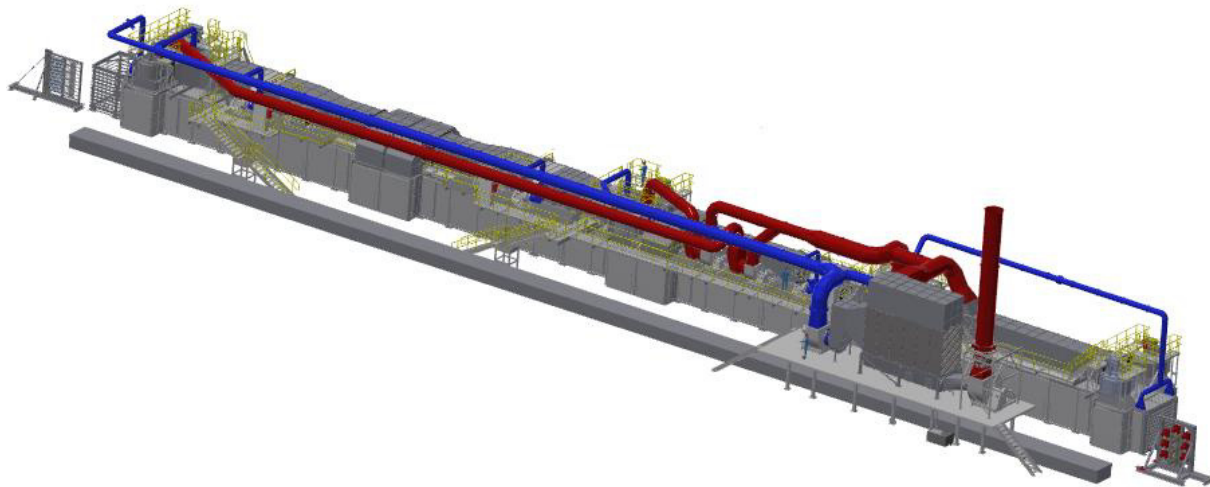




Proven Technology Worldwide

Dryer

Maintenance Manual



Customer: Carmit Mr Fix
Location: Caesarea, Israel
Project: CAIS 130200
Revision: 00

Introduction

This manual is written to provide detailed technical information to assist in the maintenance of the board dryer. For information regarding normal operation please refer to the Operational Manual. Maintenance should only be performed by qualified, trained personnel.

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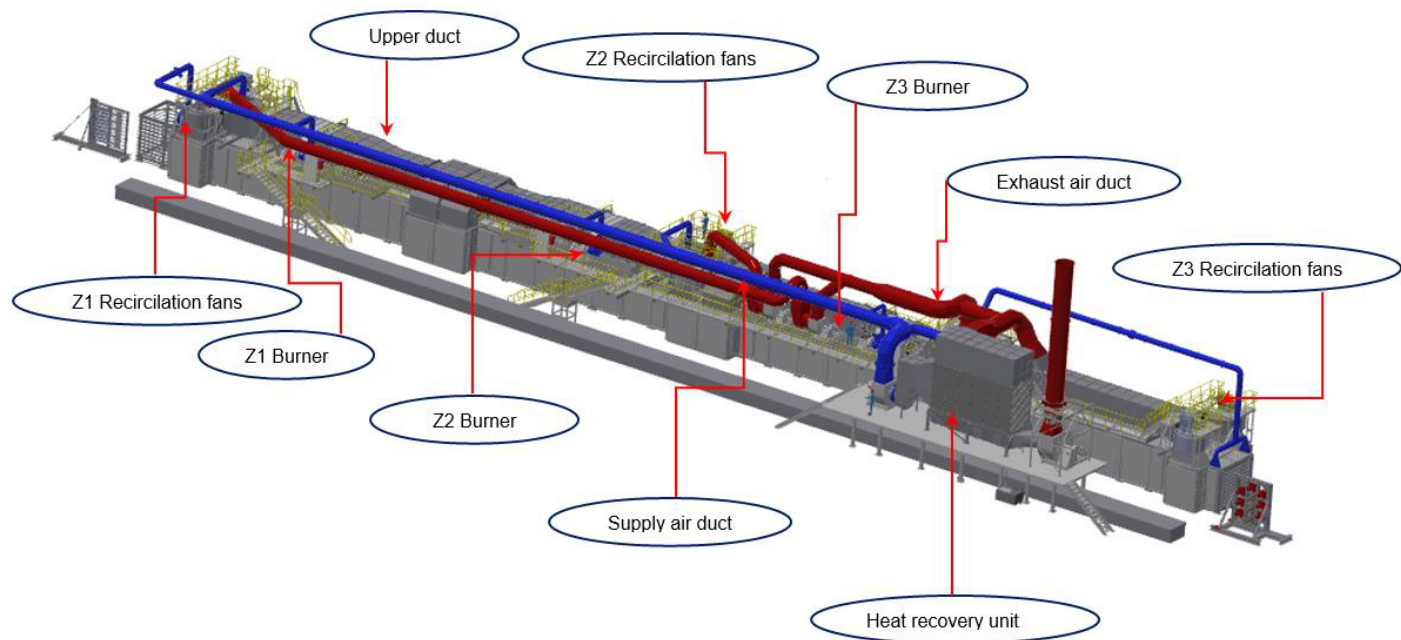
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1 Equipment Overview

The Dryers purpose is to take away excess water from the boards.

The dryer main body is divided into three drying zones; zone 1, 2 and 3. The fourth dryer area is the heat recovery areas.

Image 1: 3D model of the dryer



1.1 Major Components

1.1.1 Dryer Frame

The dryer's main body construction consists of a steel frame covered with doors along both sides and insulated top and bottom panels.

Bottom and top panels are made up of insulated panels, seal welded towards the inside of the dryer.

The bottom panel has support rolls on both sides. The support rolls are standing on rails running the entire length of the dryer – this allows for thermal expansion of the dryer frame work.

The dryer structure is made up of columns, adjustable angle profiles and bearing irons. The bearing irons are attached to the angle profile through slotted holes in each direction to accommodate roller tracking.

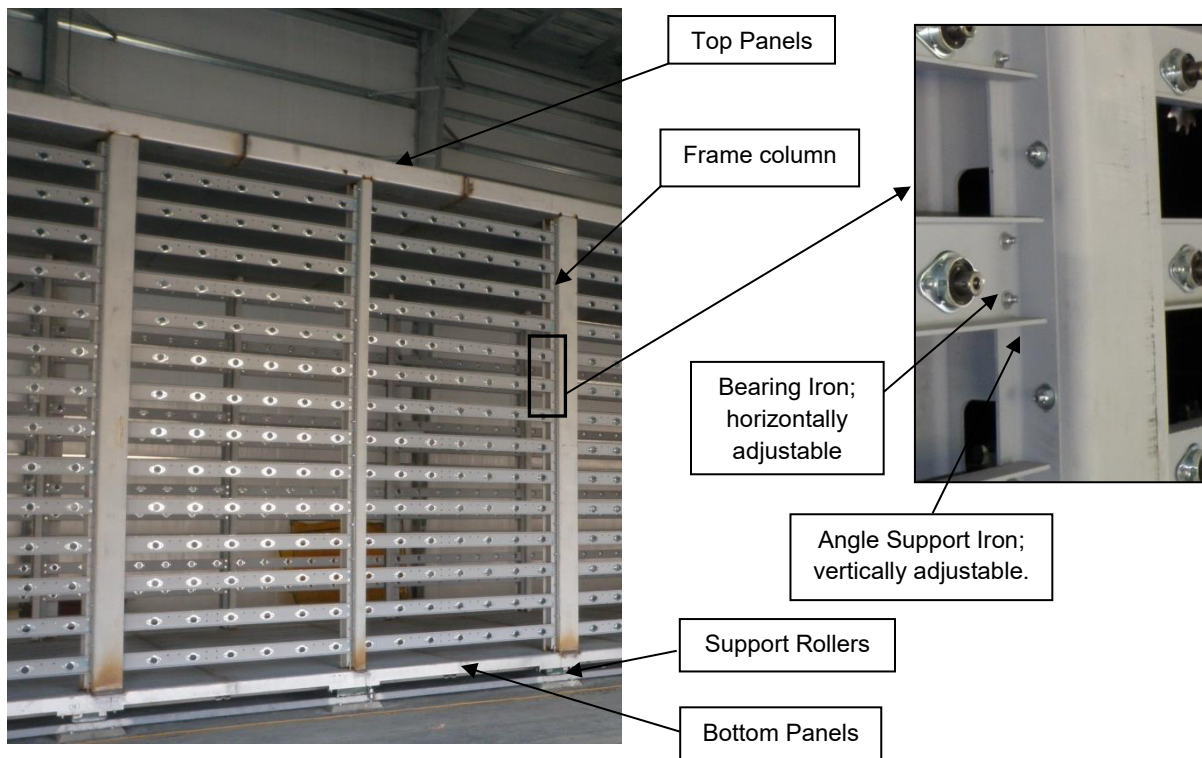


Image 2: Dryer frame work

1.1.2 Board Conveying

Boards are carried through the dryer on $\varnothing 80$ mm rollers making up 10 dryer decks. The rollers are chain driven by gear drives (one per deck) located at the outlet end of the dryer.

On the opposite end there are pneumatic chain tensioning devices to accommodate natural lengthening of the chain as well as thermal expansion. Take-up can be adjusted by changing the pressure to the cylinders on the chain tensioner. Limit switches on the chain tensioning device indicates if a problem with the drive system arises. A pressure switch assures that pneumatic air is available.

An automatic lubrication unit located at the outlet end provides oil for the chain at given intervals.

Speed sensors at the inlet end of the dryer provide feedback to the chain drives.

1.1.3 Air handling – Ducts and Fans

The dryer ducts are mainly located on top of the dryer kiln and hung on the outer building wall. The ducts have expansion joints to handle temperature expansion.

The dryer has 13 fans to pump the air; they are all belt driven with belts, shieves and outer bearings. All fans have VFD drives.

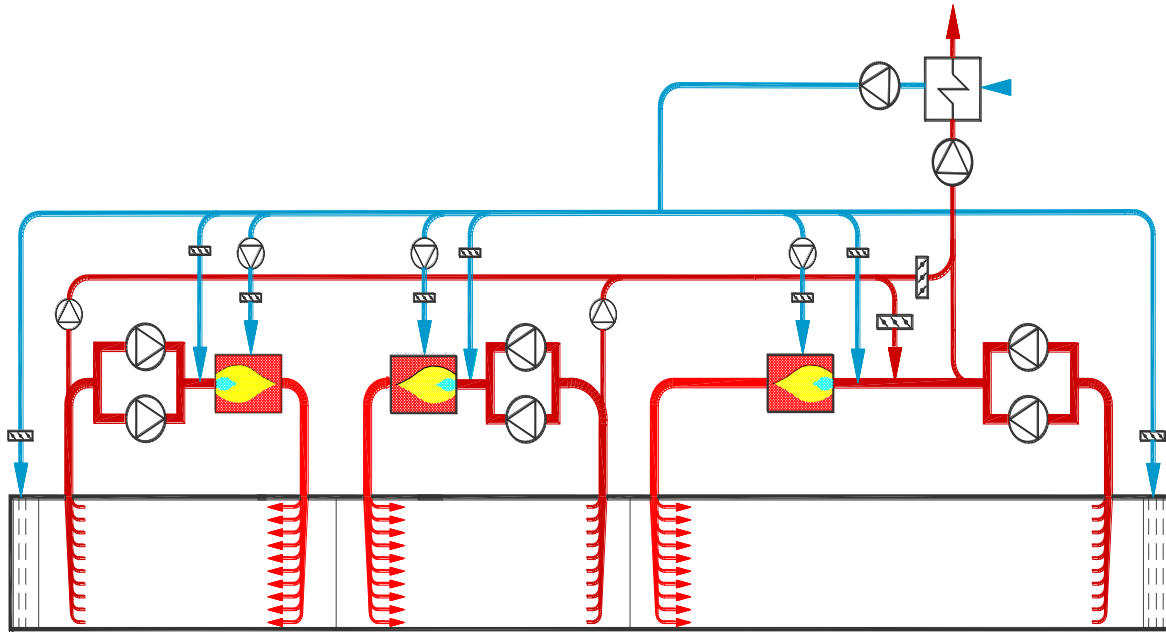


Image 3: Dryer flow sheet

1.1.4 Air heaters (Burners)

All dryer zones (1 to 3) have one Air Heater each. The Air Heaters are located in the upper ducts and consists of a line style burner that distributes the heat in the duct and a gas valve train. Each air heater will have an independent fuel train located next to the burner.

Figure 4 below shows an Air Heater unit.

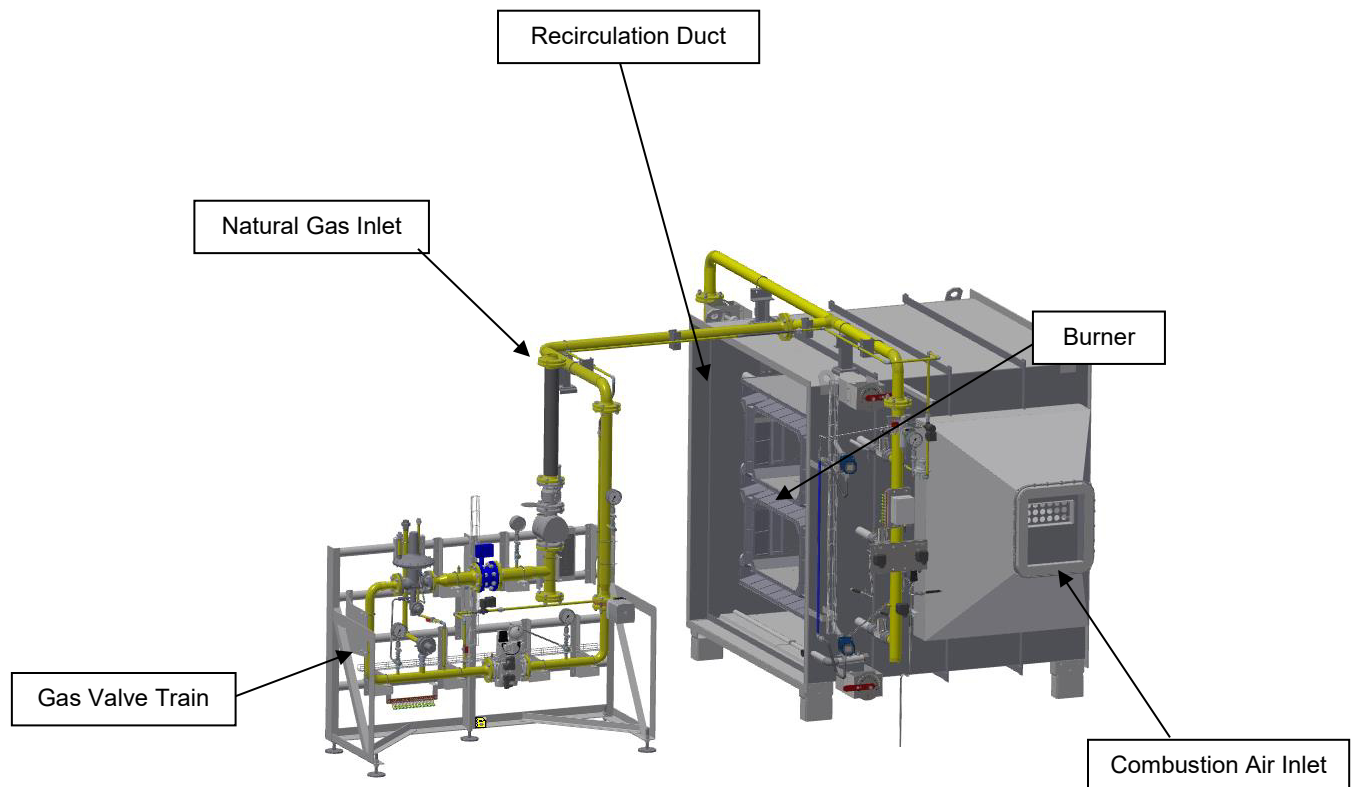


Image 4: Air heater

- **Critical!** Never make ad hoc alteration to the flame safety system in the burner management system! This will put personnel and equipment in severe danger.

1.1.5 Dampers

The dryer has dampers to control the air flow. Most of them are manual but the EOS dampers have modulating actuators. The manual dampers are meant to be in locked position and only adjusted in case the production requires so.

The dampers have outer bearings that need to be maintained.

1.1.6 Heat recovery unit

The heat recovery unit consists of a 3-pass tubular heat exchanger as illustrated in Image .

There is one heat recovery for zones 1-3.

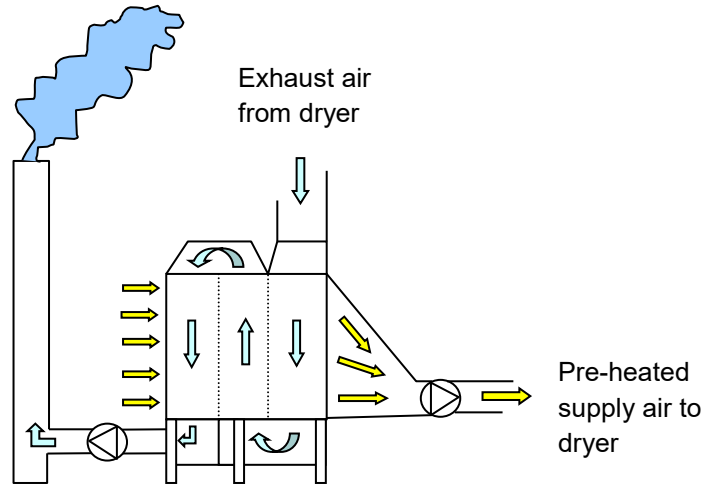


Image 5: 3-pass heat recovery unit

The heat recovery unit is constructed of tube coils with 2" tubes (see Image).



Image 6: Heat recovery unit tube coils

A differential pressure transmitter is installed to give a pressure drop reading across the heat exchanger. A high pressure drop means that the coils need cleaning; manual cleaning may also be required.

At the bottom of the heat exchanger there are condensate trays to take care of condensed water. Dirt and paper pieces from the production process will end up in the condensate trays.

1.1.7 Nozzle boxes and plenums

All zones are equipped with nozzle boxes for longitudinal dryer zones. The longitudinal nozzle boxes are made up of guide vanes and steel sheets. Zone 1 and 2 are equipped with 66 dampers in each zone. Zone 3 has 44 dampers. The board drying profile can be adjusted with these dampers so it is important that the damper blades are put back in exactly right position if they or their linkage systems are removed.

1.1.8 Instrumentation

The dryer is equipped with the following types of instruments:

- Temperature transmitters.
- Pressure transmitters
- Flame scanners for burners
- Gas flow meters for the burners
- Various switches such as inductive limit switched, inductive speed rotation switches, pressure switches and flow switches.

1.2 Technical Data

1.2.1 Zone lengths (all dimensions are metric)

Inlet Seal Section	1000 mm
Zone 1	20 500 mm
Zone 2	20 500 mm
Zone 3	38 700 mm
End seal section	1000 mm
Total dryer length	81 700mm

1.2.2 Electrical Power and Burners

El. power	Hz (cps)	60
Motor voltage supply	V, 3-phase	440
Signals	VDC	24
Installed burner cap., zone 1	MW	4,7
Installed burner cap., zone 2	MW	4,7
Installed burner cap., zone 3	MW	2,1

1.2.3 Required utilities

Fuel	Natural Gas
Incoming gas pressure	Bar (g) min 840mBar
LHV (Lower Heating Value)	kcal/Nm ³ 8,245
Rated gas consumption	Nm ³ /min 30
Max. Total water evaporation	kg H ₂ O/m ² 3,8
Compressed air pressure	Bar 6

2 Safety Overview

Never put yourself at risk.

Many pieces of equipment have the potential to cause serious injury or even death. Be sure to understand the safety concerns related to a piece of equipment before undertaking or performing any maintenance or clean out procedure. Work with your supervisors to address any safety concerns prior to undertaking work.

2.1 General Regulations

All personnel working with the equipment shall be advised and instructed regarding the safety regulations below. This is the responsibility of the appropriate works manager/foreman. Over and above the general and locally applicable safety regulations the following also apply:

- Over and above the general and locally applicable regulations the following safety regulations also apply.
- Check that fully working and up-to-date safety equipment is available. All personnel working on the plant shall be advised and instructed regarding the safety regulations below. This is the responsibility of the works manager/foreman on duty.
- Only fully trained personnel and authorized operators shall work with the equipment.
- Immediately report any faults that could lead to the risk of personnel injury to the nearest person in responsibility.
- During maintenance or repair work on motors, fans, transport (conveyors) and other motor driven equipment, the safety switch to the respective motors must be locked in OFF-position. A sign saying "WORK IN PROGRESS" should also be displayed on the control panel.
- The power supply to the equipment should be shut off and locked at the main control switch as well as at the local safety switch.
- Never make a by-pass connection of the safety switch – not even if it's faulty – replace instead.
- The locking keys to relay cabinets etc., shall be kept in a safe place so that they are not accessible to unauthorized personnel.
- When work is being carried out on shut-down equipment, the relevant safety switch shall always be locked in OFF-position. A sign saying "WORK IN PROGRESS" is visibly displayed.
- Before maintenance or repair work is started check that the relevant control switch is in OFF-position and that the sign saying "WORK IN PROGRESS" is visibly displayed.
- A specific safety regulation for components delivered by third party also applies (see appendixes).

Never put yourself at risk.

Many pieces of equipment have the potential to cause serious injury or even death. Be sure to understand the safety concerns related to a piece of equipment before undertaking or performing any maintenance or clean out procedure. Work with your supervisors to address any safety concerns prior to undertaking work.

2.2 Regulations Relating Specific to Dryer

2.2.1 Dryer

All personnel working with the dryer, even on temporary basis, shall be advised of the safety regulations below; this is the responsibility of the appropriate works manager/foreman.

It shall always be kept in mind that:

- The dryer is a kiln and contain hot air and hot vapour. Any leaks, damaged insulation etc. may create hot surfaces and everyone shall be aware of the potential risk for hot surfaces and similar.

- The dryer has built in, gas fired, burners. Mechanical damages on the system can lead to leaks which are (can cause) a risk for explosion.
- The dryer is pressurized. If the dryer is damaged or if inspection doors are opened during operation hot air, humid air as well as particles and dust can exit the dryer. This can lead to injury or equipment failure.
- Some parts of the dryer are under negative pressure. If the dryer is started with open doors or doors or hatches are opened during operation they can close by vacuum and lock in or squeeze persons close to the opened door.
- The dryer contains moving parts, for instance chain driven conveyors, fans and actuated air dampers. When the dryer is in operation no moving parts are accessible. If doors and hatches are opened during operation the dryer is not safe, therefore no doors or hatches shall be opened during operation and all parts of the dryer cover must be in place before start of the dryer.

Warning!

Do not open the doors or inspection doors before the dryer is ventilated.

- 1 Before the dryer doors are opened the following measures must be taken:
 - a) Turn off the burners.
 - b) Make sure that the exhaust dampers are fully opened (100 %).
 - c) Leave the exhaust air fans running until temperature is below 140° F and thereafter turn them off and lock them out.
- 2 When closing the dryer doors it is essential that the locking mechanism is grabbing the locking plate arms.
- 3 Before any dryer doors or inspection doors are closed it must be ensured that no-one is inside the dryer.

2.2.2 Resetting Burner Faults

Some burner safety devices must be reset locally at the equipment. For instance the pressure switches for high and low gas pressure, high and low combustion air pressure and the differential pressure switch that proves flow in the upper duct must be reset locally. This is due to safety concerns; these switches have tripped out due to a reason that might be serious; for instance a gas leak or a failed fan. By approaching the reset the operator has an opportunity to smell for gas leaks, check that fans etc. are running properly and see that everything looks normal before resetting the switch.

2.3 Lockout Procedures

As equipment may start automatically, always lock out any source of motive power (electric, hydraulic, steam, compressed air, etc.) before performing maintenance or cleaning functions. Note that potential energy may also be stored in some equipment such as those held in a raised position by hydraulic or air pressure and that such equipment may move or fall suddenly if pressure is removed.

Depending on the equipment layout, electrical locked out may be performed at the electrical panel or locally with a safety switch or disconnect. Air pressure is removed at locked out at the manual air disconnect switch. As a further safeguard, you must confirm that any equipment in the system being worked on is not operational after being locked out. Test for this by using the normal means of starting, i.e. the operator controls on the HMI station or the manual HOA switch.

The above procedure is a general recommendation. Operating and maintenance staff must follow lockout procedures and operate in compliance with their company policy and local regulations.

2.4 Electrical Disconnect Switches

Electrical disconnects are a means of physically isolating an area. Each drive panel is equipped with a lockable panel mounted disconnect switch, which isolates all drives in that panel. Some areas may also have a field mounted disconnect, which removes power to a motor or series of motors. When performing equipment maintenance or cleaning, the HOA switch must be moved to the OFF position before the disconnect switch is opened. After the disconnect switch has been opened, a lock should be placed on the switch to prevent the system from being re-energized. For safety reasons, the equipment or motor should be put into manual mode for a few seconds after the disconnect switch is opened, to ensure that the motor will not start, and then returned to OFF. There is an indicator on the HMI to show that this procedure has been correctly followed.

2.5 Electrical Safety Switches

Each section is also divided in sub-sections or "Zones". The Zone system is used to manage starting/stopping of a group of equipment and for lockout purposes. There is at least one electrical safety switch for each Zone. Each Zone also has one manual and one electric safety dump valve for pneumatic powers.

Safety switches are a means of electrically isolating a zone. To do so the HOA switch must be moved to the OFF position before the safety switch is opened. After the safety switch has been opened, a lock should be placed on the switch to prevent the system from being re-energized. For safety reasons, the equipment or motor should be put into manual mode for a few seconds after the safety switch is opened, to ensure that the motor will not start, and then returned to OFF.

2.6 Air Disconnect

Equipment requiring compressed air will have an electronically controlled air dump solenoid coupled with a manual valve for lockout procedures. Under some circumstances air pressure is dumped from a piece of equipment automatically; however it may be necessary to manually dump air pressure by locating the manual air disconnects. In either case, once air is dumped ensure that air pressure has been isolated and locked out before servicing any piece of equipment.

2.7 Emergency Stop Pushbuttons

There are a series of emergency stop buttons throughout the area. Pressing any emergency stop, will shut down the entire area immediately or in the safest manner possible and then power will be removed from the drives. To re-energize equipment the E-stop must be depressed and the safety system reset from the HMI. The equipment will re-energize after a delay of about 30 sec. This delay is necessary to allow the variable frequency drives to properly discharge before power is restored to them.

In an emergency do not hesitate to use an Emergency Stop Button however E-stops are not to be used as a normal means of shutting down equipment or as a lockout mechanism. See operational procedures for stopping the area for further details on normal shutdown procedures.

2.8 Gate Switches and Controlled Access

A physical barrier such as a safety fence often surrounds potentially hazardous areas that generally don't require access during normal operation. These areas are accessible only through designated safety gates. To open the gate the operator must request access and wait until the area has been safely shutdown and isolated before the gate will open. Once the operator has exited the area and closed the gate the system can be reset and normal operation can be restored. No personnel should ever try to override this gate system or enter the gated area while equipment is operational.

2.9 HMI Safety Overview Screen

The status of the safety system and all safety devices can be viewed on the HMI by referring to the Area Safety Overview screen. While the HMI system provides an added level of safety and valuable information and diagnostic tools, it is none of its functions are to be considered a replacement for physically isolating equipment and being alert and aware of potentially hazardous situations.

3 Maintenance Procedures

3.1 Lockout Procedures

As equipment may start automatically, always lock out any source of motive power (electric, hydraulic, steam, compressed air, etc.) before performing maintenance or cleaning functions. Note that potential energy may also be stored in some equipment such as those held in a raised position by hydraulic or air pressure and that such equipment may move or fall suddenly if pressure is removed.

Depending on the equipment layout, electrical locked out may be performed at the electrical panel or locally with a safety switch or disconnect. Air pressure is removed at locked out at the manual air disconnect switch. As a further safeguard, you must confirm that any equipment in the system being worked on is not operational after being locked out. Test for this by using the normal means of starting, i.e. the operator controls on the HMI station or the manual HOA switch.

The above procedure is a general recommendation. Operating and maintenance staff must follow lockout procedures and operate in compliance with their company policy and local regulations.

3.2 Lubrication and Dryer Chain lubricator

1. Lubricate mentioned items bearings, with recommended grease/oil or similar, within stated interval. See the Gyptech lubrication manual and also information from manufacturers of fans and motors.
2. All SEW gears needs to be checked regarding oil level, leakages etc. Fill the gear accordingly to instructions from SEW. Note installation of breather valve
3. The chain lubricator is positioned at the dryer inlet side on the chain side. 10 lubrication wheels are driven by the chain movement; mechanically opening a valve when the chain links are below the oil outlets.

NOTE: Ensure that the tank has oil above the low limit point at all times.

NOTE: The type of oil used must be suited for the high temperatures in the dryer. It is also important that no graphite is present in the oil as this will plug up the outlets on the lubrication wheel.

3.3 Dryer Structure and Ductwork

1. The dryer will expand when heated why it has support roller beneath and is standing on rails. The support rollers on the chain side have cam followers to keep the dryer on track. Inspect the rails, foundations and support rollers regularly to ensure the dryer is on track and perform repairs if problems are found.

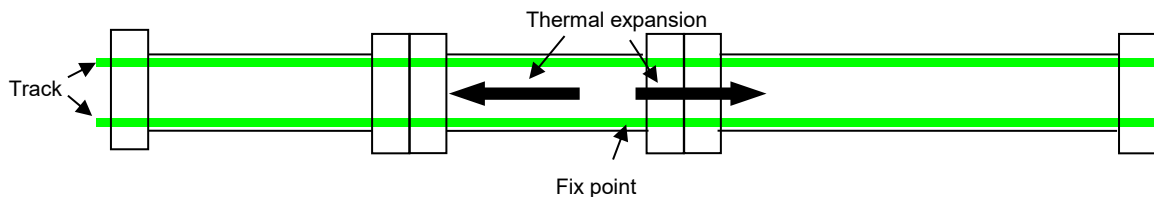


Image 7: Thermal expansion of

2. The dryer is anchored to the track at the fix point, located on the chain side between dryer zones 1 and 2. Check the condition of the fix point regularly. Repair if required.
3. The dryer ductwork is equipped with several expansion fabric joints to handle heat expansion. Check regularly and repair/replace as required.

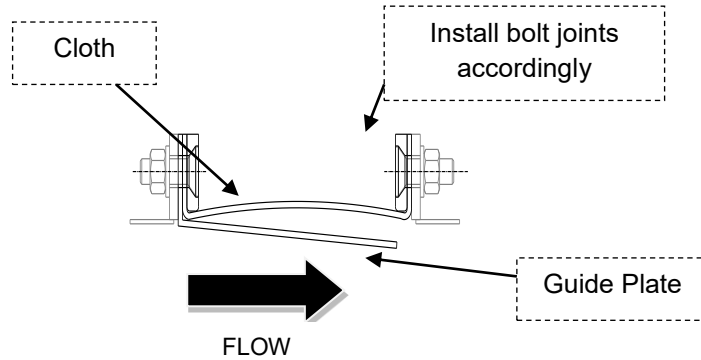


Image 8: Flexible joint with guide plate

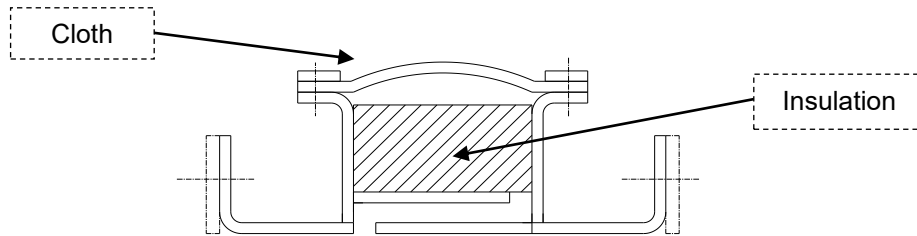


Image 9: Flexible joint with insulating bolster

4. **NOTE!** When new expansion joint fabric is installed, make sure the cloth is installed with the right side facing out ("the cold side", away from the duct). If not written on the cloth it is the smooth and shiny side that shall be on the outside.
5. Many of the duct supports are designed to let the duct float in order to handle heat expansion. Check the status of the floating supports regularly so the dryer ducts can expand freely.
6. Check welds: As a precaution all welds should be thoroughly inspected on a regular basis reassuring that the structural integrity of the dryer stays sufficiently strong. If thermal expansion is prevented for any reason, the welds risk cracking creating leaks and puts personnel in danger.
7. It's good practice to keep the ductwork clear of alien materials and dirt.

3.4 Dryer Doors

1. Check door tightness. The dryer doors are designed to be opened and closed using one locking handle per door, by turning the handle lock wheels around the perimeter of the doors move sideways engaging locking brackets. Each lock wheel can be independently adjusted to give locking force thus creating a sufficient seal between the door and the dryer frame. The adjustments can be done while the dryer is in operation.
2. Clean around door gaskets. The gasket will be damaged, and proper seal will not be achieved if built up dirt prevents the gasket from compressing.
3. Check dryer door latch functionality: there is a fuse bolt holding the handle that will break if excessive force is used for opening the doors.
4. **NOTE! All inspection doors can be locked in both opened and closed position with a padlock. During operation the doors shall be locked in closed position to prevent personnel injury. When entering the unit, the door shall be locked in opened position with individual locks for each staff member entering the equipment.**

3.5 Dryer Fans, Duct heaters and Dampers

Refer to separate manuals for air heaters and fans.

All dampers are single round single blade dampers. Manually actuated dampers can be locked in place with a bolted connection. The damper locations of these dampers are set up during commissioning and should not need to be changed on a frequent basis.

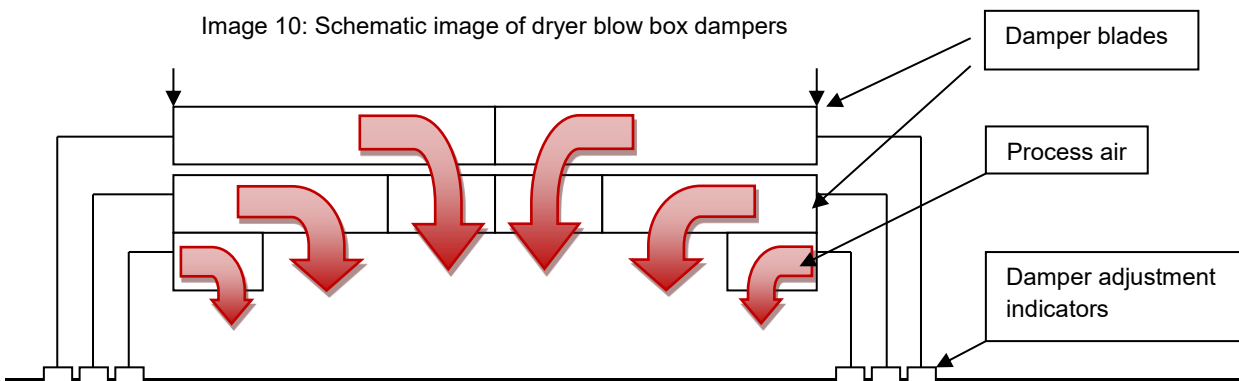
Automatic actuators are actuated by motors attached directly to the damper shaft, i.e. there are no linkage systems etc. The motors are positioned by signals from the PLC. Refer to damper actuator manuals for further information.

Some dampers have limit switches used for the Burner Management System (BMS) to prove that the air is forced towards the exhaust stacks during purge. The limit switches are inductive proximity switches looking at targets on the opposite side from the actuator.

3.6 Nozzle Box Dampers

1. The nozzle box dampers are inside the plenums and the adjustment indicators are outside the plenums, connected to the dampers with linkages. Check the status of the linkages (no loose parts etc.). Act as required
2. **NOTE! IF THE DAMPER BLADES ARE MOVED OR LINKAGES ARE REMOVED TO ACCESS OTHER EQUIPMENT, THEY MUST ALWAYS BE REINSTALLED SO THE DAMPER BLADES AND THE ADJUSTMENT INDICATORS GET THEIR ORIGINAL POSITIONS BACK.** If problems getting them back to the same positions, contact production management/process engineer.

Image 10: Schematic image of dryer blow box dampers



3.7 Dryer Board Conveying equipment

1. In order to keep the dryer roller sprockets aligned over the length of the dryer the sprockets are fixed to the roller with a lynch pin and the roller is held in place vs the dryer frame with a lock ring.

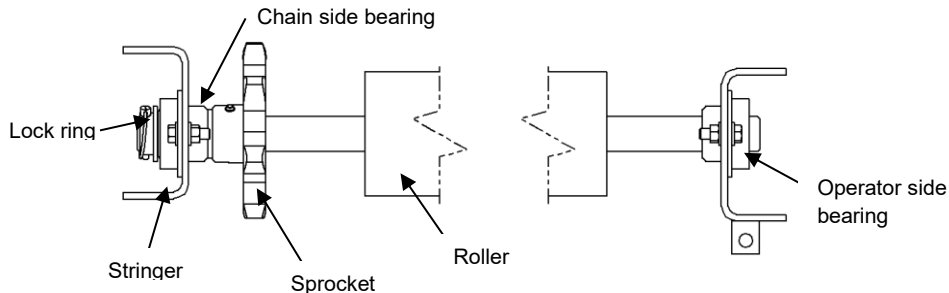


Image 11: Roller assembly in dryer

2. Dryer bearings: The complete bearing unit is put together by inserting the bearing in the housing and turning it 90 degrees, locking it in place and snapping the anti-rotational ring in the housing preventing the bearing to become loose.
3. **Critical!** Bearings need to be checked in regular intervals as part of preventive maintenance, when a roller has worn the bearing more than approximately 1/4" the bearing needs to be rotated 180 degrees renewing the wear surface. Failure to do so will cause the roller shaft to break.

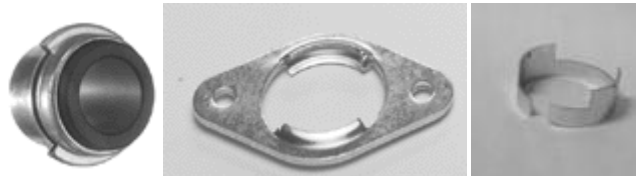


Image 12: Bearing assembly

4. Some bearings need to be checked more often and be rotated more frequently; this is the case for the bearings in the nozzle box sections (at the plenums). The conditions are harsher for the bearings in the nozzle box sections than in other places why they wear faster
5. The dryer infeed section and in the endseal section the rollers are equipped with ball bearings. The bearings need to be checked so the rollers are locked in position by the bearing stop screw, only accessible on the chain side. Some ball bearings need to be lubricated on a regular basis.

6. Chain tensioner: Preventive maintenance tasks to be conducted on the tensioner are lubrication of the bearings, cleaning of the photo eyes and cleaning the pneumatic air filters.

The sprocket assembly is built up of a sprocket pre-assembled on a shaft with bearings, UHMW slide blocks and a roller pin. The assembly is held together with two plates bolted together

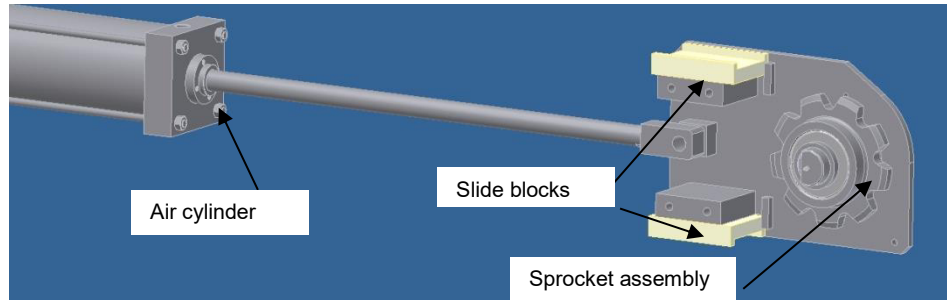


Image 13: Bearing assembly

7. If the cylinders are retracted far in during normal operation this indicates that the chain needs to be shortened. This is normal since the chain is bound to stretch. When this has occurred plan to shorten the chain during the next maintenance stop.

3.8 Heat Recovery

1. The heat exchanger coils need to be cleaned on a regular basis. There are inspection doors on the top and bottom of the tube coils for easy access. A screen in the exhaust air inlet keeps large size debris from reaching the coils, this area needs to be kept clean and should be inspected during maintenance stops.
2. All condensate pipes must be open and kept clean. Manual cleaning with manual high-pressure flushing is recommended once a year
3. The heat exchanger tube coils will need cleaning at least annually (inside each tube). The cleaning interval required will depend on a number of variables in the production, so it has to be defined after the plant has been running for a while.

Warning! The inside of the heat exchanger and the condensate tank are confined spaces and safety procedures for such must be followed!

4 Maintenance Schedule

The following table summarizes the optimal maintenance intervals.

4.1 Daily Tasks

Task	Notes
<p>General inspection rounds. Look and listen for:</p> <ul style="list-style-type: none">• Oil levels in gear motors and chain lubrication• Chain tensioner pneumatic cylinders position (if close to end position it can indicate coming problems)• Dryer chain travel (should be smooth and aligned)• Crunching sounds from fan bearings indicating a bad bearing• Water or steam coming from the dryer (indicating leaks)• Any mechanical damages to the dryer• Any loose parts – take action as required	<p>A daily routine for general inspection and error reporting should be applied.</p>

4.2 Weekly Tasks

Task	Notes
<p>Inspection and cleaning inside the dryer. Focus on:</p> <ul style="list-style-type: none">• Dryer bearings; if the bearings are worn- rotate it 180 degrees or replace it• Dryer rollers- check general condition and that they are aligned• Chain guides: check for wear. Replace if needed. Check positions and alignment.• Check inside welds and bolts that there are no cracks or loose nuts• Nothing blocking the board path- if so remove it• Look inside the heat exchanger through man doors- typically for debris but also for any damages. Take action as required• General inspection for damages• Cleaning	<p>A weekly routine for inspection, cleaning and lubrication should be in place.</p> <p>Opening the dryer doors on one side for internal inspection (without entering confined spaces) is strongly recommended.</p>

4.3 Monthly Tasks

Task	Notes
Examples of monthly tasks: <ul style="list-style-type: none">• Inspect inside upper duct• Inspect burner body condition• Check burner gas pipe connections• Enter the heat exchanger and inspect it from the inside	Basically the same tasks as for the daily and weekly maintenance; should just be performed more thoroughly and non-urgent actions repairs etc. should be performed. Also confined spaces such as the burners inside the upper duct should be inspected. NOTE! LOCK OUT PROCEDURES AND PROCEDURES FOR CONFINED SPACES MUST BE FOLLOWED!

4.4 Annual Tasks

Task	Notes
<ul style="list-style-type: none">• Cleaning the heat exchanger tubes with high pressure water• Clean the heat exchanger condensate trays and the upper hoods• Clean fan impellers from debris• Check dryer door condition in detail- make sure they seal properly• Check balancing of all fans and alignment of fan motor couplings (also if no obvious problems seem to exist)• A thorough check of bolts, nuts, welds etc. Take action as required.• Check field instruments; cabling and calibration• Check condition of all moving or rotating parts	An annual deep inspection the dryer is strongly recommended. If also minor issues that don't seem so important are fixed will the dryer last longer and work better over time.

5 TROUBLESHOOTING

5.1 General

Problem	Possible Cause(s)	Possible Solutions
Hard crunching noise at fans	Bad bearing	Check bearing, replace if needed
Water or steam coming from the dryer or the dryer ducts	Leak; bad weld, broken expansion joints, bad door seal or poor door latch adjustment	Fix weld, replace expansion joint fabric, door seal or adjust door latch; as situation requires.
Pressure transmitter not showing correct readings	The pressure transmitter is mounted on a 3-way block valve. Wrong valve position Condense in the impulse pipes or un-tight pipe	The middle valve shall be closed, the two outer ones open. Put valves in correct position. Check impulse pipe condition. The impulse pipe shall always slope into the measuring point so condense droplets pour back into the dryer/duct/heat exchanger.
Exhaust fans don't pull much enough air	Heat exchanger blocked causing high pressure drop	Clean inside
Vibrations in dryer platforms	Unbalanced fan or misaligned fan motor coupling	Check balancing and coupling alignment. Take action as soon as possible.
Uneven dryer drive chain travel	<ul style="list-style-type: none"> Poor lubrication Worn chain Inadequate tension force Cold start up 	<p>Check that lubrication unit is working properly</p> <p>Check chain condition. If worn it might be time to consider replacement</p> <p>Check cylinder and air pressure in tension tower</p> <p>If the dryer is cold can the viscosity of the lubrication oil be high so the chain travel gets a bit jerky. If this is the case will the chain go smooth again when the dryer is properly warmed up.</p>
Chain tensioning cylinder is almost pulled in	<ul style="list-style-type: none"> Too high air pressure Too long chain 	<p>Check air pressure</p> <p>The chains grow as they get older and worn-in. Take out chain links.</p>

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