Алматы (7273)495-231
Ангарск (3955)60-70-56
Архангельск (8182)63-90-72
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Благовещенск (4162)22-76-07
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Владикавказ (8672)28-90-48
Владимир (4922)49-43-18
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Коломна (4966)23-41-49
Кострома (4942)77-07-48
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курган (3522)50-90-47
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Липецк (4742)52-20-81
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
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Орел (4862)44-53-42
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Пенза (8412)22-31-16
Пермь (342)205-81-47
Петрозаводск (8142)55-98-37
Псков (8112)59-10-37
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Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
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Саратов (845)249-38-78
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Уфа (347)229-48-12
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Челябинск (351)202-03-61
Череповец (8202)49-02-64
Чита (3022)38-34-83
Якутск (4112)23-90-97
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Установка специализированная по переработке оливкового масла PMS 470 / PX 70

POLAT MAKİNA SAN. ve TİC. A.Ş.

THE FUNCTIONS OF OLIVE OIL MACHINES WITH PMS 470/PX70 CONTINUE SYSTEM

A. OLIVE CARRYING MACHINE

AI. CONVEYOR

Olive carrying line

A2. LEAF ASPIRATOR

Leaf, grass....etc. separating unit

B. OLIVE WASHING MACHINE

Olive washing and Stone, sill,...etc. separating unit

C. FEEDING SCREW CONVEYOR

Olive feeding unit for the crasher

D. PASTE PREPARE UNIT

DI. CRASHER

Olive crashing unit

D2. CONTINUE MIXER

E. DECANTER

El. DECANTER

Olive extraction unit

E2. VIBRATION SIEVE

E3. PASTE PUMP

E4. OIL PUMP

F. SEPERATOR

Oil, water, paste separation unit

G. WATER HEATHER AND HEATH EXCHANGER

Gl. AUTOMATIC HEATH EXCHANGER

Unit preparing hot water for the system.

G2. WATER HEATHER

H. MAIN CONTROL PANEL

K. INSTALLATION

CAPACITY AND POWER CONCUMPTION OF THE OLIVE OIL MACHINE OF PMS 470/PX 7(1 CONTINUE SYSTEM

OLIVE CARRYING LINE	
CARRYING CAPACITY	: 4 TONS/HOUR
TOTAL ENGINE POWER	: 4,1 KW
OLIVE WASHING MACHINE	
WASHIN CAPACITY	: 4 TONS/HOUR
TOTAL ENGINE POWER	: 1,585 KW
FEEDING SCREW	
CAPACITY	: 4 TONS/HOUR
TOTAL ENGINE POWER	: 1,5 KW
BREAKER	
CAPACITY	: 4 TONS/HOUR
TOTAL ENGINE POWER	: 22.75 KW
MIXER	
CAPACITY	: 0.8x6:4.8m^2
TOTAL ENGINE POWER	: 8,565 KW
PASTE PUMP PMS 65	
CAPACITY	: 6 TONS/HOUR
TOTAL ENGINE POWER	: 2.2 KW
DECANTER	
CAPACITY	: 1800-2500 KG / HOUR
TOTAL ENGINE POWER	: 22.92 KW
HUSK SCREWS! 2 PIECE)	
CAPACITY	: 4 TONS/HOUR
TOTAL ENGINE POWER	: 3,7 KW
SEP ER A TOR	
CAPACITY / PIECE	: 1500-2000 LT / HOUR
TOTAL ENGINE POWER	: 5,5 KW
OIL PUMP (2 PIECE)	
CAPACITY/PIECE	: 3 TONS/HOUR
TOTAL ENGINE POWER	: 1,5 KW

Л 7 / 11/ ***ASPRA TOK (2 PIECE)***

TOTAL ENGINE POWER : 0,75x2:1,5KW

VESSEL	
CAPACITY	: 150.000 KCAL / HOUR
TOTAL ENGINE POWER	: 1,1 KW
FUEL CONSUMPTION	: 29 KG / HOUR
FUEL TYPE	: DRY HUSK

PA CKA GE HE A TH EXCHANGER S YSTEM (H YDROPHORE)

35 ~40"C WATER CAPACITY : 3m^3

WATER PUMP POWER : 1.8K.W

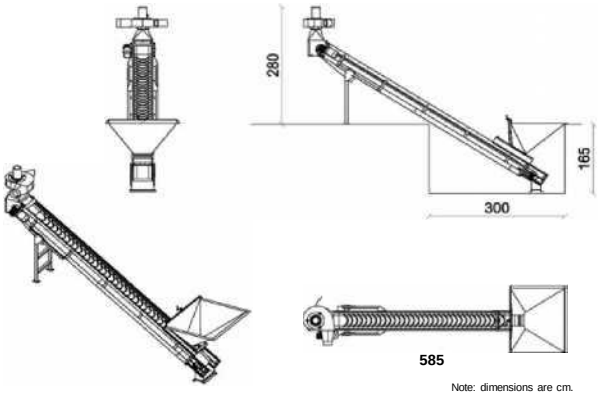
CIRCULATION PUMP POWER : 0,195 KW

A. CONVEYOR WITH OLIVE CARRYING LINE

Al.CONVEYOR

Olive banker which is 1500x1200 in size is produced by in ox material AISI 304. The conveyer is designed without any spool made of plate materials of AISI 304 so that it does not require extra maintenance and only 2 pieces of spools are used in order to prevent any extension in the line turning. The tightening system of the band conveyer is carried out with a screw for tightening, the line is tightened from the back part of drum. The line is driven as a couple in the first drum by a reducer and engine. The fixing place for the reducer-engine group can be on the right or left side of the conveyer according to the assembly in the building. The "Zillinger" band is 400mm in size, "V* nailed and it's made out of PVC material 3mm in thick according to the food regulations.

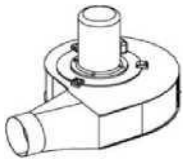
Bunker material	: AISI 304
Bunker material thickness	: 2,5mm
Material of conveyer chassis	: AISI 304
Mater, thickness of chassis	: 2 mm
Material of the line elevator	: PVC
Mater, thickness of elevator	: 3 mm
Sizes of line elevator	: 400mm x 11.750 mm
Elevator length	: 5840 mm
Line speed	: 20 m/h - 40 m/h
Reducer type	: Worm Gear
Reduction ratio	: 20/1
Engine	; V 1 F 0 24 P90
Engine power	: 1,1 kw, 1500 rpm
Capacity	: 4-6 ton / h
Weight	: 431 kg



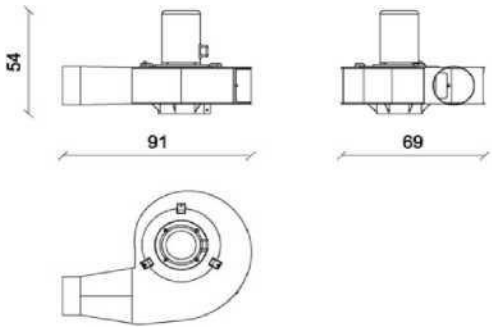
Note: dimensions are cm.

A2. LEAF ASPIRATOR

Aspirator is fixed to the front part of the conveyer optionally.it is produced in order to separate the light materials such as leaf, grass, ...etc. from the olive. The wings providing the air circulation of the aspirator are made of stainless steel AISI 304 quality and the outer part of it is manufactured out of AISI 304 material. There is a lid at the side of the body permitting to clean inside of the aspirator easily.



Transfer number	: 3000 rpm
Engine power	: 3 kw
Capacity (leaf)	: 1000 m^3/ h
Weight	: 56 kg

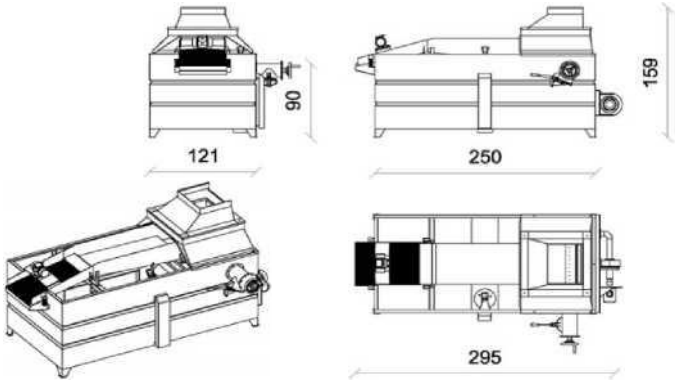


Note : dimensions are cm.

B. OLIVE WASHING MACHINE

All surfaces that olive is touched and washed and all parts in water storing chambers are produced from in ox material AISI 304 in quality. The particles within the olive sink to the bottom of the special designed chamber where olive flows. The heavy materials (stone, metal,...etc.) collected are evacuated after the machine stops by a manually driven spire. The olive passes the washing chamber and comes to frontal vibrated sieve . Here the olive leaves the water and falls into the feeding screw bunker. The system is designed in a way which provides continuous circulation of the water within the machine. The circulation is allowed by means of a pump fixed upon the machine. The water filling chamber is designed in two parts in order to prevent the materials such as mud,...etc. in the water from entering into the pump. The control board is fixed on the machine to make the operation of the washing machine to be easier.

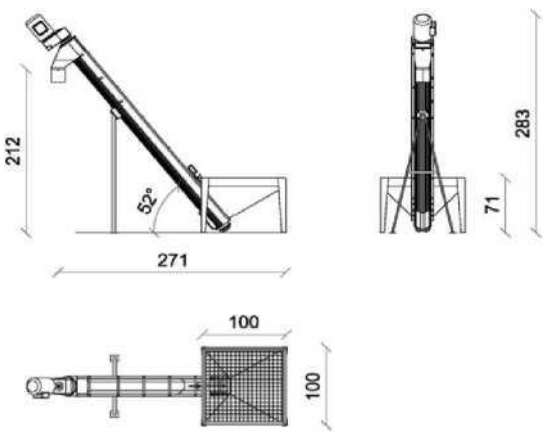
The quality of the material used	: AISI 304
The thickness of the material used	: 3 mm
Washing surface	: 1.5 m^2
Engine type of vibrator	: MVS1 15/80 S 90
Engine power of the pump	: 1.5 kw
Engine transfer of the pump	: 1500 rpm
Vibrator Engine Power (1)	: 0,085 kw, 1500 rpm
Capacity	: 4-6 ton/h
Capacity	: 1740 lt
Weight	: 649 kg



C. OLIVE FEEDING SCREW CONVEYOR

All surfaces the olive touches along the transport to the crashing machine are manufactured from in ox AISI 304 material in quality. Conveyer screw wings are produced out of in ox material of AISI 304 quality in order to strengthen against the abrasion occurred during time,

Quality of all material used	: AISI 304
Rustproof pipe thickness	: 2,5 mm
Screw elevator thickness	: 3 mm
Banker plate thickness	: 2 mm
Screw diameter	: 0 190 mm
Screw length	: 3100 mm
The type of the reducer	: PD 22
Reduction ratio	: 24/ 1
Engine power	: 1.5 kw
Engine transfer	: 1500 rpm
Capacity	: 4-6 ton / h
Weight	: 233 kg



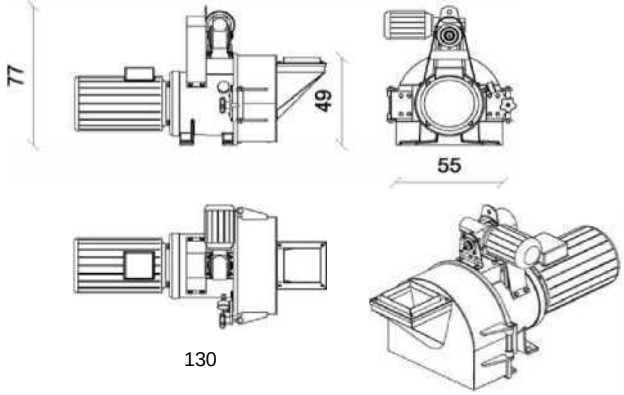
D. PASTE PREPARE UNIT

DI. CRASHING MACHINE

It is the unit where olives are crashed. With turning hammer system and special tearing blades, it enables quality oil production without heat formation. The entrance parts through which the olives to be broken and enter the unit and the front breaking lid are produced out of in ox material AISI 304 in quality. Crashing hammers 2080 special material, for the main body are designed out of GG20 material. The sieve plate where the olive paste is collected is produced from the in ox material AISI 304 in ox in quality. The olives carried to the crashing unit by the olive feeding screw conveyer are broken by special designed hammers without being pressed and burned . Crashed olives are transferred to the left or right chambers of the mixer if required by the distributive screw which is produced out of in ox AISI 304 material in quality.

PMS370

Type	: plucked hammered
Hammer material	: 2080 special
Sieve matenal	: AISI 304
Crashing front lid material	: AISI 304
Hammer amount	: 12 piece
Sieve diameter	: 370 mm
Sieve length	: 142 mm
Diameter of the sieve holes	: 6-7 mm
Crashing engine power	: 22 kw
Crashing engine transfer	: 3000 rpm
Sieve engine power	: 0.75 kw
Sieve engine transfer	: 1500 rpm
Sieve turn transfer	: 60 rpm
Reducer type	: Worm Gearl5 / 1
feeding engine power	0,37 kw
feeding engine cycle	1500 rpm
feeding reductor type	Worm Gear 15 / 1
Capacity	: 4-6 ton/h
Weight	: 415 kg.



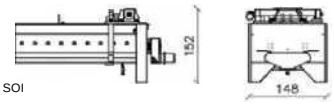
D2. CONTINUE MIXER

Horizontal mixer consists of 6 chambers at 2 lines as three by three each of which are 0.8 m^3 in volume and there is passages between each other. Olive paste is carried by the mixers from one chamber to the other by being mixed simultaneously. The paste is homogenized by the mixing screws. The paste is heated by the water of 35-38 C circulated inside the water jackets fixed around the chambers. The separation density is achieved in 35-45 minutes. This operation is necessary for improving the oil yield. It is designed as horizontal mixers because:

Looking after of the client goods is very simple. Usage, traceability and cleaning are very simple as welt the steam which occurs during crashing and mixing of the paste is discharged by the aspirator fixed on the horizontal mixer. So, the quality of the olive oil is considerably improved. The outer jackets having the water at 35-38 °C which is required for the olive paste to reach to the desired density and the olive paste contacts are made of the stainless steel at the quality of AISI 304 as specified by the complete food regulation.

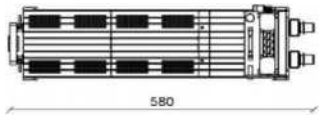
The quality of the material : AISI 304
The thickness of the Outer Jacket : 3 mm
The thickness of the Inner Jacket : 3 mm
The thickness of the Helical profile : 5 mm
The dimensions of the sections : 650 mm,2000 mm,765 mm.
Power and speed of the motor : 4 kw , 1500 rpm

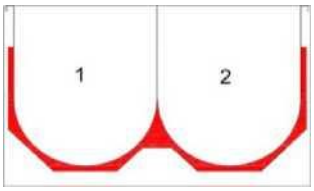
reductor type	: PD 42
reduction rate	: 68/1
heat in water jackets	: 35-38 C
Weight	: 2320 kg.

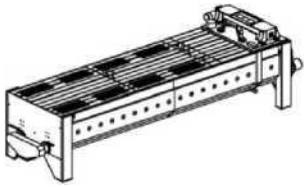


SOI

Olive Paste; 12,35 m^2 water (heat)
jacket for all surfaces which supplies olive paste to become mature at Low heat and short time







FOR EACH SECTION THERE ARE SEPARATELY WATER JACKETS.

E. DECANTER

El. DECANTER

The Engine, driven by Inverter, increases the drummer rotation to the 3000 r/m. This creates the centrifugal forces which keep the oil production at the maximum level. Thus, the system enables to separate the crude paste, water and the olive oil from each other as per their specific gravity. The paste carried by the paste pump enters the decanter drum together with the water coming from the flowmeter at 35-45 C. The water is transferred to the lower chamber of the decanter from the entrance channel behind the drum and then it is sent to the vibrated sieve near the decanter. The oil within the drum is taken out of the drum by means of 2 nozzles located opposite to each other .This Oil coming to the lower unit of the decanter through nozzles is also sent to the vibrated sieve. A Transmission fixed in front of the drum crates a definite difference at rotations between drum and inner spire. It helps to discharge the pomace out of the system . Screw coils are covered with tungsten carbure of 60-65 Rockwell in 2,5mm.

The aim here is to minimize the abrasion which may occur in time. All surfaces and the equipment the olive paste touches as it enters in to the decanter are made out of in ox materials according to the good regulations. In order to avoid the paste being stuck at the surface while it goes out the drum, a cleaning system is established at the front part of the drum. Speed control system which will be operated by a paste pump against any jam to occur during the operation of the decanter will be established. The main plate which provides embedding for the decanter drum is produced out of St 37 materials. Polat Machine Olive Oil Decanter is produced as models of 20 tons,30 tons, 40 tons, 60 tons, 80 tons, 120 tons, The main characteristics of Polat Machine decanter which distinguishes it from the others are as follows:

* Oil loss in husk and dirty water is below than world standards.

* The decanter which operates in 3 phases can carry out the production with 2 phases by choosing the adjustable water exit channels when required. It does not require any additional parts and expenditures it has got Inverter system satisfying linear take off and energy balance

It's conveyor wings plated with tungsten car bur with the 65 HRC Rockwell hardness .

* Body and spiral parts are totally made of 316 Ti stainless steel.

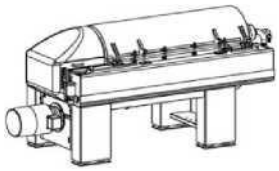
The water shield disk at the final point of the screw within the decanter prevents the oil from being mixed with the black
water.

* The paste amount in the oil can be adjusted by the adjustable oil exit channels located on the body.
* It has got an adjusting system for discharging of oil and black water as per the regional olive sort.
* It is resistant to the sudden shocks at a ratio of % S00 with aid of structure of gear box and the gearbox can absorb
the sudden starting and stopping strikes, 10 years guaranty.
* It keeps capacity at max level adjusted by the means of PLC control system Machine has electronic protection system designed as not to be damaged under excessive loading and sudden shock.

Why POLAT MAKİNA A.Ş. is using one separator ?

Because oil percent in dirty water discharged from decanter is max. 0.5 gr/lt, so there is no need for a second separator.

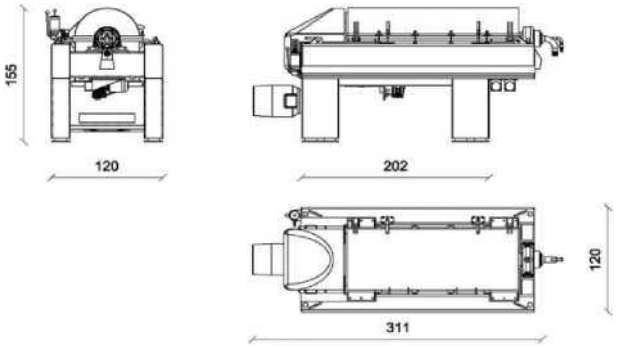
Tipi	**PX 70**
Body steel	: AISI 316 Ti - 1.4571 (DIN)
Screw steel	: AISI 316 Ti - 1.4571 (DIN)
Screw coating material	: Tungsten car bur
Screw coating hardness	: 60-65 HRC
Screw coating hardness thickness	: 2.5 mm
Screw length	: 1575 mm
Drum diameter	: 470 mm
Engine power and transfer	: 22 kw , 3000 rpm
Gear box type	: Cycloid
Reduction rate	: 25/ 1
Maximum transfer	: 3200 rpm
Operation transfer	: 3000 rpm
Engine operating system	: Invertor
Maximum operating degree	: 60°C
Drum thickness	: 11 mm
Drum length	: 1588 mm
Feeding material	: olive paste
Feeding material density	: 1,3kg / dm³
Weight	: 2942 kg.



DECANTER PERFORMANCE GUARANTEE

FOR 3 PHASE;Daily olive processing capacity 60 TON / DAY
MAX OİL IN HUSK. % 3-4 (% 50 HUMIDITY;
MAX OİL İN DIRTY WATER % 0.5 gr / II

FOR 2 PHASE;Daily olive processing capacity 60 TON / DAY
MAX OİL İN HUSK. *% 1-2* (% 60 HUMIDITY;

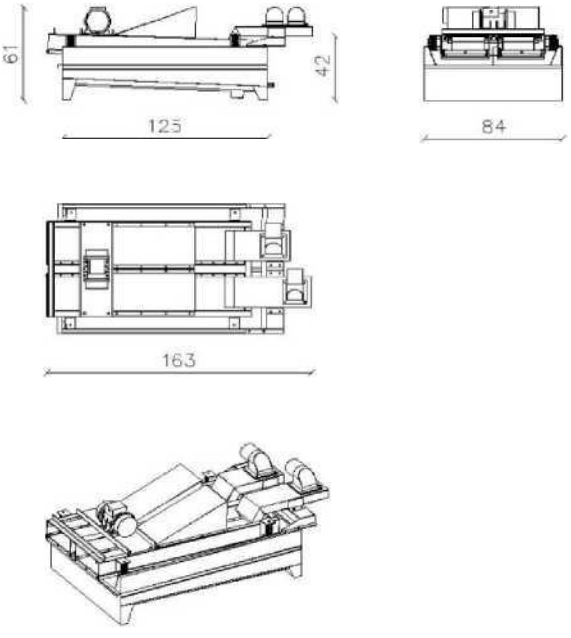


E2. VIBRATION SIEVE

All materials used are manufactured from AISI 304 in ox in quality in accordance with the good regulations since they touch directly to oil and water. It consists of two parts. These are as follows:

The sieve which holds the deposits within the oil and the other part consists of two units in which water and oil are collected and transmitted. The deposits within the water coming in to the sieve are held by specially designed sieve plate. The water here goes to the lower unit and it is discharged out of the system through the entrance channel. Like the water the oil also goes to the lower unit after its deposits are held on the sieve plate. From here it is carried by an oil pump to the separator in order to get the oil separated in micronized deposits. The deposits held on the sieve plate are poured into horizontal screw conveyer as a result of vibration and then they are discharged. The steam of the oil is discharged by means of an aspirator fixed at the entrance part of the vibrated sieve.

Vibrated engine trademark	: MVSI
Vibrated engine type	: 3 / 300 S 90
Spring amount	: 4
Diameter of the sieve hole	: 1,5 mm
Weight	: 140 kg

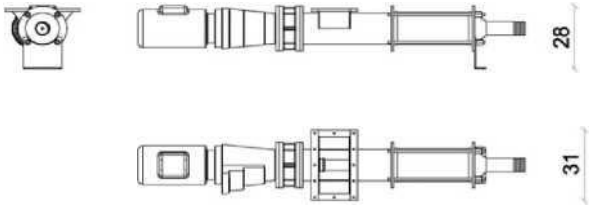


E3. PASTE PUMP

Paste pump carries the olive paste from the mixer unit to the decanter by means of the paste entrance unit. It is capable to make the vacuum operation. Engine driving system is designed with an inverter. All surfaces that olive paste touches are produced out of substance AISI 304 in quality according to the good regulations. Stator material is chosen as nitric rubber in accordance with good regulations.

PMS 65

Engine power	: 2.2 kw
Capacity	: 6 ton / h
Reducer type and trademark	: PF 32
Rotor diameter	: 65 mm
Rotor material	: 316 Ti
Strator material	: Nitric rubber
Engine server	: Invertor
Max. Transfer	: 120 rpm
Convey	: Joint
Weight	: 100 kg



HUSK GROUND AND RAMP SCREW CONVEYERS

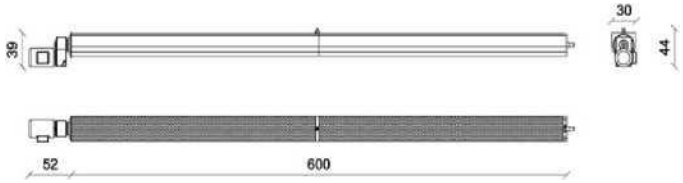
Screw conveyers are designed for evacuation the husk paste coming out of system and cumulating as a mass outside the building. At the screw wings used here are produced out from in ox material of 304 quality.

Husk Ground Screw

Engine power	; 1,5 kw 1500 rpm
Reducer type	: PD 22
Reducer ratio	: 1 / 24
Weight	: 332 kg

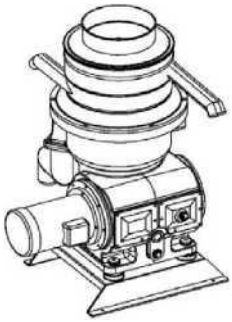
Husk Ramp Screw

Engine power	: 2,2 kw 1500 rpm
Reducer type	: PD 22
Reducer ratio	: 1/22
Weight	: 343 kg

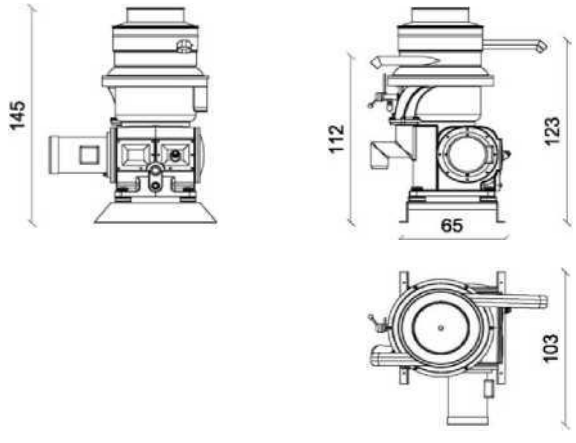


F.SEPERATOR

The other body of the separator is made of GG 20 material and all surfaces the oil touches are manufactured from in ox material in AISI 304 quality in accordance with the food regulations. The micronized sentiments within the olive oil are separated consequently by centrifugal forces. Especially ,for the bowl, forged duplex material is chosen. PMS 30S centrifuge separators of oil ,with its semi - automatic shock system, enable to process highest volume of oil .This perfect operation of the machine In aspect of the centrifugation makes it a special product of Polat Technology. Material selection is done carefully concerning mechanics and tests are carried out very carefully. Thus POLAT MAKİNA separators will continue to supply olive oil in perfect condition to your tables.



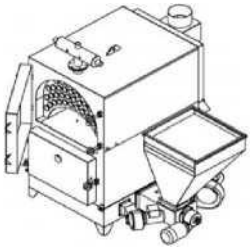
Type	: PMS 405
Engine power	; 5,5 kw 1500 rpm
Capacity	: 1500 - 2000 lt/h
Drum diameter	: 0 405 mm
Drum circulation (max.)	: 6500 r/m
Drum material	: DIN 1.4462 (Dublex) INOX
Operation degree	: 0 / 100 °C
Cleaning system	: Semi automatic
water- oil ratio	; max. 0.15 gr / lt
oil-sediment ratio	: 0.05 gr / lt
Weight	; 740 kg



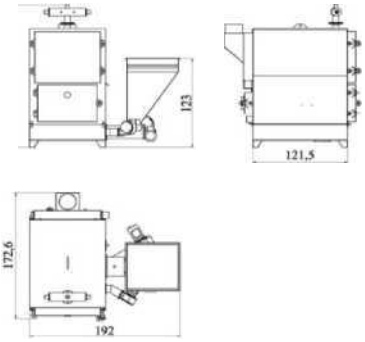
G.AUTOMATIC HEAT EXCHANGERAND WATER HEATHER

Gl.AUTOMATIC HEAT EXCHANGER

Hot water vessel is made of St 37 material and husk fuel burner is produced GG 20 material. On vessel a second turbo fan system is developed for better burning of dry husk. The control board and thermostat control are fixed on it. The packed heat exchanger system near the vessel supplies water in to the system at 35-40 C without wasting the water within the vessel. Vessel feeding is carried out by conveying the dry husk automatically to the fuel chamber by means of a screw. Up to your request diesel fuel operated models are also available.



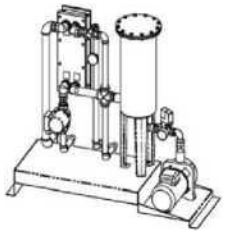
Type	: PMS DB150
Engine power	. 1,5 HP(0,55kw 900 rpm ; 0,37kw ' 2800 rpm ; 0,18kw 2800 r/m)
Aspiration type	: PMS 130 , PMS 160
Water volume of the vessel	: 0.9 m³
Heating capacity	: 150.000 kcal/ h
Weight	: 1160 kg.

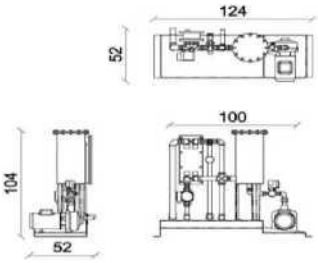


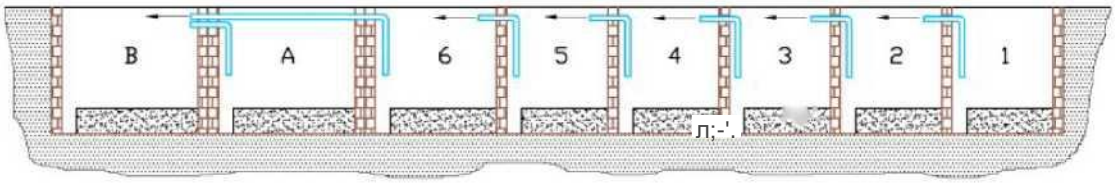
G2.WATER HEATHER (EXCHANGER)

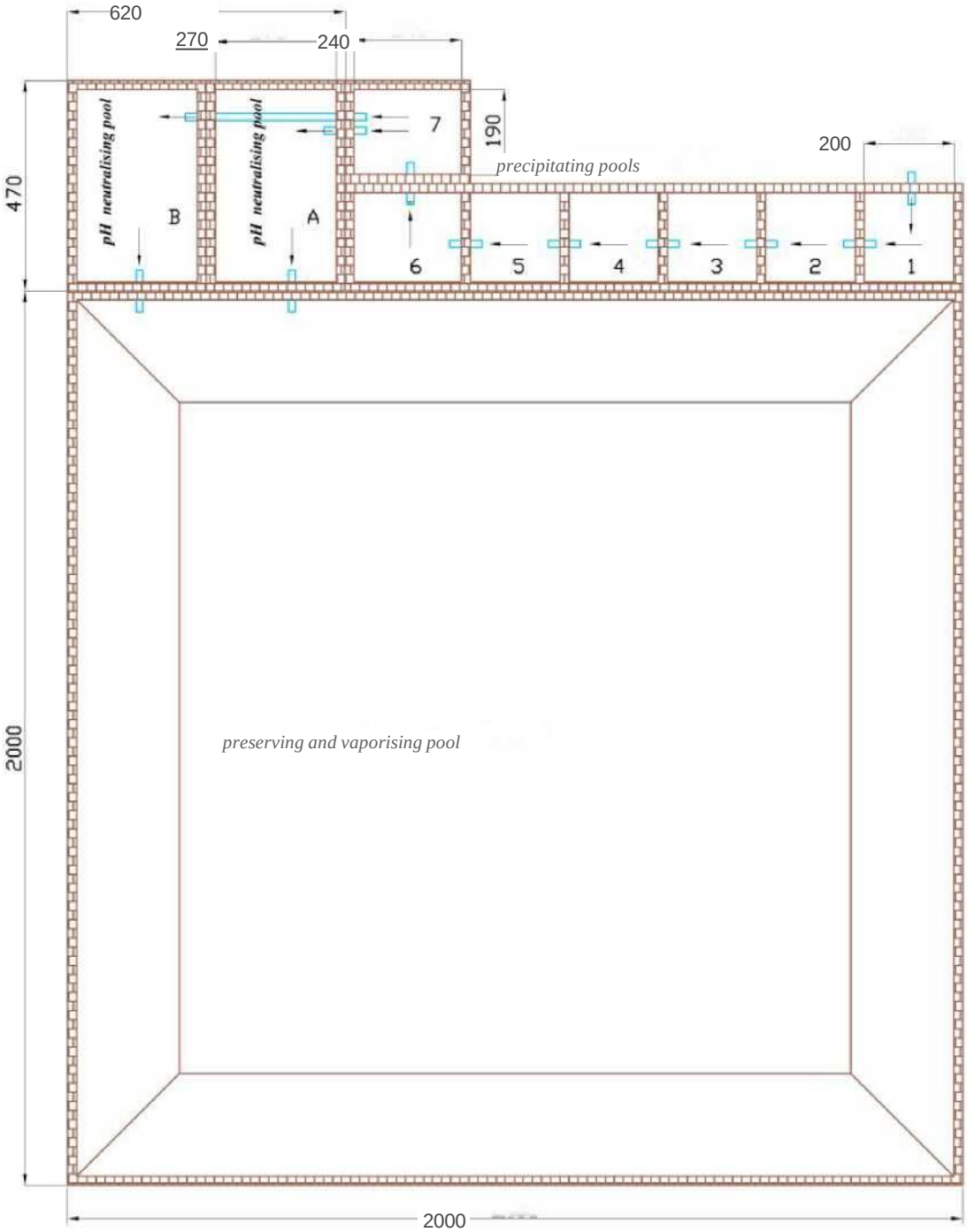
Packed heath exchanger system is designed for supplying water at required heat to the system with thermostatic valve, sensitive heath adjustment, water softening and lime prevention function.

Type of the heat exchanger	: Flake
Capacity of the heat exchange.	: 3 ton / h
Engine Power	: 1,8 kw 1500 rpm
Weight	: 192 kg









POLAT MAKI NA SANAYİ A.S. / AYDIN						
		date	signature	wiev of the pools cross-section and setting		
DRAWER	SANİYE SISMANOGLU					
CONTROL	ADNAN YILDIZ			scale	REV. NO	REV. date
approval	HAYRI T EZ E R				0	

PLC TYPE CONTROL AND ELECTRICAL PANELBOARD

This is the main control center, which is supported with the PLC and inventor systems and equipped with all of the safety equipment's required for the entire system and designed by using most advanced technologies,

Technology is adapted to the system and it is suitable for serial use and the system is equipped with the touch-screen designed to minimize the operator failures to a level as less as possible.

- The panel board is of IP 65 Class and includes a ventilation system.
- It provides a quick and comfortable use. All functions are traceable over the screen.
- System generates alarms over the alarm follow-up interface and supplies information to the operator regarding to the maintenance times of the machines. It provides the tracing of alarm and maintenance status and records over the screen.
- Reports related to retroactive defects and maintenance records can be taken out.

ISSUED BY	**POLAT MAKİNE SANAYİ VE TİCARET A.Ş.**
SUBJECT	**TECHNICAL REPORT FOR TREATMENT PLANT**

Operation System for the Treatment Plant

The waste water produced per hour during the operation of the olive oil machine of continue system is average 450 Lt/h. Daily produced waste water is on an average 10.800 lt/day. Since the total operation period is 60 days then the total waste water is 648.000 lt/period. The waste water produced during the operation is carried by pipes to the pools in the precipitation system. The precipitation system consist of 7 pools 200 cm x 200 cm in size. These pools are used to hold the oil and the paste within the waste water. The oil floating on the surface of the waste water is taken out in regular periods. The paste sinks.

The waste water entering the precipitating pool nr.l passes through the pools nr. 1-2-3-4-5-6-7. The water coming out from the pool nr.7 is carried to the A and B pools 470 cm x 270 cm x 200 cm in size by pipes after the paste is taken. The waste alter is neutralized by caustic automatically added into the water by means of PH meter in the PH adjusting pools nr.A and B. Meanwhile, the blower fixed over the pools nr.A and B helps to homogenize the water. In order to hold the froths in the filter, clean water is given to the surface by means of fountain. The froths collected in the filter are washed away regularly.

The neutralized waste water coming out from PH adjusting pools is carried out to the preserving and vaporizing pools in the capacity of 1000 m^3 and 20m x 20 m x 2.5 m in size by pipes. The waste water which is absorbed at 5 different points of the pool by means of a pump fixed outside the pool is sprayed and pulverized through 3 fountains located at the center of the pool. The spray pump has 100 m^3/h capacity. This helps the water to expose to the oxygen and to be vaporized. The water which is neuter and now rich in oxygen is used for irrigation. Since the paste is very high in calorie it can be used as fuel. Güllerdağı ltd) which is in Datça-Muğla/TÜRKİYE has the same system. The waste water and the materials within the water returns to nature without giving any harm to it.