



# Control Valve with Electric Actuator

Single-Seat Control Valve  
Series V 727



Issue Date: 11/96

PN 16  
DN 15-100 mm  
(1/2"-4")

A<sub>4</sub>

V 727

## Purpose

Modulating or on-off control of liquids, gases, and steam.

Due to the simplicity of design, this valve range is especially suited for the use on general service applications.

## Application

Pressure, temperature, level, and flow control of liquids, gases, and steam.

## Pressure/Temperature Rating

Maximum service pressure	bar psi	16 230	16 230	16 230	13 185
Related temperature	°C °F	-10 14	0 32	120 248	200 392

## Materials

Body	Grey cast iron GG 25 (0.6025)
Seat ring	Stainless steel X 20 Cr 13 (1.4021)
Plug	Austenitic stainless steel X 6 CrNiMoTi 17 12 2 (1.4571)
Body seal	Pure graphite
Spindle seal	PTFE/graphite

## Test Certificates

On request test report in accordance with EN 10204/2.2.

## Design

The GESTRA control valve type V 727 consists of valve and electric actuator.

The valve is provided with a seat ring which is pressed in and a parabolic plug. The  $k_v$  value of the various valve sizes can be modified by exchanging the valve plug.

The valve is provided with a maintenance-free Teflon spindle seal.

The stuffing box with integral guide bush and wiper ring (providing twin guiding) minimises

vibrations and ensures minimal wear.

The electric actuator consists of an anti-stall motor, transmission, spindle, pillars and handwheel.

The actuator is triggered either by a three-position stepping controller or direct via an electric control system.

Switching-off in the respective end position is effected by two position-controlled limit switches.

## Operation

The stroke action of the valve plug adjusts the area around the seat to regulate the flow.

The standard version includes a parabolic plug. The direction of flow through the valve should therefore be against its closing direction to produce the most favourable dynamic load.

## Actuator Data

Mode of operation in acc. with VDE 0530 S4	65 % duty Max. 1200 cycles per hour
Mains supply	230 V, 50 Hz
Manual adjustment	via handwheel
Permissible ambient temperature	-20 °C to +60 °C (-4 °F to +140 °F)
Protection	IP 65
Installation position	universal, but actuator must not hang downwards

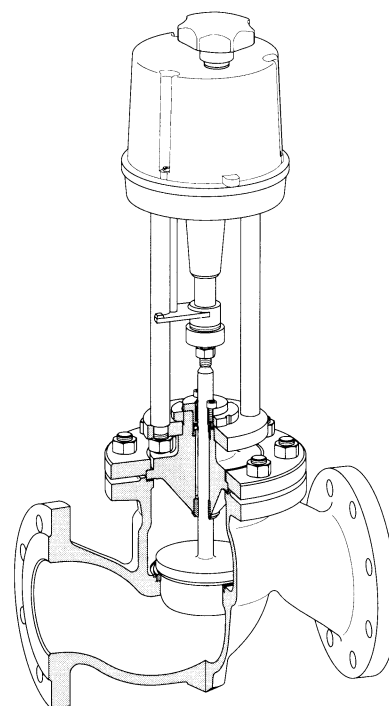
## Options

Alternative voltages and frequencies: 24 V, 50/60 Hz  
110 V, 50/60 Hz  
230 V, 60 Hz

Heating resistor for ambient temperatures down to -30 °C (-22 °F).

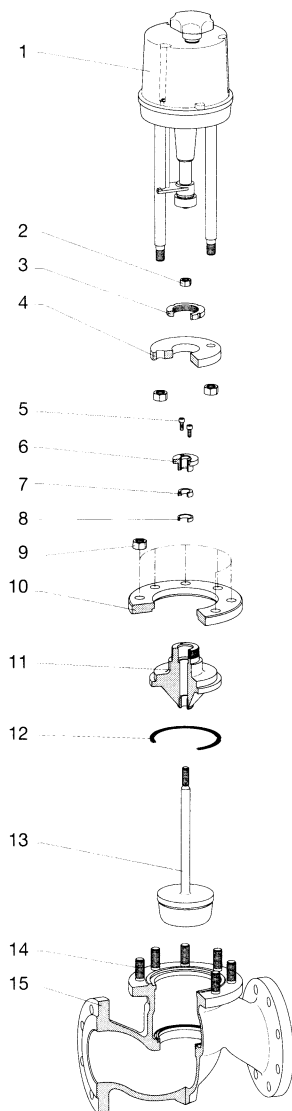
## Accessories

1000 ohm potentiometer plus two additional position-controlled limit switches.

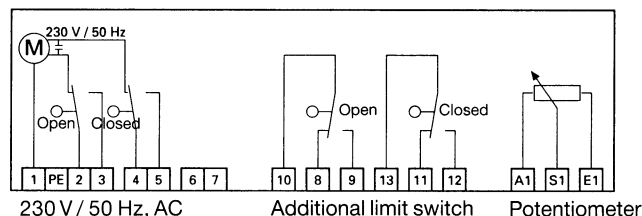


## $k_v$ Values and Differential Pressures

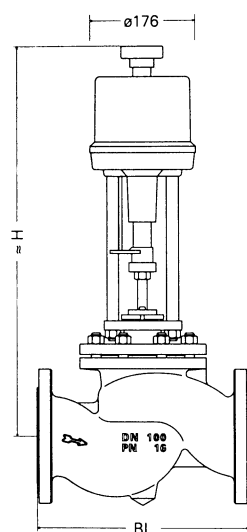
DN	mm in	15 1/2	20 3/4	25 1	32 1 1/4	40 1 1/2	50 2	65 2 1/2	80 3	100 4
$k_v$ -values [m <sup>3</sup> /h]										
		1.6	2.5	4.0	10	16	25	40	63	100
		2.5	4.0	6.3	16	25	40	63	100	160
		4.0	6.3	10						
Max. differential pressure [bar]										
Actuator type:										
PSL 201		9.6	9.3	9.6	4.5	1.9	0.4			
PSL 202		16	16	16	16	9.8	5.4	2.2	1.0	0.2
PSL 204						16	10	9.7	5.9	3.4
PSL 208								10.5	7.9	4.7



### Wiring Diagram for Actuator



Part No.	Designation	Materials
1	Linear actuator	types PSL 201, PSL 202, PSL 204, PSL 208
2	Hexagonal nut	5
3	Ring nut	11 H (chromatised)
4	Plate	Forged steel (1.0460)
5	Socket-head cap screw	8.8
6	Stuffing box	Forged steel (1.0460) (with integral guide bush and wiper ring)
7	Seal ring	PTFE/graphite
8	Bottom ring	Austenitic stainless steel (1.4571) (soft nitrated)
9	Hexagonal nut	5
10	Union flange	(0.6025) / from DN 32 mm (1.0460)
11	Bonnet	Grey cast iron (0.6025) / from DN 32 mm forged steel C 22.8 (1.0460)
12	Flat seal	Pure graphite on austenitic s.s. support plate
13	Plug	Austenitic stainless steel (1.4571)
14	Stud bolt	5.6
15	Body	Grey cast iron GG-25 (0.6025) (with stainless steel (1.4021) seat ring pressed in)



### Dimensions (mm) and Weights (kg)

Nominal sizes DN	mm in	15 1/2	20 3/4	25 1	32 1 1/4	40 1 1/2	50 2	65 2 1/2	80 3	100 4
BL		130	150	160	180	200	230	290	310	350
H with actuator PSL 201		550	550	550	562	578	587			
H with actuator PSL 202		550	550	550	562	578	587	612	622	639
H with actuator PSL 204						578	587	612	622	639
H with actuator PSL 208								646	656	673
Weight with actuator PSL 201		9.5	10.1	10.5	13.0	14.5	18.0			
Weight with actuator PSL 202		10.0	10.6	11.0	13.5	15.0	18.5	28	37	51
Weight with actuator PSL 204						15.5	19.0	29	38	52
Weight with actuator PSL 208								31	40	54
Flanges dimensioned and drilled to		DIN 2501 (BS 4504), PN 16								

Supply in accordance with our general terms of business.

Technical modifications reserved.