


# SBE



  
Engineering  
**GREAT** Solutions

**Trip Mode Device**

# SBE - Trip Mode Device

The trip mode device SBE is designed for valves which can have a safety function and where the actuating force over the whole stroke goes in the same direction. There is no external energy required to achieve safe or quick stroking.

It is mostly used on IMI CCI valves of the type ARS, DRE and MSV.

If EN4126-5 is required the actuator is equipped with triple redundant SBE Units.

## Key features

- > Designed for use with ARS, DRE and MSV valves
- > Energise to activate or de-energise activate options
- > Two flow sizes available
- > Designed for mineral oil and/or fire resistant hydraulic fluids

## Benefits

- > Designed for rugged operation
- > Compact design
- > 1 to 3 pieces directly mounted on the hydraulic actuator or open rack Multi-Station Manifold (MSM)
- > Certified to EN4126-5 / TRD 421

## Design

The safety bypass unit SBE is a solenoid operated bypass between the upper and lower piston chambers of the actuator. An adjustable 2/2-Way-valve is used to keep the SBE leakage free closed. The SBE units can be supplied as "energize to activate" or "de-energize to activate".

The compact design allows up to three (for redundancy) SBE either to be mounted on an actuator or sandwich mounted on an open rack Multi-Station Manifold (MSM) (only SBE 116), where more functions and valves can be combined.

Management of stock and spare parts is clear, easy and more transparent because there are only two flow sizes available.



*Compact design*



*The SBE is most commonly used on ARS, DRE and MSV valves*

## Function

The SBE is a bypass which connects the upper with the lower piston chamber of the actuator. An open bypass allows free movement of the actuator and therefore the main valve moves only driven by the steam force.

To avoid a hydraulic short circuit all other control devices must be closed. On the proportional valve control unit this is realised through the releasable check valves which are controlled by the 3/2 way blocking element of the proportional valve unit.

Through a stroke limiter inside the 2/2-way-valve the speed can be adjusted.

## Available sizes

There are two sizes available which can be used on all actuators of the ASM-E series. These elements are also compatible with the ASM actuators. In such cases, an adapter plate might be used (contact IMI CCI Switzerland).

Type	Connection size	Max. flow
SBE 116	Large	200 l/min
SBE 125	Actuator only	600 l/min

## Product specification

### Available system pressure

From 50 up to 160 bar

### Applicable hydraulic fluids

Mineral oil DIN51524 (DIN ISO 6074)  
Fire resistant HFD-R fluids (e.g. Fyrquel® EHC)  
Fire resistant HFD-U fluids (e.g. Quintolubric® 888)

### Max. fluid contamination

ISO 4406 17/16/13  
NAS 1638 level 6  
SAE class 3

### Manifold material

Aluminium anodized

### Sealing material

FKM (Viton)

### MTTFd - Value

75 years

### Ambient temperature

-10 to 80 °C

### Fluid temperature range

15 to 70 °C

### Protection class

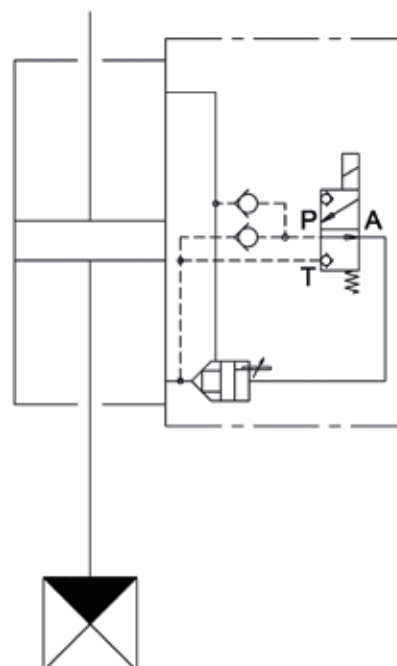
IP 65

### Electrical connector

DIN EN 175301-803 Form A

### 3/2 way seat valve

Voltage rating 24 V DC  
Voltage tolerance ±20%  
Solenoid power 26 W  
Duty ratio 100%  
Life cycle 10<sup>7</sup>



**IMI CCI Australia**  
33 South Corporate Avenue  
Rowville  
Melbourne 3178  
Australia  
Tel: +61 3 9213 0800

**IMI CCI China**  
101, #7 Building  
Guosheng S&T Park  
No. 1 Kangding St.  
Beijing 100176  
China  
Tel: +86 10 8715 4200  
Fax: +86 10 6781 7950

**IMI CCI Korea**  
14 Dangdong 2-ro  
Munsan-eup  
Paju-si  
Gyeonggi-do  
Korea 413-902  
Tel: +82 2 792 1877  
Fax: +82 2 792 1878

**IMI CCI SriCity**  
No 900 North R-1 Sri City SEZ  
Sathyavedu Mandal  
Chittoor District  
Andhra Pradesh 517588  
India  
Tel: +91 85 7639 8000  
Fax: +91 85 7639 8035

**IMI CCI Austria**  
Lemböckgasse 63/1  
1230 Wien  
Austria  
Tel: +43 1 869 27 40  
Fax: +43 1 865 36 03

**IMI CCI Dubai**  
P.O. Box 17827  
Light Industrial Unit  
BJ04 South Zone 1  
Jebel Ali – Dubai  
United Arab Emirates  
Tel: +971 4 886 1477  
Fax: +971 4 886 1476

**IMI CCI RSM**  
22591 Avenida Empresa  
Rancho Santa Margarita  
California, 92688  
USA  
Tel: +1 949 858 1877  
Fax: +1 949 858 1878

**IMI CCI Sweden**  
Industrigatan 3  
661 29 Säffle  
Sweden  
Tel: +46 533 689 600  
Fax: +46 533 689 601

**IMI CCI Bangalore**  
6th floor Warp tower SJR i park  
Plot #13 14 & 15 EPIP Zone  
Phase 1  
Whitefield Road  
Bangalore 560066  
India  
Tel: +91 80 4030 3500  
Fax: +91 80 4030 3531

**IMI CCI Houston**  
4525 Kennedy Commerce Drive  
Houston  
Texas 77032  
USA  
Tel: +1 832 467 7200  
Fax: +1 713 849 2948

**IMI CCI Singapore**  
29 International Business Park  
ACER Building Tower A  
#04-01  
Singapore 609923  
Tel: +65 6653 7000  
Fax: +65 6822 7001

**IMI CCI Switzerland**  
Itaslenstrasse 9  
CH-8362 Balterswil  
Switzerland  
Tel: +41 52 264 9500  
Fax: +41 52 264 9501

**IMI CCI Brazil**  
Rua Itapeva 286  
cj 95 to 98  
Sao Paulo  
CEP 01332-000  
Brasil  
Tel: +55 11 2691 3361  
Fax: +55 11 2539 0287

**IMI CCI Italy**  
Via Giacomo Leopardi 26  
20123  
Milano  
Italy  
Tel: +39 02 4345 8611  
Fax: +39 02 4345 8624

**IMI CCI South Africa**  
38 Industrial Crescent  
Extension 25  
Witbank 1035  
South Africa  
Tel: +27 13 697 3305  
Fax: +27 13 697 3303

**IMI CCI UK**  
Unit A3  
Brookside Business Park  
Middleton  
Manchester  
M24 1GS  
Tel: +44 (0)161 655 1680  
Fax: +44 (0)161 655 1689

**IMI CCI Brno**  
K letišti 1804/3  
Šlapanice 627 00  
Brno 27  
Czech Republic  
Tel: +420 511 188 288  
Fax: +420 511 188 245

**IMI CCI Japan**  
6-2-2 Takatsukudai  
Nishi-ku, Kobe  
Hyogo 651-2271  
Japan  
Tel: +81 78 322 1220  
Fax: +81 78 322 1221

[imicci.sales@imi-critical.com](mailto:imicci.sales@imi-critical.com)

**IMI Critical Engineering**  
Lakeside, Solihull Parkway  
Birmingham Business Park  
Birmingham B37 7XZ  
United Kingdom  
Tel: +44 (0)121 717 3700  
Fax: +44 (0)121 717 3701  
[www.imi-critical.com](http://www.imi-critical.com)