

OPERATING MANUAL



MODEL 1-15DS Global

Version 1.0

Shot Blasting System

WALK-BEHIND AND SELF-PROPELLED



Trust the Original Surface Preparation Experts
800.256.3440 blastrac.com

EC DECLARATION OF CONFORMITY

in accordance with Appendix II sub A of Directive 2006/42/EC

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Declare under our sole responsibility that the machine as described below
Conforms with the Health and Safety requirements of the European Directive
of the machine Safety.

In case of changes to the machine without our written authorization this declaration loses
its validity.

Model: *BLASTRAC 1-15DS Global* **Serial number:** *.....*

1. satisfies the conditions set out in the Machine Directive (Directive 2006/42/EC);
Low voltage directive (2006/95/EC, as last amended; EMC directive 2004/108/EC,
as last amended)
2. satisfies the following harmonized standards:
NEN-EN 349, NEN-EN 418, NEN-EN 294 and NEN-EN 60204

Nieuwegein



Michiel Kalisvaart



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1. Introduction

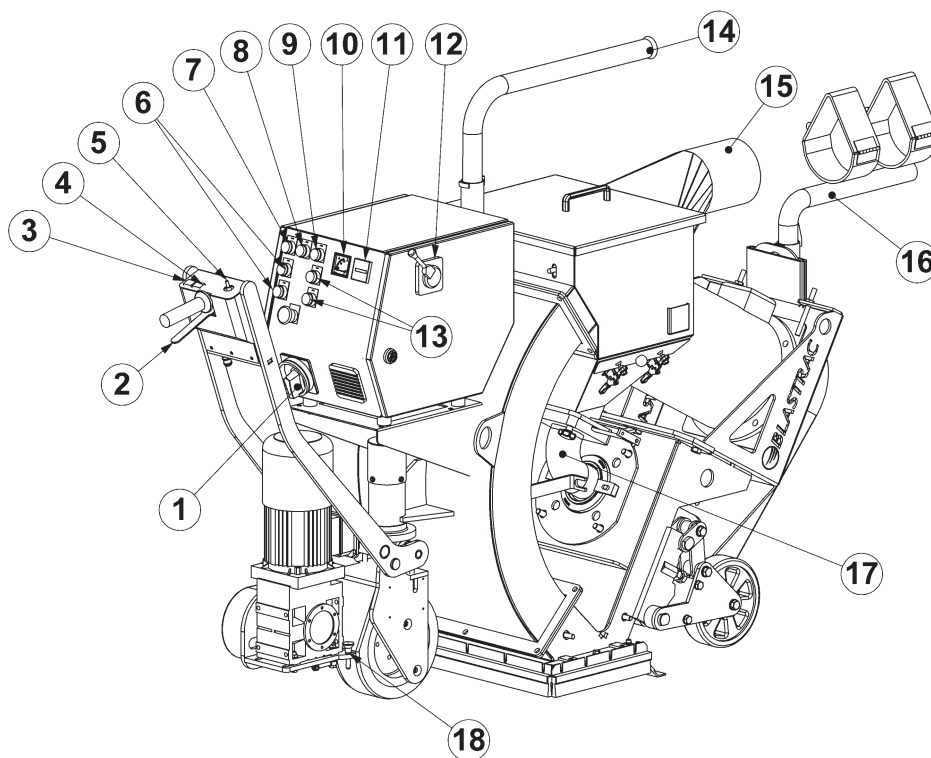
It is important that all persons who are working with or maintaining this machine must read the manual carefully and understand it fully. Keep this manual near to the machine, to enable it be referred to at any time

Only authorized and trained personnel may operate this machine.

2. Machine description

The Blastrac blast cleaning machine 1-15DS Global is a downward blasting machine with a closed abrasive circuit designed for the pre-treatment of horizontal surfaces. The bouncing impact of metallic abrasive onto the surface to be treated thoroughly removes surface contaminants, coats of paint, sealants and thin coatings.

A suitable filter unit must be connected to the machine in order to separate the dust from the abrasive. A specially designed dust collection system ensures dust-free operation of the machine and clean air at the workspace.



- | | | |
|------------------|---------------------------|----------------------------------|
| 1 Main switch | 7 Drive control light | 13 Blastmotor ON / OFF |
| 2 Travel switch | 8 Fault light | 14 Cable guide |
| 3 Overdrive | 9 Blastmotor light | 15 Connection pipe for dust hose |
| 4 Move forwards | 10 Ammeter | 16 Hose guide |
| 5 Speed control | 11 Hour counter | 17 Feed spout |
| 6 Drive ON / OFF | 12 Abrasive control cable | 18 Quick release pin |

3. Safety

Before operating the machine, the personnel must be familiar with the safety instructions given in this manual.

Keep this manual near to the machine, so it can always be consulted.

Safety precautions

- The surface to be treated must be swept clean to remove stones, screws etc.
- Never use the machine when the surface is not clear and if there is a risk of tripping.
- Make sure there is not any water on the surface to be treated.
- Don't get disturbed during the activities.
- Remove any trailing electrical cables and or dust hoses from the surface to be treated.
- Always switch on the dust collector.

Safety regulations

- Persons who do not operate the machine are not permitted to stay in the surrounding of the machine. Don't leave children anyway.
- Keep the machine original; Use cables who are approved and not damaged. Never remove the earth connecting of the supply cable and machine. Use only cables with earth wire and connectors with a earth connecting.
- Connect main power supply cable to a installation with a earth leakage circuit breaker.
- Inspect and test the electrical components of the machine regularly. This electrical components have to satisfy to the requirements EN60204-1.
- Always call a skilled electrician when you have questions about the safety of the electrical components.
- Work on electrical equipment or operating materials may only be undertaken by a skilled electrician or by trained persons under the guidance and supervision of a skilled electrician as well as in accordance with the electrical engineering regulations.
- Pull out the main plug during inspections and repairing on the machine.
- Never operate the machine when workplace is wet.
- Never stay in the rain with the machine.

The following sticker is placed on the machine.



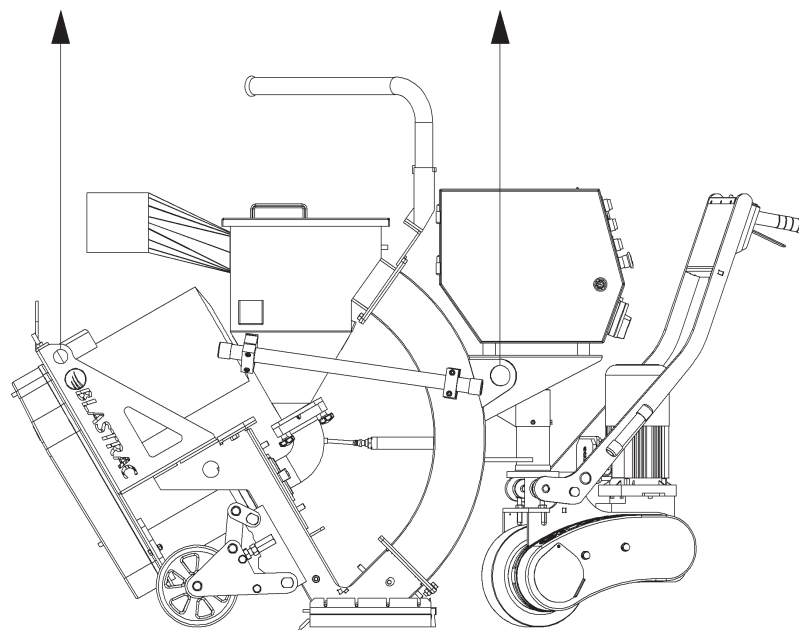
Meanings of these symbols are:

- Ear protection is obliged
- Safety glasses with lateral protection are obliged
- CE-mark on this machine
- Safety shoes obliged
- Consult the manual before operating the machine

Personnel must tie back long hair and not wear loose clothing or jewellery including rings. Wear gloves and dust mask during operating the machine.

Safety instructions

- Abrasive can escape from the sides of the blast head at high speed. Wear safety glasses with lateral protection and close-fitting protective clothing.
- Be very careful with inserting the quick release pin
- The machine, specially the handle grip must be free of fats and has to be dry.
- The dust container / bag of the filter unit must be emptied regularly. Comply with the local waste treatment regulations considering the removed material.
- The weight of the 1-15DS Global is 450 kg. By transport the machine with a crane or lift, use the lifting eyes of the machine.
- Pay attention that the drive unit do not turn away during lifting the machine.



4. Initial operation

Before using the machine it is of great importance to inspect the machine. It is not permitted to use the machine if the machine safety is not according to the checkpoints below.

Checkpoints power supply

- Use only extension cables for extending the main cable that are sized and marked in accordance with the overall power consumption of the machine.
- Electrical cables must be fully unwound from their reels.
- No damage is permitted for electrical cables.
- Use a electrical power supply connection with earth connecting.

Checkpoints of machine

- Safety functions and operating functions must work correct.
- Check the following parts for damage and wear: blastwheel, feedspout, liners, magnet- and brush sealing.
- No loose bolts and nuts permitted
- No any damage of electrical components permitted.
- Dust hose must be undamaged and the connection must be reliable.
- Check the parts of the separator on wear and defects. Remove foreign bodies and dust deposits.



5. Operating

During operating the 1-15DS Global, the following additional safety instructions must be followed closely.

Before switch on

- Check if the distance from magnet to the floor is 8 – 10 mm. Check this height with aluminium strips.
- Check the distance from brush sealing to the floor. This may be max. 1 mm.
- Fill the separator equally with the selected abrasive up to the bottom of the separator tray. The magnetic valve must be closed whilst doing this.
- Connect the blast machine and filter unit with the dust hose. This connection must be reliable.
- Connect the power supply cable of the filter unit with the generator. Be sure that electrical power supply is correct.

Switch on the machine

- Before switch on the blast machine, switch on the filter unit.
- Press the green push button "Blast wheel ON" and check the rotating direction of the blast motor. The correct direction is given with a arrow on the housing of the motor.
- Select the speed using the speed control knob. (item 5 of machine description)
- When the machine is traveling pull the abrasive control cable to open the magnetic valve. Observe the ammeter. It may indicate the full load amperage. After having blasted approx. 2 m, close the abrasive valve, stop the machine and check the blasted surface.
- If the 'hotspot' is too much on the right, turn clockwise the cage a little bit. Never adjust the cage during blasting.

Switch off the machine

- Close the abrasive valve
- Press the red button "Blast wheel OFF"
- Press the red button "Drive OFF"
- Switch the main switch to position "OFF"
- Pull out the connector of the main power supply of the machine.
- Switch off the filter unit.
- Wait for standstill of all drives before any inspection or maintenance works are started.

6. Maintenance

Changing the liners

- Loose the press bolt of the top liner and remove the cover.
- Loosen the nuts of the side liners and plenum liners. Take them out at the bottom of the housing.

To mount the liners, keep on the following sequence:

- First place the plenum liners and fix them with the nuts.
- Place the side liners inside the housing. The sideliners may stick out the body for max. 1mm. Tighten the nuts.
- Place the top liner in the housing and make sure that the top liner sits close to the edges of the side liners.
- Place the cover and tighten the bolts.
- Tighten the pressure bolt of the top liner slightly and press the top liner against the side liners.

Changing the tune - up kit

De tune-up kit consists of the blastwheel, the cage and a bolt.

- Remove the feed spout
- Remove the cage clamps
- Remove the cage and blastwheel cover plate
- Block the blastwheel and remove the central fixing bolt
- Take the blastwheel out of the housing

Use a new central fixing bolt when mounting a new blastwheel

- Place the blastwheel on the hub and tighten the central fixing bolt.
- Fix the blastwheel cover plate with 4 nuts
- Insert the control cage in the center and clamp the cage with the control clamps so that the blastwheel can rotate freely
- Turn the blastwheel manually. It must rotate freely.
- Place the feed spout between the abrasive valve and the cage.

Clean the machine every day with air and non-aggressive materials. Never use a high pressure water cleaner to clean the machine.

Store the cleaned machine in a dry room. Protect the electrical motor from moisture, heat dust and shocks. Remove the abrasive out of the abrasive storage hopper.

All repair work has to be done by qualified Blastrac personnel, this guarantee a save and reliable machine.

Any guarantee on the machine is expired when:

By not using original Blastrac spareparts and abrasive.

When repair work is not done by qualified Blastrac personnel.

When changes, add ons or conversions are undertaken without written permission of Blastrac BV.

7. Selection of abrasive

Media nr. 2

Is often used when the surface is only subsequently sealed.

- creates fine profiles, e.g. on vacuum concrete and non-glazed tiles
- removes thin layers of rust on steel surfaces
- removes thin layers of paint

Media nr. 3

creates a fine to medium texture on concrete.

- removes glazing from tiles prior to subsequently coating with antiskid floor sealings
- removes old impregnations and coatings about 1 mm thick

Media nr. 4

Standard abrasive, suitable for about 50-60 % of all applications. Creates a medium profile on concrete. Fulfills the same purpose as Media No. 3 when a higher speed of the machine is required, e.g. on asphalt, in order to keep the thermal load low.

- removes laitance from new concrete
- roughening of smooth concrete or natural stone
- removes coatings with a thickness of 1-3 mm
- cleaning of steel surfaces

Media nr. 5

This media is used to create a coarse profile or to increase the work speed in the case of surfaces hard to treat.

- removes sediments on concrete prior to coating
- removes thick paint coatings or rust from steel surfaces, bridges, tanks, etc.
- removes flexible coatings on parking house decks
- removes road markings and retexturing of asphalt and concrete roads

Media nr. 8

Only as an addition to Media No. 3, No. 4 and No. 5 with maximum 30% content.

Media No. 8 should never be used without blending since otherwise the wear in the machine as a whole would increase disproportionately.

- removes polyurethane coatings
- removes adhesive remnants
- removes rubber deposits
- penetrates coatings hard to remove
- also suitable to be used on steel for extraordinary roughness

8. Technical data

	1 - 15DS Global
Power consumption blast motor	15KW
Electrical connection (voltage is given on the control box)	3 x 230V / 60Hz 400V / 50Hz 400V / 60Hz
Blast width	383 mm
Drive speed	0 – 30 m/min
Length	1940 mm
Width	557 mm
Height	1120 mm
Weight	450 kg
Noise level (under load)	85dBa
Vibration level	1.9 RMS Allows 13,9 hrs. of working with the mentioned equipment without having to use anti vibration precaution measures.
Dust hose connection	Ø150 mm

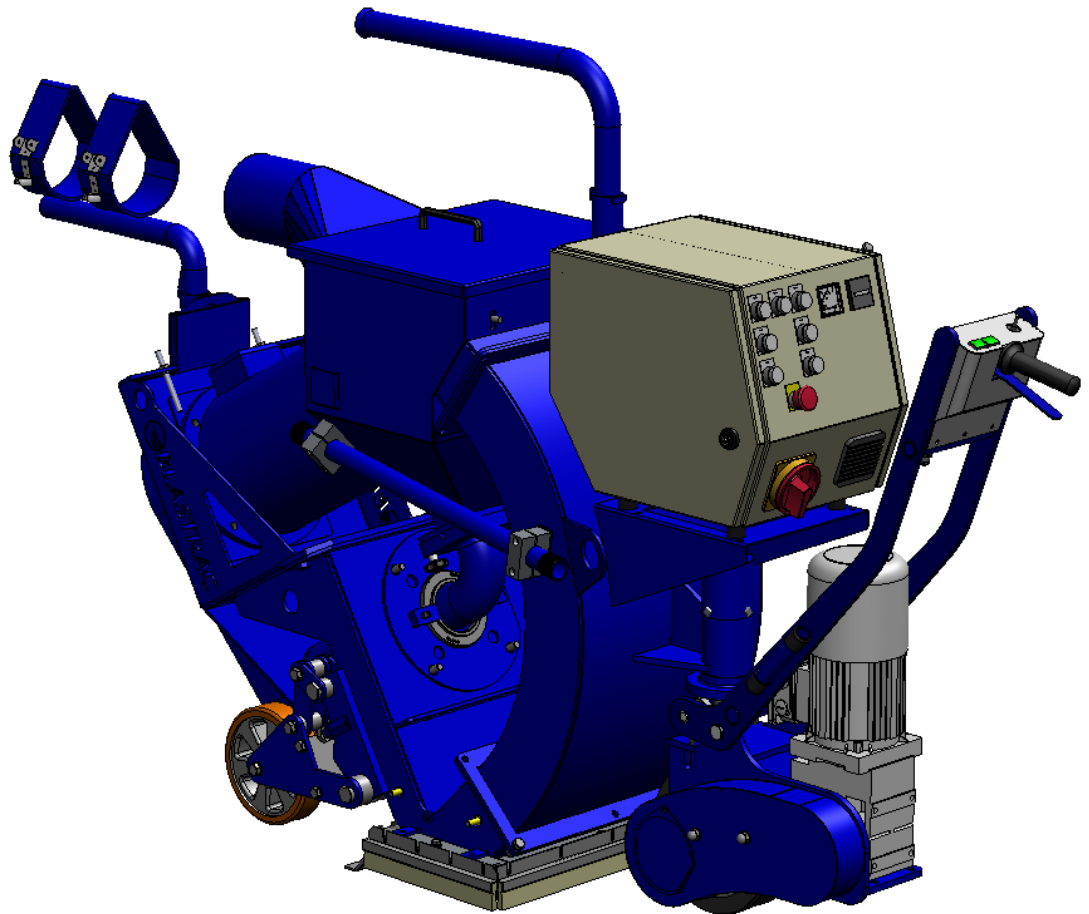
The electrical diagrams of the electrical system are placed inside of the control panel.

Design and specifications are subject to change without notice by Blastrac.



1-15DS Global

Version 1.2



EC DECLARATION OF CONFORMITY

in accordance with Appendix II sub A of Directive 2006/42/EC

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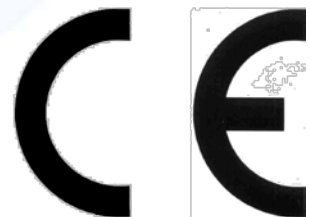
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Nieuwegein



Michiel Kalisvaart



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1. Spare parts

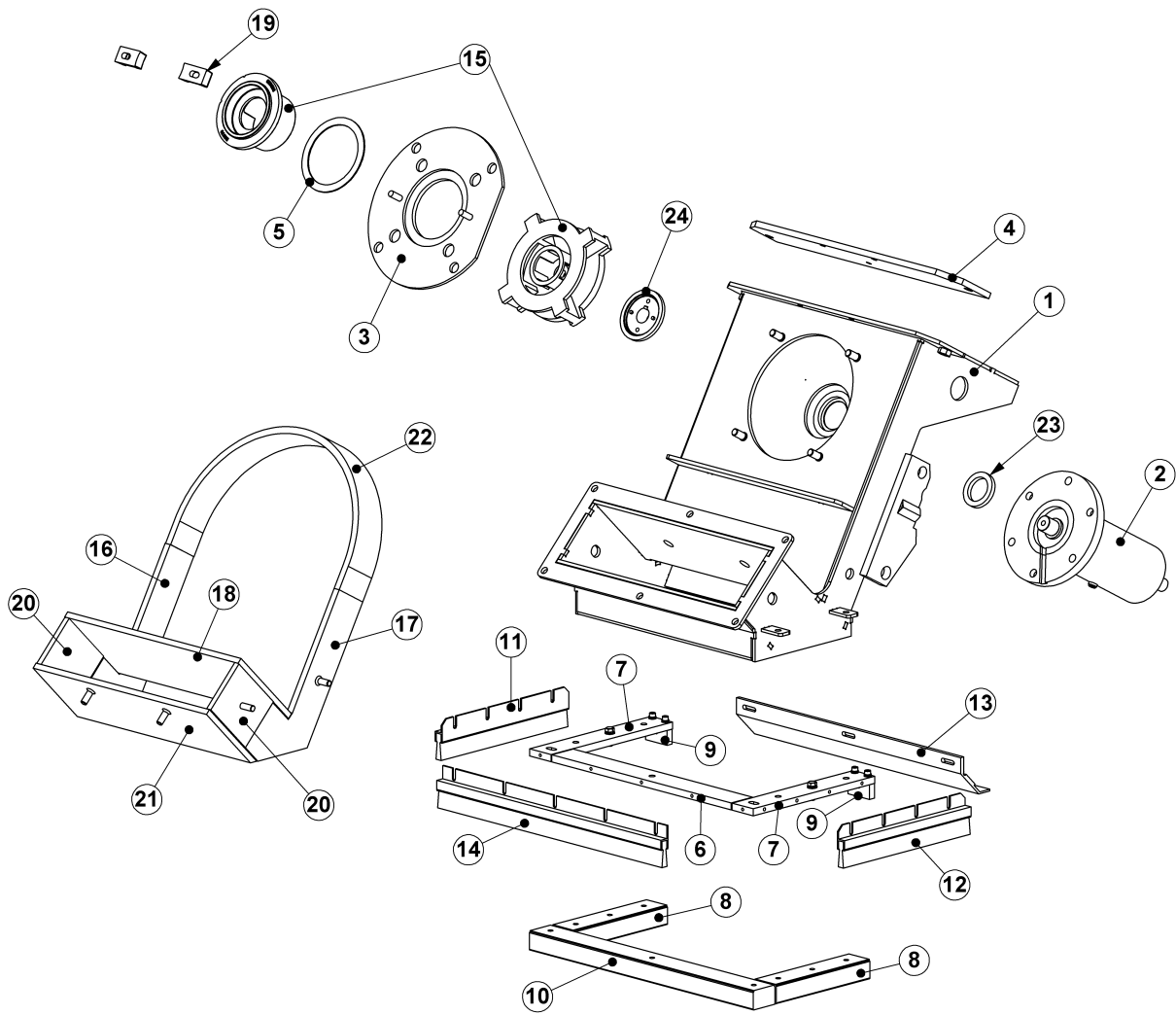


Fig. 01

Fig. 01

Item	Part number	Description	Remarks	Qty.
1	E00751	Blasthousing 1-15DS Global		1
2	E00842	Bearing unit complete		1
3	979644	Blastwheel cover plate		1
4	B20458	Blasthousing cover		1
5	972781	Control cage shim		1
6	971851	Insulator front		1
7	489945	Insulator side		2
8	PA-10644	Magnet side		2
9	481350	Spacer side magnet rear		2
10	971884	Magnet front		1
11	B20413	Side brush RH		1
12	B20424	Side brush LH		1
13	682652	Skid seal		1
14	B20412	Front brush		1
15	B20536K	Tune up kit		1
16	B20394	Side liner left hand		1
17	B20395	Side liner right hand		1
18	970151	Plenum top liner		1
19	969803	Control cage clamp		2
20	970153	Plenum bottom side liner		2
21	970152	Plenum bottom		1
22	B20907	Top liner		1
23	B20295	Felt seal Ø60x8		1
24	B20397	Hub		1

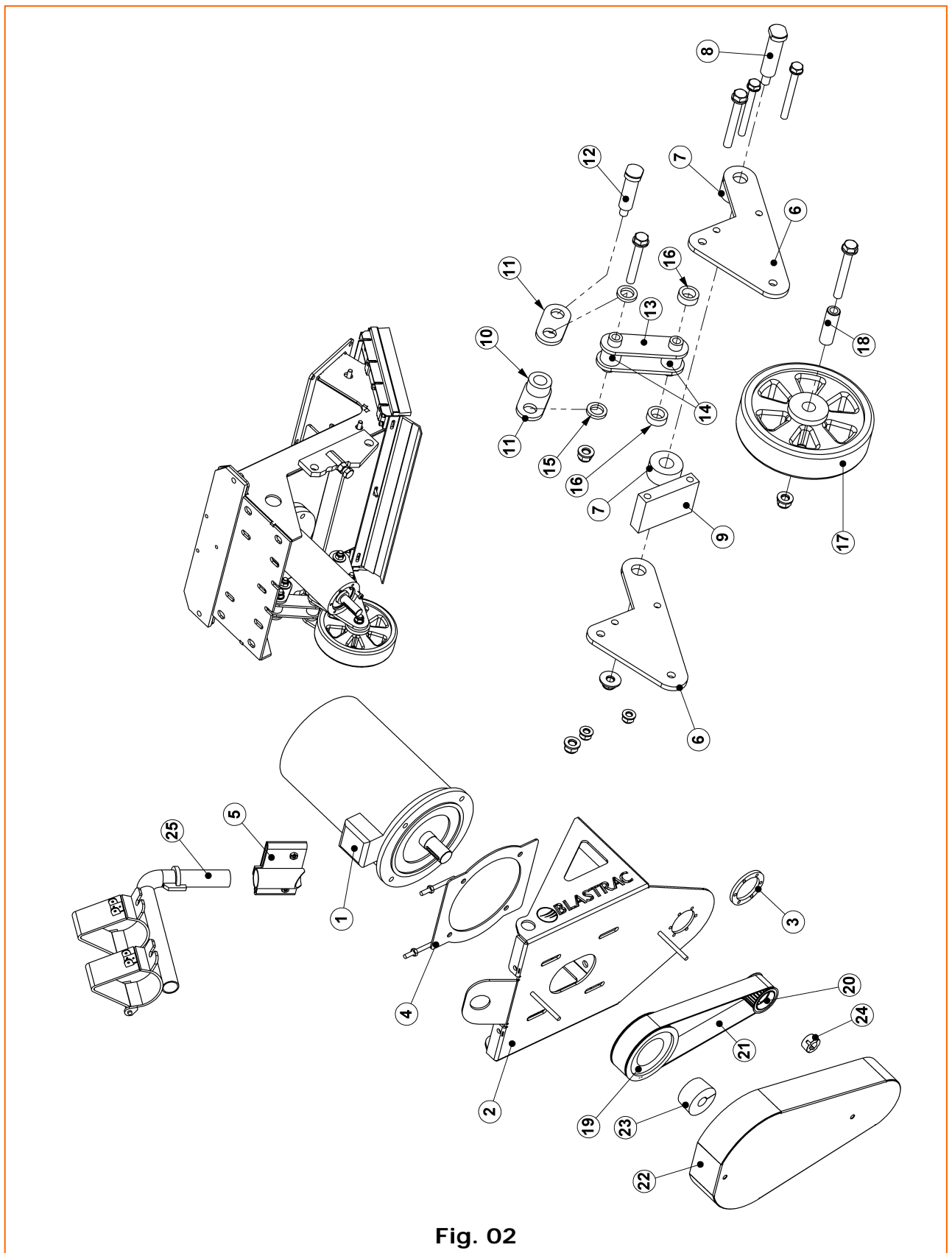


Fig. 02

Fig. 02

Item	Part number	Description	Remarks	Qty.
1	E06511	Blastmotor 15 kW		1
2	E06512	Motorbracket		1
3	E00864	Fill up ring bearing unit		1
4	E06513	Fill up plate blastmotor		1
5	E00745	Cable guide bracket		1
6	E06465	Wheel bracket side plate		4
7	E06472	Wheel bracket bush		4
8	E06468	Bottom bolt		2
9	E06475	Distance plate		2
10	E06474	Lever bush top		4
11	E06467	Top lever		4
12	E06469	Top bolt		2
13	E06466	Bottom lever		4
14	E06471	Lever shaft		4
15	E06855	Lever bush middle		4
16	E06473	Lever bush bottom		4
17	B20842	wheel		2
18	E06470	Idler wheel bush		2
19	B20429-1	Pulley	50Hz	1
	B21340	Pulley	60Hz	1
20	B20430-1	Pulley	50Hz	1
	B21341	Pulley	60Hz	1
21	B20428	Belt	50Hz	1
	E04009	Belt	60Hz	
22	B20224	Pulley guard		1
23	E00425	Taperlock		1
24	222-2172-V	Taper lock		1
25	E00746	Cable guide		1

Fig. 03

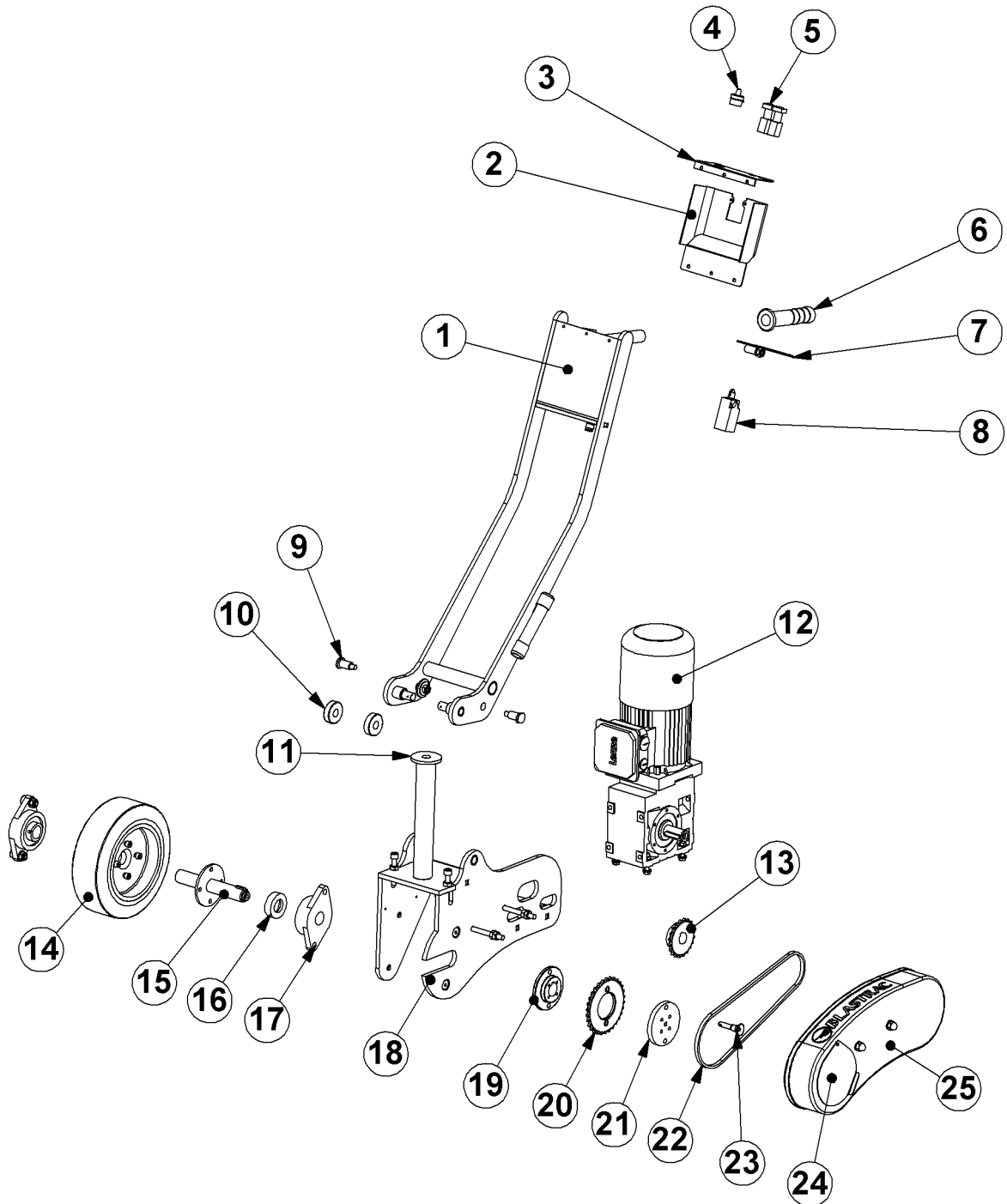


Fig. 03

Item	Part number	Description	Remarks	Qty.
1	E00737	Handle		1
2	E00740	Control box		1
3	E00741	Control box top plate		1
4	E00866	Potention meter complete (consists out of item 4.1 & 4.2)		1
4.1	E00866/1	Potmeter only with soldered		1
4.2	E00866/2	Potmeter holder		1
5	E00867	Switch		2
6	453290	Handle grip		1
7	E00743	Switch lever		1
8	454796	Limit switch		1
9	E00738	Handle pin		2
10	B20517	Bearing		2
11	971860	Washer for yoke shaft		1
12	E00646	Drive motor		1
13	E00732	Sprocket		1
14	476405	Traction wheel		1
15	E00742	Drive wheel shaft		1
16	E07293	Distance bush drive wheel		1
17	009324	Bearing drive wheel		2
18	E00739	Drive wheel bracket		1
19	488551	Hub		1
20	4776310-EU	Idler sprocket		1
21	477630	Sprocket retainer		1
22	E00237	Chain		0.9m
22.1	E00238	Chain link		1
23	478198	Quick release pin		1
24	979971	Cover plate chain guard		1
25	E00744	Chain guard		1



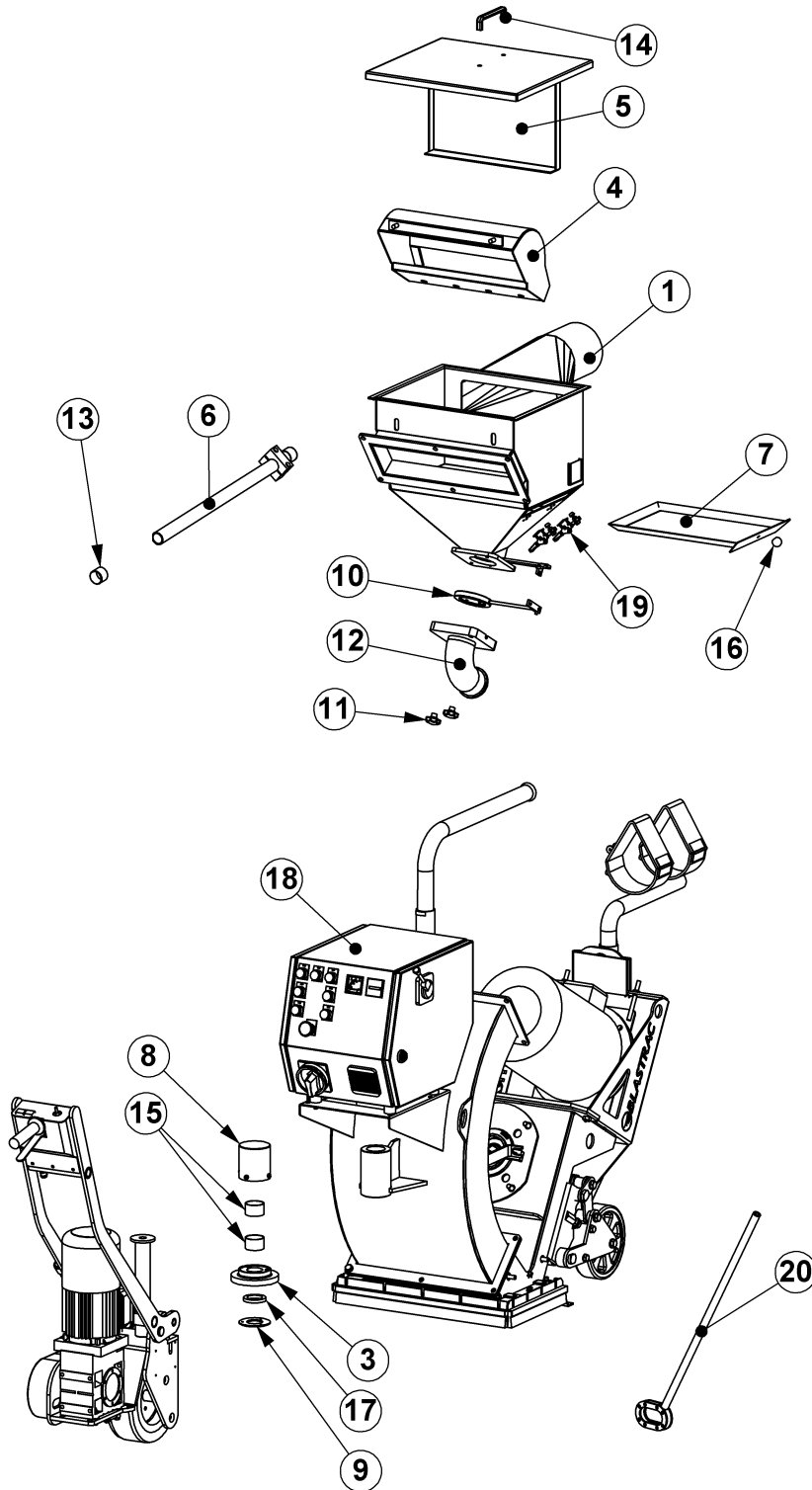
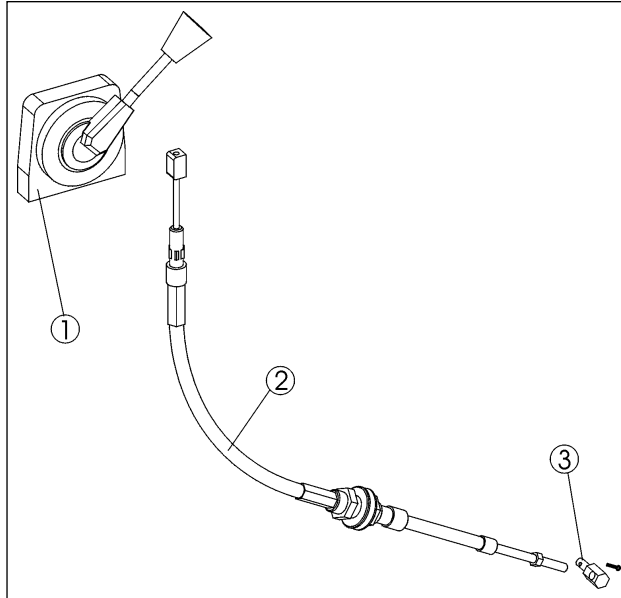


Fig. 04

Fig. 04

Item	Part number	Description	Remarks	Qty.
1	B20393	Separator		1
3	B20511	Lifting plate		1
4	B20262	Deflector		1
5	B20263	Separator cover		1
6	B21969	Cable tube		1
7	B20264	Separator tray		1
8	B20515	Shaft cover		1
9	B20512	Seal retainer		1
10	B20444	Magnetic valve assembly		1
11	000213	Clamp knob		2
12	B20443	Feed spout		1
13	E00337	Cable protection cap		2
14	970385	Handle		1
15	971341	Sleeve-bearing bush		2
16	B21325	Ball head for separator		1
17	B20295	Felt seal		1
18	E06540	Electrobox 1-15DS Global		1
19	001084	Clamp for separator tray		2
20	B21917	Lever		1



Item	Part number	Description	Remarks	Qty.
1	B20519	Abrasive control lever		1
2	B20520	Abrasive control cable		1
3	B20521	Pivot for abrasive control cable		1

2. Maintenance box

Item	Part number	Description	Remarks	Qty.
1	001071	Metal box 1-15DS		1
2	B20536K	Tune-up kit		3
3	B20394	Left liner		1
4	B20395	Right liner		1
5	B20907	Top liner		1
6	B20520	Abrasive control cable		1
7	B20428	Belt		1
8	B20413	Side brush right		2
9	B20424	Side brush left		2
10	B20412	Front brush		2
11	682652	Skid seal		1
12	001017	Open-end spanner 10 x 11		1
13	001018	Open-end spanner 13 x 15		1
14	001019	Open-end spanner 17 x 19		1
15	001042	Open-end spanner 24 x 26		1
16	001036	Ring spanner 8 x 9		1
17	000114	Ratchet spanner ½"		1
18	000146	Box spanner 13		1
19	000147	Box spanner 17		1
20	000148	Box spanner 19		1
21	000149	Box spanner 24		1
22	000150	Box spanner SW 8mm 120lg		1
23	001033	Allenkey 3		1
24	001016	Allenkey 6		1
25	001032	Screwdriver 5,5 x 100		1
26	001035	Insulated screwdriver		1
27	001056	Water pump pliers		1
28	000151	Hammer		1
29	001031	Safety glasses		1
30	000117	Maintenance box complete		1



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Project description 1-15 DS Dual Voltage

Drawing number PJ11.1065.08
Blastrac number E6540/ULCSA



Power supply 480Y/277V or 240V
Input lead
Control Voltage 230Vac/24Vdc

Year of Manufacturing 2011

Remarks As Built

Created on 25-2-2011 by hvandenbrink
Edit date 27-3-2012 by HVDB

Number of pages 18

				Date	2-1-2012	Project name:		1-15DS DUAL VOLTAGE ULCSA				Page description:		Customer:		Blastrac bv.		=	
				Ed.	HVDB	E6540/ULCSA						Drawing number:		PJ11.1065.08		+			
Modification	Date	Name	Last print	20-4-2012										Page		1			

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3	Legend		2-1-2012	HVDB
4	Symbol library		2-1-2012	HVDB
5	Panel Layout		2-1-2012	HVDB
6	Cableset		27-3-2012	HVDB
10	Main-Voltage		27-3-2012	HVDB
11	Main-Voltage		27-3-2012	HVDB
12	Main-Voltage		27-3-2012	HVDB
13	Control-Voltage		27-3-2012	HVDB
14	Control-Voltage		27-3-2012	HVDB
20	Klemmenaansluitlijst X0		2-1-2012	HVDB
21	Klemmenaansluitlijst X1		2-1-2012	HVDB
22	Klemmenaansluitlijst X2		2-1-2012	HVDB
30	Partlist		2-1-2012	HVDB
31	Partlist		3-1-2012	HVDB
32	Partlist		2-1-2012	HVDB

1

2.a

Revision	Date	Discription	Remark	Editor
01	01-04-2011	As built	Engeneering ART4	HvdB
02	19-05-2011	Cable gland added for earth connection to frame	Engeneering ART4	HvdB
03	28-06-2011	Lay-out changed and wire dimmensions added	Engeneering ART4	HvdB
04	31-08-2011	Small changes according remarks Blastrac OKC (see visit rapport)	Engeneering ART4	HvdB
05	12-09-2011	Numbers 11F3, 11F1 and text drive motor and steering unit changed places	Engeneering ART4	HvdB
06	02-01-2012	Dip switch settings changed High voltage softstarter and CSA logo added	Engeneering ART4	HvdB
07	31-01-2012	Parametersettings lenze drive changed acc rmarks RK Blastrac	Engeneering ART4	HvdB
08	27-03-2012	Cable to motor changed in length	Engeneering ART4	HvdB

Date	27-3-2012	
Ed.	HVDB	
Appr		
Last print	20-4-2012	
Modification	Date	Name

Project name: **1-15DS DUAL VOLTAGE ULCSA**
E6540/ULCSA



Page description: **Revision sheet**

Customer: **Blastrac bv.**
Drawing number: **PJ11.1065.08**

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WIRE COLOR

Main Voltage

<u>Phase</u>	<u>Colors</u>
L1	- Black
L2	- Black
L3	- Black
Earth / PE	- Yellow/Green

Control Voltage (AC)

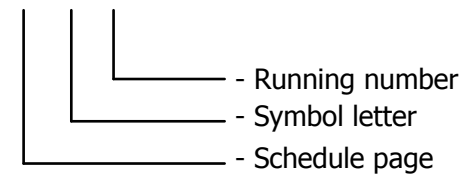
Phase	- Red
Hook-up wire	- Red
Zero	- Red

Control Voltage (DC)

(+)	- Dark Blue
Hook-up wire	- Dark Blue
(-)	- White/Blue

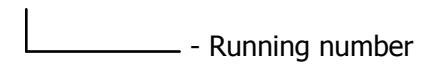
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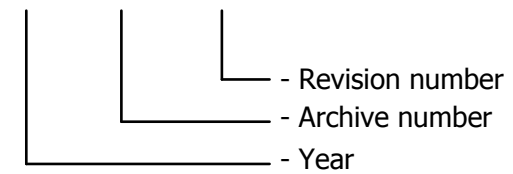
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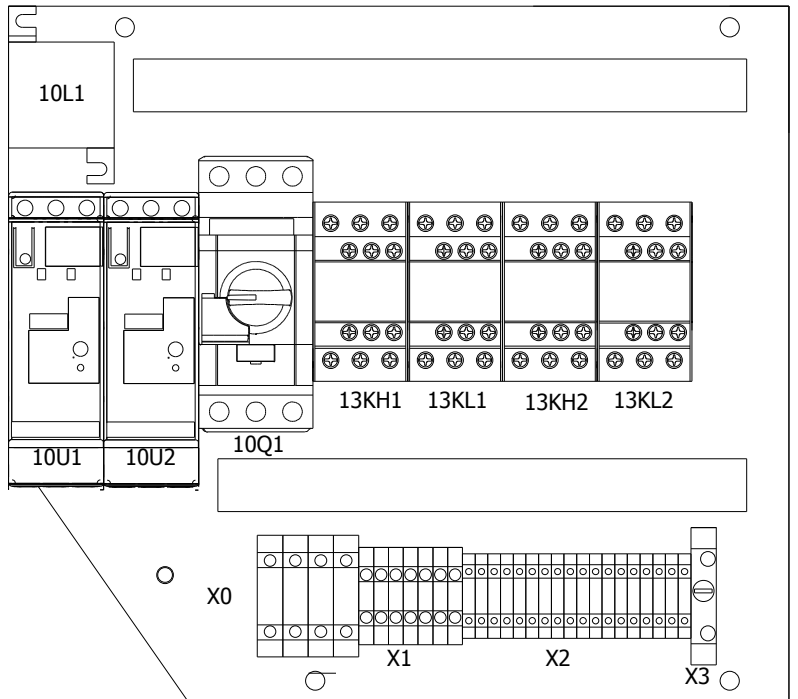
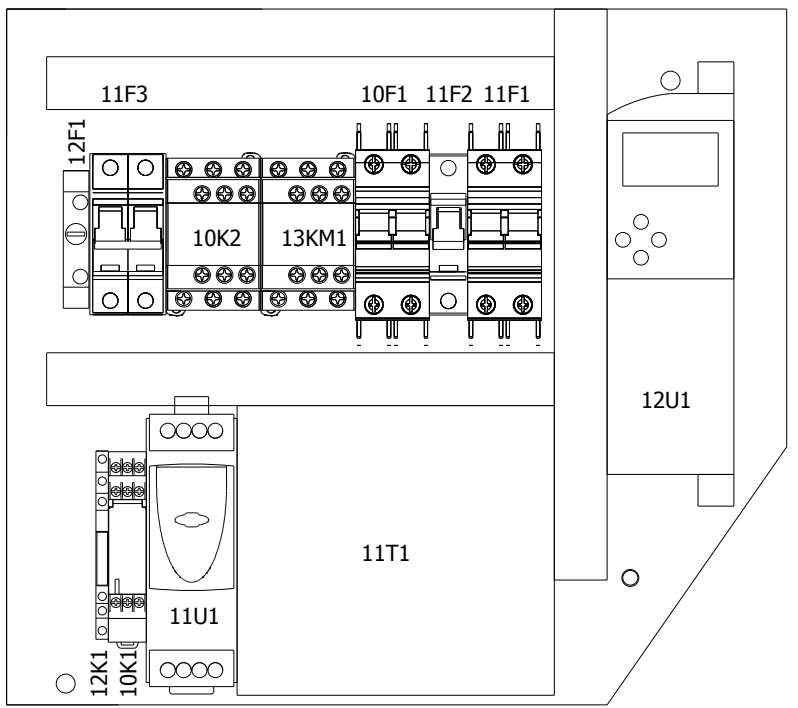
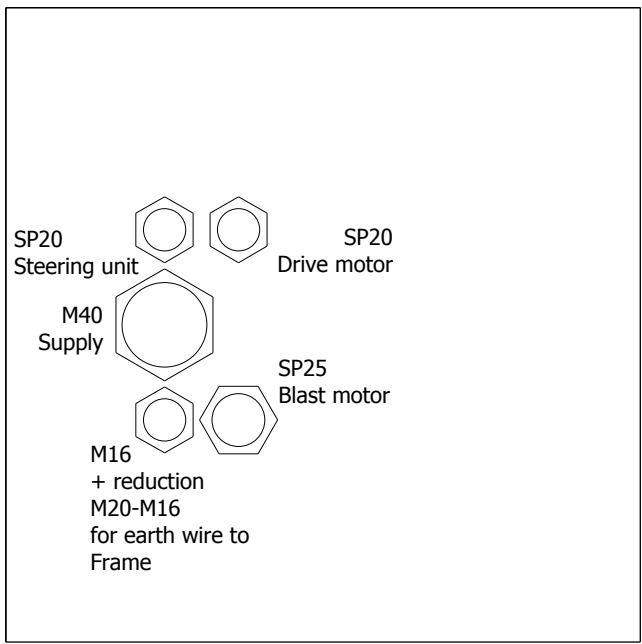
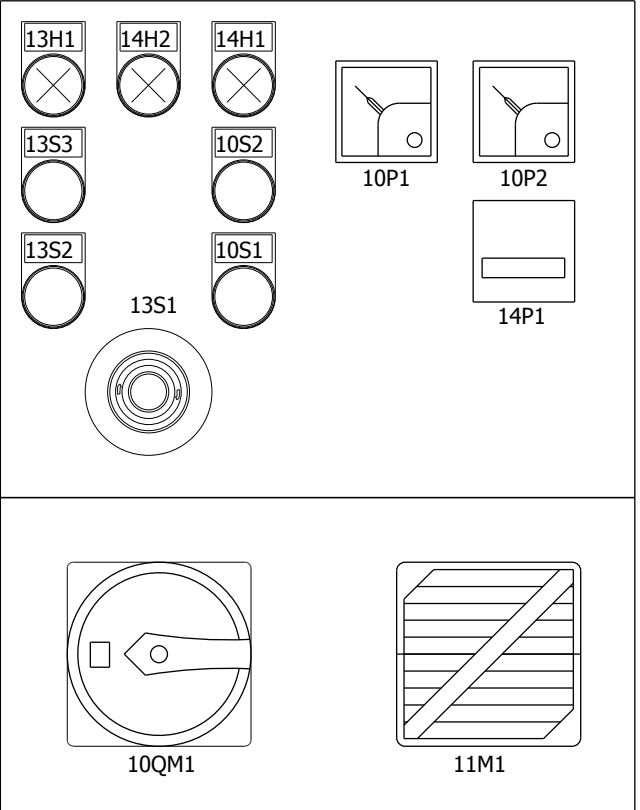
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	auxiliary contact	hulpcontact		signal light	signaallamp		Safety fuse	smeltveiligheid
	Power contact	vermogenscontact		horn	hoorn		Fused switch, three-pole	schakelbare scheider
	NO contact, opens with time delay	maakcontact, vertraagd open		apm.meter	amperemeter		Fused disconnect, three-pole	scheider "klapbak"
	NO contact, closes with time delay	maakcontact, vertraagd sluitend		runninghour counter	urenteller		Main switch	hoofdschakelaar
	NC contact, opens with time delay	verbreekcontact, vertraagd open		transformer	transformator		Circuit breaker, single-pole	installatieautomaat 1-polig
	NC contact, closes with time delay	verbreekcontact, vertraagd sluitend		Contactor coil relay coil	spoel		Circuit breaker, two-pole	installatieautomaat 2-polig
	Pushbutton rebound	drukknop terugverend		Contactor/relay coil, with pick-up delay	Spoel met opkomvertraging		Circuit breaker, three-pole	installatieautomaat 3-polig
	Pushbutton locking	drukknop blijvend		Contactor/relay coil, with drop-out delay	spoel met afvalvertraging		Power circuit breaker motor overload switch with switch mechanism	motorbeveiligingsschakelaar
	Rotary switch rebound	tip draaischakelaar		Contactor pulse coil relay pulse coil,	spoel puls		Valve	elektrisch bediende klep
	Rotary switch locking	draaischakelaar		Tube light	TL verlichting		Resistor with movable contact	regelbare weerstand
	Emergency stop rotary unlock	noodstop met draaibare vrijgave		Resistor / Heating	weerstand verwarming		Terminal	rijgklem
	Thermostatic switch	thermostaat hygrostaat		Socket	wandcontactdoos		Terminal with fuse	rijgklem metzekering
	Pressure switch	drukschakelaar		Current transformer	stroomtransformator		Rectifier	gelijkrichter
	Limit switch	eindschakelaar						
	Proximity switch	naderingsschakelaar						

			Date	2-1-2012	Project name: 1-15DS DUAL VOLTAGE ULCSA E6540/ULCSA		Page description: Symbol library	Customer:	Blastrac bv.	=
			Ed.	HVDB				Drawing number:	PJ11.1065.08	+
Modification	Date	Name	Last print	20-4-2012						Page

CAB



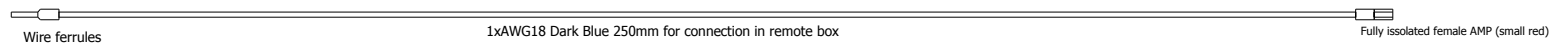
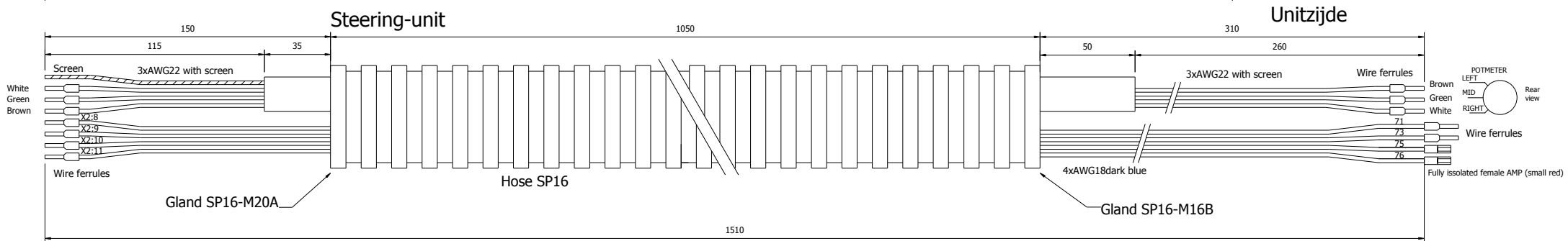
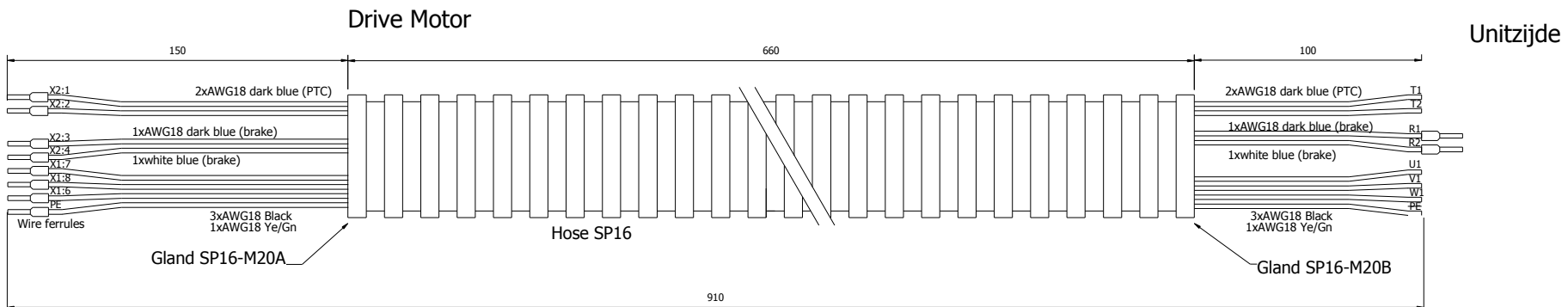
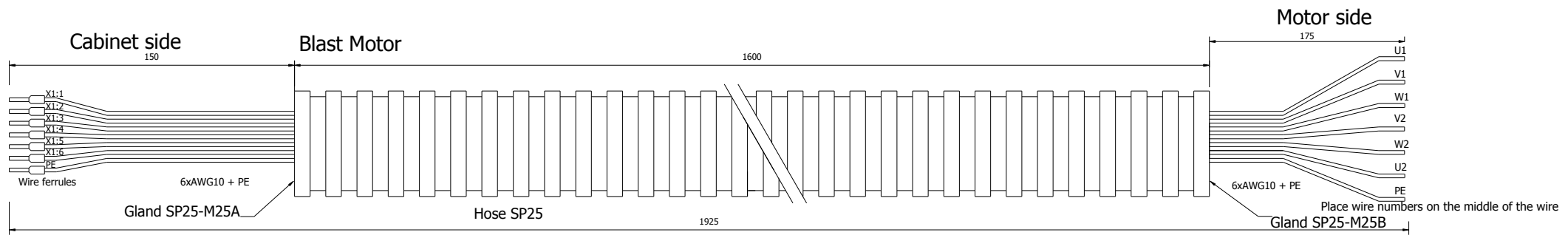
Modification	Date	Name	Last print	20-4-2012
	Date			
	Ed.	HVDB		
	Appr			
	Date	2-1-2012		

Project name: **1-15DS DUAL VOLTAGE ULCSA**
 E6540/ULCSA

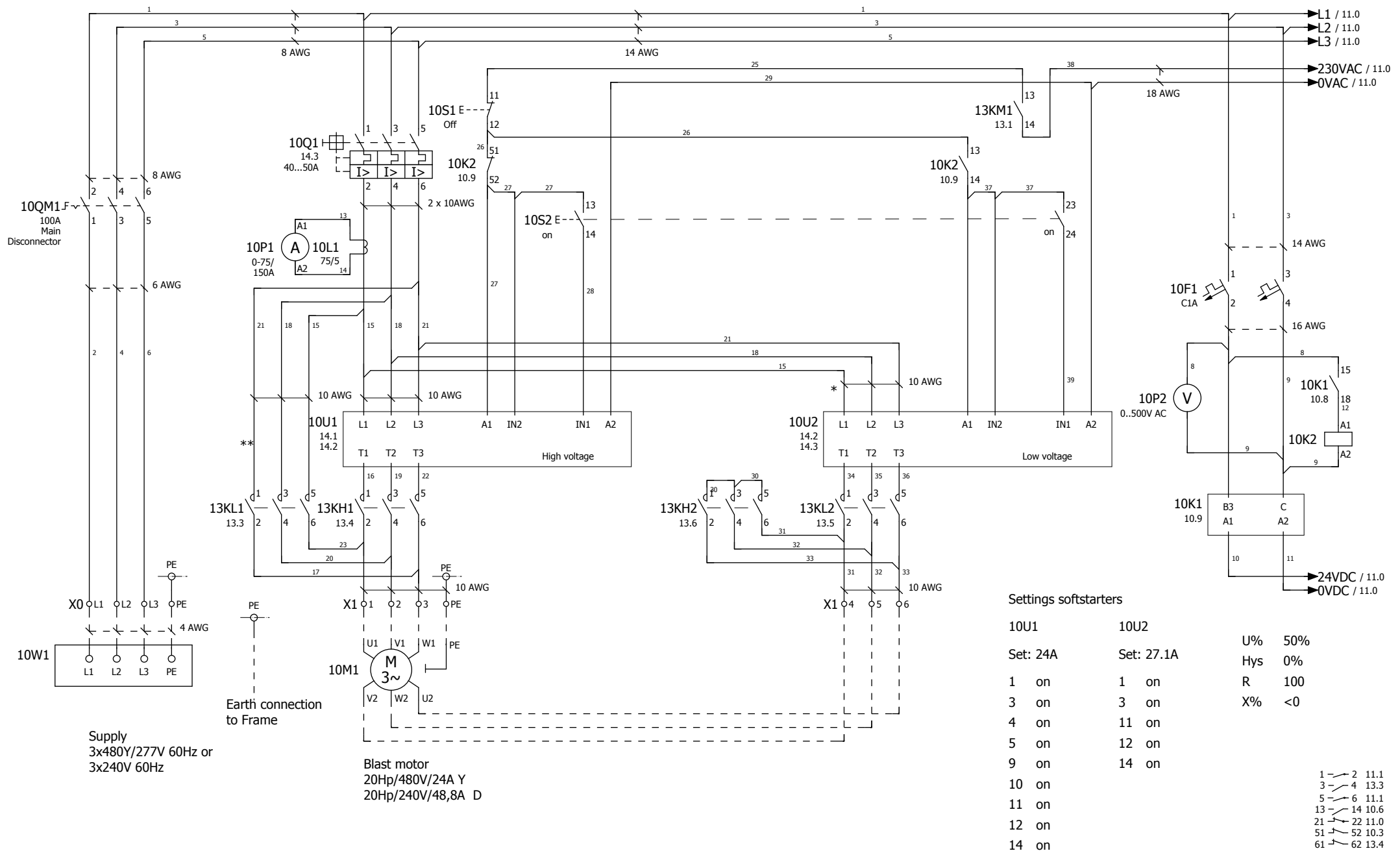


Page description: **Panel Layout**

Customer: **Blastrac bv.**
 Drawing number: **PJ11.1065.08**



Date: 27-3-2012				Project name: 1-15DS DUAL VOLTAGE ULCSA		Page description: Cableset		Customer: Blastrac bv.		=
Ed: HVDB				E6540/ULCSA		BLASTRAC		Drawing number: PJ11.1065.08		+
Appr:										Page
Last print: 20-4-2012										6



Settings softstarters

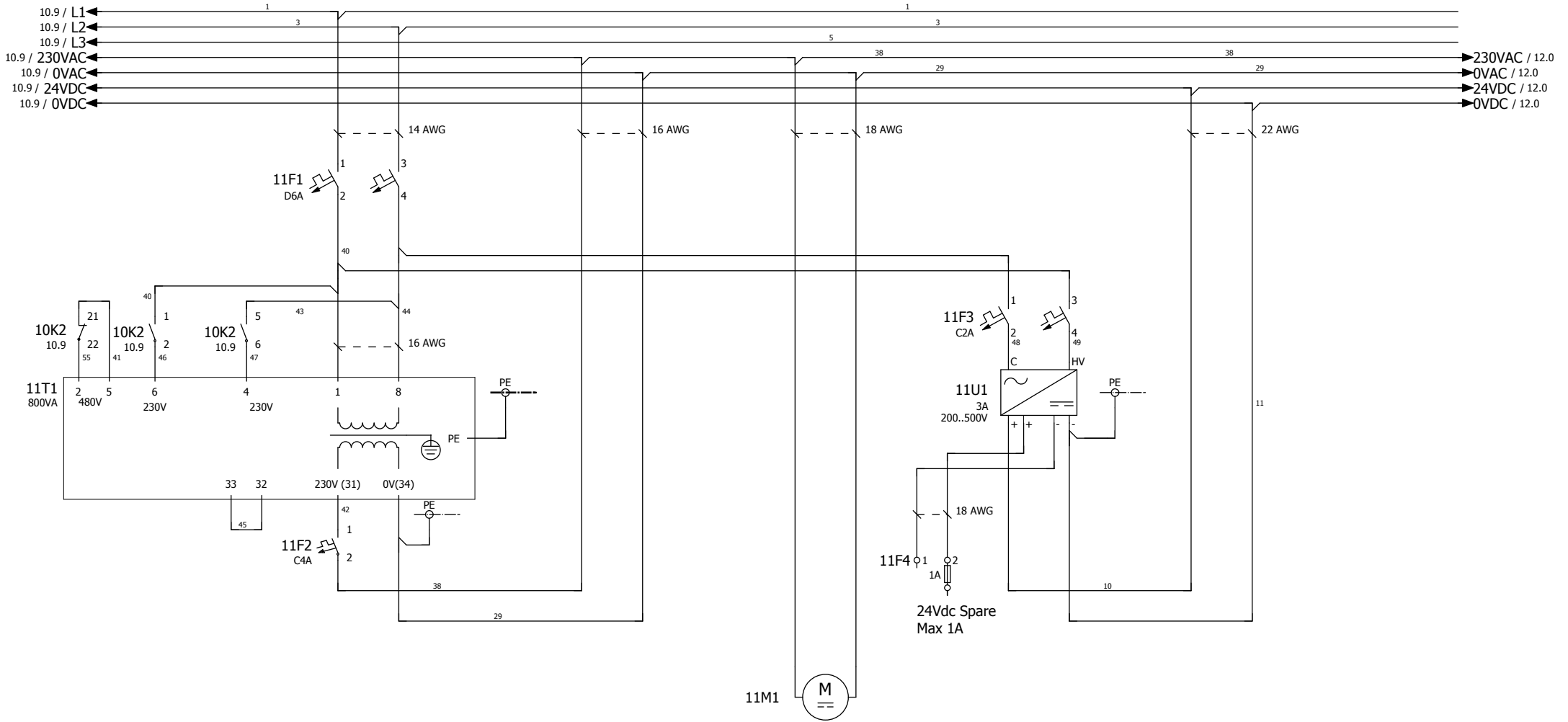
10U1	10U2	U%	50%
Set: 24A	Set: 27.1A	Hys	0%
1 on	1 on	R	100
3 on	3 on	X%	<0
4 on	11 on		
5 on	12 on		
9 on	14 on		
10 on			
11 on			
12 on			
14 on			
15 on			

* = Wiring from 10U1 to 10U2
 ** = Wiring from 10Q1 to 13KL1

Supply
 3x480Y/277V 60Hz or
 3x240V 60Hz

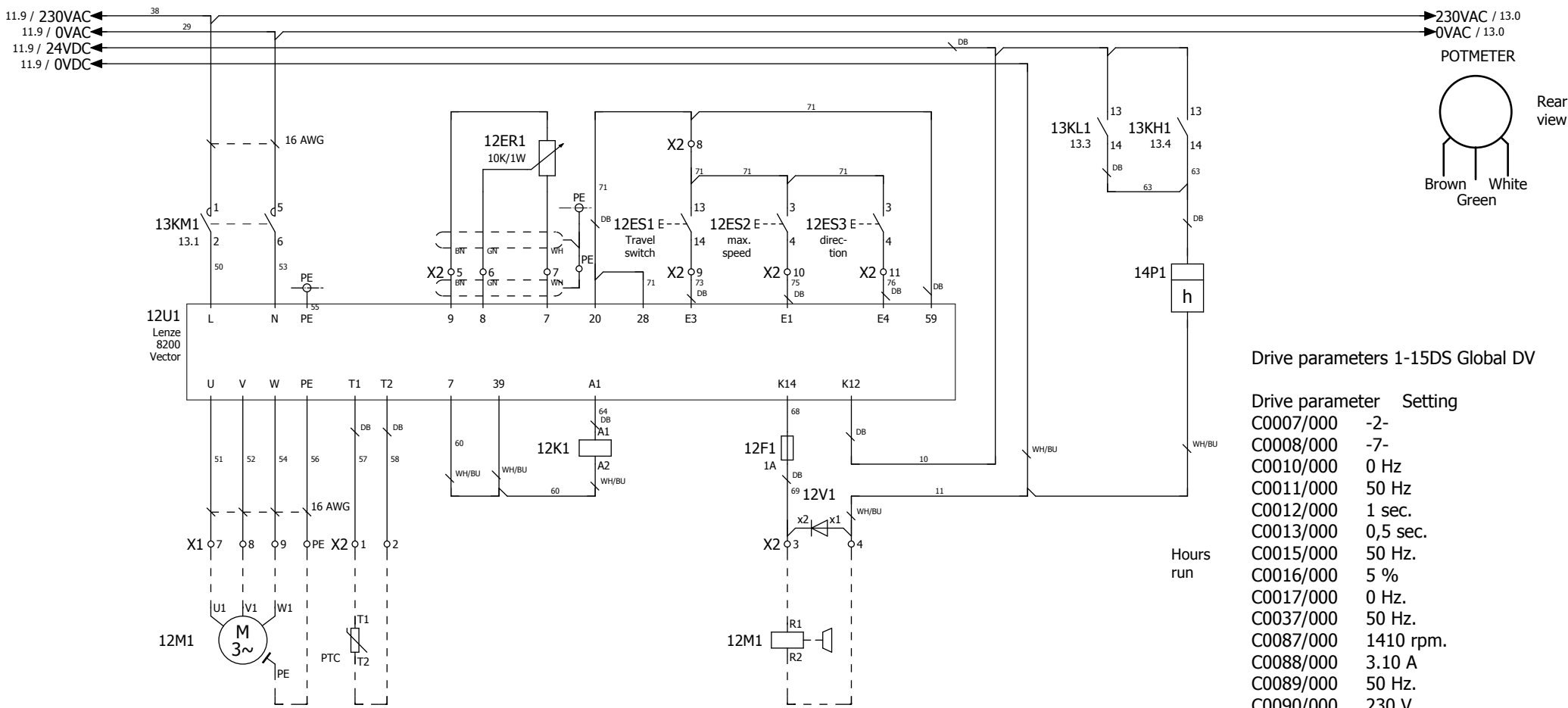
Blast motor
 20Hp/480V/24A Y
 20Hp/240V/48,8A D

- 1 - 2 11.1
- 3 - 4 13.3
- 5 - 6 11.1
- 13 - 14 10.6
- 21 - 22 11.0
- 51 - 52 10.3
- 61 - 62 13.4



Fan
230V AC

			Date	27-3-2012	Project name: 1-15DS DUAL VOLTAGE ULCSA E6540/ULCSA		Page description: Main-Voltage	Customer: Blastrac bv.	Drawing number: PJ11.1065.08	= + Page 11
			Ed.	HVDB						
			Appr							
Modification	Date	Name	Last print	20-4-2012						



Drive parameters 1-15DS Global DV

Drive parameter	Setting
C0007/000	-2-
C0008/000	-7-
C0010/000	0 Hz
C0011/000	50 Hz
C0012/000	1 sec.
C0013/000	0,5 sec.
C0015/000	50 Hz.
C0016/000	5 %
C0017/000	0 Hz.
C0037/000	50 Hz.
C0087/000	1410 rpm.
C0088/000	3.10 A
C0089/000	50 Hz.
C0090/000	230 V
C0091/000	0.8
C0105/000	0.9 sec.
C0119/000	-1-
C0142/000	-3-
C0148/000	-1- (*)
C0410/001	-1-
C0415/001	-6-
C0415/002	-25-
C0416/000	-2-
C0417/001	-1-

Drivemotor
 1 Hp/480V/1,9A
 1 Hp/277V/3,3A
 Incl.
 Thermistor

Failure drive
 24Vdc

Brake
 24Vdc

* Connect drivemotor
 in delta

(*) Motor identification will be 0 after applying

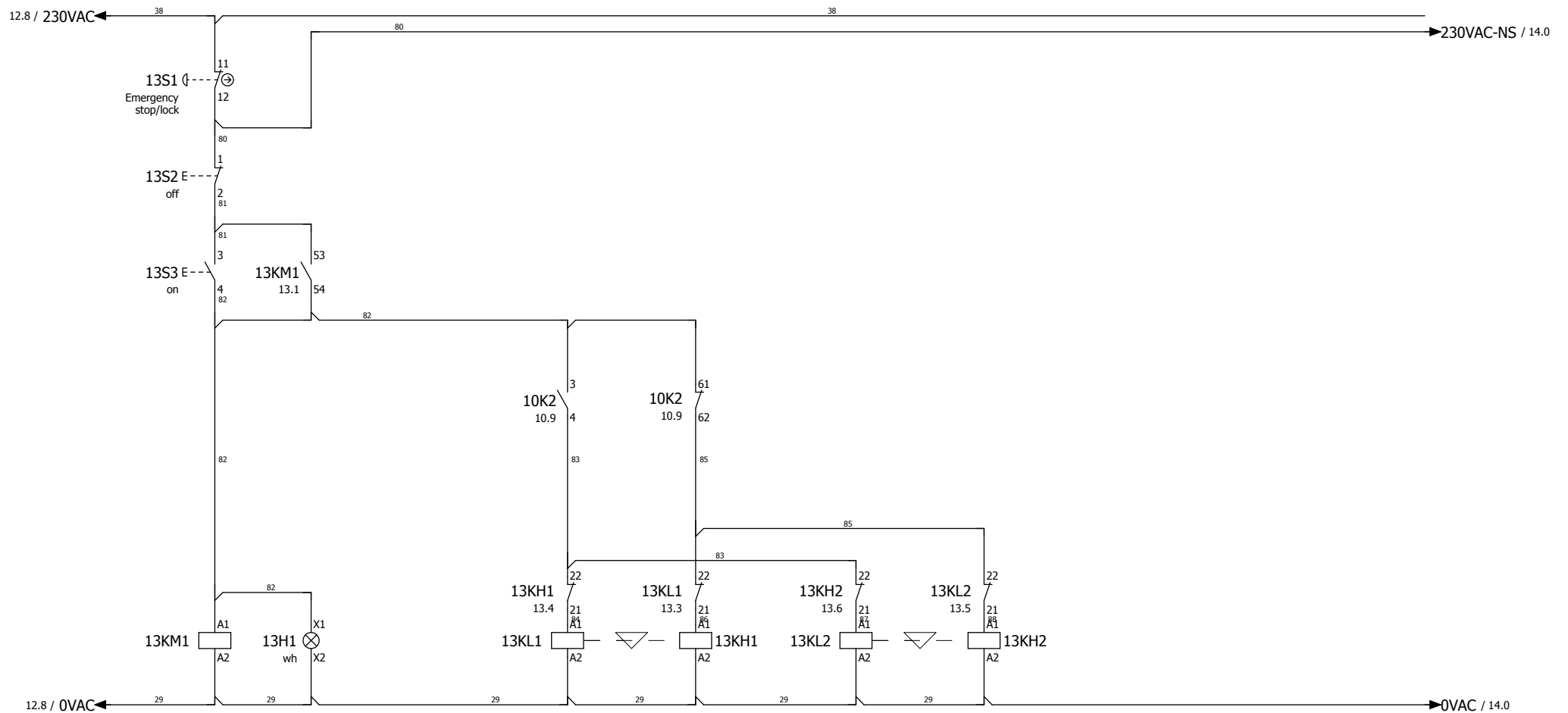
Modification	Date	Name	Last print	20-4-2012
			Date	27-3-2012
			Ed.	HVDB
			Appr	

Project name:
1-15DS DUAL VOLTAGE ULCSA
 E6540/ULCSA



Page description:
Main-Voltage

Customer:
Blastrac bv.
 Drawing number:
PJ11.1065.08



Control
voltage
on

1 2 12.1
5 6 12.1
13 14 10.7
53 54 13.2

1 2 10.1
3 4 10.2
5 6 10.2
13 14 12.6
22 21 13.4

1 2 10.2
3 4 10.2
5 6 10.3
13 14 12.7
22 21 13.3

1 2 10.6
3 4 10.6
5 6 10.6
22 21 13.6

1 2 10.5
3 4 10.5
5 6 10.5
22 21 13.5

Modification	Date	Name	Date
			20-4-2012

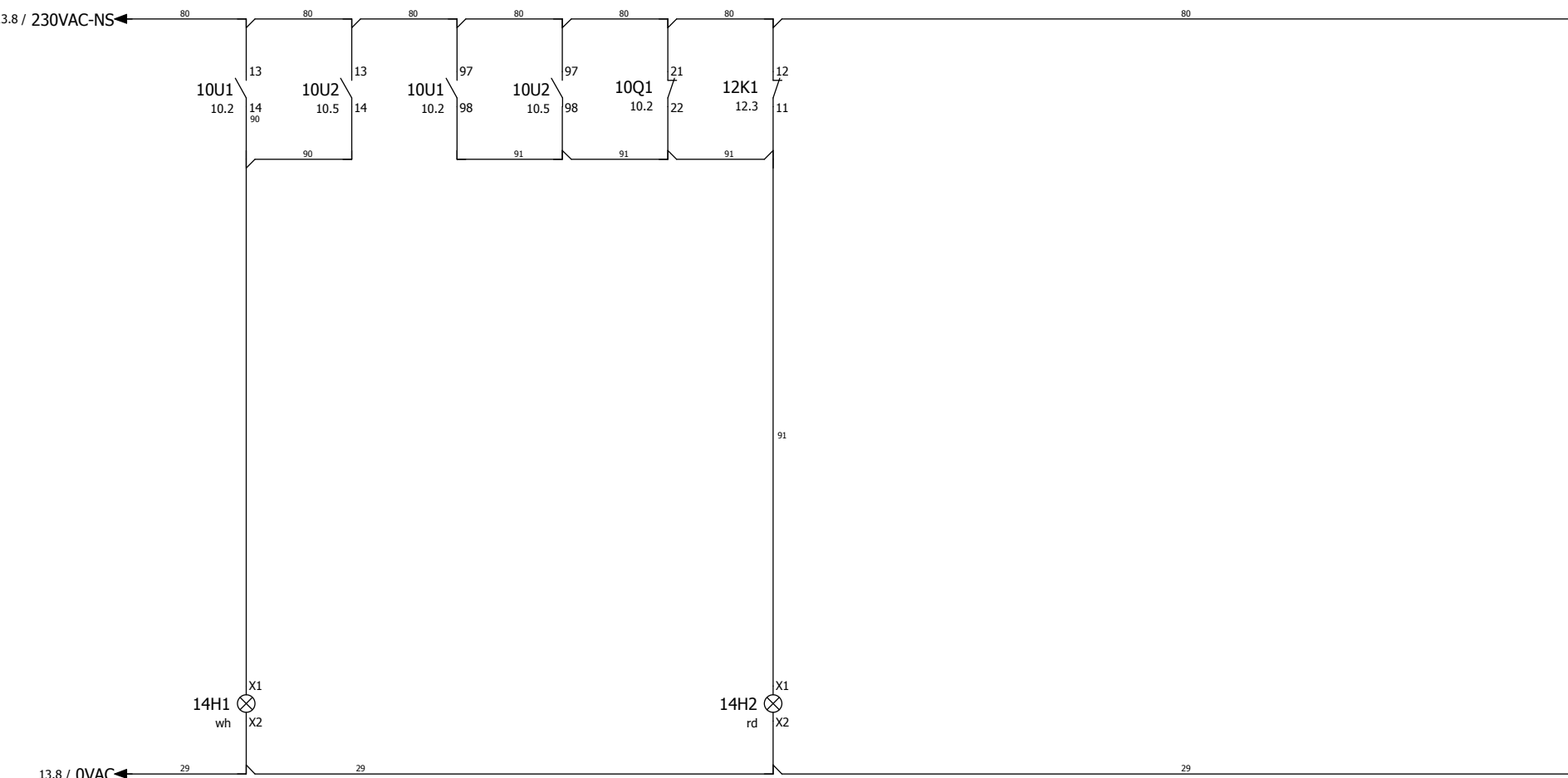
Project name:	1-15DS DUAL VOLTAGE ULCSA
	E6540/ULCSA



Page description:	Control-Voltage
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Customer:	Blastrac bv.
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Wheels on Hours run Failure

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				Ed.	HVDB	E6540/ULCSA				Control-Voltage		Drawing number:		PJ11.1065.08	+
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Terminal diagram

function text	Strip X0								Cable name					Page / column
	Cable name	cable type	Target designation	Connection point	terminal	jumper	Target designation	Connection point		cable type				
Supply 3x480Y/277V 60Hz or 3x240V 60Hz			10QM1	1	L1	.	10W1	L1					10.0	
=			10QM1	3	L2	.	10W1	L2					10.0	
=			10QM1	5	L3	.	10W1	L3					10.1	
=			PE	PE	PE	.	10W1	PE					10.1	

Terminal diagram

function text	Cable name					Strip X2					Cable name						
	cable type					Target designation	Connection point	terminal	jumper	Target designation	Connection point	cable type					
																	Page / column
Thermistor						12U1	T1	1	.	12M1	T1						12.2
Drivemotor 1 Hp/480V/1,9A 1 Hp/277V/3,3A Incl. Thermistor						12U1	T2	2	.	12M1	T2						12.2
Brake						12F1;12V1	x2	3	.	12M1	R1						12.4
Brake 24Vdc						11U1;12V1	-;x1	4	.	12M1	R2						12.5
Speed						12U1	9	5	.	12ER1							12.2
Drivemotor 1 Hp/480V/1,9A 1 Hp/277V/3,3A Incl. Thermistor						12U1	8	6	.	12ER1							12.3
=						12U1	7	7	.	12ER1							12.3
Failure drive						12U1;12U1	20;59	8	.	12ES1	13						12.4
Travel switch						12U1	E3	9	.	12ES1	14						12.4
max. speed						12U1	E1	10	.	12ES2	4						12.4
direction						12U1	E4	11	.	12ES3	4						12.5
Drivemotor 1 Hp/480V/1,9A 1 Hp/277V/3,3A Incl. Thermistor									PE	PE							12.3

Parts list

device tag	Quantity	designation	Type number	Brand	Blastrac number
CAB	1	1-10/15/20/20D univesel empty	1-10DS EMPTY	Haewa	E07833
CAB	2	Mont.goot BxH 25x80 MM vpp=56	T1-E 25X80 MONT.GOOT	Generic	E07834
CAB	1	M.rail verz.geel,7,5x35MM 2M	TS35 MONT.RAIL SLEUF	Generic	E07835
CAB	2	overdrive-forward zelfkl.60*10 witte pl/zw letter	RESOPAL 2-20DT/1	Generic	E07836
CAB	1	speed control zelfkl.45*10 witte pl/zw letter	RESOPAL 2-20DT/2	Generic	E07837
CAB	1	Bocht 90 M20 inw* M20 uitw	B/PG13/90	Generic	E07838
CAB	2	FITTING @16*M20	SP16/M20/A	Adaptaflex	E07839
CAB	2	FITTING @16*M20 DRAAIBAAR	SP16/M20/B	Adaptaflex	E03508
CAB	2	Bescherm slang metaal + pvc 16*13 zwart	SP16/ZWART	Adaptaflex	E00559
CAB	1	FITTING @25*M25 vast	SP25/M25/A	Adaptaflex	E07840
CAB	1	FITTING @25*M25 DRAAIBAAR	SP25/M25/B	Adaptaflex	E07841
CAB	1	Bescherm slang metaal + pvc 25*21.4 zwart	SP25/ZWART	Adaptaflex	E00560
CAB	1	Cable gland plug M20*1.5 brass, nickel-plated	WARTEL BLINDSTOP M20	Jacob	E07842
CAB	1	Cable gland M40*1.5 (PG29/36) brass, nickel-plated	WARTEL M40*1.5	Jacob	E00409
CAB	3	Cable gland nut M20*1.5 brass, nickel-plated	WARTELMOER M20*1.5	Jacob	E00406_1
CAB	1	Cable gland nut M25*1.5 brass, nickel-plated	WARTELMOER M25*1.5	Jacob	E00407_1
CAB	1	Cable gland nut M40*1.5 brass, nickel-plated	WARTELMOER M40*1.5	Jacob	E00409_1
CAB	15	Montagesnoer zwart AWG14 2.5mm2 UL-CSA	AWG 14 ZWART	LAPP	E07843
CAB	30	Montagesnoer rood AWG18 1.0mm2 UL-CSA	AWG 18 ROOD	LAPP	E07894
CAB	1	Internal wire black AWG18 1.0mm2 UL-CSA	AWG 18 ZWART	LAPP	E07845
CAB	15	Montagesnoer rood AWG22 0.5mm2 UL-CSA	AWG 22 ROOD	LAPP	E07846
CAB	15	Montagesnoer donkerblauw AWG22 0.5mm2 UL-CSA	AWG 22 D BL.	LAPP	E08012
CAB	50	Adereindhuls 0.5mm2 wit geïsoleerd	G 488 MONT.ADERHULS	Calpe	E07848
CAB	40	Adereindhuls 1mm2 rood geïsoleerd	G 490	Calpe	E07849
CAB	70	Adereindhuls 2x1mm2 rood geïsoleerd	G 490-TWIN MONT.A.H.	Calpe	E07850
CAB	50	Adereindhuls 1,5mm2 zwart geïsoleerd	G 491 MONT.A.H.	Calpe	E07851
CAB	20	Adereindhuls 2,5mm2 grijs geïsoleerd	G 492 MONT.ADERHULS	Calpe	E07852
CAB	20	Aderhuls 2x2,5MM2 blauw geïsoleerd	G 492-TWIN MONT.A.H.	Calpe	E07853
CAB	18	Adereindhuls 4mm2 oranje geïsoleerd	G 493 MONT.ADERHULS	Calpe	E07854
CAB	6	Aderhuls 10MM2 bruin geïsoleerd	G 495 MONT.ADERH.	Calpe	E07855
CAB	1	1-15DS dual voltage,incl.kleine stickers	STICKER 1-15DS DUAL VOLTAGE	Generic	E07856
CAB	1	Montagesnoer ge/gr. AWG8 10mm2 UL-CSA	AWG 8 GG	LAPP	E07866
CAB	6	Montagesnoer zwart AWG8 10mm2 UL-CSA	AWG 8 ZW	LAPP	E07867
CAB	1	Reducer M20*1.5 ext. M16*1.5 int. brass nickel plated	REDUCTIERING M20M16	Jacob	E08095
CAB	1	Cabel gland M16*1.5 (PG9/11) IP68 brass, nickel-plated 50616	WARTEL M16*1.5	Jacob	E00405
CAB	1	Cable gland nut M16*1.5 brass, nickel-plated	WARTELMOER M16*1.5	Jacob	E00405_1
CAB	1	Montagesnoer wit/blauw AWG22 0.5mm2 UL-CSA	AWG 22 WH/BL.	LAPP	E08016
12ER1	1	Potm. 10KOhm. 4W-500V	POTMETER 10 K OHM	Generic	454795
12ER1	1	Schroef aansluiting potmeter	POTMETER PRINT KLEM	Wieland	E05088
12ER1	1	Head Ø22 + mounting base for potentiometer	ZB4-BD912	Schneider Electric	E00866/2
12ES1	1	Limit switch XCKP - steel roller plunger - 1NO+1NC - snap -	XCK-P2102P16	Schneider Electric	454796
12ES2	1	White square flush complete pushbutton Ø16 spring return 1NO	XB6-CA11B	Schneider Electric	E00867
12ES3	1	White square flush complete pushbutton Ø16 spring return 1NO	XB6-CA11B	Schneider Electric	E00867
10F1	1	Zek. autom. AB 2P 1A C-kar UL 489 480/277V	C60N-1489-A2C010	Allen Bradley	E07824
11F1	1	Zek. autom. AB 2P 6A D-kar UL 489 480/277V	C60N-1489-A2D060	Allen Bradley	E07816
11F2	1	Zek. autom. AB 1P 4A C-kar UL 489 480/277V	C60N-1489-A1C040	Allen Bradley	E07962
11F3	1	Zek. autom. AB 2P 2A C-kar	C60N-1492-SP2C020	Allen Bradley	E07904
11F4	1	ZEK.SMELTV. 5*20MM SLOW 1A	ZEK.GLAS TRAAAG 1 A	Generic	E07815
11F4	1	Conn. railk. 4MM2 grijs WK4/U	VU4-4 GRIJS CONN.R.K	Wieland	E07829
11F4	1	ZEK.KLEM 10MM2 GRIJS 5*20MM	VUSI 4-10M C.ZEK.KLM	Wieland	E01321
11F4	1	VOOR VUSI 4-10	VASI 4-10 C.SCHOT	Wieland	E05154
11F4	1	Eindsteun V4 klein 9708/2S35	EINDSTEUN V4 CON.ACC	Wieland	E07828
12F1	1	ZEK.KLEM 10MM2 GRIJS 5*20MM	VUSI 4-10M C.ZEK.KLM	Wieland	E01321
12F1	1	VOOR VUSI 4-10	VASI 4-10 C.SCHOT	Wieland	E05154
12F1	1	ZEK.SMELTV. 5*20MM SLOW 1A	ZEK.GLAS TRAAAG 1 A	Generic	E07815
13H1	1	tekstpl.houder 27*13 h=45 elfi	F6300	Schneider Electric	E07831

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			Ed.	HVDB			E6540/ULCSA		Partlist		Drawing number:		PJ11.1065.08		+	
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Parts list

device tag	Quantity	designation	Type number	Brand	Blastrac number
13H1	1	White pilot light head Ø22 plain lens for integral LED	ZB5-AV013	Schneider Electric	333-3454
13H1	1	White light block with body/fixing collar integral LED 230.2	ZB5-AVM1	Schneider Electric	E05093
14H1	1	tekstpl.houder 27*13 h=45 elfi	F6300	Schneider Electric	E07831
14H1	1	White pilot light head Ø22 plain lens for integral LED	ZB5-AV013	Schneider Electric	333-3454
14H1	1	White light block with body/fixing collar integral LED 230.2	ZB5-AVM1	Schneider Electric	E05093
14H2	1	tekstpl.houder 27*13 h=45 elfi	F6300	Schneider Electric	E07831
14H2	1	Red pilot light head Ø22 plain lens for integral LED	ZB5-AV043	Schneider Electric	E00360
14H2	1	Red light block with body/fixing collar integral LED 230.240	ZB5-AVM4	Schneider Electric	E07817
10K1	1	Volt.bew.2w30-300/500V 24-240V	RM4-UA33MW	Schneider Electric	500-3570-EDA
10K2	1	Contacteur 4.0kW 400vac 1M/1V coil 230Vac	LC1-D09-P7	Schneider Electric	333-3384
10K2	1	Auxiliary contact block - 2 NC - screw-clamps terminals	LAD-N02	Schneider Electric	E07818
12K1	1	Interface relais with socket 1CO 6A 24Vdc	38.51.7.024.0050	Finder	E05007
13KH1	1	Contacteur 15kw 400VAC coil 230VAC 1NO/1NC	LC1-D32-P7	Schneider Electric	E07819
13KH2	1	Contacteur 15kw 400VAC coil 230VAC 1NO/1NC	LC1-D32-P7	Schneider Electric	E07819
13KL1	2	Reversing switch kit	LAD-9R1V	Schneider Electric	E07820
13KL1	1	Contacteur 15kw 400VAC coil 230VAC 1NO/1NC	LC1-D32-P7	Schneider Electric	E07819
13KL2	1	Contacteur 15kw 400VAC coil 230VAC 1NO/1NC	LC1-D32-P7	Schneider Electric	E07819
13KM1	1	Auxiliary contact block - 2 NO - screw-clamps terminals	LAD-N20	Schneider Electric	500-3394
13KM1	1	Contacteur 4.0kW 400vac 1M/1V coil 230Vac	LC1-D09-P7	Schneider Electric	333-3384
10L1	1	Prim. 75/5A 3.75VA/Kl.1 UL-CSA	M55E-94A	Crompton	E00491
11M1	1	VENTILATOR80*80*38MM 240VAC	FAN 80*80*38	PABST	E05140
11M1	2	UITL.FILT.MONT.UITSP. 80*80MM	221-336 KAST KL.BEH.	PABST	E00283
11M1	2	Finger Guard 80mm.	250-1612 KAST KL.BEH	PABST	E00283
10P1	1	Amperemeter 75A/5 48*48 met cornermask	IQ/EQ48 75A/5A	Crompton	E07821
10P1	1	IV48 48*48mm, IP-20	IQ/EQ 48 AFDEKKAP	Crompton	E07822
10P2	1	Voltmeter 500V 48*48 met cornermask Crompton	IQ/EQ48 500V	Crompton	BG007854
14P1	1	Hour counter 48*48mm 10-80VDC UL/CSA	E242-151G	Crompton	E08240
10Q1	1	Motor safety switch 40-50A	SIEM 3RV1031-4HA10	Siemens	E07963
10Q1	1	Auxiliary contact for 3RV10 circuit breaker 1NC+1NO	SIEM 3RV1901-1E	Siemens	E07964
10QM1	1	Hoofdschak. 100A, 3P niet vergrendelbaar	P3-100/E	Kraus Naimer	E07965
10S1	1	Pushbutton head Ø22 spring return without cap	ZB5-AA0	Schneider Electric	E01318
10S1	1	Single contact block with body/fixing collar 1NC screw clamp	ZB5-AZ102	Schneider Electric	E00357
10S1	1	Red cap marked STOP for circular pushbutton Ø22	ZBA-434	Schneider Electric	E01353
10S1	1	tekstpl.houder 27*13 h=45 elfi	F6300	Schneider Electric	E07831
10S2	1	tekstpl.houder 27*13 h=45 elfi	F6300	Schneider Electric	E07831
10S2	1	Pushbutton head Ø22 spring return without cap	ZB5-AA0	Schneider Electric	E01318
10S2	1	Single contact block with body/fixing collar 2NO screw clamp	ZB5-AZ103	Schneider Electric	E08169
10S2	1	Green cap marked START for circular pushbutton Ø22	ZBA-333	Schneider Electric	E05078
13S1	1	Red Ø40 Emergency switching off pushbutton head Ø22 latching	ZB4-BS54	Schneider Electric	001398
13S1	1	Single contact block with body/fixing collar 1NC screw clamp	ZB4-BZ102	Schneider Electric	B21153
13S1	1	Sticker noodstop rood/geel	NOODSTOPSTICKER	Generic	E07832
13S2	1	tekstpl.houder 27*13 h=45 elfi	F6300	Schneider Electric	E07831
13S2	1	Pushbutton head Ø22 spring return without cap	ZB5-AA0	Schneider Electric	E01318
13S2	1	Red cap marked STOP for circular pushbutton Ø22	ZBA-434	Schneider Electric	E01353
13S2	1	Single contact block with body/fixing collar 1NC screw clamp	ZB5-AZ102	Schneider Electric	E00357
13S3	1	tekstpl.houder 27*13 h=45 elfi	F6300	Schneider Electric	E07831
13S3	1	Pushbutton head Ø22 spring return without cap	ZB5-AA0	Schneider Electric	E01318
13S3	1	Green cap marked START for circular pushbutton Ø22	ZBA-333	Schneider Electric	E05078
13S3	1	Single contact block with body/fixing collar 1NO screw clamp	ZB5-AZ101	Schneider Electric	333-3224
11T1	1	Transformator 440/230V ac 800VA	SIEM 4AM55 42-8DD40-0FA0	Siemens	E07872
10U1	1	Softst.3-f 30A 200-480V/110-220vac (15kW)	150-C30NBD	Allen Bradley	E07825
10U2	1	Softst.3-f 30A 200-480V/110-220vac (15kW)	150-C30NBD	Allen Bradley	E07825
11U1	1	Power supply 24Vdc 3A 200-520vac	ABL8-RPS24030	Schneider Electric	E05149
12U1	1	E82EV751K2C200 vector/no flite	FREQ.REG 0.75 KW (1FASE)	Lenze	E07826
12U1	1	E82ZBC bed. display	FREQ.REG BED.DISPLAY	Lenze BV	E00415
12U1	1	E82ZAFS standaard I/O inbouw	FREQ.REG I/O	Lenze	E00482

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				Last print	20-4-2012	Appr			E6540/ULCSA				Drawing number:	PJ11.1065.08				



CSA INTERNATIONAL

Certificate of Compliance

Certificate: 2459264

Master Contract: 251963

Project: 2459264

Date Issued: December 1, 2011

Issued to: ART4 Technical Systems B.V.
Nieuwe gracht 11
3763 LP Soest
THE NETHERLANDS

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only



Issued by: G. Vertechy
G. Vertechy

PRODUCTS

CLASS 3211 07 INDUSTRIAL CONTROL EQUIPMENT – Miscellaneous Apparatus
CLASS 3211 87 INDUSTRIAL CONTROL EQUIPMENT – Miscellaneous Apparatus –
Certified to US Standards

Motor control box, enclosure Type 1

Model 350E SB UL, 480Y/277 V, 30 A, 18 Hp, 3-ph, 60 Hz, SCCR 5kA

Model 500E SB UL, 480Y/277 V, 45 A, 29 Hp, 3-ph, 60 Hz, SCCR 5kA

Model BDC 854, 480Y/277 V, 62 A, 40 Hp, 3-ph, 60 Hz, SCCR 5kA

Model 654 BDC, 480Y/277 V, 36 A, 27 Hp, 3-ph or 230 V, 72 A, 27 Hp, 3-ph, 60 Hz, SCCR 5kA

Model 1-10DS Dual Voltage, 480Y/277 V, 19 A, 16 Hp, 3-ph or 230 V, 38 A, 16 Hp, 3-ph, 60 Hz, SCCR 5kA

Model 1-15DS Dual Voltage, 480Y/277 V, 26 A, 21 Hp, 3-ph or 230 V, 52 A, 21 Hp, 3-ph, 60 Hz, SCCR 5kA

Model 1-8 DPS30, 230V, 14 A, 4.3 Hp, 1-ph, 60 Hz, SCCR 5kA

Model 1-10 DPS75, 230V, 29 A, 10.5 Hp, 3-ph, 60 Hz, SCCR 5kA

Model BMC-EHY335, 480Y/277 V, 25 A, 17 Hp, 3-ph, 60 Hz, SCCR 5kA

Note:

- The motor control boxes are factory installed on industrial floor treatment equipment. The suitability of the combination is to be determined by CSA-International or other NRTL.

Certificate: 2459264
Project: 2459264



Master Contract: 251963
Date Issued: December 1, 2011

APPLICABLE REQUIREMENTS

- CSA Standard C22.2 No. 0 - General Requirements, Canadian Electrical Code Part II
- CSA Standard C22.2 No. 04 - Bonding of Electrical Equipment
- CSA Standard C22.2 No. 14 - Industrial Control Equipment
- UL508 - Industrial Control Equipment
- UL508A - Industrial Control Panels



CSA INTERNATIONAL

Supplement to Certificate of Compliance

Certificate: 2459264

Master Contract: 251963

*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
2459264	December 1, 2011	Original cCSAus Certification of motor control boxes Types 350E SB UL, 500E SB UL, BDC 854, 654 BDC, 1-10DS dual voltage, 1-15DS dual voltage, 1-8 DPS30, 1-10 DPS75 and BMC-EHY335.

Blastrac

13201 North Santa Fe Avenue
Oklahoma City, OK 73114
800-256-3440
Fax: 866-485-1046
www.blastrac.com





13201 North Santa Fe Avenue • Oklahoma City, OK 73114 • Ph: 800-256-3440 • F: 405-478-8608 blastrac.com

Product Warranty

Standard Equipment Products:

Blastrac warrants its Blastrac Standard Equipment Products against defects in quality of material and workmanship, under normal and proper use for a period of **1 Year** from the date of delivery, as noted on the returned warranty registration card, or, in the case of **Rental Fleet Machines, 180 Days** from the date of assignment to Rental Fleet. This warranty is non-transferable and is extended to machines purchased and entered into the normal service of surface preparation by a recognized professional or qualified contractor. Blastrac makes this warranty only to the buyer who purchases the products directly from Blastrac or its Authorized Distributor. This warranty does not include expendable parts such as, but not limited to, blades, blast wheels, wear plates, liners, seals, and electrical components. All purchased parts utilized in the manufacture will be honored to the original manufacturer's specified warranty.

If the buyer does not return the warranty card or register the product online at www.blastrac.com within 30 days after taking delivery of Blastrac Standard Equipment Products, the warranty period is limited to 6 months from the date of delivery noted on shipping receipt.

Hand Tool Products:

Blastrac warrants its BLASTRAC Hand Tool Products, including hand grinders and accessories, against defects in material and workmanship under normal and proper use for a period of **90 days** from the date of delivery or, in the case of Rental Fleet Machines, from the date of assignment to a Rental Fleet. Blastrac makes this warranty only to the buyer who purchases the products directly from Blastrac or its authorized distributor. This warranty does not include expendable parts such as blades.

If the buyer does not return the warranty card, or register online at www.blastrac.com within 15 days after taking delivery of Blastrac Hand Tool Products, the warranty period is limited to 30 days from the date of delivery noted on shipping receipt.

WARRANTY TERMS AND CONDITIONS:

1. Blastrac's obligation under this warranty is limited to the replacement or repair, at Blastrac's option, of products and does not include, labor, the cost of transportation, loss of operating time, or normal maintenance services.
2. This warranty does not apply to failure occurring as a result of abuse, misuse, negligence, corrosion, erosion, normal wear and tear, alterations or modifications made to products without the express written consent of Blastrac.
3. The buyer must submit all warranty claims no later than thirty (30) days after buyer becomes aware of the basis for any such claim, or should have become aware of the basis for any such claim in the exercise of reasonable diligence.

To return parts for warranty consideration, please call Blastrac Customer Service at **800-256-3440**. Your customer service representative will obtain the necessary information to complete the Blastrac Returned Merchandise Authorization (RMA) Form. Blastrac will then send the RMA form to the customer authorizing the return of the parts for warranty evaluation. The parts must be received within sixty (60) days following the RMA origination date or the warranty claim will be denied. Once the parts are received they will be evaluated for warranty.

If the customer cannot wait for the evaluation/replacement of the parts during this process, the customer must issue a new purchase order to Blastrac for the replacement parts before they can be shipped. Once the evaluation process is complete and parts are deemed a valid warranty claim, a credit will be issued against this invoice.

4. The buyer may not return Blastrac products without written authorization to do so through a Blastrac RMA.

5. Blastrac reserves the right to inspect and determine the scope of its warranty responsibilities for any returned Blastrac products.

6. Blastrac makes no warranty with respect to accessories it does not manufacture, including but not limited to, engines, motors, batteries, tires and all other parts. See component manufacture warranty.

7. Blastrac reserves the right to make product changes or improvements without prior notice and without undertaking any obligation for such changes or improvements on previously sold products.

8. The above warranty conditions can only be altered by Blastrac. Blastrac must confirm alterations in writing for each specific transaction.

9. Blastrac reserves the right to modify this warranty for used or demo products on an individual transaction basis. Blastrac will include warranty modifications on its invoices for used or demo products.

10. BLASTRAC DOES NOT AUTHORIZE ANY PERSON, REPRESENTATIVE, SERVICE OR SALES OUTLET TO MAKE ANY WARRANTY DIFFERENT FROM THIS PRODUCT WARRANTY.

11. EXCEPT FOR ITS PRODUCT REPAIR OR REPLACEMENT OBLGATIONS DESCRIBED IN THIS PRODUCT WARRANTY, UNDER NO CIRCUMSTANCES SHALL BLASTRAC BE LIABLE TO THE BUYER, OR ANY OTHER PERSON, FOR ANY DIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE BLASTRAC PRODUCT, OR FOR ANY SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER, INCLUDING WITHOUT LIMITATIONS, DAMAGES FOR ANY LOSS OF GOODWILL, WORK STOPPAGE, OR ANY AND ALL OTHER COMMERCIAL DAMAGES OR LOSSES.

12. BLASTRAC MAKES NO OTHER PRODUCT WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.



IMPORTANT!

TO THE DELIVERING DISTRIBUTOR OR END USER

To ensure the proper warranty coverage is extended to the owner of this machine, fill in the necessary information below **COMPLETELY** and **ACCURATELY** and retain for your records. **Go to www.blastrac.com and register online.** Click on the Register icon in the left column of the homepage, and fill out the product registration form with the same information that will be recorded here.

The warranty period will start upon the delivery date of the machine.

The distributor or the end user must provide the machine warranty information when the machine is delivered. Registration of the machine will extend the warranty period from the recorded delivery date entered with product registration. **Failure to comply will make any and all warranties on the equipment void after 6 months.**

OWNER/END USER'S REFERENCE INFORMATION

Delivery Date _____	Machine Model No. _____
Delivering Distributor's Name and Address _____	Machine Serial No. _____
_____	Modifications _____
_____	_____
_____	_____
_____	_____
_____	_____

Signature of Delivering Distributor's Representative

Blastrac is a registered trademark of Blastrac,NA
Fold and Detach Here if Mailing

Warranty Registration

IMPORTANT! To ensure that your Blastrac® machine is covered under warranty, please provide the information recorded here by registering online at blastrac.com, or complete this page and fax to 866-485-1046, or if you prefer, detach and mail to:

Blastrac, 13201 North Santa Fe Avenue, Oklahoma City, OK 73114-9901

(Please print legibly)

Company _____

Address _____

City, State, & Zip _____

Telephone No. _____ Contact Person _____

Date of Purchase _____ Date Received _____

Machine Model No. _____ Serial No. _____

Distributor Name _____

End User Name _____

End User E-mail _____