



Spirax TurboPower

Description

The Spirax TurboPower range generates electrical power via the function of steam pressure reduction. The solution allows you to generate and supplement your own electrical demands by harnessing the energy released by the resulting pressure drop.

The generated electrical power is primarily used for local plant consumption; however, any excess can be supplied back to the grid. Features include;

- Direct drive, air bearing technology enables extremely high operational efficiency
- Titanium impeller design making it suitable for saturated or superheated steam
- Oil-free operation
- Compact design makes retrofitting into existing steam plant possible
- Supplied fully assembled and tested – ready to install

Application

The Spirax TurboPower solution is specifically designed for use in steam systems - electricity is produced as steam turns the turbo rotor.

Typically installed in parallel to an existing steam pressure reducing station, up to 100 kW* of electrical power can be produced – with the outlet steam still available for plant utilisation.

The back-pressure control will convert the required amount of energy to lower the steam pressure, so the steam emerging on the downstream side can still be utilised for process application.

Available range

Unit	Max. electrical output*
TP50	50 kW
TP100	100 kW

* Larger outputs are available on request

Technical data

Power output	up to 100 kW*
Turbo rotor speed	Nominal 60,000 rpm
Voltage	415 V, 3 phase, 50 Hz

Steam pressure / temperature limits

	TP50	TP100
Maximum inlet pressure	14 bar g	
Maximum outlet pressure	4 bar g	
Maximum operating temperature	200°C	

Dimensions

Unit	Dimensions (mm)		
	H	W	L
TP50 & TP100	1843	1214	2793

Standards

This product fully complies with the requirements of the Machinery Equipment Directive 2006/42/EC, the Electromagnetic Compatibility Directive 2004/108/EC and the European Pressure Equipment Directive 97/23/EC and carries the CE mark when required.



Pipework connections

Connection	TP50	TP100
Steam inlet	DN80 PN25	DN100 PN25
Steam outlet	DN100 PN25	DN150 PN25
Condensate drain	DN15 PN25	DN15 PN25
Seal vent	DN15 PN25	DN15 PN25
Compressed air	½" BSPF	½" BSPF

Engineering recommendation G59/2

Engineering Recommendation (EREC) G59/2:

Recommendations for the Connection of Generating Plant to the Distribution Systems of Licensed Distribution Network Operators

G59/2 sets out the requirements that must be met before the local Distribution Network Operator (DNO) will allow the generating plant to be connected to the network.

How to specify

A Spirax Sarco Energy Solutions Specialist will help determine application suitability, required size and potential savings. For contact details of your local Energy Solutions Specialist, contact us at:

T: 01242 521361
 E: ukenquiries@spiraxsarco.com
 W: spiraxsarco.com/uk/microturbines