

INSTRUCTIONS FOR USE



Motor-driven gear pumps

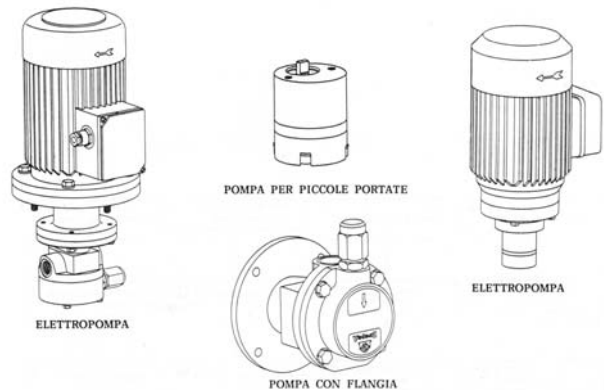
In accordance with point 1.7.4, to I, Dir 98/37 CE

**SERIES
341-----
340000**

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- 2.0 TECHNICAL SPECIFICATIONS
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DECLARATION OF CONFORMITY



Catalogue P/N C2010IE - Wk 23/02

Registered name	DROPSA SpA
Address	via Croce 1, 20090 Vimodrone (MI), Italy
Model	Motor-driven gear pump 3410---
Year of manufacture	1999
Marking	CE

0.0 INTRODUCTION

This user's and maintenance manual refers to **motor-driven gear pumps**, for use in mineral oil lubrication systems. It is recommended that this manual is carefully kept in good condition and is always available to persons requiring to consult it.

To request further copies, updates or clarifications with respect to this manual contact the Engineering Department at Dropsa SpA.

The use of the pump referred to in this manual must be entrusted to qualified personnel with a knowledge of hydraulics and electrical systems.

The manufacturer reserves the right to update the product and/or the user's manual without the obligation to revise previous versions. It is however, possible to contact the Engineering Department for the latest revision in use.

The pump, and any accessories mounted on it, should be carefully checked immediately on receipt and in the event of any discrepancy or complaint the Dropsa SpA Sales Department should be contacted without delay.

DROPSA S.p.A. declines to accept any responsibility for injuries to persons or damage to property in the event of the non-observance of the information presented in this manual.

Any modification to component parts of the system or the different destination of use of this system or its parts without prior written authorisation from DROPSA S.p.A. will absolve the latter from any responsibility for injury or damage to persons and/or property and will release them from all obligations arising from the guarantee.

Instructions for the correct ordering of the required model, and a list of importers, is shown in Section 4.

1.0 DESCRIPTION OF THE PUMPS

These new pump units have been designed as the result of over thirty years experience in the field of developing and manufacturing gear pumps.

The application possibilities are numerous; **the pumps are self-lubricating** and are able to operate with oils or any other fluid with proven lubricating capacity.

These pumps can therefore be utilised in the fields of lubrication, refrigeration, hydraulics and, more generally, for the circulation of fluids for machines, motors and linear motion applications; these units can also be employed on recirculating systems without the need for particularly fine filtering of the circulation fluid.

One of the most striking features of these pumps is the **high degree of silentness in operation**, obtained with the use of gears specially designed for this type of unit.

Also, thanks to particularly precise machining and finishing, a significant improvement has been achieved in efficiencies compared to all previous similar models produced.

To ensure an external seal the pumps have an **“O” ring** located between the pump body and the relative cover in addition to a lip seal on the main shaft.

The body of the pump is produced in hydraulic cast iron and the gears and relative shafts in chrome-nickel steel – carburized, hardened and ground.

The body of the low flow rate pump (up to 500 cc/min) is made of sintered steel; the shafts and gears in carburized and hardened steel with a seal on the main shaft.

WARNING

For all the motor-driven pumps we have shown the applied power to the motors in function of the maximum pressure demand indicated in the table. For higher pressures the motor must be suitably sized; accordingly, to obtain a quotation, state the voltage, the maximum operating pressure and if the service will be continuous or intermittent. (Max pressure = 30 bar for continuous service); (max. pressure = 60 bar for intermittent service). Working temperature of the fluid –20 - +100 degrees with low to medium velocity oil.

On request flameproof motors can be supplied in various voltages.

Request availability from Dropsa SpA.

1.1 Gear pumps for low flow rates with pressures of 30-80 bar.

Gear pumps for low flow rates can also be supplied assembled to the motors.

3 sizes are available: 0.35 – 0.5 – 1.2 litres/min. at 1500 rpm.

The direction of rotation is indifferent; simply invert the suction and delivery tubes.

The service can be either continuous or intermittent.

The following standard power supplies are provided for:

- 220/380 V – 50 Hz
- 240/440 V – 60 Hz
- 415V _ 50 Hz

Other voltages and frequencies are available on request.

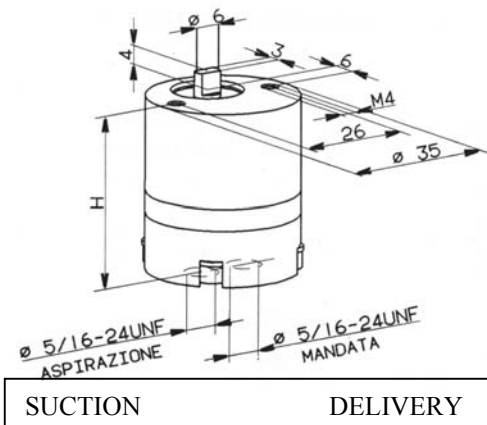
The motors have IP55 grade protection.

In addition, it is possible to order separately a suction filter c/w dip tube (400 mesh/cm², filtering grade 260) of an overall length of between 100 and 455 mm depending on the needs of different installations.

These gear pumps are suitable for operating with oils of a viscosity between 150 and 1000 cSt at fluid working temperatures in the range of –20 - +100 °C.

The maximum useful pressure in intermittent service is 80 bar; for this the design rotation speed of the pump is 1500 or 3000 rpm.

Assembly Part N°		Flow rate in litres/min a 1500 rpm	
Pump for external	Pump in tank		
3099127	3099129	0.35	38
3099004	3099130	0.5	40
3099131	3099133	1.2	47



1.2 Accessories

◆ Pressure switch

DESCRIPTION	Part N°		
	bar	NO	NC
	1-10	3291028	3291031
	10-20	3291034	3291035
	20-50	3291022	3291021

◆ Control panel

DESCRIPTION	Part N°
It is also possible to supply, as an accessory to the pump, a control panel called a "VIP", which permits the controlling of the various operating parameters: pressure switch and level alarms, work and pause cycles.	Single phase : 1639077 (plastic) 1639081 (sheet metal)
	3-phase: 1639087 1639089

• Suction filter assembly

Part N° 3088053	length 165 mm
Part N°3088054	length 80 mm
Part N°3088055	length 415 mm
Part N°3088056	length 130 mm

2.0 TECHNICAL SPECIFICATIONS

2.1 Electrical diagram

2.2 Hydraulic diagram

3.0 CORRECT USE

3.1 Putting into service

Damage to the power supply cable and housing could result in contact with high voltage live parts and hence be a danger to life:

- ◆ carefully check the integrity of the power supply cable and the unit before use;
- ◆ In the event of there being damage to the power supply cable or the unit, **DO NOT** put the system into service!;
- ◆ Replace the damaged power supply cable with a new one;
- ◆ The unit can be opened and repaired **ONLY** by qualified personnel;
- ◆ In order to prevent dangers of electric shock due to direct or indirect contact with live parts it is necessary that the electrical power supply line is adequately protected by a suitable differential magneto-thermal circuit breaker with an intervention threshold of 0.03 Ampere and a max. operating time of 1 second.
The breaking capacity of the circuit breaker must be ≤ 10 kA and the nominal current $I_n = 6$ A.
- ◆ The pump **MUST NOT** be submersed in fluids or utilised in environments which are particularly aggressive or explosive/inflammable if not prepared for this purpose beforehand by the supplier.
- ◆ For correct fixing verify the distance between centres shown in the diagram in Figure ?
- ◆ Use gloves and safety glasses as required in the lubrication oil safety chart;
- ◆ **DO NOT** use aggressive lubricants with NBR gaskets and seals; if in doubt consult the Engineering Department of Dropsa SpA, who will provide a chart with the details of recommended oils;
- ◆ **DO NOT** ignore dangers to health and observe all hygiene standards;
- ◆ **WARNING!** All electrical components must be grounded. This refers to both electrical components and control devices. In this regard ensure that the ground cable is correctly connected. For reasons of safety the ground cable must be approx. 100 mm longer than the phase cables. In the event of accidental detachment of the cable, the ground terminal must be the last to be removed.

Action to be taken prior to start up

- ◆ Verify the integrity of the pump;
- ◆ Fill the tank with suitable lubricant (min/max indication on the tank);
- ◆ Verify that the pump is at operating temperature and the tubing free from air bubbles;
- ◆ Check that the electrical connections have been effected correctly (CEI 64/8, IEC 364);
- ◆ Verify the correct connections of the level and any pressure switch to the control panel
- ◆ On starting the pump, check that the direction of rotation of the electric motor: if rotating in the wrong direction invert the cable connections.

3.2 Use

1. verify the settings made;
2. press the start button of the machine to which the pump is connected;
3. verify the starting of the pump;
4. verify the adequate lubrication of the machine (if doubt exists as to the correct functioning consult the Engineering Department of Dropsa SpA to request test procedures).

3.3 Transport and storage

Transport and storage is effected in a cardboard package.

No particular precautions are required except as noted on the package itself.

handling can be effected by one person.

! *Lift the unit with taking account of the right way up indicated on the cardboard carton*

! *The machine components can withstand temperatures, during storage, from -20 to +50°C; however, in order to avoid damage, starting of the machine should occur at a minimum temperature of -5°C.*

3.4 Assembly/Disassembly

No pump assembly operations are envisaged.

For wall mounting ensure adequate space is available (as shown in the installation diagram) to avoid abnormal postures and possible impacts; four fixing holes are provided with different characteristics depending on the version. Subsequently it will be necessary, as previously described, to connect the pump to the machine hydraulically and then to connect the control panel.

During the disassembly phase ensure the tank is empty.

Disconnect the electrical and hydraulic parts.

Where the machine is to be scrapped, do not dispose of potentially polluting parts in the environment, following local regulations for their correct disposal.

At the time of the machine being scrapped it is necessary to remove and destroy the identification plate and all other relative documents.

3.5 Regulation

The only parameter which can be modified is the pressure.

3.6 Maintenance

- ! *Locate the machine in conditions which facilitate easy access.*
- Utilise individual protection to avoid contact with mineral oil or grease.*

Periodically it is necessary to check:

VERIFICATION	WORK CYCLE
The state of lubrication	1000
The oil level	2000
Cleanliness of the filling and intake filter	4000
Clean the tank of any deposits on the bottom	6000

The machine does not require any special tools to carry out checks or maintenance tasks, However, it is recommended that only tools suitable for the tasks and in good condition should be utilised (DPR 547/55) to avoid injury to persons or damage to machine parts.

3.7 Repairs

The following diagnostic table indicates the main anomalies which may be encountered, the probable causes and possible solutions.

The anomalies shown are:

- the pump fails to deliver sufficient oil or no oil at all
- the pump fails to deliver oil at the prescribed pressure
- failure to effect lubrication cycle

In case of doubts and/or problems which cannot be resolved do not attempt to disassemble parts of the machine but contact the Engineering Department of DROPSA S.p.A.

DIAGNOSTIC TABLE		
INDICATION	PROBABLE CAUSE	REMEDY
The pump does not deliver oil or does not deliver oil in the exact quantity prescribed	<ul style="list-style-type: none"> • Drawing in air due to the tank being empty • The intake filter is dirty or blocked • The internal connections are loose • Pump has deteriorated • Pressure regulating valve loose, so the oil returns immediately to the tank before flowing through the delivery valve • Release valve damaged 	<ul style="list-style-type: none"> • Refill the tank and purge air from the system • Wash the filter in petrol and blow it through with compressed air • Tighten all connections ensuring there are no leakages • Replace the pump • Tighten the regulating screw until oil exits from the delivery
The pump does not deliver oil at the prescribed pressure	<ul style="list-style-type: none"> • Incorrect setting of the regulating valve • Presence of dirt under the by-pass valve 	<ul style="list-style-type: none"> • To the pump outlet connect a tube approximately 30cm long with a manometer connected to the free end. Regulate the valve by means of turning the screw and reading the corresponding pressure value on the manometer • Disassemble the valve and clean or replace it as necessary

3.8 Dangers present in use

The verification of conformity with the essential safety requirements and regulations of the Machine Directive is effected by means of the compilation of a check list which has been pre-prepared and is contained in the *technical file*.

The lists which are utilised are of three types:

- list of dangers (as in EN 414 referring to EN 292)
- application of essential safety requirements (Machine Dir. - att. 1, part 1)
- electrical safety requirements (EN 60204-1)

The following is a list of dangers which have not been fully eliminated but which are considered acceptable:

- ◆ it is possible to encounter squirts of oil (for this reason appropriate protective clothing must be worn)
- ◆ contact with oil -> see the requirements for the use of suitable personal protective clothing
- ◆ use of unsuitable lubricant -> the characteristics of the fluid are shown on the pump and in the manual **(in case of doubt contact the Eng. Dept of Dropsa Spa)**
- ◆ protection against direct and indirect contact must be provided by the user
- ◆ given the purpose of the pump it must always be functioning; for this reason it is necessary to pay attention to the electrical connections which, in the case of a power failure, the customer's machine is restarted only by means of a reset, while the lubrication pump is able to restart.

INADMISSIBLE FLUIDS	
Fluid	Danger
Lubricants with abrasive additives	High wear rate of contacted parts
Lubricants with silicone based additives	Seizure of the pump
Petrol – solvents – inflammable liquids	Fire – explosion – damage to seals
Corrosive products	Corrosion of the pump– injury to persons
Water	Oxidation of the pump

Gear pumps for low flow rates with pressures of 30-80 bar

Assembly Part N°	Motor power			Flow rate litres/min	Weight Kg	Dimensions in mm												
	size	kW	rpm			A	B	C	D	E	F	G	H	L	M	N	P	R
3405000	56	0.09	1500	0.50	3.7	171	137	104	56	80	65	56	5.5	71	90	6	106	36
3406000	63	0.25	3000	1.00	5.5	194	153	119	56	90	75	58	5.5	--	--	--	--	--
3407000	63	0.185	1500	0.50	5.5	194	153	119	56	90	75	58	5.5	--	--	--	--	--
3402002	56	0.09	1500	0.35	3.7	171	137	104	54	80	65	56	5.5	71	90	6	106	36
3402006	56	0.09	1800	0.41	3.7	171	137	104	54	80	65	56	5.5	71	90	6	106	36
3405079	56	0.09	1500	0.50	3.7	171	137	104	56	80	65	56	5.5	--	--	--	--	--
3407003	63	0.185	1800	0.41	5.5	194	153	119	54	90	75	58	5.5	--	--	--	--	--

This assembly consists only of the motor and the gear pump.

	DropsA Line	By-pass setting	Standard setting	By-pass	Assembly	Motor power			Voltage	Flow rate litres/min	Dimensions			
						Size	kW	rpm			*A	*B	*C	D
Electric motor for continuous operation	01	2-20 bar	5 bar	with non-return valve	3404023	56	0.09	1500	220/380V-50 Hz	0.35	205	156	110	38
					3404022	56	0.09	1500	220/380V-50 Hz	0.50	205	156	110	40
					3404026	56	0.06	1500	110 V – 50 Hz	0.35	205	156	110	38
					3404046	56	0.06	1500	110 V – 50 Hz	0.50	205	156	110	40
					3405099	56	0.09	1500	220/380V – 50 Hz	0.35	205	156	110	38
					3405101	56	0.09	1500	220/380V – 50 Hz	0.50	205	156	110	40
					3405121	56	0.06	1500	110 V – 50 Hz	0.35	205	156	110	38
Intermittent	04-06	25-80 bar	50 bar	with release valve	3405098	56	0.12	1500	220/380V-50 Hz	0.35	187	156	110	38
					3405100	56	0.12	1500	220/380V-50 Hz	0.50	187	156	110	40
					3405123	56	0.06	1500	110 V – 50 Hz	0.35	205	156	110	38
					3405124	56	0.06	1500	110 V – 50 Hz	0.50	205	156	110	40

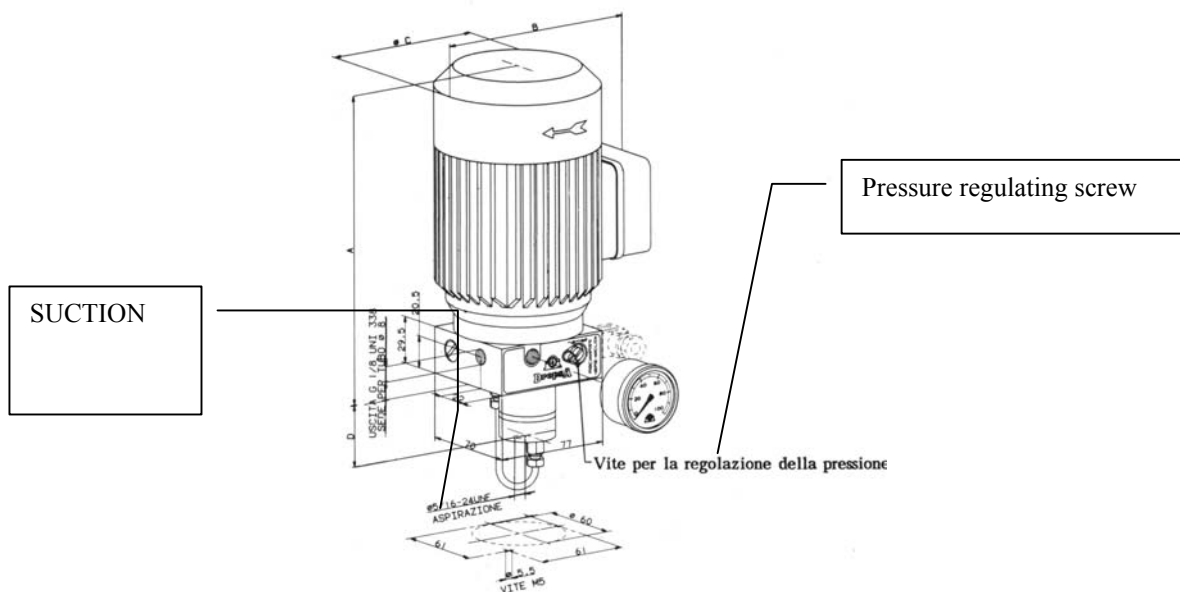
This assembly is composed of a gear pump, an electric motor, a manometer and a valve block.

Thanks to a by-pass it is possible to regulate the working pressure in accordance with the requirements of the system to which the pump is connected.

Also included in the valve block is a non-return valve or alternatively a release valve so that it can be adapted for use with the different **DROPSA** systems (line 01, line 26, lines 04-06) or on other systems of a similar nature.

It is also possible to order separately an intake filter with a dip tube (400 mesh/cm² filtering grade 260) of an overall length variable between 100 and 455 mm depending on the differing requirements of the installation).

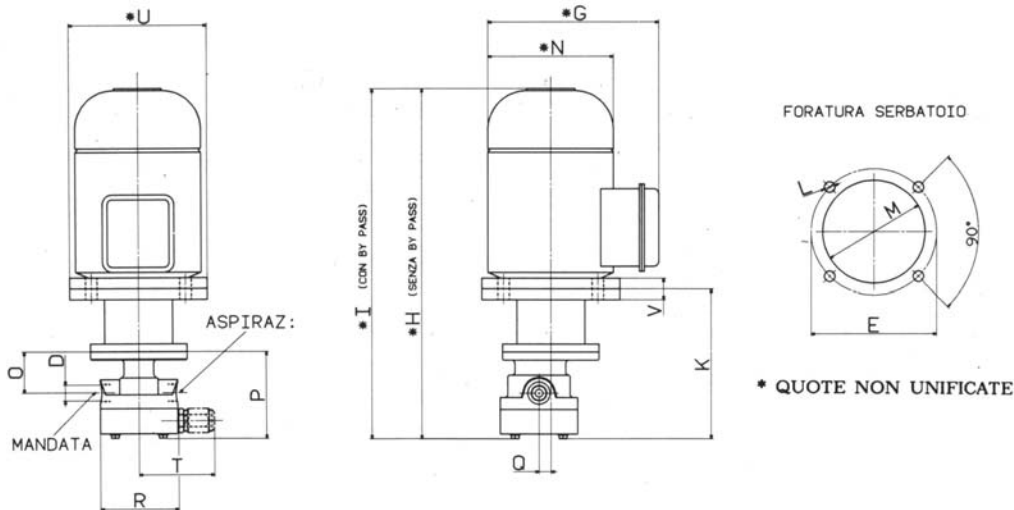
THE MOTOR VOLTAGE MUST ALWAYS BE STATED AT THE TIME OF ORDERING.



Vertical or horizontal application motor-driven pumps— motor type B5 4 pole – Pressure 30/60 bar

WITHOUT BY-PASS

Assembly Part N°	litres	Power kW	Press. max bar	Wt Kg	"gas D	Dimensions in mm														
						E	G	H	K	I	L	M	N	O	P	Q	R	T	U	V
3410110	2	0.185	26	8.6	1/4	115	148	306	118	---	9	95	11	32	63	8.7	60	---	140	23
3410112	3.5	0.25	20	8.6	1/4	130	167	333	126	---	9	110	129	32	63	8.7	60	---	160	23
3410114	5.5	0.25	13	10.4	3/8	130	167	355	148	---	9	110	129	42	85	12.3	80	---	160	23
341016	5.5	0.55	29	12.9	3/8	165	187	392	159	---	11	130	149	42	85	12.3	80	---	200	28
3410118	10	0.25	7	10.4	3/8	130	167	355	148	---	9	110	129	42	85	12.3	80	---	160	23
3410120	10	0.55	15	12.9	3/8	165	187	392	159	---	11	130	149	42	85	12.3	80	---	200	28
3410122	19	0.55	8	15.7	1/2	165	187	437	202	---	11	140	149	53	102	15.2	90	---	200	28
3410124	19	0.75	11	17.2	1/2	165	187	437	202	---	11	140	149	53	102	15.2	90	---	200	28
3410126	26	0.75	8	19.5	3/4	165	187	451	214	---	11	150	149	59	113	18.9	108	---	200	28
3410128	26	1.1	12	25	3/4	165	210	473	214	---	11	150	172	159	113	18.9	108	---	200	28
3410130	32	0.75	6	19.5	3/4	165	187	451	214	---	11	150	149	59	113	18.9	108	---	200	28
3410132	32	1.1	10	25	3/4	165	210	473	214	---	11	150	172	59	113	18.9	108	---	200	28
3410134	45	1.1	7	28.5	1	165	212	494.5	239.5	---	11	155	172	65.5	138.5	22.5	130	---	200	28
3410136	45	2.2	15	48.5	1	215	236	570	248.5	---	13	170	196	65.5	138.5	22.5	130	---	250	33
3410138	60	2.2	11	51.5	1	215	236	570	248.5	---	13	170	196	65.5	138.5	22.5	130	---	250	33
3410140	60	30	15	54.7	1	215	236	570	248.5	---	13	170	196	65.5	138.5	22.5	130	---	250	33



LA TENSIONE DEL MOTORE DEVE ESSERE SEMPRE INDICATA IN FASE D'ORDINE

TANK DRILLING

NON-STANDARD DIMENSIONS

SUCTION

DELIVERY

THE MOTOR VOLTAGE MUST ALWAYS BE STATED AT THE TIME OF ORDERING.

WITH BY-PASS

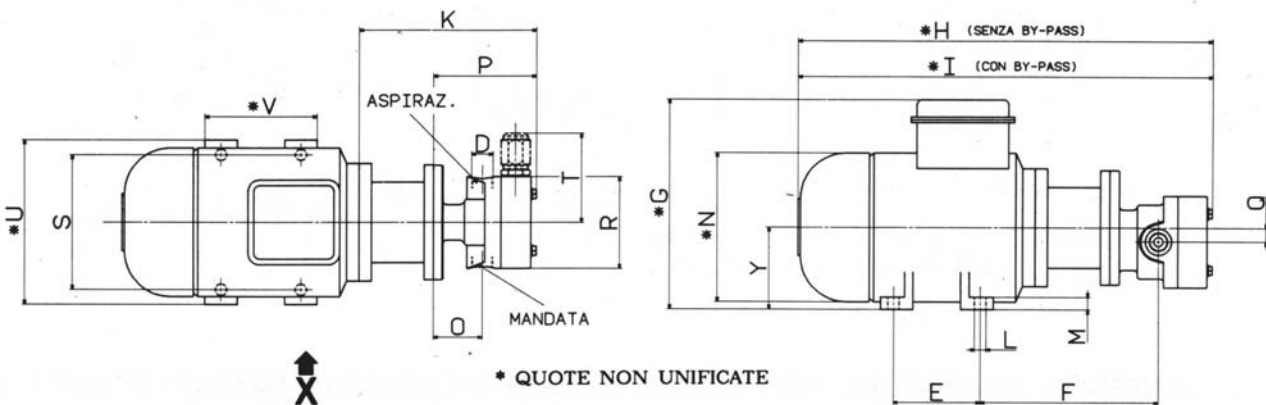
Assembly Part N°	litres	Power kW	Press. max bar	Wt Kg	"gas D	Dimensions in mm														
						E	G	H	K	I	L	M	N	O	P	Q	R	T	U	V
3410111	2	0.185	26	8.7	1/4	115	148	---	118	306	9	95	111	32	63	8.7	60	58	140	23
3410113	3.5	0.25	20	8.7	1/4	130	167	---	128	333	9	110	129	32	63	8.7	60	58	160	23
3410115	5.5	0.25	13	10.6	3/8	130	167	---	148	355	9	110	129	42	85	12.3	80	78	160	23
3410117	5.5	0.55	29	13.1	3/8	165	187	---	159	392	11	130	149	42	85	12.3	80	78	200	28
3410119	10	0.25	7	10.6	3/8	130	167	---	148	355	9	110	129	42	85	12.3	80	78	160	23
3410121	10	0.55	15	13.1	3/8	165	187	---	159	392	11	130	149	42	85	12.3	80	78	200	28
3410123	19	0.55	8	16	1/2	165	187	---	204	439	11	140	149	53	104	15.2	90	86	200	28
3410125	19	0.75	11	17.5	1/2	165	187	---	204	439	11	140	149	53	104	15.2	90	86	200	28
3410127	26	0.75	8	20	3/4	165	187	---	218	455	11	150	149	59	117	18.9	108	102.5	200	28
3410129	26	1.1	12	25.5	3/4	165	210	---	218	477	11	150	172	59	117	18.9	108	102.5	200	28
3410131	32	0.75	6	20	3/4	165	187	---	218	455	11	150	149	59	117	18.9	108	102.5	200	28
3410133	32	1.1	10	25.5	3/4	165	210	---	218	477	11	150	172	59	117	18.9	108	102.5	200	28
3410135	45	1.1	7	29	1	165	212	---	238.5	494.5	11	155	172	65.5	138.5	22.5	130	113	200	28
3410137	45	2.2	15	49	1	215	236	---	248.5	570	13	170	196	65.5	138.5	22.5	130	113	250	33
3410139	60	2.2	11	52	1	215	236	---	248.5	570	13	170	196	65.5	138.5	22.5	130	113	250	33
3410141	60	3	15	55.2	1	215	236	---	248.5	570	13	170	196	65.5	138.5	22.5	130	113	250	33

Vertical or horizontal application motor-driven pumps— motor type B3/B14 4 pole – Pressure 30/60 bar

WITHOUT BY-PASS

Assembly Part N°	litres	Power kW	Press. max bar	Wt Kg	"gas D	Dimensions in mm																	
						E	F	G	H	K	I	Y	L	M	N	O	P	Q	R	S	T	U	V
3410011	2	0.185	26	8.6	1/4	80	127	155	306	118	-	63	7	8	111	32	63	8.7	60	100	-	120	100
3410012	3.5	0.25	20	8.6	1/4	90	140	173	333	126	-	71	7	9	129	32	63	8.7	60	112	-	136	110
3410027	5.5	0.25	13	10.4	3/8	90	150	173	355	148	-	71	7	9	129	42	85	12.3	80	112	-	136	110
3410013	5.5	0.55	29	12.9	3/8	100	166	192	392	159	-	80	9	10	149	42	85	12.3	80	125	-	155	125
3410028	10	0.25	7	10.4	3/8	90	150	173	355	148	-	71	7	9	129	42	85	12.3	80	112	-	136	110
3410014	10	0.55	15	12.9	3/8	100	166	192	392	159	-	80	9	10	149	42	85	12.3	80	125	-	155	125
3410029	19	0.55	8	15.7	1/2	100	203	192	437	204	-	80	9	10	149	53	102	15.2	98	125	-	155	125
3410015	19	0.75	11	17.2	1/2	100	203	192	437	204	-	80	9	10	149	53	102	15.2	98	125	-	155	125
3410030	26	0.75	8	19.5	3/4	100	210	192	451	218	-	80	9	10	149	59	113	18.9	116	125	-	155	125
3410016	26	1.1	12	25	3/4	100	216	216	473	218	-	90	9	11	172	59	113	18.9	116	140	-	174	128
3410031	32	0.75	6	19.5	3/4	100	210	192	451	218	-	80	9	10	149	59	113	18.9	116	125	-	155	125
3410017	32	1.1	10	25	3/4	100	216	216	473	218	-	90	9	11	172	59	113	18.9	140	140	-	174	128
3410032	45	1.1	7	28.5	1	100	222.5	216	494.5	239.5	-	90	9	11	172	65.5	138.5	22.5	140	140	-	174	128
3410018	45	2.2	15	48.5	1	140	238.5	238	570	248.5	-	100	12	12	196	65.5	138.5	22.5	140	160	-	196	170
3410066	60	2.2	11	51.5	1	140	238.5	238	570	248.5	-	100	12	12	196	65.5	138.5	22.5	160	160	-	196	170

VISTA DA X



LA TENSIONE DEL MOTORE DEVE ESSERE SEMPRE INDICATA IN FASE D'ORDINE

SUCTION
DELIVERY
NON-STANDARD DIMENSIONS

VIEW FROM X

THE MOTOR VOLTAGE MUST ALWAYS BE STATED AT THE TIME OF ORDERING.

WITH BY-PASS

Assembly Part N°	litres	Power kW	Pres. max bar	Wt Kg	"gas D	Dimensions in mm																	
						E	F	G	H	K	I	Y	L	M	N	O	P	Q	R	S	T	U	V
3410019	2	0.185	26	8.7	1/4	80	127	155	-	118	306	63	7	8	111	32	63	8.7	60	100	58	120	100
3410020	3.5	0.25	20	8.7	1/4	90	140	173	-	126	333	71	7	9	129	32	63	8.7	60	112	58	136	110
3410033	5.5	0.25	13	10.6	3/8	90	150	173	-	148	355	71	7	9	129	42	85	12.3	80	112	78	136	110
3410021	5.5	0.55	29	13.1	3/8	100	166	192	-	159	392	80	9	10	149	42	85	12.3	80	125	78	155	125
3410034	10	0.25	7	10.6	3/8	90	150	173	-	148	355	71	7	9	129	42	85	12.3	80	112	78	136	110
3410022	10	0.55	15	13.1	3/8	100	166	192	-	159	392	80	9	10	149	42	85	12.3	80	125	78	155	125
3410035	19	0.55	8	16	1/2	100	203	192	-	206	439	80	9	10	149	53	104	15.2	98	125	86	155	125
3410023	19	0.75	11	17.5	1/2	100	203	192	-	206	439	80	9	10	149	53	104	15.2	98	125	86	155	125
3410036	26	0.75	8	20	3/4	100	210	192	-	222	455	80	9	10	149	59	117	18.9	116	125	102.5	155	125
3410024	26	1.1	12	25.5	3/4	100	216	216	-	222	477	90	9	11	172	59	117	18.9	116	140	102.5	174	128
3410037	32	0.75	6	20	3/4	100	210	192	-	222	455	80	9	10	149	59	117	18.9	116	125	102.5	155	125
3410025	32	1.1	10	25.5	3/4	100	216	216	-	222	477	90	9	11	172	59	117	18.9	116	140	102.5	174	128
3410038	45	1.1	7	29	1	100	222.5	216	-	239.5	494.5	90	9	11	172	65.5	138.5	22.5	140	140	113	174	128
3410026	45	2.2	15	49	1	140	238.5	238	-	248.5	570	100	12	12	196	65.5	138.5	22.5	140	160	113	196	170
3410067	60	2.2	11	52	1	140	238.5	238	-	248.5	570	100	12	12	196	65.5	138.5	22.5	140	160	113	196	170
3410069	60	3	15	55.2	1	140	238.5	238	-	248.5	570	100	12	12	196	65.5	138.5	22.5	140	160	113	196	170

CE Declaration Of Conformity

Manufacturer:

DROPSA SpA
Company
Via Croce, 1 - 20090 Vimodrone (MI), Italy
Address
+39 02 250791
Telephone

It is certified that:

The machine: Motor-driven gear pump type 3410---

* is manufactured in conformity with the DIRECTIVE OF THE COUNCIL OF THE EUROPEAN COMMUNITY concerning the harmonisation of member states legislation relative to machines (98/37 CE + 91/368/CEE), EMC (89/336/CEE) and BT (73/23/CEE) and relative amendments.

* is manufactured in accordance with the following standards and harmonised technical specifications:

EN 292/1, EN 292/2, EN 50081-2, EN 50082-2, CEI EN 60204-1, EN 1050.

Technical Manager

Ing. Walter Divisi

Product Manager

Name

DROPSA SpA - Vimodrone (MI) - Italy

Company



Signature

January 1999

Date

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