



TI-P005-03  
CMGT Issue 7

## BPS32 and BPS32Y Stainless Steel Balanced Pressure Thermostatic Steam Traps

### Description

The BPS32 and BPS32Y are stainless steel maintainable balanced pressure thermostatic steam traps with straight connections. The BPS32 has an integral flat strainer screen and the BPS32Y an integral cylindrical Y-type strainer. All pressure bearing components are produced by TÜV approved suppliers in accordance with AD-Merkblatt WO/TRD100. Both traps are unaffected by waterhammer and are available as follows:-

|                       |                      |                                            |
|-----------------------|----------------------|--------------------------------------------|
| <b>Standard units</b> | BPS32 and BPS32Y     | having 'STD' fill capsule                  |
| <b>Also available</b> | BPS32CV and BPS32YCV | having 'STD' fill capsule and check valve. |

**Note:** When placing an order always state capsule fill.

### Capsule fill and operation:

**Standard capsule** - Is marked with 'STD' for operation at approximately 12 °C below steam saturation temperature.

**Optionally** - The capsule can be supplied for sub-cooled 'SUB' operation at approximately 24 °C below steam saturation temperature or near-to-steam 'NTS' operation at approximately 6 °C below steam temperature.

### Standards

This product fully complies with the requirements of the European Pressure Equipment Directive 2014/68/EU.

### Certification

This product is 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

½", ¾", and 1" screwed BSP T Rp (ISO 7-1) or NPT.

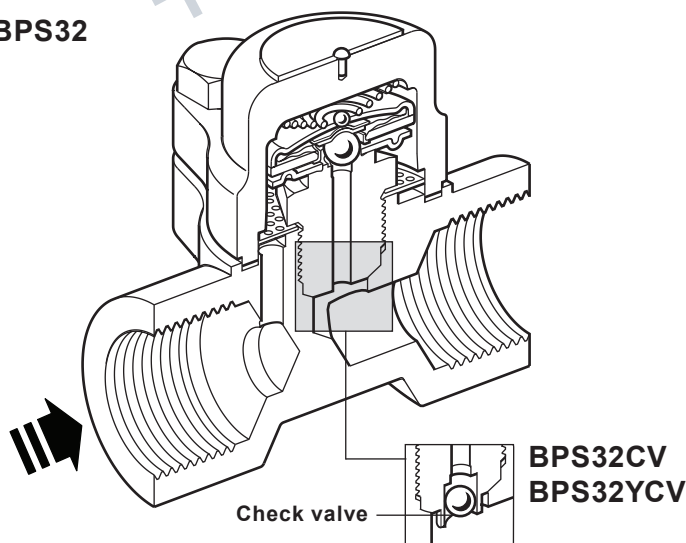
½", ¾", and 1" socket weld ends to BS 3799.

½", ¾", and 1" butt weld ends to EN 12 627.

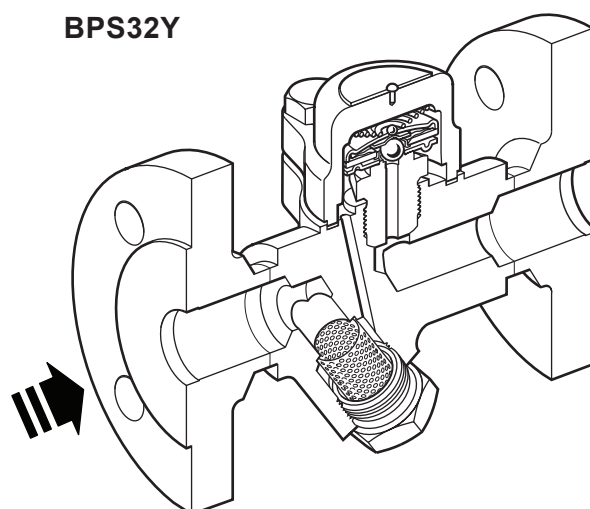
DN15, DN20 and DN25 standard flange to EN 1092 PN40,

ASME B 16.5 Class 150 and 300, JIS/KS 10K and JIS/KS 20K.

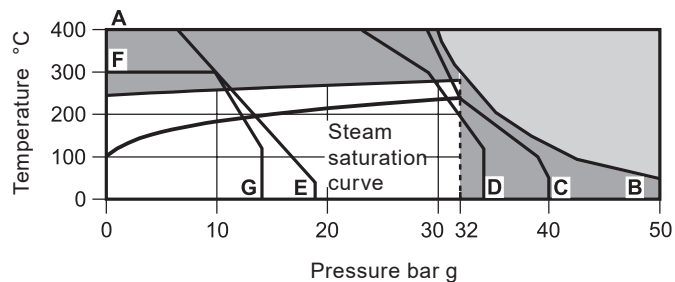
### BPS32



### BPS32Y



## Pressure/temperature limits (ISO 6552)



The product **must not** be used in this region.

The product should not be used in this region or beyond its operating range as damage to the internals may occur.

**A - B** Screwed, socket weld, butt weld and flanged ASME 300

**A - C** Flanged EN 1092 PN40

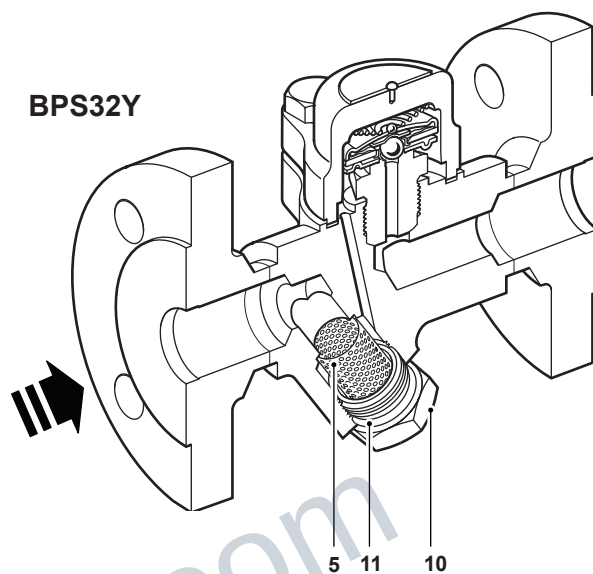
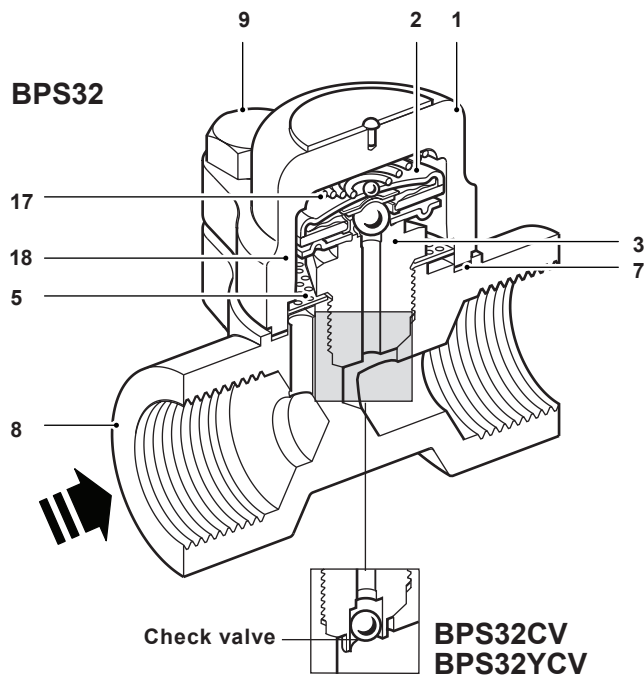
**A - D** Flanged JIS/KS 20K

**A - E** Flanged ASME 150

**F - G** Flanged JIS/KS 10K

|                                                                |                                                        |                   |
|----------------------------------------------------------------|--------------------------------------------------------|-------------------|
| Body design conditions                                         |                                                        | PN40              |
| PMA                                                            | Maximum allowable pressure                             | 50 bar g @ 50 °C  |
| TMA                                                            | Maximum allowable temperature                          | 400 °C @ 30 bar g |
| Minimum allowable temperature                                  |                                                        | -200 °C           |
| PMO                                                            | Maximum operating pressure for saturated steam service | 32 bar g          |
| TMO                                                            | Maximum operating temperature                          | 281 °C @ 32 bar g |
| Minimum operating temperature                                  |                                                        | 0 °C              |
| Note: For lower operating temperatures consult Spirax Sarco    |                                                        |                   |
| BPS32 and BPS32Y are safe for use under full vacuum conditions |                                                        |                   |
| Designed for a maximum cold hydraulic test pressure of         |                                                        | 75 bar g          |

## Materials



| No. | Part                | Material                                                          |
|-----|---------------------|-------------------------------------------------------------------|
| 1   | Cover               | Austenitic stainless steel EN 10222-5 1.4571 or ASTM A182 F316 Ti |
| 2   | Capsule             | Stainless steel                                                   |
| 3   | Valve seat          | Stainless steel BS 970 431 S29                                    |
| 5   | Strainer screen     | Stainless steel AISI 304                                          |
| 7   | Cover gasket        | Stainless steel reinforced exfoliated graphite                    |
| 8   | Body/flanges        | Austenitic stainless steel EN 10222-5 1.4571 or ASTM A182 F316 Ti |
| 9   | Cover bolts         | Stainless steel (M10 x 30) A2-70                                  |
| 10  | Strainer cap        | Austenitic stainless steel DIN 17440 (W/S 1.4404) 316L            |
| 11  | Strainer cap gasket | Stainless steel BS 1449 304 S16                                   |
| 17  | Spring              | Stainless steel                                                   |
| 18  | Spacer plate        | Stainless steel                                                   |

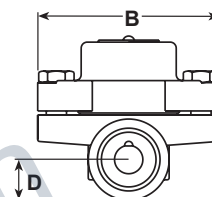
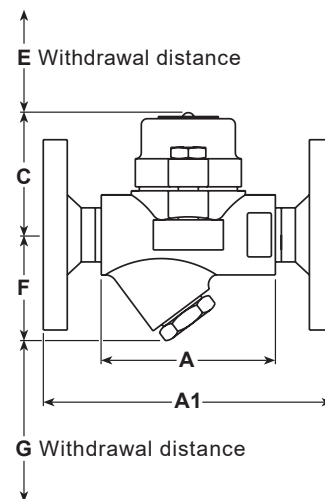
## Dimensions/weights (approximate) in mm and kg

### BPS32

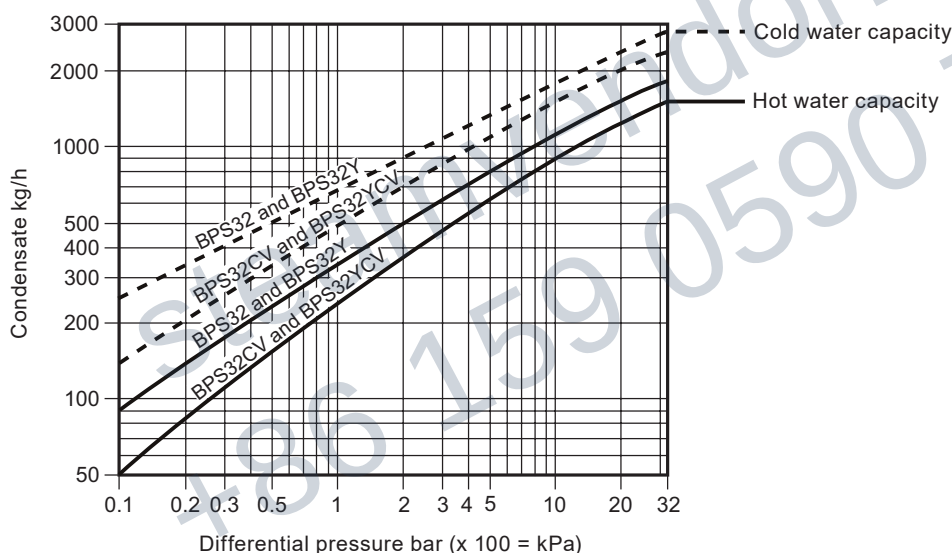
| Size    |    |     |    |    |    |    |   |   | Weight     |      |
|---------|----|-----|----|----|----|----|---|---|------------|------|
|         | A  | A1  | B  | C  | D  | E  | F | G | Scrd/SW/BW | Flgd |
| ½" DN15 | 95 | 150 | 94 | 64 | 17 | 37 | - | - | 1.4        | 2.9  |
| ¾" DN20 | 95 | 150 | 94 | 64 | 19 | 37 | - | - | 1.4        | 3.5  |
| 1" DN25 | 95 | 160 | 94 | 64 | 23 | 37 | - | - | 1.5        | 4.1  |

### BPS32Y

| Size    |    |     |    |    |   |    |    |    | Weight     |      |
|---------|----|-----|----|----|---|----|----|----|------------|------|
|         | A  | A1  | B  | C  | D | E  | F  | G  | Scrd/SW/BW | Flgd |
| ½" DN15 | 95 | 150 | 94 | 64 | - | 37 | 55 | 28 | 1.6        | 3.1  |
| ¾" DN20 | 95 | 150 | 94 | 64 | - | 37 | 56 | 28 | 1.6        | 3.7  |
| 1" DN25 | 95 | 160 | 94 | 64 | - | 37 | 58 | 28 | 1.8        | 4.4  |



## Capacities



## Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P005-04) supplied with the product.

### Installation note:

The BPS32 and BPS32Y are designed for installation in any position, horizontal or vertical.

It is recommended that a non-return valve is fitted when discharging condensate into return lines where backpressure is experienced.

It is also recommended that a diffuser is fitted when discharging to atmosphere.

For ease and maintenance, consideration should be given to fitting isolation valves upstream and downstream of the steam trap.

### Disposal

These products are recyclable. No ecological hazard is anticipated with the disposal of these products, providing due care is taken.

### How to order

**Example:** 1 off DN20 Spirax Sarco BPS32Y balanced pressure thermostatic steam trap manufactured in corrosion resistant stainless steel. Having a Y-type strainer and 'STD' fill capsule for operation at approximately 12 °C below steam saturation temperature. Flanged connections to EN 1092 PN40.

## Spare parts

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

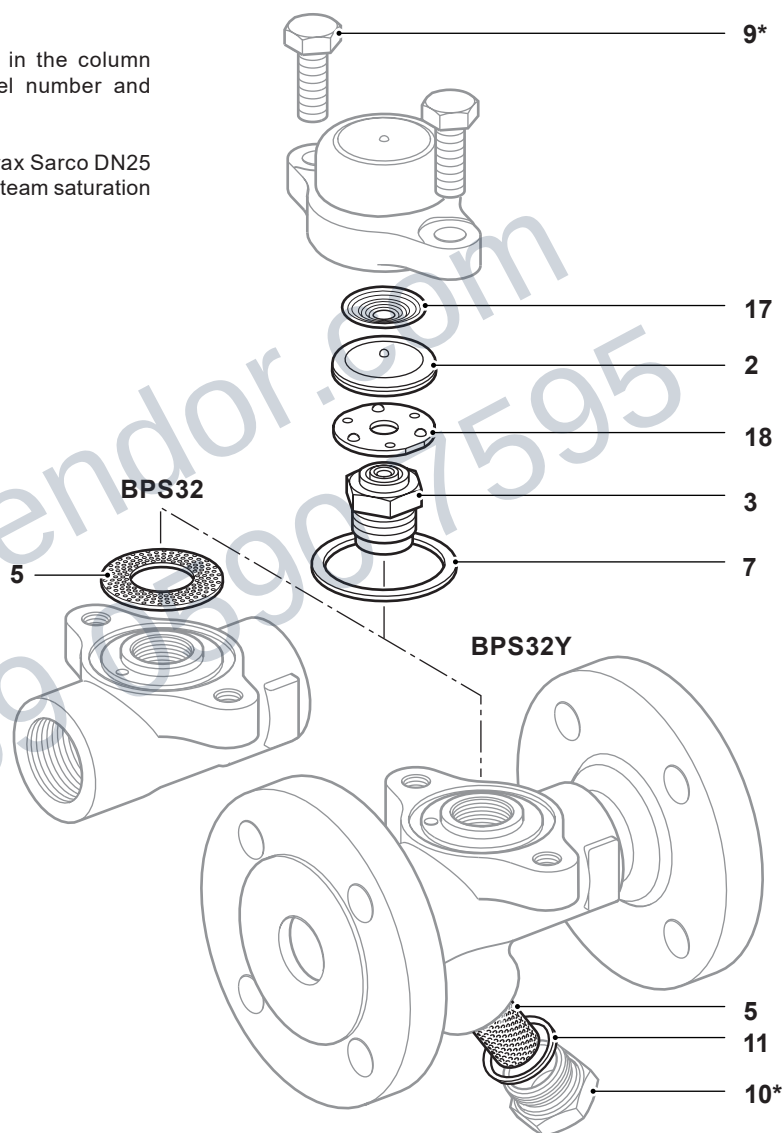
### Available spares

|                               |        |               |              |
|-------------------------------|--------|---------------|--------------|
| Capsule and seat assembly set |        |               | 2, 3, 17, 18 |
| Strainer screen               | BPS32  | (3 off)       | 5            |
| Strainer screen and gasket    | BPS32Y | (1 off each)  | 5, 11        |
| Set of cover gaskets          |        | (packet of 3) | 7            |
| Strainer cap gasket           |        | (packet of 3) | 11           |

### How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the size, model number and capsule reference.

**Example:** 1 - Capsule and seat assembly set for a Spirax Sarco DN25 BPS32 - 'STD' fill capsule for operation at 12 °C below steam saturation temperature.



\* Note: Items 9 and 10 are not available as spares.

### Recommended tightening torques

| Item | Part         |  or<br>mm |  | N m       |
|------|--------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------|
| 3    | Valve seat   | 24 A/F                                                                                       | M10 x 30                                                                            | 115 - 125 |
| 9    | Cover bolts  | 16 A/F                                                                                       |                                                                                     | 23 - 27   |
| 10   | Strainer cap | 27 A/F                                                                                       |                                                                                     | 120 - 135 |