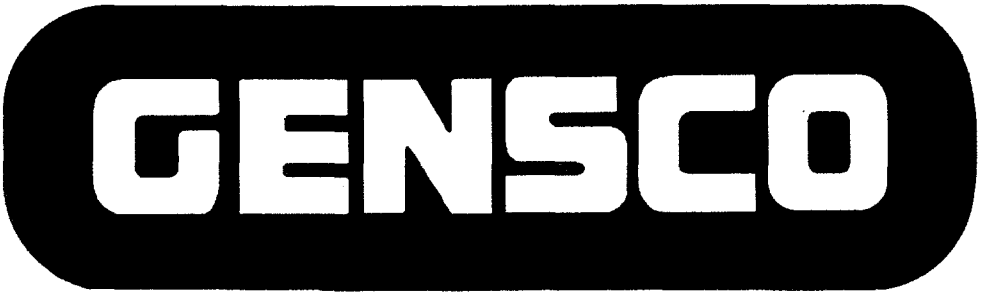

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CIRCULAR SCRAP HANDLING MAGNETS
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Orange peel grapples for scrap steel, non-ferrous, solid waste and garbage. Combination grapples *with* magnets.

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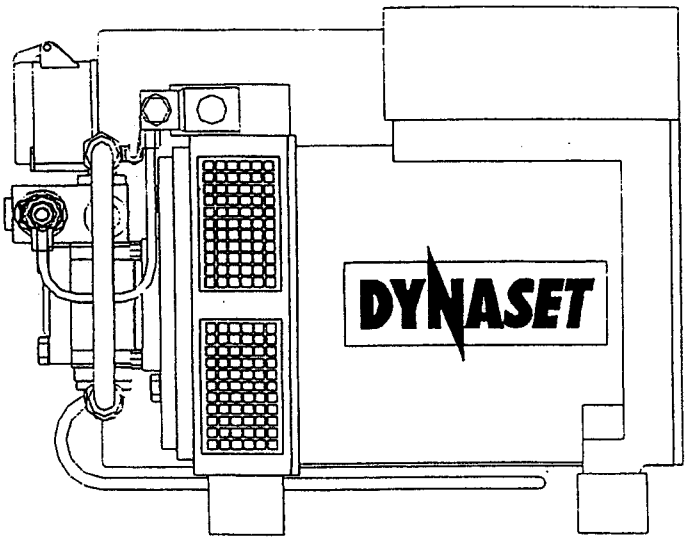

DYNASET

HYDRAULIC MAGNET GENERATORS

HMG 3,5 kW with EC – control

HMG 6,10,12, 15, 20, 30 kW 220 VDC

OPERATION MANUAL

Since 1919

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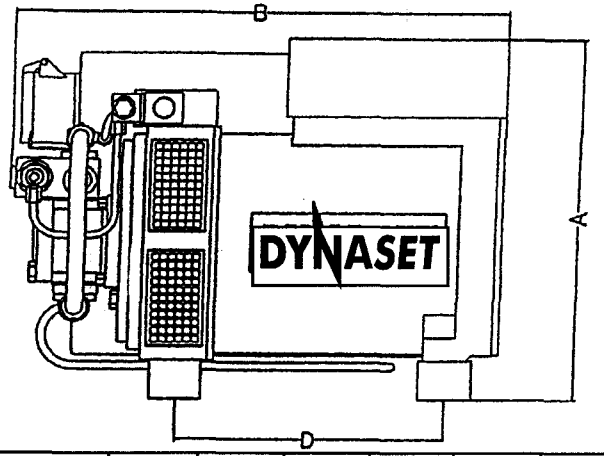
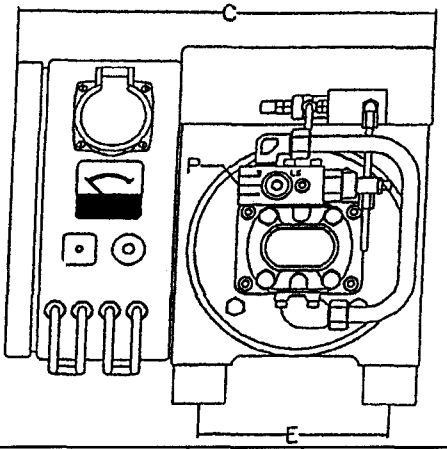
DYNASET

HYDRAULIC DRIVEN MAGNET POWER & CONTROL SYSTEMS





TYPE	A	B	C	D	E	MIN FLOW		PRESSURE		P LINE	T LINE	S LINE	WEIGHT	
						L/MIN	GPM	MIN PSI	MAX PSI				KGS	LBS
HMG 3.5kW 220VDC-17	10.0	17.0	11.5	9.0	6.0	17	5.0	2755	3625	1/2	1/2	3/8	28	61.6
HMG 6kW 220VDC-30	12.5	19.0	14.5	11.5	6.5	30	8.0	2755	3625	1/2	1/2	3/8	49	108
HMG 10kW 220VDC-44	14.5	19.5	15.5	11.5	7.5	44	12.0	2755	3625	1/2	1/2	3/8	63	139
HMG 12kW 220VDC-52	14.5	21.5	15.5	13.0	7.5	52	14.0	2755	3625	1/2	1/2	3/8	76	167
HMG 15kW 220VDC-65	18.0	31.5	17.0	11.5	9.0	65	17.5	2755	3625	3/4	1	-	110	242
HMG 20kW 220VDC-92	18.0	31.5	17.0	11.5	9.0	92	24.5	2755	3625	3/4	1	-	160	352
HMG 30kW 220VDC-120	24.0	42.5	22.0	17.5	14.0	120	32.0	2755	3625	3/4	1	-	210	462

*Dimensions are +/- 1/2 inch

*Subject to change without notice

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DYNASET HYDRAULIC DRIVEN
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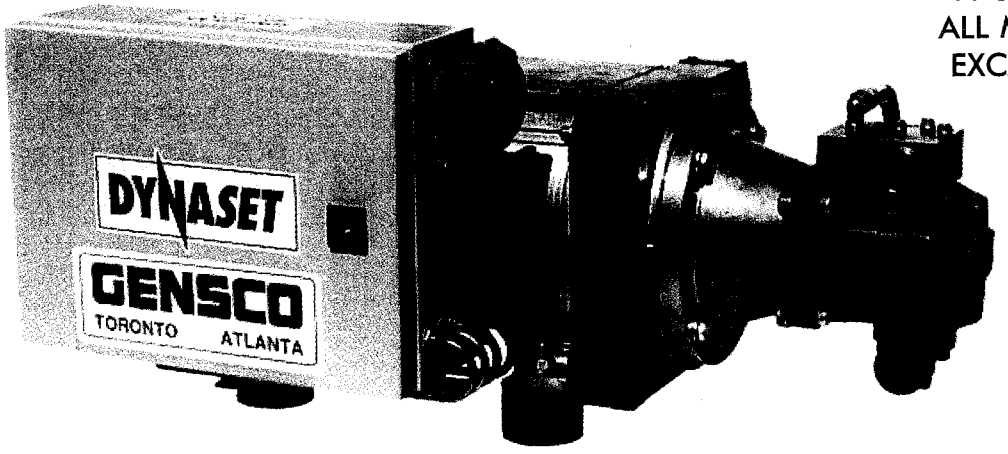
SUPPLIED WITH A FULL VALVE PACKAGE FOR YOUR MACHINE. SUITABLE FOR ALL HYDRAULIC SYSTEMS: CONSTANT OUTPUT PUMPS, VARIABLE DISPLACEMENT OR LOAD SENSING SYSTEMS.

PROVEN ON ALL MAKES OF EXCAVATORS

IN USE IN YARDS AROUND THE WORLD



AVAILABLE IN 3.5 TO 30 KW SYSTEMS

FEATURES INCLUDE:

* Constant voltage regardless of engine RPM or machine function
* Equipped with speed controlled hydraulic drive
* Safe 24 Volt control circuit (12 Volt optional)
* Fast drop circuit standard, with full clean discharge
* Full overload and short circuit protection.
* Weatherproof design
* Simple, single push button control for magnet functions
* Small compact system for easy installation
* No low voltage relay required.
* No bulky mechanical switches and contactors
* Optional outlet for AC Current 110/220V

FACTORY TRAINED TECHNICIANS available for installation and assistance.

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DYNASET HYDRAULIC MAGNET GENERATORS

OPERATION MANUAL

GENERAL

Dynaset hydraulic magnet generator transforms hydraulic power into high quality electricity to used in lifting magnet purpose. All components are built in one unit. Because of compact construction and little size Dynaset HMG magnet generator is easy to be mounted on all loading machines.

Dynaset magnet generator is a combination of hydraulic motor, generator and electric control system. The motor has an automatic speedcontrol valve, to keep speed of generator steady when incoming hydraulic oil flow can vary from minimum flow up to 20 - 50 l/min more. In case of overloading the generator hydraulic pressure control in main system is protecting the generator very effectively.

Generators rotor with magnetic windings is directly on hydraulic motors shaft. Electric power is taken from stator windings where also voltage control system windings are positioned. Voltage control is working automatically accorring to load. Windings are insulated from body and protection is filling up norm IP 23 and control box IP 44.

The control electronics is built in metal box next to generator. Magnet is controlled by one press button on the control lever (joy stick). The voltage peaks are prevented by an effective diode controlled safety resistance. System is operated by safety control voltage 24 V DC. The control electronics take care of counter magnetizing (antimagnetism) automatically according the properties of magnet. Dynaset Rapid drop control system is designed for all 220 V DC magnet coils. Inductance of magnet coil with ferrous material can be 0 to 20 H (Henry). Demagnetizing time cycle is 1.5 to 3 second depending on inductance of magnet and loaded material.

Dynaset hydraulic magnet generators are manufactured in conformity with the CE 89/392 directive, modified by 91/368, 93/44 and 93/68 directives. They are also manufactured within standards C.E.I. 2-3, IEC 34.1,VDE 0530, BS 4999-5000 and NF 51.100 as well as filling up norms ML STD 461 A/B and VDE 0875 class N for radiointerference.

Dynaset hydraulic magnet generators are having a cast aluminium body and rubber dampers to stationary mounting. Hydraulics is coupled by pressure and tank lines.

DYNASET

INSTALLING

Place for Dynaset HMG is free. The best place is clean and cool. Generator can stand rain water, but under cover is the most safety place. Take care that generator cooling air flows freely and without any restraints.

Dynaset hydraulic magnet generator needs only pressure- (P) and tank (T) line connections (marked to speed control block) to hydraulic system. Maximum hydraulic pressure is 210 bar continuously and 250 bar temporarily. In HMG 30 kW max. pressure is 350 bar.

Tank line must be connected by the shortest way direct to hydraulic tank of machine and if possible through return oil filter and oil cooler (if exist). Good place for tank line is the cap of return oil filter in oil tank. Drill a hole and install extra fitting there. Maximum return oil pressure is not allowed to exceed 5 bar. Check also that your machine oil cooling is working together with Dynaset.

In **excavators** Dynaset HMG is best to connect to main hydraulic pump circuit of excavator, because all of them have variable flow in main pumps with engine power control and many of them even computer control for different working modes.

1. OPEN CENTER hydraulic system installation is best to do with Dynaset priority valve. It takes right adjusted oil for HMG from main pump from main pump pressure line and have solenoid and pressure relief function for HMG for pressure line. See hydraulic schema.
2. CLOSED CENTER load sensing system installation is best to do with Dynaset Ls-control valve. It takes right oil flow from main pump pressure line T-connection for HMG and has solenoid and pressure relief function. See hydraulic schema.

In **cranes** same installation methods than in excavators, but some loading machines have extra pump circuit what is independent of boom functions. The extra pump is good for HMG and installation can be done e.g. with solenoid operated 3-way valve
Installing sets for most common machines are available at Dynaset Oy. In special applications the installation will be solved with co-operation with the customer.

Dynaset extra service hydraulic valves for installation:

PV C3C - ¾ 12 / 24 V	160 / 90 l/min. priority valve, solenoid, pressure control, 350 bar max.
PV C3C - 1 12 / 24 V	350 / 200 l/min. priority valve, solenoid, pressure control, 350 bar max.
PV C3C - 1 ¼ 12 / 24 V	450 / 300 l/min. priority valve, solenoid, pressure control, 350 bar max.
LS - valve 80	Load Sensing control valve 10 - 80 l/min. 350 bar max.
VKV 90 - ¾	Free circulation valve, solenoid, pressure control 90 l/min. 250 bar max.
SV 3/2 - 70 l/min. - R1/2	Solenoid 3-way valve 70 l/min. 250 bar max.

Dynaset hydraulic magnet generator HMG 3,5 kW:

Control is either hydraulic or electric. Inside electric box there is control card where is a switch with two position: **HYDR** (Hydraulic control) and **EXT** (electric control).

Hydraulic control:

Dynaset HMG 3,5 starts working when hydraulic oil flow is turned on. Magnet switches on when hydraulic oil flow to HMG is 17 l/min and magnetic field start to take ferrous material. Load from magnet drops when the hydraulic oil flow is turned off. At the same time the control electronic demagnetises automatically the magnet so that all iron particles drop and magnet is clean.

Electric control by 12 - 24 V:

Dynaset HMG 3,5 starts working when hydraulic oil flow is turned on. Magnet switches on when socket is connected to 12 - 24 V voltage by an electric switch and start to take ferrous material. When voltage is switched off the current is disconnected from magnet, load drops and control electric automatically demagnetises the magnet.

When the overload situation occurs, the overload switch knob jumps up in generator back cover. The switch is activated again by pressing the knob. The cause to the overload (short circuit in the cable, etc.) should always be found and removed prior to further use.

Dynaset hydraulic magnet generators HMG 6,0 - 20 kW:

When hydraulic system is in order, generator can be started by an electric switch. At the same time control power is switched on. When button is pressed first time (one second is enough) the current to magnet is switched on and magnet takes ferrous material. The material drops by pressing the button second time and current is disconnected. At the same time the demagnetise current is connected and it discharges the remaining magnetism so that all ferrous particles are dropping down quickly. The discharging time depends on the magnet and material inductance. Normal discharging time is 1.5 to 3 seconds. Force of magnet can be adjusted by pressing the button during discharging time again when magnetic field goes up and next time pressing, when magnetic field goes again down. This feature is good to use on material selecting works.

If the overload situation occurs, the overload protection is activated again by turning the switch in generator. The reason to overload should always clarify before further use.

DYNASET

Dynaset hydraulic magnet generator 30 kW with EC - control:

The generator is started by an electrical switch. At the same time the control power is switched on. The magnet is controlled by a press button on the control lever for the boom. Pressing the button for the first time and keeping it down, a part of the power of magnet is switched on, and magnet takes the ferrous material. When button is allowed to rise up a full power is switched on.

The material drops by pressing button for a second time and the power of magnet is switched off. And when button is allowed to rise up again, automatically, a demagnetise current is switched on. This discharges the remaining magnetism of the magnet so that all ferrous particles are removed from the magnet. The discharging time is 1 to 3 seconds, depending on the magnet.

Force of magnet can be adjusted by third pressing and tamping of button control. This way the magnetic field goes up and down. This feature can be used on material selecting works.

When the overload situation occurs, the overload protection is activated again by turning the switch situated in the generator. The cause to the overload (short circuit in the cable, etc.) should always be found and removed prior to further use.

SAFETY

Hydraulic oil is hot and under high pressure. It may cause serious damage to people.

Be sure that all connections are tighten and there is no leaks.

Check regularly the condition of hydraulic hoses and connections.

In hydraulics there are valid same safety rules as in working machine.

Dangerous voltage - to prevent electric shocks let the service to qualified personnel only.

There are some capacitors in generator electric circuit where are high voltage still after use. You must wait at least 10 minutes before opening generator and then first check with multimeter that there is no voltage left.

Do not ever go under load which is lifted with magnet because hydraulic- or electric break may drop the load down.

Keep your hands away from rotation parts.

DYNASET

WARRANTY

The time of warranty is 6 months.

The warranty includes material and manufacturing faults.

The warranty includes spare parts.

The purchaser of the equipment is responsible for the transportation and installation costs of the spare part under the warranty.

The warranty void if product has been modified, changed other parts than original or used wrong.

SERVICE

Check daily that there are no leaks and all parts are properly fixed. Take also care of general cleanliness of Dynaset product.

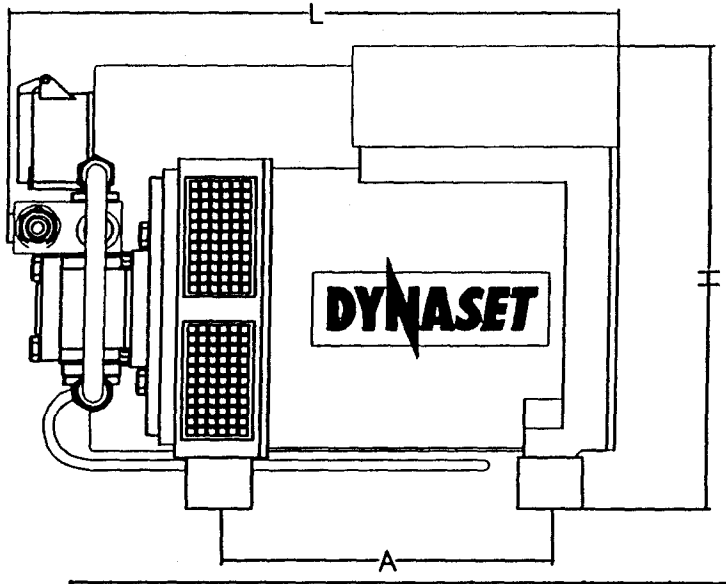
Dynaset generators are free of service, but they still include parts which have to change after long life time.

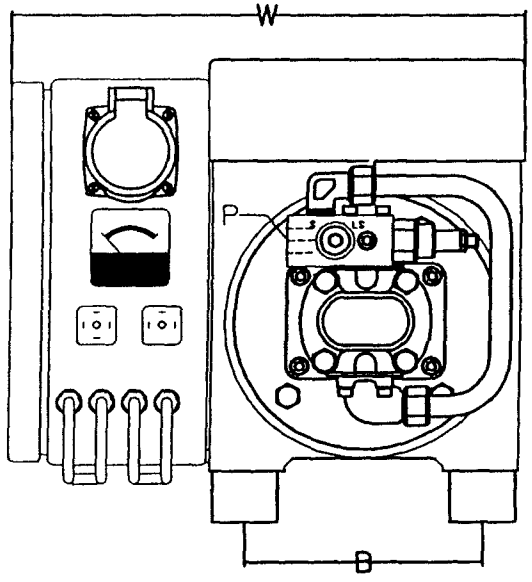
The most important thing in hydraulic service is CLEANLINESS.

Hydraulic system must service according to base machine service instructions (change of oil and filter etc.)

How to order spare parts ?

1. Give generators type and serial number.
2. Give spare parts name and number.





TYYPPI		L	W	H	A	B	Q min l/min	p bar	p max bar	p line BSP female	T line BSP female	weight kg
HMG 3,5kW 220VDC–17	MA	420	290	250	220	150	18	190	250	G1/2	G1/2	28
HMG 6,0kW 220VDC–30	SI	490	360	380	340	160	32	190	250	G1/2	G1/2	49
HMG 10,0kW 220VDC–44	SI	540	360	380	340	160	46	190	250	G1/2	G1/2	63
HMG 12,0kW 220VDC–52	NSM	610	430	380	165	230	54	190	250	G1/2	G1/2	76
HMG 15,0kW 220VDC–65	NSM	860	430	380	280	230	68	190	250	G3/4	G1	110
HMG 20,0kW 220VDC–92	NSM	860	430	380	280	230	95	190	250	G3/4	G1	160
HMG 30,0kW220VDC–120	MA	1070	550	600	440	350	125	190	250	G3/4	G1	210

DYNASET OY 08000012

GENSCO

Osa	Piirustusnumero / Tavaratunnus	Osan tai kokoonpanoryhmmman nimitys	Standardi tai luettelo	Muoto, malli, maara / Lajimerkki	Laatu	Kpl
Yleistoleranssit		Mittakaava	Tuote	Liittyy	MAGNET GENERATOR HMG 3,5–30,0 DIMENSIONAL DRAWING	
Piirt.	HPI 090399				Ent.	Uusi
Suun.					08000012	
Tark.		Massa kg				
Hyv.						

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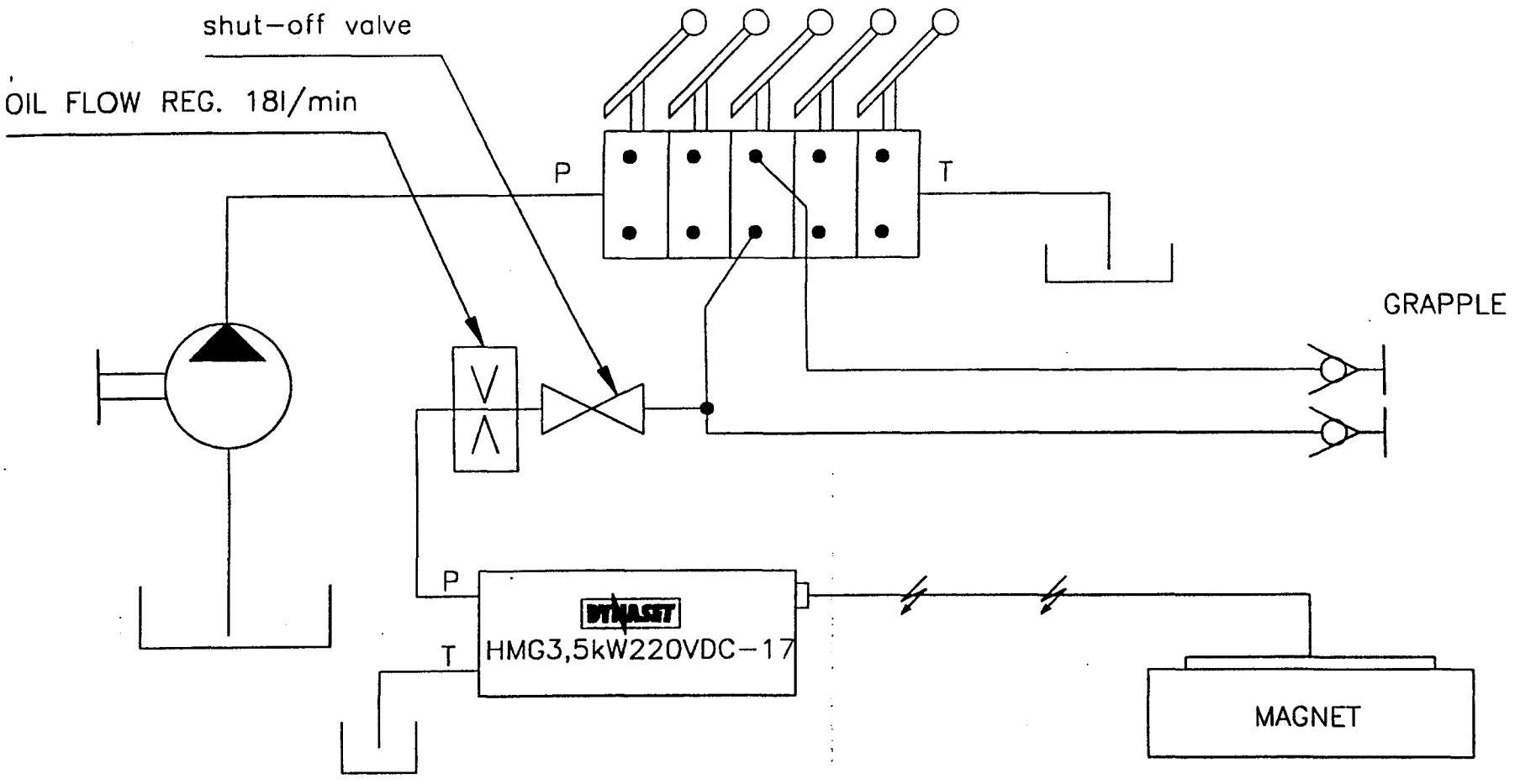

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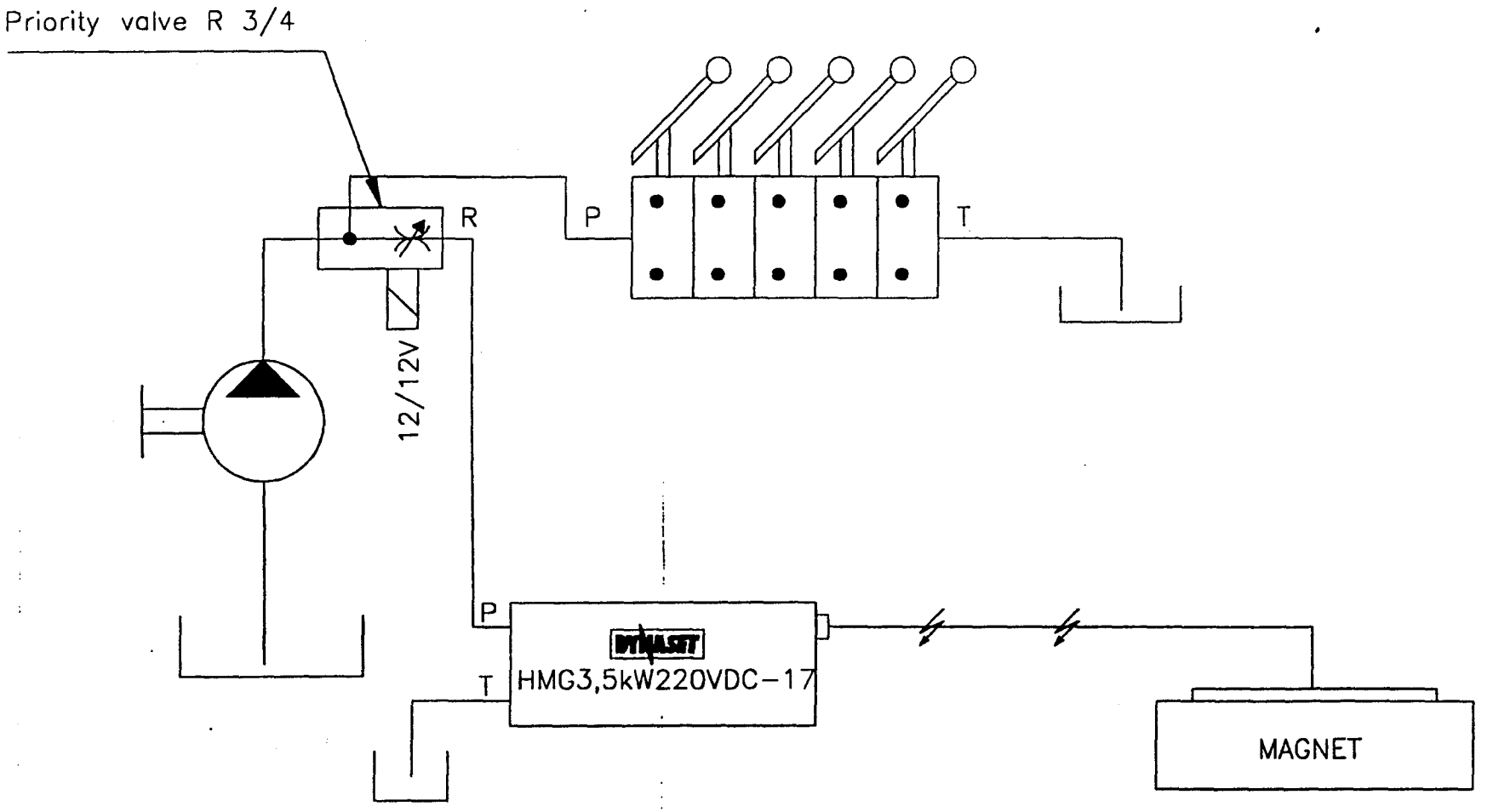
Osa	Piirustusnumero / Tavaratunnus	Osan tai kokoonpanoryhmmmon nimitys	Standardi tai luettelo	Muoto, malli, maara / Lajimerkki	Laatu	Kpl
Yleistoleranssit		Mittakaava	Tuote	Liittyy	HMG 3,5kW with hydraulic, control	
Piirt.	TNi240495				Ent.	Uusi
Suun.						
Tark.		Massa				

DYNASET



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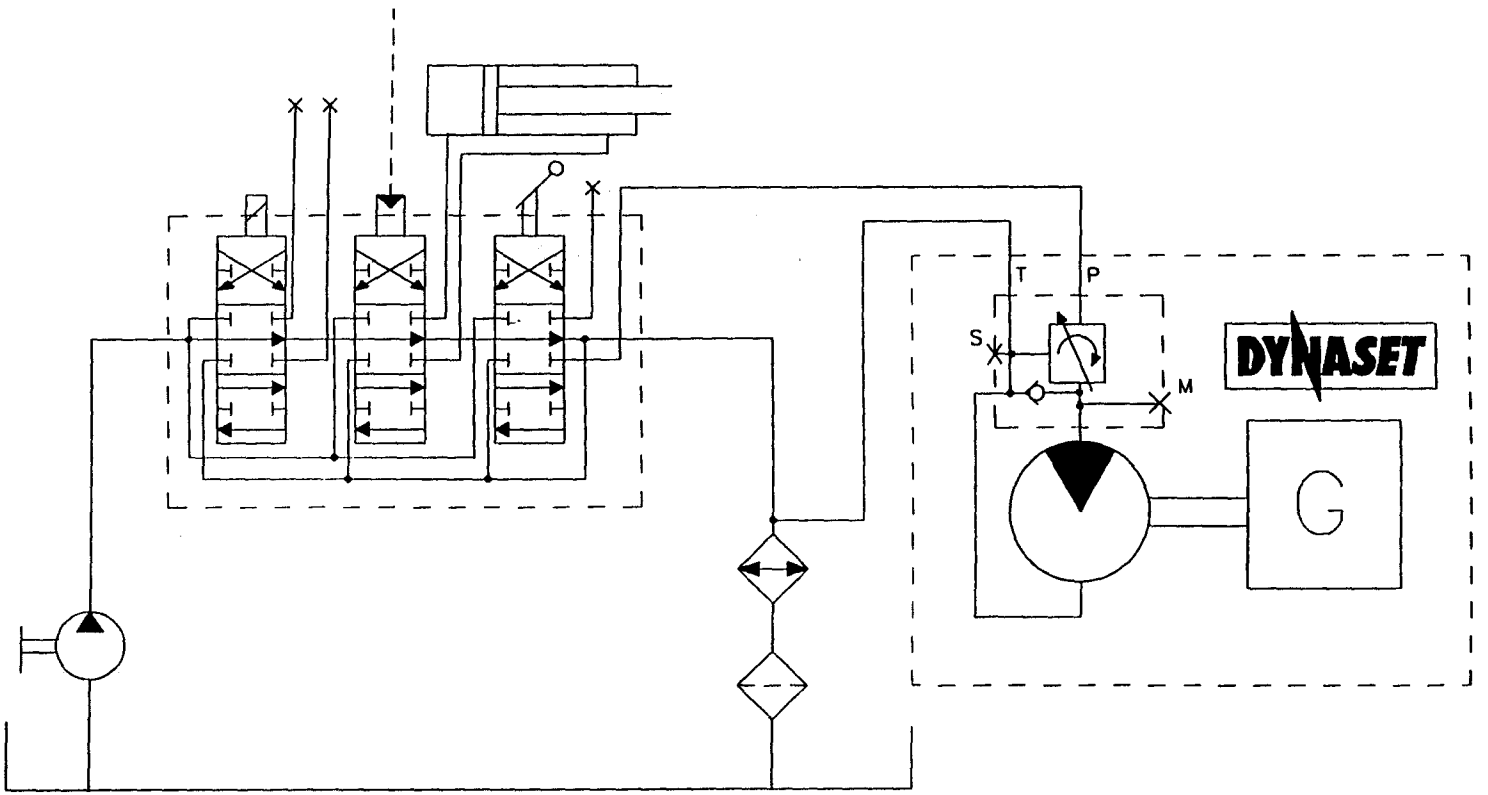
Osa	Piirustusnumero / Tavaratunnus	Osan tai kokoonpanoryhmmmon nimitys	Standardi tai luettelo	Muoto, malli, määrä / Lajimerkki	Laatu	Kpl
Yleistoleranssit		Mittakaava	Tuote	Liittyy	HMG 3,5kW with priority valve hydr.	
Piirt.	TNi240495				Ent.	Uusi
Suun.						
Tark.		Massa kg				
Hyv.						

DYNASET



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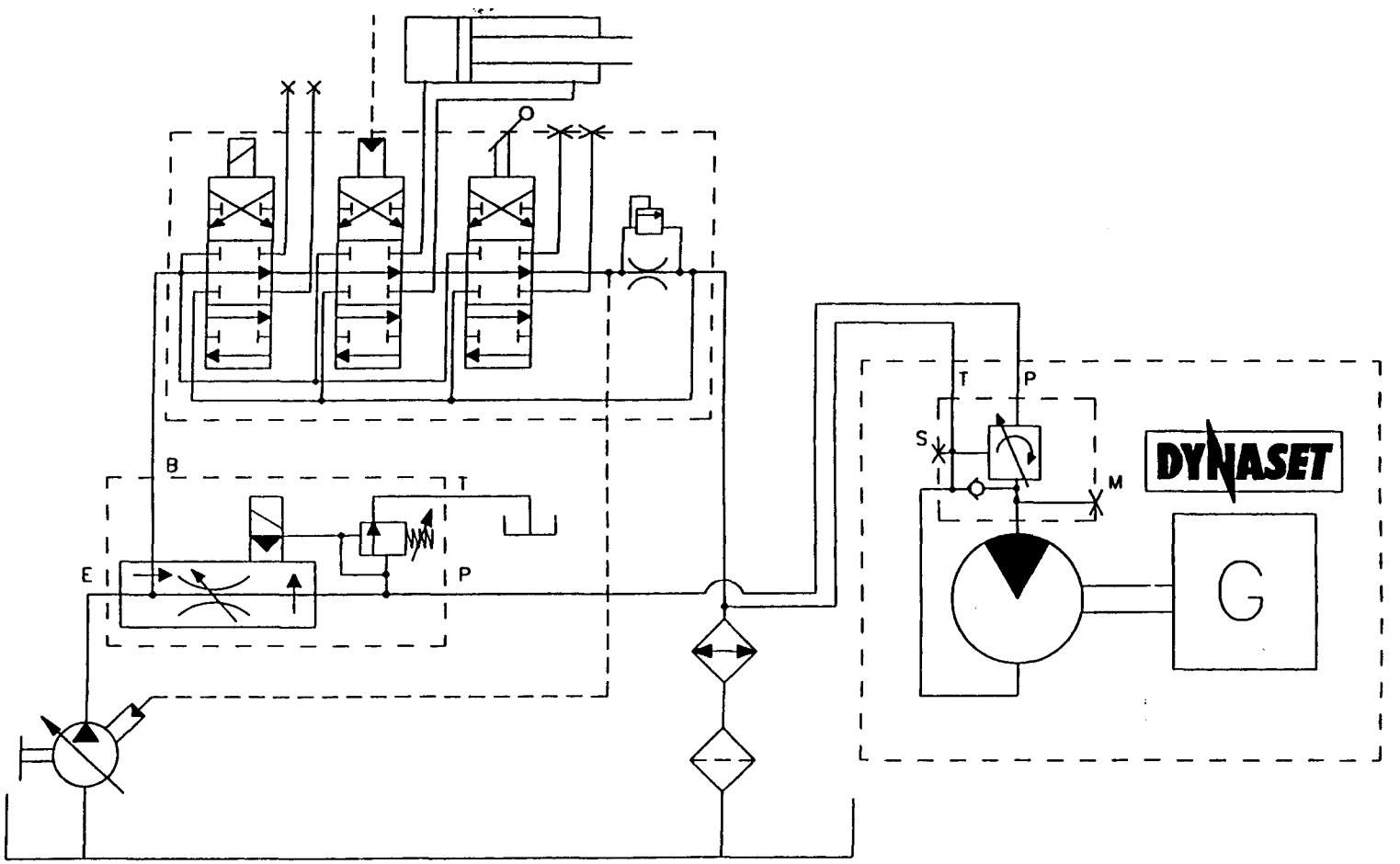
Osa	Piirustusnumero / Tavaratunnus	Osan tai kokoonpanoryhmmman nimitys	Standardi tai luettelo	Muoto, malli, maara / Lajimerkki	Laatu	Kpl
Yleistoleranssit		Mittakaava	Tuote	Liittyy	Consi ant-volume pump system	
Piirt.	HPi 251196				Ent.	Uusi
Suun.						
Tark.		Massa			09000170	

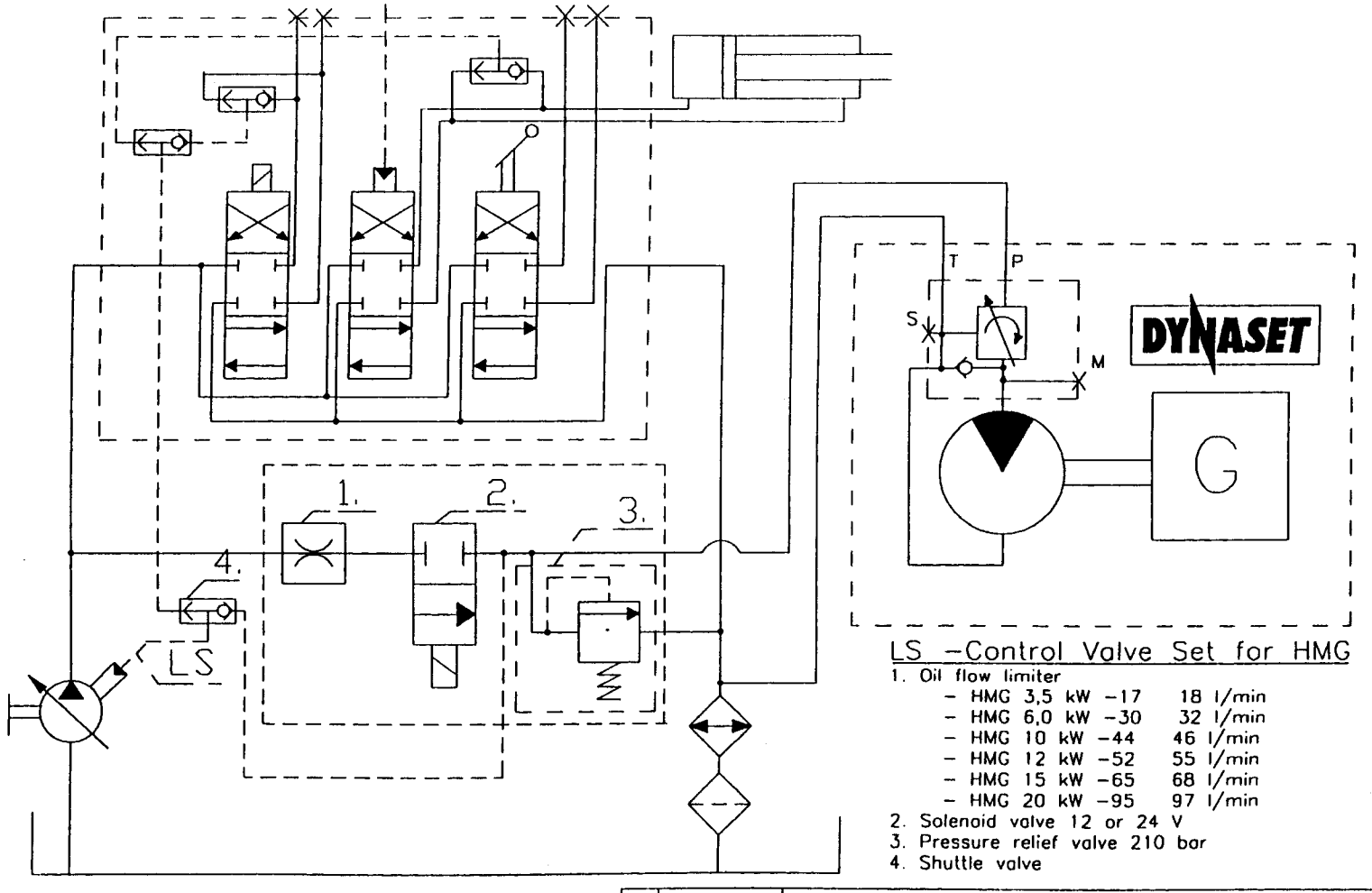
DYNASET



GENSCO

Osa	Piirustusnumero Tavaratunnus	Osan tai kokoonpanoryhmmman nimitys	Standardi tai luettelo	Muoto, malli, maara Lajimerkki	Laatu	K
Yleistoleranssit		Mittakaava	Tuote	Liittyy	Variable displacement system with free circuit	
Piirt.	HPi 251196				Ent.	Uusi
Suun.						
Tark.		Massa			09000171	

DYNASET



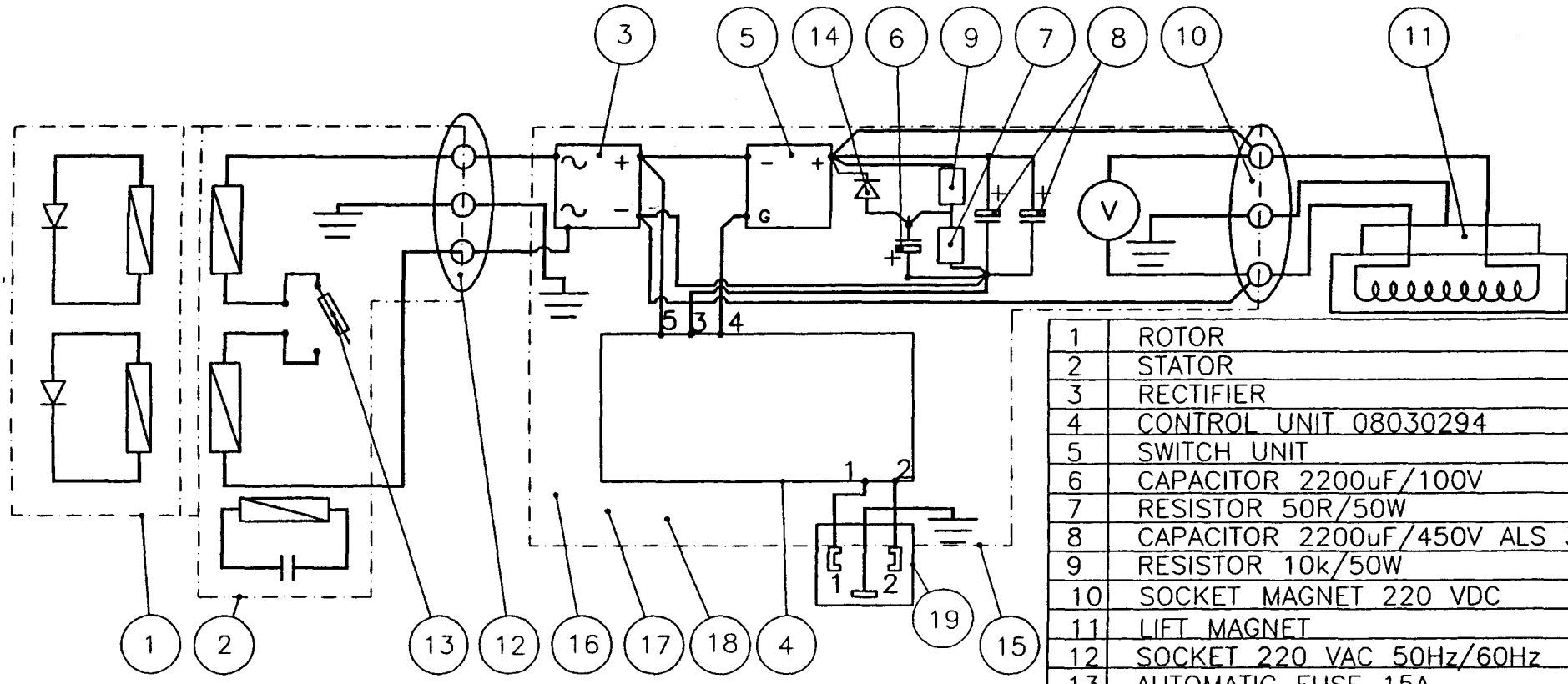
LS –Control Valve Set for HMG

1. Oil flow limiter
   - HMG 3,5 kW –17 18 l/min
   - HMG 6,0 kW –30 32 l/min
   - HMG 10 kW –44 46 l/min
   - HMG 12 kW –52 55 l/min
   - HMG 15 kW –65 68 l/min
   - HMG 20 kW –95 97 l/min
2. Solenoid valve 12 or 24 V
3. Pressure relief valve 210 bar
4. Shuttle valve

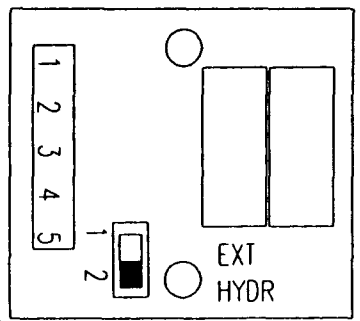
GENSCO

Osa	Piirustusnumero / Tavaratunnus	Osan tai kokoonpanoryhmmman nimitys	Standardi tai luettelo	Muoto, malli, maara / Lajimerkki	Laatu	Kpl
Yleistoleranssit		Mittakaava	Tuote	Liittyy	Variable displacement pump with load sensing system	
Piirt.	HPi 251196				Ent.	Uusi
Suun.						
Tark.		Massa kg			09000172	
Hyv.						

DYNASET



1	ROTOR
2	STATOR
3	RECTIFIER
4	CONTROL UNIT 08030294
5	SWITCH UNIT
6	CAPACITOR 2200uF/100V
7	RESISTOR 50R/50W
8	CAPACITOR 2200uF/450V ALS 31
9	RESISTOR 10k/50W
10	SOCKET MAGNET 220 VDC
11	LIFT MAGNET
12	SOCKET 220 VAC 50Hz/60Hz
13	AUTOMATIC FUSE 15A
14	DIODE -70A UNF 1/4
15	CONTROL BOX
16	AL-PLATE 169X249X5
17	WIRING SET
18	PLASTIC COVER
19	EXTERNAL ELECTRIC CONTROL PLUG



Since 1919

GENSCO

Osa	Piirustusenumero / Tavaratunnus	Osan tai kokoonpanoryhmmman nimitys	Standardi tai luettelo	Muoto, malli, maara / Lajimerkki	Laatu	Kpl
Yleistoleranssit		Mittakaava	Tuote	Liittyy WIRING_LIST COMP_LIST	MAGNET CONTROL BOX 3,5 kW ELECTRIC DIAG COMPONENT_LIST	
Piirt.	MRa020797				Ent.	Uusi
Suun.	TNi300496				08030110A	
Tark.		Massa kg				
Hyv.						

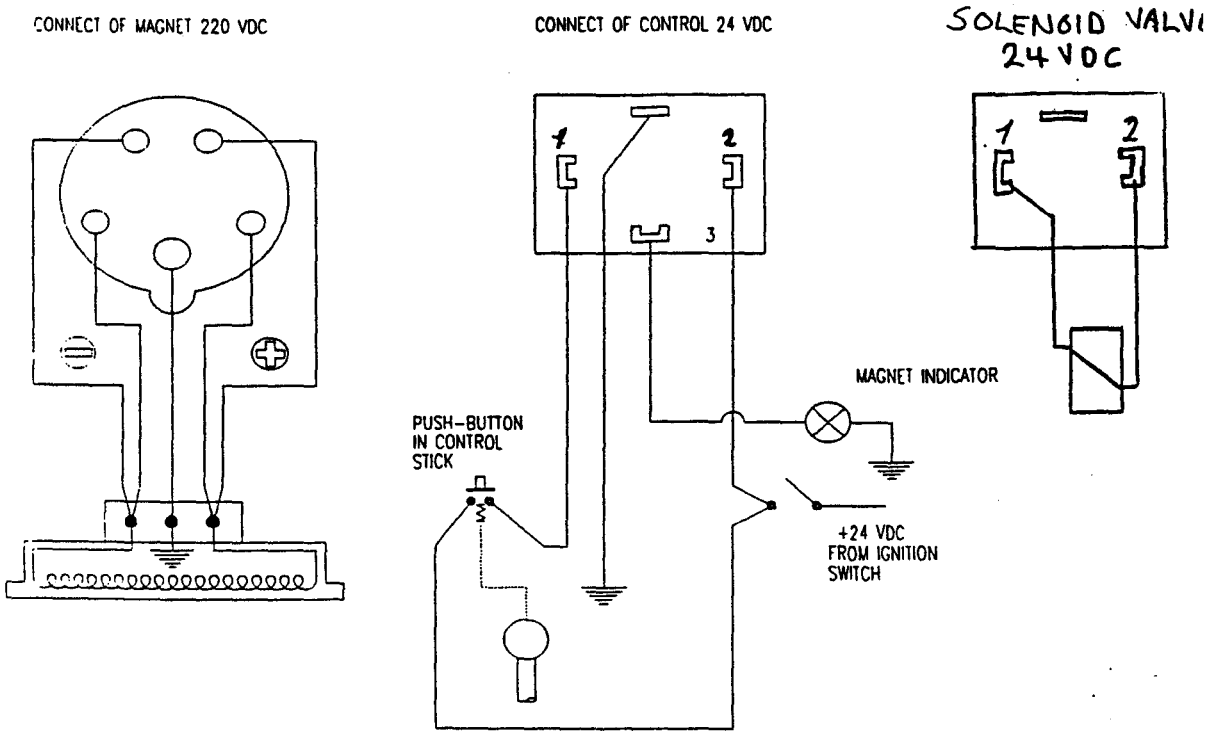
DYNASET

DYNASET OY

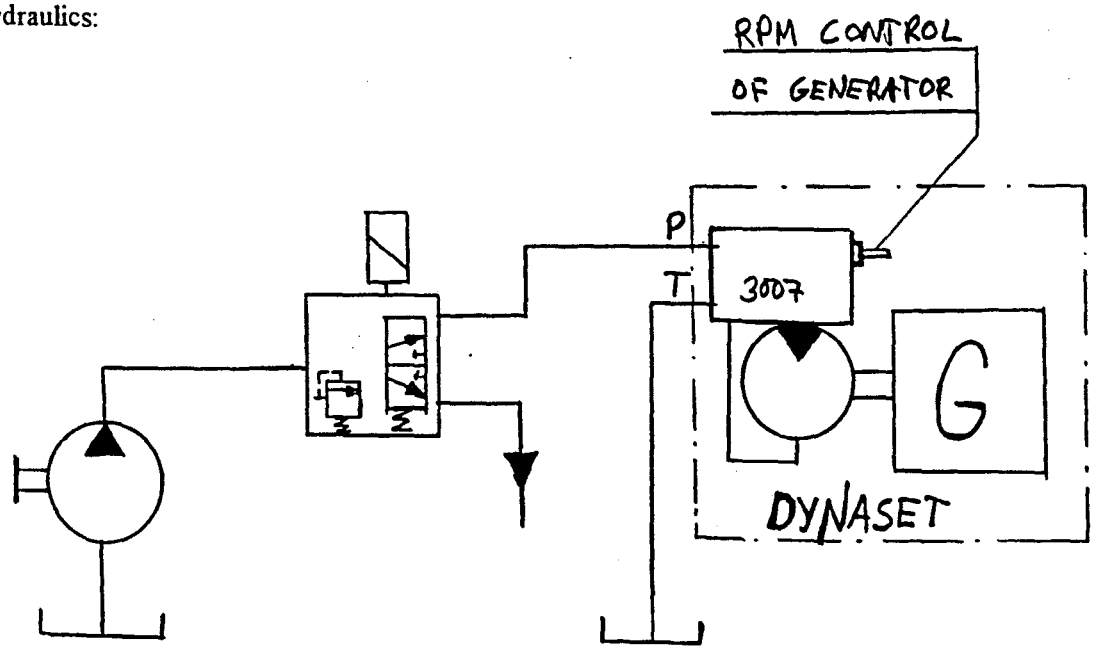
KYTKENTÄKAAVIO
DIAGRAM OF CONNECTION

HMG 6-20

Sähkö:
Electric:



Hydraulikka:
Hydraulics:

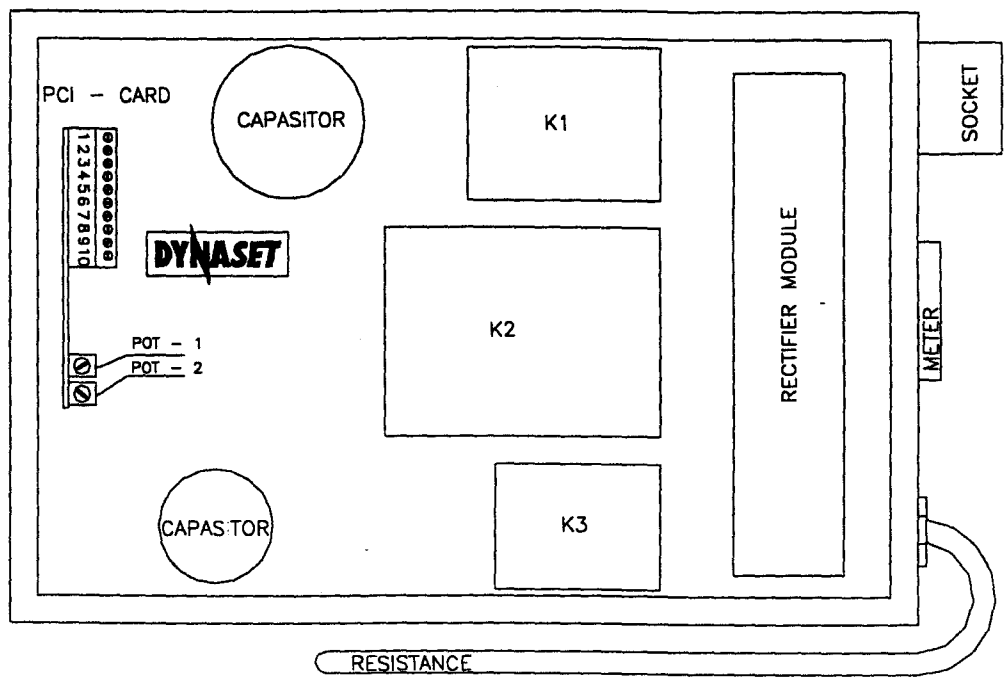


DYNASET OY

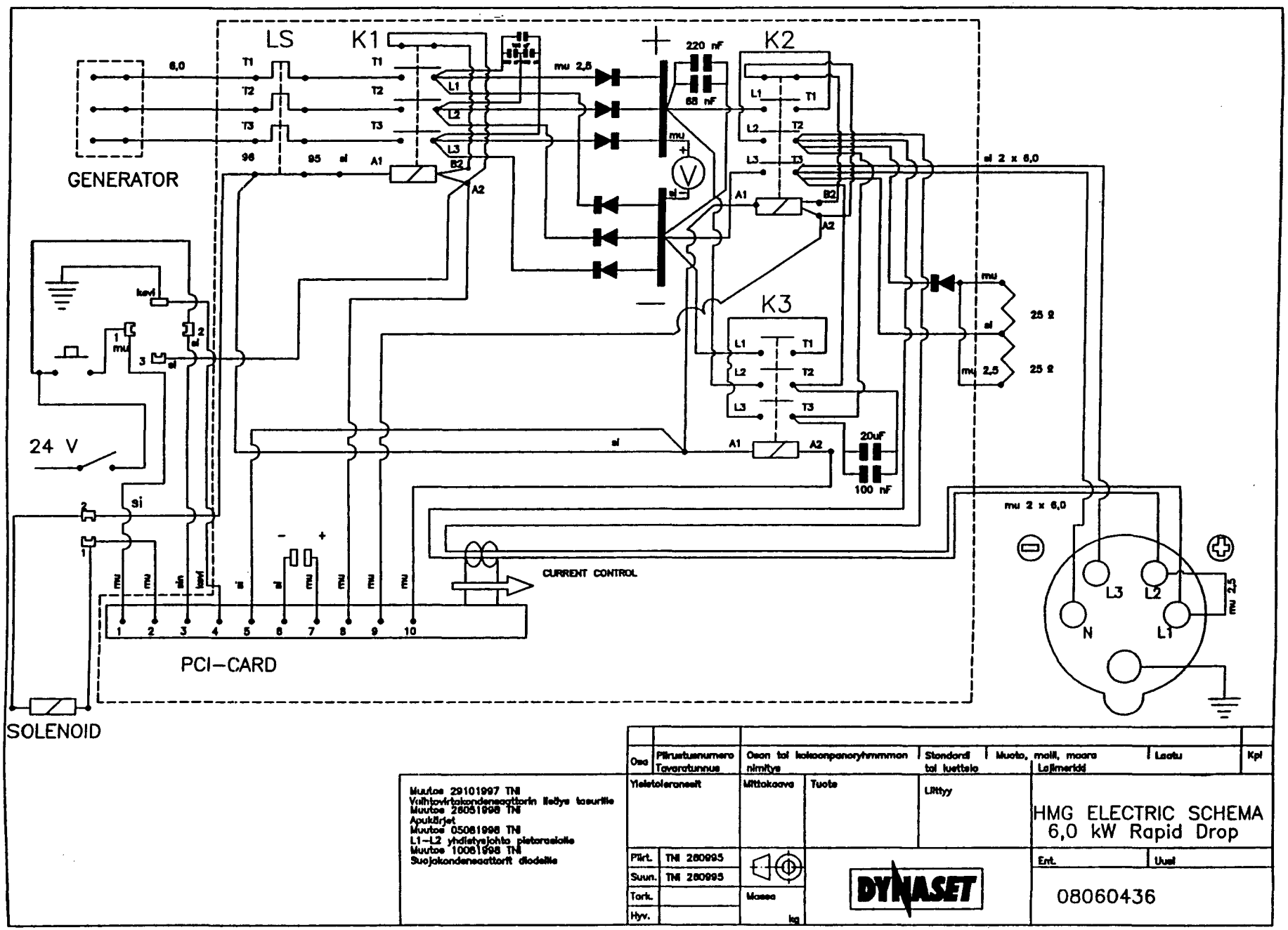
VARAOSAT
SPARE PARTS

HMG 6-20

SÄHKÖKAAPPI



Tasasuuntausyksikkö	Rectifier module
Diodisarja	Diode set
Jäähdytyslevyt	Cooling profile
Eristyslevyt	Insulating plate
Kontaktori	Contactor K1
Kontaktori	Contactor K2
Kontaktori	Contactor K3
Kondensaattori	Capacitor
Ohjauskortti	PCI - card
Vastus	Resistance
Jännitemittari	Meter
Pistoke	Socket



Osa	Piirustusnumero / Tavaratunnus	Osan tai kokoonpanoryhmmmän nimitys	Standardi tai luettelo	Muoto, malli, määrä	Laatu	Kpl
	Yleistoleranssit	Mittakaava	Tuote	Liittyy		
Piirt.	TNI 280995					
Suun.	TNI 280995					
Tark.		Massa kg				
Hyv.						

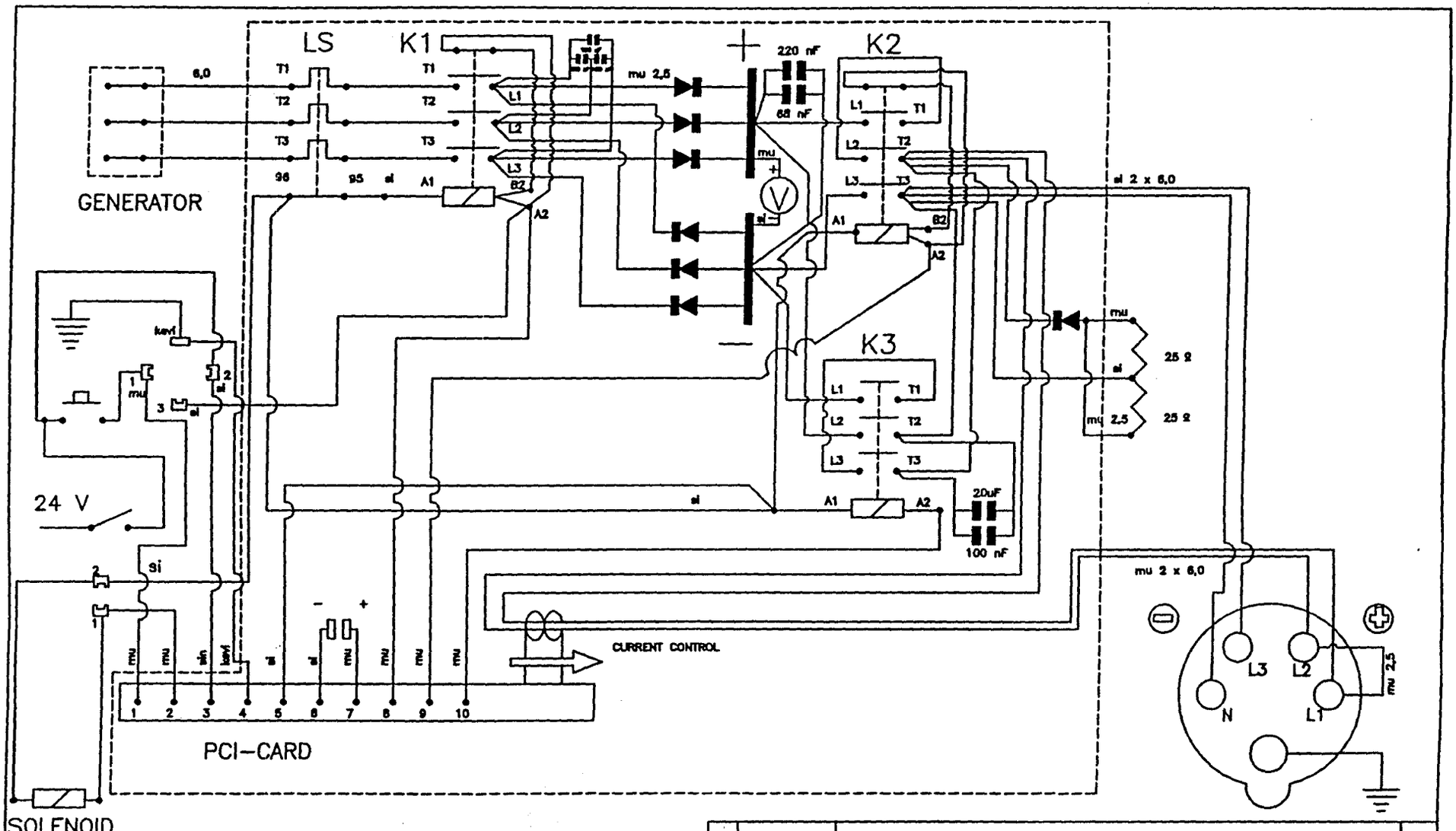
Muutos 29101997 TNI
Vaihtovirtakondensaattorin lisäys tasurille
Muutos 26051998 TNI
Apukärjet
Muutos 05081998 TNI
L1–L2 yhdistysjohto pistorasiolle
Muutos 10081998 TNI
Suojakondensaattorit diodeille

DYNASET

HMG ELECTRIC SCHEMA
6,0 kW Rapid Drop

Ent. | Uusi

08060436



Since 1919

GENSCO

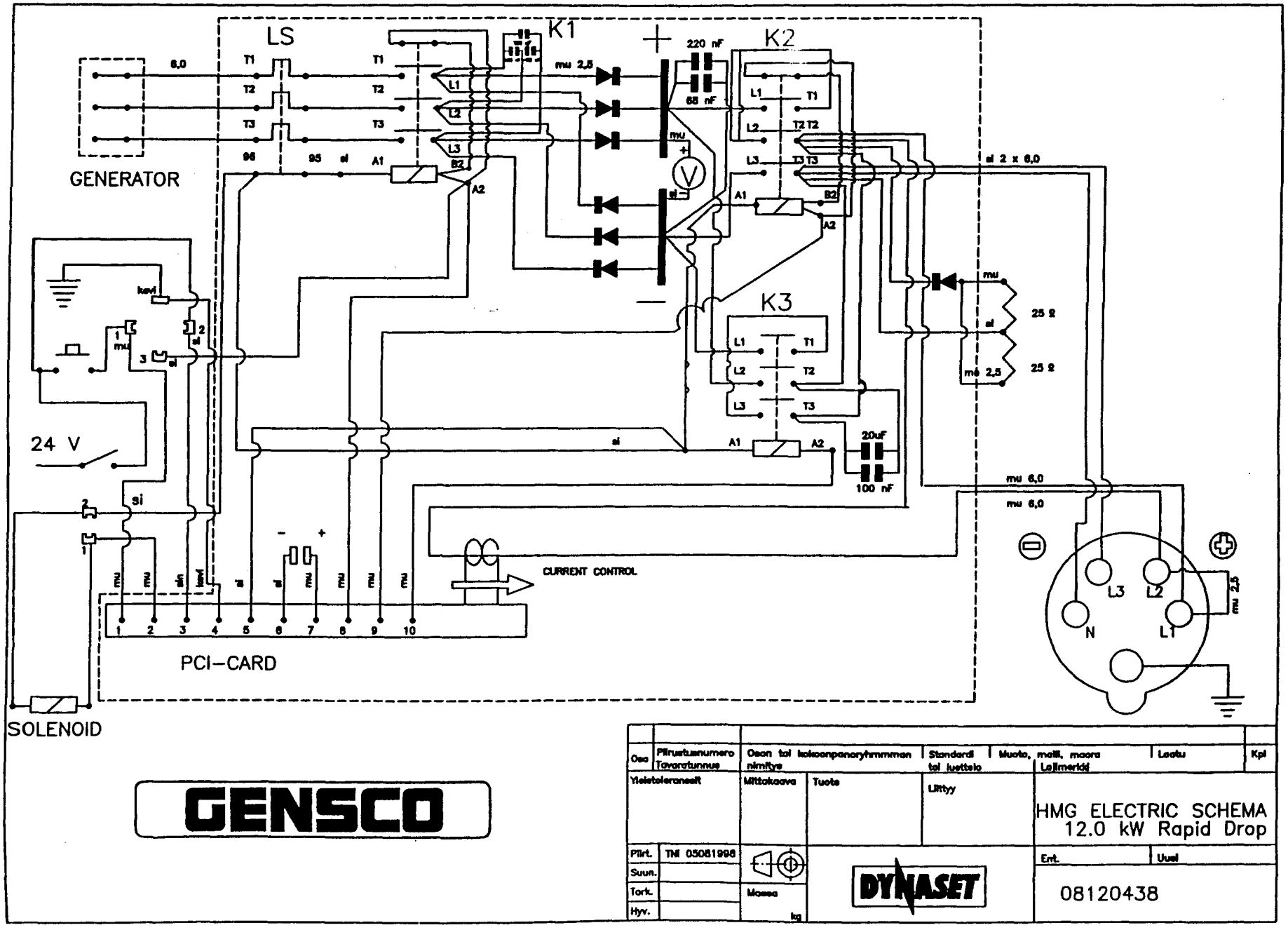
Muutos 29101997 TNI
Vaihtovirtakondensaattorin lisäys tasurille
Muutos 28051998 TNI
Apukärjet
Muutos 05081998 TNI
L1–L2 yhdistysjohto pistorasiolle
Muutos 10061998 TNI
Suojakondensaattorit diodeille

Osa	Piirustusnumero / Tavaratunnus	Osan tai kokoonpanoryhmän nimitys	Standardi tai luettelo	Muoto, malli, määrä / Lisämerkit	Laatu	Kpl
Yleistoleranssit		Mittakaava	Tuote	Liittyy		
Piirt.	TNI 280995					
Suun.	TNI 280995					
Tark.		Massa kg				
Hyv.						

DYNASET

HMG ELECTRIC SCHEMA
6,0 kW Rapid Drop

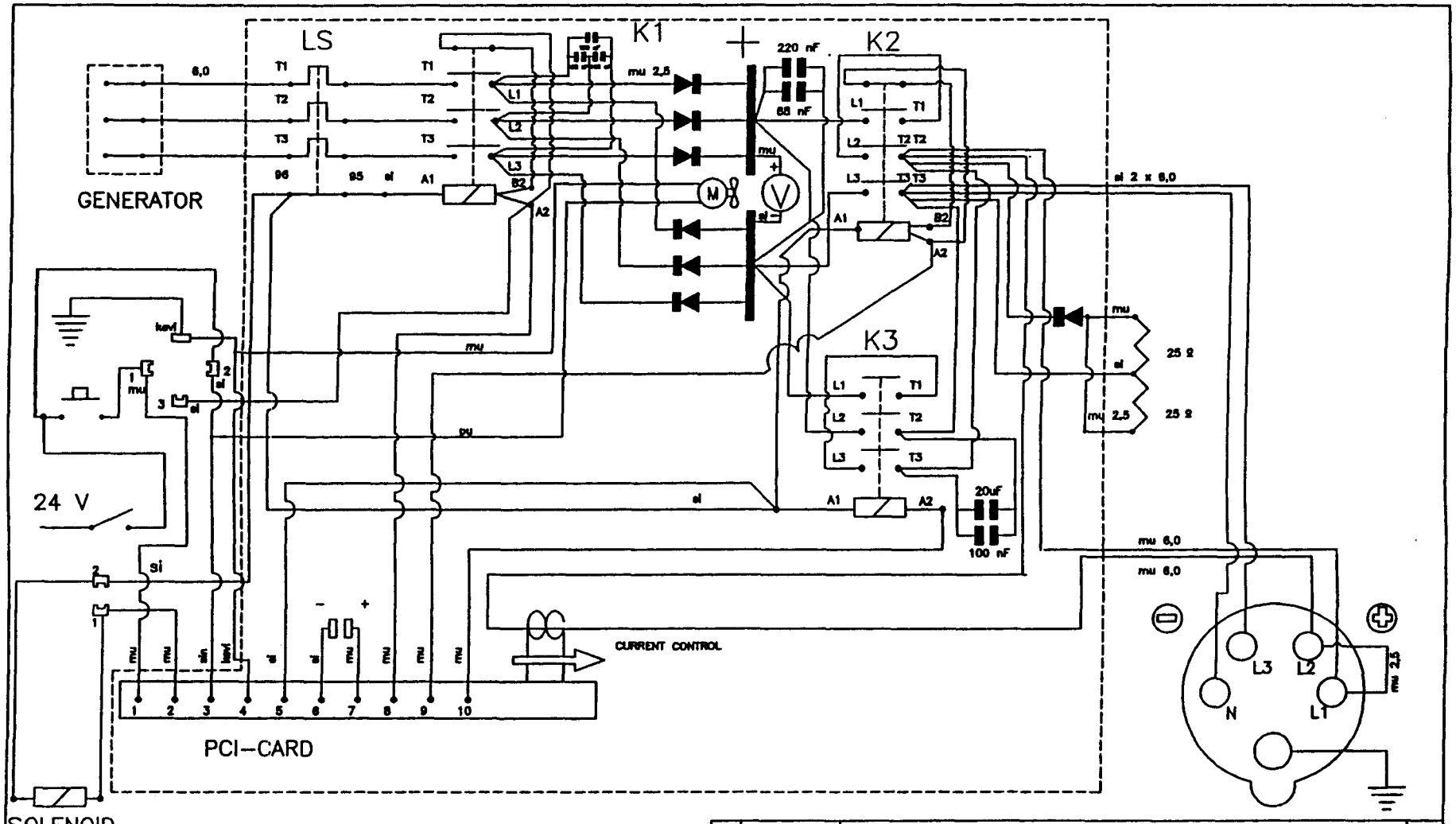
Ent.	Uusi
08060436	



Osa	Piirustusnumero / Tavaratunnus	Osan tai kokoonpanoryhmmman nimitys	Standardi tai luettelo	Muoto, malli, mitat / Lisämerkit	Laatu	Kpl
Yleistoleranssit		Mittakaava	Tuote	Liittyy	HMG ELECTRIC SCHEMA 12.0 kW Rapid Drop	
Piirt.	TNI 05081998				Ent.	Uusi
Suun.					08120438	
Tark.		Massa kg				
Hyv.						

GENSCO

DYNASET



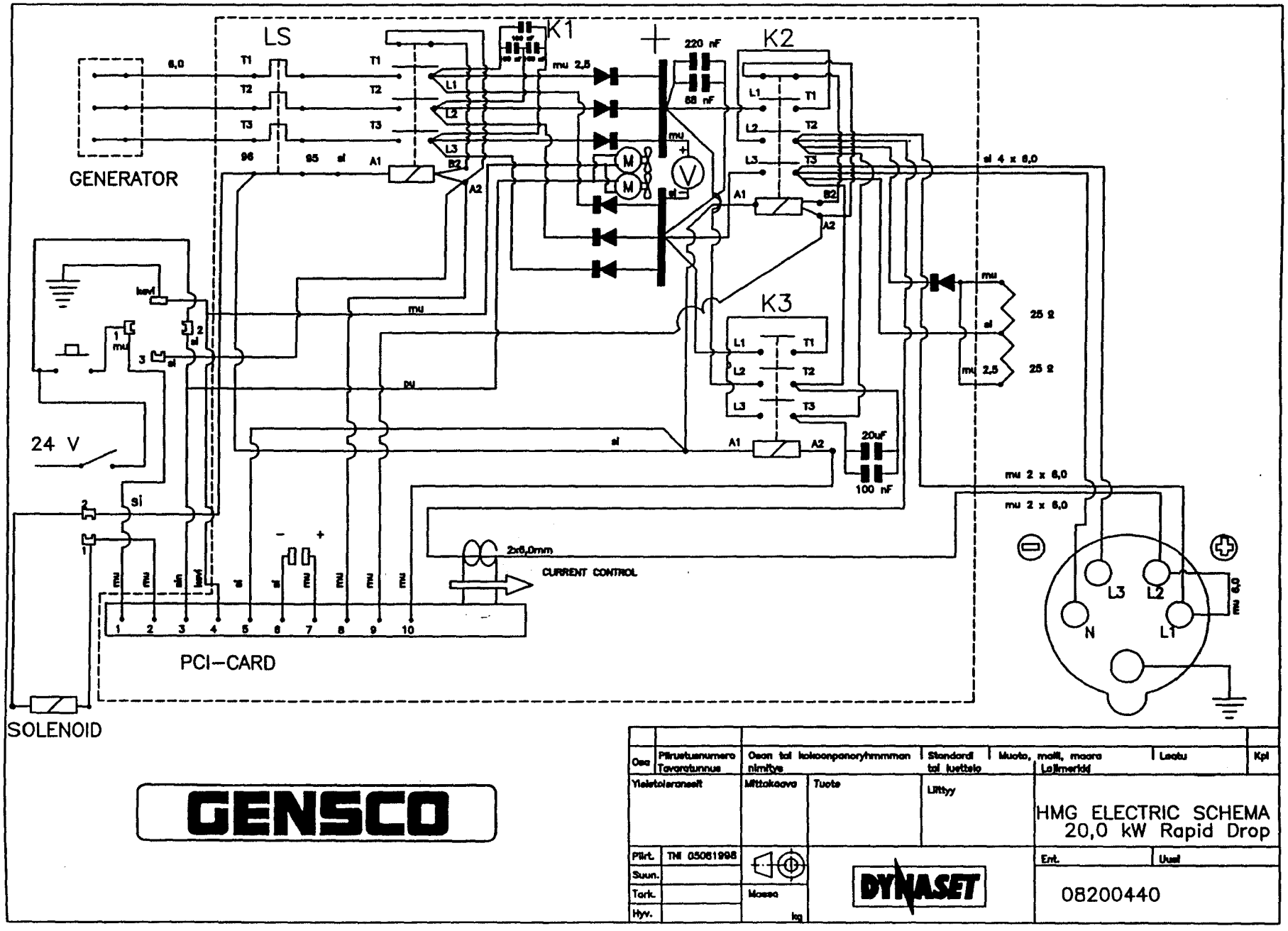
GENSCO

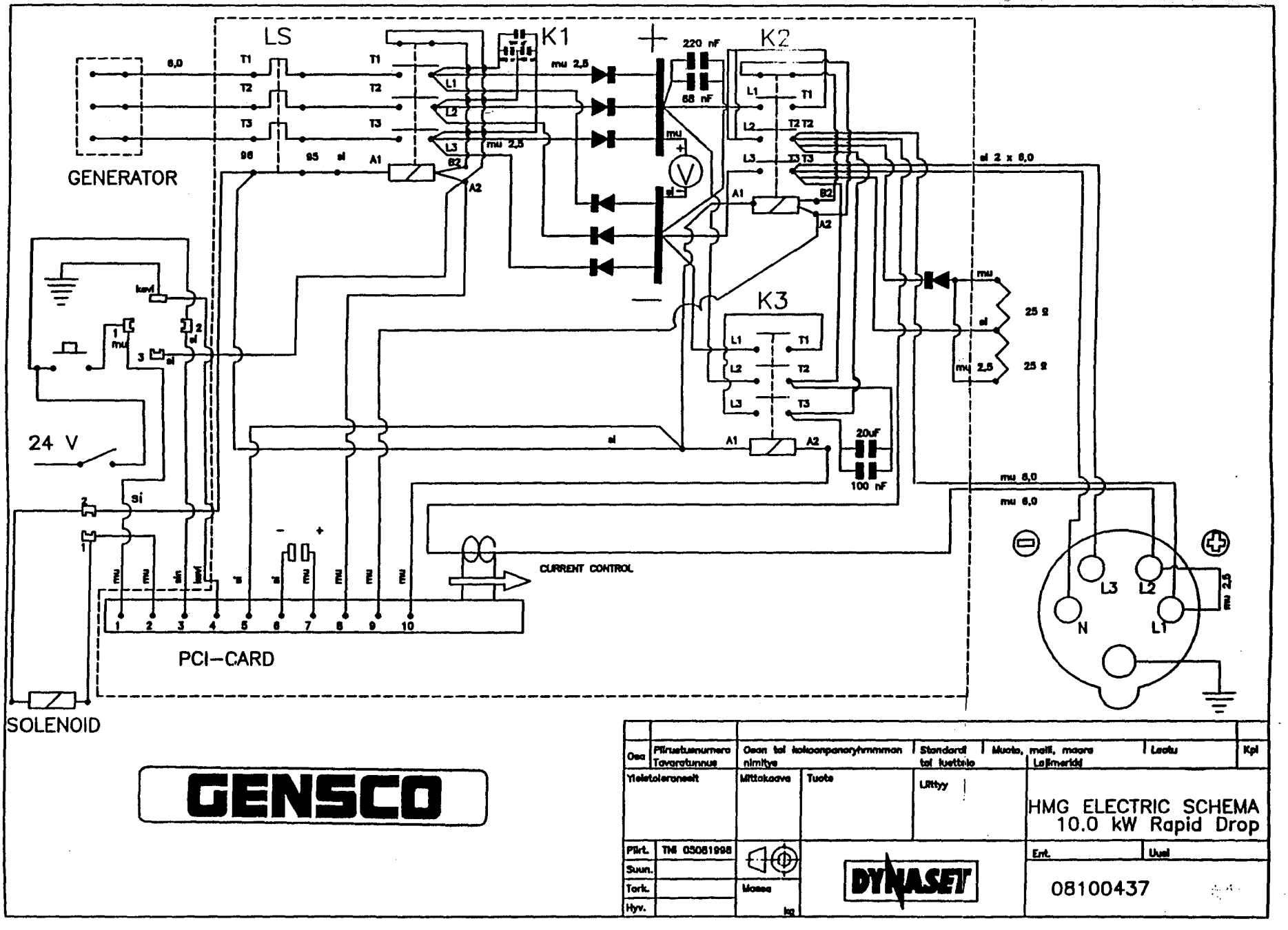
Osa	Piirustusnumero / Tavaratunnus	Osan tai kokoonpanoryhmmman nimitys		Standardi tai luettelo	Muoto, malli, maara / Lajimerkki	Laatu	Kpl
Yleistoleranssit		Mittakaava	Tuote	Ulkyy	HMG ELECTRIC SCHEMA 15.0 kW Rapid Drop		
Piirt.	TNI 05061998						
Suun.							
Tark.		Massa kg					
Hyv.							

DYNASET

Ent. 08150439

Uusi


LS
K1
K2
K3
GENERATOR
6,0
T1
T2
T3
96
95
A1
A2
B2
L1
L2
L3
mu 2,5
220 nF
68 nF
mu
sl
sl 4 x 6,0
25 Ω
mu 2,5
24 V
20uF
100 nF
mu 2 x 6,0
2x6,0mm
CURRENT CONTROL
PCI–CARD
SOLENOID
N
L1
L2
L3
GENSCO
DYNASET
HMG ELECTRIC SCHEMA
20,0 kW Rapid Drop
08200440



Osa	Piirustusnumero / Tavaratunnus	Osan tai kokoonpanoryhmämän nimitys	Standardi tai luettelo	Muoto, malli, mitat	Laatu	Kpl
Yleistoleranssit		Mittakaava	Tuote	Liittyy		
Piirt.	TM 03081998					
Suun.						
Tark.						
Hyv.						

GENSCO

DYNASET

HMG ELECTRIC SCHEMA
10.0 kW Rapid Drop

Ent. | Uusi

08100437

DYNASET

SERVICE BULLETIN
11.8.1996/HPi

MAGNETGENERATOR HMG

A. There isn't voltage in the socket of generator.

- Take the magnet's plug away from the socket of generator.
  - Is there voltage in socket?
- Measure the voltage with electric multimeter from socket.
  - Is there now voltage?

1. Rotate the generator almost on nominal speed?
- Does it work the drive switch in the cab?
- Does it work the speed adjuster valve of hydraulicmotor?
- Does it work the regulating valve of generator?
- Does it work the hydraulic system?

The right rotation speed is, when you have **frequency 46 Hz +/- 2 Hz or voltage 170 +/- 5 VAC.**

2. Is there any AC -voltage from generator to control box?
- Measure 3-phase voltage 150 ... 180 VAC / contactor K1, pole T1, T2, T3.
  * Damage in the generator: carbon brushes, rectifier, winding

3. Does it work the control of contactors (K1 and K2 must pull).
- Does it work the control of contactors with the push-button in the cab?
  * Electric wire of control, push-button, drive switch
  * PCI-card, LED-lights of relays show the work of contactors
  * Check the PCI-card with ***the separate instructions manual.***

4. Is there any voltage (220 V DC), check the indicator.
  * Contactor K1 heads are broken, measure max. 0,2 ohms on connected.
  (**Notice**: Measure the wires resistance of multimeter and decrease it away from the value of multimeter)
  * Rectifier diodes are short-circuit or broken.
- Measure: + diodes between K1/L1, L2 and L3 to K2/L1
  - diodes between K1/L1, L2 and L3 to K2/L3

5. Measure contactor K2 heads, max. 0,2 ohms on connected.
- Check the wiring to socket.
- Start the test again.

B. Demagnetisation doesn't work

1. Does contactor K3 and K1 connect at the same time for about 1 second, when the voltage turn off with push-button in the cab.
-the wiring of control, push-button
-PCI-card, check the PCI-card with ***the separate instructions manual.***
(The old PC-card has 12 connections and this new PCI -card has only 10 connections)
(The old PC-card has replaced to PCI -card from date 29 August 1995 and from manufacturing number 1377 - .)

2. Measure contactor K3 heads, max. 0,2 ohms.

3. Check the tube resistors (25 and 50 ohms) under the control box, diode.
- Check the wiring
- Start the test again.

HMG INSTRUCTIONS 24.08.1998

PCI -CONTROL CARD (V2.2 07.10.95) RAPID DROP

24 V INDICATOR LED, green: Led is on when 24V main switch is on.

- If led is off fault is in 24V control wiring from cabin or fuse is broken (6,3A)

K1(red), K2(yellow), K3(green) INDICATOR LEDS: Contactors indicators.

- If contactor is still open, fault is in coil of contactor or in wiring.
- If leds are off constantly, the PCI-card doesn't work properly.

FAILURE INDICATOR LED(red): Indicator of magnet current metering circuit and control voltage.

-If led is continuously on at working

- Cable of magnet is open or broken.
- Circuit of current metering on PCI-card has failure or the PCI -card has not been adjusted right (check the value of potentiometers Virta 1 and Virta 2)

-If led is flashing after working period there is bad connection in wiring of 24 V.

- If 24 V voltage drop down longer time than 0,2 s the led start flashing.

POTENTIOMETER, Virta 1: Adjust of induction current of magnet at opening contactor K2.

- PCI-card measures automatically the right time and opens the contactor K2 at the right time without sparking inde
- pendently of inductance and power of magnet.

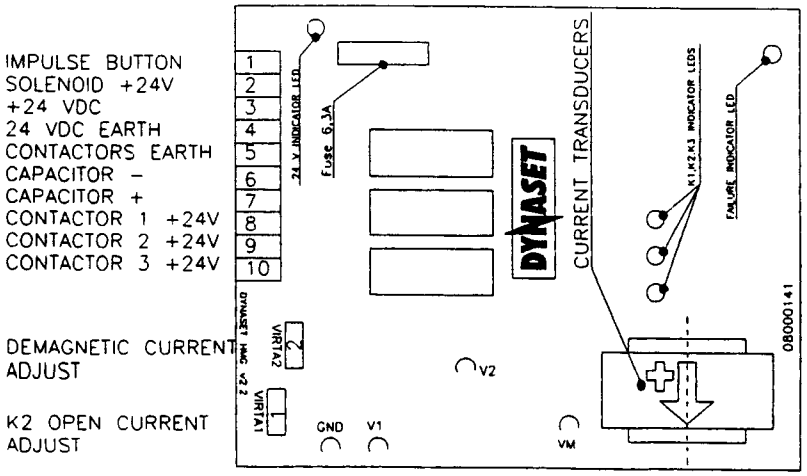
- Adjusted induction current value can measured by mV-meter (1 mV = 0,001 V) between V1- and GND -measure points in the card, when 24 V is connected on. 1 A = 40 mV.
- Factory default is +300 mV (= 7,5 A).
- It`s possible to hurry up the opening time by increasing V1 -value to 330 mV (= 8,3A)

DO NOT increase too much because that reduces working life of contactor K2.

POTENTIOMETER, Virta 2: Adjust of demagnetising current.

-Adjusted demagnetising current can measured by mV-meter between V2- and GRN -measure points in the card when 24V is on.

- Factory default is - 100 mV (= 2,5 A).



DYNASET

SERVICE BULLETIN
17.1.1997/HPi

DYNASET HYDRAULIC GENERATOR HG 6,5 - 70 KVA

CAUTION! You must be carefully, because of high voltage, pressure and temperature of hydraulic oil and rotating parts.
The test must do with warm oil.

Generator does not get excited

1. Insufficient residual voltage	1. Excite the rotor using a battery
2. Connection interrupted	2. Reset the connection
3. Broken rectifier	3. Replace the rectifier
4. Low speed	4. Check the hydraulic system and hydraulic motor (Oil flow and pressure).
5. Winding breakdowns	5. Check windings resistance and replace the damaged part
6. Poor contact of the brushes	6. Clean and check the slip ring and brushes

Low no load voltage

1. Low rotation speed	1.Check the hydraulic system and hydraulic motor
2. Poor contact of the brushes	2. Clean and check the slip ring
3. Broken winding	3. Check winding resistance and replace the defected part
4. Broken rectifier	4. Replace the rectifier
5. Air-gap in compound too small	5. Increase the air-gap in compound

Low load voltage, but correct no load voltage

1. Low rotation speed at full load	1. Check the hydraulic system and hydraulic motor.
2. Compound defected	2. Check the compound and if broken, replace it
3. Broken rotor winding	3. Check the rotor winding resistance and if broken, replace it
4. Load too high	4. Reduce the load

High load voltage, but correct no load voltage

1. Condersers on the load	1. Reduce the applied capacity
2. Incorrect data of the compound	2. Check the compound windings resistances and if necessary, replace it

High no load voltage

1. Excessive speed	1. Adjust the rotation speed
2. Air-gap compound too high	2. Reduce the compound air-gap
3. Breakdown in compound windings	3. Check the winding resistance and if necessary change the compound
4. Connections of the phases are incorrect	4. Check and connect the phases properly

Uneven voltage

1. Uneven rotating speed	1. Check the hydraulic system and motor Check the automatic speed control valve
2. Poor contact on the slip ring	2. Clean and check the slip ring and the brushes

Noisy sound or oil leakage

1. Short circuit in windings or in loads	1. Check the windings and the loads
2. Broken bearing	2. Replace the bearing
3. Broken hydraulic motor	3. Check the hydraulic motor

DYNASET

VARAOSAT
SPARE PARTS
ERSATZTEILE

HMG 3,5

GENERAATTORI - RUNKO MA
GENERATOR - BODY MA
GENERATOR - FÜLLE MA

Numero Number Nummer	Nimitys	Name	Bezeichnung
2	Vaarnaruuvi 7/16 UNF-M8 L=200	Stay bolt	Zentriersstift
3	HG kartio 3,5 k	HG coupling cone	HG kupplung konus
4	HG laippa M.A. 3,5 k	HG flange	HG flansch
5	HG etujalka 3,5k	HG front foot	HG vorderbein
6	HG Takajalka 3,5k	HG back foot	HG hinterbein
7	Hammasp. 11-R	Gear motor 11-R	Zahnradmotor 11-R
7.1	Hammasp.tiivistesarja	Gear motor gasket set	Dichtung teil
8	Akselitiiviste 17x30x7 FPM	Axel seal set	Achse dichtung teil
9	Laippaliitin imukulma 15	Flange joint elbow 15	Flansch konnektor 15
10	HG pyör.nop.säädin lohko	HG speed control block	HG kontrolle block
11	Virt.säädinpatruuna	Flow control cartbridge	Fluss kontrolle
12	Vastaventtiili	Check valve	Kontrolle ventil
13	Kulmaliitin 15 RK 1/2	Elbow 15 RK 1/2	Konnektor winkel 15 RK 1/2
14	O-rengas 15.3x2.4	O-ring 15.3x2.4	O-ring 15.3x2.4
15	Tulppa R 3/8 6-kolo DIN	Plug hexagon R 3/8	Propfen innerhexagon R 3/8
16	Tulppa R 1/4 6-kolo DIN	Plug hexagon R 1/4	Propfen innerhexagon R 3/8
17	Tulppa R 1/8 6-kolo DIN	Plug hexagon R 1/8	Propfen innerhexagon R 3/8
18	Putki HG-HK 15 l=330	Pipe HG-HK 15 l=330	Röhre HG-HK 15 l=330
19	Ruuvi,6-kolo M6x50	Screw,hexagon M6x50	Schraube,innerhexagon M6x50
20	Ruuvi,6-kolo M8x20	Screw,hexagon M8x20	Schraube,innerhexagon M8x20
21	Ruuvi,kuusio M8x16	Screw,hexagon M8x16	Schraube,sechskantkopf M8x16
22	Ruuvi,kuusio M8x20	Screw,hexagon M8x20	Schraube,sechskantkopf M8x20
25	Mutteri,M8	Nut,M8	Mutter,M8
* 28	Vikavirtasuoja 2 nap.25 A 30 mA	Earth leakage relay	Schutzschalter
* 29	V-mittari 250 V AC D 52	Volt meter	Volt messer
30	Eturunko	Drive end bracket	Vorderer gehäuse
31	Suojus	Cover	Schutz
32	Tuuletin	Fan	Lufter
33	Roottori	Rotor	Rotor
34	Staattori	Stator	Stator
35	Laakeri	Bearing	Hinter lager
36	Takarunko	Non drive end bracket	Hinteres gehäuse
37	Kondensaattori	Capasitor	Kondensator
38	Ruuvi	Securing stud	Zugstange
40	Päätykotelo	Terminal box	Deckel
42	Tulppa	Rubber cap	Gummistopfen
45	Pistorasia	Socket	Steckdose
46	Automaattisulake	Automatic fuse	Automatisch schalter

* Lisävaruste * Accessory * Zubehör

Since 1919

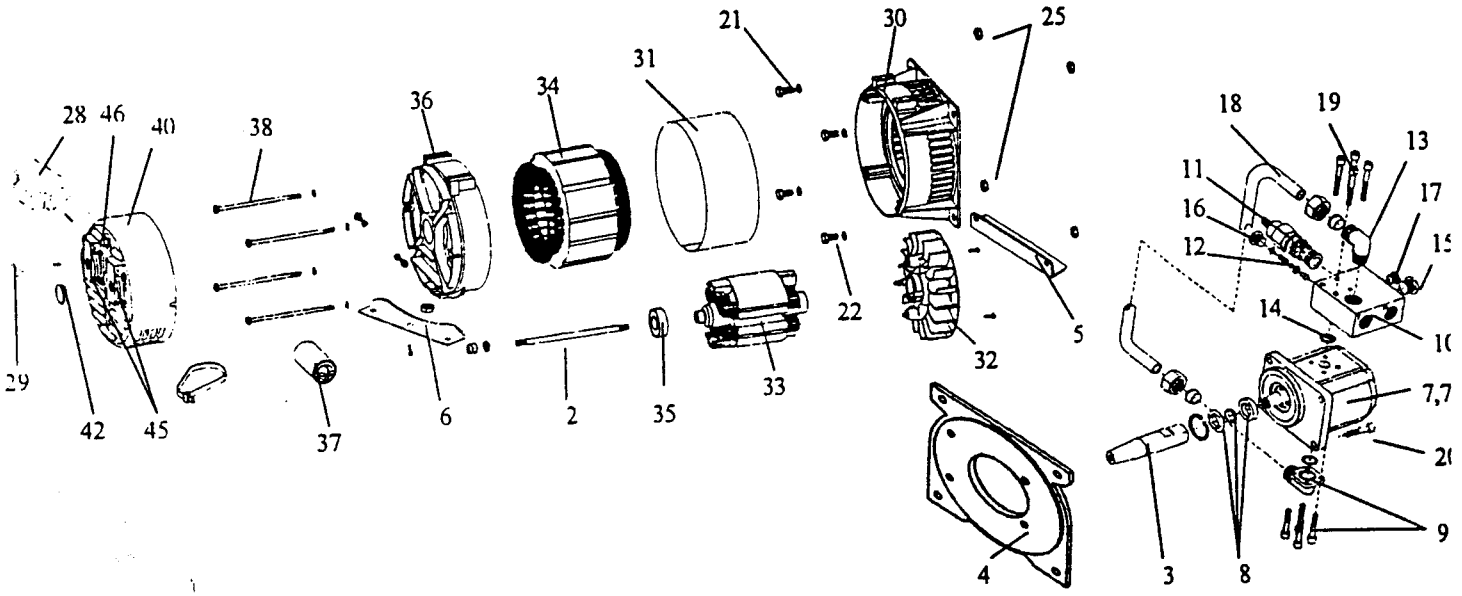
GENSCO

DYNASET

VARAOSAT
SPARE PARTS
ERSATZTEILE

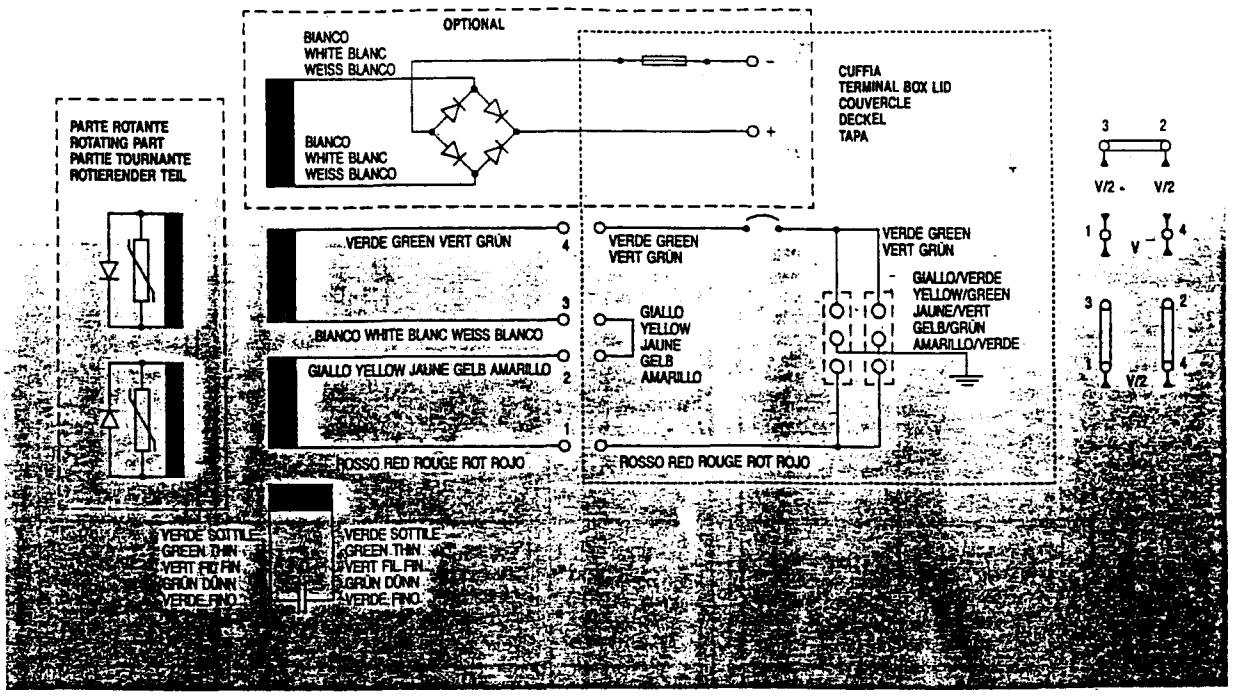
1098KV

HMG 3,5
GENERAATTORI - RUNKO MA
GENERATOR - BODY MA
GENERATOR - FÜLLE MA



GENSCO

SCHEMA ELETTRICO · WIRING DIAGRAM · SCHEMA ELECTRIQUE · SCHALTSCHEMA · ESQUEMA ELECTRICO



RESISTENZA DEGLI AVVOLGIMENTI A 20°C AMBIENTE · WINDING RESISTANCE AT 20°C ROOM TEMPERATURE · RESISTANCE DES BOBINAGES A 20°C DE TEMPERATURE AMBIANTE · WIDERSTAND DER WICKLUNG BEI 20°C RAUMTEMPERATUR · RESISTENCIA DE LOS BOBINADOS A 20°C DE TEMPERATURA AMBIENTE

3000 RPM - 110÷220 V - 50 Hz				
Tipo / Type / Type / Typ / Tipo	KVA	Statore / Stator / Stator / Stator / Estator Ω × fase/phase	Rotore / Rotor / Rotor / Rotor / Rotor Ω	Eccitazione / Exciting / Excitation / Erregung / Excitación Ω
A1-A	1.5	1.880	3.070	11.380
A1-B	2.2	1.230	2.930	6.270
A1-C	3.5	0.810	3.550	2.850
A1-D	4.1	0.520	4.020	1.470

3600 RPM - 120÷240 V - 60 Hz				
Tipo / Type / Type / Typ / Tipo	KVA	Statore / Stator / Stator / Stator / Estator Ω × fase/phase	Rotore / Rotor / Rotor / Rotor / Rotor Ω	Eccitazione / Exciting / Excitation / Erregung / Excitación Ω
A1-A	1.8	1.480	3.070	6.320
A1-B	2.6	1.010	2.930	4.400
A1-C	4.2	0.570	3.550	2.330
A1-D	5	0.360	4.020	1.250

TABELLA CAPACITORI ASSORBIMENTI TESTE PER VERIFICARE CONDENSATORE · TABLEAU DES CAPACITEURS ABSORPTIONS VERIFICATION CONDENSATEURS · TABELLE DER KONDENSATOREN ABSORPTIONSZUR PRÜFUNG DER · TABLA DE CONSUMOS PARA LA VERIFICACION DEL CONDENSADOR

Tipo / Type / Type / Typ / Tipo	µF	I ac 220 V÷50 Hz	I ac 240 V÷60 Hz
A1-A	10	1.30	1.6
A1-B	10	1.30	1.6
A1-C	20	2.40	3.0
A1-D	31.5	3.40	4.1

Tipo / Type / Type / Typ / Tipo	3000 RPM 50 Hz			3600 RPM 60 Hz		
	Volume d'aria / Air volume / Volume d'air / Luftmenge / Volumen de aire m³/min	Rumore / Noise / Bruit / Geräusch / Ruido 7m dBA	1m dBA	Volume d'aria / Air volume / Volume d'air / Luftmenge / Volumen de aire m³/min	Rumore / Noise / Bruit / Geräusch / Ruido 7m dBA	1m dBA
A1-A	2.5	56	72	3.2	60	77
A1-B	2.4	56	72	3.1	60	77
A1-C	2.3	56	72	3	60	77
A1-D	2.3	56	72	3	60	77

TECHNICAL INFORMATION

These self-exciting and self-regulating generators of compact, overed dimensions are design for high-level electrical perfomance and maximum operating reliability.

START-UP

Make sure, when starting up, that cooling air intake and discharge openings are free and unblocked. In case alternator has been stored for a long time and in order to avoid damages caused by humidity we suggest that — through a 500 V megger — the insulation resistance of all windings be checked towards ground, including the rotor. The resulting data must be higher than 1 megaohm. If data are not higher than said value then apply a stream of warm air to the windings till the above mentioned value is obtained.
Ensure that the alternator's rotational sense is anticlockwise when looking at it from opposite end to coupling end.
We also recommend (when the machine operates in a dusty enviroment) periodic checks to make sure alternator is properly ventilated.

THE IMPORTANCE OF SPEED

Frequency and voltage depend directly on rotational speed. This must be kept as constant as possible on its nominal value no matter what the load. Drive-motor speed control systems generally have a small drop in speed between no-load and loaded conditions. We therefore recommend setting no-load speed 3÷4% above nominal speed.

CHECKING VOLTAGE

All the machines are regulated during factory testing. If voltage readings differ from the value indicated on the name plate, this may be caused by a wrong reading or by a different rotational speed and we recommend regulating motor speed in order to have nominal RPM under loaded conditions.

GROUND CONNECTION

For ground connection there is a hole in the upper part of the end bracket which is accessible without having to remove end cover.

DIODE CHECK-UP

For test with ohmmeter it is best to disconnect diode from circuit. The lamp lights on only in one sense.

TROUBLE SHOOTING

PRELIMINARY CHECKS

Carry out a thorough visual check prior to modifying alternator in any way. Check connections of several components, eventual cable ruptures, or loose connections. If said search gives negative results then follow carefully the instructions indicated on "trouble - shooting table".

PROBLEMS	CAUSES	REMEDIES
Alternator excitation failure	**1** - Loow speed. **2** - Faulty condenser. **3** - Faulty windings.	**1** - Check RPM and set at nominal value. **2** - Check and replace. **3** - Check that winding resistance is as shown in the tables.
High no-load voltage	**1** - Speed too high. **2** - Condenser with high capacity.	**1** - Check and adjust RPMs. **2** - Check and replace.
Low no-load voltage	**1** - Speed to low. **2** - Faulty rotary diodes. **3** - Breakdown in windings. **4** - Condenser with low capacity.	**1** - Check and adjust RPMs. **2** - Check and replace. **3** - Check winding resistance, as per tables. **4** - Check and replace.
Proper no-load but low loaded voltage	**1** - Low loaded speed. **2** - Load too big. **3** - Rotary diodes short-circuited.	**1** - Check an regulate RPM. **2** - Check and change. **3** - Check and replace.
Proper no-load but high loaded voltage	High loaded.	Check and regulate RPM.
Unstable voltage	**1** - Loose contacts. **2** - Uneven rotation.	**1** - Check connections. **2** - Check for uniform rotation speed.
Noisy generator	**1** - Broken bearings. **2** - Poor coupling.	**1** - Replace. **2** - Check and repair.

DYNASET

VARAOSAT
SPARE PARTS

HG 6,5
HMG 6

GENERAATTORI - RUNKO SI
GENERATOR - BODY SI

Numero Number	Nimi	Name	Varaosaumero Spare part number	Määrä Quantity
74	Virtaussäätöpatruuna	Flow control cartbidge	74	1
75	Vastaventtiiliyksikkö	Check valve unit	75	1
76	Tulppa 6-kolo R1/4	Plug hexagon R1/4	76	1
78	Tulppa 6-kolo R3/8	Plug hexagon R3/8	78	1
79	6-koloruuvi M6 x 50	Screw hexagon M6 x 50	79	1
80	6-koloruuvi M6 x 35	Screw hexagon M6 x 35	80	4
82	Laippaliitin kulma 15	Flange joint elbow	82	1
83	O-rengas 24,5 x 2,5	O-ring 24,5 x 2,5	83	1
84	6-koloruuvi M8 x 20	Screw hexagon M8 x 20	84	4
85	O-rengas 15,3 x 2,4	O-rengas 15,3 x 2,4	85	1
86	Putki	Pipe	86	1
88	Kulmaliitin 15L-RK 1/2	Joint elbow 15L-RK1/2	88	1
92	Kytkinkartio	Coupling cone	92	1

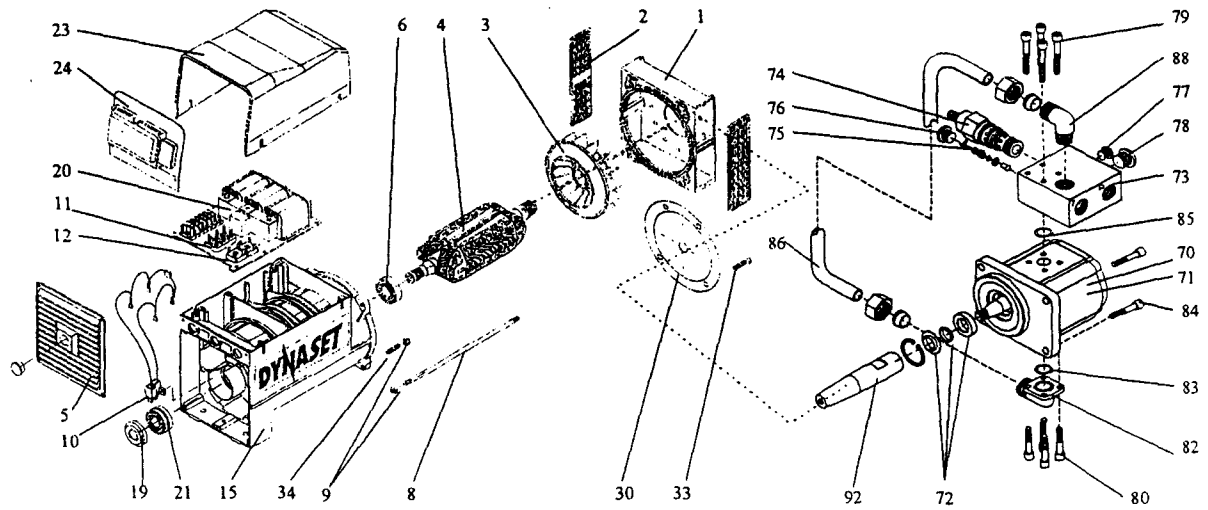
GENSCO

DYNASET

VARAOSAT 05/98 KV
SPARE PARTS

HG 10
HMG 10

GENERAATTORI - RUNKO SI
GENERATOR - BODY SI



Numero Number	Nimitys Määrä	Name	Varaosanumero Spare part number	Quantity
1	Puhallinkotelo	Front shield	1	1
2	Eturitilä	Front grid	2	2
3	Tuuletin	Fan	3	1
4	Roottori	Rotor	4	1
5	Takaritilä	Rear grid	5	1
6	Laakeri	Bearing	6	1
8	Lukituspultti	Stay bolt	8	1
9	Lukitusmutteri	Selflocking nut	9	2
10	Hiiliharjat ja -pidin	Brush holder with brushes	10	1
11	Liitinruuvit	Terminal	11	1
12	Tasasuuntaaja	Rectifier bridge	12	1
20	Säädin	Regulator	20	1
23	Kotelo	Cover	23	1
24	Kansi	Plate	24	1
30	Laippa	Flange	4120	1
33	Ruuvi M8 x 25	Screw M8 x 25	33	4
34	Pultti	Bolt	34	4
70	Hammaspyörämoottori 16 - R	Gear motor 16 - R	70	1
71	Tiivistesarja	Gasket set	71	1
72	Akselitiiviste 10 B - 17 - 30	Axel gasket 10 B - 17 - 30	70b	1
73	Venttiililohko	Valve block	D3007	1

GENSCO

DYNASET

VARAOSAT
SPARE PARTS

HG 10
HMG 10

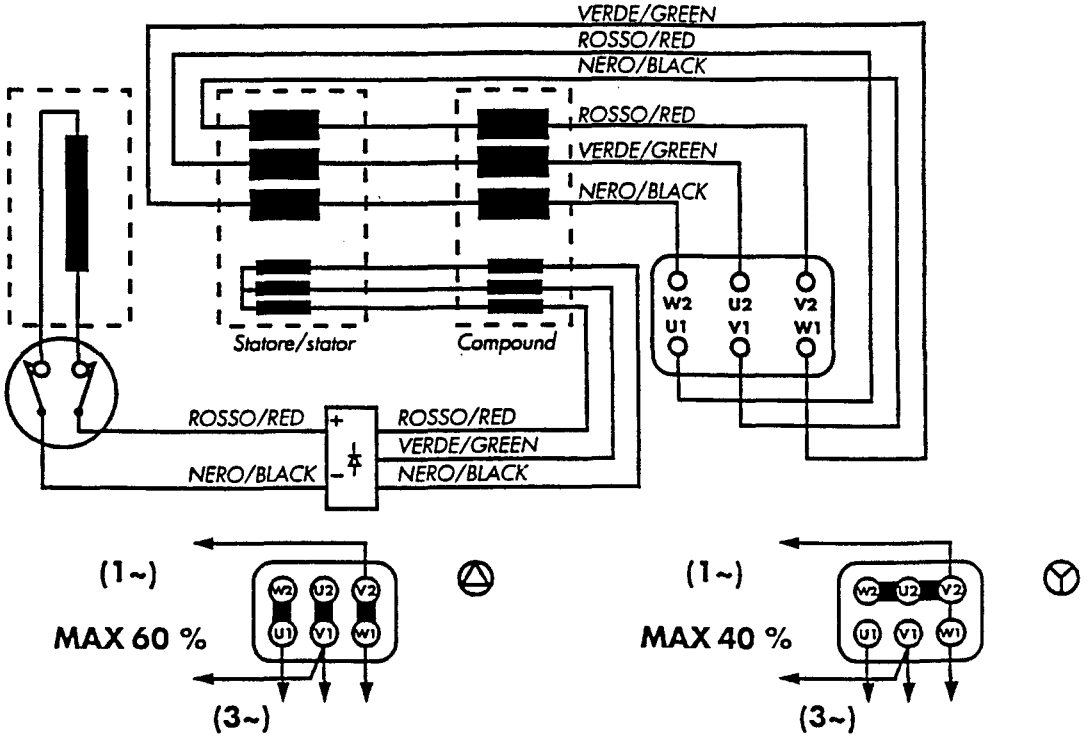
GENERAATTORI - RUNKO SI
GENERATOR - BODY SI

Numero Number	Nimi	Name	Varaosaumero Spare part number	Määrä Quantity
74	Virtaussäätöpatruuna	Flow control cartbidge	74	1
75	Vastaventtiiliyksikkö	Check valve unit	75	1
76	Tulppa 6-kolo R1/4	Plug hexagon R1/4	76	1
78	Tulppa 6-kolo R3/8	Plug hexagon R3/8	78	1
79	6-koloruuvi M6 x 50	Screw hexagon M6 x 50	79	1
80	6-koloruuvi M6 x 35	Screw hexagon M6 x 35	80	4
82	Laippaliitin kulma 15	Flange joint elbow	82	1
83	O-rengas 24,5 x 2,5	O-ring 24,5 x 2,5	83	1
84	6-koloruuvi M8 x 20	Screw hexagon M8 x 20	84	4
85	O-rengas 15,3 x 2,4	O-rengas 15,3 x 2,4	85	1
86	Putki	Pipe	86	1
88	Kulmaliitin 15L-RK 1/2	Joint elbow 15L-RK1/2	88	1
92	Kytkinkartio	Coupling cone	92	1

GENSCO

SCHEMA ELETTRICO TRIFASE • THREE PHASES ELECTRIC PLAN

HG 6.5, HG 10, HMG 6, HMG 10



CARATTERISTICHE ELETTRICHE • ELECTRICAL DATA • CARACTERISTIQUES ELECTRIQUES
(50 Hz - 3000 RPM - 230/400 V)

TIPO TYPE TYPE	kVA	RESISTENZA DEGLI AVVOLGIMENTI (20°C) WINDINGS RESISTANCE (20°C) RESISTANCE DES BOBINAGES (20 °C)					DATI ECCITAZIONE EXCITATION DATA DONNES D'EXCITATION			
		STATORE STATOR STATOR (•)	AUS AUSX AUX	COMPOUND SERIE SERIE SERIE	 PARALLELO PARALLEL PARALLELE	ROTORE ROTOR ROTOR	A VUOTO NO LOAD A VIDE		A PIENO CARICO FULL LOAD EN CHARGE NOM.	
		Ω	Ω	Ω	Ω	Ω	Vdc	Idc	Vdc	Idc
GS 100 T/4	4	3,660	3,27	0,503	1,80	17,1	16	0,9	73	3,4
GS 100 T/5,5	5,5	2,140	2,51	0,286	1,79	20,9	18,7	0,9	95	3,5
GS 100 T/6,5	6,5	1,327	2,33	0,200	1,80	25,4	22	0,86	111	3,5
GS 100 T/8	8	0,946	1,97	0,132	1,79	27,8	27,5	0,9	127	3,7
GS 100 T/10	10	0,709	1,91	0,081	1,80	31,2	31,6	0,9	131,8	3,6

DYNASET

HG 12
HMG 12

VARAOSAT
SPARE PARTS
ERSATZTEILE

07/98 KV

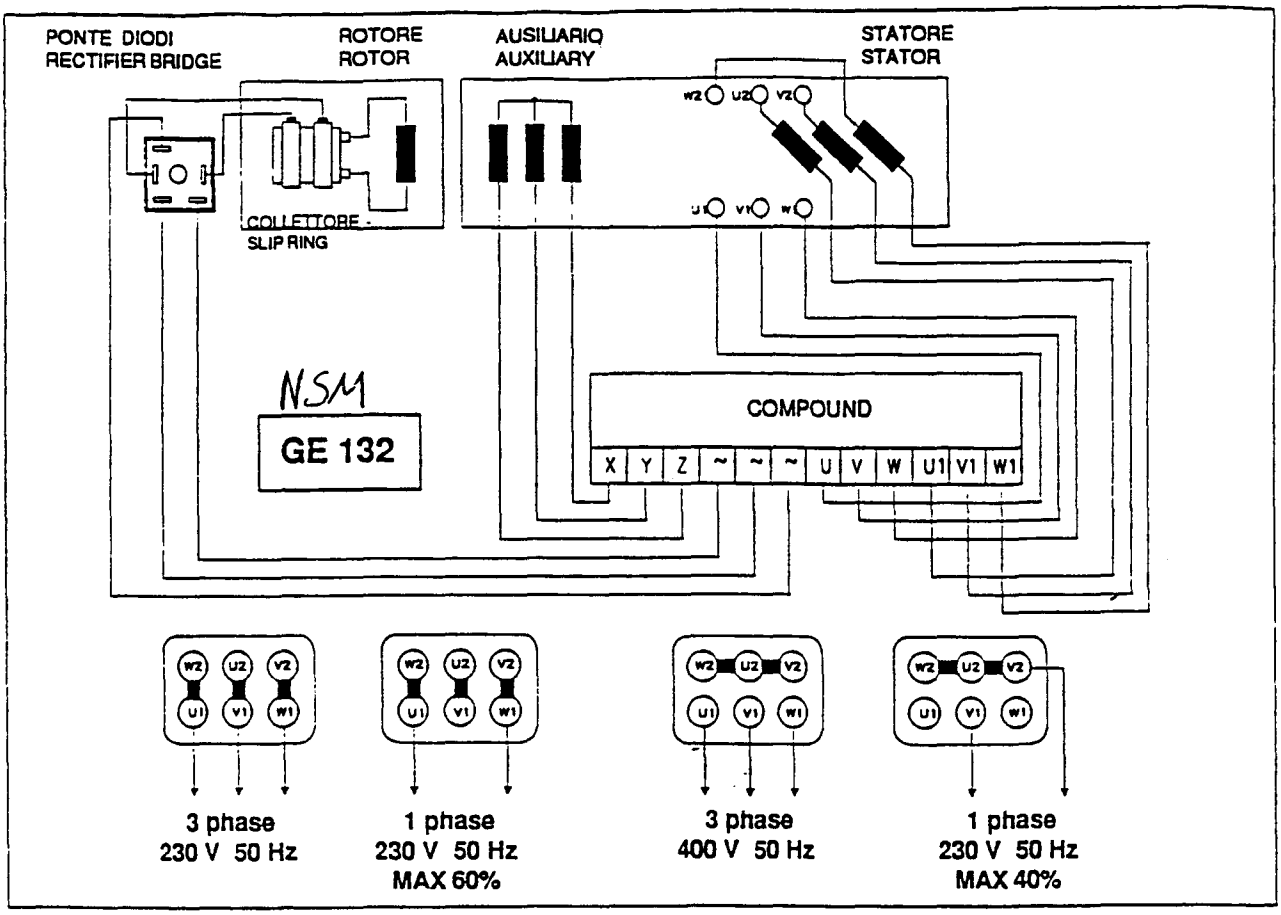
GENERAATTORI - RUNKO NSM
GENERATOR - BODY NSM
GENERATOR - FÜLLE NSM

Numero Number Nummer	Nimitys	Name	Name	Varaosanumero Spare part number Ersatzteilnummer	Kpl Pcs Stück
19	Tasasuuntaussilta	Rectifier bridge	Gleichrichtung brucke	19	1
20	Puhallinkotelo	Coupling flange cone 30	Anstellung flansch kegel 30	20	1
21	Lukitusmutteri M8	Locking nut M8	Interlock mutter M8	21	1
22	Säädin	Compound	Regulator	22	1
23	Runko ja staattori	Frame and stator	Fülle und stator	23	1
24	Liitinruuvit	6 wires terminal board	6 garn konnektor	24	1
26	Lukituspultti	Shaft tierod	Interlock bolzen	26	1
30	Vastus (HMG)	Resistor (HMG)	Resistanz (HMG)	30	2
31	Ylivirtasuoja	Overcurrent protector	Überstromschutz	31	1
32	*Vikavirtasuoja (lisäv.)	*Residual current device.(opt.)	*Schutzschalter (zubehör)	32	1
33	Johdonsuoja (HMG)	Automatic fuse (HMG)	LS schalter (HMG)	33	1
40	Laippa	Flange	Flansch	40	1
43	Ruuvi kuusio M8x25	Screw hexagon M8x25	Sechskantschraube M8x25	43	4
70	Hammasp.moottori 19-R	Gear motor 19-R	Zahnradmotor 19 - R	70	1
71	Tiivistesarja	Gasket set	Dichtung serie	71	1
72	Akselitiiviste	Axel gasket	Achse dichtung	72	1
73	Venttiililohko	Valve block	Ventil block	D 3007	1
74	Virtaussäätöpatruuna	Flow control cartbridge	Fluss kontrolle patron	74	1
75	Vastaventtiiliyksikkö	Check valve unit	Kontrolle ventil	75	1
76	Tulppa 6 - kolo R 1/4	Plug hexagon socket R 1/4	Pfropfen innensechskant R ¼	76	1
78	Tulppa 6 - kolo R 3/8	Plug hexagon socket R 3/8	Propfen innensechskant R 3/8	78	1
79	6 - koloruuvi M6x50	Screw hexagon socket M6x50	Schraube innensechskant M6x50	79	4
80	6 - koloruuvi M6x20	Screw hexagon socket M6x20	Schraube innensechskant M6x20	80	4
82	Laippaliitin kulma 15	Flange joint elbow	Flansch kniekonnektor	82	1
83	O - rengas 24,5x2,5	O - ring 24,5x2,5	O - ring 24,5x2,5	83	1
84	6 - koloruuvi M8x20	Screw hexagon socket M8x20	Schraube innensechskant M8x20	84	4
85	O - rengas 15,3x2,4	O - ring 15,3x2,4	O - ring 15,3x2,5	85	1
86	Putki	Pipe	Röhre	86	1
88	Kulmaliitin 15 L RK ½	Joint elbow 15 L RK ½	Kniekonnektor 15 L RK ½	88	1
92	Kytkinkartio	Coupling cone	Kupplung konus	92	1

* HG - generaattori - HG - generator

GENSCO

SCHEMA DI COLLEGAMENTO - WIRING DIAGRAM - SCHEMA DES CONNEXIONS



CARATTERISTICHE ELETTRICHE - ELECTRICAL DATA - CARACTERISTIQUES ELECTRIQUE (50Hz - 230 V / 400 V)

TIPO TYPE TYPE	kVA	RESISTENZA DEGLI AVVOLGIMENTI (20°C) WINDINGS RESISTANCE (20°C) RESISTANCE DES BOBINAGES (20°C)					DATI ECCITAZIONE EXCITATION DATA DONNÉES D'EXCITATION			
		STATORE STATOR STATOR (*) Ω	AUS. AUX. AUX. Ω	COMPOUND U-U1 V-V1 W-W1 (*) Ω	COMPOUND X-- Y-- Z-- Ω	ROTORE ROTOR ROTOR Ω	A VUOTO NO LOAD A VIDE V dc	A VUOTO NO LOAD A VIDE I dc	A PIENO CARICO FULL LOAD EN CHARGE NOM. V dc	A PIENO CARICO FULL LOAD EN CHARGE NOM. I dc
4 poles -50 Hz -1500rpm										
GE132 SA/4	6	1.9	2.3	0.13	0.9	21	32	1.5	140	5.0
GE132 SB/4	8	1.3	2.3	0.09	1.0	24	40	1.6	150	4.8
GE132 MB/4	10	0.8	2.3	0.06	1.1	27	48	1.7	160	4.7
GE132 LA/4	12.5	0.6	2.3	0.04	1.2	31	55	1.7	170	4.5
GE132 LB/4	15	0.4	2.3	0.03	1.4	35	62	1.7	180	4.2
GE132 LC/4	20	0.3	2.2	0.02	1.7	45	72	1.5	200	3.8
2 poles -50 Hz -3000rpm										
GE132 MB/2	12.5	0.7	3.0	0.09	1.5	25	34	1.4	140	5.0
GE132 LA/2	15	0.5	2.6	0.06	1.7	28	40	1.4	150	4.7
GE132 LB/2	20	0.4	2.6	0.04	1.8	32	46	1.4	170	4.6
GE132 LC/2	25	0.25	2.5	0.02	1.9	41	60	1.4	180	4.5

IMG12

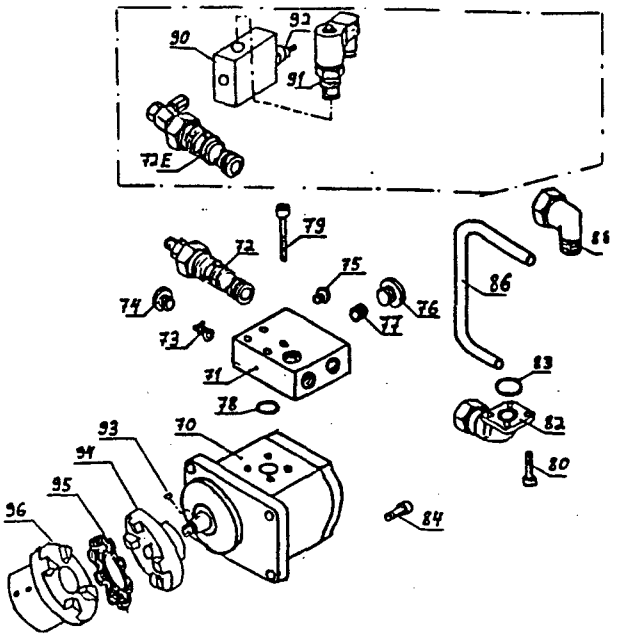
(*) Per tensione nominale diversa da 400V:
For rated voltage different from 400V: Res2=Res1 x (Volt2 / Volt1)²
Pour tension nominal different de 400V:

ex: mac.: GE132 LB/4 Volt2= 415V
Rstat= 0.4 x (415/400)² =0.43Ω

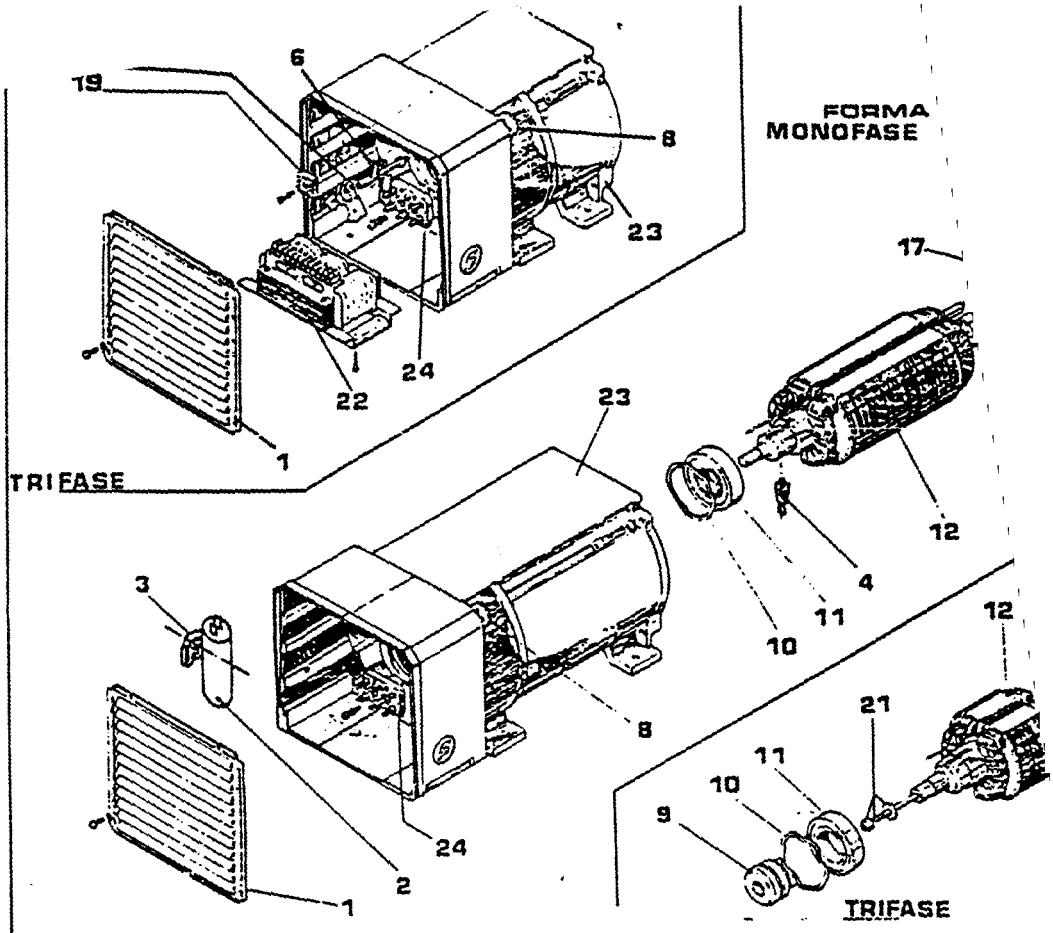
DYNASET

VARAOSAT / SPAREPARTS
HYDRAULIIKKA / HYDRAULICS
HG, HMG 15, 20 kW

10.3.1996

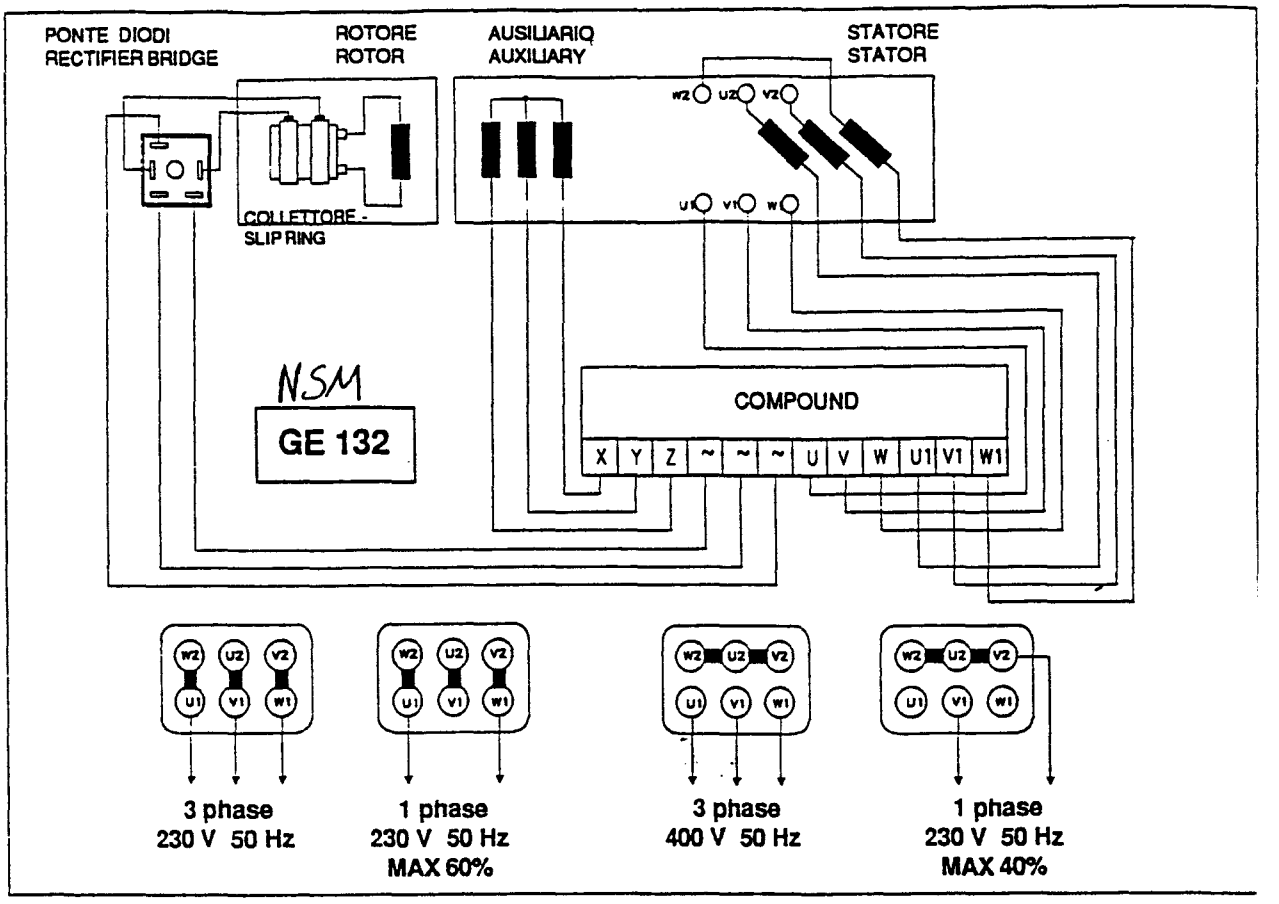


Numero Number	Nimitys Name	Name	Varaosanro Spare part number
70	Hydraulimoottori	Hydraulic motor	70
70 a	Tiivistesarja	Seal kit	70 a
70 b	Akselitiiviste	Shaft seal	70 b
70 c	Tukirengas	Backing ring	70 c.D
71	Venttiililohko	Valveblock	71.D3007
72	Venttiilipatruuna	Cartridgevalve	72
72E	Venttiilipatruuna	Cartridgevalve	72E
73	Venttiili	Valve	73
74	Tulppa	Plug	74
75	Tulppa	Plug	75
76	Tulppa	Plug	76
77	Tulppa	Plug	77
78	O -rengas	O -ring	78
79	Ruuvi	Screw	79
82	Laippaliitin	Flange joint	82
83	O -rengas	O -ring	83
84	Ruuvi	Screw	84
86	Putki	Pipe	86.D
88	Liitin	Joint	88.BL15.R1/8.1/2
90	Venttiililohko	Valveblock	90
91	Venttiilipatruuna	Cartridgevalve	91
93	Kiila	Vedge	93
94	Kytkin/moottori	Coupling/motor	94
95	Kytkinkumi	Rubbercoupling	95
96	Kytkin/generaattori	Coupling/generator	96



Nº	CODICE CODE	PARTI DI RICAMBIO	SPARE PART LIST	PIECES DETACHEES
7	3GLA...	Rete di protezione per scudo SAE	Protection screen for SAE flange	Grille de protection pour flasque SAE
12	5AA...	Rotore avvolto	Wounded rotor	Roue polaire bobinée
20A	3SLA30008	Scudo anter. SAE 3	Coupling flange SAE 3	Flasque avant SAE 3
20B	3SLA30003	Scudo anter. SAE 4	Coupling flange SAE 4	Flasque avan. SAE 4
20C	3SLA30004	Scudo anter. SAE 5	Coupling flange SAE 5	Flasque avan. SAE 5
20	3SLA30005	Scudo anter. cono 30	Coupling flange cone 30	Flasque avant cone 30
15	3SLA30007	Scudo anter. B3 B14	Coupling flange B3 / B14	Flasque avant B3 / B14
13	1VGA30001	Vèntola	Fan	Ventilateur
23	5FA...	Carcassa con statore avvolto	Frame with wounded stator	Carcasse avec stator bobiné
22	5CLA...	Compound	Compound	Transf.de compoundage
6	3MVP005001	Piolo portaspazzole	Brush holder pin	Vis du porte balai
8	7PRPA02840	Passacavo	Fair - lead	Presse-etoupe
19	KPDT25A12	Ponte diodi eccitazione 25A - 1200 V.	Excitation rectifier bridge 25A / 1200 V	Pont redresseur d'excitation 25A / 1200 V
10	7OC090	Anello di compensazione	Compensation ring	Bague de compensation
21	7TZ...	Tirante albero	Shaft tierod	Tige centrale
11	7CV62102Z	Cuscinetto posteriore 6210-2Z	Rear bearing 6210 -2Z	Roulement arriere 6210 -2Z
18	7CV63082Z	Cuscinetto anteriore B3 / B14 6308 -2Z	Front bearing B3 / B14 6308 - 2Z	Roulement avant B3 / B14 6308 - 2Z
1	2GGA30006	Cuffia aspirazione aria	Suction casing	Flasque arriere
5	7PSR0510	Portaspazzole completo	Brush holder with brushes	Porte - balais complete
9	7COG0502	Collettore	Slip ring	Bagues
25A	7ATGI3007	Mozzo per disco SAE 3	SAE 3 coupling disc hub	Moyeu pour disqueSAE 3
25B	7ATGI3006	Mozzo per disco SAE 4-5	SAE 4-5 coupling disc hub	Moyeu pour disque SAE 4-5
14.	7ATDI000.	Dischi SAE ...	SAE ... discs	Disques SAE ...
16	3MVB008	Bussola di riduzione da cono 30 a cono 23	cone 30 to cone 23 adapter	Douille de reduction cone 30 - cone 23
24	7MTP0606	Morsettiera a 6 perni - M6	6 wires terminal board - M6	Plaque à bornes - M6
17	7L1008070	Linguetta acc. B14	Coupling key B14	Clavette d'accouplement B14

SCHEMA DI COLLEGAMENTO - WIRING DIAGRAM - SCHEMA DES CONNEXIONS



CARATTERISTICHE ELETTRICHE - ELECTRICAL DATA - CARACTERISTIQUES ELECTRIQUE (50Hz - 230 V / 400 V)

TIPO TYPE TYPE	kVA	RESISTENZA DEGLI AVVOLGIMENTI (20°C) WINDINGS RESISTANCE (20°C) RESISTANCE DES BOBINAGES (20°C)					DATI ECCITAZIONE EXCITATION DATA DONNÉES D'EXCITATION			
		STATORE STATOR STATOR (°)	AUS. AUX. AUX.	COMPOUND U-U1 V-V1 W-W1 (°)	 X-- Y-- Z--	ROTORE ROTOR ROTOR	A VUOTO NO LOAD A VIDE		A PIENO CARICO FULL LOAD EN CHARGE NOM.	
		Ω	Ω	Ω	Ω	Ω	V dc	I dc	V dc	I dc
4 poles -50 Hz -1500rpm										
GE132 SA/4	6	1.9	2.3	0.13	0.9	21	32	1.5	140	5.0
GE132 SB/4	8	1.3	2.3	0.09	1.0	24	40	1.6	150	4.8
GE132 MB/4	10	0.8	2.3	0.06	1.1	27	48	1.7	160	4.7
GE132 LA/4	12.5	0.6	2.3	0.04	1.2	31	55	1.7	170	4.5
GE132 LB/4	15	0.4	2.3	0.03	1.4	35	62	1.7	180	4.2
GE132 LC/4	20	0.3	2.2	0.02	1.7	45	72	1.5	200	3.8
2 poles -50 Hz -3000rpm										
GE132 MB/2	12.5	0.7	3.0	0.09	1.5	25	34	1.4	140	5.0
GE132 LA/2	15	0.5	2.6	0.06	1.7	28	40	1.4	150	4.7
GE132 LB/2	20	0.4	2.6	0.04	1.8	32	46	1.4	170	4.6
GE132 LC/2	25	0.25	2.5	0.02	1.9	41	60	1.4	180	4.5

(°) Per tensione nominale diversa da 400V:
For rated voltage different from 400V: Res2=Res1 x (Volt2 / Volt1)² ex: mac.: GE132 LB/4 Volt2= 415V
Pour tension nominal different de 400V: Rstat= 0.4 x (415/400)² =0.43Ω

GENSCO

INSTRUCTIONS TO CHANGE SEAL

1) Remove item 86

2) Remove item 82

3) Remove back fan cover

4) Remove 4 - 8 mm allan screws

5) Hold pump to generator fan housing

6) Lock pump by inserting a large flat blade screw driver between gears

7) Unscrew item 92 from pump shaft using a wrench on coupling cone flats

8) Remove shaft seal using a small pick or screw driver

9) Install new seal and retaining plate and snap ring

10) Assembly is reverse to disassembly

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53 Carlaw Avenue, Toronto, Ontario Canada M4M 2R6
Telephone: (416) 465-7521 In the USA 800-268-6797
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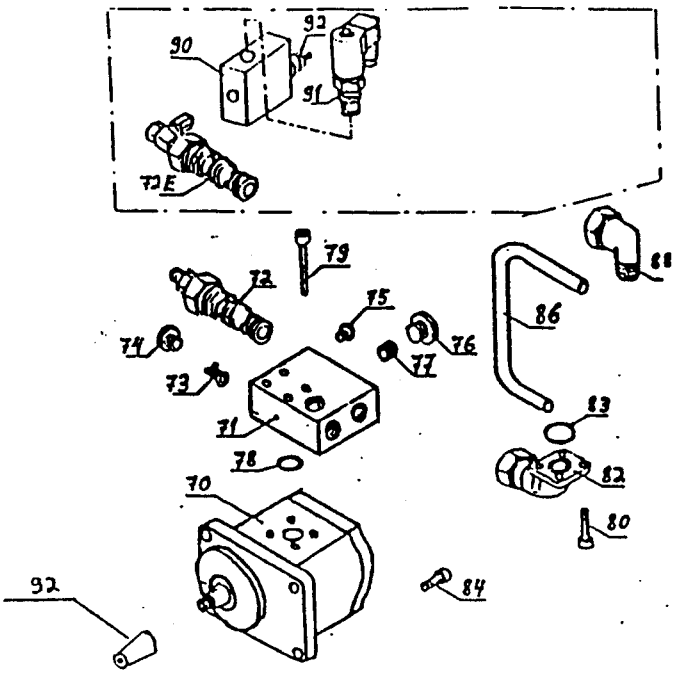
Serving industrial markets world-wide since 1919

DYNASET OY

VARAOSAT
SPARE PARTS

Hydrauliikka
Hydraulics



70	Hydraulimoottori	Hydraulic motor
70a	Tiivistesarja	Seal kit
70b	Akselitiiviste	Axle seal
70c	Venttiililohko	Valve block
71	Patruunaventtiili	Catridgevalve
71e	Patruunaventtiili	Catridgevalve
73	Venttiili	Valve
74	Tulppa	Plug
75	Tulppa	Plug
76	Tulppa	Plug
77	Tulppa	Plug
78	O-rengas	O-ring
79	Ruuvi	Screw
82	Laippaliitin	Flangejoint
83	O-rengas	O-ring
84	Ruuvi	Screw
86	Putki	Pipe
88	Liitin	Joint
90	Venttiililohko	Valve block
91	Patruunaventtiili	Catridgevalve
92	Kytkinkartio	Coupling cone

serie ET

ALTERNATORI TRIFASI 2 POLI
2 POLES THREE-PHASE ALTERNATORS
ALTERNATEURS TRIPHASES 2 POLES
DREIPHASIGER GENERATOR MIT 2 POLEN
ALTERNADORES TRIFÀSICOS 2 POLOS

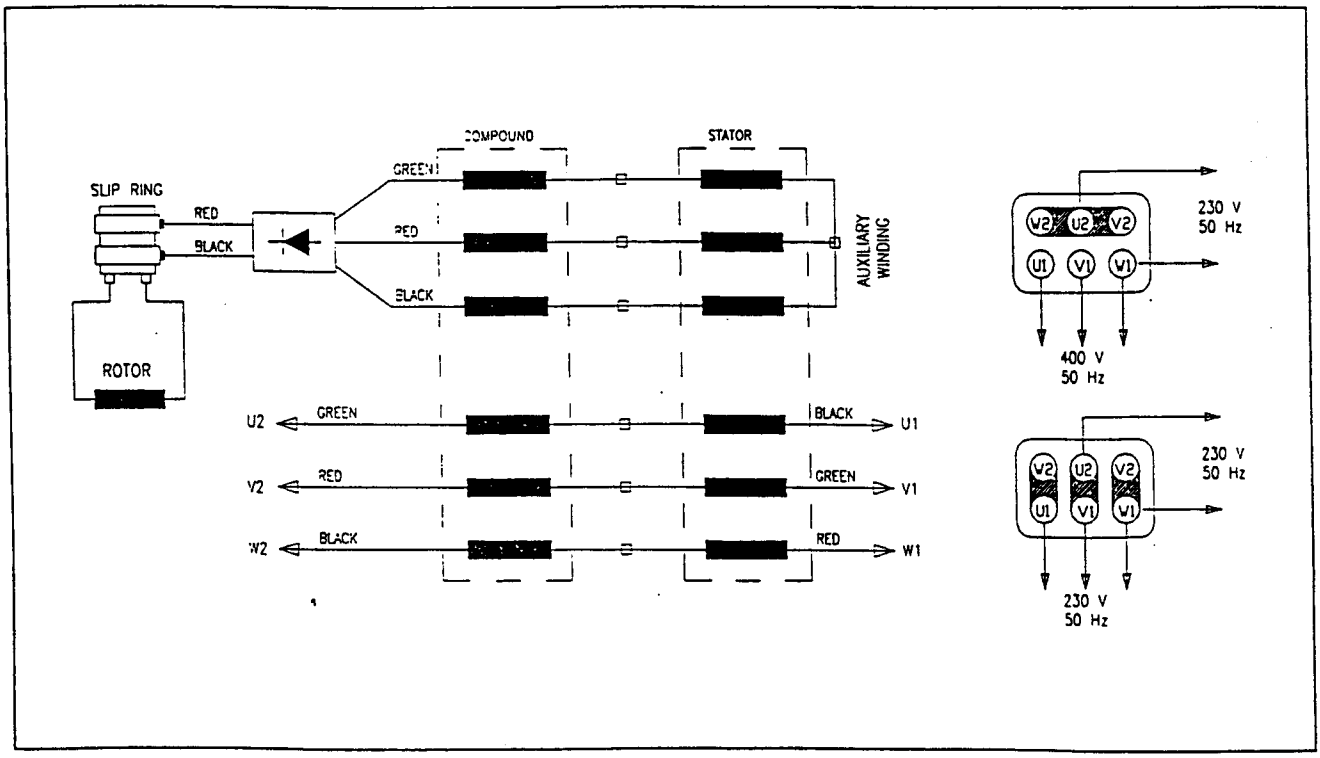
HG 6.5,HG 10,HMG 6,HMG 10

CARATTERISTICHE TECNICHE TECHNICAL CHARACTERISTICS CARACTERISTIQUES TECHNIQUES TECHNISCHE EIGENSCHAFTEN CARACTERISTICAS TECNICAS

2 POLI - 2 POLES - 2 POLES - 2 POLEN - 2 POLOS

TIPO TYPE TYPE TYP TIPO	CODICE CODE CODE KENNZEICH. CODIGO	50 Hz - 3000 r.p.m.		60 Hz - 3600 r.p.m.		PESO WEIGHT POIDS GEWICHT PESO B35 kg
		POTENZA POWER PUISSANCE LEISTUNG POTENCIA kVA	η% (4/4 cosφ=0.8)	POTENZA POWER PUISSANCE LEISTUNG POTENCIA kVA	η% (4/4 cosφ =0.8)	
ET 4	81301072-X2	4	73	5	73.5	25.1
ET 5.5	81301095-X2	5.5	75	6.9	76	28.3
ET 7	81301125-X2	7	79	9	80	32.3
ET 8.5	81301150-X2	8.5	81	10.5	82	36.8
ET 10	81301180-X2	10	83	13	84	41.2
ET 7/4	81301125-X203	7(3~) / 4(1~)	82	9(3~) / 5.2(1~)	83	32.5

SCHEMA ELETTRICO ELECTRIC DIAGRAM SCHEMA ELECTRIQUE SCHALTSCHEMA ESQUEMA ELECTRICO



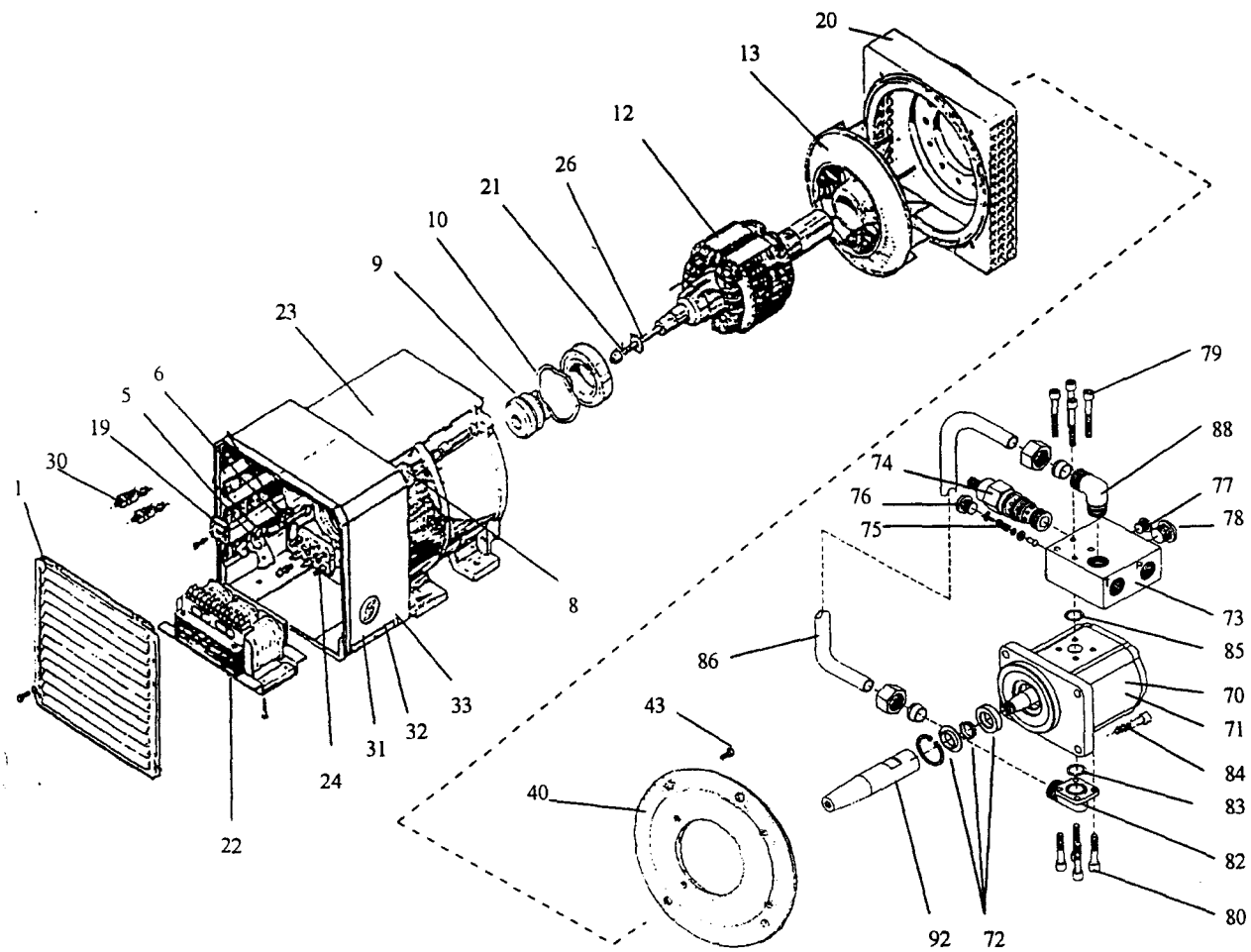
DYNASET

HG 12
HMG 12

VARAOSAT
SPARE PARTS
ERSATZTEILE

07/98KV

GENERAATTORI - RUNKO NSM
GENERATOR - BODY NSM
GENERATOR - FÜLLE NSM



Numero Number Nummer	Nimitys	Name	Name	Varaosanumero Spare part number Ersatzteilnummer	Kpl Pcs Stück
1	Suojus	Cover	Deck	1	1
5	Hiilet ja hiilenpidin	Brush holder with brushes	Kohle und halter	5	1
6	Hiilen kiinnitysruuvi	Brush holder pin	Schraube halter	6	1
8	Tulppa	Cap	Propfen	8	1
9	Kollektori	Slip ring	Kollektor	9	1
10	Jousi	Compensation ring	Feder	10	1
12	Roottori	Rotor	Rotor	12	1

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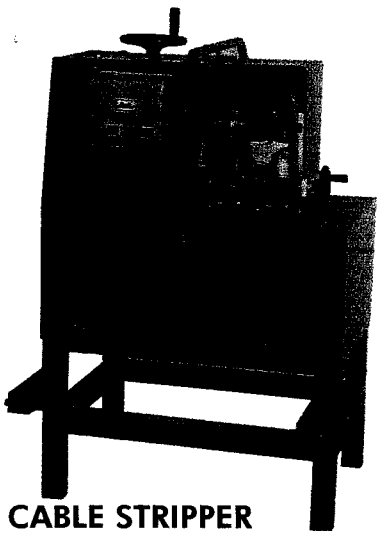
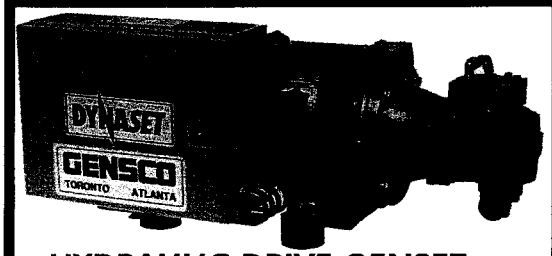
HYDRAULIC GRAPPLES

MAGNETS

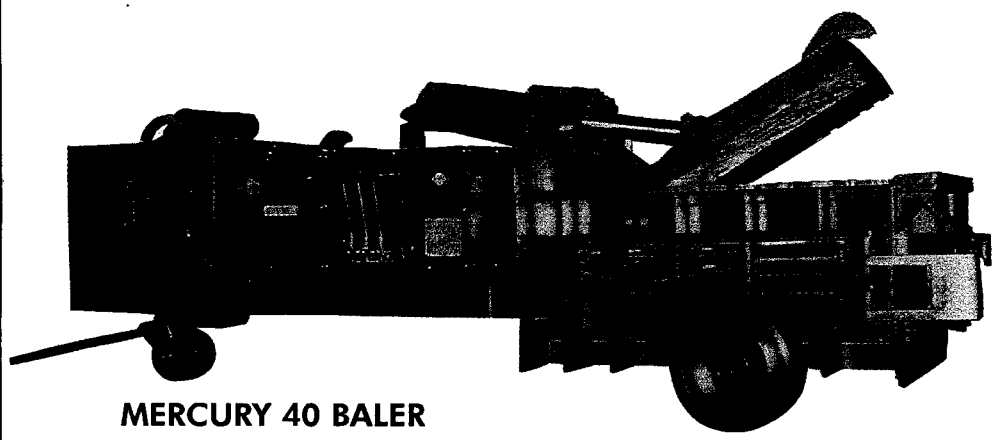


CABLE STRIPPER

HYDRAULIC SHEARS

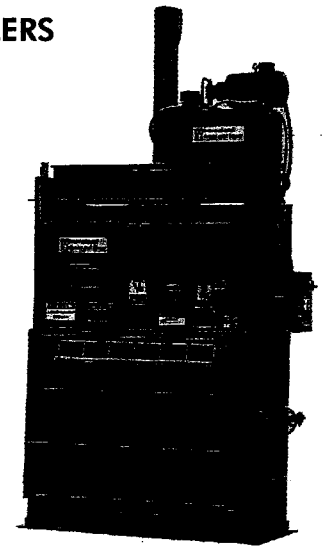


HYDRAULIC DRIVE GENSET



MERCURY 40 BALER

BALERS



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