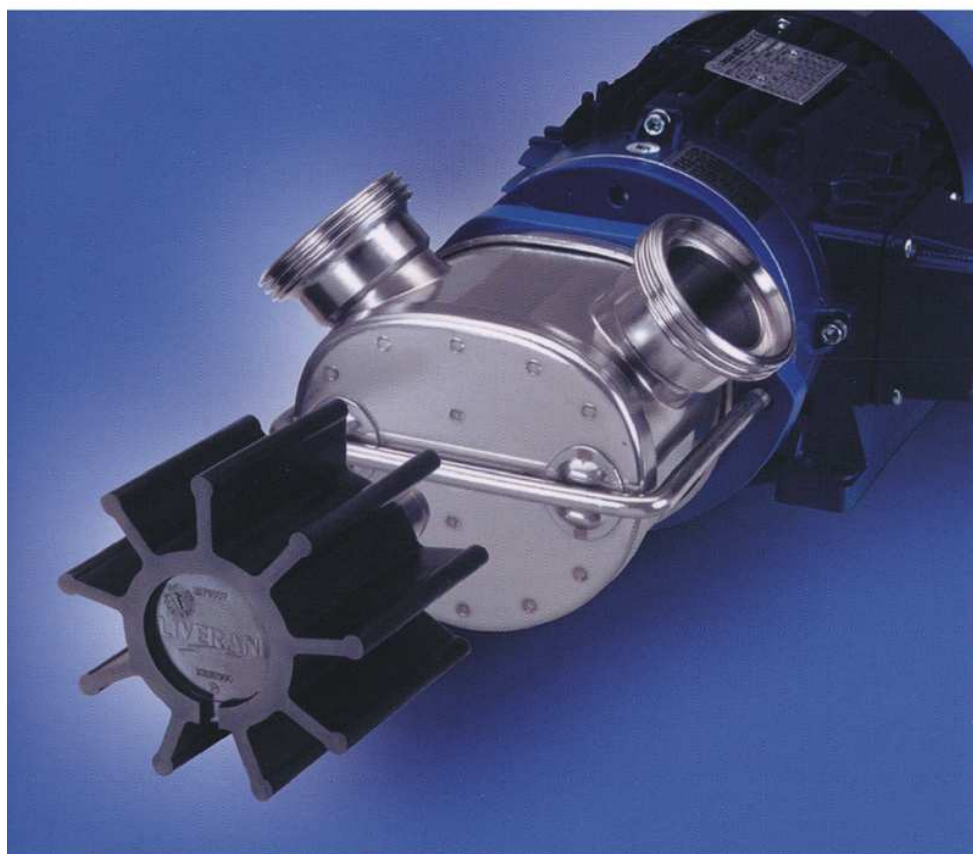
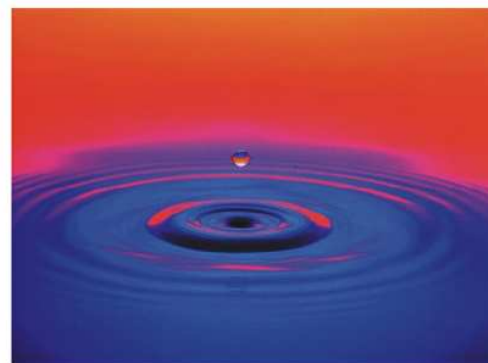


POMPE A GIRANTE FLESSIBILE

FLEXIBLE IMPELLER PUMPS



CATALOGO
TECNICO

TECHNICAL
CATALOGUE

LIVERANI

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POMPE AD ASSE NUDO

BARE SHAFT PUMPS

POMPE CON MOTORE IDRAULICO ORBITALE

HYDRAULIC ORBITAL MOTOR PUMPS

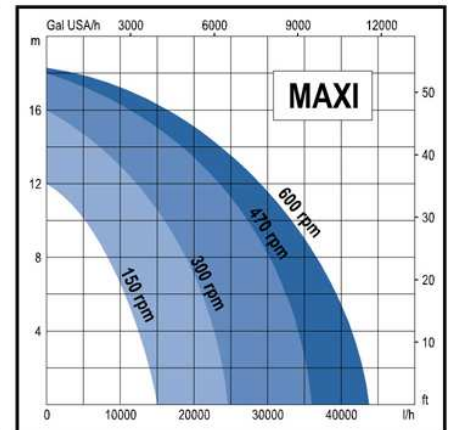
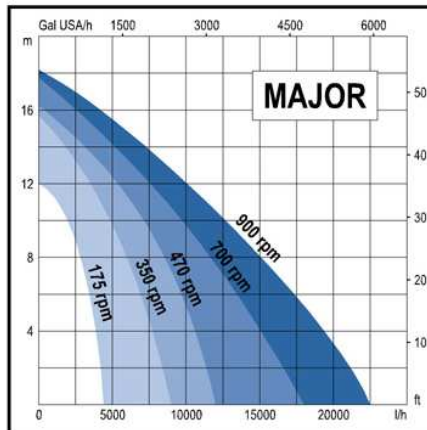
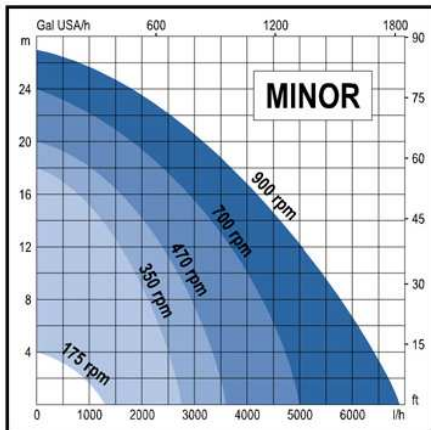
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POMPE AD ASSE NUDO (S/P)
BARE SHAFT PUMPS (S/P)

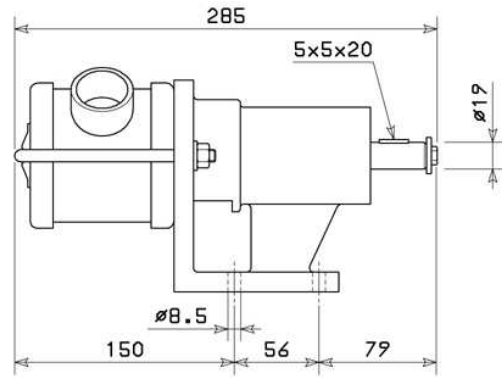
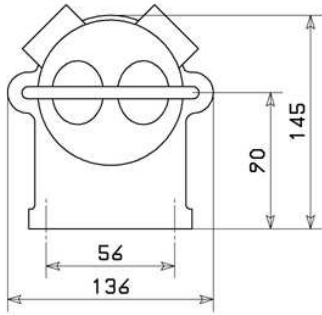


POMPE CON MOTORE IDRAULICO ORBITALE (MID)
HYDRAULIC ORBITAL MOTOR PUMPS (MID)

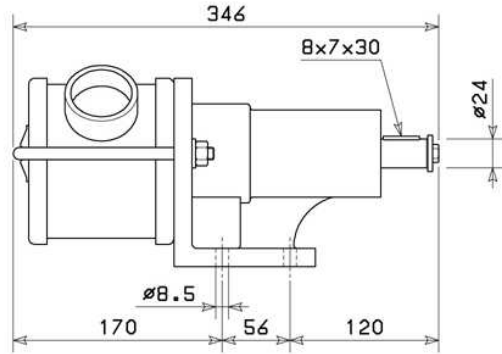
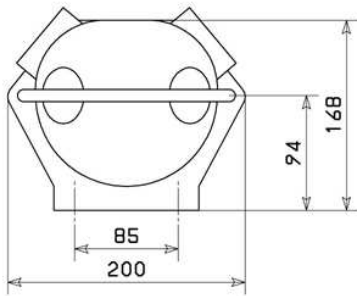


Tipo Type	Peso/Weight		Giri/min Rpm	H(m) = Prevalenza / Head - Q (l/h) = Portata / Capacity											
	S/P	MID		0	4	8	12	16	18	20	24	27	H		
MINOR 40	5,4 kg	11,7 kg	min 175	1320	0										
			350	2750	2500	2100	1600	800	0						
			470	3600	3300	2900	2400	1600	1000	0					
			700	5000	4700	4300	3700	3000	2520	1800	0				
			max 900	6900	6200	5760	5040	4200	3660	3200	1800	0			
MAJOR 60	9,7 kg	16 kg	min 175	4320	3840	3000	0								
			350	9000	7800	6000	3700	0							
			470	12000	10500	8700	5100	0							
			700	18000	15000	12000	8400	2500	0						
			max 900	22500	19560	15000	11220	3000	0						
MAXI 80	15,7 kg	22 kg	min 150	15000	12000	8700	0								
			300	24600	22200	18900	12000	0							
			470	36000	34200	30000	24000	12000	0						
			max 600	43800	41400	36000	30000	16000	0						

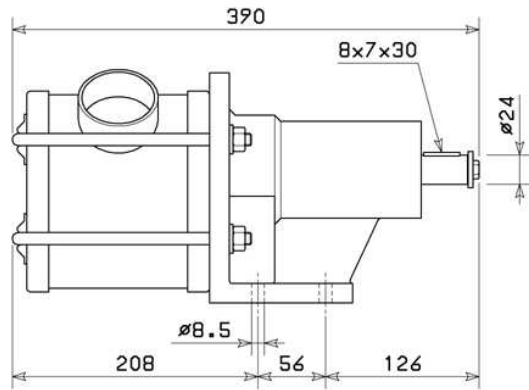
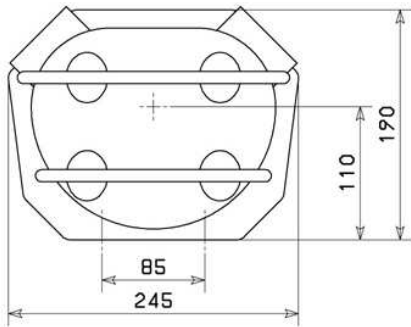
MINOR



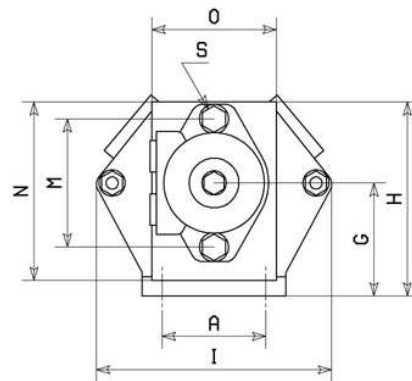
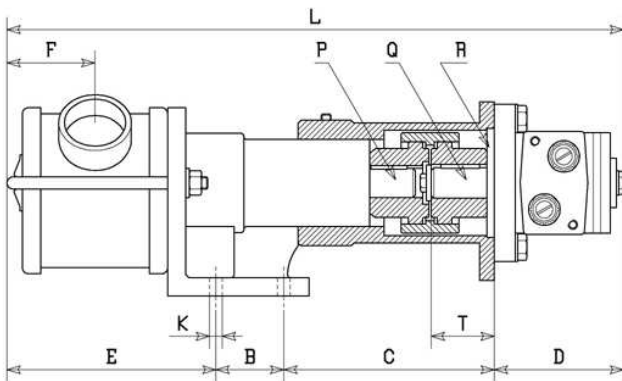
MAJOR



MAXI



MID

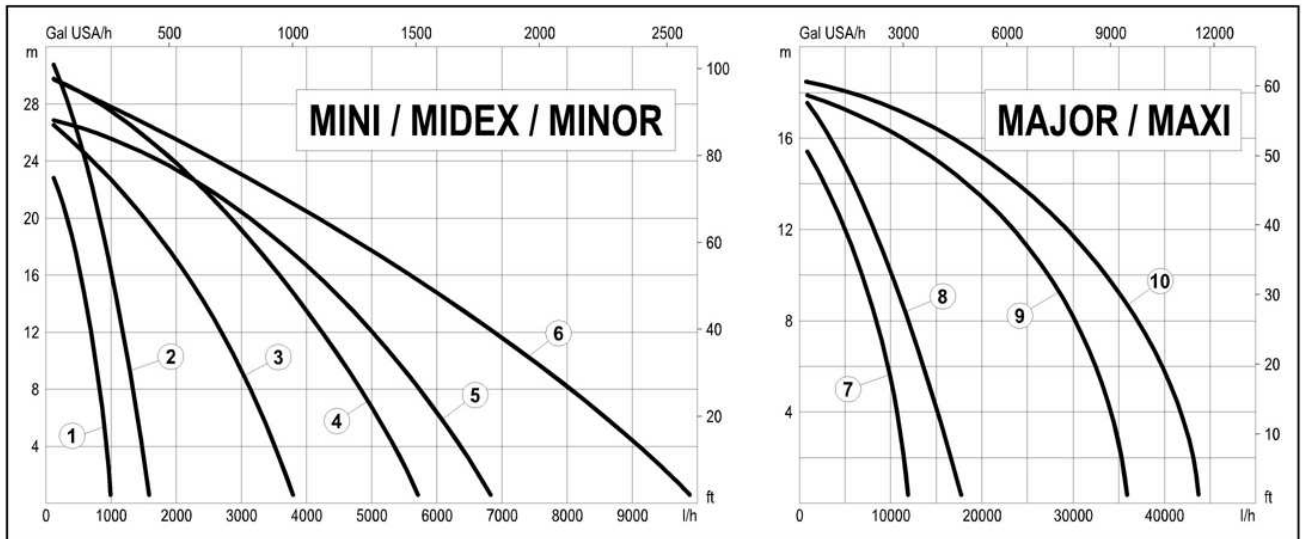
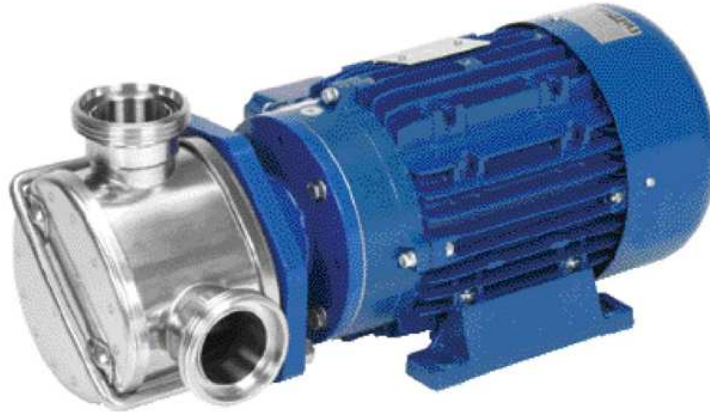


Tipo/Type	A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	Q	R	S	T
MINOR 40	56	56	141	107	150	60	90	157	136	ø8.5	454	106	146	103	ø19	ø25	ø82.5	M12	69
MAJOR 60	85	56	175	107	170	70	94	161	200	ø8.5	508	106	146	103	ø24	ø25	ø90	M12	52
MAXI 80	85	56	182	107	208	90	110	177	245	ø8.5	553	106	146	103	ø24	ø25	ø90	M12	52

ELETTROPOMPE COASSIALI

COAXIAL PUMPS

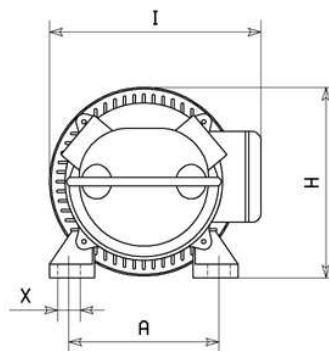
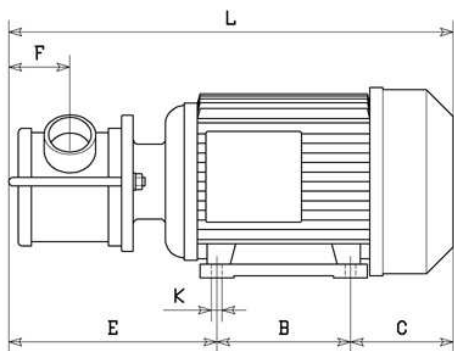
4



Tipo Type	Peso Weight	Motore/Motor **			Giri/min Rpm	Rif. Ref.	H (m) = prevalenza / Head - Q (l/h) = Portata / Capacity													
		Tipo/Type	HP	kW			0	4	8	12	16	18	24	27	30	32	H			
EP MINI 3/4"	9,3 kg	MF TF	0,5	0,37	900	1	1000	900	840	720	540	450	0				Q			
	9 kg	MF TF	0,75	0,56	1400	2	1620	1440	1320	1140	1020	900	600	400	180	0				
EP MIDEX 1" 1/4	15 kg	MF TF	0,75	0,56	900	3	3840	3480	3180	2760	2160	1800	720	0		Q				
	15 kg	MF TF	1	0,75	1400	4	5760	5160	4800	4320	3600	3180	1920	1200	0					
EP MINOR 40	20 kg	MF TF	2	1,49	900	5	6900	6200	5760	5040	4200	3660	1800	0				Q		
	20 kg	TF	2	1,49	1400	6	10000	9000	8000	6900	5500	4900	2600	1700	0					
	27 kg	TF	2,8	2,09	900	5	6900	6200	5760	5040	4200	3660	1800	0						
			1,6	1,19	1400	6	10000	9000	8000	6900	5500	4900	2600	1700	0					
EP MAJOR 60	38 kg	TF	1,5	1,12	470	7	12000	10500	8700	5100	0								Q	
	31 kg	TF	2	1,49	700	8	18000	15000	12000	8400	2500	0								
EP MAXI 80	68 kg	TF	4,5	3,35	470	9	36000	34200	30000	24000	12000	0								Q
	68 kg	TF	4,5	3,35	600	10	43800	41400	36000	30000	16000	0								

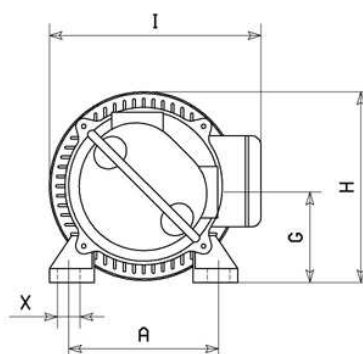
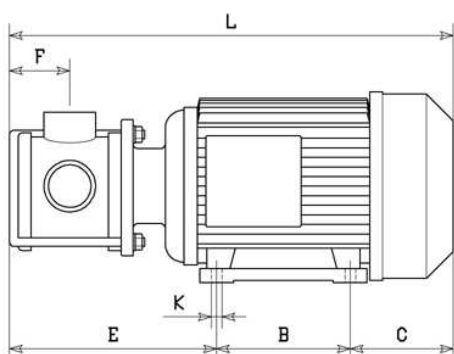
** MF = Monofase/Single-phase TF = Trifase/Three-phase

Pos. V



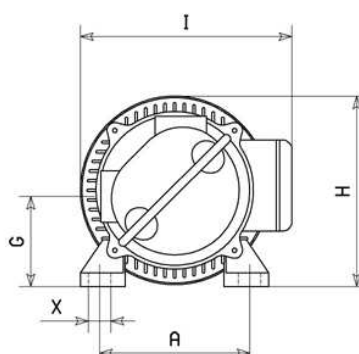
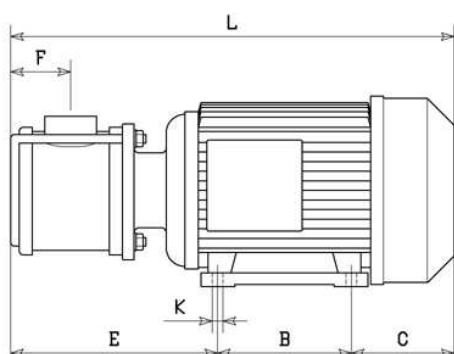
Tipo/Type	Giri/min / Rpm		L	H	I	A	B	C	E	F	K	X
EP MINI 3/4"	900	1400	276	140	180	112	90	80	106	26	7	12
EP MIDEX 1"1/4	900	1400	338	159	215	125	100	85	153	38	8	16
EP MINOR 40	900	1400	420	180	238	140	125	95	200	60	10	16
	900/1400		455	198	250	160	140	107	208	60	12	21
EP MAJOR 60	700		490	198	250	160	140	107	243	70	12	21
	470		514	225	275	190	140	115	259	70	12	22
EP MAXI 80	470	600	630	261	322	216	178	143	309	90	12	22

Pos. 90D



Tipo/Type	Giri/min / Rpm		L	H	I	A	B	C	E	F	G	K	X
EP MINI 3/4"	900	1400	276	140	180	112	90	80	106	26	70	7	12
EP MIDEX 1"1/4	900	1400	338	159	215	125	100	85	153	38	70	8	16
EP MINOR 40	900	1400	420	180	238	140	125	95	200	60	84	10	16
	900/1400		455	198	250	160	140	107	208	60	94	12	21
EP MAJOR 60	700		490	198	250	160	140	107	243	70	82	12	21
	470		514	225	275	190	140	115	259	70	82	12	22
EP MAXI 80	470	600	630	261	330	216	178	143	309	90	115	12	22

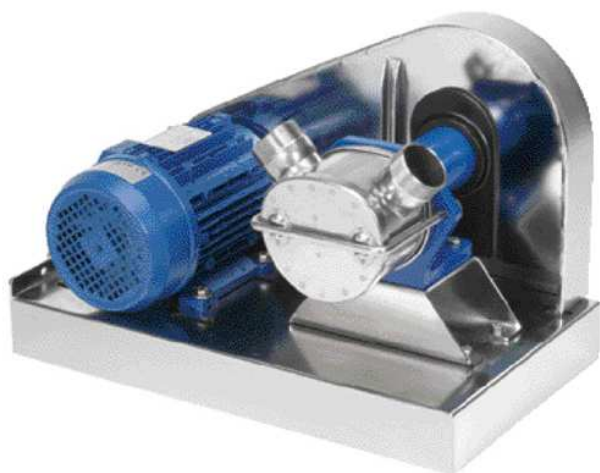
Pos. 90S



Tipo/Type	Giri/min / Rpm		L	H	I	A	B	C	E	F	G	K	X
EP MINI 3/4"	900	1400	276	140	180	112	90	80	106	26	70	7	12
EP MIDEX 1"1/4	900	1400	338	159	215	125	100	85	153	38	70	8	16
EP MINOR 40	900	1400	420	180	238	140	125	95	200	60	84	10	16
	900/1400		455	198	250	160	140	107	208	60	94	12	21
EP MAJOR 60	700		490	198	250	160	140	107	243	70	82	12	21
	470		514	225	275	190	140	115	259	70	82	12	22
EP MAXI 80	470	600	630	261	322	216	178	143	309	90	115	12	22

POMPE CON RIDUZIONE A PULEGGIA SU BASE O CARRELLO BELT DRIVEN PUMPS ON BASE OR TROLLEY

6



GRUPPO A PULEGGIA SU BASE
BELT DRIVEN PUMP ON BASE

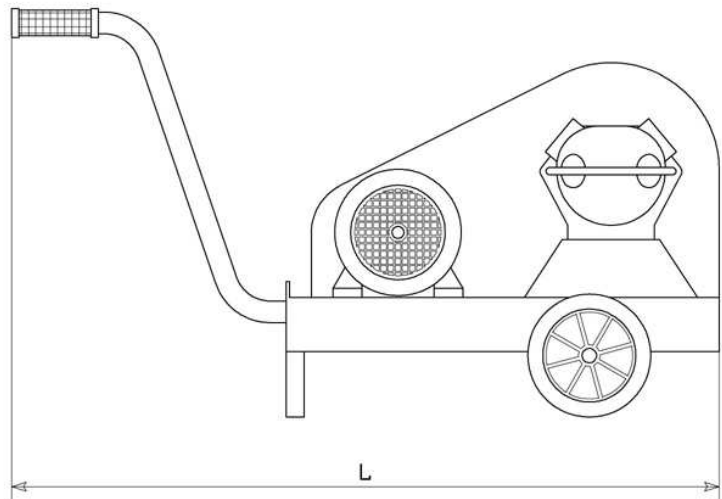
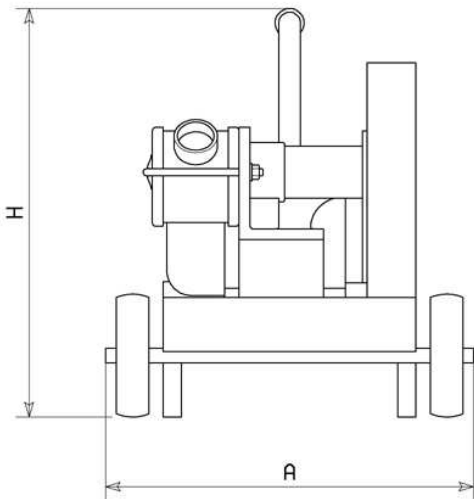
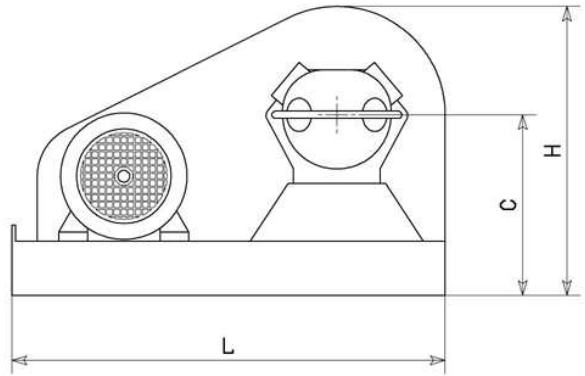
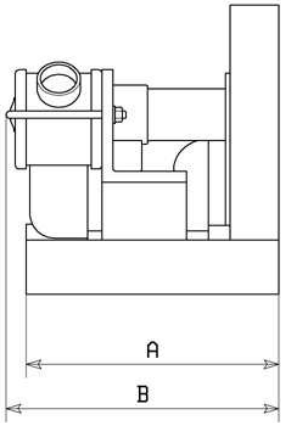
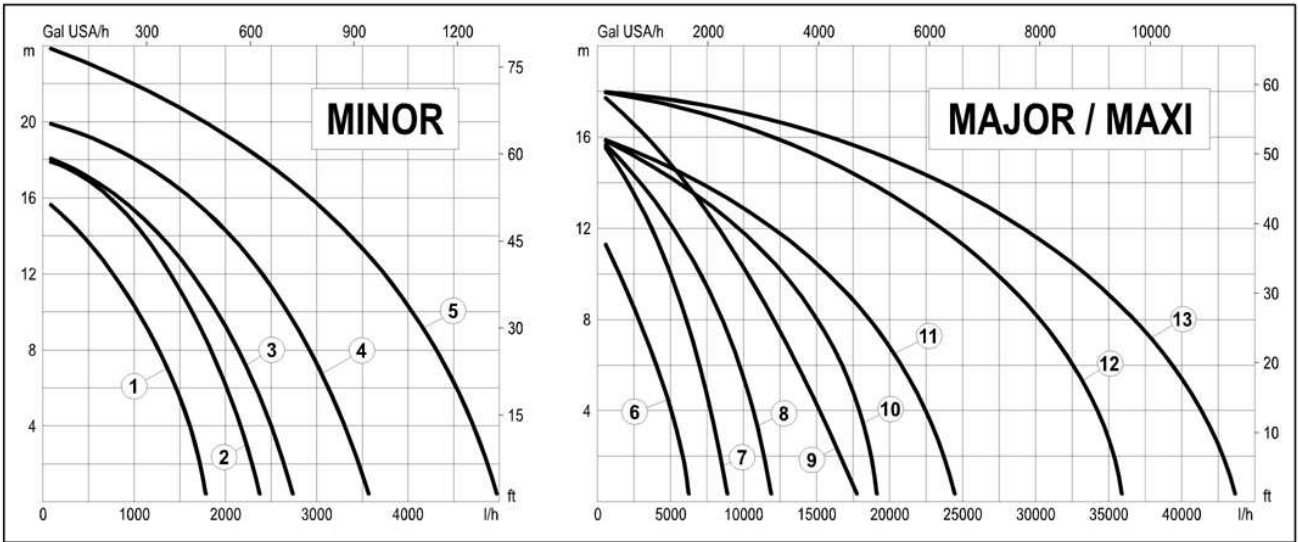


GRUPPO A PULEGGIA SU CARRELLO
BELT DRIVEN PUMP ON TROLLEY

Tipo Type	Peso* Weight*	Motore/Motor **			Velocità Speed	Giri/min Rpm	Rif. Ref.	H (m) = Prevalenza / Head - Q (l/h) = Portata / Capacity							
		Tipo/Type	HP	kW				0	4	8	12	16	18	20	24
GR MINOR 40	36-38 kg	MF TF	2	1,49	1	300	2	2400	2150	1800	1400	700	0		
	36-38 kg	MF TF	2	1,49	1	470	4	3600	3300	2900	2400	1600	1000	0	
	36-38 kg	MF TF	2	1,49	1	700	5	5000	4700	4300	3700	3000	2520	1800	0
	45-46 kg	TF	2,4 1,4	1,79 1,04	2	470 235	4 1	3600 1800	3300 1600	2900 1300	2400 750	1600 0	1000	0	
	40-41 kg	TF	3 2	2,24 1,49	2	700 350	5 3	5000 2750	4700 2500	4300 2100	3700 1600	3000 800	2520	1800	0
GR MAJOR 60	42-44 Kg	MF TF	2	1,49	1	470	8	12000	10500	8700	5100	0			
	42-44 kg	TF	2,5	1,86	1	700	9	18000	15000	12000	8400	2500	0		
	51-53 kg	TF	2,4 1,4	1,79 1,04	2	470 235	8 6	12000 6300	10500 5100	8700 2700	5100 0	0			
	44-45 kg	TF	3 2	2,24 1,49	2	700 350	9 7	18000 9000	15000 7800	12000 6000	8400 3700	2500 0	0		
GR MAXI 80	65-67 kg	TF	5,5	4,10	1	470	12	36000	34200	30000	24000	12000	0		
	65-67 kg	TF	5,5	4,10	1	600	13	43800	41400	36000	30000	16000	0		
	93-95 kg	TF	5,5 3,5	4,10 2,61	2	470 235	12 10	36000 19200	34200 18000	30000 15000	24000 9600	12000 0	0		
	93-95 kg	TF	5,5 3,5	4,10 2,61	2	600 300	13 11	43800 24600	41400 22200	36000 18900	30000 12000	16000 0	0		

*Gruppo su base-Gruppo su carrello / Group on base-Group on trolley

**MF = Monofase/Single-phase TF = Trifase/Three-phase

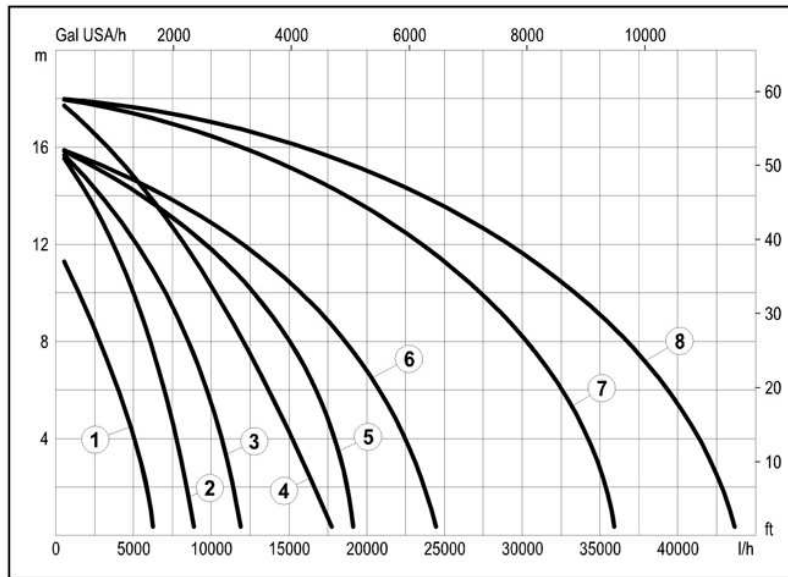


Tipo Type	Velocità Speed	Gruppi su base / Group on base					Gruppi carrellati / Group on trolley		
		L	A	B	C	H	L	A	H
GR MINOR 40	1-2	600	350	-	245	400	1000	500	610
GR MAJOR 60	1-2	600	350	375	250	400	1000	500	610
GR MAXI 80	1	600	350	430	265	400	1000	500	610
	2	750	450	510	265	415	1150	620	620

POMPE CON MOTORIDUTTORE

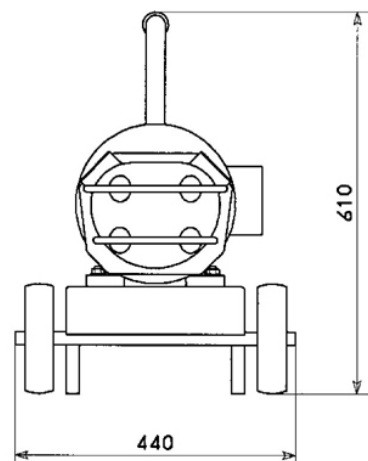
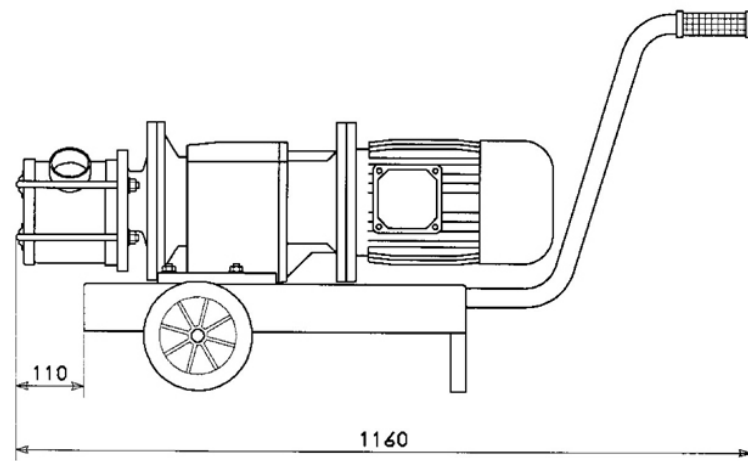
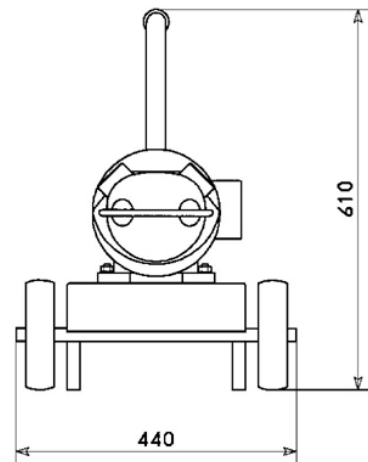
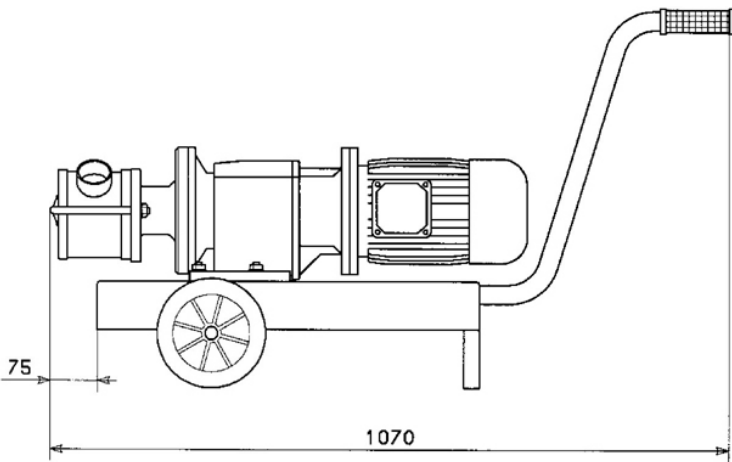
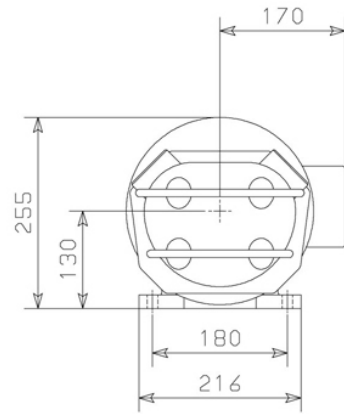
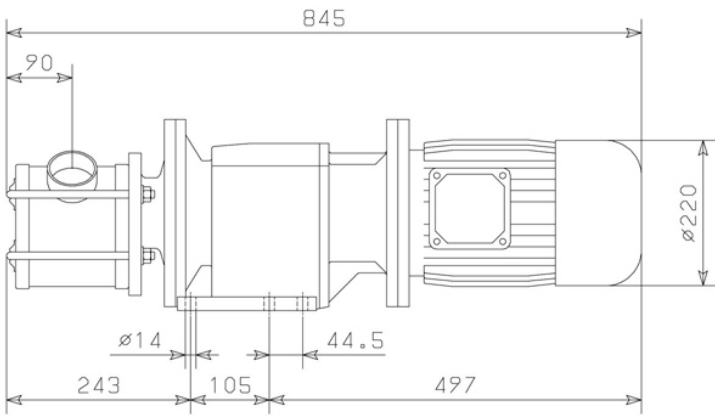
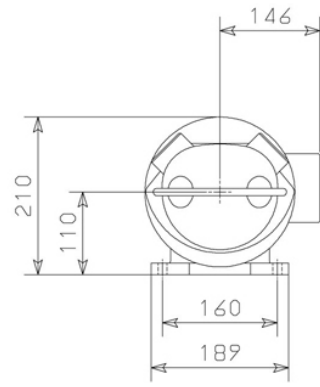
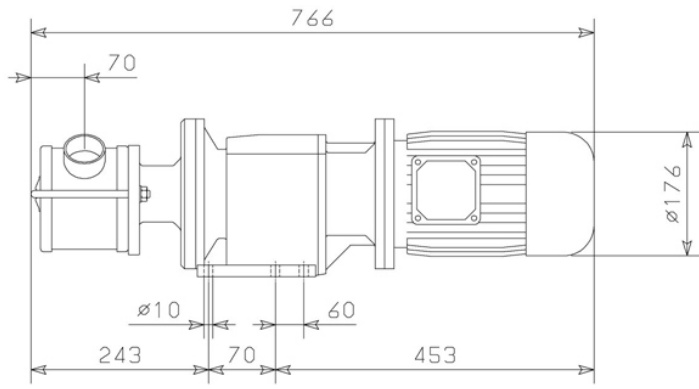
PUMPS WITH GEARMOTOR

8



Tipo Type	Peso Weight	Motore/Motor **		Velocità Speed	Giri/min Rpm	Rif. Ref.	H (m) = Prevalenza / Head - Q (l/h) = Portata / Capacity									
		Tipo/Type	HP				kW	0	4	8	12	16	18	20	24	H
RID MAJOR 60	38 kg	TF	3	2,24	1	470	3	12000	10500	8700	5100	0			Q	
			3	2,24		700	4	18000	15000	12000	8400	2000	0			
		TF	3	2,24	2	470	3	12000	10500	8700	5100	0				
			2	1,49		235	1	6300	5100	2700	0					
RID MAXI 80	72 kg	TF	5,5	4,10	1	470	7	36000	34200	30000	24000	12000	0			
			5,5	4,10		600	8	43800	41400	36000	30000	16000	0			
		TF	5,5	4,10	2	470	7	36000	34200	30000	24000	12000	0			
			3,5	2,61		235	5	19200	18000	15000	9600	0				
TF	5,5	4,10	2	600	8	43800	41400	36000	30000	16000	0					
	3,5	2,61		300	6	24600	22200	18900	12000	0						

**TF= Trifase/Three-phase



POMPE CON VARIATORE O INVERTER

PUMPS WITH MECHANICAL SPEED VARIATOR OR FREQUENCY CONVERTER

10



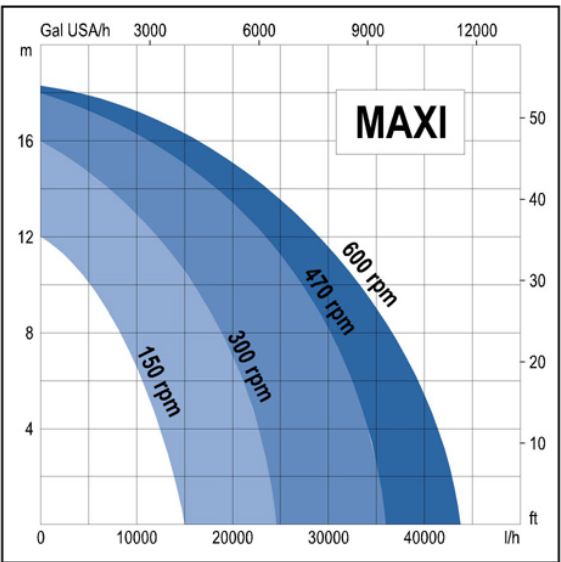
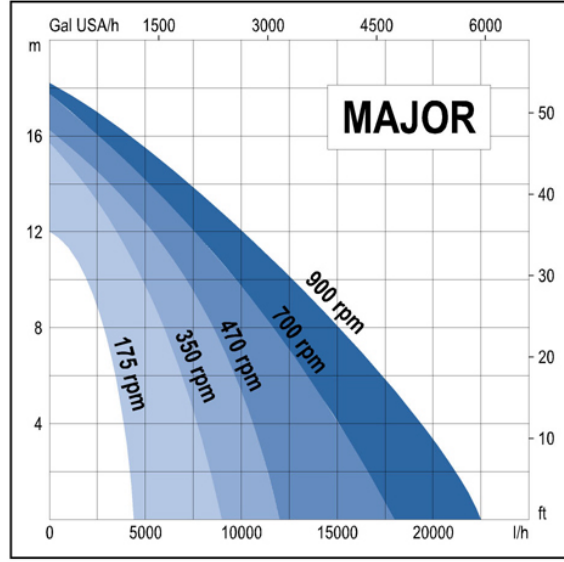
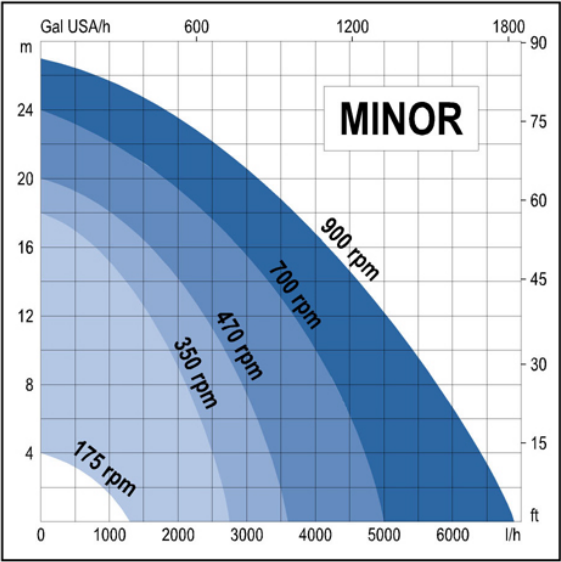
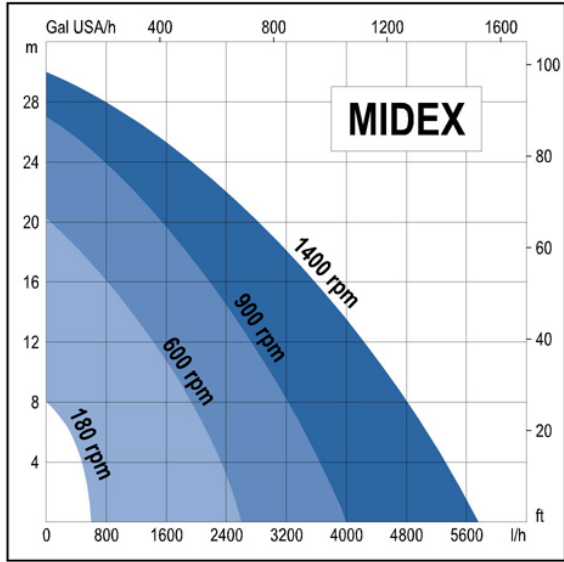
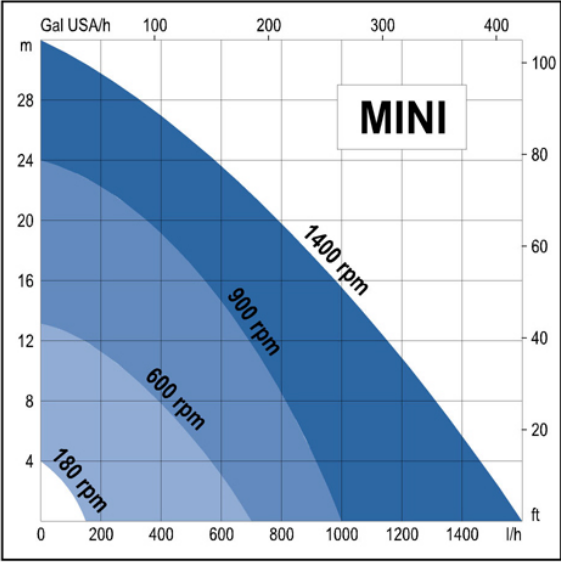
POMPA CON VARIATORE (VA)
PUMP WITH MECH. SPEED VARIATOR (VA)

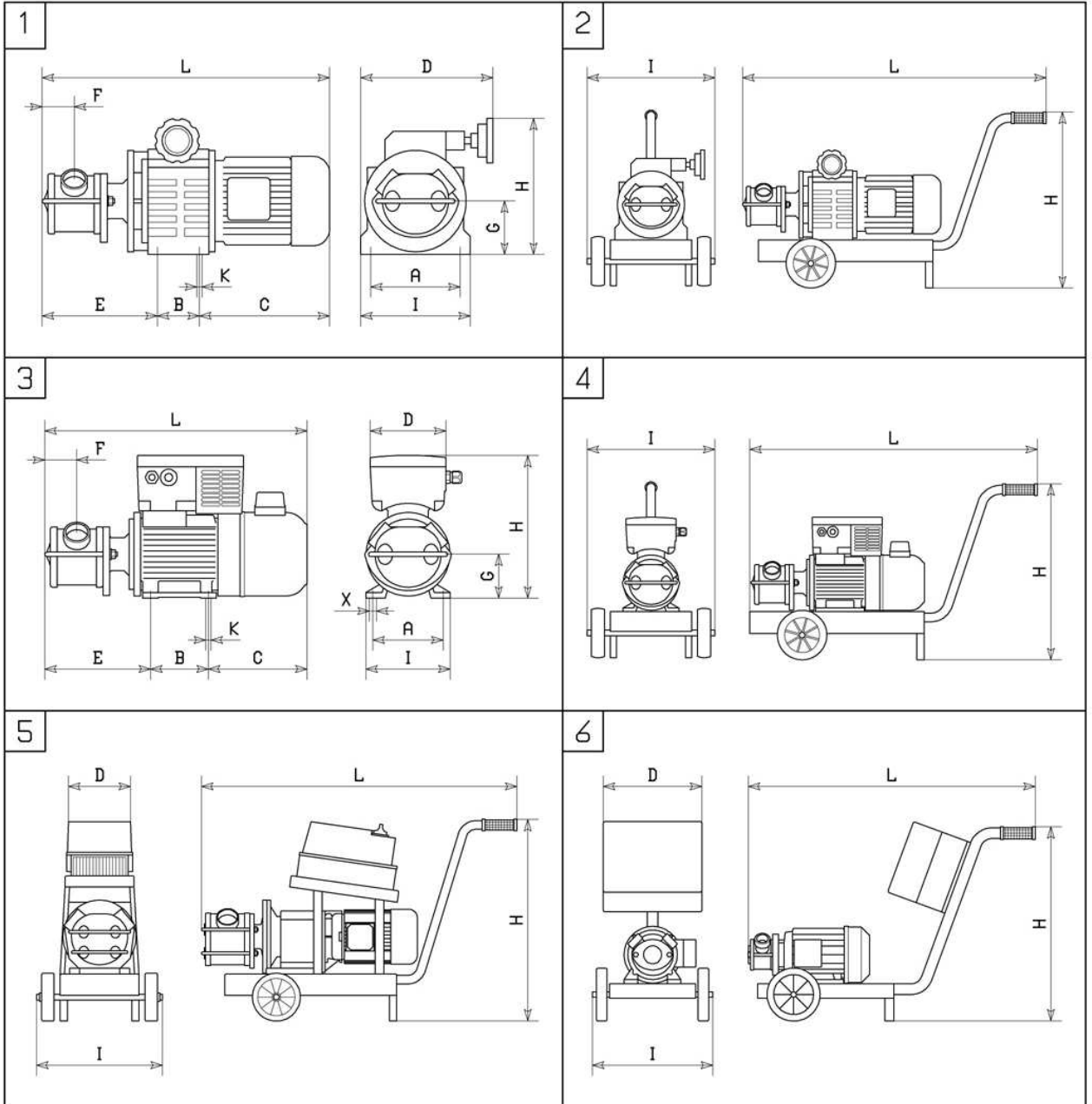


POMPA CON INVERTER (INV)
PUMP WITH FREQUENCY CONVERTER (INV)

Tipo Type			Giri/min Rpm	H (m) = Prevalenza / Head - Q (l/h) = Portata / Capacity											H				
				0	4	8	12	16	18	20	24	27	30	32					
MINI 3/4"	INV 230 V/Hz 230/50 HP 0,75 kW 0,56	INV 400 V/Hz 400/50 HP 0,75 kW 0,56	min 180	150	0														
			600	700	560	390	150	0											
			900	1000	900	840	720	540	450	350	0								
			max 1400	1620	1440	1320	1140	1020	900	800	600	400	180	0					
MIDEX 1" 1/4	INV 230 V/Hz 230/50 HP 1 kW 0,75	INV 400 V/Hz 400/50 HP 1 kW 0,75	min 180	600	480	0													
			600	2600	2300	2000	1400	800	400	0									
			900	3840	3480	3180	2760	2160	1800	1600	720	0							
			max 1400	5760	5160	4800	4320	3600	3180	2800	1920	1200	0						
MINOR 40	VA V/Hz 230-400/50 HP 2 kW 1,5	INV V/Hz 400/50 HP 2,5 kW 1,86	min 175	1320	0														
			350	2750	2500	2100	1600	800	0										
			470	3600	3300	2900	2400	1600	1000	0									
			700	5000	4700	4300	3700	3000	2520	1800	0								
max 900	6900	6200	5760	5040	4200	3660	3200	1800	0										
MAJOR 60	VA V/Hz 230-400/50 HP 2,5 kW 1,86	INV V/Hz 400/50 HP 3 kW 2,24	min 175	4320	3840	3000	0												
			350	9000	7800	6000	3700	0											
			470	12000	10500	8700	5100	0											
			700	18000	15000	12000	8400	2500	0										
max 900	22500	19560	15000	11220	3000	0													
MAXI 80	VA V/Hz 230-400/50 HP 5,5 kW 4,1	INV V/Hz 400/50 HP 5,5 kW 4,1	min 150	15000	12000	8700	0												
			300	24600	22200	18900	12000	0											
			470	36000	34200	30000	24000	12000	0										
			max 600	43800	41400	36000	30000	16000	0										

Q





Tipo Type	Peso Weight	Rif. Ref.	Dimensioni (mm) / Dimensions (mm)												
			A	B	C	D	E	F	G	H	I	K	L	X	
MINI 3/4"	INV	17 kg	6				280				550	340		790	
MIDEX 1" 1/4	INV	23 kg	6				280				550	340		805	
MINOR 40	VA	50 kg	1	165	96	280	240	264	60	110	265	210	M10	640	
		63 kg	2								610	440		1020	
	INV	27 kg	3	160	140	220	172	212	60	100	325	192	11	572	16
		40 kg	4								610	440		1000	
MAJOR 60	VA	54 kg	1	165	96	280	240	294	70	110	265	210	M10	670	
		67 kg	2								610	440		1040	
	INV	42 kg	3	190	140	247	172	265	70	112	350	220	11	652	16
		55 kg	4								610	440		1000	
MAXI 80	VA	87 kg	1	200	120	340	334	300	90	132	336	270	M12	760	
		109 kg	2								610	440		1100	
	INV	95 kg	5				205				710	440		1200	

TABELLA DI CORROSIONE GIRANTI IMPELLER CORROSION TABLE

13

	Materiale	Material
NBR	Nitrile	Nitrile
EPDM	Epdm	Epdm
CR	Neoprene	Neoprene rubber
NR	Gomma naturale	Natural Rubber
VQM	Silicone	Silicone

	Caratteristica	Characteristic
A	Ottimo	<i>Eccellent</i>
B	Discreto/Buono	<i>Fair/Good</i>
C	Sconsigliato/Scarso	<i>Not advisable/Poor</i>
*	Variabile	<i>Variable</i>
-	Non disponibile	<i>Not available</i>

Le temperature riportate tra parentesi sono da considerarsi come temperature massime di utilizzo. La temperatura di 20° C rappresenta all'incirca la temperatura ambiente.

Il termine "Variabile" indica che all'interno della stessa famiglia di polimeri si possono avere comportamenti diversi in funzione del tipo di polimero, della concentrazione del prodotto o della temperatura di utilizzo.

Temperatures reported in parentheses must be considered the highest temperatures that can be used. The temperature of 20° C corresponds to an average room temperature.

The term "Variable" means that within the same family of polymers there can be different behaviours according to the kind of polymer, the concentration of the product and the temperature at which it is used.















Prodotto	NBR	EPDM	CR	NR	VMQ
Acetato di etile	C	A (55° C) C (70° C)	C	C	B (20° C)
Aceto	B (20° C) * (60° C)	A (60-90° C)	B (90° C)	B (20° C)	A (20° C)
Acido Acetico (30%)	B (20° C)	A	B (20° C)	B (20° C)	-
Acido Borico	A (60° C) B (90° C)	A (60° C) B (90° C)	A (70° C) B (90° C)	A (20° C) B (85° C)	A (20° C)
Acido Bromico (40%)	C	A (90° C)	*	B (20° C)	C
Acido Cianidrico	B (60° C)	A (60° C)	*	-	B (20° C)
Acido Citrico	A (90° C) B (100° C)	A	A	A (20° C)	A (20° C)
Acido Cloridrico concentrato	C	C	C	*	C
Acido Cloroacetico	C	B (70-90° C)	A (20° C) C (40° C)	*	*
Acido Cromico	C	B	*	*	*
Acido Fluoridrico (50%)	C	B (60° C)	*	C (20° C)	*
Acido Fluoridrico concentrato	C	C	C	C	C
Acido Fluoroborico	A (60° C) B (85° C)	A (60° C) B (80° C)	A (60° C) B (85° C)	A (20° C) B (65° C)	A (20° C)
Acido Formico	*	A (90° C)	*	B (20° C)	B (20° C)
Acido Fosforico (85%)	C	A (80° C)	A (40° C)	B (65° C)	C
Acido Lattico concentrato	A (20° C)	A (60° C)	A (20° C) B (60° C) C (80° C)	-	-
Acido Nitrico (10%)	C	A (40° C) C (80° C)	C (40° C)	C	B (20° C)
Acido Nitrico (70%)	-	C	C	C	C
Acido Ossalico concentrato	B (60° C)	A (120° C)	B (60° C)	B (20° C)	B (20° C)
Acido Palmitico	A (70° C)	B (20° C)	B (20-70° C)	B (20° C)	C
Acido Picrico	C	A (20° C)	B (20° C)	C	C
Acido Picrico (10%)	B (70° C)	B (90° C)	A (20° C) C (40° C)	B (20° C)	C
Acido Solforico (50%)	A (20° C) C (80° C)	B (60-80° C)	B (70° C)	B (26° C)	*

Prodotto	NBR	EPDM	CR	NR	VMQ
Acido Solforico (80%)	B (40° C) C (60-80° C)	A (60° C) C (80° C)	C	C	C
Acido Stearico	A (120° C)	B (60° C)	B (60-70° C)	*	B (20° C)
Acqua	A (80° C)	A (135° C)	B (100° C)	A (20° C) B (80° C)	B (80° C)
Alcol Benzilico	C	B (40° C) C (60° C)	*	C	-
Alcol Etilico	A (60° C) B (85° C)	A (90° C)	A (70° C) B (80° C)	A (20° C) B (65° C)	B (20° C)
Alcol Metilico	B (65° C)	A (70° C) B (80° C)	A (60° C) B (80° C)	B (37° C)	A (70° C)
Alcol Propilico	B (90° C)	B (90° C)	A (60° C) B (90° C)	A (20° C) B (65° C)	A (20° C)
Ammonio Idrato concentrato (38%)	A (90° C)	-	A (90° C)	A (65° C)	-
Anidride Solforosa	C	C (20° C)	C (20° C)	C	A (20° C)
Anilina	C	A (90° C)	C	C	B (20° C)
Benzina	A (120° C)	C	C	C	C
Birra	A (60° C) B (120° C)	A (60° C) B (80° C)	A (60° C)	A (20° C)	A (20° C)
Bromo gas	C	C	C	C	C
Burro	A (60° C)	A (60° C)	B (20° C) C (60° C)	C	B (20° C)
Butadiene	*	*	*	C	C
Butano	A (90° C) B (120° C)	C	A (60° C)	C	C
Calcio Idrato	A (20° C) B (90° C)	A (20° C)	A (20° C) B (90° C)	A (20° C) B (65° C)	A (20° C)
Calcio Ipcloclorito	C	A (120° C)	C	C	B (20° C)
Cherosene	A (120° C)	C	B (20° C)	C	C
Cloro Umido	C	*	C	C	C
Cloroformio	C	C	C	C	C
Gelatina	A (90° C)	A (80° C)	A (60° C) B (80° C)	A (20° C) B (65° C)	A (20° C)
Glicerina	A (120° C)	A (80° C) B (90° C)	A (70° C)	A (20° C) B (65° C)	A (20° C)
Glucosio	A (90° C)	A (80° C)	A (60° C)	A (20° C) B (48° C)	A (20° C)
Iodio	B (60° C) A (20° C) 6,5%	B (70° C) A (20° C) 6,5%	C	C	C
Latte	A (60° C)	A (120° C)	A (60° C)	A (20° C) B (37° C)	A (20° C)
Magnesio Cloruro	A (80° C) B (100° C)	A (80° C) B (100° C)	A (80° C) B (100° C)	A (20° C) B (85° C)	A (20° C)
Magnesio Solfato	A (80° C) B (100° C)	A (80° C) B (100° C)	A (80° C) B (90° C)	B (85° C)	A (20° C)
Mercurio	A (60° C)	A (60° C)	A (60° C)	A (20° C)	A (20° C)
Metiletilchetone	C	A (60° C) B (90° C)	C	C	C
Nafta	A (120° C)	C	C	C	C
Olio di Anilina	C	B (20° C)	C	C	C
Olio di Cotone	A (90° C) B (100° C)	A (20° C) C (80° C)	B (65° C)	C	A (20° C)
Olio di fegato di merluzzo	A (20° C) B (50° C)	A (20° C)	B (20° C)	C	B (20° C)
Olio di Granoturco	A (120° C)	*	B (20° C)	C	A (20° C)
Olio di Lino	A (90° C)	B (20° C)	B (80° C)	C	C
Olio di Oliva	A (120° C)	B (20° C)	*	C	*
Olio di Pino	B (120° C)	C	C	C	C
Olio di Ricino	A (100° C)	A (60° C)	A (70° C)	A (25° C)	A (20° C)
Olio di Soia	A (120° C)	*	B (20° C)	C	C
Olio Idraulico (esteri fosforici)	C	A (120° C)	C	C	*
Olio SAE n.10	A (120° C)	C	*	C	*
Olio vegetale	A (90° C)	*	C (20° C)	C	A (20° C)
Paraffina	A (60° C)	C	B (20° C)	*	C
Percloroetilene	*	C	C	C	*
Sodio Cloruro	A (70° C)	B (90° C)	A (100° C)	A (65° C)	B
Sodio Idrato	B (65° C)	A (20° C)	B (90° C)	A (20° C) B (65° C)	C (20° C)
Succo di frutta	A (60° C)	A (120° C)	A (60° C)	*	A (20° C)
Succo di pomodoro	A (60° C)	A (20° C)	A (60° C)	-	-

Prodotto	NBR	EPDM	CR	NR	VMQ
Toluolo	C	C	C	C	C
Tricloroetilene	C	C	C	C	C
Trietanolammina	C (20° C) 100% B (37° C) 80%	A (70° C)	A (70° C)	B (26° C)	C
Vino	A (90° C)	A (90° C)	A (90° C)	A (20° C) B (65° C)	A (20° C)
Whisky	A (90° C)	A (90° C)	A (60° C) C (90° C)	A (20° C) B (65° C)	A (20° C)
Xilolo	C	C	C	C	C
Zolfo fuso 120° C	C	A (120° C)	A (20° C)	C (20° C)	A (20° C) C (120° C)
Zucchero di canna	A (60° C) B (90° C)	A (80° C)	A (20° C) B (90° C)	A (20° C)	A (20° C)

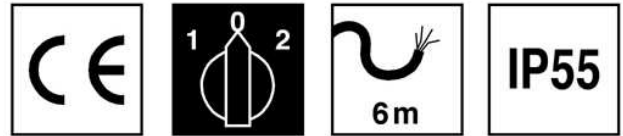
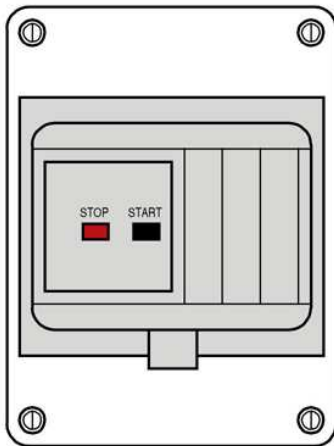
Product	NBR	EPDM	CR	NR	VMQ
Acetic Acid (30%)	B (20° C)	A	B (20° C)	B (20° C)	-
Ammonium Hydroxide (38%)	A (90° C)	-	A (90° C)	A (65° C)	-
Aniline	C	A (90° C)	C	C	B (20° C)
Aniline Oil	C	B (20° C)	C	C	C
Beer	A (60° C) B (120° C)	A (60° C) B (80° C)	A (60° C)	A (20° C)	A (20° C)
Benzyl Alcohol	C	B (40° C) C (60° C)	*	C	-
Boric Acid	A (60° C) B (90° C)	A (60° C) B (90° C)	A (70° C) B (90° C)	A (20° C) B (85° C)	A (20° C)
Bromic Acid (40%)	C	A (90° C)	*	B (20° C)	C
Butadiene	*	*	*	C	C
Butane	A (90° C) B (120° C)	C	A (60° C)	C	C
Butter	A (60° C)	A (60° C)	B (20° C) C (60° C)	C	B (20° C)
Calcium Hydrate	A (20° C) B (90° C)	A (20° C)	A (20° C) B (90° C)	A (20° C) B (65° C)	A (20° C)
Calcium Hypchlorite	C	A (120° C)	C	C	B (20° C)
Cane Sugar liquide	A (60° C) B (90° C)	A (80° C)	A (20° C) B (90° C)	A (20° C)	A (20° C)
Castor Oil	A (100° C)	A (60° C)	A (70° C)	A (25° C)	A (20° C)
Chlorine (damp)	C	*	C	C	C
Chloroacetic Acid		B (70-90° C)	A (20° C) C (40° C)	*	*
Chloroform	C	C	C	C	C
Chromic Acid	C	B	*	*	*
Citric Acid	A (90° C) B (100° C)	A	A	A (20° C)	A (20° C)
Cod-Liver Oil	A (20° C) B (50° C)	A (20° C)	B (20° C)	C	B (20° C)
Corn Oil	A (120° C)	*	B (20° C)	C	A (20° C)
Cotton Oil	A (90° C) B (100° C)	A (20° C) C (80° C)	B (65° C)	C	A (20° C)
Diesel Oil	A (120° C)	C	C	C	C
Ethyl Acetate	C	A (55° C) C (70° C)	C	C	B (20° C)
Ethyl Alcohol	A (60° C) B (85° C)	A (90° C)	A (70° C) B (80° C)	A (20° C) B (65° C)	B (20° C)
Fluoboric Acid	A (60° C) B (85° C)	A (60° C) B (80° C)	A (60° C) B (85° C)	A (20° C) B (65° C)	A (20° C)
Formic Acid	*	A (90° C)	*	B (20° C)	B (20° C)
Fruit Juices	A (60° C)	A (120° C)	A (60° C)	*	A (20° C)
Gelatine	A (90° C)	A (80° C)	A (60° C) B (80° C)	A (20° C) B (65° C)	A (20° C)
Glucose	A (90° C)	A (80° C)	A (60° C)	A (20° C) B (48° C)	A (20° C)
Glycerine	A (120° C)	A (80° C) B (90° C)	A (70° C)	A (20° C) B (65° C)	A (20° C)

Product	NBR	EPDM	CR	NR	VMQ
Hydraulic Oil	C	A (120° C)	C	C	*
Hydrochloric Acid (concentrated)	C	C	C	*	C
Hydrocyanic Acid	B (60° C)	A (60° C)	*	B (20° C)	B (20° C)
Hydrofluoric Acid (50%)	C	B (60° C)	*	C (20° C)	*
Hydrofluoric Acid (concentrated)	C	C	C	C	C
Iodine	B (60° C) A (20° C) 6,5%	B (70° C) A (20° C) 6,5%	C	C	C
Kerosene	A (120° C)	C	B (20° C)	C	C
Lactic Acid (concentrated)	A (20° C)	A (60° C)	A (20° C) B (60° C) C (80° C)	-	-
Linseed Oil	A (90° C)	B (20° C)	B (80° C)	C	C
Magnesium Chloride	A (80° C) B (100° C)	A (80° C) B (100° C)	A (80° C) B (100° C)	A (20° C) B (85° C)	A (20° C)
Magnesium Sulphate	A (80° C) B (100° C)	A (80° C) B (100° C)	A (80° C) B (90° C)	B (85° C)	A (20° C)
Mercury	A (60° C)	A (60° C)	A (60° C)	A (20° C)	A (20° C)
Methyl Alcohol	B (65° C)	A (70° C) B (80° C)	A (60° C) B (80° C)	B (37° C)	A (70° C)
Methyl-ethyl-ketone	C	A (60° C) B (90° C)	C	C	C
Milk	A (60° C)	A (120° C)	A (60° C)	A (20° C) B (37° C)	A (20° C)
Nitric Acid (10%)	C	A (40° C) C (80° C)	C (40° C)	C	B (20° C)
Nitric Acid (70%)	-	C	C	C	C
Olive Oil	A (120° C)	B (20° C)	*	C	*
Oxalic Acid (concentrated)	B (60° C)	A (120° C)	B (60° C)	B (20° C)	B (20° C)
Palmitic Acid	A (70° C)	B (20° C)	B (20-70° C)	B (20° C)	C
Paraffin	A (60° C)	C	B (20° C)	*	C
Perchloroethylen	*	C	C	C	*
Petrol	A (120° C)	C	C	C	C
Phosphoric Acid (85%)	C	A (80° C)	A (40° C)	B (65° C)	C
Picric Acid	C	A (20° C)	B (20° C)	C	C
Picric Acid (10%)	B (70° C)	B (90° C)	A (20° C) C (40° C)	B (20° C)	C
Pine Oil	B (120° C)	C	C	C	C
Propylic Alcohol	B (90° C)	B (90° C)	A (60° C) B (90° C)	A (20° C) B (65° C)	A (20° C)
SAE n.10 Oil	A (120° C)	C	*	C	*
Sodium Chloride	A (70° C)	B (90° C)	A (100° C)	A (65° C)	B
Sodium Hydrate	B (65° C)	A (20° C)	B (90° C)	A (20° C) B (65° C)	C (20° C)
Soybean Oil	A (120° C)	*	B (20° C)	C	C
Stearic Acid	A (120° C)	B (60° C)	B (60-70° C)	*	B (20° C)
Sulphur (fused 120° C)	C	A (120° C)	A (20° C)	C (20° C)	A (20° C) C (120° C)
Sulphur Dioxide	C	C (20° C)	C (20° C)	C	A (20° C)
Sulphuric Acid (50%)	A (20° C) C (80° C)	B (60-80° C)	A (70° C)	B (26° C)	*
Sulphuric Acid (80%)	B (40° C) C (60-80° C)	A (60° C) C (80° C)	C	C	C
Toluol	C	C	C	C	C
Tomatoes Juices	A (60° C)	A (20° C)	A (60° C)	-	-
Trichloroethylene	C	C	C	C	C
Triethanolamine	C (20° C) 100% B (37° C) 80%	A (70° C)	A (70° C)	B (26° C)	C
Vegetable Oil	A (90° C)	*	C (20° C)	C	A (20° C)
Vinegar	B (20° C) * (60° C)	A (60-90° C)	B (90° C)	B (20° C)	A (20° C)
Water	A (80° C)	A (135° C)	B (100° C)	A (20° C) B (80° C)	B (80° C)
Whisky	A (90° C)	A (90° C)	A (60° C) C (90° C)	A (20° C) B (65° C)	A (20° C)
Wine	A (90° C)	A (90° C)	A (90° C)	A (20° C) B (65° C)	A (20° C)
Xylol	C	C	C	C	C

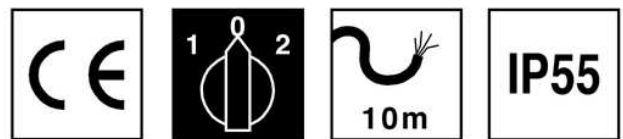
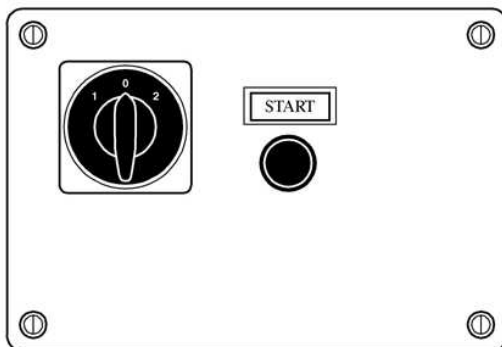
Tipo Type		MINI	MIDEX	MINOR	MAJOR	MAXI
						
Garolla		<i>Non disponibile Not available</i>	Garolla 40	Garolla 40 Garolla 50	Garolla 50 Garolla 60 Garolla 70	Garolla 70 Garolla 80 Garolla 100
DIN 11851		DIN 25	DIN 32 DIN 40	DIN 40 DIN 50	DIN 50 DIN 65	DIN 65 DIN 80 DIN 100
BSP-M		BSP-M 3/4	BSP-M 1"1/4	BSP-M 1"1/4 BSP-M 1"1/2	BSP-M 2"	BSP-M 2"1/2 BSP-M 3"
BSP-F		<i>Non disponibile Not available</i>	BSP-F 1"	BSP-F 1" BSP-F 1"1/4	BSP-F 1"1/2 BSP-F 2"	BSP-F 2"1/2 BSP-F 3"
Macon		<i>Non disponibile Not available</i>	Macon 40	Macon 40 Macon 50	Macon 40 Macon 50	Macon 70
Triclover		<i>Non disponibile Not available</i>	Triclover 1"1/2	Triclover 1"1/2	Triclover 2"	Triclover 3"
SMS		<i>Non disponibile Not available</i>	SMS 38	SMS 38	SMS 51	SMS 76
BSM (RJT)		BSM 1"	BSM 1"1/2	BSM 1"1/2	BSM 2" BSM 2"1/2	BSM 3"
Friederich		<i>Non disponibile Not available</i>	Friederich 40	Friederich 40	Friederich 40 Friederich 60	Friederich 60

QUADRI ELETTRICI CONTROL PANELS

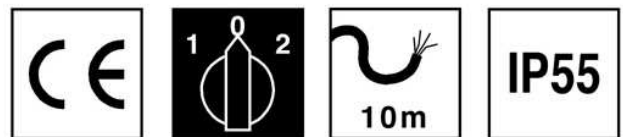
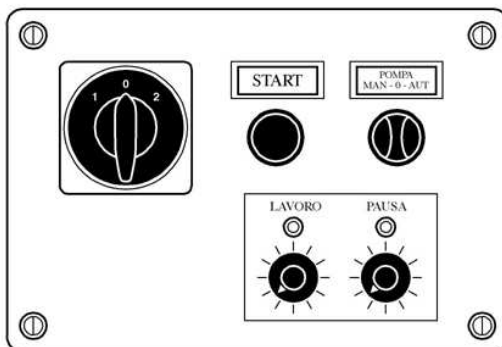
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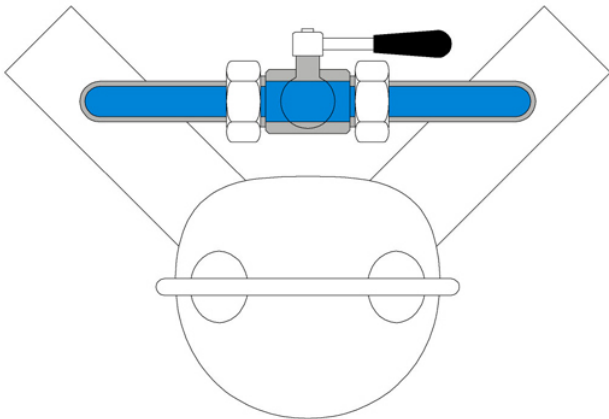
Impianto elettrico CE
CE control panel



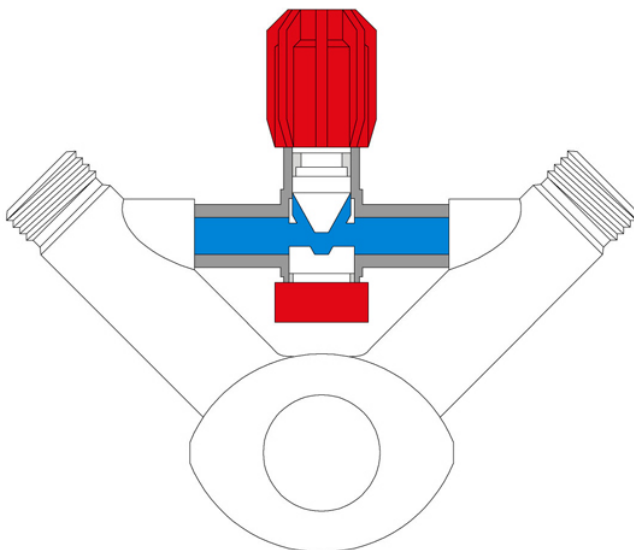
Impianto elettrico CE con derivazione
supplementare 24V NC per sensore di temperatura,
pressostato, sensore di livello, ecc.
CE control panel with supplementary 24V NC shunt trip
for temperature sensor, pressure switch, level sensor, etc..



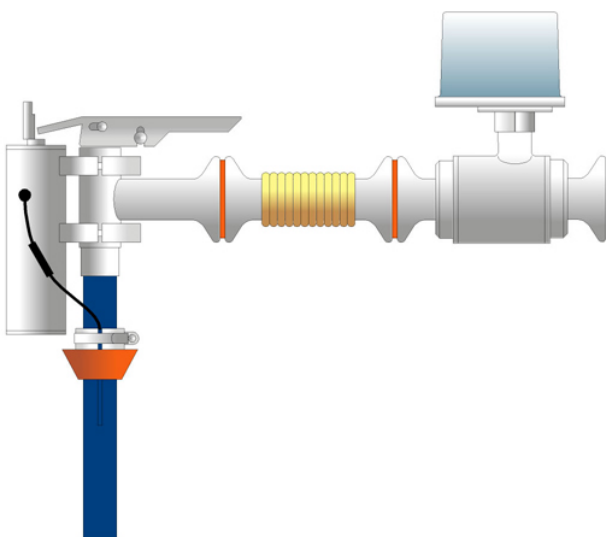
Impianto elettrico CE con temporizzatore con
2 selettori, 12 posizioni per pausa e lavoro e con
2 range di temporizzazioni disponibili (da specificare in
caso di ordine):
Tipo LIV 1: lavoro 2-24 minuti, pausa 10-120 minuti
Tipo LIV 2: lavoro 2-24 minuti, pausa 1-12 ore
CE control panel with 2 selector switch timer,
with 12 possible selections each and with
2 time rate options (to be stated in case of order):
Option 1: LIV 1 run 2-24 minutes, pause 10-120 minutes
Option 2: LIV 2 run 2-24 minutes, pause 1-12 hours



By-pass con valvola a sfera per i modelli: Mini, Minor, Major, Maxi.
Ball bypass valve for pump types: Mini, Minor, Major, Maxi.



By-pass con valvola a molla per modello Midex.
Spring bypass valve for Midex pump type.



Kit riempi barriques o fusti.
Kit for barrel filling.

Pistola automatica inox con valvola di non ritorno e pressostato.
Stainless steel automatic gun with no return valve and pressure switch.

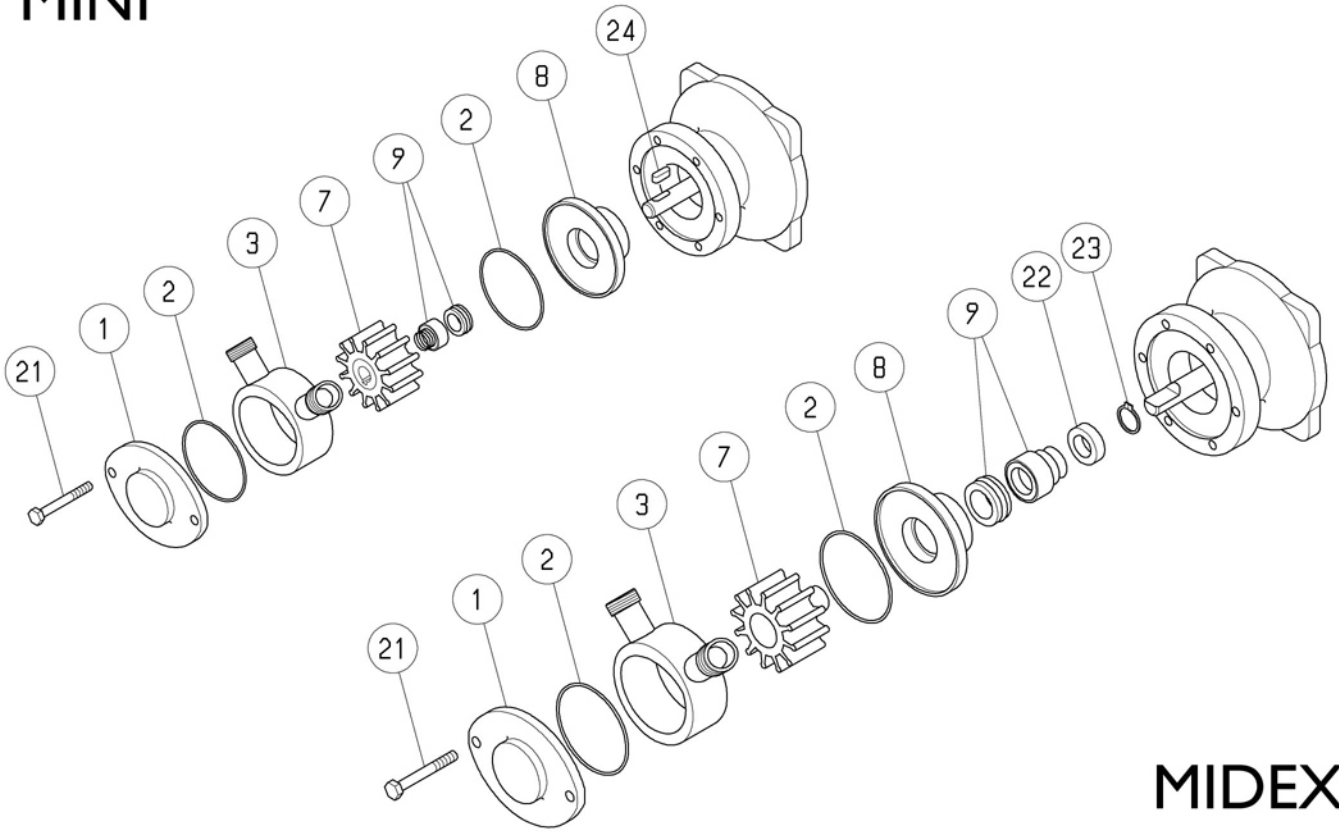
Il kit può essere utilizzato solo con quadro elettrico del tipo con derivazione supplementare 24V NC. In caso di pompa con inverter quest'ultimo deve essere dotato di derivazione supplementare NC.
The kit must be used only with a control panel with a supplementary 24V NC shunt trip. In case of pump driven by frequency converter, the last must be fitted with a supplementary NC trip.

COMPONENTI SPARE PARTS

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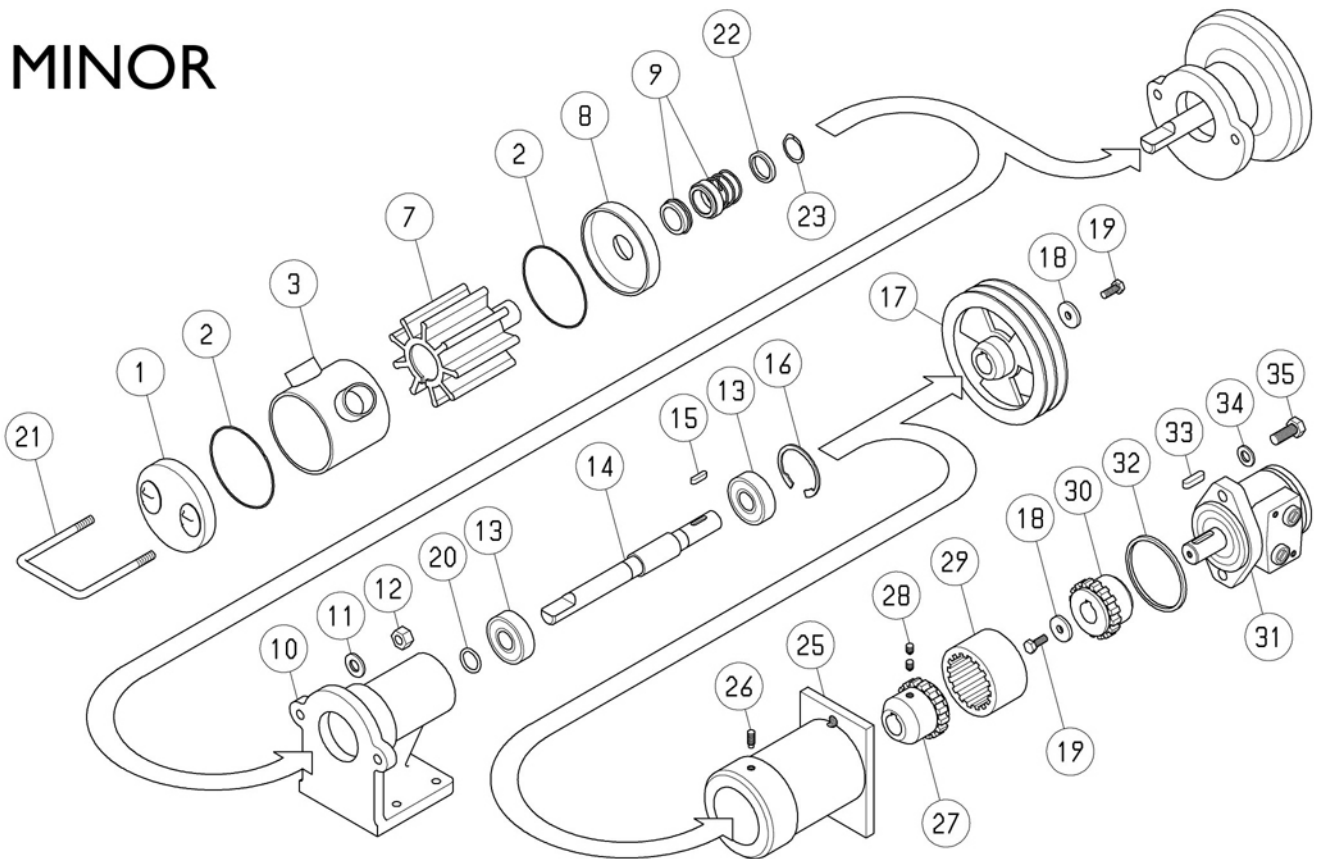
Pos.	DESCRIZIONE/DESCRIPTION	MATERIALE/MATERIAL	MINI	MIDEX	MINOR	MAJOR	MAXI
1	CULATTA ANTERIORE/FRONT COVER	INOX AISI 304/STAINLESS STEEL AISI 304			x	x	x
		INOX AISI 316/STAINLESS STEEL AISI 316	x	x			
2	ANELLO OR CULATTA/O RING COVER	GOMMA NBR/RUBBER (NBR)	x	x	x	x	x
3	CORPO POMPA/CASING	INOX AISI 304/STAINLESS STEEL AISI 304			x	x	x
		INOX AISI 316/STAINLESS STEEL AISI 316	x	x			
7	GIRANTE/IMPELLER	GOMMA NATURALE (NR)/NATURAL RUBBER (NR)	x	x	x	x	x
		NEOPRENE (CR)/NEOPRENE (CR)	x	x	x	x	x
		NITRILE (NBR)/NITRILE (NBR)	x	x	x	x	x
		EPDM	x	x	x	x	x
8	CULATTA POSTERIORE/REAR COVER	INOX AISI 304/STAINLESS STEEL AISI 304			x	x	x
		INOX AISI 316/STAINLESS STEEL AISI 316	x	x			
9	TENUTA MECCANICA/MECHANICAL GASKET	INOX-GRAFITE-NBR/STAINLESS STEEL-GRAFITE-NBR	x	x	x	x	x
		CARB. DI TUNGSTENO-NBR/TUNGSTEN CARBIDE-NBR	x	x	x	x	x
		CARB. DI TUNGSTENO-VITON/TUNGSTEN CARBIDE-VITON	x	x	x	x	x
10	SUPPORTO S/P / SUPPORT S/P	ALLUMINIO/ALUMINIUM			x	x	x
	SUPPORTO MID/SUPPORT MID	ALLUMINIO/ALUMINIUM			x	x	x
11	RONDELLA/WASHER	INOX AISI 304/STAINLESS STEEL AISI 304			x	x	x
12	DADO/NUT	OTTONE CROMATO/CHROMATE BRASS			x	x	x
13	CUSCINETTO/BALL BEARING	COMMERCIALE/COMMERCIAL			x	x	x
14	ALBERO/SHAFT	INOX AISI 420/STAINLESS STEEL AISI 420			x	x	x
15	CHIAVETTA/FLAT KEY	INOX AISI 304/STAINLESS STEEL AISI 304			x	x	x
16	ANELLO SEEGER/SEEGER RING	ACCIAIO/STEEL			x	x	x
17	PULEGGIA/PULLEY	ALLUMINIO/ALUMINIUM			x	x	x
18	RONDELLA/WASHER	INOX AISI 304/STAINLESS STEEL AISI 304			x	x	x
19	VITE/BOLT	INOX AISI 304/STAINLESS STEEL AISI 304			x	x	x
20	ANELLO PROTEZIONE ALBERO/GUARD RING	GOMMA NBR/RUBBER (NBR)			x	x	
21	CAVALLOTTO/U-BOLT	INOX AISI 304/STAINLESS STEEL AISI 304			x	x	x
	VITE/BOLT	INOX AISI 304/STAINLESS STEEL AISI 304	x	x			
22	CAVALLOTTO/U-BOLT	INOX AISI 304/STAINLESS STEEL AISI 304					x
	ANELLO DISTANZIALE/SPACING RING	INOX AISI 304/STAINLESS STEEL AISI 304		x	x	x	
23	ANELLO SEEGER/SEEGER RING	INOX AISI 304/STAINLESS STEEL AISI 304		x	x	x	
	CUSCINETTO/BALL BEARING	COMMERCIALE/COMMERCIAL					x
24	CHIAVETTA/FLAT KEY	INOX AISI 304/STAINLESS STEEL AISI 304	x				
25	FLANGIA MID/MID FLANGE	ALLUMINIO/ALUMINIUM			x	x	x
26	VITE/BOLT	ACCIAIO/STEEL			x	x	x
27	GIUNTO POMPA/PUMP COUPLING	ACCIAIO/STEEL			x	x	x
28	VITE/BOLT	ACCIAIO/STEEL			x	x	x
29	MANICOTTO COLLEGAMENTO/BOX COUPLING	NYLON			x	x	x
30	GIUNTO MOTORE/MOTOR COUPLING	ACCIAIO/STEEL			x	x	x
31	MOTORE ORBITALE/ORBITAL MOTOR	COMMERCIALE/COMMERCIAL			x	x	x
32	ANELLO DI CENTRAGGIO/CENTER RING	INOX AISI 304/STAINLESS STEEL AISI 304			x	x	x
33	CHIAVETTA/FLAT KEY	ACCIAIO/STEEL			x	x	x
34	RONDELLA/WASHER	INOX AISI 304/STAINLESS STEEL AISI 304			x	x	x
35	VITE/BOLT	INOX AISI 304/STAINLESS STEEL AISI 304			x	x	x

MINI

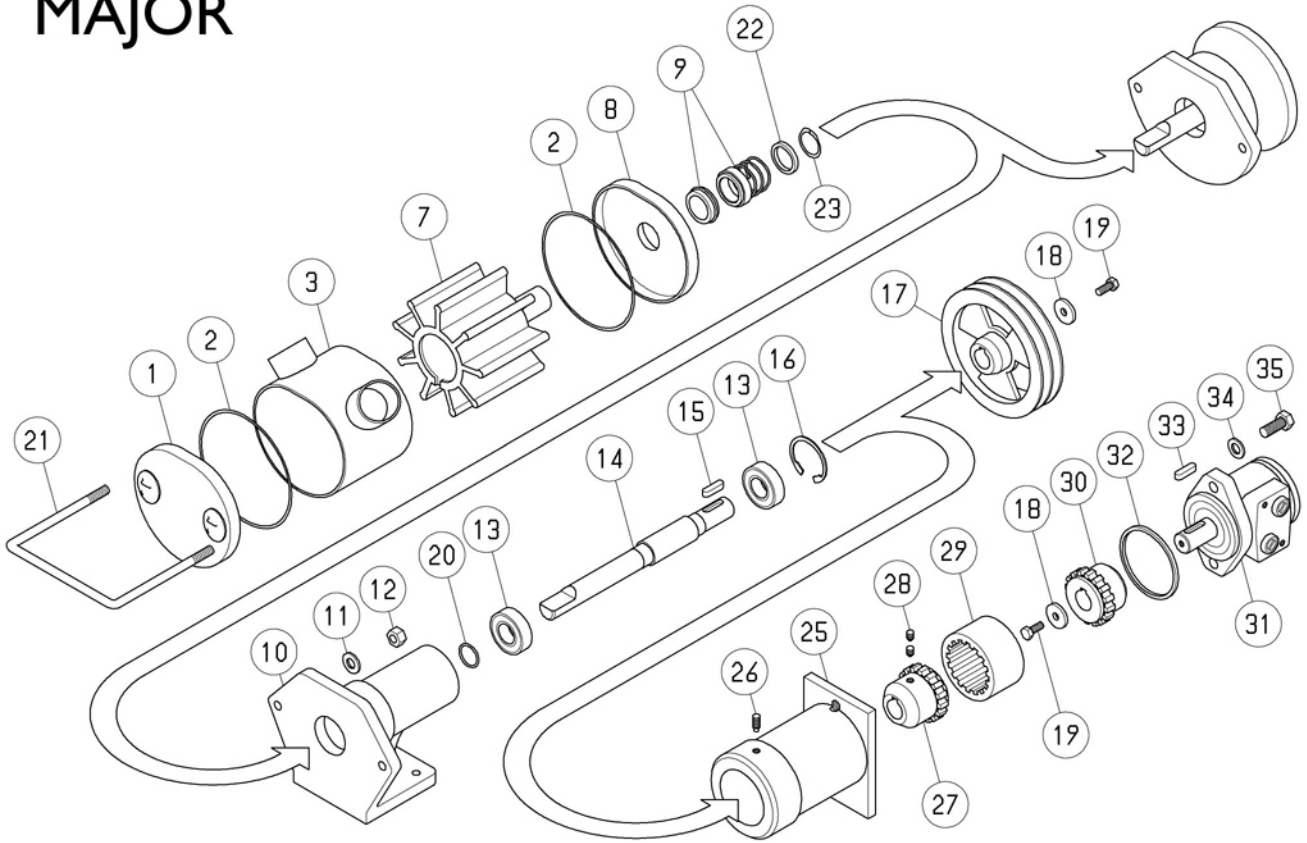


MIDEX

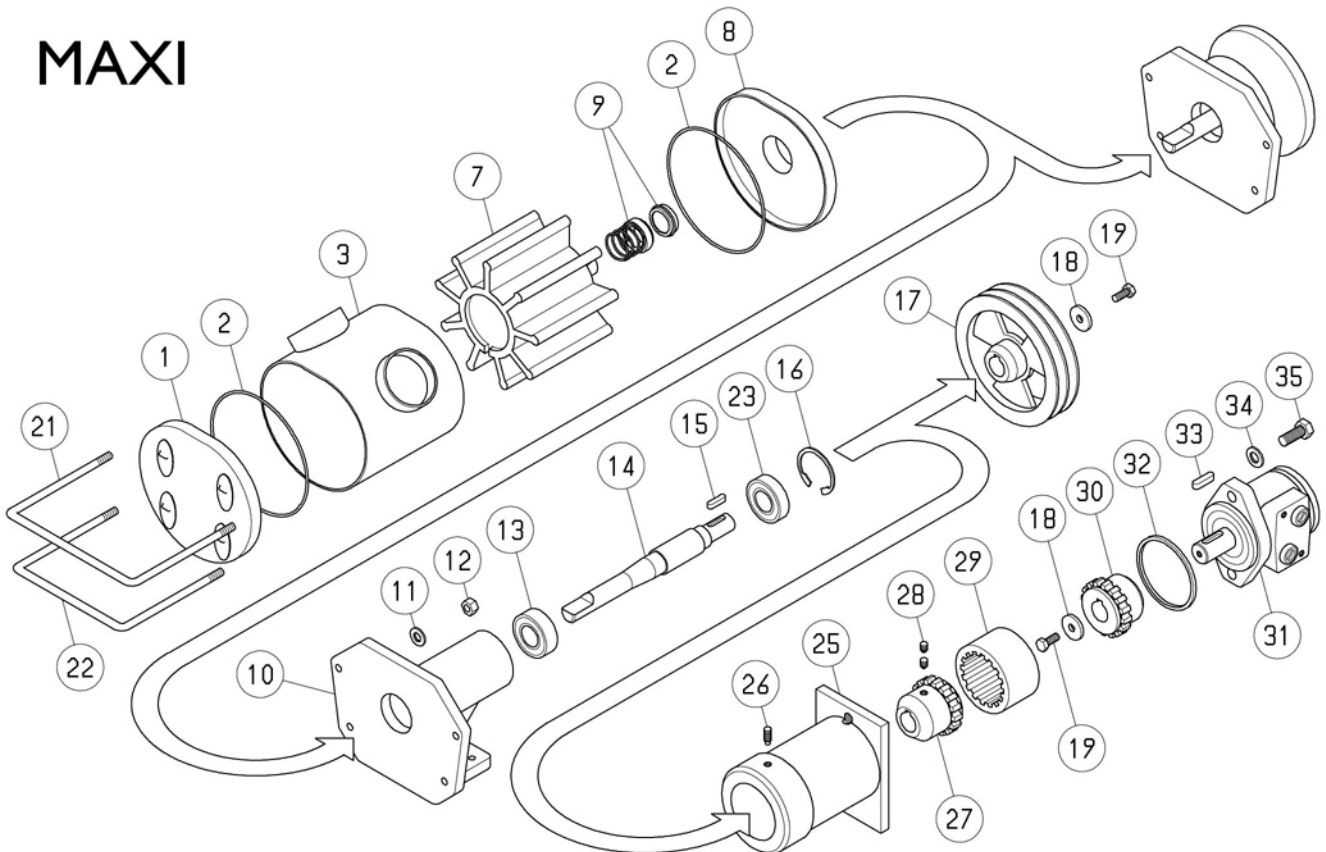
MINOR



MAJOR



MAXI





LIVERANI

FLUID TRANSFER TECHNOLOGY

Via De' Brozzi, 94 - 48022 Lugo (Ra) Italy
Tel. ++39 0545 22379 - Fax ++39 0545 30350
E-mail: liverani@liverani.com
www.liverani.com

Distributore Distributor