INTRODUCTION

Thank you for your choice of EMTAŞ heating systems produced in world standard quality. Wish you enjoy it.

In this instruction book, you can find the guarantee conditions and installation –usage and the maintenance of EMTAŞ heating boilers with flame transformation and with fuel of solid, fluid and natural gas.

In order to take better outputs from EMTAŞ heating boilers with flame transformation and with fuel of solid, fluid and natural gas and in order to use this product longer times, you should read the directions in the instruction book and you should perform them.

emtaş®

PANEL RADIATOR & HEAT INDUSTRY TRAL INCORPORATED COMPANY

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IMPORTANT POINTS

You shouldn't fit the heating boiler in bathroom, balcony or your other …… areas.

You shouldn't operate the heating boiler with fuel of solid with closed expansion tank. You should use open (imbisat) tank system.

Pay attention that the water of heating boiler is completely full. In case of boiler's water decreasing and when the heat of boiler's water decrease under 30 ^{0}C, you should give cold water till water comes from messenger. (In order to stop freezing in the in boilers that are not used frequently, you should add antifreeze or other chemical substances which prevent freezing to the installation water.)

You shouldn't open the boiler's feeding tap when the fan is working. As much as possible you should pull the burning ember toward the tap and you should make loading toward the back. Absolutely you shouldn't make the feeding on the bumming coal.

Certainly you shouldn't empty the boiler's water neither summer nor winter.

It is necessary to clean smoke tubes per week, smoke box per month and chimney per year.

Pay attention to air the place of boiler all the time.

Absolutely you shouldn't cut the electric feeding when there is a fire in the boiler.

SETTLING & CHIMNEY CONNECTION

For better boiler output and combustion, well accommodation ventilation of the boiler should be provided. Don't assemble to airless places and especially where people live.

Assemble the boiler to the places where it can be preserved from exterior factors such as sun and rainfall.

Don't assemble the boiler to wet and moist places.

Elevate the boiler's floor by at least 15 cm concrete base.

Chimney Connection

The horizontal smoke pipe's diameter, between the boiler and the chimney, should not be smaller than the boiler's chimney diameter.

The horizontal smoke pipe's length, between the boiler and the chimney, should be between minimum 60 cm and maximum 2 mt.

Make the connection of the horizontal smoke pipe to the chimney with % 10 increasing gradient and by not using turn.

The height of the chimney should not be smaller than 5 mt and should be at least 80 cm height from building roof ridge.

The chimney connections should not be passed through living places and should be built as appropriate to tear down when necessary.

Being smooth, not leaking and with isolation of the interior of chimney have great impact on chimney absorption and the boiler's output. (In case of smaller chimney diameter than necessary, the combustion will get difficult and demanded output cannot be acquired. And in case of bigger chimney diameter than necessary, since the natural absorption will be much, sleep of the b

FEATURES OF BOILER

In manufacturing of the EMTAŞ Solid Fuel-Fired boilers, hot rolled ST 37 sheet was used. Beside of easiness usage, maximum output, by using more thick material it was designed by considering long life.

The privileges of the EMTAŞ boilers than the other boilers; they have heating surface that can obtain maximum output from the used solid fuel. Owing to this, the produced high combustion and heat increase the boiler's output to the maximum level.

In our solid fuel boilers by means of heat exchanger and moist smoke tube, by transforming stack gas having high temperature to calorie, increase in the boiler's output was achieved.

Our boilers was designed as to work in 2 bar operating pressure and presented to use after tested with 5 bar pressure test.

In our boilers, with useful wide cover, loading and filling, firing and ash cleaning can be done more easily.

By the fan, equipped with thermostat, the boiler's water gets up to the demanded temperature very quickly and fuel saving can be achieved by the boiler is going to sleep.

Achieving "complete combustion with air" by means of the air speed adjustment, the maximum output is o

ASSEMBLY and RULES

The boiler should be assembly in its scale and should be seated on at least 15 cm concrete base.

There must be ventilation window in the boiler room.

Leave enough working space from side walls to enable assembling of the boiler and its equipments.

In the excessive cold and existing risk of frost regions, you must absolutely isolate the expansion storage tank and its going and returning pipes.

Place the opened expansion storage tank to the highest point of the installation. Never place equipments like valve, filter, drain valve etc. on its pipes.

Absolutely use 3 bar safety ventilate in the installation.

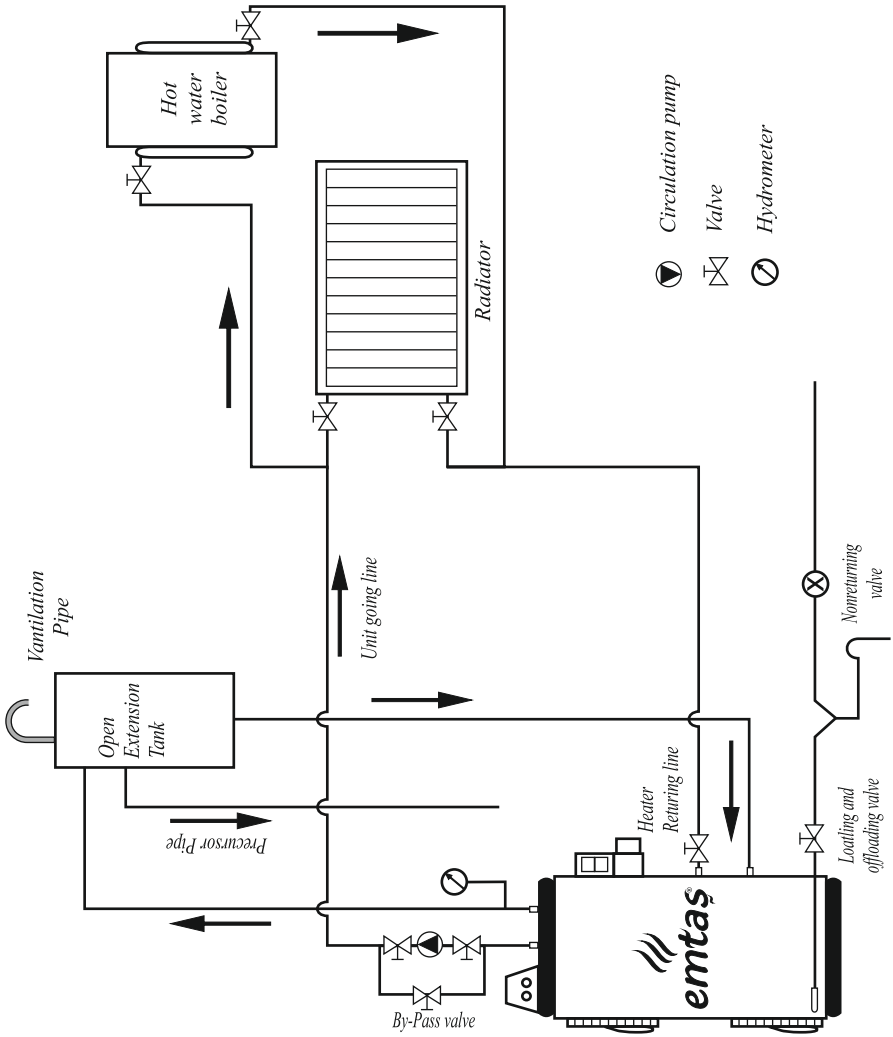
You can assembly circulating pump to the going or return line. (The assembled pump to the return line is gotten preserve from excessive hot)

Set the valve on the by-pass line to the close positi

Capacity of Boiler	Exponsion tank volume
20.000 - 30.000	40 Lt.
35.000 - 50.000	50 Lt.
60.000 - 80.000	100 Lt.
80.000 - 100.000	180 Lt.
100.000 - 160.000	250 Lt.
200.000 - 250.000	400 Lt.

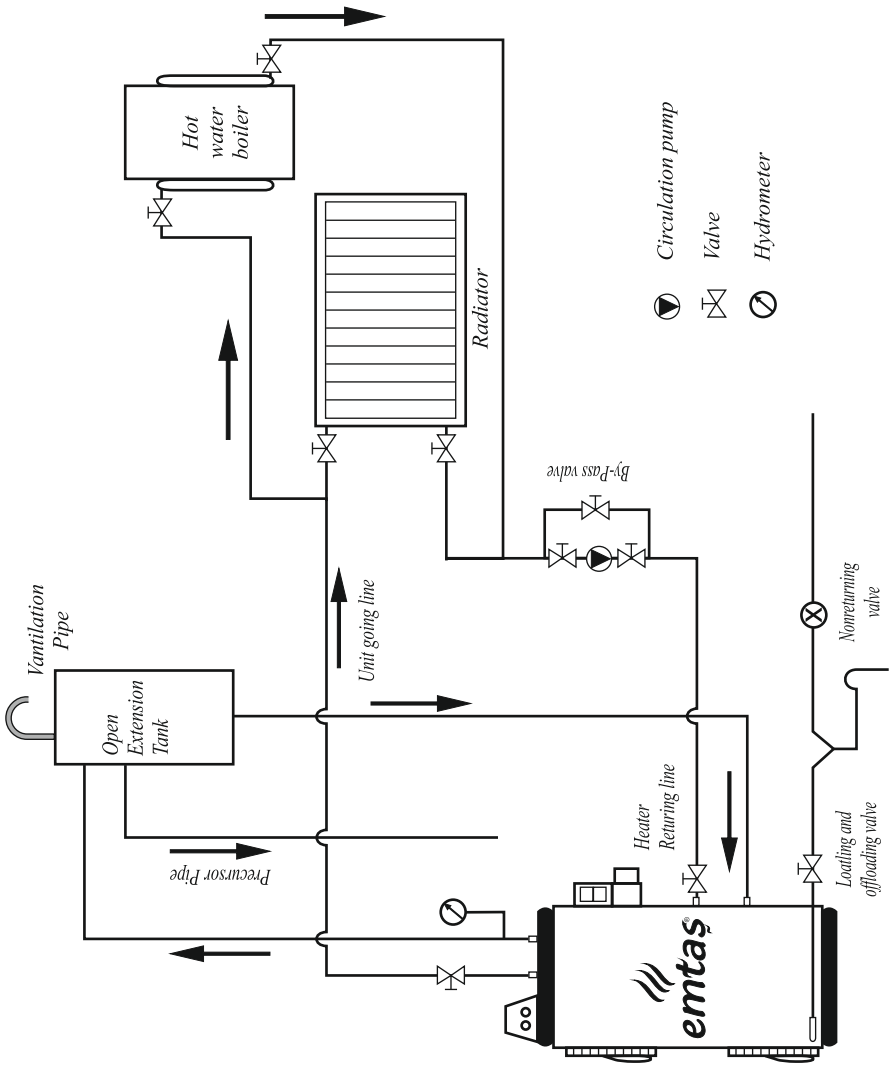
Notice : İnstallation accors to vary

INSTALLATION WICH IN CUTBOUND FLOW AT CHART OF PUMP AND WATER HOATER CONNECTION



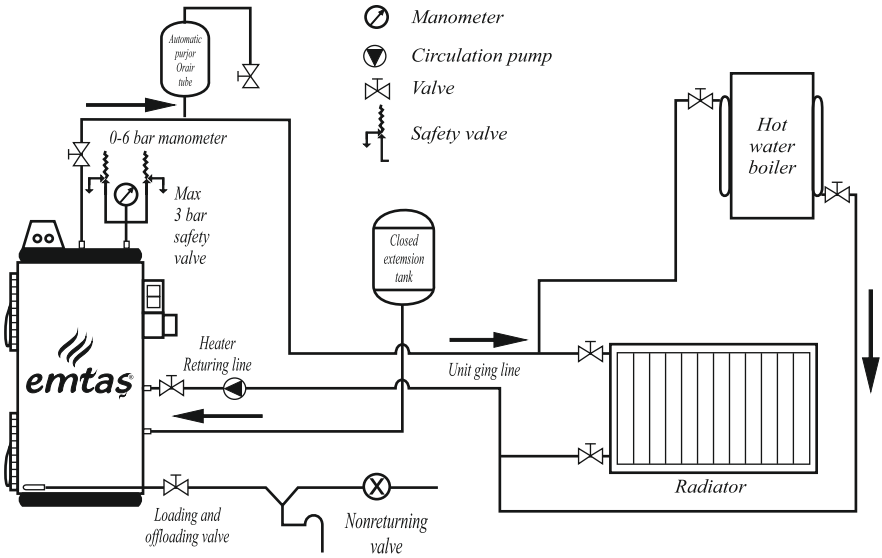
schema 1

INSTALLATION WHICH IN TRUN FLOW AT CHART OF PUMP AND WATER HOATER CONNECTION



schema 2

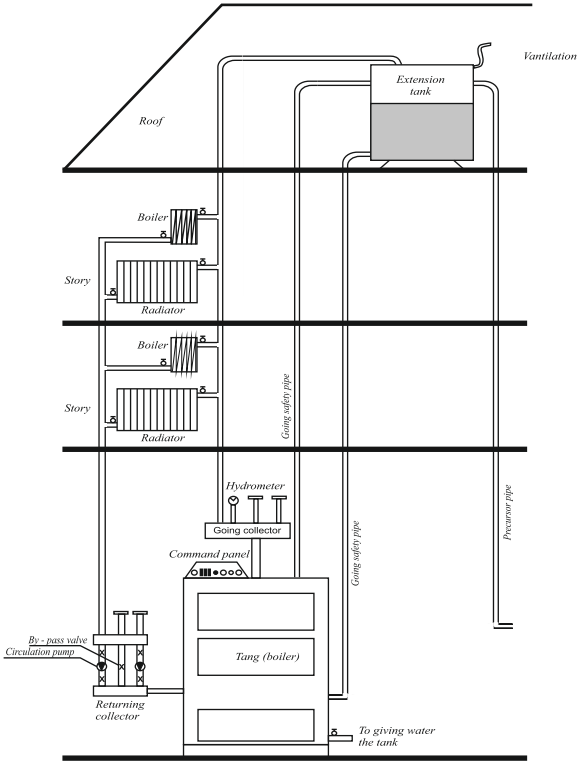
CONNECTİON SCHEME and BOİLER CONNECTİON WHERE THE BOİLER İS AT FLOOR LEVEL or HİGHER LEVEL



schema 3

If you have to place your boiler to floor level or higher level, you should make system connection as in schema-3. In these systems you don't need to make By-Pass. Because of existing of natural circulation in these systems is impossible. In electricity cuts, these systems must be under control. We recommend that if the temperature is going to 90-100° C temperature value, cool down the fire inside (make cooling by throwing soil or sand since it is dangerous that throwing water on fire) or unload the fire. When the water temperature reaches maximum, there will be observation of stream releasing from the safety ventilates. In these situations immediately cool down the boiler without panic and fill the system's water then vent air from the system. If the boiler located at lower than floor level and become again closed expansion, the By-Pass system have to be placed. In the closed systems there have to be expansion storage tank and safety ventilate.

INSTALLATION SCHEME IN THE CENTRAL SYSTEM



schema 4

Between the opened expansion storage tank, the safety ventilate and the boiler, the valve shouldn't be placed.

Make the radiator going line as same as output diameter until the first radiator group.

The pipe diameter in the by-pass line should be as same as the pipe diameter in the boiler going line.

For easiness in assembling-disassembling of the system, use record in all connections in the installation.

OPERATING OF THE BOILER

Check if the boiler and the installation were assembled appropriate to the operating guide and to the standards.

Check the chimney absorption before firing the boiler. Check the all valves are in the open position. (Except by-pass valve and auxiliary circulation pump valve)

Before starting, check the system water is full by looking at hydrometer.

Make sure you get the air out from the system.

Check the existence of power supply in the system. Check turning direction by running the circulation pump. Water will follow arrow mark direction shown in the pump, if it goes opposite direction, the circulation won't become.

Start the fan. Set air inflow by the air speed control switch to prevent dense smoke at first firing.

Adjust the temperature controller on the control panel according to the outer environment air temperature. The fan will run until the adjusted temperature will be reached.

Never open the swing door when the fan is running.

Provide dropping of the ashes that prevent air inflow by accumulating on the grids, by the handle beside the boiler. When getting air inflow, more quality combustion will be obtained.

Attention to use high calorie coal. Don't forget that the quality of fuel affects the boiler output, quality of combustion, amount of ash and cleaning time.

In case of electricity cut, increase in boiler water temperature can be seen since the circulation pump won't run.

IN THİS SİTUATİON;

Open the by-pass valve.

Never unload the boiler water.

If the boiler temperature exceeds 85-90° C, take out the burning coal and wait until the boiler gets cold.

If taking out the coal is impossible, you can stop the combustion by throwing sand, soil on it.

Never throw water on burning coal.

CLEANING and MAINTENANCE

It is very easy that the maintenance and the cleaning of the EMTAŞ Solid Fuel-Fired boilers.

Before every fuel loading, shake the grid two or three times by the handle beside the boiler.

Open the upper door and provide dropping within the boiler by cleaning the smoke pipes with the wire brush.

Clean the collected soot in the moist smoke tube by loosening the door bolts. After the cleaning, close the door as not to allow smoke exiting. After this process, if there is smoke exiting, you can stop it by smearing fireproof red silicone around the door.

Clean the collected dust on the fan motor. Never provide coal sack, carry bag etc. around the fan clack. Sometimes, check the fan running by opening the clack. If there is dirtiness around the fan cover, clean it and assembly again.

Clean the chimney by opening the lower cleaning door.

Clean the smoke pipes once a week, moist smoke tube once a month and chimney once a year, absolutely.

Pour the grease to the boiler door handles and to the bolts once a month.

POSSIBLE FAILURES and TROUBLE - SHOOTING

TROUBLE	CAUSES	SOLUTIONS
The fan doesn't run.	No power supply to the fan The electrical connection of the fan could be wrong. The fuse of it could be blown out. The fan thermostat is close or at low adjustment The dimmer (the air speed control switch) could be close. The dimmer fuse could be blown out.	Check the electrical energy. Check the fan's electrical connection. Check the glass fuse that is on the panel and inside the dimmer. Adjust the fan thermostat on the 45 degree. Open the dimmer. Change the fuse inside the dimmer.
The boiler's water temperature is consistently increasing.	The circulation pump doesn't run or it could have air inside. The fan clack could be open. The boiler's lower door could be open. There could be no power supply to the electrical installation.	Check the circulation pump. Take the air by loosening the bolt on the pump; with screwdriver pres1-2 times forward to the pump shaft and rotate in a clockwise direction. In this process some water will flow down. After finishing the process, fasten the bolt to its place. Check the fan clack. Check the boiler's lower door. Check the electrical energy.
All of the radiators or some of them aren't being heated.	The circulation pump doesn't run or could be insufficient. Air could be inside the system. The by-pass valve could be open. The boiler's input-output valves could be close. The radiator connection could be wrong.	Check the circulation pump and its cycle. Take the radiator's air from its air relief cock. Close the by-pass valve. Open the boiler's input-output valves. The hot water has to come to the radiator from the upper side.
The fan is running but the demanded temperature cannot be achieving or achieving too late	The fan's electrical connection could be wrong. The fan clack could be jammed. The boiler's smoke pipes could be filled. The ash tank could be filled. The pump flow rate could be too much.	Check the fan's electrical connection. Check the fan clack. Clean the boiler's smoke pipes. Empty the ash tank. Use the appropriate pump having convenient flow rate to the installation. (Since the big pump according to the installation will make fast circulation, the heat transfer will be difficult.)
Difficulty in firing Excessive fuel consumption Insufficient heating	Moist, dusty or low quality fuel Insufficient air Improper chimney absorption Wrong dimmer (the air speed control switch) adjustment Insufficient isolation	Change the fuel Check the fan running and chimney absorption Arrange the chimney wideness to the boiler Check the dimmer (the air speed control switch) adjustment Complete the installation and residence isolation.
Excessive being tar in the boiler	Insufficient chimney absorption Bad fuel The boiler is running at low temperature The air speed control switch is turned down.	Check the chimney absorption Change the fuel Rise up the boiler's degree (It is normal that being tar while the boiler is running at 40-45 degree) Bring the air speed control switch to the final speed.
Unburned fuel is left.	Automatic temperature control degree (the pump thermostat degree) is high The outer environment temperature is at above the seasonal norm.	Adjust the pump thermostat to the 30 or lower. For burning the unburned fuel, load over it by not taking and not touching any ash, you can do this process until remaining any available space for the coal or ignition is too difficult. You can take the boiler's ash once or twice a week.

AUTOMATIC FEEDING BOILERS CAUTIONS AND PROBLEMS THAT MAY OCCUR AND SOLUTIONS

TROUBLE	CAUSE	SOLUTION
Combustion with troubles, kick of the flames on the loading cover	Combustion with insufficient air, insuufficient flue gass pull.	It is necessary to provide a new chimney that is appropriate to need and the system itself. Please, consult operation manual for the details about the chimney.
Extinguish of the fire Soot in the flue	Insufficient air or use of non-qualified fuel	Make sure that the fan damper blade operates at correct adjusment. Ventilate if the boiler is a non-ventilated closes environment. Do not use fuel other than those specified in the operation manuel.
No sleep of fire Vapor block	There is air in the boiler.	Make sure that the fan damper blade and sootcoal and closed. Check if there is air leak from the lower pedestal of the boiler.
No heating Excessive fuel consuption	Insufficient isolation Insufficient capasity	Heat isolaton of the erea should be developed. The fuel used should be changed. The heat requirement of the house should be checked. And the boiler should be changed if required.

TECHNICAL DATA

MODEL	KAPASİTE (kcal/h)	KAZAN GENİŞLİĞİ(mm) G	kazan ve silo	DERİNLİK(mm) L	YÜKSEKLİK(mm) H	İŞLETME /TEST BASINCI (bar)	BACA ÇAPI (mm)	KAZAN GİDİŞ /DÖNÜŞ(")	EMNİYET GİDİŞ/DÖNÜŞ(")	SU HACMİ(lt.)
EKY-25	25.000	510	-------	770	1290	3/6	130	1"/1"	3/4"	62
EKY-35	35.000	670	-------	770	1350	3/6	130	1"/1"	3/4"	80
EKY-45	45.000	670	-------	880	1350	3/6	130	1" 1/4"	3/4"	95
EKY-60	60.000	730	-------	950	1470	3/6	170	1" 1/2"	1"	140
EKY-80	80.000	730	-------	1130	1470	3/6	170	1" 1/2"	1"	180
EKY-100	100.000	730	-------	1500	1640	3/6	170	2"	1"	274
EKY-120	120.000	830	-------	1500	1640	3/6	210	2"	1"	286
EKY-140	140.000	830	-------	1600	1640	3/6	210	2"	1"	336
EKY-160	160.000	730	-------	1600	1920	3/6	270	2"	1"	380
EKY-180	180.000	830	-------	1600	1920	3/6	270	DN65	1" 1/2"	400
EKY-200	200.000	830	-------	1890	1920	3/6	270	DN65	1" 1/2"	460
EKY-250	250.000	940	-------	2050	2030	3/6	270	DN80	1" 1/2"	570
EKY-300	300.000	940	-------	2350	2030	3/6	270	DN80	1" 1/2"	730
EKY-350	350.000	1040	-------	2450	2030	3/6	330	DN80	2"	860
EKY-400	400.000	1140	-------	2600	2030	3/6	330	DN80	2"	925
EKY-450	450.000	1120	-------	2800	2030	3/6	330	DN100	2"	1050
EKY-500	500.000	1240	-------	2800	2030	3/6	350	DN100	2"	1200
EKY-600	600.000	1340	-------	2950	2030	3/6	350	DN125	2"	1380
EKY-700	700.000	1440	-------	3050	2030	3/6	400	DN125	2"	1820
EKY-800	800.000	1540	-------	3150	2030	3/6	400	DN125	2"	2290
EKY-900	900.000	1640	-------	3250	2030	3/6	450	DN125	2"	2860

TECHNICAL DATA

EKY-1000	1.000.000	1740	-------	3350	2030	3/6	450	DN125	2"	3420
EK3G-20	20.000	510	-------	710	1160	3/6	130	1"/1"	3/4"	
EK3G-25	25.000	510	-------	710	1280	3/6	130	1"/1"	3/4"	62
EK3G-35	35.000	670	-------	710	1350	3/6	130	1" 1/4"	3/4"	80
EK3G-45	45.000	670	-------	820	1350	3/6	130	1" 1/2"	1"	95
EK3G-60	60.000	770	-------	950	1470	3/6	170	1" 1/2"	1"	140
EK3G-80	80.000	770	-------	1130	1470	3/6	170	2"	1"	180
EK3G-100	100.000	730	-------	1400	1630	3/6	170	2"	1"	274
EK3G-120	120.000	830	-------	1300	1630	3/6	210	2"	1"	286
EK3G-140	140.000	830	-------	1400	1630	3/6	210	2"	1"	336
EK3G-160	160.000	730	-------	1400	1630	3/6	270	2"	1"	380
EK3G-180	180.000	830	-------	1400	1910	3/6	270	DN65	1" 1/2"	400
EK3G-200	200.000	830	-------	1690	1910	3/6	270	DN65	1" 1/2"	460
EK3G-250	250.000	940	-------	1850	1910	3/6	270	DN80	1" 1/2"	570
EK3G-300	300.000	940	-------	2150	2020	3/6	270	DN80	1" 1/2"	730
EK3G-350	350.000	1040	-------	2250	2020	3/6	330	DN80	2"	860
EK3G-400	400.000	1140	-------	2400	2020	3/6	330	DN80	2"	925
EK3G-450	450.000	1120	-------	2600	2020	3/6	330	DN100	2"	1050
EK3G-500	500.000	1240	-------	2600	2020	3/6	350	DN100	2"	1200
EK3G-600	600.000	1340	-------	2750	2020	3/6	350	DN125	2"	1380
EK3G-700	700.000	1440	-------	2850	2020	3/6	400	DN125	2"	1820
EK3G-800	800.000	1540	-------	2950	2020	3/6	400	DN125	2"	2290
EK3G-900	900.000	1640	-------	3050	2020	3/6	450	DN125	2"	2860
EK3G-1000	1.000.000	1740	-------	3150	2020	3/6	450	DN125	2"	3420
EKYB-50	50.000	610	-------	530	1610	3/6	170	1"	3/4"	95

TECHNICAL DATA

EKYB-110	110.000	710	-------	1130	1740	3/6	170	1" 1/2"	1"	274
EKB/3G-25	25.000	510	-------	710	1280	3/6	130	1"/1"	3/4"	62
EKB/3G-35	35.000	670	-------	710	1350	3/6	130	1"/1"	3/4"	80
EKB/3G-45	45.000	670	-------	820	1350	3/6	130	1" 1/4"	3/4"	95
EKB/3G-60	60.000	770	-------	950	1470	3/6	170	1" 1/2"	1"	140
EKB/3G-80	80.000	770	-------	1130	1470	3/6	170	1" 1/2"	1"	180
EKB/3G-100	100.000	730	-------	1400	1630	3/6	170	2"	1"	274
EKYP-ÇSOA/S-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EKYP-ÇSOA/S-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EKYP-ÇSOA/S-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EKYP-ÇSOA/S-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EKYP-ÇSOA/S-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EKYP-ÇSOA/S-120	120.000	1490	1490	1500	1630	3/6	170	2	1"	274
EKYP-ÇSOA/S-140	140.000	1490	1490	1130	1630	3/6	210	2	1"	286
EKYP-ÇSOA/S-160	160.000	1490	1490	1330	1630	3/6	210	2	1"	336
EKYP-ÇSOA/S-180	180.000	1490	1490	1600	1630	3/6	270	2	1"	380
EKYP-ÇSOA/S-200	200.000	1600	1600	1600	1910	3/6	270	DN65	1" 1/2"	420
EKYP-ÇSOA/S-220	220.000	1600	1600	1890	1910	3/6	270	DN65	1" 1/2"	460
EKYP-ÇSOA/S-270	270.000	1710	1710	2050	1910	3/6	270	DN80	1" 1/2"	570
EKYP-ÇSOA/S-320	320.000	1710	1710	2350	2020	3/6	270	DN80	1" 1/2"	730
EKYP-ÇSOA/S-370	370.000	1810	1810	2450	2020	3/6	330	DN80	2"	860
EKYP-ÇSOA/S-420	420.000	1910	1910	2600	2020	3/6	330	DN80	2"	925
EKYP-ÇSOA/S-470	470.000	1910	1910	2800	2020	3/6	330	DN100	2"	1050
EKYP-ÇSOA/S-520	520.000	2010	2010	2800	2020	3/6	350	DN100	2"	1200
EKYP-ÇSOA/S-620	620.000	2110	2110	2950	2020	3/6	350	DN125	2"	1380

TECHNICAL DATA

EKYP-ÇSOA/S-720	720.000	2440	2440	3050	2020	3/6	400	DN125	2"	1820
EKYP-ÇSOA/S-820	820.000	2540	2540	3150	2020	3/6	400	DN125	2"	2290
EKYP-ÇSOA/S-920	920.000	2640	2640	3150	2020	3/6	450	DN150	2"	2860
EKYP-ÇSOA/S-1020	1.020.000	2640	2640	3250	2020	3/6	450	DN150	2"	3420
EK3G-ÇSBA/S-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EK3G-ÇSBA/S-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EK3G-ÇSBA/S-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EK3G-ÇSBA/S-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EK3G-ÇSBA/S-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EK3G-ÇSBA/S-120	120.000	1490	1490	1500	1630	3/6	170	2	1"	274
EK3G-ÇSBA/S-140	140.000	1490	1490	1130	1630	3/6	210	2	1"	286
EK3G-ÇSBA/S-160	160.000	1490	1490	1330	1630	3/6	210	2	1"	336
EK3G-ÇSBA/S-180	180.000	1490	1490	1600	1630	3/6	270	2	1"	380
EK3G-ÇSBA/S-200	200.000	1600	1600	1600	1910	3/6	270	DN65	1" 1/2"	420
EK3G-ÇSBA/S-220	220.000	1600	1600	1890	1910	3/6	270	DN65	1" 1/2"	460
EK3G-ÇSBA/S-270	270.000	1710	1710	2050	1910	3/6	270	DN80	1" 1/2"	570
EK3G-ÇSBA/S-320	320.000	1710	1710	2350	2020	3/6	270	DN80	1" 1/2"	730
EK3G-ÇSBA/S-370	370.000	1810	1810	2450	2020	3/6	330	DN80	2"	860
EK3G-ÇSBA/S-420	420.000	1910	1910	2600	2020	3/6	330	DN80	2"	925
EK3G-ÇSBA/S-470	470.000	1910	1910	2800	2020	3/6	330	DN100	2"	1050
EK3G-ÇSBA/S-520	520.000	2010	2010	2800	2020	3/6	350	DN100	2"	1200
EK3G-ÇSBA/S-620	620.000	2110	2110	2950	2020	3/6	350	DN125	2"	1380
EK3G-ÇSBA/S-720	720.000	2440	2440	3050	2020	3/6	400	DN125	2"	1820
EK3G-ÇSBA/S-820	820.000	2540	2540	3150	2020	3/6	400	DN125	2"	2290
EK3G-ÇSBA/S-920	920.000	2640	2640	3150	2020	3/6	450	DN150	2"	2860
EK3G-ÇSBA/S-1020	1.020.000	2640	2640	3250	2020	3/6	450	DN150	2"	3420

TECHNICAL DATA

EK3G-BA/S-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EK3G-BA/S-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EK3G-BA/S-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EK3G-BA/S-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EK3G-BA/S-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EK3G-BA/S-120	120.000	1490	1490	1500	1630	3/6	170	2	1"	274
EK3G-BA/S-140	140.000	1490	1490	1130	1630	3/6	210	2	1"	286
EK3G-BA/S-160	160.000	1490	1490	1330	1630	3/6	210	2	1"	336
EK3G-BA/S-180	180.000	1490	1490	1600	1630	3/6	270	2	1"	380
EK3G-BA/S-200	200.000	1600	1600	1600	1910	3/6	270	DN65	1" 1/2"	420
EK3G-BA/S-220	220.000	1600	1600	1890	1910	3/6	270	DN65	1" 1/2"	460
EK3G-BA/S-270	270.000	1710	1710	2050	1910	3/6	270	DN80	1" 1/2"	570
EK3G-BA/S-320	320.000	1710	1710	2350	2020	3/6	270	DN80	1" 1/2"	730
EK3G-BA/S-370	370.000	1810	1810	2450	2020	3/6	330	DN80	2"	860
EK3G-BA/S-420	420.000	1910	1910	2600	2020	3/6	330	DN80	2"	925
EK3G-BA/S-470	470.000	1910	1910	2800	2020	3/6	330	DN100	2"	1050
EK3G-BA/S-520	520.000	2010	2010	2800	2020	3/6	350	DN100	2"	1200
EK3G-BA/S-620	620.000	2110	2110	2950	2020	3/6	350	DN125	2"	1380
EK3G-BA/S-720	720.000	2440	2440	3050	2020	3/6	400	DN125	2"	1820
EK3G-BA/S-820	820.000	2540	2540	3150	2020	3/6	400	DN125	2"	2290
EK3G-BA/S-920	920.000	2640	2640	3150	2020	3/6	450	DN150	2"	2860
EK3G-BA/S-1020	1.020.000	2640	2640	3250	2020	3/6	450	DN150	2"	3420
EK3G-OA/S-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EK3G-OA/S-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EK3G-OA/S-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95

TECHNICAL DATA

EK3G-OA/S-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EK3G-OA/S-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EK3G-OA/S-120	120.000	1490	1490	1500	1630	3/6	170	2	1"	274
EK3G-OA/S-140	140.000	1490	1490	1130	1630	3/6	210	2	1"	286
EK3G-OA/S-160	160.000	1490	1490	1330	1630	3/6	210	2	1"	336
EK3G-OA/S-180	180.000	1490	1490	1600	1630	3/6	270	2	1"	380
EK3G-OA/S-200	200.000	1600	1600	1600	1910	3/6	270	DN65	1" 1/2"	420
EK3G-OA/S-220	220.000	1600	1600	1890	1910	3/6	270	DN65	1" 1/2"	460
EK3G-OA/S-270	270.000	1710	1710	2050	1910	3/6	270	DN80	1" 1/2"	570
EK3G-OA/S-320	320.000	1710	1710	2350	2020	3/6	270	DN80	1" 1/2"	730
EK3G-OA/S-370	370.000	1810	1810	2450	2020	3/6	330	DN80	2"	860
EK3G-OA/S-420	420.000	1910	1910	2600	2020	3/6	330	DN80	2"	925
EK3G-OA/S-470	470.000	1910	1910	2800	2020	3/6	330	DN100	2"	1050
EK3G-OA/S-520	520.000	2010	2010	2800	2020	3/6	350	DN100	2"	1200
EK3G-OA/S-620	620.000	2110	2110	2950	2020	3/6	350	DN125	2"	1380
EK3G-OA/S-720	720.000	2440	2440	3050	2020	3/6	400	DN125	2"	1820
EK3G-OA/S-820	820.000	2540	2540	3150	2020	3/6	400	DN125	2"	2290
EK3G-OA/S-920	920.000	2640	2640	3150	2020	3/6	450	DN150	2"	2860
EK3G-OA/S-1020	1.020.000	2640	2640	3250	2020	3/6	450	DN150	2"	3420
EK3GP-ÇS/S-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EK3GP-ÇS/S-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EK3GP-ÇS/S-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EK3GP-ÇS/S-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EK3GP-ÇS/S-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EK3GP-ÇS/S-120	120.000	1490	1490	1500	1630	3/6	170	2	1"	274
EK3GP-ÇS/S-140	140.000	1490	1490	1130	1630	3/6	210	2	1"	286

TECHNICAL DATA

EK3GP-ÇS/S-160	160.000	1490	1490	1330	1630	3/6	210	2	1"	336
EK3GP-ÇS/S-180	180.000	1490	1490	1600	1630	3/6	270	2	1"	380
EK3GP-ÇS/S-200	200.000	1600	1600	1600	1910	3/6	270	DN65	1" 1/2"	420
EK3GP-ÇS/S-220	220.000	1600	1600	1890	1910	3/6	270	DN65	1" 1/2"	460
EK3GP-ÇS/S-270	270.000	1710	1710	2050	1910	3/6	270	DN80	1" 1/2"	570
EK3GP-ÇS/S-320	320.000	1710	1710	2350	2020	3/6	270	DN80	1" 1/2"	730
EK3GP-ÇS/S-370	370.000	1810	1810	2450	2020	3/6	330	DN80	2"	860
EK3GP-ÇS/S-420	420.000	1910	1910	2600	2020	3/6	330	DN80	2"	925
EK3GP-ÇS/S-470	470.000	1910	1910	2800	2020	3/6	330	DN100	2"	1050
EK3GP-ÇS/S-520	520.000	2010	2010	2800	2020	3/6	350	DN100	2"	1200
EK3GP-ÇS/S-620	620.000	2110	2110	2950	2020	3/6	350	DN125	2"	1380
EK3GP-ÇS/S-720	720.000	2440	2440	3050	2020	3/6	400	DN125	2"	1820
EK3GP-ÇS/S-820	820.000	2540	2540	3150	2020	3/6	400	DN125	2"	2290
EK3GP-ÇS/S-920	920.000	2640	2640	3150	2020	3/6	450	DN150	2"	2860
EK3GP-ÇS/S-1020	1.020.000	2640	2640	3250	2020	3/6	450	DN150	2"	3420
EK3GP-ÇSOA/S-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EK3GP-ÇSOA/S-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EK3GP-ÇSOA/S-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EK3GP-ÇSOA/S-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EK3GP-ÇSOA/S-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EK3GP-ÇSOA/S-120	120.000	1490	1490	1500	1630	3/6	170	2	1"	274
EK3GP-ÇSOA/S-140	140.000	1490	1490	1130	1630	3/6	210	2	1"	286
EK3GP-ÇSOA/S-160	160.000	1490	1490	1330	1630	3/6	210	2	1"	336
EK3GP-ÇSOA/S-180	180.000	1490	1490	1600	1630	3/6	270	2	1"	380
EK3GP-ÇSOA/S-200	200.000	1600	1600	1600	1910	3/6	270	DN65	1" 1/2"	420
EK3GP-ÇSOA/S-220	220.000	1600	1600	1890	1910	3/6	270	DN65	1" 1/2"	460

TECHNICAL DATA

EK3GP-ÇSOA/S-270	270.000	1710	1710	2050	1910	3/6	270	DN80	1" 1/2"	570
EK3GP-ÇSOA/S-320	320.000	1710	1710	2350	2020	3/6	270	DN80	1" 1/2"	730
EK3GP-ÇSOA/S-370	370.000	1810	1810	2450	2020	3/6	330	DN80	2"	860
EK3GP-ÇSOA/S-420	420.000	1910	1910	2600	2020	3/6	330	DN80	2"	925
EK3GP-ÇSOA/S-470	470.000	1910	1910	2800	2020	3/6	330	DN100	2"	1050
EK3GP-ÇSOA/S-520	520.000	2010	2010	2800	2020	3/6	350	DN100	2"	1200
EK3GP-ÇSOA/S-620	620.000	2110	2110	2950	2020	3/6	350	DN125	2"	1380
EK3GP-ÇSOA/S-720	720.000	2440	2440	3050	2020	3/6	400	DN125	2"	1820
EK3GP-ÇSOA/S-820	820.000	2540	2540	3150	2020	3/6	400	DN125	2"	2290
EK3GP-ÇSOA/S-920	920.000	2640	2640	3150	2020	3/6	450	DN150	2"	2860
EK3GP-ÇSOA/S-1020	1.020.000	2640	2640	3250	2020	3/6	450	DN150	2"	3420
EKYP-ÇS/S-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EKYP-ÇS/S-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EKYP-ÇS/S-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EKYP-ÇS/S-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EKYP-ÇS/S-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EKYP-ÇS/S-120	120.000	1490	1490	1500	1630	3/6	170	2	1"	274
EKYP-ÇS/S-140	140.000	1490	1490	1130	1630	3/6	210	2	1"	286
EKYP-ÇS/S-160	160.000	1490	1490	1330	1630	3/6	210	2	1"	336
EKYP-ÇS/S-180	180.000	1490	1490	1600	1630	3/6	270	2	1"	380
EKYP-ÇS/S-200	200.000	1600	1600	1600	1910	3/6	270	DN65	1" 1/2"	420
EKYP-ÇS/S-220	220.000	1600	1600	1890	1910	3/6	270	DN65	1" 1/2"	460
EKYP-ÇS/S-270	270.000	1710	1710	2050	1910	3/6	270	DN80	1" 1/2"	570
EKYP-ÇS/S-320	320.000	1710	1710	2350	2020	3/6	270	DN80	1" 1/2"	730
EKYP-ÇS/S-370	370.000	1810	1810	2450	2020	3/6	330	DN80	2"	860
EKYP-ÇS/S-420	420.000	1910	1910	2600	2020	3/6	330	DN80	2"	925

TECHNICAL DATA

EKY-OA/S-820	820.000	2540	2540	3150	2020	3/6	400	DN125	2"	2290
EKY-OA/S-920	920.000	2640	2640	3150	2020	3/6	450	DN150	2"	2860
EKY-OA/S-1020	1.020.000	2640	2640	3250	2020	3/6	450	DN150	2"	3420
EKY-BA/S-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EKY-BA/S-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EKY-BA/S-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EKY-BA/S-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EKY-BA/S-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EKY-BA/S-120	120.000	1490	1490	1500	1630	3/6	170	2	1"	274
EKY-BA/S-140	140.000	1490	1490	1130	1630	3/6	210	2	1"	286
EKY-BA/S-160	160.000	1490	1490	1330	1630	3/6	210	2	1"	336
EKY-BA/S-180	180.000	1490	1490	1600	1630	3/6	270	2	1"	380
EKY-BA/S-200	200.000	1600	1600	1600	1910	3/6	270	DN65	1" 1/2"	420
EKY-BA/S-220	220.000	1600	1600	1890	1910	3/6	270	DN65	1" 1/2"	460
EKY-BA/S-270	270.000	1710	1710	2050	1910	3/6	270	DN80	1" 1/2"	570
EKY-BA/S-320	320.000	1710	1710	2350	2020	3/6	270	DN80	1" 1/2"	730
EKY-BA/S-370	370.000	1810	1810	2450	2020	3/6	330	DN80	2"	860
EKY-BA/S-420	420.000	1910	1910	2600	2020	3/6	330	DN80	2"	925
EKY-BA/S-470	470.000	1910	1910	2800	2020	3/6	330	DN100	2"	1050
EKY-BA/S-520	520.000	2010	2010	2800	2020	3/6	350	DN100	2"	1200
EKY-BA/S-620	620.000	2110	2110	2950	2020	3/6	350	DN125	2"	1380
EKY-BA/S-720	720.000	2440	2440	3050	2020	3/6	400	DN125	2"	1820
EKY-BA/S-820	820.000	2540	2540	3150	2020	3/6	400	DN125	2"	2290
EKY-BA/S-920	920.000	2640	2640	3150	2020	3/6	450	DN150	2"	2860
EKY-BA/S-1020	1.020.000	2640	2640	3250	2020	3/6	450	DN150	2"	3420

TECHNICAL DATA

EKYP-ÇS/S-470	470.000	1910	1910	2800	2020	3/6	330	DN100	2"	1050
EKYP-ÇS/S-520	520.000	2010	2010	2800	2020	3/6	350	DN100	2"	1200
EKYP-ÇS/S-620	620.000	2110	2110	2950	2020	3/6	350	DN125	2"	1380
EKYP-ÇS/S-720	720.000	2440	2440	3050	2020	3/6	400	DN125	2"	1820
EKYP-ÇS/S-820	820.000	2540	2540	3150	2020	3/6	400	DN125	2"	2290
EKYP-ÇS/S-920	920.000	2640	2640	3150	2020	3/6	450	DN150	2"	2860
EKYP-ÇS/S-1020	1.020.000	2640	2640	3250	2020	3/6	450	DN150	2"	3420
EKY-OA/S-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EKY-OA/S-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EKY-OA/S-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EKY-OA/S-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EKY-OA/S-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EKY-OA/S-120	120.000	1490	1490	1500	1630	3/6	170	2	1"	274
EKY-OA/S-140	140.000	1490	1490	1130	1630	3/6	210	2	1"	286
EKY-OA/S-160	160.000	1490	1490	1330	1630	3/6	210	2	1"	336
EKY-OA/S-180	180.000	1490	1490	1600	1630	3/6	270	2	1"	380
EKY-OA/S-200	200.000	1600	1600	1600	1910	3/6	270	DN65	1" 1/2"	420
EKY-OA/S-220	220.000	1600	1600	1890	1910	3/6	270	DN65	1" 1/2"	460
EKY-OA/S-270	270.000	1710	1710	2050	1910	3/6	270	DN80	1" 1/2"	570
EKY-OA/S-320	320.000	1710	1710	2350	2020	3/6	270	DN80	1" 1/2"	730
EKY-OA/S-370	370.000	1810	1810	2450	2020	3/6	330	DN80	2"	860
EKY-OA/S-420	420.000	1910	1910	2600	2020	3/6	330	DN80	2"	925
EKY-OA/S-470	470.000	1910	1910	2800	2020	3/6	330	DN100	2"	1050
EKY-OA/S-520	520.000	2010	2010	2800	2020	3/6	350	DN100	2"	1200
EKY-OA/S-620	620.000	2110	2110	2950	2020	3/6	350	DN125	2"	1380
EKY-OA/S-720	720.000	2440	2440	3050	2020	3/6	400	DN125	2"	1820

TECHNICAL DATA

EKY-ÇSBA/S-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EKY-ÇSBA/S-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EKY-ÇSBA/S-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EKY-ÇSBA/S-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EKY-ÇSBA/S-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EKY-ÇSBA/S-120	120.000	1490	1490	1500	1630	3/6	170	2	1"	274
EKY-ÇSBA/S-140	140.000	1490	1490	1130	1630	3/6	210	2	1"	286
EKY-ÇSBA/S-160	160.000	1490	1490	1330	1630	3/6	210	2	1"	336
EKY-ÇSBA/S-180	180.000	1490	1490	1600	1630	3/6	270	2	1"	380
EKY-ÇSBA/S-200	200.000	1600	1600	1600	1910	3/6	270	DN65	1" 1/2"	420
EKY-ÇSBA/S-220	220.000	1600	1600	1890	1910	3/6	270	DN65	1" 1/2"	460
EKY-ÇSBA/S-270	270.000	1710	1710	2050	1910	3/6	270	DN80	1" 1/2"	570
EKY-ÇSBA/S-320	320.000	1710	1710	2350	2020	3/6	270	DN80	1" 1/2"	730
EKY-ÇSBA/S-370	370.000	1810	1810	2450	2020	3/6	330	DN80	2"	860
EKY-ÇSBA/S-420	420.000	1910	1910	2600	2020	3/6	330	DN80	2"	925
EKY-ÇSBA/S-470	470.000	1910	1910	2800	2020	3/6	330	DN100	2"	1050
EKY-ÇSBA/S-520	520.000	2010	2010	2800	2020	3/6	350	DN100	2"	1200
EKY-ÇSBA/S-620	620.000	2110	2110	2950	2020	3/6	350	DN125	2"	1380
EKY-ÇSBA/S-720	720.000	2440	2440	3050	2020	3/6	400	DN125	2"	1820
EKY-ÇSBA/S-820	820.000	2540	2540	3150	2020	3/6	400	DN125	2"	2290
EKY-ÇSBA/S-920	920.000	2640	2640	3150	2020	3/6	450	DN150	2"	2860
EKY-ÇSBA/S-1020	1.020.000	2640	2640	3250	2020	3/6	450	DN150	2"	3420
EKY/S-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EKY/S-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EKY/S-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EKY/S-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140

TECHNICAL DATA

EKY/S-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EKY/S-120	120.000	1490	1490	1500	1630	3/6	170	2	1"	274
EKY/S-140	140.000	1490	1490	1130	1630	3/6	210	2	1"	286
EKY/S-160	160.000	1490	1490	1330	1630	3/6	210	2	1"	336
EKY/S-180	180.000	1490	1490	1600	1630	3/6	270	2	1"	380
EKY/S-200	200.000	1600	1600	1600	1910	3/6	270	DN65	1" 1/2"	420
EKY/S-220	220.000	1600	1600	1890	1910	3/6	270	DN65	1" 1/2"	460
EKY/S-270	270.000	1710	1710	2050	1910	3/6	270	DN80	1" 1/2"	570
EKY/S-320	320.000	1710	1710	2350	2020	3/6	270	DN80	1" 1/2"	730
EKY/S-370	370.000	1810	1810	2450	2020	3/6	330	DN80	2"	860
EKY/S-420	420.000	1910	1910	2600	2020	3/6	330	DN80	2"	925
EKY/S-470	470.000	1910	1910	2800	2020	3/6	330	DN100	2"	1050
EKY/S-520	520.000	2010	2010	2800	2020	3/6	350	DN100	2"	1200
EKY/S-620	620.000	2110	2110	2950	2020	3/6	350	DN125	2"	1380
EKY/S-720	720.000	2440	2440	3050	2020	3/6	400	DN125	2"	1820
EKY/S-820	820.000	2540	2540	3150	2020	3/6	400	DN125	2"	2290
EKY/S-920	920.000	2640	2640	3150	2020	3/6	450	DN150	2"	2860
EKY/S-1020	1.020.000	2640	2640	3250	2020	3/6	450	DN150	2"	3420
EK3G/S-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EK3G/S-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EK3G/S-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EK3G/S-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EK3G/S-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EK3G/S-120	120.000	1490	1490	1500	1630	3/6	170	2	1"	274
EK3G/S-140	140.000	1490	1490	1130	1630	3/6	210	2	1"	286
EK3G/S-160	160.000	1490	1490	1330	1630	3/6	210	2	1"	336

TECHNICAL DATA

EK3G/S-180	180.000	1490	1490	1600	1630	3/6	270	2	1"	380
EK3G/S-200	200.000	1600	1600	1600	1910	3/6	270	DN65	1" 1/2"	420
EK3G/S-220	220.000	1600	1600	1890	1910	3/6	270	DN65	1" 1/2"	460
EK3G/S-270	270.000	1710	1710	2050	1910	3/6	270	DN80	1" 1/2"	570
EK3G/S-320	320.000	1710	1710	2350	2020	3/6	270	DN80	1" 1/2"	730
EK3G/S-370	370.000	1810	1810	2450	2020	3/6	330	DN80	2"	860
EK3G/S-420	420.000	1910	1910	2600	2020	3/6	330	DN80	2"	925
EK3G/S-470	470.000	1910	1910	2800	2020	3/6	330	DN100	2"	1050
EK3G/S-520	520.000	2010	2010	2800	2020	3/6	350	DN100	2"	1200
EK3G/S-620	620.000	2110	2110	2950	2020	3/6	350	DN125	2"	1380
EK3G/S-720	720.000	2440	2440	3050	2020	3/6	400	DN125	2"	1820
EK3G/S-820	820.000	2540	2540	3150	2020	3/6	400	DN125	2"	2290
EK3G/S-920	920.000	2640	2640	3150	2020	3/6	450	DN150	2"	2860
EK3G/S-1020	1.020.000	2640	2640	3250	2020	3/6	450	DN150	2"	3420
EKY-OAKB/S-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EKY-OAKB/S-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EKY-OAKB/S-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EKY-OAKB/S-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EKY-OAKB/S-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EK3G-OAKB/S-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EK3G-OAKB/S-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EK3G-OAKB/S-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EK3G-OAKB/S-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EK3G-OAKB/S-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EKY/S-KB-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62

TECHNICAL DATA

EKY/S-KB-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EKY/S-KB-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EKY/S-KB-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EKY/S-KB-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180
EK3G/S-KB-30	30.000	990	990	770	1280	3/6	130	1"	3/4"	62
EK3G/S-KB-40	40.000	1210	1210	770	1350	3/6	130	1"	3/4"	80
EK3G/S-KB-50	50.000	1210	1210	880	1350	3/6	130	1 1/4"	3/4"	95
EK3G/S-KB-70	70.000	1360	1360	950	1470	3/6	170	1 1/2"	1"	140
EK3G/S-KB-100	100.000	1360	1360	1130	1470	3/6	170	1 1/2"	1"	180

BOILER WEIGHTS

MANUEL BOILER CAPACITY/TYPE	KG.	AUTO LODING BOILER CAPACITY/TYPE	KG.
20.000 / 3 pass manuel loading	160	30.000/ 3 pass	240
25.000 / 3 pass manuel loading	200	40.000/ 3 pass	340
25.000 / 4 pass manuel loading	200	50.000/ 3 pass	360
35.000 / 3 pass manuel loading	260	50.000/ 4 pass	380
45.000 / 3 pass manuel loading	360	70.000/ 3 pass	500
60.000 / 3 pass manuel loading	440	70.000/ 4 pass	520
60.000 / 4 pass manuel loading	440	100.000/ 3 pass	570
80.000 / 3 pass manuel loading	500	100.000/ 4 pass	580
80.000 / 4 pass manuel loading	520	120.000/ 3 pass	700
100.000 / 3 pass manuel loading	620	140.000/ 3 pass	800
120.000 / 3 pass manuel loading	760	160.000/ 3 pass	900
140.000 / 3 pass manuel loading	930	180.000/ 3 pass	1100
140.000 / 4 pass manuel loading	940	200.000/ 3 pass	1200
160.000 / 3 pass manuel loading	1000	220.000/ 3 pass	1300
180.000 / 3 pass manuel loading	1080	270.000/ 3 pass	1600
200.000 / 3 pass manuel loading	1350	320.000/ 3 pass	2100
250.000 / 3 pass manuel loading	1650	370.000/ 3 pass	2500
300.000 / 3 pass manuel loading	2000	420.000/ 3 pass	2800
350.000 / 3 pass manuel loading	2500	470.000/ 3 pass	3100
400.000 / 3 pass manuel loading	2800	520.000/ 3 pass	3400
450.000 / 3 pass manuel loading	3100	620.000/ 3 pass	3700
500.000 / 3 pass manuel loading	3300	720.000/ 3 pass	4100
600.000 / 3 pass manuel loading	3700	820.000/ 3 pass	4500
700.000 / 3 pass manuel loading	4000	920.000/ 3 pass	4900
800.000 / 3 pass manuel loading	4400	1.020.000/ 3 pass	5200
900.000 / 3 pass manuel loading	4700		
1.000.000 / 3 pass manuel loading	5000		

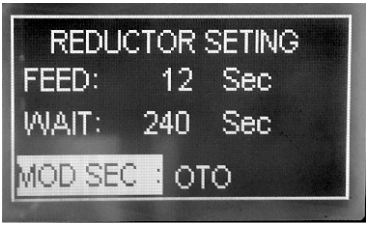
AUTO FEED SOLİD FVEL HOT WATER BILER PANEL GUIDE

MAIN MENU

TEMP. SET: The display – shown above – is the main screen of control board (PCB). When you push “menu” buton Temprature Set fuction is activated. By the help of the up and down buttons you can arrange the temorature between 35 and 90 celcius degrees. The boiler works until it reaches the arranged temprature. When it reaches the arranged temp it stands by, itself. If the water temp decreases 3 degrees according to arranged temp the boiler starts to work by itself. For saving the changes, it should be pushed the menu buton after settings. If you do not push menu button, the control card does not save your changes.

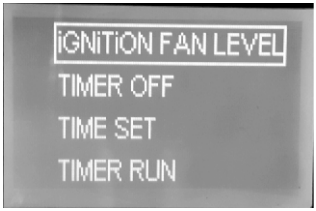
FAN: For setting the fan speed, ıt shoul be pushed the menu button 2 times. By the help of up and down button, you can arrange the fan speed from 1 to 6 speeds. Firstly,the fan starts to work with max speed for 5 seconds , then the speed goes on with the arranged speed. For saving the changes, it should be pushed the menu buton after settings. If you do not push menu button, the control card does not save your changes.

PUMP: For setting the circulation pump, ıt shoul be pushed the menu button 3 times. By the help of up and down button, you can arrange the circulation pump working temp between 35-70 celcius degrees. When water temp reaches the arranged temp, the pump starts to work automaticly. When the water temp decrease 1 celcius lower then the arranged temp, it stops by itself. For saving the changes, it should be pushed the menu buton after settings. If you do not push menu button, the control card does not save your changes.



RDK(REDUCER): For setting the reducer/feeding, ıt shoul be pushed the menu button 4 times. Then the parameters will be shown on the screen automaticly. With up and down buttons you can set the feding duration as seconds (max 60 seconds).auto feding will be done according to your setting. When you push the menu button, your settings are saved at the same time the cursor comes to stand by setting. You can arrange the stand by durationby up and down button (from 10 to 600 seconds. When you push the menu button, your changes are saved and at the same time the cursor comes to MOD SEC. Here, you can set the feding AUTO or MANUAL, if you chose MANUAL your settings will be unvalid. Your settings are valid only with AUTO function. For saving the changes, push the menu button. The TIMER screen is shown after pushing the menu button.

MANUAL FEEDING: When you push the button above, until you release the button, reducer feeds the boiler.



TIMER: You can set the start-stop timing 5 different times in 24 hours. For this feature there is a TIMER fuction in control card. When you push the menu button 8 times for TIMER menu. There are 4 fuctions on the screen. Up and down button helps you to select the function. When you activated Time programming fuction, you see the screen above.

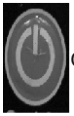
. You can trasition between functions by pushing the P1 button. Menu Z.OPEN is start time. Enter the time period here. Push MENU buton to reach the menu Z.CLOSE than enter the close time here. Push the MENU buton and set the TEMP SET degree. This menu is program time, boiler heat set degree. When the timer activated is the heat set in that menu and boiler works according to heat degree entered in this menu. The program time set until here is the first program time. If you want you set the different time program as second time program. Push the manuel supply buton, P2 sign comes to the screen.
You can make the same operations by using different time periods. You can set five different time programs until the P5. Push the ON_OFF buton after you set the time for back to previous menu and push the MENU button when the sign on the TİME START . Boiler is going to start automatically at the set time. Except the set times boiler stands by. Stand by screen is like down below.

SAFETY MEASURES

SENSOR FAULT: If the sencor becomes out of order, the sensor fault sign appears on the screen.
ABNORMAL TEMPRATURE: I f the boiler temprature increases over 90 celcius degrees, the abnormal temprature sign appears on the screen
RUN OUT OF FUEL: After reaching the programmed temp, if the boiler's temprature decresases under 21 celcius degrees, run out of fuel sign appears on the screen
FREEZING PROTECTION: If the water temprature decreases lower then 5 celcius degrees, in any position of boiler, the circulation pump Works for protecting the boiler from freezing.

BUTTON TASKS

MENU: This button provides you to pass the other function and saves the changes,



ON/OFF: This button shuts down the system

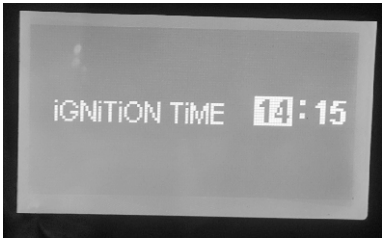
MANUAL FEEDING: This button provides you to feed the boiler manually,

DOWN BUTTON: Decreases the values 1

UP BUTTON: Increase the values 1

When timer activated only ON_OFF button works on the remote panel buttons, only that button exit the timer and go back to the main screen. But timer still activated at the bacside. In the case of power cut than electricity come again, if there is a set program in the PROGRAM menu the timer will activate automatically and boiler will work according to this program. If you want to cancel the timer you have to push UP and DOWN buttons at the same time. Go to the timer menu and g oto DELETE ALL . Push the MENU button to get YES or NO options by using up and down arrows and push MENU button. If you choose YES wait for the COMPLETED. Than push the ON_OFF button to get main screen. To being sure, get the timer menu again and start TİME then it sholud not start. You can turn the main screen by push ON_OFF button.

TIME SET: Enter the timer menu by pushing the real time watch setting button of the boiler remote board. The last tab of is menu is WATCH option menu. When you push the menu button watch options will come to the screen.Set the time by using up and down buttons. Push the menu button then set the minutes part. After the time set options ends push the ON_OFF buttons until the main screen or wait for a minutes main screen automatically will come. Although the power cuts for a long time, the time function of the device never delete.



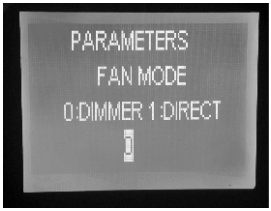
NOT: You can enter the timer menu by pushing UP and DOWN buttons at the sam time.

PARAMETER MENU

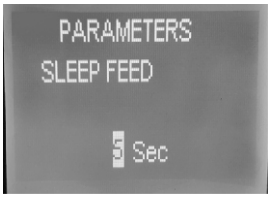

Turn of the device. first push and hold the button ON_OFF than push the MENU button without don't move your finger on ON_OFF button. Pameters screen is going to open.

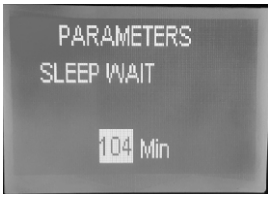
. Language Settings: Languages choosing screen opens first. You may enter the number of the language which one you want to choose.

. Fan Mode: if you push the MENU button again you can open the FAN MENU. If you choose DIRECT 1 in this menu, fan speed setting will cancelled therefore fan continuesly work at the same speed. If you choose DIMMER 0, fan speed can be controllable than you can change the fan speed setting in the main menu.



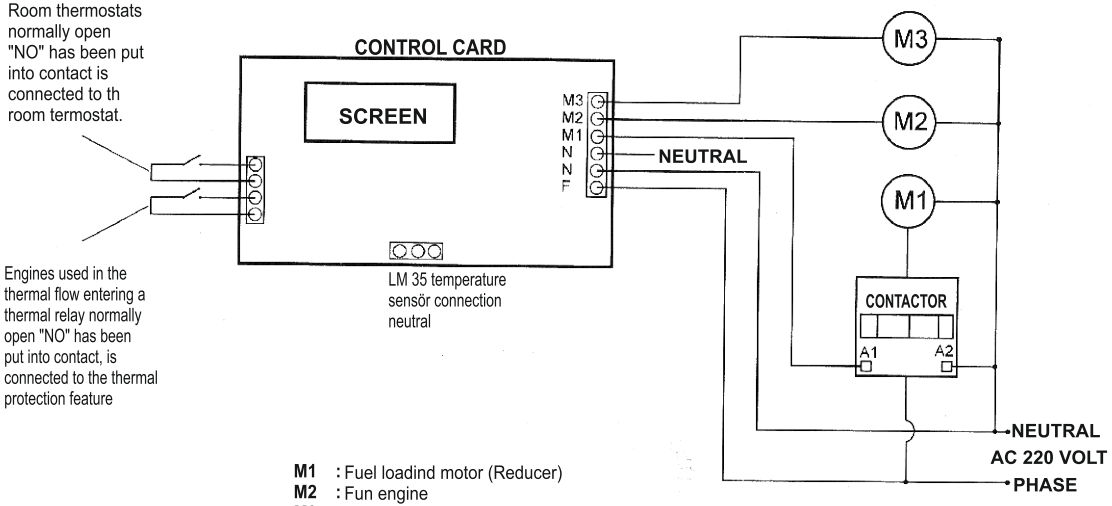
FEEDING AT STAND BY:If you push the MENU button after open the FAN MODE menu, SUPPLY ON STAND BY MENU is going to open. This menu use to prevent stocker from burning backward. In this menu reductor works and take coal to the inside until the time you enter to the screen ends.





STAND BY: Push the MENU button after the stand by time set, stand by mode is going to open. This menu shows the supply period time in the heating boiler.For example,if you enter the normal supply time is 7 seconds, stand by supply time is 20 minutes, the heating boiler will doing7 seconds supply in every 20 minutes.

Boiler Control Card Connection Diagram



M1 : Fuel loadind motor (Reducer)
M2 : Fun engine
M3 : Circulation pump
NOT : Directly 220 volt power pole to the maximum 300 watt engine commander card can be user on the relays. 300 watt is greater than or 380 watt used engine contactor addition of star from the sky is needed.

MANUEL BOILER PANEL GUIDE

. When you see OFF like the picture it shows that the heating boiler turned off.

When you push the red button/OFF button around 2 seconds heating boiler will be turn on. The heat on the secreen is the heat of the boiler at present.


. If you push the MENU button when the heating boiler is turned on, you may see Pr on screen. It means that heat settings menu. You can increase or decrease the temperature values by using arrow buttons you want to set.

If you push the MENU button twice when the heating boiler is turned on, you may see Fn on screen. This is the fan settings menu. You can change the values 1 to 6 by using arrow buttons which value you want to set.

. Whwn you push the down arrow button around 10 seconds P_ _ menu will open. In this menu value P choose by using aroow buttons between 35 and 65. This value shows us that what temperature level pump will be active.

SAFETY MEASURES and WARNİNGS

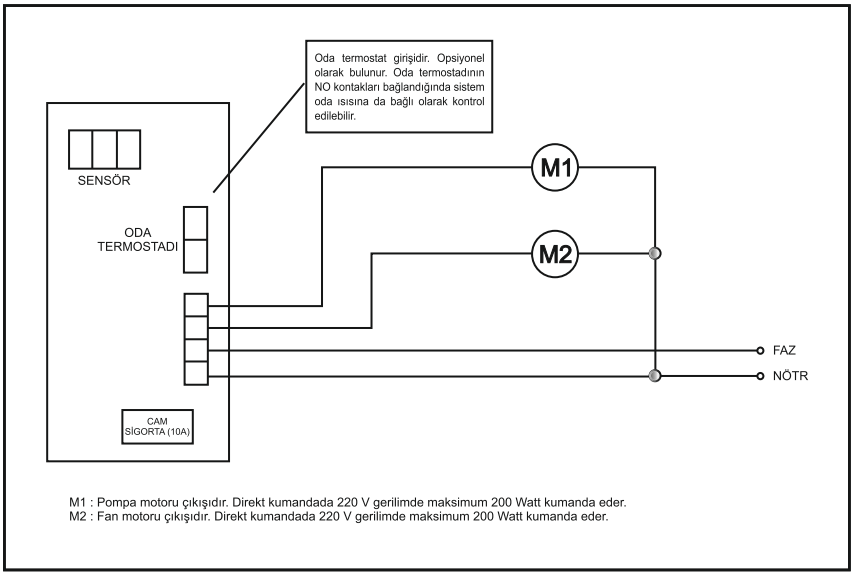
When there is a extraordinary increase about calculated heat value, system start the circulation pump engine by turn off the fan and give an voice alert then a sign on screen like in the scheme

When there is a problem about heat system calculator, system give an mistake code and voice alert then start the circulation pump by turn off the fan.

Fuel - Out Warning: System does not give an fuel-out warning without calculate the pump set value at least one time after the heating boiler open. Boiler give an YBT(fuel-out) warning when it see the calculated Fuel-Out set value.

Fuel-Out Set Value Option Menu: When you push and hold FAN DOWN buton for ten seconds there will be Y and SET value on screen like a pictur down below, it can be change by using FAN DOWN and FAN UP buttons. When you stop holding buttons , set value will be recorded automatically and screen return to the normal menu. When calculated heat increase over the set value and decrease down set fuel-out value , system give an warning like upside picture.

DİJİTAL KUMANDA KARTI BAĞLANTI ŞEMASI



M1 : Pompa motoru çıkışıdır. Direkt kumandada 220 V gerilimde maksimum 200 Watt kumanda eder.
M2 : Fan motoru çıkışıdır. Direkt kumandada 220 V gerilimde maksimum 200 Watt kumanda eder.