

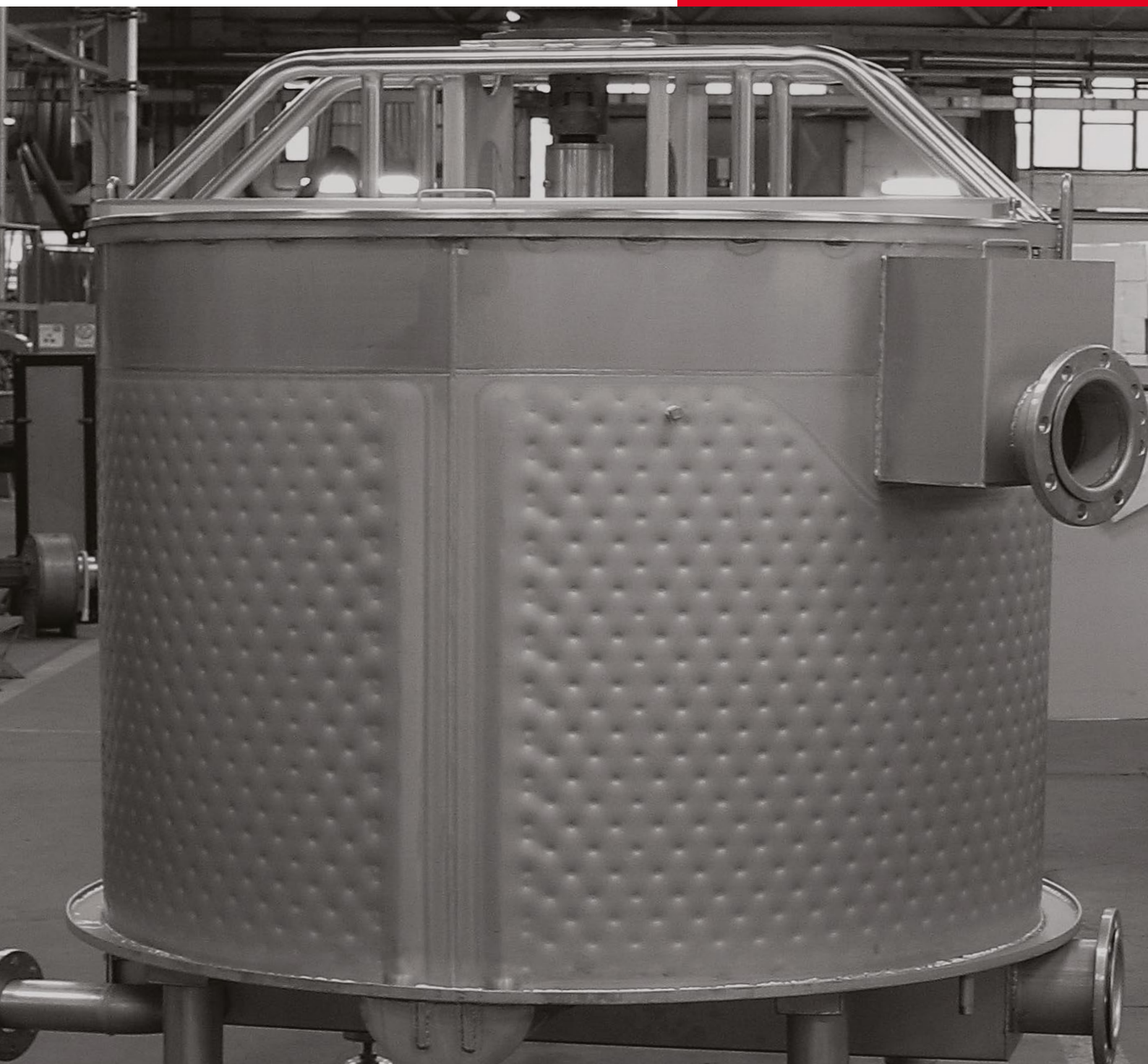


HEAT
EXCHANGE
MASTERY

MADE IN ITALY SINCE 1951 ● ○ ●

THERMX

heat recovery system
from dirty wastewater



FIC S.p.A. – Industrial Division

THERMX

Lots of industrial and civil activities produce dirty liquid effluents with an energy content that, despite their not high temperature level, can be recovered when using the proper heat-exchanger.

FIC ThermX is a well proven solution for this application it is a pillow-plate based heat exchanger that combines the advantages of the pillow plates with a self-cleaning technology.

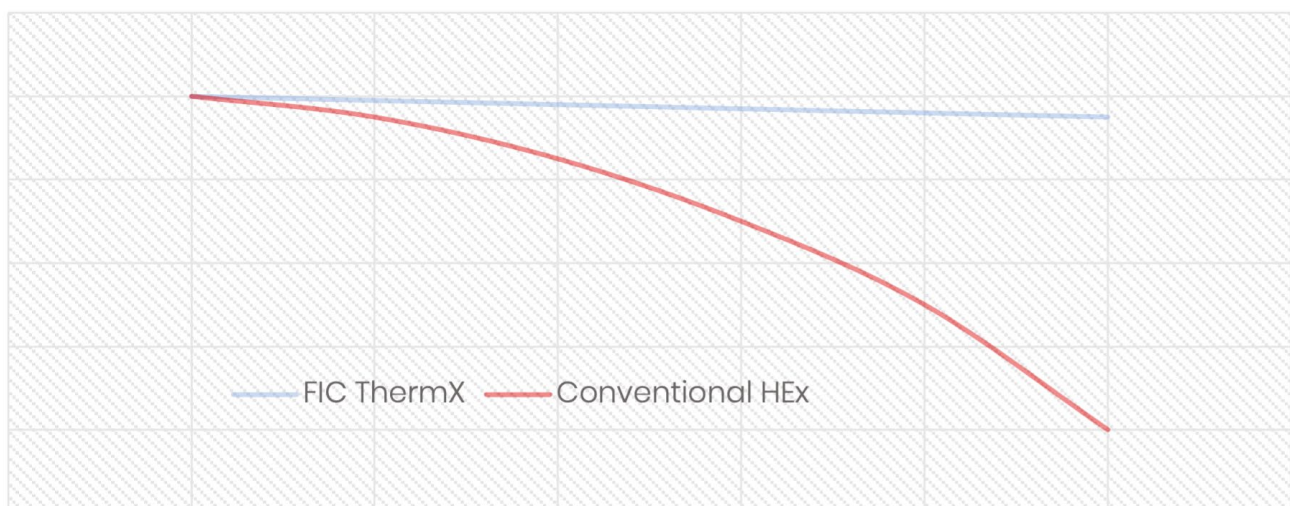
It consists of several pillow-plate rings, assembled according to a concentric lay-out and against whose surfaces a brush system rotates continuously. A dirty and warm effluent flows between the rings whereas a clean and colder fluid is pumped into each ring. The brushes with their rotating movement have a double beneficial effect: they keep cleaned the heat-transfer surface thus avoiding any massive fouling and they contribute to create high turbulence at the external side of the rings. These two aspects determine a very good heat-transfer ratio, that is of course enhanced by the natural high efficiency of heat-transfer of the pillow-plate in their internal side.

■ MAIN FEATURES

The reason why ThermX can run efficiently even with very dirty effluents is simply explained: with the conventional heat-exchangers, there is soon a dramatic decrease of the performances, due to fouling, so cleaning and maintenance are requested. The ThermX does not require such

THERMX VS CONVENTIONAL HEX HEAT-TRANSFER EFFICIENCY WITH DIRTY EFFLUENTS

Efficiency



Time

- ThermX are available in several models and they can also be customised according to the specific customer needs so they can be used for a wide range of process conditions in terms of flow rate of the effluent to be treated and temperatures profiles. Each ThermX can be furthermore adapted to the specific customer request in terms of position of the connections, diameter and height of the equipment, so to facilitate the installation and to have a smoother operation of the equipment.

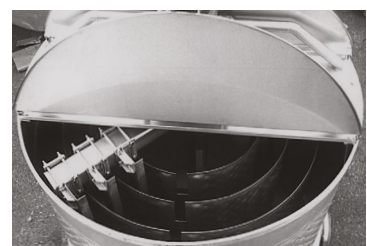


APPLICATION FIELDS

ThermX can be always used when warm and dirt effluents (containing e.g.: fibers, oil, grease, suspended solids and lots more) must be processed, for both civil installations - like swimming pools, wellness centers, hospitals, public bath - and for industrial applications that can be in the food industry, vegetable processing, slaughterhouses, textile, chemical, pulp, paper, tannery, dairy and lots more. They can also be used in heat-pump applications, so the otherwise wasted heat is recovered and is used to produce warmer water.



ThermX - Brush



- ThermX are made of stainless steel, normally AISI 316L but can also be of more corrosion resistant materials, like e.g. duplex or superduplex. FIC ThermX can operate in a wide range of conditions, referring to the waste effluent in fact they can handle flow rates from a few m^3/h to $100 \text{ m}^3/\text{h}$, having temperatures from 5-6 degC up to 30-35 degC. In this way the heat recovered goes from 100 kW to 1000 kW. When the temperature of the effluent is low, the typical application is using brine as clean fluid and to install the system in a heat-pump loop.



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FIC S.p.A.

Via Trivulzia, 54 | Mese (SO)
Italy

Tel. +39 0343 41051
fic@fic.com

www.fic.com