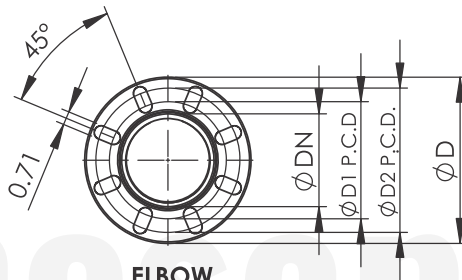
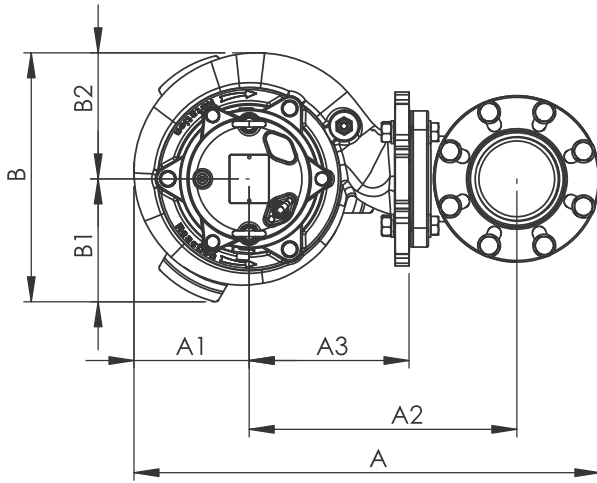


# Performance curve

MODEL	CUT1003 / CUT1004									RATED	
FREQUENCY	60 Hz								HEAD	52.5 ft	16 m
DISCHARGE	4 INCHES / 100 mm								CAPACITY	235 GPM	900 LPM
OUTPUT	10 HP / 7.5 kW								POLE / RPM	4 P / 1750 RPM	
PHASE/VOLTAGE	3Ø	208 V	220 V	230 V	380 V	400 V	440 V	460 V	-	START METHOD	DIRECT ON LINE
F.L.A.	A	28.8	27.6	26.6	15.6	15.5	13.7	13.6	-	INSULATION CLASS	CLASS B



▶ CUT303 / 304



C.W.L.: Continuous Running Water Level  
 L.W.L.: Lowest Running Water Level  
 (Most effective motor heat dissipation when fully submerged)

PIPE CONNECTION TYPE	
PT	NPT

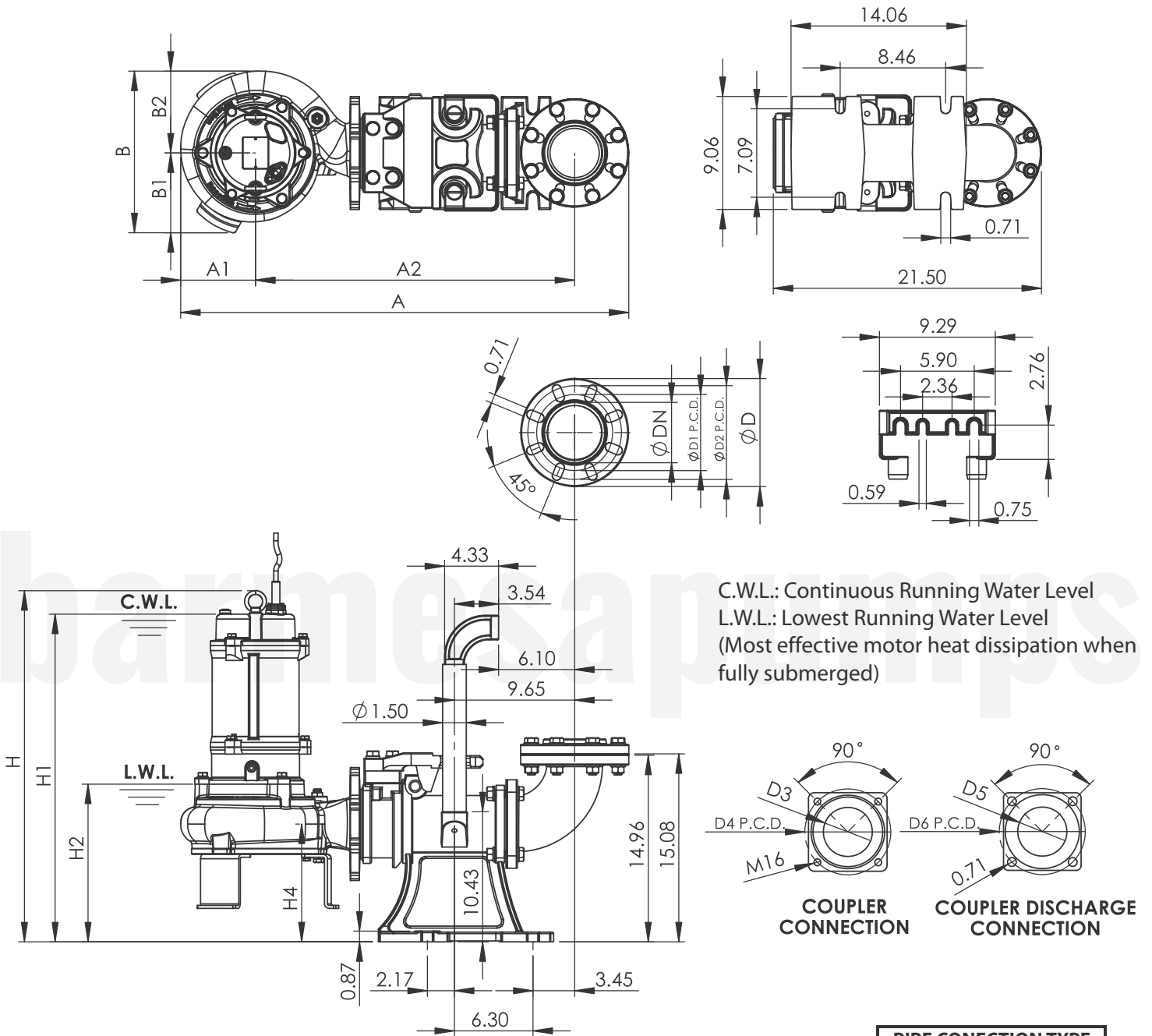
A	A1	A2	A3	B	B1	B2	DN	D	D1
27.8	7.7	15.8	10.2	16.1	8.1	8.1	4	8.7	7.5

D2	D3	D4	D5	D6	H	H1	H2	H3	WT
6.1	7.5	6.9	7.5	5.7	35.8	27.6	11.5	14.4	308

- Dimensions in inches.  
 - Weight in pounds, without the cable.

# Dimensional

## ► Slide Rail Coupling QL-100 for CUT303 / 304



PIPE CONNECTION TYPE	
PT	NPT

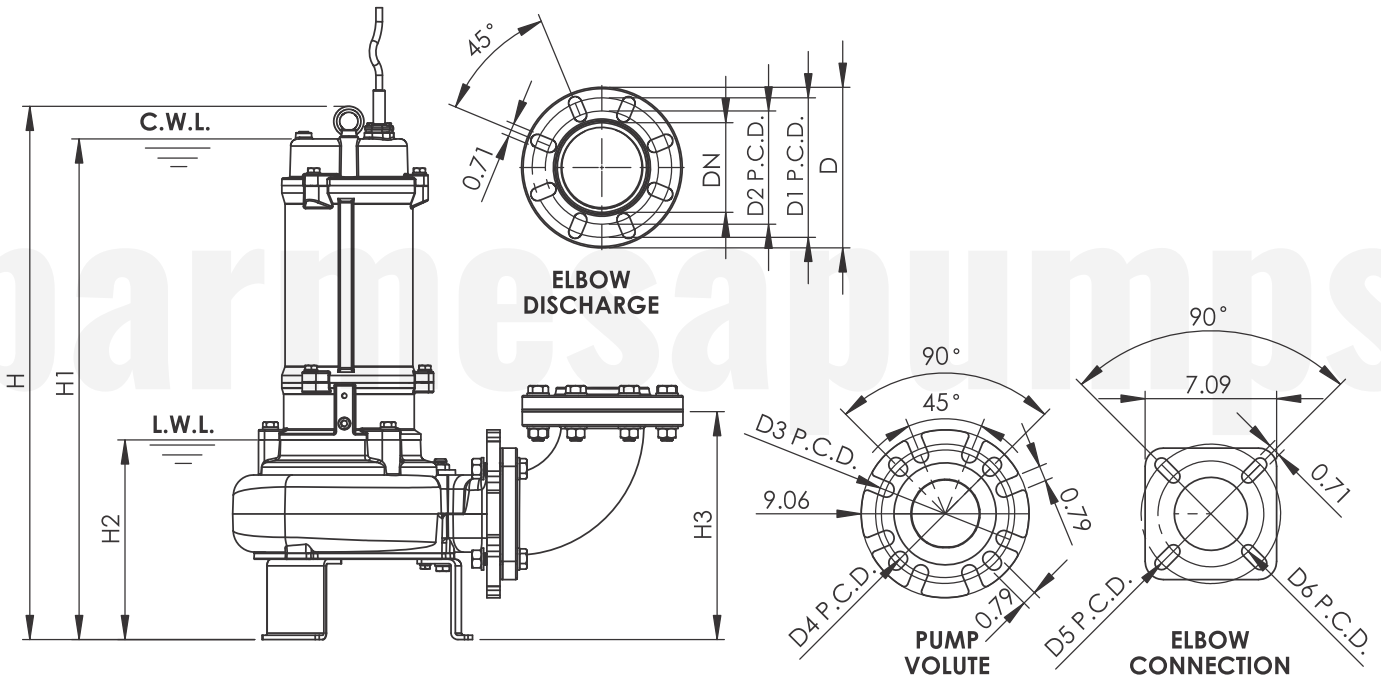
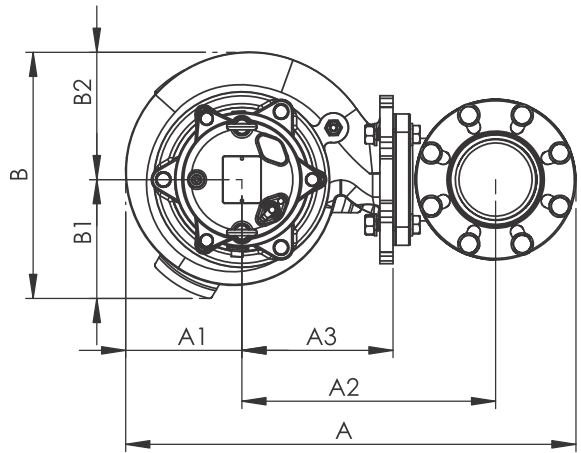
A	A1	A2	B	B1	B2	D	D1	D2	D3	D4
35.9	6	25.5	13	6.4	6.6	8.7	7.5	6.1	3.9	6.9

D5	D6	DN	H	H1	H2	H3	H4	WT	WT1
3.9	6.9	4	28	26.2	12.6	2.7	9.4	165	99

- Dimensions in inches.
- Weight in pounds, without the cable.
- WT1: coupling weight.



▶ CUT503 / 504



C.W.L.: Continuous Running Water Level  
 L.W.L.: Lowest Running Water Level  
 (Most effective motor heat dissipation when fully submerged)

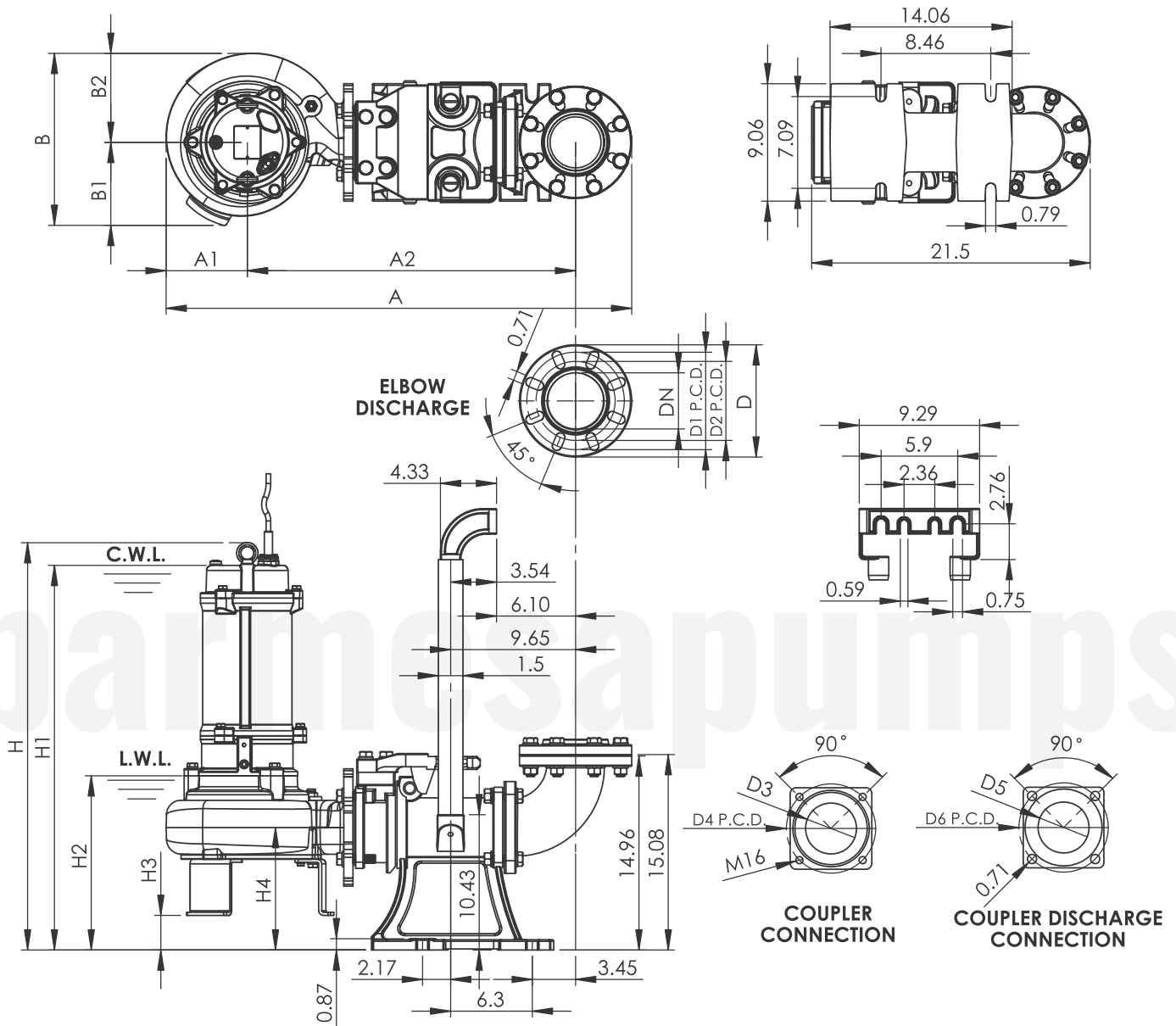
PIPE CONECTION TYPE	
PT	NPT

A	A1	A2	A3	B	B1	B2	DN	D	D1
24.4	6.3	13.7	8.2	13.3	6.4	6.9	4	8.7	7.5

D2	D3	D4	D5	D6	H	H1	H2	H3	WT
6.1	7.5	6.9	7.5	5.7	28.8	27	10.8	12.3	198

- Dimensions in inches.
- Weight in pounds, without the cable.

## ► Slide Rail Coupling QL-100 for CUT503 / 504



C.W.L.: Continuous Running Water Level  
 L.W.L.: Lowest Running Water Level  
 (Most effective motor heat dissipation when fully submerged)

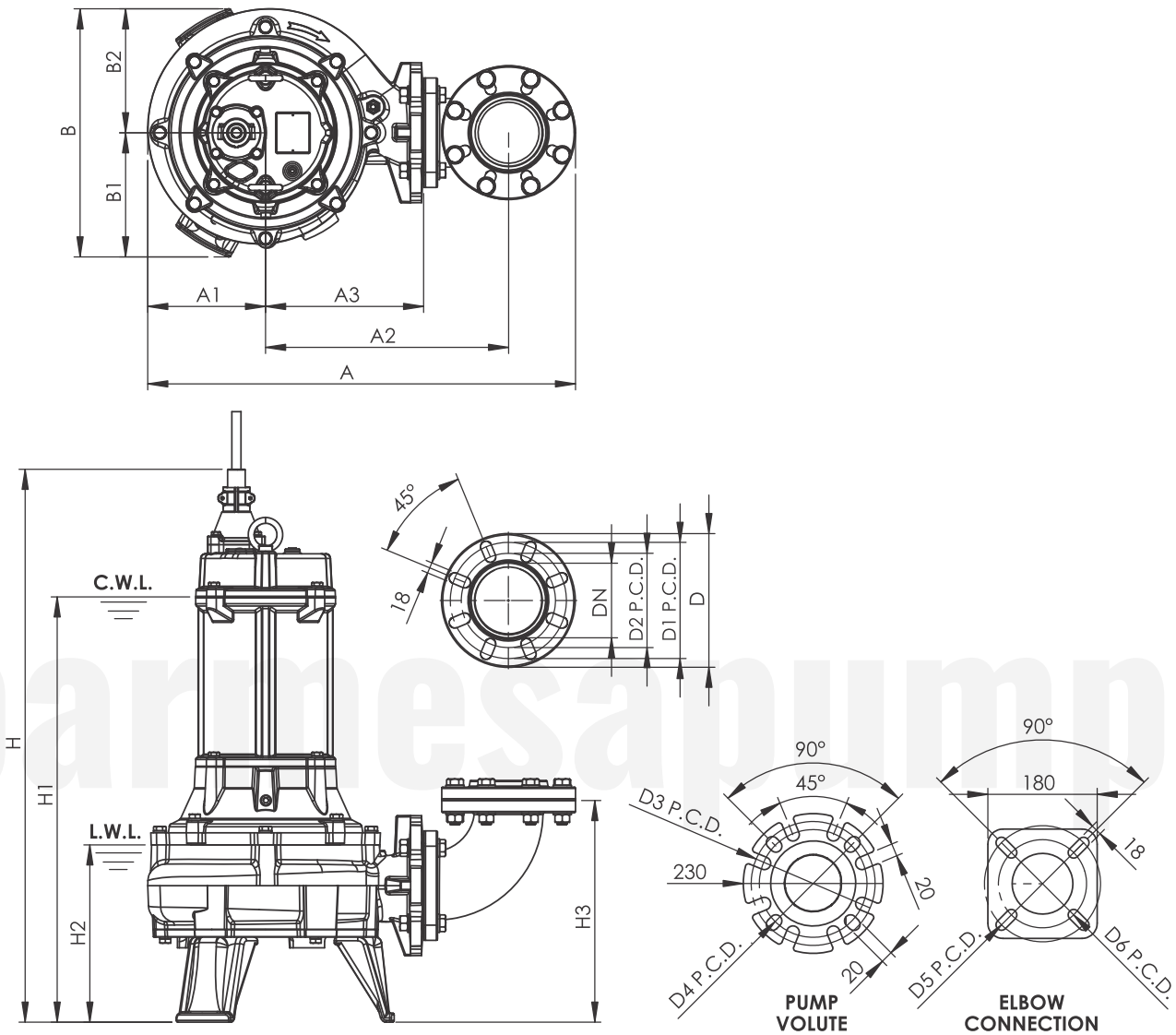
PIPE CONNECTION TYPE	
PT	NPT

A	A1	A2	B	B1	B2	D	D1	D2	D3	D4
35.9	6.3	25.4	13.3	6.4	6.9	8.7	7.5	6.1	3.9	6.9

D5	D6	DN	H	H1	H2	H3	H4	WT	WT1
3.9	6.9	4	31.5	29.7	13.5	2.7	9.5	198	99

- Dimensions in inches.
- Weight in pounds, without the cable.
- WT1: coupling weight.

▶ CUT753 / 754



C.W.L.: Continuous Running Water Level  
 L.W.L.: Lowest Running Water Level  
 (Most effective motor heat dissipation when fully submerged)

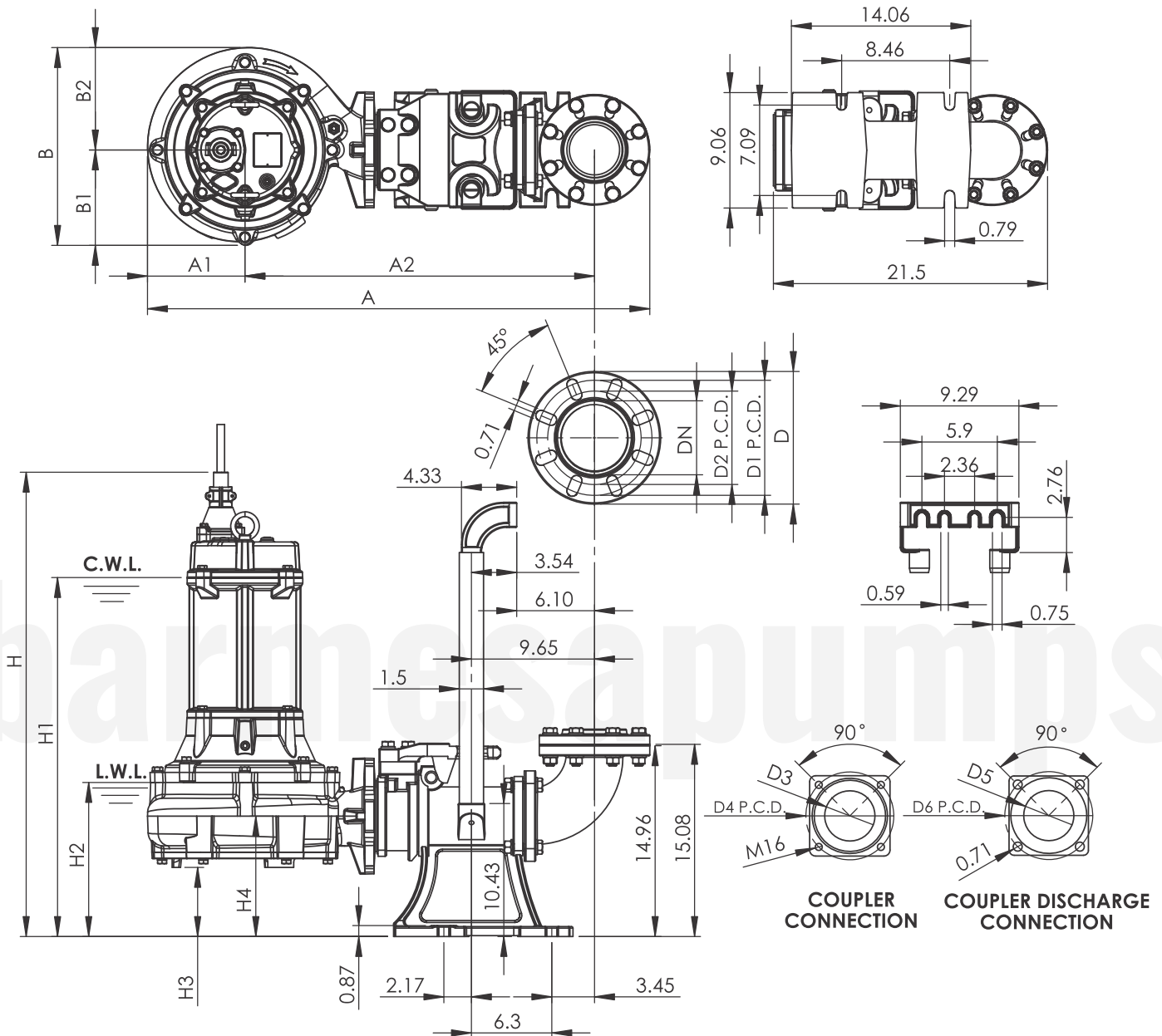
PIPE CONECTION TYPE	
PT	NPT

A	A1	A2	A3	B	B1	B2	DN	D	D1
27.8	7.7	15.8	10.2	16.1	8.1	8.1	4	6.7	7.5

D2	D3	D4	D5	D6	H	H1	H2	H3	WT
6.1	7.5	6.9	7.5	5.7	35.8	27.6	11.5	14.4	308

- Dimensions in inches.
- Weight in pounds, without the cable.

## ► Slide Rail Coupling QL-100 for CUT753 / 754



**NOTE: Remove pump feet for QL-100 installation**

PIPE CONNECTION TYPE	
PT	NPT

C.W.L.: Continuous Running Water Level

L.W.L.: Lowest Running Water Level

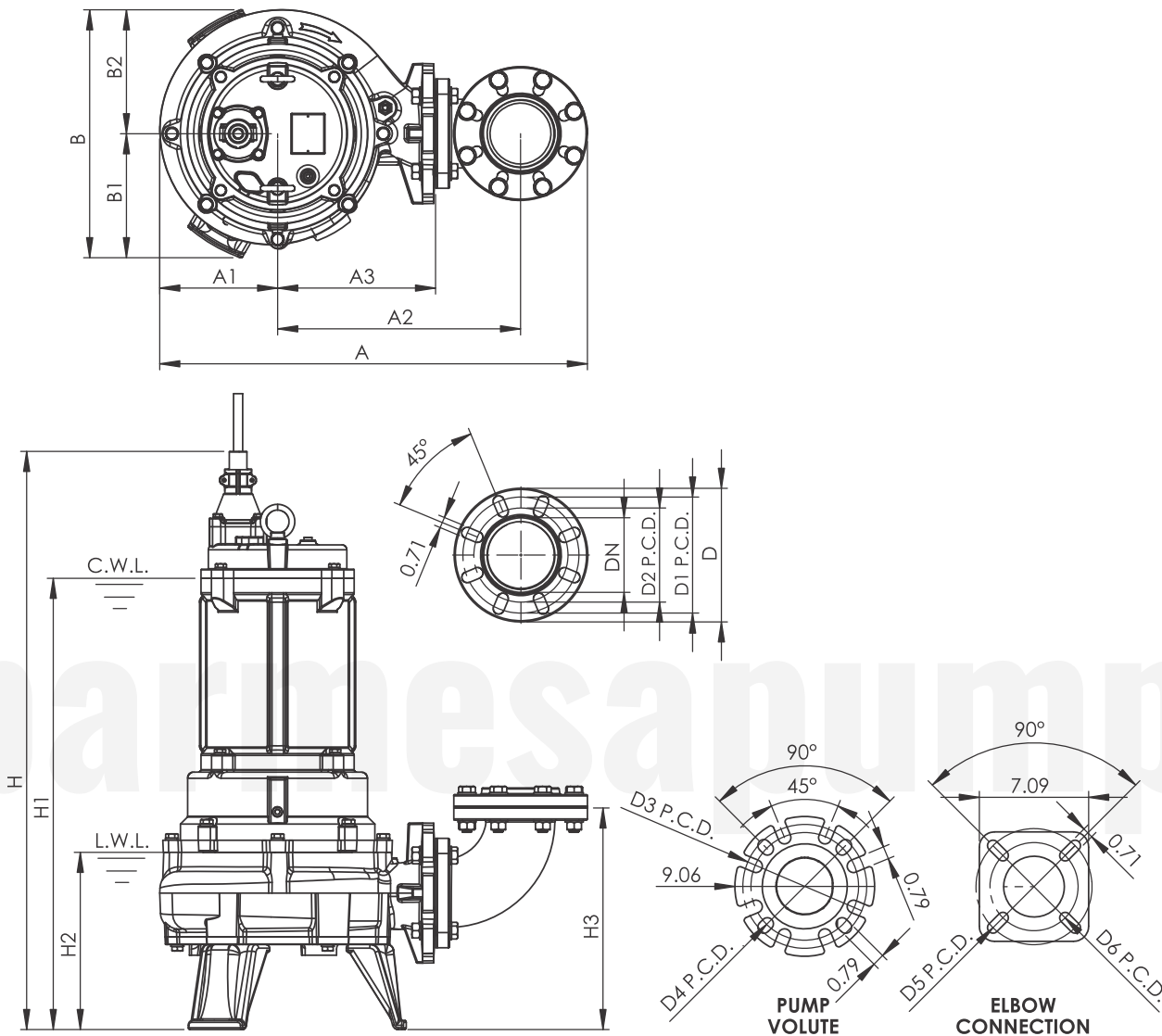
### QL-100

A	A1	A2	B	B1	B2	D	D1	D2	D3	D4
39.4	7.7	27.4	15.5	7.5	8.1	8.7	7.5	6.1	3.9	6.9

D5	D6	DN	H	H1	H2	H3	H4	WT	WT1
3.9	6.9	4	36.5	28.2	12.1	5.4	9.5	308	99

- Dimensions in inches.
- Weight in pounds, without the cable.
- WT1: coupling weight.

▶ CUT1003 / 1004



C.W.L.: Continuous Running Water Level  
 L.W.L.: Lowest Running Water Level  
 (Most effective motor heat dissipation when fully submerged)

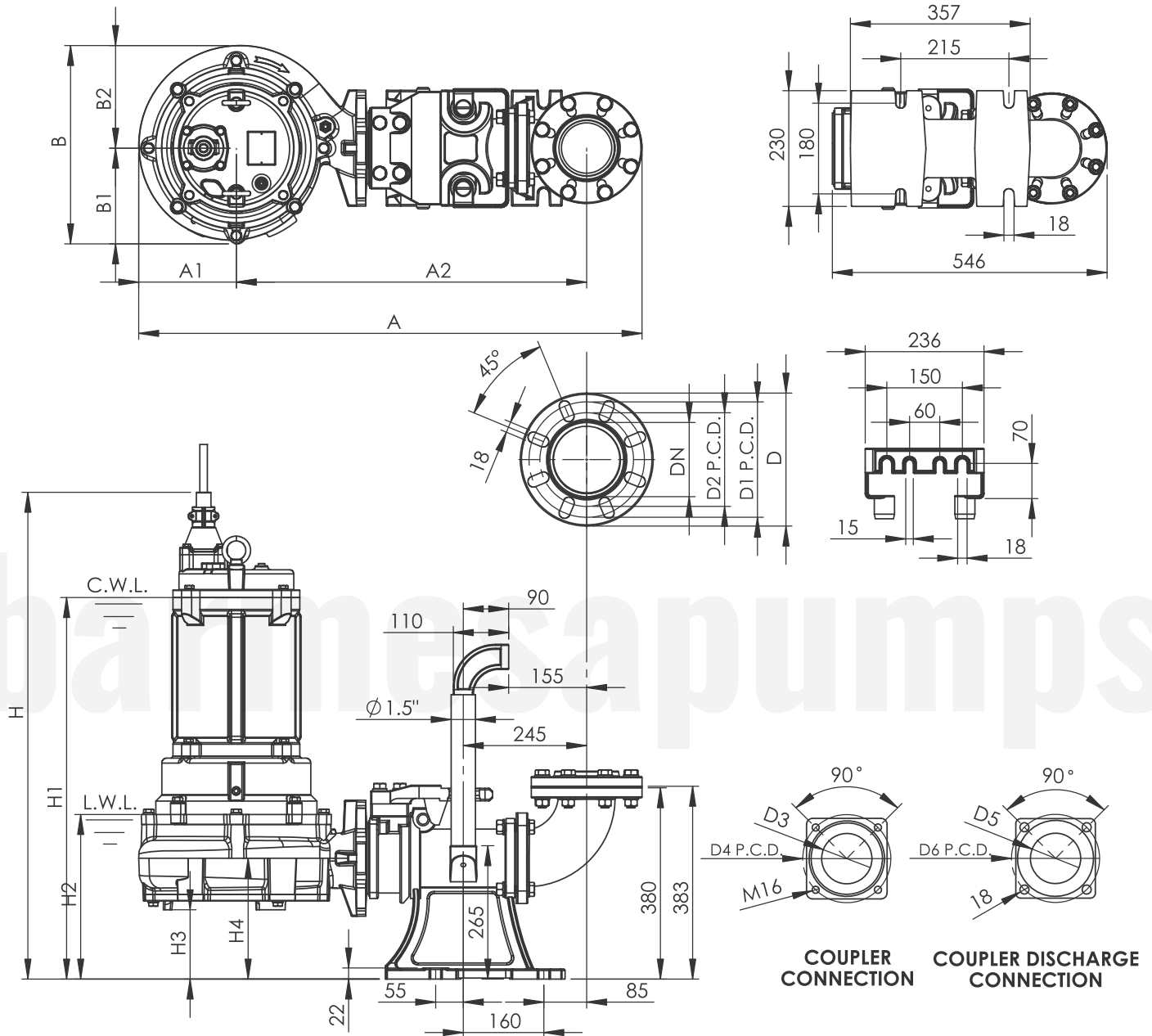
PIPE CONECTION TYPE	
PT	NPT

A	A1	A2	A3	B	B1	B2	DN	D	D1
27.8	7.7	15.8	10.2	16.1	8.1	8.1	4	8.7	7.5

D2	D3	D4	D5	D6	H	H1	H2	H3	WT
6.1	7.5	6.9	8	5.7	37.5	29.3	11.5	14.4	363

- Dimensions in inches.  
 - Weight in pounds, without the cable.

► Slide Rail Coupling QL-100 for CUT1003 / 1004



PIPE CONNECTION TYPE	
PT	NPT

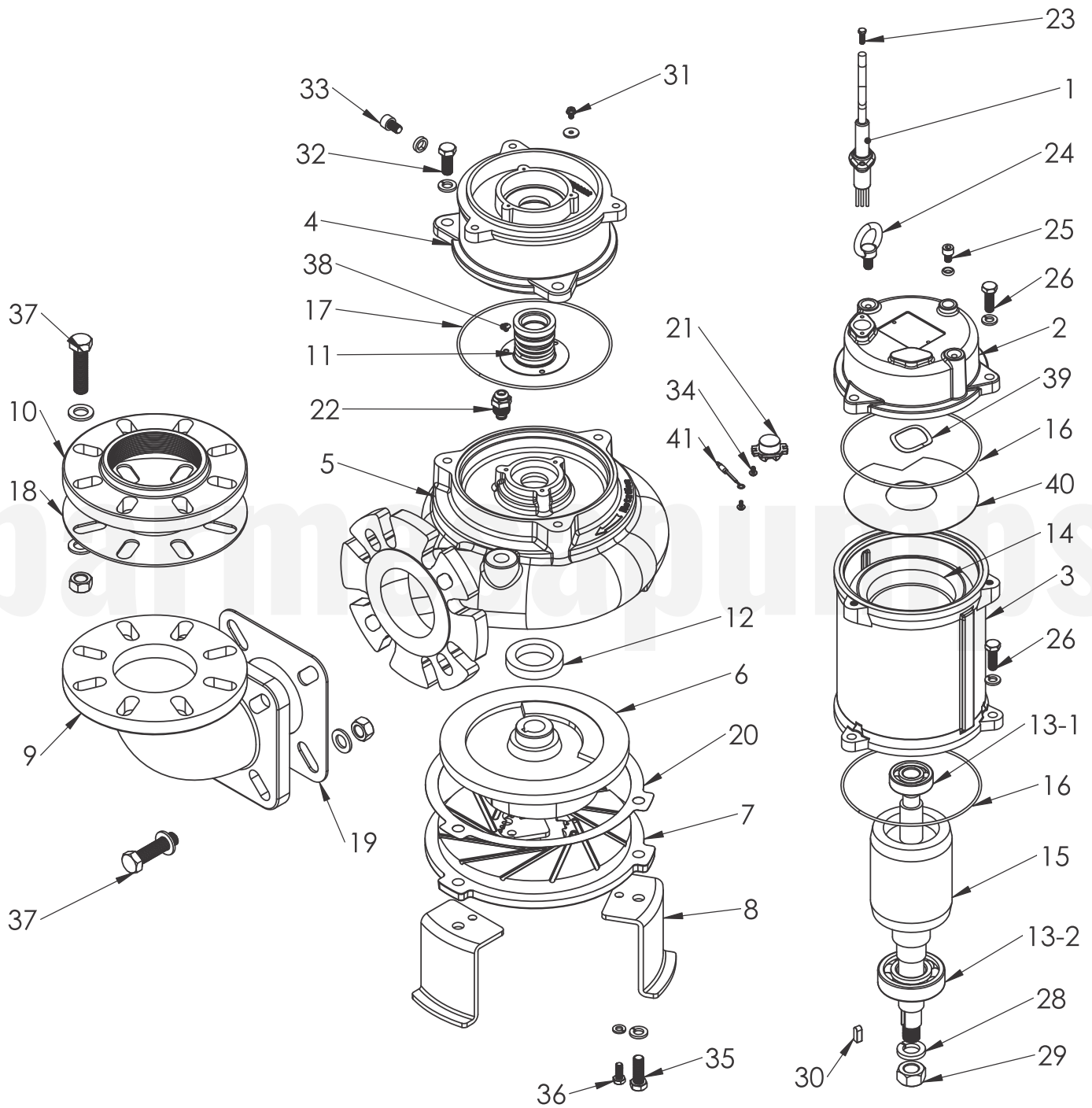
A	A1	A2	B	B1	B2	D	D1	D2	D3	D4
39.4	7.7	27.4	15.5	7.5	8.1	8.7	7.5	6.1	3.9	6.9

D5	D6	DN	H	H1	H2	H3	H4	WT	WT1
3.9	6.9	4	38	29.8	12.1	5.4	9.5	363	99

- Dimensions in inches.
- Weight in pounds, without the cable.
- WT1: coupling weight.

# Exploded view

► CUT303 / 304



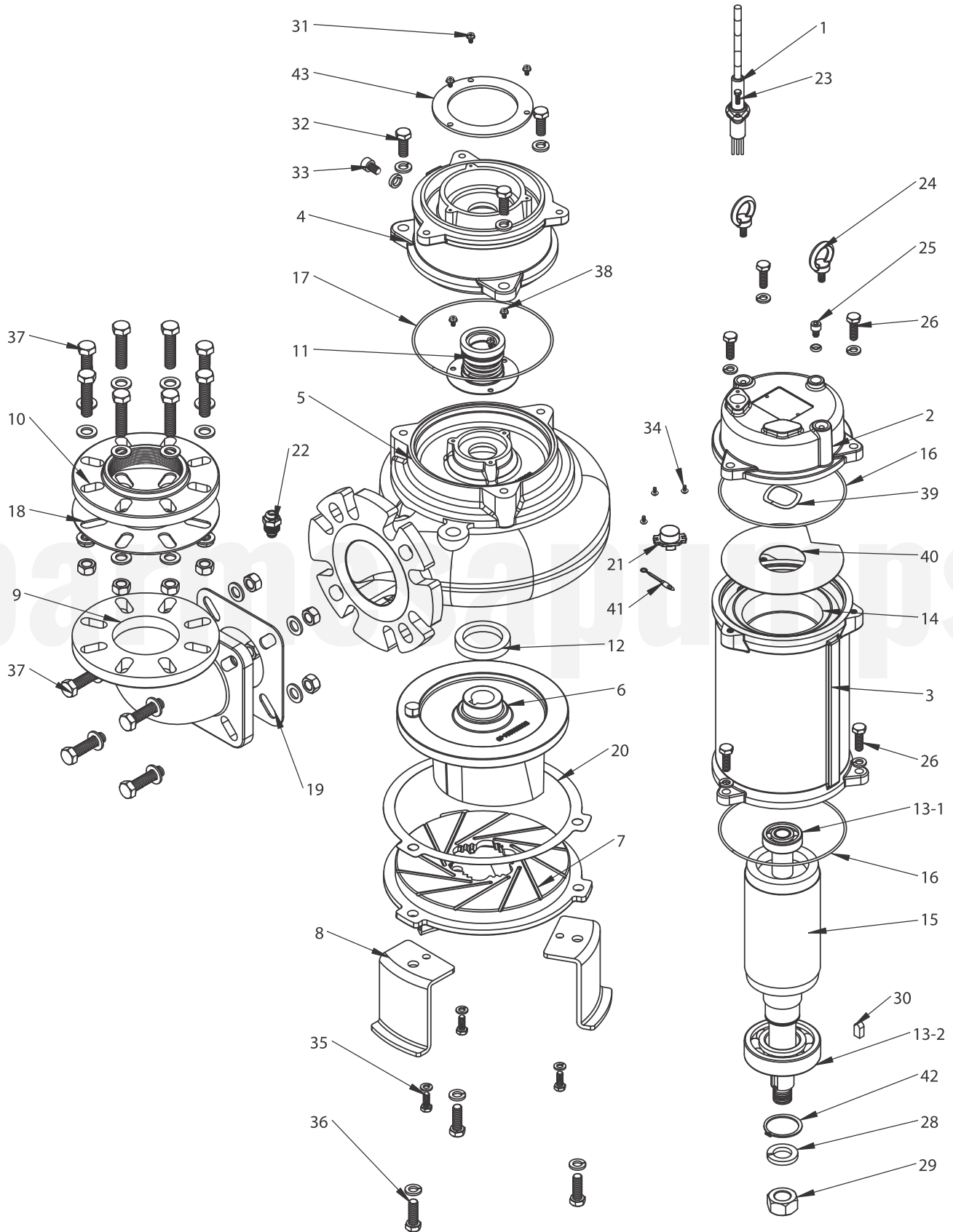
► CUT303 / 304

ITEM	DESCRIPTION	MATERIAL
1	Cable	STOW
2	Motor cover	ASTM A48 class 30
3	Motor housing	ASTM A48 class 30
4	Oil chamber	ASTM A48 class 30
5	Volute	ASTM A48 class 30
6	Impeller	ASTM A48 class 30
7	Suction plate	ASTM A536 100-70-03
8	Pump feet	SC
9	Discharge elbow	ASTM A48 class 30
10	Flange	ASTM A48 class 30
11	Mechanical seal	SIC / SIC CA / CE
12	Lip seal	Buna N
13-1	6304 bearing	NTN
13-2	6307 bearing	NTN
14	Stator	
15	Rotor with shaft	AISI 410
16	O-ring	Buna N
17	O-ring	Buna N
18	Flange gasket	Buna N
19	Discharge gasket	Buna N
20	Suction plate gasket	PE
21	Overload protector	
22	Air release valve	PP
23	Hex. bolt	AISI304
24	M10 eye bolt	AISI304
25	Socket screw / o-ring	AISI304 / Buna N
26	Hex. bolt & spring washer	AISI304
28	Spring washer	AISI304
29	Hex nut	AISI304
30	Key	AISI304
31	Hex. bolt & washer	SC
32	Hex. bolt & spring washer	AISI304
33	Socket screw & o-ring	AISI304 / Buna N
34	Phillips screw	SC
35	Hex. bolt & spring washer	AISI304
36	Hex. bolt & spring washer	AISI304
37	Hex. bolt, spring washer, hex. nut	AISI304
38	Truss bolt	SC
39	Wave washer	SC
40	Insulation sheet	Paper
41	Ground lead	



# Exploded view

► CUT503 / 504

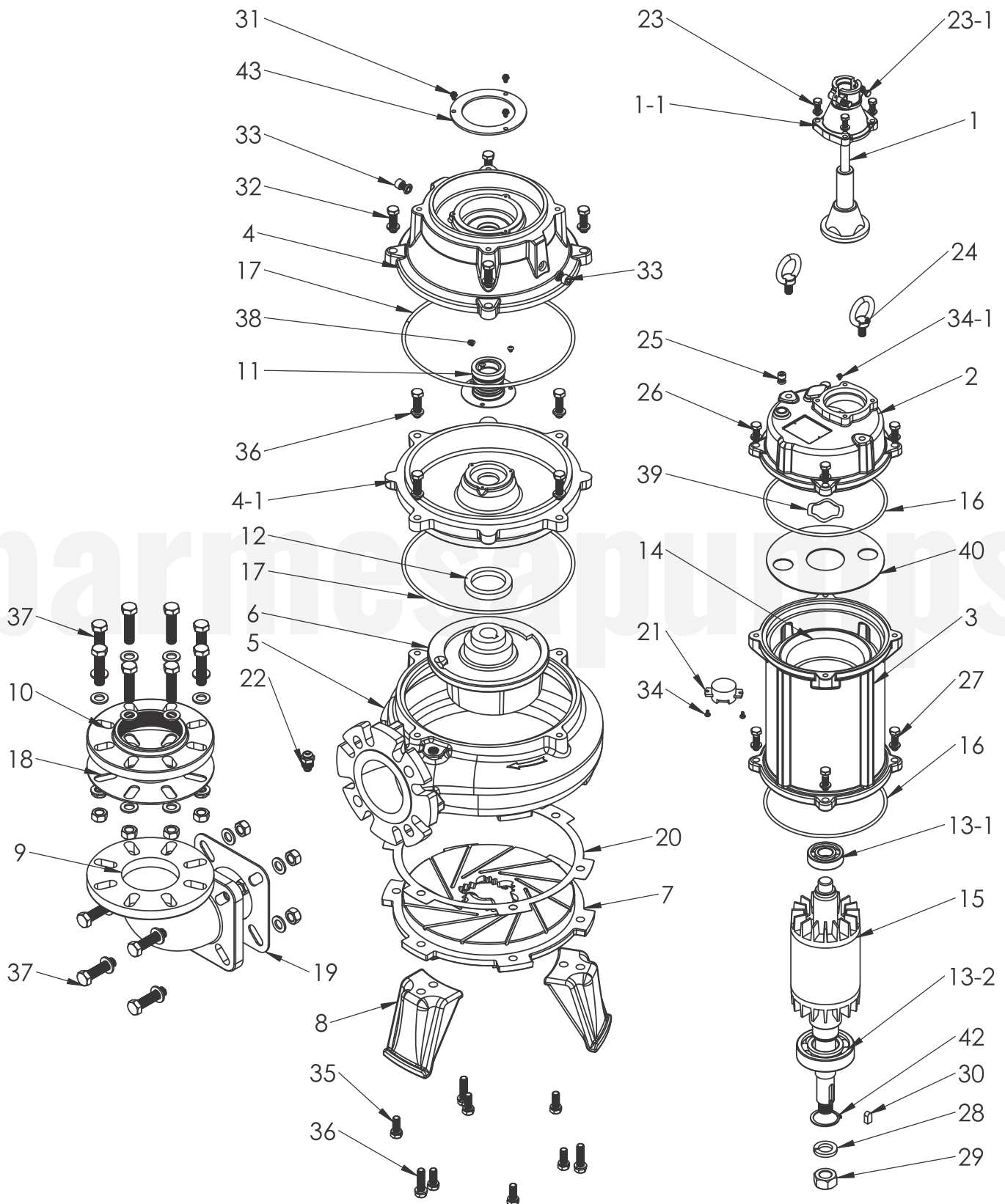


► CUT503 / 504

ITEM	DESCRIPTION	MATERIAL
1	Cable	STOW
2	Motor cover	ASTM A48 class 30
3	Motor housing	ASTM A48 class 30
4	Oil chamber	ASTM A48 class 30
5	Volute	ASTM A48 class 30
6	Impeller	ASTM A48 class 30
7	Suction plate	ASTM A536 100-70-03
8	Pump feet	SC
9	Discharge elbow	ASTM A48 class 30
10	Flange	ASTM A48 class 30
11	Mechanical seal	SIC / SIC CA / CE
12	Lip seal	Buna N
13-1	6304 bearing	NTN
13-2	6307 bearing	NTN
14	Stator	
15	Rotor with shaft	AISI 420
16	O-ring	Buna N
17	O-ring	Buna N
18	Flange gasket	Buna N
19	Elbow gasket	Buna N
20	Suction plate gasket	PE
21	Overload protector	Klixon
22	Air release valve	PP
23	Hex. bolt	AISI304
24	M10 eye bolt	AISI304
25	Socket screw / o-ring	AISI304 / Buna N
26	Hex. bolt & spring washer	AISI304
28	Spring washer	AISI304
29	Hex. nut	AISI304
30	Key	AISI304
31	Hex. bolt	SC
32	Hex. bolt & spring washer	AISI304
33	Socket screw & o-ring	AISI304 / Buna N
34	Phillips screw	SC
35	Hex. bolt & spring washer	AISI304
36	Hex. bolt & spring washer	AISI304
37	Hex. bolt, spring washer, hex. nut	AISI304
38	Truss bolt	SC
39	Wave washer	SC
40	Insulation sheet	Paper
41	Ground lead	
42	Shaft retaining ring	SC
43	Bearing holder	SC

# Exploded view

► CUT753 / 754

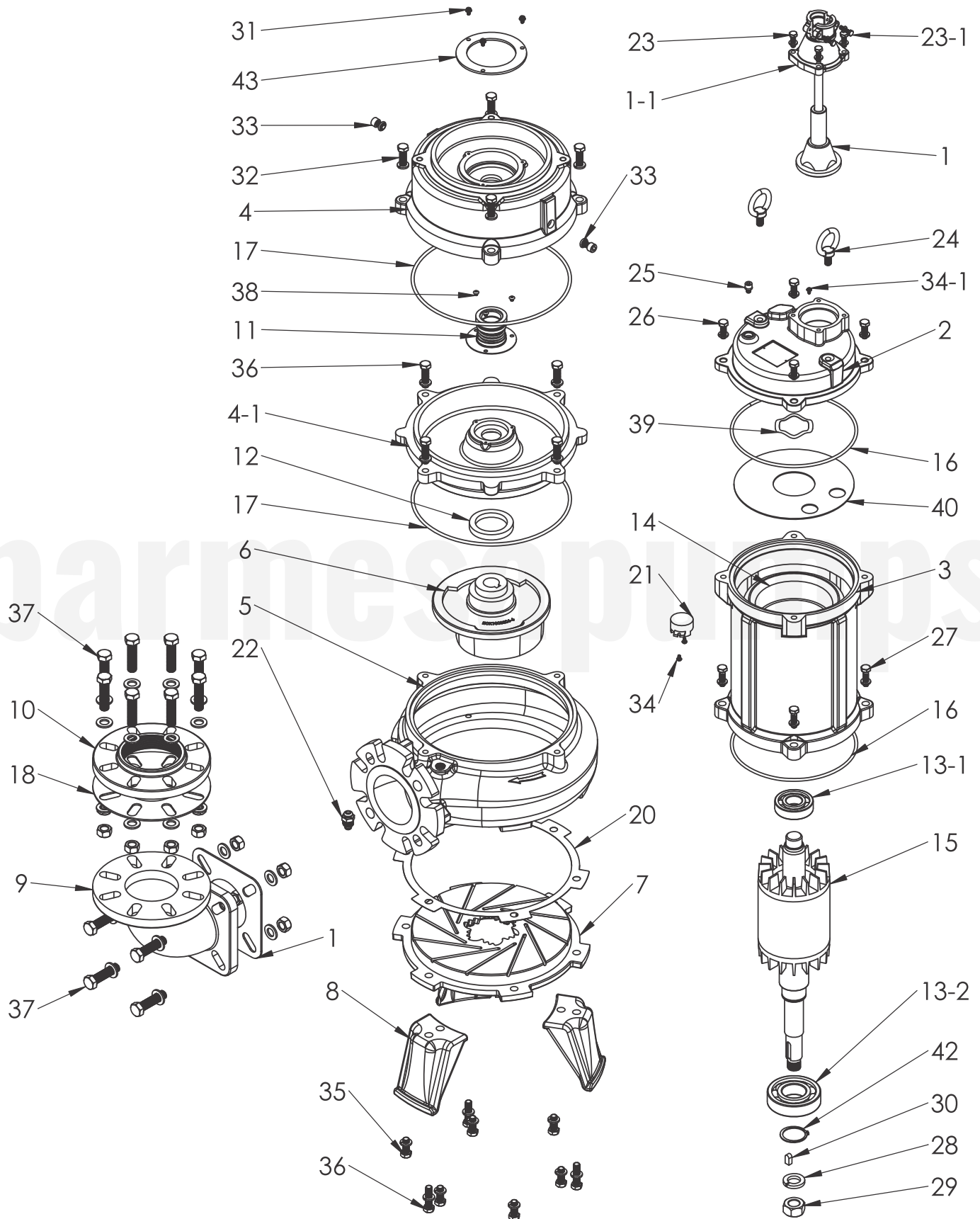


► CUT753 / 754

ITEM	DESCRIPTION	MATERIAL
1	Cable	STOW
2	Motor cover	ASTM A48 class 30
3	Motor housing	ASTM A48 class 30
4	Oil chamber	ASTM A48 class 30
4-1	Seal bracket	ASTM A48 class 30
5	Volute	ASTM A48 class 30
6	Impeller	ASTM A48 class 30
7	Suction plate	ASTM A536 100-70-03
8	Pump feet	ASTM A48 class 30
9	Discharge elbow	ASTM A48 class 30
10	Flange	ASTM A48 class 30
11	Mechanical seal	SIC / SIC CA / CE
12	Lip seal	Buna N
13-1	6305 bearing	NTN
13-2	6309 bearing	NTN
14	Stator	
15	Rotor with shaft	AISI 420
16	O-ring	Buna N
17	O-ring	Buna N
18	Flange gasket	Buna N
19	Elbow gasket	Buna N
20	Suction plate gasket	Buna N
21	Overload protector	Klixon
22	Air release valve	PP
23	Hex. bolt	AISI304
23-1	Hex. bolt	AISI304
24	M12 eye bolt	AISI304
25	Socket screw / o-ring	AISI304 / Buna N
26	Hex. bolt & spring washer	AISI304
27	Hex. bolt & spring washer	AISI304
28	Spring washer	AISI304
29	Hex. nut	AISI304
30	Key	AISI304
31	Hex. bolt	SC
32	Hex. bolt & spring washer	AISI304
33	Socket screw & o-ring	AISI304 / Buna N
34	Phillips screw	SC
34-1	Phillips screw	SC
35	Hex. bolt & spring washer	AISI304
36	Hex. bolt & spring washer	AISI304
37	Hex. bolt, spring washer, hex. nut	AISI304
38	Truss bolt	SC
39	Wave washer	SC
40	Insulation sheet	Bakelite
42	Shaft retaining ring	SC
43	Bearing holder	SC
44	VG-32 oil - 259.35 cu in	

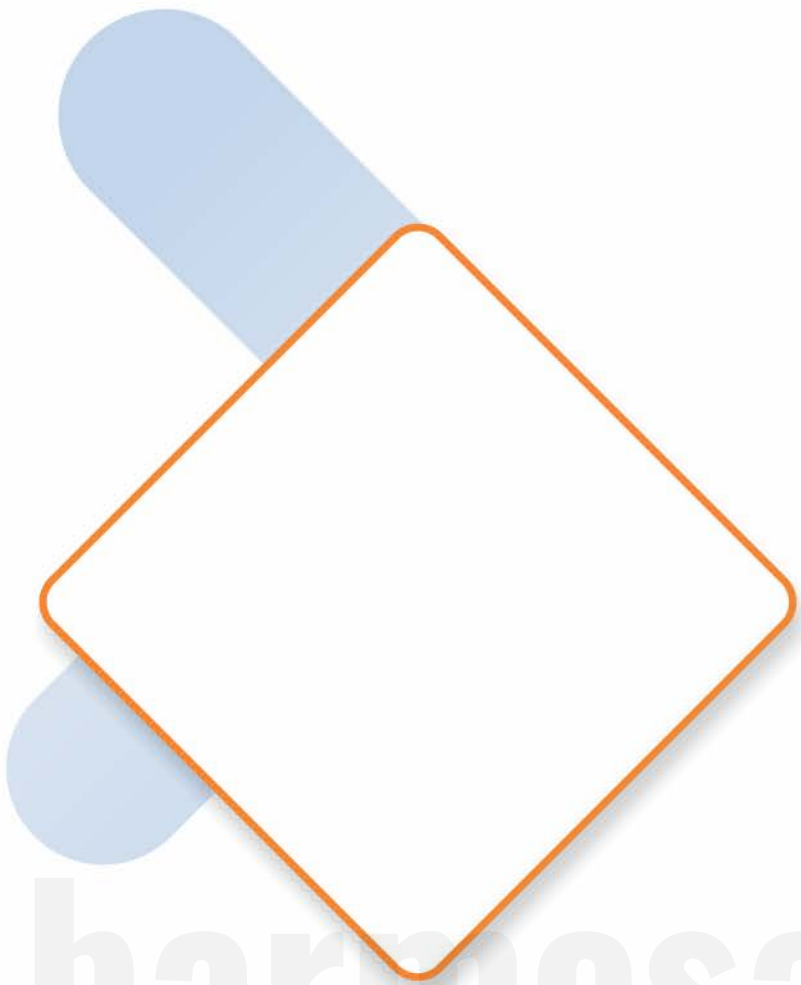
# Exploded view

► CUT1003 / 1004



► CUT1003 / 1004

ITEM	DESCRIPTION	MATERIAL
1	Cable	STOW
2	Motor cover	ASTM A48 class 30
3	Motor housing	ASTM A48 class 30
4	Oil chamber	ASTM A48 class 30
4-1	Seal bracket	ASTM A48 class 30
5	Volute	ASTM A48 class 30
6	Impeller	ASTM A48 class 30
7	Suction plate	ASTM A536 100-70-03
8	Pump feet	ASTM A48 class 30
9	Discharge elbow	ASTM A48 class 30
10	Flange	ASTM A48 class 30
11	Mechanical seal	SIC / SIC CA / CE
12	Lip seal	Buna N
13-1	6306 bearing	NTN
13-2	6309 bearing	NTN
14	Stator	-
15	Rotor with shaft	AISI 420
16	O-ring	Buna N
17	O-ring	Buna N
18	Flange gasket	Buna N
19	Elbow gasket	Buna N
20	Suction plate gasket	PE
21	Overload protector	Klixon
22	Air release valve	PP
23	Hex. bolt & spring washer	AISI304
23-1	Hex. bolt & spring washer	AISI304
24	M12 eye bolt	AISI304
25	Socket screw / O-ring	AISI304 / Buna N
26	Hex. bolt & spring washer	AISI304
27	Hex. bolt & spring washer	AISI304
28	Spring washer	AISI304
29	Hex. nut	AISI304
30	Key	AISI304
31	Hex. bolt	SC
32	Hex. bolt & spring washer	AISI304
33	Socket screw / O-ring	AISI304 / Buna N
34	Phillips screw	SC
34-1	Phillips screw	SC
35	Hex. bolt & spring washer	AISI304
36	Hex. bolt & spring washer	AISI304
37	Hex. bolt, flat washer & hex. nut	AISI304
38	Truss bolt	SC
39	Wave washer	SC
40	Insulation sheet	Bakelite
42	Shaft retaining ring	SC
43	Bearing holder	SC
44	VG-32 oil - 317.32 cu in	-



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