Product description

SPLT 150-400

Customer	Supplier
Company name	
Editor	
Phone number	
E-mail	

Fields of Application

Water supply and booster stations.
Irrigation, overhead irrigation.
Drainage stations.
Power stations.
Industrial water supply systems.
Firefighting systems.
Marine applications.
General applications in refineries.

Design Specification

Single-stage axially split casing pumps with double entry and radial impeller.

Double entry, closed impeller is hydraulically thrust compensated.

Lower casing is in-line design, suction and discharge nozzles are on the same line.

Upper casing is self-aligning and it is easy to mount.

The NPSH values are reduced and high suction lifts are possible thanks to double suction impeller.

Two different designs can be applicable:

Long shaft design: For soft packing stuffing box, the length of the pump shaft is longer. It is also possible to use mechanical seal on this design.

Short shaft design: For mechanical seal applications, shaft length can be reduced. Therefore, compact and rigid pumps are available .

Pump and motor are separate components connected to each other via flexible coupling and mounting on a base plate. It is also possible to couple the pump to the diesel engine.

Technical Data

Suction Flange: DN80 - DN500
Discharge Flange : DN65 - DN500
Operating Pressure : 16 - 20 bar
Temperature Range : Up to 110 °C
Speed Range : 960 - 3500 rpm
Flow Range : 30 - 4000 m³/h
Head Range : 15 - 180 m

Technical data

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Operating data specification

Pumped fluid	Water		Rated flow	320	m³/h
Solids			Rated head	50	m
Kind			Geodetic head	0	m
Percentage of solid content	0		Available system NPSH		m
pH value			Inlet pressure (pin)	0	bar
Temperature	20	°C	Altitude above sea level	100	m
Density	998.3	kg/m³	Max. operating pressure	5.41	bar
Kin. viscosity	1.005	mm²/s	Max. diff. pressure	5.41	bar
Vapour pressure	0.0234	bar			

Pump

Make	MAS DAF		Impeller type		
Pump type	SPLT 150-400		Impeller construction		
Frame size			Impeller Ø		
Design	Split Case		Max.	450	mm
Self priming	☒ No		designed	387	mm
Speed	1480	1/min	Min.	345	mm
Stages	1		Flow		
Suction port			Nominal	402	m³/h
Pressure rating	PN16		Max.	576	m³/h
Nominal pipe size	DN200		Min.	0	m³/h
Standard	DIN		Head		
Discharge port			Nominal	46	m
Pressure rating	PN16		Min.	31.4	m
Nominal pipe size	DN150		Max.	55.3	m
Standard	DIN		Shut off head	55.3	m
Shaft power	56.9	kW	NPSH3	2.89	m
Shaft power P2(Q=max.)	75	kW	Efficiency	76.4	%

Motor

Make/Type	75 KW-1500 RPM / 280S	
Specific design	IE3 / 50 Hz / Pole pairs 2	
Rated power	75	kW
Electric voltage	3~ 400	V
Speed	1480	1/min
Electric current	133	A
Frame size	280S	
Degree of protection	IP 55	
Type of protection		
Explosion protection		

Coupling

Make/Type		
Series		
Spacer length		mm
Frame size		

Materials

Pump		Shaft seal	Soft Packing
Casing	GJL-250 (GG25)	Material code	
Impeller	GJL-250 (GG25)		
Shaft	A 276 Type 420 (X20Cr13)		

Performance curves

SPLT 150-400

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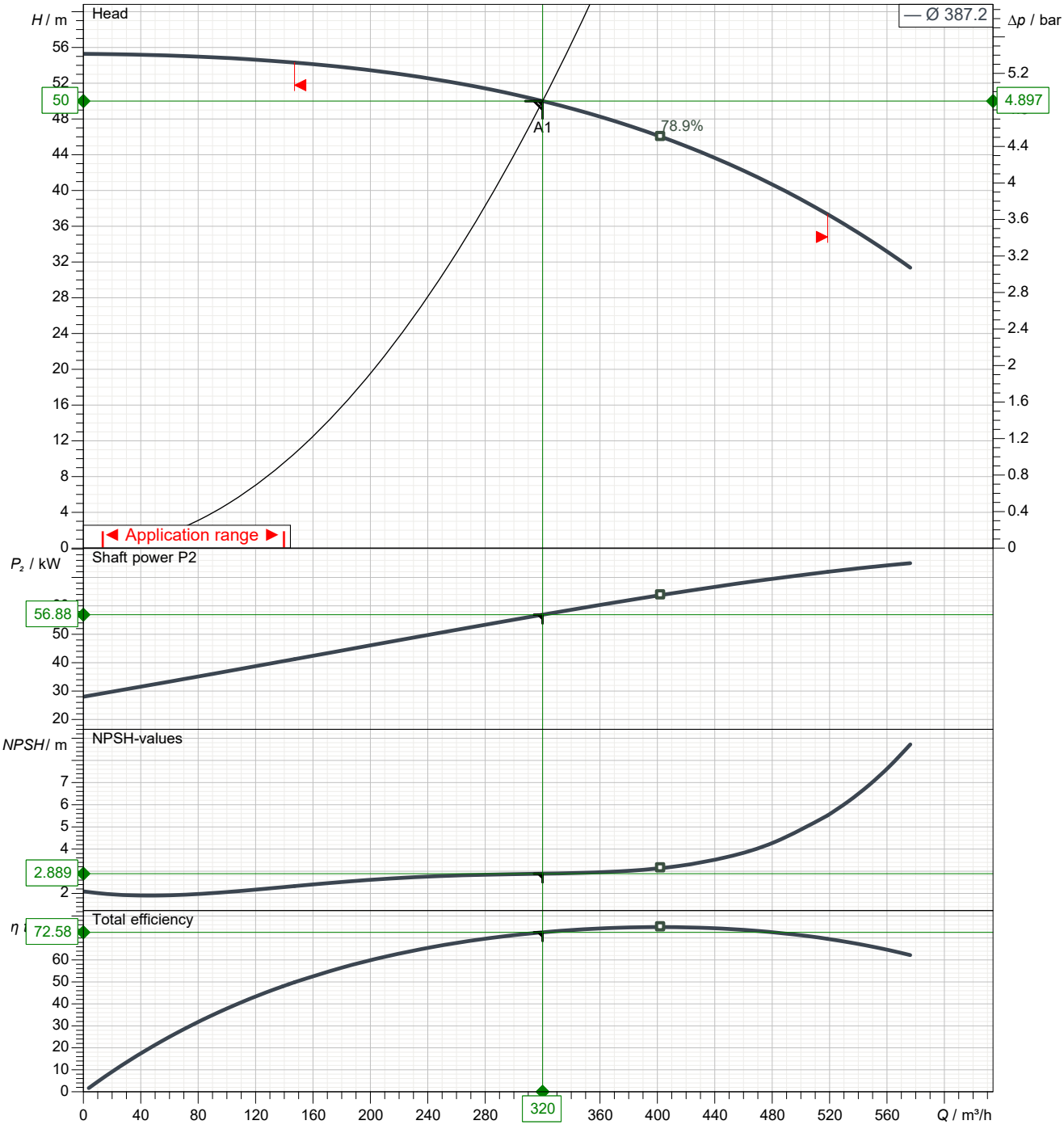
Power data referred to: Water; 20°C; 998.3kg/m³; 1.005mm²/s

Sense of rotation Clockwise from the drive end



Pump curves in accordance with ISO 9906 2B

Pumped fluid	Water		Rated flow	320	m³/h
Temperature	20	°C	Rated head	50	m
Density	998.3	kg/m³	Shaft power	56.9	kW
Kin. viscosity	1.005	mm²/s	Speed	1480	1/min
Vapour pressure	0.0234	bar	NPSH3	2.89	m
Impeller Ø	387	mm	Efficiency	76.4	%

Brief description of pump

SPLT 150-400

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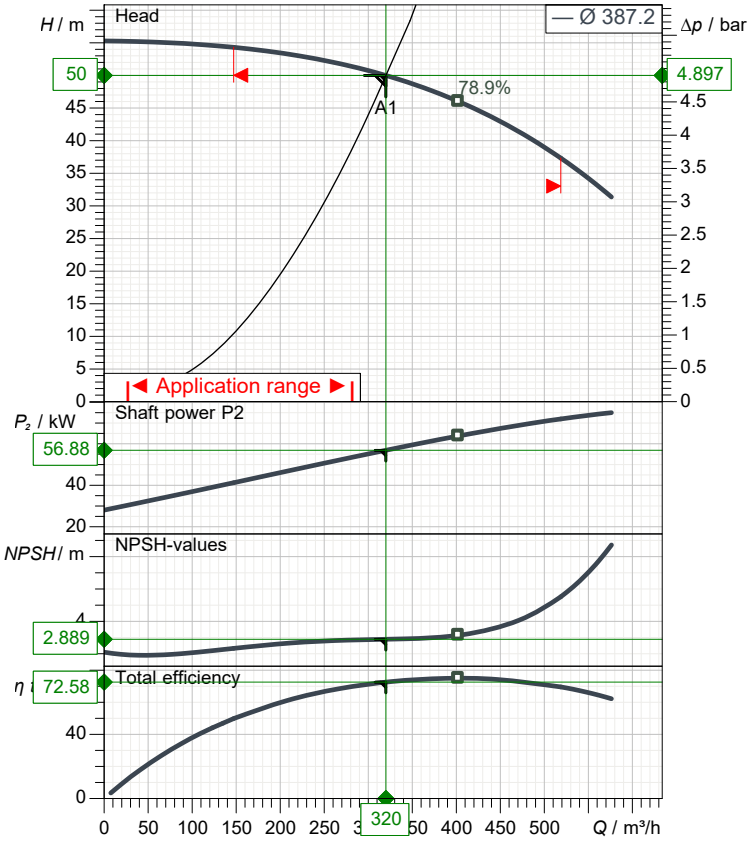
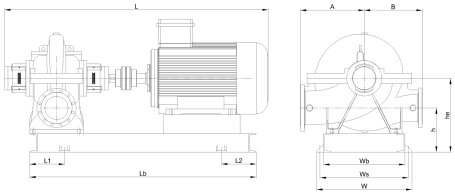
Performance curves



Pump curves in accordance with ISO 9906 2B



Pump

Make	MAS DAF
Pump type	SPLT 150-400
Design	Split Case
Suction port	
Pressure rating	PN16
Nominal pipe size	DN200
Standard	DIN
Discharge port	
Pressure rating	PN16
Nominal pipe size	DN150
Standard	DIN

Operating data specification

Pumped fluid	Water	
Temperature	20	°C
Density	998.3	kg/m³
Kin. viscosity	1.005	mm²/s
Vapour pressure	0.0234	bar
Rated flow	320	m³/h
Rated head	50	m
Shaft power	56.9	kW
Speed	1480	1/min
NPSH3	2.89	m
Efficiency	76.4	%
Impeller Ø	387	mm

Motor

Make/Type	75 KW-1500 RPM / 280S	
Specific design	IE3 / 50 Hz / Pole pairs 2	
Rated power	75	kW
Speed	1480	1/min
Electric voltage	3~ 400	V
Electric current	133	A
Degree of protection	IP 55	

Materials

Shaft seal	Soft Packing
Material code	

Dimensions	mm
A	475
B	400
h	360
he	560
L	1946
L1	300
L2	300
Lb	1650
W	770
Wb	650
Ws	710

Casing	GJL-250 (GG25)
Impeller	GJL-250 (GG25)
Shaft	A 276 Type 420 (X20Cr13)

Pump dimensions

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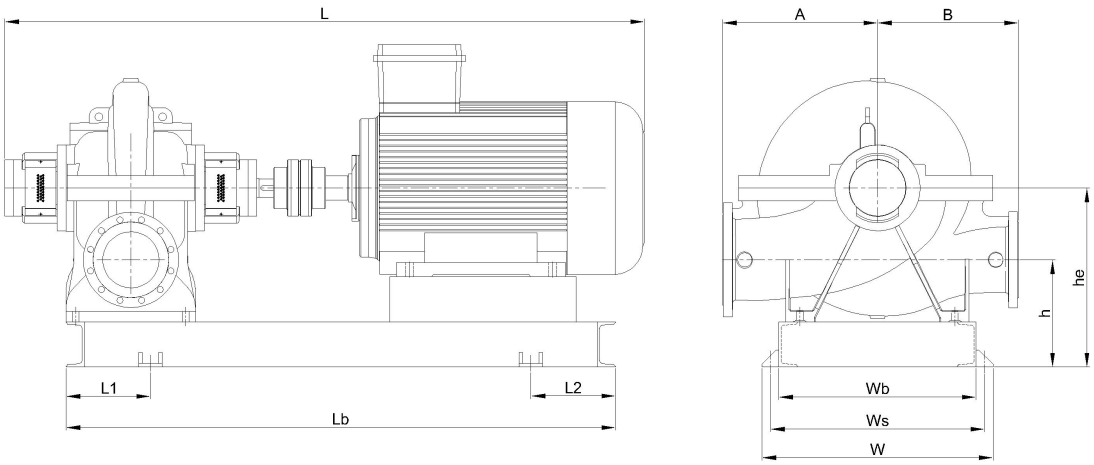

Dimensions	mm
A	475
B	400
h	360
he	560
L	1946
L1	300
L2	300
Lb	1650
W	770
Wb	650
Ws	710

Inlet / outlet

Suction port	Discharge port
DN200	DN150
PN16	PN16

Motor performance curve

75 KW-1500 RPM / 280S

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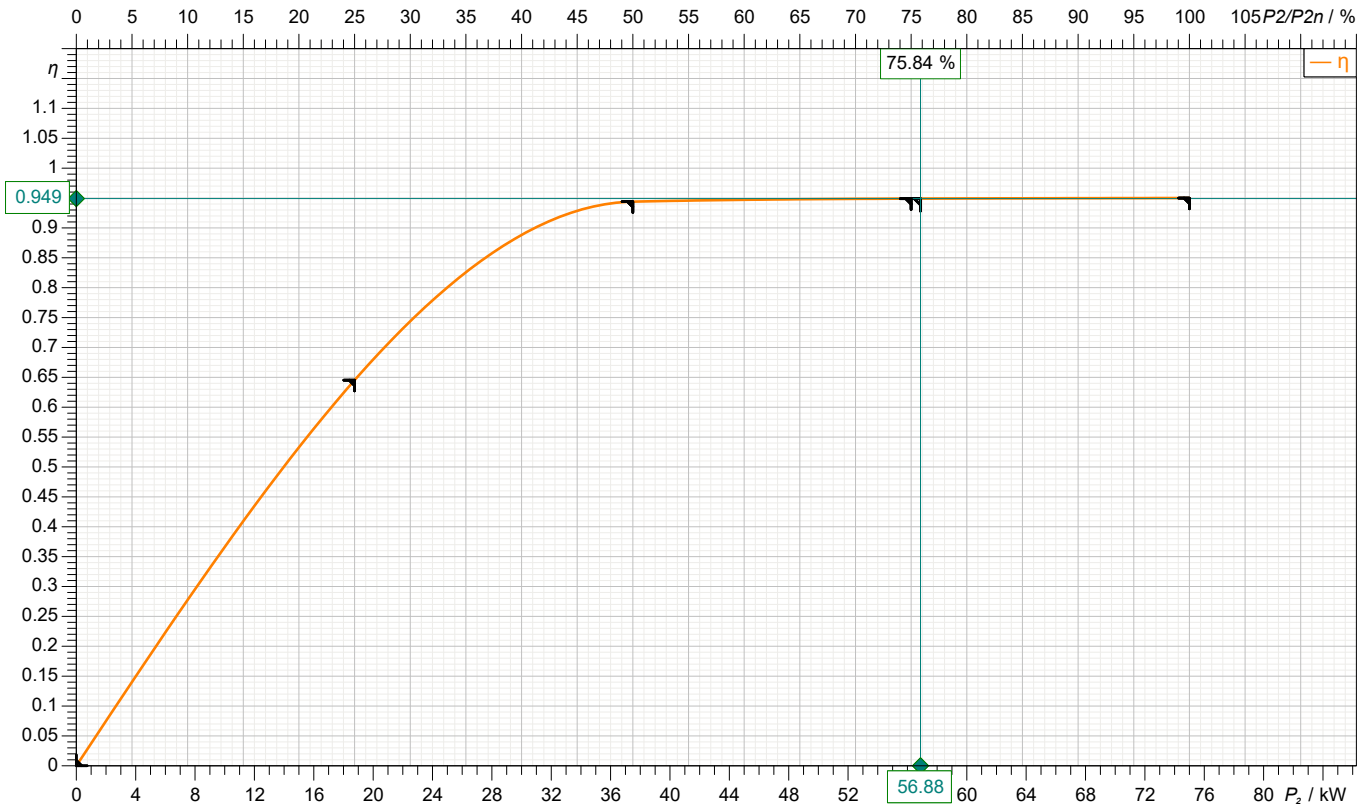
motor data



Symbol	No load	25 %	50 %	75 %	100 %	125 %
P_2 / kW	0	18.75	37.5	56.25	75	
P_1 / kW		29.05	39.72	59.27	78.95	
η / %	0	64.53	94.4	94.9	95	

Motor

Make/Type	75 KW-1500 RPM / 280S		Degree of protection	IP 55	
Specific design	IE3 / 50 Hz / Pole pairs 2		Type of protection		
Rated power	75	kW	Explosion protection		
Electric voltage	3~ 400	V	Service factor	1.15	
Number of poles	4		Starting current		
Speed	1480	1/min	Starting torque		
Electric current	133	A	Moment of inertia		
Power factor	0.86		No. starts per hour		
Frame size	280S		Rated torque	484 Nm	
Efficiency class	IE3		Insulation class	F (155C°)	

Motor dimensions

75 KW-1500 RPM / 280S

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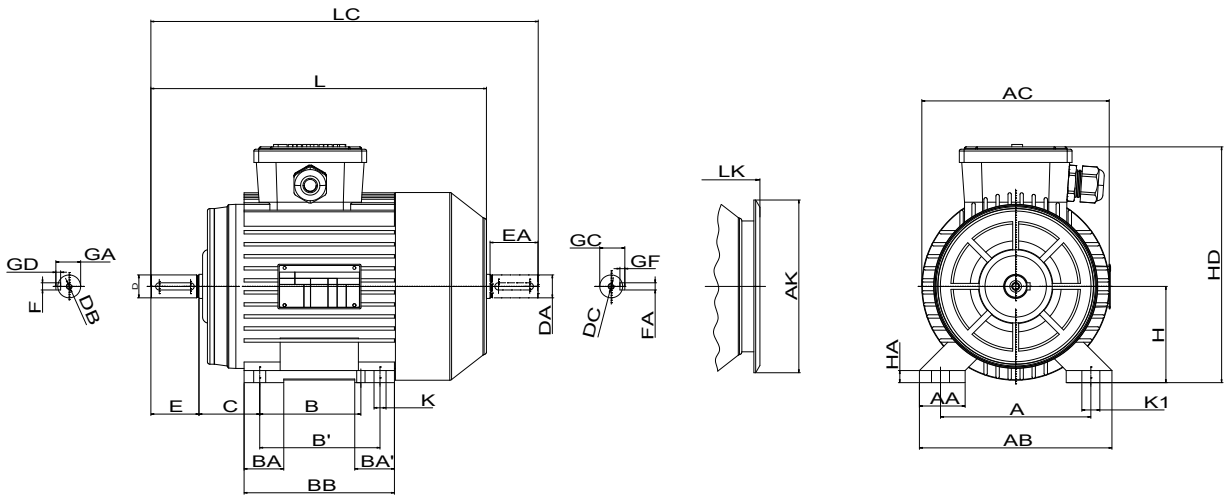

Dimensions	mm		
A	457	E	140
AA	120	EA	140
AB	550	FAxGF	20X12
AC	544	FxGD	20X12
AK	440	GA	79.5
B	368	GC	79.5
B'	–	H	280
BA	85	HA	40
BA'	128	HD	630
BB	474	K	24
C	190	L	958
D	75	LC	1106
DA	75	LK	1014
DB	M20		
DC	M20		

Base plate

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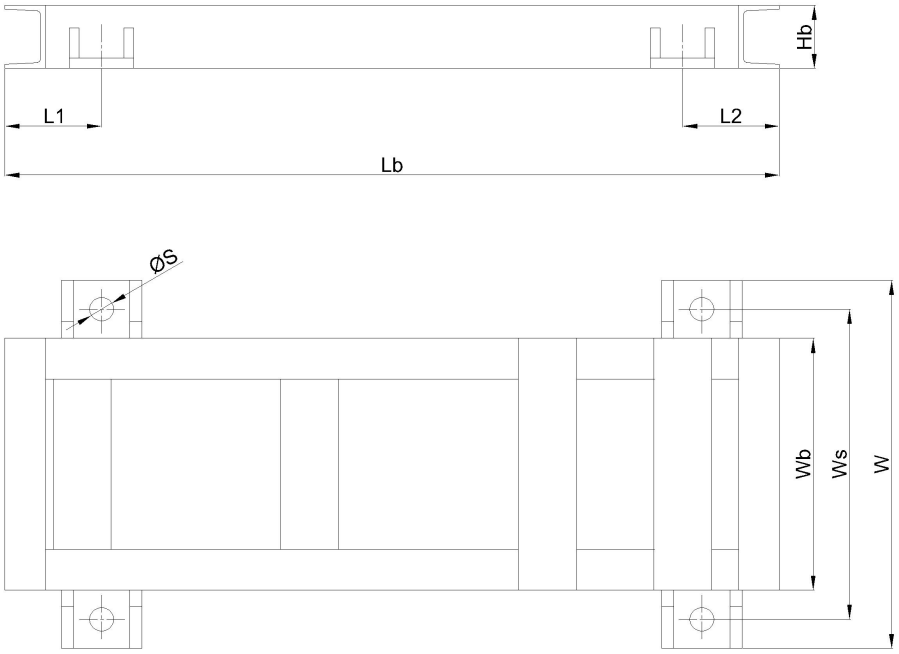

Dimensions	mm
Hb	160
L1	300
L2	300
Lb	1650
S	50
W	770
Wb	650
Ws	710

Spare part list

SPLT 150-400

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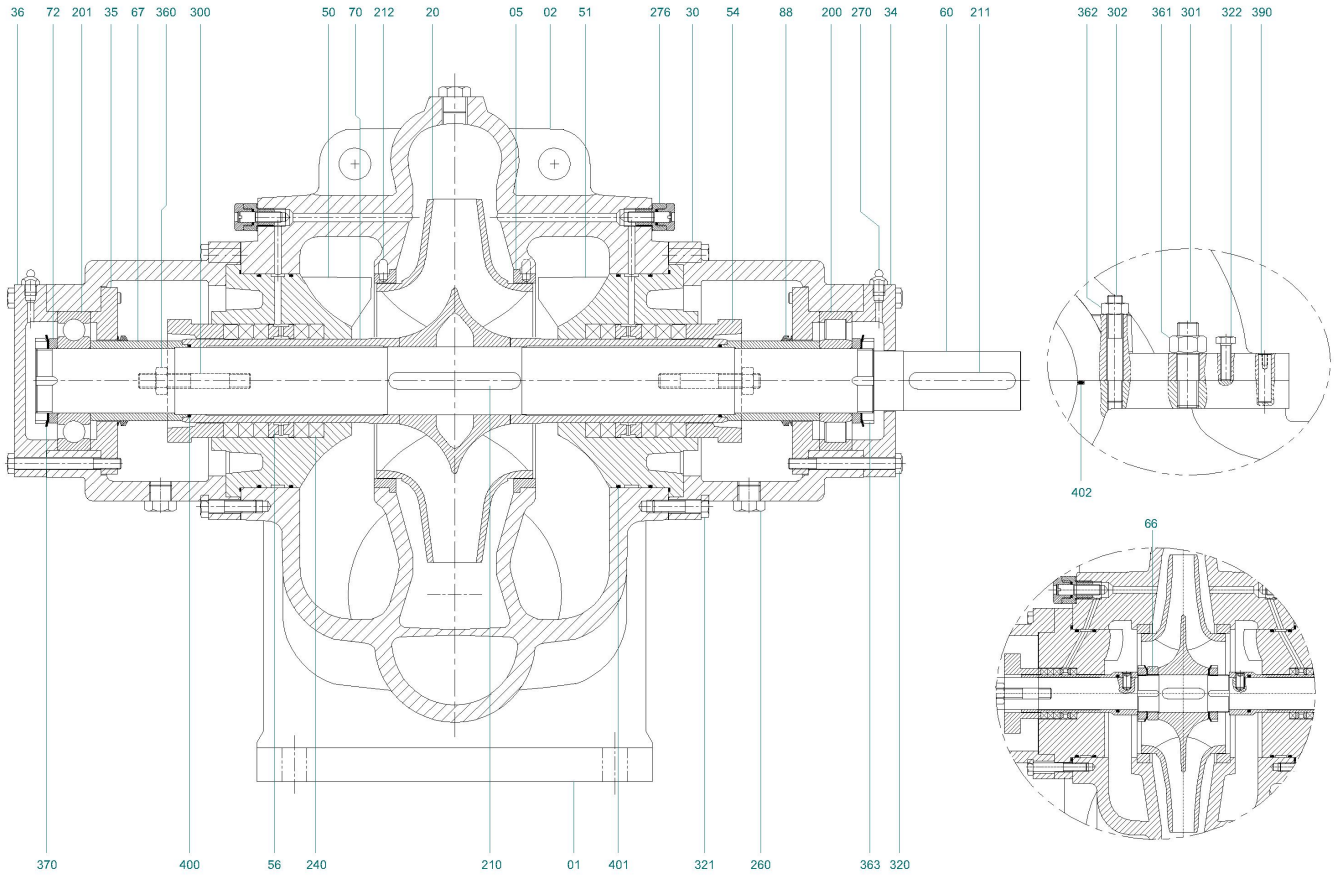

Part No	Part Name	Part No	Part Name	Part No	Part Name
1	Casing Lower	67	Space Sleeve	301	Casing Stud
2	Casing Upper	70	Seal Sleeve	302	Casing Stud
5	Wearing Ring	72	Bearing Sleeve	320	Hex Bolt
20	Impeller	88	V-Ring	321	Bolt
30	Bearing Casing	200	Bearing	322	Bolt
34	Bearing Cover	201	Bearing	360	Nut, Gland
35	Bearing	210	Coupling Key	361	Nut, Casing
36	Bearing H.Cover	211	Impeller Key	362	Nut, Casing
50	Stuffing Box	212	Wearing Ring Key	363	Safety Nut
51	Stuffing Box (Motor)	240	Soft Packing	370	Safety Sheet Metal
54	Gland	260	Plug	390	Cylindrical Pin
56	Lantern Ring	270	Greaser	400	O-Ring (Sleeve)
60	Shaft	276	Setting Tap	401	O-Ring (Stuffing Box)
66	Impeller Setting Sleeve	300	Gland Stud	402	O-Ring

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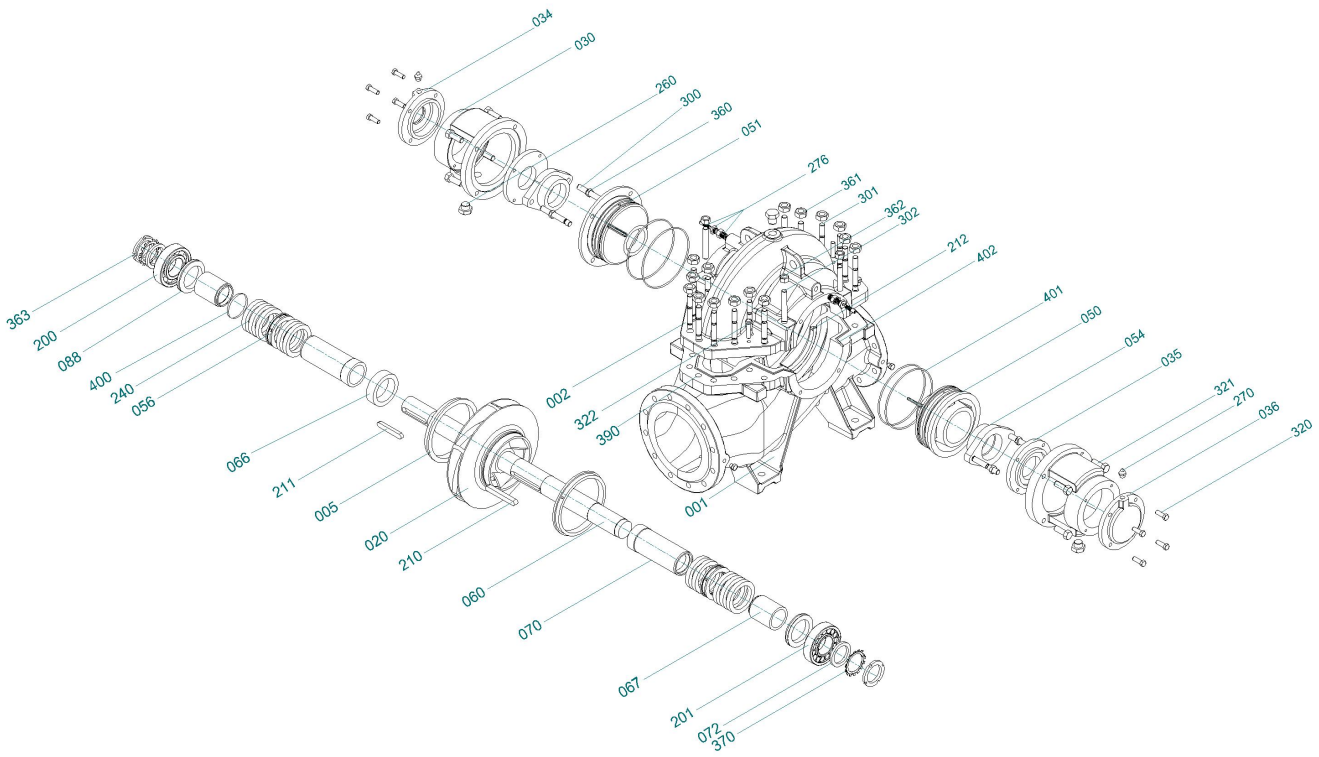

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34	Bearing Cover	201	Bearing	360	Nut, Gland
35	Bearing	210	Coupling Key	361	Nut, Casing
36	Bearing H.Cover	211	Impeller Key	362	Nut, Casing
50	Stuffing Box	212	Wearing Ring Key	363	Safety Nut
51	Stuffing Box (Motor)	240	Soft Packing	370	Safety Sheet Metal
54	Gland	260	Plug	390	Cylindrical Pin
56	Lantern Ring	270	Greaser	400	O-Ring (Sleeve)
60	Shaft	276	Setting Tap	401	O-Ring (Stuffing Box)
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