A series

PLUNGER TYPE
DOSING PUMPS

DOSEURO®



A

Plunger Type

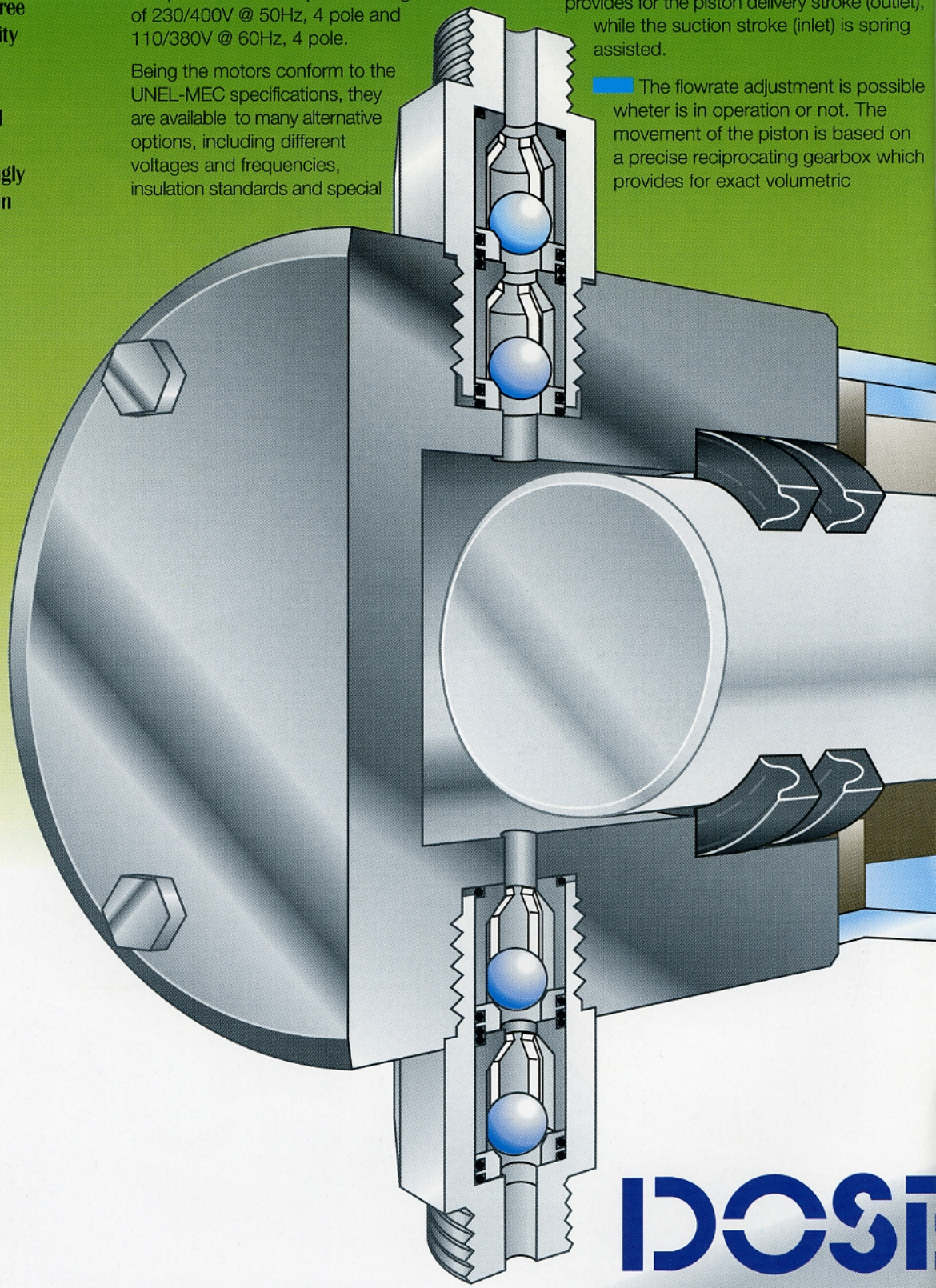
"A" Series piston metering pumps, have been specifically designed to ensure accuracy and are engineered for continuous metering applications through a wide range of capacities.
The design ensures a high degree of accuracy and reproducibility commensurate with the requirements of the water treatment and petrolchemical engineer.
The pumps are built accordingly with the CE norms as stated in the EU Machine Guideline

TECHNICAL CHARACTERISTICS

Every pumps are fitted as standard with gearbox reduction system and with vertically mounted B14 shaped electric motor in accordance to the UNEL-MEC specifications. The motor's power range is from 0.18 Kw upto 0.75 Kw at european standard 3 phase voltages of 230/400V @ 50Hz, 4 pole and 110/380V @ 60Hz, 4 pole.

Being the motors conform to the UNEL-MEC specifications, they are available to many alternative options, including different voltages and frequencies, insulation standards and special explosion proof versions.

- The gearbox provides for a wormwheel reduction system with all bearings fully supported within the fully lubricated gearbox.
- The manually adjustable output with spring return is operated by an eccentric, which provides for the piston delivery stroke (outlet), while the suction stroke (inlet) is spring assisted.
- The flowrate adjustment is possible wheter is in operation or not. The movement of the piston is based on a precise reciprocating gearbox which provides for exact volumetric



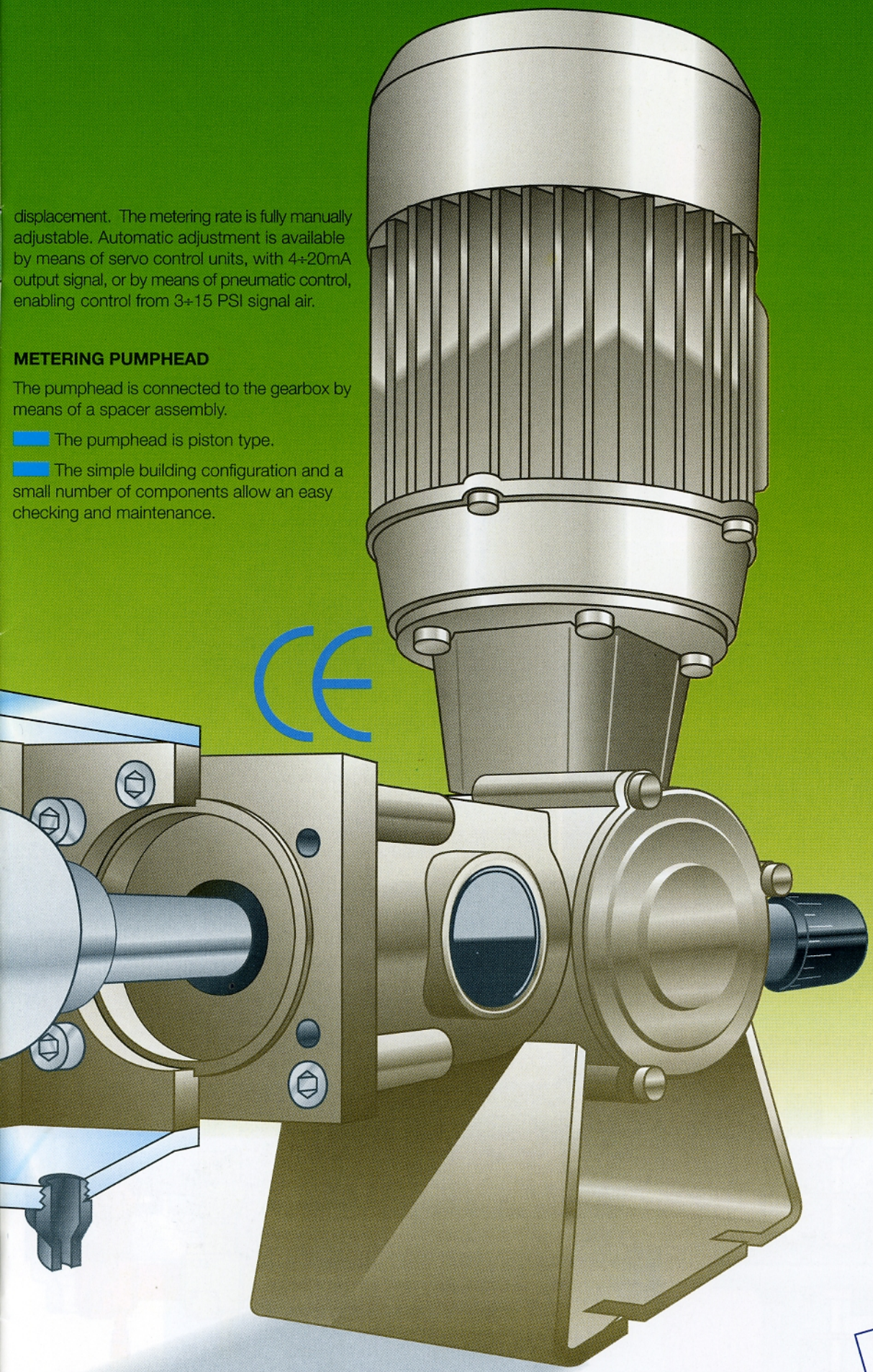
DOSI

displacement. The metering rate is fully manually adjustable. Automatic adjustment is available by means of servo control units, with 4÷20mA output signal, or by means of pneumatic control, enabling control from 3÷15 PSI signal air.

METERING PUMPHEAD

The pumphead is connected to the gearbox by means of a spacer assembly.

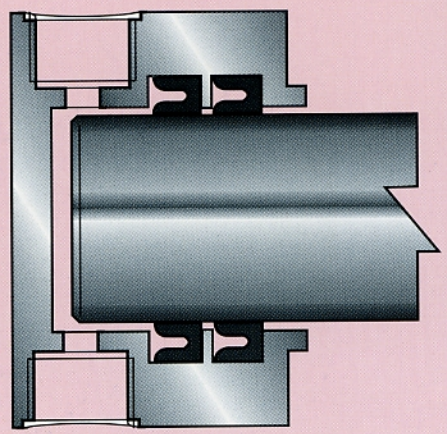
- The pumphead is piston type.
- The simple building configuration and a small number of components allow an easy checking and maintenance.



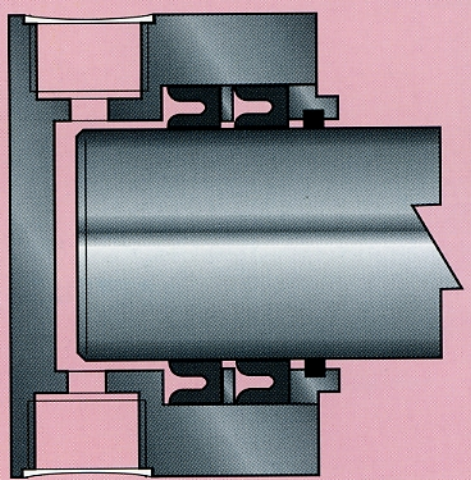
EURO®

Examples composition

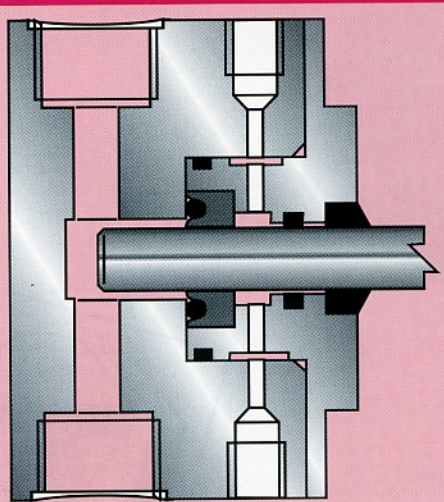
Execution 11 - piston Ø 38÷47



Execution 13 - piston Ø 54÷89



Execution 32 CL - High pressure with washing



"A" series Piston pumps are available in three different sizes:

- A 125 N
piston stroke 12.5 mm

- A 175 N
piston stroke 17.5 mm

- A 250 N
piston stroke 25 mm

For these three types 11 different piston sizes are available to suit each client's applications for capacity and pressure.

Piston metering pumps are suitable for use when:

The dosed liquid is a non abrasive solution.

A drip proof system is not essential.

High pressure is required

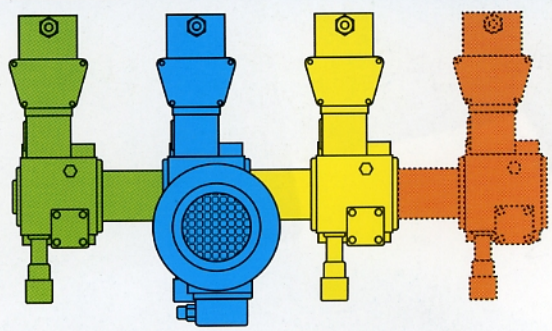
Standard materials of pumphead construction:

AISI 316 Stainless steel and PVC.

Available in many different materials of construction to suit the chemicals in use.

Jacketed pumpheads for either cooling or heating are available to suit requirements. Piston glandling arrangements can be supplied with water washed seals to continuously flush the piston.

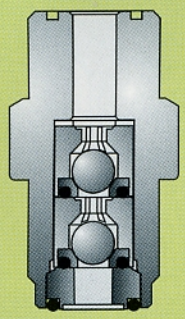
Piston seals are of the lip type design, but, in addition, "V" type seals are available in PTFE.



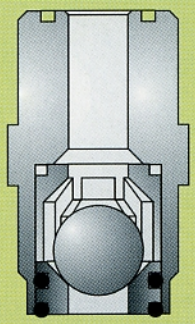
MULTIPLE HEADED PUMPS

Different multiple heads units are available on request.
Each pumping element is independently adjustable eather is in operation or not.

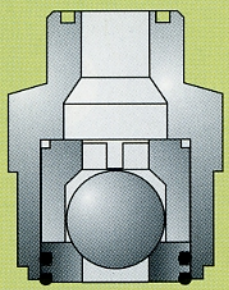
AB 5/14 N DV



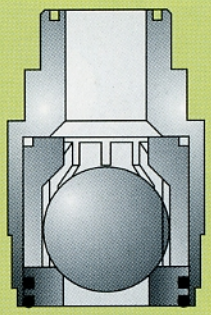
AB 8/21 N



AB 11/14 N



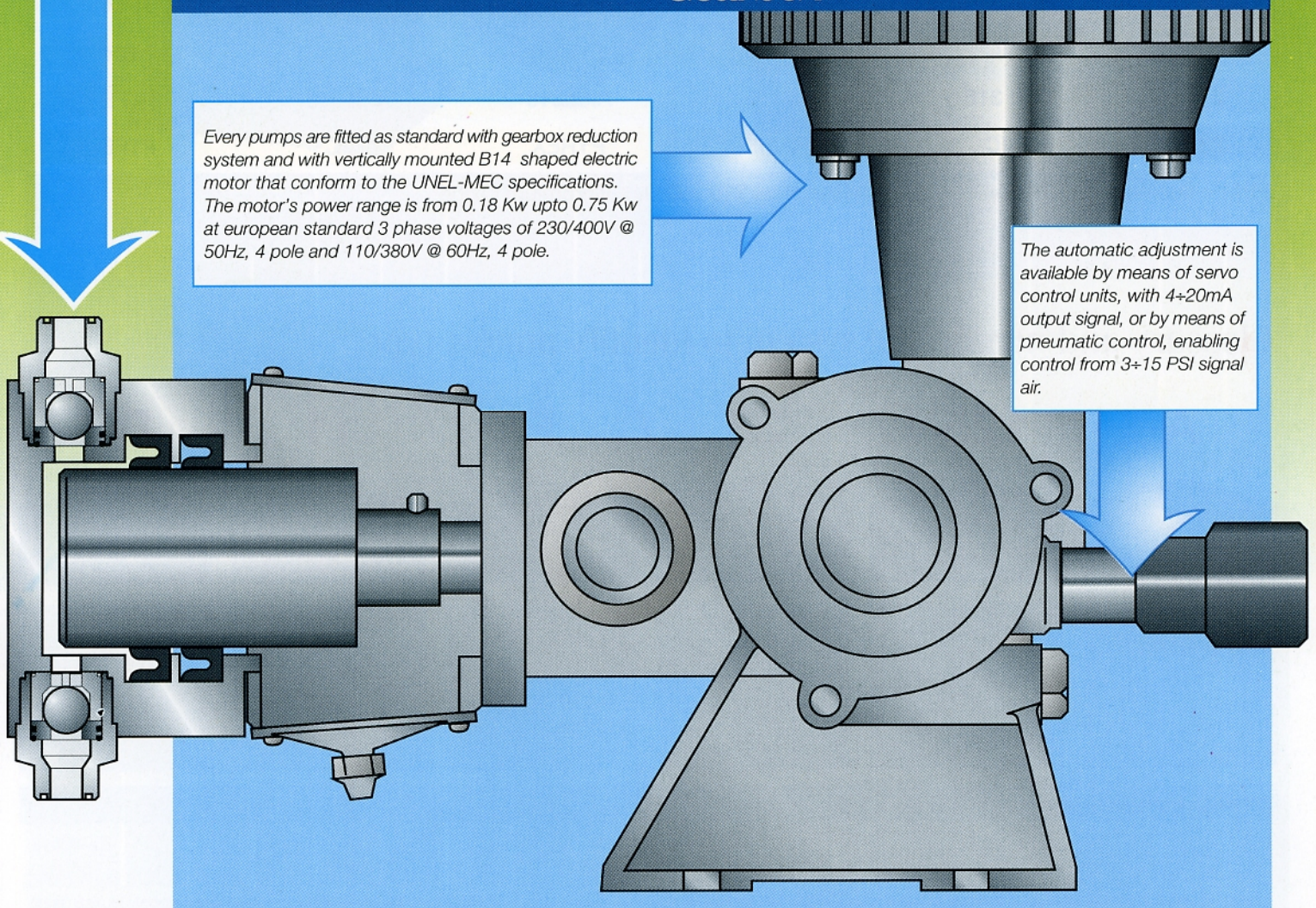
AB 17/21 N



Gearbox

Every pumps are fitted as standard with gearbox reduction system and with vertically mounted B14 shaped electric motor that conform to the UNEL-MEC specifications. The motor's power range is from 0.18 Kw upto 0.75 Kw at european standard 3 phase voltages of 230/400V @ 50Hz, 4 pole and 110/380V @ 60Hz, 4 pole.

The automatic adjustment is available by means of servo control units, with 4÷20mA output signal, or by means of pneumatic control, enabling control from 3÷15 PSI signal air.



A

Plunger Type

Piston pumps: executions

	PARTS				
EXECUT.	PUMP HEAD	PISTON	VALVE (ball)	VALVE SEATS	PISTON GASKETS
11	AISI 316	AISI 316	AISI 316	AISI 316	NBR
13	PVC	CERAMIC	PYREX	PVC	FPM
14	AISI 316	AISI+C.O.	AISI 316	AISI 316	POLYURETHANE
17	AISI 316	CERAMIC	AISI 316	AISI 316	FPM
19	AISI 316	AISI 316	AISI 316	AISI 316	FPM
20	PVC	AISI 316	PYREX	PVC	NBR
21	AISI 316	AISI 316	AISI 316	AISI 316	PTFE
23	PVC	CERAMIC	PYREX	PVC	PTFE

FPM = fluoroelastomer AISI 316 = stainless steel 316 C.O. = Chromium Oxide

Glossary and numbering-system to identify pumps type

A	125N	38 /	F	11	DV
1st group	2nd group	3rd group	4th group	5th group	6th group
"A" series piston dosing pump	*stroke length*	*piston diameter in mm*	*reduction ratio group (nr. of piston strokes/min): F (1/24) B (1/12)*	*materials in touch with the fluid*	*not standard - special code*

in case of pumps supplied without motor add: WO/M



A125N

Pump type		Reducer ratio Strokes number /1		Capacity (*2) L/1'		L/h		Max Press. (*3) psi		Connections (*4)		Motor	ø mm Real piston	Stroke mm	Net Weights (*5) Kg	
	(*1)	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	SS 316	PVC	SS 316	PVC			Length	SS 316	PVC
A-125N- 6	F C B	58 96 116	70 116	0,013 0,022 0,027	0,017 0,027	0,8 1,3 1,6	1,0 1,6						6		8,5	7,5
A-125N- 11	I F C B	35 58 96 116	42 70 116	0,040 0,066 0,110 0,133	0,048 0,080 0,133	2,4 4 6 8	2,8 4,8 8	20	10			Kw 0.18 3 Ph	11.11		8,5	7,5
A-125N- 17	I F C B	35 58 96 116	42 70 116	0,1 0,166 0,273 0,330	0,120 0,200 0,330	6 10 16 20	7,2 12 20					~1400 rpm	17.46		8,5	7,5
A-125N- 25	I F C B	35 58 96 116	42 70 116	0,221 0,366 0,604 0,733	0,264 0,440 0,733	13,2 22 36 44	15,8 26,4 44	20		1/2" G.m.		or	25.4	12.5 mm	8,5	7,5
A-125N- 30	I F C B	35 58 96 116	42 70 116	0,311 0,516 0,854 1,033	0,374 0,620 1,033	18,7 31 51 62	22,4 37,2 62	14					30.16		8,5	7,5
A-125N- 38	I F C B	35 58 96 116	42 70 116	0,502 0,833 1,373 1,660	0,600 1,000 1,660	30 50 82 100	36 60 100	9				Kw 0.18 1 ph	38.1		9,5	8
A-125N- 47	I F C B	35 58 96 116	42 70 116	0,784 1,300 2,150 2,600	0,940 1,560 2,600	47 78 129 156	56 93,6 156	5,5				~1400 rpm	47.63		9,5	8

Note: G.m. = Cylindrical, male; 1 liter = 0,264 gallon; 1 Kg/cm2 = 14,223 PSI

(*1) Piston's number of strokes during 1 minute with 4 pole motor
I = Reducer ratio 1 : 40 = 35 strokes at 50 Hz / 42 strokes at 60 Hz
F = Reducer ratio 1 : 24 = 58 strokes at 50 Hz / 70 strokes at 60 Hz
C = Reducer ratio 1 : 14,5= 96 strokes at 50 Hz / 116 strokes at 60 Hz
B = Reducer ratio 1 : 12 = 116 strokes at 50 Hz

(*2) The indicated capacity value is subject to changes due to the working pressure, the dosed liquid, the viscosity.

(*3) Higher pressures are available.

(*4) Different range of connections are available on request.

(*5) The weight is approximate and is the value of the pump fitted with a totally enclosed fan-cooled outdoor motor.

(6) The pumps can be supplied with accessories if requested.

(7) The pumps are epoxy coated RAL 7030.



A175N

Pump type	(*1)	Reducer ratio Strokes number /1 50 Hz	60 Hz	Capacity (*2) L/1' 50 Hz	60 Hz	L/h 50 Hz	60 Hz	Max Press. (*3) Kg/cm2 SS 316 0,25kW	SS 316 0,37kW	PVC 0,25kW	PVC 0,37kW	Connections (*4)	Motor Real piston	ø mm mm	Stroke Length	Net Weights (*5) Kg SS 316	PVC
A-175N -6	F	70	84	0,021	0,026	1,3	1,56		//					6		11	10
	C	96	116	0,029	0,035	1,7	2,11										
	B	120		0,036		2,2											
A-175N -11	F	70	84	0,100	0,120	6	7,2						kW 0.25 or kW 0.37	11.11		11	10
	C	96	116	0,133	0,160	8	9,6										
	B	120		0,166		10											
A-175N -17	F	70	84	0,283	0,340	17	20,4						3 Ph ~1400 rpm	17.46		11	10
	C	96	116	0,400	0,480	24	28	20		10							
	B	120		0,500		30											
A-175N -25	F	70	84	0,616	0,740	37	44,4					1/2 " G.m.		25.4		11	10
	C	96	116	0,853	1,024	51	61,4										
	B	120		1,066		64											
A-175N -30	F	70	84	0,866	1,400	52	62,4						or	30.16	17.5	11	10
	C	96	116	1,200	1,440	72	86	20	20								
	B	120		1,500		90											
A-175N -38	F	70	84	1,383	1,660	83	99,6							38.1		12	10,5
	C	96	116	1,920	2,304	115	138	13	20								
	B	120		2,400		144							kW 0.25 or kW 0.37 1 ph				
A-175N -47	F	70	84	2,166	2,600	130	156							47.63		12	10,5
	C	96	116	3,013	3,615	180	216	8,5	13	8,5	10						
	B	120		3,766		226											
A-175N -54	F	70	84	2,800	3,360	168	201,6						~1400 rpm	53,98		15.5	12
	C	96	116	3,866	4,640	232	278	6,5	10	6,5	10	3/4" G.m.					
	B	120		4,830		290											
A-175N -64	F	70	84	3,933	4,720	236	283,2							63.5		16	12.5
	C	96	116	5,440	6,528	326	391	4,5	7	4,5	7						
	B	120		6,800		408											

Note: G.m. = Cylindrical, male; 1 liter = 0,264 gallon; 1 Kg/cm2 = 14,223 PSI

(*1) Piston's number of strokes during 1 minute with 4 pole motor
F = Reducer ratio 1 : 20 = 70 strokes at 50 Hz / 84 strokes at 60 Hz
C = Reducer ratio 1 : 14,5 = 96 strokes at 50 Hz / 116 strokes at 60 Hz
B = Reducer ratio 1 : 1 = 120 strokes at 50 Hz

Notes: See next page



A250N

Pump type	(*1)	Reducer ratio Strokes number /1 50 Hz	60 Hz	Capacity (*2) L/1' 50 Hz	60 Hz	L/h 50 Hz	60 Hz	Max Press. (*3) Kg/cm2 SS 316 0,55kW	0,75kW	PVC 0,55kW	0,75kW	Connections (*4)	Motor Real piston	ø mm mm	Stroke Length	Net Weights (*5) Kg SS 316	PVC
A-250N- 25	F C B	56 96 112	67 116	0,716 1,228 1,433	0,860 1,474	43 73 86	51,6 88	20	//	//	//	1/2 "G.m.	kW 0.55	25,4		21	//
A-250N- 38	F C B	56 96 112	67 116	1,600 2,743 3,200	1,920 3,290	96 164 192	115,2 197,5	20	20	//	//		or kW 0.75 3 Ph ~1400 rpm	38,1		23	17
A-250N- 47	F C B	56 96 112	67 116	2,500 4,285 5,000	3,000 5,142	150 257 300	180 308	17	20	10	10	3/4"G.m.	or	47,63		23	17
A-250N- 54	F C B	56 96 112	67 116	3,200 5,485 6,400	3,840 6,582	192 329 384	230,4 395	13	17	10	10			53,98	25	23.5	17.5
A-250N- 64	F C B	56 96 112	67 116	4,433 7,600 8,860	5,320 9,120	266 456 532	319,2 547,2	9,5	12	9,5	10		kW 0.55 or kW 0.75 1 ph	63,5		25.5	20
A-250N- 76	F C B	56 96 112	67 116	6,383 10,943 12,760	7,660 13,131	383 656 766	459,6 787,8	6,5	8,6	6,5	8,6	1"G.m.	~1400 rpm	76,2		26	20
A-250N- 89	F C B	56 96 112	67 116	8,683 14,885 17,360	10,420 17,862	521 893 1042	625,2 1071,7	4,8	6,3	4,8	6,3			88,9		29	20
A-350N- 89	F C B	56 96 112	67 116	12,150 20,816 24,300	14,566 24,966	729 1249 1458	874 1498	//	4	//	4	1 1/2" G.m.	kW 0.75	88,9	35	35	24

Note: G.m. = Cylindrical, male; 1 liter = 0,264 gallon; 1 Kg/cm2 = 14,223 PSI

(*1) Piston's number of strokes during 1 minute with 4 pole motor
F = Reducer ratio 1 : 25 = 56 strokes at 50 Hz / 67 strokes at 60 Hz
C = Reducer ratio 1 : 14,5 = 96 strokes at 50 Hz / 116 strokes at 60 Hz
B = Reducer ratio 1 : 12,5 = 112 strokes at 50 Hz

(*2) The indicated capacity value is subject to changes due to the working pressure, the dosed liquid, the viscosity.

(*3) Higher pressures are available.

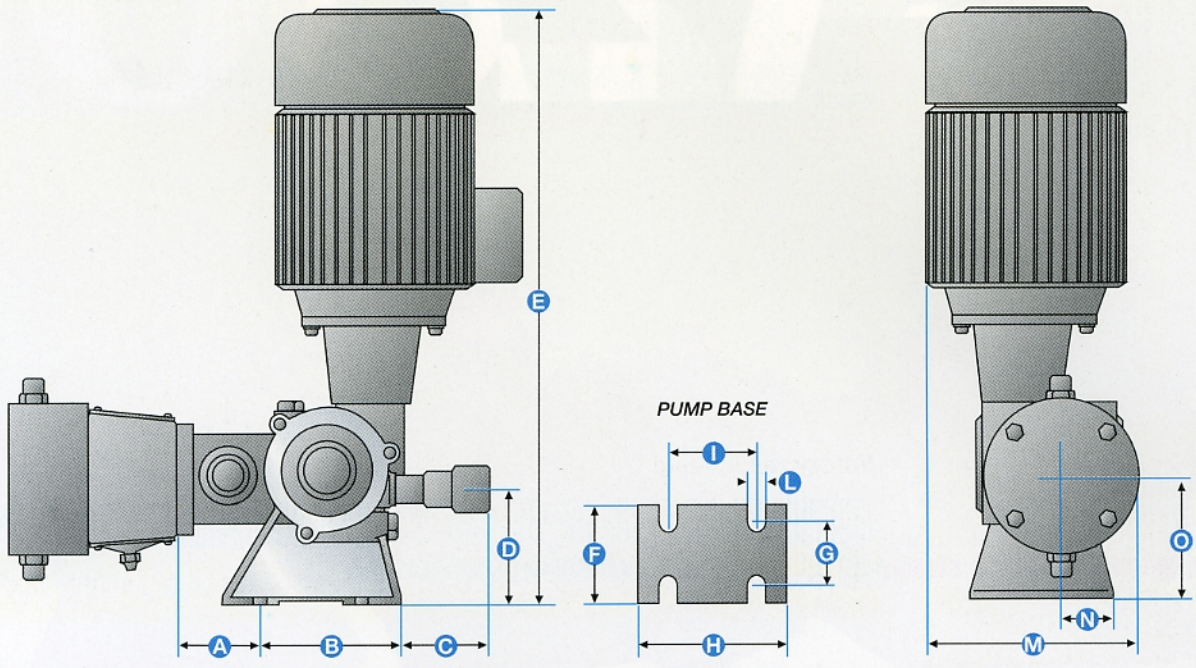
(*4) Different range of connections are available on request.

(*5) The weight is approximate and is the value of the pump fitted with a totally enclosed fan-cooled outdoor motor.

(6) The pumps can be supplied with accessories if requested.

(7) The pumps are epoxy coated RAL 7030.

Dimensions



	A	B	C	D	E	F	G	H	I	L	M	N	O
125	57	90	70	75	378	90	70	115	65	7	130	32	80
175	68	100	75	72	410	90	70	125	65	7	140	32	78
250	75	127	120	70	450	154	130	157	102	9	188	60	78

Dimensions in millimeters

Dimensions and configurations may be changed without prior notice for the purpose of product improvement.

Fittings

FITTINGS

Every metering pumps can be supplied with accessories in order to improve the operating and accuracy of the pumps.

Relief valves, adjustable to meet the site conditions, may be manufactured in Stainless Steel or PVC on request.

Back pressure valves can be utilized to ensure the correct and accurate operation of the pump, and to avoid any risk of syphoning.

Safety valves to protect the pump from any type of over pressure and to ensure the maximum reliability.

Hydropneumatic accumulators membrane type, featuring stainless steel or PVC and several type of elastomer diaphragms, are available on request.

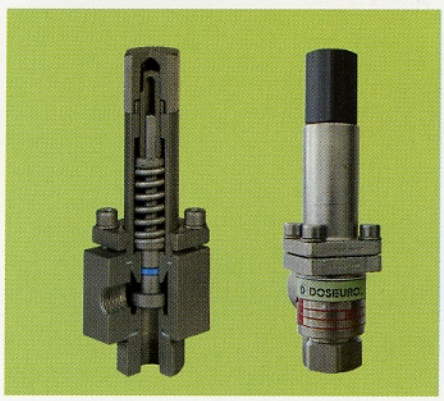
Fittings



Relief valves and back pressure valves

Type	*Pump capacity*	*Connections*	*Body material*	*Diaphragm*
VSC-6	90 l/h	1/2" G.F.	PVC or S.S. 316	PTFE / NBR
VSC-10	230 l/h	1/2" G.F.		
VSC-14	420 l/h	3/4" G.F.		
VSC-22	1000 l/h	1"G.F.		

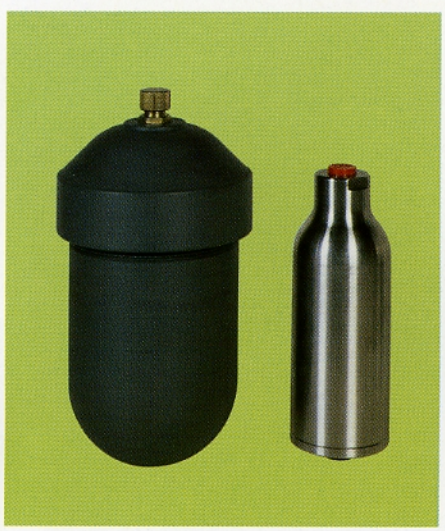
* *Relief valve setting pressure: 3÷10 kg/cm^2 (44÷145 psi)*
Back pressure valve setting pressure: 1÷3 kg/cm^2 (15÷44 psi)
G.F. = Cylindrical, Female



Safety relief valve

Type	*Pump capacity*	*Connections*	*Body material*	*Diaphragm*
TS-10	200 l/h	3/8" o 1/2" G.F.	PVC or S.S. 316	PTFE / NBR
TS-13	400 l/h	1/2" G.F.		
TS-21	1000 l/h	1" G.F.		

* *S.S. 316 Relief Safety valve setting pressure: max 40 kg/cm2 (588 psi)*
PVC Relief Safety valve setting pressure: max 10 kg/cm2 (145 psi)
For higher setting pressures consult our technical dept.
G.F. = cylindrical, female



Membrane hydropneumatic accumulators HST type

Type: HSTX
Body in S.S.316, composed of two parts assembled together by means of a special housing that, under dynamic pressures, tends to close itself. Diaphragms to suit the chemicals in use. Built accordingly to the ASME VIII° Div. 1 rules.

Type:HSTPVC
Body in PVC, composed of two parts assembled together by means of a special housing that, under dynamic pressures, tends to close itself.
Maximum temperature: + 50 °C. Diaphragms to suit the chemicals in use.



Our product range also includes:

- Hydraulic diaphragm dosing pumps “B”, “BR” and “E” series;
- Mechanical diaphragm dosing pumps “D” and “FM” series;
- Polyelectrolyte automatic preparation plants “HA” and “HB” series;
- Polypropylene protected high speed mixers;
- High and slow speed mixers with worm-gear or coaxial reducer.

DOSEURO®

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