



BELLOW CONTROL VALVE WITH PNEUMATIC ACTUATOR AND POSITIONER zCON



| Body material | Nominal pressure | Nominal diameter | Max. temperature |
|------------------------|----------------------------|------------------|------------------|
| A Grey cast iron | C 16 bar | DN 15-150 | 300°C |
| C Nodular cast iron | C 16 bar D 25 bar | DN 15-150 | 350°C |
| F Cast steel | E 40 bar | DN 15-150 | 350°C |



correspond to the pressure equipment directive 2014/68/UE marking CE for DN≥32

FEATURES

- high tightness (leakproofness class - A acc. EN -12266 - 1)
- face of face dimensions: series 1 acc. EN 558
- flange end connections: EN-1092-2
- rangeability 50:1
- equal percentage flow characteristic
- environment friendly

APPLICATION *

* not all of the applications are suitable for all of the executions

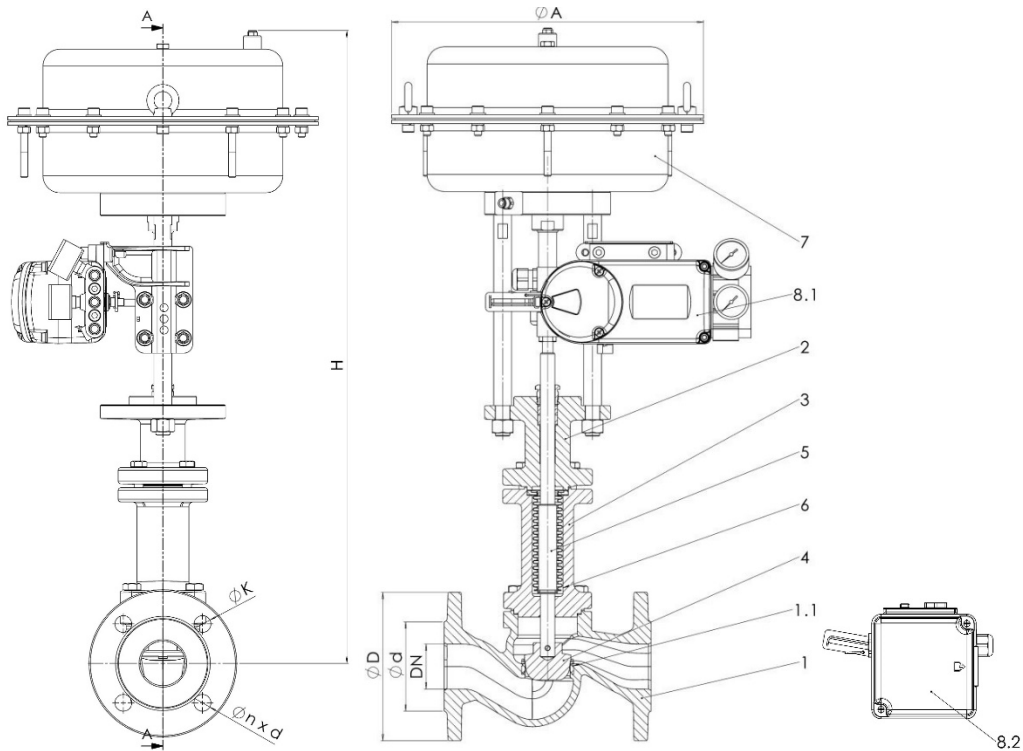
| | | | | | | |
|------------|----------|--------------------------|----------------|--|-------------------|-------------------|
| industries | | | | | | |
| | INDUSTRY | SHIPBUILDING INDUSTRY | HEATING | REFRIGERATION AND AIR CONDITIONING | | |
| media | | | | | | |
| | GLYCOL | INDUSTRIAL WATER | DIATHERMIC OIL | STEAM | COMPRESSED AIR | NEUTRAL FLUIDS |

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FIG.236

MATERIALS, DIMENSIONS



| | Body material | A | C | F |
|------------------|--------------------|--|--|---|
| | Type | 71 | | |
| 1 | Body | EN – GJL-250 5.1301 (ex. JL1040) | EN – GJS-400 – 18-LT 5.3103 (ex.JS1025) | GP240GH+N 1.0619 |
| 1.1 | Seat ring | X20Cr13 1.4021 | X20Cr13 1.4021 | DN15-50 X20Cr13 1.4021 DN65-150 Stellite |
| 2 | Top bonnet | EN – GJS-400 – 18-LT 5.3103 (ex.JS1025) | | |
| 3 | Bottom bonnet | EN – GJS-400 – 18-LT 5.3103 (ex.JS1025) | | |
| 4 | Disc | X20Cr13 1.4021 | | |
| 5 | Stem | X20Cr13 1.4021 | X20Cr13 1.4021 | X20Cr13 1.4021 |
| 6 | Bellow | X6CrNiMoTi17-12-2 | | |
| 7 | Pneumatic actuator | SPO (normally open actuator) SPZ (normally closed actuator) | | |
| 8.1 | Positioner | SRD998 – intelligent positioner | | |
| 8.2 | | SRI 986 – electro-pneumatic positioner | | |
| Max. temperature | | 300°C | 350°C | |

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FIG.236

| DN | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 |
|--------------------|----------|------|------|------|------|------|------|------|------|------|------|------|
| L (mm) | | 130 | 150 | 160 | 180 | 200 | 230 | 290 | 310 | 350 | 400 | 480 |
| PN16 | D (mm) | 95 | 105 | 115 | 140 | 150 | 165 | 185 | 200 | 220 | 250 | 285 |
| | K (mm) | 65 | 75 | 85 | 100 | 110 | 125 | 145 | 160 | 180 | 210 | 240 |
| | nxd (mm) | 4x14 | 4x14 | 4x14 | 4x19 | 4x19 | 4x19 | 4x19 | 8x19 | 8x19 | 8x19 | 8x23 |
| PN25 | D (mm) | 95 | 105 | 115 | 140 | 150 | 165 | 185 | 200 | 235 | 270 | 300 |
| | K (mm) | 65 | 75 | 85 | 100 | 110 | 125 | 145 | 160 | 190 | 220 | 250 |
| | nxd (mm) | 4x14 | 4x14 | 4x14 | 4x19 | 4x19 | 4x19 | 8x19 | 8x19 | 8x23 | 8x28 | 8x28 |
| PN40 | D (mm) | 95 | 105 | 115 | 140 | 150 | 165 | 185 | 200 | 235 | 270 | 300 |
| | K (mm) | 65 | 75 | 85 | 100 | 110 | 125 | 145 | 160 | 190 | 220 | 250 |
| | nxd (mm) | 4x14 | 4x14 | 4x14 | 4x18 | 4x18 | 4x18 | 8x18 | 8x18 | 8x22 | 8x26 | 8x26 |
| H (SPO;SPZ 280) | | 615 | 615 | 620 | 630 | 650 | 656 | 710 | 708 | 744 | 810 | 832 |
| H (SPO;SPZ 530) | | - | - | - | - | - | 707 | 760 | 758 | 795 | 861 | 883 |
| H (SPO;SPZ 1000) | | - | - | - | - | - | - | 820 | 818 | 855 | 921 | 943 |

MAX. PERMISSIBLE CLOSING PRESSURES (SPO)

| Actuator | Operating pressure (kPa) | Nominal diameter DN | | | | | | | | | | |
|------------------|--------------------------|--|------|------|------|------|------|------|------|------|------|-----|
| | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 |
| | | Max. permissible closing pressures (bar) | | | | | | | | | | |
| SPO 280 (A=247) | 140 | 21,5 | 16,8 | 11,7 | 7,9 | 5,8 | 3,6 | - | - | - | - | - |
| | 250 | 64,7 | 50,5 | 35,3 | 23,7 | 17,6 | 11 | - | - | - | - | - |
| | 400 | 125,8 | 98,2 | 68,7 | 46,1 | 34,2 | 21,5 | - | - | - | - | - |
| SPO 530 (A=347) | 140 | - | - | - | - | - | 4,9 | 2,9 | 2 | 1,3 | - | - |
| | 250 | - | - | - | - | - | 19 | 11,1 | 7,7 | 5,1 | - | - |
| | 400 | - | - | - | - | - | 38,7 | 22,7 | 15,7 | 10,5 | - | - |
| SPO 1000 (A=491) | 140 | - | - | - | - | - | - | 6,6 | 4,6 | 3 | 2 | 1,4 |
| | 250 | - | - | - | - | - | - | 22,5 | 15,6 | 10,4 | 6,9 | 4,9 |
| | 400 | - | - | - | - | - | - | 44 | 30,6 | 20,5 | 13,6 | 9,6 |

MAX. PERMISSIBLE CLOSING PRESSURES (SPZ)

| Actuator | Operating pressure (kPa) | Nominal diameter DN | | | | | | | | | | |
|------------------|--------------------------|--|------|------|------|------|------|-----|-----|-----|-----|-----|
| | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 |
| | | Max. permissible closing pressures (bar) | | | | | | | | | | |
| SPZ 280 (A=247) | 230 | 25,0 | 16,0 | 9,0 | 3,0 | - | - | - | - | - | - | - |
| SPZ 530 (A=347) | 250 | - | 25,0 | 25,0 | 18,0 | 9,0 | 3,0 | 1,0 | - | - | - | - |
| SPZ 1000 (A=491) | 310 | - | - | - | - | 25,0 | 14,0 | 7,0 | 4,0 | 1,0 | - | - |

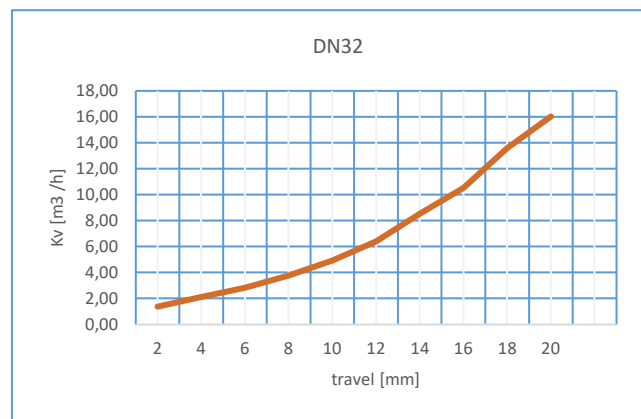
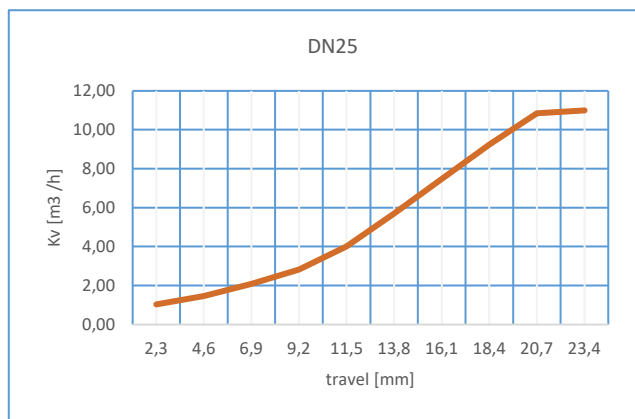
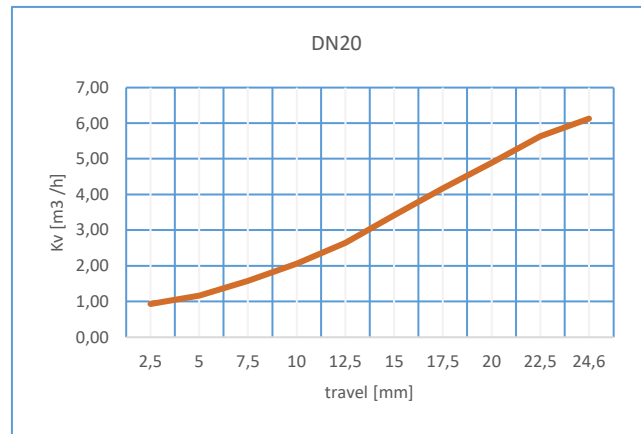
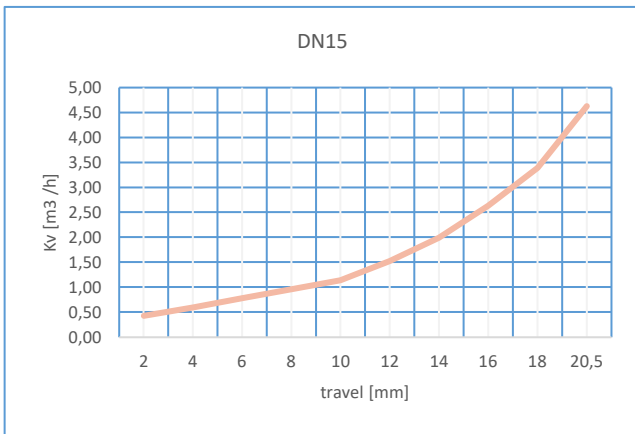
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PRESSURE-TEMPERATURE RATINGS

| Acc. EN 1092-2 | PN | | -10 ÷120°C | 150°C | 200°C | 250°C | 300°C | 350°C | | |
|----------------------|----|-----|------------|-----------|----------|-------|-------|-------|-------|-------|
| EN – GJL-250 | 16 | bar | 16 | 14,4 | 12,8 | 11,2 | 9,6 | - | | |
| EN – GJS-400 – 18-LT | 16 | | 16 | 15,5 | 14,7 | 13,9 | 12,8 | 11,2 | | |
| EN – GJS-400 – 18-LT | 25 | | 25 | 24,3 | 23 | 21,8 | 20 | 17,5 | | |
| Acc. EN 1092-1 | PN | | -20÷ -10°C | -10÷ 50°C | 10-100°C | 150°C | 200°C | 250°C | 300°C | 350°C |
| GP240GH+N | 40 | bar | 30 | 40 | 37,1 | 35,2 | 33,3 | 30,4 | 27,6 | 25,7 |

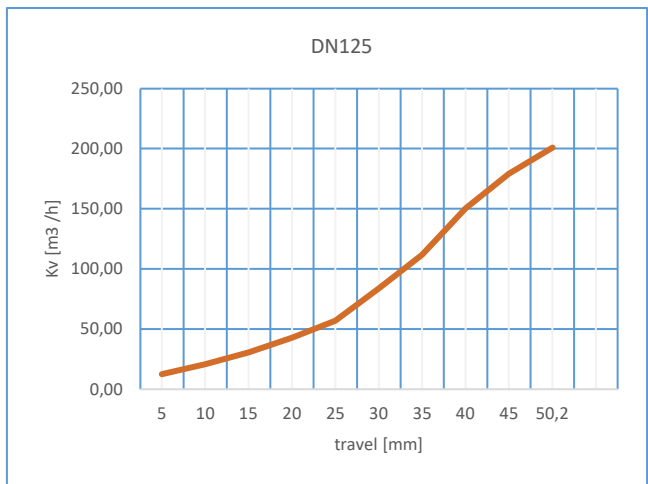
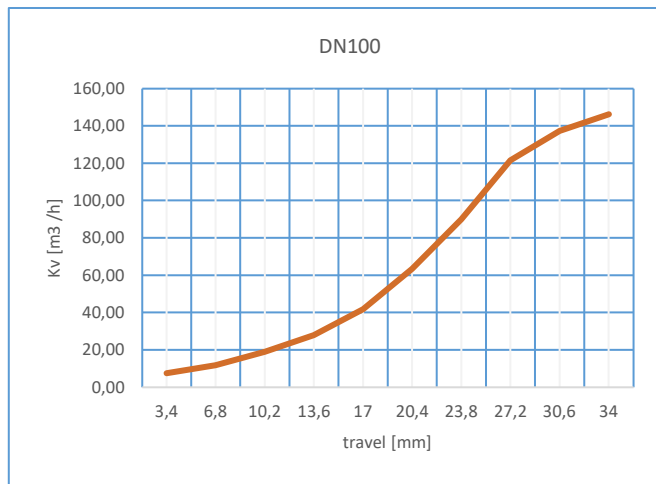
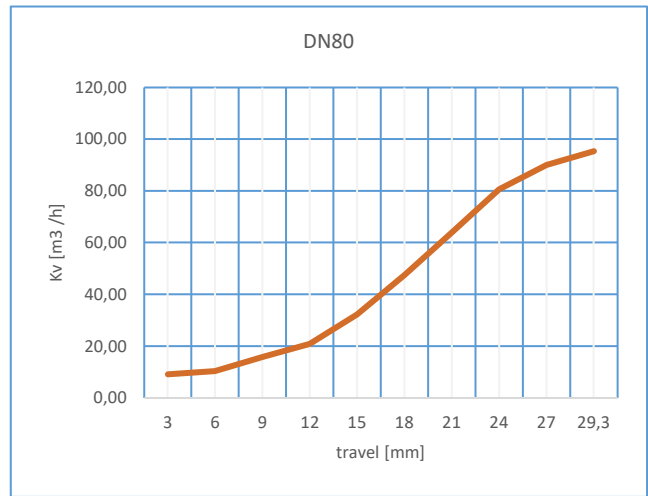
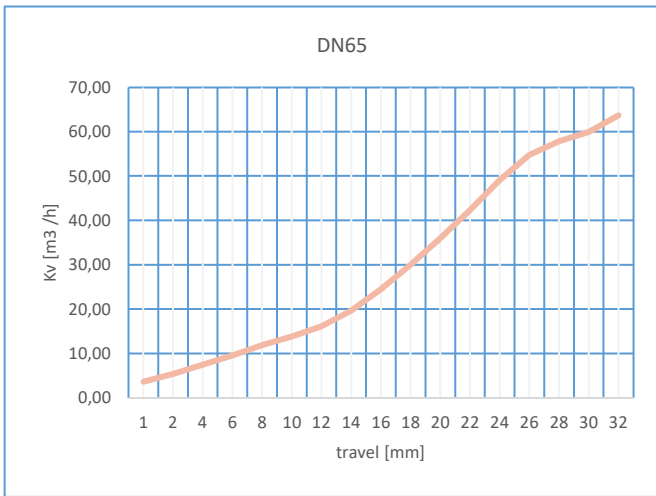
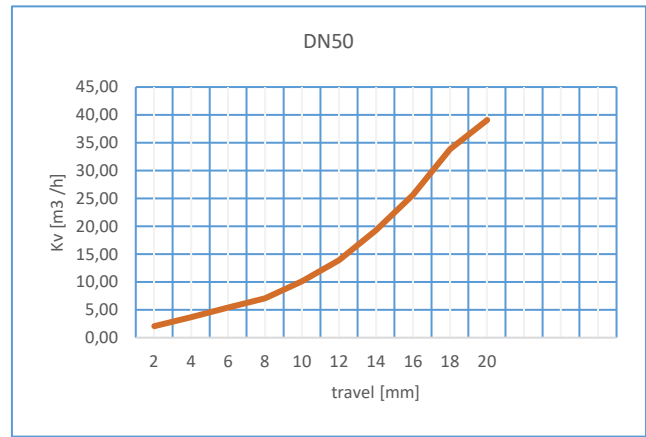
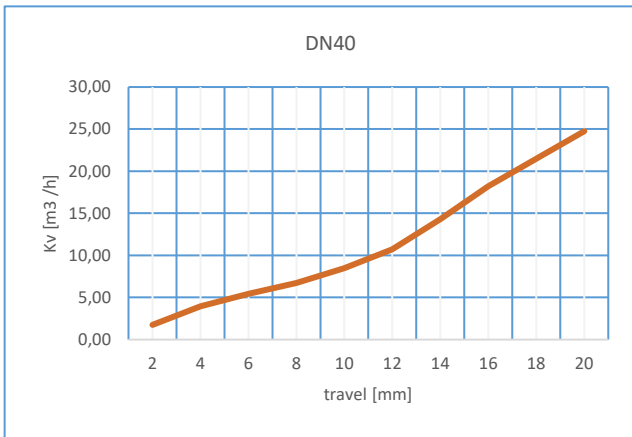
HYDRAULIC CHARACTERISTICS PN16, PN25



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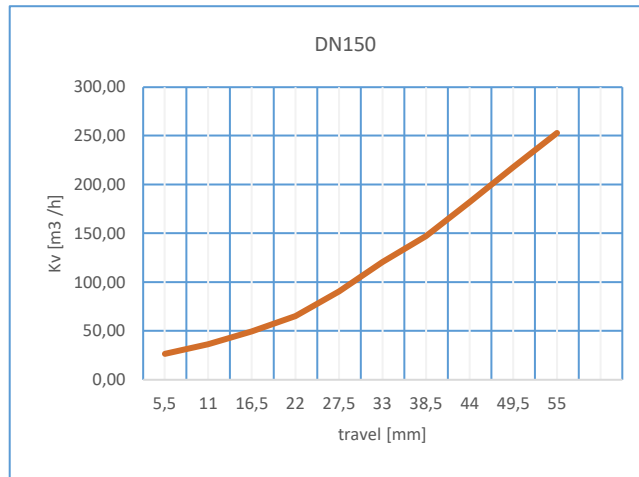
FIG.236



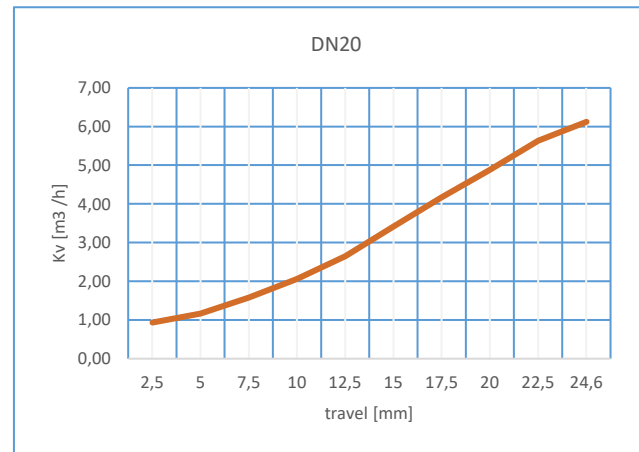
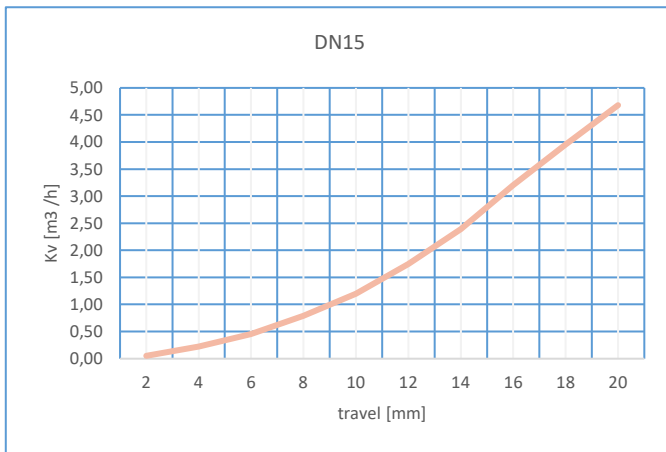
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FIG.236



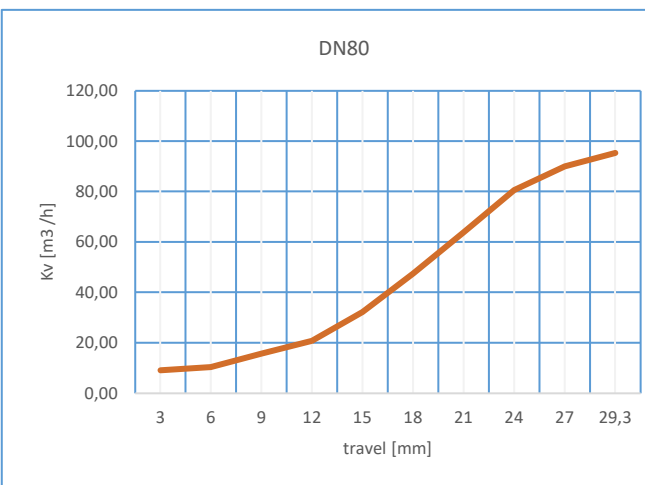
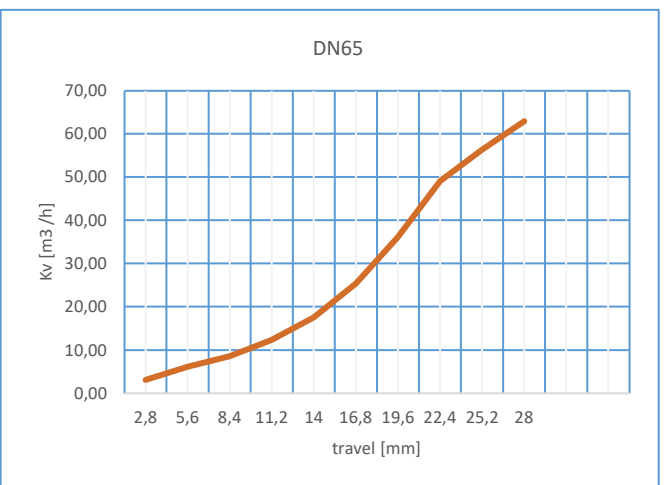
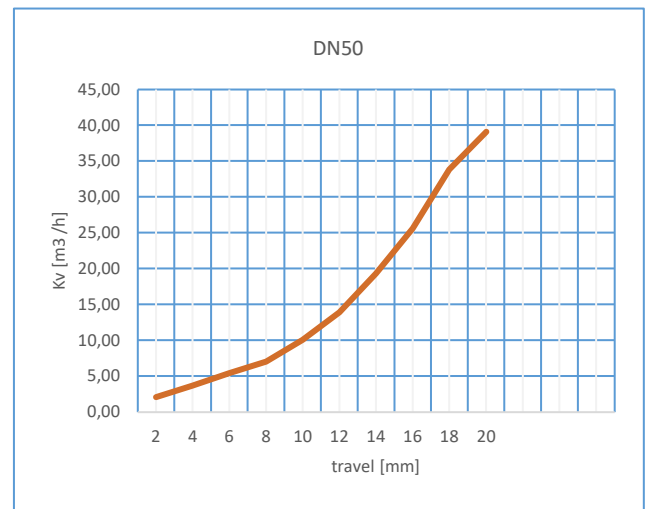
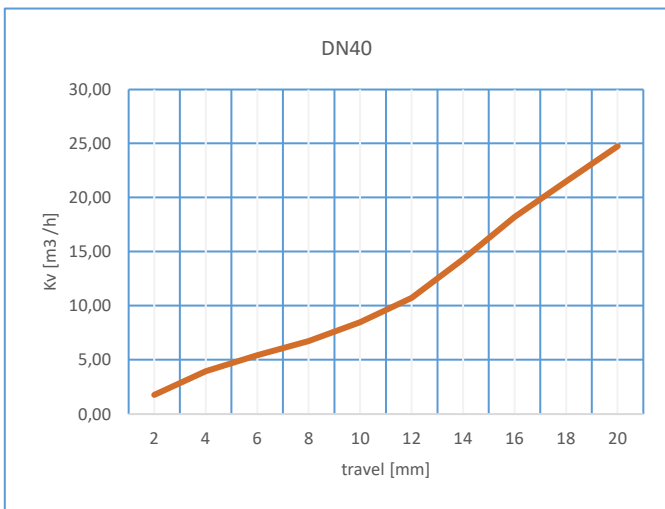
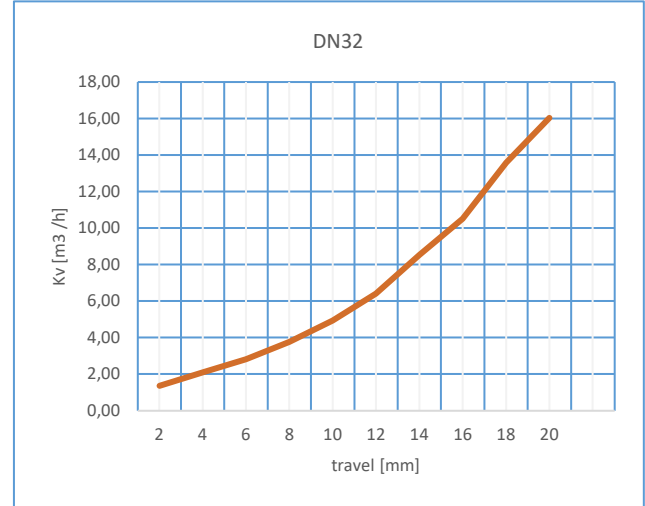
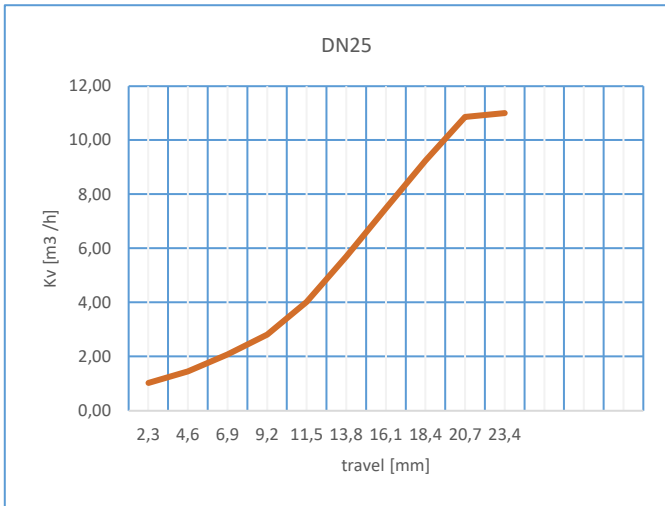
HYDRAULIC CHARACTERISTICS PN 40



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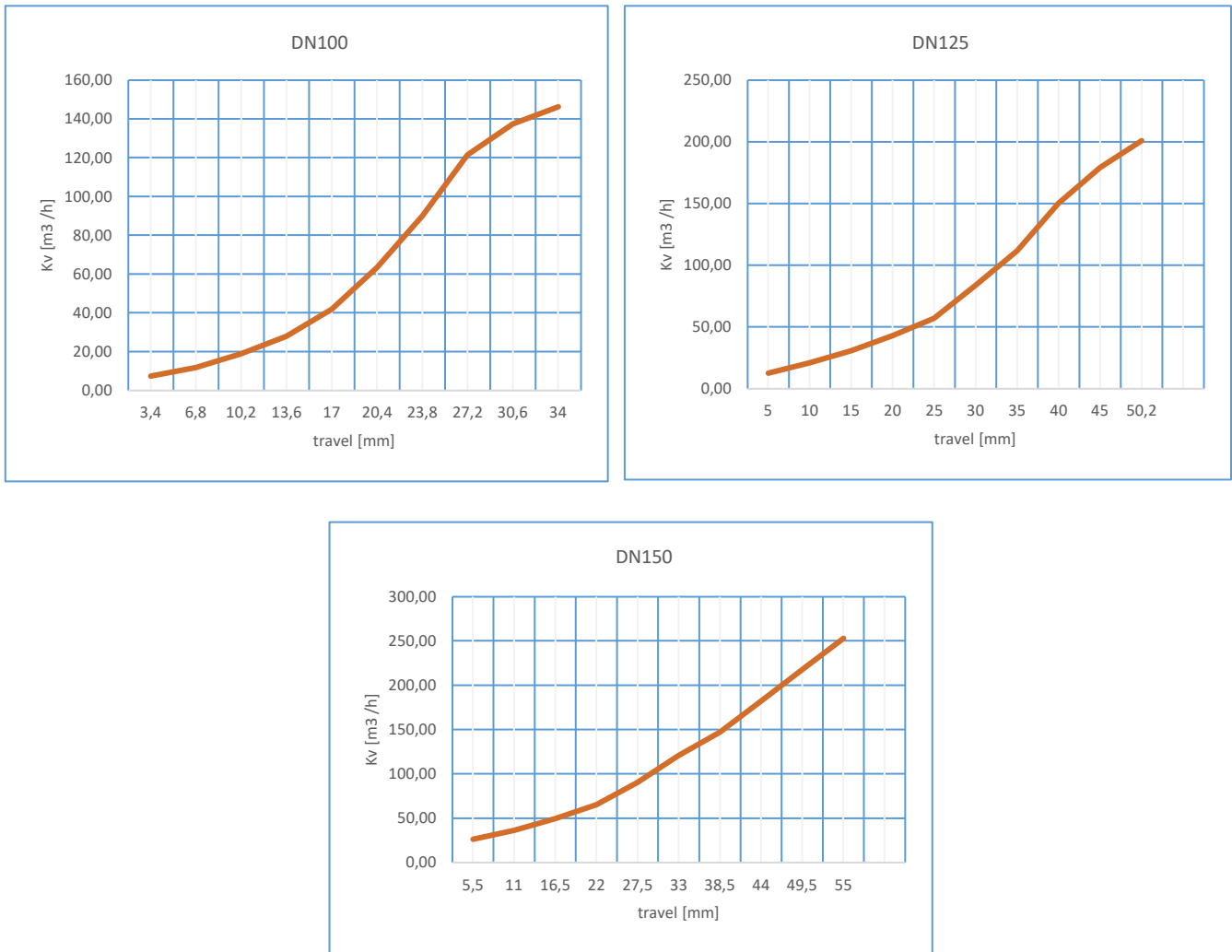
FIG.236



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FIG.236



EQUIPMENT

STANDARD EQUIPMENT OF CONTROL VALVE WITH PNEUMATIC ACTUATOR AND POSITIONER:

- pneumatic actuator produced in two versions: SPZ, SPO
detailed data in the documentation DTR pneumatic actuators
- positioner produced in two versions
detailed data in the documentation DTR positioner PZ2000

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FIG.236

TYPE

| Figure | Body material | Nominal diameter | Nominal pressure | Type | | |
|--------|--|------------------|-----------------------------------|--|-------------|--|
| 236 | A Grey cast iron EN-GJL-250 | 15-32 mm | C 16 bar | A21 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPZ280 | | |
| | | 20-65 mm | C 16 bar | B21 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPZ530 | | |
| | | 40-100 mm | C 16 bar | C21 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPZ1000 | | |
| | | 15-50 mm | C 16 bar | A31 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPO280 | | |
| | | 50-100 mm | C 16 bar | B31 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPO530 | | |
| | | 65-150 mm | C 16 bar | C31 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPO1000 | | |
| 236 | C Nodular cast iron EN-GJS-400-18-LT | 15-32 mm | C 16 bar | A21 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPZ280 | | |
| | | 20-65 mm | C 16 bar | B21 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPZ530 | | |
| | | 40-100 mm | C 16 bar | C21 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPZ1000 | | |
| | | 15-50 mm | C 16 bar | A31 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPO280 | | |
| | | 50-100 mm | C 16 bar | B31 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPO530 | | |
| | | 65-150 mm | C 16 bar | C31 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPO1000 | | |
| | | 15-32 mm | D 25 bar | A21 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPZ280 | | |
| | | 20-65 mm | D 25 bar | B21 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPZ530 | | |
| | | 40-100 mm | D 25 bar | C21 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPZ1000 | | |
| | | 15-50 mm | D 25 bar | A31 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPO280 | | |
| | | 50-100 mm | D 25 bar | B31 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPO530 | | |
| | | 65-150 mm | D 25 bar | C31 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPO1000 | | |
| | | 236 | F Cast steel GP240GH 1.0619 | 15-32 mm | E 40 bar | A21 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPZ280 |
| | | | | 20-65 mm | E 40 bar | B21 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPZ530 |
| | | | | 40-100 mm | E 40 bar | C21 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPZ1000 |
| | | | | 15-50 mm | E 40 bar | A31 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPO280 |
| | | | | 50-100 mm | E 40 bar | B31 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPO530 |
| | | | | 65-150 mm | E 40 bar | C31 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPO1000 |

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ORDERING

| Figure | Body material | Nominal diameter | Nominal pressure | Type |
|--------|-----------------------------------|------------------|------------------|---|
| 236 | A Grey cast iron EN-GJL-250 | 15-50 mm | C 16 bar | A21 bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPZ280 |

Order example acc. index

236 A 050 C A21

Bellow control valve with pneumatic actuator and positioner

Grey cast iron EN-GJL-250

Nominal diameter (mm)

Nominal pressure PN 16

Bellow control valve; SRI 986 – electro-pneumatic positioner or SRD998 – intelligent positioner; pneumatic actuator SPZ280

236

A

050

C

A21

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