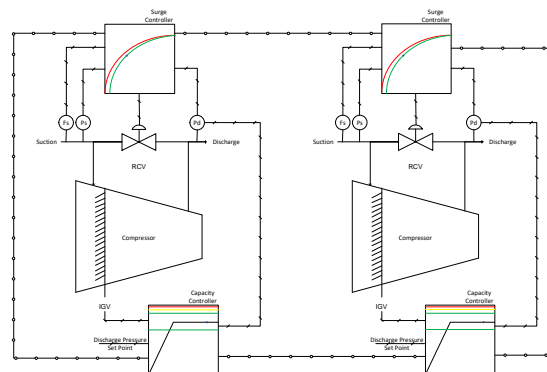




ASCC AntiSurge and Compressor Controller

The TMC AntiSurge and Compressor Controller (ASCC) provides a cost efficient solution for Axial, or Radial, Compressors, which can be operated from anywhere, on a plate.



The TMC ASCC controls one or more Compressor Stages in parallel, series, on separate circuits or a combination.

The ASCC includes load sharing between Compressor Stages and the following features per stage:

Surge Control

- TMC 3D Compressor Map
- Variable Tuning
- Operating Point Shadowing
- Incremental Margin
- Spike Detection
- Incipient Surge Detection (with the addition of a SurgeGard*)

Capacity Control

- Discharge Pressure/Flow/Temperature Control
- Discharge Pressure/Flow/Temperature Limiting
- Suction Pressure/Flow/Temperature Control
- Suction Pressure/Flow/Temperature Limiting

Monitoring

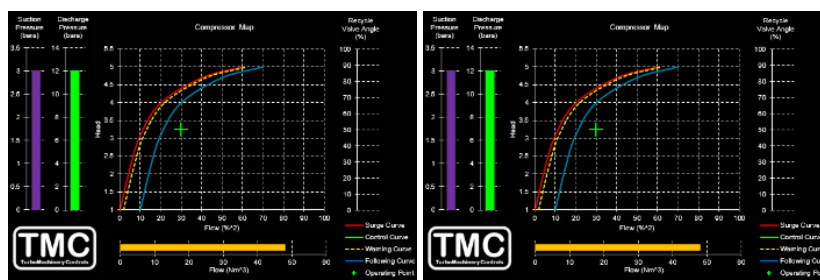
- Multiple Surge Trip
- Surge Alarm
- Surge Spike Trip
- Incipient Surge Alarm
- Discharge Pressure High Alarm
- Discharge Pressure High Trip
- Suction Pressure Low Alarm
- Suction Pressure Low Trip
- Recycle Valve Position Deviation alarm
- Inlet Guide Vane Position Deviation Alarm

The TMC ASCC has a choice of the following per stage I/O:

| 4 to 20mA Analogue Outputs | 4 to 20mA Analogue Inputs | 24VDC Digital Outputs | 24VDC Digital Inputs |
|----------------------------|----------------------------|-----------------------|----------------------|
| Recycle Valve 1 | Flow | Loaded = CC | Load = CC |
| Recycle Valve 2 | Suction Pressure | In Surge = OC | Running = CC |
| Blow Off Valve 1 | Suction Temperature | Alarm = OC | |
| Blow Off Valve 2 | Discharge Pressure | Valve 1 Open = OC | |
| Quench Valve 1 | Discharge Temperature | Valve 2 Open = OC | |
| Quench Valve 2 | SurgeGard | | |
| Inlet Guide Vanes | Recycle Valve 1 Position | | |
| Suction Throttle Valve | Recycle Valve 2 Position | | |
| Demand Speed | Blow Off Valve 1 Position | | |
| Capacity Control PV | Blow Off Valve 2 Position | | |
| Capacity Control Set Point | Quench Valve 1 Position | | |
| Control Curve Distance | Quench Valve 2 Position | | |
| | Inlet Guide Vane Position | | |
| | Suction Throttle Position | | |
| | Capacity Control PV | | |
| | Capacity Control Set Point | | |
| | Valve 1 Override Position | | |
| | Valve 2 Override Position | | |

The same duty can be selected for 2 or more Analogue Outputs for Compressors with valves working in parallel.

The ASCC is supplied on a mounting plate designed to be easily retrofitted in to an existing panel. It can be supplied in a range of panels and other types of enclosures*.



The TMC ASCC is available with a range of Human Machine Interfaces from Lamps, Switches, Dials and Meters* though to PC based SCADA Systems*, DCS systems* and the internet. Remote monitoring is available through an inbuilt HMI web server. The ASCC can be monitored using any device that has a web browser. The TMC ASCC can send emails and SMS text messages to inform operators of process critical events. Industrial wireless connections* minimise the time needed for instrument loop checks.

The TMC ASCC can accommodate Auxiliary Control* and be combined with TMC STIG Core Control Application Software to provide Integrated Train Control for a Steam Turbine Compressor Set*.

Zener Barriers*, Galvanic Isolators*, Interposing Relays* and Position Controllers* can be supplied in addition as required by the application.

| Part Number | Description |
|-------------|--|
| 0019-003 | ASCC AntiSurge and Compressors Controller |
| 0018-003 | HMI-ASCC 15" Panel Mounted Colour Touch Screen |

For enquiries and further information on ASCC, STIG or Gas Turbine Control please contact TMC Technical Sales by emailing techsales@turbomachinerycontrols.com.

* Not included in 0019-003 or 0018-003.