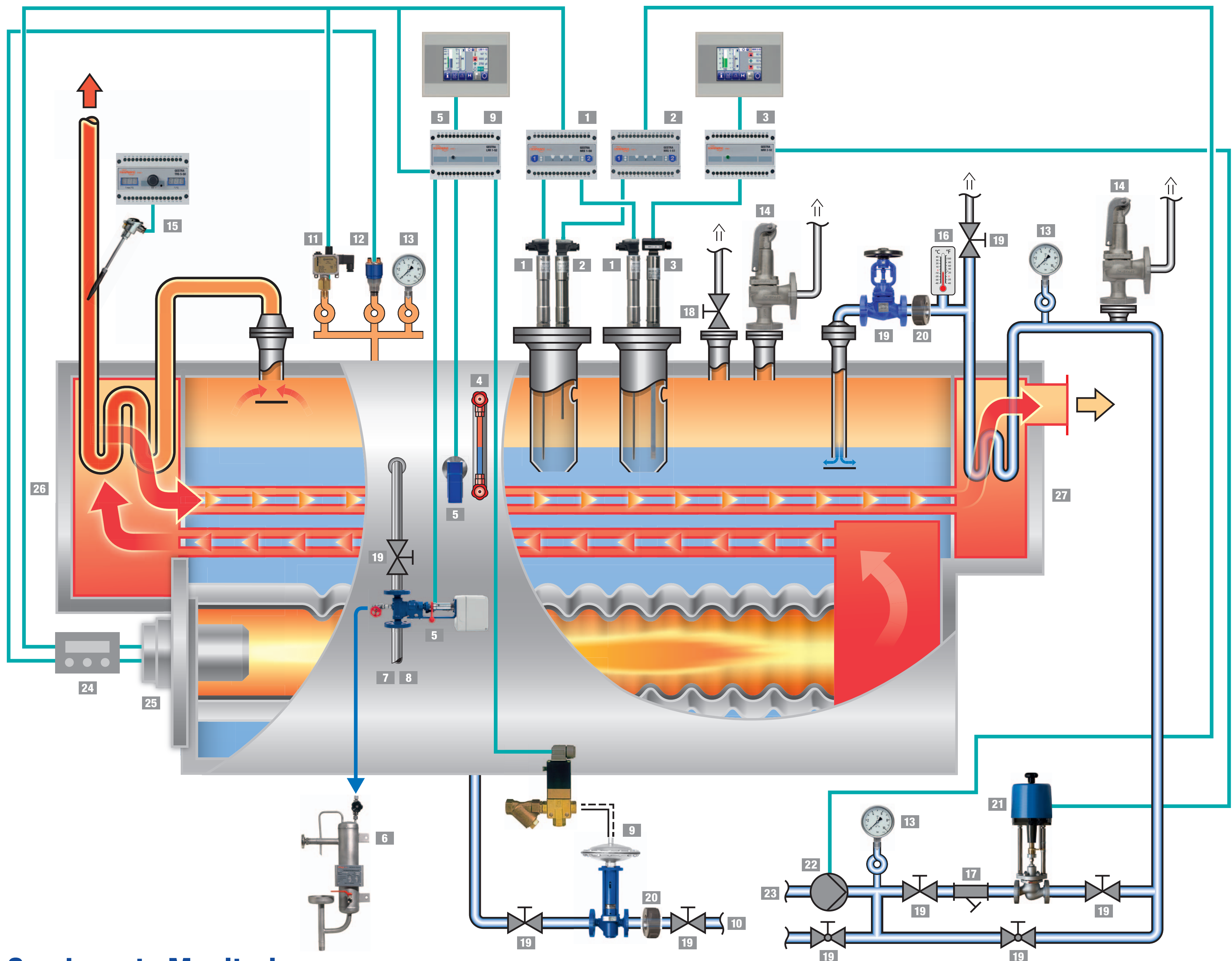
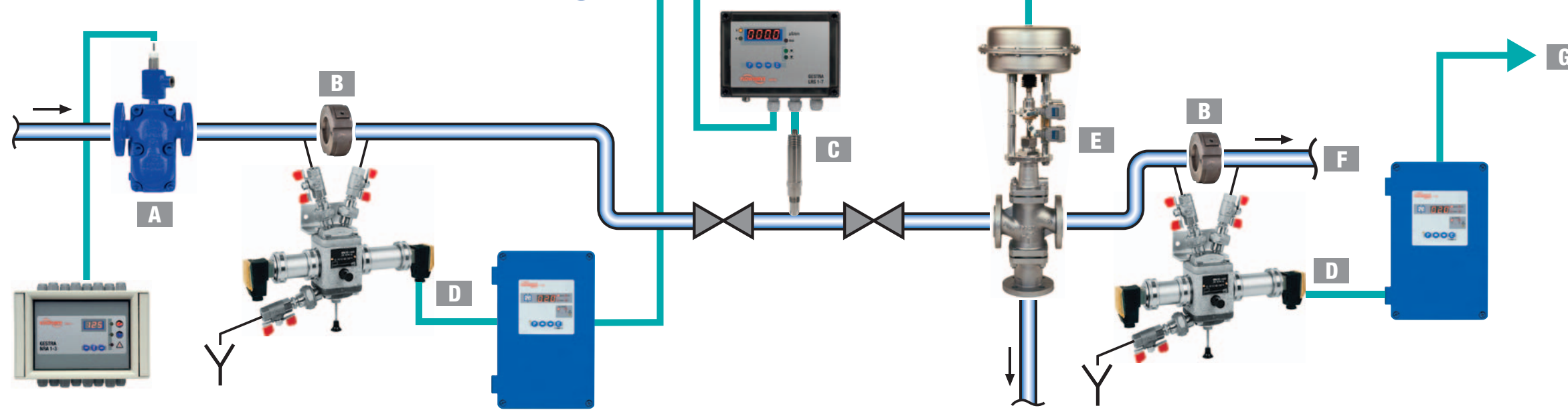


# GESTRA Steam Boiler Equipment

SPECTOR<sup>module</sup> – for operation according to EN 12953



## Condensate Monitoring



**Type Approvals:**  
EC approval  
TÜV (Germany)

## Example of a Steam Boiler Plant Operating without Continuous Supervision (72h)

### GESTRA Steam Boiler Equipment

- 1 Low-level limiter of "high-integrity design": level electrode NRG 16-50, level switch NRS 1-50, SIL 3
- 2 Separate high-level alarm of "high-integrity design": level electrode NRG 16-51, level switch NRS 1-51, SIL 3
- 3 Level control with high-level alarm and remote water level indicator: level probe NRG 26-21, level controller NRR 2-52 and control valve V726
- 4 Water level gauge
- 5 Conductivity measurement with indicator, conductivity limit switch and continuous blowdown control: conductivity electrode LRGT 16-2, continuous blowdown controller LRR 1-52, continuous blowdown valve BAE
- 6 Sample cooler
- 7 Blowdown flash vessel
- 8 Residual blowdown cooler
- 9 Automatic intermittent blowdown: intermittent blowdown valve MPA, pilot valve
- 10 Blowdown receiver
- 11 Pressure limiter DSF
- 12 Pressure transmitter DRT
- 13 Pressure gauge
- 14 Safety valve GSV
- 15 Safety temperature monitor (limiter): resistance thermometer TRG, temperature switch TRS 5-50, SIL 3
- 16 Thermometer
- 17 Strainer
- 18 Vent valve
- 19 Stop valve (also in bypass)
- 20 Non-return valve
- 21 Electrical/pneumatic control valve V 725
- 22 Feedwater pump
- 23 Monitoring of the feedwater / condensate
- 24 Burner control unit
- 25 Burner
- 26 Superheater
- 27 Economizer

### Condensate monitoring

- A Steam trap with trap test set: test chamber VKE, electrode NRG 16-19 and test station NRA 1-3 for max. 16 traps
- B Non-return valve RK 86
- C Quality control for ingress of foreign matter, using type-approved systems as per VdTÜV bulletin on water monitoring facilities (WÜ 100)
- D Monitoring for ingress of acids, blowdown, raw water etc.: conductivity electrode with integrated resistance thermometer LRG 16-9, conductivity switch LRS 1-7
- E Monitoring for ingress of oil, grease etc.: oil and turbidity detector OR
- F Electrical/pneumatic three-way valve for discharging the contaminated condensate
- G Condensate tank
- H Shutdown of the condensate-return system or interruption of the safety chain