





TSMC 108 two-stage reciprocating compresor unit shown with closed flash inter-stage cooling system and UniSAB systems controller

Sabroe TCMO/TSMC two-stage reciprocating compressor units

Two-stage versions of CMO and SMC reciprocating compressors, with swept volumes of 150–1,000 m³/h

Sabroe TCMO/TSMC two-stage reciprocating compressors are an economical operating alternative to single-stage compressors in smaller low-temperature refrigeration installations.

TCMO/TSMC compressor units are also ideal for mediumsize industrial refrigeration installations that involve a big temperature range, such as freezer installations. Furthermore, these units are easy to customise with intermediate cooling systems.

Using a two-stage setup built together as a single unit helps avoid equipment duplication – and thus reduce costs and save space.

Our three-year guarantee covers the complete unit, including compressor block, UniSAB, motor and coupling – for all refrigerants.

Range

Eight different models are available to provide swept volumes of between 150 and 1,000 m $^{3}/h$.

Features	Benefits
Splitting the temperature lift into two separate stages reduces overall energy consumption	Two-stage installations are relatively cost-effective, which helps reduce energy costs
Relatively small footprint	Can be installed in relatively small locations, or where space is limited
High coefficient of performance (COP), with excellent performance under part-load conditions	Low power consumption, which greatly reduces operating costs
Variable-speed drive (optional) provides stepless capacity control over the entire operating range	Power consumption and operating costs kept to a minimum





Technical data

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Number of	Swept volume		Nominal capacities* – in kW –40/+35°C		Unit dimensions in mm			Weight excluding motor	Sound pressure level	
low/high- pressure	1500 rpm 1800 rpm								1500 rpm	1800 rpm
side	m³/h	m³/h	1500 rpm	1800 rpm	L	w	н	kg	db(A)	db(A)
6 / 2	146	175	20	24	1400-1750	700	1000	500	68	70
6 / 2	170	205	23	28	1400-1750	700	1000	500	69	71
6 / 2	339	407	50	60	2311-2915	1052	1247	1746	80	82
6 / 2	424	509	66	79	2311-2915	1052	1247	1781	81	83
6 / 2	509	N/A	81	N/A	2311-2915	1052	1247	1796	81	83
12 / 4	679	814	100	121	3329-3737	1327	1445	2791	81	83
12 / 4	848	1018	133	159	3329-3737	1327	1445	2841	82	84
12 / 4	1018	N/A	163	N/A	3329-3737	1327	1445	2891	83	84
	Number of cylinders low/high- pressure side 6 / 2 6 / 2 6 / 2 6 / 2 6 / 2 12 / 4	Number of cylinders low/high- pressure side Swept 1500 rpm 6/2 146 6/2 339 6/2 339 6/2 339 6/2 300 6/2 301 6/2 302 6/2 303 6/2 300 6/2 301 6/2 303 6/2 303 6/2 304 6/2 305 6/2 304 6/2 509 12/4 848	Number of cylinders low/high pressure sideSwept-ume1500 rpm1800 rpmm³/nm³/h6/21466/21706/23396/23296/25096/250912/46798481018	Number of cylinders low/high- pressure side Swept-Jume Nominal c result 1500 rpm 1800 rpm -40/4 m³/h m³/h 1500 rpm 6 / 2 146 175 20 6 / 2 146 175 20 6 / 2 170 205 23 6 / 2 339 407 50 6 / 2 329 101 101 6 / 2 509 N/A 81 12 / 4 679 814 100 12 / 4 848 1018 133	Number of cylinders low/high pressure sideSwept-JumeNominal-zepaties* in kW -40/-3001500 rpm1800 rpm1500 rpm1800 rpm1500 rpm1800 rpm1500 rpm1800 rpm6/214617520246/217020523286/233940750606/232940750606/2509N/A81N/A12/467981410012112/4848101813315	Number of cylinders low/high pressure sideSwept vumeNominal case in kW in kW -40/+35Nume in kW solutionNume in kW 	Number of cylinders low/high pressure sideSwept vurneNominal capacitars in kW -40/+35°Durit diversions in w -40/+35°1500 rpm1800 rpm1800 rpm1800 rpmLW1500 rpm1300 rpm1500 rpm1800 rpmLW6/214617520241400-17507006/217020523281400-17507006/233940750602311-201510526/2509N/A81N/A231-2015105212/46798141001213329-373132712/48481018133159329-3731327	Number of cylinders low/high pressure sideSwept vlumeNominal capacities* in kW -40/+3°CDunit diversions in kW persure -40/+3°CDunit diversions in kW persure -40/+3°C1500 rpm1800 rpm1800 rpm1800 rpmLWH6/214617520241400-175070010006/217020523281400-175070010006/233940750602311-2915105212476/232970450612311-2915105212476/2509N/A81N/A2311-29151052124712/46798141001213329-37313271445	Number of cylinders low/high pressure sideSwept vieweNominal case: in kW -40/+35°cPunit dimensions in the sectorization pressure -40/+35°cPunit dimensions in the sectorization pressure -40/+36°cPunit dimensions in the sectorization -40/+36°cPunit dimensions in the sectorization -40/+36°c6/2339407507	Number of cylinders low/high pressure side Swept volume Nominal creatives* in kW -40/+35°C Unit dimensions in weight pressure side Weight excluding motor Sound pre- loculation 1500 rpm 1800 rpm 1800 rpm 1800 rpm 100 100 1000 1000 1000 1000 1000 1000 600 <td< td=""></td<>

* Nominal capacities are based on:

1500 rpm at 50 Hz. 1800 rpm at 60 Hz or VSD.

Refrigerant: R717 Other refrigerants available on request.

For R717

2K liquid subcooling, 0.5 K non-usable suction superheat and liquid subcooling in intermediate cooler to 10K above intermediate temperature.

Min./max. speed	R717
тсмо	700-1800 rpm
TSMC S	500-1800 rpm
TSMC L	500-1800 rpm
TSMC E	500-1500 rpm

For TCMO

Design pressure, HP side: 28 bar Design pressure, LP side: 18 bar Differential pressure: 25 bar.

For TSMC

Design pressure, HP side: 28 bar Design pressure, LP side: 18 bar Differential pressure: 25 bar.

Sound pressure levels measured in free field, over reflecting plane and one metre distance from the compressor block.

Options

- UniSAB systems controller
- Gauges, thermometers and temperature/ pressure control switches

Dimensions, weight and sound pressure levels are guidelines only.

- Oil level regulator (for use in parallel systems)
- ATEX-compliant configuration
- Special vibration dampening
- Intermediate cooling systems

All information is subject to change without notice.

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