

PISTON ROD-BRAKE

for Cylinders



Find out our
key products



Solution for most applications



Easy and intuitive choice



Excellent value for money



Wide availability



Fast delivery



Features and certifications

Series of piston rod-brake for cylinders conforming to standard ISO 6432 and ISO 15552, suitable for blocking the rod of the cylinder in the event of a pressure lack or pressure drop to the cylinder, or in those cases where a stop is necessary for a processing or handling. Supplied as standard in compliance with Reach and RoHS directives.



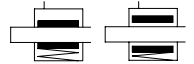
Static piston rod-brake for cylinders ISO 6432

from page 1.75.10



Static piston rod-brake for cylinders conforming to standard ISO 6432. Can be supplied normally closed or normally open.

The clamping forces are suitable for cylinder working pressure up to 8 bar and act in both directions. For the application of the piston rod-brake type ABS to a cylinder ISO 6432, the actuator must be ordered with the rod predisposed for this (extended rod in hardened and chrome plated steel, option B).



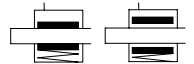
Static piston rod-brake for cylinders ISO 15552

from page 1.75.10



Static piston rod-brake for cylinders conforming to standard ISO 15552. Can be supplied normally closed or normally open.

The clamping forces are suitable for cylinder working pressure up to 8 bar and act in both directions. For the application of the piston rod-brake type ABS to a cylinder ISO 15552, the actuator must be ordered with the rod predisposed for this (extended rod in hardened and chrome plated steel, option B).



Dynamic piston rod-brake for cylinders ISO 15552



from page 1.75.40



Dynamic piston rod-brake for cylinders conforming to standard ISO 15552. Can be supplied normally closed only. The peculiarity of this type ABK is to lock the piston rod while moving and to hold it still even in presence of pressure in the chamber. The special feature of the piston-rod brake type ABK is the absolute absence of axial movement and rotation of the cylinders' piston-rod. For the application of the piston rod-brake type ABK to a cylinder ISO 15552, the actuator must be ordered with the rod predisposed for this (extended rod in hardened and chrome plated steel, option B1).

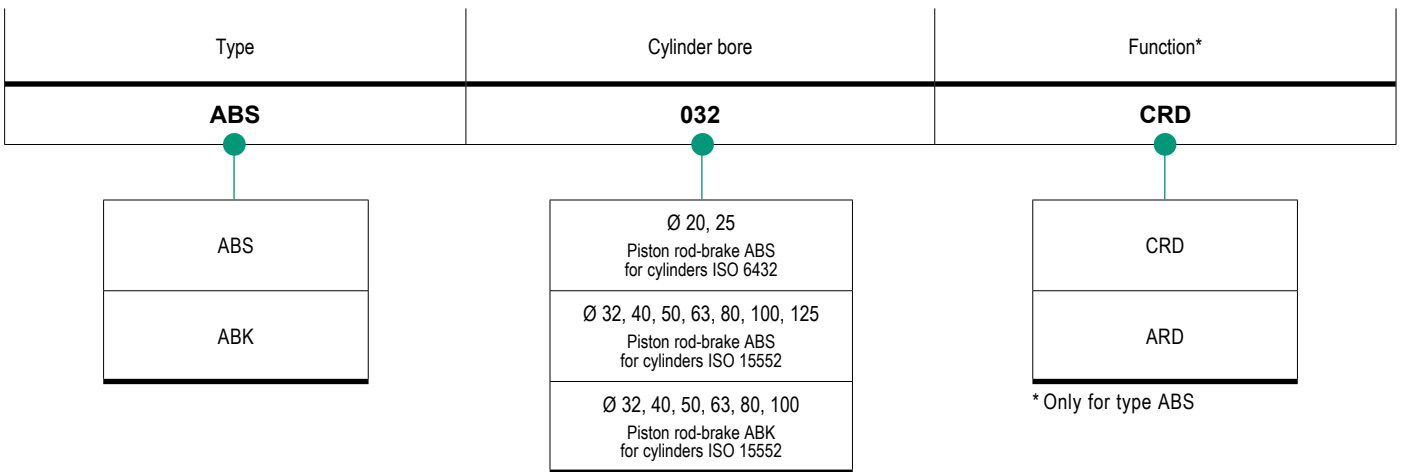


Standard options matching

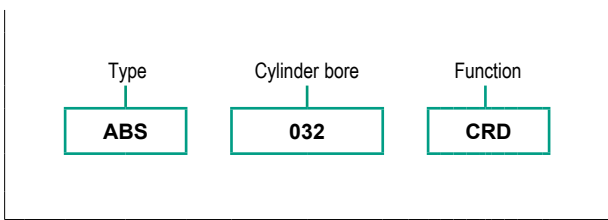
Series	Bore	Model	Functions	
			Normally closed 	Normally open 
ABS..	Ø 20 + 125	Standard	●	●
ABK..	Ø 32 + 100	Standard	●	-

Key
 ● available; - not available.

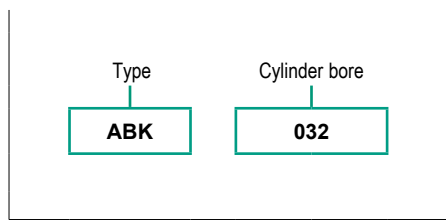
Code key



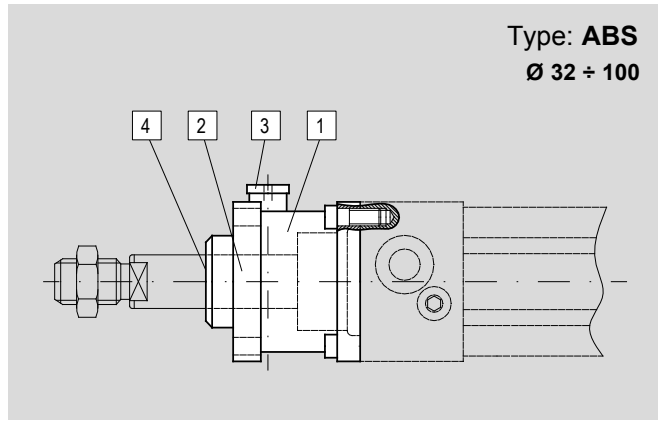
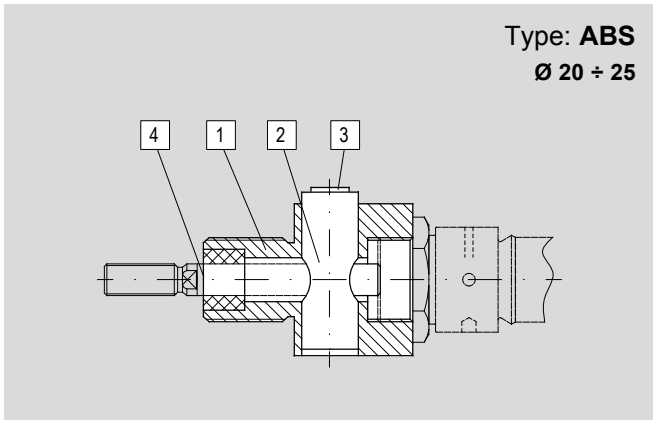
How to order type ABS



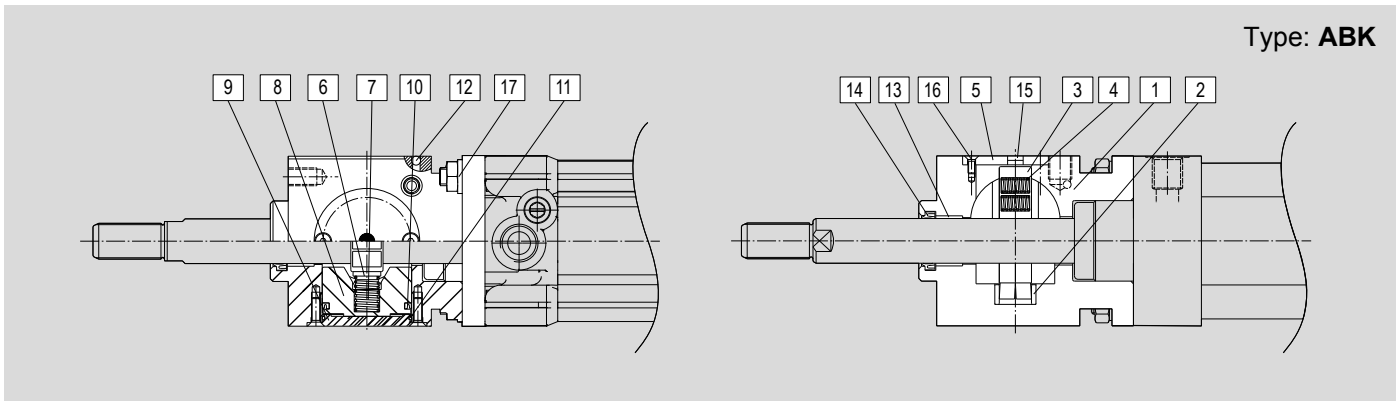
How to order type ABK



Standard materials



Position	Description	Materale
1	Body	Anodised aluminium
2	Jaws	Brass
3	Seals	NBR
4	Cylindrical locking device	Anodised aluminium



Position	Description	Materale
1	Body	Anodised aluminium
2	Bushing	Carbon steel
3	Locking unit	Brass
4	Spring	SWPA
5	Cover	Anodised aluminium
6	Locking spring	Acetalic resin (POM)
7	Spring	SWPA
8	Piston	Acetalic resin (POM)
9	Rear cover	Anodised aluminium
10	Seal	Polyurethane (PU)
11	O-ring	NBR
12	Sphere	Carbon steel
13	Bushing	Sintered bronze
14	Rod seal	NBR
15	Silencer	Brass
16	Screw	Nickel-plated carbon steel
17	Screw	Carbon steel blackening

Piston Rod-Brake for Cylinders

Static piston-rod brake for cylinders ISO 6432



Main features

20 ÷ 25

Bores Ø



Normally closed

ABS..CRD

Type



20 ÷ 25

Bores Ø



Normally open

ABS..ARD

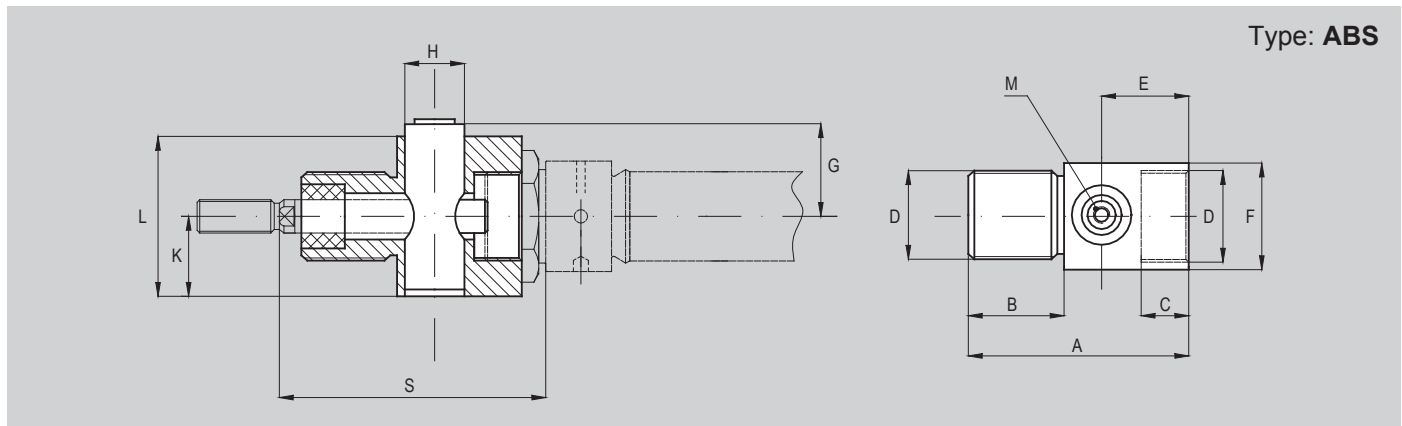
Type

Technical data

Bore Ø (mm)	20	25
Fluid	Compressed filtered air with or without lubrication	
Pressure range	4 ÷ 8 bar	
Locking force (N)	300	400
Temperature range	-10°C ÷ +80°C	

Warning: working of piston rod-brake type ABS is static: before clamping is necessary to arrest the rod, is not usable for reducing the speed of the rod while moving. The locking-rod unit must only be unlocked when the pressures of both chambers of the cylinder are balanced, or the rod of the cylinder could move with non-uniform motion, causing problems to the application. For the application of the piston rod-brake the actuator must be ordered with the rod predisposed for this (extended rod in hardened and chrome plated steel, option B).

Standard dimensions



Type: ABS

For cylinder Ø (mm)	A	B	C	E	F	G	H	K	D	L	M	S
20	58	23	12	24	27	21	20	19	M22x1,5	38	M5	72
25	58	23	12	24	27	21	20	19	M22x1,5	38	M5	74

Codes

For cylinder Ø (mm)	Code	Item	Function
20	042022	ABS020CRD	Normally closed
25	042023	ABS025CRD	

Seals kit not available

For cylinder Ø (mm)	Code	Item	Function
20	042032	ABS020ARD	Normally open
25	042033	ABS025ARD	

Seals kit not available

Piston Rod-Brake for Cylinders

Static piston-rod brake for cylinders ISO 15552



1 - CYLINDERS

Main features

32 ÷ 125

Bores Ø



Normally closed

ABS..CRD

Type



32 ÷ 125

Bores Ø



Normally open

ABS..ARD

Type

Technical data

Bore Ø (mm)	32	40	50	63	80	100	125
Fluid	Compressed filtered air with or without lubrication						
Pressure range	4 ÷ 8 bar						
Locking force (N)	650	1100	1600	2500	4000	6300	8700
Temperature range	-10°C ÷ +80°C						

Warning: working of piston rod-brake type ABS is static: before clamping is necessary to arrest the rod, is not usable for reducing the speed of the rod while moving. The locking-rod unit must only be unlocked when the pressures of both chambers of the cylinder are balanced, or the rod of the cylinder could move with non-uniform motion, causing problems to the application. For the application of the piston rod-brake the actuator must be ordered with the rod predisposed for this (extended rod in hardened and chrome plated steel, option B).

Codes

For cylinder Ø (mm)	Code	Item	Function
32	042001	ABS032CRD	Normally closed
40	042002	ABS040CRD	
50	042003	ABS050CRD	
63	042004	ABS063CRD	
80	042005	ABS080CRD	
100	042006	ABS100CRD	
125	042007	ABS125CRD	

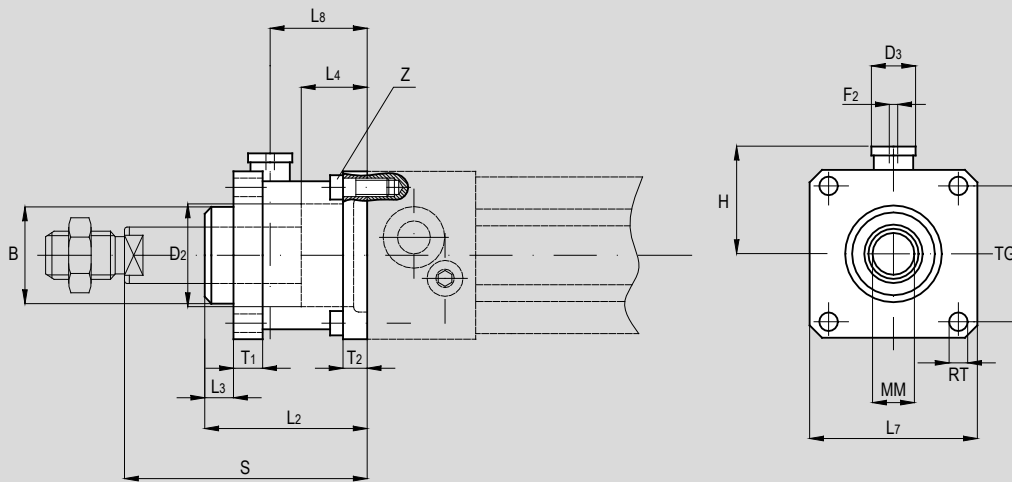
Seals kit not available

For cylinder Ø (mm)	Code	Item	Function
32	042011	ABS032ARD	Normally open
40	042012	ABS040ARD	
50	042013	ABS050ARD	
63	042014	ABS063ARD	
80	042015	ABS080ARD	
100	042016	ABS100ARD	
125	042017	ABS125ARD	

Seals kit not available

Standard dimensions

Type: **ABS**



1 - CYLINDERS

Per cylinder Ø (mm)	ØB d11	ØD ₂	ØD ₃	F ₂	H	L ₂	L ₃	L ₄	L ₇	ØL ₈	ØMM	RT	T ₁	T ₂	TG	Z	S
32	30	30,5	20	M5	25,5	58	10	20,5	45	31,5	12	M6	13	8	32,5	M6x20	74
40	35	35	24	1/8"	30	65	10	22,5	50	36	16	M6	13	8	38	M6x20	85
50	40	40	30	1/8"	36	82	12	29,5	60	45,5	20	M8	16	15	46,5	M8x30	107
63	45	45	38	1/8"	40	82	12	29,5	70	49,5	20	M8	16	15	56,5	M8x30	107
80	45	45	48	1/8"	50	110	20	35	90	61	25	M10	20	18	72	M10x35	136
100	55	55	48	1/8"	58	115	23	39	105	65	25	M10	20	18	89	M10x35	143
125	60	60	65	1/8"	80	167	45	51	140	86,5	32	M12	30	22	110	M12x40	187

Piston Rod-Brake for Cylinders

Dynamic piston-rod brake for cylinders ISO 15552



Main features

32 ÷ 100

Bores Ø



Normally closed

ABK

Type



Technical data

Bore Ø (mm)		32	40	50	63	80	100
Fluid		Compressed filtered air with or without lubrication					
Pressure range		4 ÷ 6,5 bar					
Minimum working pressure (bar)		4.0	4.0	3.5	3.5	3.0	3.0
Locking model		Secure locking of piston rod in any position					
Locking force (N)		510	860	1275	2060	3300	4620
Lock braking precision (mm)	V (mm/sec)	(Horizontal axis) operate with a load ratio of 70% or less (Vertical axis) operate with a load ratio of 35% or less					
	50 (mm/sec)	±0.7	±0.8	±0.9	±0.8	±0.8	±1
	100 (mm/sec)	±1	±1	±1	±1	±1.2	±1.4
	200 (mm/sec)	±1.3	±1.6	±1.4	±1.8	±2.1	±2.4
Allowable energy (max) J(N • m) J(Ek=½mv ²)		0.84	1.41	2.2	3.31	4.98	7.57
Temperature range		-10°C ÷ +60°C					

Warning: for the application of the piston rod-brake the actuator must be ordered with the rod predisposed for this (extended rod in hardened and chrome plated steel, option B1).

Codes

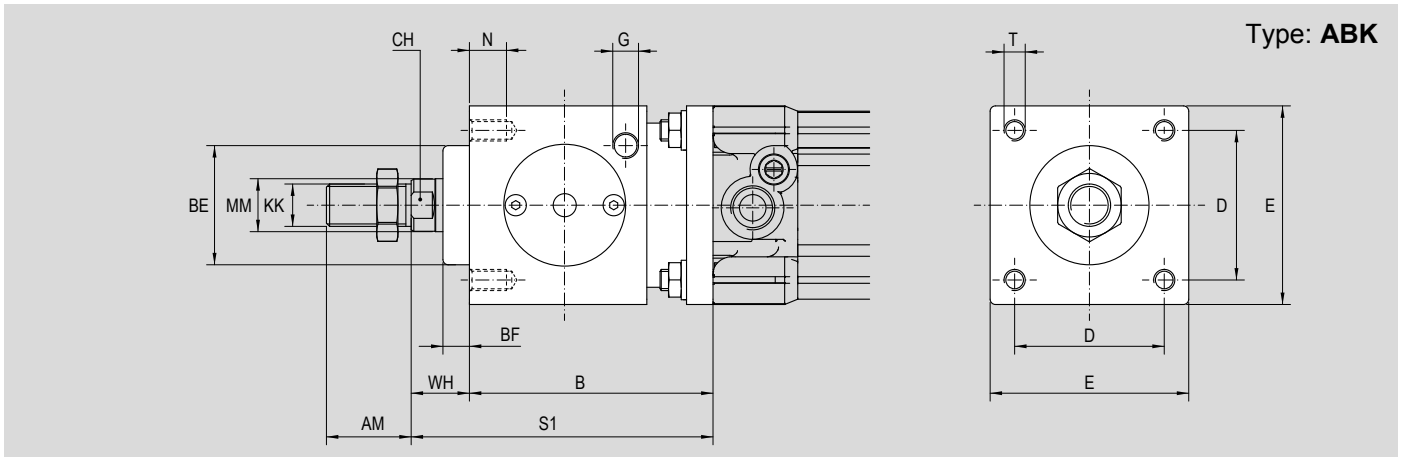
For cylinder Ø (mm)	Code	Item	Option
32	042035	ABK032	Normally closed
40	042036	ABK040	
50	042037	ABK050	
63	042038	ABK063	
80	042039	ABK080	
100	042040	ABK100	

Piston Rod-Brake for Cylinders

Dynamic piston-rod brake for cylinders ISO 15552



Standard dimensions

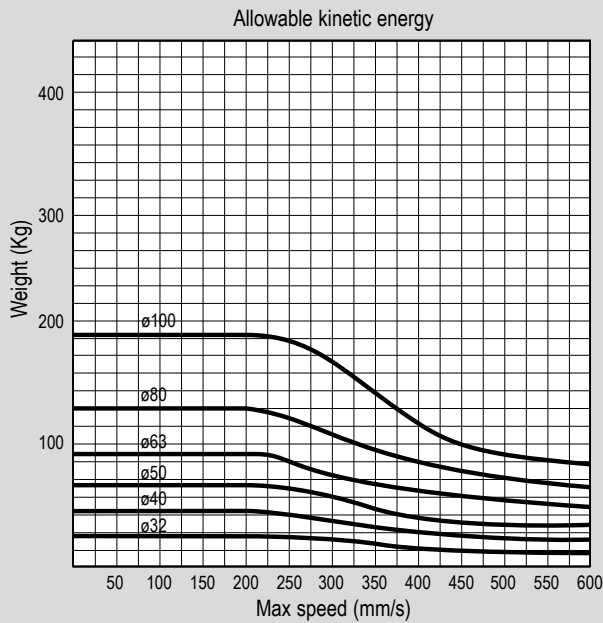
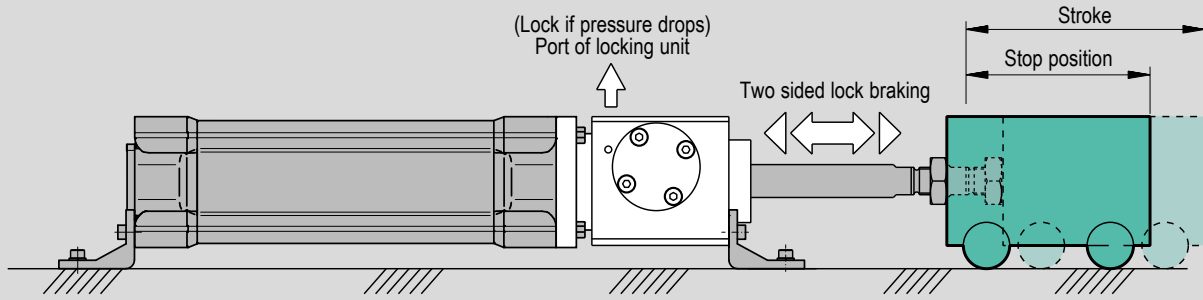


1 - CYLINDERS

For cylinders Ø (mm)	AM	B	BE	BF	CH	D	E	G	ØKK	ØMM f7	N	S1	T	WH
32	22	73	30	8	10	32.5	47	1/8"	M10x1.25	12	12	99	M6	26
40	24	76	35	8	13	38	53	1/8"	M12x1.25	16	12	106	M6	30
50	32	90	40	8	17	46.5	65	1/8"	M16x1.5	20	14	127	M8	37
63	32	92	45	10	17	56.5	75	1/8"	M16x1.5	20	14	129	M8	37
80	40	110	45	10	22	72	95	1/4"	M20x1.5	25	16	156	M10	46
100	40	130	55	10	27	89	115	1/4"	M20x1.5	25	16	181	M10	51

Horizontal application

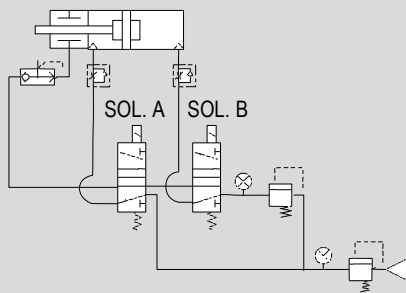
Type: **ABK**



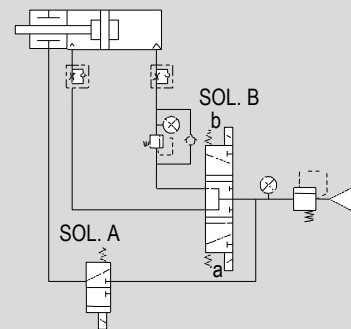
$$Ek = \frac{1}{2} mv^2$$

Ek: Kinetic energy (J)
v: Speed (m/s)
m: Weight (kg)

Example 1



Example 2

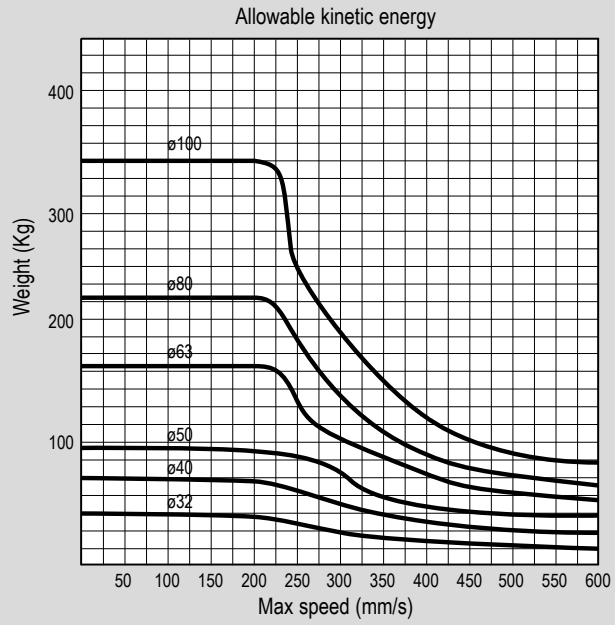
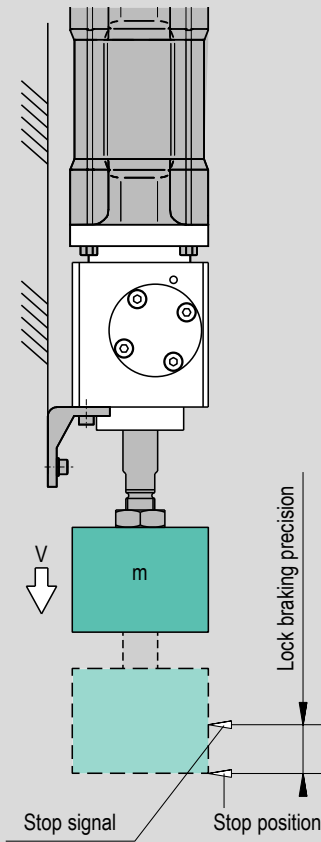


SOL. A	SOL. B	CYLINDER
ON	OFF	extended
OFF	OFF	stop
ON	OFF	extended
OFF	ON	retract
OFF	OFF	stop
OFF	ON	retract

SOL. A	SOL. B		CYLINDER
	a	b	
ON	OFF	ON	extended
OFF	OFF	OFF	stop
ON	OFF	ON	extended
ON	ON	OFF	retract
OFF	OFF	OFF	stop
ON	ON	OFF	retract

Vertical application

Type: **ABK**



$$Ek = \frac{1}{2}mv^2$$

Ek: Kinetic energy (J)
 v: Speed (m/s)
 m: Weight (kg)