



KBV21i and KBV40i Key Operated Boiler Blowdown Valves

Description

The key operated boiler blowdown valve consists of a carbon steel reduced bore ball valve with carbon reinforced PTFE seats and a key operated mechanism in stainless steel. Two types of key are sold as optional extras and are available as follows:

- **Standard length key.**
- **Extended length 'T' bar type key** for use where access to the valve is limited.

To ensure compliance with boiler regulations the key cannot be removed when the valve is open.

Note: The standard length key and extended length 'T' bar type key are sold separately. It is recommended that an extended length 'T' bar type key is purchased for valve sizes DN50 and DN65.

Standards

These products comply with the requirements of the European Pressure Equipment Directive 2014/68/EU and carries the  mark when so required.

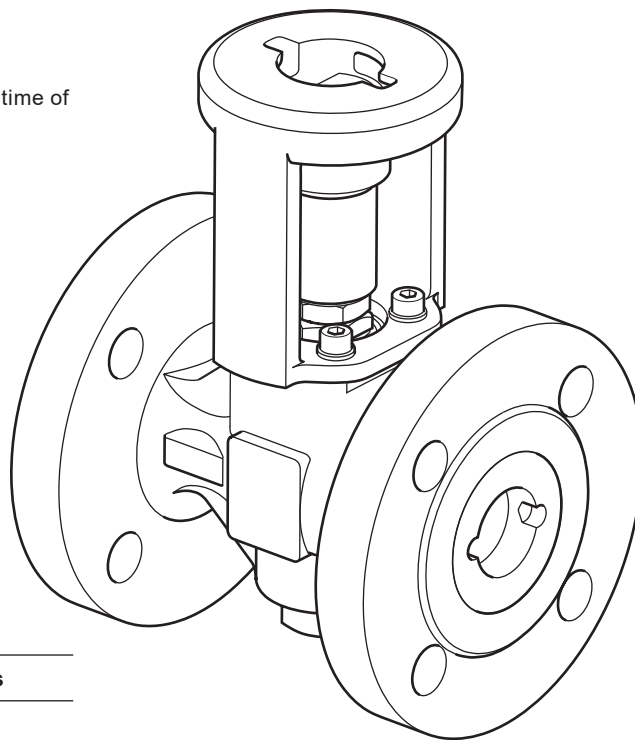
ISO mounting in accordance with ISO 5211.

Antistatic device complying with ISO 7121 and BS 5351.

Certification

These products are available with certification to EN 10204 3.1.

Note: All certification / inspection requirements must be stated at the time of order placement.



Sizes and pipe connections

DN25, DN32, DN40, DN50 and DN65

Flanged PN40 (F4), PN40 (BS) or ASME (ANSI) B 16.5 Class 300.

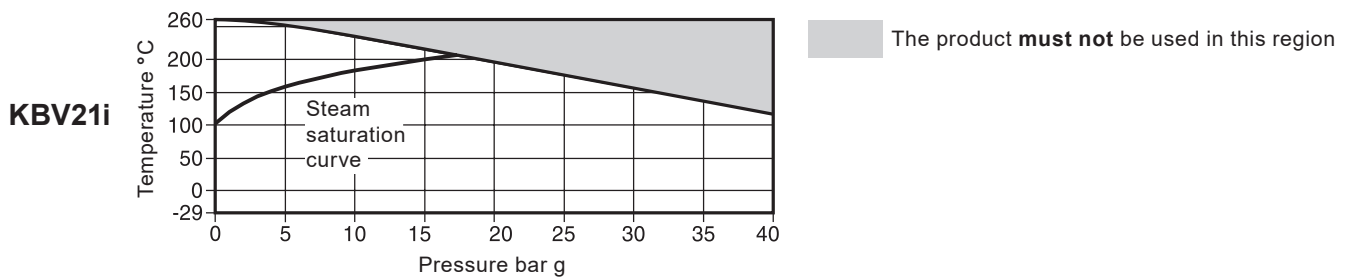
Available flange options:

Flange	Face-to-face	Flange thickness
PN40 (F4)	DIN 3002 F4	EN 1092 Part 1
PN40 (BS)	BS 2080	EN 1092 Part 1
ASME (ANSI) 300	ASME B 16.10	ASME B 16.5

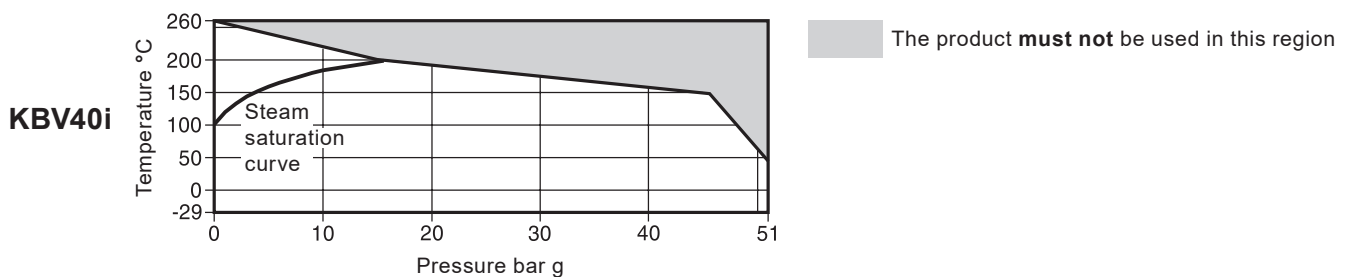
Materials

Body and insert	Zinc plated carbon steel	ASTM A216 WCB	
Stem seals	Antistatic R-PTFE		
Vented ball	Austenitic stainless steel	AISI 316	
Stem	DN65	Austenitic stainless steel	AISI 316
	DN25 - DN50	Martensitic stainless steel	AISI 420
Seats	Carbon and graphite reinforced PTFE	PDR 0.8	

Pressure / temperature limits



Body design conditions	PN40
PMA Maximum allowable pressure	40 bar g @ 120°C
TMA Maximum allowable temperature	260°C @ 0 bar g
Minimum allowable temperature	-29°C
PMO Maximum operating pressure for saturated steam service	17.25 bar g
TMO Maximum operating temperature	260°C @ 0 bar g
Minimum operating temperature. Note: For lower operating temperatures consult Spirax Sarco	-29°C
Δ PMX Maximum differential pressure is limited to the PMO	
Designed for a maximum cold hydraulic test pressure of :	60 bar g



Body design conditions	ASME 300
PMA Maximum allowable pressure	51 bar g @ 38°C
TMA Maximum allowable temperature	260°C @ 0 bar g
Minimum allowable temperature	-29°C
PMO Maximum operating pressure for saturated steam service	17.25 bar g
TMO Maximum operating temperature	260°C @ 0 bar g
Minimum operating temperature. Note: For lower operating temperatures consult Spirax Sarco	-29°C
Δ PMX Maximum differential pressure is limited to the PMO	
Designed for a maximum cold hydraulic test pressure of :	76.5 bar g

Valve coefficients

Size	DN25	DN32	DN40	DN50	DN65
Kv value	30	40	81	103	197

How to specify

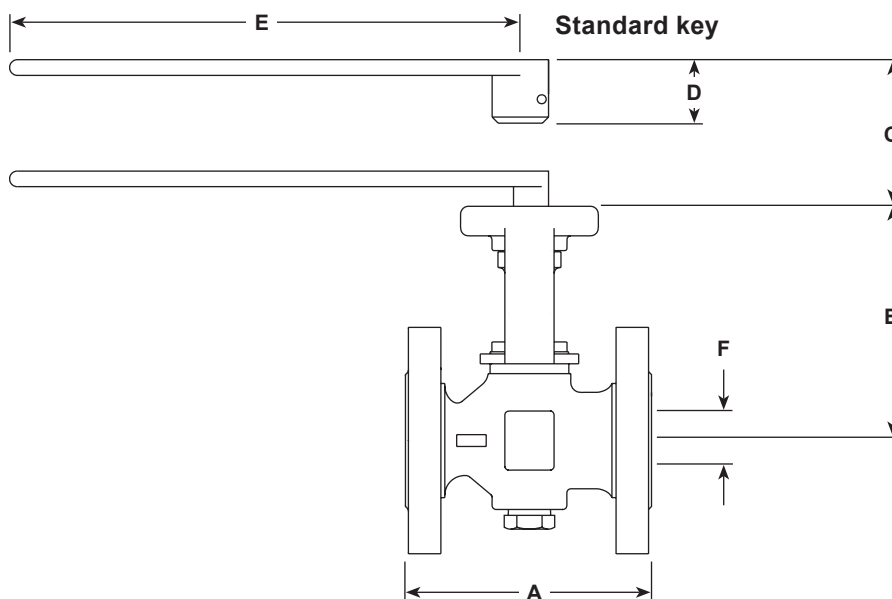
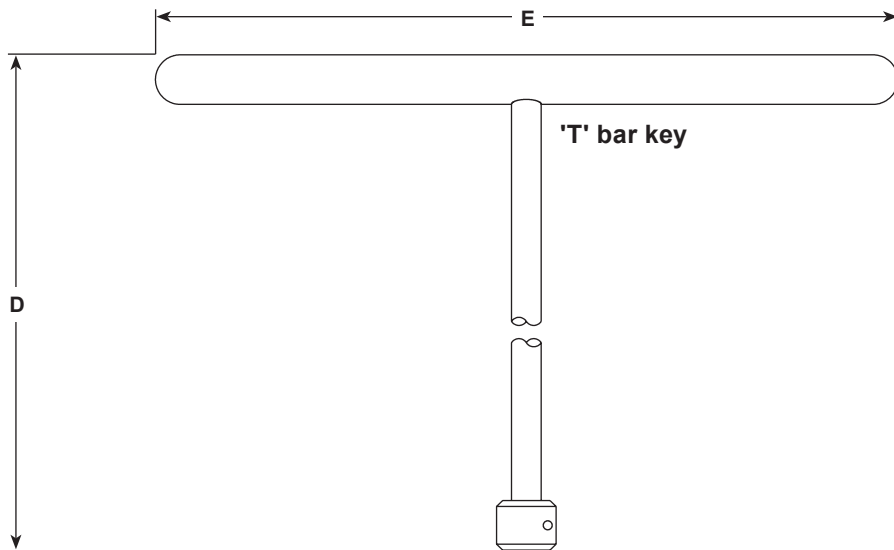
DN40 key operated boiler blowdown valve, flanged PN40 with carbon reinforced seats and stainless steel key.

How to order

Example: 1 off Spirax Sarco DN40 KBV21i key operated boiler blowdown valve having PN40 (F4) flanged connections.

Dimensions/weights (approximate) in mm and kg

Valve size	Flange	A	B	C	D	E	F	Weight
DN25	F4	125	119	35			19	3.9
	BS	165	119	35			19	4.1
	A300	165	119	35			19	4.3
DN32	F4	130	130	35			25	5.3
	BS	178	130	35			25	5.7
	A300	178	130	35			25	5.5
DN40	F4	140	131	35			30	6.7
	BS	190	131	35			30	7.1
	A300	190	131	35			30	8.0
DN50	F4	150	139	35			37	9.0
	BS	216	139	35			37	9.9
	A300	216	139	35			37	10.1
DN65	F4	170	140	35			50	12.4
	BS	241	140	35			50	13.9
	A300	241	140	35			50	15.0
Standard length key					32	258		0.4
Extended length 'T' bar key					500	375		0.9



Spare parts - DN25 to DN50

The spare parts available are shown in solid outline. Parts drawn in a grey line are not supplied as spares.

To ensure correct operation and maintain the warranty, use only Spirax Sarco original parts.

Before actioning any maintenance programme observe the 'Safety Information' in Section 1 of the Information and Maintenance Instructions IM-P405-48 supplied with the unit.

Available spares

Seats, insert 'O' ring and stem seals	5, 6, 9, 10
Insert tool - Required to aid the removal of the ball valve insert (2)	Not shown

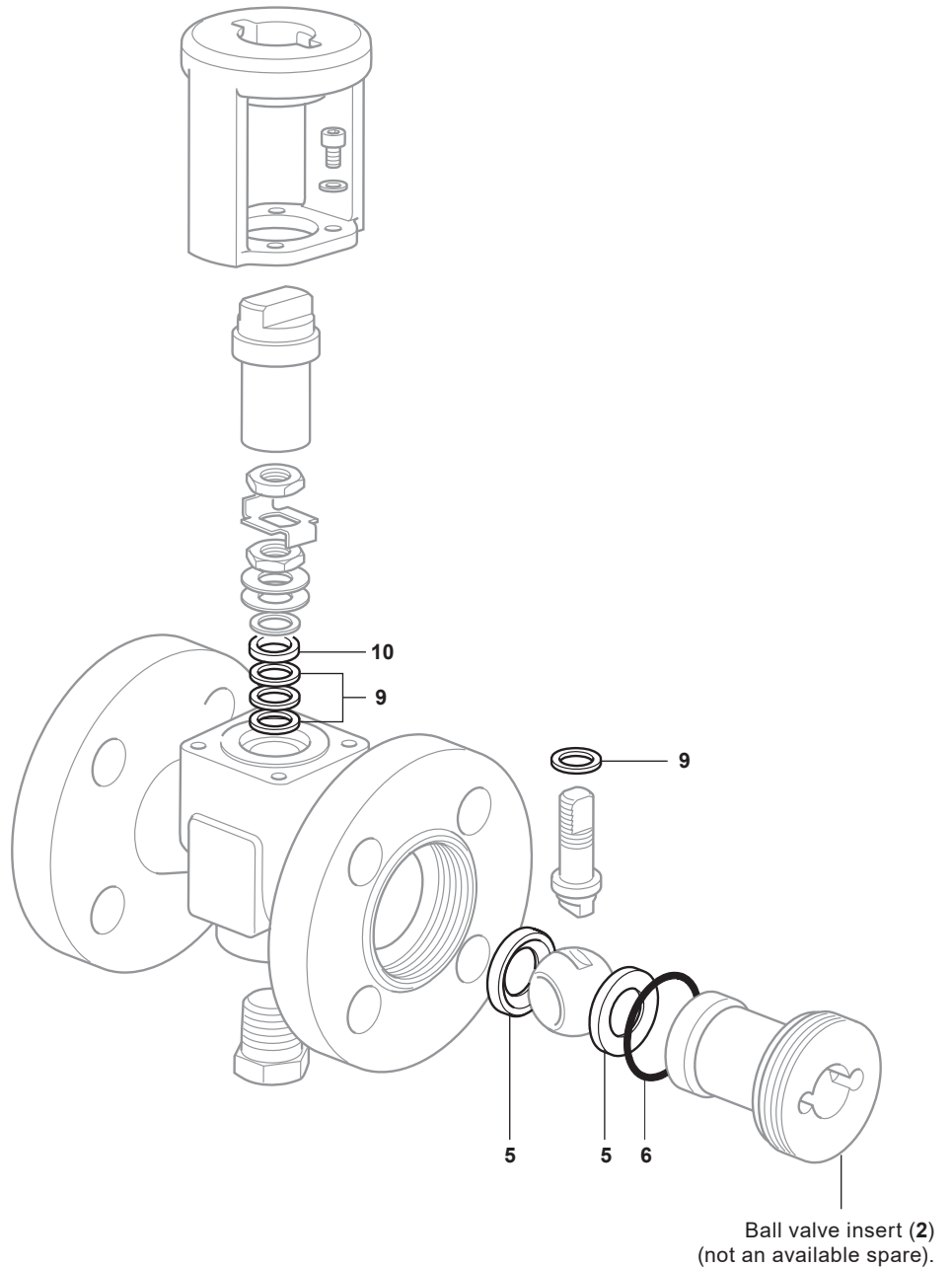
Please note: Spare parts are common for both the KBV21i and KBV40i.

Caution - The ball must be installed with the vent hole on the upstream side of the valve.

How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the size and type of ball valve.

Example: 1 set of seats, insert 'O' ring and stem seals for a Spirax Sarco DN50 KBV21i boiler blowdown valve.



Please note: You will need to order the **Insert tool** listed in the table above to aid removal.

Spare parts - DN65

The spare parts available are shown in solid outline. Parts drawn in a grey line are not supplied as spares.

To ensure correct operation and maintain the warranty, use only Spirax Sarco original parts.

Before actioning any maintenance programme observe the 'Safety Information' in Section 1 of the Information and Maintenance Instructions IM-P405-48 supplied with the unit.

Available spares

Seats, insert 'O' ring, seat 'O' ring, stem 'O' ring, lower stem seals and upper stem packing	5, 6, 7, 8, 11, 12
Insert tool - Required to aid the removal of the ball valve insert (2)	Not shown

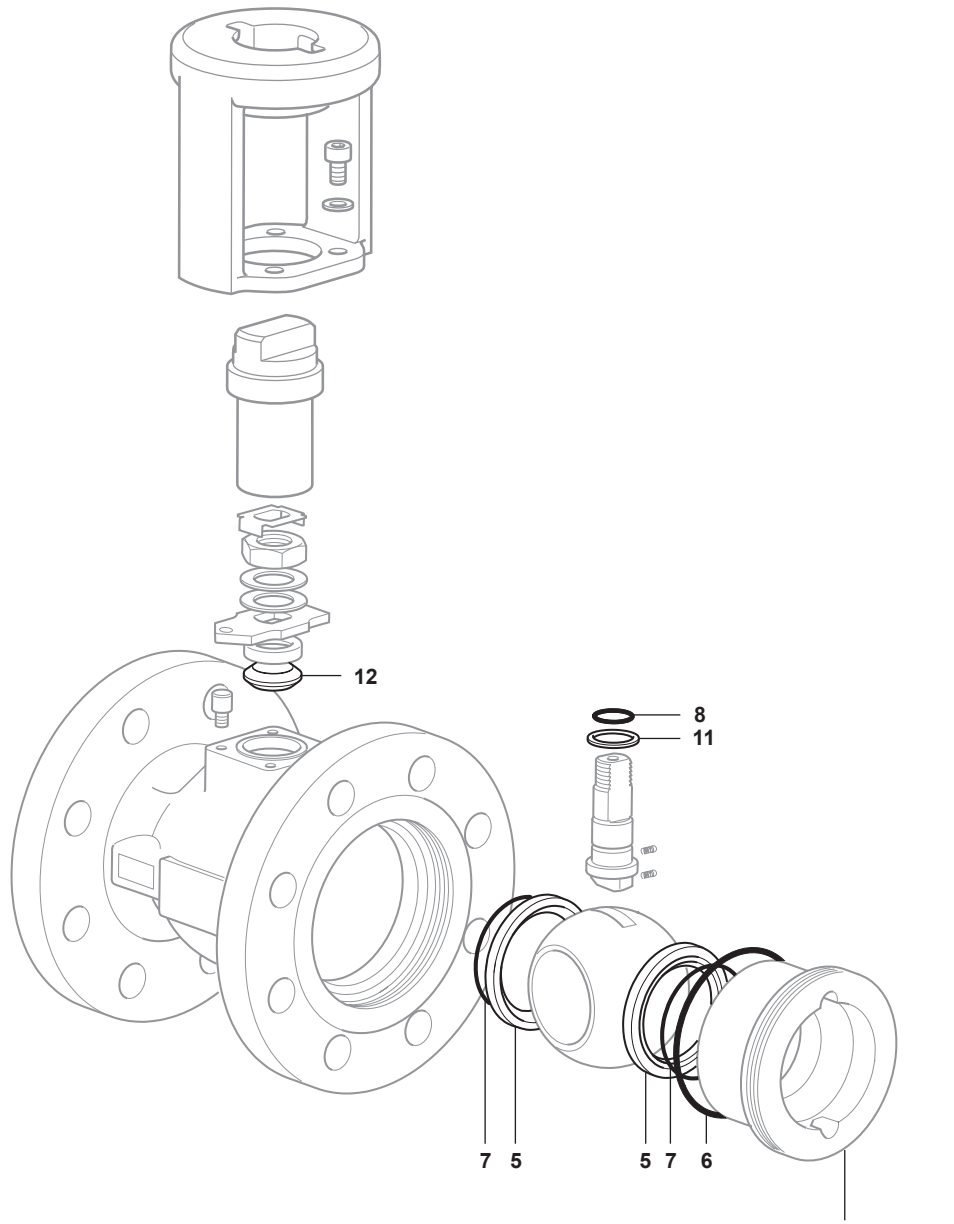
Please note: Spare parts are common for both the KBV21i and KBV40i.

Caution - The ball must be installed with the vent hole on the upstream side of the valve.

How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the size and type of ball valve.

Example: 1 set of seats, insert 'O' ring, seat 'O' ring, stem 'O' ring, lower stem seals and upper stem packing for a Spirax Sarco DN65 KBV40i boiler blowdown valve.



Ball valve insert (2)
(not an available spare).

Please note: You will need to order the **Insert tool** listed in the table above to aid removal.