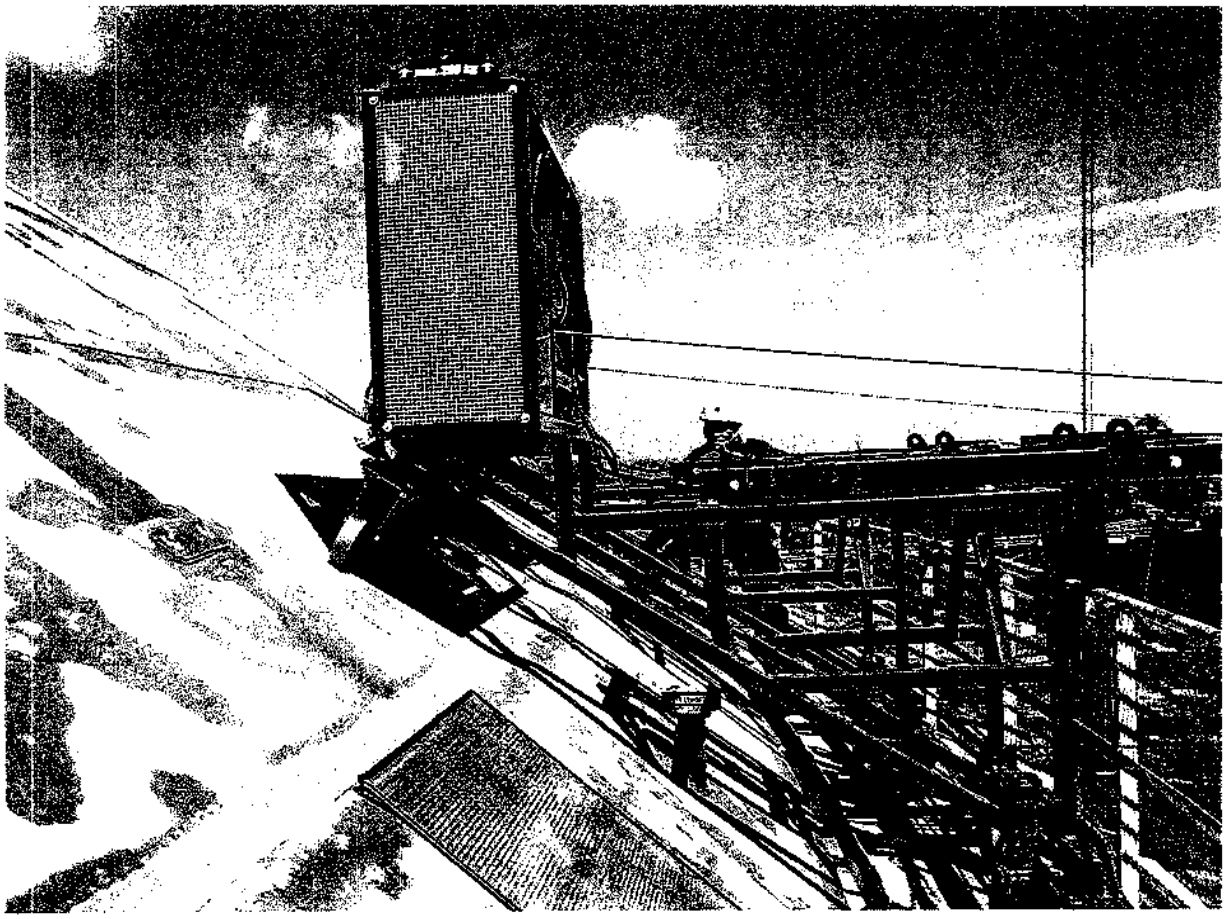


INSTRUCTIONS HYDRAULIC WINCH RIG 4012

READ BEFORE USE !!

CONTAINS ORGINAL TESTCERTIFICATES

CONTENTS:

IMPORTANT : READ BEFORE USE

SERVICE MANUAL*:

Hydraulic - driven winch build for:
BLASTRAC
Nieuwegein
Holland

- Temporary manual, to be reviewed by USF-EBE

Contents

1.COMMON WARNINGS AND DIRECTIONS:

All certificates and tests are according to Dutch law and regulations.

***

Certified according to Dutch law:

- **Load test at 125% of S.W.L. (Save Work Load)**
- **Hoisting points at 125% of death weight (approx. 400 Kg)**
- **See our certificates in this manual**

***

Check your procedures, which are ordered by law by your local government.

***

If necessary, that means if rules are different, be sure you re-test following your local rules.

***

Check your hoisting equipment always before using it!

***

Work safe: make sure your equipment is in good shape!

***

And…never walk under a load that is lifted!

***

2. Productinformation

2.1 Product

This product consist of:

- Hydraulic powerpack with hydraulic valves etc.
- Electronic controlbox
- Hydraulic driven winch with all necessary brakevalves etc.
- Steel skit frame

2.2 Function

- The hydraulic powerpack has one fixed displacement pump of 11.3 cc/rev. It is attached to an electric controlled hydraulic 4/3 valve. This valve is a proportional valve with a 3 - way flow compensatory. The oil flow trough the valve is adjustable between 0 - 16 l/min, this is resulting in a winch speed between 0 - 20 m/min. An oil-air cooler, build in the return line, keeps the temperature at useable hydraulic oil temperature.

- The winch has fixed displacement motor with a displacement of 6 cc/rev. It is equipped with a hydraulic brake valve with external signal to the static brake. The hydraulic and static brake or on if there is no hydraulic signal to one of these functions. The winch is also equipped with an electric limited switch. Maximum pull in or maximum pay out is limited by this switch. Mounted are also two limited switches which indicated the last few meters cable, at pull in or pay out, when these switches are operated (which is done automatically) the winch can only be operated at low speed

- The electronic controlbox is equipped with all the necessary switches to operate the electromotor of hydraulic powerpack as well as the electromotor of the air-oil cooler. The controlbox has a digital amplifier to operate the electric 4/3 valve. The controlbox has all the electric safeties for each user attached. At the main controlbox, which has build on the skit frame, a remote controlbox has to be attached to operate the winch. On this remotecontrolbox is build an emergency switch which, if operated, stops the hydraulic powerpack and therefore the operation of the winch.

- The skit frame is build of steel 37, however the hoistclamps are made of steel 53-3. The frame is protected against rust by 2 components paint.

2.3 Safety of components

- A hydraulic relief valve build in the separated 4/3 valve protects the hydraulic pump. It is adjusted at 150 bar.
- The returnfilter has a by-pass, which opens at two bar.
- A pressure filter makes sure the oil to the mainvalve is clean.
- The tank has a temperature/level indicator, which indicates the level and temperature of the hydraulic oil.
- The electric remote control box has an emergency switch.
- The 5.5 kW electromotor is protected by a fuse of 10-14 A.
- A fuse of 0.25-0.4A protects the 0.35 kW coolermotor.
- A fuse of 0.4-0.63A protects the electric drive motors.
- The operation of the winch is protected by a "start" button, which has to be operated before using the potentiometer for selecting up – down, or any other buttons.

2.4 Technical date :

- Powersupply main motor : 5,5 kW 400 - 440 V, 50 / 60 Hz
- Power coolermotor : 0.35 kW 400 - 440 V, 50 / 60 Hz
- Hydraulic pump : 11,3 cc/rev P max : 250 bar
- Hydraulic motor : 6 cc/rev P max : 420 bar
- Winch : pulling force F = 7160 N
  - Speed : 0 -20 m /min
  - Cable : 30 M ø 8 mm
  - I : 130
- Total power consumption : approx. 6.5 Kw/400V

3. Installation

3.1 Transport

- The skit frame can be transported by a forklift or crane. DWG +/- 400 kg:
- Use cranes or forklift which is build to lift these weight.
- The pre-mounted hoisting points are only to lift the hydraulic winch.

3.2 Mounting / Installation device

- The hydraulic system can and may be **only** connected according the delivered hydraulic schedule. Changes can only be accepted after written permission by an engineer from *USF-EBE BV.*
- The hydraulic system has to be connected by an *USF-EBE* engineer, or somebody who is authorised by *USF-EBE.*
- An authorised electrician according to the delivered electric diagram may only connect the electric system.

3.3 Connections

- The connections of the hydraulic system must be connected according to the hydraulic schedule.

3.4 Hydraulic oil

- The hydraulic oil of standard type, according to DIN 51524 (HLP) can be used. The ideal operating range is 15 – 30 cSt. At start up the viscosity may not exceed 1000 cSt. Because the viscosity depends off the temperature, we give you the following table :

Temperature	**Viscosity Class**
30 – 40 Celsius	22 cSt. to 40 degrees Celsius
60 – 70 Celsius	68 cSt. to 40 degrees Celsius
80 – 90 Celsius	100 cSt. to 40 degrees Celsius

From factory it is filled with T-46 cst

4 Use

4.1 Starting up

- The hydraulic and electrical part has to be connected at this time.
- When the installation is totally clean it can be filled up with hydraulic oil till the maximum on the level indicator.
- The housing of the hydraulic motor has to be totally filled up.
- The hydraulic multiple disc brake has to be filled up with hydraulic oil
- If the three phases are connected, the led on the RM4 phasescontrol will light. If not, changes two phases.
- The red led on the controlbox indicates if the phases are incorrect.

When this is done:
- Start electromotor shortly (max. 1 second) and check rotation off electromotor see arrow mounted on electromotor (CW).
- If rotation is right, start again for two seconds.
- Start again for 5 seconds
- Start up and check for leakage.
- Press " start" button on remotecontrol
- It is now possible to operate the either by up – down, or after operating the "auto" mode by the potentiometer. The potentiometer is only used for to adjust the blastspeed down. Anyway, the 'down'button has to be operated.
- Check movement winch.
- Operated to full speed
- If no movements the winchcable can be at maximum pull out or maximum pull in and is now limited by the limited switch.

- Just before maximum pull out or in, the winch gives a signal so that it will operate at slow speed.

►NOTE: Always run the winch with a straight tensioned cable!

►NOTE: Check outgoing voltage transformator!

►NOTE: Max. 26 VDC!!! (If higher change setting on transformator.)

See image number 9.

Example	Input voltage
+ 20V + 380V	Setting = 400V
- 20V + 500V	Setting = 480V
0 + 440V	Setting = 440V
Etc.	

4.2 Normal use

- Select main switch to ''on'', control voltage will light.
- Press ''start'' on the remote control, hydraulic and cooler motor will run.
- On ''mode'' press up or down, attention two speeds is available.
- On ''auto'' mode, press down and select down (=blast) speed with potentiometer (min ⇔ max)

4.3 Who may operate the machine

- Regulations according to personal protection etc. will be given by *USF - EBE* and

- Knowledge, instruction, education etc. will be given by *USF - EBE*.

4.4 Working of the machine

- De electric motor will be started and the hydraulic pump will be driven. If the valves are not operated the flow will be, by means of the 3 - way compensator, go through the cooler and the returnfilter to the tank. If the valve is operated the valve delivers exactly the flow of oil which is selected, depending of the position of the valve. This oil goes through the brake valve, the hydraulic motor, cooler, returnfilter back to the tank.
  After the pump a pressure filter is mounted.

4.5 Stop the machine

- The electromotor will stop if
  - The emergency switch is operated

- The main switch on the controlbox is operated to " off "
- The oil level is too low
- The maximum oil temperature is reached (about 80 ° C)
- One of the tree phases is gone

- The hydraulic powerpack has to be serviced if
  - The oil level is too low.
  - The maximum temperature is reached (80 ° C)
  - The leakage of the components is more than 5 drops/hour

5 Maintenance

5.1 Machine maintenance

- Check powerpack daily to :
  - Oil level
  - Leakage's to hoses, pipe work etc
  - Dirt
  - Gauges
  - If necessary take oil sample and sent to *USF-EBE.*
- Check hydraulic powerpack every hour at oil temperature and level
- Check winch daily to:
  - Hoist cable
  - Bolds etc.
  - Hoisting hook
  - General inspection, see chapter 6/7/8

Maximum oil temperature: 80 ° C

- For further maintenance see control and service intervals

5.2 Who may maintenance the machine?

- Persons who have written permission from USF-EBE.

- **WARNING**********CAUTION**

5.3 Extreme danger during maintenance

- **Temperature of components can be above 37 degrees Celsius.**
- **Hoses or pipe work can be under hydraulic pressure.**
- **By dismounting of brakevalves the winch has to be blocked mechanically and the winch has to be FREE OF LOAD!**
- **Before any maintenance: main electric switch to zero and disconnect main supply.**

5.4 Special regulations

- If the machine is start up, please check if all the moving components can move freely
- Always be sure that the hydraulic oil level is at least ¾ to maximum.
- The leakage oil of the hydraulic motor may never exceed 90 degrees Celsius

5.5 Safety

- **Be sure that the winch can rotate freely**
- **Sent away people who are not necessary**
- **Don't point to anything which is moving**
- **Use tools etc. for which the are made for**
- **Replace broken or damaged hoses**
- **Wear safety boots, helmet and safety glasses**
- **Take notice of this complete manual**
- **Never walk under the skit frame when it is hoisted by secundair crane**
- **Use skitframe with all parts build on it only where it is used for.**
- **Lift only USF - EBE blastmachines, which are designed for this skid frame.**
- **NEVER walk under a load which is lifted**
- **Check hoistcabels daily.**

6. Glossary

6.1 Oil

- *USF-EBE* advises to take an oil sample at least every year or every 1000 hours
- The hydraulic oil has to be replaced every year, or every 1000 – 2000 hours.

6.2 Filters

- There is one return hydraulic filters
- There is one pressure filter
-
    - For TEF 70, return element : 300.089
    - For HP 30, pressure element : 300.064

Use only INTERNORMEN filters. These filters are very special and clean up to less than 10 micron.

Change filters at least every 500 hours or when indicator turns red.(if applicable)

6.3 Hoses

Change hoses if they are damaged or broken. See for right hose schedule and spare part list.

7. TROUBLE SHOOTING

► *Cooler + electromotor main hydraulic will not run however "control voltage" is on*

1 Check phases, the led on 5K1 (inside electrobox) has to lit, otherwise the phases are incorrect.
2 Main electromotor fuses are off (5Q2-5Q3-6Q1).
3 Oil level too low or oiltemperature too high.
4 Main voltage too low, controlvoltage has to be approx. ± 24vDc, check setting Dc-supply.

► *Winch will not move however both motors are running and up or down be operated*

1 Check if limited switches winch are operated or stacked.
2 Check potentiometer, while pressing "down" (select on "auto").
3 Check LED's on main valve, while operating either up or down.
4 Follow the next procedure:
- Start hydraulic powerpack as usual
- Check that limited switches (4x) behind hydraulic winch can operate freely, these switches limit the electric signal if they are operated.
- Check that RM 3 led is yellow
- Press start on remote control (RC)
- Check K2 is on (red)
- Check K3 is on !, if not a problem with low hydraulic oil or high temperature could exist
- On RC put selector to "MODE" , =>K4 NOT on !
- Press down fully (high speed)
- Check inside 8U1, see page 9 of electric schedule, if there is 24 VDC between point 1 and 13, and 1 and 14, if so
- Remove upper electrical connection from hydraulic valve,
- Operated down fully, check if there is a current of approx. 4.6 VDC (be sure measurement points are fitted correctly into electrical connection!
- If there is an electric signal the problem is hydraulic if not => replace 8U1, after you are 100% sure that the electric signal is coming in, but not coming out to the hydraulic valve. (Be very carefully with connections!)
- If hydraulic, which means that you have an electrical signal but no hydraulic, get AMCA operation manual (chapter 9)
- See page 21, B2.
- Remove electrical solenoid, BE VERY CAREFULLY WITH DIRT ETC!!!!, behind this solenoid is a pilot valve with bore 0.6 mm be sure this is clean. (can be removed with little magnet)
- De-bleed according to B1, page 21

5. Check remote cable if it is not broken

8. APPENDIX with images

Image 1: Hydraulic valve

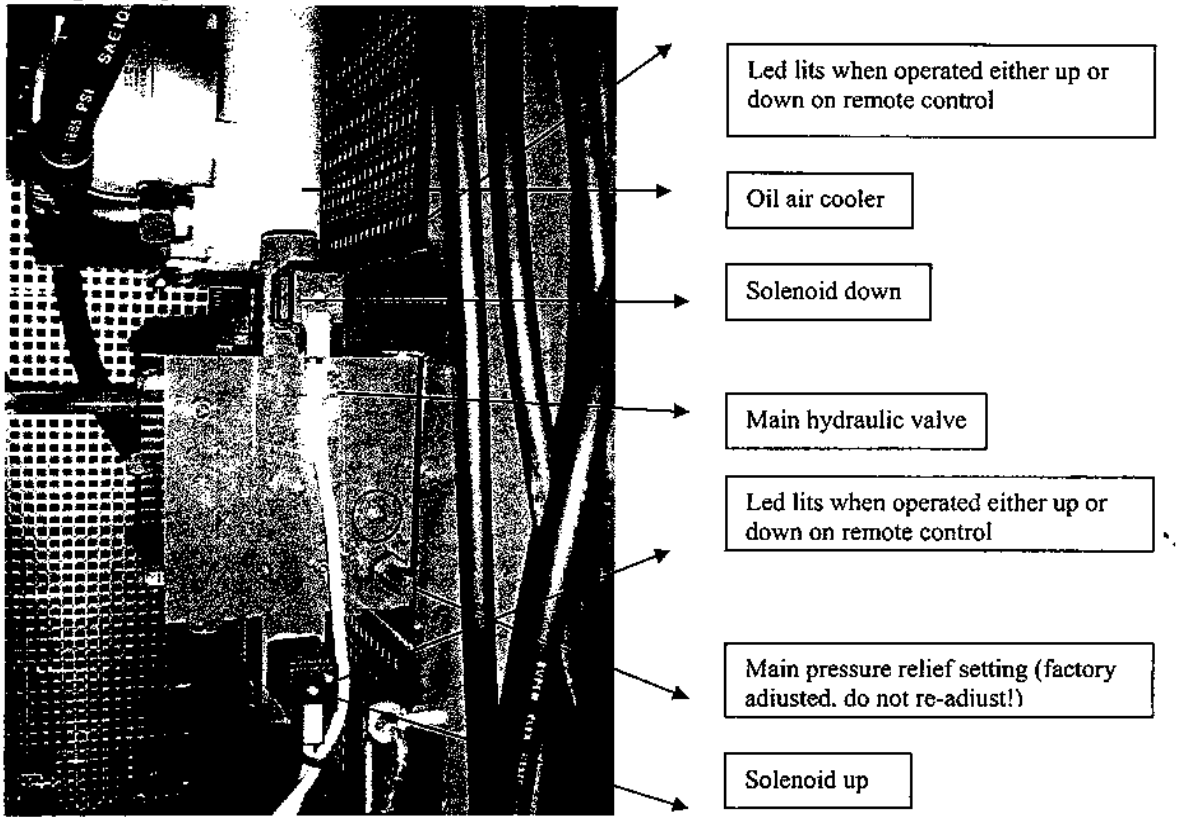


Image 2: Electric control box

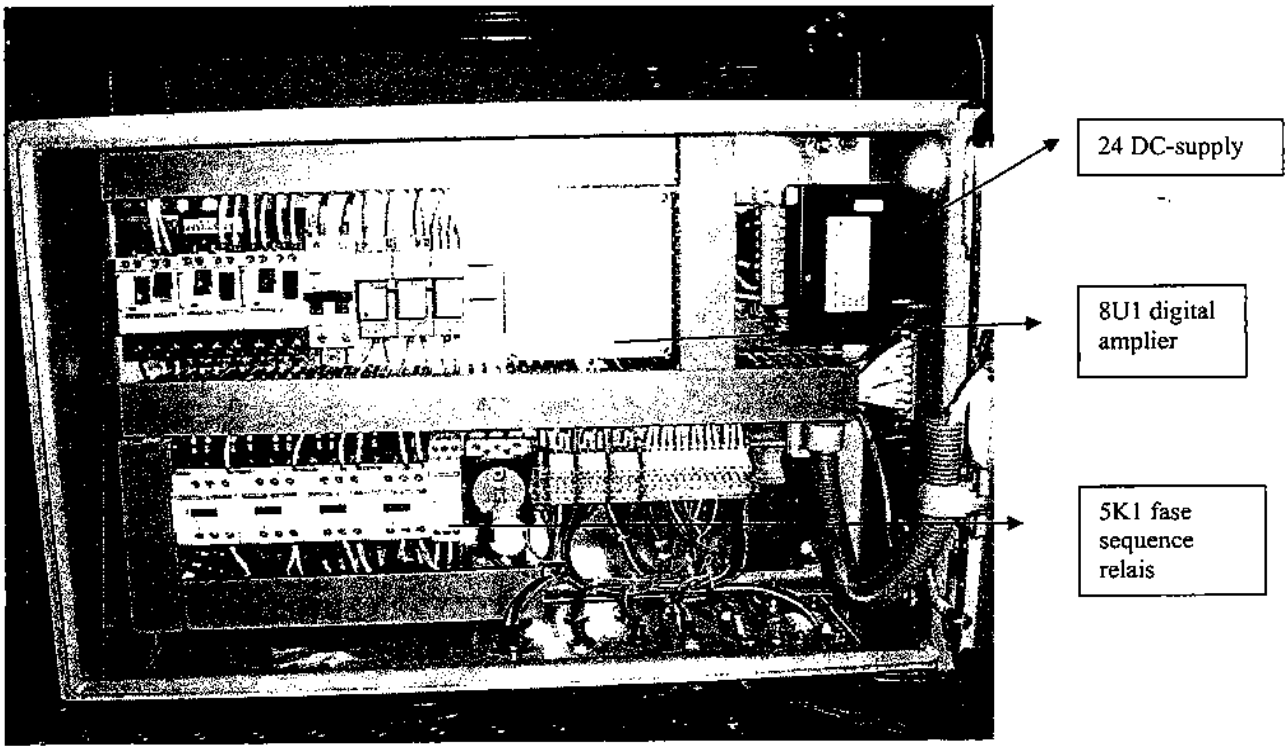


Image 3: winch limit switch

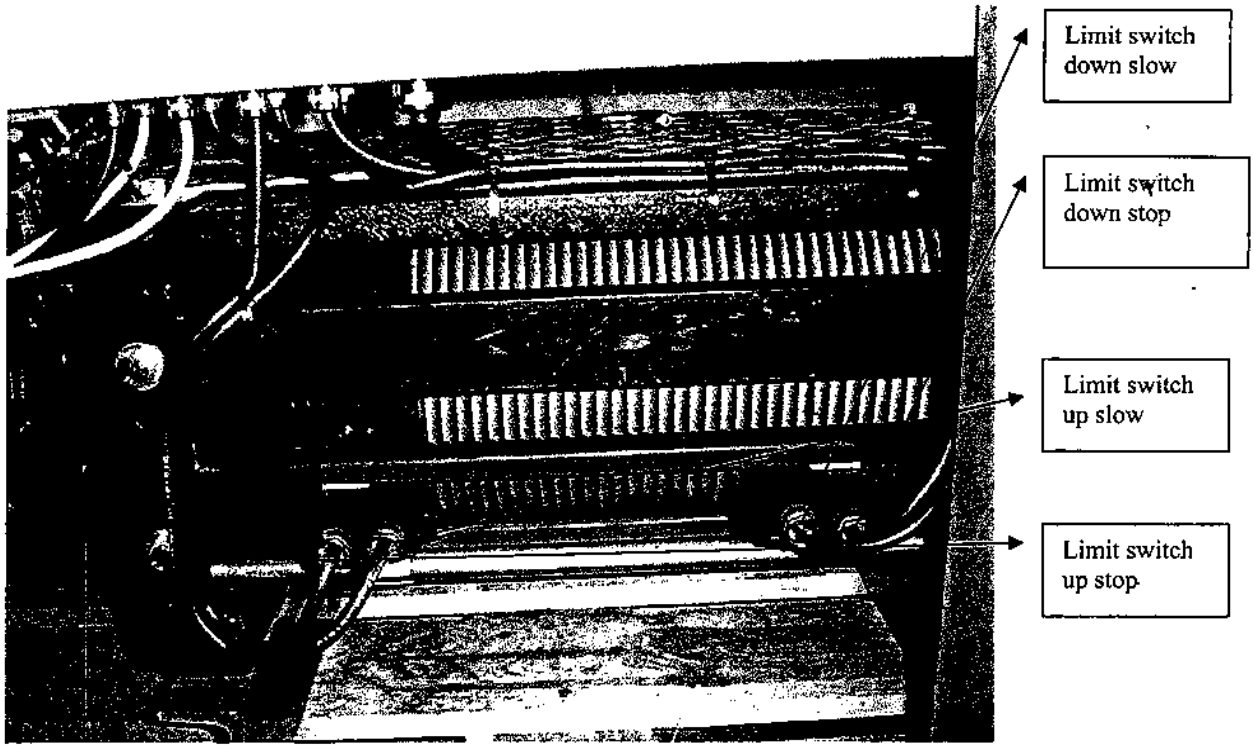


Image 4: brake-hydromotor- brake valve assembly

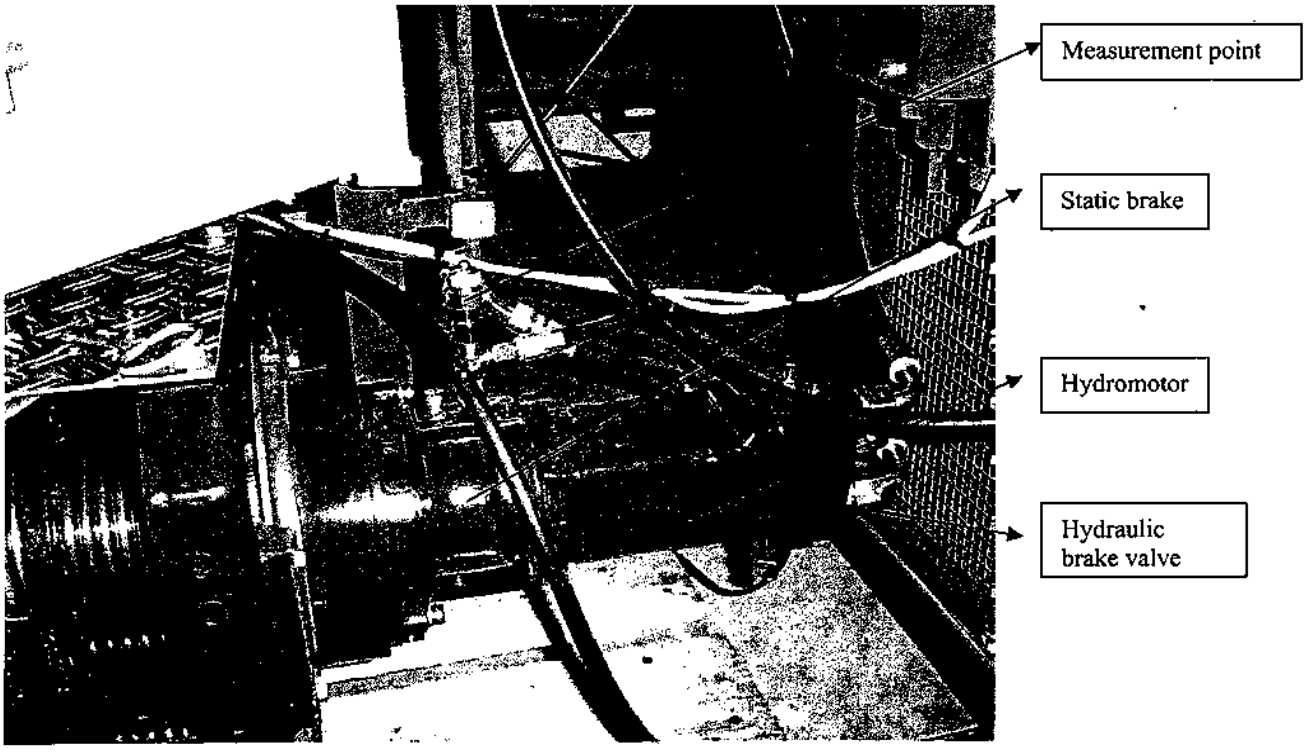


Image 5: hydraulic reservoir assembly

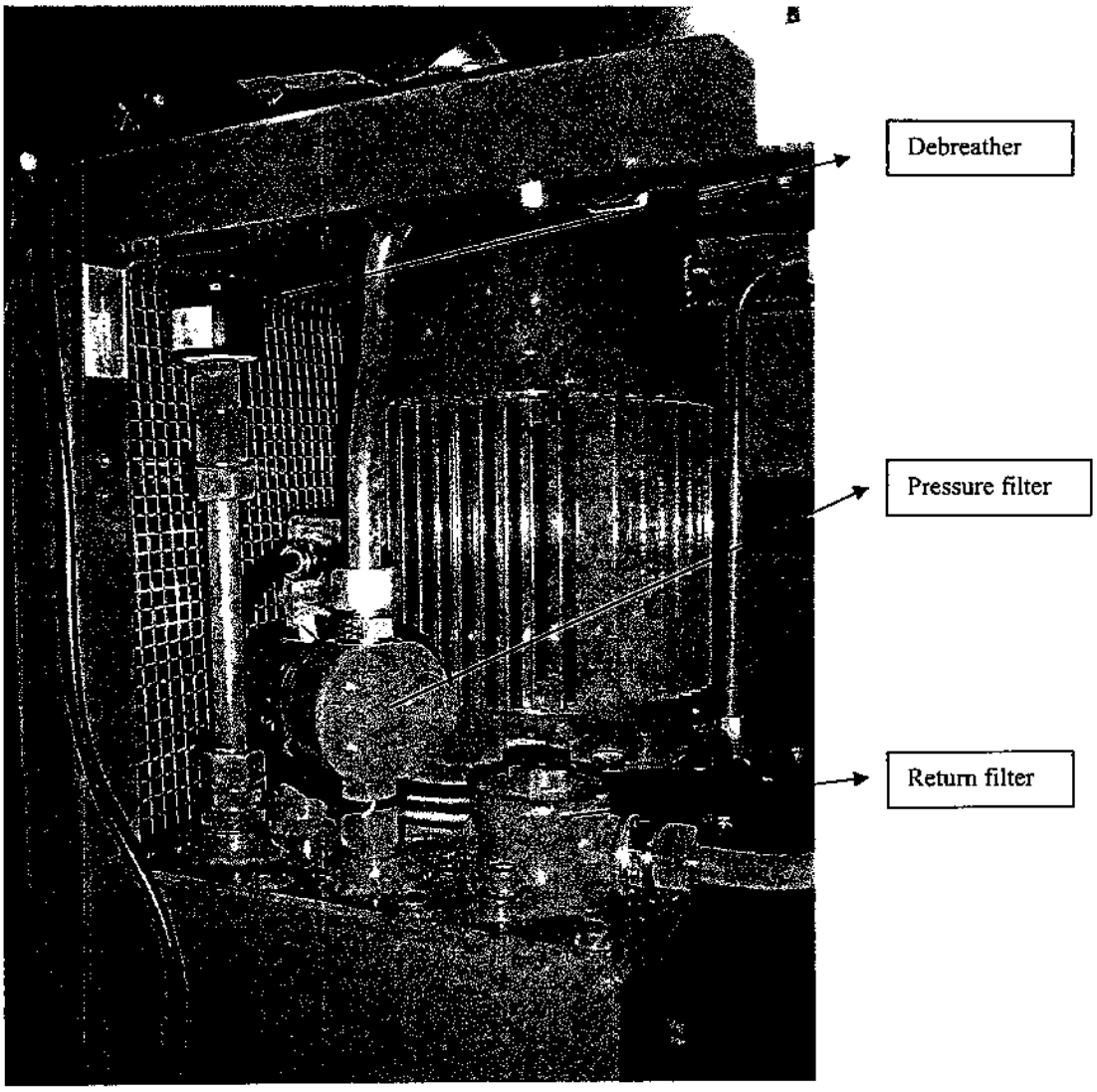
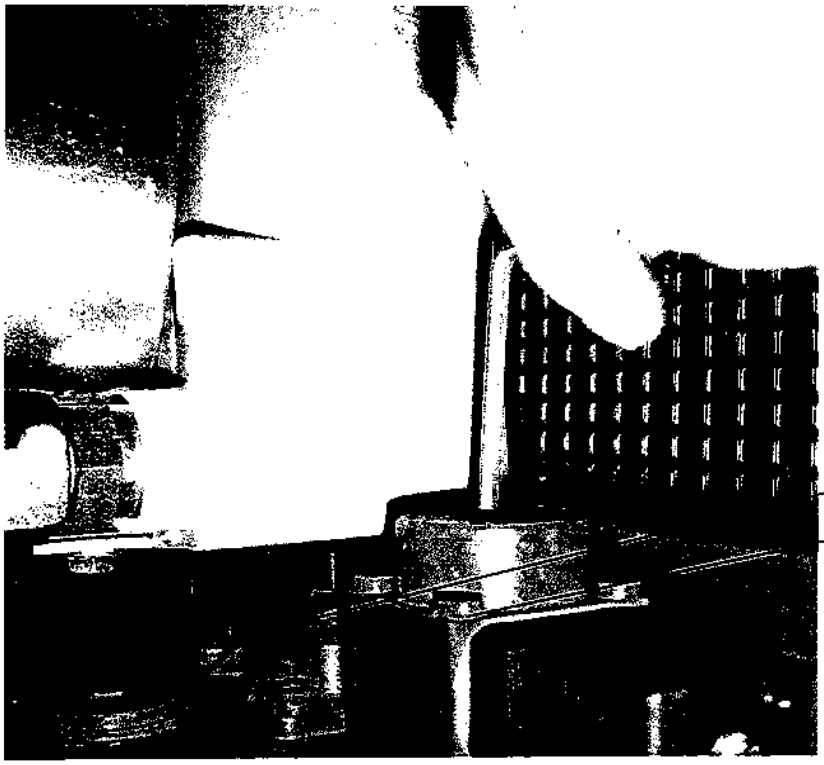


Image 6: Manual operation valve

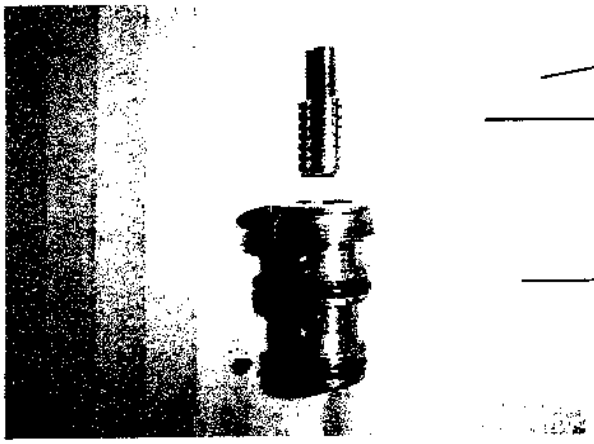


Manual operation of the hydraulic valve

►NOTE: upper valve: when operated winch pay out (down)
lower valve: when operated winch haul in (up)

Debreath by loosen 4 bolts and 1 nut of end cap while operating. Only loosen! Do not remove!

Image 7: Cartridge pilot valve



Signal bore 0.6 mm

2

1

Detail cartridge pilot valve (1) and pilot valve (2)

Image 8: Pilot valve disabled from main valve

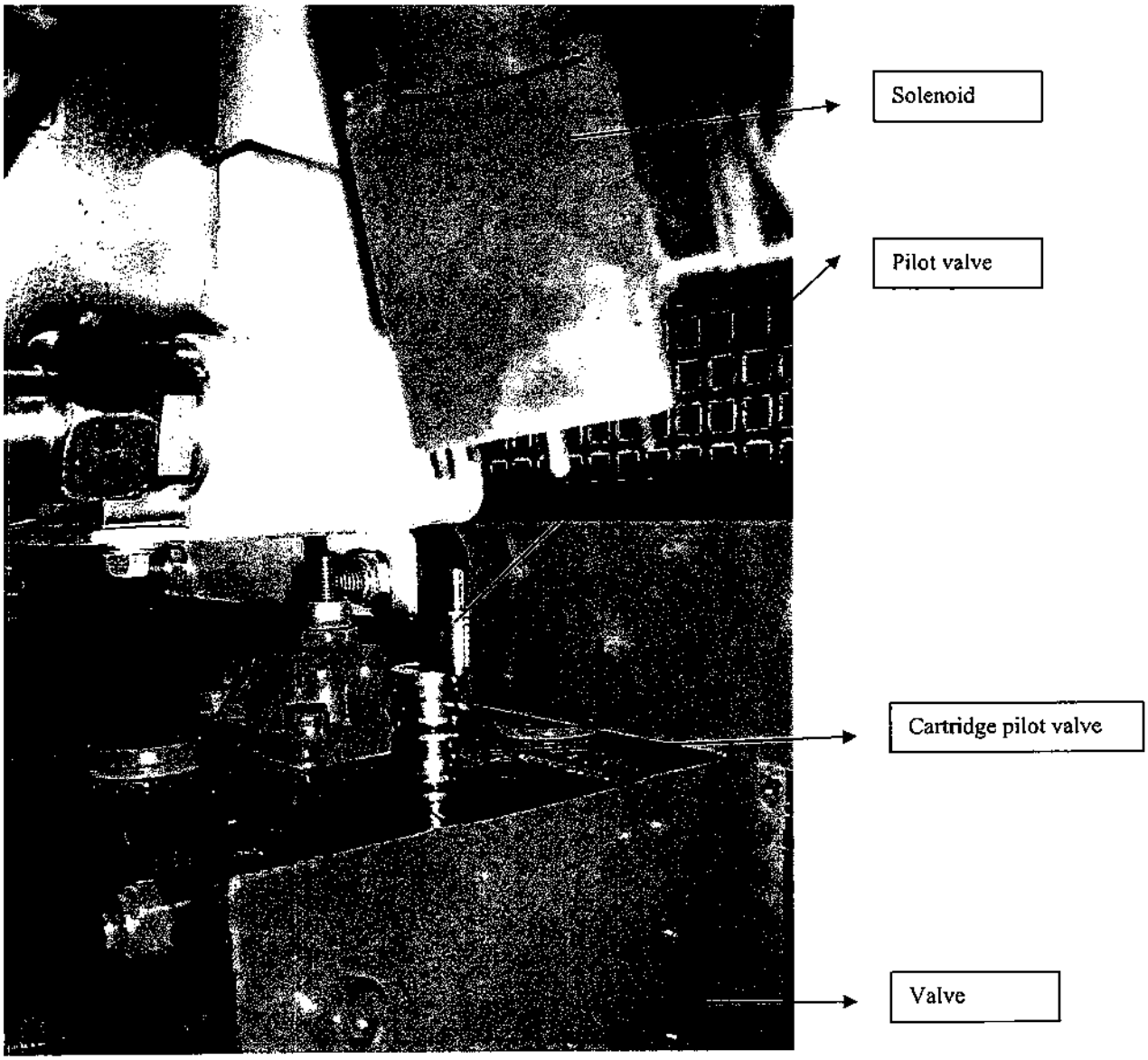
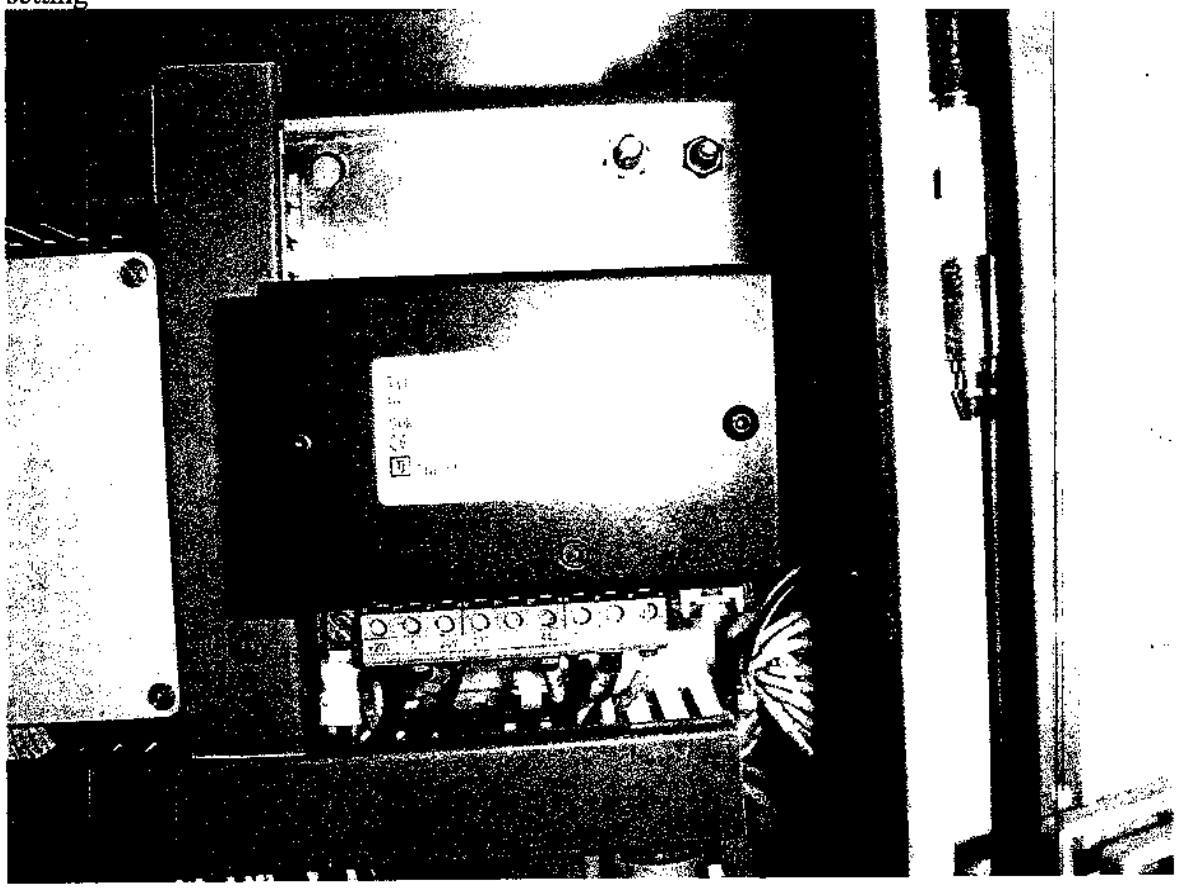


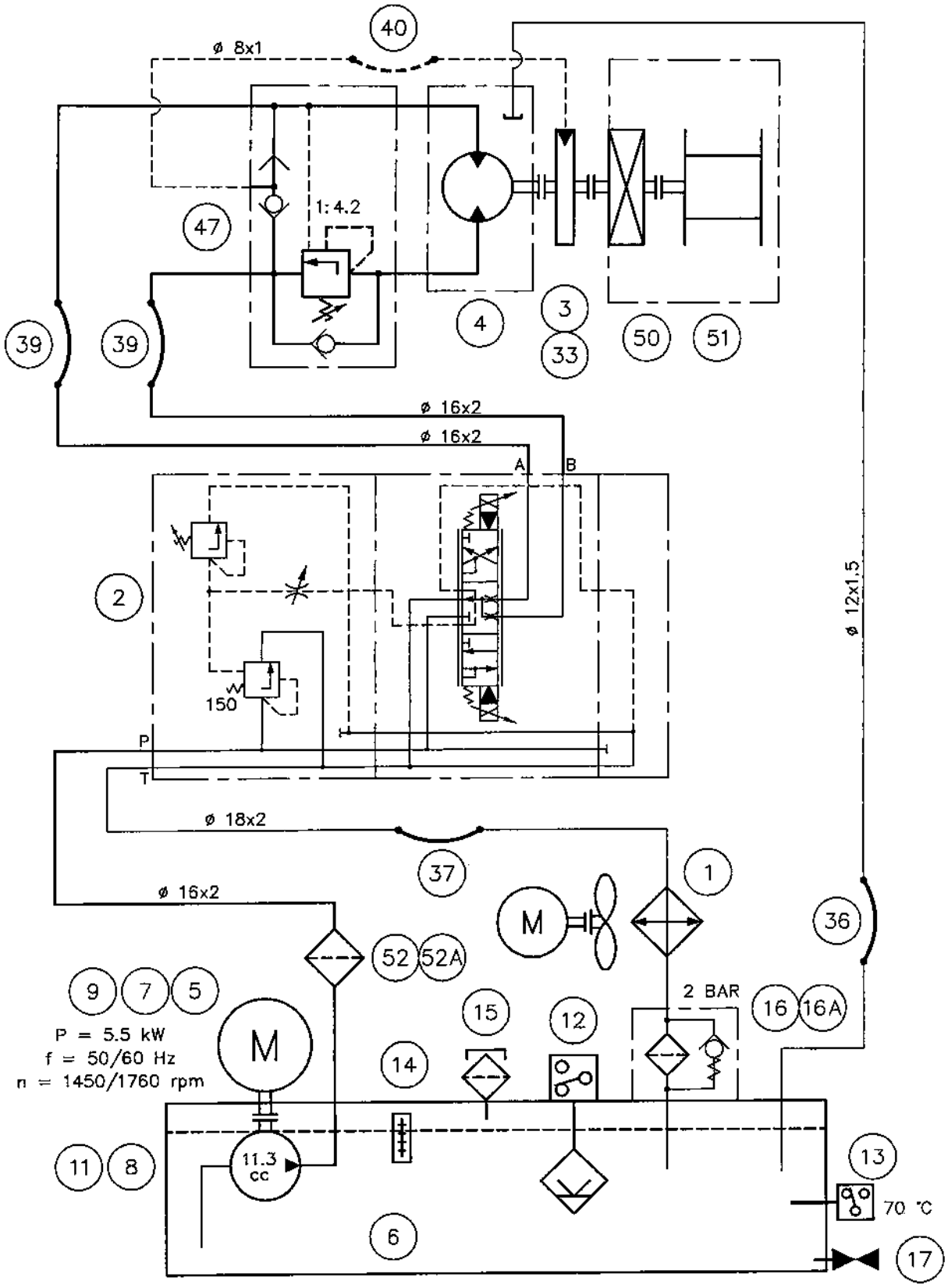
Image 9: Voltage setting



Example	Input voltage
+ 20V + 380V	Setting = 400V
- 20V + 500V	Setting = 480V
0 + 440V	Setting = 440V
Etc.	

-20;0;230;380;440;500 Volt **=> input voltage AC**

-;+ **=>output voltage DC**



This drawing remains the property of ART4 TECHNICAL SYSTEMS B.V. Without written permission of the proprietor reproduction or disclosure to third parties is not allowed	SCALE:	DATE:	
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	CHKD:		
	CHANGE:	NAME	DATE
	A: 16A, 52, 52A ADDED	RvdG	08-10-02

HYDRAULIC CIRCUIT WINCH RIG 4012 (SWL 716 KG)

ART4 TECHNICAL SYSTEMS B.V.
BECKERINGHSTRAAT 55
3762 EV SOEST, THE NETHERLANDS
TEL: +31 (0)35 5822468

DRAWINGNR.

RIG4012 A

Partlist RIG 4012

pos	Partnumber	discription	Aant	brandname	recom.spare part
1	OLIEKOELER 5060	oil-air cooler	1,00	bugge	
2	F12 ASSEMBLY	4/3 hydraulic valve	1,00	amca	
3	FL 620	hydraulic static brake (assembly)	1,00	brevini	
4	AXIAALPLUNJERMOTOR	ASM 06"./hydromotor	1,00	bucher	1
5	SKG112M-4PC B5	5.50 kw 1500 3/6 euro	1,00	elektrim	
6	TANK 350 VH/RIG	Tank 350 VH/RIG/hydraulic reservoir	1,00	ART 4	
7	@250/2 LS253	bell house	1,00	omt	
8	2D16	gear pomp 11,3 cc/rev	1,00	Marzochi	1
9	FLENS 2P	connection pump-house	1,00	omt	
10	GL-250 RUBBER PAKK.	seal @ 250	1,00	omt	
11	@28/2-65, ND61	coupling motor-pump	1,00	omt	
12	LEN-A250-A-A/F 1 FL.	level switch	1,00	omt	
13	TEMP.SCH.70-80°C K.	temp.switch	1,00	omt	
14	LG-1T	level/temperatuur gauge	1,00	omt	1
15	TR-1	filling/breating filter	1,00	omt	
16	TEF 70 10 VG 16 SP	returnfilter 10 mu	1,00	Internormen	1
17	PLUG 1"/WD	plug 1"tank	1,00	ART 4	
18	GES 12L B4	welding coupling	1,00	ART 4	
19	GES 16S B4	welding coupling	1,00	ART 4	
20	LASSOK 1"	welding coupling 1"	1,00	ART 4	
21	GE 16SR 1/2" B4	hydraulic fitting	9,00		
22	GE 22LR 3/4" B4	hydraulic fitting	1,00		
23	GE 16SR 3/4" B4	hydraulic fitting	2,00		
24	GE 18LR 3/4" B4	hydraulic fitting	4,00		
25	EW 18L VGM B4	hydraulic fitting	1,00		
26	EL 18L VGM B4	hydraulic fitting	1,00		
27	GAI 18LR 1/2" B4	hydraulic fitting	1,00		
28	EL 16S VGM B4	hydraulic fitting	1,00		
29	EW 16S VGM B4	hydraulic fitting	2,00		
30	GE 8LR 1/4" B4	hydraulic fitting	1,00		
31	GE 8LM 10°1 B	hydraulic fitting	1,00		
32	HYDRAULISCHE OLIE	hydraulic oil tellus 46	65,00	shell	
33	SPLINEBUS ASM06/25H7	L=23 D=25h7 inw spl.16/32 9T	1,00	ART 4	1
35	SLANG RIG 4012/1 (hose)	RMS16S+RMS16S 600 mm zl (tank)	1,00	ART 4	1
36	SLANG RIG 4012/1 LEK (hose)	PO 12L + RMS 12L 210 MM TL	1,00	ART 4	1
37	SLANG RIG 4012/2 (hose)	HMS18L RMS 18 L 500 MM TL	1,00	ART 4	1
38	SLANG RIG 4012/3 (hose)	HMS18L RPO 18 L 385 MM TL	1,00	ART 4	1
39	SLANG RIG 4012/4 (hose)	HMS 16 S + RMS 16 S 570 MM TL	2,00	ART 4	1
40	SLANG RIG 4012/5 (hose)	HMS 08L RMS 08 L 450 MM ZL	1,00	ART 4	1
41	DEKPLAAT DPN 2	pipe clam	4,00	ART 4	
42	DEKPLAAT DPN1	pipe clam	3,00	ART 4	
43	HOGEDRUKPIJP 16*2 V	hydraulic pipe	3,00	ART 4	
44	HYDRAULIEKBUIS 18*2	hydraulic pipe	3,00	ART 4	
45	HYDRAULIEKBUIS12*1.5	hydraulic pipe	3,00	ART 4	
46	HOGEDRUKPIJP 22*2	hydraulic pipe	0,50	ART 4	
47	REMKLEP MF 1892 SPEC	brake valve	1,00	ART 4	
48	EW 08L VGM B4	hydraulic fitting	1,00		
49	FRAME RIG 4012	frame RIG 4012 complete	1,00	ART 4	
50	winch	winch VS 03	1,00	ART 4+verlinde	
	cable guide		1		1
	winch cable		1		1
	spring for cable guide		1		1

0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9

Particulars:

PROJECT

Client : BLASTRAC BV
Name : Controlbox hydraulic winch RIG 4012

SUPPLIER

Draw.number : PJ01.01490T1B
Order number :

Supplier : BLASTRAC BV
Contact :
Telephone : +31(0)30-6018866
Telefax : +31(0)30-6018333
Email :

DATA

Arch.number : PJ01.01490T1B
Calc. number :
Status : As Built

Start of project : 24.Sep.2001
Latest change : 22.Mrt.2007 (GKU)

Highest page number : 12
Number of pages : 16

2

	Start	24.Sep.2001	BLASTRAC BV Controlbox hydraulic winch RIG 4012	BLASTRAC	Front page	Arch.nr. PJ01.01490T1B	
	Eng.	RJO					
	Print	22.Mrt.2007				Draw.nr. PJ01.01490T1B	Pages 16 / Page 1
	Status	As Built					

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	Eng.	RJO					
	Print	22.Mrt.2007				Draw.nr. PJ01.01490T1B	
	Status	As Built					

Wire Color:

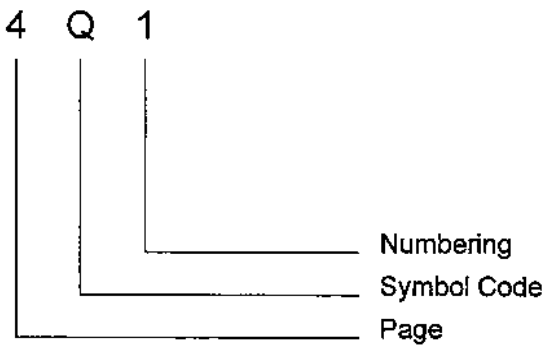
Main-Voltage

L1	-Black
L2	-Black
L3	-Black
PE/⏚	-Yellow/Green

Control-Voltage

24VDC	-White
0VDC	-White

Example Codifiction:



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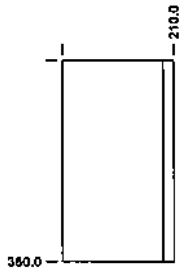
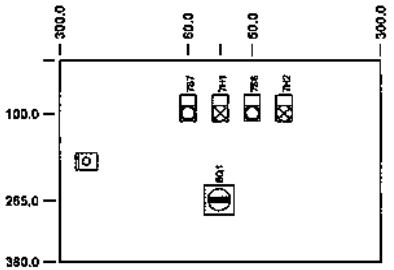
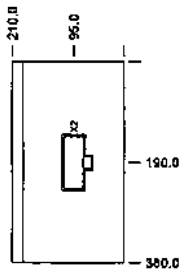
LEFTSIDE-VIEW



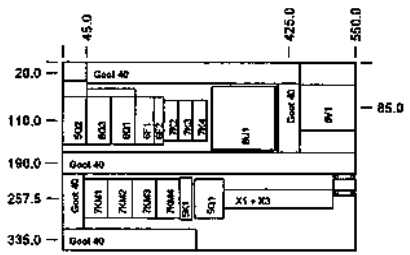
FRONTSIDE-VIEW



RIGHTSIDE-VIEW



MOUNTINGPLATE



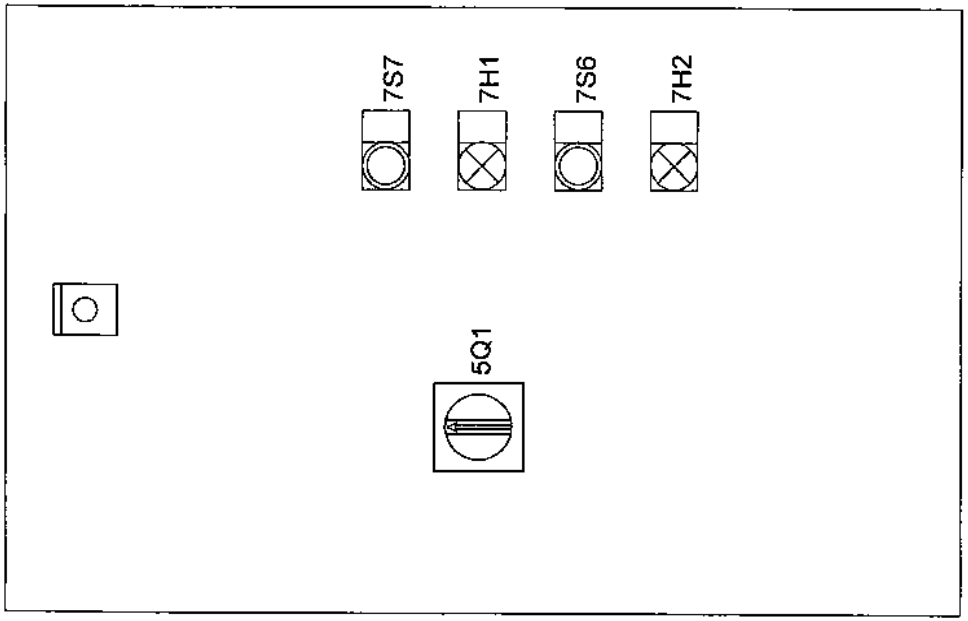
Enclosure

Make : Rittal
Type : AE 1039.600
Dim. : 380x600x210mm (WxHxD)
Color : RAL 7032

46

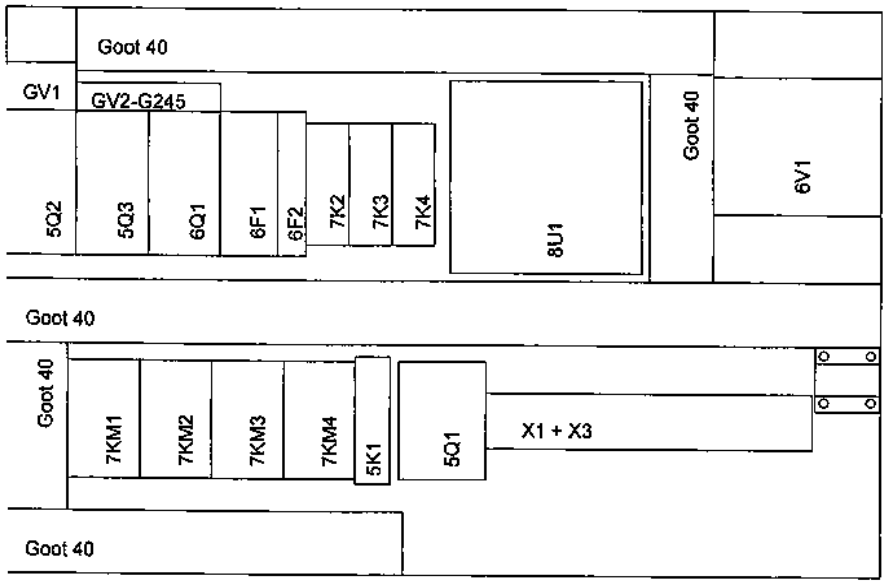
		Start	24.Sep.2001	BLASTRAC BV Controlbox hydraulic winch RIG 4012	BLASTRAC	Panel layout	Arch.nr. PJ01.01490T1B	=
		Eng.	RJO					+
		Print	22.Mrt.2007				Draw.nr. PJ01.01490T1B	Pages 16 / Page 4
		Status	As Built					

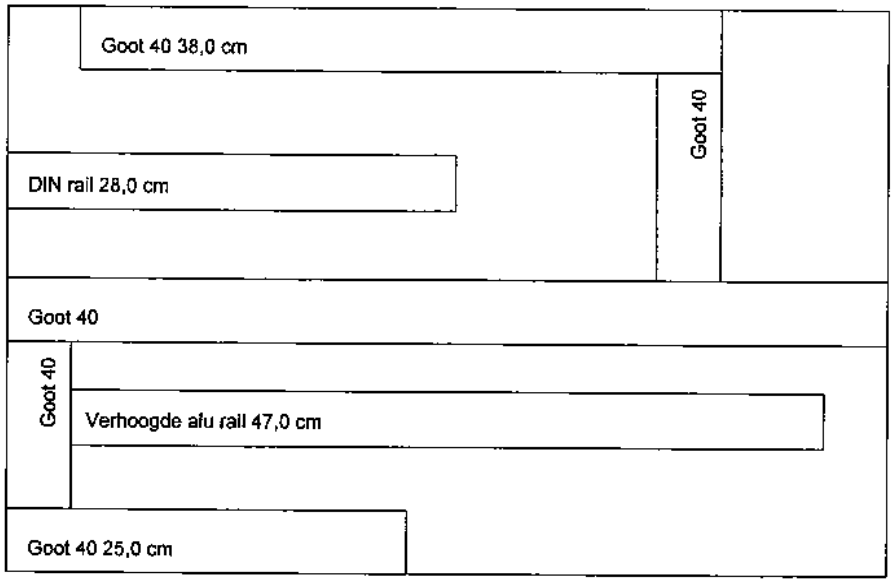
FRONTSIDE



	Start	24.Sep.2001	BLASTRAC BV	BLASTRAC	Frontside	Arch.nr. PJ01.01490T1B	=	
	Eng.	RJO	Controlbox hydraulic				+	
	Print	22.Mrt.2007	winch RIG 4012			Draw.nr. PJ01.01490T1B	Pages 16	Page 4a
	Status	As Built						

MOUNTINGPLATE

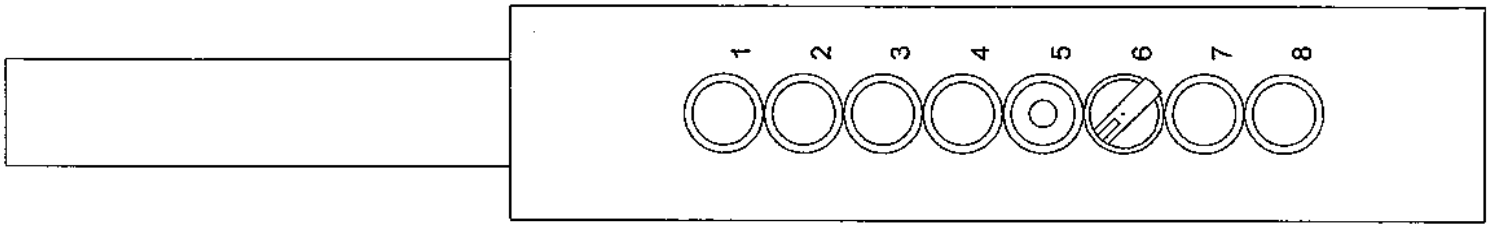




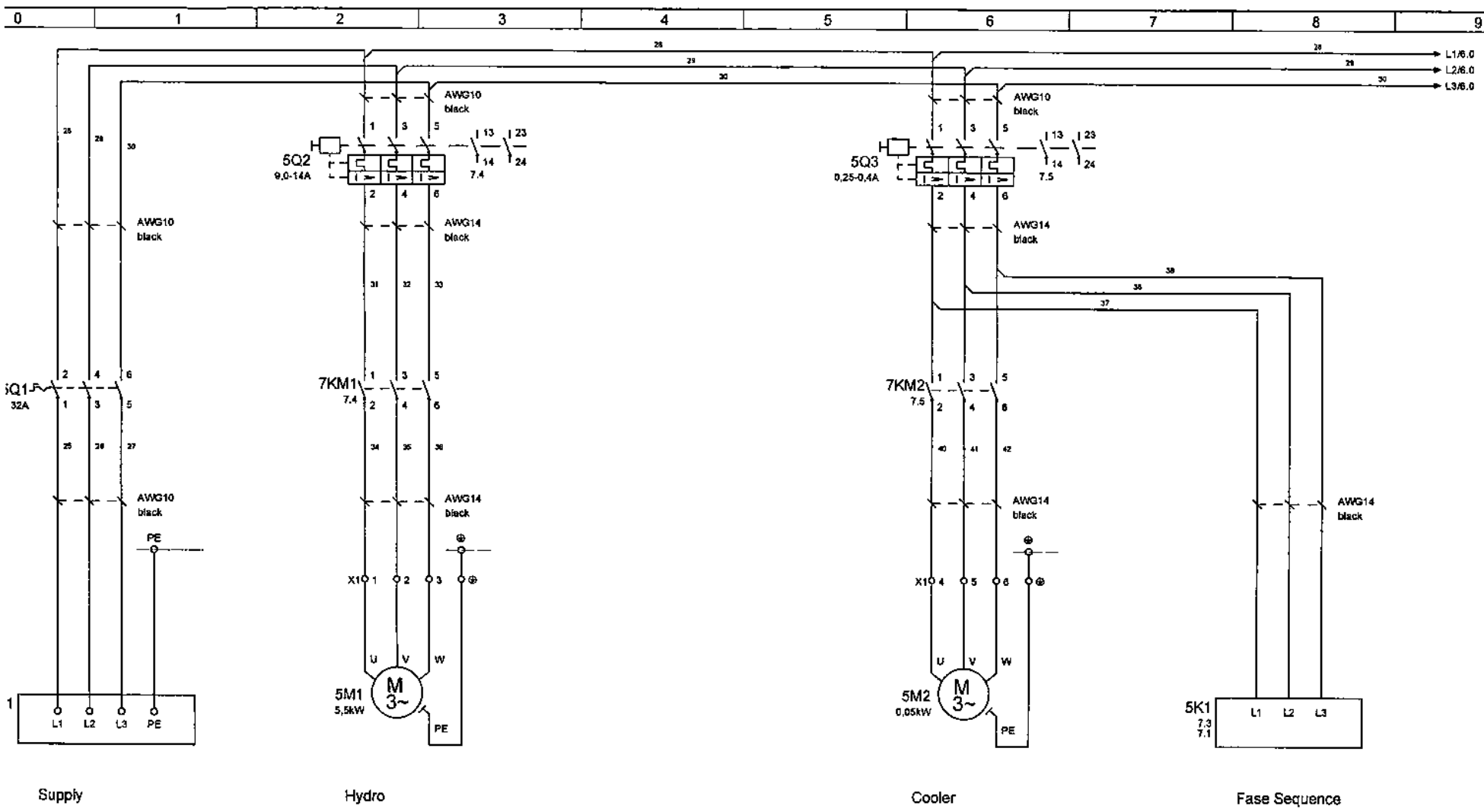
SWIVELPLATE

1: Bout M6
2: Wartel PG9
3: Wartel PG9
4: Wartel PG9
5: Wartel PG9
6: Wartel PG9
7: Wartel PG9
8: Wartel PG9
9: Wartel PG9
10: Wartel PG9
11: Wartel PG16
12: Gat 35x52

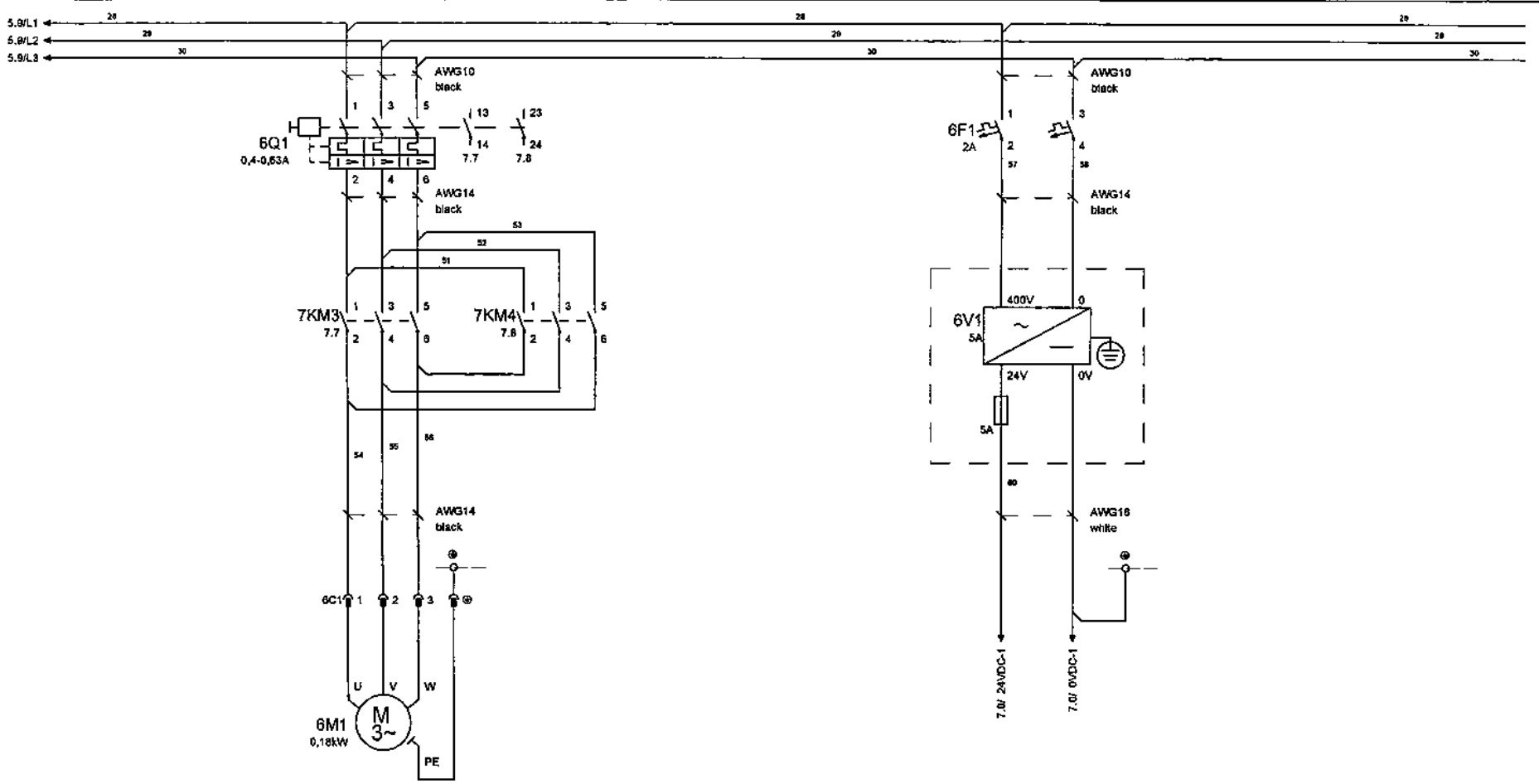
REMOTE CONTROL



1:	8S1	Up
2:	8S2	Down
3:	7S3	Right
4:	7S4	Left
5:	8R1	Max - Min
6:	7S5	Auto mode
7:	7S1	Start
8:	7S2	Emergency switch



		Start	24.Sep.2001	BLASTRAC BV	BLASTRAC	Main-Voltage	Arch.nr. PJ01.01490T1B	=
		Eng.	RJO	Controlbox hydraulic winch RIG 4012				+
		Print	22.Mrt.2007				Draw.nr. PJ01.01490T1B	Pages 16 / Page 5
		Status	As Built					

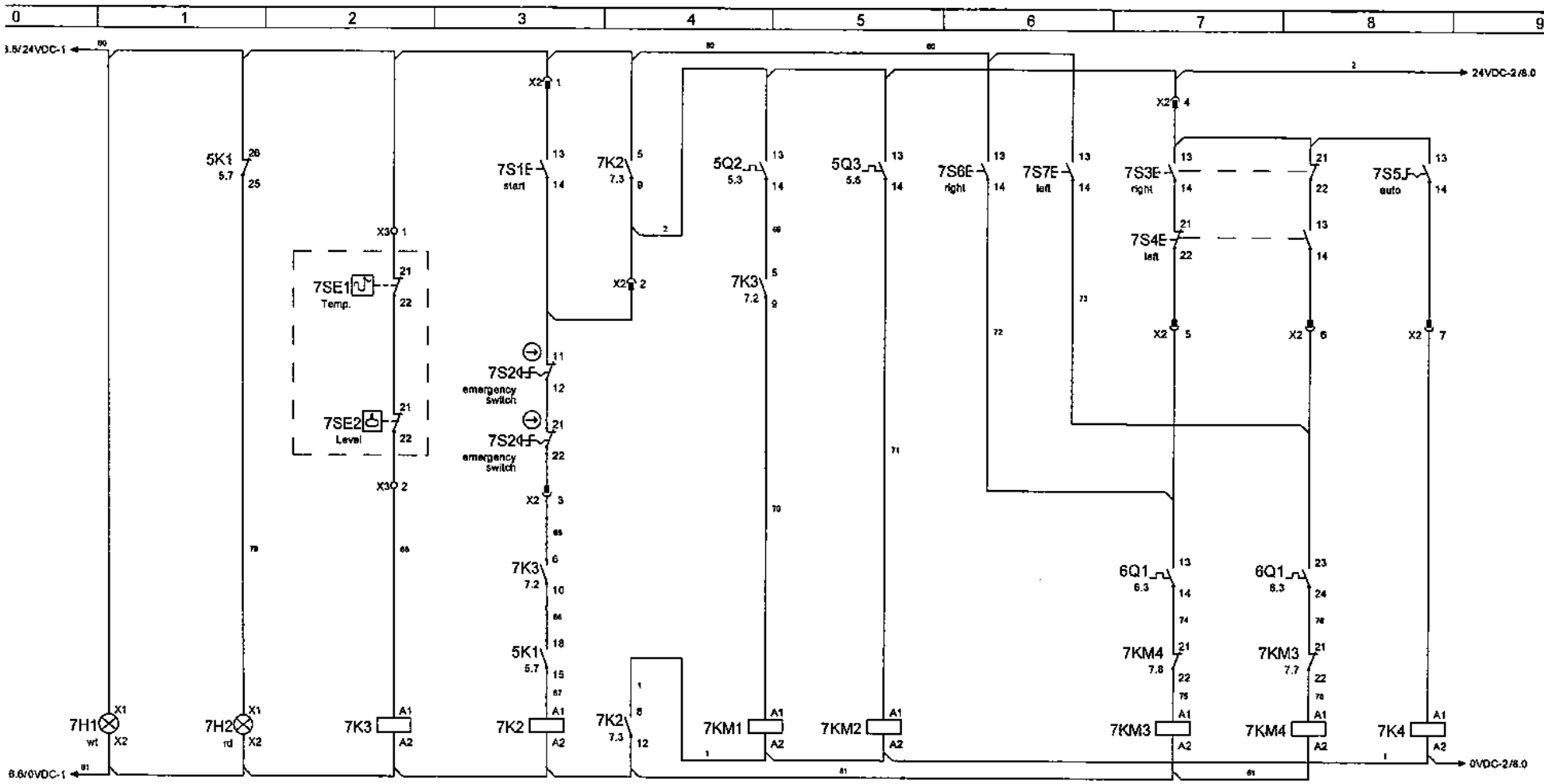


Electrical Engine
Left - Right

Control-Voltage
24 VDC

7

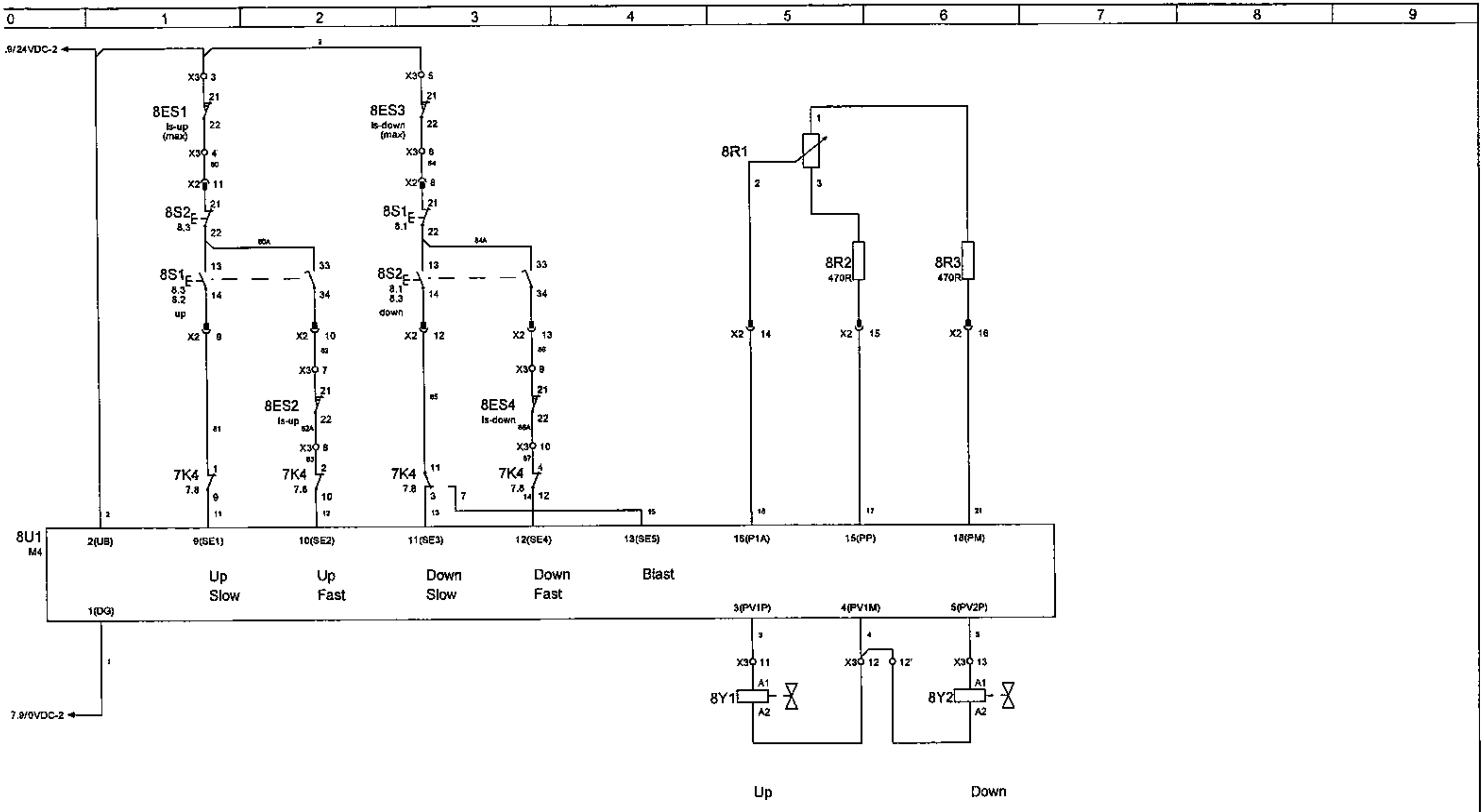
		Start	24.Sep.2001	BLASTRAC BV	BLASTRAC	Main-voltage	Arch.nr.	PJ01.01490T1B	=
		Eng	RJO	Controlbox hydraulic					+
		Print	22.Mrt.2007	winch RIG 4012			Draw.nr.	PJ01.01490T1B	Pages 16 / Page 6
		Status	As Built						



Control Voltage ON	Fase Sequence failure	> Temp. < Level	Release	Hydro	Cooler	Electrical Engine Right	Electrical Engine Left	Automatic
		5 – 9 7.4 6 – 10 7.3	5 – 6 7.4 8 – 12 7.4	1 – 2 5.2 3 – 4 5.2 5 – 6 5.3	1 – 2 5.6 3 – 4 5.6 5 – 6 5.6	1 – 2 6.2 3 – 4 6.2 5 – 6 6.2 21 – 22 7.8	1 – 2 6.3 3 – 4 6.3 5 – 6 6.3 21 – 22 7.7	1 – 9 8.1 2 – 10 8.2 4 – 12 8.3 7 11 – 3 8.3

6

		Start	24.Sep.2001	BLASTRAC BV Controlbox hydraulic winch RIG 4012	BLASTRAC	Control-Voltage	Arch.nr.	PJ01.01490T1B	
		Eng.	RJO						
		Print	22.Mrt.2007				Draw.nr.	PJ01.01490T1B	Pages 16 / Page 7
		Status	As Built						

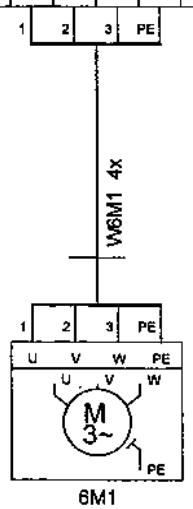


Start	24.Sep.2001	BLASTRAC BV	Control-Voltage	Arch.nr. PJ01.01490T1B
Eng.	RJO	Controlbox hydraulic		
Print	22.Mrt.2007	winch RIG 4012		Draw.nr. PJ01.01490T1B
Status	As Built			Pages 16 — Page 8

0	1	2	3	4	5	6	7	8	9

C1

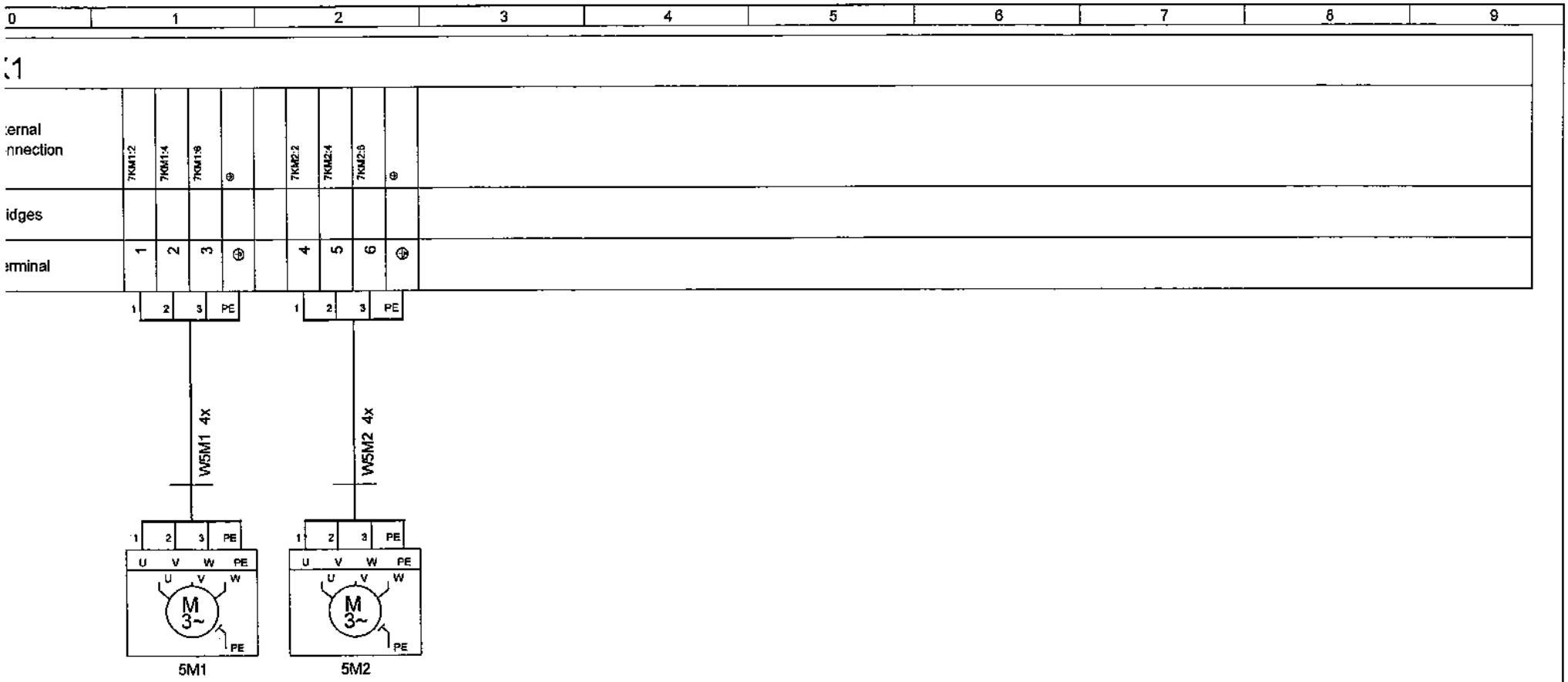
ternal nnection	7KM3:2	7KM3:4	7KM3:6	⊕
idges				
erminal	1	2	3	⊕



Electrical Engine
Left - Right

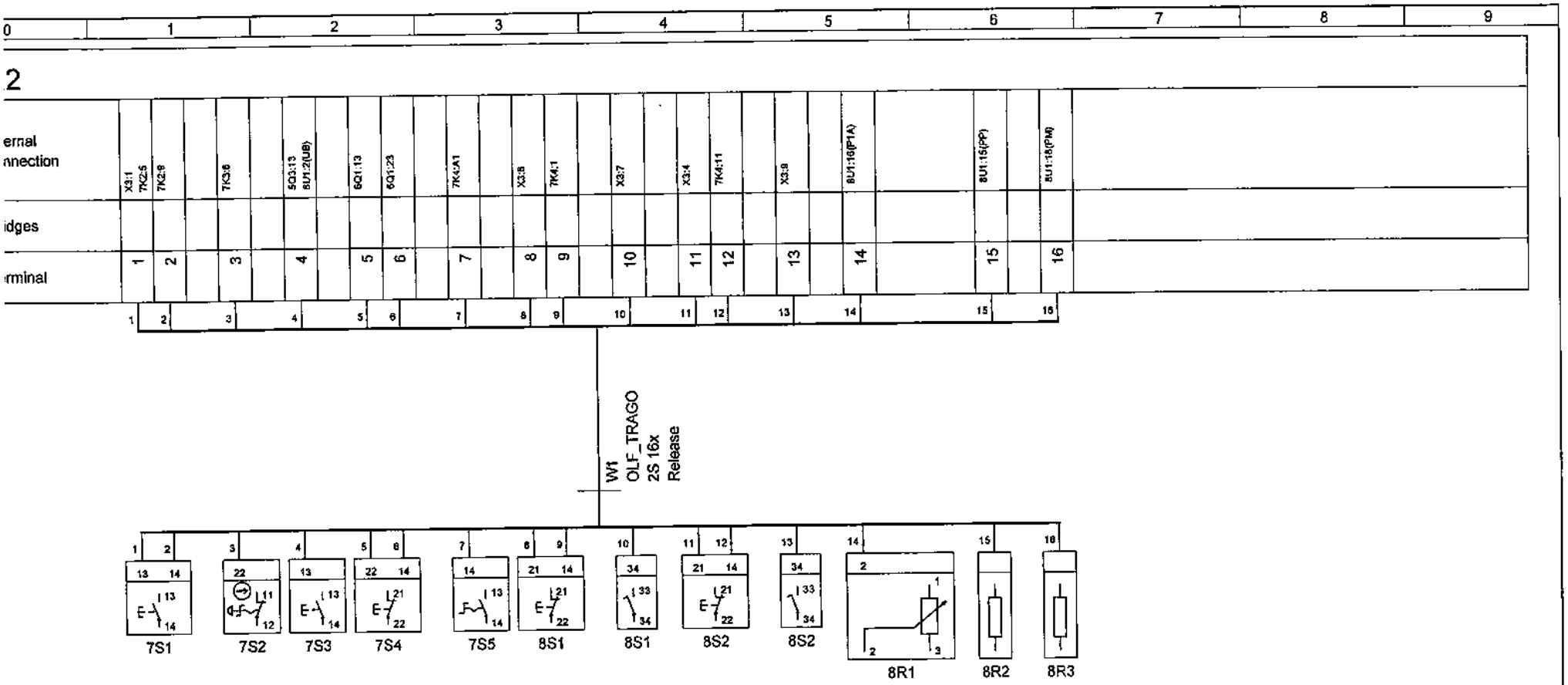
10

		Start	24.Sep.2001	BLASTRAC BV Controlbox hydraulic winch RIG 4012	BLASTRAC	Connector Electrical Engine	Arch.nr. PJ01.01490T1B	=
		Eng.	GKU					+
		Print	22.Mrt.2007				Draw.nr. PJ01.01490T1B	Pages 16 / Page 9
		Status	As Built					



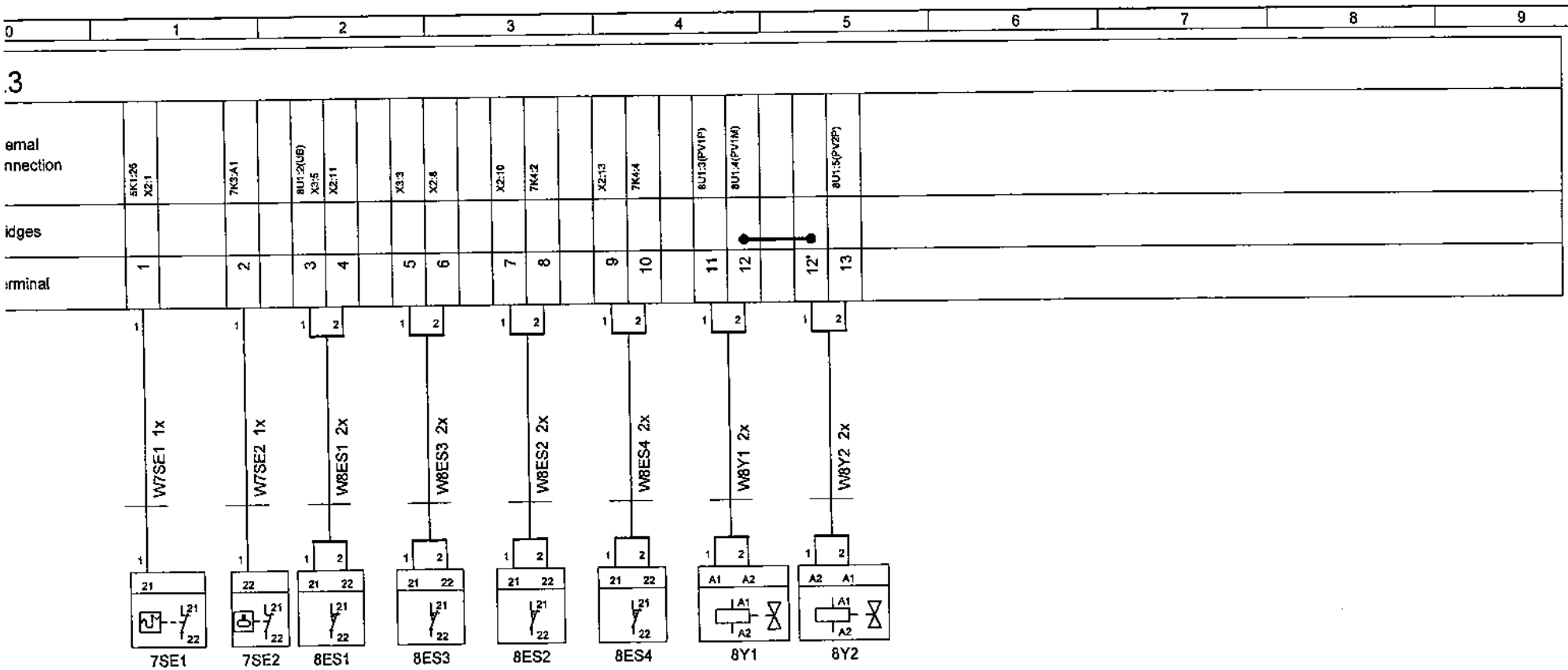
11

			Start	24.Sep.2001	BLASTRAC BV Controlbox hydraulic winch RIG 4012	BLASTRAC	Power connection	Arch.nr. PJ01.01490T1B	
			Eng.	GKU				Draw.nr. PJ01.01490T1B	Pages 16 / Page 10
			Print	22.Mrt.2007					
			Status	As Built					



12

	Start	24.Sep.2001	BLASTRAC BV	BLASTRAC	Remote connection	Arch.nr. PJ01.01490T1B	=
	Eng.	GKU	Controlbox hydraulic				+
	Print	22.Mrt.2007	winch RIG 4012			Draw.nr. PJ01.01490T1B	Pages 16 / Page 11
	Status	As Built					

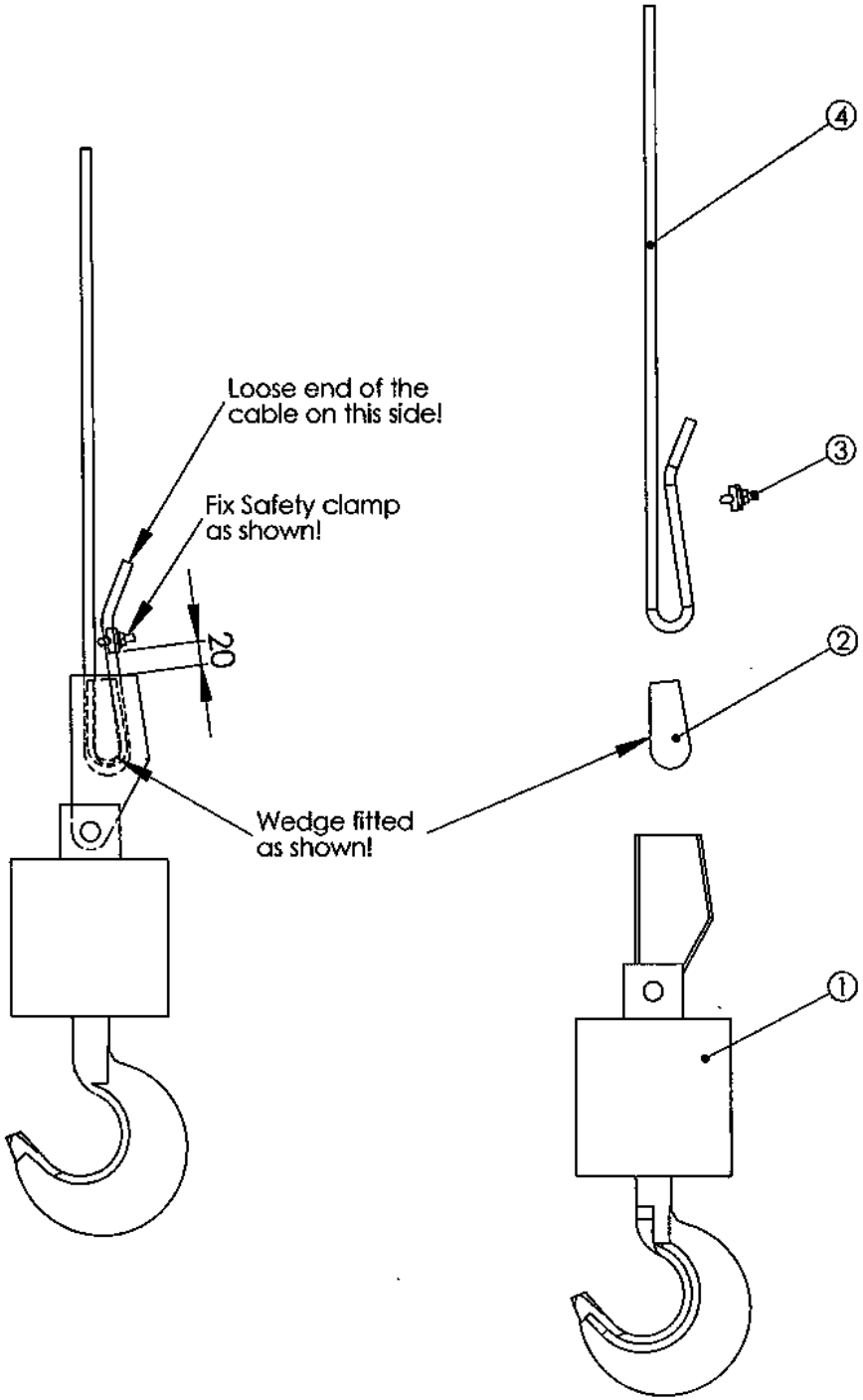


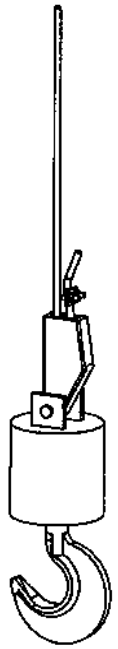
			Start	24.Sep.2001	BLASTRAC BV	BLASTRAC	Detection	Arch.nr. PJ01.01490T1B	
			Eng.	GKU	Controlbox hydraulic winch RIG 4012			Draw.nr. PJ01.01490T1B	Pages 16 / Page 12
			Print	22.Mrt.2007					
			Status	As Built					

Partlist Controlbox RIG 4012

pos.	partnumber	description	number	rec. spare part	
10	AE 1039.600 KASTWAND	case IP 66	1,00		
20	GV2-M03MOT.T/M BEV.	engine safegard	1,00	1	
30	GV2-M04 MOT.T/M BEV.	engine safegard	1,00	1	
5Q2	GV2-M16 MOT.T/M BEV.	engine safegard	1,00	1	
50	GV2-AE20 MOT.H.CONT.	engine safegard	3,00	1	
60	GV2-G245 MOT.RAIL2-V	engine safegard	2,00		
70	GV1-G09 MOT.AANSL.B.	connection	1,00		
80	RM4-TG201MS7	fase control relais	1,00	1	
90	LP1-D09--BD M.SCH.	magnet switch	2,00	1	
100	LP1-D09--BD M.SCH.	magnet switch	1,00		
105	LP1-D12--BD MAGN S	magnet switch	1,00	1	
110	94.04 REL.VOET14PINS	Rel.vt.14p tbv rel.55.32/34	3,00		
120	55.34.9.024.0040REL.	Rel.interf.4W 5A sp.24VDC	3,00	2	
140	C60N 2P C2A ZEK.	automatic 2 pool	1,00		
160	EGSUM 24-5 VOE.AFGEV	1-F p210..520V s24VDC-5A	1,00	1	
170	714.416 CONN.PANEEL	connection remote control	1,00		
171	710.116 CONN.PANEEL	connection remote control	1,00		
172	714.406 CON.PANEEL	connection remote control	1,00		
173	712.606 CON.PANEEL	connection remote control	1,00		
174	710.206 CONN PANEEL	connection remote control	1,00		
175	710.106	connection remote control	1,00		
180	VU4-4 GRIJS CONN.R.K	Conn. railkl. 4MM2 grijs	22,00		
190	VUPE 4-4 CONN.AARDKL	Conn.aardkl.,4MM2, ge/gr	4,00		
200	VUPE 4-6 CONN.AARDKL	Conn.aardkl.,6MM2 ge/gr	2,00		
210	EINDSTEUN V4 CON.ACC	Eindsteun V4 klein	1,00		
5Q1	V1 BED.L.S.3P-32A	main switch	1,00		
5Q1	KCF-1PZ BED.D.S. G/R	main switch	1,00		
5Q1	VZ17 BED.ASSEN	main switch	1,00		
5Q1	KZ32 BED.L.S.VERGR.	main switch	1,00		
5Q1	KZ66 BED.MONT.MAT.	main switch	1,00		
270	ZB5-AVB1 BED LAMPH.I	Bed.L.incl.prot.led,wi24vac/dc	1,00		
280	ZB5-AV013 BED LENS	Bed.lens wit. tbv intergr. led	1,00		
290	ZBZ-33 BED SCH.DR	Bed.sch.dr.30x50, v ZBY51	3,00		
300	ZBY-5102 BED TEKSTPL	Bed.tp 18x27 grav.wi/ge (zw)	3,00		
310	ZB5-AP3	impression button	2,00		
320	ZB5-AZ101	impression button	2,00		
330	M4 - versterker	digital amplier	1,00	1	
620	AFSTAND.BED.RIG 4012	remote con. RIG 4012 complete	1,00	1	note 60 meter cable

HYDRAULIC HOISTING WINCH 350VH (RIG - 4012)
WINCH HOOK ASSEMBLY





ITEM	QTY.	DESCRIPTION	PART NO.
01	1	Lifting block bottom	RIG-2903-CDF
02	1	Wedge	RIG-2904-CDF
03	1	Safety cable clamp	RIG-2910-CDF
04	1	Cable	RIG-2900-CDF

B.V. PID

PERIODIEKE INSPEKTIEDIENST

POSTBUS 832 – 3100 AV SCHIEDAM – TELEFOON 010 - 246 99 00 – FAX 010 - 246 70 55

INSPECTIERAPPORT

Ordernr : 2007392
Rapportnr : 01

KLANTNAAM : ART4 Technical Systems BV

Lokatie : werkplaats

Certificaat Nr : **4012.206**
Serie Nr : RIG 4012.H206

Soort : Hydraulische lier
Fabrikant : ART4 Technical Systems BV
Werklast : 900 KG
Afmetingen : zie gebruikshandleiding
Opmerkingen : treklast bij proef 1250kg

Inspectie Datum	Test Datum	Gegevens over reparatie en Eindoordeel inspectie	Firma Stempel
11-2007	11/2007	In orde	

Alle werkzaamheden worden uitgevoerd volgens de werkvoorschriften van de E.K.H.

B.V. PID

PERIODIEKE INSPEKTIEDIENST

POSTBUS 832 - 3100 AV SCHIEDAM - TELEFOON 010 - 246 99 00 - FAX 010 - 246 70 55

INSPEKTIERAPPORT

Datum : 2-11-2007
Inspekteur : G.Steenbergen
Lokatie : Soest

Klantnaam : Art 4 Technical Systems BV

Hijsoog

Order Nr	: 2007392
Lokatie Hijsoog	: Machine Rig 4012.H206
Reg. Cer. Nr	: 4.012.210
Intern bedrijfsnummer	: Rig 4012.H206
Benaming	: Hijsoog TBV Frame
Datum ingebruik	: nov-07
Materiaal	: staal 360
Fabrieks of H nummer	: nvt
CE Markering * ja / nee	: ja
Fabrikant	: ART4 Technical Systems BV
Afmetingen	: 300x130 mm
Type	: Plaat hijsoog met afgeschuinde kanten
Rvs matriaal/Papieren	: neen
Afwerking oppervlak	: geverfd
Testdatum	: nov-07
Werkbelasting	: 250 Kg
Proefbelasting	: Kn
Inspektiedatum	: nov-07

Opmerking : Geen bijzonderheden geconstateerd

* Indien Ce Markering / gebruikshandleiding niet aanwezig is kan er geen IIA certificaat verstrekt worden.

nov-07	Betreft Uitgifte Certificaat	1	1 is EKH , 2 is AII , 3 is geen

Alle werkzaamheden worden uitgevoerd volgens de werkvoorschriften van de E.K.H.

Datum inspectie (bij stempel komt de kopdatum te vervallen)

B.V. PID

PERIODIEKE INSPEKTIEDIENST

POSTBUS 832 – 3100 AV SCHIEDAM – TELEFOON 010 - 246 99 00 – FAX 010 - 246 70 55

INSPEKTIERAPPORT

Datum : 2-11-2007
Inspekteur : G.Steenbergen
Lokatie : Soest

Klantnaam : Art 4 Technical Systems BV

Hijsoog

Order Nr	: 2007392	
Lokatie Hijsoog	: Machine Rig 4012.H206	
Reg. Cer. Nr	: 4.012.209	
Intern bedrijfsnummer	: Rig 4012.H206	
Benaming	: Hijsoog TBV Frame	
Datum ingebruik	: nov-07	
Materiaal	: staal 360	
Fabrieks of H nummer	: nvt	
CE Markering * ja / nee	: ja	
Fabrikant	: ART4 Technical Systems BV	
Afmetingen	: 300x130	mm
Type	: Plaat hijsoog met afgeschuinde kanten	
Rvs matriaal/Papieren	: neen	
Afwerking oppervlak	: geverfd	
Testdatum	: nov-07	
Werkbelasting	: 250	Kg
Proefbelasting	:	Kn
Inspektiedatum	: nov-07	

Opmerking : Geen bijzonderheden geconstateerd

* Indien Ce Markering / gebruikshandleiding niet aanwezig is kan er geen IIA certificaat verstrekt worden.

nov-07	Betreft Uitgifte Certificaat	1	1 is EKH , 2 is AII , 3 is geen

Alle werkzaamheden worden uitgevoerd volgens de werkvoorschriften van de E.K.H.

Datum inspectie (bij stempel komt de kopdatum te vervallen)

B.V. PID

PERIODIEKE INSPEKTIEDIENST

POSTBUS 832 – 3100 AV SCHIEDAM – TELEFOON 010 - 246 99 00 – FAX 010 - 246 70 55

KEURINGSRAPPORT HIJSMIDDELEN

Ondergetekende verklaart namens zijn firma, dat onderstaande gegevens juist zijn en dat het omschreven reeds in gebruik zijnde hijsmiddel is beproefd en onderzocht door een bevoegde persoon onder zijn toezicht, volgens de EKH- werkvoorschriften..

The underlying certifies on behalf of his company, that below particulars are correct and that the described already used hoisting equipment was tested and examined by a competent person under his supervision, according to the EKH-Code of Practice.

Referentie Klant: Reference customer	**Art4**	Certificaat Nummer: Certificate number	**4.012.206**
Opdracht Nummer: Order number	**2007392**	Registratie Merk en nummer: Distinguishing mark and number	**RIG 4012.H206**

Omschrijving : **Hydraulische lier**
Description

Werklast in KG of T **900** WLL: **0,9** T
Working load limit

Afmetingen : **Zie gebruikshandleiding / onderhoudsvoorschriften**
Measurements

Materiaal : Diverse Staal FE 360
Material

Warmtebehandeling : **Neen**
Heat treatment

Afwerking oppervlak : **Geverft**
Surface Finishing

Sterkte Proefbelasting in kN PL : **10 Kn**
Proofload applied

Datum beproeving : **nov-07**
Date of test

Gebruiksfactor : **1,5**
Coefficient of utilization

Toepassing ; **Lierwerk / linepull**
Application

Eigenaar / gebruiker van het hijsmiddel : **Art 4**
Owner/ user of the hoisting equipment

Testdatum date of delivery	Naam en adres test bedrijf name and adress of test company	Gegevens betreffende test Note of test	Handtekening deskundige Signature of competent person
1-nov	**P.I.D** **Schiedam**	**Ingebruikname test**	

V01-110%

B.V. PID **PERIODIEKE INSPEKTIEDIENST**

POSTBUS 832 – 3100 AV SCHIEDAM – TELEFOON 010 - 246 99 00 – FAX 010 - 246 70 55

KEURINGSRAPPORT HIJSMIDDELEN 3.1.B volgens NEN-EN-10204

Ondergetekende verklaart namens zijn firma, dat onderstaande gegevens juist zijn en dat het omschreven reeds in gebruik zijnde hijsmiddel is beproefd en onderzocht door een bevoegde persoon onder zijn toezicht, volgens de EKH- werkvoorschriften..

The underlying certifies on behalf of his company, that below particulars are correct and that the described already used hoisting equipment was tested and examined by a competent person under his supervision, according to the EKH-Code of Practice.

Ref Klant Reference customer	**Art 4 Technical Systems BV**	Certificaat Nummer: Certificate number	**4012210**
Opdracht Nummer: Order number	**2007392**	Registratie Merk en nummer: Distinguishing mark and number	**Rig 4012.H206**

Omschrijving : **Fabrikant** **ART4 Technical Systems BV**
Description **Hijsoog TBV Frame**

Werklast in KG of T **250** WLL: **0,25** **T**
Working load limit

Afmetingen : **Type Plaat hijsoog met afgeschuinde kanten**
Measurements **Afmetingen 300x130 mm**

Materiaal : **staal 360** Staal **Fabrikant(en); ART4 Technical Systems BV**
Material

Warmtebehandeling : **Neen**
Heat treatment

Afwerking oppervlak : **geverfd**
Surface Finishing

Sterkte Proefbelasting in kN PL : **3,065625 Kn**
Proofload applied

Datum beproeving : **nov-07**
Date of test

Gebruiksfactor : **4**
Coefficient of utilization

Toepassing : **Hijsdoeleinden** **op locatie:** **Machine Rig 4012.H206**
Application

Eigenaar / gebruiker van het hijsmiddel : **Art 4 Technical Systems BV**
Owner/ user of the hoisting equipment

Testdatum date of delivery	Naam en adres test bedrijf name and adress of test company	Gegevens betreffende test Note of test	Handtekening deskundige Signature of competent person
nov-07	**Periodieke Inspectie Dienst B.V. Nieuwe Haven 91 3116 AB Schiedam**	**Keuring volgens EKH en herbeproeving volgens voorschriften**	

V.05-200%

B.V. Pid **PERIODIEKE INSPEKTIEDIENST**

POSTBUS 832 – 3100 AV SCHIEDAM – TELEFOON 010 - 246 99 00 – FAX 010 - 246 70 55

KEURINGSRAPPORT HIJSMIDDELEN 3.1.B volgens NEN-EN-10204

Ondergetekende verklaart namens zijn firma, dat onderstaande gegevens juist zijn en dat het omschreven reeds in gebruik zijnde hijsmiddel is beproefd en onderzocht door een bevoegde persoon onder zijn toezicht, volgens de EKH- werkvoorschriften..

The underlying certifies on behalf of his company, that below particulars are correct and that the described already used hoisting equipment was tested and examined by a competent person under his supervision, according to the EKH-Code of Practice.

Ref Klant Reference customer	Art 4 Technical Systems BV	Certificaat Nummer: Certificate number	4012209
Opdracht Nummer: Order number	2007392	Registratie Merk en nummer: Distinguishing mark and number	Rig 4012.H206

Omschrijving : **Fabrikant** **ART4 Technical Systems BV**
Description **Hijsoog TBV Frame**

Werklast in KG of T **250** WLL: **0,25** T
Working load limit

Afmetingen : **Type Plaat hijsoog met afgeschuinde kanten**
Measurements **Afmetingen 300x130 mm**

Materiaal : **staal 360 Staal** **Fabrikant(en); ART4 Technical Systems BV**
Material

Warmtebehandeling : **Neen**
Heat treatment

Afwerking oppervlak : **geverfd**
Surface Finishing

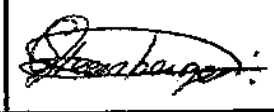
Sterkte Proefbelasting in kN PL : **3,065625 Kn**
Proofload applied

Datum beproeving : **nov-07**
Date of test

Gebruiksfactor : **4**
Coefficient of utilization

Toepassing : **Hijsdoeleinden** **op locatie:** **Machine Rig 4012.H206**
Application

Eigenaar / gebruiker van het hijsmiddel : **Art 4 Technical Systems BV**
Owner/ user of the hoisting equipment

Testdatum date of delivery	Naam en adres test bedrijf name and adress of test company	Gegevens betreffende test Note of test	Handtekening deskundige Signature of competent person
nov-07	**Periodieke Inspectie Dienst B.V. Nieuwe Haven 91 3116 AB Schiedam**	**Keuring volgens EKH en herbeproeving volgens voorschriften**	

V.05-200%