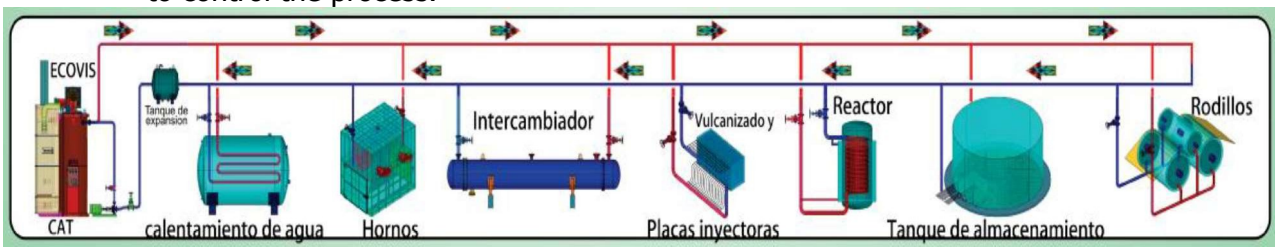
ECOVIS THERMAL OIL HEATERS, are the best option to supply thermal energy at High temperatures, with low pressure and high energy transmission rate.

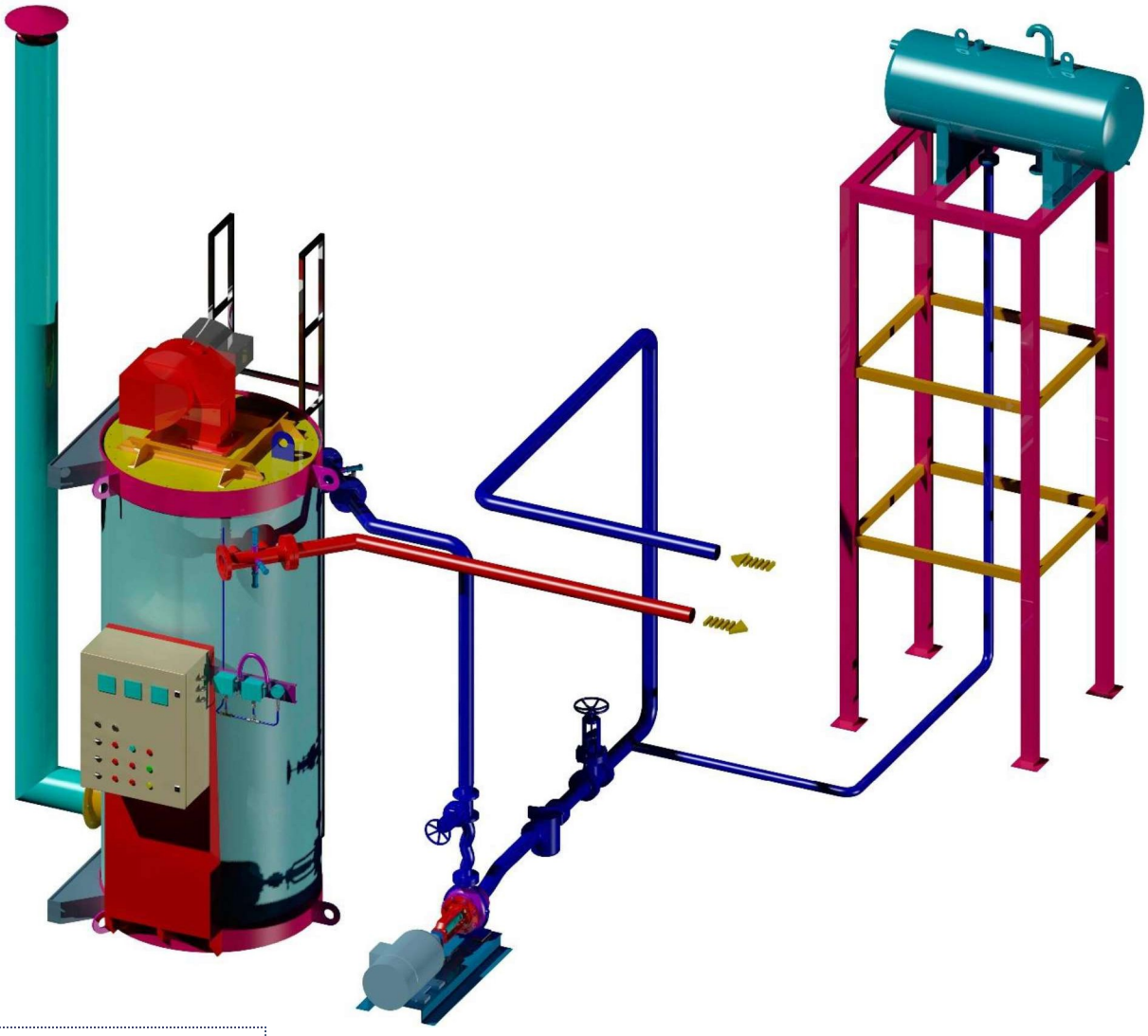
ECOVIS CAT – Oil Heater Series, Works efficiently between 160° a 350°C.

- Total Temperature Control. CAT heater can control temperature of the oil with 1°C variation, and this is perfect to control the process.



- Low heat loss during the course of the hot oil through the system.

- Its counterflow design increases the heat transfer of the flue gases. The return oil, the coldest part comes into contact with the flue gas outlet just before the chimney. The indoor coil carries the oil back to the system, and this coil in contact with the flame. This results in lower fuel consumption.
- Coils are helicals in order to reduce oil use in the system.
- It can be made in Vertically or Horizontally, in accordance to client needs.



The Boiler burner is the prestigious European Brand LIMPSFIELD (England), a burner of last generation that meets all European standards as well as Mexican standards (NOM-085-ECOL-1994 and NOM-002-ENER-1995).

LIMPSFIELD burner, combustion may operate with about 3% excess oxygen, this is a very important point for fuel savings

The control panel includes indicators inlet and outlet water temperature, temperature of flue gases, switches for boot pumps and burner. The Equipment has protection systems for both lack of pressure in the circulation system as excess pressure, and an extra temperature control emergency programmed to cut off power of the burner in case of failure of the control (pyrometer) starting and stopping.

The CAS boiler is package type, comes fully assembled from the factory, and its operation is fully automatic. Once the maximum temperature and the minimum stop-start the selected temperature control, the boiler remains in the established range.

OPTIONAL

To increase the efficiency of the CAS, it is usual to use an energy-saving system CATUB, TUBULAR HEATER AIR, which, uses the heat of the flue gases leaving the heater to about 170 ° C (depending on operating temperature water), and they were removed from their energy content, leaving up to 100 ° C. This energy is used to preheat the air before it enters the burner, increasing the team's efficiency by 5-6%

Vertical Type double concentric helical coil, three-steps, fully automatic type package with all accessories, complete and ready to work. Its exterior finish finished sheet of heat-resistant steel and is insulated with mineral wool and fire bricks.

DATA

Manufacturer:	ECOVIS
Model:	CAT-V90 G
Type:	Vertical
Number of Coils:	2 coils
Gases Steps:	3 steps
Working Pressure:	5.0 kg/cm²
Desing Pressure:	8.0 kg/cm²
Hydrostatic Test Pressure:	10.4 kg/cm²
Max. Working Temperature:	350°C
Desing Temperature:	330°C
Fuel / Heat Power of Fuel:	NATURAL GAS / 9,500 Kcal/m3

DATA

Heating Surface:	35 m2
Outlet Thermal capacity:	765,000 kcal/hr
Eficiency	89%
Inlet Fuel Thermal requeriment	859,550 kcal/hr
Burner	LIMPSFIELD, with heating capacity 500,000 a 900,000 kcal/hr

MATERIALS & DIMENSIONS

Shell Body Material	ASTM SA-36
Tubing material	ASTM A-106 B
Insulation:	Mineral wool 2" thks, covered with Pintro steel cover
Chimney diam.	0.356 m (14")
Empty weight	4.75 tons
Oil capacity	444 Lt
Inlet /Outlet nozzle diam (OIL):	DN80 (3 in)
Diameter:	1.82 m
High, including burner:	3.98 m

1.- GAS FUEL BURNER:

The heater burner is of the latest generation, made in England and therefore complies with all European standards, as well as Mexican standards and norms (NOM-085-ECOL-1994 and NOM-002- ENER-1995).

Model	LIMPSFIELD capacity 500,000 to 900,000 kcal/hr
Fan body.	Monoblock design, fan integrated at burner
Fuel	GAS NATURAL
Accesories	Control de flama
Valve Train	Gas natural.

The heater is be equipped with gas burner High efficiency that can operate with Natural Gas. Monoblock type with ignition control system, integrated control and security, which allows control of the fuel / air ratio, varying in luxury air and gas, depending on the pressure. Complete train for gas inlet is included to control fuel supply and shut-off valves.

Explosion protection in the combustion chamber according to the following: constant monitoring of the flame through an electronic sensor type UV flame, sweeping the flue gas overpressure relief gates of the combustion chamber, valves instant closure in case of failure of flame or unmet demand, installed in the fuel supply and control of combustion air pressure, checks the correct operation of the fan. It includes two differential pressure switches for high pressure furnace (alarm and trip).

Following components are included:

- Body burner with internal access cover for easy maintenance
- Eye hole.
- Cables, electrodes and ignition transformer.
- Air Interruptor.
- Mixing system with retention of flame nozzle and diffuser disc.
- Mounting frame and insulation board.
- Short Barrel Combustion Head.
- Control valves sealing included.
- Pilot Valve.
- Flame control Mini Mk8
- UV photocell for flame detection.
- Solenoid valves for Gas

2.- OIL HEATER ACCESORIES:

Honeywell Presuretrol L404A1388	Cutting low oil pressure
Honeywell Presuretrol L404A1388	Cutting high oil pressure

	Pressure Gauge 2" diam
	Termometer 3" diam.
	Oil Inlet
	Oil Inlet
Thermocouples type "J" for pyrometers 2 room	2 pieces
Thermowells for pyrometers	2 pieces

Control Box:

Flame Control	Mini Mk8
Starter (contactor and bimetallic relay)	SIEMENS
Fan	

Digital Temperature Control, principal and auxiliar controller.

Switches:

- General current
- On/Off Burner.
- On/Select/Off for hot water pump

3.- GAS FEEDING SECURITY TRAIN

It includes:

- Valves with SSOV actuators for slow and quick opening.
- Gas metering Valve
- 2 plug valves.
- 1 Protection switch for high pressure gas.

4.- EXPANSION TANK:

The expansion tank is calculated to occupy 3 times the volume of expansion of the oil. The lower part (1/3) marks the normal level of the oil in the system, when it is cold. The middle part (2/3) contains the oil expansion volume at operating temperature, and the top part (3/3) is free to contain oil expansion in excess, and it is connected to the Horizontal Spill-Over Tank.

3/16", Manufactured in Carbon Steel plate A-36, in accordance to ASME Code Secc.1 (not stamped). Tank structure is painted with non-corrosive black paint.
Volume: 666 Lt. Diam: 700 mm x 1900 mm length.

5.- EXHAUST GASES CHIMNEY:

Manufactured in galvanized sheet cal.14 with cap.

Diam:	0.355 m (14")
High:	6.00 m

With top cover made with cal.14 steel, and thermometer for flue gas.

6.- PUMP FOR THERMAL OIL (2 PARTS):

Thermal oil pump without mechanical seal coupled to motor with base and coupling, this pump isspecially designed to work with thermal oil at a maximum temperature of 300°C, the seal is made by means of self-lubricated Viton seals with the same thermal oil.

Brand:	SIHI	
Type:	Horizontal Centrifuge	
Model:	ZNTD080160	
Motor:	25 H.P.	
Electrical Consumption:	Burner fan 220V/60 Cycles	2.23 kW/h
	Oil pump motor:	18.65 kW/h

www.ecovismexico.com

ECOTRANS 280

ACEITE TERMICO PARA TRANSFERENCIA DE CALOR

FICHA TÉCNICA

DESCRIPCIÓN:

ECOTRANS 280 es un fluido para transferencia de calor form
comprende a básicos vírgenes hidrocraqueados con alto grad
de alta tecnología que le proporcionan una alta eficienc
transferencia de calor.

Diseñado para trabajar en sistemas industriales que requie
indirecta con temperaturas de trabajo del orden de los 3
temperatura del calentador.

CARACTERISTICAS PRINCIPALES:

- ✓ Temperatura máxima de Trabajo, 320°C.
- ✓ Alta estabilidad térmica.
- ✓ Excelente conductividad térmica.
- ✓ Baja tendencia a la evaporación
- ✓ Baja Presión de vapor a temperaturas de trabajo.
- ✓ Viscosidad adecuada al arranque y durante la opera
- ✓ Baja tendencia a la carbonización y al enlodamiento

PROPIEDADES TIPICAS:

	ECOTRANS 280
PROPIEDADES FISICOQUIMICAS	**N**
Apariencia	V
Color ASTM	D
Viscosidad 40°C, cSt	D
Viscosidad 100°C, cSt	D
Punto de fluidez, °C	D
Punto de flama, °C	D
Punto de fuego, °C	D
Gravedad especifica 15.6°C	D
Numero acido total, mgKOH / g	D

APLICACIONES: ECOTRANS 280 es un fluido para transfere
utilizado en sistemas industriales cerrados de circulación fo
son:

- ✓ *Hornos o túneles de secado (radiadores)*
- ✓ *Calentamiento de tanques de materias primas prensas*
- ✓ *Calentamiento de tinas de freído*
- ✓ *Calentamiento de Reactores (serpentín) dryer)*
- ✓ *Generadores de vapor indirecto*

HEAT STEEL DE MÉXICO S.A.
San Ramón #130, Col. Valle de la Miseri
Jalisco, México, C.P. 45
Tels: (33) 3692 5885, (33) 4
www.vimalub.com

www.ecovismexico.com

ECOTRANS 280

ACEITE TERMICO PARA TRANSFERENCIA DE CALO

FICHA TÉCNICA

RECOMENDACIONES:

Para sistemas que operen a muy altas temperaturas, se
nitrógeno (gas inerte). No se deben mezclar con fluidos ya
menor desempeño. No usar en sistemas estáticos y abierto

SEGURIDAD E HIGIENE

No tire el aceite usado a la alcantarilla o al drenaje. Dis
estatales y/o federales vigentes. Utilice los servicios de er
residuos peligrosos. Este producto es inofensivo si se utiliza b
a cabo unas adecuadas prácticas de Seguridad e Higiene. Si
de su manejo, consulte la Hoja de Seguridad o llame al Depa

HEAT STEEL DE MÉXICO S.A
San Ramón #130, Col. Valle de la Miseri
Jalisco, México, C.P. 4
Tels: (33) 3692 5885, (33) 4
www.vimalub.com