



**ENERPROJECT SA**  
Via Cantonale 53  
CH-6805 Mezzovico  
Switzerland

[www.enerproject.com](http://www.enerproject.com)



COMPRESS, **NOW.**

**FUEL BOOSTER  
SOLUTIONS**

## OVERVIEW

Compressors are used as fuel boosters to compress natural gas from various sources to gas turbines that function as generator sets or mechanical drives. Fuel gas booster compressors ensure continuous supply of fuel gas to gas turbines at specified temperature and pressure.

Fuel boosters can be customized on specific request. We supply a wide range of compressors, up to 50000 Nm<sup>3</sup>/h.

The choice of compressor type and capacity control type is based on the flow rate and inlet/outlet pressure required. Our products are widely used in the power industry thanks to their high efficiency and low maintenance costs.

Electric motors are broadly used; diesel or gas engines are also available.

Compressors mounted on frame to allow easy transportation and installation.

**We** are ISO9001 certified.

**We** provide logistics, commissioning, training and maintenance.

**We** guarantee spare parts availability for the lifetime of our packages.

**We** offer tailor-made solutions.

**We** implement ways to reduce the environmental impact of our products.

**We** are committed to health and safety.

**We** believe in our competence and invest in our people with ongoing education and training.

**We** constantly invest in research and development.

## SYSTEM DESCRIPTION

To eliminate possible solid particles, we install a filter (FS175) upstream of our gas compressors (FGC).

The lube oil system of a screw compressor is closed loop. Oil is injected into the machine in several places. Once the oil is injected, it combines with the gas. The oil and gas mixture is then discharged out of the machine. The injected oil must be removed from the gas downstream of the compressor.

The oil and gas mixture enters a gas-oil separator (B200) where the compressed gas and the oil are separated by centrifugal force. The gas then flows in the same vessel through a coalescing filter (FS120) that reduces the oil content to the value required by the customer. The gas goes from here into a gas-water or air-water cooler (W119) that allows temperature control, independently of the FGC operating mode according to the requirements of the GT manufacturer.

The gas then flows through a second stage coalescing filter (FS122) which acts as a backup in case of a malfunction of the FS120. When required by the GT manufacturer, a third stage can be installed in order to further reduce the oil content. Our separation-cooling system allows the delivery of a dry and clean gas, in accordance with the most stringent parameters for fuel gas quality as required by all major OEM gas turbines (GT).

Our compressors feature separate oil- and gas-cooling circuits. Each circuit has its own dedicated heat-exchanger (W119 and W203). This system allows the control of the gas temperature, independently of the operating mode of the SGC.

**The volume of the B200 vessel is specially designed to prevent the overflow of oil into the downstream gas line even in case of an emergency stop at full load.**

## CAPACITY CONTROL TYPES

The screw compressor can operate over a very wide range with little or no changes required to the machine, which makes it very well suited for power generation – a process where flow rates and operating conditions are often changing. Screw compressors are usually provided with hydraulic slide control. By moving the slide parallel to the rotor, the outlet pressure remains constant as the gas flow increases or decreases. The most remarkable advantage of unloading with a slide valve is the high amount of power saved through reduced flow rates. Other methods of capacity control include variable frequency drives mostly used in case of significant variations in the inlet pressure.

