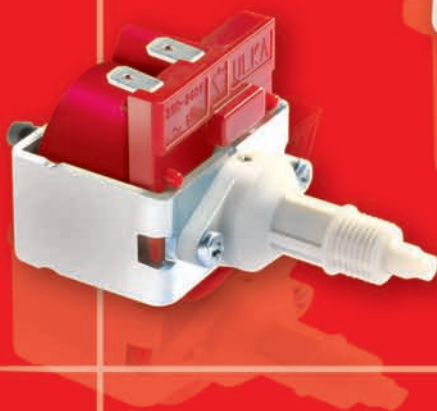
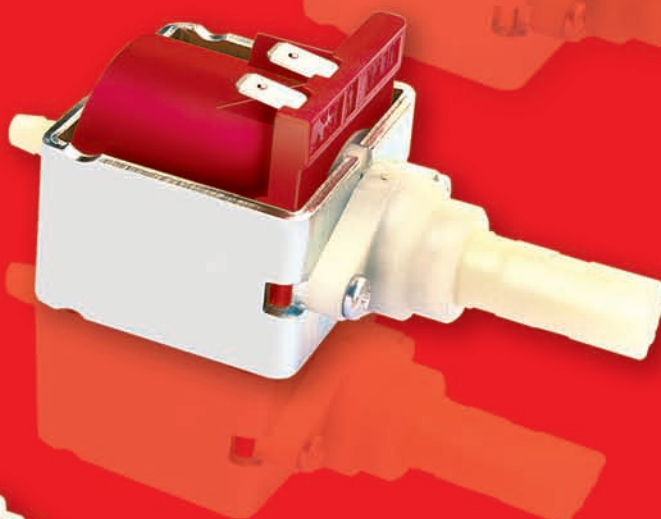
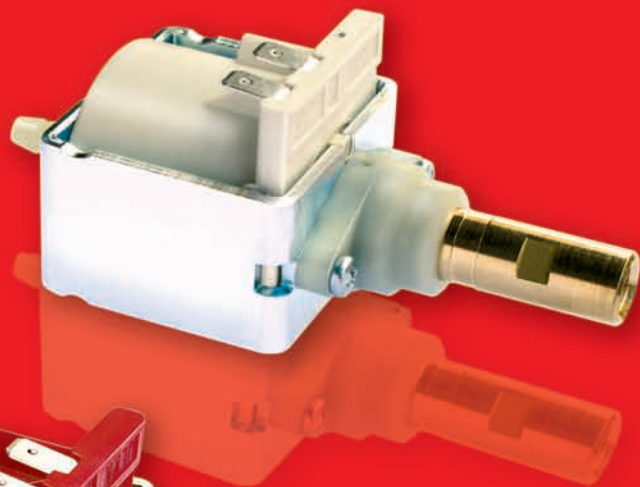


CEME a Win-Win Partner

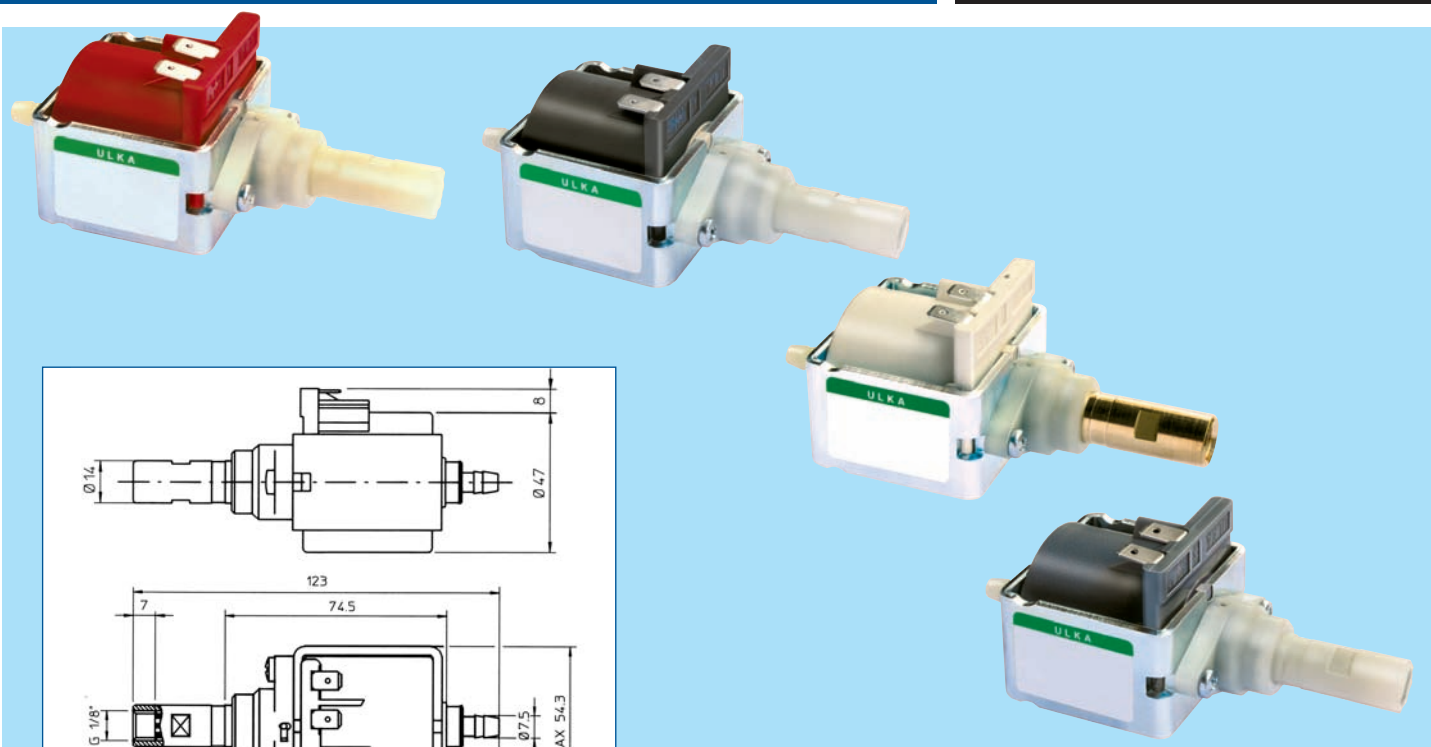
ITALIAN PUMPS FOR COFFEE WORLDWIDE



ULKA

COFFEE DIVISION

GENERAL CATALOGUE



IN COMPLIANCE WITH
THE 2011/65/EC
RoHS Directive

EP

USCITA IN PLASTICA
PLASTIC OUTLET

EX

USCITA IN OTTONE
BRASS OUTLET

Per i mercati IEC sono disponibili le versioni GW (glow wire test 750°C)
For IEC Market GW (glow wire test 750°C) are available

NEW **NEW**

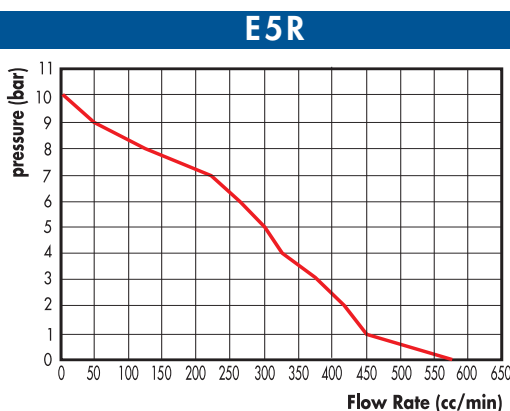
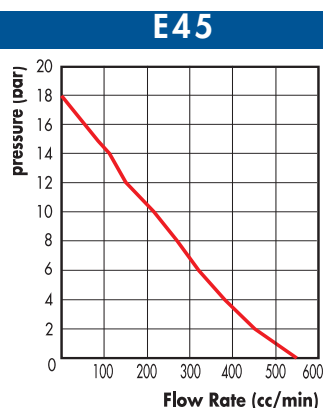
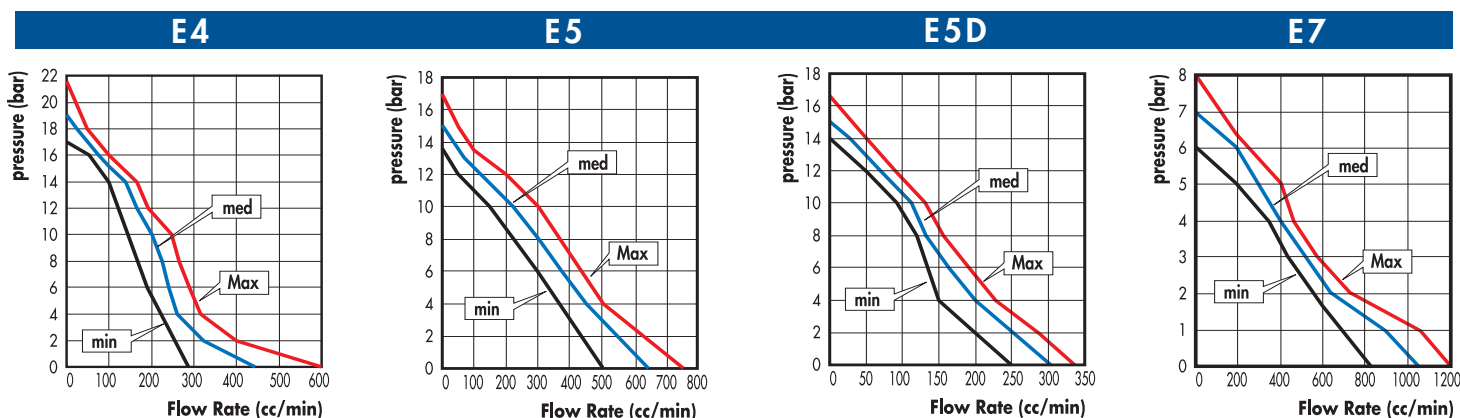
Models		E4	E4R	E5	E5D	EK	EK2	E7	E77	E8	E8S	E8R	E8LT	E45	E5R
Max Pressure (Nominal values)	[Bar]	20	9	15	15	16	15,5	7	4	2,5	2,5	2,2	2	18	10
Max Flow Rate (Nominal values)	[cc/min]	450	350	650	300	700	650	1000	900	1200	1200	650	1100	550	550
Noise at p=0 Bar/20cm	[dB(A)]	58	60	64,5	60	67,2	67,2	67,8	65,8	60	73	58	55,5	60	60

POMPA EVOLUZIONE

EVOLUTION PUMP

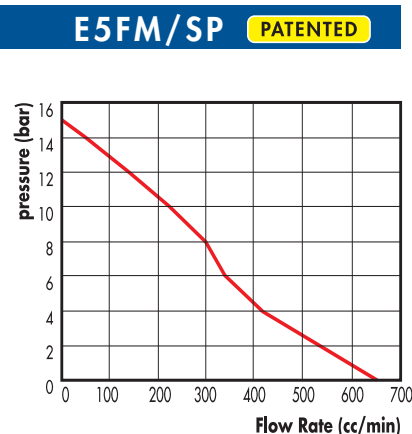
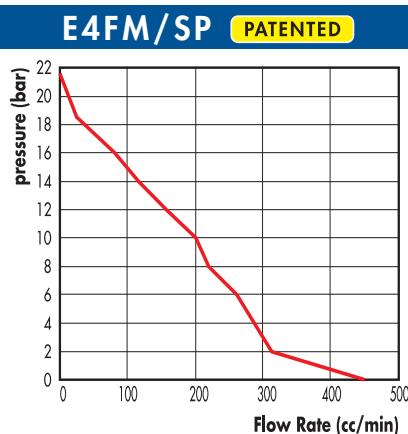
Corrente alternata	Alternating current
Fluido ideale: acqua	Ideal fluid: water
Autoinnescante a pressione 0	Self-priming at 0 bar
Non idonea all'utilizzo a secco tranne che per i normali interventi di innesco	Suitable to dry-use only during priming
Non idonea all'utilizzo a pressione massima	Not suitable to use at maximum pressure
Diodo integrato (tranne 24V - aggiungere diodo 2A)	Integrated diode (except 24V - please add diode 2A)
Faston 6.3 x 0,8	Electrical connections: 6.3 x 0,8
Raccordo uscita snodato	A joint making the pump independent from the hydraulic connection at the delivery is provided
Tasca per termoprotettore	Thermal cutout pocket
Produzione e collaudo automatizzati e computerizzati	Computer-based production and inspection
Test elettrici e idraulici al 100%	Full detailed electrical and hydraulic inspection
"Tutte le tipologie di pompe sono progettate e verificate utilizzando come fluido l'acqua. Sconsigliamo stoccaggi lunghi e/o temperature di magazzino elevate soprattutto con pompe prive di acqua all'interno: in questi casi vi suggeriamo di contattare il nostro ufficio tecnico per consigli in proposito ad evitare malfunzionamenti delle pompe."	"All types of pumps are designed and tested using water as the fluid. We do not recommend stocks long and / or high storage temperatures above pump without water inside: in these cases, we suggest that you contact our technical department for advice in this regard to prevent malfunction of the pump."
"Per il raccordo di uscita in plastica (versione EP) l'indicazione del filetto G 1/8" è indicativa e non può essere soggetta per il controllo alla norma UNI EN ISO 228/2; la tenuta non è garantita dal filetto, ma dalla guarnizione (vedere indicazioni a pagina 6)"	"For the outlet fitting plastic (EP version) an indication of the thread G 1/8" is indicative and cannot be subjected to control according the UNI EN ISO 228/2; the seal is not guaranteed by the thread, but by the sealing (see the instructions on page 6)"

Prestazione a bobina fredda		Cold coil performances				
Curva ricavata da prove a banco secondo lo schema a pag.6		Measurements done on bench test like scheme at page 6				
V = Vn		V = Vn				
Temperatura ambiente 25°C		Room temperature at 25°C				
Fluido: acqua a 20°C		Fluid: water at 20°C				
E4 - E5 - E7						
Models		Voltage	ON/OFF (min)	Class	W	Certificates
EP4, EP5, EP7, EP5 D	EX4, EX5, EX7, EX5 D	240V~50Hz	2/1	F	48	IMQ M6294
		230V~50Hz	2/1	F	48	IMQ M6294/VDE
		220V~50Hz	2/1	F	48	IMQ M6294
EAP4, EAP5, EAP7, EAP5 D	EAX4, EAX5, EAX7, EAX5 D	220V~60Hz	1/2	A	64	c-UL E151204
EP4, EP5, EP7, EP5 D	EX4, EX5, EX7, EX5D	200V~50-60Hz	2/1	F	48	-
		120V~60Hz	1/1	A	41	c-UL E151204
EAP4, EAP5, EAP7, EAP5 D	EAX4, EAX5, EAX7, EAX5 D	120V~60Hz	1/1,5	A	52	c-UL E151204
EP4, EP5, EP7, EP5 D	EFX4, EFX5, EFX7, EFX5 D	120V~60Hz	2/1	F	52	c-UL E151204
EP4, EP5, EP7, EP5 D	EX4, EX5, EX7, EP5 D	100V~50-60Hz	2/1	F	55	-
		24V~50-60Hz	2/1	F	48	-
EP45	-	230V~50Hz	1/1	F	48	TUV Z1 12 09 80968 002
EP5R	-	220-240V~50Hz	1/1	F	45	TUV Z1 12 09 80968 002



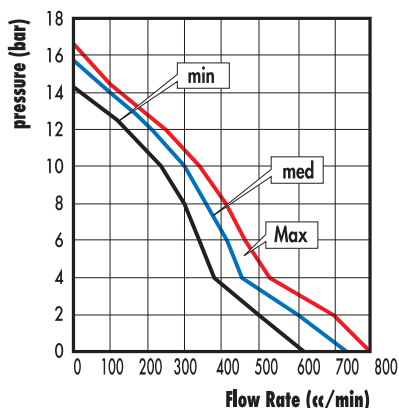
Models	Voltage	ON/OFF (min)	Class	W	Certificates
EP4FM-EP5FM	230V~50Hz	2/1	F	48	VDE
EP4FM-EP5FM	230V~50Hz	2/1	F	46	c-UL in progress

Temporary - Values to be set up - Tolerancy +/- 15%

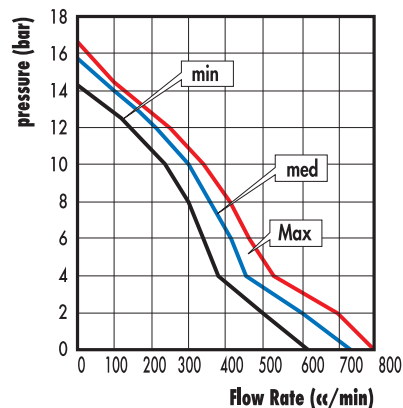


EK		-	EK2		
Models	Voltage	ON/OFF (min)	Class	W	Certificates
EK	220V~50Hz	1/1	F	54	IMQ M6294
EK2	230V~50Hz	1/1	F	56	IMQ M6294/VDE

EK



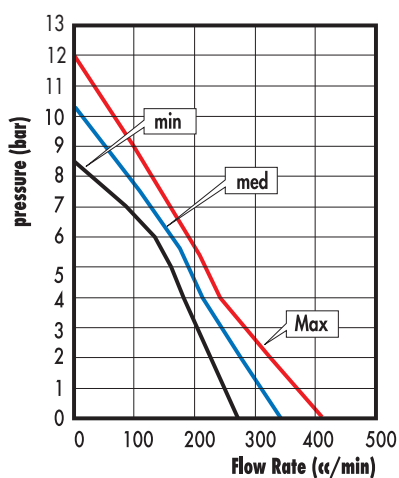
EK2



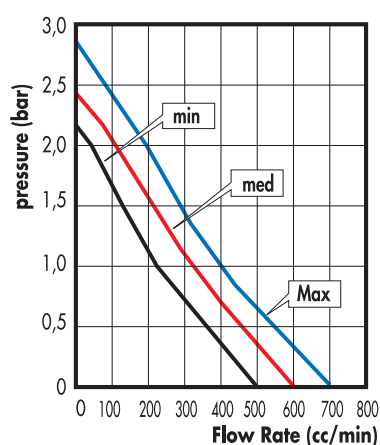
ER

Models		Voltage	ON/OFF (min)	Class	W	Certificates
EP4R, EP8R	EX4R, EX8R	230V~50Hz	1/1	F	42	VDE
		120V~60Hz	1/1	F	46	c-UL E151204
EP8R	EX8R	100V~50-60Hz	1/1	F	46	-
EP4R	EX8R	100V~50-60Hz	1/1	F	42	-

E4R



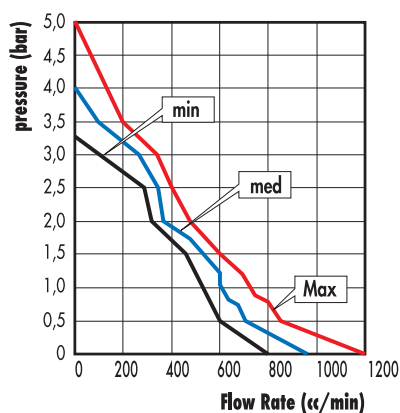
E8R



E77

Models		Voltage	ON/OFF (min)	Class	W	Certificates
EP77	EX77	230V~50Hz	100%	F	28	VDE
		220V~50-60Hz	100%	F	35	-
		120V~60Hz	100%	A	27	UL E151204
		100V~50-60Hz	100%	F	31	--

E77

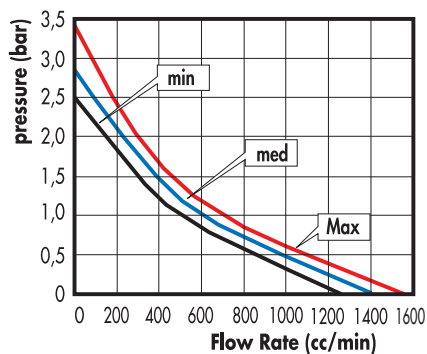


E8 - E8S

Models		Voltage	ON/OFF (min)	Class	W	Certificates
EP8, EP8S	EX8, EX8S	230V-240V~50Hz	100%	F	26	VDE
		220V~50-60Hz	100%	F	33	-
		120V~60Hz	100%	F	29	c-UL E151204
		100V~50-60Hz	100%	F	28	---
		24V~50Hz	100%	F	28	-

E8 - E8S

Per funzionamento continuo.
E8S anche a secco fino a 30 minuti.
Suitable for continuous working.
E8S even up-to-30-minute dry-working.

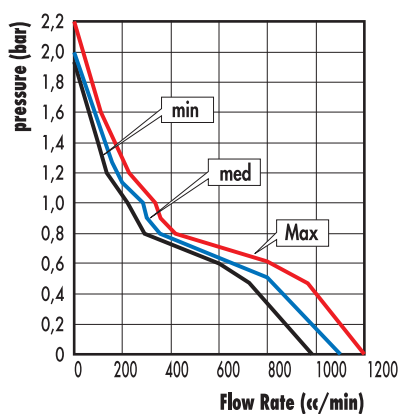


E8LT						
Models		Voltage	ON/OFF (min)	Class	W	Certificates
EP8LT	EX8LT	230-240V~50Hz	100%	F	20	VDE
		120V~60Hz	100%	F	23	c-UL E151204

E8LT

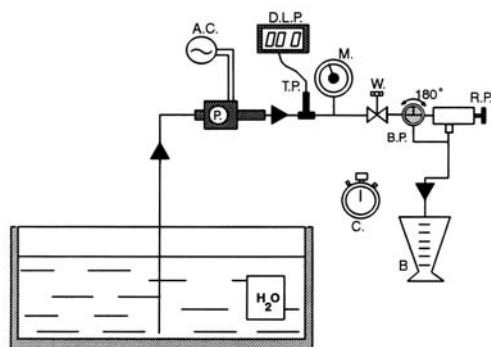
Per funzionamento continuo senza termoprotettore,
anche a secco!

Suitable for continuous working without thermal pro-
tection, even dry!



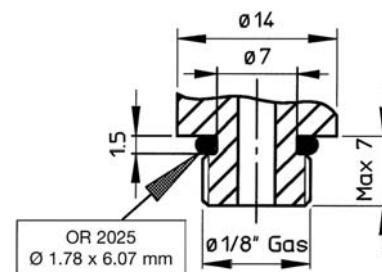
SCHEMA DI PROVA - TEST PROCEDURE

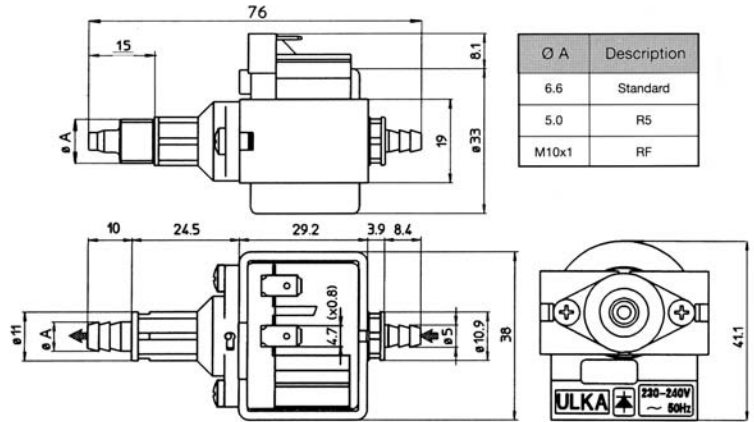
- Schema di connessione e tenuta idraulica ideale da applicare alla mandata delle pompe E
- Drawing showing the ideal junction and hydraulic seal to be applied at the delivery of the pump type E



HOW OUR TEST IS CARRIED OUT:
1- COLD PUMP
2- "X" PRESSURE VALUE SETTING
3- RATE OF FLOW MEASURED IN 1 MINUTE (B)

LEGEND:
P = Pump
A.C. = Pump supply at V=Vn
T.P. = Pressure electronic transducer
D.L.P. = Pressure reading display
M = Manometer with glycerine inside
B.P. = By-Pass at 0 Bar
R.P. = Pressure setting regulator
C. = Chronometer
B = Flow Rate measurement container (becker)
W = Water tap to measure the maximum pressure





IN COMPLIANCE WITH
THE 2011/65/EC
RoHS Directive

Class F

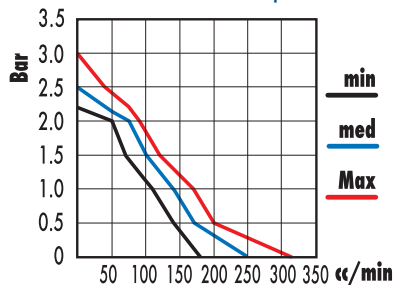
Integrated Diode 1 N 4007 1000V
Without Diode, description: ND

Voltage available and Relative Certification					TYPES	NME 1	NME 1C	NME 1S	NME 2	NME 3	NME 4	NME 5
Voltage	Hz	ON/OFF (min)	W	Certificates	Max pressure (Nominal values) [Bar]	2,5	2,5	3,2	2,5	2,5	2,5	1
230-240	50	100%	16	VDE	Max Flow-rate (Nominal values) [cc/min]	250	270	180	150	130	50	20-30
220	60	100%	16	-	Noise at p=0 Bar/20cm [dB(A)]	50	44	51	40	39	36	36
120	60	100%	16	c-UR E151204								
100	50-60	100%	16	-								
24	50-60	100%	16	-								

NME 1

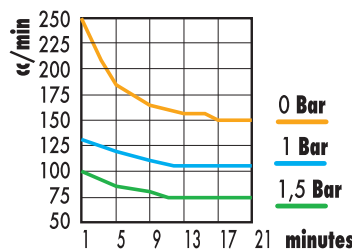
Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



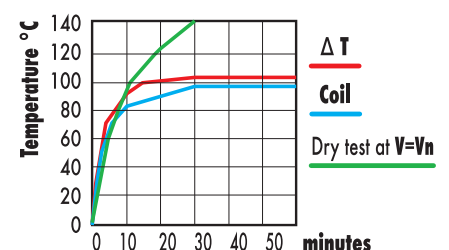
Flow rate/Time:

V=Vn - Water 20°C - Ambient temperature 25°C



Heating test:

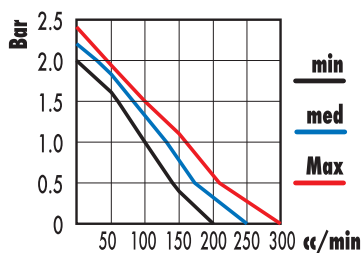
Water 20°C - Ambient temp. 25°C V=Vn+6%-p=0 Bar



NME 1C

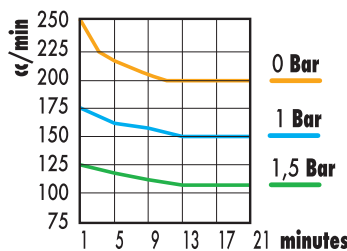
Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



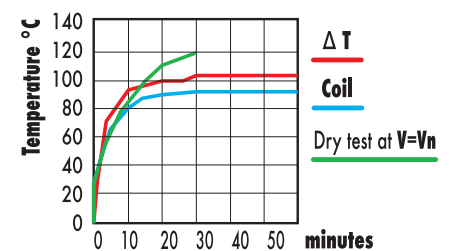
Flow rate/Time:

V=Vn - Water 20°C - Ambient temperature 25°C



Heating test:

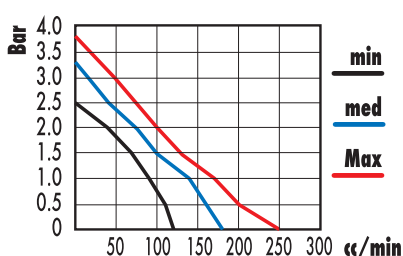
Water 20°C - Ambient temp. 25°C V=Vn+6%-p=0 Bar



NME 1S

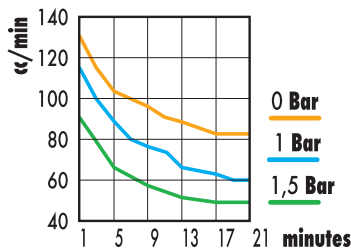
Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



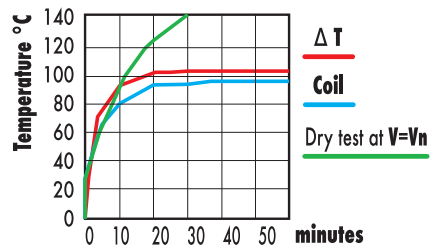
Flow rate/Time:

V=Vn - Water 20°C - Ambient temperature 25°C



Heating test:

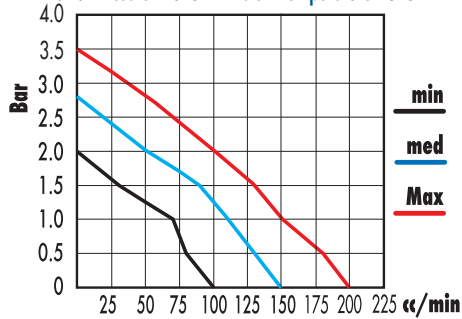
Water 20°C - Ambient temp. 25°C V=Vn+6%-p=0 Bar



NME2

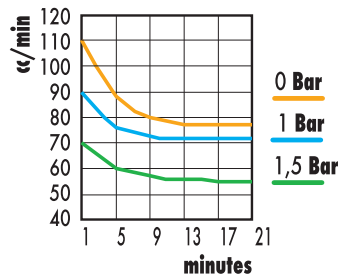
Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



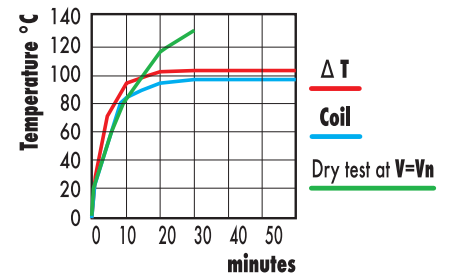
Flow rate/Time:

V=Vn - Water 20°C - Ambient temperature 25°C



Heating test:

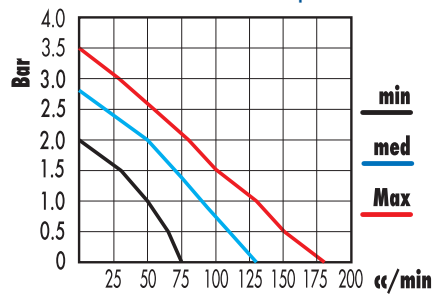
Water 20°C - Ambient temp. 25°C V=Vn+6%-p=0 Bar



NME3

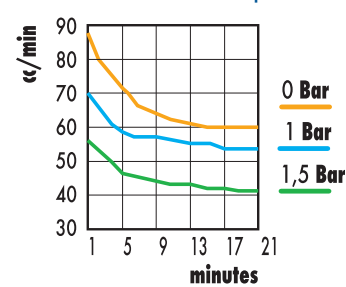
Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



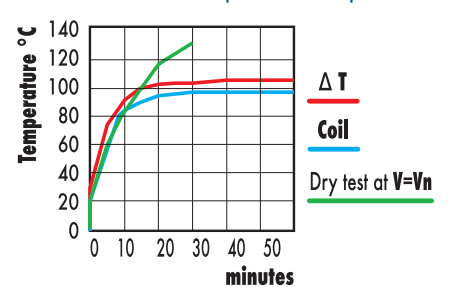
Flow rate/Time:

V=Vn - Water 20°C - Ambient temperature 25°C



Heating test:

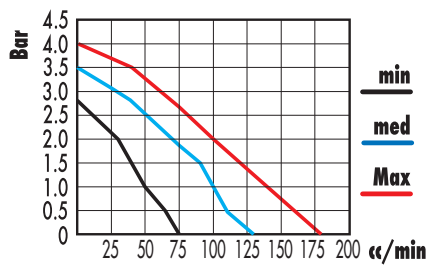
Water 20°C - Ambient temp. 25°C V=Vn+6%-p=0 Bar



NME3S

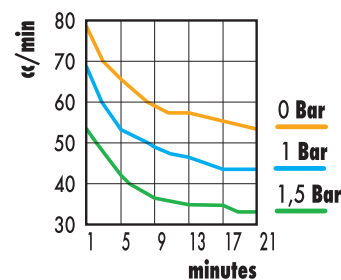
Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



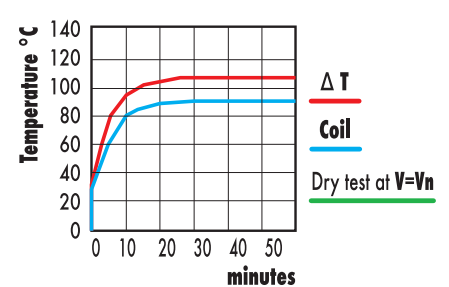
Flow rate/Time:

V=Vn - Water 20°C - Ambient temperature 25°C



Heating test:

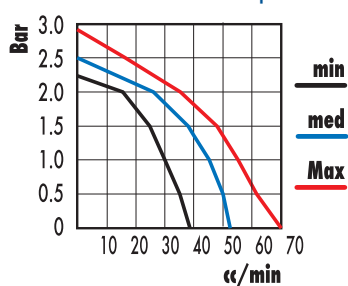
Water 20°C - Ambient temp. 25°C V=Vn+6%-p=0 Bar



NME4

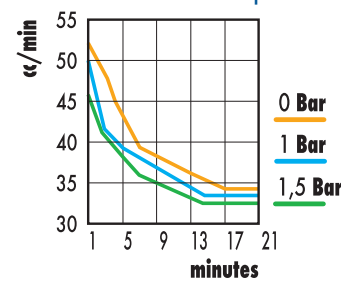
Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C



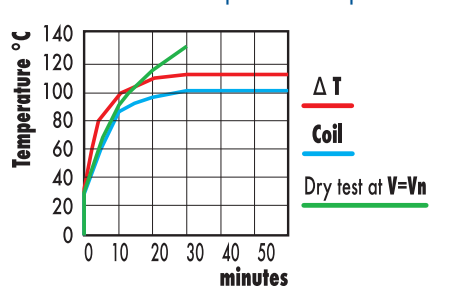
Flow rate/Time:

V=Vn - Water 20°C - Ambient temperature 25°C



Heating test:

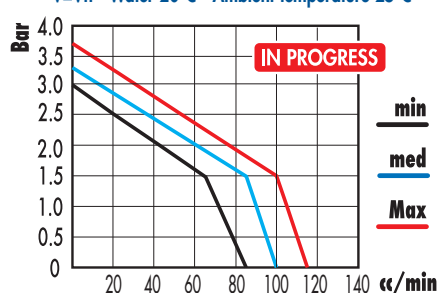
Water 20°C - Ambient temp. 25°C V=Vn+6%-p=0 Bar



NME2S

Cold Performance:

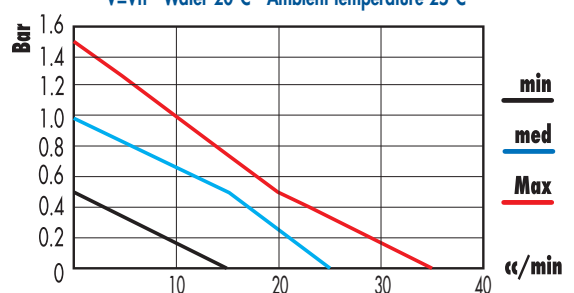
V=Vn - Water 20°C - Ambient temperature 25°C

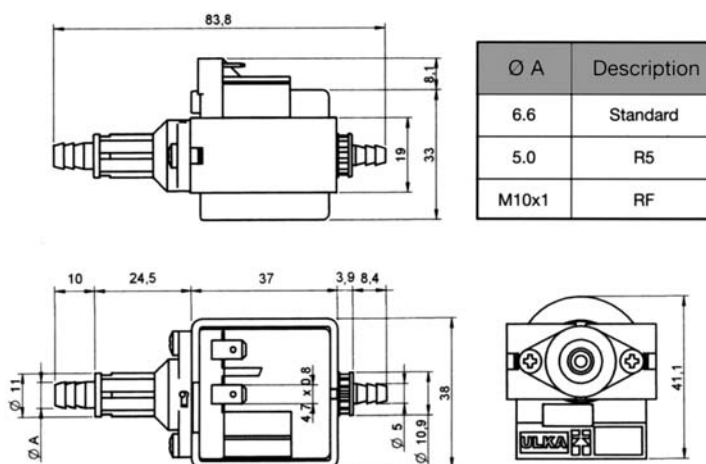


NME5

Cold Performance:

V=Vn - Water 20°C - Ambient temperature 25°C





IN COMPLIANCE WITH
THE 2011/65/EC
RoHS Directive

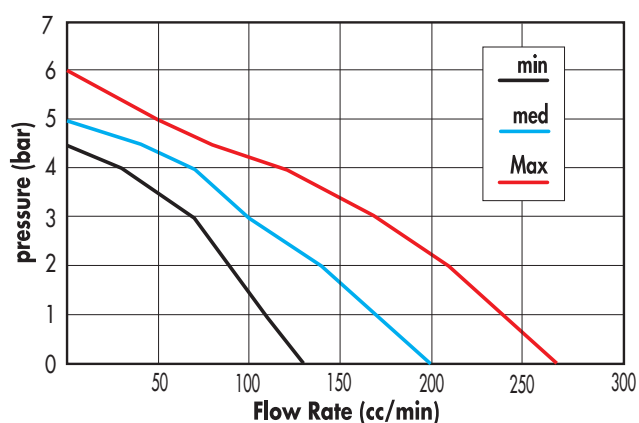
Class F

Integrated Diode 1 N 4007 1000V
Without Diode, description: ND

Voltage available and Relative Certification	Voltage	Hz	ON/OFF (min)	W	Certificates
	230-240	50	100%	21	VDE
	120	60	100%	17	c-UI E151204
	220	60	100%	21	-
	100	50-60	100%	21	-
	24	50-60	100%	17	-

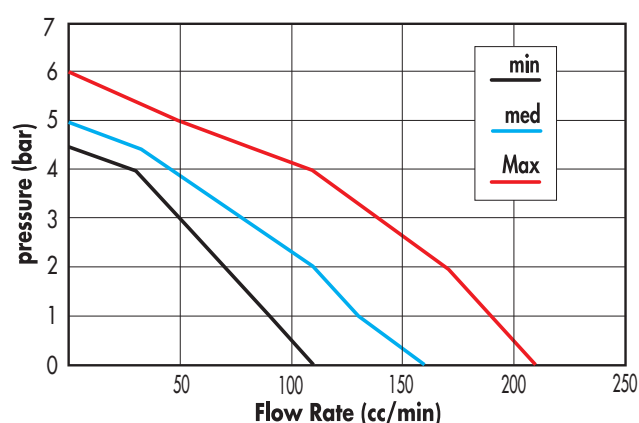
NMEHP1

Cold Performance:
V=Vn - Water 20°C - Ambient temperature 25°C



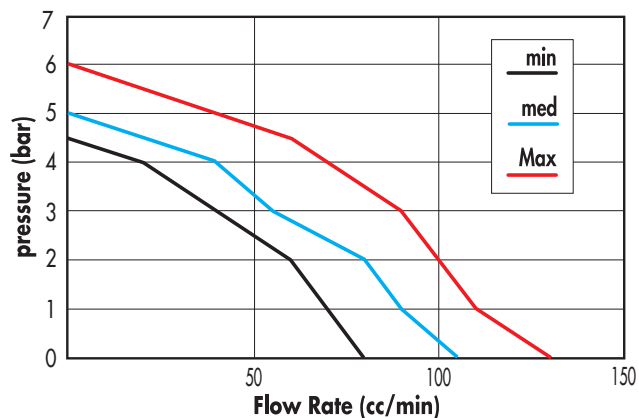
NMEHP2

Cold Performance:
V=Vn - Water 20°C - Ambient temperature 25°C



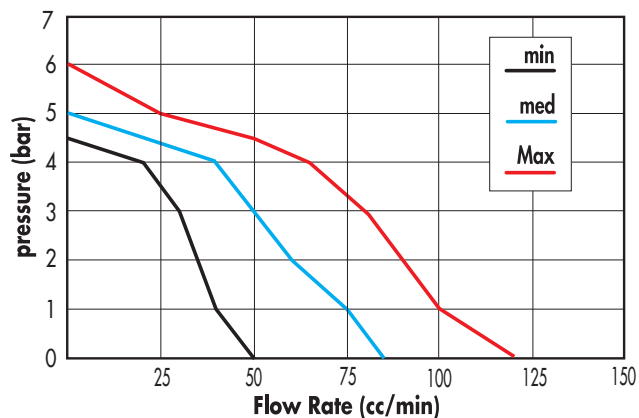
NMEHP3

Cold Performance:
V=Vn - Water 20°C - Ambient temperature 25°C

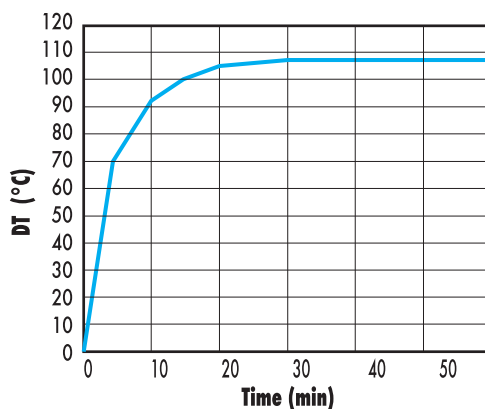


NMEHP4

Cold Performance:
V=Vn - Water 20°C - Ambient temperature 25°C



Heating test: Water 20°C - Ambient temperature 25°C V=Vn+6°C-p=0 Bar



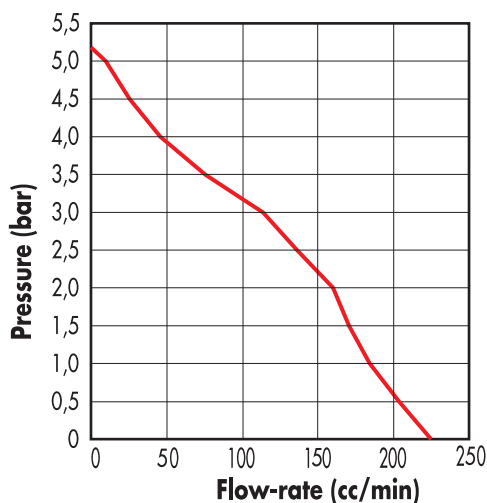
NMEHP1S

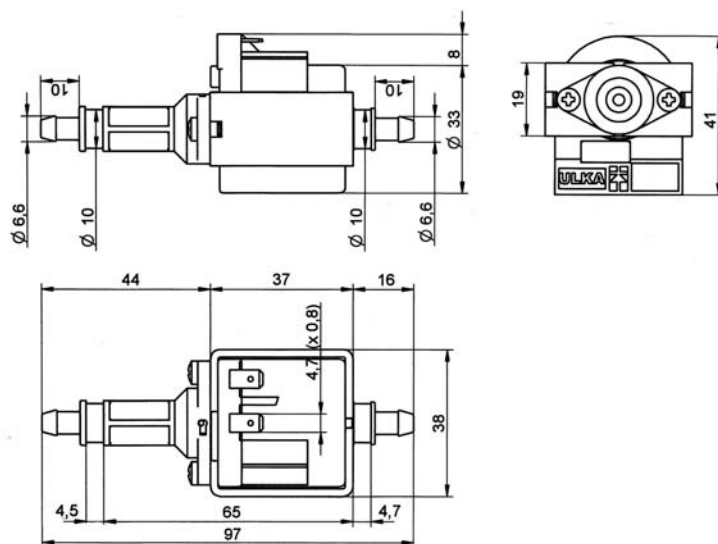
Cold Performance: V=Vn - Water 20°C - Ambient temperature 25°C

Class F

Integrated Diode 1 N 4007 1000V
Without Diode, description: ND

	Voltage	Hz	ON/OFF (min)	W	Certificates
Voltage available and Relative Certification	230-240	50	1/1	16	VDE

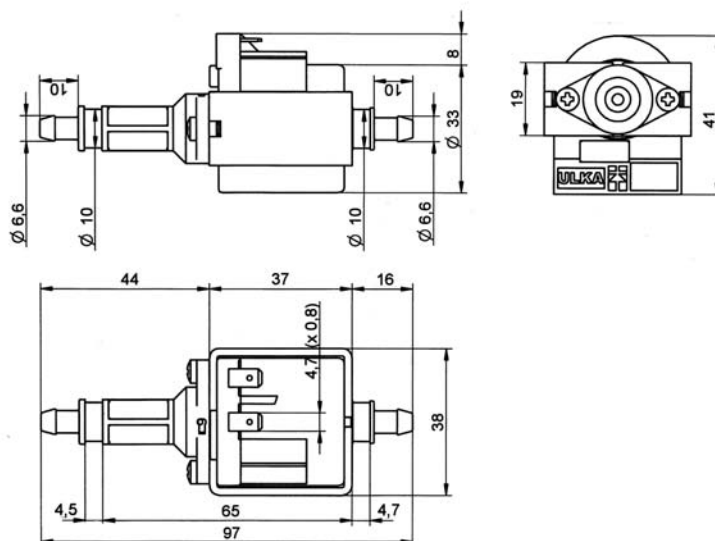




- Not suitable for use at maximum pressure
- “ND”=Without integrated Diode in case the pumps is supplied by an electronic management
- T=110°C Max at V=Vn+6% - 2 min ON/1 min OFF - p=0 bar

The graph illustrates the relationship between pressure and flow rate for three different filter media. The y-axis represents pressure in bar, ranging from 0 to 3.5. The x-axis represents flow rate in l/min, ranging from 0 to 1000. The 'Max' media (red line) shows the highest pressure, followed by 'med' (blue line) and 'min' (black line). All three media show a decrease in pressure as flow rate increases, with the 'min' media exhibiting a more significant drop after 600 l/min.

Flow Rate (l/min)	Max (bar)	med (bar)	min (bar)
0	3.0	2.7	2.3
100	2.0	1.8	1.5
200	1.5	1.4	1.2
400	1.1	1.0	0.8
600	0.7	0.6	0.5
700	0.5	0.4	0.0
800	0.0	0.0	0.0



CERTIFIED

**IN COMPLIANCE WITH
THE 2011/65/EC
RoHS Directive**

HF2 - HF2/S

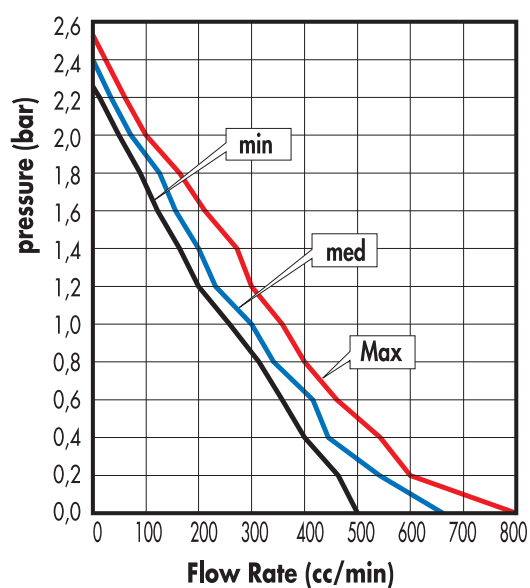
Models	Voltage	ON/OFF (min)	Class	W	Certificates
HF2	230V~50Hz	100%	F	18	-
	120V~60Hz	100%	F	18	-
HF2/S	230V~50Hz	100%	F	18	VDE
	120V~60Hz	100%	F	15	-

Temporary - Values to be set up

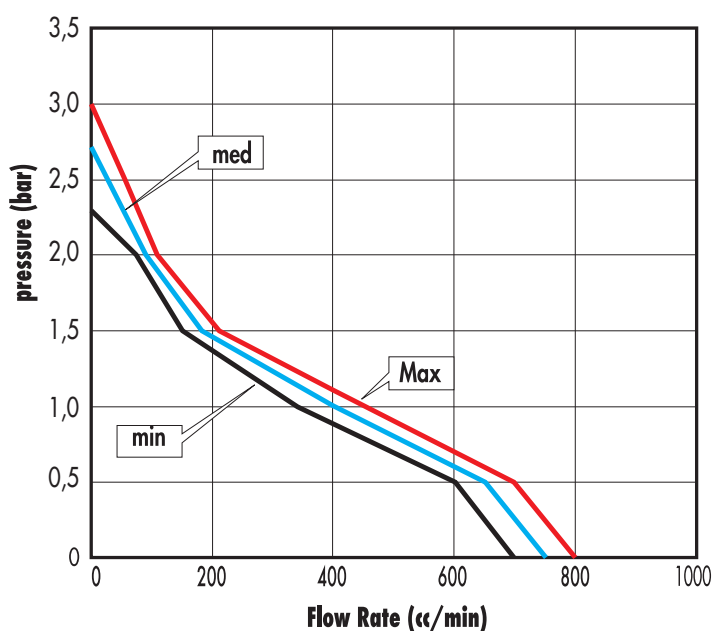
- Double Insulation
- Self-priming without counterpressure
- Suitable to dry-use only during priming

- Non idoneo all' utilizzo in pressione massima
- "ND"=Without integrated Diode in case the pumps is supplied by an electronic management
- T=110°C Max at V=Vn+6% - 2 min ON/1 min OFF - p=0 bar

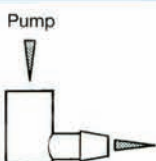

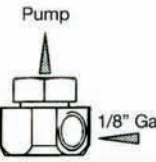







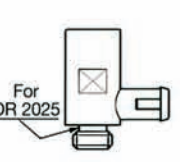

HF2




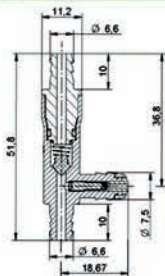
HF2/S




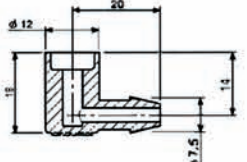
FITTING E MODELS

	ACCESSORI	FITTINGS
	Lato Aspirazione Pompa	Suction head
 	Aspirazione a pressione atmosferica:	Atmospheric pressure suction:
	Pipetta in Santoprene	Pipetta in Santoprene
 	Aspirazione mediante allacciamento alla rete idrica:	Suction through water pipe network connection:
	Raccordo Bar in ottone	Raccordo Bar in brass
	Lato Mandata Pompa	Delivery head
 	Raccordo 90°	Raccordo 90°
	Connessione a 90°	Connecting device
 	Valvola "S2": Autoinnesco in contropressione	Valve "S2": Self-priming in counter pressure conditions
	Valvola "S22": Autoinnesco in contropressione e ripristino pressione atmosferica in caldaia	Valve "S22": Self-priming in counter pressure conditions and restoration of the atmospheric pressure in the boiler
 	Valvola "S3": Autoinnesco in contropressione, ripristino pressione atmosferica in caldaia e valvola di sicurezza integrata	Valve "S3": Self-priming valve in counter pressure conditions, restoration of the atmospheric pressure in the boiler and integrated safety valve
 	Valvola "S3BP": Autoinnesco in contropressione, ripristino pressione atmosferica in caldaia e by-pass	Valve "S3BP": Self-priming valve in counter pressure conditions, restoration of the atmospheric pressure in the boiler and by-pass


FITTING NMEHP MODELS

ACCESSORI	FITTINGS
Lato Mandata Pompa	Delivery head
	
Valvola "S4" Autoinnesco in contropressione	Valve "S4" Self-priming in counter pressure conditions




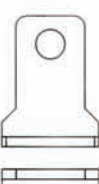
FITTING NME MODELS

ACCESSORI	FITTINGS
Lato Aspirazione Pompa	Suction head
	
	Pipetta NME

FITTING HF MODELS

ACCESSORI	FITTINGS
Lato Aspirazione Pompa	Suction head
	
	PIPETTA

FITTING E MODELS

Standard Rubber Mounting 8.01.017  	Square Rubber Mounting 8.01.022  	"ST" Square Rubber Mounting 8.01.039  
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FITTING HF MODELS

Square Rubber Mounting 
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Evolution Pumps

- DOPPIO ISOLAMENTO.
- ALIMENTAZIONE A CORRENTE ALTERNATA COME DA DATI DI TARGA.
- FLUIDO IDEALE: ACQUA ALLA TEMPERATURA DI 25°C.
- FUNZIONAMENTO E POTENZA ASSORBITA SECONDO DATI DI TARGA.
- AUTOINNESCANTE PURCHÈ PRIVA DI CONTRO PRESSIONE ALLA MANDATA; PREVALENZA 3MT.
- NON IDONEA ALL'UTILIZZO A SECCO TRANNE CHE PER I NORMALI INTERVENTI DI INNESCO.
- LA BOBINA È DOTATA DI UN MARSUPIO PER OSPITARE UN EVENTUALE TER-MOPROTETTORE.
- I COMPONENTI SONO SOTTOPOSTI A SEVERI CONTROLLI DI QUALITÀ.
- LA PRODUZIONE E IL COLLAUDO SONO EFFETTUATI DA UN IMPIANTO AUTOMATIZZATO E COMPUTERIZZATO CHE NE GARANTISCE E CERTIFICA LA QUALITÀ NONCHÉ LA INDISPENSABILE TEMPESTIVITÀ D'EVAZIONE DEGLI ORDINI.
- LE PROVE AL 100% COMPRENDONO:
1) PROVA DI RIGIDITÀ DIELETTICA VERSO MASSA A 2500V PER 2 SECONDI.
2) PROVA DI IDRAULICA, DI INNESCO, DI PORTATA, DI PRESSIONE.
- DOUBLE INSULATION.
- AC SUPPLY AS PER LABEL DATA.
- IDEAL FLUID: WATER AT 25°C (MAXIMUM TEMPERATURE).
- WORKING TIME AND ABSORBED POWER AS PER LABEL DATA.
- SELF-PRIMING WITHOUT COUNTERPRESSURE AT DELIVERY HEAD; 3 MT HEIGHT.
- SUITABLE TO DRY-USE ONLY DURING PRIMING.
- THE COIL IS EQUIPPED WITH A POCKET FOR THE POSSIBLE FITTING OF A THERMAL CUTOUT.
- THE COMPONENTS ARE SUBJECTED TO STRICT QUALITY CONTROLS.
- BOTH PRODUCTION AND TEST ARE CARRIED OUT BY AN AUTOMATED AND COMPUTERISED SYSTEM ASSURING AND CERTIFYING NOT ONLY ITS QUALITY BUT ALSO THE INDISPENSABLE PROMPTNESS IN EXECUTING ORDERS.
- THE FULL DETAILED INSPECTION INCLUDES:
1) DIELECTRIC STRENGHT TEST TOWARDS MASS AT 2500V PER 2 SECONDS.
2) HYDRAULIC, SELF-PRIMING, FLOW-RATE AND PRESSURE TESTS.

Appliances

Macchine da Caffè		Coffee Machines
Lavamoquette Sistemi di Pulizia a Vapore		Carpet Cleaners Steam Cleaning Systems
Ferri da Stiro / Sistemi Stiranti Presse per Stiratura		Steam Irons / Steam Stations Ironing Presses
Apparecchi Medicali Apparecchi Odontoiatrici		Medical Equipment Dental Equipment
Gasificatori d'Acqua Distributori di Bevande		Water Gasifying Equipment Vending Multi-Beverage
Condizionatori d'Aria		Air Conditioners
Macchine per Fumo Scenico		Disco Smoke Machines

