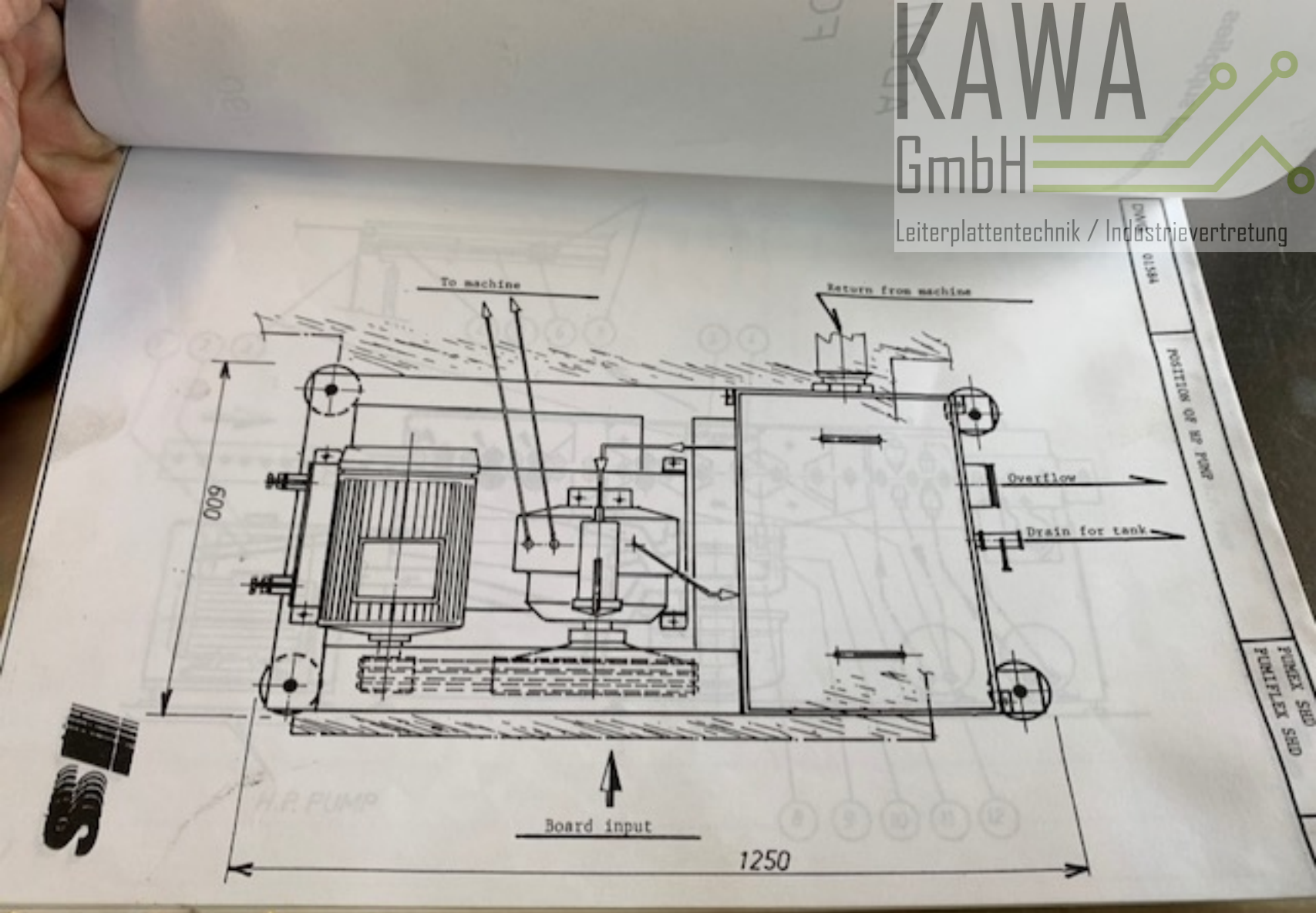
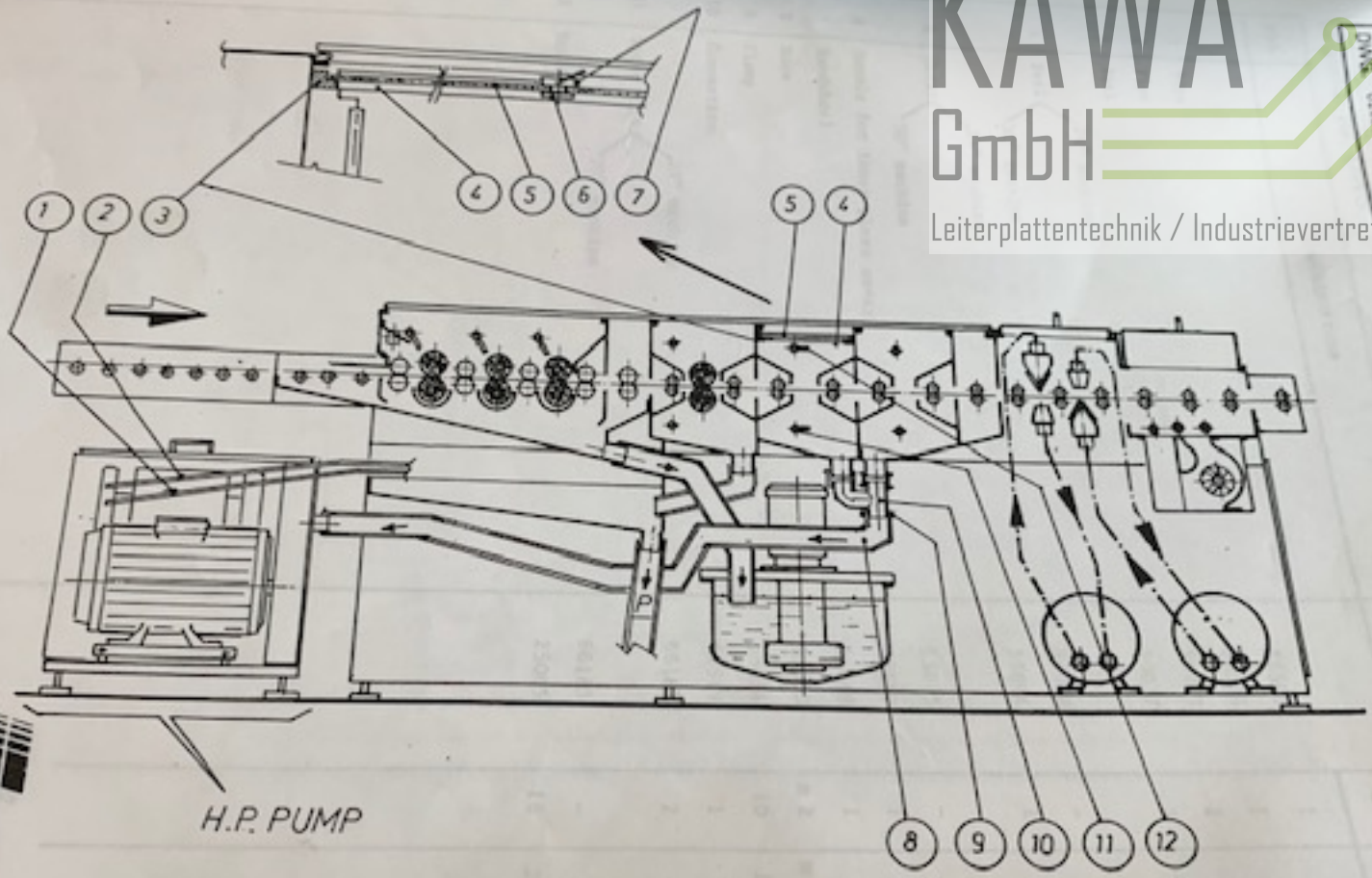




FILTREX I

OPERATION AND MAINTENANCE MANUAL

Serial N° _____

1 - GENERAL SPECIFICATIONS:

- Work space: see drawing 03022.
- Overall dimensions: width: 830 mm
  length: 1210 mm
  height: 1400
- Approximate net weight: 500 kg
- Approximate gross weight: 600 kg
- Electric power supply: 2.1 Kw, 380 Volts, threephase,
  50 Hz (others upon request)
- Water supply: A = inlet Ø 1/2"
- Water consumption: negligible

2 - DESCRIPTION

The Filtrex was designed after several tests in the field, for disposal of the spent pumice slurry and to remove pumice from the water used in the rinsing chambers of pumice scrubbers.

2.1 - General information

The Filtrex is the result of close collaboration with the leading manufacturers of p.c. boards and includes our long experience in the field of pumice scrubbing.

Main material used in construction is stainless steel: shafts, tanks, covers, hoods etc. are generally of stainless steel. The basic frame is of a self-supporting design and consists of 3 mm thick stainless steel, bent and welded to final shape to give the highest chemical and mechanical resistance.

PUMEX SHD-24"

OPERATION AND MAINTENANCE MANUAL

Serial N° _____

3/90

1 - GENERAL

1.1 - Parts identification

There are two different methods for identifying the [illegible]:

1.1.1 - Each part appearing in a drawing may be identified by the drawing number (five digits) followed by the number as shown in the same drawing.

Example: 02464/2.

This means: part shown as 2 on drawing 02464, i.e. spring.

This is the method used in the instructions of this manual.

1.1.2 - Each drawing is followed by a "legend" where each part is described and identified with a pos. number (2 in the above example) as well as a ref. number (37010 in the example). This is the real number which identifies the part in question. The same part may appear in a different drawing or in a different manual (= machine) where it may be identified with a different pos. number (example drawing 02466 pos 2) but the same ref. number (37010) will be given.

1.2 - Specifications

- Maximum panel width: 610 mm (24")
- Maximum panel thickness: 3 mm
- Minimum panel thickness: 0.5 mm (see PUMIFLEX for thin foils)
- Conveyor speed: 0.6 to 1.8 m/min.
- Capacity of slurry tank: 50 litres
- Work space: see drawing 01785 and 02286
- Overall dimensions: width 1360 mm
  length 3310 mm
  height 1300 mm

- Approximate net weight: 1000 kg
- Approximate gross weight: 1250 kg
- Electric power supply: 12 kW, 380 Volts, threephase, 50 HZ
  (others upon request)
- Water supply: A = inlet Ø 1"
- Water consumption: approximately 2.5 cubic metres/hour at
  mains pressure (2 to 3 kg/cm^2)

2 - DESCRIPTION

The PUMEX-SHD scrubs flat boards by means of nylon brushes and a suspension of pumice and water which is sprayed onto the boards. The machine ensures perfect surface cleaning, washing and drying on both sides of the materials being processed.

2.1 - General information

The PUMEX-SHD is the result of close collaboration with the leading manufacturers of p.c. boards and includes our long experience in the field of pumice scrubbing. This unit features the well-known advantages of our scrubbers such as: highest efficiency and cleaning action, ease of maintenance, quick replacement of brushes. Main material used in construction is stainless steel: shafts, tanks, covers, hoods, etc. are generally of stainless steel. The basic frame is of a self-supporting design and consists of 3 mm thick stainless steel, bent and welded to final shape to give the highest chemical and mechanical resistance. The scrubbing and washing sections are sealed by means of a large tempered glass cover. This cover with spring-loaded supports can be easily opened for check-ups and maintenance.

The PUMEX-SHD is delivered ready to operate and needs only very simple connections to power, water supply and drain.

A stainless steel bottom tray for the pumice slurry tank is provided as a built-in item and allows easy and fast installation in the cleanest working area, without any particular preparation of the floor.

The adjustable feet on the machine compensate for any unevenness of the floor.

The materials to be processed are transported through the following stations:

2.2 - Description of stations (see drawing 01840)

A - Free input conveyor: length 750 mm
This consists of nine driven stainless steel shafts with rubber wheels.

B - Input conveyor: length 260 mm

C - Scrubbing section
The boards are firmly transported by pairs of rubber coated rollers and are processed on both sides by three pairs of fast rotating nylon brushes which brush the pumice suspension which has been previously sprayed onto the boards.
This suspension is recirculated by a pump in a suitable tank where the pumice is automatically and constantly stirred.
All brushes are quickly and finely adjustable in height with one handle only for upper and lower as well as left and right side. This guarantees that they always work parallel to the boards being processed.

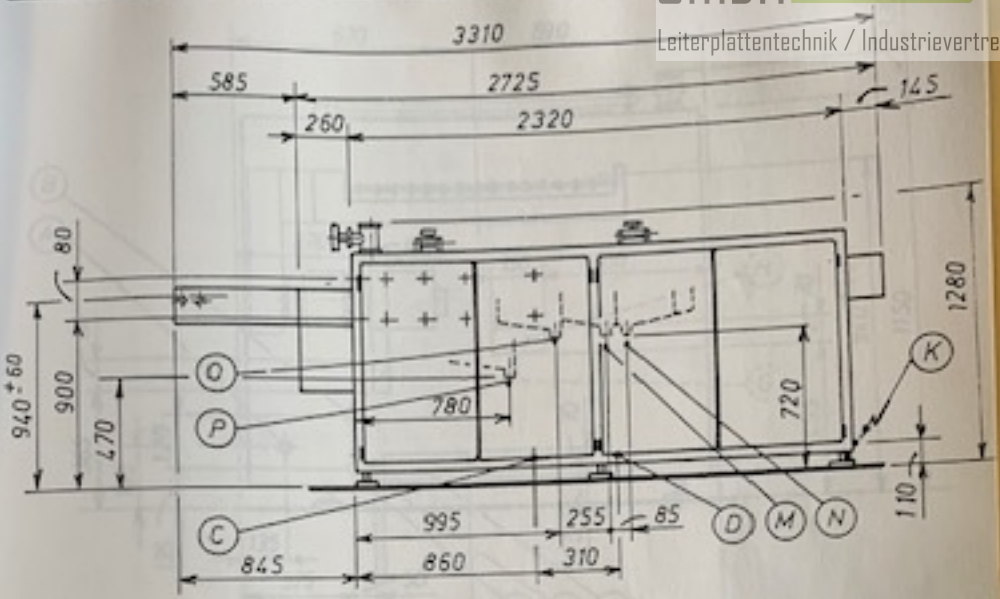
D, E, F - Rinsing section
Complete removal of all pumice residues is of the utmost importance, and experience has shown that this is possible only by simultaneous brushing of both sides of the boards. One pair of rotating nylon brushes sprayed with water removes all pumice residues very efficiently.
The boards then pass through further water jets for final rinsing.

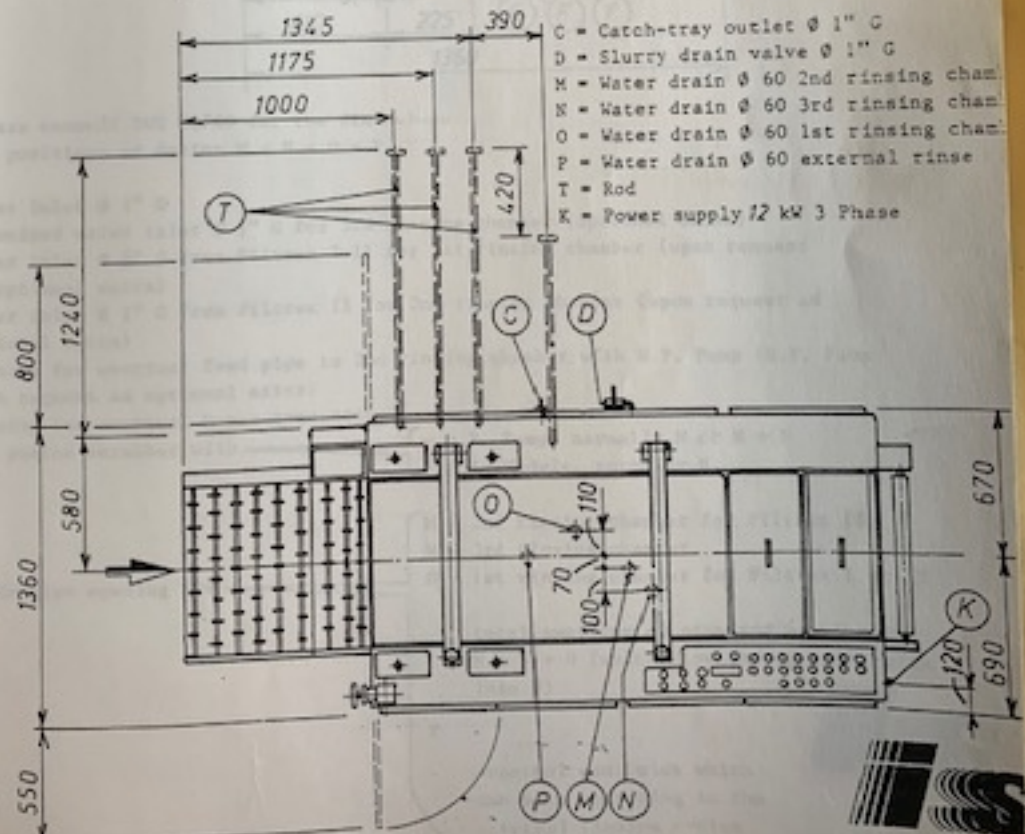
G - Squeegee chamber

H, I, L - Drying section

Immediate removal of water residues and efficient drying of the boards prevents reoxidation of the copper. The boards are transported by solid rollers, covered with an absorbing material, which squeeze them and pump the water residues away from the surface and out of the holes. This ensures constant and even removal of water puddles from the surfaces of boards and maximum "pumping" action of water from the holes.
The boards then proceed into section G of the machine where almost all the water is removed.

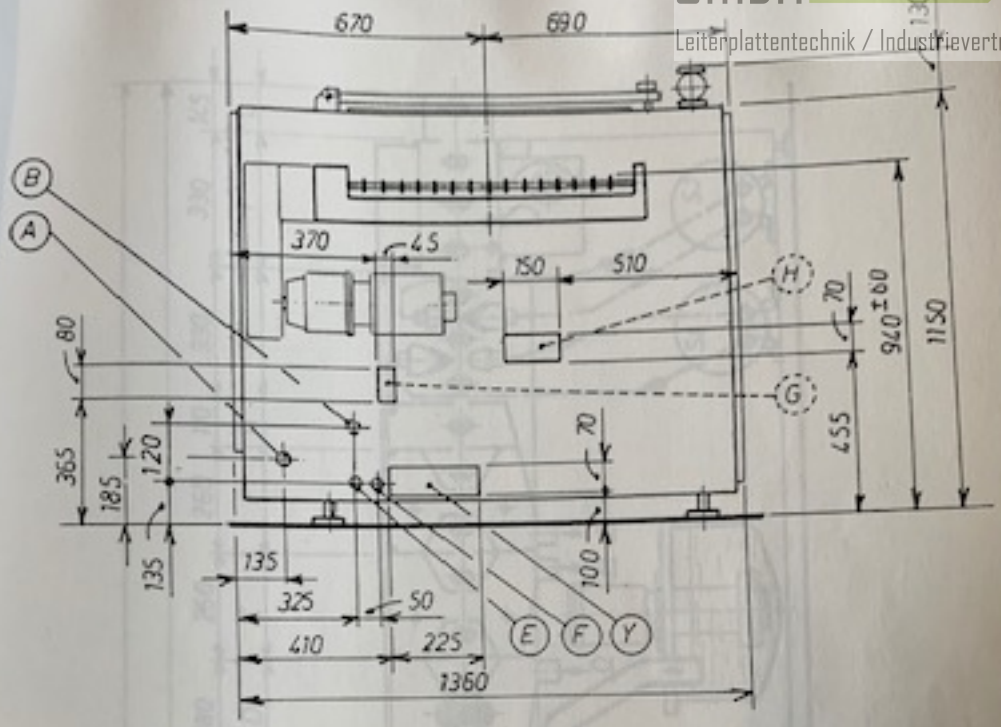
DWG. 01785'	WORK SPACE AND CONNECTIONS





C = Catch-tray outlet Ø 1" G
D = Slurry drain valve Ø 1" G
M = Water drain Ø 60 2nd rinsing cham
N = Water drain Ø 60 3rd rinsing cham
O = Water drain Ø 60 1st rinsing cham
P = Water drain Ø 60 external rinse
T = Rod
K = Power supply 12 kW 3 Phase

DWG. 02286	CONNECTIONS FRONT VIEW



NB. Please consult DWG 01785 for the dimensions and positions of drains M - N - O - P .

A - Water inlet ø 1" G
B - Deionized water inlet ø ½" G for 3rd rinsing chamber (optional extra)
E - Water inlet ø ½" G from Filtrex I-II for 1st rinsing chamber (upon request as optional extra)
F - Water inlet ø ½" G from Filtrex II for 2nd rinsing chamber (upon request as optional extra)
G - Opening for eventual feed pipe to 2nd rinsing chamber with H.P. Pump (H.P. Pump upon request as optional extra)
H - Opening for eventual hoses connecting the pumice scrubber with
  - H.P. Pump, normally M or M + N
  - Acid Module, normally N

Y - Drain pipe opening for
  - M - 2nd rinsing chamber for Filtrex II
  - N - 3rd rinsing chamber
  - O - 1st rinsing chamber for Filtrex I or II

    total emptying of standard machine = M + N + O (which flow through manifolds into P)

  - P

    eventual manifolds which can vary according to the external rinsing cycles

PUMEX SHD

SCHEMATIC CROSS SECTION

DWG. 01840'