

**Characteristics**

Pilot operated pressure relief valves for in-line mounting series R4V have a similar design to the subplate mounted R4V series. For single functions - where no manifold blocks are used - the valves can be directly placed in the pipework.

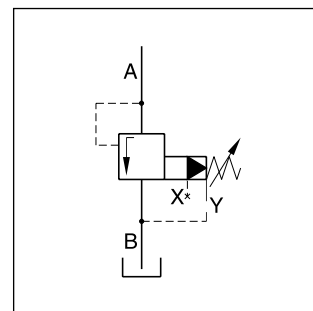
The R4V valves are available with 2 ports (L-body) for in-line relief function or with 3 ports (T-body) for relief functions in the bypass.

**Features**

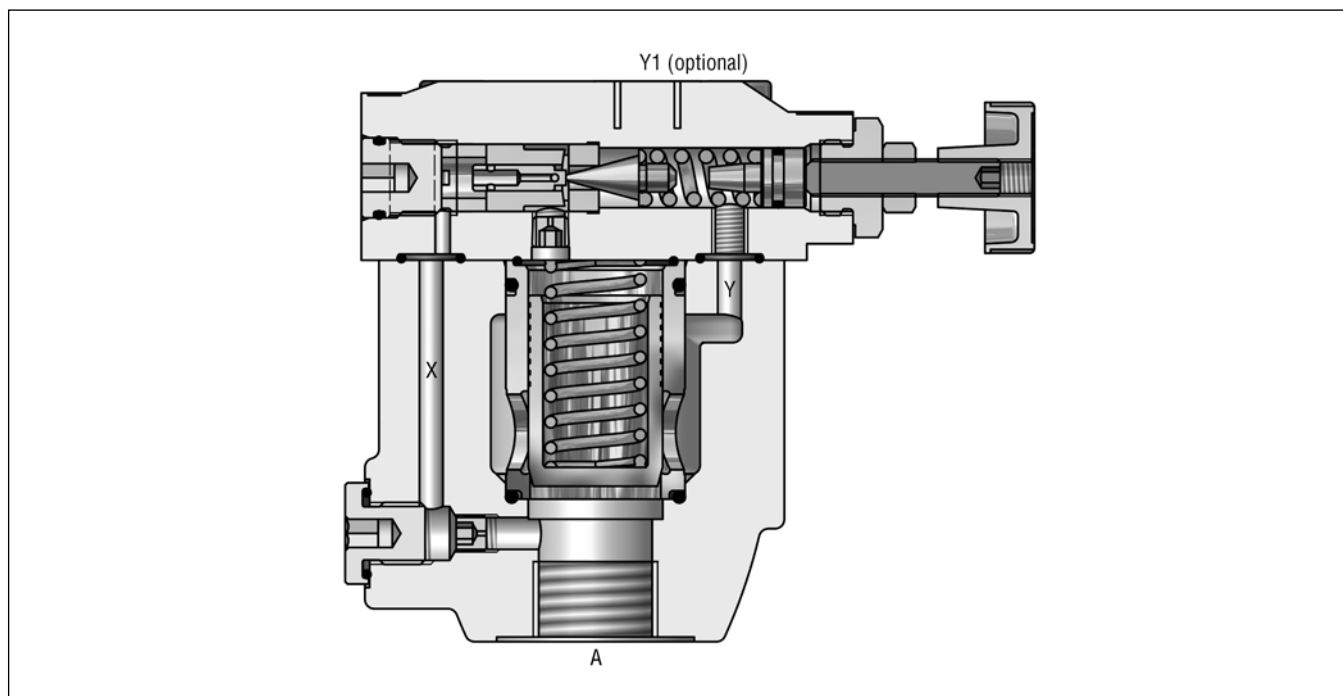
- Pilot operated with manual adjustment
- 2 interfaces
  - L-body (R4V06-G $\frac{3}{4}$ ", R4V10-G1 $\frac{1}{4}$ "")
  - T-body (R4V03-G $\frac{1}{2}$ ", R4V06-G1"")
- 3 pressure stages
- 3 adjustment modes
  - Hand knob
  - Acorn nut with lead seal
  - Key lock
- With optional vent function



R4V10 L-body



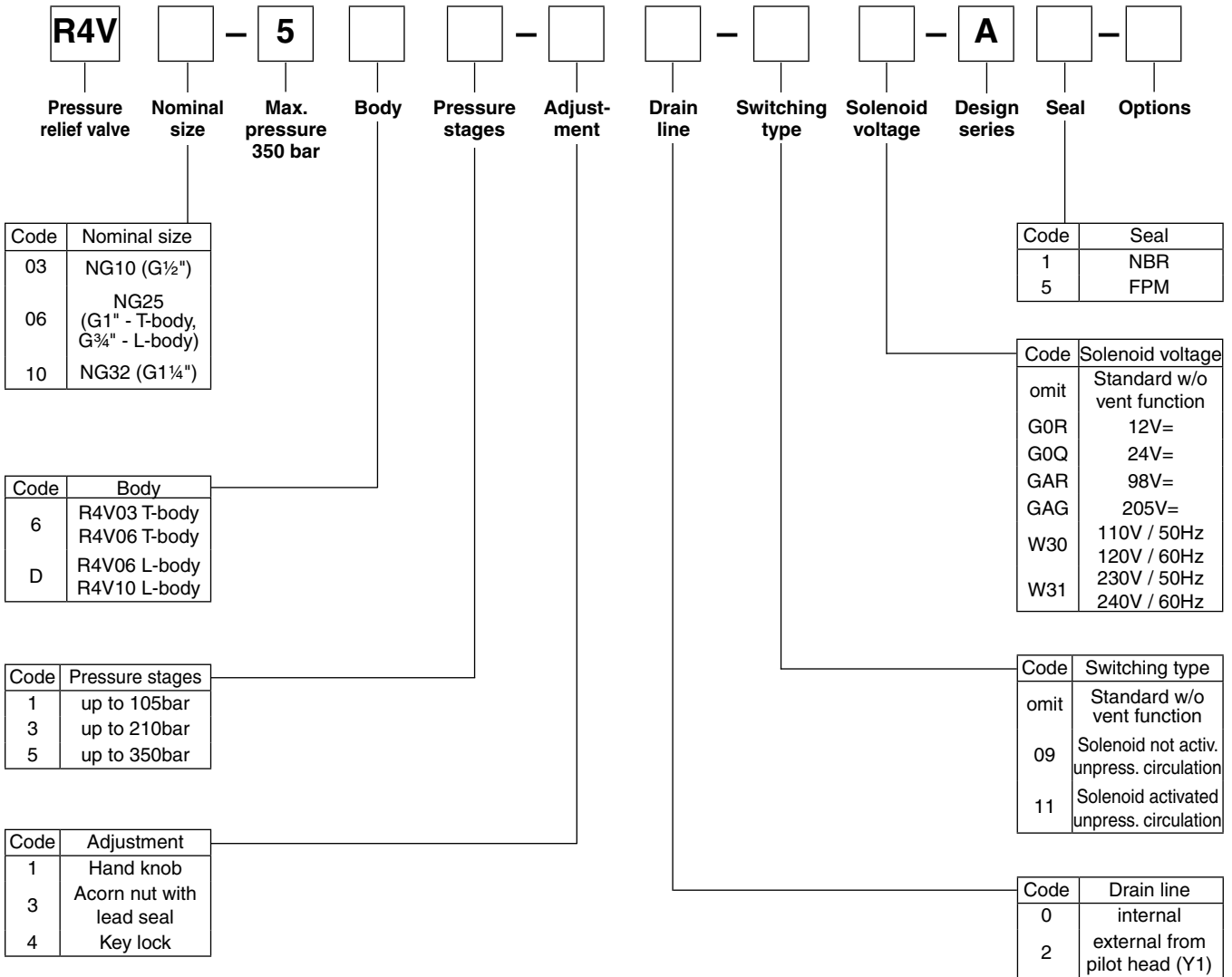
**R4V06 L-body**



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**Ordering Code**

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**Technical Data**

**R4V**

| General                 | T-body                                      |   | L-body  |          |     |
|-------------------------|---|---|---------|----------|-----|
|                         | 03 (½")                                     | 06 (1")                                       | 06 (¾") | 10 (1¼") |     |
| Size                    |   |   |         |          |     |
| Mounting                | Threaded body                               |   |         |          |     |
| Mounting position       | unrestricted                                |   |         |          |     |
| Ambient temperature     | [°C]  | -20...+50                                     |         |          |     |
| Weight                  | [kg]  | 3.2   | 6.6     | 3.3      | 5.6 |
| <b>Hydraulic</b>        |   |   |         |          |     |
| Max. operating pressure | [bar]                                       | Ports A and X up to 350; Ports B and Y 30 bar |         |          |     |
| Pressure stages         | [bar]                                       | 105, 210, 350                                 |         |          |     |
| Nominal flow            | [l/min]                                     | 60  | 200     | 200      | 450 |
| Fluid                   | Hydraulic oil as per DIN 51524...525        |   |         |          |     |
| Fluid temperature       | [°C]  | -20...+80                                     |         |          |     |
| Viscosity permitted     | [cSt]/[mm²/s]                               | 10...650                                      |         |          |     |
| Viscosity recommended   | [cSt]/[mm²/s]                               | 30  |         |          |     |
| Filtration              | ISO 4406 (1999) 18/16/13 (acc. NAS 1638: 7) |   |         |          |     |

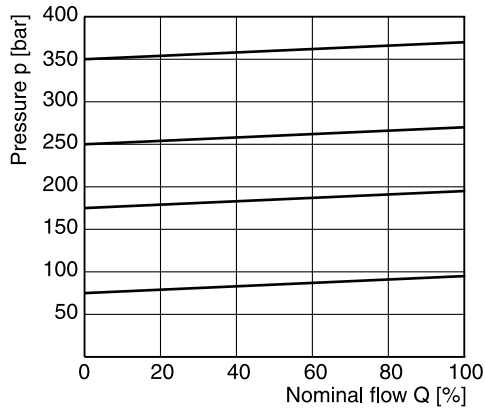
**R4V with vent function**

| General                 | T-body                                      |   | L-body  |          |     |
|-------------------------|---|---|---------|----------|-----|
|                         | 03 (½")                                     | 06 (1")                                   | 06 (¾") | 10 (1¼") |     |
| Size                    |   |   |         |          |     |
| Mounting                | Threaded body                               |   |         |          |     |
| Mounting position       | unrestricted                                |   |         |          |     |
| Ambient temperature     | [°C]  | -20...+50                                 |         |          |     |
| Weight                  | [kg]  | 4.9                                       | 8.3     | 5.0      | 7.3 |
| <b>Hydraulic</b>        |   |   |         |          |     |
| Max. operating pressure | [bar]                                       | Ports A and X up to 350; Ports B and Y 30 |         |          |     |
| Pressure stages         | [bar]                                       | 105, 210, 350                             |         |          |     |
| Nominal flow            | [l/min]                                     | 60  | 200     | 200      | 450 |
| Fluid                   | Hydraulic oil as per DIN 51524...525        |   |         |          |     |
| Fluid temperature       | [°C]  | -20...+80                                 |         |          |     |
| Viscosity permitted     | [cSt]/[mm²/s]                               | 10...650                                  |         |          |     |
| Viscosity recommended   | [cSt]/[mm²/s]                               | 30  |         |          |     |
| Filtration              | ISO 4406 (1999) 18/16/13 (acc. NAS 1638: 7) |   |         |          |     |

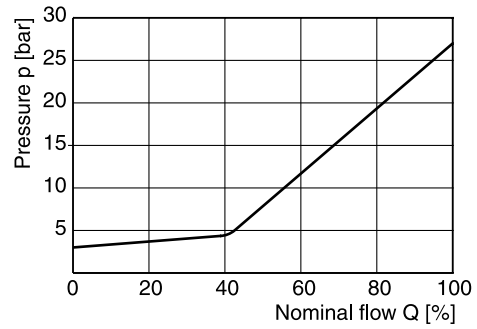
| Electrical (solenoid)    |  |  |          |          |          |                            |                            |
|--------------------------|--|--|----------|----------|----------|----------------------------|----------------------------|
| Duty ratio               | [%]  | 100  |          |          |          |                            |                            |
| Response time            | [ms]   | Energized / de-energized AC: 20/18 , DC: 46/27 |          |          |          |                            |                            |
|                          | Code   | G0R  | G0Q      | GAR      | GAG      | W30                        | W31                        |
| Supply voltage           | [V]  | 12V =  | 24V =    | 98V =    | 205V =   | 110 at 50Hz<br>120 at 60Hz | 230 at 50Hz<br>240 at 60Hz |
| Tolerance supply voltage | [%]  | +5...-10                                       | +5...-10 | +5...-10 | +5...-10 | +5...-10                   | +5...-10                   |
| Power consumption hold   | [W]  | 31   | 31       | 31       | 31       | 78                         | 78                         |
| in rush                  | [W]  | 31   | 31       | 31       | 31       | 264                        | 264                        |
| Max. switching frequency | AC: up to 7.200, DC: up to 16.000 switchings/hour      |  |          |          |          |                            |                            |
| Solenoid connection      | Connector as per EN175301-803                          |  |          |          |          |                            |                            |
| Protection class         | IP65 in accordance with EN 60529 (plugged and mounted) |  |          |          |          |                            |                            |
| Coil insulation class    | H (180 °C)   |  |          |          |          |                            |                            |

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**p/Q performance curve Series R4V <sup>1)</sup>**



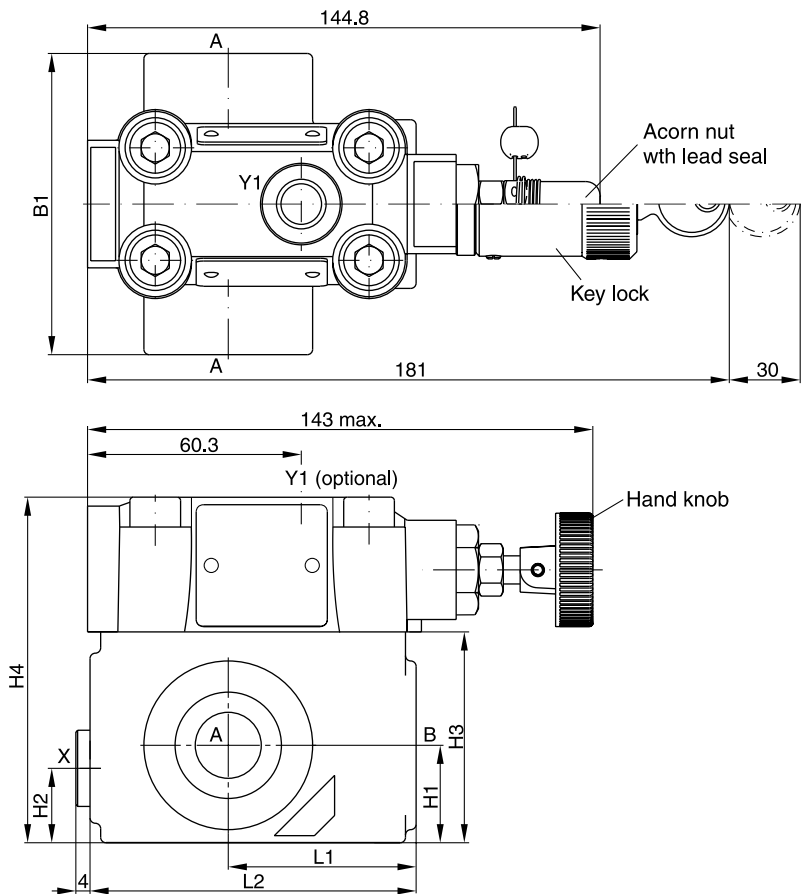
**Minimum pressure curve**



1) The performance curves are measured with external drain. For internal drain the tank pressure has to be added to curve.

**Dimensions R4V\*06**

**T-body**

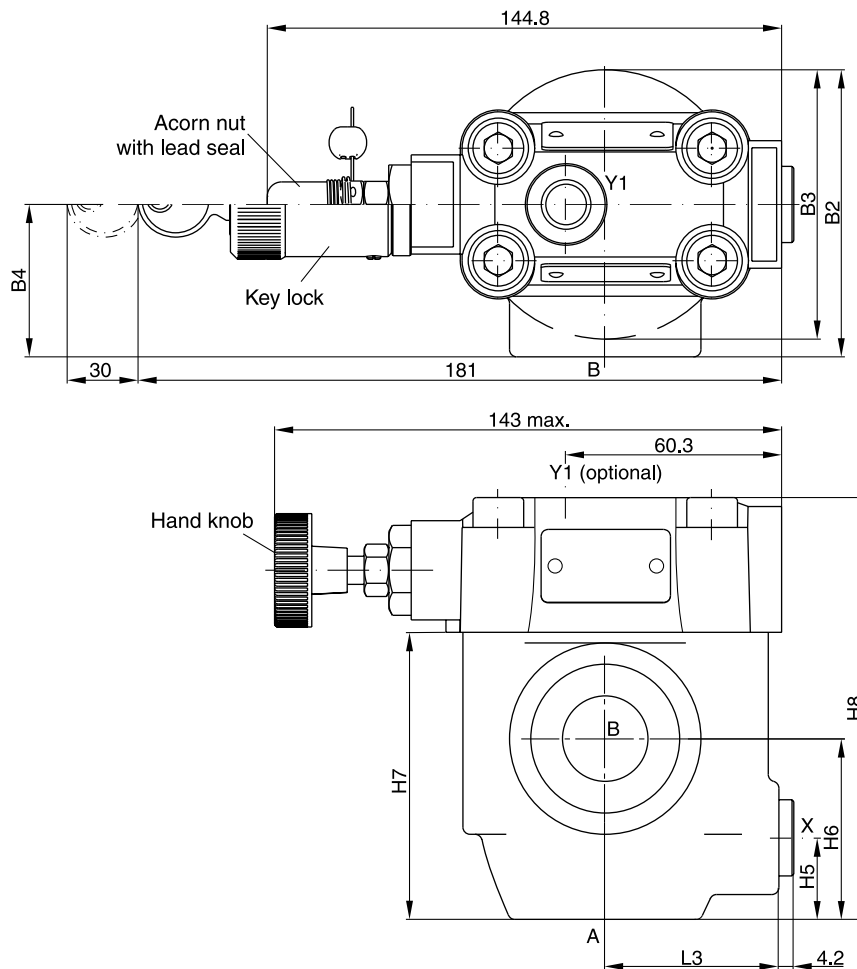


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**Dimensions**

**Dimensions R4V\*06**

**L-body**



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| NG | Body   | B1  | B2    | B3   | B4   | H1   | H2 | H3   | H4   | H5   | H6   | H7 | H8  | L1   | L2    | L3   |
|----|--------|-----|-------|------|------|------|----|------|------|------|------|----|-----|------|-------|------|
| 03 | T-body | 85  | -     | -    | -    | 27.5 | 21 | 59.5 | 97.5 | -    | -    | -  | -   | 53   | 92    | -    |
| 06 | T-body | 136 | -     | -    | -    | 38   | 28 | 93   | 131  | -    | -    | -  | -   | 66.5 | 117.5 | -    |
| 06 | L-body | -   | 81    | 76   | 43   | -    | -  | -    | -    | 23   | 51   | 81 | 119 | -    | -     | 49   |
| 10 | L-body | -   | 120.7 | 85.8 | 77.8 | -    | -  | -    | -    | 31.8 | 50.8 | 96 | 134 | -    | -     | 49.8 |

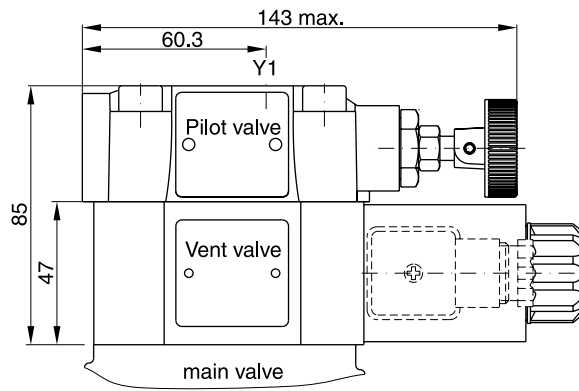
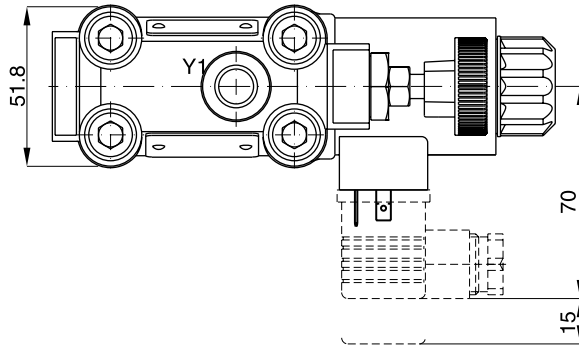
| Ports            | Function                               | Port size         |                   |              |                    |
|------------------|--|-------------------|-------------------|--------------|--------------------|
|                  |  | R4V03 T-body      | R4V06 L-body      | R4V06 T-body | R4V10 L-body       |
| A                | pressure (inlet)                       | G $\frac{1}{2}$ " | G $\frac{3}{4}$ " | G1 "         | G1 $\frac{1}{4}$ " |
| B                | tank (outlet)                          | G $\frac{1}{2}$ " | G $\frac{3}{4}$ " | G1 "         | G1 $\frac{1}{4}$ " |
| X <sup>1)</sup>  | ext. remote control or vent connection | G $\frac{1}{4}$ " |                   |              |                    |
| Y1 <sup>2)</sup> | external drain                         |                   |                   |              |                    |

<sup>1)</sup> closed when supplied

<sup>2)</sup> port Y1 is only available at drain line (code2) external from the pilot head

**Dimensions**

**Dimensions R4V with vent function**



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| Code | Internal drain | External drain |
|------|----------------|----------------|
| 11   |                |                |
| 09   |                |                |