The compact rotary 4-way mixing valve series VRG140 is available in DN 15–50, and is made of brass, PN10. Two types of connections are available: internal thread and external thread. Registered design.

**OPERATION**
The ESBE series VRG140 is a range of compact low leakage mixing valves made of special brass alloys allowing use in heating and cooling installations.

For easy manual operation the valves are equipped with non-slip knobs and end stops for an operation angle of 90°. The valve position scale can be turned over and rotated, allowing many different mounting positions. Together with actuator series ESBE ARA600, the VRG140 valves are also easily automated and have good regulating accuracy thanks to the unique valve-to-actuator interface. For more advanced control functions, the ESBE controllers allow even more applications.

ESBE VRG140 valves are available in dimensions DN 15 – 50 with internal thread and external thread.

**SERVICE AND MAINTENANCE**
The slender and compact design of the valve allows for easy tool access when assembling and disassembling the valve.

Repair kits are available for key components.

**INSTALLATION EXAMPLES**
All the examples of installation can be mirrored. The valve position scale can be turned over and rotated to fit a number of installation layouts and should at the installation be fitted in the correct position as shown in the instruction for installation. The symbol markings of the valve ports (●▲■) minimize the risk of incorrect installation.

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**TECHNICAL DATA**
- Pressure class: PN 10
- Media temperature:
  - max. (continuously) +100°C
  - max. (temporarily) +130°C
  - min. -10°C
- Torque (at nominal pressure):
  - DN15–32: < 3 Nm
  - DN40–50: < 5 Nm
- Leakrate in % of flow*: < 1.0%
- Working pressure: 1 MPa (10 bar)
- Max. differential pressure drop: 100 kPa (1 bar)
- Close off pressure: 100 kPa (1 bar)
- Rangeability Kv/Kvmin, a-aB: 100
- Connections: Internal thread, EN 10226-1
- External thread, ISO 228/1
- Material:
  - Valve body: dezincification resistant brass DZR
  - Slide: Abrasion resistant brass
  - Shaft and bushing: PPS composite
  - O-rings: EPDM

PED 97/23/EC, article 3.3

**VALVE CHARACTERISTICS**

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**SERIES VRG140 DESIGNED FOR**
- Heating
- Comfort cooling
- Potable water
- Floor heating
- Solar heating
- Ventilation
- Zone
- District hot water
- District heating
- District cooling

**SUITE ACTUATORS AND CONTROLLERS**
- Series ARA600
- Series 90*
  - * Adaptor kit necessary, see product page
- Series 90C
- Series CRC110
- Series CRB100
- Series CRA110
**ROTARY MOTORIZED VALVES**

**MIXING VALVE**

**SERIES VRG140**

- **From boiler**
- **Riser**
- **Return line**
- **To boiler**

The flat-sided spindle top points towards the sleeve position.

### SERIES VRG141, INTERNAL THREAD

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<thead>
<tr>
<th>Art. No.</th>
<th>Reference</th>
<th>DN</th>
<th>Kvs*</th>
<th>Connection</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Weight [kg]</th>
<th>Note</th>
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### SERIES VRG142, EXTERNAL THREAD

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* Kvs-value in m³/h at a pressure drop of 1 bar. Flow chart, see product catalogue.