

INSTALLATION MANUAL

INLET STATION & REMOTE DEWATERER

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE
CONSERVEZ CES INSTRUCTIONS POUR RÉFÉRENCE ULTÉRIEURE

imc

CE

EC DECLARATION OF CONFORMITY

(Guarantee of Production Quality)

We, Imperial Machine Company Limited of:

Unit 1, Abbey Road, Wrexham Industrial Estate, Wrexham, LL13 9RF

Declare under our sole responsibility that the following machines; Food Waste Disposers, Impactor Range, Potboy, WastePro, WastePro II, WasteStation, Burnishers, Composters, Inlet Station, Remote Dewaterer and Bench systems

As described in the technical construction file (TCF) documentation, are in conformity with the protection requirements of the Electromagnetic Compatibility Directive 2004/108/EC.

These products are manufactured in accordance with harmonised standards EN 61000-6-1: 2001 Immunity and EN 61000-6-3: 2001 Emissions.

They also satisfy the essential health and safety requirements of the Low Voltage Directive 2006/95/EC, EN60204-1 Safety of Machinery and are manufactured in accordance with product specific standards including BS EN 60335-1, BS EN 60335-2-16 and BS EN60335-2-64.

Approved by

Eddy Plumb

Engineering Manager



Signed at Wrexham, Date

12/10/2016

CONTENTS

1.0	INTRODUCTION.....	4
2.0	MODEL IDENTIFICATION	5
3.0	INSTALLATION REQUIREMENTS & SPECIFICATIONS.....	7
3.1	ELECTRICAL:	7
3.2	WATER/WASTE:.....	7
3.3	DIMENSIONS & WEIGHT:.....	7
4.0	SAFETY INSTRUCTIONS.....	8
5.0	INSTALLATION.....	9
5.1	SELECTION OF SITE/POSITIONING & CLEARANCES	10
5.2	WASTE OUTLET CONNECTION	12
5.3	WATER INLET SUPPLY CONNECTION.....	13
5.4	ELECTRICAL CONNECTION	14
5.5	EQUIPMENT COMMISSIONING - PRE START CHECKS	17

1.0 INTRODUCTION

This manual is applicable to the Installation of the Inlet Station & Remote Dewaterer models, IMC Order Nos:

F79/030 Inlet Station, 400 volt, 3-phase, 50 Hz

F78/060 Remote Dewaterer, 400 volt, 3-phase, 50 Hz

Thank you for your confidence and congratulations on your purchase of our WasteStation technology; this demonstrates a true understanding and commitment to the need for waste food recycling and environmental sustainability. Not only are we pleased to partner directly and indirectly through our network of trusted distributors from around the world, we are especially pleased to know that you have selected IMC as your chosen vendor of choice. IMC is proud to lead the way in terms of 'green technology' and to know that together, we can make an important difference in the global war against waste.

The IMC Inlet Station & Remote Dewaterer are intended for the processing of food waste matter by maceration under an automatic water flow, dewatering of the macerated food waste and discharge of the dewatered food waste into a receptacle. The 'grey' water will be discharged into the drainage system according to local regulations where applicable and under responsibility of the installer.

ON DELIVERY

The chosen IMC system is supplied with the following ancillary items.

ITEM	QTY
Fully assembled Waste Appliances	1
Release Key	1
Feeding Pusher	1
Waste Bin (240 ltr)	2
Instruction Manual	1
Operating Plaque (wall mounted self-adhesive)	2
Appliance Hoses (flexible plastic)	3
Waste Outlet Pipe (2" plastic, rigid)	1

The Inlet Station system is supplied with the following additional Cables for integration:

DESCRIPTION	PART NO	TYPE	QTY
Dewaterer Motor Supply Cable	G60/809	4 x 1.5mm ²	1
Starter Box to Junction Box Link	G60/805	12 x 0.75mm ²	1
Controller Box Link Cable	G60/810	8 x 1.00mm ²	1

Note: These cables are already connected at the INLET STATION, but require connection at the REMOTE DEWATERER (junction box). Refer to Section 5.4.4 for instructions.

Please ensure the appliance and ancillary contents are complete and not damaged. Notify both the Carrier and Supplier immediately if there is a shortage or if an item is damaged.

2.0 MODEL IDENTIFICATION

The IMC Inlet Station & Remote Dewaterer grey water macerator appliances are for use in Commercial establishments only and are for permanent connection.

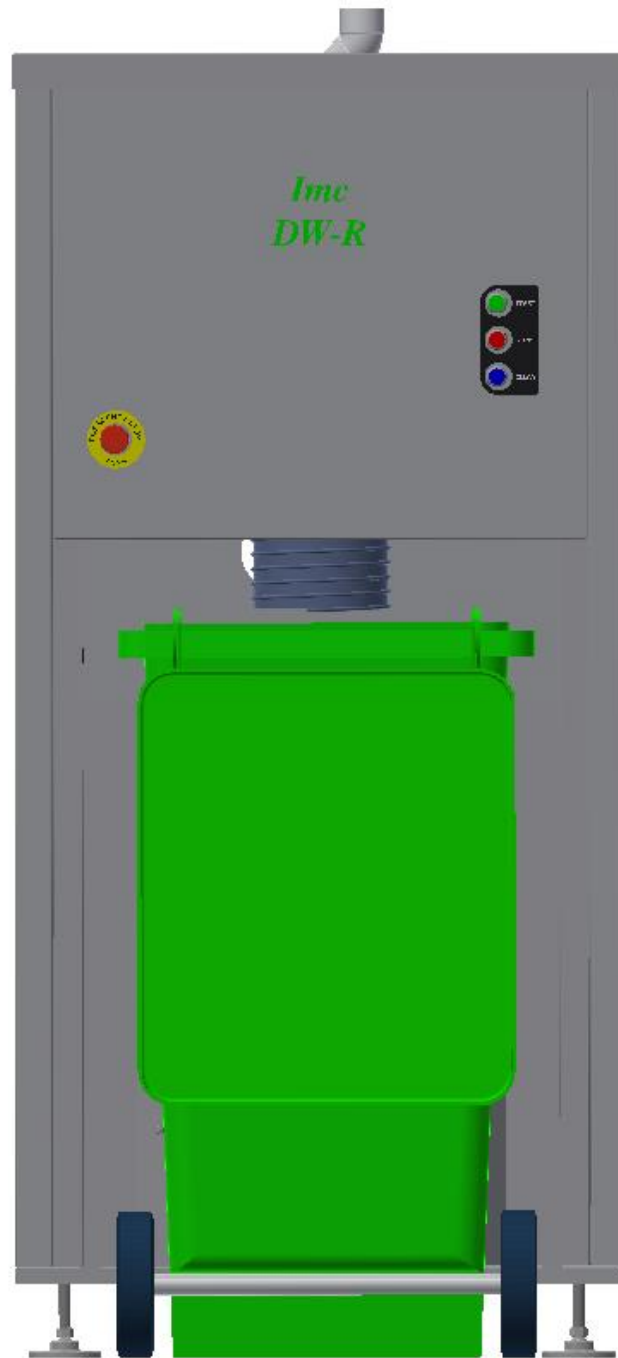
The IMC Inlet Station is a single unit enclosing all components for the maceration and pumping of food waste.



IMC INLET STATION

The Inlet Station comprises of the control cabinet, Macerator and Pump assemblies.

The Remote Dewaterer comprises of a cabinet with a dewaterer unit and removable 240 litre wheeled waste bin.



IMC REMOTE DEWATERER

3.0 INSTALLATION REQUIREMENTS & SPECIFICATIONS

The Inlet Station and Remote Dewaterer require the following electrical and mechanical services for installation

3.1 ELECTRICAL:

Voltage/Frequency: 400V, 3PH, 50 Hz

Total Power: 4.1 kW (5.49 hp)

The Inlet Station and Dewaterer system contains the following rated motors:

<u>FUNCTION</u>	<u>DESIGNATION</u>	<u>MOTOR POWER</u>
Macerator	M1	2.2 kW / 3.0 hp
Auger	M2	1.1 kW / 1.5 hp
Pump	M3	0.75 kW / 1.0 hp

3.2 WATER/WASTE:

Water Supply: Pressure - 6 bar (maximum) (87 psi)
 Flow Rate (dewaterer) - 12 – 15 Litres /min (2.6– 3.3 gpm)
 Flow Rate (Inlet Station) - 18 – 30 Litres /min (5.9 – 6.6 gpm)
 (Flow is Installation Dependant for Inlet Station)
 Temperature - 15 - 50°C (59 - 86°F)

Waste: Minimum 2” Diameter waste Outlet is required

3.3 DIMENSIONS & WEIGHT:

A. Inlet Station:

Weight: - 102 kg (225 lb)
 Dimensions (w x d x h): - 700 x 771 x 900 mm (27.56 x 30.35 x 35.43 inches)





B. Remote Dewaterer:

Weight: - 167 kg (without Bin) (368 lb)
 Dimensions (w x d x h): - 839 x 1055 x 1776 mm (33.03 x 41.53 x 69.92 inches)

4.0 SAFETY INSTRUCTIONS

All safety instructions detailed within this document are to be adhered to for safe operation, installation and maintenance of personnel and the equipment.

The following symbols are used on the product and throughout the product documentation:

<u>MEANING / DESCRIPTION</u>	<u>SYMBOL</u>	<u>SIGNIFICATION / DESCRIPTION</u>
<p>WARNING/CAUTION</p> <p>An appropriate safety instruction should be followed or caution to a potential hazard exists.</p>		<p>AVERTISSEMENT</p> <p>Une consigne de sécurité appropriée doivent être suivies ou garde d'un danger potentiel existe.</p>
<p>PROTECTIVE EARTH (GROUND)</p> <p>To identify any terminal which is intended for connection to an external conductor for protection against electric shock in case of a fault, or the terminal of a protective earth (ground) electrode.</p>		<p>TERRE DE PROTECTION</p> <p>Pour marquer bornes destinées à être raccordées à un conducteur de protection extérieur contre les chocs électiques en cas de défaut d'isolement, ou pour marquer la borne de la terre de protection</p>
<p>DANGEROUS VOLTAGE</p> <p>To indicate hazards arising from dangerous voltages.</p>		<p>TENSION DANGEREUSE</p> <p>Pour indiquer les dangers résultant des tensions dangereuses.</p>
<p>HEAVY</p> <p>This product is heavy and reference should be made to the safety instructions for provisions of lifting and moving.</p>		<p>LOURD</p> <p>Ce produit est lourd et se référer aux instructions de sécurité pour les dispositions de soulever et déplacer.</p>

- **This product is to be installed by a qualified IMC appointed installation engineer observing all local and regional codes.**
- **All electrical and water services are to be isolated and locked out before installation or carrying out any remedial work to the IMC Waste appliance.**
- **Ensure all water supply and waste connections are tight.**

5.0 INSTALLATION



PRIOR TO CARRYING OUT ANY WORK, ENSURE BOTH ELECTRICAL AND OTHER SUPPLY SERVICES ARE ISOLATED

Installation of the appliance MUST be carried out in the following chronological order:

- A. Selection of site and positioning
- B. Waste outlet connection to the main drain.
- C. Water Inlet supply connection.
- D. Electrical Connection.
- E. Commissioning Tests and necessary adjustments. Including:
 - i. Check for correct rotation of pump and Dewatering Unit drive motors
 - ii. Check for correct operation of magnetic feed hopper interlock device
 - iii. Check for correct operation of bin present sensor
 - iv. Check for correct operation of bin level sensor
 - v. Check for correct operation of Emergency-Stop push button
- F. Refit all panels
- G. Fix self-adhesive Operator instruction plaques in a prominent position adjacent to both machines.

5.1 Selection Of Site/Positioning & Clearances

Select the site of the Inlet Station with care so that it is convenient both for the major source of food waste and for access by machine operators.

The machine should be installed as close to the existing drains as reasonably practicable.



5.1.1 The IMC Waste Appliances require the following minimum clearances:

A. Inlet Station Appliance System

POSITION	CLEARANCE	REASON
TOP	1100 mm / 36 inches	For operating the machine.
LHS	600 mm / 24 inches	For service access if available*.
RHS	600 mm / 24 Inches	For service access if available*.
FRONT	900 mm / 36 inches	ensure that the control buttons and the emergency stop button are easily accessible on the front panel
REAR	200 mm / 8 inches	Clearance for waste outlet, water inlets and electrical connection (including isolator switch).

B. Remote Dewaterer Appliance System

POSITION	CLEARANCE	REASON
TOP	300 mm / 12 inches	Access to pipework.
LHS	600 mm / 24 inches	For service access if available*.
RHS	600 mm / 24 Inches	For service access if available*.
FRONT	1000 mm / 39 inches	ensure that bin access and the emergency stop button are easily accessible on the front panel
REAR	300 mm / 12 inches	For service access if available*.



- 5.1.2 The IMC Waste appliances require a minimum, 2 persons and the appropriate lifting equipment to position at the site of installation.

The IMC Waste appliances can be positioned near to the final place of installation on its shipping pallet, using a pallet truck.

A hoist, forklift or other appropriate lifting equipment will be required to lift the machine off the pallet and onto the floor, in its final resting position.

- 5.1.3 Adjust height and level of the appliances accordingly and lock into place.

A minimum of 100mm (4 inches) is required underneath the Inlet Station or Remote Dewaterer cabinets.

5.2 Waste Outlet Connection

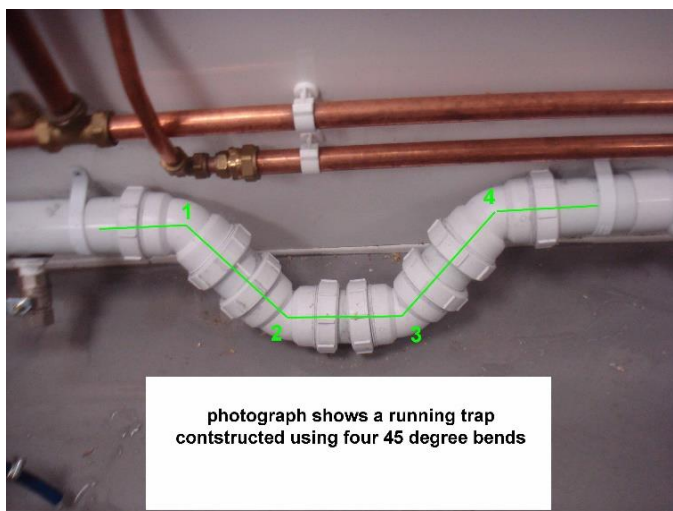
The IMC waste appliances are fitted with a standard 51 mm (2") waste pipe stub outlet for connection to the dedicated waste drain.

The IMC Waste outlet is located at the Rear of the Remote Dewaterer unit.



THE FOLLOWING ARE IMPORTANT INSTALLATION REQUIREMENTS

- The size of these outlets must not be reduced, and the drainpipe should run into 51mm (2") outside diameter pipe work as far as its junction with the main drain line connection.
- The length of run between the machine and the main junction must be kept to an absolute minimum.
- The waste pipe must have a gradient fall of at least 1 in 7 (-8° / 14.29% grade).
- It is recommended that when required, a running trap be fitted. (see photo below) "P" type, "S" type or bottle traps MUST NOT be used.



- Changes of direction should be made by swept bends rather than elbows.
- Cleaning eyes should be considered and fitted where possible.
- IMC recommends the use of copper water pipe and compression fittings along with standard ABS/PVC drain line connections with compression fittings.
- All water and drain line connections should be installed according to local codes and regulations.
- IMC Waste appliances must have an independent waste pipe, which does not also serve sinks, dishwashers and similar equipment.
- The use of Grease Traps is determined in accordance with local codes and regulations; any such device must be regularly maintained and is the responsibility of buyer.
- If this outlet is positioned below a control box, it is important to use fittings, which give at least the minimum 220mm (8.7") clearance, required for service access.



5.3 Water Inlet Supply Connection



THE FOLLOWING ARE IMPORTANT INSTALLATION REQUIREMENTS

Hot and Cold Water Inlet Supplies

The plumbing system is to be installed and used in accordance with the requirements of the Water Supply (Water Fittings) Regulations and Byelaws. The purpose of these regulations is to protect your drinking water supply from contamination.

When the WasteStation is purchased with a cold water air break, customers are to ensure that the HOT water supply is compliant and has an approved air break or back flow prevention.

By-laws and Regulations vary by region so it is important to check with the authority having jurisdiction in your area.

The rate of water flow required for normal food waste is 18 - 30 litres (5.9 - 6.6 gallons UK) per minute, at a maximum pressure of 6 bar. This flow is entirely dependant upon the installation type / length. IMC will provide advice on this.

The head of water should not be less than 0.18 bar (1.8m) (18 kPa).

The IMC Inlet Station is provided with 2 x ¾" Appliance connections for the Cold water supply at the rear of the machine.

The IMC Remote Dewaterer is provided with 1 x ¾" Appliance connections for the Hot water supply at the rear of the machine.

An isolation valve should be fitted, to enable the installer to both isolate for maintenance and adjust the flow of the hot and cold water supplies.

It is recommended that a constant water pressure and flow rate should be available at all time during operation.

- 5.3.1 Connect appropriate hoses to the water inlet connections. Ensure they are not routed to hinder access to the Isolator and that they do not present a hazard.
- 5.3.2 Open water supply isolator valves slowly.
- 5.3.3 Ensure that there are no leaks evident.
- 5.3.4 Isolate the water supply.

5.4 Electrical Connection



- **ALL ELECTRICAL WORK MUST BE CARRIED OUT BY A QUALIFIED ELECTRICIAN AND IN ACCORDANCE WITH LOCAL ELECTRICAL CODES AND PRACTICES.**




- **THE IMC Inlet Station or Remote Dewaterer must be grounded**





- **The Inlet Station or Remote Dewaterer Appliances must be protected by a 3-Pole Branch Circuit breaker rated 16A**

Examine the rating plates attached to the machine to ensure that the characteristics shown are correct for the supply available. The rating plate is located on the rear of the machine; a representative sample is shown below.



IMPERIAL MACHINE COMPANY Ltd
LL13 9RF, UNITED KINGDOM
TEL +44 (0)1978 661155

INLET STATION	
TYPE / MODEL	F79/030
VOLTAGE RANGE	400
PHASE	3
SERIES #	1

FREQUENCY(Hz)	50
IP RATING	IP55
dB (A)	83
AMPS (MAX)	8.62
kW (MAX)	4.1

SERIAL NUMBER = 7910130001

www.imco.co.uk

The Inlet Station or Remote Dewaterer is for permanent connection and is rated 400V 3PH, 50Hz, 4.1kW (16A) as a connected system. The machine is not for continuous use (duty cycle 30%).

- 5.4.1 Ensure both the electrical and water supplies are isolated.
- 5.4.2 A mains cable of 4 x 1.5mm² including ground conductor of type 3184Y 300/500V to BS6500 must be used.
- 5.4.3 Run the mains cable to the mains isolator switchbox on the rear of the Inlet Station and connect as shown in figure 3.

Run the 3 interconnecting cables from Inlet Station to the Junction Box on the Remote Dewaterer. Connect these 3 cables as described in figure 4.

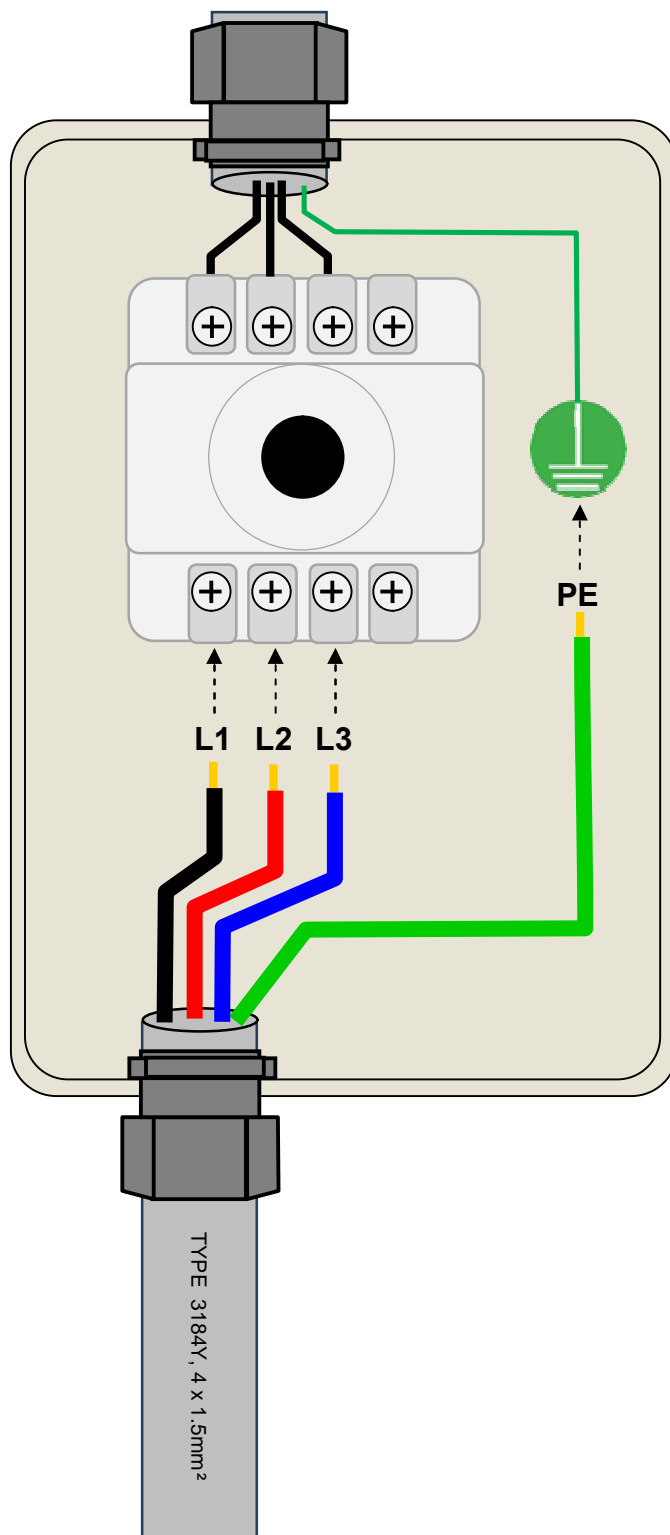


Figure 3 - Inlet Station Mains cable connection at the isolator switch on the rear panel of the machine.

5.4.4 The Inlet Station system comprises of interconnecting cables that are supplied with the system to power and interface with the Remote Dewaterer.

Refer to Figure 4 for the Inlet Station power and interface connection.

5.4.5 On completion of electrical connection and prior to equipment testing, check for proper rotational direction of motors as detailed in section 5.5 of this guide.

1. PASS THE 3 INTERCONNECTING CABLES FROM THE INLET STATION, THROUGH CABLE GLANDS GL9, 13 & 15.
2. CONNECT THE INDIVIDUAL WIRES TO THE 24-WAY CONNECTOR BLOCK AS SHOWN.

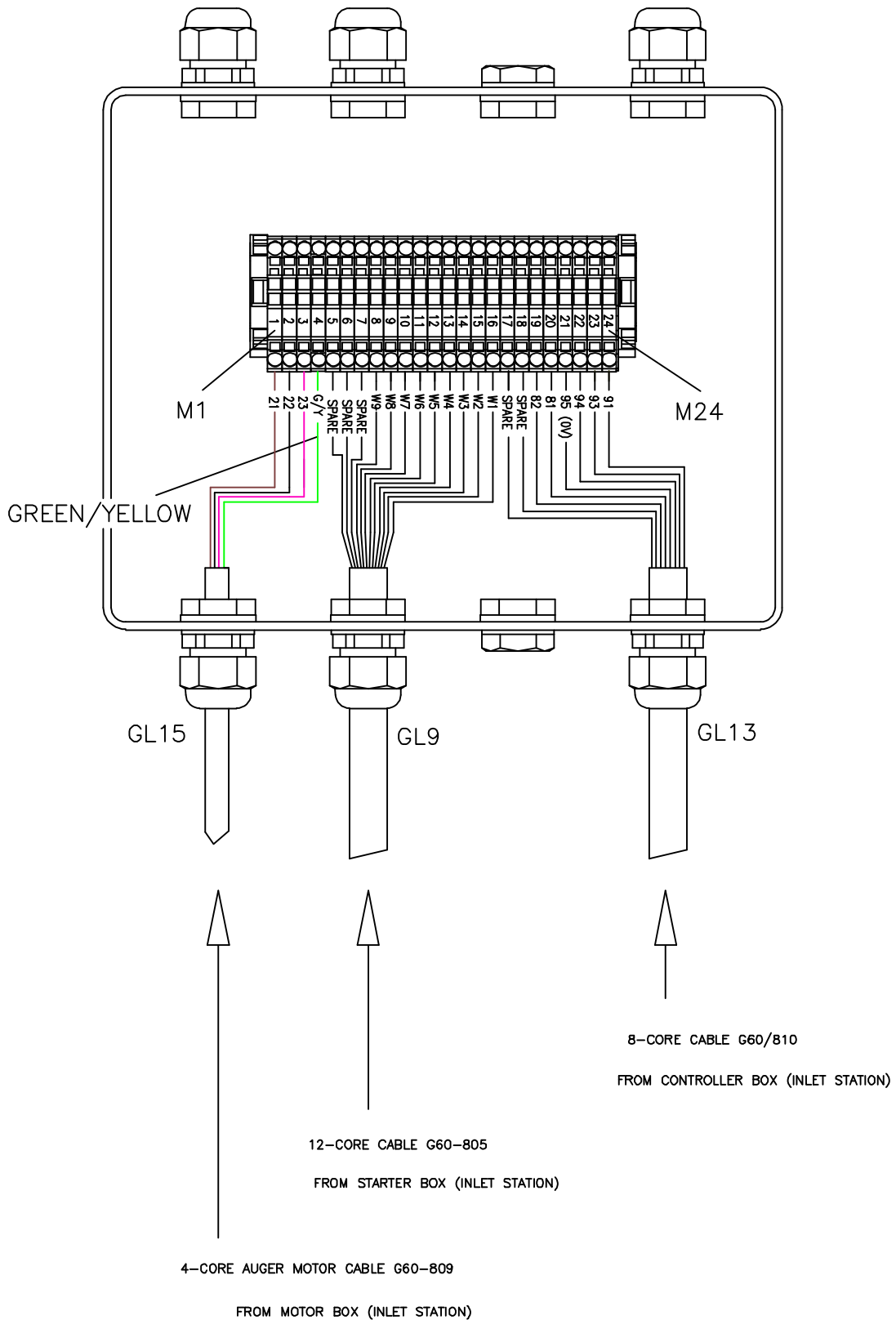


Figure 4 - Inlet Station > Remote Dewaterer Interconnection Diagram

5.5 Equipment Commissioning - Pre Start Checks

Following Installation carry out the following commissioning operations:

- 5.5.1 Check that all Electrical supply connections are correctly made and securely fixed.
- 5.5.2 Check that nothing has been left in the macerator chamber and that the macerator rotor is free to rotate (use the release key if necessary).
- 5.5.3 Fit the hopper baffle plate and ensure that the magnetic safety interlock knob is fully screwed down (Do not over tighten).
- 5.5.4 Check that the Emergency Stop button is in the correct 'OUT' position – (Turn and release)
- 5.5.5 Turn on the hot and cold water supplies (Cold (2 off) to Inlet Station, Hot to Remote Dewaterer).

Check that there are no water leaks.
- 5.5.6 Turn on the Electrical supply and set the Inlet Station Isolator to "ON".
- 5.5.7 Put the waste bin in place in the Remote Dewaterer Bin Area – push all the way back and check that the solid red light goes out.
- 5.5.8 When machine is ready to operate, all lights on the operator control panel should be extinguished.
- 5.5.9 The motor should now initially be checked for rotational conformance.

Macerator Motor – controlled by the PLC and to help prolong the life of the macerator cutting edge, the macerator will rotate in reversed direction each time the WasteStation is used. Motor rotation in this instance does not matter. No motor rotation check is necessary.

Pump Motor – Ensure the pump motor rotates according to the directional arrow. Wrong direction of pump rotation will result in the feed hopper not draining and possibility of splash back of water and food waste from the feed hopper.

Dewatering Unit – Ensure the dewatering unit drive motor rotates according to the directional arrow. Wrong direction of the motor will result in faulty machine function and damage to the machine.

- 5.5.10 Run a test Cycle, check operation of Emergency Stop.
- 5.5.11 Reset Emergency Stop, System should reset after running a dewatering cycle.
- 5.5.12 Refit all panels

The Waste System is now ready to operate.

