SBA Accumulator Safety Blocks
For working pressures up to 350 Bar
Introduction

SBA Safety Blocks

Parker’s range of SBA safety blocks is available in NG10, NG20 and NG32 sizes. SBA safety blocks combine all the features required to protect, isolate and discharge a hydraulic accumulator. The shut-off valve turns through 90° to isolate the accumulator instantly from the hydraulic system, in emergency or for maintenance purposes. Once isolated, the accumulator can be discharged to tank via a manual or electrically-controlled discharge valve. System protection is provided by a PED-approved, tamper-proof pressure relief valve.

SBA safety blocks permit safe, simple connection of an accumulator to a hydraulic system. Suitable for use with all types of accumulators – bladder, piston and diaphragm – their compact, multi-function design saves space and reduces connections. By cutting the time required for installation and maintenance procedures, SBA safety blocks enable productivity and profitability to be maximised while system downtime is kept to a minimum. To simplify installation, a full range of adapters is available to suit all common port sizes and styles. For diagnostic purposes and continuous pressure monitoring, all SBA safety blocks feature two maintenance ports.

The European Pressure Equipment Directive (PED) 97/3/EC states that a safety device must be fitted to all accumulators to provide a shut-off facility, pressure limiting and pressure release functions, and measurement points. Parker’s SBA range fulfils all of these requirements in a single, compact unit.

The safety block should always be mounted as close as possible to the accumulator. Commissioning and maintenance of the safety block and associated equipment must be performed by qualified personnel.

A Complete Range of Accumulators

High Productivity – Low Cost of Ownership

Parker Hannifin offers a full range of piston, bladder and diaphragm accumulators for industrial applications. From miniature diaphragm accumulators for pilot valve operation to multiple large-volume piston accumulator and gas bottle combinations for presses and injection moulding machines, Parker will work with you to maximise the productivity and profitability of your manufacturing systems. All Parker accumulators are designed to deliver long, efficient service with low maintenance requirements, guaranteeing high performance year after year.

About Parker Hannifin

Parker Hannifin is the global leader in motion and control technologies, partnering with its customers to increase their productivity and profitability. The company employs more than 57,000 people in 43 countries around the world, providing customers with technical excellence and first class customer service.

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Accumulator Safety Blocks

Technical Data

SBA Series

Technical Data

Construction

- shut-off valve
- pressure relief
- manually-operated discharge valve
- electrically-operated discharge valve

Port type

see table below

Mounting position

accumulator port A facing upwards

Mounting screws (not supplied)

M8 to grade 10.9, max. torque 26 + 4Nm

Ambient temperature

-30°C to +80°C

Max. operating pressure

350 bar

Relief flow rate G at \( p_{nom} \)

see table on page 4

Fluid

mineral oil according to DIN/ISO. For other fluid types, please contact the factory.

Operating temperature

-15°C to +80°C

Viscosity

10 to 800 mm²/s

\( \Delta p-Q \)-graphs

see page 4

Electrical discharge

U=24VDC, 105VDC (for 115V/60 Hz AC supply), P=26W, 100% ED, IP 65 to DIN 40050, connector to DIN 43650 type A

Finish

black zinc phosphated

Seal material

Nitrile

Dimensions and Weights

<table>
<thead>
<tr>
<th>Type</th>
<th>A 1</th>
<th>P</th>
<th>T</th>
<th>M1</th>
<th>M2</th>
<th>Weight kg</th>
<th>Model Number (^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10M (T port)</td>
<td>M33x2</td>
<td>G/½</td>
<td>G/¾</td>
<td>G/½</td>
<td>G/¼</td>
<td>4.4</td>
<td>SBA10MT1 - xxx</td>
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<tr>
<td>10E (T port)</td>
<td>M33x2</td>
<td>G/½</td>
<td>G/¾</td>
<td>G/½</td>
<td>G/¼</td>
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<td>G1</td>
<td>G/½</td>
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<td>G1</td>
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<td>G1/½</td>
<td>G1</td>
<td>G/½</td>
<td>G/¼</td>
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<td>G1</td>
<td>G/½</td>
<td>G/¼</td>
<td>12.6</td>
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</tbody>
</table>

1 A range of adapters is available for accumulator port A – see page 11

2 xxx = pressure setting of pressure relief valve – see page 4

Warning

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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Offer of Sale

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Parker Hannifin
Cylinder Division
Europe
Flow – Accumulator (A) to Pressure Port (P)

Pressure Relief Valve
The function of the pressure relief valve is to protect the accumulator in service. If pressure exceeds the relief valve setting, the valve lifts off its seat and fluid is discharged to tank, allowing pressure in the system to fall to a safe level.

Because of its cartridge design, the pressure relief valve can be readily replaced by a valve with a different pressure setting, selected from the table. A new approval under PED 97/3/EC is not required following this change. The pre-set relief pressure, in bar, is stamped onto the identification plate.

Type Approval
The pressure relief valve is checked and security sealed following approval, according to pressure vessel regulations. It carries a CE mark, type approval number and serial number. All valves are supplied with a certificate showing the pressure setting. The documents supplied with the pressure relief valve must be retained, as they will be required in the event of repeat tests.

Pressure Settings

<table>
<thead>
<tr>
<th>Pressure p bar</th>
<th>Max Flow Rate G l/min</th>
<th>Item Number</th>
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<tr>
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<td>40</td>
<td>SV050</td>
</tr>
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<td>70</td>
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<td>SV070</td>
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<td>SV280</td>
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<td>SV300</td>
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<td>130</td>
<td>SV330</td>
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Manual and Electrical Discharge Valves
The discharge valve allows fluid stored in the accumulator to be discharged to tank. All models of SBA safety block are fitted with a manually-operated discharge valve. As an optional feature, an electrical discharge valve is available in addition to the manual valve. An electrical discharge valve should be specified where the safety block is to be mounted in a remote or inaccessible location. Manual-only versions of the SBA safety block are denoted by an M in the model code, see page 11, while models with both a manual and an electrical discharge valve are designated E.
Accumulator Safety Blocks
SBA Series

Dimensions – SBA10MT1

All dimensions are in millimetres unless otherwise stated.
All dimensions are in millimetres unless otherwise stated.
Accumulator Safety Blocks

SBA Series

Dimensions – SBA20MT1

All dimensions are in millimetres unless otherwise stated.
All dimensions are in millimetres unless otherwise stated.
Dimensions – SBA32MT1

All dimensions are in millimetres unless otherwise stated.
Dimensions – SBA32ET1

All dimensions are in millimetres unless otherwise stated.
Accumulator Safety Blocks
SBA Series

Adapters – Accumulator to Safety Block

<table>
<thead>
<tr>
<th>Accumulator Fluid Port</th>
<th>Safety Block Port A</th>
<th>SW</th>
<th>L</th>
<th>L1</th>
<th>D2</th>
<th>D3</th>
<th>Weight kg</th>
<th>Part Number</th>
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<tr>
<td>G ¼</td>
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<td>46</td>
<td>33</td>
<td>16</td>
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All dimensions are in millimetres unless otherwise stated.

How to Order

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<td>E</td>
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<tr>
<td>300</td>
<td>330</td>
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</tr>
</tbody>
</table>
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