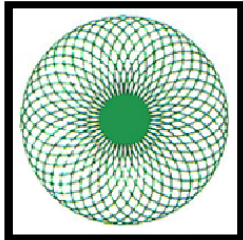


WINGET



Croker

CUMFLOW RP150XD MK2 ROTATING PAN MIXER

PARTS & OPERATION MANUAL

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The contents of this handbook although correct at the time of publication, may be subject to alteration by the manufacturers without notice and Winget Limited can accept no responsibility for any errors or omissions contained within the following pages. Nor can we accept any liability whatsoever arising from the use of this manual howsoever caused.

Winget Limited operate a policy of continuous product development. Therefore, some illustrations or text within this publication may differ from your machine

Winget Limited can accept no responsibility for incorrectly supplied parts unless the machine serial number, part number and a full description of the items required is given when the order is placed.

NOTE

Imperial fixings (bolts, setscrews, nuts, washers etc) have been progressively changed to Metric. If in doubt as to whether you have a Metric or Imperial fixing please order the metric items listed, i.e. bolt or setscrew and associated or flat and spring washers to replace the existing items

NOTE

Electrical cables particularly those with copper conductors suffer from a condition known as 'relaxation' which may cause wiring to work loose over a period of time, it is recommended that the tightness of wiring connections and terminals are checked following the first month in service.

**OPERATING
AND
MAINTENANCE MANUAL**

SECTION 1
GENERAL INFORMATION
RP150XD MK2

COMPANY DETAILS AND GENERAL INFORMATION

For any spares or service work, please contact:-

Winget Limited
P.O. Box 41
Edgefold Industrial Estate
Plodder Lane
Bolton
Lancs
BL4 OLR

Telephone No:	++ 44 (0) 1204 854650
Facsimile No:	++ 44 (0) 1204 854663
'E Mail'	crokersales@winget.co.uk parts@winget.co.uk service@winget.co.uk

ORDERING SPARES

To help us to complete your order promptly and correctly we need:-

- Machine type and serial number
- Description and quantity of parts required
- The full address to which the parts are to be sent

Winget Limited can accept no responsibility for incorrectly supplied parts unless the machine serial number, part number and a full description of the items required is given when the order is placed.

IMPORTANT NOTICE

The CUMFLOW RP150XD MK2 (formerly the RP100HD) is a high performance mixer

The following precautions are necessary to obtain the best results and to avoid damage to the MIXING STAR and PAN DRIVE

AGGREGATES

Strict control of graded aggregates must be maintained
Maximum size 19mm

Oversize lumps of aggregate or rogue materials must be prevented from entering the Pan

MIXING STAR BLADES

They are to a special shape and material to prolong wear life. They should not be modified in any way and only replaced with GENUINE 'CROKER' spares obtained from **WINGET LIMITED.**

A daily check is advisable to ensure that the Blades/Wearing parts are secure and undamaged.

MAXIMUM BATCH LOADS

UNDER NO CIRCUMSTANCES should the Maximum Batch Loads quoted be exceeded nor should the mixer be stopped or re-started when there is a mix in Pan

MIXING PAN

Ensure that the Mixing Pan is rotating concentrically and that the pan base is Horizontal.

WARNING

THE MANUFACTURER ACCEPTS NO RESPONSIBILITY FOR ANY DAMAGE OR FAILURE RESULTING FROM OPERATIONAL MISUSE OR MALPRACTICE. ANY MODIFICATIONS TO THE MACHINE WILL AFFECT ITS WORKING PARAMETERS AND

SAFETY FACTORS. REFER TO THE MANUFACTURERS BEFORE FITTING ANY NON STANDARD EQUIPMENT OR PARTS.

THE MANUFACTURERS ACCEPT NO RESPONSIBILITY FOR ANY MODIFICATIONS MADE AFTER THE MACHINE HAS LEFT THE FACTORY, UNLESS PREVIOUSLY AGREED IN WRITING. THE MANUFACTURERS WILL ACCEPT NO LIABILITY FOR DAMAGE TO PROPERTY, PERSONNEL OR THE MACHINE IF FAILURE IS BROUGHT ABOUT DUE TO SUCH MODIFICATIONS, OR THE FITMENT OF SPURIOUS PARTS.

RP150XD MK2
OPERATIONAL AND SAFETY
REQUIREMENTS

PRE-DELIVERY

- 1.1 Drive coupling alignments, pan and star meshing of pan rack and drive gear.
- 1.2 Operating clearances star blade to pan. Fixed blade to pan wall.
- 1.3 Correct oil level in gearboxes. All grease points charged. Gear teeth greased.
- 1.4 No load test. Correct rotations.

PRE INSTALLATION

- 2.1 Check consignment.
- 2.2 Offload equipment using certified lifting gear of suitable capacity, by a competent person (see separate chart for nett weight).

INSTALLATION

- 3.1 Refer to contract arrangement and site instructions.
- 3.2 Mixer to be mounted on supports of adequate strength and rigidity to prevent undue vibration when mixing and securely bolted.
- 3.3 Mixer frame to be level on structure, add packers as required.
- 3.4 Check that pan is correctly seated and that pan rack and drive gear are in correct mesh.

ELECTRICAL SERVICES

- 4.1 Refer to wiring diagram in Ops Manual. All wiring to be undertaken by competent electrician, it is recommended that the mains electrical supply is provided via an earth leakage circuit breaker. **NOTE:** electrical cables particularly those with copper conductors suffer from a condition known as 'relaxation' which may cause wiring to work loose over a period of time, it is recommended that the tightness of wiring connections and terminals are checked following the first month in service.

OPERATION

- 5.1 Correct oil level in the gearboxes.
- 5.2 Check the Mixing pan clear of loose nuts and bolts to prevent damage to fingers and blades.
- 5.3 Check correct rotation – mixing star – anti clockwise; mixing pan – anti clockwise. All when viewed from the top.
- 5.4 Blade operating clearances adjust in line with maintenance instructions.
- 5.5 Never exceed manufacturer's maximum capacity as detailed in specification.

SHUTDOWN

- 6.1 Prior to any work being carried out mixer to be isolated and physically locked off
- 6.2 Follow the procedures detailed in your companies Health and Safety Policy at all times.
- 6.3 Ensure all storage bins containing materials to be mixed are isolated.

MAINTENANCE

- 7.1 Ensure that all maintenance is carried out in accordance with the Parts and Operating manuals and proprietary manufacturer's specific instruction.
- 7.2 Isolate electrical and other services to the mixer as section 6 above.
- 7.3 Service at recommended intervals.
- 7.4 Use **Croker** manufactured replacement parts available from **WINGET LIMITED**.
- 7.5 Ensure all safety guards and interlocks are reinstated prior to operating mixer.

GENERAL

- 8.1 Under on circumstances should the Maximum Batch Loads be exceeded by either weight and volume as stated in Technical Specification.

- 8.2 Mixer star blades to be checked daily for damage.
- 8.3 Pan rim and base wearing plates must be replaced before excessive wear causes distortion.
- 8.4 Ensure mixing pan is rotating concentrically and pan base is rotating in horizontal plane.
- 8.5 Mixer must not be stopped and started when there is mix in the pan.
- 8.6 Refer to the Contract Drawing for scope of supply and the Site instruction notes outlining weights etc.
- 8.7 Refer to Method Statement when installation and commissioning is responsibility of Croker.

Nett Weights Max (kgs)

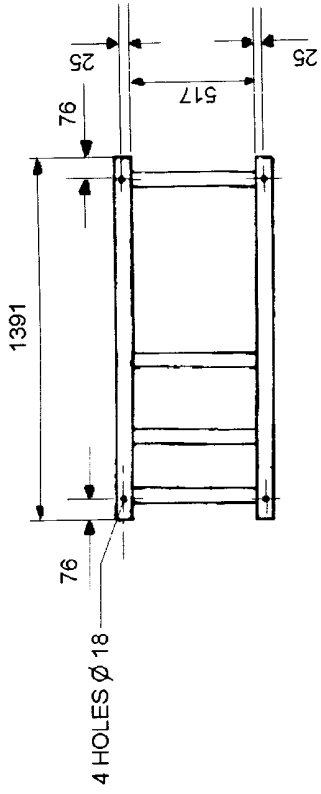
9.1	RP100XD	900	RP1250XD	4840
	RP150XD	1100	RP1500XD	4980
	RP200XD	1400	RP3000XD	7112
	RP400XD	2000	FP1000	4040
	RP550XD	2150	FP1500	4065
	RP850XD	2600	FP2000	4100

- 9.2 Refer to technical specification for nett weights of ancillary equipment.
- 9.3 Refer to contract drawing for nett weights of ancillary equipment.

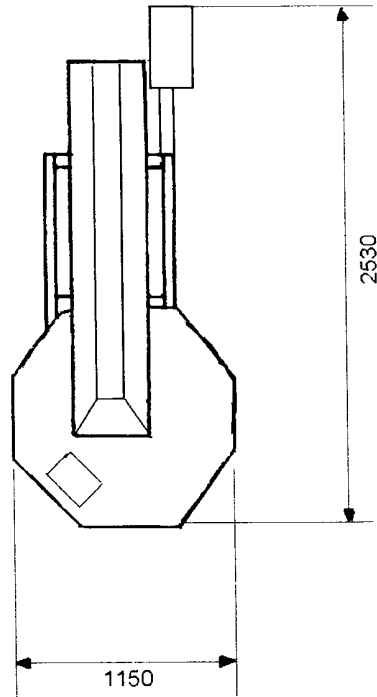
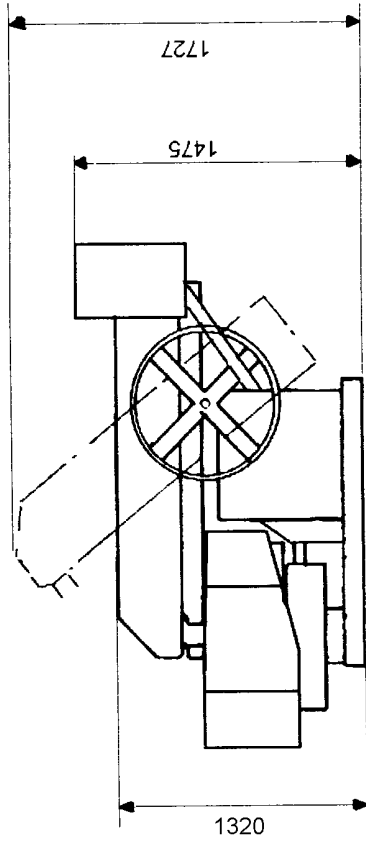
Miscellaneous

- 10.1 Noise. Measured in accordance with Article V of Directive 2000/14/EC
Noise Emission in the Environment by Equipment for Use Outdoors:- 105Lwa

INSTALLATION DRAWING



NOTES
STAR DRIVE MOTOR 3.0Kw (BROWN GROUP BH402)
PAN DRIVE MOTOR 2.2Kw (BROWN GROUP BH302)
MACHINE WEIGHT RP150XD MK2 1100 KG APPROX



**OPERATING
AND
MAINTENANCE MANUAL**

SECTION 2

**INSTALLATION AND OPERATING
INSTRUCTIONS**

PRE-INSTALLATION

On arrival of the equipment it is advisable to check that all packages listed on the consignment note have been received.

The equipment must be offloaded using certified lifting gear of suitable capacity, by a competent person.

An outline drawing and bolt hold plan is normally sent prior to the despatch of the machine and will enable preparations to be made for the installation. With the `picture` of what the machine will look like when it is assembled, the ancillary equipment dismantled for transport can easily be identified.

INSTALLATION

Please refer to the contract arrangement and site instructions as applicable.

It is recommended that a concrete foundation (to take foundation bolts – not supplied) should be provided for the machine to be mounted on

Before completing the installation, check that the main mixer frame is level with a spirit level. Packings should be inserted as required under the main frame. Check that the pan is seated and that the pan rack and drive gear are in mesh.. Also check that all the blade clearances are in line with the maintenance instructions.

On connecting to the power supply, the wiring diagram must be referred to.

Note:- it is recommended that the mains electrical supply is taken via an earth leakage circuit breaker.

The wiring is correctly connected to the motors when the pan and star drive rotate as follows:-

- The mixing pan and mixing star rotate anti-clockwise when looking from the top.

NOTE:- the proximity sensors below the pan and star drive lifting mechanism are fitted with small LED's which light up when the sensors are operating correctly.

OPERATING THE MIXER

Prior to start up, the following points should be checked:-

- 1) That there is oil in a) the pan drive gearbox
b) the star drive gearbox
- 2) The mixing pan should be clear of loose nuts, bolts, spanners, etc as these will damage the fingers and blades.
- 3) Check that the blade clearances are correct and if necessary adjust, in line with the maintenance instructions.
- 5) To raise the mixing star out of the mixing pan, turn the hand wheel in a clockwise direction until the arm is at 45°
- 6) To lower, turn the hand wheel anti-clockwise and lower gently. The mixer will automatically start if the mixing pan is in position. When the mixing pan is removed the mixer cannot be operated as the proximity switches need to sense the pan in position to complete the electrical circuit
- 7) On completion of the mixing cycle the raising of the mixing star operates a limit switch which automatically stops all moving parts
- 8) The pan can then be removed by hand or with the special lifting trolley available as an option

IMPORTANT:

After each mix the contents of the pan must be completely discharged. At the end of each period of operation the mixing pan, mixing blades, and fingers, must be washed down to prevent product setting on them and so impairing the efficiency of the machine. **NOTE:- isolate the electrical supply before washing down the mixer and do not aim the water jet directly at the electrical control panel or related switch gear or sensors**

OPERATING THE MIXER

SAFETY NOTES

Never operate the mixer unless you have read and fully understand the contents of the Operators Manual

Never operate the mixer whilst wearing loose fitting clothing

Never reach inside the Pan whilst it is rotating

Never operate any equipment unless you have received adequate training

Cement, certain other minerals and organic compounds can cause skin irritation leading to Dermatitis. Always use Personal Protective Equipment i.e. gloves etc to protect the skin from direct contact. If in any doubt about the materials being used consult your employers COSHH manual

Wear Eye protection to protect your eyes from dust and liquid splashes

Do not attempt to remove the pan single handedly, obtain assistance, use the Pan Trolley (if provided) or use suitable lifting equipment

Do not operate the mixer with any of the guards removed, safety devices or interlocks disconnected. They are there to offer you some protection, ensure they are correctly maintained

Carry out the daily maintenance before operating the mixer and report defects to your supervisors

Oils, Greases and Lubricants are skin irritants and prolonged direct skin contact can cause skin cancer. PPE or barrier creams should be used when carrying out maintenance work, wash your hands on completion

Always dispose of waste oils and lubricants in a proper manner, it is illegal to pour it down drains or bury it. Contact your local authority for a list of authorised disposal sites

Always disconnect the power supply at the mains before carrying out any maintenance work or cleaning the equipment down. Do not turn on the power until everything has dried out

Do not allow waste from the wash down process to enter the public drainage system unless it has been properly filtered

Decals and Instruction Plates are attached to the equipment to warn against hazards and assist in the safe operation of the equipment, if they become damaged or defaced they must be replaced.

OPERATING INSTRUCTIONS FOUR WHEEL PAN TROLLEY

The Four-Wheel Pan Trolley is designed to allow the safe and speedy removal and transportation of the pan and mixed materials to wherever they may be required within the plant. The following instructions should be followed to ensure the Four Trolley is used safely and correctly.

- 1) It is recommended that the Trolley be used only on firm level ground.
- 2) On no account should the laden Trolley be left unattended on anything other than a level surface unless the castors are securely chocked.
- 3) The area around the mixer should be kept free from any build up of waste material.
- 4) Ensure the Pan Lifting Lugs and Hoop attached to the pan are in good condition, secure and free from any build up of waste material.
- 5) Position the Trolley in front of the mixer so that the wheels are equally spaced to each side of the mainframe/chassis.
- 6) Fully raise the Mixing Star by means of the handwheel and allow the pan to come to a complete stop. Manually rotate the pan until two of the Pan Lifting Lugs are at right angles to the mainframe/chassis. This will allow the Trolley, when correctly positioned below the pan to cleanly lift the pan clear of the rack.
- 7) Push the Trolley under the pan until the 'V' support arms on the Trolley are aligned below the Pan Lifting Lugs, brace the Trolley by placing a foot in the rear centre of lower fixed frame and pull back on the handle until the 'V' supports are engaged with the Pan Lifting Lugs, continue pulling back on the handle until it abuts the stops, at which point the pan will be clear of the rack. Manoeuvre both pan and Trolley clear of the mixer. The Trolley complete with the pan can now be carefully pushed or pulled to wherever the mixed material is required. Be aware of the increased inertia inherent in the combined weight of the Trolley, Pan and Material.
- 8) Before tipping the pan to discharge the material it is recommended that the handle is moved fully forward to lower the upper moving frame of the Trolley

firmly onto the lower fixed frame. When the material has been discharged the trolley can be braced as described above, the handle pulled backwards against the stops and the pan transported back to mixer where the pan can be easily and quickly positioned over the rack and lowered into place.

9) On no account must attempts be made to engage the trolley with the mixer mainframe/chassis unless the Star Drive is raised and the rack stationary.

10) Do not 'swing' on the Trolley Handles, doing so may cause the Trolley to become unstable and it may tip backwards especially if the pan is empty causing injury to either yourself or nearby persons.

START PROCEDURE CROKER RP50XD, RP100XD & RP150XD RANGE MIXERS

- 1) Raise the mixing star assembly by way of the large hand wheel, rotate the wheel in a clockwise direction to raise the star assembly
- 2) Ensure the mixing pan is in place on the pan rack (gear) and correctly seated down.
- 3) Turn the power on at the red isolator switch on the control panel
- 4) Ensure the red emergency stop plunger on the front of the control panel is not depressed.
- 5) Press the green start button.
- 6) With both hands on the hand wheel, rotate the hand wheel anti-clockwise and lower the mixing star slowly and gently down into the mixing pan. The motors driving the pan and star should start automatically as the star enters the pan.

Note: do not allow the mixing star assembly to drop in an uncontrolled manner into the mixing pan, lower it slowly with both hands on the hand wheel.

**OPERATING
AND
MAINTENANCE MANUAL**

SECTION 3

**TECHNICAL SPECIFICATION
AND MAINTENANCE**

TECHNICAL SPECIFICATION OF **CUMFLOW RP150XD MK2**

CAPACITIES: Maximum Batch Capacity by Weight 200 kgs
 by Volume 140 litres

Batch capacity and outputs will vary with material densities.

FEED MATERIAL: Maximum Size 19 mm

MIXER FRAME: Strongly constructed from welded Steel Channel

MIXING PAN: Steel Base Pan removed by hand, forklift or with the aid of a special optional pan lifting trolley.

MIXING STAR: Two spring mounted mixing star blades and fixed scraper blade

MIXING STAR
CONTROLS 762mm(30'') diameter handwheel raises mixing star clear of the pan

POWER UNITS (415V): Mixing pan drive 2.2kw totally enclosed geared electric motor to suit 3 phase, 50 cycles, 380/420 volts a/c supply. Mixing star drive 3.0kw totally enclosed geared electric motor to suit 3 phase, 50 cycles, 380/420 volts a/c supply.

POWER UNITS (240V): Mixing pan drive 2.2kw totally enclosed geared electric motor to suit 1 phase, 50 cycles, 240 volts a/c supply. Mixing star drive 3.0kw totally enclosed geared electric motor to suit 1 phase, 50 cycles, 240 volts a/c supply.

ELECTRICAL
CONTROLS Direct on line starter controls both motors. Automatic safety control switch operates when mixing star is raised out of the pan with proximity switch to sense pan position

GUARDING All gears are guarded to comply with the relevant PUWER and Supply of Machinery Safety Regulations

SPEEDS Speed of Pan 16 rpm
 Speed of Star 74 rpm

WEIGHTS (UNLADEN)

1100kg (approx)

Weight of additional pan

95kg (approx)

**PAN LIFTING
TROLLEY**

RHS steel frame mounted on four industrial castors with tubular section handle

MAINTENANCE OF MIXER

IMPORTANT NOTE:

Ensure that all maintenance is carried out in accordance with the Parts and Operating Manual and Proprietary Manufacturer's specific instruction.

PROCEDURE

- 1 ISOLATE ELECTRICAL AND OTHER SERVICES TO THE MIXER (see separate section).
- 2 Service at recommended intervals.
- 3 Use **Croker** manufactured replacement parts available from **WINGET LIMITED**.
- 4 Ensure all safety guards and interlocks are reinstated prior to operating the mixer.
- 5 Main items of wear (see Section 4).
 - A) Star Blades
 - B) Fixed Blade

Access to mixing pan internals is via the safety interlocks. Each of the above are bolted components and are replaced by simple method and usually achieved in situ without dismantling other components.

- C) Other items prone to less wear are star blade fingers and mixing star. Each can be replaced again in situ but pan covers may require removal to provide the necessary access.

MAINTENANCE AND LUBRICATION

NOTE:

ALWAYS ENSURE APPARATUS IS ISOLATED FROM MAINS SUPPLY BEFORE COMMENCING MAINTENANCE. IF NECESSARY A 'PERMIT TO WORK' SHOULD BE OBTAINED

DAILY:

Charge the grease points using Total EP2 Grease 2 (or equivalent)

WEEKLY

Lubricate

Racks	Apply Open Gear Lubricant (or equivalent)
Pinions	Apply Open Gear Lubricant (or equivalent)

Inspect and top-up if necessary.

1. Star Gear Box (BH302) Use Total Carter SP220 1.8 litres cap
2. Pan Drive Gear Box (BH202) Use Total Carter SP220 1.2 litres cap
(Refer to plate on top of Gearbox to cross check oil type and capacity)

NOTE:- Total Carter SP220 is a synthetic oil and should not be mixed with mineral oils such as Mobil Mobilgear 630, unless the gearbox is thoroughly flushed out after draining.

INSPECT AND ADJUST-MONTHLY

1. Pan Gear and Pinion, grease Open Gear Lubricant (or equivalent), as required.
2. Adjust Star Blades, Fixed Blades and Discharge Blade to the following settings, also make sure that Blade Fingers are free in their bearings and that the springs are clear of obstruction.
3. Star Drive Bevel Pinions, remove cover and grease pinions with Open Gear Lubricant or equivalent as required. Check retaining grub screws and keys are tight.

<u>MIXING BLADE</u>	3mm clear of pan base. Adjust by moving the blade up or down its finger.
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FIXED BLADES

6mm clear of pan base with the leading edge just touching the pan side. Adjust by moving the blade up or down its finger.

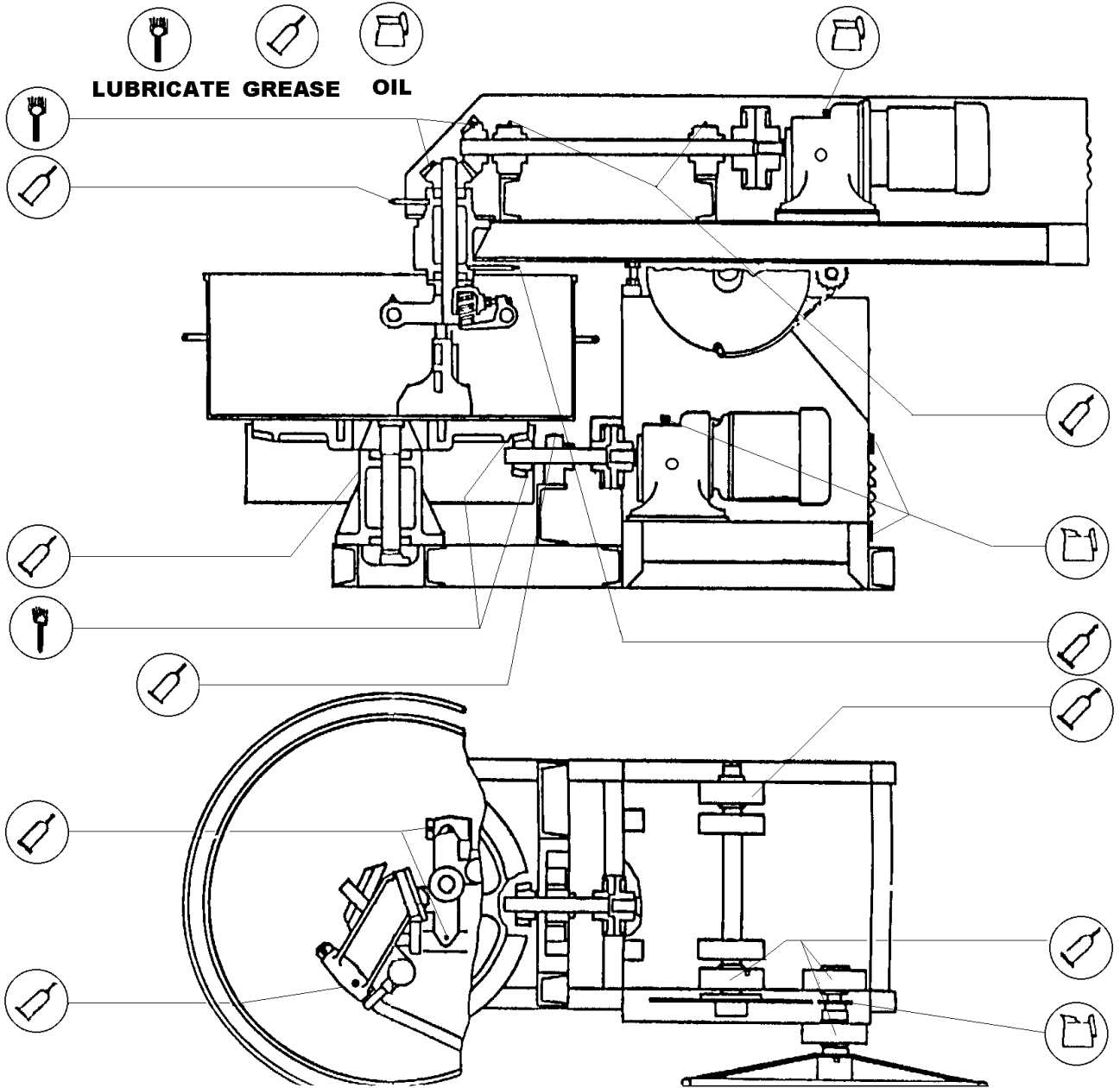
MAINTENANCE FOR GEAR UNITS

MAINTENANCE OF THE MOTORS

The surface of the housing as well as the cover lattice of the fan bonnet should be kept clean in order not to endanger the cooling of the motor with dust and dirt.

Although the bearings of the motor have life time lubrication, the oil in the gearbox of a new unit should be drained after the first **500** hours of operation and the case thoroughly flushed with a light flushing oil before refilling with fresh oil to the correct specification

LUBRICATION CHART



**OPERATING
AND
MAINTENANCE MANUAL**

**SECTION 4
MIXER SPARE PARTS**

RP150XD MK2 USA/CANADA SPECIFICATION 480V 60Hz

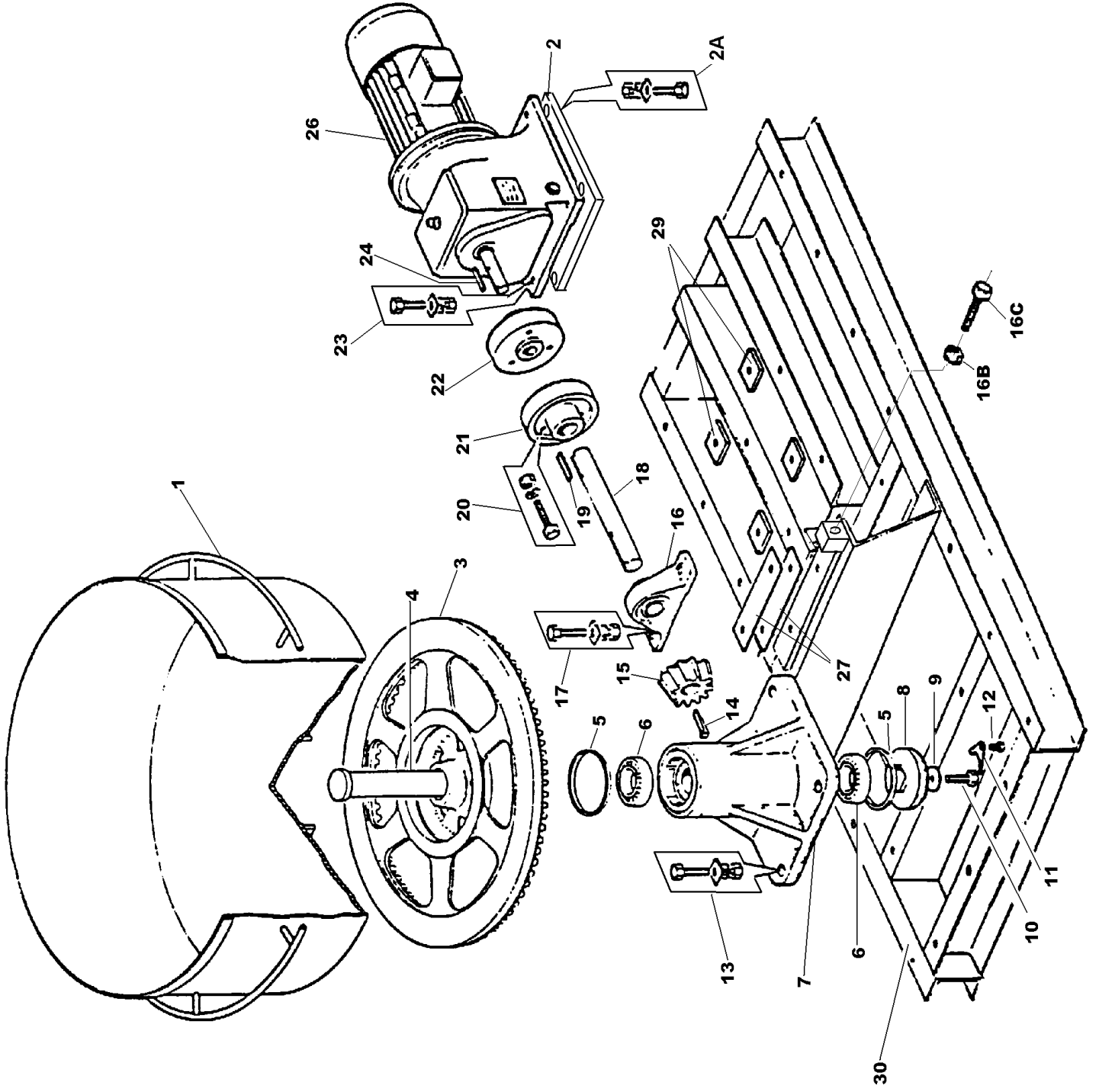
The Star and Pan Drive Motors and Control Panel fitted to USA/Canada Specification mixers are intended for operation with a supply voltage of 480V 3 Ph 60Hz and not 415V 3 Ph 50Hz as listed overleaf. When ordering spares for the motors, gearbox or control panel it is important that this is state

Star Drive Gearmotor Unit Specification USA/Canada

C402N0250IE2D100L4, 70 RPM Output Shaft, Motor Speed 1746 RPM, 3.0Kw, 480V 60Hz, Nominal Current 6.5Amp

Pan Drive Gearmotor Unit Specification USA/Canada, 302N0155IE2D100K4, 112 RPM Output Shaft, Motor Speed 1746 RPM, 2.2Kw, 480V 60Hz, Nom Current 4.8Amp

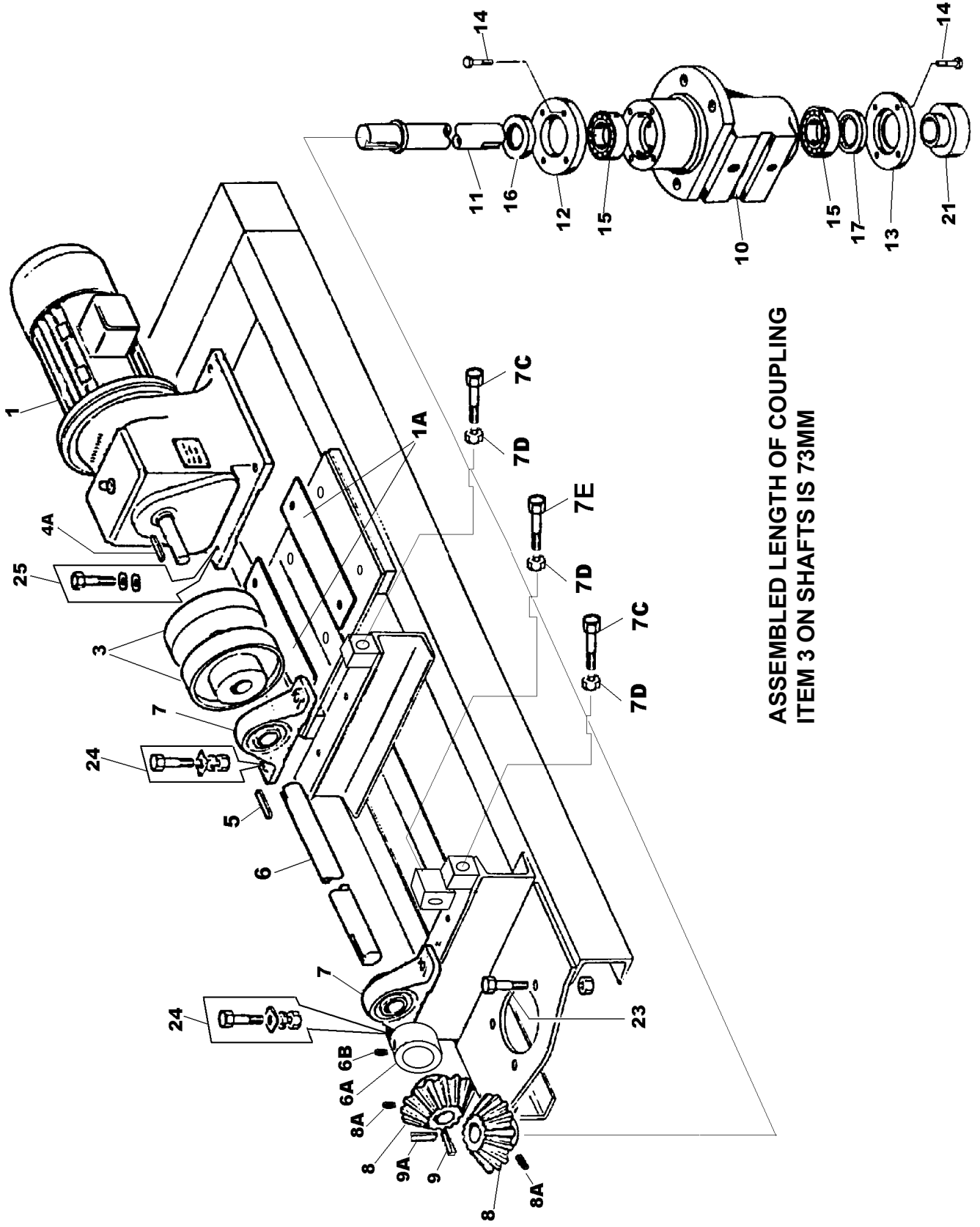
RP150XD MK2 MIXING PAN & DRIVE



RP150XD MK2 MIXING PAN & DRIVE

1	CR549026	MIXING PAN RP100HD/RP150XD MK2	1
2	CR53100876	PLATE ADAPTOR MOUNTING	1
2A	8S05D	BOLT M12 X 40	4
2B	17S06	WASHER SPRING M12	4
2C	267S07	WASHER FLAT M12	4
3	CR210136	PAN RACK	1
4	CR520179	CONICAL SHAFT	1
5	CR560006	FELT SEAL	2
6	CR150153	CONICAL SHAFT BEARING	2
7	CR210137	PAN CONICAL SUPPORT	1
7A	333104020	NIPPLE GREASE 1/4 BSP STRAIGHT	1
7B	176S01	COVER NIPPLE GREASE	1
8	CR210092	CONICAL END CAP	1
9	CR630047	KEY CAP WASHER	1
10	11S06F	KEY CAP BOLT M16 X 40	1
11	CR530477	KEY CAP LOCKING PLATE	1
12	68S05C	LOCKING PLATE CAPSCREW M10 X 20	1
12A	17S05	WASHER SPRING M10	1
13	8S06H	CONICAL BOLT M16 X 60	4
13A	61S06	NUT BINX M16	4
13B	267S09	WASHER FLAT M16	4
13C	105S07	WASHER TAPER M16	4
13D	CR53100925	PAN CONICAL PACKER (NOT ILLUSTRATED)	2
14	CR320021	BEVEL PINION KEY, GIB HEAD 1/2 X 3/8 X4	1
14A	CR320023	ALTERNATIVE 1/2 X 7/16 X6 CUT TO SIZE	1
15	CR460022	BEVEL PINION	1
16	CR150925	BEVEL PINION SHAFT BEARING	1
16A	176S01	COVER NIPPLE GREASE	1
16B	7S06	NUT M16	2
16C	11S06P	SCREW SET M16 X 80	2
17	8S05J	BOLT BEARING M12 X 65	2
17A	61S05	NUT BINX M12	2
17B	267S07	WASHER FLAT M12	2
17C	105S05	WASHER TAPER M12	2
18	CR52100896	BEVEL PINION SHAFT	1
19	CR329015	COUPLING, DRIVEN HALF FEATHER KEY	1
20	8S05F	BOLT, RIGID COUPLING M12 X 50	3
20A	7S05	NUT, RIGID COUPLING M12	3
21	CR23100869	ASSEMBLY RIGID COUPLING	1
21A	57S04E2	SCREW GRUB M6 COUPLING DRIVING HALF	1
21B	57S05D2	SCREW GRUB M8 COUPLING DRIVEN HALF	1
23	8S04F	BOLT GEAR UNIT M10 X 55	4
23A	17S05	WASHER SPRING M10	4
23B	267S06	WASHER FLAT M10	4
24	CR329047	COUPLING, DRIVING HALF FEATHER KEY	1
26	CR22100918	GEAR MOTOR UNIT, PAN DRIVE, 240V 1PH 2.2KW (BH302)	1
26	CR22100889	GEAR MOTOR UNIT, PAN DRIVE, 415V 3PH 2.2KW (BH302)	1
27	CR549006	SHIM PACK BEARING (4 SHIMS PER SET)	1
29	555114904	SHIM SET, GEARED MOTOR UNIT	A/R
30	CR26100866	CHASSIS FRAME	1

RP150XD MK2 STAR DRIVE ASSEMBLY



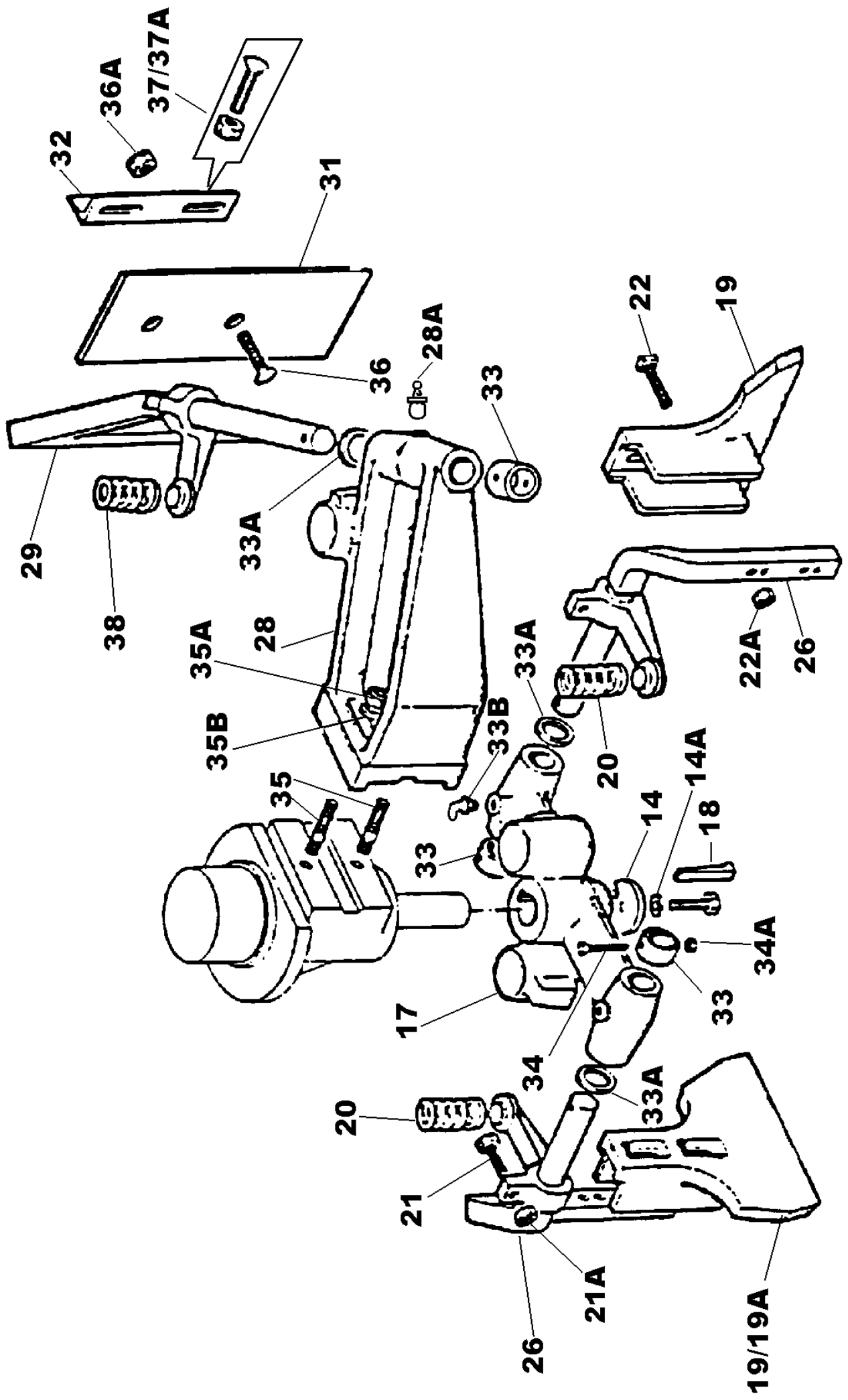
RP150XD MK2 STAR DRIVE ASSEMBLY

1	CR22100917	MOTOR GEAR UNIT STAR DRIVE 3.0KW 240V 1PH (BH402)	1
1	CR22100888	MOTOR GEAR UNIT STAR DRIVE 3.0KW 415V 3 PH (BH402)	1
1A	555114900	SHIM GEAR MOTOR UNIT	A/R
3	CR23100915	COUPLING ASSEMBLY. FLEXIBLE, FENNER HRC TYPE F	1
Consists of Following			
3A	CR23100908	COUPLING HALF FENNER HRC TYPE F	2
3B	CR23100891	INSERT, FLEXIBLE, FENNER HRC180	1
3C	CR66100894	BUSH TAPERLOCK DRIVING/MOTOR HALF 40MM DIA	1
3D	CR66100893	BUSH TAPERLOCK DRIVEN HALF 1 1/2" DIA	1
4A	CR329047	KEY DRIVING HALF COUPLING	1
5	CR329013	KEY DRIVEN HALFCOUPLING	1
6	CR52100871	SHAFT TOP	1
6A	CR52100872	SPACER BEVEL PINION	1
6B	57S05D2	SCREW GRUB	2
7	CR159006	BEARING ASSEMBLY TOP SHAFT	2
7A	176S01	COVER GREASE NIPPLE	2
7B	CR549006	SHIM PACK BEARINGS (4 SHIMS PER SET)	A/R
7C	11S06M	SCREW SET M16 X 70	4
7D	7S06	NUT M16	6
7E	11S06K	SCREW SET M16 X 60	2
8	CR460024	GEAR BEVEL	2
8A	57S05D2	GRUB SCREW M8	6
8B	555116600	PLATE GEAR RETAINING	2
8C	11S04D	SCREW SET M10 X 30	2
8D	17S05	WASHER SPRING M10	2
8E	267S06	WASHER FLAT M10	2
9	CR329046	KEY FEATHER BEVEL GEAR HORIZONTAL 1/2X5/16X2"	1
9A	CR329093	KEY FEATHER BEVEL GEAR VERTICAL 1/2X5/16X3/4"	1
10	CR210139	SUPPORT CONICAL STAR	1
10A	333104020	NIPPLE GREASE 1/4 BSP STRAIGHT	2
10B	176S01	COVER NIPPLE GREASE	2
11	CR529011	SHAFT STAR	1
12	CR529012	UPPER LIP SEAL CARRIER	1
13	CR529013	LOWER LIP SEAL CARRIER	1
14	8S02B	BOLTS CARRIER M6 X 30 (UPPER SEAL CARRIER)	4
14	8S02C	BOLTS CARRIER M6 X 35 (LOWER SEAL CARRIER)	4
14A	17S03	WASHER SPRING M6	8
15	CR150149	BEARINGS STAR SHAFT	2
16	CR569008	SEAL LIP UPPER	1
17	CR569007	SEAL LIP LOWER	1
21	CR529014	SPACER COLLAR STAR	1
23	8S06G	BOLTS STAR CONICAL M16 X 55	4
23A	267S09	WASHER FLAT M16	8
23B	17S08	WASHER SPRING M16	4
23C	7S06	NUT PLAIN M16	4
24	8S05M	BOLTS TOP SHAFT BEARINGS M12 X 80	4

RP150XD MK2 STAR DRIVE ASSEMBLY

24A	267S07	WASHER FLAT M12	4
24B	105S05	WASHER TAPER M12	4
24C	61S05	NUT BINX M12	4
25	8S04J	BOLT M10 X 65	4
25A	267S07	WASHER FLAT M12	4
25B	61S04	NUT BINX M10	4
26	CR26100867	STAR ARM CHASSIS/FRAME	1

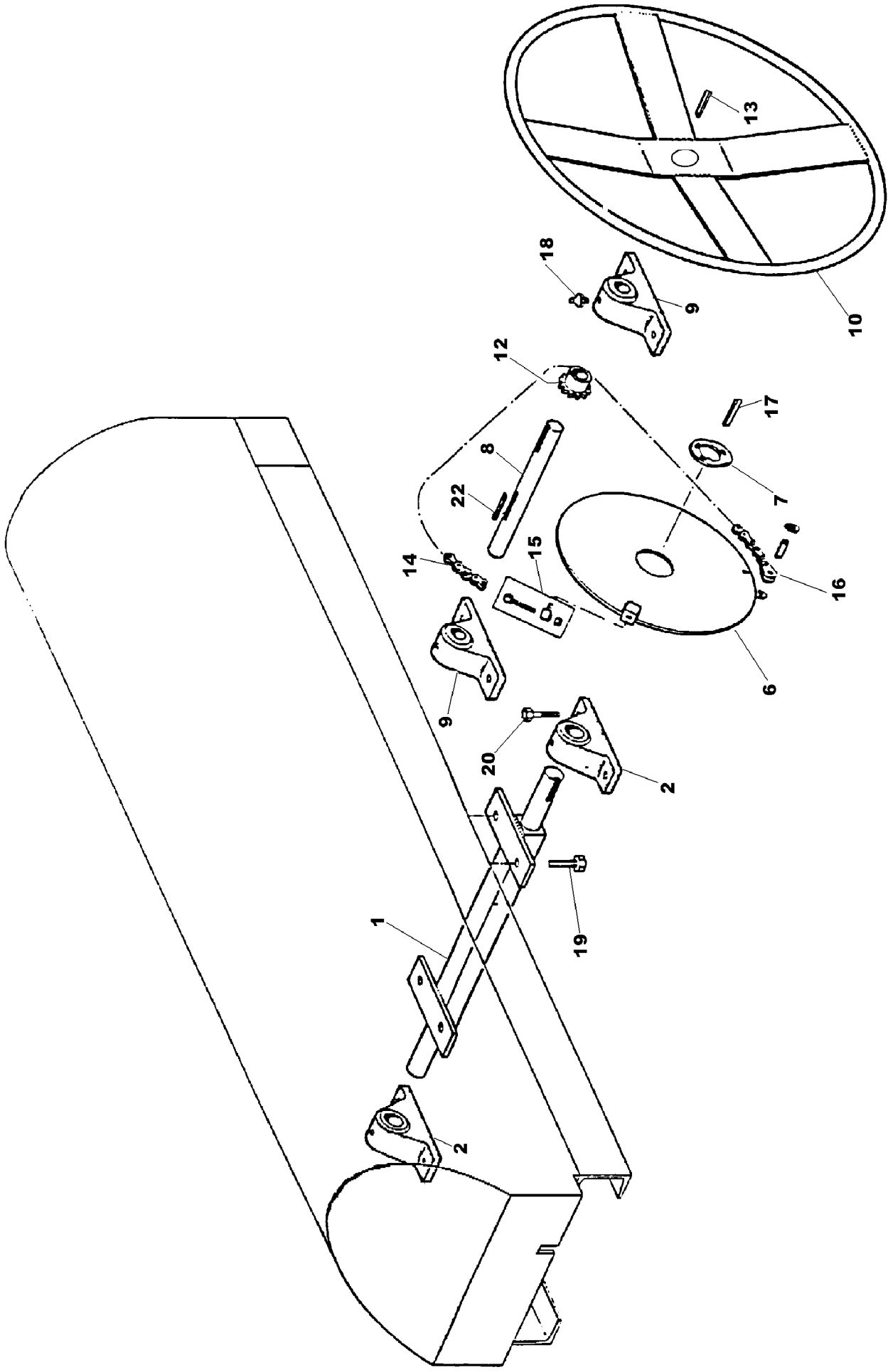
RP150XD MK2 MIXING STAR ASSEMBLY



RP150XD MK2 MIXING STAR ASSEMBLY

14	CR529020	KEY CAP	1
14A	11S05B	SCREW SET M12 X 20	1
14B	17S06	WASHER SPRING M12	1
17	CR210140	STAR MIXING	1
18	CR329053	KEY FEATHER MIXING STAR	1
19	CR219009C	BLADE STAR CAST, RIBBED	2
19A	CR219009P	BLADE STAR POLYUREATHANE, RIBBED	2
19B	CR219009SS	BLADE STAR STAINLESS STEEL, RIBBED	2
19C	CR219009SP	BLADE STAR POLYUREATHANE, NO RIBS, SMOOTH	2
19D	CR219009SC	BLADE STAR CAST, NO RIBS, SMOOTH FINISH	2
20	CR330061	SPRING COMPRESSION STAR BLADE	2
21	11S05K	BOLT ADJUSTING BLADE FINGER M12 X 70	3
21A	7S05	NUT M12	4
22	8S05L	BOLT STAR BLADE M12 X 75	6
22A	267S07	WASHER FLAT M12	10
22B	17S06	WASHER SPRING M12	6
22C	7S05	NUT M12	6
26	CR260390	FINGER STAR BLADE	2
26A	CR269149	EXTENSION STAR BLADE FINGER (NOT ILLUSTRATED)	2
28	CR210142	BRACKET FIXED BLADE	1
28A	333104020	NIPPLE GREASE 1/4 BSP STRAIGHT	1
28B	176S01	COVER NIPPLE GREASE	1
29	CR260415	FINGER FIXED BLADE	1
31	CR53100900	BLADE FIXED RP150XD MK2	1
32	CR539158	ANGLE BRACKET, BLADE FIXED	1
33	CR639004	COLLAR SPACER	3
33A	10S31	WASHER FLAT	AR
33B	CR289002	GREASE NIPPLE 1/4 BSP 90' ANGLED	2
34	8S04J	BOLT, COLLAR M10 X 65	3
34A	61S04	NUT BINX M10	3
35	8S06F	BOLT M16 X 50	2
35A	17S08	WASHER, SPRING M16	2
35B	267S09	WASHER FLAT M16	2
36	52S05H	BOLT SHORT, FIXED BLADE M12 X 40	2
36A	267S07	WASHER FLAT M12	4
36B	17S06	WASHER SPRING M12	4
36C	7S05	NUT M12	4
37	52S04K	BOLT LONG, FIXED BLADE ANGLE BRACKET M10 X 50	2
37A	17S05	WASHER, SPRING M10	2
37B	7S04	NUT M10	2
38	CR330022	SPRING FIXED BLADE	1

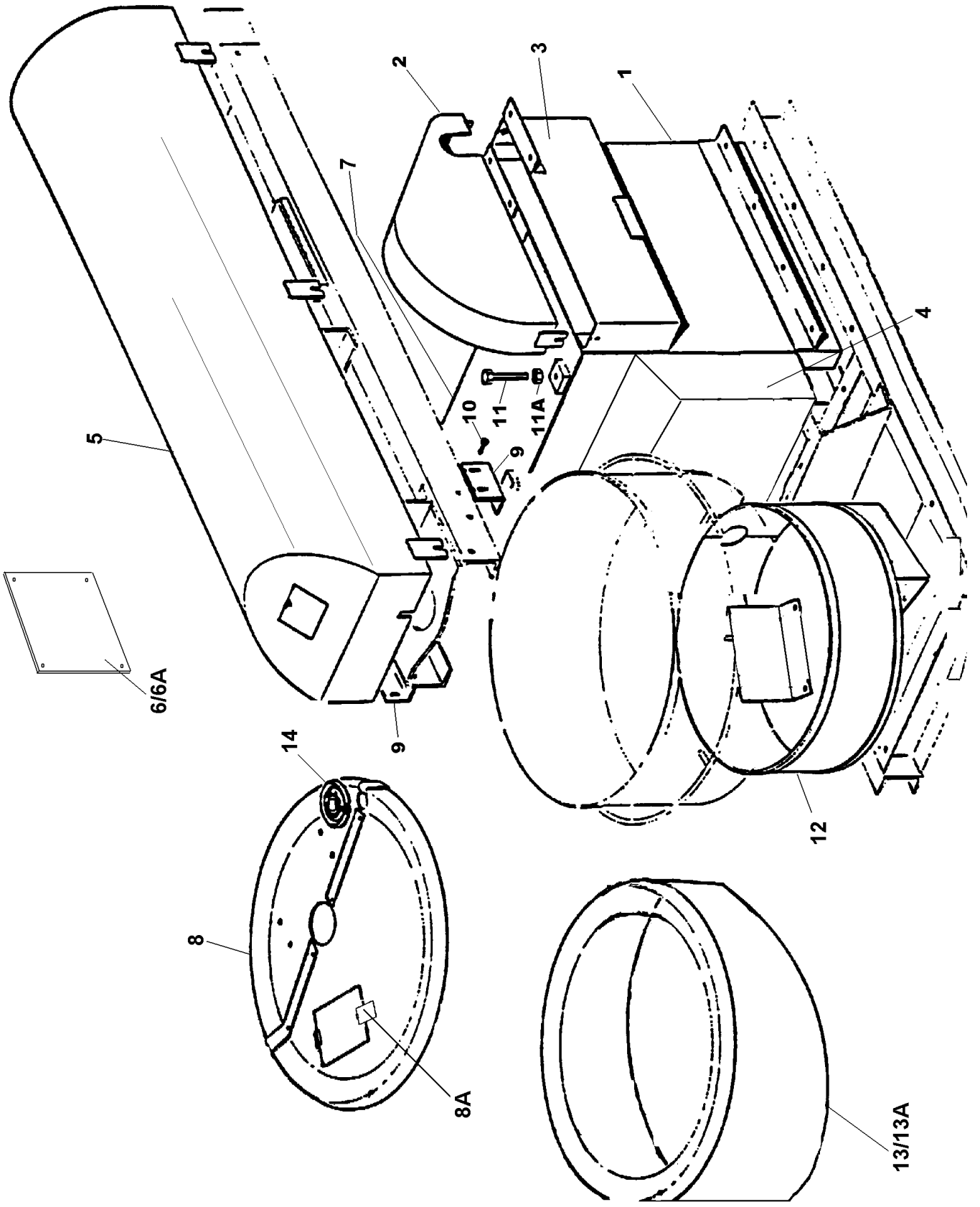
RP150XD MK2 MIXING STAR LIFTING ARRANGEMENT



RP150XD MK2 MIXING STAR LIFTING ARRANGEMENT

1	CR52100823	PIVOT SHAFT	1
1A	CR549028	SPACER, PIVOT SHAFT & UPPER FRAME (NOT ILLUS)	2
2	CR15100819	PIVOT SHAFT BEARING 40MM BORE	2
2B	176S01	COVER NIPPLE GREASE	2
6	CR26100816	PLATE, WHEEL, TAPERLOCK FITTING	1
6A	CR66100895	BUSH TAPERLOCK PLATE WHEEL	1
7	CR54100821	CAM, PROXIMITY SWITCH	1
8	CR52100824	SHAFT, HANDWHEEL	1
9	CR15100818	BEARING, HANDWHEEL SHAFT	2
9A	8S05E	BOLT, BEARINGS M12 X 45 (NOT ILLUS)	4
9B	267S07	WASHER FLAT M12	8
9C	61S05	NUT BINX M12	4
10	CR36100815	HANDWHEEL, TAPERLOCK FITTING	1
10A	CR66100832	BUSH TAPERLOCK HANDWHEEL	1
12	CR34100817	SPROCKET, CHAIN TAPERLOCK FITTING	1
12A	CR66100916	BUSH TAPERLOCK SPROCKET	1
13	304710825	KEY, HANDWHEEL BUSH	1
14	CR20100874	CHAIN, TILTING	1
14A	134104002	LINK SPLIT CHAIN	1
15	CR200134	BOLT & BLOCK, DRAW CHAIN	1
16	CR200072	LINK ATTACHMENT, CHAIN END	1
17	304712863	KEY, PLATE WHEEL BUSH, M12 X 8 X 63	1
18A	176S01	COVER NIPPLE GREASE	2
19	8S06Q	BOLTS, PIVOT SHAFT, SPACER, UPPER FRAME M16 X 120	4
19A	267S09	WASHER FLAT M16	8
19B	61S06	NUT BINX M16	4
19C	105S07	WASHER TAPERED M16	4
20	8S05E	BOLT, BEARINGS M12 X 45	4
20A	267S07	WASHER FLAT M12	8
20B	61S05	NUT BINX M12	4
21	CR22100886	SWITCH PROXIMITY, NOT ILLUSTRATED	1
21A	CR53100887	ANGLE BRACKET SWITCH MOUNTING, NOT ILLUSTRATED	1
21B	11S02A	SCREW SET M6 X 16, NOT ILLUSTRATED	4
21C	267S04	WASHER FLAT M6	4
21D	17S03	WASHER SPRING M6	4
22	304708035	KEY PARALLEL, SPROCKET BUSH	1

RP150XD MK2 COVERS & GUARDS



RP150XD MK2 COVERS & GUARDS

1	CR53100833	HOUSING ASSEMBLY PAN DRIVE MOTOR	1
1A	11S05D	SCREW SET M12 X 30	8
1B	267S07	WASHER FLAT M12	8
1D	61S05	NUT BINX M12	8
2	CR54100820	GUARD, CHAIN UPPER	1
2A	7S04	NUT M10	2
2B	17S05	WASHER SPRING M10	2
2C	267S06	WASHER FLAT M10	2
3	CR53100814	COVER CHAIN LOWER	1
3A	11S05D	SCREW SET M12 X 30	6
3B	267S07	WASHER FLAT M12	6
3C	61S05	NUT BINX M12	6
4	CR54100862	GUARD PAN DRIVE SHAFT	1
4A	11S03B	SCREW SET M8 X 20	6
4B	267S05	WASHER FLAT M8	6
4C	17S04	WASHER SPRING M8	6
5	CR54100822	GUARD STAR DRIVE	1
5A	V2003215	DOOR PULL, NOT ILLUSTRATED	2
5B	11S02A	SCREW SET M6 X 20	4
5C	267S04	WASHER FLAT M6	4
5D	17S03	WASHER SPRING M6	4
5E	7S03	NUT M6	4
5F	11S05D	SCREW SET M12 X 30	6
5G	17S05	WASHER SPRING M12	6
5H	267S07	WASHER FLAT M12	6
6	CR53100897	COVER INSPECTION, HOUSING SIDE, R/H, NOT ILLUS	1
6A	11S03B	SCREW SET M8 X 20	4
6B	17S04	WASHER SPRING M8	4
6C	267S05	WASHER FLAT M8	4
6D	CR53100909	COVER INSPECTION, HOUSING SIDE, L/H, NOT ILLUS	1
6E	11S03B	SCREW SET M8 X 20	4
6F	17S04	WASHER SPRING M8	4
6G	267S05	WASHER FLAT M8	4
7	CR53100875	COVER FRONT, HOUSING NOT ILLUSTRATED	1
7A	11S03B	SCREW SET M8 X 20	4
7B	17S04	WASHER SPRING M8	4
7C	267S05	WASHER FLAT M8	4
8	CR54100882	COVER DUST ASSEMBLY	1
8A	CR249505	CATCH INSPECTION HATCH	1
8B	11S03C	SCREW SET M8 X 25	5
8C	17S04	WASHER SPRING M8	5
8D	267S05	WASHER FLAT M8	5
9	CR540442	CLEAT, DUST COVER TO FRAME	2
9A	11S04C	SCREW SET M10 X 25 CLEAT TO DUST COVER	4
9B	267S06	WASHER FLAT M10	8
9C	17S05	WASHER SPRING M10	4
9D	7S04	NUT PLAIN M10	4
10	11S05D	SCREW SET M12 X 30 CLEAT TO FRAME	4
10A	267S07	WASHER FLAT M12	8
10B	17S06	WASHER SPRING M12	4
10C	7S05	NUT PLAIN M12	4
11	8S07T	BOLT STAR FRAME STOP M20 X 140	2

RP150XD MK2 COVERS & GUARDS

11A	7S07	NUT PLAIN M20	2
12	CR54100839	GUARD PAN DRIVE GEAR/PAN RIM	1
12A	11S04D	SCREW SET M10 X 30	4
12B	267S06	WASHER FLAT M10	8
12C	17S05	WASHER SPRING M10	4
12D	7S04	NUT M10	4
13	CR54100883	GUARD, PAN COVER SIDE, RH	1
13A	CR54100884	GUARD, PAN COVER SIDE, LH	1
13B	CR54100885	GUARD PAN COVER REAR, NOT ILLUSTRATED	1
13C	11S03B	SCREW SET M8 X 20	21
13D	17S04	WASHER SPRING M8	21
13E	267S05	WASHER FLAT M8	21
13F	7S03	NUT M8	9
14	CR570019	SEAL RUBBER	1
15	CR53100926	STOP ANGLE, STAR ARM CHASSIS, NOT ILLUSTRATED	1
15A	8S03B	BOLT M8	2
15B	267S05	WASHER FLAT M8	4
15C	61S03	NUT BINX M8	2

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RP150XD MK2 PROXIMITY SWITCHES & CAM

PARTS NOT ILUSTRATED

1	CR22100878	SWITCH PROXIMITY, PAN	2
2	CR22100886	SWITCH PROXIMITY, STAR LIFTING	1
3	CR53100887	ANGLE BRACKET, SWITCH MOUNTING STAR LIFTING	1
4	11S02C	SCREW SET M6 X 25	2
5	17S03	WASHER SPRING M6	2
6	267S04	WASHER FLAT M6	2
7	7S02	NUT M6	2
8	CR54100821	CAM, SWITCH OPERATING, STAR LIFTING	1
9	11S02C	SCREW SET M6 X 25	2
10	17S03	WASHER SPRING M6	2
11	267S04	WASHER FLAT M6	2
12	CR54100863	BRACKET, PROXIMITY SWITCH PAN	2
13	11S03C	SCREW SET M8 X 25	4
14	267S05	WASHER FLAT M8	4
15	17S04	WASHER SPRING M8	2
16	7S03	NUT M8	2
17	7000410	COVER SPIRAL GUARD	6MT
18	143200300	CLIP 'P'	2
19	11S02B	SCREW SET M6 X 20	2
20	267S04	WASHER FLAT M6	2
21	17S03	WASHER SPRING M6	2
22	7S02	NUT M6	2
23	V2003252	GROMMET OPEN	2

RP150XD MK2 ELECTRICAL SWITCH GEAR

PARTS NOT ILLUSTRATED

1	CR22100919	CONTROL PANEL ASSEM, HIGH LEVEL MOUNTING 240V 1PH	1
1	CR22100920	CONTROL PANEL ASSEM, HIGH LEVEL MOUNTING 415V 3PH	1
1A	CR53100873	BRACKET SUPPORT CONTROL PANEL MOUNTING	1
1B	11S03C	SCREW SET M8 X 30	4
1C	267S05	WASHER FLAT M8	8
1D	17S04	WASHER SPRING M8	4
1E	61S03	NUT BINX M8	4
1F	11S01C	SCREW SET M5 X 25	6
1G	267S03	WASHER FLAT M5	6
1H	17S02	WASHER SPRING M5	6
IJ	7S01	NUT M5	6
2	CR229109	SP20 CONDUIT	4MT
3	CR229110	SP20/M20/TYP E B FITTINGS	12
4	191902200	TERMINAL RING 'CRIMP ON TYPE' BLUE	8
5	144799000	CABLE 1.5MM SQ G/Y (6491X H07)	4MT
6	144700100	CABLE 1.5MM SQ RED (6491X H07)	4MT
7	144798000	CABLE 1.5MM SQ BLACK (6491X H07)	4MT
8	CR229103	CABLE 2.5MM SQ RED (6491X H07)	3MT
9	CR229104	CABLE 2.5MM SQ YELLOW (6491X H07)	3MT
10	CR229105	CABLE 2.5MM SQ BLUE (6491X H07)	3MT
11	CR229097	TERMINAL RING 'CRIMP ON TYPE'	2
12	CR229114	LOCK RINGS 20MM	3
13	CR22100879	CONVERTER PG16-M20	2
14	513340800	BOSS	4
15	143200300	CLIP 'P'	2
16	11S02B	SCREW SET M6 X 20	2
17	267S04	WASHER FLAT M6	4
18	17S03	WASHER SPRING M6	2
19	7S02	NUT M6	2
20	CR22100886	SWITCH PROXIMTY, MIXING STAR LIFTING PROTECTION	1
21	CR22100878	SWITCH PROXIMTY, PAN DRIVE PROTECTION	2

RP150XD MK2 DECALS AND LOGOS

1 CROKER CUMFLOW RP150XD

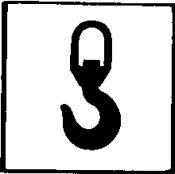
2

WINGET WINGET LIMITED P.O. Box 89, Shepperton, Bucks, MK45 0WV Tel: 01844 211111 Fax: 01844 211112	
Model	
Serial No.	
Engine No.	
Capacity	Mass (kg)
SRO No.	Power (kW)
Year Of Manuf.	Eng. (rpm) Drum (rpm)
A Gossamer Group Company	

4

WINGET

5



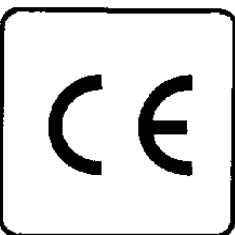
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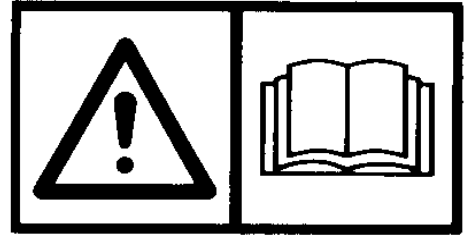
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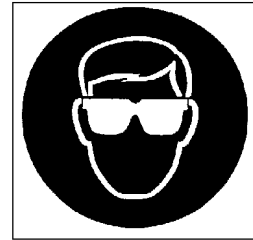
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9



10



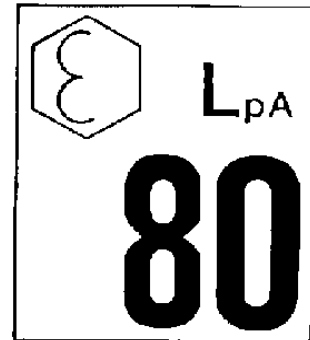
11

SAFETY WARNING

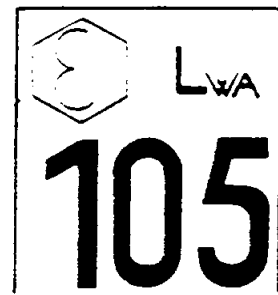
- 1 Before starting this machine the operator should be familiar with the operating instructions issued by the manufacturer
- 2 The manufacturer's rated capacity must never be exceeded
- 3 Before carrying out any maintenance servicing, or greasing, always ensure that the engine has been switched off. Never work on a machine while it is running

W5480155x11

12



13



RP150XD MK2 DECALS AND LOGOS

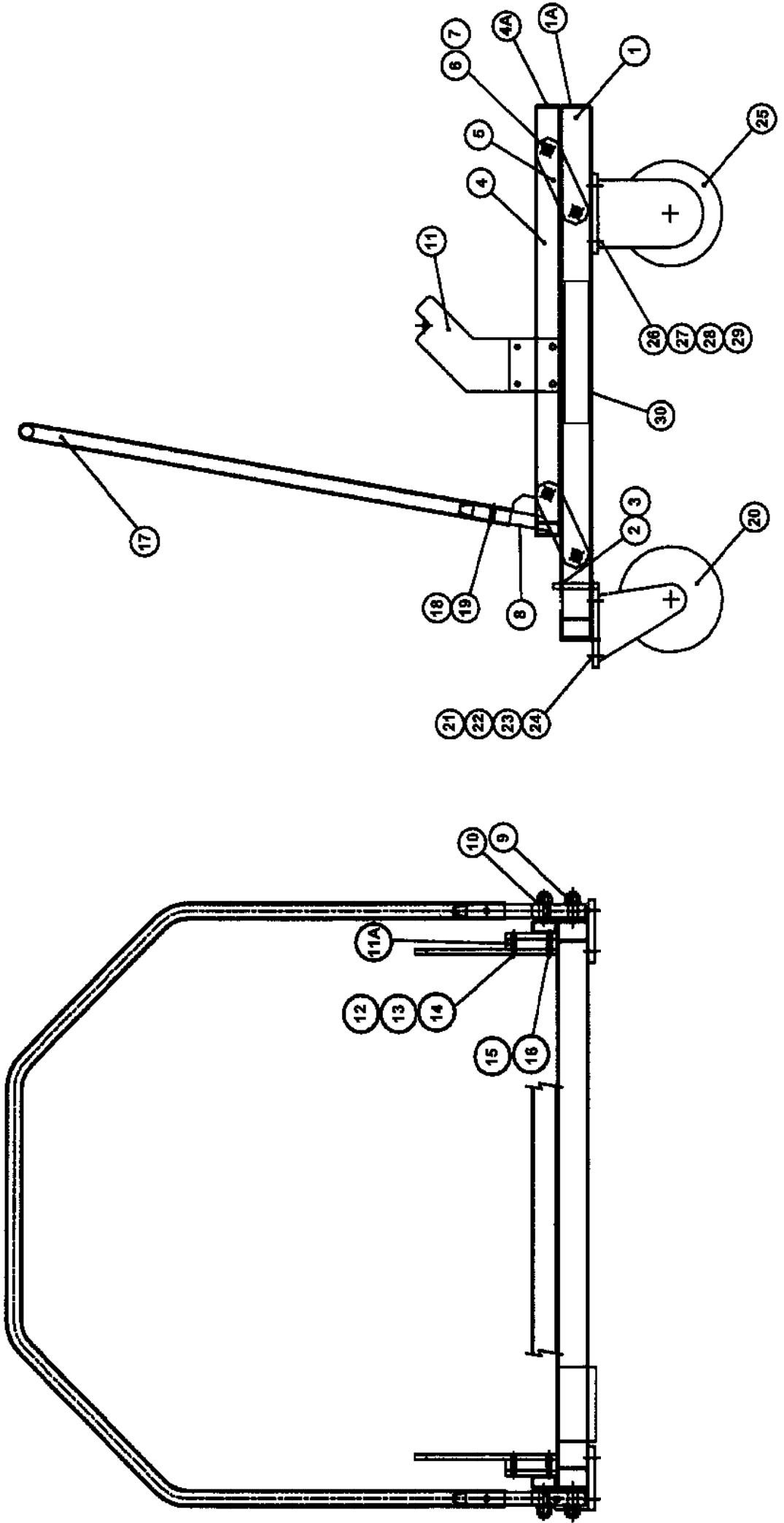
1	CR85100914	DECAL RP150XD	2
2	V2003037	PLATE SERIAL NUMBER	1
3	101S05D	RIVET POP	4
4	V2003039	DECAL 'WINGET' MEDIUM	2
5	V2003665	DECAL SLING POINT	4
6	V2003598	DECAL BRITISH MADE	2
7	V2004307	DECAL ELECTRICAL HAZARD	2
8	V2004223	DECAL 'CE' MARK	1
9	V2004229	DECAL OPERATORS HANDBOOK	2
10	V2004744	DECAL EYE PROTECTION	2
11	504694600	DECAL SAFETY	1
12	V2004130	DECAL NOISE 80 LPA	1
13	V2003575	DECAL NOISE 105 LWA	1

**OPERATING
AND
MAINTENANCE MANUAL**

SECTION 5

**ANCILLARY EQUIPMENT
SPARE PARTS**

RP150XD MK2 FOUR WHEEL PAN TROLLEY



RP150XD MK2 FOUR WHEEL PAN TROLLEY

FROM MARCH 2003 ONWARDS

1	CR26100858	FRAME LOWER	1
1A	CR47100860	INSERT BLANKING 60 X 40	2
2	11S04G	STOP SCREWS M10 X 45	2
3	7S04	NUT M10	4
4	CR26100857	FRAME UPPER	1
4A	CR47100861	INSERT BLANKING 50 X 25	2
5	CR26100850	PIVOT BAR FRONT	2
6	59S11	NUT NYLOC M16	4
7	267S09	WASHER FLAT M16	4
8	CR53100849	PIVOT BAR REAR C/W HANDLE CARRIERS	2
9	59S11	NUT NYLOC M16	4
10	267S09	WASHER FLAT M16	4
11	CR53100852	PLATE PICKUP, PAN SUPPORT	2
11A	CR53100853	PLATE SPACER	2
12	8S03E	BOLT UPPER M8 x 45	4
13	17S04	WASHER SPRING M8	4
14	267S05	WASHER FLAT M8	4
15	8S03D	BOLT LOWER M8 x 40	4
16	17S04	WASHER SPRING M8	4
17	CR53100846	HANDLE TROLLEY	1
18	8S03E	BOLT HANDLE RETAINING M8 x 45	2
19	61S03	NUT BINX M8	2
20	CR449001	CASTOR SWIVEL REAR ASSEMBLY	2
INDIVIDUAL WHEEL ITEMS AVAILABLE AS FOLLOWS			
20A	CR449002	WHEEL ASSEMBLY C/W BEARING	1
20B	CR449005	WHEEL CENTRE BUSH/SPACER	1
20C	11S05P	BOLT M12 x 80	1
20D	61S05	NUT BINX M12	1
21	11S04D	BOLT CASTOR RETAINING M10 x 30	8
22	267S06	WASHER FLAT M10	8
23	17S05	WASHER SPRING M10	8
24	7S04	NUT M10	8
25	CR449000	CASTOR FIXED FRONT ASSEMBLY	2
INDIVIDUAL WHEEL ITEMS AVAILABLE AS FOLLOWS			
25A	CR449002	WHEEL ASSEMBLY C/W BEARING	1
25B	CR449005	WHEEL CENTRE BUSH/SPACER	1
25C	11S05P	BOLT M12 x 80	1
25D	61S05	NUT BINX M12	1
26	11S04D	BOLT CASTOR RETAINING M10 x 30	8
27	267S06	WASHER FLAT M10	8
28	17S05	WASHER SPRING M10	8
29	7S04	NUT M10	8
30	V2004636	DECAL WINGET SMALL	2

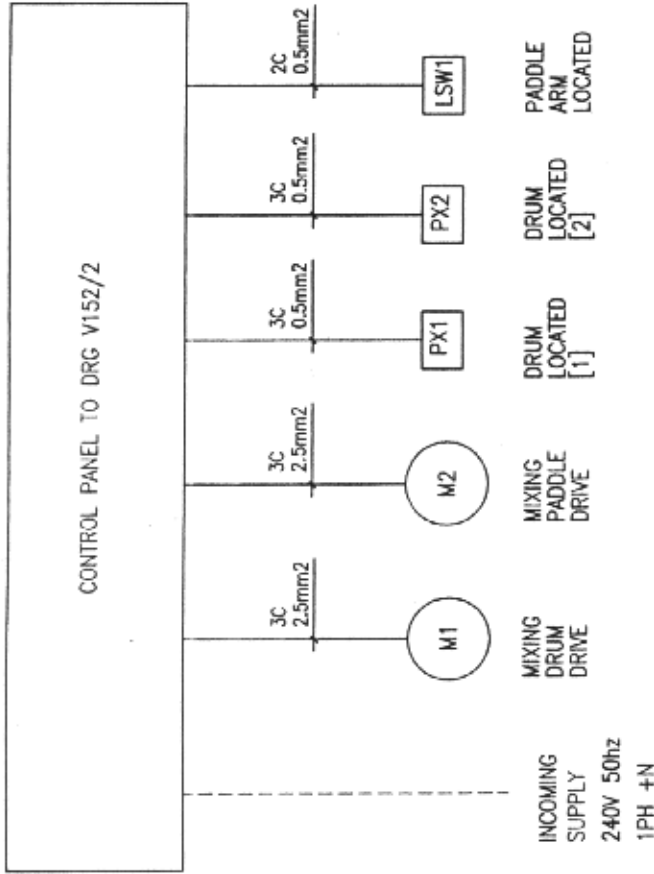
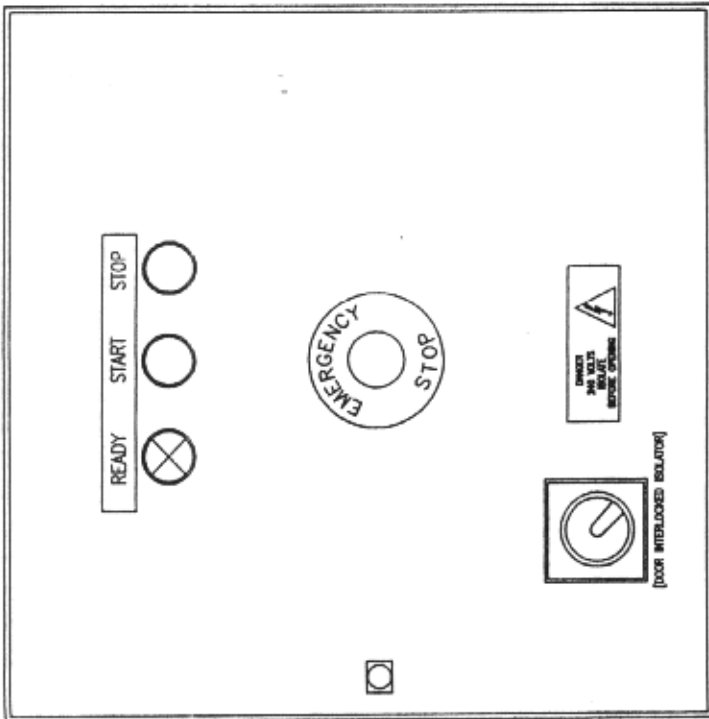
RP150XD MK2 ADDITIONAL PARTS REQUIREMENT MoD

ADDITIONAL PARTS LISTED BELOW ARE NOT ILLUSTRATED

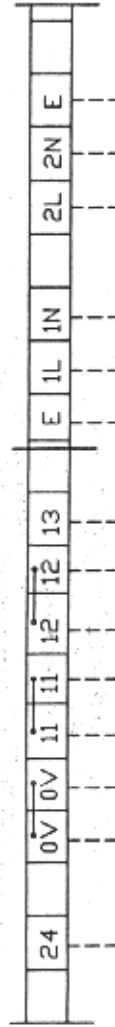
1	V2005120	PLATE - NOMENCLATURE/INSCRIPTION	1
2	101S05D	RIVET POP	4
3	V2005132	TOOL KIT	1
4	CR54100774	TOOL BOX	1
5	11S04B	SCREW SET M10	2
6	17S05	WASHER SPRING M10	2
7	7S04	NUT M10	2

**OPERATING
AND
MAINTENANCE MANUAL**

**SECTION 6
ELECTRICAL SYSTEM**



BOTTOM CABLE ENTRY GLAND PLATE



COMPONENT LABELS W/B/W TRAFFOLYTE
WARNING LABELS Y/B/Y TRAFFOLYTE

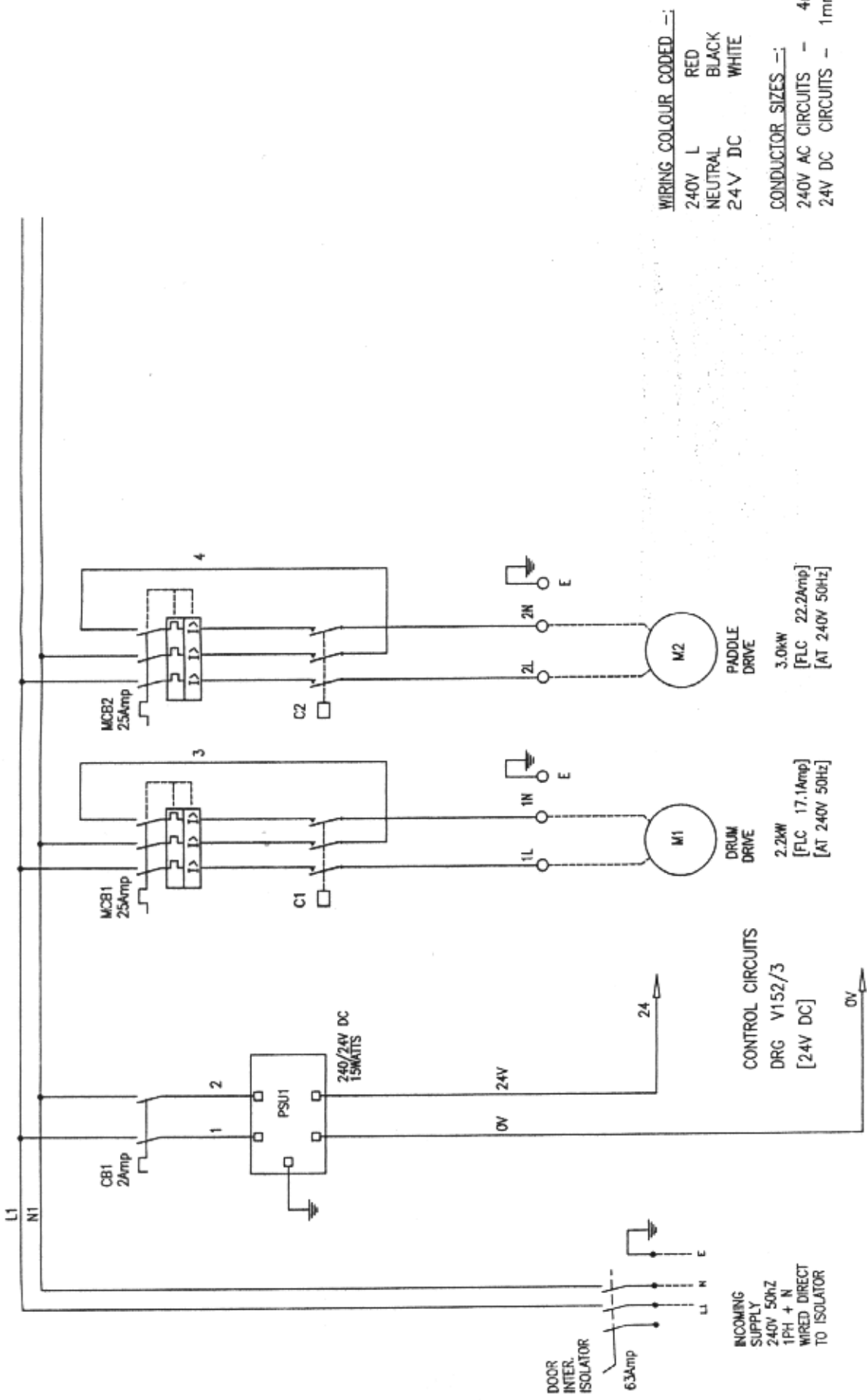
- PXA - DRUM LOCATED (1) 24 / 0V / 11 [BRN/BLUE/Gn.Yw]
- PXB - DRUM LOCATED (2) 11 / 0V / 12 [Brown/Blue/Gn.Yw]
- LSW1 - MIXING ARM LOCATED 12 / 13 [Brown/Blue]

MIXING DRUM DRIVE

MIXING PADDLE DRIVE

CONTROL CIRCUITS TO DRG V152/2-3

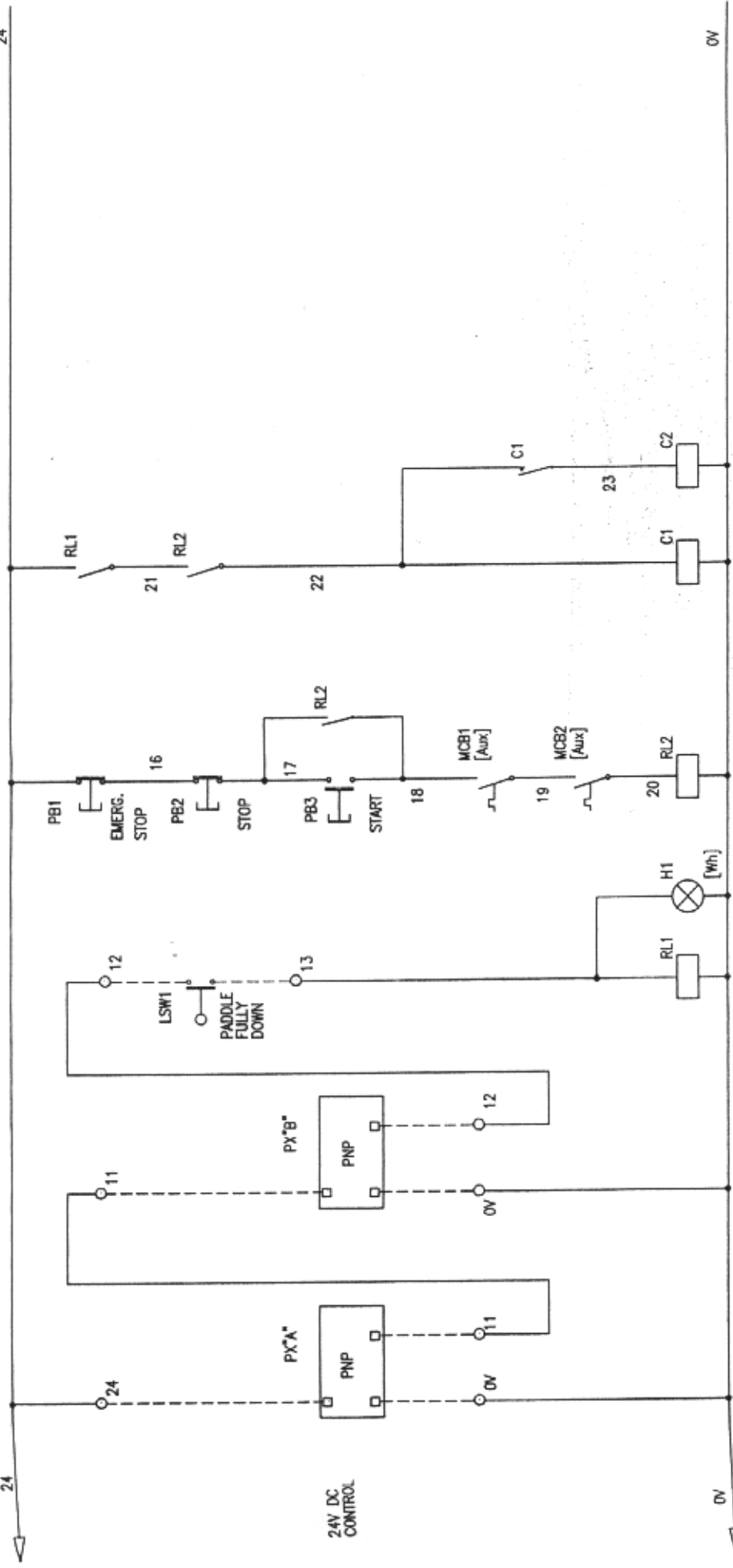
ISSUE	TITLE	GENERAL DETAILS ELECTRICAL CONTROL PANEL PADDLE / DRUM MIXER RP150XD WINGET Ltd	
	ISSUE		
	DRAWN	T.E.STONES	
	DATE	03/05/03	
	CHECKED	<i>[Signature]</i>	
	APPROVED	<i>[Signature]</i>	
	DRAWING No.	V152/1	
	ISSUE	A	
HORWICH ELECTRONIC LABORATORIES Ltd. LONGWORTH RD. HORWICH, BOLTON LANCs. BL6 7BN TEL. 01204 693311 FAX 01204 690023			



WIRING COLOUR CODED :-
 240V L RED
 NEUTRAL BLACK
 24V DC WHITE

CONDUCTOR SIZES :-
 240V AC CIRCUITS - 4mm²
 24V DC CIRCUITS - 1mm²

ISSUE	ISSUE	TITLE	ELECTRICAL POWER CIRCUITS - ELECTRICAL STARTER PANEL PADDLE / DRUM MIXER RP150XD (240V 1Ph)	
			HORWICH ELECTRONIC LABORATORIES Ltd. LONGWORTH RD. HORWICH, BELTON LANCs. BL6 7BN TEL. 01204 693311 FAX 01204 690023 WINGET Ltd	
ISSUE	ISSUE	DATE	T.E. STONES	DRAWING No.
				03/05/03
ISSUE	ISSUE	DATE	T.E. STONES	CHECKED
				<i>[Signature]</i>
ISSUE	ISSUE	DATE	T.E. STONES	APPROVED
				<i>[Signature]</i>
				DRAWING No. V152/2
				ISSUE A



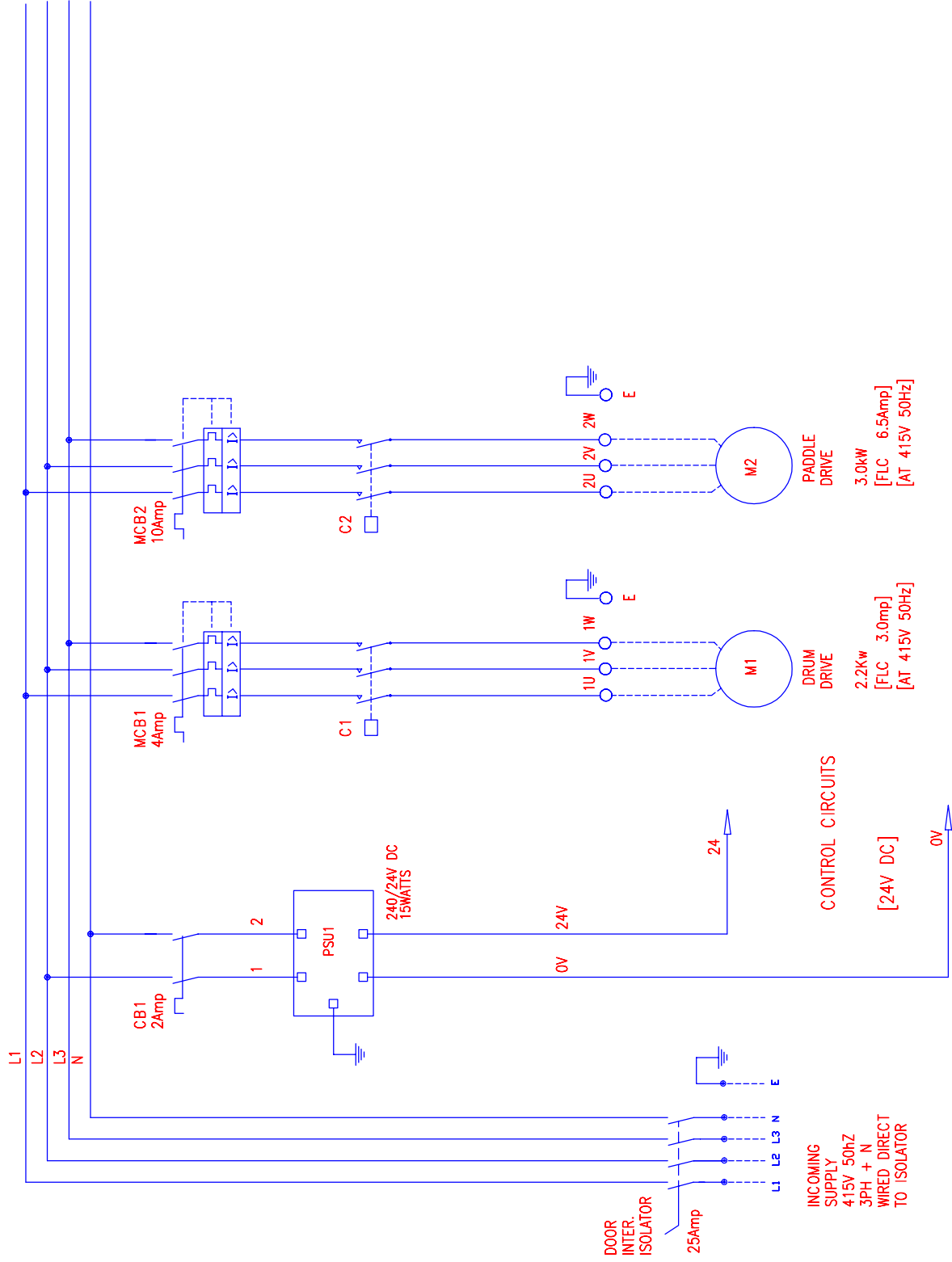
ISSUE	TITLE	DRAWN T.E.STONES		DRAWING No. V152/3
		DATE 03/05/03		
ISSUE	TITLE	CHECKED	APPROVED	DATE 03/05/03
		HORWICH ELECTRONIC LABORATORIES Ltd. LONGWORTH RD. HORWICH, BOLTON LANCES. BL6 7BN TEL. 01204 693311 FAX 01204 690023		

MATERIAL PARTS LISTS

SHT ND. 1 OF 1

QTY	CIRCUIT REFERENCES CONTROL PANEL TO DRG V152/1 -3	DESCRIPTION	TYPE /CODE NO.	MANUFACTURER	REMARKS
1	-	MILD STEEL ENCLOSURE	400 x 400 X 200 ST4 -415	ETA	
1	ISOL	DOOR INTERLOCKED ISOLATOR	P1 63N/SVB	KLOCKNER MOELLER	
1	CB1	CIRCUIT BREAKER 2Amp	S272-K2	ABB	
2	MCB1,MCB2	MOTOR CIRCUIT BREAKER	PKZM0-25 +NHI-11	KLOCKNER MOELLER	
2	C1,C2	CONTACTOR	DIL0AM-G-10	KLOCKNER MOELLER	
1	PSU1	POWER SUPPLY 240/24VDC/15W	PS5R-B-24V	IDEC	
2	RL1-2inc	CONTROL RELAY 24V DC 4 POLE	111A4.24VDC	KHUNKE	
2	RL1-2inc	RELAY BASE 14 PIN	Z392.04	KHUNKE	
1 SET	-	TERMINALS	SAK 2,5	KLIPPON	
		PANEL DOOR COMPONENTS			
1	PB1	EMERGENCY STOP BUTTON	M22-PV-K01	KLOCKNER MOELLER	
1	PB2	PUSHBUTTON RED	M22-D-R+M22-K01	KLOCKNER MOELLER	
1	PB3	PUSHBUTTON GREEN	M22-D-G+M22-K10	KLOCKNER MOELLER	
1	H1	INDICATOR LAMP WHITE	M22-L-W+M22-LED230-W	KLOCKNER MOELLER	
1	-	COMPONENT LABEL	W/B/W TRAFFOLYTE	HEL	
1	-	WARNING LABEL [415V]	Y/B/Y TRAFFOLYTE	HEL	
1	-	EM STOP LABEL	M22-XBK1	KLOCKNER MOELLER	

ISSUE	TITLE MATERIAL PARTS LIST -ELECTRICAL STARTER PANEL PADDLE / DRUM MIXER RP150XD (240V 1Ph) WINGET Ltd	ISSUE	DATE	DRAWING NO.
		ISSUE	DATE	DRAWING NO.
		ISSUE	DATE	DRAWING NO.
		ISSUE	DATE	DRAWING NO.
	HORWICH ELECTRONIC LABORATORIES Ltd. LONGWORTH RD. HORWICH, BOLTON LANCS. BL6 7BN TEL. 01204 693311 FAX 01204 690023	DATE	03/05/03	V152PL1
		CHECKED		
		APPROVED		
				ISSUE A



WIRING COLOUR CODED -:
 415V 3PH. RED/YELLOW/BLUE
 NEUTRAL BLACK
 24V DC WHITE
 CONDUCTOR SIZES -:
 L1,L2,L3+N - 2.5mm²
 1U1,1U2,1U3 etc - 1.5mm²
 24V DC - 1mm²

ISSUE

ISSUE

TITLE

POWER CIRCUITS -ELECTRICAL STARTER PANEL
 PADDLE / DRUM MIXER RP100XD MK2 415V 3PH.
 WINGET Ltd
 HORWICH ELECTRONIC LABORATORIES Ltd. LONGWORTH RD. HORWICH, BOLTON
 LANCs. BL6 7BN TEL. 01204 693311 FAX 01204 690023

DRAWN T.E.STONES

DATE FEB 2003

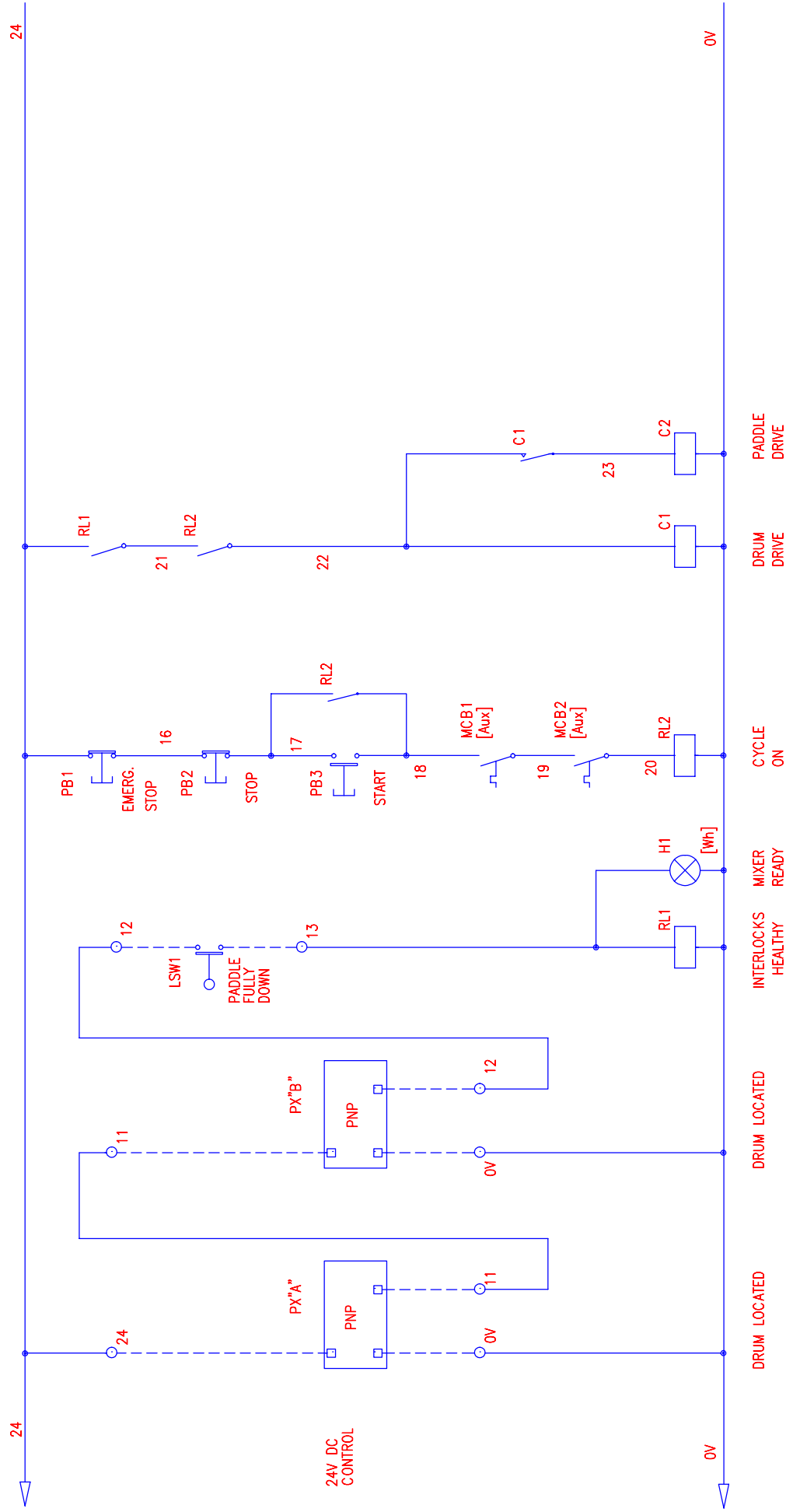
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APPROVED

DRAWING No.

WINGET-04B

ISSUE A



ISSUE

ISSUE

TITLE

CONTROL CIRCUITS -ELECTRICAL STARTER PANEL
 PADDLE / DRUM MIXER RP100XD Mk2 415V 3PH
 WINGET Ltd
 HORWICH ELECTRONIC LABORATORIES Ltd. LONGWORTH RD. HORWICH, BOLTON
 LANCs. BL6 7BN TEL. 01204 693311 FAX 01204 690023

DRAWN T.E.STONES

DATE FEB 2003

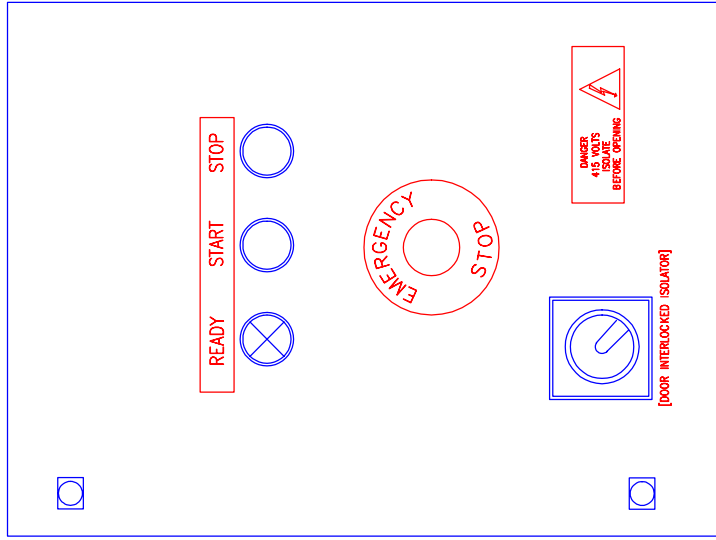
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APPROVED

DRAWING No.

WINGET-04C

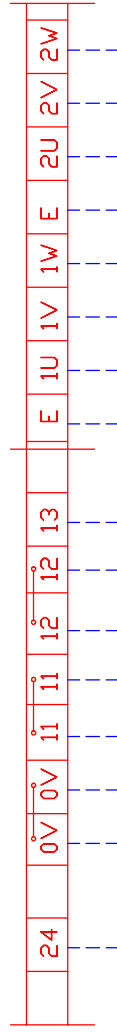
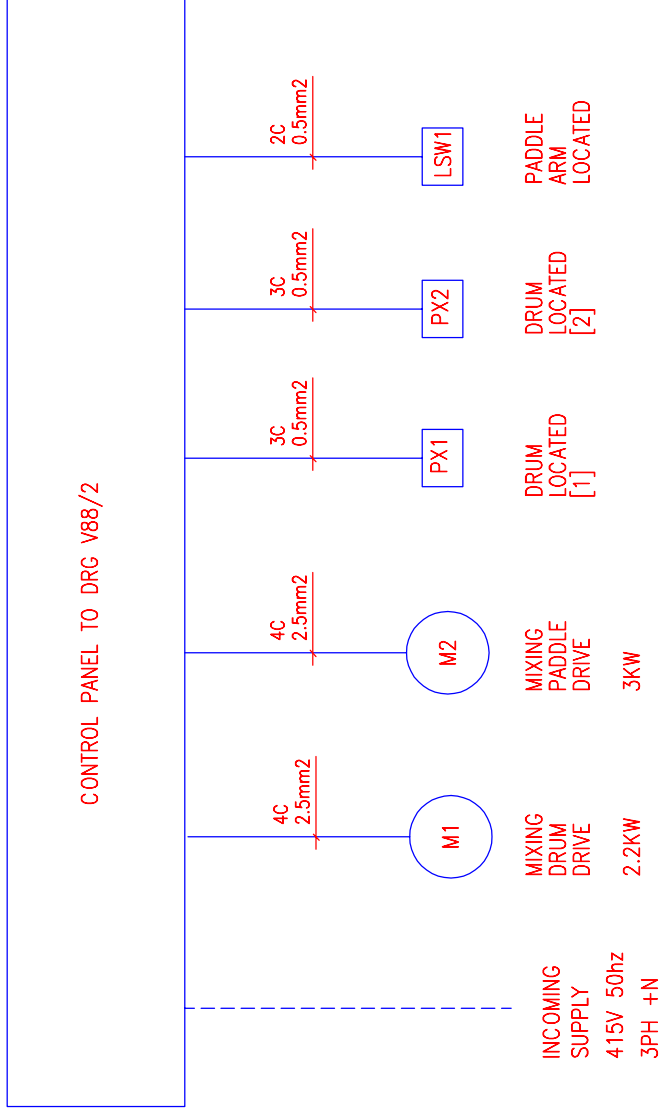
ISSUE A



BOTTOM CABLE ENTRY GLAND PLATE

ENCLOSURE NOML SIZE 400H X 300W X 150 D
 MILD STEEL CONSTRUCTION IP65
 FINISH PAINTED RAL 7032

COMPONENT LABELS W/B/W TRAFFOLYTE
 WARNING LABELS Y/B/Y TRAFFOLYTE



MIXING DRUM DRIVE
 MIXING PADDLE DRIVE

PXA - DRUM LOCATED (1) 24 / 0V /11 [BRN/BLUE/Gn.Yw]
 PXB - DRUM LOCATED (2) 11 / 0V /12 [Brown/Blue/Gn.Yw]
 LSW1-MIXING ARM LOCATED 12 / 13 [Brown/Blue]

ISSUE

ISSUE

TITLE

GENERAL LAYOUT -ELECTRICAL STARTER PANEL
 PADDLE / DRUM MIXER RP100XD MK2 -415V 3PH
 WINGET L td

HORWICH ELECTRONIC LABORATORIES L td. LONGWORTH RD. HORWICH, BOLTON
 LANCs. BL6 7BN TEL. 01204 693311 FAX 01204 690023

DRAWN T.E.STONES

DATE FEB 2003

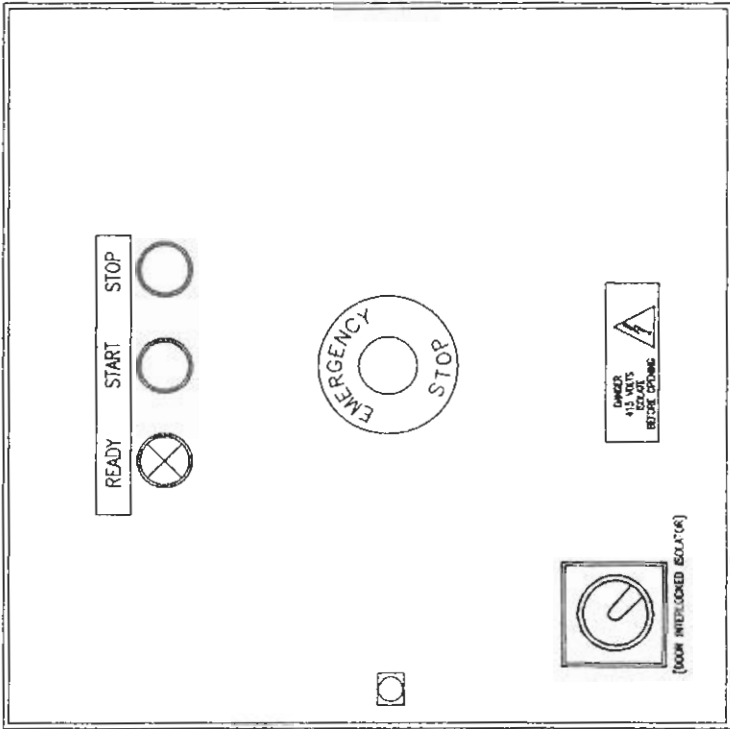
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APPROVED

DRAWING No.

WINGET-04A

ISSUE A



BOTTOM CABLE ENTRY GLAND PLATE

ENCLOSURE NOML SIZE 400H X 400W X 150 D
 MILD STEEL CONSTRUCTION IP65
 FINISH PAINTED RAL 7032
 COMPONENT LABELS W/B/W TRAFFOLYTE
 WARNING LABELS Y/B/Y TRAFFOLYTE

Mixer SERIAL N° 6109 Customized

ISSUE

TITLE

GENERAL LAYOUT -ELECTRICAL STARTER PANEL
 PADDLE / DRUM MIXER RP150XD MK2 (415V SUPPLY)
 WINGET Ltd

HORWICH ELECTRONIC LABORATORIES Ltd. BANKFIELD STREET BOLTON
 LANCs. BL3 5NP TEL. 01204 650555 FAX 01204 61797

DRAWN T.E.STONES

DATE 22/08/11

CHECKED

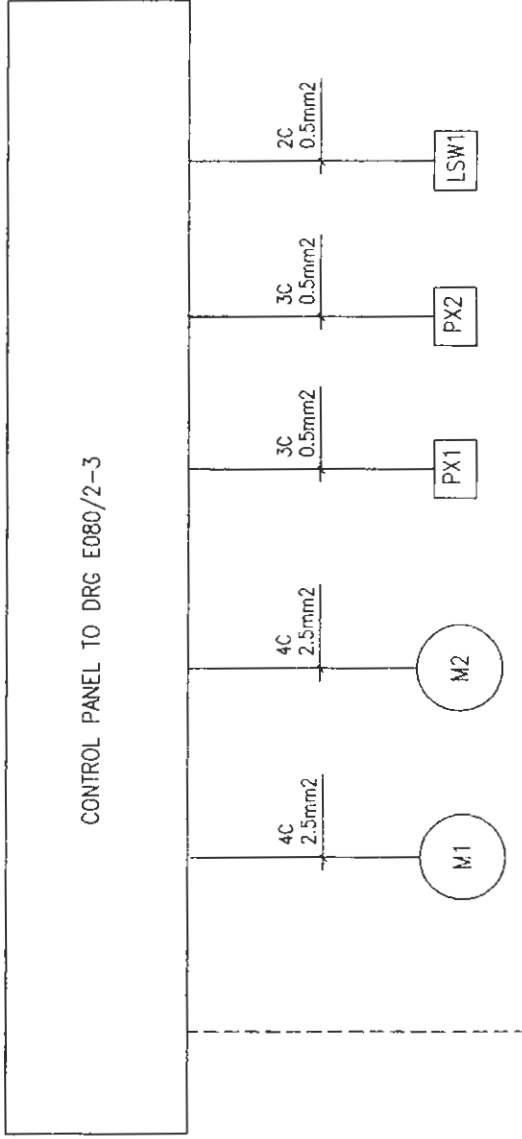
APPROVED

DRAWING No.

F012/1

ISSUE 01

CONTROL CIRCUITS TO DRG F012/2-3



INCOMING SUPPLY 415V 50hz 3PH +N
 MIXING DRUM DRIVE 2.2KW
 MIXING PADDLE DRIVE 3KW
 DRUM LOCATED [1]
 DRUM LOCATED [2]
 PADDLE ARM LOCATED

CABLE CONNECTIONS TO MIXER BY CLIENT

Y scan

SHROUDED

24	0V	11	11	12	12	13	13	E	1U	1V	1W	E	2U	2V	2W
----	----	----	----	----	----	----	----	---	----	----	----	---	----	----	----

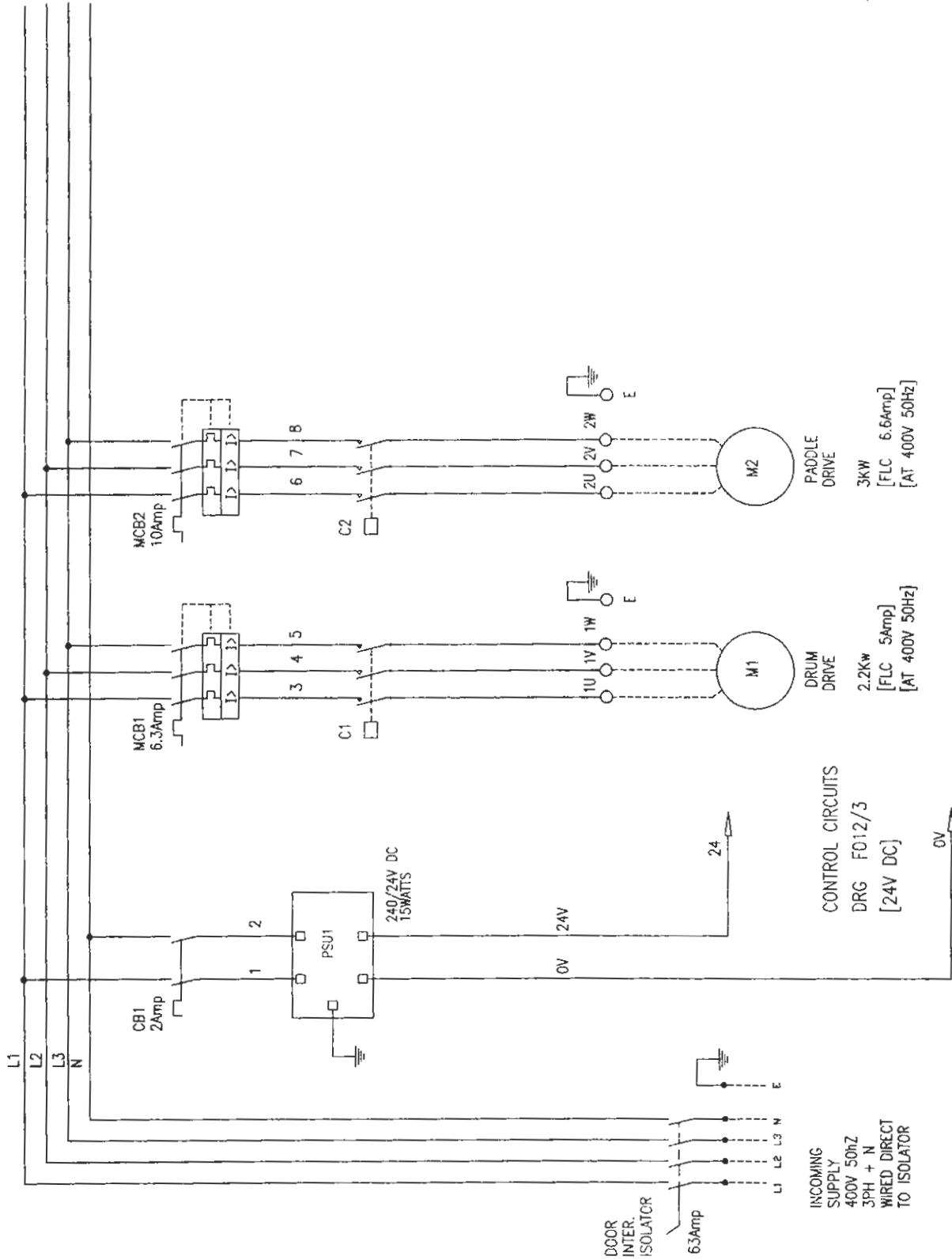
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MIXING DRUM DRIVE

MIXING PADDLE DRIVE

PXA - DRUM LOCATED (1) 24 / 0V / 11 [Brown/Blue/Gn.Yw]
 PXB - DRUM LOCATED (2) 11 / 0V / 12 [Brown/Blue/Gn.Yw]
 LSW1 - MIXING ARM LOCATED 12 / 13 [Brown/Blue]

11-6d 12 orange 24 Brown of 11-6d



WIRING COLOUR CODED :-

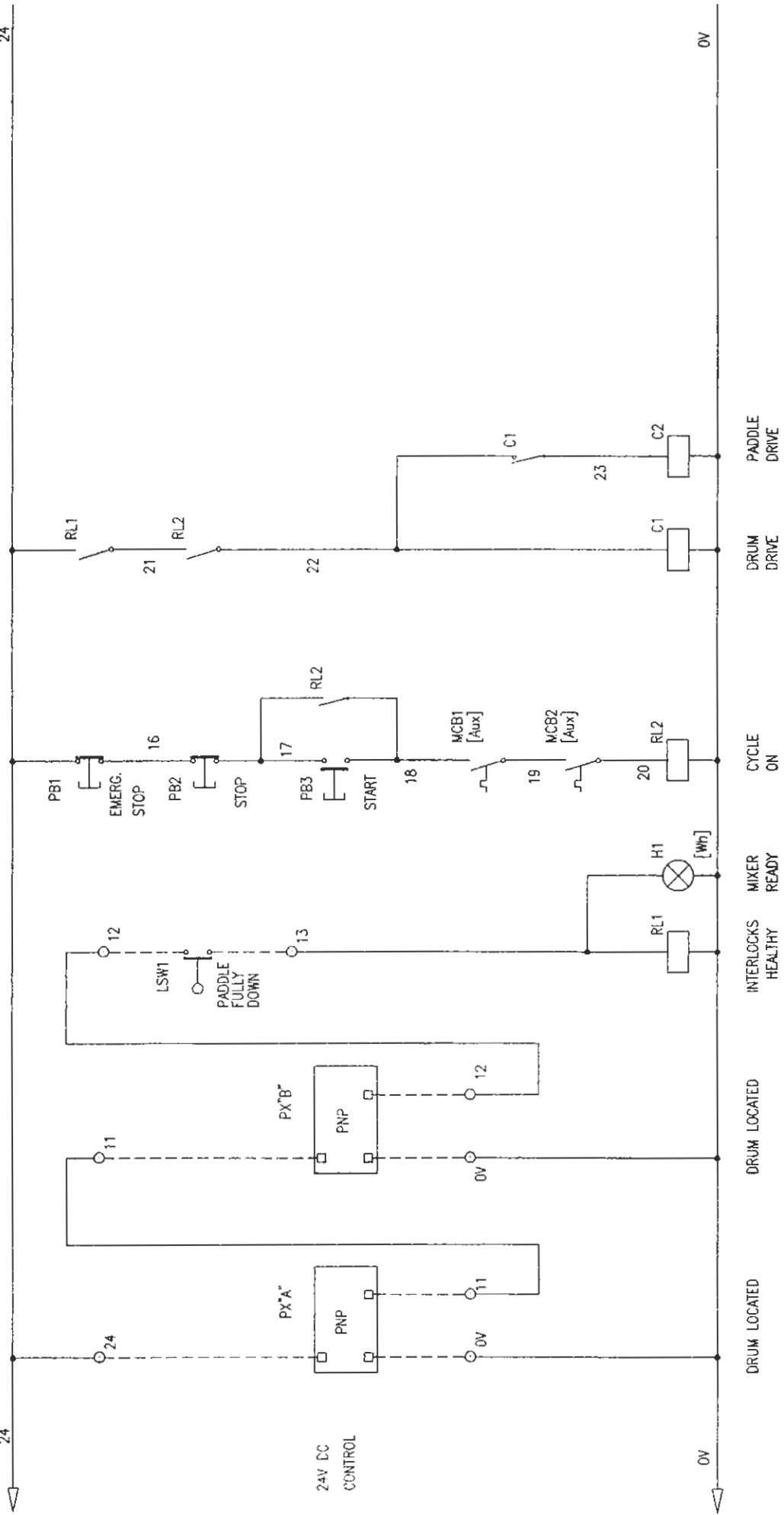
400V 3PH. BROWN/BLACK/GREY
 NEUTRAL BLUE
 24V DC WHITE

CONDUCTOR SIZES :-

L1,L2,L3+N - 2.5mm²
 1U,1U2,1U3 etc - 1.5mm²
 24V DC - 1mm²

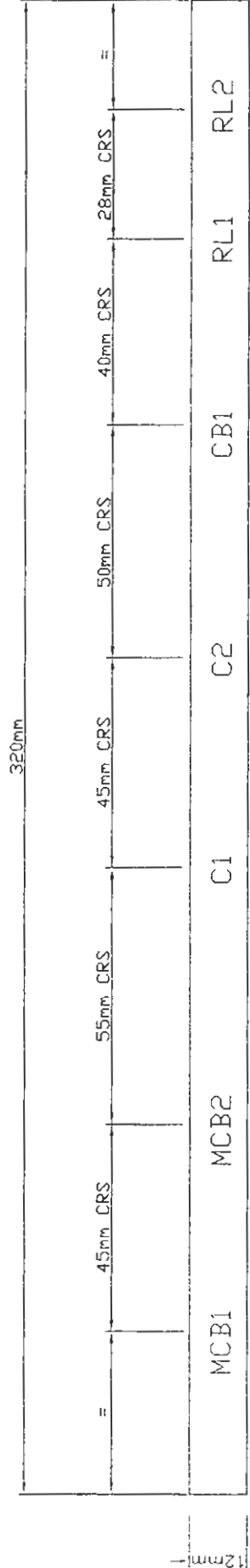
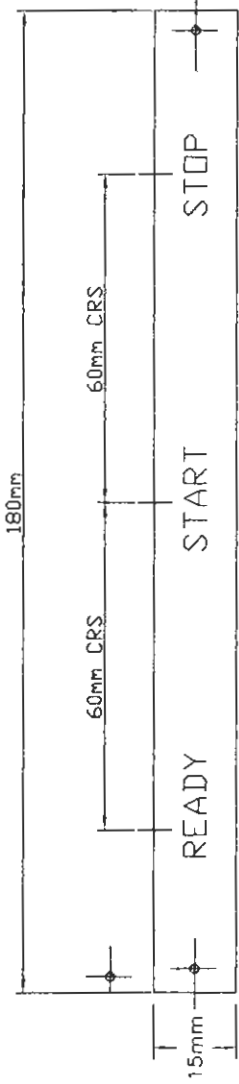
Mixer Serial No 6109 Custom TCO

ISSUE	ISSUE	TITLE		DRAWING No. F012/2
	ISSUE	POWER CIRCUITS - ELECTRICAL STARTER PANEL		
	ISSUE	PADDLE / DRUM MIXER RP150XD Mk2 (400V 50Hz)		
	ISSUE	WINGET Ltd		
ISSUE	ISSUE	HORWICH ELECTRONIC LABORATORIES Ltd, BANKFIELD STREET BOLTON		ISSUE 01
ISSUE	ISSUE	LANCS. BL3 5NP TEL. 01204 650555 FAX 01204 61797		
ISSUE	ISSUE	T.E. STONES		
ISSUE	ISSUE	DATE	22/08/11	
ISSUE	ISSUE	CHECKED		APPROVED



Mixer Serial No 6109 CUSTOMER TCO

ISSUE	TITLE	DRAWN T.E.STONES	DRAWING No.
	CONTROL CIRCUITS -ELECTRICAL STARTER PANEL	DATE 22/08/11	F012/3
	PADDLE / DRUM MIXER RP150XD Mk2	CHECKED	
	WINGET Ltd	APPROVED	ISSUE 01
	HORWICH ELECTRONIC LABORATORIES Ltd. BANKFIELD STREET BOLTON LANCs. BL3 5NP TEL. 01204 650555 FAX 01204 61797		



IDENTIFICATION LABEL
 W/B/W TRAFFOLYTE
 SCREW FIXED 3.5mm HOLES
 5mm HIGH CHRS

Mixer Serial no 6109 Custom 'Tco'

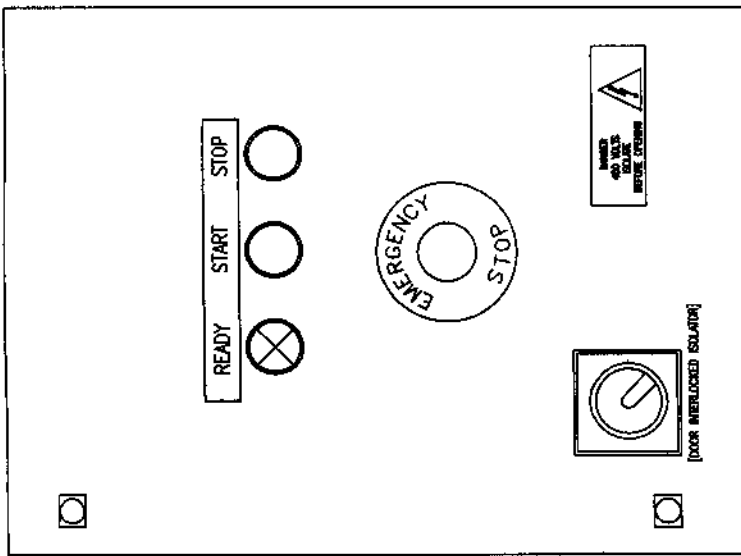
ISSUE	TITLE	DRAWN	T.E.STONES
	LABELLING DETAILS -ELECTRICAL STARTER PANEL PADDLE / DRUM MIXER RPI50XD MK2 WINGET Ltd HDRWICH ELECTRONIC LABORATORIES Ltd, BANKFIELD STREET BOLTON LANCs. BL3 5NP TEL. 01204 650555 FAX 01204 61797	DATE	22/08/11
		CHECKED	
		APPROVED	
		DRAWING No.	F012/4
		ISSUE	01

MATERIAL PARTS LISTS

QTY	CIRCUIT REFERENCES CONTROL PANEL TO DRG F012/1 --3	DESCRIPTION	TYPE /CODE NO.	MANUFACTURER	REMARKS
		MILD STEEL ENCLOSURE	400 x 400 X 150 ST3 -415	ETA	
1	ISOL	DOOR INTERLOCKED ISOLATOR	P1-63V/SVB	KLOCKNER MOELLER	
2	ISOL	ISOLATOR TERMINAL SHROUDS	HP1	KLOCKNER MOELLER	
1	CB1	CIRCUIT BREAKER 2amp	S272-K2	ABB	
1	MCB1	MOTOR CIRCUIT BREAKER	PKZM0-6.3	KLOCKNER MOELLER	
1	MCB2	MOTOR CIRCUIT BREAKER	PKZM0-10	KLOCKNER MOELLER	
2	MCB1,2	MCB AUX CONTACT	NHIE-11PKZ0	KLOCKNER MOELLER	
2	C1,C2	CONTACTOR	DILM17-10-24VDC	KLOCKNER MOELLER	
1	PSU1	POWER SUPPLY 240/24VDC/15W	PS5R-S8-24V	IDEC	
2	RL1-2inc	CONTROL RELAY 24V DC 4 POLE	111.A4.24VDC	KHUNKE	
2	RL1-2inc	RELAY BASE 14 PIN	Z366	KHUNKE	
1 SET	-	TERMINALS	SAK 2,5	KLIPPPON	
		PANEL DOOR COMPONENTS			
1	PB1	EMERGENCY STOP BUTTON	M22-PV-K01	KLOCKNER MOELLER	
1	PB2	PUSHBUTTON RED	M22-D-R+M22-K01	KLOCKNER MOELLER	
1	PB3	PUSHBUTTON GREEN	M22-D-G+M22-K10	KLOCKNER MOELLER	
1	H1	INDICATOR LAMP WHITE	M22-L-W+M22-LED230--W	KLOCKNER MOELLER	
1	-	COMPONENT LABEL	W/B/W TRAFFOLYTE	HEL	
1	-	WARNING LABEL [400V]	Y/B/Y TRAFFOLYTE	HEL	
1	-	EM STOP LABEL	M22-XBK1	KLOCKNER MOELLER	

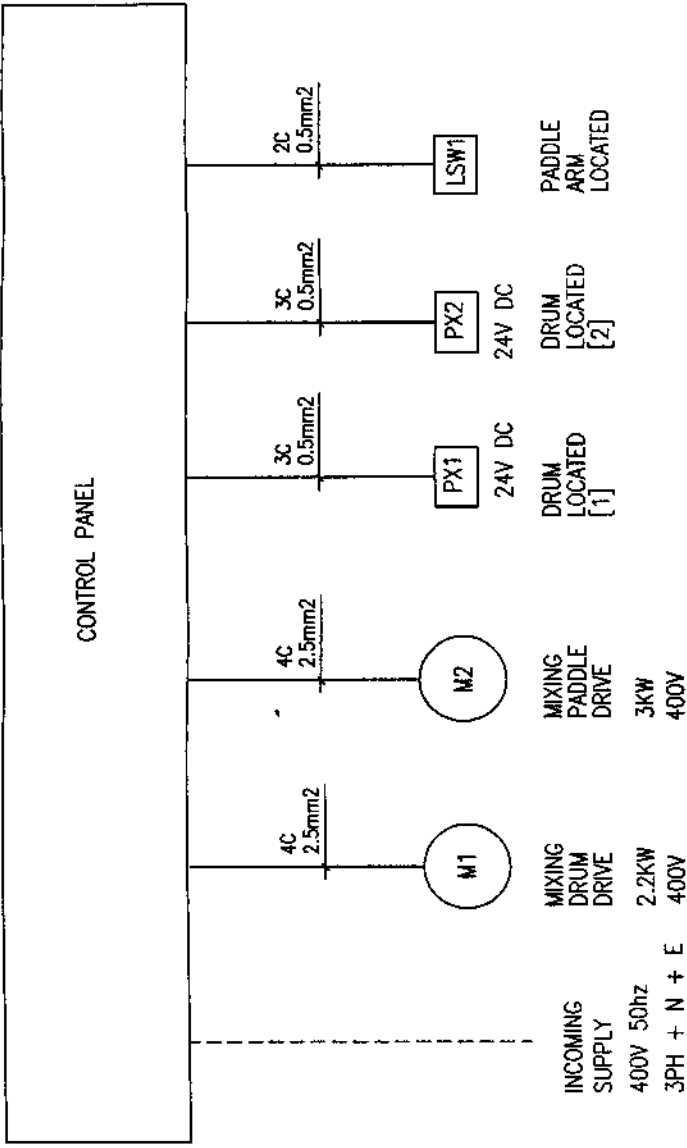
Mixer Serial No 6109 Customized

ISSUE	ISSUE	TITLE	MATERIAL PARTS LISTS - ELECTRICAL STARTER PANEL		DRAWN T.E.STONES	
			PADDLE / DRUM MIXER RP150XD Mk2 WINGET Ltd		DATE	22/08/11
			HORWICH ELECTRONIC LABORATORIES Ltd BANKFIELD STREET BOLTON LANCS. BL3 5NP TEL: 01204 650555 FAX 01204 61797		CHECKED	
					APPROVED	
						DRAWING No. F012/PL1
						ISSUE 01

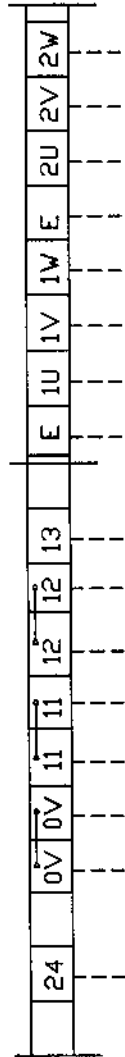


BOTTOM CABLE ENTRY GLAND PLATE

ENCLOSURE NOML SIZE 400H X 300W X 150 D
 MILD STEEL CONSTRUCTION IP65
 FINISH PAINTED RAL 7032
 COMPONENT LABELS W/B/W TRAFFOLYTE
 WARNING LABELS Y/B/Y TRAFFOLYTE



CABLE CONNECTIONS TO MIXER BY CLIENT

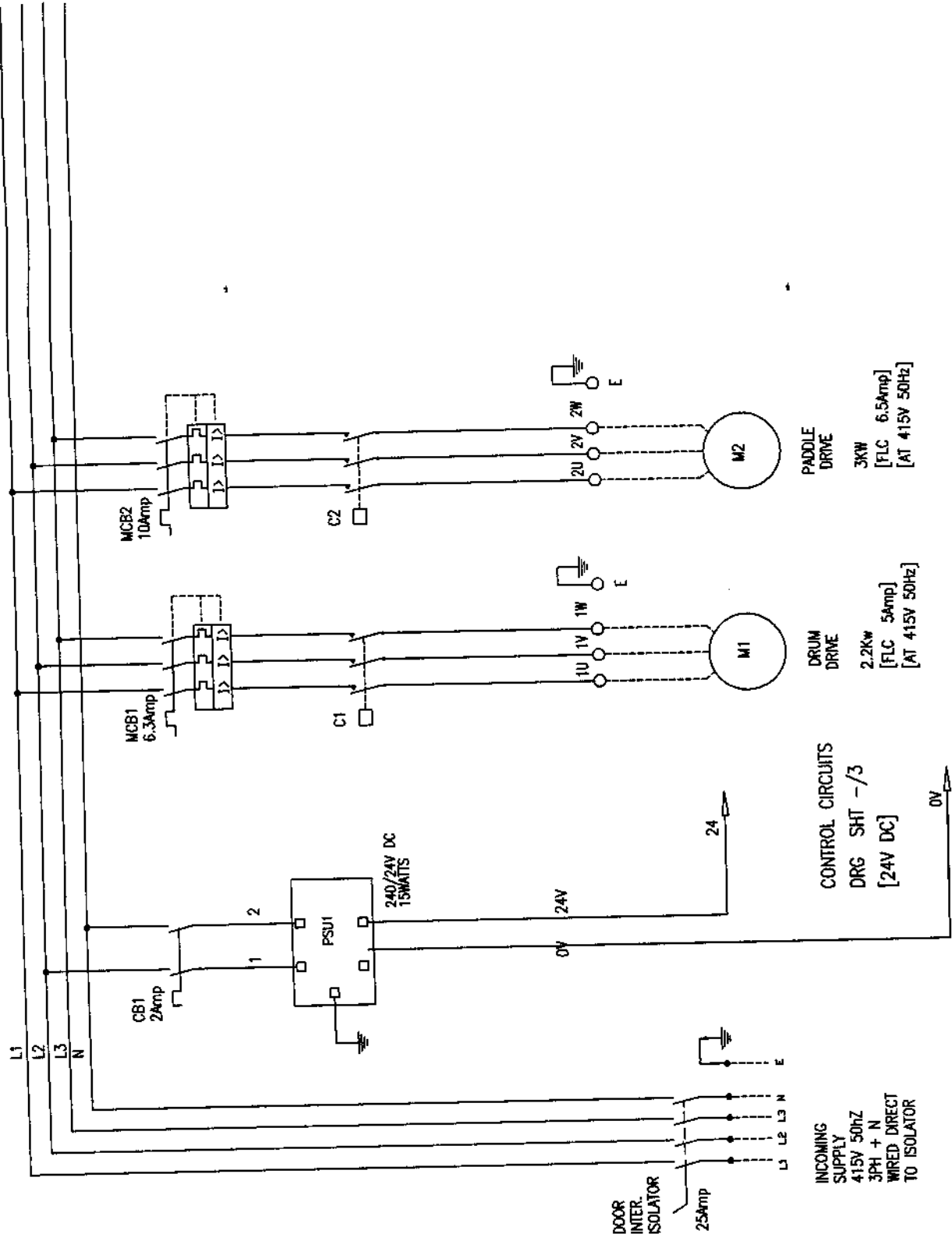


TERMINALS	SWITCH CABLE COLOURS	MIXING DRUM DRIVE	MIXING PADDLE DRIVE
PXA - DRUM LOCATED (1)	24 / 0V / 11 [Brown/Blue/Gn.Yw]	[PNP PROXIMITY SWITCH]	
PXB - DRUM LOCATED (2)	11 / 0V / 12 [Brown/Blue/Gn.Yw]	[PNP PROXIMITY SWITCH]	
LSW1 - MIXING ARM LOCATED	12 / 13 [Brown/Blue]	[NO CONTACT SWITCH]	

CONTROL CIRCUITS TO DRG SHT - /2

ISSUE	TITLE	GENERAL LAYOUT - ELECTRICAL STARTER PANEL PADDLE / DRUM MIXER RP150XD Mk2 (400/415V 50HZ SUPPLY) WINGET Ltd	DRAWN	T.E.STONES
	ISSUE		DATE	16/12/11
			CHECKED	
			APPROVED	
			DRAWING No.	F031/1
			ISSUE	01

HORWICH ELECTRONIC LABORATORIES Ltd, BANKFIELD STREET BOLTON
 LANCs. BL3 5NP TEL. 01204 650555 FAX 01204 61797



WIRING COLOUR CODED :-
 415V 3PH. BROWN/BLACK/GREY
 NEUTRAL BLUE
 24V DC WHITE

CONDUCTOR SIZES :-
 L1,L2,L3+N - 2.5mm²
 1U1,1U2,1U3 etc - 1.5mm²
 24V DC - 1mm²

T.E.STONES	
DRAWN	16/12/11
DATE	
CHECKED	
APPROVED	

DRAWING No.
F031/2
 ISSUE 01

TITLE
 POWER CIRCUITS -ELECTRICAL STARTER PANEL
 PADDLE / DRUM MIXER RP150XD Mk2 (415V 50HZ)
 WINGET Ltd

HORWICH ELECTRONIC LABORATORIES Ltd, BANKFIELD STREET BOLTON
 LANCs. BL3 5NP TEL. 01204 650555 FAX 01204 61797

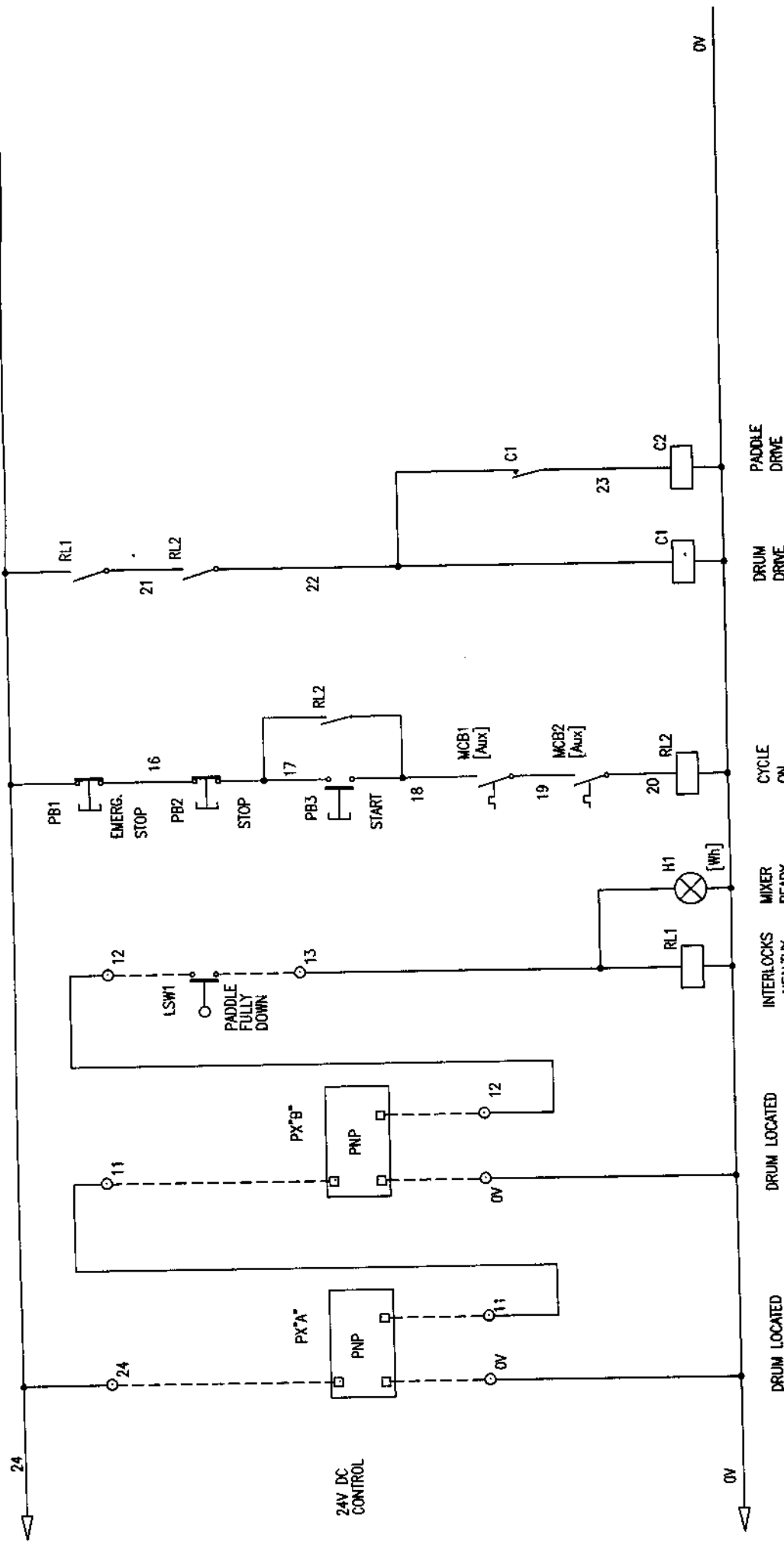
CONTROL CIRCUITS
 DRG SHT -/3
 [24V DC]

DRUM DRIVE
 2.2Kw
 [FLC 6.5Amp]
 [AT 415V 50Hz]

PADDLE DRIVE
 3Kw
 [FLC 6.5Amp]
 [AT 415V 50Hz]

ISSUE

ISSUE



DRUM LOCATED DRUM LOCATED INTERLOCKS MIXER READY CYCLE ON DRUM DRIVE PADDLE DRIVE

DRAWING No.
F031/3
ISSUE 01

DRAWN T.E.STONES
DATE 16/12/11
CHECKED
APPROVED

TITLE
CONTROL CIRCUITS -ELECTRICAL STARTER PANEL
PADDLE / DRUM MIXER RP150XD MK2
WINGET Ltd
HORWICH ELECTRONIC LABORATORIES Ltd. BANKFIELD STREET BOLTON
LANCS. BL3 5NP TEL. 01204 650555 FAX 01204 61797

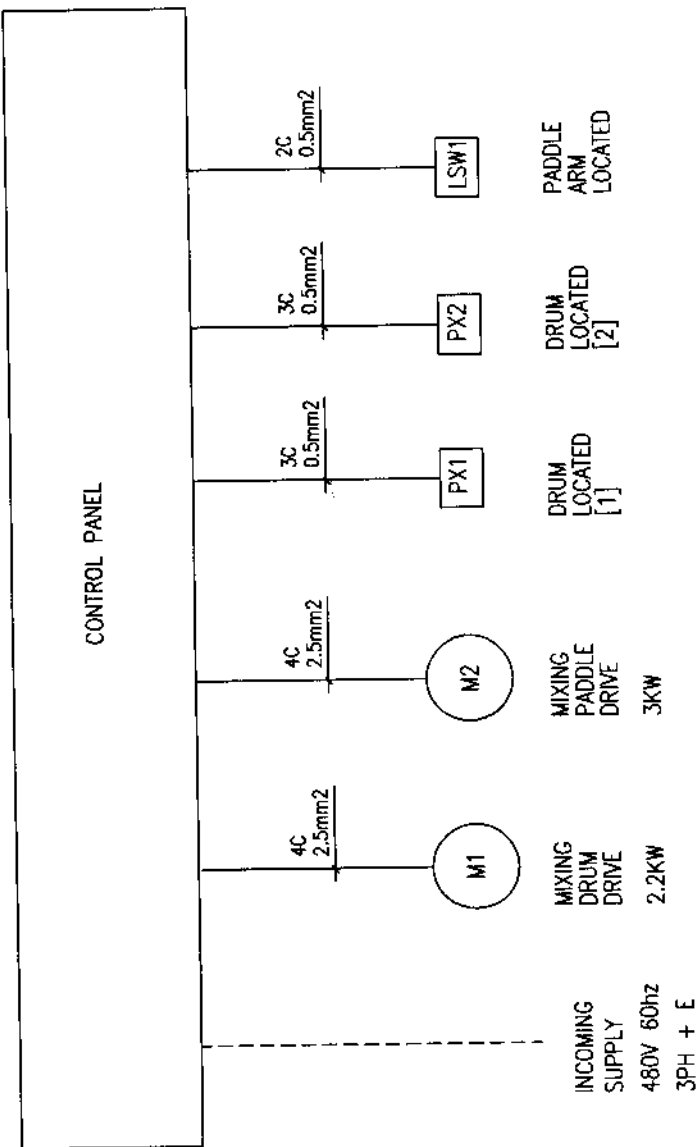
ISSUE

MATERIAL PARTS LISTS

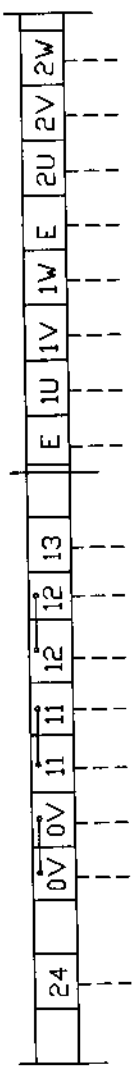
SHT NO. 1 OF 1

QTY	CIRCUIT REFERENCES CONTROL PANEL TO SHEET/1	DESCRIPTION	TYPE /CODE NO.	MANUFACTURER	REMARKS
1	-	MILD STEEL ENCLOSURE	300 x 400 X 150 ST4 -415	ETA	
1	ISOL	DOOR INTERLOCKED ISOLATOR	P1 25/V/SVB	KLOCKNER MOELLER	
2	ISOL	ISOLATOR SHROUDS	HPI	KLOCKNER MOELLER	
1	MCB1	CIRCUIT BREAKER 3P 2Amp	S202-K2	ABB	
		MOTOR STARTER ASSY			
1	MCB 1	MOTOR CIRCUIT BREAKER	PKZM0- 6.3	KLOCKNER MOELLER	
1	MCB 2	MOTOR CIRCUIT BREAKER	PKZM0- 10	KLOCKNER MOELLER	
2	MCB 1,2	MCB AUX CONTACTS	NHE-11-PKZD AUX	KLOCKNER MOELLER	
2	C1,C2	CONTACTOR	DILM12-10 24V DC	KLOCKNER MOELLER	
2	MCB1/C1, MCB2/C2	MOUNTING KIT	PKZM0-XDM12	KLOCKNER MOELLER	
1	PSU1	POWER SUPPLY 240/24VDC/30W	428-455	RS COMPONENTS	
2	RL1-2inc	CONTROL RELAY 24V DC 4 POLE	111.A4.24VDC	KHUNKE	
2	RL1-2inc	RELAY BASE 14 PIN	Z392.04	KHUNKE	
1 SET	-	TERMINALS	SAK 2,5	KLIPPON	
		PANEL DOOR COMPONENTS			
1	PB1	EMERGENCY STOP BUTTON	M22-PVT-KD1	KLOCKNER MOELLER	
1	PB2	PUSHBUTTON RED	M22-D-R+M22-KD1	KLOCKNER MOELLER	
1	PB3	PUSHBUTTON GREEN	M22-D-G+M22-K10	KLOCKNER MOELLER	
1	H1	INDICATOR LAMP WHITE	M22-L-W+M22-LED24-W	KLOCKNER MOELLER	
1	-	INT. COMPONENT LABEL	W/B/W TRAFFOLYTE	HEL	DRG SHT - /4
1	-	EM STOP LABEL	M22-XAK1	KLOCKNER MOELLER	
1	-	VOLTAGE WARNING LABEL 415V	Y/B/Y TRAFFOLYTE	HEL	STD
1	-	PUSHBUTTON LABELLING	W/B/W TRAFFOLYTE	HEL	DRG SHT - /4

ISSUE	ISSUE	TITLE			DRAWN			T.E.STONES			DRAWING No.		
		MATERIAL PARTS LISTS - ELECTRICAL STARTER PANEL			DATE			16/12/11			F031/PL1		
		PADDLE / DRUM MIXER RP150XD Mk2 WINGET Ltd			CHECKED								
		HORWICH ELECTRONIC LABORATORIES Ltd. BANKFIELD STREET BOLTON LANCS. BL3 5NP TEL. 01204 650555 FAX 01204 61797			APPROVED						ISSUE 01		

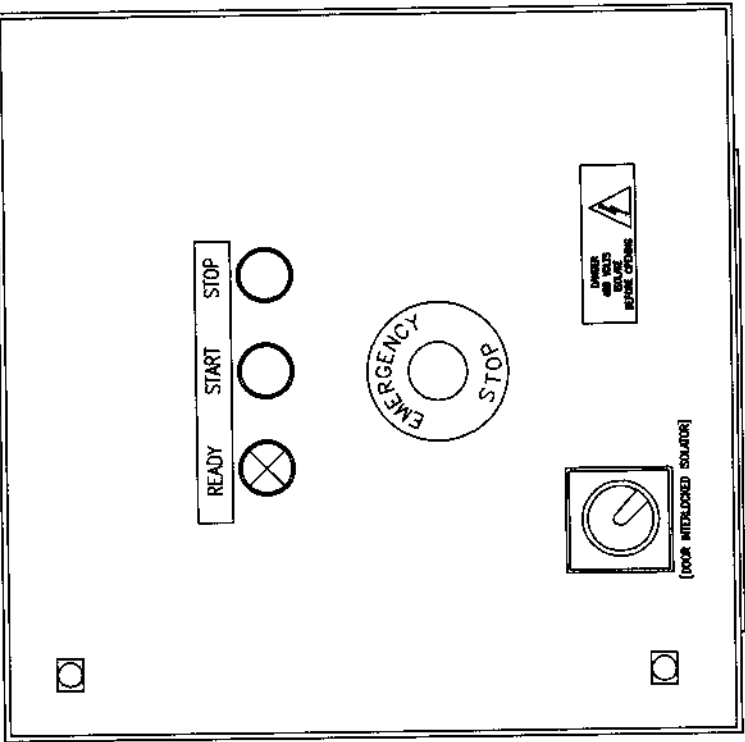


CABLE CONNECTIONS TO MIXER BY CLIENT



ENCLOSURE NOML SIZE 400H X 400W X 200 D
MILD STEEL CONSTRUCTION IP65
FINISH PAINTED RAL 7032

COMPONENT LABELS W/B/W TRAFFOLYTE
WARNING LABELS Y/B/Y TRAFFOLYTE



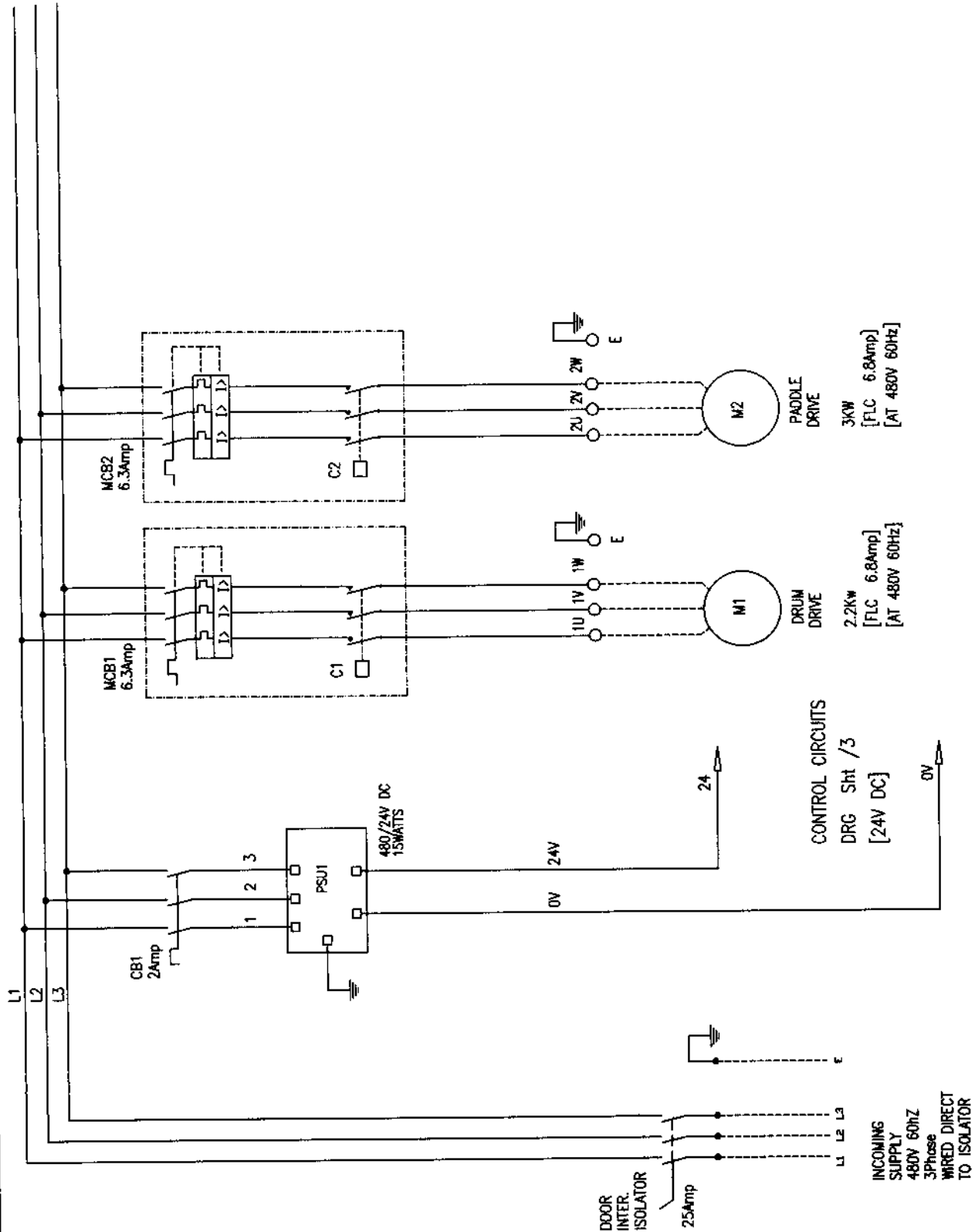
BOTTOM CABLE ENTRY GLAND PLATE

TERMINALS	SWITCH	CABLE COLOURS
24 / 0V / 11		[Brown/Blue/Gn.Yw]
11 / 0V / 12		[Brown/Blue/Gn.Yw]
12 / 13		[Brown/Blue]

MIXING DRUM DRIVE
MIXING PADDLE DRIVE

CONTROL CIRCUITS TO DRG SHT /2

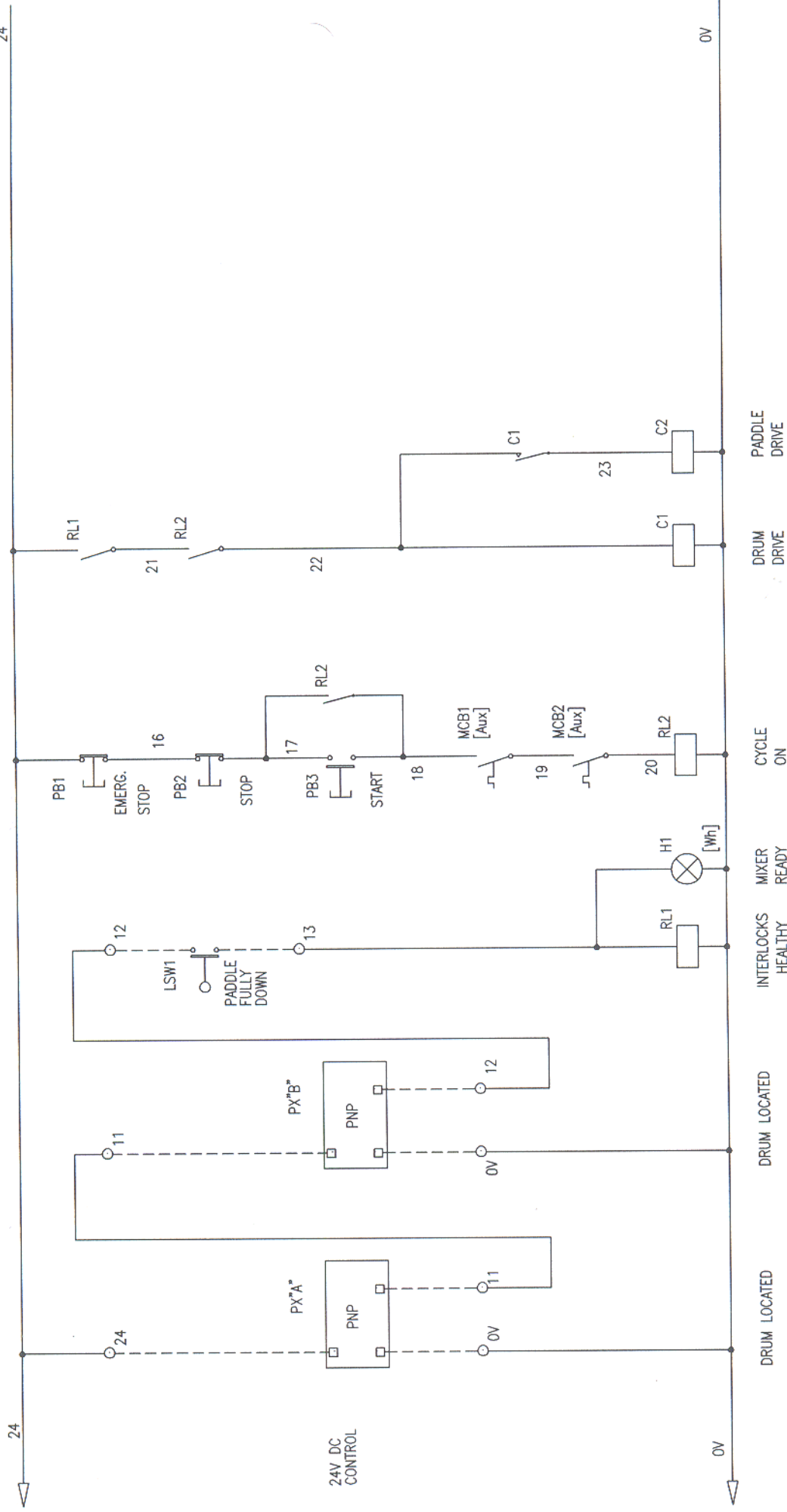
ISSUE	GENERAL LAYOUT	-ELECTRICAL STARTER PANEL	
	PADDLE / DRUM MIXER RP150XD Mk2 (480V 60Hz SUPPLY)	WINGET Ltd	
ISSUE	TITLE	HDRWICH ELECTRONIC LABORATORIES Ltd, BANKFIELD STREET BOLTON LANCs, BL3 5NP TEL. 01204 650555 FAX 01204 61797	
	DRAWN	T.E.STONES	
	DATE	01/07/11	
	CHECKED		
	APPROVED		
	DRAWING No.	E105/1	
	ISSUE	01	



WIRING COLOUR CODED :-
 480V 3PH. BLACK/ BLACK /BLACK
 24V DC BLUE

CONDUCTOR SIZES :-
 480V 3 PHASE - 2.5mm²
 24V DC - 1mm²

ISSUE	ISSUE	TITLE POWER CIRCUITS -ELECTRICAL STARTER PANEL PADDLE / DRUM MIXER RP150XD Mk2 (480V 60Hz) WINGET Ltd	DRAWN T.E.STONES	DRAWING No. E105/2
	ISSUE			DATE 01/07/11
			CHECKED	
			APPROVED	
HRWICH ELECTRONIC LABORATORIES Ltd, BANKFIELD STREET BOLTON LANCs. BL3 5NP TEL. 01204 650555 FAX 01204 61797				

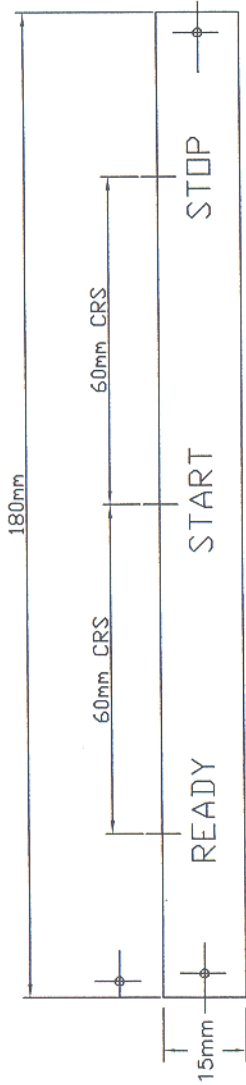


DRAWN	T.E.STONES
DATE	01/07/11
CHECKED	
APPROVED	

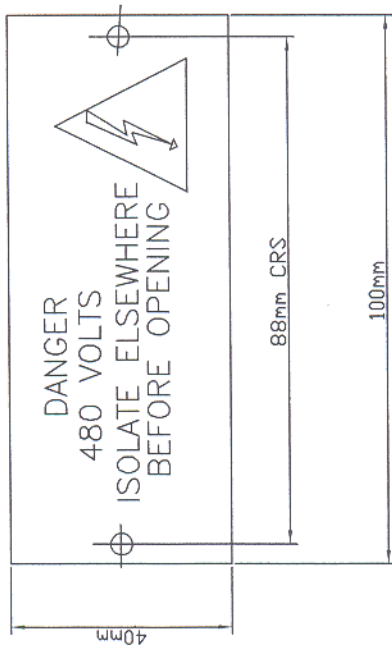
TITLE
 CONTROL CIRCUITS -ELECTRICAL STARTER PANEL
 PADDLE / DRUM MIXER RP150XD Mk2
 WINGET Ltd
 HORWICH ELECTRONIC LABORATORIES Ltd, BANKFIELD STREET BOLTON
 LANCs. BL3 5NP TEL. 01204 650555 FAX 01204 61797

ISSUE	
--------------	--

DRAWING No.
 E105/3
ISSUE 01



IDENTIFICATION LABEL
 W/B/W TRAFFOLYTE
 SCREW FIXED 3.5mm HOLES
 5mm HIGH CHRS



ENGRAVED TRAFFOLYTE LABEL
 Y/B/Y
 100mm X 40mm
 3.5mm HOLES ON 88mm CRS

ISSUE	TITLE	DETAIL OF LABELLING -ELECTRICAL STARTER PANEL		DRAWN T.E.STONES	DRAWING No.		
		RP150XD MK 2 DRUM MIXER				DATE 03/06/11	E105/4
		WINGET Ltd				CHECKED	
		HDRWICH ELECTRONIC LABORATORIES Ltd, LONGWORTH RD, HDRWICH, BOLTON LANCs. BL6 7BN TEL. 01204 693311 FAX 01204 690023				APPROVED	

MATERIAL PARTS LISTS

SHT NO. 1 OF 1

QTY	CIRCUIT REFERENCES CONTROL PANEL TO SHEET/1	DESCRIPTION	TYPE /CODE NO.	MANUFACTURER	REMARKS
1	-	MILD STEEL ENCLOSURE	400 x 400 X 200 ST4 -420	ETA	
1	ISOL	DOOR INTERLOCKED ISOLATOR	P1 25/V/SVB	KLOCKNER MOELLER	
2	ISOL	ISOLATOR SHROUDS	HP1	KLOCKNER MOELLER	
1	CB1	CIRCUIT BREAKER 3P 2amp	S203-K2	ABB	
		MOTOR STARTER ASSY			
1	MCB 1	MOTOR CIRCUIT BREAKER	PKZMO- 6.3	KLOCKNER MOELLER	
1	MCB 2	MOTOR CIRCUIT BREAKER	PKZMO- 6.3	KLOCKNER MOELLER	
2	MCB 1,2	MCB AUX CONTACTS	NHIE-11-PKZ0 AUX	KLOCKNER MOELLER	
2	C1,C2	CONTACTOR	DILM12-10 24V DC	KLOCKNER MOELLER	
2	MCB1/C1, MCB2/C2	MOUNTING KIT	PKZMO-XDM12	KLOCKNER MOELLER	
		POWER SUPPLY 500/24VDC/50W	413-037	RS COMPONENTS	
2	RL1-2inc	CONTROL RELAY 24V DC 4 POLE	111.A4.24VDC	KHUNKE	
2	RL1-2inc	RELAY BASE 14 PIN	Z392.04	KHUNKE	
1 SET	-	TERMINALS	SAK 2,5	KLIPPON	
		PANEL DOOR COMPONENTS			
1	PB1	EMERGENCY STOP BUTTON	M22-PVT-K01	KLOCKNER MOELLER	
1	PB2	PUSHBUTTON RED	M22-D-R+M22-K01	KLOCKNER MOELLER	
1	PB3	PUSHBUTTON GREEN	M22-D-G+M22-K10	KLOCKNER MOELLER	
1	H1	INDICATOR LAMP WHITE	M22-L-W+M22-LED24-W	KLOCKNER MOELLER	
1	-	COMPONENT LABEL	W/B/W TRAFFOLYTE	HEL	
1	-	WARNING LABEL [415V]	Y/B/Y TRAFFOLYTE	HEL	
1	-	EM STOP LABEL	M22-XAK1	KLOCKNER MOELLER	
-	-	PUSHBUTTON LABEL	W/B/W TRAFFOLYTE	HEL	DRG E105/4
-	-	VOLTAGE WARNING LABEL 480V	Y/B/Y TRAFFOLYTE	HEL	

ISSUE	ISSUE	TITLE MATERIAL PARTS LISTS - ELECTRICAL STARTER PANEL PADDLE / DRUM MIXER RP150XD MK2 WINGET Ltd	DRAWN T.E.STONES	DRAWING No.
				E105/PL1
			DATE	01/07/11
			CHECKED	
			APPROVED	ISSUE 01
HORWICH ELECTRONIC LABORATORIES Ltd. BANKFIELD STREET BOLTON LANCS. BL3 5NP TEL. 01204 650555 FAX 01204 61797				

Ersatzteilliste

für Stirnradgetriebe - Fußausführung

Spare Parts List

for helical gear units -
foot mounting

Nr.: 440813.02

Seite 1 von 2



STÖBER ANTRIEBSTECHNIK

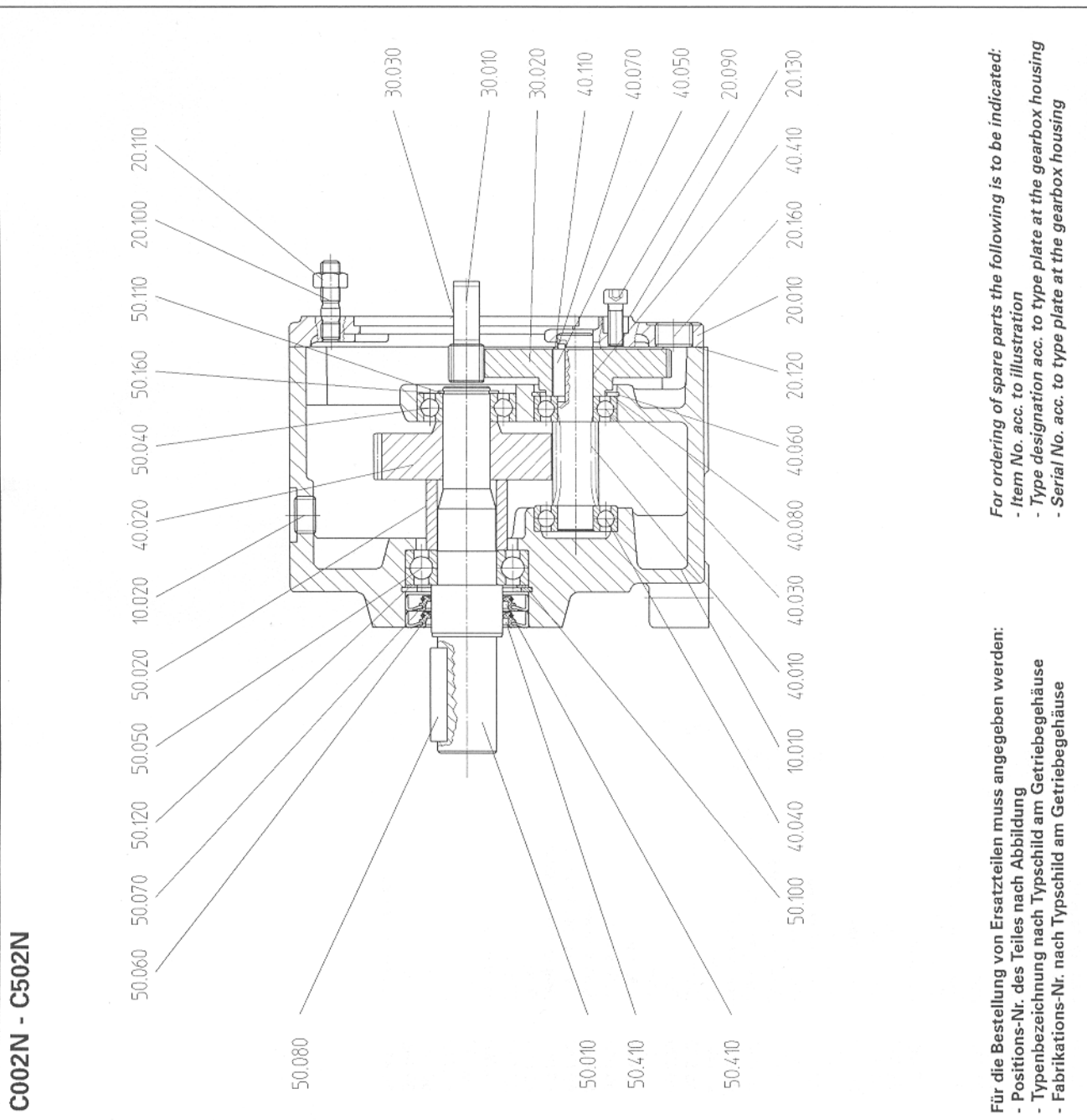
Kieselbronner Straße 12 • 75177 Pforzheim

Postfach 910103 • 75091 Pforzheim

Phone +49 (0) 7231 582-0 • Fax +49 (0) 7231 582-197

eMail: mail@stoerber.de • Internet: http://www.stoerber.de

Pos. Nr.	Bezeichnung
10.010	Getriebegehäuse
10.020	Verschlusschraube
20.010	Motoranschlussflansch
20.090	Zylinderschraube
20.100	Stiftschraube
20.110	Mutter
20.120	Dichtmasse (bei C0 Flachdichtung)
20.130	Flachdichtung
20.160	Verschlusschraube
30.010	Einsteckritzel
30.020	Zahnrad
30.030	Klebstoff
40.010	Vorgelegewelle
40.020	Zahnrad
40.030	Rillenkugellager
40.040	Rillenkugellager
40.050	Passfeder
40.060	Sicherungsring
40.070	Sicherungsring
40.080	Passscheibe
40.110	Passscheibe
40.410	Klebstoff
50.010	Endwelle
50.020	Distanzbuchse
50.040	Rillenkugellager
50.050	Rillenkugellager
50.060	Weilendichtring
50.070	Weilendichtring
50.080	Passfeder
50.100	Sicherungsring
50.110	Sicherungsring
50.120	Passscheibe
50.160	Passscheibe
50.410	Montagefett



For ordering of spare parts the following is to be indicated:
 - Item No. acc. to illustration
 - Type designation acc. to type plate at the gearbox housing
 - Serial No. acc. to type plate at the gearbox housing

Für die Bestellung von Ersatzteilen muss angegeben werden:
 - Positions-Nr. des Teiles nach Abbildung
 - Typenbezeichnung nach Typschild am Getriebegehäuse
 - Fabrikations-Nr. nach Typschild am Getriebegehäuse

Ersatzteilliste

für Stirnradgetriebe - Fußausführung

Spare Parts List

for helical gear units -
foot mounting

Nr.: 440813.02

Seite 2 von 2



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Item No.	Description
10.010	Gearbox housing
10.020	Screw plug
20.010	Motor connection flange
20.090	Cheese-head screw
20.100	Locking screw stud
20.110	Nut
20.120	Sealing compound (CO with flat gasket)
20.130	Flat gasket
20.160	Screw plug
30.010	Shank pinion
30.020	Gear wheel
30.030	Adhesive
40.010	Intermediate shaft
40.020	Gear wheel
40.030	Deep-grooved ball bearing
40.040	Deep-grooved ball bearing
40.050	Feather key
40.060	Circlip
40.070	Circlip
40.080	Shim
40.110	Shim
40.410	Adhesive
50.010	Solid shaft
50.020	Spacer sleeve
50.040	Deep-grooved ball bearing
50.050	Deep-grooved ball bearing
50.060	Oil seal
50.070	Oil seal
50.080	Feather key
50.100	Circlip
50.110	Circlip
50.120	Shim
50.160	Shim
50.410	Assembly grease

Motoranschluss

für Drehstrommotoren
Elektrischer Anschluss



Motor connection

for A. C. motors
Electrical connection



Nr.: 441599.02

Seite 1 von 2



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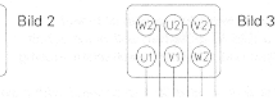
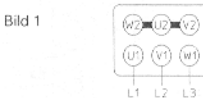
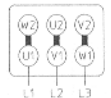
Schaltbild Drehstrommotor / Connection diagram Three-Phase A.C. motor

Motor motor VDE 0530 / DIN EN 60034

Ausführung design	Δ	Y
Betrieb running	-> Bild 1	-> Bild 2
Anlauf starting	direkt direct	direkt direct
	Y-Δ-> Bild 3	

Anmerkung / Note

- Drehrichtungsänderung durch Vertauschen von 2 Zuleitungen
- for reversing the sense of rotation change two supply lines
- Schaltungsart und Anschlussspannung siehe Leistungsschild
- connection and supply voltage see rating plate



TEMPERATURWÄCHTER*) THERMAL PROTECTOR *)

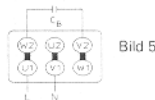
- > Kaltleiter (=KALTLE) PTC-resistor
- > Bimetallschalter (= BIMET) bimetallic switch
- siehe Leistungsschild see rating-plate

Bild 4

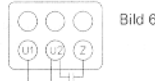
DREHSTROMFREMDBELÜFTUNG *) / THREE PHASE A.C. SEPARATE VENTILATION *)

siehe Abschnitt "Motor" see paragraph "motor"

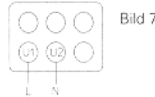
Einphasenfremdbelüftung in Steinmetzschaltung mit Betriebskondensator C_B *) -> Bild 5
single-phase separate ventilation according to "Steinmetz" with capacitor C_B *) -> Bild 5



Einphasenfremdbelüftung mit Betriebskondensator C_B *) -> Bild 6
single-phase separate ventilation with capacitor C_B *) -> Bild 6



Einphasenfremdbelüftung *) -> Bild 7
single-phase separate ventilation *) -> Bild 7



INKREMENTALGEBER *) INCREMENTAL ENCODER *)

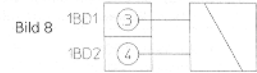
Typ **) type ITD 40 A4; ITD 61 A4; DG 60 B; DG60 BS
Stiftbelegung in Anschlussdose pin assignment in the socket

Signal signal	Stift pin	Signal signal	Stift pin
A	5	A invertiert / inverted	6
B	8	B invertiert / inverted	1
N	3	N invertiert / inverted	4
+ UB **)	12	± 0V	10/11
+ U sensor	2		

Ab 05/2006 wird PIN 9 nicht mehr im Geber kontaktiert.
Since 05/2006 PIN 9 has not anymore contact with the encoder.

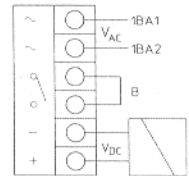
BREMSE *) BRAKE *)

-> ohne Gleichrichter without rectifier -> Bild 8
Anschlussspannung V_{DC} siehe Leistungsschild
supply voltage V_{DC} see rating-plate



-> mit Gleichrichter und externer Versorgung V_{AC} -> Bild 9
with rectifier and external power supply V_{AC} -> Bild 9
Anschlussspannung V_{AC} siehe Leistungsschild
supply voltage V_{AC} see rating-plate

Bild 9



- Wechselstromseitiges Schalten (mit Brücke B) A.C.-side connection (with jumper B)
- Gleichstromseitiges Schalten (schnelles Eintallen der Bremse) D.C.-side connection (rapid break in of brake)

Brücke B in -> Bild 9 entfernen und durch Schaltkontakt ersetzen und zusätzlich wechselstromseitig schalten
remove jumper B in -> Bild 9 and connect with a switch and switch A.C.-side connections additionally

-> mit Gleichrichter und externer Versorgung V_{AC} von den Motorklemmen
with rectifier power supply V_{AC} directly from motor terminals

Die beigelegten Verbindungsbrücken gemäß -> Bild 10 bzw. -> Bild 11 einbauen
installation of the enclosed studs according to -> Bild 10 respectively to -> Bild 11

Achtung / take care:

Für die Anschlussspannung der Bremse (V_{AC}) gemäß Leistungsschild und Netzspannung (U_L) gilt:
for power supply of brake (V_{AC}) according to rating plate and main voltage (U_L):

$$V_{AC} = U_L \times 0,58 \quad \rightarrow \text{Bild 10}$$

$$V_{AC} = U_L \quad \rightarrow \text{Bild 11}$$

Anschließen der Bremse an Motorklemmen nur möglich, wenn Spannungen übereinstimmen.

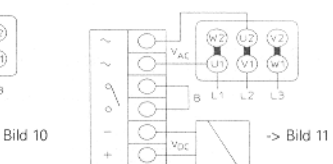
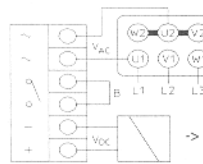
If the voltages differ, the connection of the brake to the motor terminals is not possible.

Nur bei Direktanlauf am Netz zulässig. Only permissible if direct online starting.

-> mit Powerbox-Gleichrichter with power rectifier

Anschlussspannung 220-277 V_{AC} / Supply voltage 220-277 V_{AC}
Spulenspannung 115 (oder 127) V_{DC} / Coil voltage 115 (oder 127) V_{DC}

Achtung: Anschlussbezeichnung auf Bauteil beachten!
Pay attention to terminal marking fo component!



Andere Ausführungen oder andere Anbauteile, falls vorhanden, siehe separates Schaltbild
other designs or other attachments, in case of existence, see separate connection diagram
*) falls vorhanden in case of existence
**) siehe Leistungsschild see rating-plate

Motoranschluss darf nur unter Beachtung und Einhaltung der beiliegenden Sicherheitshinweise erfolgen. Anschlussbezeichnung beachten!
Motorconnection may only occur, if the enclosed general safety instructions will be observed and kept. Pay attention to terminal marking!

Multitum Absolutwertgeber / Multitum absolute encoder

Signal/Versorgung signal/supply	Aderfarbe color of wire	Kontakt / contact 12pol
0V (UN)	weißgrün / white-green	10
+V (UP)	braungrün / brown-green	12
Daten	grau / grey	6
Daten	rosa / pink	5
Takt	violett / violet	1
Takt	gelb / yellow	8
frei		2, 3, 4, 7, 9, 11
frei	rot, schwarz, grün, blau, weiß, braun / red, black, green, blue, white, brown	

ACHTUNG !

Anschlussfehler können zu Beschädigungen der Komponenten führen. Im Zweifelsfall nach Anschlussbilder der STÖBER-Antriebe anschließen oder unsere Verkaufsbüros konsultieren. Bitte beachten Sie die Sicherheitshinweise, Impr.-Nr. 441598!

Attention!

Connection mistakes may cause damages for the components. In case of doubt, please connect in reference of the wiring-pictures of the STÖBER drives or please contact our sales office. Please observe the safety regulations No. 441598!

Motoranschluss

für Drehstrommotoren
Elektrischer Anschluss polumschaltbar

Motor connection

for A. C. motors
Electrical connection pole-changing

Nr.: 441599.02

Seite 2 von 2



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(D)

(GB)

Schaltbild für polumschaltbaren Drehstrommotor mit 2 Drehzahlen Connection diagram for pole-changing motor with 2 speeds

Motor / motor VDE 0530 / DIN EN 60034
Getrennte Wicklungen, Schaltung Y / Y (siehe Leistungsschild)
2 separate windings, connection Y / Y (see rating-plate)
- niedrige Drehzahl / low speed -> Bild 1
- hohe Drehzahl / high speed -> Bild 2

Dahlanderwicklung, Schaltung Δ / YY oder Y / YY (siehe Leistungsschild)
Dahlander winding, connection Δ / YY or Y / YY (see rating-plate)

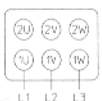


Bild 1

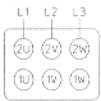


Bild 2

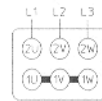


Bild 3

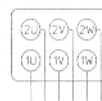


Bild 4

-> mit 6 Anschlussklemmen (direktes Einschalten)
with 6 connection terminals (direct online starting)

• ohne Polumschalter (Schaltung am Klemmbrett)
without pole-changing switch (terminal board connection)
niedere Drehzahl / low speed -> Bild 1

Schaltung Δ / connection Δ

hohe Drehzahl / high speed -> Bild 3

Schaltung YY / connection YY

• mit Polumschalter / with pole changing switch -> Bild 4

-> mit 9 Anschlussklemmen / with 9 connection terminals
(Y-Δ-Anlauf in niedriger Drehzahl ist nur bei Δ / YY möglich)

(Y-Δ starting in the lower speed is possible, only if Δ / YY)

• ohne Anlaspolschalter (Schaltung am Klemmbrett)
without pole-changing starting switch (terminal board connection)

Anlauf niedere Drehzahl starting low speed -> Bild 5

Betrieb niedere Drehzahl running low speed -> Bild 6

Betrieb hohe Drehzahl running high speed -> Bild 7

• mit Anlaspolschalter with pole-changing starting switch -> Bild 8

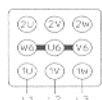


Bild 5

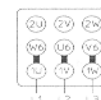


Bild 6

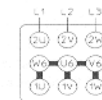


Bild 7

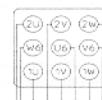


Bild 8

INKREMENTALGEBER *) INCREMENTAL ENCODER *)

Typ**) type ITD 40 A4; ITD 61 A4; DG 60 B; DG60 BS
Stiftbelegung in Anschlussdose pin assignment in the socket

Signal signal	Stift pin	Signal signal	Stift pin
A	5	A invertiert / inverted	6
B	8	B invertiert / inverted	1
N	3	N invertiert / inverted	4
+ UB **)	12	± 0V	10/11
+ U sensor	2		

Ab 05/2006 wird PIN 9 nicht mehr im Geber kontaktiert.
Since 05/2006 PIN 9 has not anymore contact with the encoder.

BREMSE *) BRAKE *)

-> ohne Gleichrichter without rectifier - Bild 9
Anschlussspannung V_{DC} siehe Leistungsschild
supply voltage V_{DC} see rating-plate



Bild 9

-> mit Gleichrichter und externer Versorgung V_{AC}
with rectifier and external power supply V_{AC}

Anschlussspannung V_{AC} siehe Leistungsschild
supply voltage V_{AC} see rating-plate

• Wechselstromseitiges Schalten (mit Brücke B)
A.C. -side connection (with jumper B)

• Gleichstromseitiges Schalten (schnelles Einfallen der
Bremsen)
D.C.-side connection (rapid break in of brake)
Brücke B in -> Bild 10 entfernen und durch Schalt-
kontakt ersetzen und zusätzlich wechsellstromseitig
schalten
remove jumper B in -> Bild 10 and connect with a switch
and switch A.C.- side connections additionally

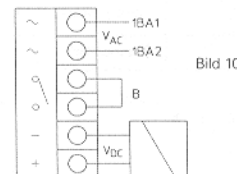


Bild 10

-> mit Powerbox-Gleichrichter with Powerbox-rectifier

Anschlussspannung 220-277 V_{AC} Spulenspannung 115 (oder 127) V_{DC}
Supply voltage 220-277 V_{AC} Coil voltage 115 (or 127) V_{DC}

Achtung: Anschlussbezeichnung auf Bauteil beachten!
Pay attention to terminal marking of component!

DREHSTROMFREMBELÜFTUNG *) THREE PHASE A.C. SEPARATE VENTILATION *)

Ausführung	Δ	Y
Betrieb running	-> Bild 11	-> Bild 12

Einphasenfrembelüftung in
Steinmetzschiene mit Betriebskondensator C_B *) -> Bild 13
single-phase separate ventilation according to "Steinmetz" with capacitor C_B *) -> Bild 13

Einphasenfrembelüftung mit Betriebskondensator C_B *) -> Bild 14
single-phase separate ventilation with capacitor C_B *) -> Bild 14

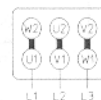


Bild 11

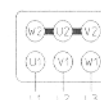


Bild 12

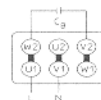


Bild 13

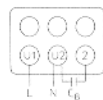


Bild 14

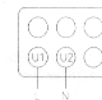


Bild 15

TEMPERATURWÄCHTER *) THERMAL PROTECTOR *) -> Bild 16

-> Kaltleiter (KALT.) PTC-resistor
-> Bimetallschalter (BIMET.) bimetallic switch
siehe Leistungsschild see rating-plate

Bild 16

Andere Ausführungen oder andere Anbauteile, falls vorhanden, siehe separates Schaltbild.
Other designs or other attachments, in case of existence, see separate connection diagram
(*) falls vorhanden in case of existence (**) siehe Leistungsschild see rating-plate

Motoranschluss darf nur unter Beachtung und Einhaltung der beiliegenden Sicherheitshinweise
erfolgen. Anschlussbezeichnung beachten!
Motor connection may only occur, if the enclosed general safety instructions will be observed
and kept. Pay attention to terminal marking!

Multiturn Absolutwertgeber / Multiturn absolute encoder

Signal/Versorgung signal/supply	Aderfarbe color of wire	Kontakt / contact 12pol
0V (UN)	weißgrün / white-green	10
+V (UP)	braungrün / brown-green	12
Daten	grau / grey	6
Daten	rosa / pink	5
Takt	violett / violet	1
Takt	gelb / yellow	8
frei		2, 3, 4, 7, 9, 11
frei	rot, schwarz, grün, blau, weiß, braun / red, black, green, blue, white, brown	

ACHTUNG !

Anschlussfehler können zu Beschädigungen der Komponenten führen. Im Zweifelsfall nach Anschlussbilder der STÖBER-Antriebe anschließen oder unsere Verkaufsbüros konsultieren. Bitte beachten Sie die Sicherheitshinweise, Impr.-Nr. 441598!

Attention!

Connection mistakes may cause damages for the components. In case of doubt, please connect in reference of the wiring-pictures of the STÖBER drives or please contact our sales office. Please observe the safety regulations No. 441598!

**OPERATING
AND
MAINTENANCE MANUAL**

**SECTION 7
MISCELLANEOUS**

7.1 NOISE DETAILS

Measured in accordance with Article V of Directive 2000/14/EC

Noise Emission in the Environment by Equipment for Use Outdoors the noise levels should not exceed 105Lwa