



# SBA Accumulator Safety Blocks

For working pressures up to 350 Bar

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filtration  
fluid & gas handling  
**hydraulics**  
pneumatics  
process control  
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## 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) 97/23/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.

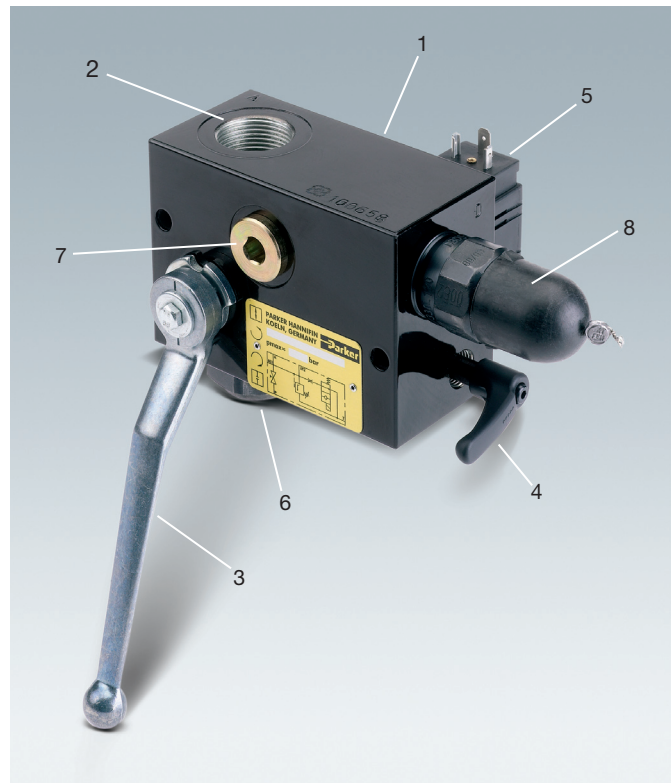
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## Accumulator Safety Blocks

### SBA Series

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### Key Features

- 1 Block
- 2 Accumulator port A
- 3 Shut-off valve
- 4 Manually-operated discharge valve
- 5 Electrically-operated discharge valve (optional)
- 6 Pressure port P
- 7 Maintenance port M1
- 8 Pressure relief valve

Not shown in this view:

- Tank port T
- Maintenance port M2

**Technical Data**

**SBA Series**

**Technical Data**

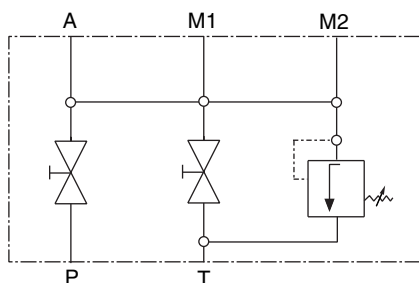
Construction	ball valve
- shut-off valve	poppet-type valve with damping
- pressure relief	poppet-type valve
- manually-operated discharge valve	poppet-type valve (where fitted)
- electrically-operated discharge valve	see table below
Port type	accumulator port A facing upwards
Mounting position	M8 to grade 10.9, max. torque 26 + 4Nm
Mounting screws (not supplied)	-30°C to +80°C
Ambient temperature	350 bar
Max. operating pressure	see table on page 4
Relief flow rate G at p <sub>nom</sub>	mineral oil according to DIN/ISO. For other fluid types, please contact the factory.
Fluid	-15°C to +80°C
Operating temperature	10 to 800 mm <sup>2</sup> /s
Viscosity	see page 4
Δp-Q-graphs	U=24VDC, 105VDC (for 115V/60 Hz AC supply), P=26W, 100% ED, IP 65 to DIN 40050, connector to DIN 43650 type A
Electrical discharge	black zinc phosphated
Finish	Nitrile
Seal material	

**Dimensions and Weights**

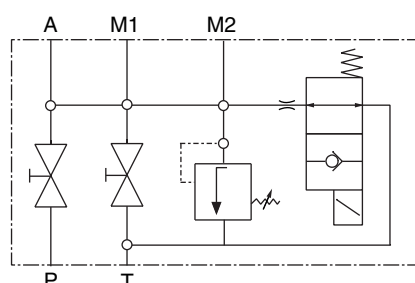
Type	A <sup>1</sup>	P	T	M1	M2	Weight kg	Model Number <sup>2</sup>
10M	M33x2	G <sup>1</sup> / <sub>2</sub>	G <sup>3</sup> / <sub>8</sub>	G <sup>1</sup> / <sub>2</sub>	G <sup>1</sup> / <sub>4</sub>	4.4	SBA10MT1 - xxx
10E	M33x2	G <sup>1</sup> / <sub>2</sub>	G <sup>3</sup> / <sub>8</sub>	G <sup>1</sup> / <sub>2</sub>	G <sup>1</sup> / <sub>4</sub>	4.7	SBA10ET1 - xxx
20M	M33x2	G1	G <sup>1</sup> / <sub>2</sub>	G <sup>1</sup> / <sub>2</sub>	G <sup>1</sup> / <sub>4</sub>	6.0	SBA20MT1 - xxx
20E	M33x2	G1	G <sup>1</sup> / <sub>2</sub>	G <sup>1</sup> / <sub>2</sub>	G <sup>1</sup> / <sub>4</sub>	6.5	SBA20ET1 - xxx
32M	Flange	G <sup>1</sup> / <sub>2</sub>	G1	G <sup>1</sup> / <sub>2</sub>	G <sup>1</sup> / <sub>4</sub>	12.0	SBA32MT1 - xxx
32E	Flange	G <sup>1</sup> / <sub>2</sub>	G1	G <sup>1</sup> / <sub>2</sub>	G <sup>1</sup> / <sub>4</sub>	12.6	SBA32ET1 - xxx

<sup>1</sup> A range of adapters is available for accumulator port A – see page 11

<sup>2</sup> xxx = pressure setting of pressure relief valve – see page 4



**SBA Type M**  
**Manually-Operated Discharge Valve**



**SBA Type E**  
**Manually- and Electrically-Operated Discharge Valves**

**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.

This document and other information from Parker Hannifin Corporation, its subsidiaries, sales offices and authorized distributors provide product or system options for further investigation by users having technical expertise. Before you select or use any product or system it is important that you analyse all aspects of your application and review the information concerning the product or system in the current product catalogue. Due to the variety of operating conditions and applications for these products or systems, the user, through his own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance and safety requirements of the application are met.

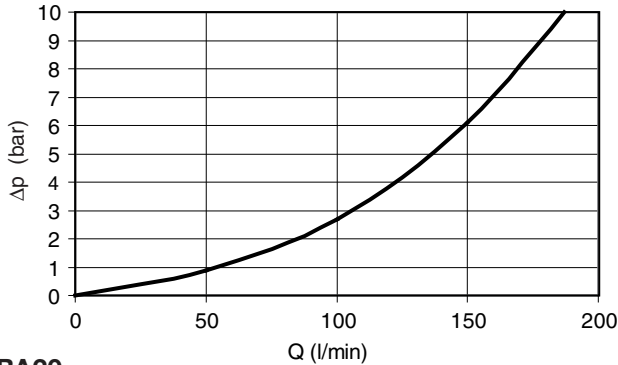
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**Offer of Sale**

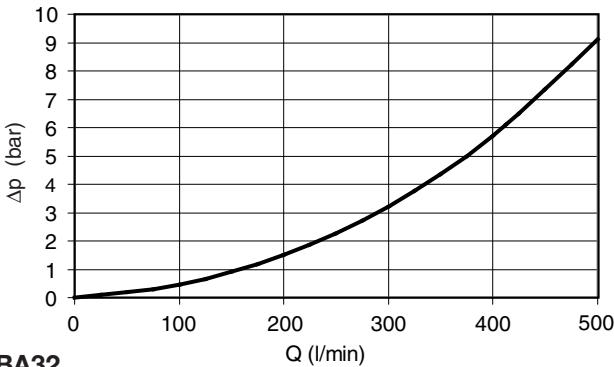
Please contact you local Parker representative for a detailed offer of sale.

**Flow – Accumulator (A) to Pressure Port (P)**

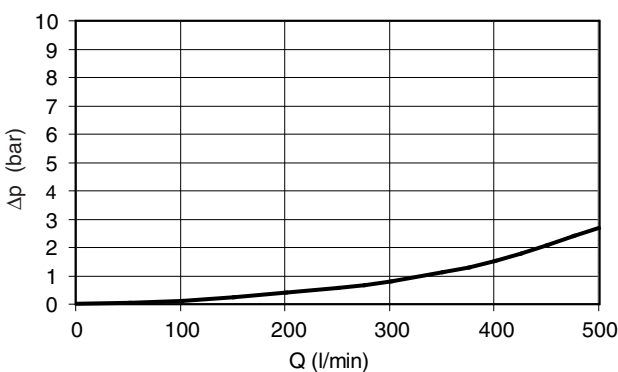
**SBA10**



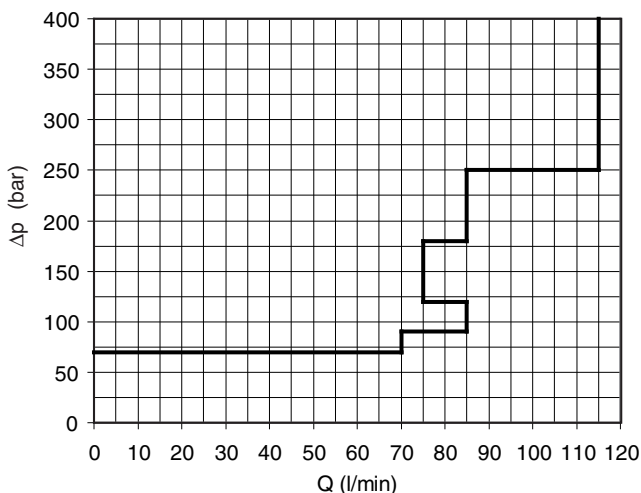
**SBA20**



**SBA32**



**Flow Limits for Safety Valve SV – All Models**



**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.

**Pressure Settings**

Pressure p bar	Item Number
50	SV050
70	SV070
100	SV100
120	SV120
140	SV140
160	SV160
200	SV200
210	SV210
250	SV250
280	SV280
300	SV300
330	SV330

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 97/23/EC is not required following this change. The pre-set relief pressure, in bar, is stamped onto the identification plate.

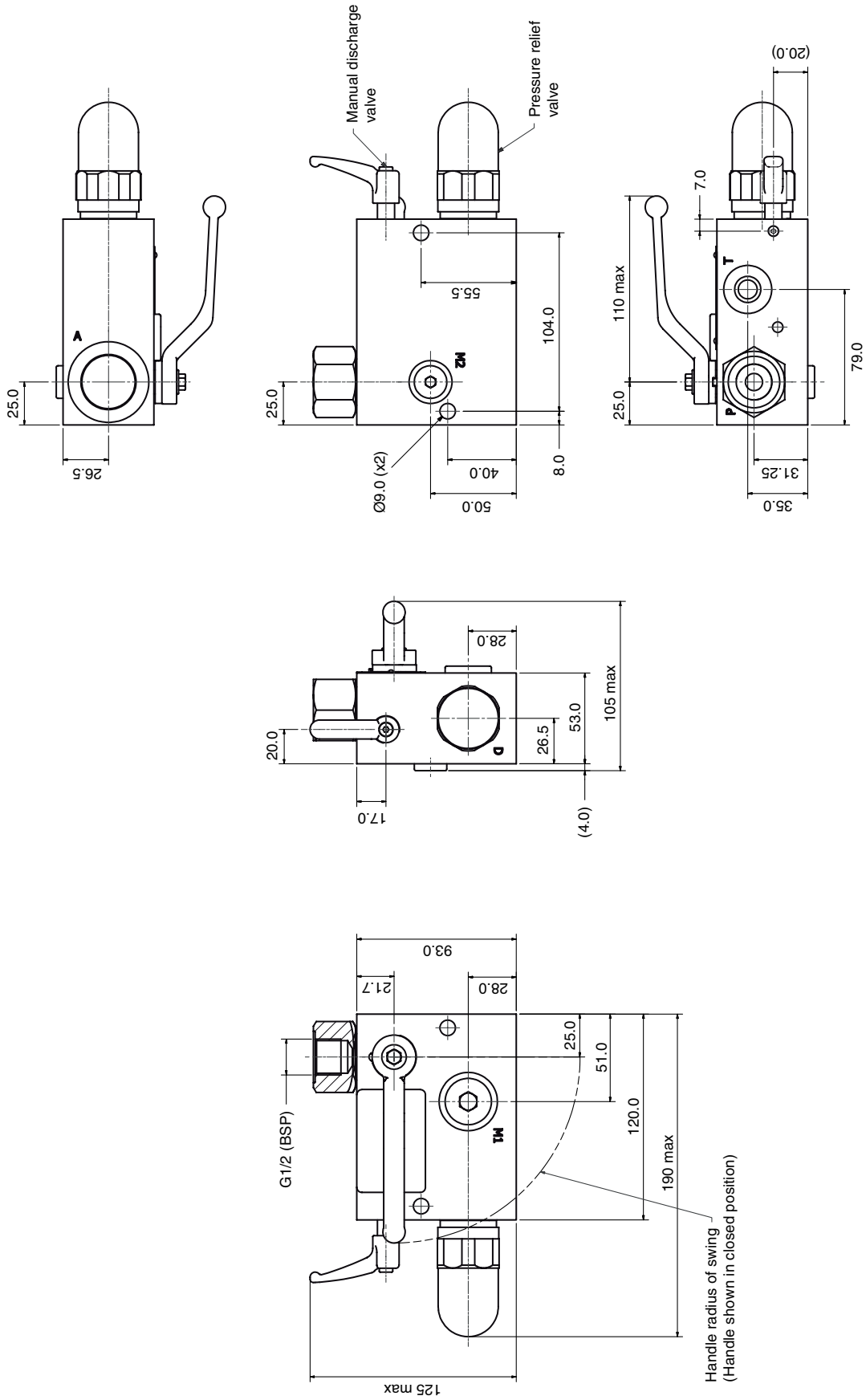
**Type Approval**

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.

**Manual and Electrical Discharge Valves**

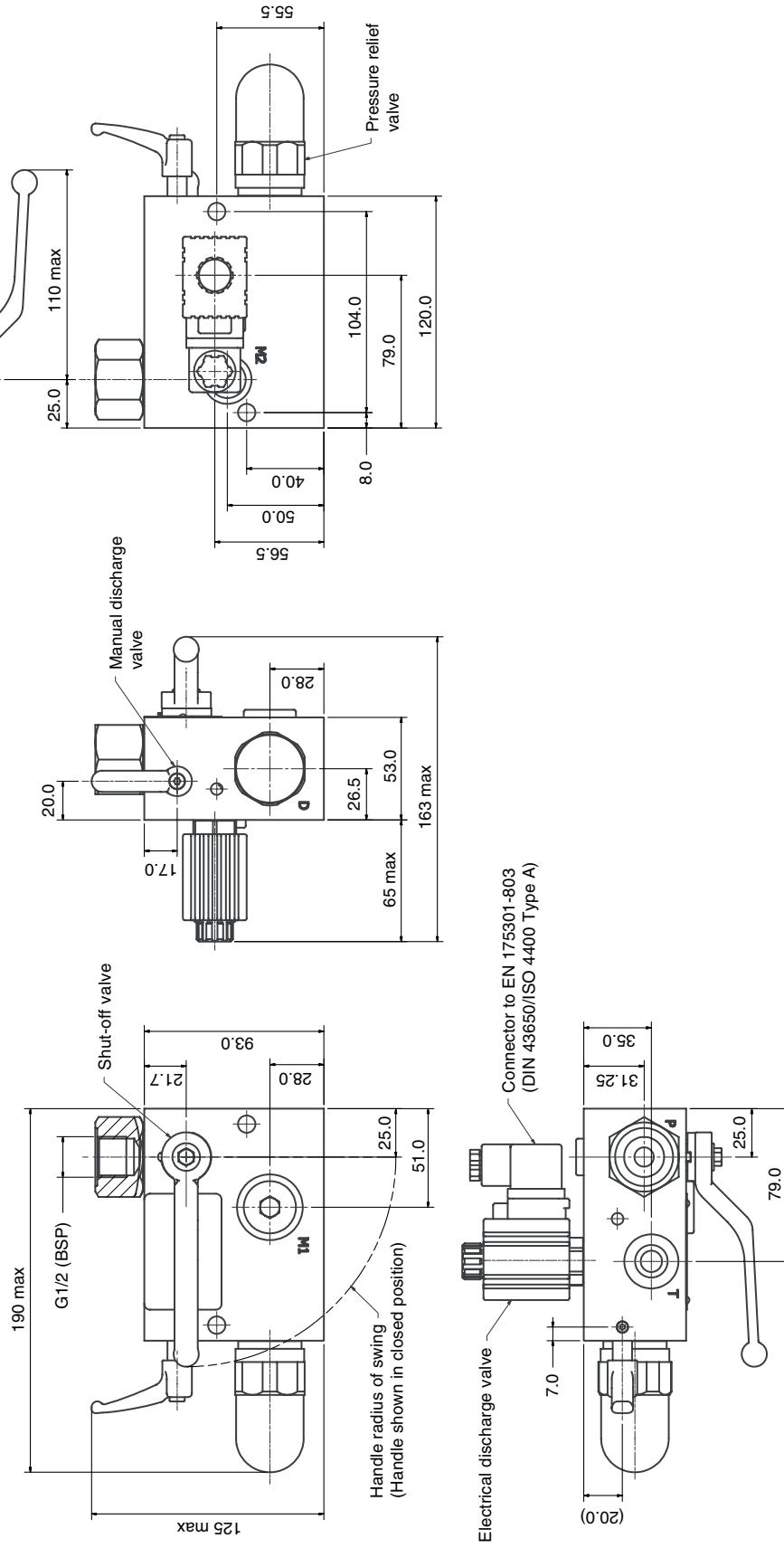
The discharge valve allows fluid stored in the accumulator to be discharged to tank. All models of SBA safety block are fitted with a manually-operated discharge valve. As an optional feature, an electrical discharge valve is available in addition to the manual valve. An electrical discharge valve should 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.

**Dimensions – SBA10MT1**



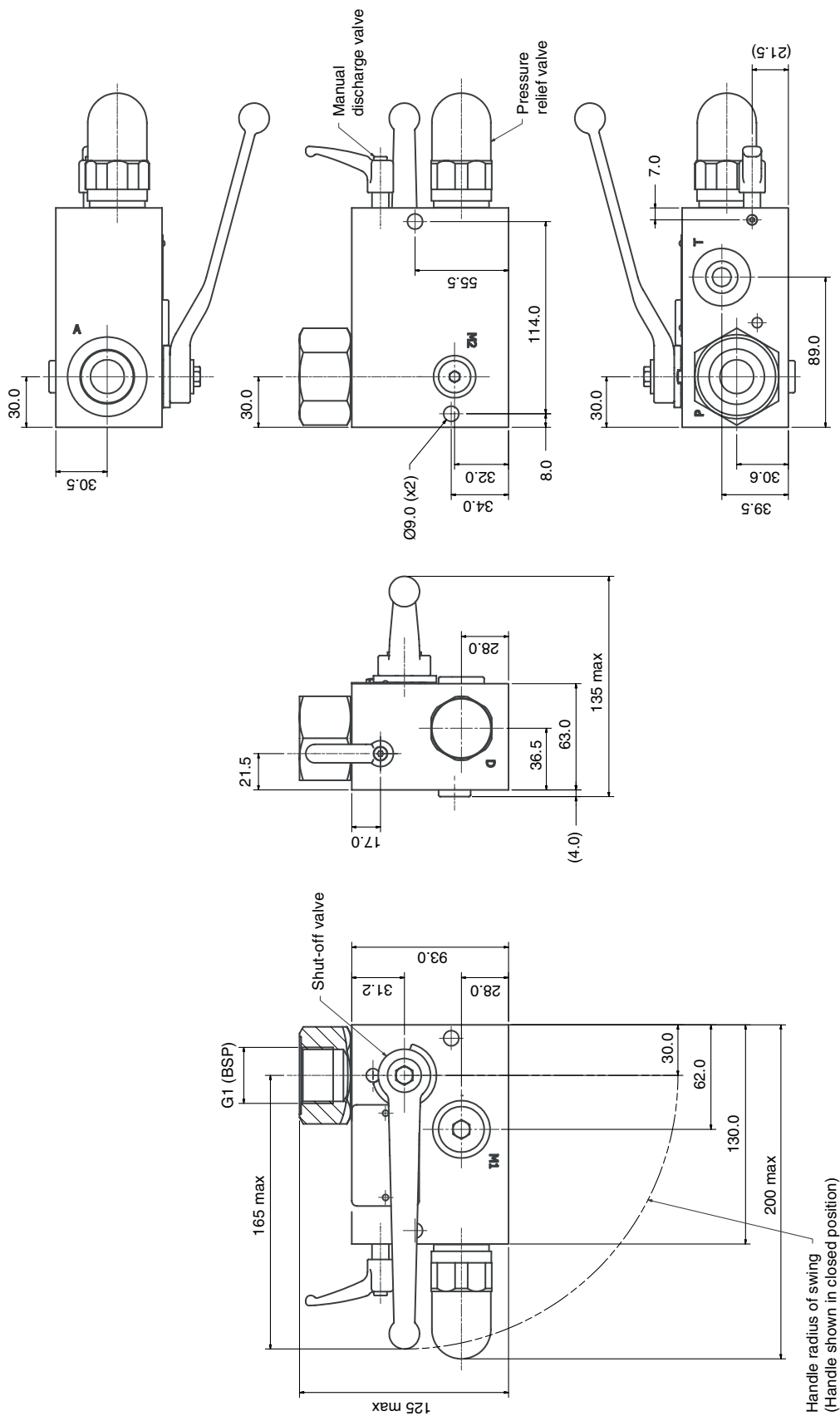
All dimensions are in millimetres unless otherwise stated.

**Dimensions – SBA10ET1**



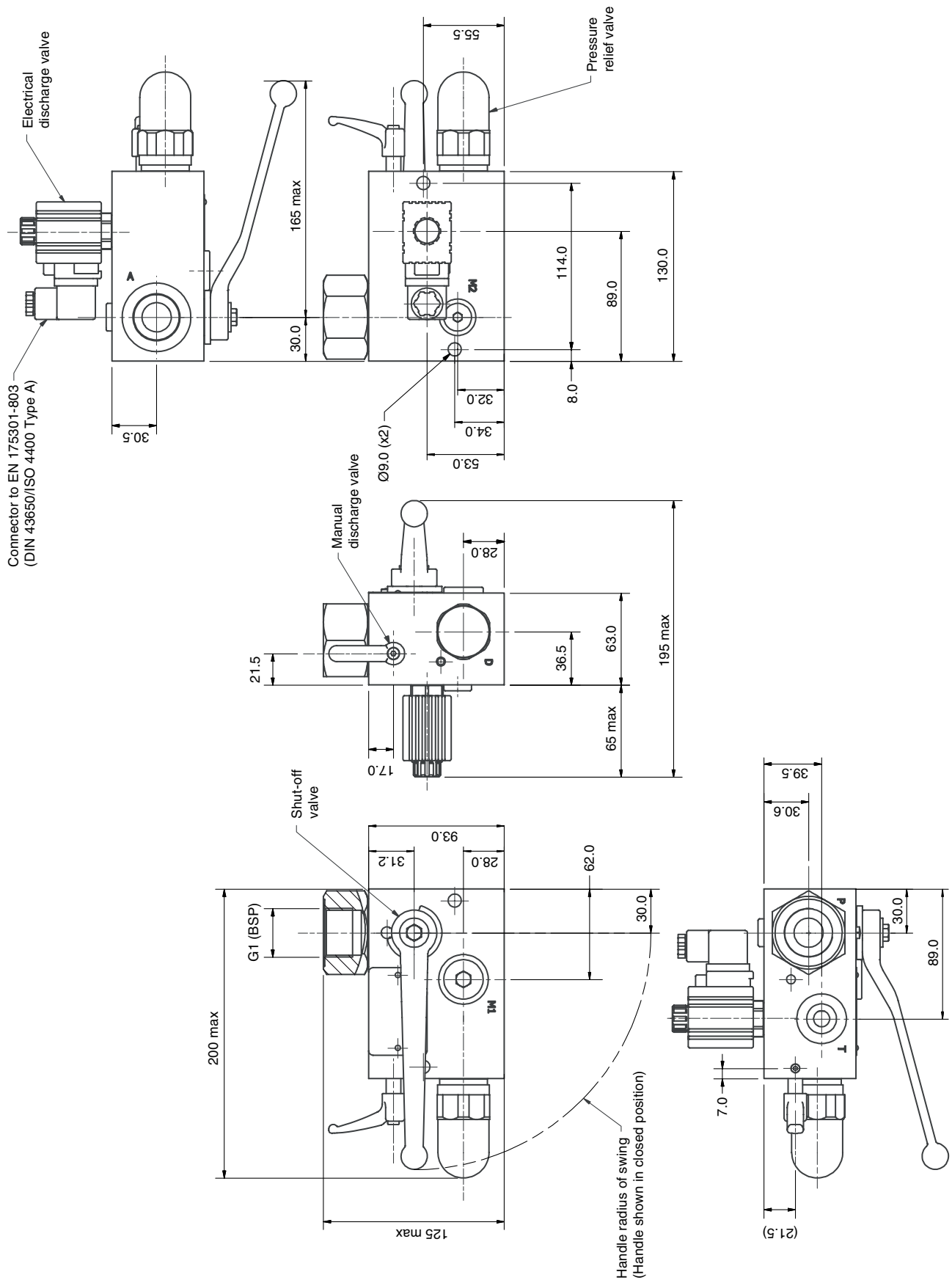
All dimensions are in millimetres unless otherwise stated.

**Dimensions – SBA20MT1**



All dimensions are in millimetres unless otherwise stated.

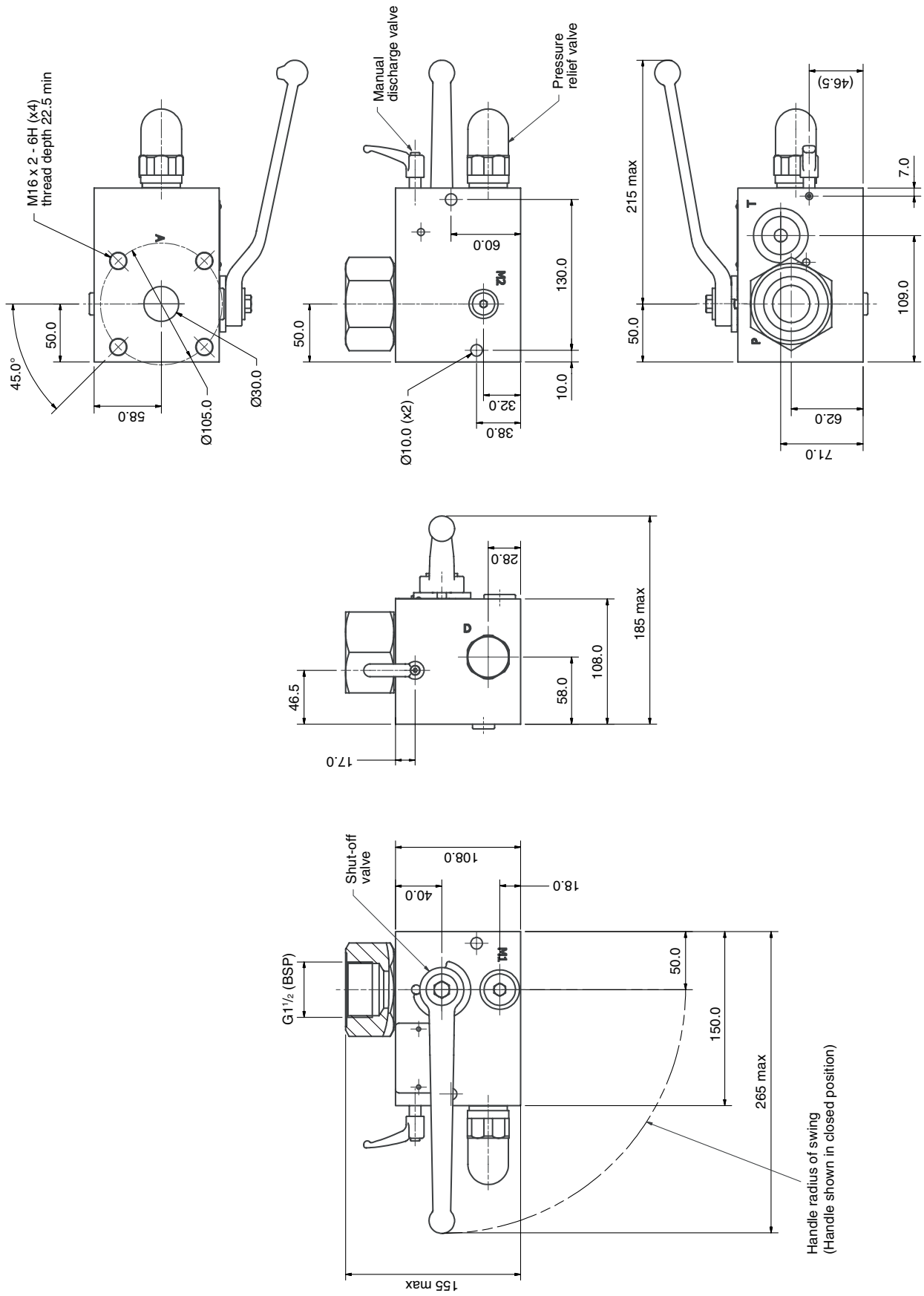
**Dimensions – SBA20ET1**



All dimensions are in millimetres unless otherwise stated.

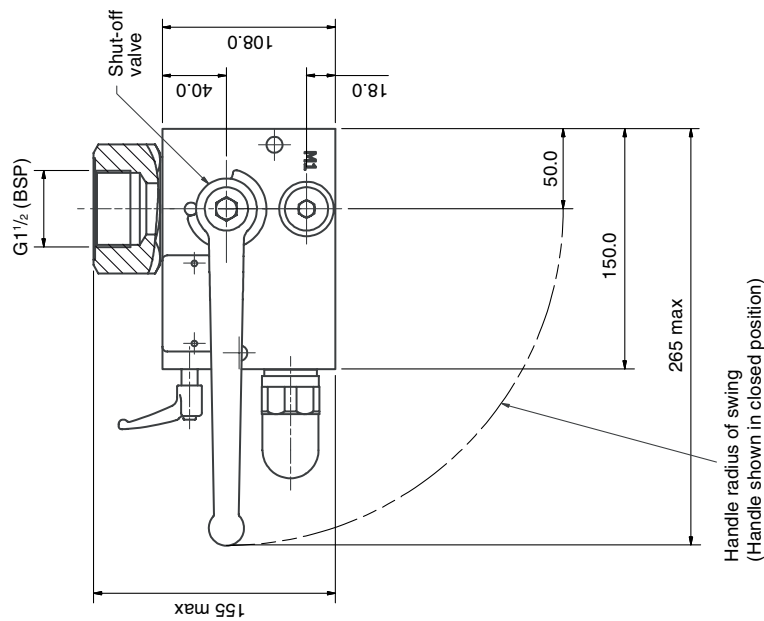
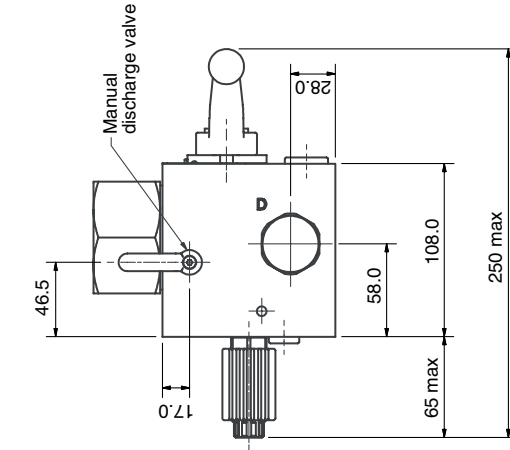
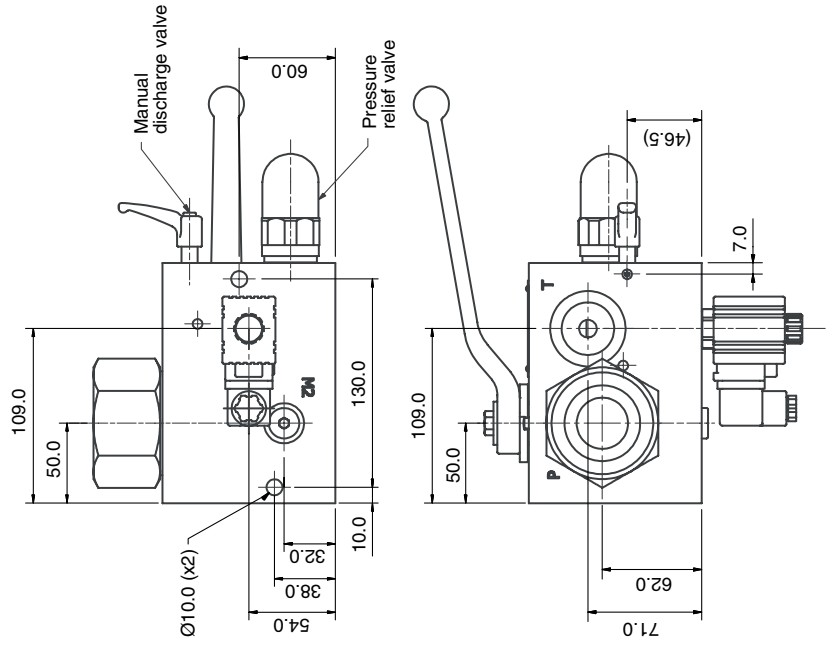
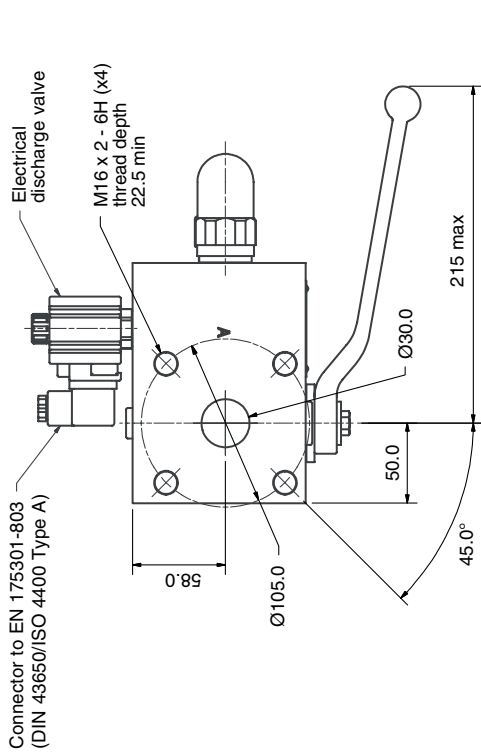


**Dimensions – SBA32MT1**



All dimensions are in millimetres unless otherwise stated.

**Dimensions – SBA32ET1**

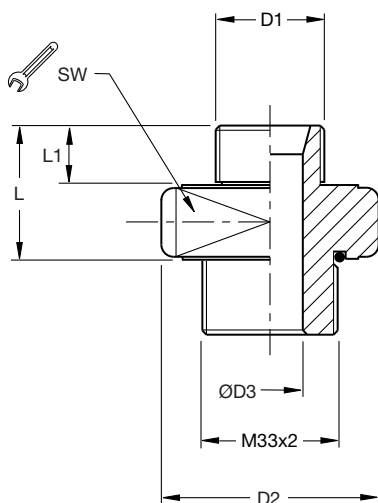


All dimensions are in millimetres unless otherwise stated.

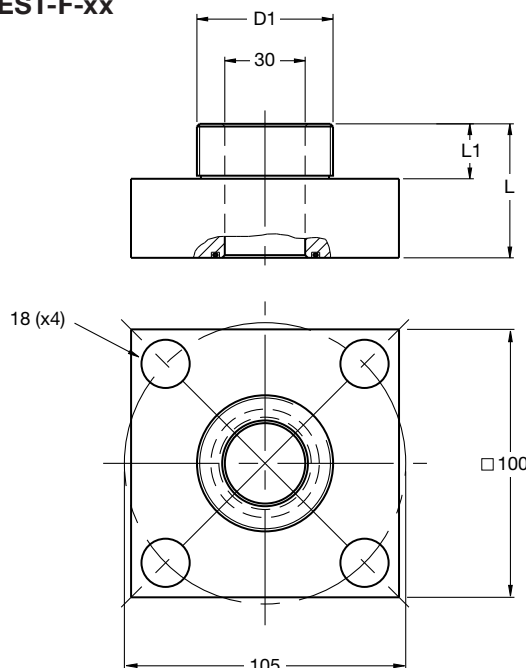
**Adapters – Accumulator to Safety Block**

Accumulator Fluid Port D1		Safety Block Port A	SW	L	L1	D2	D3	Weight kg	Part Number	Use with SBA	For Accumulator Type		
											Bladder	Diaphragm	Piston
G <sup>3/4</sup>	ISO 228	M33 x 2	46	33	16	53	16	0.4	UEST-T- <sup>3/4</sup>	10 & 20	X		
G1 <sup>1/4</sup>	ISO 228	M33 x 2	55	41	20	63	20	0.4	UEST-T-1 <sup>1/4</sup>	10 & 20	X		
G2	ISO 228	M33 x 2	80	46	22	90	20	1.5	UEST-T-2	10 & 20	X		
G2	ISO 228	Flange □100	-	50	22	-	30	2.2	UEST-F-2	32	X		
G <sup>1/2</sup>	ISO 228	M33 x 2	46	34	14	53	12	0.4	UEST-T- <sup>1/2</sup> ED	10 & 20		X	X
G <sup>3/4</sup>	ISO 228	M33 x 2	46	36	16	53	16	0.4	UEST-T- <sup>3/4</sup> ED	10 & 20		X	X
G1 <sup>1/2</sup>	ISO 228	Flange □100	-	70	22	-	30	2.3	UEST-F-1 <sup>1/2</sup>	32			X

**Threaded Adapter**  
**UEST-T-xx**

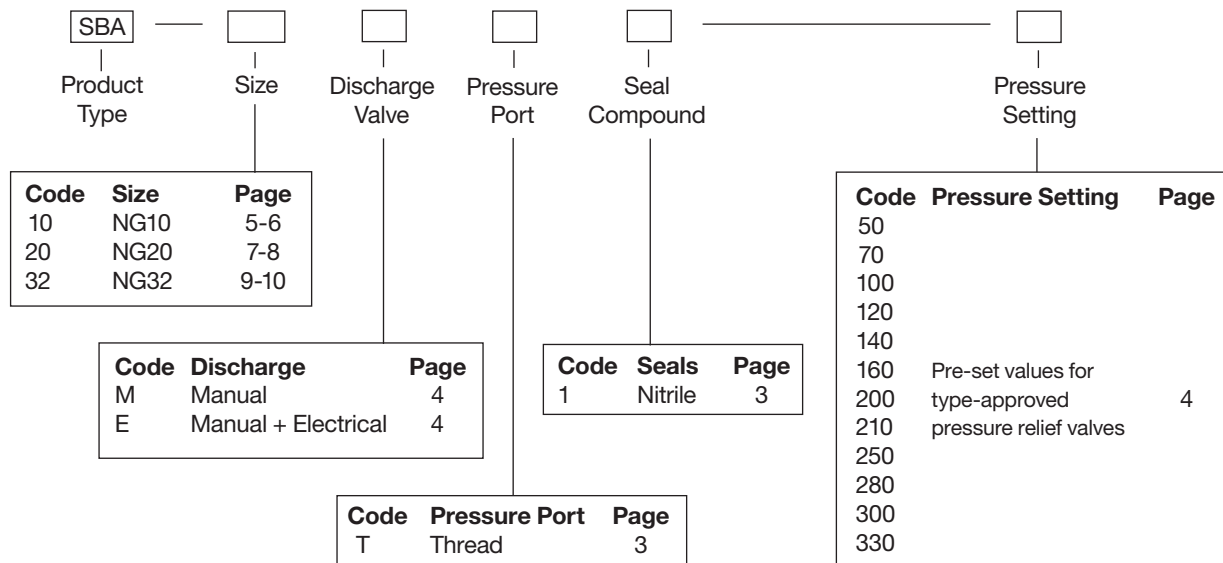


**Flanged Adapter**  
**UEST-F-xx**



All dimensions are in millimetres unless otherwise stated.

**How to Order**



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