

Compressor performance service

OVERVIEW

Compressor performance service is based on CALMS analysis and should be performed at least once per year as part of a regular yearly maintenance plan. Service is used to validate CALMS auto analysers in permanent monitoring systems

CALMS compressor performance analysis goals:

- Independent compressor performance verification
- Manual CALMS auto analyser verification
- Check performance before and after investment in new equipment
- Compare history data and characteristic deterioration
- Service troubleshooting

Compressor performance is measured based on below tolerances :

Flow : +- 4%

Pressure: +-1%

Specific Energy consumption: +-5%

No load/ Zero flow power: +-10%

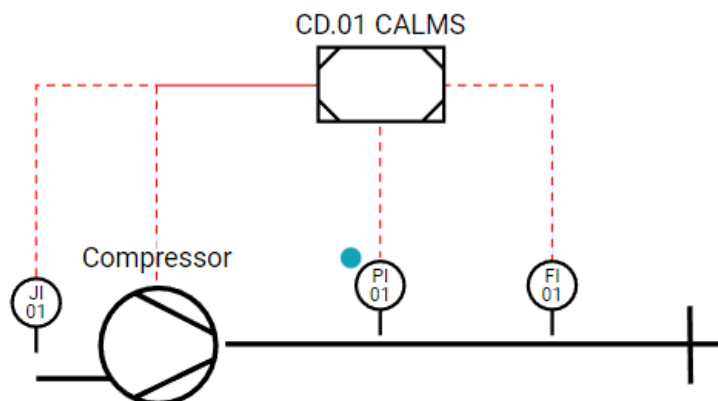
Based on ISO1217 annex C for 15m³/min (500cfm) or more.

PROCEDURE

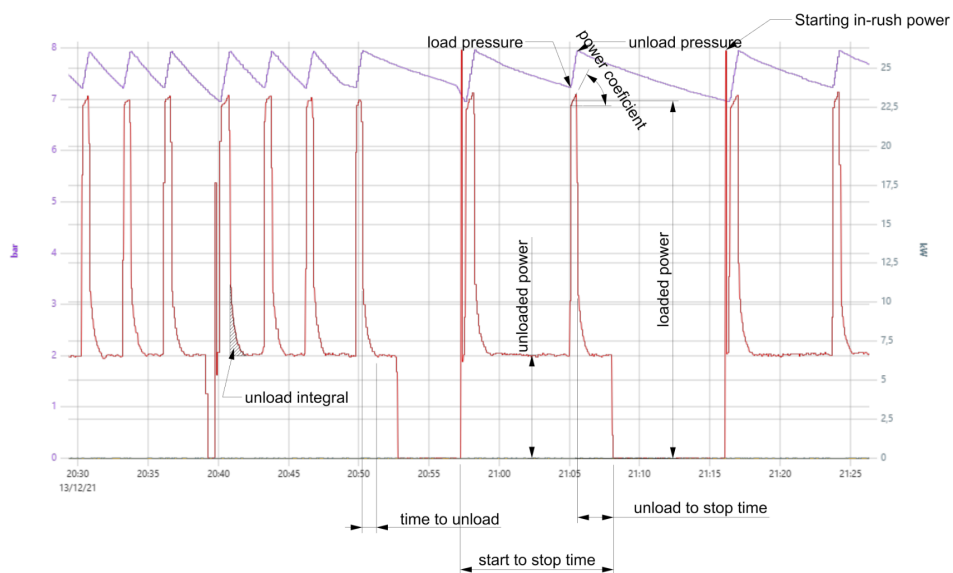
CALMS compressor performance test must be carried out with compressor operator or service person and expert working live on CALMS Inspect page with **scope mode** turned ON. Measurement sampling rate is 1 sec. Before starting check and confirm that all measurement equipment was tested and calibrated. Compressor operator must be online connected to CALMS tester (Whatsapp..) . Test duration max 2h.

Instrumentation:

- Power meter/analyser
- Pressure sensor
- Flow sensor
- CALMS edge gateway

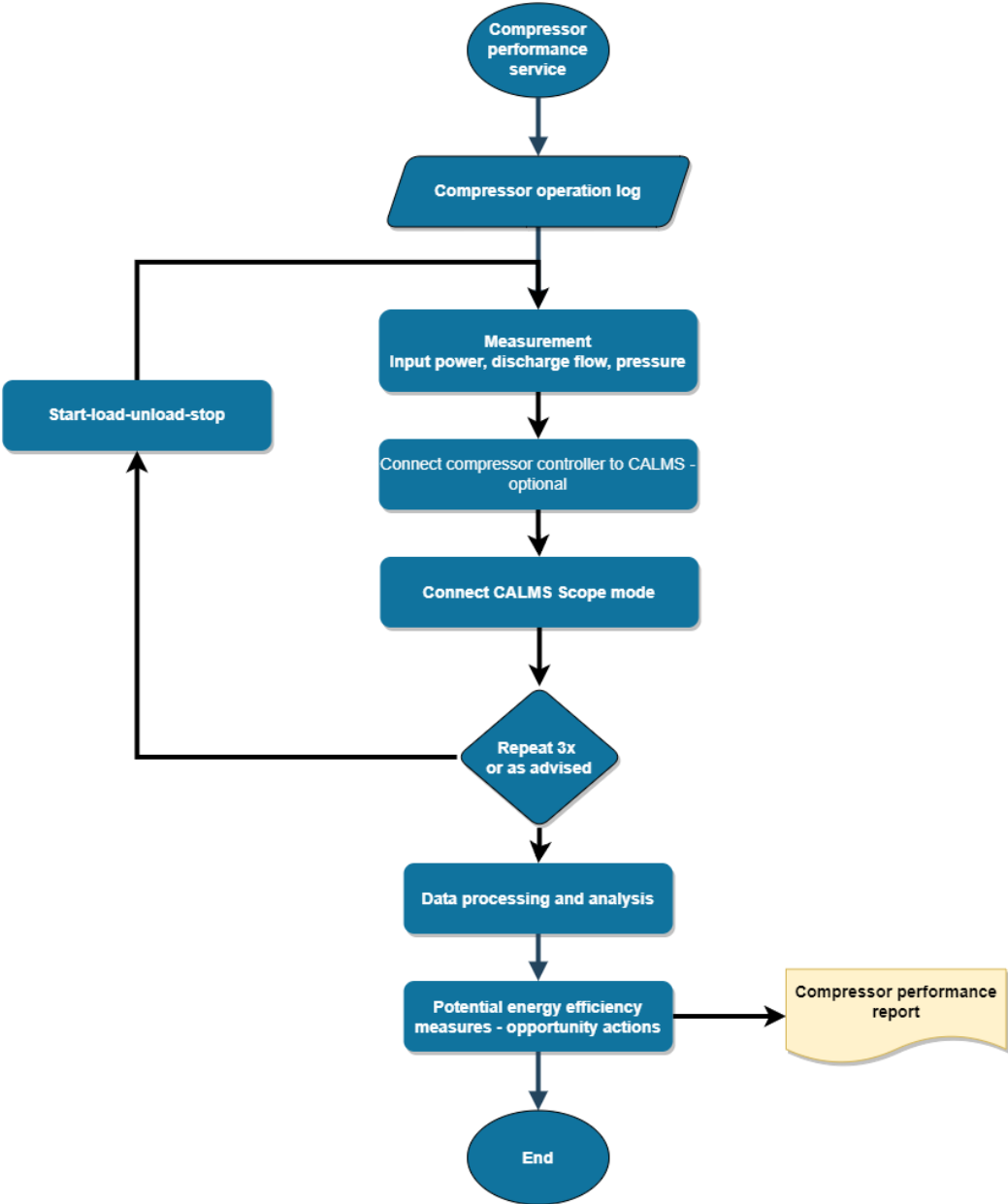


CALMS will use auto analyser tools to collect and calculate all necessary parameters based on measurements.



Pos	Description – Test Characteristic -channel	Nominal size, Tolerance, Characteristic as per CALMS Setup	Test result <input type="checkbox"/> P <input type="checkbox"/> F <input type="checkbox"/> NA
1	Input power	Design data +-5%	
2	Voltage, cos.fi, current f1,f2,f3	Design data +-5%	
3	Pressure	Design data+-1%	
4	Flow	Design data +-4%	
5	Specific power	Design data +-5%	
6	Load pressure		
7	Unload pressure		
8	Load power		
9	Unload power		
10	Starting in-rush power		
11	Unload integral		
12	Time to unload		
13	Start to stop time		
14	Unload to stop time		
	Additional compressor parameters based on type and controller connection - optional		
	Vibrations		
	Airend and discharge Temperature		
	Interstage pressure		

Compressor performance service process diagram



Final compressor performance report.