RODLESS BAND CYLINDERS

Ø 25 - 50 mm - double acting
with carrier guided with rollers
with active brake
equipped for magnetic detectors

Series **448**
Type STBB

APPLICATION PRINCIPLE

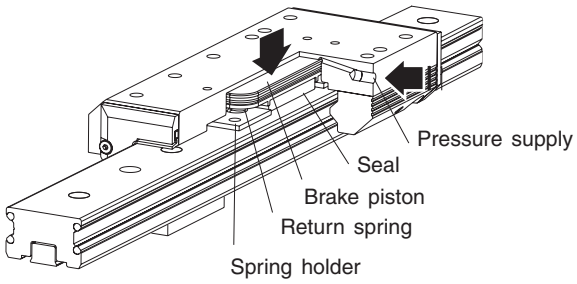
The brake is designed to stop the loaded cylinder carrier and hold it in the end-of-stroke position when it is supplied with pressure during machine operation.
The brake is a mechanical device which acts on the carrier's guide rail. It is released by spring actuation when the air pressure is removed.

Advantages

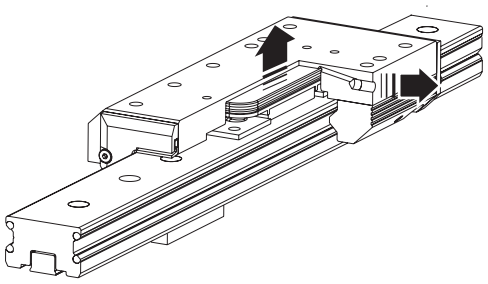
- Stops and holds carrier in the end-of-stroke position.
- Holds maximum allowable cylinder load without slipping.
- Intermediate stops possible.
- **Blocks by pressurisation**.
- Two-directional action.
- Any mounting position.

OPERATING PRINCIPLE

Pressure applied



No pressure applied



SPECIFICATIONS

CYLINDER: see preceding pages

ACTIVE BRAKE

FLUID : Air or neutral gas, unlubricated
ALLOWABLE PRESSURE : 8 bar max.
AMBIENT TEMPERATURE : -10°C to +80°C
MOUNTING POSITION : Any
Loads, moments and forces :

Ø Cylinder (mm)	Bending moments (in N.m)			Load (in N)	**Holding force** at 6 bar (in N)
	M	**M_s**	**M_v**	**L**	
25	39	16	39	857	consult us
32	73	29	73	1171	
40	158	57	158	2074	
50	249	111	249	3111	

MECHANICAL CHARACTERISTICS: see preceding pages

CHOICE OF EQUIPMENT

Ø Cylinder (mm)	CYLINDER EQUIPPED FOR DETECTOR		Max. allowable stroke (mm)	Pipe size	Cushioning length (mm)
	CODE(2)	REFERENCE			
25	**44850030** (1)	STBB 25 A - 0(3) - **AB** -_(1)_- DM	3750	G 1/8	17
32	**44850031** (1)	STBB 32 A - 0(3) - **AB** -_(1)_- DM	3750	G 1/4	20
40	**44850032** (1)	STBB 40 A - 0(3) - **AB** -_(1)_- DM	3750	G 1/4	27
50	**44850033** (1)	STBB 50 A - 0(3) - **AB** -_(1)_- DM	3750	G 1/4	30

For other strokes, contact us.
(1) Specify stroke (in mm)
(2) Position detectors are to be ordered separately
(3) 1 for slow speed option

When ordering, please specify the code of the STTB cylinder with active brake, its stroke, reference and any accessories you may require.
Example:
Cylinder Ø 25 mm, 200 mm stroke, with active brake, without slow speed option: code **44850030200 - STB 25 A 0 AB 200 DM**

MOUNTINGS

Ø Cylinder (mm)	CODE  Low foot brackets (4)
25 **32**	**43400494** **43400495**

Ø Cylinder (mm)	CODE  Flanges
40 **50**	**43400496** **43400497**

Delivered with 2 foot brackets or 2 flanges plus cylinder mounting screws.
The mountings are delivered non assembled.
(4) Foot brackets for cylinders Ø 25 and 32 allow height adjustment.

ACCESSORIES

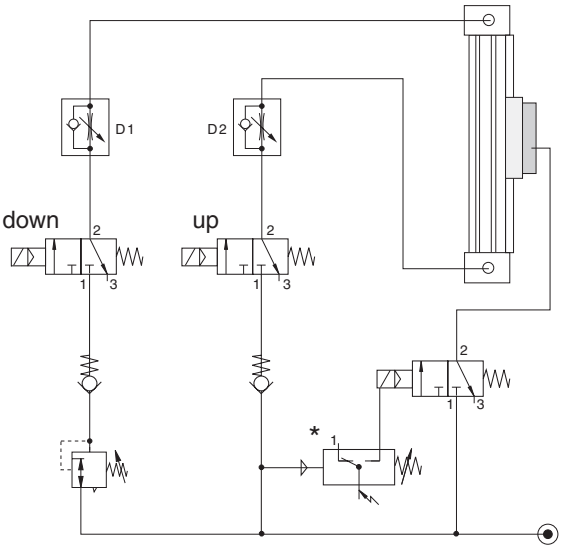
- **Tube support** (recommended to avoid buckling, depending on the stroke and load)
- Shock absorbers
- Magnetic detectors: Reed switch or magneto-inductive type

OPTIONS

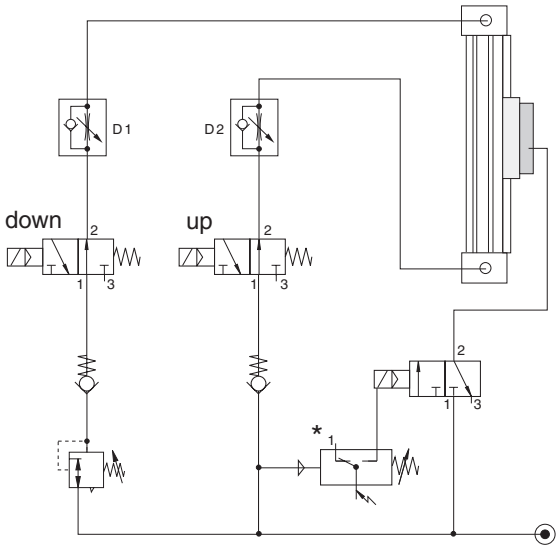
- Slow speeds from 5 mm/s to 0,2 m/s - code: Ø 25 : **995083** Ø 40 : **995085**
  Ø 32 : **995084** Ø 50 : **995086**
  (When selecting this option, you will have to change the cylinder reference to: STBB .. A **1** ... DM)
- Pressure supply ports on same side as guide rail (contact us)

WIRING DIAGRAM
VERTICAL APPLICATION

Control of a cylinder with normally closed (NC) 3/2 spool valves (the cylinder chambers are exhausted when in the reset position).



Control of a cylinder with normally open (NO) 3/2 spool valves (the cylinder chambers are pressurised when in the reset position).



APPLICATION PRINCIPLE

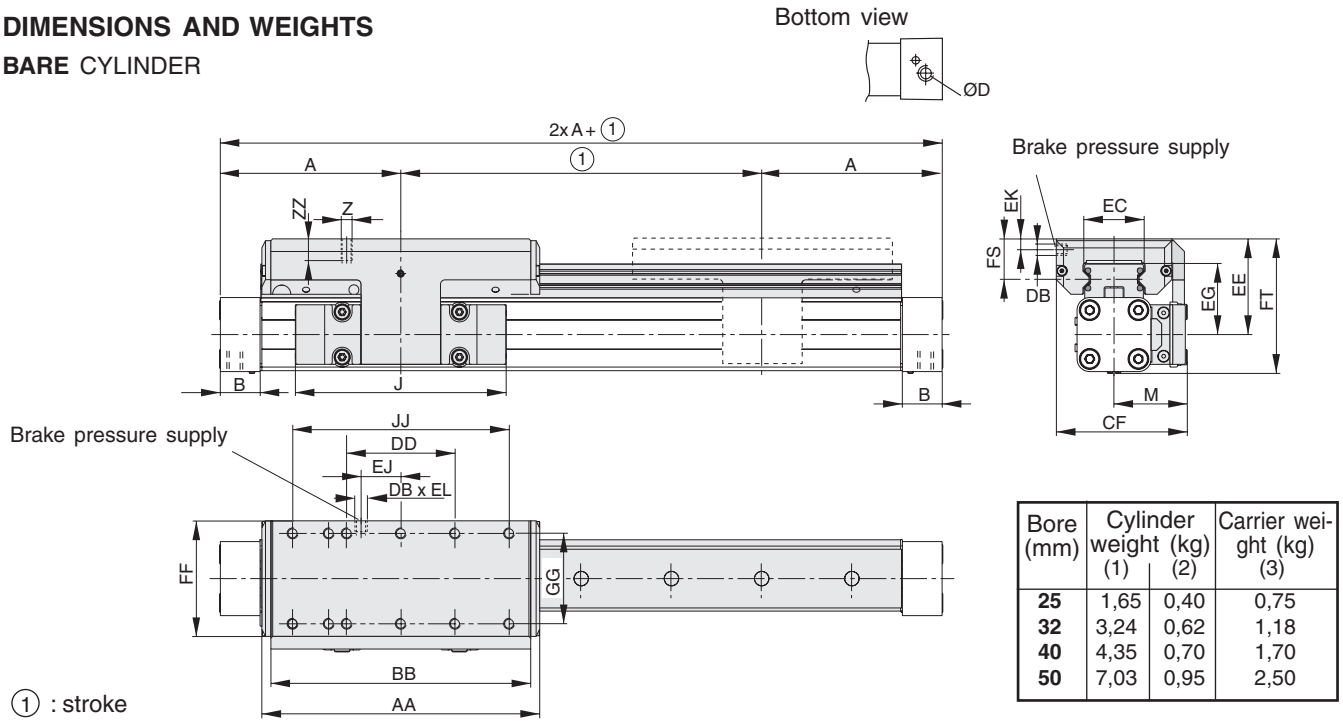
Under normal operating conditions, the pressure switch is closed. The 3/2 spool valve supplies air to the brake to release it and allow the cylinder to move. In the event of loss of pressure or pressure failure, the pressure switch activates the cylinder valve and locks the movement of the cylinder. When pressure is restored to the two cylinder chambers, the brake is once again released.
The flow reducers D1 and D2 do not have any influence on the brake. The two non-return valves enhance the stability of the system.
The pressure regulator is used to compensate the force of the load in vertical applications.

NOTE: Before releasing the brake, make sure both air chambers are pressurised. Tube length and size as well as the size of the fittings influence the reaction time of the brake. We recommend reducing tubing lengths and using adequately sized fittings.

❇ An adjustable pressure switch locks the brake when the pressure drops below a pre-set value.

DIMENSIONS AND WEIGHTS

BARE CYLINDER



Bore (mm)	Cylinder weight (kg) (1)	(2)	Carrier weight (kg) (3)
25	1,65	0,40	0,75
32	3,24	0,62	1,18
40	4,35	0,70	1,70
50	7,03	0,95	2,50

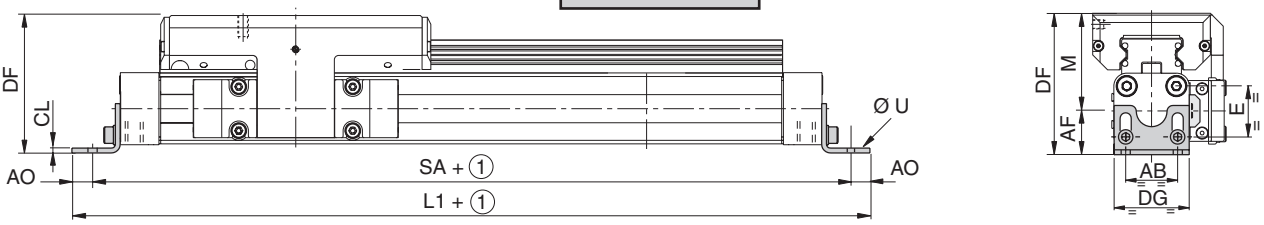
① : stroke

Bore (mm)	DIMENSIONS (mm)																					
	A	**B**	**D**	**J**	**M**	**Z**	**AA**	**BB**	**DD**	**DB**	**CF**	**EC**	**EE**	**EG**	**EJ**	**EK**	**EL**	**FF**	**FS**	**FT**	**GG**	**JJ**	**ZZ**
25	100,4	22	G1/8	117	40,5	M6	154	144	60	M5	72,5	32,5	53	39	22	6	6	64	23	73,5	50	120	12
32	125,2	25,5	G1/4	152	49	M6	197	187	80	M5	91	42	62	48	32	6	6	84	25	88	64	160	12
40	150	28	G1/4	152	55	M6	232	222	100	M5	102	47	64	50,5	58	9	6	94	23,5	98,5	78	200	12
50	175	33	G1/4	200	62	M6	276	266	120	M5	117	63	75	57	81	6	6	110	29	118,5	90	240	16

(1) Weight with 0 mm stroke
(2) Weight to be added per additional 100 mm length
(3) When using the cushioning diagram, be sure to add the weight of the carrier to the weight of the load to be moved.

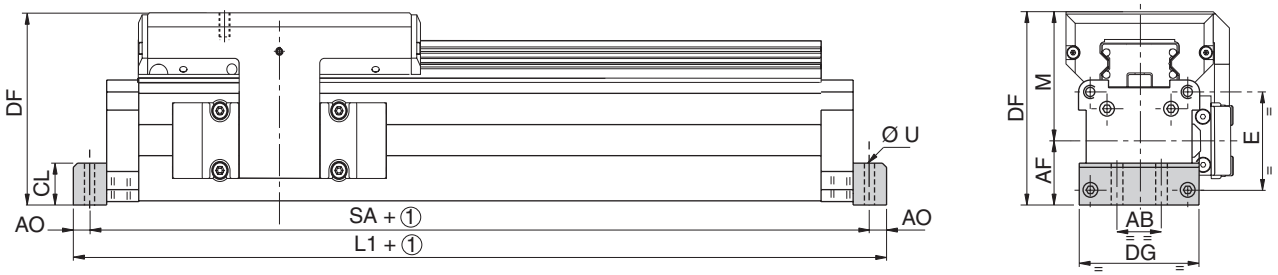
CYLINDER WITH MOUNTING **BRACKETS**

Ø25 - 32 mm



CYLINDER WITH MOUNTING **FLANGES**

Ø40 - 50 mm



① : stroke

Bore (mm)	DIMENSIONS (mm)												Weights (kg)	
	AB	**AF** min	**AF** max	**A0**	**CL**	**DF** min	**DF** max	**DG**	**E**	**L1**	**M**	**SA**	**U**	**Brackets**	**Flanges**
25	27	22,7	32,3	9,5	2,5	75,7	85,3	39	27	250,8	53	231,8	6,6	0,072	-
32	36	32,5	45,2	9,3	3	94,5	107,2	50	36	292,4	62	273,8	7	0,117	-
40	30	35,2		11,3	24	99,2		68	54	348	64	325,4	9	-	0,210
50	31,8	46		16,2	30	121		86	70	398	75	365,6	10	-	0,308