

ENERGY RECOVERY

GAS EXPANSION



High Pressure in the gas pipeline is a necessity to drive the NG stream, while any connected consumer may use an RPV station to use the gas at a lower pressure. In the pressure drop process, there is considerable energy lost through the conventional valve expansion.

PROCESS SYSTEMS, as a highly expert company in gas stations, delivers state-of-the-art gas expansion turbine modular units harnessing waste energy to generate emission-free electricity. This solution is a turnkey package of pre-heating, filtration, expander-generator, and power unit with the below specification:

 **Modular design and short installation**

 **Lifetime of 20 years**

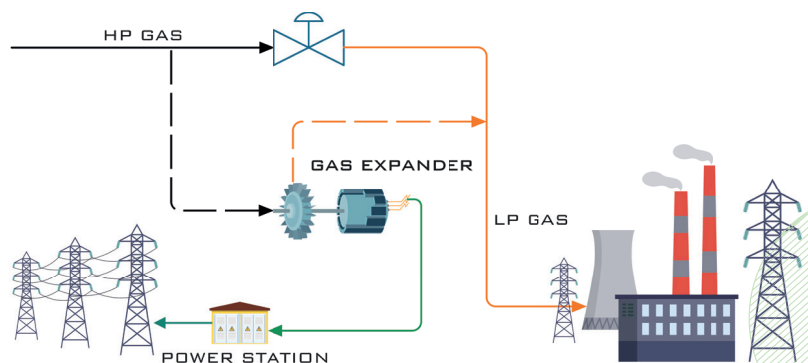
 **High-efficiency turbine of 85%**

 **Flexible operation between 50% to 110%**

 **No need for fuel or utilities**

 **Max inlet pressure of 70barg**

Our gas expansion solutions receive gas flow rates between 10,000 to 100,000 nm³/h, to generate 0.4 to 4 MWe fuel-free power at high pressure ratios.



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HEAT TO POWER



Low-temperature waste heat in industries is an enormous source of energy loss, without a solution in conventional technologies.

PROCESS SYSTEMS, with a strong background in the development of innovative thermal solutions, now delivers ORC Heat to Power units in collaboration with PARTNERS to convert LT waste heat into emission-free electrical power.

Thanks to our modular design, we deliver turn-key solutions from heat harnessing to power cycle in a range of 1 to 10 MWe fuel-free output, from the LT heat sources within 150 to 350 C. The main features are listed below :

-  **Closed cycle, low maintenance**
-  **Zero fuel consumption**
-  **Short delivery, fast installation**
-  **High-efficiency cycle of up to 24%**
-  **Flexibility between 50% to 110%**
-  **Long lifetime of 20 years**
-  **Fully Automatic**

