COMPANY
WITH QUALITY SYSTEM
CERTIFIED BY DNV
=ISO 9001/2000=

Water technology at your service

VULCO

*The **VULCO** family of submersible pumps have their impeller partly-recessed. The impeller and inside of the pump body are coated in a thick layer of abrasion-resistant polyurethane. They are ideal for transfer of ceramic enamels, ceramic glaze and slips or other dense, abrasive liquids.*

***VULCO** submersible pumps are constructed with hydraulic units made entirely out of cast iron coated in a thick layer of Vulkollan abrasion-resistant polyurethane, which has a virtually unlimited duration permitting application where other materials would be subject to excessive wear and require frequent maintenance, or where no metal part may be allowed to come into contact with the liquid.*

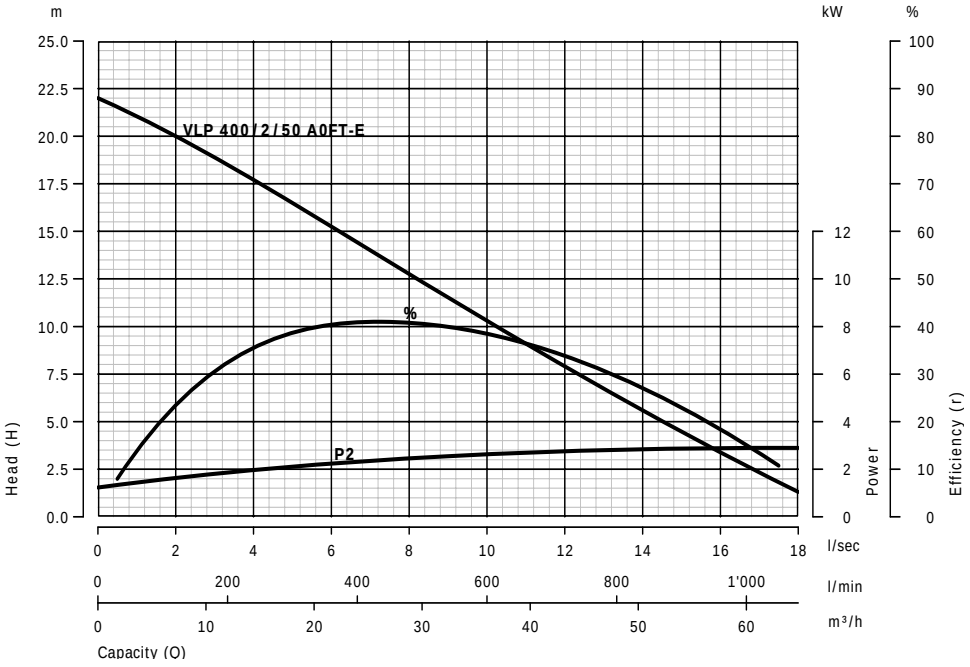
*The **VULCO** hydraulic unit is designed especially for use in the ceramics industry, for working with granite, marble, glass and crystal, and for conveyance of dense industrial sludges of all kinds.*

50 Hz

ENGLISH

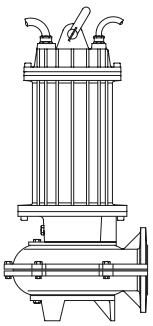
VLP 400/2/50 A0FT-E

Hydraulic model: **"A"**



% = Hydraulic Performance - P2 = Power Delivered

ACTUAL OUTLINE



Hydraulic type:

Multi-channelled polyurethane-coated impeller *

Power/poles:

3,6 kW - 2 Poles

Outlet type:

50 mm UNI PN10 flanged horizontal opening

Explosion-proof:

Pump in NOT ex-proof version

Free passage of solid bodies:

Max 25 mm

ELECTRO-MECHANICAL UNIT

Rated delivered power:	3,6 kW	Motor poles/revolutions:	2900 1/min - 2Poles
Rated absorbed power:	4,7 kW	Motor phases:	T - Three-phase
Rated absorbed current:	8 A	Service:	S1 submersible or w/sleeve
Starting current:	35,47 A	Motor protection:	IP 68
Starting torque:	27,24 Nm	Insulation class (ICL):	H
Rated Cos Ø:	0,85	Max. Starts per hour:	20
Rated motor performance:	77%	Standard cable type:	10 mt-H07RN-F 4G1,5
Detailed description of series:	Submersible pump consisting of an electromechanical unit made of EN-GJL-250 cast iron, suitable for submersible operation, with 3 mechanical seals conventionally installed in an inspectable oil sump. Oil-bathed motor. Separate hydraulic unit. Explosion-proof version not available.*		
Standard mechanical seals	2 mechanical silicon carbide (Viton) seals and 1 mechanical graphite alumina (NBR) seal		
Lifting:	With eyebolt on motor cover		
Ball bearings:	Upper permanently lubricated ball bearing, lower oil-immersed ball bearing		
Winding type:	Induction motor with oil-filled winding and manual overload protection		
Impregnation type:	Doubly impregnated humidity-resistant winding		
Direction of rotation:	Clockwise seen from top of electric pump		

Data provided above refers to hydraulic tests carried out at: 400 Volt 50 Hz

MATERIALS

Mechanical unit:	EN-GJL-250 cast iron	**Hyd. Unit, impeller:**	Vulkollan polyurethane
Shaft:	X30Cr13 (AISI420) steel	**Bolts and Screws:**	INOX A2 steel
Seals (O-Ring):	NBR-SBR rubber	**Grinder cutter:**	Not applicable
****Cooling jacket:**	Fe360 steel	**Painting:**	Ecological epoxy vinyl

** Cooling jacket supplied upon request in series specified

LIMITS ON USE REFERENCE STANDARDS

Max. operating temp.:	40 °C	**Max. sub. depth:**	20 m
Liquid PH:	6 to 10	**Liquid density:**	1 kg/dm³
Viscosity of liquid:	1 mm²/s	**Max. acoustic press.:**	< 70 dB dB

Reference standards:

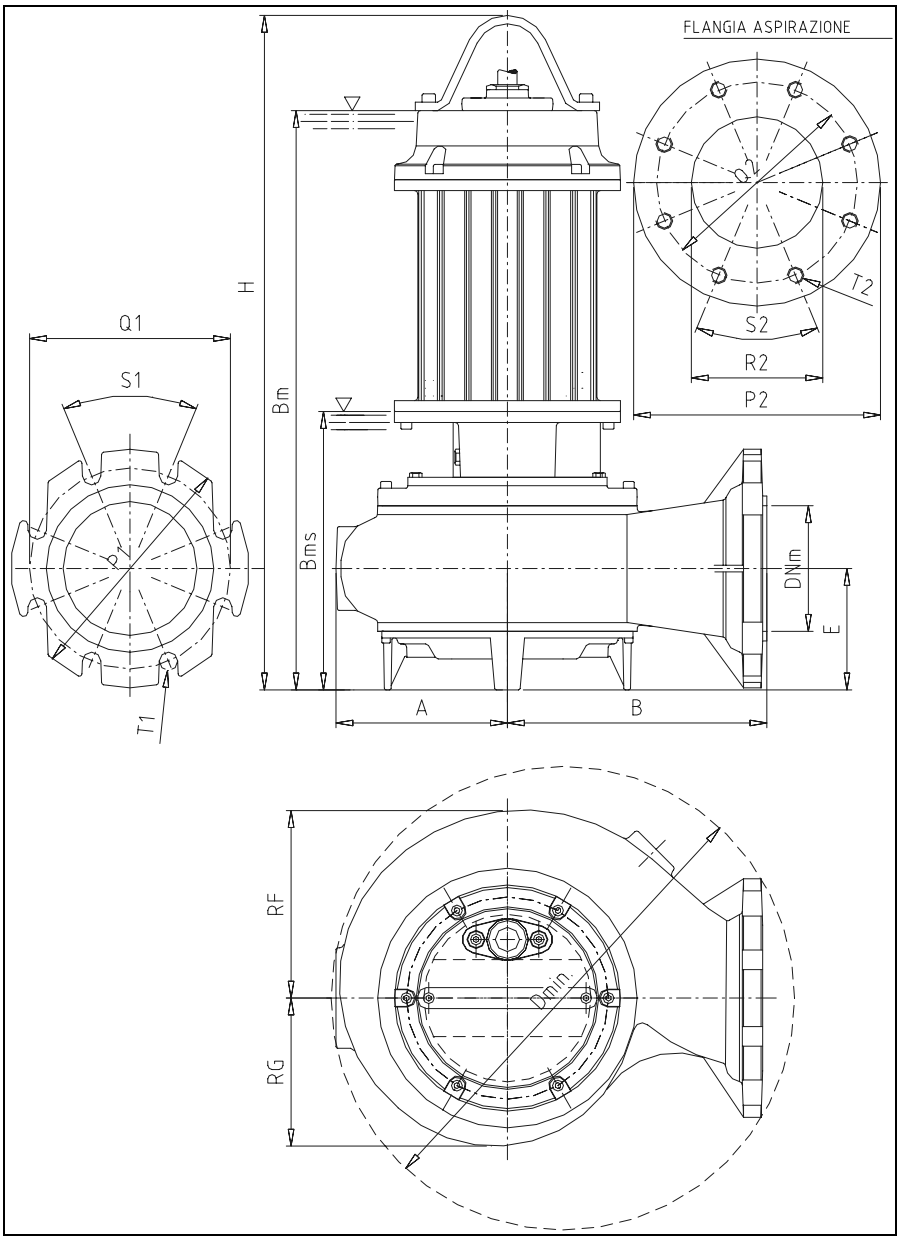
- EN 292-1; EN 292-2; CEI EN 60529; ISO 9906; CEI EN 60034-1.
- CEI EN 60204; UNI ISO 6009; UNI EN 1561-1563; UNI EN 10098.
- Low voltage directive 73/23/CEE.
- Procedures specified by Zenit Europe Quality System, UNI EN ISO 9001 (ISO 9001) certified, DNV n. SQ 0660-IT certified.
- Machines directive 89/392/CEE and successive amendments thereto (directives 91/368/CEE, 93/68/CEE), electromagnetic compatibility directive 89/336/CEE

SYMBOLS

CE — Product complying with European standards in force

Company Quality System complying with UNI ISO norm

VARIANTS AVAILABLE	
Electrical accessories	
T	Thermistor
Set of mechanical seals	
2SICAL	2 mechanical silicon carbide (Viton) seals and 1 mechanical graphite alumina (NBR) seal
Cooling system / mechanical seal flushing versions*	
FT	Seal flushing system employing liquid from outside system
CGFT	Generic cooling jacket and seal flushing



• These drawings do not represent actual product appearance. Refer to the outline on the previous page.

A	B	Bm	Bms	Dmin	DNm	E	H	P1	P2	Q1	Q2	R2	RF	RG	S1	S2	T1
138	150	550	222	312	50	103	600	165	165	125	125	50	131	131	90	90	18
T2																	
M16																	

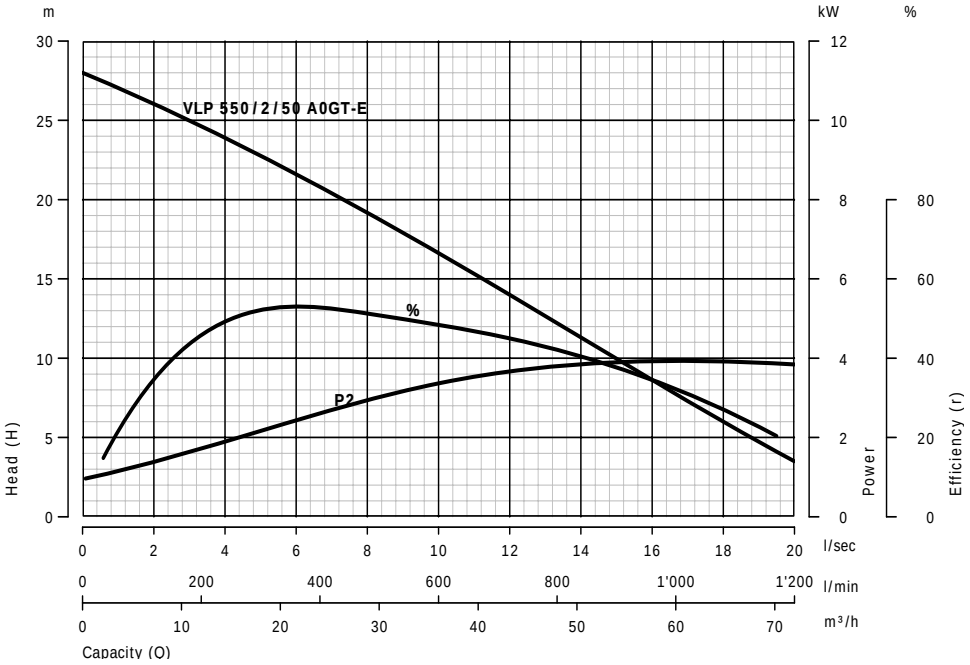
Number of holes in outlet flange 4-DN50 PN10 / Number of holes in suction flange 4-DN50 PN10

Dimensions 'mm' except than: S1-degrees S2-degrees	**Mass:**	48 Kg	**Possible installations:**	I1-I4-I5

*For more information see the descriptive sections

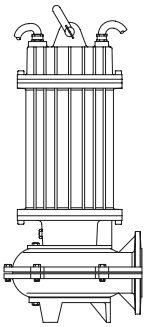
VLP 550/2/50 A0GT-E

Hydraulic model: **"A"**



% = Hydraulic Performance - P2 = Power Delivered

ACTUAL OUTLINE



Hydraulic type:

Multi-channelled polyurethane-coated impeller *

Power/poles:

4,9 kW - 2 Poles

Outlet type:

50 mm UNI PN10 flanged horizontal opening

Explosion-proof:

Pump in NOT ex-proof version

Free passage of solid bodies:

Max 21 mm

ELECTRO-MECHANICAL UNIT

Rated delivered power:	4,9 kW	Motor poles/revolutions:	2900 1/min - 2Poles
Rated absorbed power:	6 kW	Motor phases:	T - Three-phase
Rated absorbed current:	10,1 A	Service:	S1 submersible or w/sleeve
Starting current:	48 A	Motor protection:	IP 68
Starting torque:	28,91 Nm	Insulation class (ICL):	H
Rated Cos Ø:	0,86	Max. Starts per hour:	15
Rated motor performance:	82%	Standard cable type:	10 mt-NSSHOUJ 4G2,5+2x0,75
Detailed description of series:	Submersible pump consisting of an electromechanical unit made of EN-GJL-250 cast iron, suitable for submersible operation, with 3 mechanical seals conventionally installed in an inspectable oil sump. Oil-bathed motor. Separate hydraulic unit. Explosion-proof version not available.*		
Standard mechanical seals	2 mechanical silicon carbide (Viton) seals and 1 mechanical graphite alumina (NBR) seal		
Lifting:	With eyebolt on motor cover		
Ball bearings:	Upper permanently lubricated ball bearing, lower oil-immersed ball bearing		
Winding type:	Induction motor with oil-filled winding and manual overload protection		
Impregnation type:	Doubly impregnated humidity-resistant winding		
Direction of rotation:	Clockwise seen from top of electric pump		

Data provided above refers to hydraulic tests carried out at: 400 Volt 50 Hz

MATERIALS

Mechanical unit:	EN-GJL-250 cast iron	**Hyd. Unit, impeller:**	Vulkollan polyurethane
Shaft:	X30Cr13 (AISI420) steel	**Bolts and Screws:**	INOX A2 steel
Seals (O-Ring):	NBR-SBR rubber	**Grinder cutter:**	Not applicable
****Cooling jacket:**	Fe360 steel	**Painting:**	Ecological epoxy vinyl

** Cooling jacket supplied upon request in series specified

LIMITS ON USE REFERENCE STANDARDS

Max. operating temp.:	40 °C	**Max. sub. depth:**	20 m
Liquid PH:	6 to 10	**Liquid density:**	1 kg/dm³
Viscosity of liquid:	1 mm²/s	**Max. acoustic press.:**	< 70 dB dB

Reference standards:

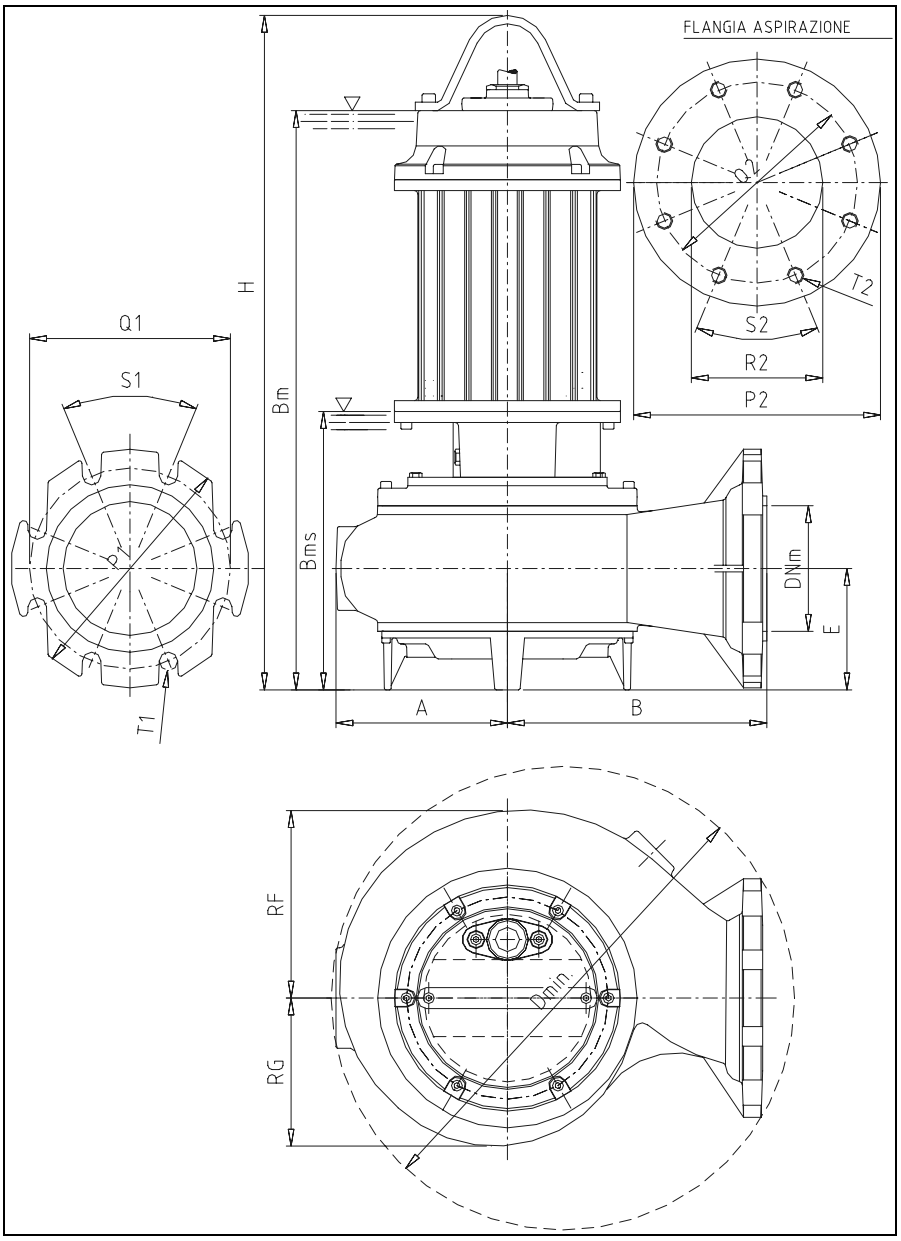
- EN 292-1; EN 292-2; CEI EN 60529; ISO 9906; CEI EN 60034-1.
- CEI EN 60204; UNI ISO 6009; UNI EN 1561-1563; UNI EN 10098.
- Low voltage directive 73/23/CEE.
- Procedures specified by Zenit Europe Quality System, UNI EN ISO 9001 (ISO 9001) certified, DNV n. SQ 0660-IT certified.
- Machines directive 89/392/CEE and successive amendments thereto (directives 91/368/CEE, 93/68/CEE), electromagnetic compatibility directive 89/336/CEE

SYMBOLS

CE — Product complying with European standards in force

Company Quality System complying with UNI ISO norm

VARIANTS AVAILABLE		
	Electrical accessories	
	T	Thermistor
	Set of mechanical seals	
	2SICAL	2 mechanical silicon carbide (Viton) seals and 1 mechanical graphite alumina (NBR) seal
	Cooling system / mechanical seal flushing versions*	
	FT	Seal flushing system employing liquid from outside system
	CGFT	Generic cooling jacket and seal flushing



• These drawings do not represent actual product appearance. Refer to the outline on the previous page.

A	B	Bm	Bms	Dmin	DNm	E	H	P1	P2	Q1	Q2	R2	RF	RG	S1	S2	T1
138	150	572	222	312	50	103	625	165	165	125	125	50	131	131	90	90	18
T2																	
M16																	

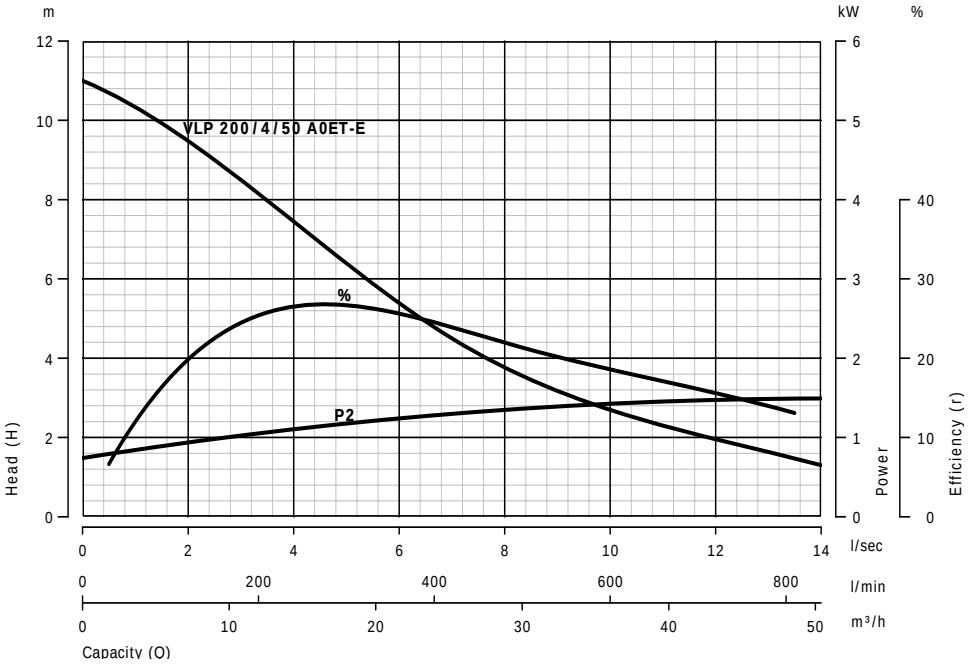
Number of holes in outlet flange 4-DN50 PN10 / Number of holes in suction flange 4-DN50 PN10

Dimensions 'mm' except than: S1-degrees S2-degrees	**Mass:**	67 Kg	**Possible installations:**	I1-I4-I5

*For more information see the descriptive sections

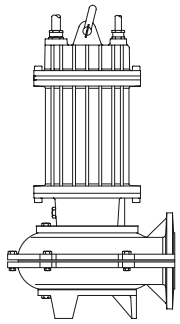
VLP 200/4/50 A0ET-E

Hydraulic model: **"A"**



% = Hydraulic Performance - P2 = Power Delivered

ACTUAL OUTLINE



Hydraulic type:

Multi-channelled polyurethane-coated impeller *

Power/poles:

1,5 kW - 4 Poles

Outlet type:

50 mm UNI PN10 flanged horizontal opening

Explosion-proof:

Pump in NOT ex-proof version

Free passage of solid bodies:

Max 28 mm

ELECTRO-MECHANICAL UNIT

Rated delivered power:	1,5 kW	Motor poles/revolutions:	1450 1/min - 4Poles
Rated absorbed power:	2,05 kW	Motor phases:	T - Three-phase
Rated absorbed current:	4,1 A	Service:	S1 submersible or w/sleeve
Starting current:	18,18 A	Motor protection:	IP 68
Starting torque:	22,74 Nm	Insulation class (ICL):	H
Rated Cos Ø:	0,72	Max. Starts per hour:	20
Rated motor performance:	73%	Standard cable type:	10 mt-H07RN-F 4G1,5
Detailed description of series:	Submersible pump consisting of an electromechanical unit made of EN-GJL-250 cast iron, suitable for submersible operation, with 3 mechanical seals conventionally installed in an inspectable oil sump. Oil-bathed motor. Separate hydraulic unit. Explosion-proof version not available.*		
Standard mechanical seals	2 mechanical silicon carbide (Viton) seals and 1 mechanical graphite alumina (NBR) seal		
Lifting:	With eyebolt on motor cover		
Ball bearings:	Upper permanently lubricated ball bearing, lower oil-immersed ball bearing		
Winding type:	Induction motor with oil-filled winding and manual overload protection		
Impregnation type:	Doubly impregnated humidity-resistant winding		
Direction of rotation:	Clockwise seen from top of electric pump		

Data provided above refers to hydraulic tests carried out at: 400 Volt 50 Hz

MATERIALS

Mechanical unit:	EN-GJL-250 cast iron	**Hyd. Unit, impeller:**	Vulkollan polyurethane
Shaft:	X30Cr13 (AISI420) steel	**Bolts and Screws:**	INOX A2 steel
Seals (O-Ring):	NBR-SBR rubber	**Grinder cutter:**	Not applicable
****Cooling jacket:**	Fe360 steel	**Painting:**	Ecological epoxy vinyl

** Cooling jacket supplied upon request in series specified

LIMITS ON USE REFERENCE STANDARDS

Max. operating temp.:	40 °C	**Max. sub. depth:**	20 m
Liquid PH:	6 to 10	**Liquid density:**	1 kg/dm³
Viscosity of liquid:	1 mm²/s	**Max. acoustic press.:**	< 70 dB dB

Reference standards:

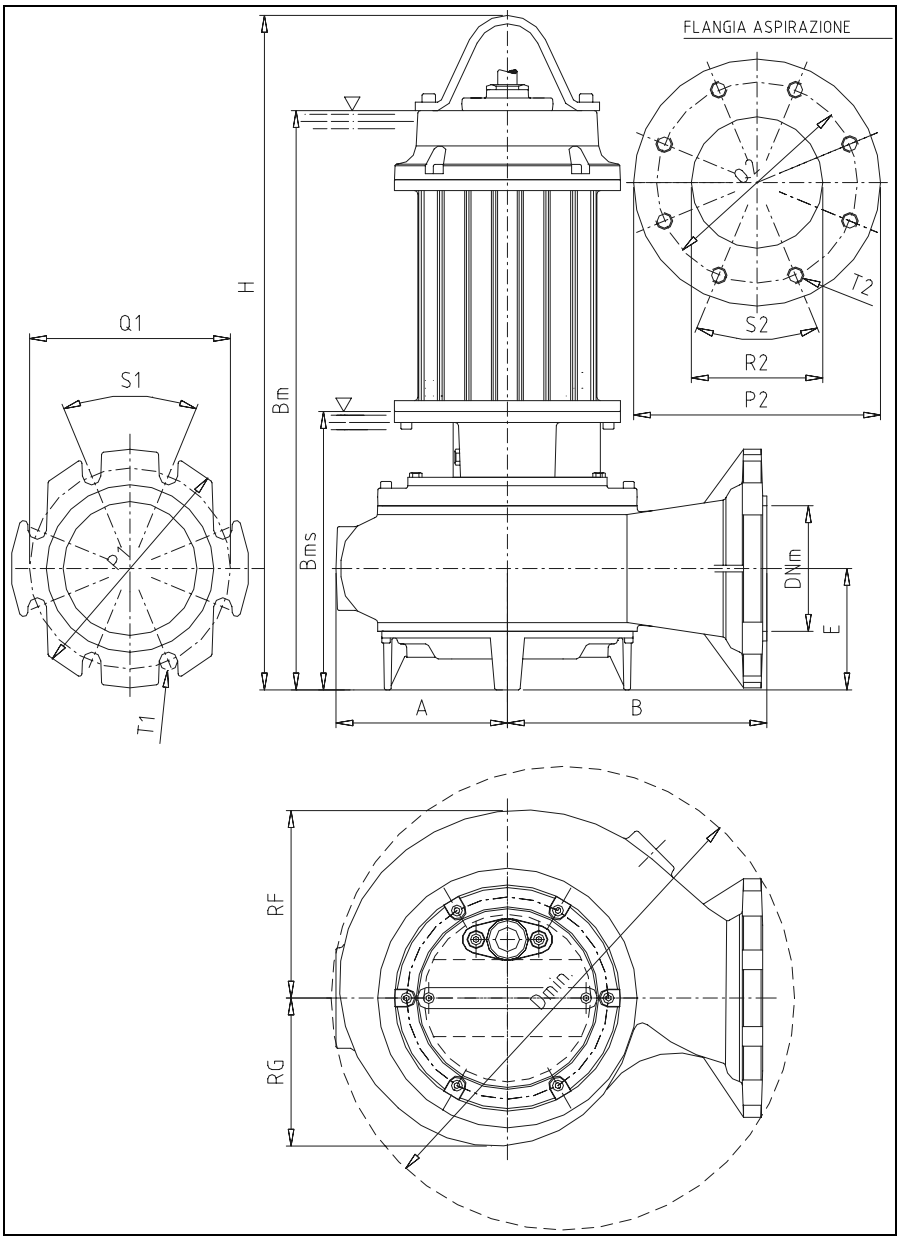
- EN 292-1; EN 292-2; CEI EN 60529; ISO 9906; CEI EN 60034-1.
- CEI EN 60204; UNI ISO 6009; UNI EN 1561-1563; UNI EN 10098.
- Low voltage directive 73/23/CEE.
- Procedures specified by Zenit Europe Quality System, UNI EN ISO 9001 (ISO 9001) certified, DNV n. SQ 0660-IT certified.
- Machines directive 89/392/CEE and successive amendments thereto (directives 91/368/CEE, 93/68/CEE), electromagnetic compatibility directive 89/336/CEE

SYMBOLS

CE — Product complying with European standards in force

Company Quality System complying with UNI ISO norm

VARIANTS AVAILABLE	
Electrical accessories	
T	Thermistor
Set of mechanical seals	
2SICAL	2 mechanical silicon carbide (Viton) seals and 1 mechanical graphite alumina (NBR) seal
Cooling system / mechanical seal flushing versions*	
FT	Seal flushing system employing liquid from outside system
CGFT	Generic cooling jacket and seal flushing



• These drawings do not represent actual product appearance. Refer to the outline on the previous page.

A	B	Bm	Bms	Dmin	DNm	E	H	P1	P2	Q1	Q2	R2	RF	RG	S1	S2	T1
138	150	485	223	312	50	103	530	165	165	125	125	50	131	131	90	90	18
T2																	
M16																	

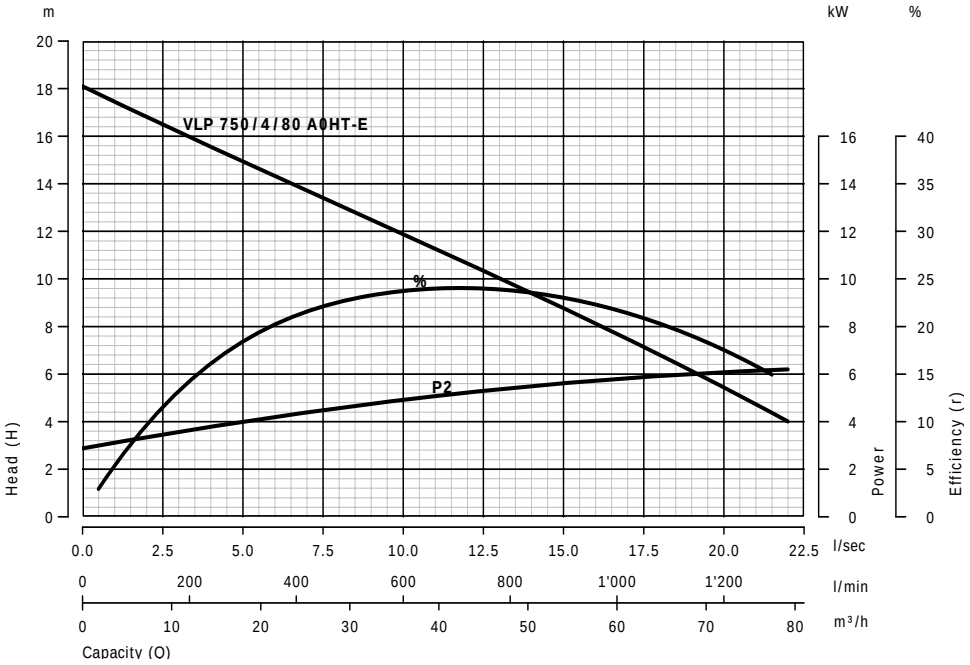
Number of holes in outlet flange 4-DN50 PN10 / Number of holes in suction flange 4-DN50 PN10

Dimensions 'mm' except than: S1-degrees S2-degrees	**Mass:**	26 Kg	**Possible installations:**	I1-I4-I5

*For more information see the descriptive sections

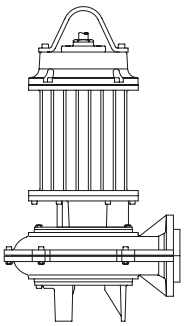
VLP 750/4/80 A0HT-E

Hydraulic model: **"A"**



% = Hydraulic Performance - P2 = Power Delivered

ACTUAL OUTLINE



Hydraulic type:

Multi-channelled polyurethane-coated impeller *

Power/poles:

6,5 kW - 4 Poles

Outlet type:

80 mm UNI PN10 flanged horizontal opening

Explosion-proof:

Pump in NOT ex-proof version

Free passage of solid bodies:

Max 45 mm

ELECTRO-MECHANICAL UNIT

Rated delivered power:	6,5 kW	Motor poles/revolutions:	1450 1/min - 4Poles
Rated absorbed power:	7,9 kW	Motor phases:	T - Three-phase
Rated absorbed current:	14,9 A	Service:	S1 submersible or w/sleeve
Starting current:	68 A	Motor protection:	IP 68
Starting torque:	72,52 Nm	Insulation class (ICL):	H
Rated Cos Ø:	0,77	Max. Starts per hour:	15
Rated motor performance:	82%	Standard cable type:	10 mt-H07RN-F 7G1,5+3x0,75
Detailed description of series:	Submersible pump consisting of an electromechanical unit made of EN-GJL-250 cast iron, suitable for submersible operation, with 3 mechanical seals conventionally installed in an inspectable oil sump. Oil-bathed motor. Separate hydraulic unit. Explosion-proof version not available.*		
Standard mechanical seals	2 mechanical silicon carbide (Viton) seals and 1 mechanical graphite alumina (NBR) seal		
Lifting:	With handle on motor cover with possible hook-up for chain		
Ball bearings:	Upper permanently lubricated ball bearing, lower oil-immersed ball bearing		
Winding type:	Induction motor with oil-filled winding and manual overload protection		
Impregnation type:	Doubly impregnated humidity-resistant winding		
Direction of rotation:	Clockwise seen from top of electric pump		

Data provided above refers to hydraulic tests carried out at: 400/700 Volt 50 Hz

MATERIALS

Mechanical unit:	EN-GJL-250 cast iron	**Hyd. Unit, impeller:**	Vulkollan polyurethane
Shaft:	X30Cr13 (AISI420) steel	**Bolts and Screws:**	INOX A2 steel
Seals (O-Ring):	NBR-SBR rubber	**Grinder cutter:**	Not applicable
****Cooling jacket:**	Fe360 steel	**Painting:**	Ecological epoxy vinyl

** Cooling jacket supplied upon request in series specified

LIMITS ON USE REFERENCE STANDARDS

Max. operating temp.:	40 °C	**Max. sub. depth:**	20 m
Liquid PH:	6 to 10	**Liquid density:**	1 kg/dm³
Viscosity of liquid:	1 mm²/s	**Max. acoustic press.:**	< 70 dB dB

Reference standards:

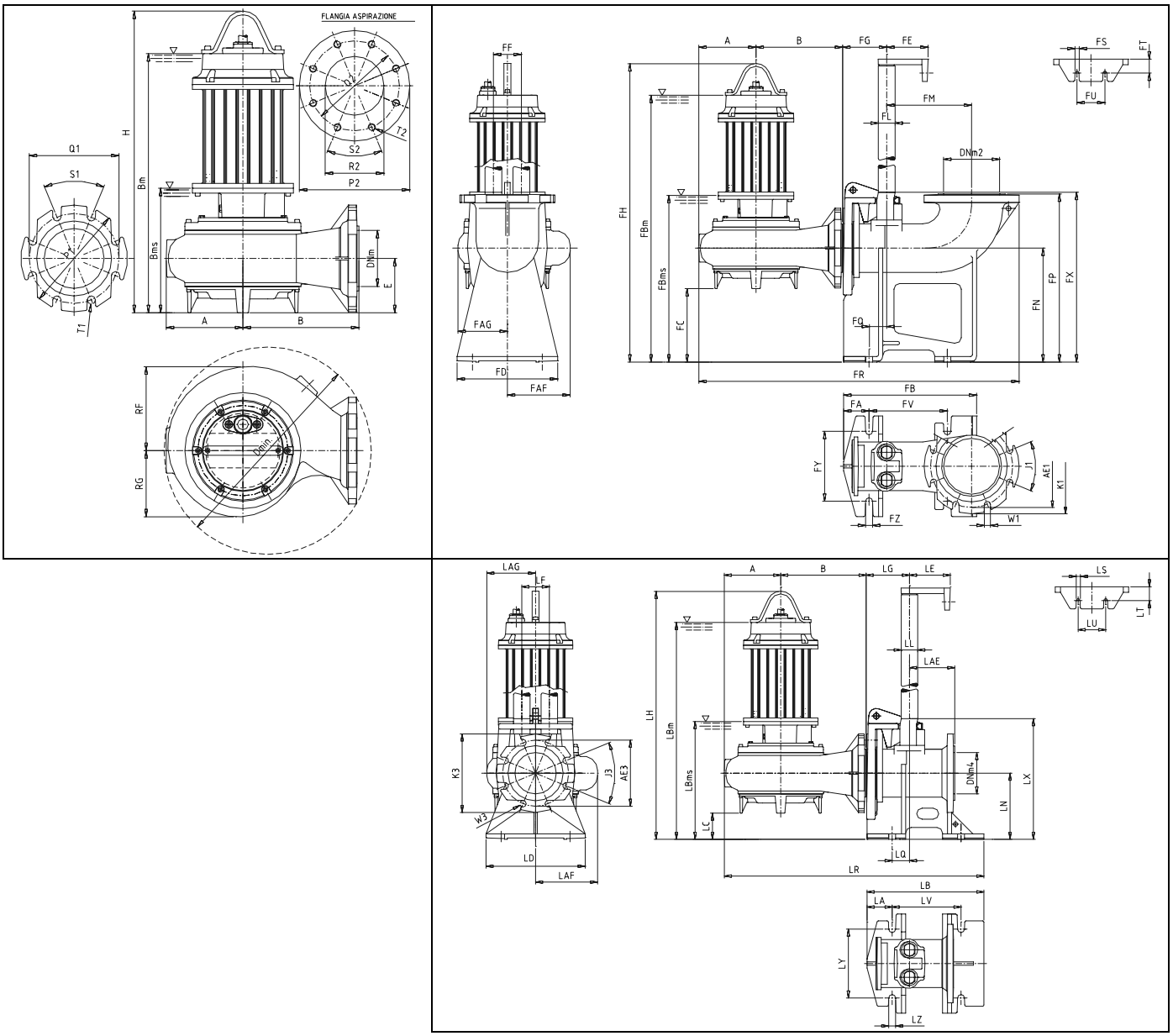
- EN 292-1; EN 292-2; CEI EN 60529; ISO 9906; CEI EN 60034-1.
- CEI EN 60204; UNI ISO 6009; UNI EN 1561-1563; UNI EN 10098.
- Low voltage directive 73/23/CEE.
- Procedures specified by Zenit Europe Quality System, UNI EN ISO 9001 (ISO 9001) certified, DNV n. SQ 0660-IT certified.
- Machines directive 89/392/CEE and successive amendments thereto (directives 91/368/CEE, 93/68/CEE), electromagnetic compatibility directive 89/336/CEE

SYMBOLS

CE — Product complying with European standards in force

Company Quality System complying with UNI ISO norm

VARIANTS AVAILABLE	
Electrical accessories	
T	Thermistor
Set of mechanical seals	
2SICAL	2 mechanical silicon carbide (Viton) seals and 1 mechanical graphite alumina (NBR) seal
Cooling system / mechanical seal flushing versions*	
FT	Seal flushing system employing liquid from outside system
CGFT	Generic cooling jacket and seal flushing



• These drawings do not represent actual product appearance. Refer to the outline on the previous page.

A	AE1	AE3	B	Bm	Bms	Dmin	DNm	DNm2	DNm4	E	FA	FAF	FAG	FB	FBm	FBms	FC
195	160	160	240	659	300	444	80	80	80	164	34	183	183	312	685	326	26
FD	FE	FF	FG	FH	FL	FM	FN	FP	FQ	FR	FS	FT	FU	FV	FX	FY	FZ
232	124	61	99	799	1½	142	190	316	36	776	12	51	34	250	241	200	16
H	J1	J3	K1	K3	LA	LAE	LAF	LAG	LB	LBm	LBms	LC	LD	LE	LF	LG	LH
772	90	90	200	200	34	122	183	183	313	685	326	26	232	148	100	147	799
LL	LN	LQ	LR	LS	LT	LU	LV	LX	LY	LZ	P1	P2	Q1	Q2	R2	RF	RG
2	190	113	748	14	50	100	250	321	200	14	200	185	160	145	80	183	183
S1	S2	T1	T2	W1	W3												
90	90	18	M16	18	18												

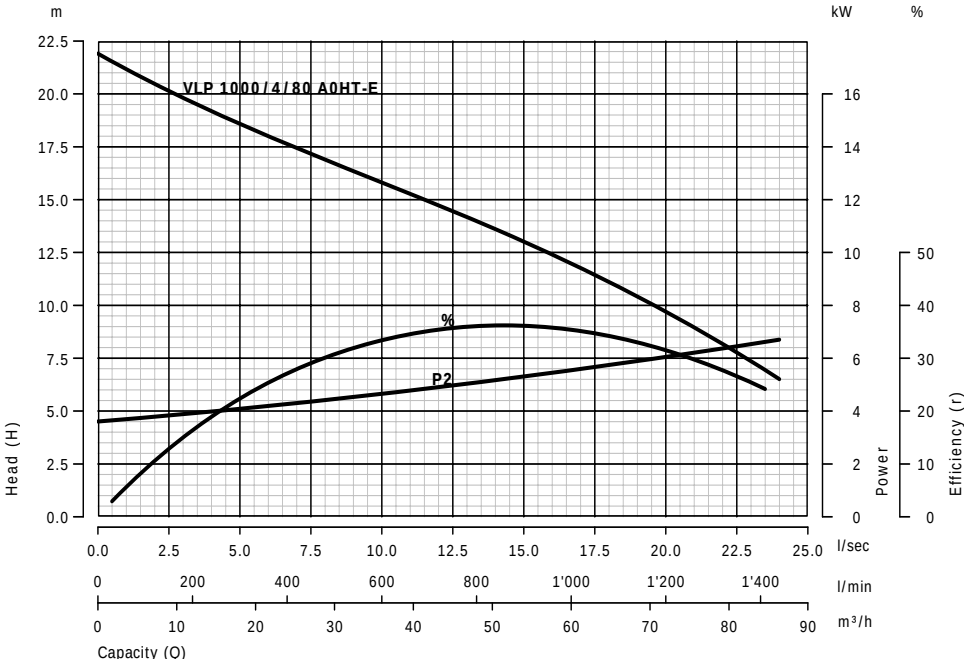
Number of holes in outlet flange 4-DN80 PN10 / Number of holes in suction flange 4-DN65 PN10

Dimensions 'mm' except than: FL-inches J1-degrees J3-degrees LL-inches S1-degrees S2-degrees	**Mass:**	80 Kg	**Possible installations:**	I1-I4-I5

*For more information see the descriptive sections

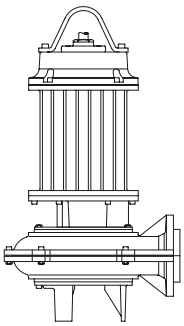
VLP 1000/4/80 A0HT-E

Hydraulic model: **"A"**



% = Hydraulic Performance - P2 = Power Delivered

ACTUAL OUTLINE



Hydraulic type:
Multi-channelled polyurethane-coated impeller *
Power/poles:
8,9 kW - 4 Poles
Outlet type:
80 mm UNI PN10 flanged horizontal opening
Explosion-proof:
Pump in NOT ex-proof version
Free passage of solid bodies:
Max 45 mm

ELECTRO-MECHANICAL UNIT

Rated delivered power:	8,9 kW	Motor poles/revolutions:	1450 1/min - 4Poles
Rated absorbed power:	10,8 kW	Motor phases:	T - Three-phase
Rated absorbed current:	20 A	Service:	S1 submersible or w/sleeve
Starting current:	102 A	Motor protection:	IP 68
Starting torque:	100,94 Nm	Insulation class (ICL):	H
Rated Cos Ø:	0,78	Max. Starts per hour:	10
Rated motor performance:	82%	Standard cable type:	10 mt-H07RN-F 7G1,5+3x0,75
Detailed description of series:	Submersible pump consisting of an electromechanical unit made of EN-GJL-250 cast iron, suitable for submersible operation, with 3 mechanical seals conventionally installed in an inspectable oil sump. Oil-bathed motor. Separate hydraulic unit. Explosion-proof version not available.*		
Standard mechanical seals	2 mechanical silicon carbide (Viton) seals and 1 mechanical graphite alumina (NBR) seal		
Lifting:	With handle on motor cover with possible hook-up for chain		
Ball bearings:	Upper permanently lubricated ball bearing, lower oil-immersed ball bearing		
Winding type:	Induction motor with oil-filled winding and manual overload protection		
Impregnation type:	Doubly impregnated humidity-resistant winding		
Direction of rotation:	Clockwise seen from top of electric pump		

Data provided above refers to hydraulic tests carried out at: 400/700 Volt 50 Hz

MATERIALS

Mechanical unit:	EN-GJL-250 cast iron	**Hyd. Unit, impeller:**	Vulkollan polyurethane
Shaft:	X30Cr13 (AISI420) steel	**Bolts and Screws:**	INOX A2 steel
Seals (O-Ring):	NBR-SBR rubber	**Grinder cutter:**	Not applicable
****Cooling jacket:**	Fe360 steel	**Painting:**	Ecological epoxy vinyl

** Cooling jacket supplied upon request in series specified

LIMITS ON USE REFERENCE STANDARDS

Max. operating temp.:	40 °C	**Max. sub. depth:**	20 m
Liquid PH:	6 to 10	**Liquid density:**	1 kg/dm³
Viscosity of liquid:	1 mm²/s	**Max. acoustic press.:**	< 70 dB dB

Reference standards:

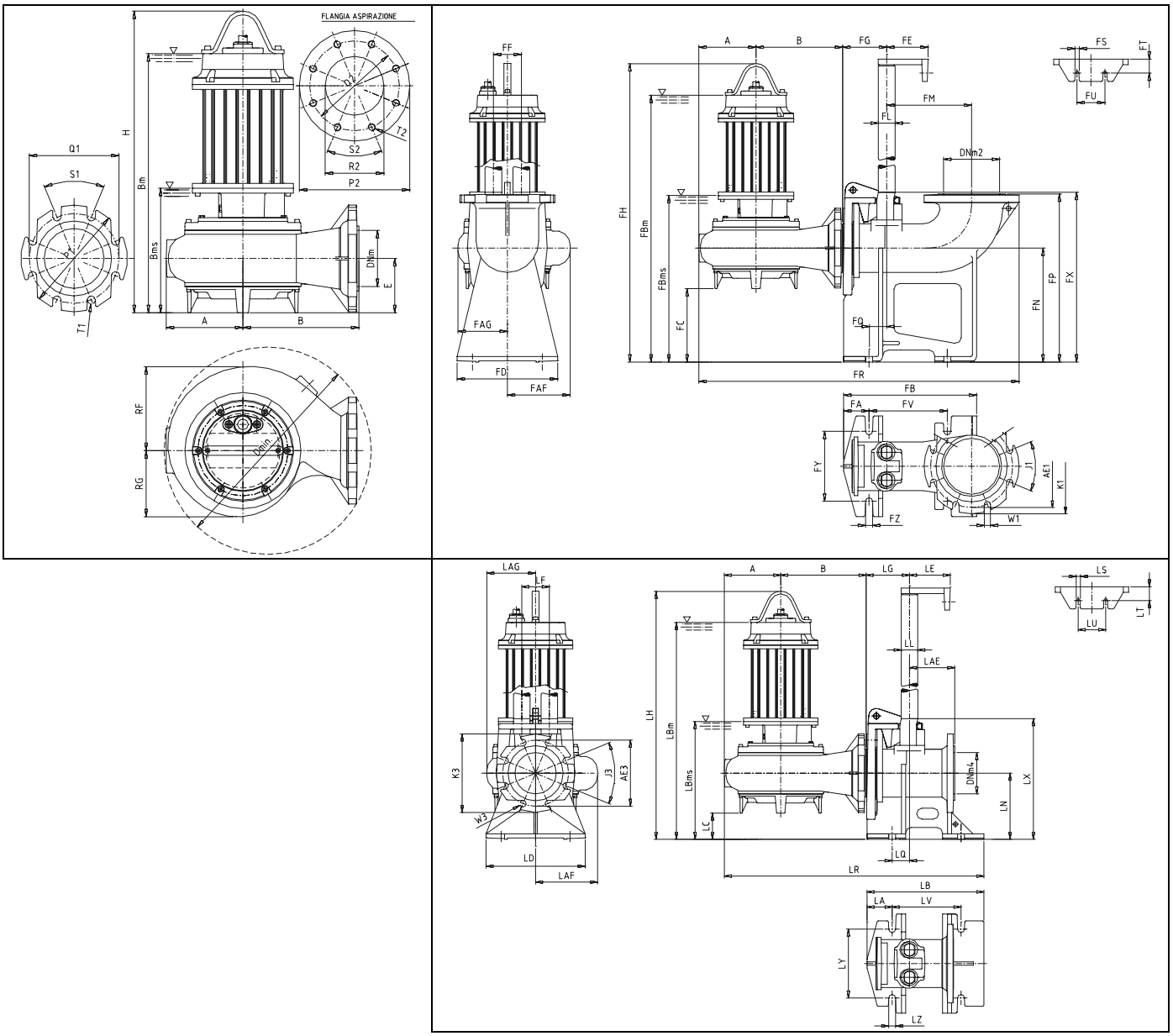
- EN 292-1; EN 292-2; CEI EN 60529; ISO 9906; CEI EN 60034-1.
- CEI EN 60204; UNI ISO 6009; UNI EN 1561-1563; UNI EN 10098.
- Low voltage directive 73/23/CEE.
- Procedures specified by Zenit Europe Quality System, UNI EN ISO 9001 (ISO 9001) certified, DNV n. SQ 0660-IT certified.
- Machines directive 89/392/CEE and successive amendments thereto (directives 91/368/CEE, 93/68/CEE), electromagnetic compatibility directive 89/336/CEE

SYMBOLS

CE — Product complying with European standards in force

Company Quality System complying with UNI ISO norm

VARIANTS AVAILABLE	
Electrical accessories	
T	Thermistor
Set of mechanical seals	
2SICAL	2 mechanical silicon carbide (Viton) seals and 1 mechanical graphite alumina (NBR) seal
Cooling system / mechanical seal flushing versions*	
FT	Seal flushing system employing liquid from outside system
CGFT	Generic cooling jacket and seal flushing



• These drawings do not represent actual product appearance. Refer to the outline on the previous page.

A	AE1	AE3	B	Bm	Bms	Dmin	DNm	DNm2	DNm4	E	FA	FAF	FAG	FB	FBm	FBms	FC
195	160	160	240	659	300	444	80	80	80	164	34	183	183	312	685	326	26
FD	FE	FF	FG	FH	FL	FM	FN	FP	FQ	FR	FS	FT	FU	FV	FX	FY	FZ
232	124	61	99	799	1½	142	190	316	36	776	12	51	34	250	241	200	16
H	J1	J3	K1	K3	LA	LAE	LAF	LAG	LB	LBm	LBms	LC	LD	LE	LF	LG	LH
772	90	90	200	200	34	122	183	183	313	685	326	26	232	148	100	147	799
LL	LN	LQ	LR	LS	LT	LU	LV	LX	LY	LZ	P1	P2	Q1	Q2	R2	RF	RG
2	190	113	748	14	50	100	250	321	200	14	200	185	160	145	80	183	183
S1	S2	T1	T2	W1	W3												
90	90	18	M16	18	18												

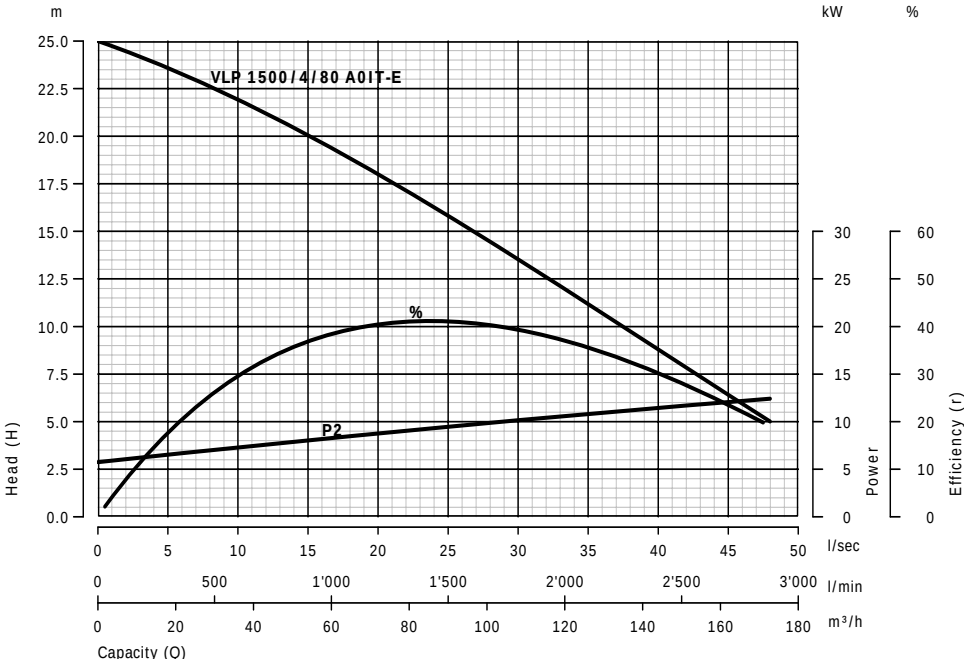
Number of holes in outlet flange 4-DN80 PN10 / Number of holes in suction flange 4-DN65 PN10

Dimensions 'mm' except than: FL-inches J1-degrees J3-degrees LL-inches S1-degrees S2-degrees	**Mass:**	81 Kg	**Possible installations:**	I1-I4-I5

*For more information see the descriptive sections

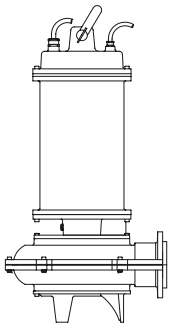
VLP 1500/4/80 A0IT-E

Hydraulic model: **"A"**



% = Hydraulic Performance - P2 = Power Delivered

ACTUAL OUTLINE



Hydraulic type:

Multi-channelled polyurethane-coated impeller *

Power/poles:

13,6 kW - 4 Poles

Outlet type:

80 mm UNI PN10 flanged horizontal opening

Explosion-proof:

Pump in NOT ex-proof version

Free passage of solid bodies:

Max 54 mm

ELECTRO-MECHANICAL UNIT

Rated delivered power:	13,6 kW	Motor poles/revolutions:	1450 1/min - 4Poles
Rated absorbed power:	15,8 kW	Motor phases:	T - Three-phase
Rated absorbed current:	28,2 A	Service:	S1 submersible or w/sleeve
Starting current:	110 A	Motor protection:	IP 68
Starting torque:	127,4 Nm	Insulation class (ICL):	H
Rated Cos Ø:	0,81	Max. Starts per hour:	10
Rated motor performance:	86%	Standard cable type:	10 mt-H07RN-F 2x4G6
Detailed description of series:	Submersible pump consisting of an electromechanical unit made of EN-GJL-250 cast iron, suitable for submersible operation, with 3 mechanical seals conventionally installed in an inspectable oil sump. Oil-bathed motor. Separate hydraulic unit. Explosion-proof version not available.*		
Standard mechanical seals	2 mechanical silicon carbide (Viton) seals and 1 mechanical graphite alumina (NBR) seal		
Lifting:	With eyebolt on motor cover		
Ball bearings:	Upper permanently lubricated ball bearing, lower oil-immersed ball bearing		
Winding type:	Induction motor with oil-filled winding and manual overload protection		
Impregnation type:	Doubly impregnated humidity-resistant winding		
Direction of rotation:	Clockwise seen from top of electric pump		

Data provided above refers to hydraulic tests carried out at: 400/700 Volt 50 Hz

MATERIALS

Mechanical unit:	EN-GJL-250 cast iron	**Hyd. Unit, impeller:**	Vulkollan polyurethane
Shaft:	X30Cr13 (AISI420) steel	**Bolts and Screws:**	INOX A2 steel
Seals (O-Ring):	NBR-SBR rubber	**Grinder cutter:**	Not applicable
****Cooling jacket:**	Fe360 steel	**Painting:**	Ecological epoxy vinyl

** Cooling jacket supplied upon request in series specified

LIMITS ON USE REFERENCE STANDARDS

Max. operating temp.:	40 °C	**Max. sub. depth:**	20 m
Liquid PH:	6 to 10	**Liquid density:**	1 kg/dm³
Viscosity of liquid:	1 mm²/s	**Max. acoustic press.:**	< 70 dB dB

Reference standards:

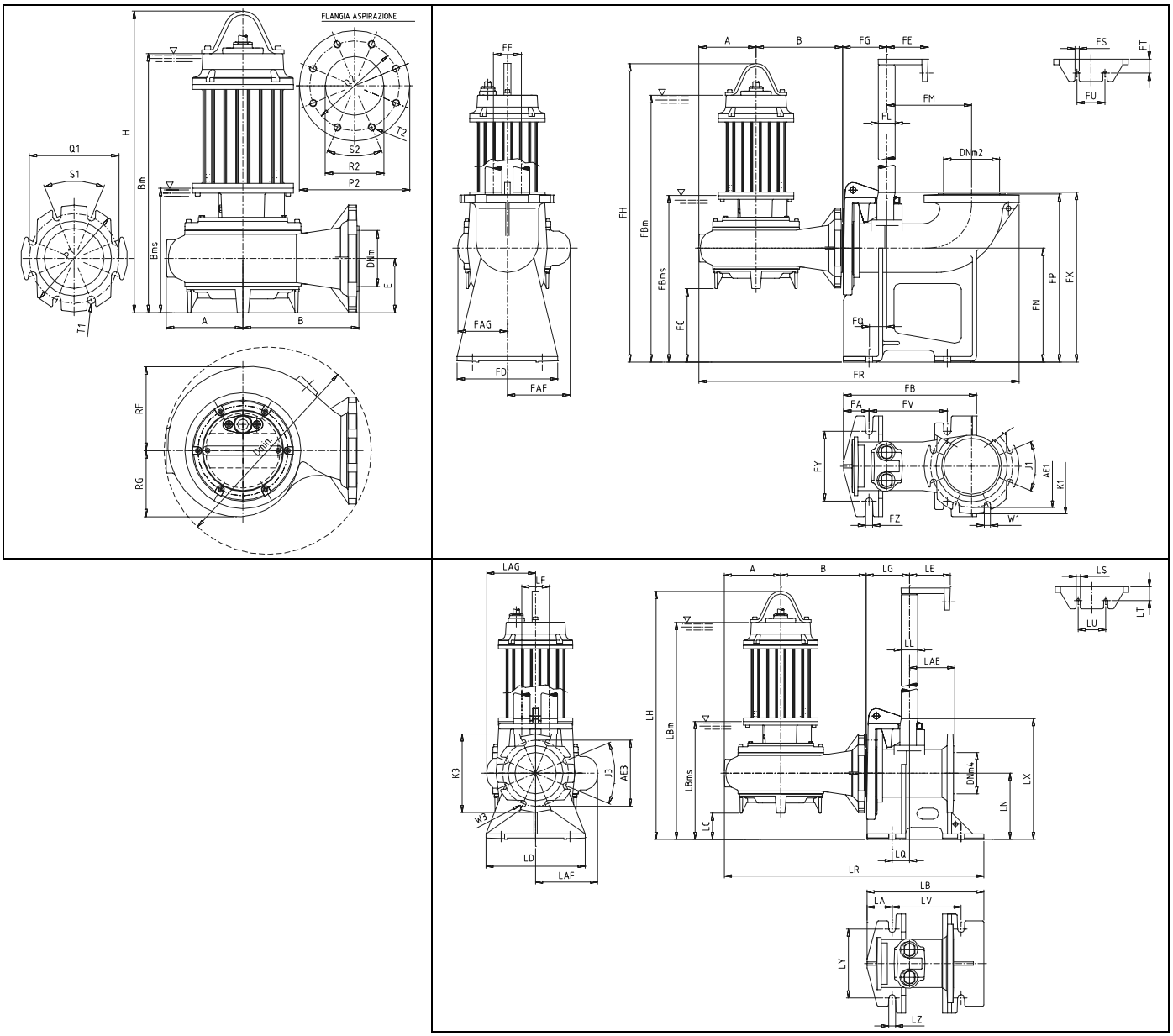
- EN 292-1; EN 292-2; CEI EN 60529; ISO 9906; CEI EN 60034-1.
- CEI EN 60204; UNI ISO 6009; UNI EN 1561-1563; UNI EN 10098.
- Low voltage directive 73/23/CEE.
- Procedures specified by Zenit Europe Quality System, UNI EN ISO 9001 (ISO 9001) certified, DNV n. SQ 0660-IT certified.
- Machines directive 89/392/CEE and successive amendments thereto (directives 91/368/CEE, 93/68/CEE), electromagnetic compatibility directive 89/336/CEE

SYMBOLS

CE — Product complying with European standards in force

Company Quality System complying with UNI ISO norm

VARIANTS AVAILABLE	
Electrical accessories	
T	Thermistor
Set of mechanical seals	
2SICAL	2 mechanical silicon carbide (Viton) seals and 1 mechanical graphite alumina (NBR) seal
Cooling system / mechanical seal flushing versions*	
FT	Seal flushing system employing liquid from outside system
CGFT	Generic cooling jacket and seal flushing



• These drawings do not represent actual product appearance. Refer to the outline on the previous page.

A	AE1	AE3	B	Bm	Bms	Dmin	DNm	DNm2	DNm4	E	FA	FAF	FAG	FB	FBm	FBms	FC
233	160	160	258	831	330	444	80	80	80	176	34	220	220	312	845	344	14
FD	FE	FF	FG	FH	FL	FM	FN	FP	FQ	FR	FS	FT	FU	FV	FX	FY	FZ
232	124	61	99	899	1½	142	190	316	36	832	12	51	34	250	241	200	16
H	J1	J3	K1	K3	LA	LAE	LAF	LAG	LB	LBm	LBms	LC	LD	LE	LF	LG	LH
890	90	90/45	200	200	34	122	220	220	313	845	344	14	232	148	100	147	899
LL	LN	LQ	LR	LS	LT	LU	LV	LX	LY	LZ	P1	P2	Q1	Q2	R2	RF	RG
2	190	113	804	14	50	100	250	321	200	14	200	185	160	145	80	220	220
S1	S2	T1	T2	W1	W3												
90	90	18	M16	18	18												

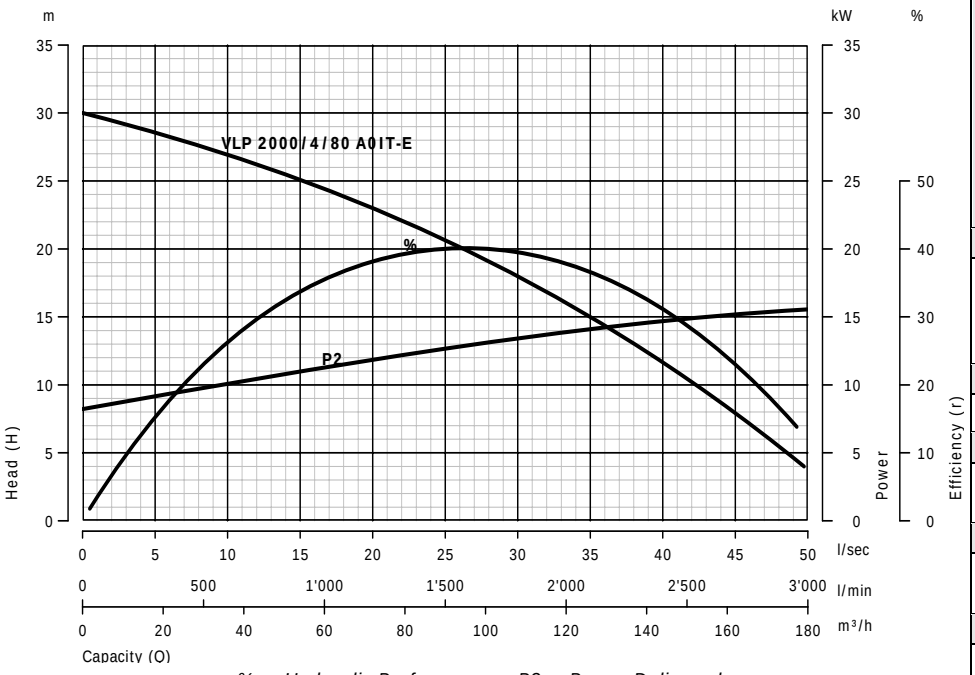
Number of holes in outlet flange 4-DN80 PN10 / Number of holes in suction flange 4-DN65 PN10

Dimensions 'mm' except than: FL-inches J1-degrees J3-degrees LL-inches S1-degrees S2-degrees	**Mass:**	172 Kg	**Possible installations:**	I1-I4-I5

*For more information see the descriptive sections

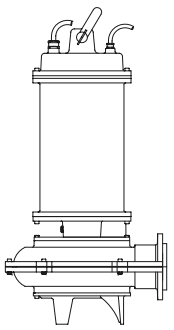
VLP 2000/4/80 A0IT-E

Hydraulic model: **"A"**



% = Hydraulic Performance - P2 = Power Delivered

ACTUAL OUTLINE



Hydraulic type:	
Multi-channelled polyurethane-coated impeller *	
Power/poles:	
16,4 kW - 4 Poles	
Outlet type:	
80 mm UNI PN10 flanged horizontal opening	
Explosion-proof:	
Pump in NOT ex-proof version	
Free passage of solid bodies:	
Max 54 mm	

ELECTRO-MECHANICAL UNIT

Rated delivered power:	16,4 kW	Motor poles/revolutions:	1450 1/min - 4Poles
Rated absorbed power:	19,6 kW	Motor phases:	T - Three-phase
Rated absorbed current:	36 A	Service:	S1 submersible or w/sleeve
Starting current:	151 A	Motor protection:	IP 68
Starting torque:	188,16 Nm	Insulation class (ICL):	H
Rated Cos Ø:	0,79	Max. Starts per hour:	10
Rated motor performance:	84%	Standard cable type:	10 mt-H07RN-F 2x4G6
Detailed description of series:	Submersible pump consisting of an electromechanical unit made of EN-GJL-250 cast iron, suitable for submersible operation, with 3 mechanical seals conventionally installed in an inspectable oil sump. Oil-bathed motor. Separate hydraulic unit. Explosion-proof version not available.*		
Standard mechanical seals	2 mechanical silicon carbide (Viton) seals and 1 mechanical graphite alumina (NBR) seal		
Lifting:	With eyebolt on motor cover		
Ball bearings:	Upper permanently lubricated ball bearing, lower oil-immersed ball bearing		
Winding type:	Induction motor with oil-filled winding and manual overload protection		
Impregnation type:	Doubly impregnated humidity-resistant winding		
Direction of rotation:	Clockwise seen from top of electric pump		

Data provided above refers to hydraulic tests carried out at: 400/700 Volt 50 Hz

MATERIALS

Mechanical unit:	EN-GJL-250 cast iron	**Hyd. Unit, impeller:**	Vulkollan polyurethane
Shaft:	X30Cr13 (AISI420) steel	**Bolts and Screws:**	INOX A2 steel
Seals (O-Ring):	NBR-SBR rubber	**Grinder cutter:**	Not applicable
****Cooling jacket:**	Fe360 steel	**Painting:**	Ecological epoxy vinyl

** Cooling jacket supplied upon request in series specified

LIMITS ON USE REFERENCE STANDARDS

Max. operating temp.:	40 °C	**Max. sub. depth:**	20 m
Liquid PH:	6 to 10	**Liquid density:**	1 kg/dm³
Viscosity of liquid:	1 mm²/s	**Max. acoustic press.:**	< 70 dB dB

Reference standards:

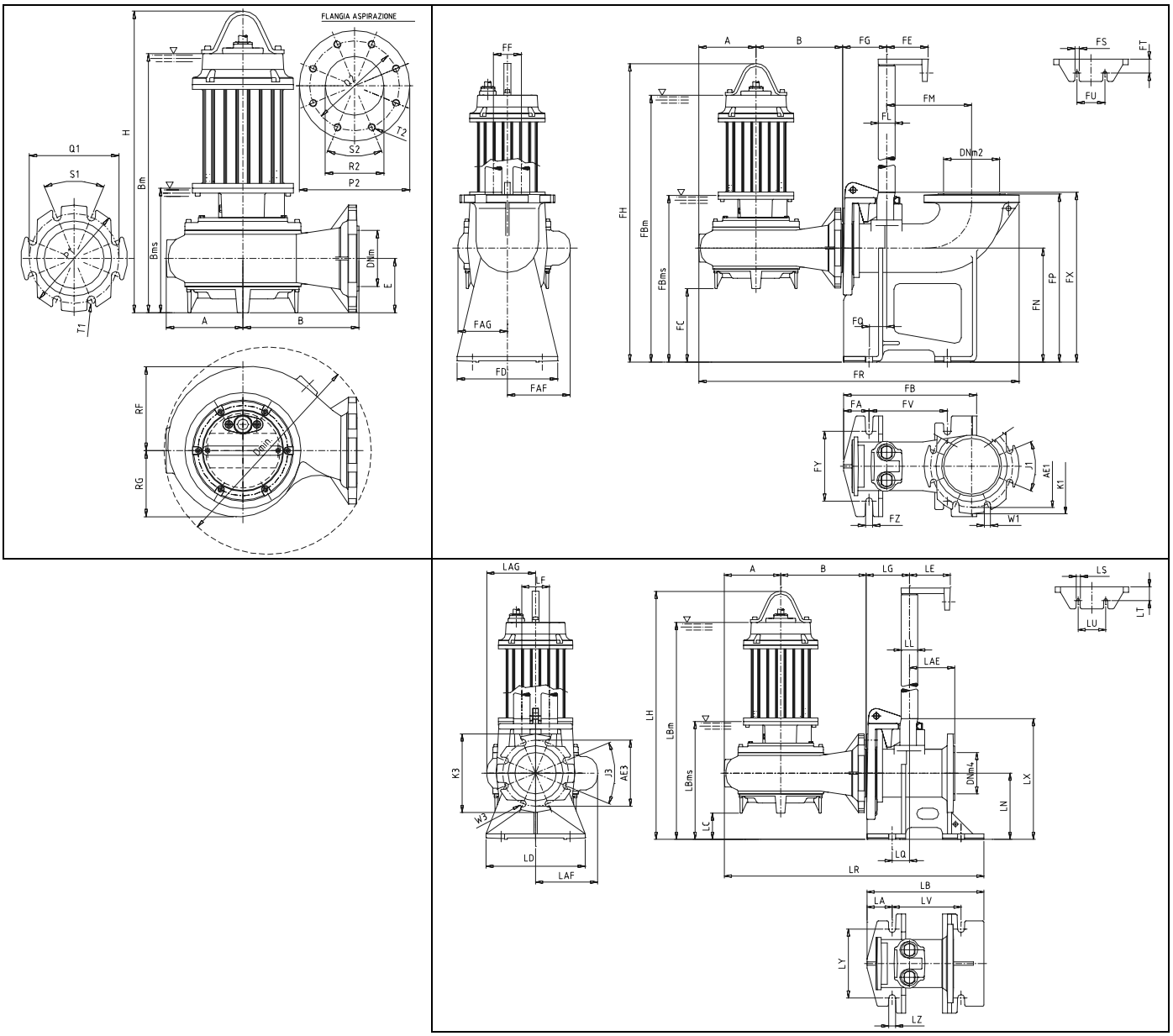
- EN 292-1; EN 292-2; CEI EN 60529; ISO 9906; CEI EN 60034-1.
- CEI EN 60204; UNI ISO 6009; UNI EN 1561-1563; UNI EN 10098.
- Low voltage directive 73/23/CEE.
- Procedures specified by Zenit Europe Quality System, UNI EN ISO 9001 (ISO 9001) certified, DNV n. SQ 0660-IT certified.
- Machines directive 89/392/CEE and successive amendments thereto (directives 91/368/CEE, 93/68/CEE), electromagnetic compatibility directive 89/336/CEE

SYMBOLS

CE — Product complying with European standards in force

Company Quality System complying with UNI ISO norm

VARIANTS AVAILABLE	
Electrical accessories	
T	Thermistor
Set of mechanical seals	
2SICAL	2 mechanical silicon carbide (Viton) seals and 1 mechanical graphite alumina (NBR) seal
Cooling system / mechanical seal flushing versions*	
FT	Seal flushing system employing liquid from outside system
CGFT	Generic cooling jacket and seal flushing



- These drawings do not represent actual product appearance. Refer to the outline on the previous page.

A	AE1	AE3	B	Bm	Bms	Dmin	DNm	DNm2	DNm4	E	FA	FAF	FAG	FB	FBm	FBms	FC
233	160	160	258	831	330	444	80	80	80	176	34	220	220	312	845	344	14
FD	FE	FF	FG	FH	FL	FM	FN	FP	FQ	FR	FS	FT	FU	FV	FX	FY	FZ
232	124	61	99	899	1½	142	190	316	36	832	12	51	34	250	241	200	16
H	J1	J3	K1	K3	LA	LAE	LAF	LAG	LB	LBm	LBms	LC	LD	LE	LF	LG	LH
890	90	90/45	200	200	34	122	220	220	313	845	344	14	232	148	100	147	899
LL	LN	LQ	LR	LS	LT	LU	LV	LX	LY	LZ	P1	P2	Q1	Q2	R2	RF	RG
2	190	113	804	14	50	100	250	321	200	14	200	185	160	145	80	220	220
S1	S2	T1	T2	W1	W3												
90	90	18	M16	18	18												

Number of holes in outlet flange 4-DN80 PN10 / Number of holes in suction flange 4-DN65 PN10

Dimensions 'mm' except than: FL-inches J1-degrees J3-degrees LL-inches S1-degrees S2-degrees	**Mass:**	190 Kg	**Possible installations:**	I1-I4-I5

*For more information see the descriptive sections

www.zenit.com info@zenit.com

Cod. 0904#0603804_0
Rev. 0 - 30/11/04