

## **Linear Cylinders**

*pneumatic*

**SOMMER**  
*automatic*





## SH

Order no.	Stroke	Pressure force max.	Tensile force max.	Page
Product Information				8
SH-X7	7 mm	170 N	100 N	10
SH-X15	15 mm	170 N	100 N	10
SH-X25	25 mm	170 N	100 N	10
SH-X50	50 mm	170 N	100 N	10
SH-XD25	25 mm	100 N	100 N	12
SH-XD50	50 mm	100 N	100 N	12



## LI

Order no.	Stroke	Pressure force max.	Tensile force max.	Page
Product Information				16
LI16-20	20 mm	100 N	80 N	20
LI16-35	35 mm	100 N	80 N	20
LI30-15	14,5 mm	270 N	200 N	22
LI30-30	29,5 mm	270 N	200 N	22
LI30-60	59,5 mm	270 N	200 N	24
LI30-90	89,5 mm	270 N	200 N	24
LI40-40	39,5 mm	450 N	270 N	26
LI40-90	89,5 mm	450 N	270 N	26
LI16-50D	50 mm	80 N	80 N	28
LI30-60D	59,5 mm	200 N	200 N	30
LI30-90D	89,5 mm	200 N	200 N	30
LI40-90S	90 mm	270 N	270 N	32
LI40-130S	130 mm	270 N	270 N	32
LI40-160S	160 mm	270 N	270 N	32
LI40-200S	200 mm	270 N	270 N	34
LI40-250S	250 mm	270 N	270 N	34
LI40-300S	300 mm	270 N	270 N	34
LI50-50S	50 mm	950 N	950 N	36
LI50-90S	90 mm	950 N	950 N	36
LI50-130S	130 mm	950 N	950 N	38
LI50-160S	160 mm	950 N	950 N	38
LI50-200S	200 mm	950 N	950 N	38
LI50-250S	250 mm	950 N	950 N	40
LI50-300S	300 mm	950 N	950 N	40



# Linear *Cylinders*

## HZ

Order no.	Stroke	Pressure force max.	Tensile force max.	Page
Product Information				44
HZ40-50D2	50 mm	720 N	600 N	48
HZ40-100D2	100 mm	720 N	600 N	48



## LS

Order no.	Stroke	Pressure force max.	Tensile force max.	Page
Product Information				52
LS10-25	25 mm	40 N	30 N	56
LS10-50	50 mm	40 N	30 N	58
LS16-25	25 mm	100 N	85 N	60
LS16-50	50 mm	100 N	85 N	62





**LSF**

Order no.	Stroke	Pressure force max.	Tensile force max.	Page
Product Information				66
LSF25-50	50 mm	265 N	220 N	70
LSF25-100	100 mm	265 N	220 N	72



**LSX**

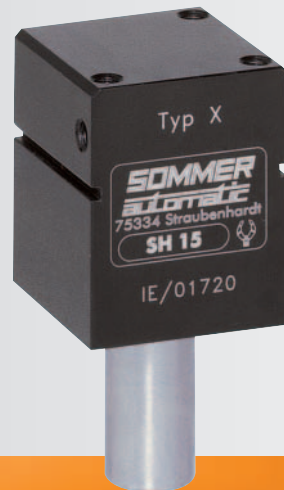
Order no.	Stroke	Pressure force max.	Tensile force max.	Page
Product Information				76
LSX25-50	50 mm	265 N	220 N	80
LSX25-100	100 mm	265 N	220 N	82
LSX25-200	200 mm	265 N	220 N	84
LSX40-100	100 mm	750 N	680 N	86
LSX40-200	200 mm	750 N	680 N	88





# Linear **Cylinders**

*pneumatic*



*SH Series*

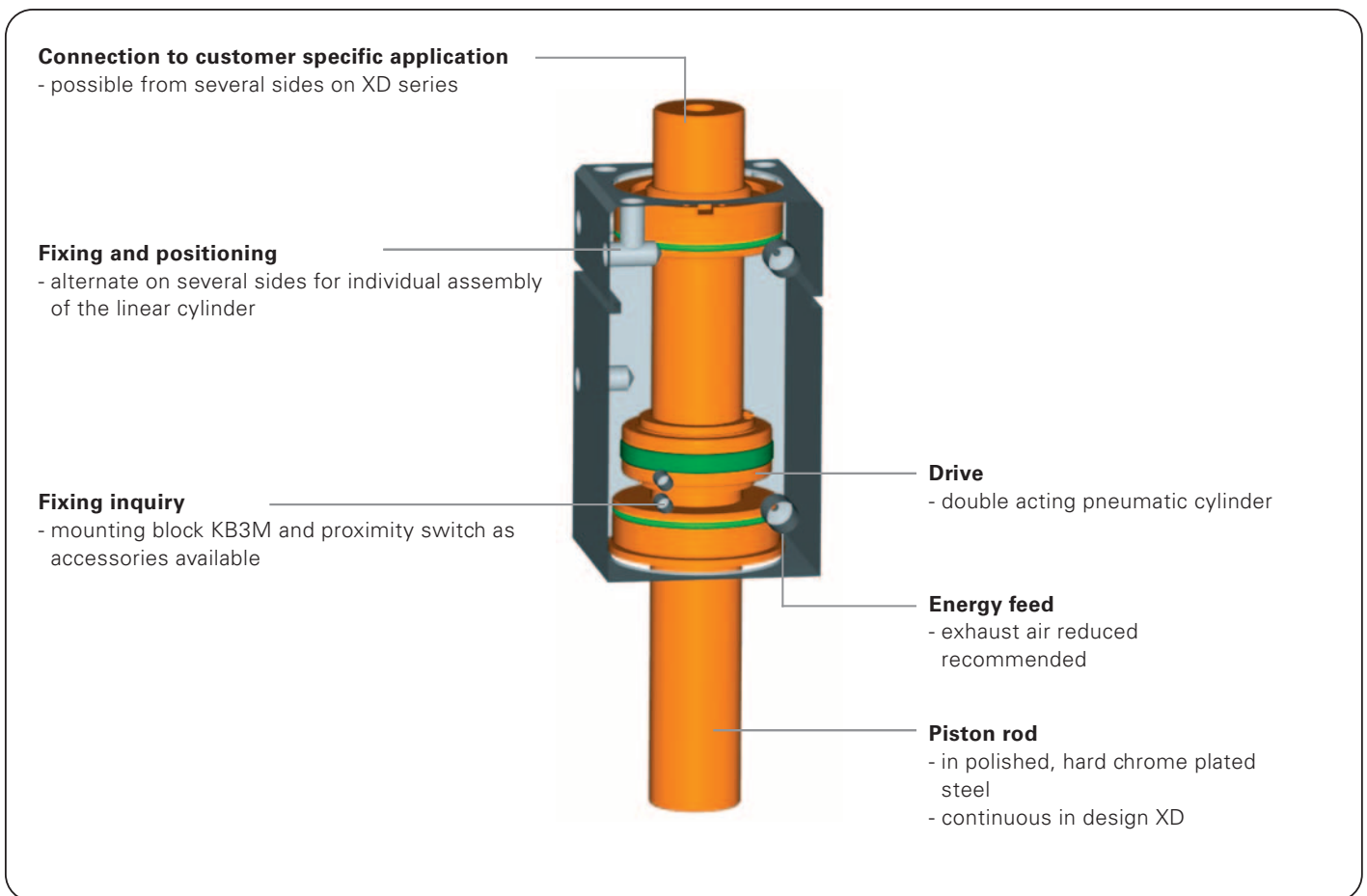
**SOMMER**  
*automatic*

# Linear *Cylinder*

## ➤ Features

- compact construction
- light weight
- short cycle times

## Functional diagram





## Terms

**Cycle:** one complete movement of the piston forward and back

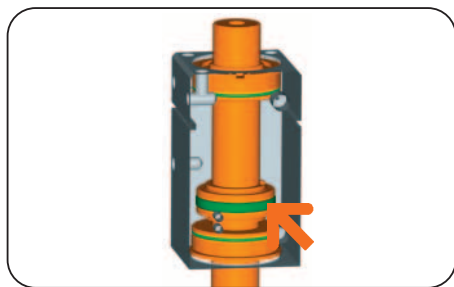
**Maintenance:** maintenance free up to 10 Mio. cycle  
(please see the owner's manual for conditions,  
download from [www.sommer-automatic.com](http://www.sommer-automatic.com))

- long maintenance intervals keep costs down
- long durability

## Model

**XD:** Continuous piston rod

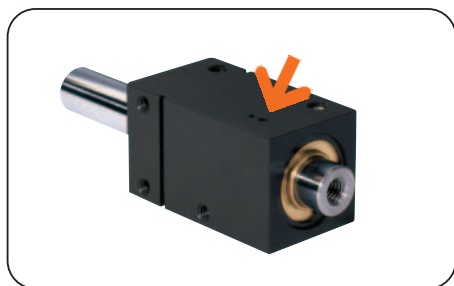
Order no.	Stroke	Extension force	Retraction force
SH-X7	7 mm	170 N	100 N
SH-X15	15 mm	170 N	100 N
SH-X25	25 mm	170 N	100 N
SH-X50	50 mm	170 N	100 N
SH-XD25	25 mm	100 N	100 N
SH-XD50	50 mm	100 N	100 N



## Drive

### Double acting pneumatic cylinder

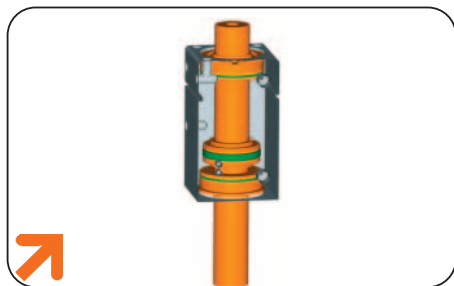
- high drive force when extending and retracting
- on XD series with continuous piston rod, constant drive force in both directions



## Position sensing

### Direct sensing possible

- mounting block KB3M and inductive proximity switch (e.g. NJ3...) available as accessory



## Machine connection

### Fixing and positioning possibilities from several sides

- optimum integration into the workroom through individual mounting position
- energy feed via exhaust air control valve recommended

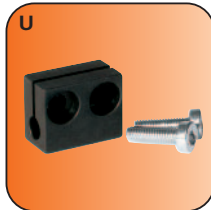
# Linear *Cylinder*



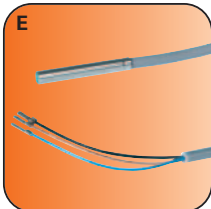
## Accessory list



Pneumatic fittings  
Order no. DRVM5x4



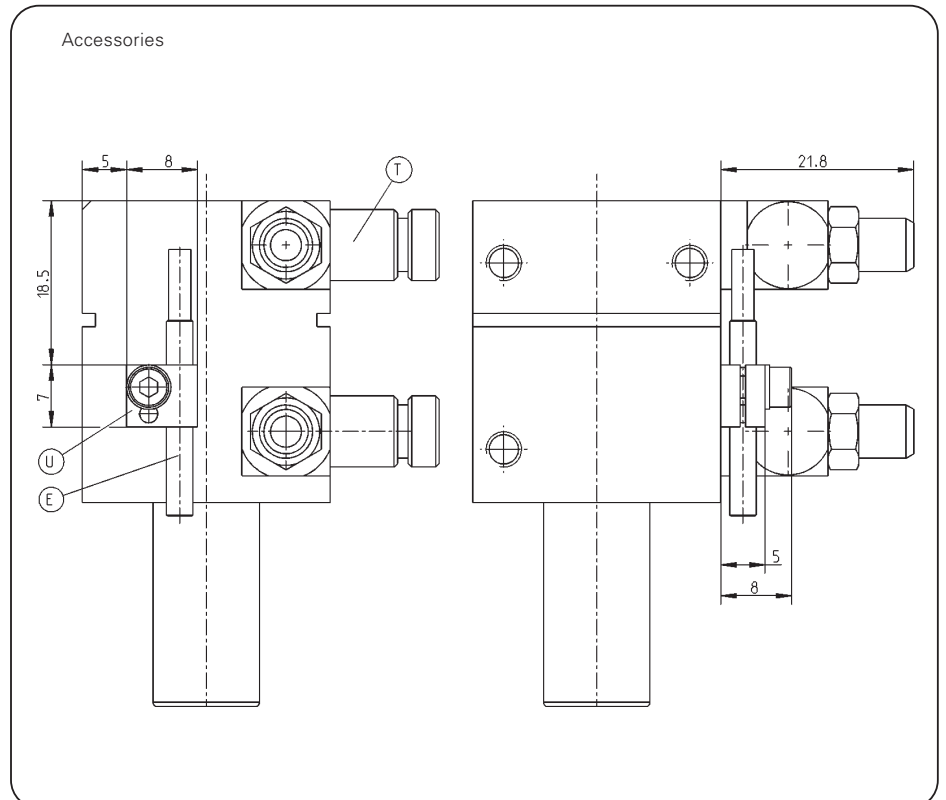
Mounting block  
Order no. KB3M



Proximity switch  
Order no. NJ3-E2-03



Plug 3-pole  
Order no. S12-G-3

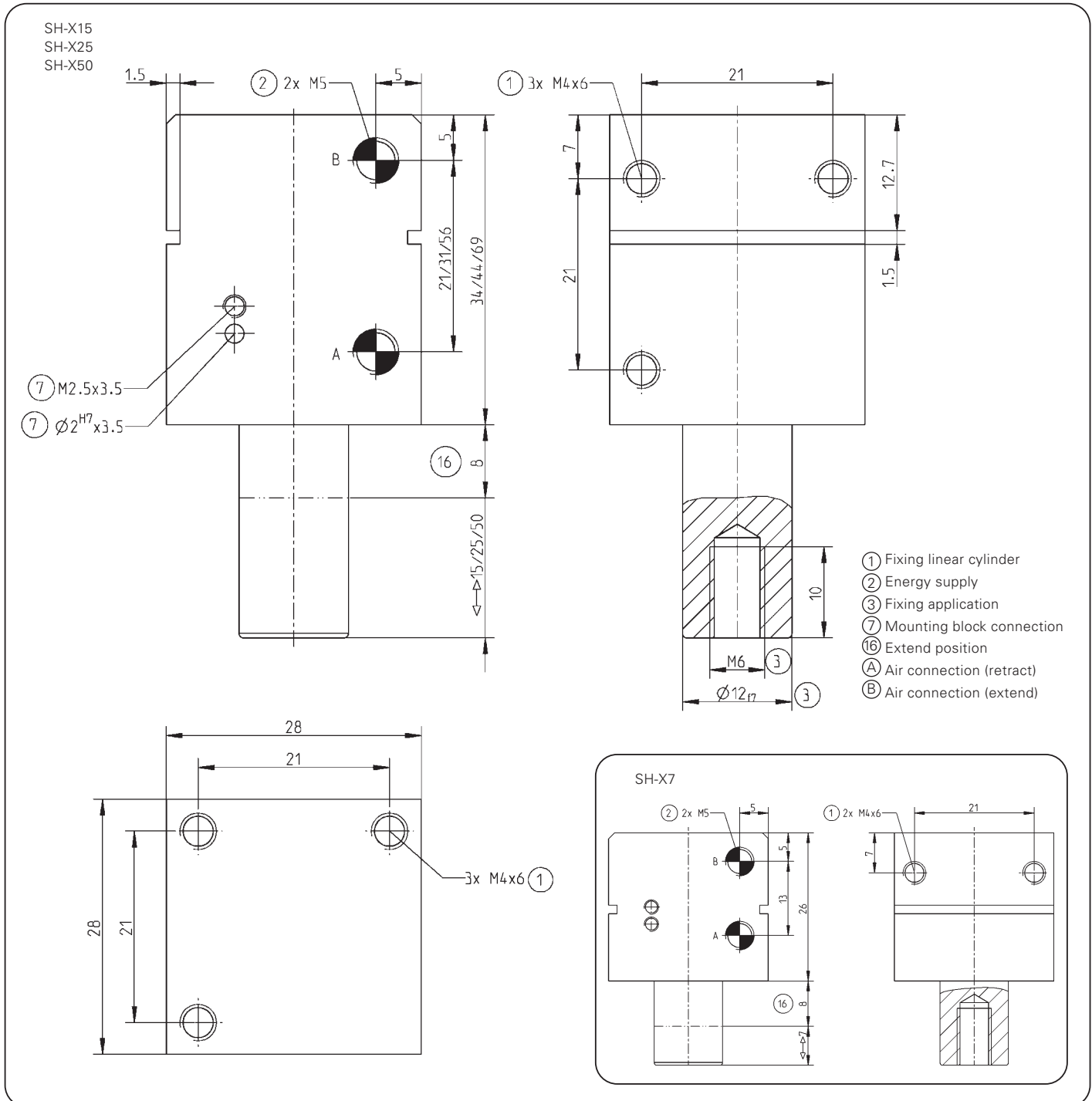


Subject to change without prior notice

Order no.:	SH-X7	SH-X15	SH-X25	SH-X50
Stroke [mm]:	7	15	25	50
Extension force [N]:	170	170	170	170
Retraction force [N]:	100	100	100	100
Air volume per cycle [cm <sup>3</sup> ]:	1,7	3,4	13,4	30,0
Min./max. operating temperature [°C]*:	5/80	5/80	5/80	5/80
Weight [g]:	90	100	130	180

All data measured at 6 bar

\* High temperature resistant model (up to 150 °C) add „T“ to part number



Subject to change without prior notice

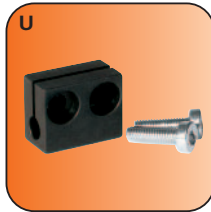
# Linear *Cylinder*



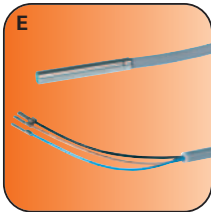
## Accessory list



Pneumatic fittings  
Order no. DRVM5x4



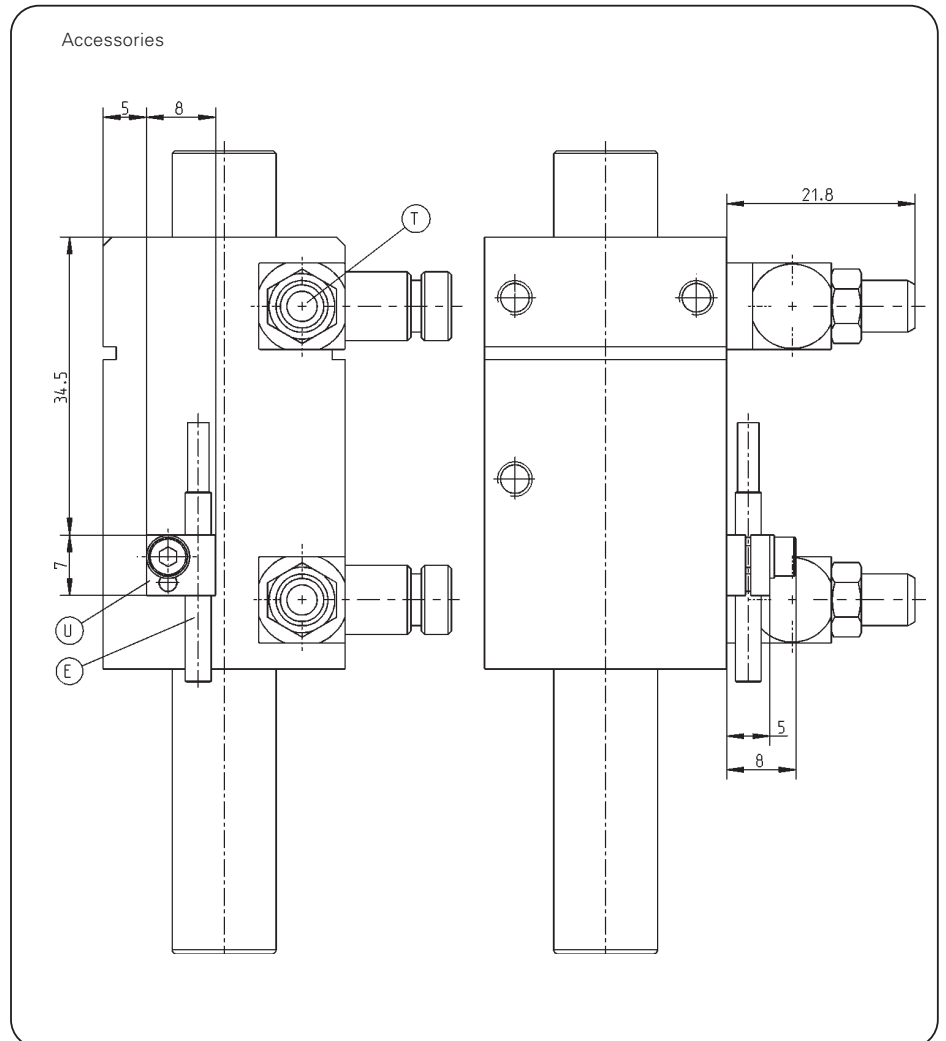
Mounting block  
Order no. KB3M



Proximity switch  
Order no. NJ3-E2-03



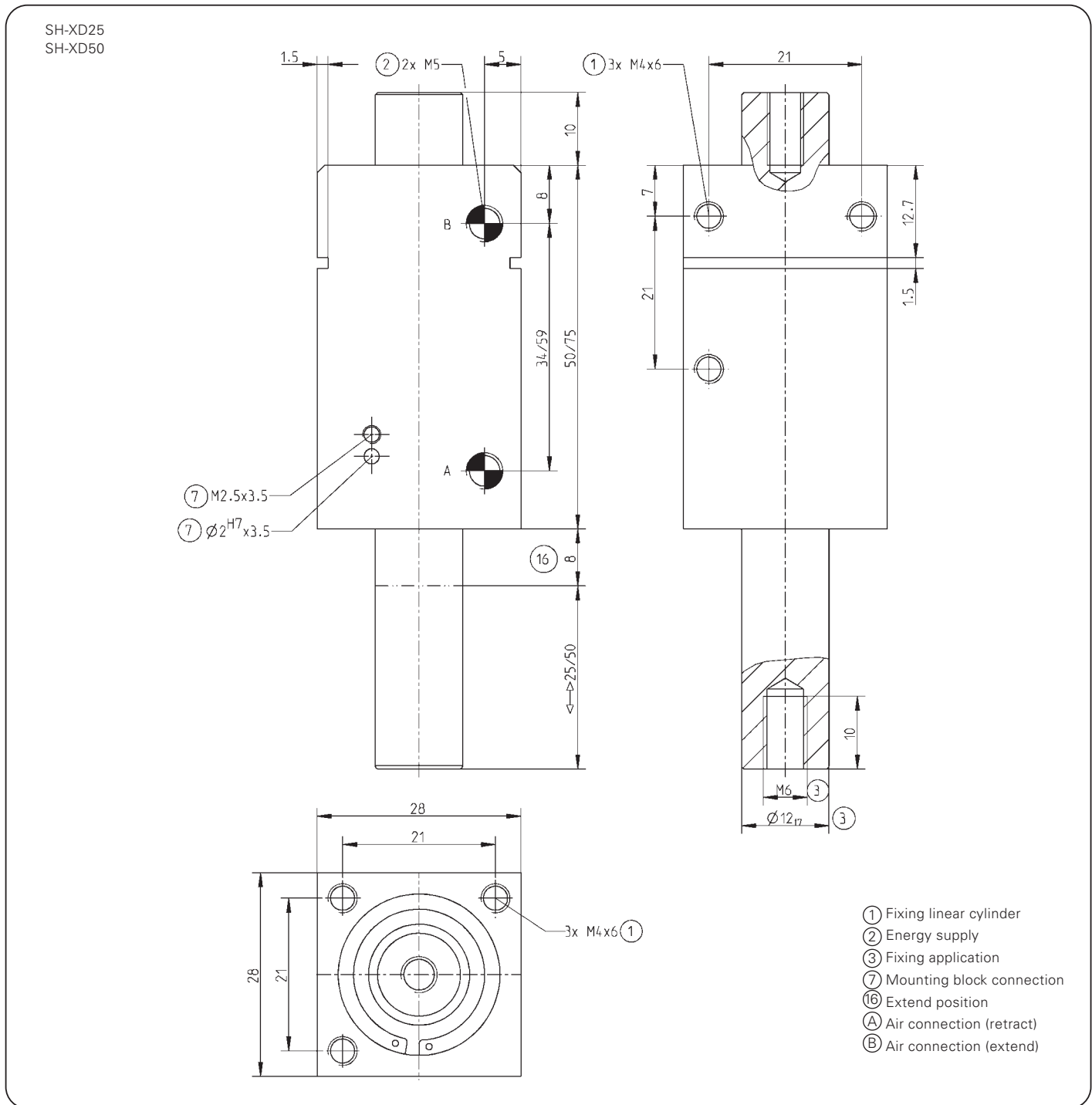
Plug 3-pole  
Order no. S12-G-3



Subject to change without prior notice

Order no.:	SH-XD25	SH-XD50
Stroke [mm]:	25	50
Extension force [N]:	100	100
Retraction force [N]:	100	100
Air volume per cycle [cm <sup>3</sup> ]:	12	25
Min./max. operating temperature [°C]*:	5/80	5/80
Weight [g]:	190	270

All data measured at 6 bar  
 \* High temperature resistant model (up to 150 °C) add „T“ to part number

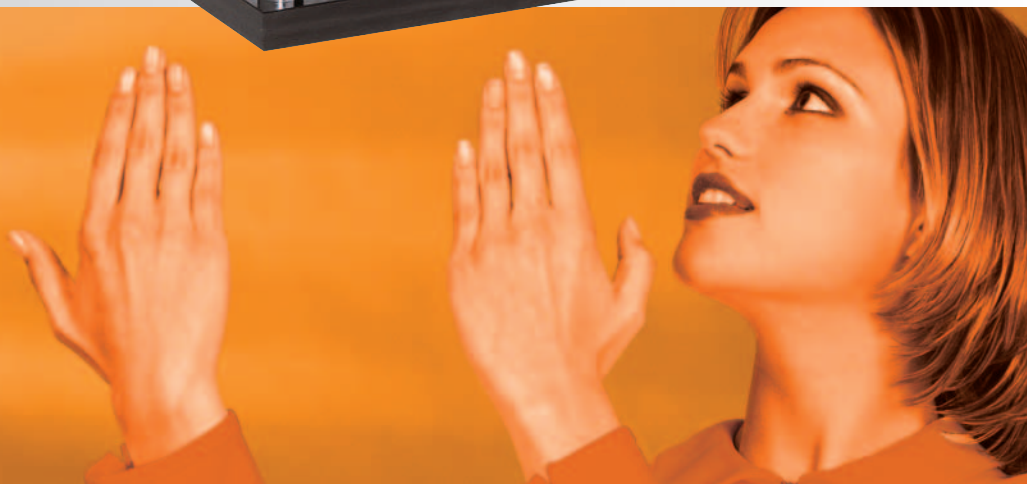


Subject to change without prior notice



# Linear **Cylinders**

*pneumatic*



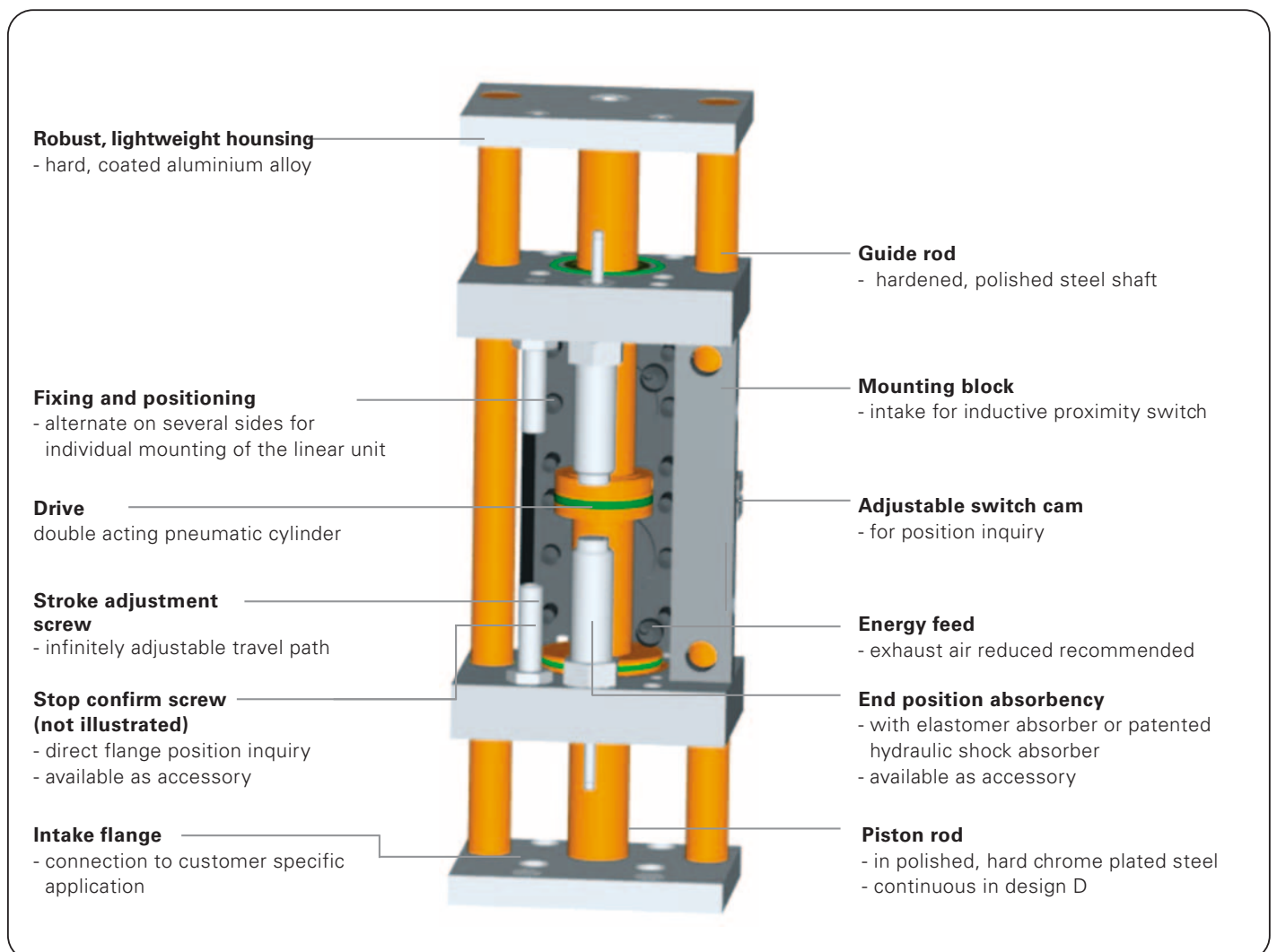
*LI-Series*

# Linear *Cylinders*

## ➤ Features

- high reliability and long durability
- large strokes up to 300 mm
- high drive force, 950 N pressure force

## Functional diagram





## Terms

**Cycle:** one complete movement of the piston forward and back

**Maintenance:** maintenance free up to 10 Mio. cycle  
(please see the owner's manual for conditions,  
download from [www.sommer-automatic.com](http://www.sommer-automatic.com))

- long maintenance intervals keep costs down
- long durability

## Model

**D:** 3 way guiding, continuous piston rod

**S:** 2 way guiding

Order no.	Stroke	Extension force	Retraction force
LI16-20	20 mm	100 N	80 N
LI16-35	35 mm	100 N	80 N
LI30-15	15 mm	270 N	200 N
LI30-30	30 mm	270 N	200 N
LI30-60	60 mm	270 N	200 N
LI30-90	90 mm	270 N	200 N
LI40-40	40 mm	450 N	270 N
LI40-90	90 mm	450 N	270 N
LI16-50D	50 mm	80 N	80 N
LI30-60D	90 mm*	200 N	200 N
LI30-90D	90 mm**	200 N	200 N
LI40-90S	90 mm	270 N	270 N
LI40-130S	130 mm	270 N	270 N
LI40-160S	160 mm	270 N	270 N
LI40-200S	200 mm	270 N	270 N
LI40-250S	250 mm	270 N	270 N
LI40-300S	300 mm	270 N	270 N
LI50-50S	50 mm	950 N	950 N
LI50-90S	90 mm	950 N	950 N
LI50-130S	130 mm	950 N	950 N
LI50-160S	160 mm	950 N	950 N
LI50-200S	200 mm	950 N	950 N
LI50-250S	250 mm	950 N	950 N
LI50-300S	300 mm	950 N	950 N

\* measured: 59,724 mm

\*\* measured: 89,656 mm

# Linear *Cylinders*



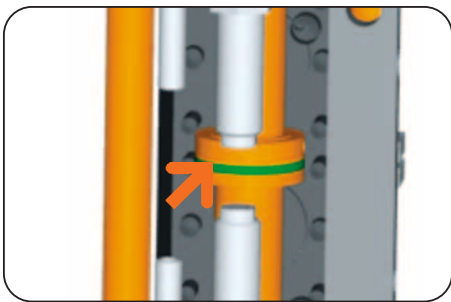
## Structure type

### Design without specification letters

- unilateral extending piston rod

### Design S and D

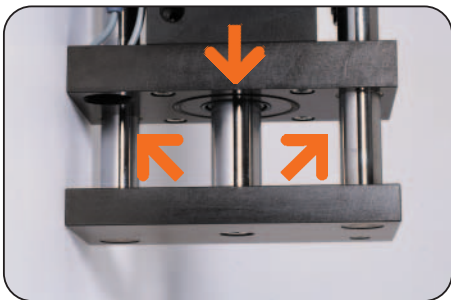
- continuous piston rod for bilateral stroke movement
- S two-sided continual guide rod
- D unilateral continual guide rod and continual piston rod



## Drive

### Double acting pneumatic cylinder

- maximum drive force in extend and retract movement
- pressure force up to 950 N



## Guide

### Up to 3 way guided

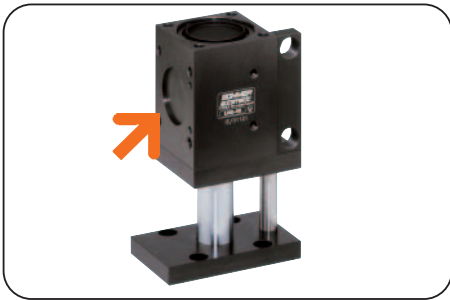
- high precision from polished and hard chrome plated guide rods
- maximum force and torque intake



## Travel path

### Infinitely adjustable

- up to 300 mm
- easy alignment via adjustment screw or stop absorber (from size 30)



## Machine connection

### Fixing and positioning possibilities from several sides

- optimum integration into the workroom
- energy feed via exhaust air control valve recommended



## Position sensing

### Via inductive proximity switch

- process safe
- stop confirm screw, for direct sensing of intake flange position available as accessory

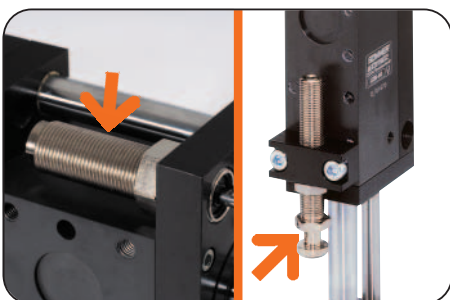


## Adapter plate

### Easiest connection of application

- low design effort
- available as accessory

Linear cylinders from the same series have the same hole pattern on the intake flange and on the housing. This means they can be combined with no drilling effort.



## End position damping

### with hydraulic shock absorbers

- suitable for heavy mounting loads and high cycles time
- available as accessory

### with elastomer-absorber

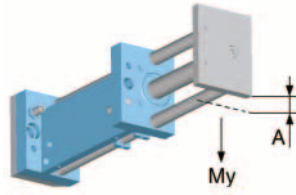
- suitable for light mounting loads and low piston rod speed
- available as accessory

# Linear *Cylinders*



## Forces and Moments

Max allowable static forces and moments.



Order no.:	L116-20	L116-35
Load My max. [N]:	25	15
Max. deflection A [mm]:	0.05	0.05

## Accessory list



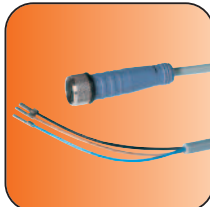
Pneumatic fittings  
Order no. DRVM5x4



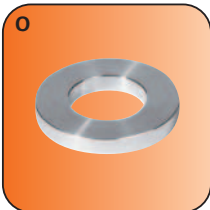
Proximity switch  
Order no. NJ8-E2S



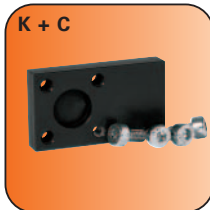
Cable angled plug  
Order no. KAW500



Cable straight plug  
Order no. KAG500

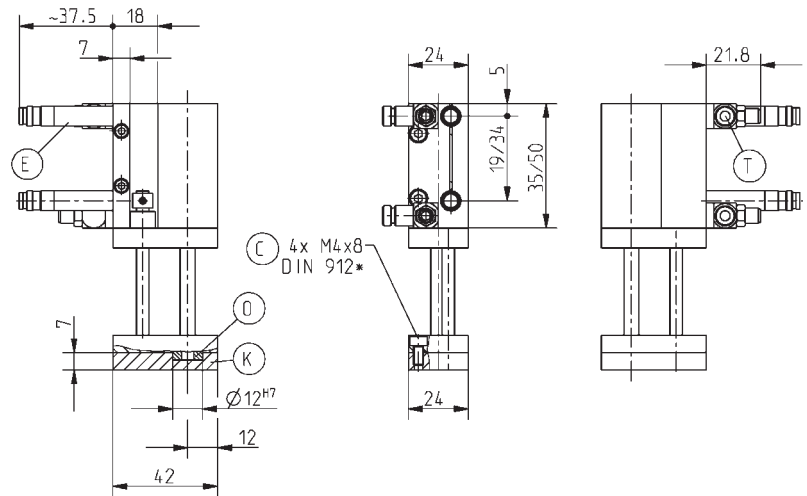


Centring disc  
Order no. ZE12H7x4



Adapter plate  
Order no. AP16

## Accessories



Subject to change without prior notice



Order no.:	LI16-20	LI16-35
Stroke [mm]:	20	35
Extension force max. [N]:	100	100
Retraction force max. [N]:	80	80
Travel time without external load [s]:	0,04	0,07
Air volume per cycle [cm <sup>3</sup> ]:	5	13
Min./max. operating temperature [°C]*:	5/80	5/80
Weight [g]:	150	180

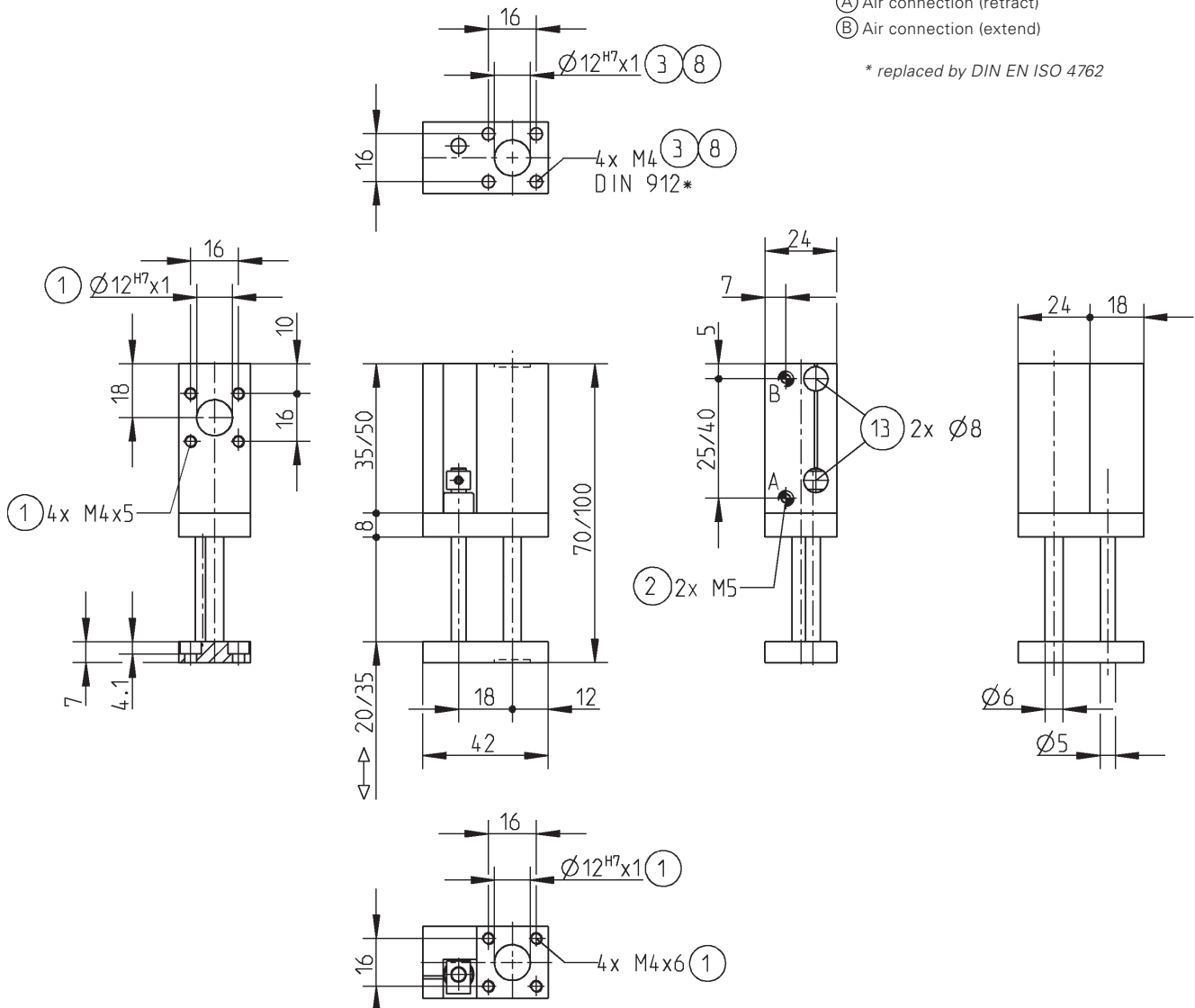
\* All data measured at 6 bar

\*\* High-temperature-resistant model (up to 150°C) add T to part number

LI16-20  
LI16-35

- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑧ Fixing for adapter plate
- ⑬ Intake for proximity switch
- Ⓐ Air connection (retract)
- Ⓑ Air connection (extend)

\* replaced by DIN EN ISO 4762



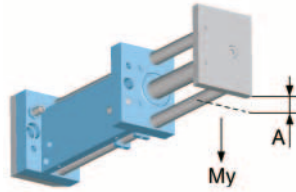
Subject to change without prior notice

# Linear *Cylinders*



## Forces and Moments

Max allowable static forces and moments.



Order no.:	LI30-15	LI30-30
Load My max. [N]:	70	50
Max. deflection A [mm]:	0.05	0.05

## Accessory list



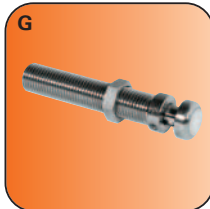
Pneumatic fittings  
Order no. DRVM5x4



Proximity switch  
Order no. NJ12-E2S



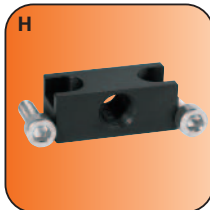
Cable angled plug  
Order no. KAW500



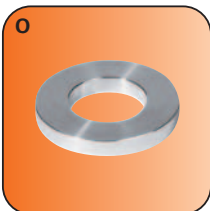
Stop absorber  
Order no. AD-M10x1



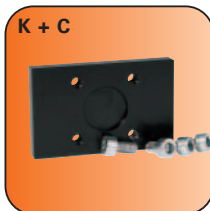
Industrie-shock absorbers  
Order no. M10x1S-06



Absorber intake  
Order no. HV30

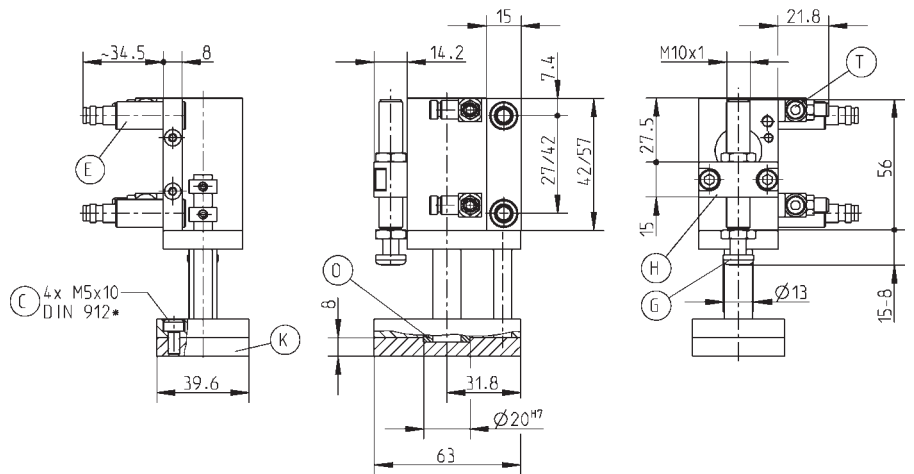


Centring disc  
Order no. ZE20H7x4



Adapter plate  
Order no. AP30

## Accessories



Subject to change without prior notice

Order no.:	LI30-15	LI30-30
Stroke [mm]:	15	30
Extension force max. [N]:	270	270
Retraction force max. [N]:	200	200
Travel time without external load [s]:	0,06	0,14
Air volume per cycle [cm <sup>3</sup> ]:	12	25
Min./max. operating temperature [°C]*:	5/80	5/80
Weight [g]:	300	360

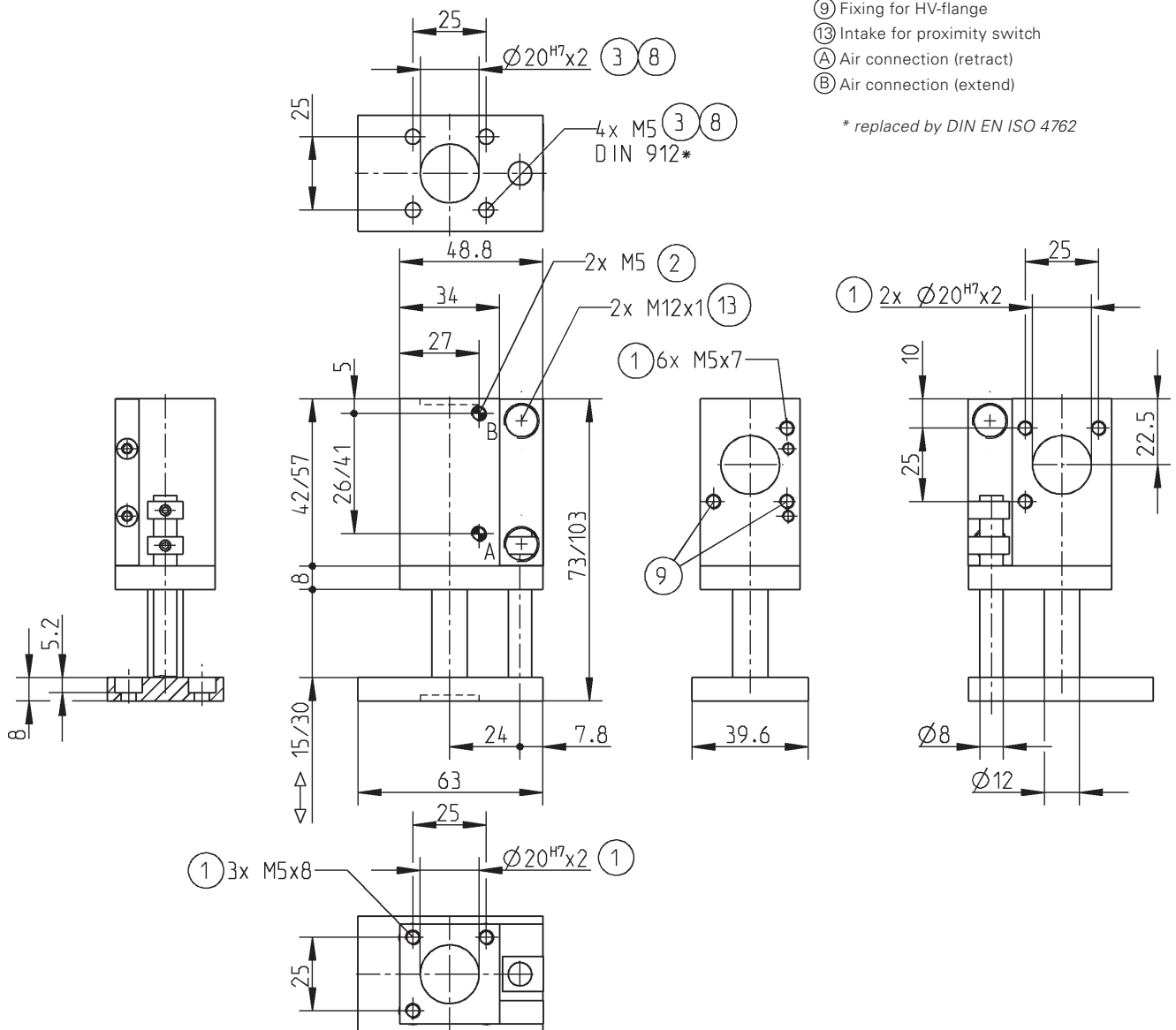
\* All data measured at 6 bar

\*\* High-temperature-resistant model (up to 150°C) add T to part number

LI30-15  
LI30-30

- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑧ Fixing for adapter plate
- ⑨ Fixing for HV-flange
- ⑬ Intake for proximity switch
- A Air connection (retract)
- B Air connection (extend)

\* replaced by DIN EN ISO 4762



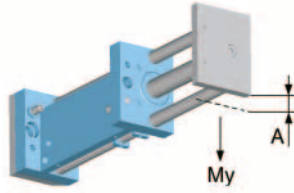
Subject to change without prior notice

# Linear *Cylinders*



## Forces and Moments

Max allowable static forces and moments.



Order no.:	LI30-60	LI30-90
Load My max. [N]:	30	20
Max. deflection A [mm]:	0.05	0.05

## Accessory list



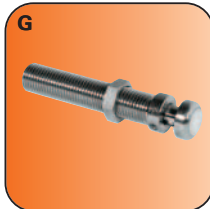
Pneumatic fittings  
Order no. DRVM5x4



Proximity switch  
Order no. NJ12-E2S



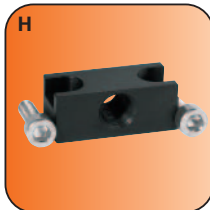
Cable angled plug  
Order no. KAW500



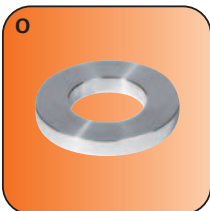
Stop absorber  
Order no. AD-M10x1



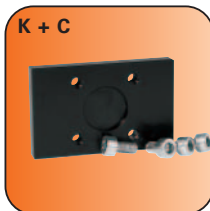
Industrie-shock absorbers  
Order no. M10x1S-06



Absorber intake  
Order no. HV30

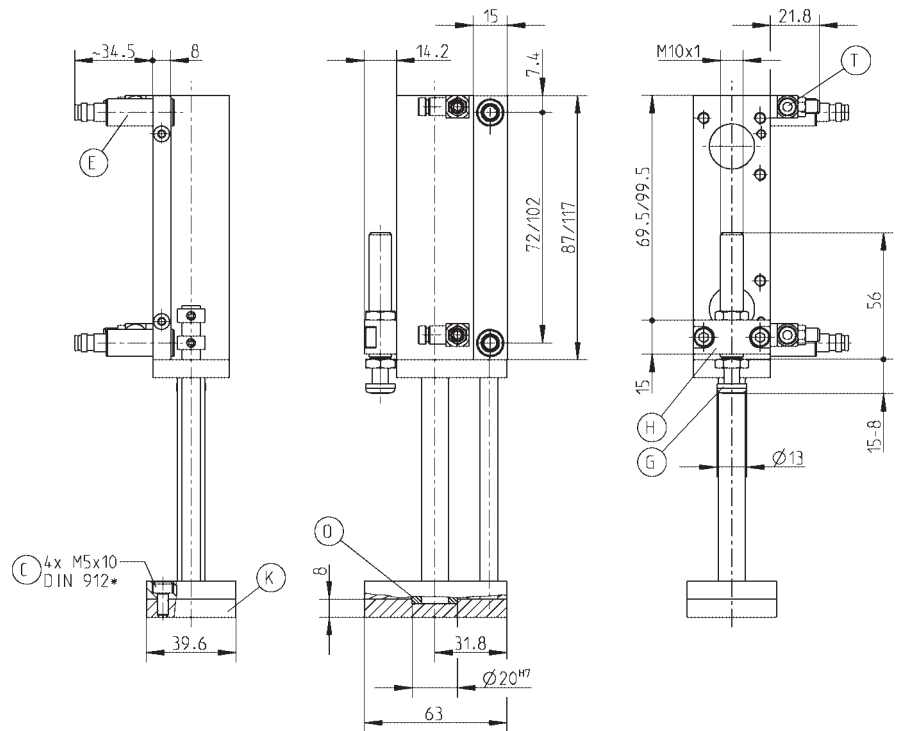


Centring disc  
Order no. ZE20H7x4



Adapter plate  
Order no. AP30

## Accessories



Subject to change without prior notice

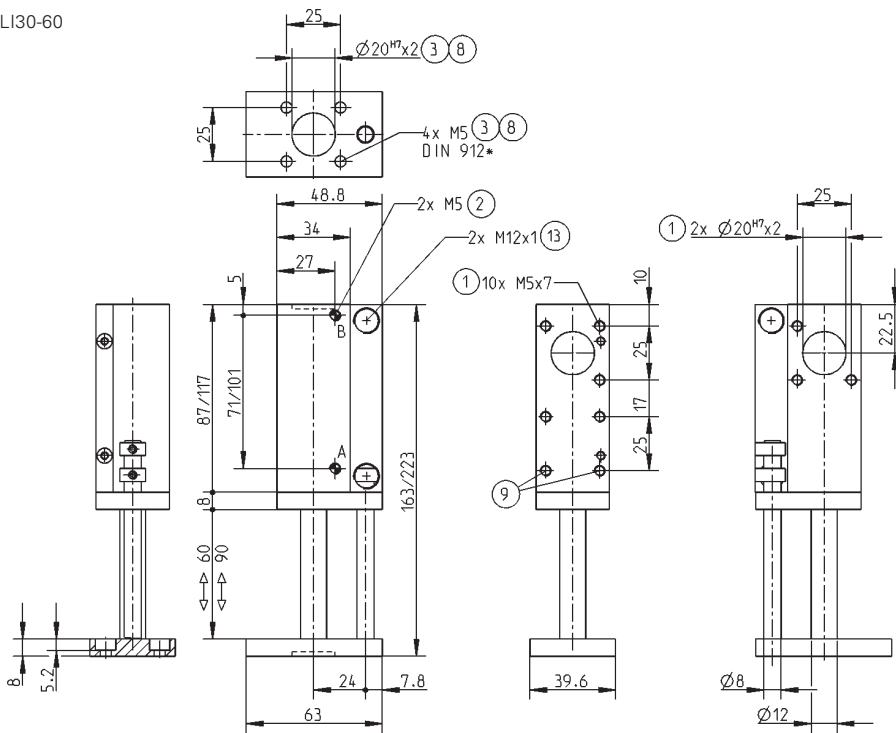


Order no.:	LI30-60	LI30-90
Stroke [mm]:	60	90
Extension force max. [N]:	270	270
Retraction force max. [N]:	200	200
Travel time without external load [s]:	0,25	0,26
Air volume per cycle [cm <sup>3</sup> ]:	50	92
Min./max. operating temperature [°C]*:	5/80	5/80
Weight [g]:	460	560

\* All data measured at 6 bar

\*\* High-temperature-resistant model (up to 150°C) add T to part number

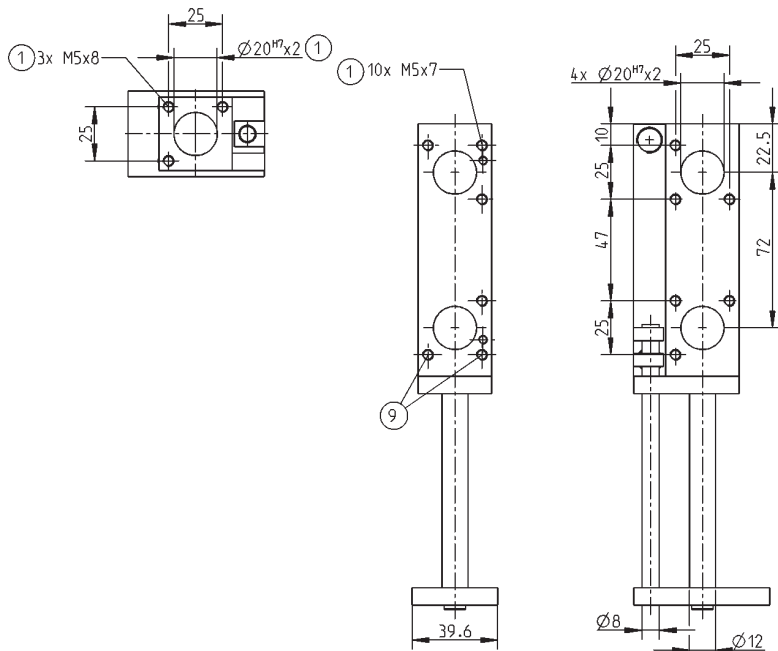
LI30-60



- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑧ Fixing for adapter plate
- ⑨ Fixing for HV-flange
- ⑬ Intake for proximity switch
- A Air connection (retract)
- B Air connection (extend)

\* replaced by DIN EN ISO 4762

LI30-90

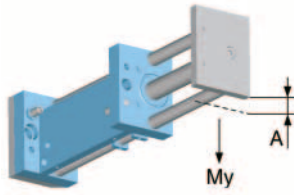


Subject to change without prior notice

# Linear *Cylinders*

## Forces and Moments

Max allowable static forces and moments.



Order no.:	LI40-40	LI40-90
Load My max. [N]:	80	30
Max. deflection A [mm]:	0.05	0.05

## Accessory list



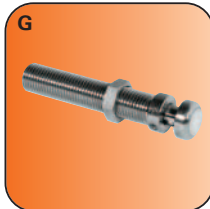
Pneumatic fittings  
Order no. DRVM5x4



Proximity switch  
Order no. NJ8-E2S



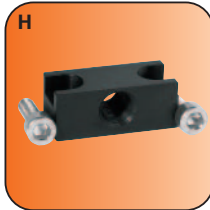
Cable angled plug  
Order no. KAW500



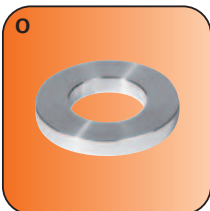
Stop absorber  
Order no. AD-M10x1



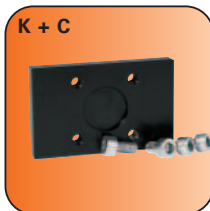
Industrie-shock absorbers  
Order no. M10x1S-06



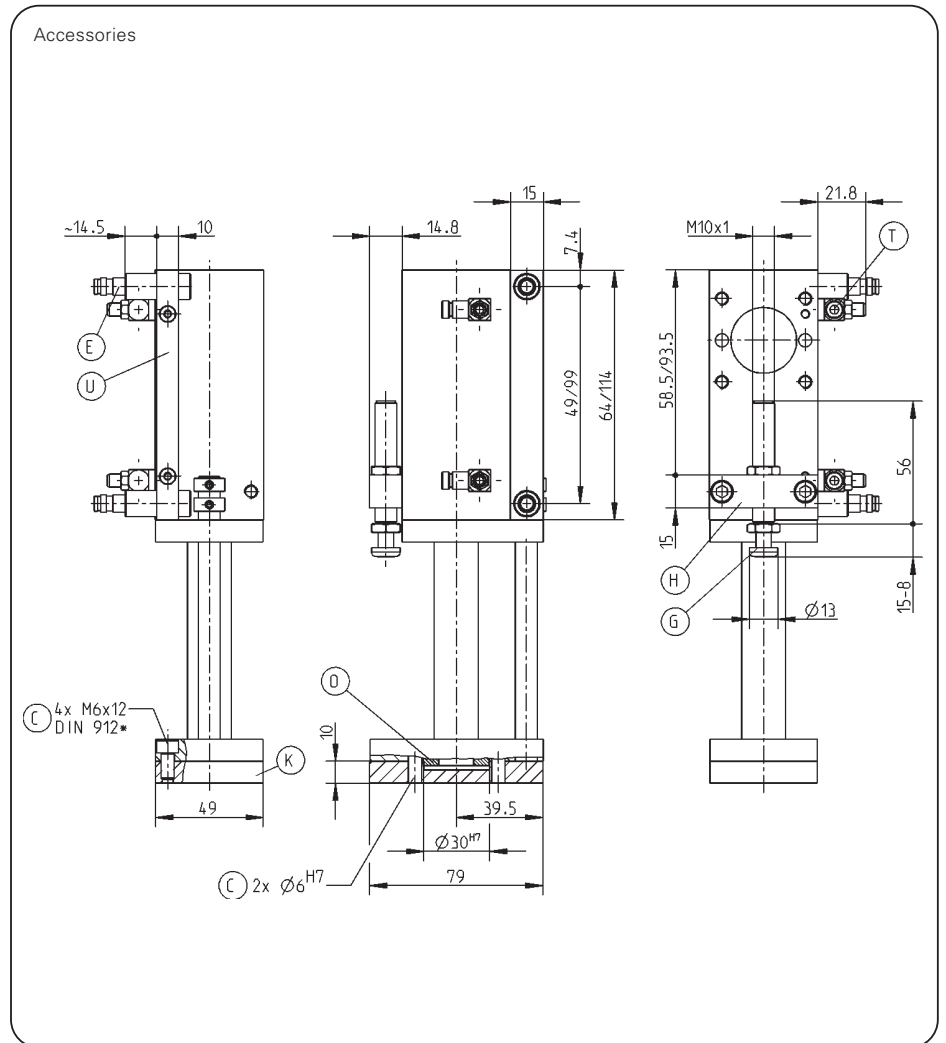
Absorber intake  
Order no. HV40



Centring disc  
Order no. ZE30H7x4



Adapter plate  
Order no. AP40



Subject to change without prior notice



Order no.:	LI40-40	LI40-90
Stroke [mm]:	40	90
Extension force max. [N]:	450	450
Retraction force max. [N]:	270	270
Travel time without external load [s]:	0,08	0,20
Air volume per cycle [cm <sup>3</sup> ]:	50	117
Min./max. operating temperature [°C]*:	5/80	5/80
Weight [g]:	740	10/70

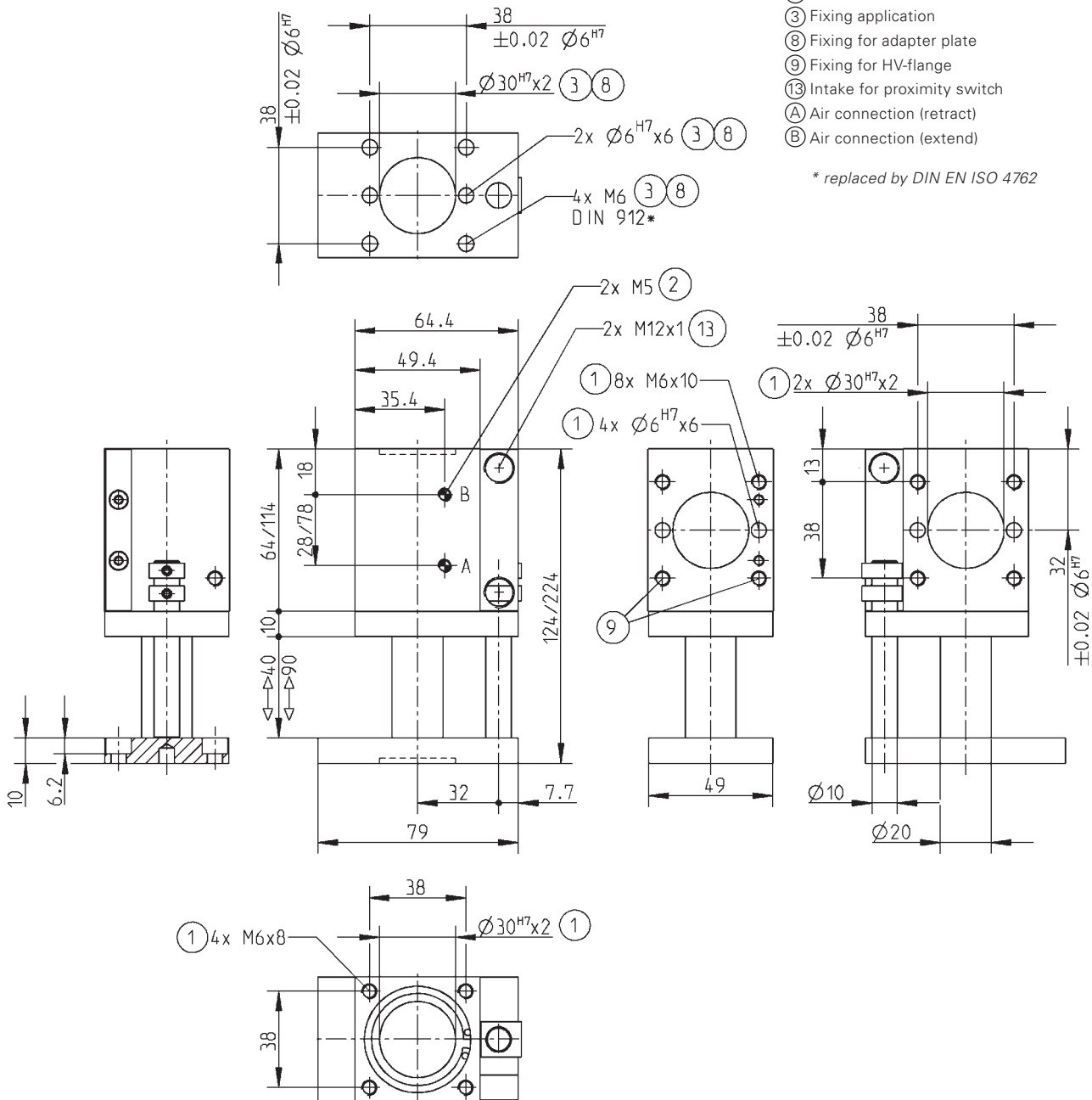
\* All data measured at 6 bar

\*\* High-temperature-resistant model (up to 150°C) add T to part number

LI40-40  
LI40-90

- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑧ Fixing for adapter plate
- ⑨ Fixing for HV-flange
- ⑬ Intake for proximity switch
- A Air connection (retract)
- B Air connection (extend)

\* replaced by DIN EN ISO 4762

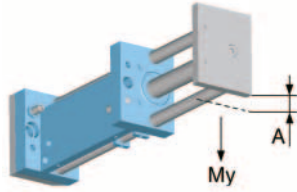


# Linear *Cylinders*



## Forces and Moments

Max allowable static forces and moments.



<b>Order no.:</b>	<b>LI16-50D</b>
Load $M_y$ max. [N]:	40
Max. deflection A [mm]:	0.10

## Accessory list



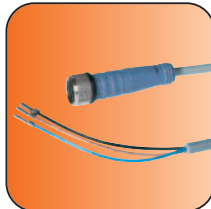
Pneumatic fittings  
Order no. DRVM5x4



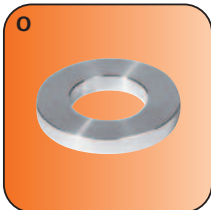
Proximity switch  
Order no. NJ12-E2S



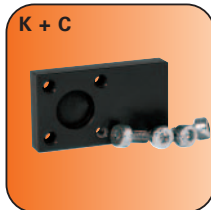
Cable angled plug  
Order no. KAW500



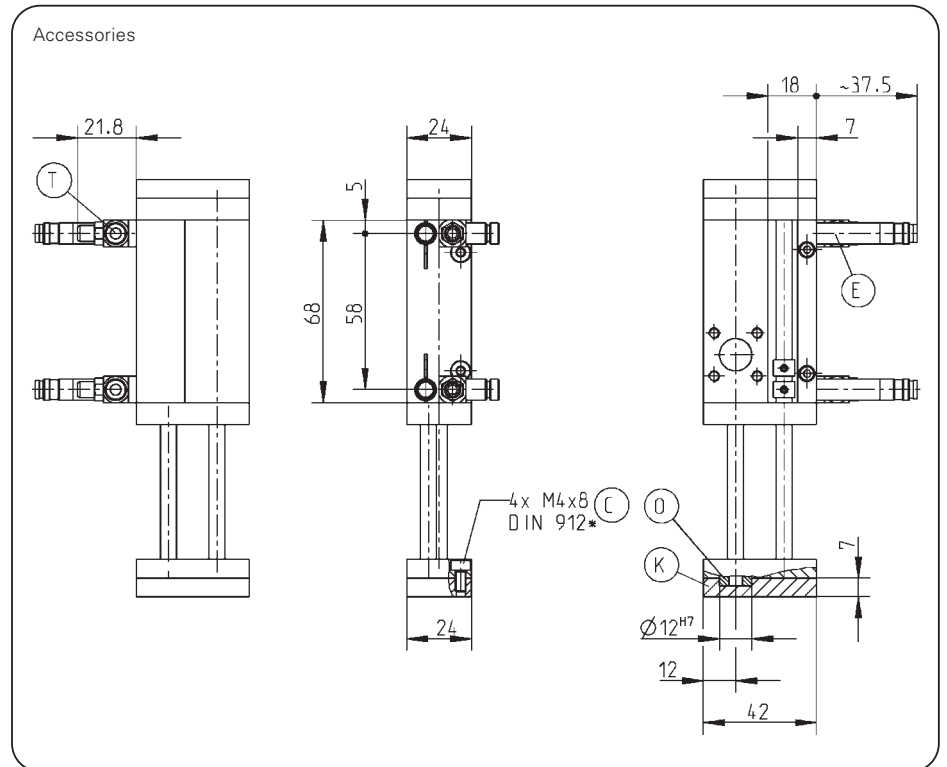
Cable straight plug  
Order no. KAG500



Centring disc  
Order no. ZE12H7x4



Adapter plate  
Order no. AP16





Order no.:	LI16-50D
Stroke [mm]:	50
Extension force max. [N]:	80
Retraction force max. [N]:	80
Travel time without external load [s]:	0,10
Air volume per cycle [cm <sup>3</sup> ]:	15
Min./max. operating temperature [°C]*:	5/80
Weight [g]:	300

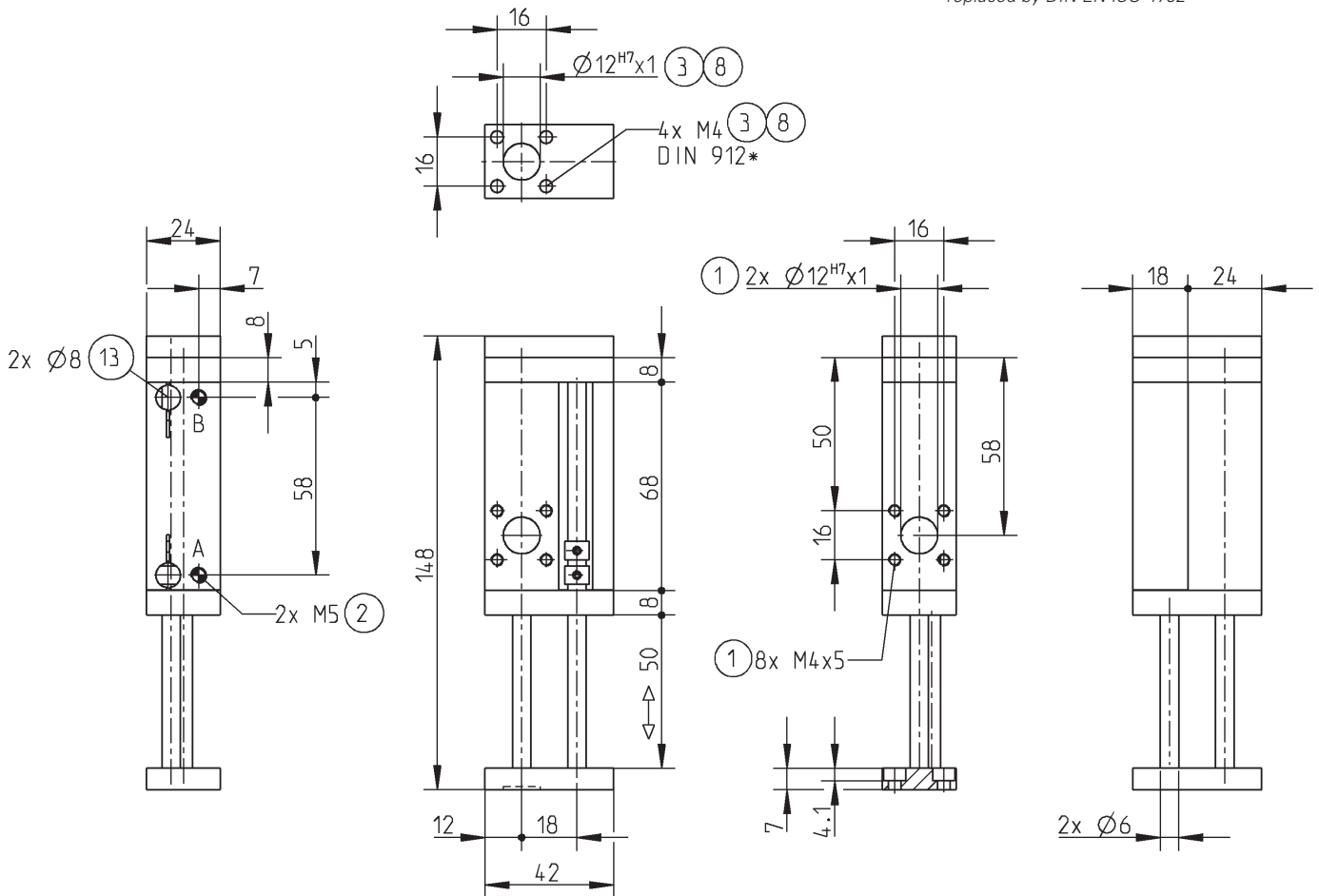
\* All data measured at 6 bar

\*\* High-temperature-resistant model (up to 150°C) add T to part number

LI16-50D

- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑧ Fixing for adapter plate
- ⑬ Intake for proximity switch
- Ⓐ Air connection (retract)
- Ⓑ Air connection (extend)

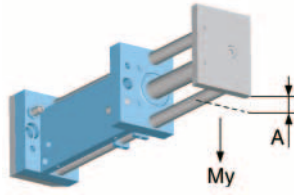
\* replaced by DIN EN ISO 4762



# Linear *Cylinders*

## Forces and Moments

Max allowable static forces and moments.



Order no.:	LI30-60D	LI30-90D
Load My max. [N]:	80	60
Max. deflection A [mm]:	0.10	0.10

## Accessory list



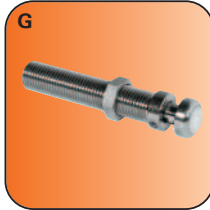
Pneumatic fittings  
Order no. DRVM5x4



Proximity switch  
Order no. NJ12-E2S



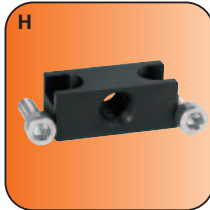
Cable angled plug  
Order no. KAW500



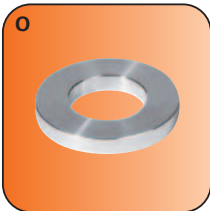
Stop absorber  
Order no. AD-M10x1



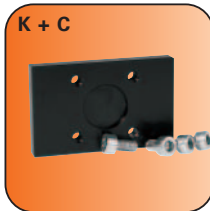
Industrie-shock absorbers  
Order no. M10x1S-06



Absorber intake  
Order no. HV30

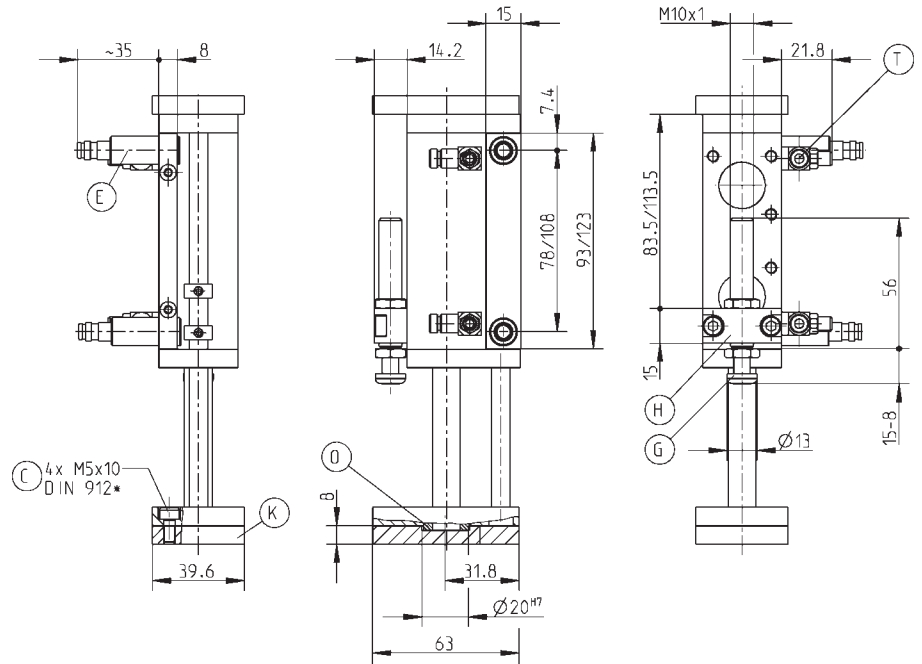


Centring disc  
Order no. ZE20H7x4



Adapter plate  
Order no. AP30

## Accessories



Subject to change without prior notice

Order no.:	LI30-60D	LI30-90D
Stroke [mm]:	60	90
Extension force max. [N]:	200	200
Retraction force max. [N]:	200	200
Travel time without external load [s]:	0,21	0,25
Air volume per cycle [cm <sup>3</sup> ]:	50	66
Min./max. operating temperature [°C]*:	5/80	5/80
Weight [g]:	700	850

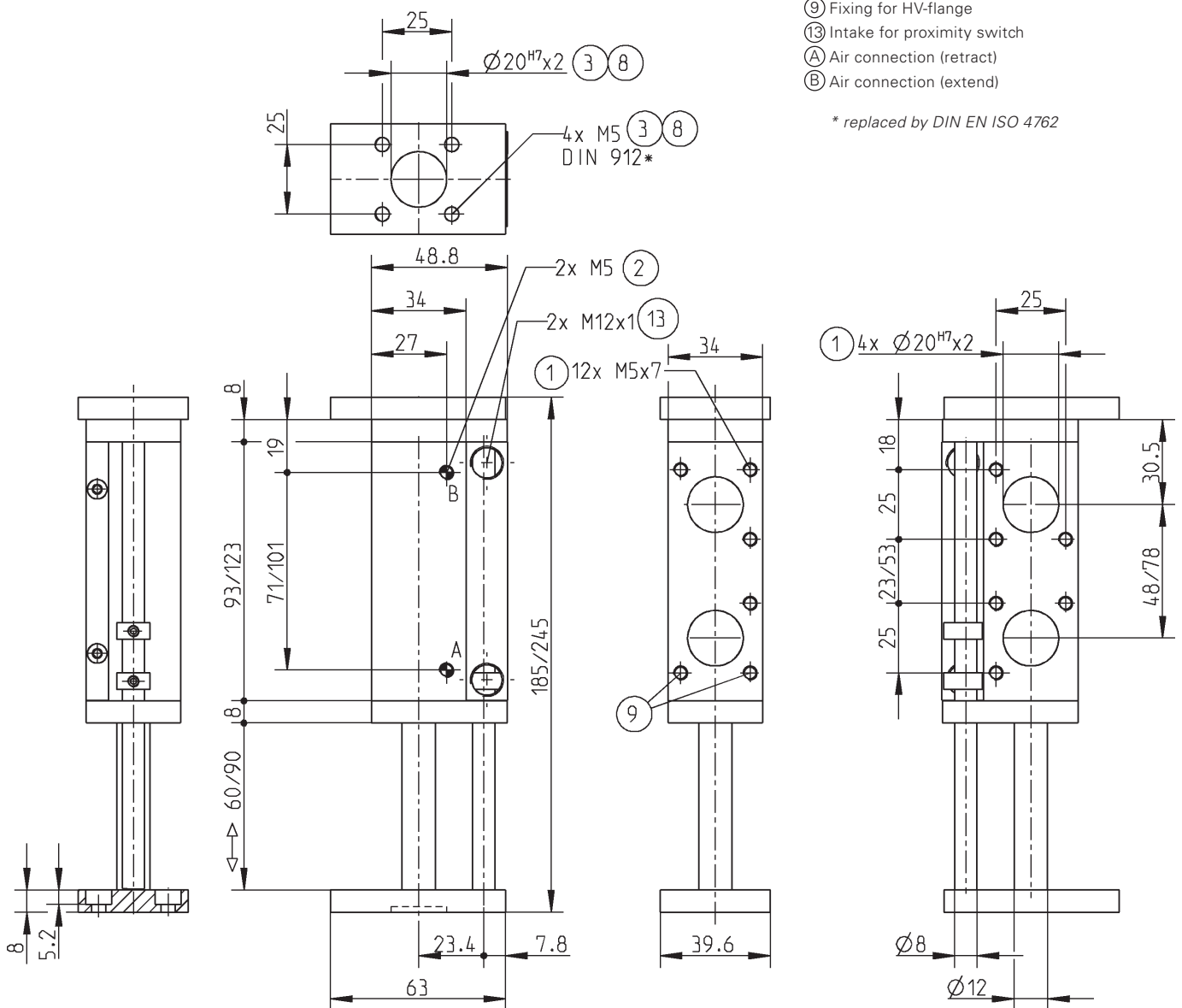
\* All data measured at 6 bar

\*\* High-temperature-resistant model (up to 150°C) add T to part number

LI30-60D  
LI30-90D

- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑧ Fixing for adapter plate
- ⑨ Fixing for HV-flange
- ⑬ Intake for proximity switch
- A Air connection (retract)
- B Air connection (extend)

\* replaced by DIN EN ISO 4762

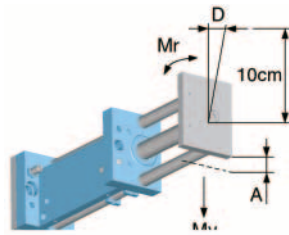


Subject to change without prior notice

# Linear *Cylinders*

## Forces and Moments

Max allowable static forces and moments.



Order no.:	LI40-90S	LI40-130S	LI40-160S
Load My max. [N]:	300	230	150
Max. deflection A [mm]:	0.09	0.13	0.16
Radial load Mr max. [Ncm]:	600	400	320
Max. rotation D at 100 mm [mm]:	0.10	0.10	0.10

## Accessory list



Pneumatic fittings  
Order no. DRV1/8x6



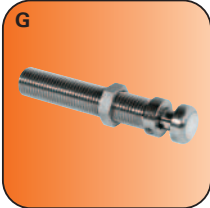
Proximity switch  
Order no. NJ12-E2S



Stop confirm screw  
Order no. AI-M8x1-53



Cable angled plug  
Order no. KAW500



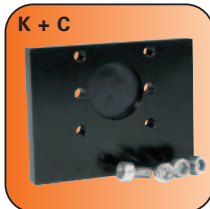
Stop absorber  
Order no. AD-M14x1,5



Industrie-shock absorbers  
Order no. M14x1.5S-06

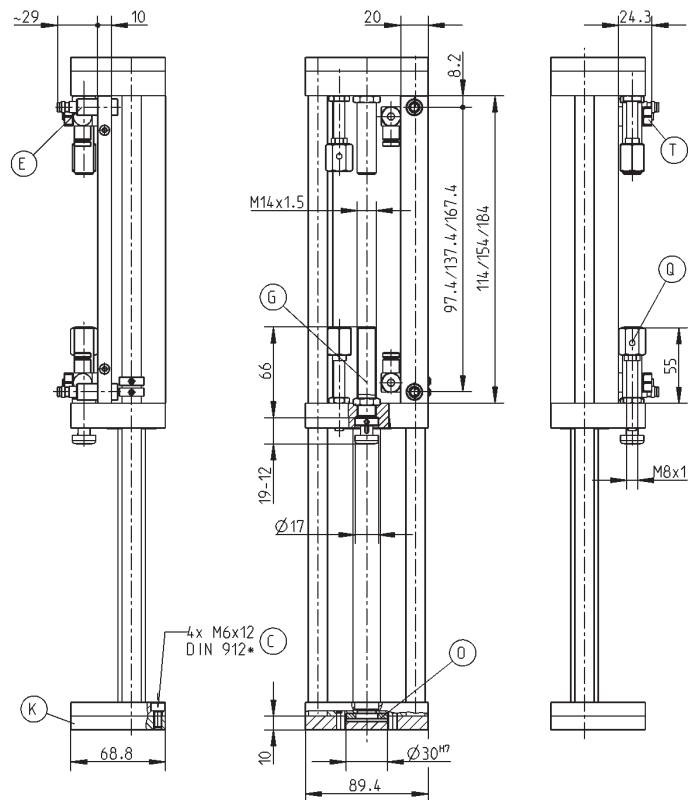


Centring disc  
Order no. ZE30H7x4



Adapter plate  
Order no. AP40S

## Accessories



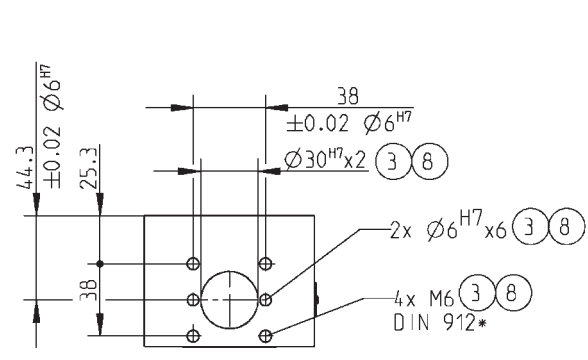
Subject to change without prior notice



Order no.:	LI40-90S	LI40-130S	LI40-160S
Stroke [mm]:	90	130	160
Extension force max. [N]:	270	270	270
Retraction force max. [N]:	270	270	270
Travel time without external load [s]:	0,09	0,13	0,22
Air volume per cycle [cm <sup>3</sup> ]:	100	133	166
Min./max. operating temperature [°C]*:	5/80	5/80	5/80
Weight [kg]:	2,9	3,5	3,9

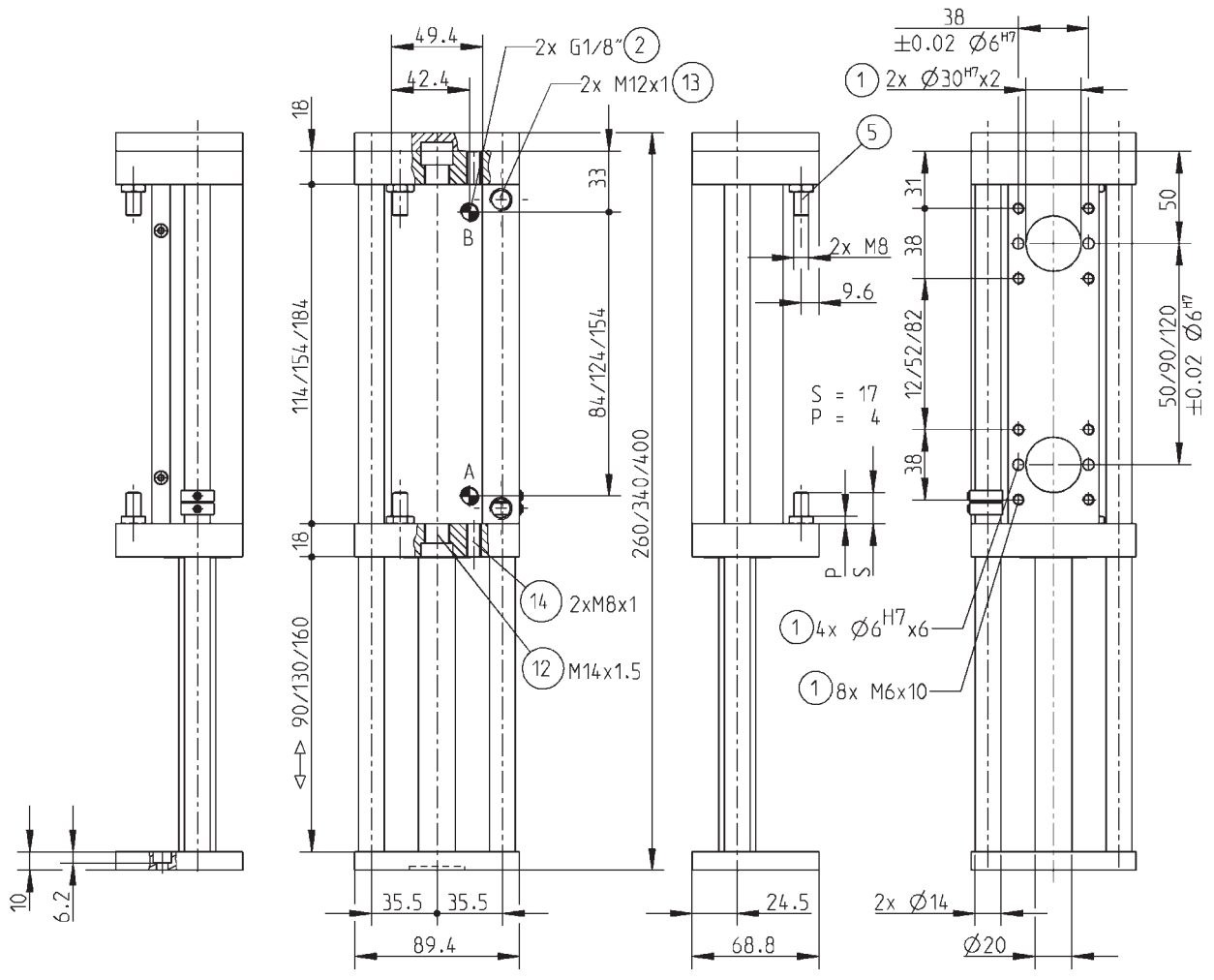
\* All data measured at 6 bar  
 \*\* High-temperature-resistant model (up to 150°C) add T to part number

LI40-90S  
 LI40-130S  
 LI40-160S



- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑤ Stop screw for stroke limitation
- ⑧ Fixing for adapter plate
- ⑫ Intake for shock absorbers
- ⑬ Intake for proximity switch
- ⑭ Intake for fix stop
- Ⓐ Air connection (retract)
- Ⓑ Air connection (extend)

\* replaced by DIN EN ISO 4762

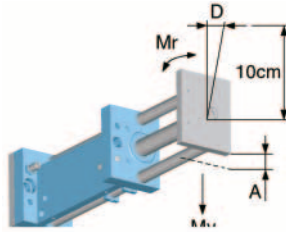


Subject to change without prior notice

# Linear Cylinders

## Forces and Moments

Max allowable static forces and moments.



Order no.:	LI40-200S	LI40-250S	LI40-300S
Load $M_y$ max. [N]:	120	90	65
Max. bending A [mm]:	0.20	0.25	0.30
Radial load $M_r$ max. [Ncm]:	230	130	100
Max. rotation D at 100 mm [mm]:	0.10	0.10	0.10

## Accessory list



Pneumatic fittings  
Order no. DRV1/8x6



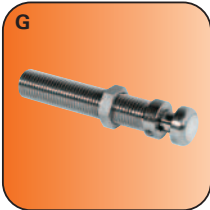
Proximity switch  
Order no. NJ12-E2S



Stop confirm screw  
Order no. AI-M8x1-53



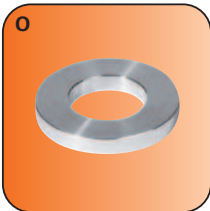
Cable angled plug  
Order no. KAW500



Stop absorber  
Order no. AD-M14x1,5



Industrie-shock absorbers  
Order no. M14x1.5S-06

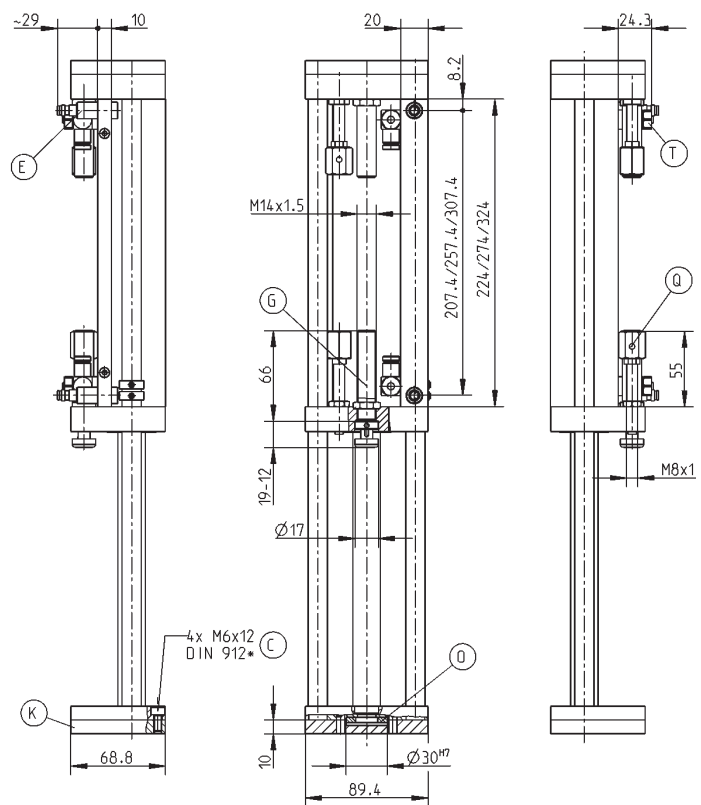


Centring disc  
Order no. ZE30H7x4



Adapter plate  
Order no. AP40S

## Accessories



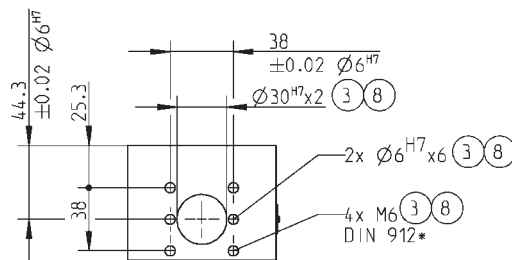
Subject to change without prior notice

Order no.:	LI40-200S	LI40-250S	LI40-300S
Stroke [mm]:	200	250	300
Extension force max. [N]:	270	270	270
Retraction force max. [N]:	270	270	270
Travel time without external load [s]:	0,22	0,28	0,40
Air volume per cycle [cm <sup>3</sup> ]:	216	266	316
Min./max. operating temperature [°C]*:	5/80	5/80	5/80
Weight [kg]:	4,5	5,2	5,9

\* All data measured at 6 bar

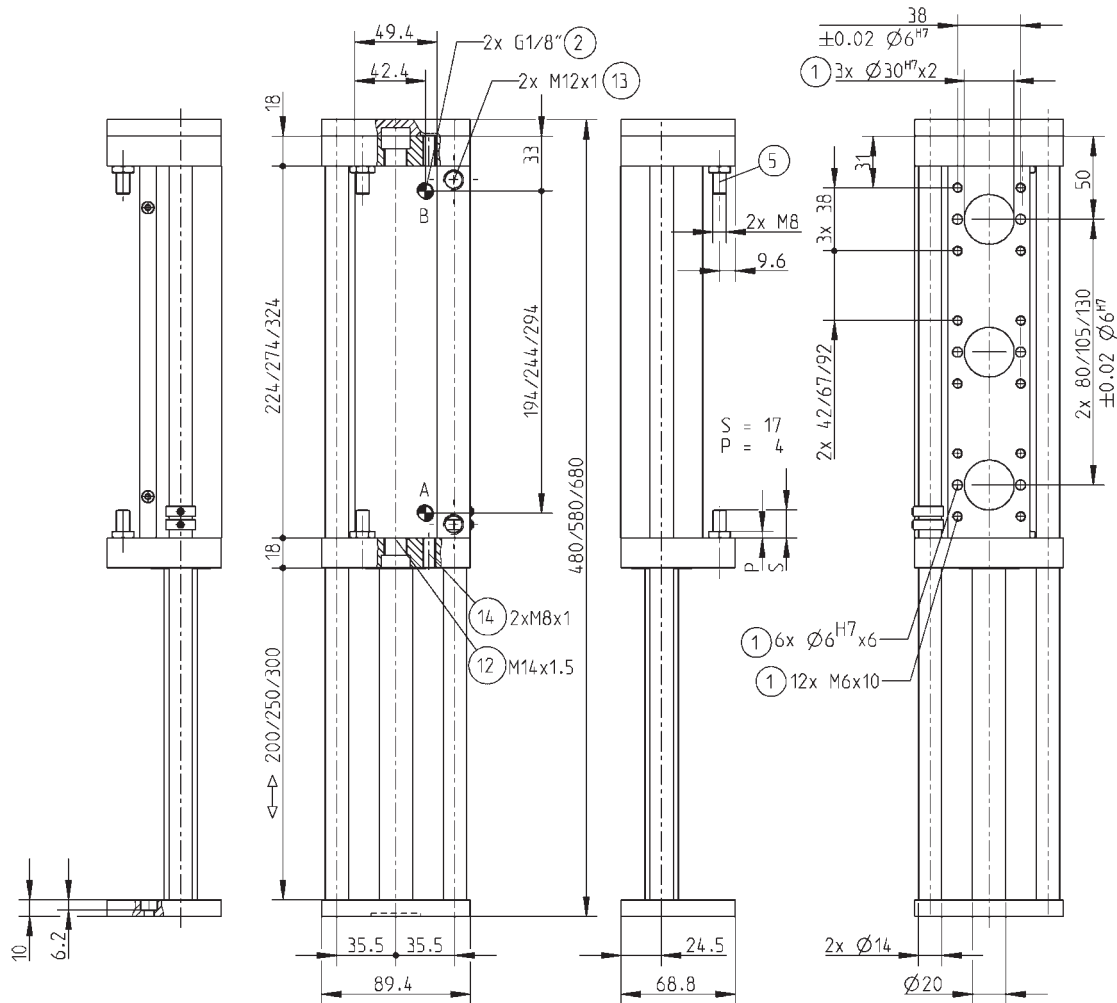
\*\* High-temperature-resistant model (up to 150°C) add T to part number

LI40-200S  
LI40-250S  
LI40-300S



- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑤ Stop screw for stroke limitation
- ⑧ Fixing for adapter plate
- ⑫ Intake for shock absorbers
- ⑬ Intake for proximity switch
- ⑭ Intake for fix stop
- Ⓐ Air connection (retract)
- Ⓑ Air connection (extend)

\* replaced by DIN EN ISO 4762



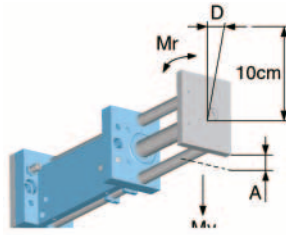
Subject to change without prior notice

# Linear *Cylinders*



## Forces and Moments

Max allowable static forces and moments.



Order no.:	LI50-50S	LI50-90S
Load My max. [N]:	300	200
Max. bending A [mm]:	0.03	0.05
Radial load Mr max. [Ncm]:	1500	1100
Max. rotation D at 100 mm [mm]:	0.08	0.08

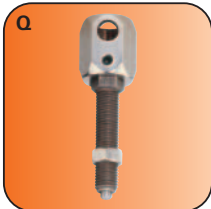
## Accessory list



Pneumatic fittings  
Order no. DRV1/8x6



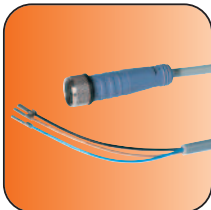
Proximity switch  
Order no. NJ12-E2S



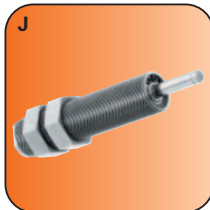
Stop confirm screw  
Order no. AI-M8x1-53



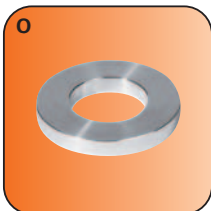
Cable angled plug  
Order no. KAW500



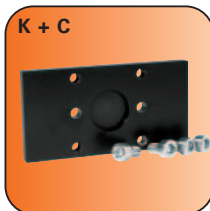
Cable straight plug  
Order no. KAG500



Industrie-shock absorbers  
Order no. M20x1.5S-06

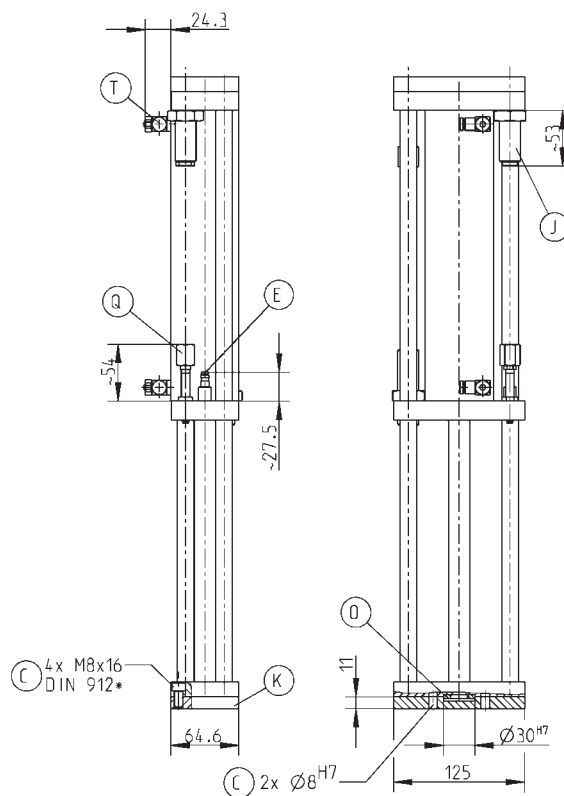


Centring disc  
Order no. ZE30H7x4



Adapter plate  
Order no. AP50S

### Accessories



Subject to change without prior notice



Order no.:	LI50-50S	LI50-90S
Stroke [mm]:	50	90
Extension force max. [N]:	950	950
Retraction force max. [N]:	950	950
Travel time without external load [s]:	0,13	0,24
Air volume per cycle [cm <sup>3</sup> ]:	166	300
Min./max. operating temperature [°C]*:	5/80	5/80
Weight [kg]:	2,9	3,6

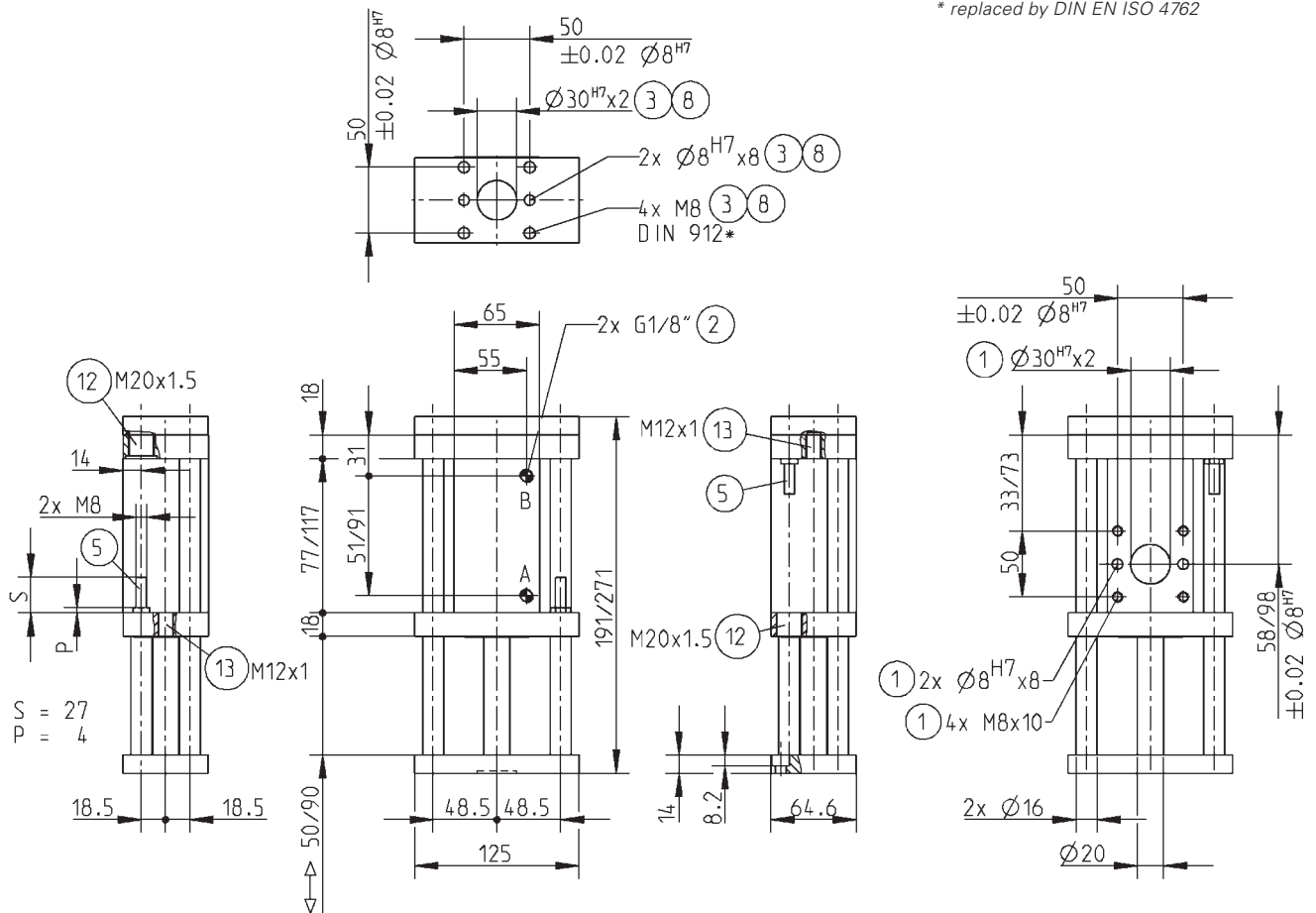
\* All data measured at 6 bar

\*\* High-temperature-resistant model (up to 150°C) add T to part number

LI50-50S  
LI50-90S

- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑤ Stop screw for stroke limitation
- ⑧ Fixing for adapter plate
- ⑫ Intake for shock absorbers
- ⑬ Intake for proximity switch
- Ⓐ Air connection (retract)
- Ⓑ Air connection (extend)

\* replaced by DIN EN ISO 4762

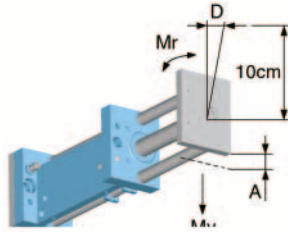


# Linear Cylinders



## Forces and Moments

Max allowable static forces and moments.



Order no.:	LI50-130S	LI50-160S	LI50-200S
Load $M_y$ max. [N]:	130	100	90
Max. bending A [mm]:	0.05	0.08	0.10
Radial load $M_r$ max. [Ncm]:	900	750	400
Max. rotation D at 100 mm [mm]:	0.10	0.10	0.10

## Accessory list



Pneumatic fittings  
Order no. DRV1/8x6



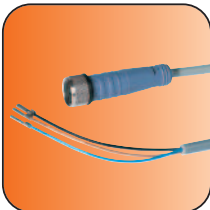
Proximity switch  
Order no. NJ12-E2S



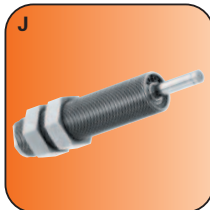
Stop confirm screw  
Order no. AI-M8x1-53



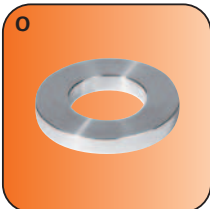
Cable angled plug  
Order no. KAW500



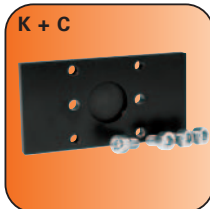
Cable straight plug  
Order no. KAG500



Industrie-shock absorbers  
Order no. M20x1.5S-06

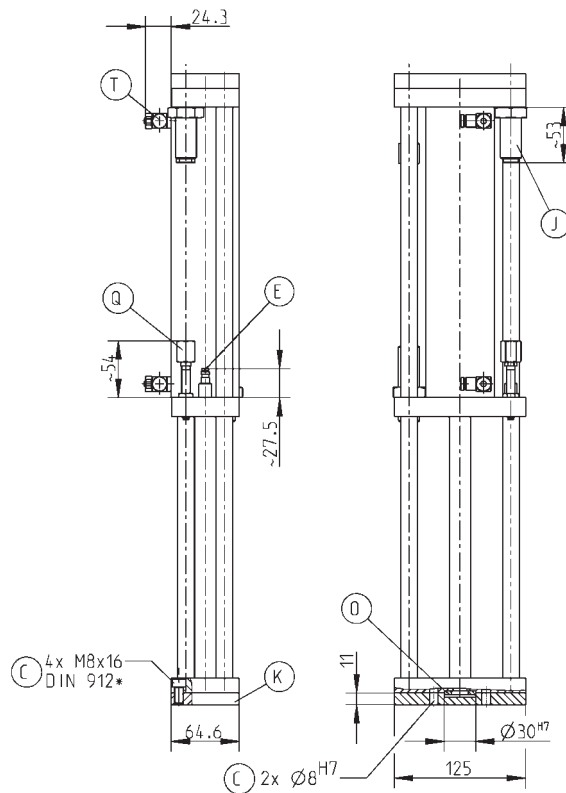


Centring disc  
Order no. ZE30H7x4



Adapter plate  
Order no. AP50S

## Accessories



Subject to change without prior notice

Order no.:	LI50-130S	LI50-160S	LI50-200S
Stroke [mm]:	130	160	200
Extension force max. [N]:	950	950	950
Retraction force max. [N]:	950	950	950
Travel time without external load [s]:	0,34	0,42	0,48
Air volume per cycle [cm <sup>3</sup> ]:	433	533	666
Min./max. operating temperature [°C]*:	5/80	5/80	5/80
Weight [kg]:	4,4	4,8	5,5

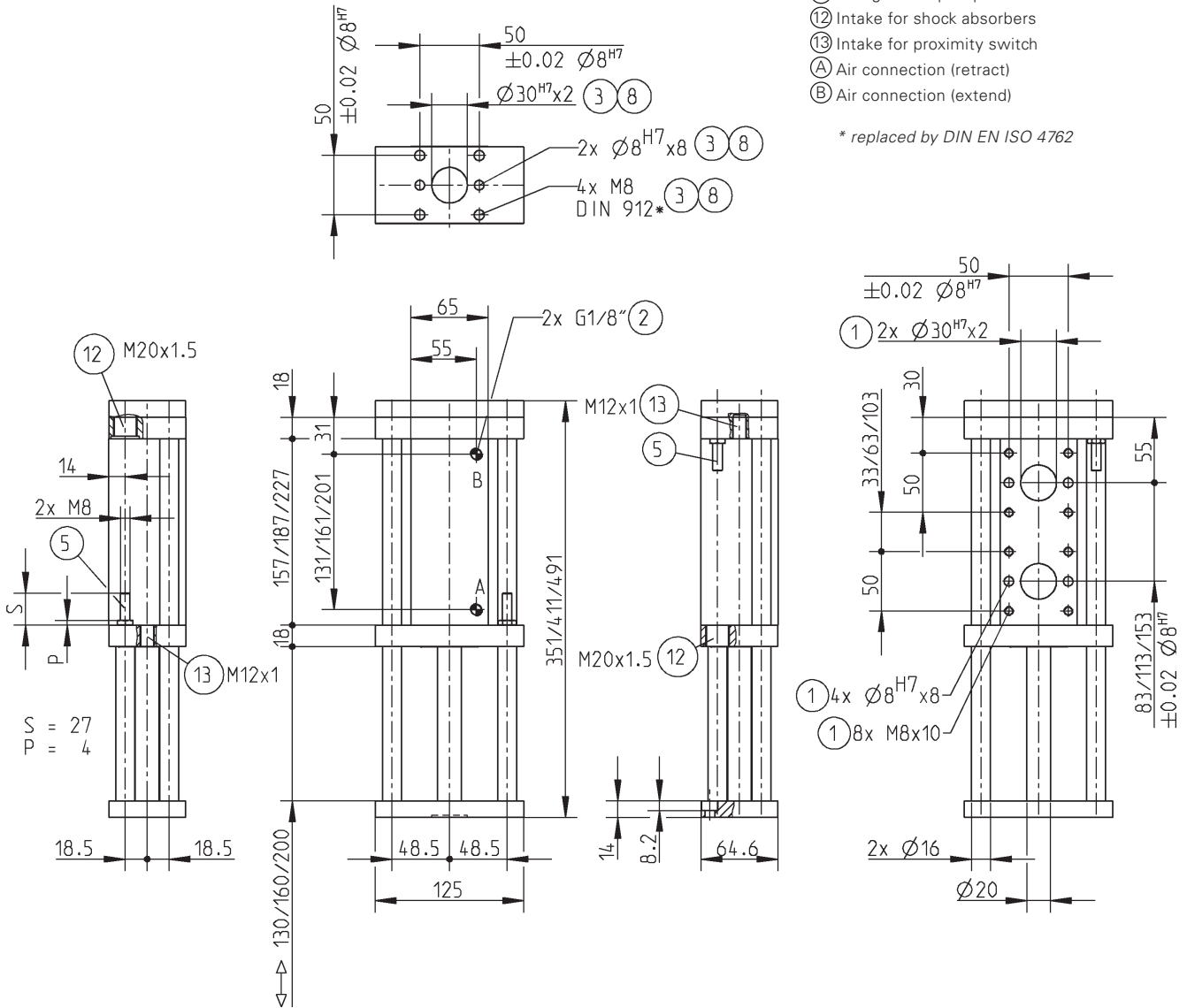
\* All data measured at 6 bar

\*\* High-temperature-resistant model (up to 150°C) add T to part number

LI50-130S  
LI50-160S  
LI50-200S

- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑤ Stop screw for stroke limitation
- ⑧ Fixing for adapter plate
- ⑫ Intake for shock absorbers
- ⑬ Intake for proximity switch
- Ⓐ Air connection (retract)
- Ⓑ Air connection (extend)

\* replaced by DIN EN ISO 4762

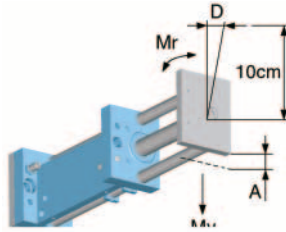


# Linear *Cylinders*



## Forces and Moments

Max allowable static forces and moments.



Order no.:	LI50-250S	LI50-300S
Load My max. [N]:	75	55
Max. bending A [mm]:	0.15	0.20
Radial load Mr max. [Ncm]:	250	200
Max. rotation D at mm [mm]:	0.10	0.10

## Accessory list



Pneumatic fittings  
Order no. DRV1/8x6



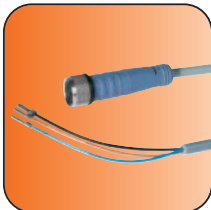
Proximity switch  
Order no. NJ12-E2S



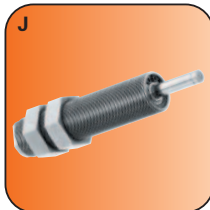
Stop confirm screw  
Order no. AI-M8x1-53



Cable angled plug  
Order no. KAW500



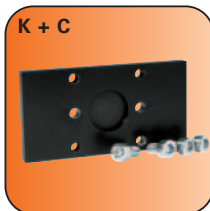
Cable straight plug  
Order no. KAG500



Industrie-shock absorbers  
Order no. M20x1.5S-06

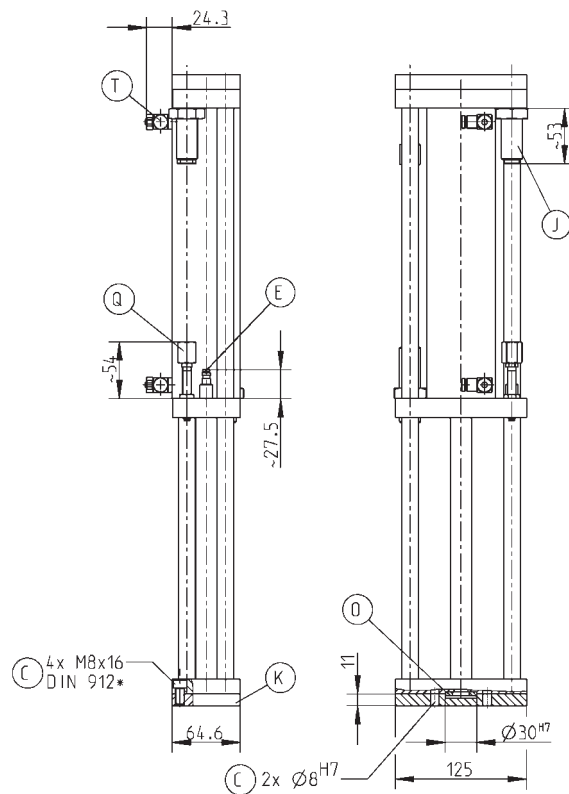


Centring disc  
Order no. ZE30H7x4



Adapter plate  
Order no. AP50S

## Accessories



Subject to change without prior notice



Order no.:	LI50-250S	LI50-300S
Stroke [mm]:	250	300
Extension force max. [N]:	950	950
Retraction force max. [N]:	950	950
Travel time without external load [s]:	0,63	0,84
Air volume per cycle [cm <sup>3</sup> ]:	833	1000
Min./max. operating temperature [°C]*:	5/80	5/80
Weight [kg]:	6,4	7,2

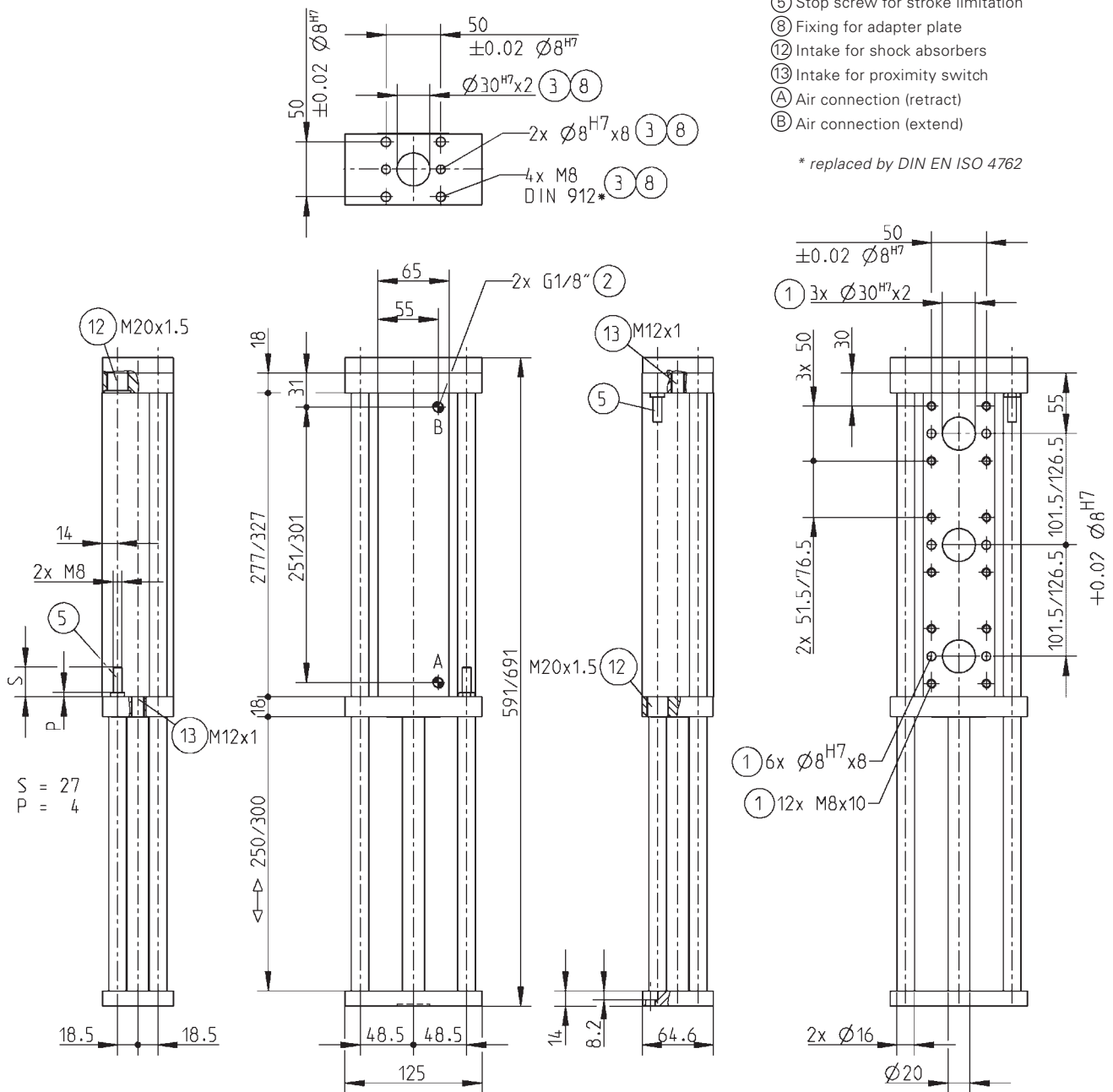
\* All data measured at 6 bar

\*\* High-temperature-resistant model (up to 150°C) add T to part number

LI50-250S  
LI50-300S

- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑤ Stop screw for stroke limitation
- ⑧ Fixing for adapter plate
- ⑫ Intake for shock absorbers
- ⑬ Intake for proximity switch
- Ⓐ Air connection (retract)
- Ⓑ Air connection (extend)

\* replaced by DIN EN ISO 4762

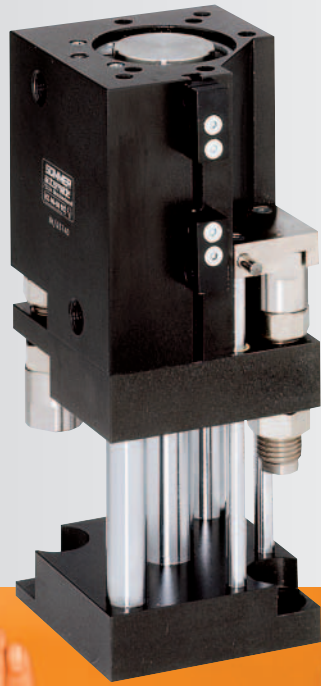


Subject to change without prior notice



# Stroke **Cylinders**

*pneumatic*



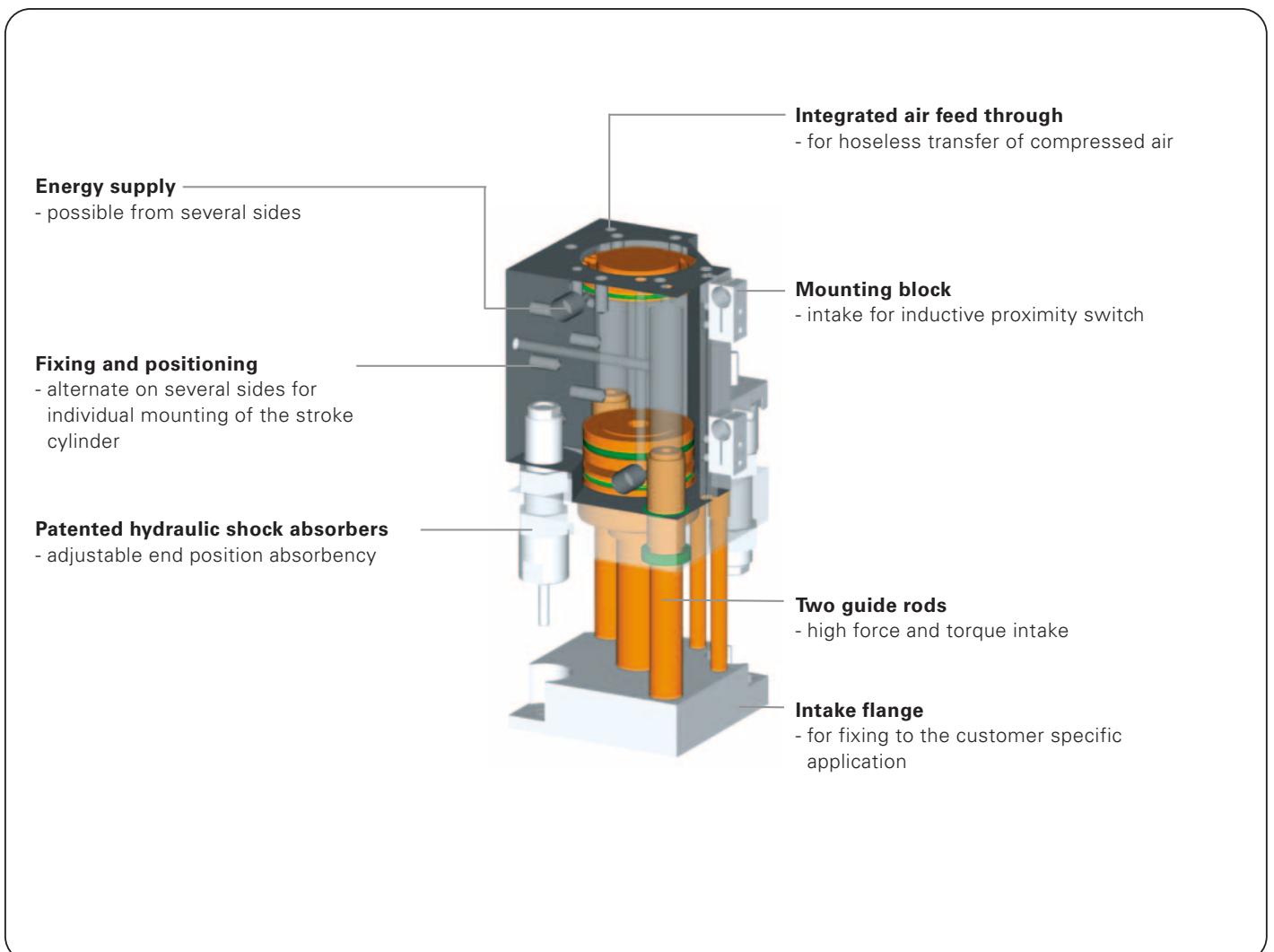
*HZ40-Series*

# Stroke Cylinder

## ➤ Features

- Hoseless air connection possible
- 2 way integrated hoseless air feed through for connecting grippers or other actors
- Standard shock absorbed stop positions due to hydraulic industrial shock absorbers
- High torque intake and pressure force of 720 N
- Adjustable stroke

## Functional diagram





**Terms**

**Cycle:** one complete movement of the piston forward and back

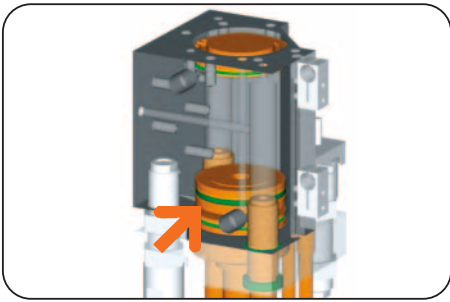
**Maintenance:** maintenance free up to 10 Mio. cycle  
(please see the owner's manual for conditions,  
download from [www.sommer-automatic.com](http://www.sommer-automatic.com))

- long maintenance intervals keep costs down
- long durability

**Model**

<b>Order no.</b>	<b>Stroke</b>	<b>Extension force</b>	<b>Retraction force</b>	<b>Air feed through</b>
HZ40-50D2	50 mm	720 N	600 N	2
HZ40-100D2	100 mm	720 N	600 N	2

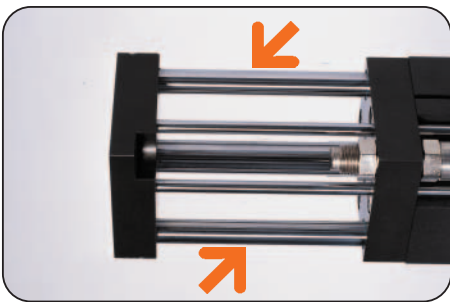
# Stroke Cylinder



## Drive

### Double acting pneumatic cylinder

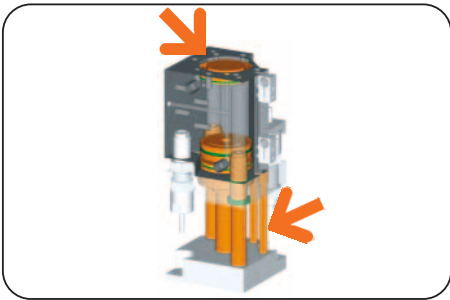
- maximum drive force in extend and retract movement
- pressure force up to 720 N



## Guide

### Two polished and hard chrome plated guide rods

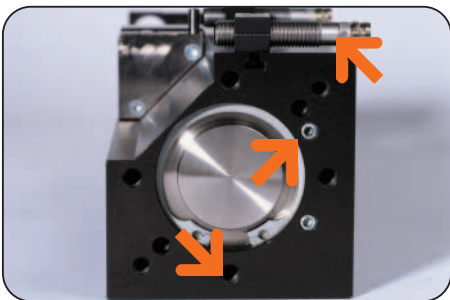
- high precision
- high force and torque intake



## Air transfer

### Hoseless, two integrated pneumatic air feed through

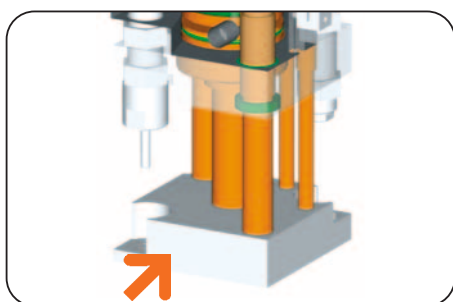
- reduces the interference contour
- hoses are not stressed in movement



## Machine connection

### Energy feed, attachment and positioning possibilities on several sides

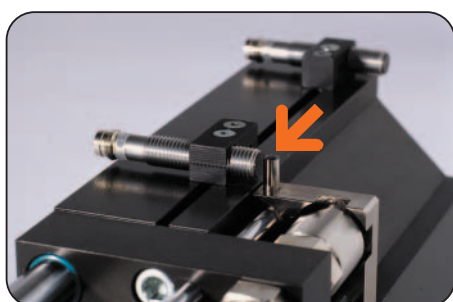
- optimum integration in the workroom
- hoseless direct connection possible, no additional interference contours



### **Intake flange**

**Direct connection of customer specific application**

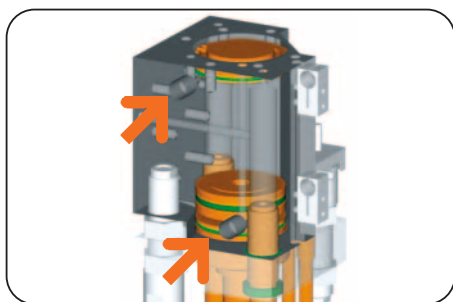
- low design effort
- simple connection



### **Position sensing**

**Travelling switch cam fixed to stop**

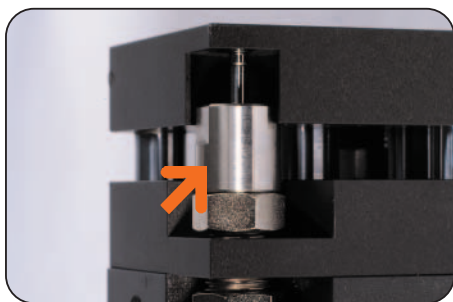
- process safe
- adjustable
- compact



### **Energy feed**

**Exhaust air control valve recommended**

- low wear
- adjustable stroke speed



### **End position damping**

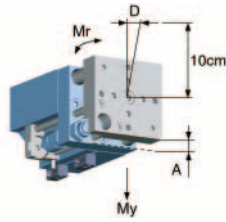
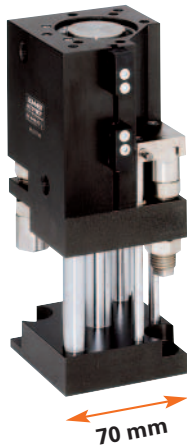
**Hydraulic shock absorber with spiral groove technology**

- low wear approach to end position, gentle energy absorption due to profiled spiral groove
- the damping characteristics can be individually adjusted by the screw depth

# Stroke Cylinder

## Forces and Moments

Max allowable static forces and moments.



Order no.:	HZ40-50D2	HZ40-100D2
Deviation D for Mr 10 N [mm]:	0.1	-
Deviation D for Mr 70 N [mm]:	0.5	-
Deviation D for Mr 5 N [mm]:	-	0.5
Deviation D for Mr 15 N [mm]:	-	1
Deflection A for My 60 N [mm]:	0.05	0.1
Deflection A for My 100 N [mm]:	0.1	0.15

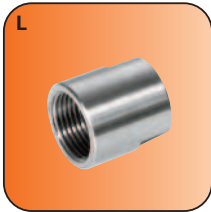
## Included in the delivery



Mounting block  
Order no. KB8-28

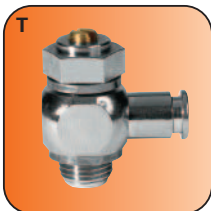


Shock absorbers  
Order no. M14x1,5S-06



Stop sleeve  
Order no. BDST01491

## Accessory list



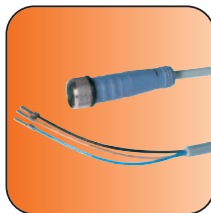
Pneumatic fittings  
Order no. DRV1/8x6



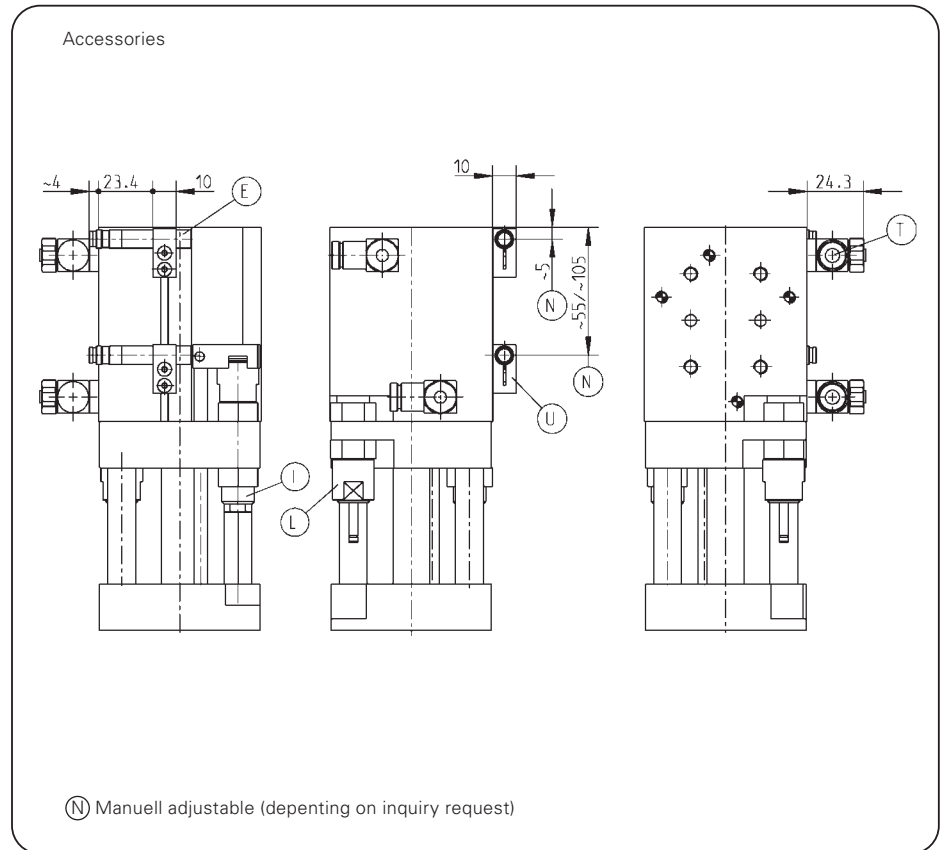
Proximity switch  
Order no. NJ8-E2S



Cable angled plug  
Order no. KAW500



Cable straight plug  
Order no. KAG500

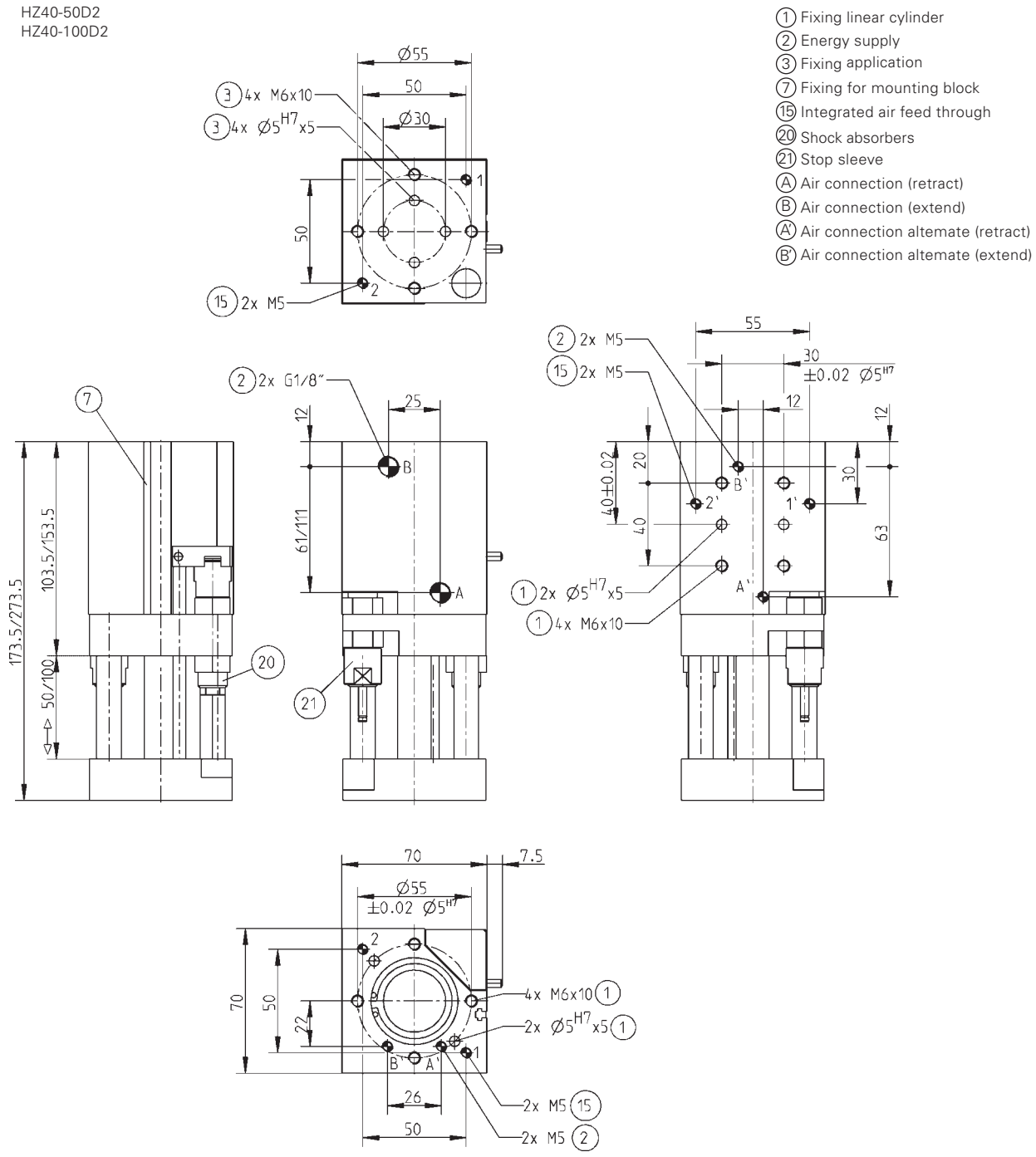


Subject to change without prior notice



Order no.:	HZ40-50D2	HZ40-100D2
Stroke [mm]:	50	100
Extension force max. [N]:	720	720
Retraction force max. [N]:	600	600
Air feed through [quantity]:	2	2
Air volume per cycle [cm <sup>3</sup> ]:	116	232
Min./max. operating temperature [°C]*:	5/80	5/80
Weight [kg]:	2,0	2,7

HZ40-50D2  
HZ40-100D2

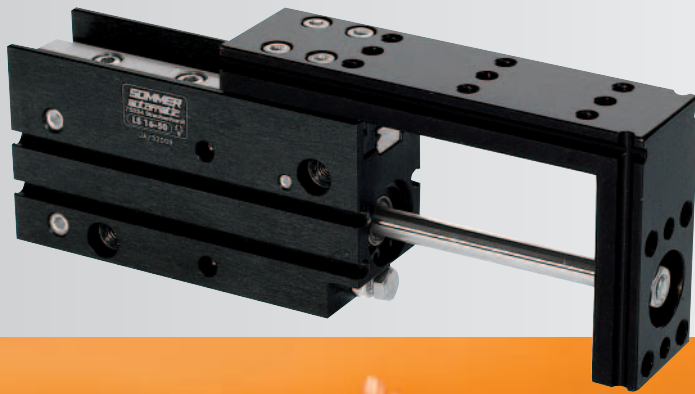


- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑦ Fixing for mounting block
- ⑮ Integrated air feed through
- ⑳ Shock absorbers
- ㉑ Stop sleeve
- Ⓐ Air connection (retract)
- Ⓑ Air connection (extend)
- Ⓐ Air connection alternate (retract)
- Ⓑ Air connection alternate (extend)



# *Linear rail slide*

*pneumatic*



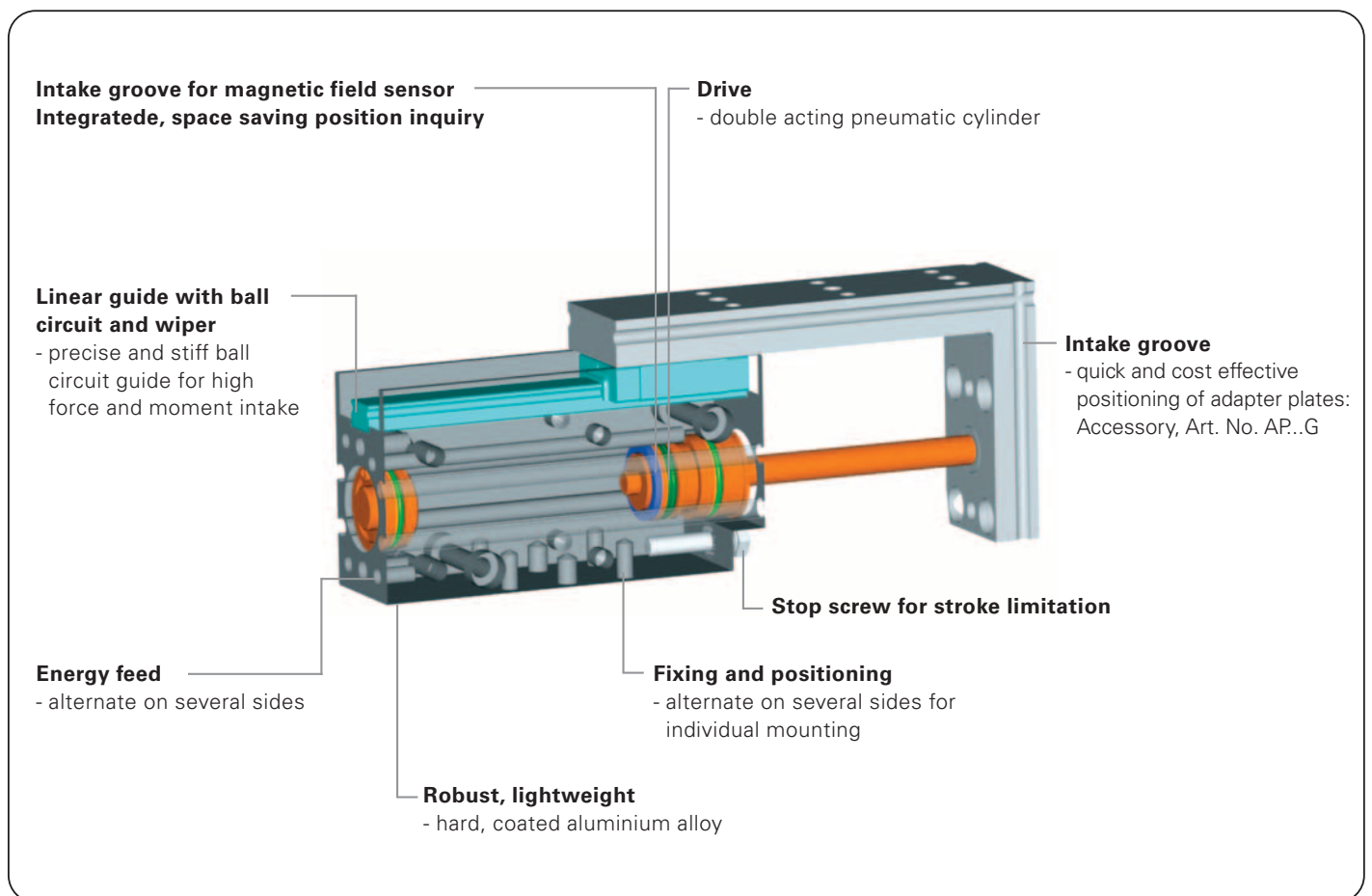
*LS Series*

# Linear rail slide

## Features

- precise and stiff linear guide with ball circuit and wiper
- four sizes with adjustable strokes of 25 and 50 mm
- high drive force, pressure force up to 100 N
- high flexibility due to diverse fixing and assembly options
- stroke adjustable via stop screw
- high torque load and force effect possible

## Functional diagram



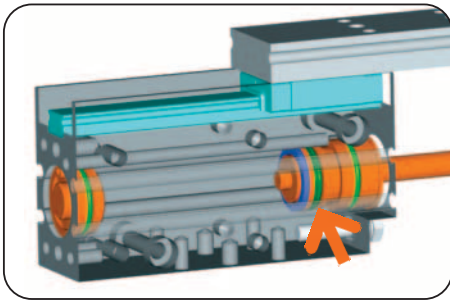
**Terms**

- Handling weight:** max. allowable extension load
- Cycle:** one complete movement of the piston forward and back
- Maintenance:** maintenance free up to 10 Mio. cycle  
 (please see the owner's manual for conditions,  
 download from [www.sommer-automatic.com](http://www.sommer-automatic.com))
- long maintenance intervals keep costs down
  - long durability

**Model**

<b>Order no.</b>	<b>Stroke</b>	<b>Extension force</b>	<b>Retraction force</b>	<b>Recommended handling weight</b>
LS10-25	25 mm	40 N	30 N	2 kg
LS10-50	50 mm	40 N	30 N	2 kg
LS16-25	25 mm	100 N	85 N	6 kg
LS16-50	50 mm	100 N	85 N	6 kg

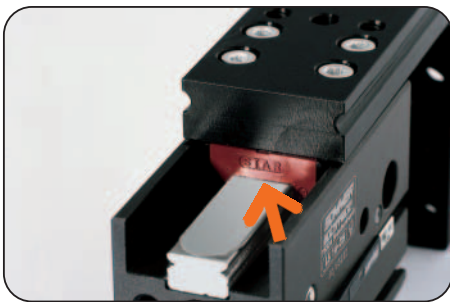
# Linear rail slide



## Drive

### Double acting pneumatic cylinder

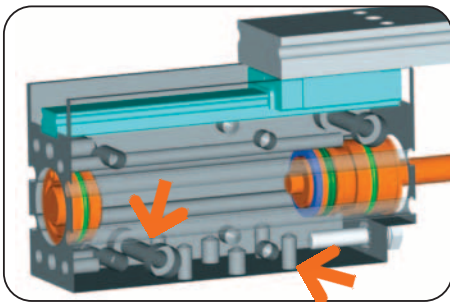
- maximum drive force in extend and retract movement
- pressure force up to 100 N



## Guide

### Profile rail guide with ball circuit and wiper

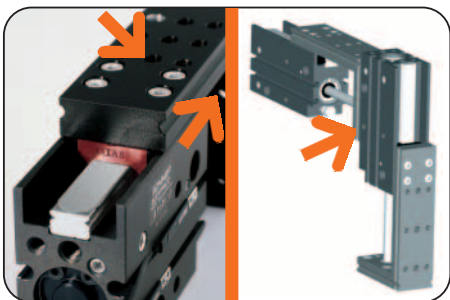
- smooth
- torsion stiff



## Machine connection

### Fixing and positioning possibilities on several sides

- installation location as desired
- optimum integration in the workroom



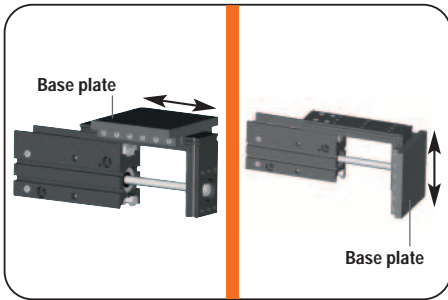
## Intake flange

### Direct connection of customer specific application

- possible on several sides
- with intake groove for adapter plates

### Direct connection of a further linear slide from the same series

- no additional adapter plates required
- easiest assembly



### Adapter plate

**Easiest connection and positioning of application**

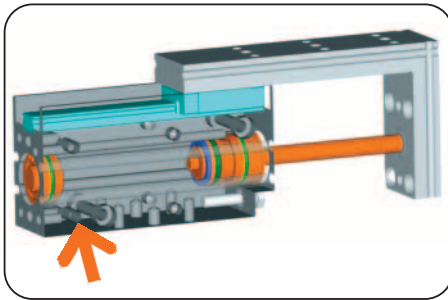
- low design effort
- available as accessory



### Position sensing

**via magnetic field sensor**

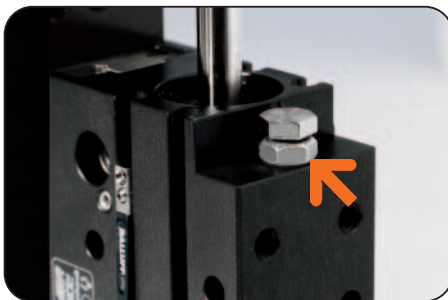
- process safe
- compact



### Energy supply

**Possible from several sides**

- hoseless connection possible, no additional interference contours
- exhaust air control valve recommended for speed regulation

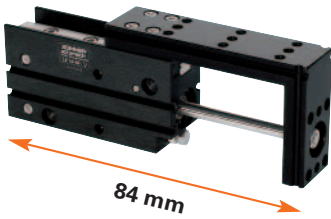


### Travel path

**Infinitely adjustable**

- up to 50 mm
- easy alignment via adjustment screw

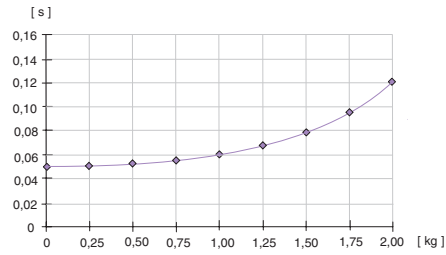
# Linear rail slide



Picture shows LS16-50

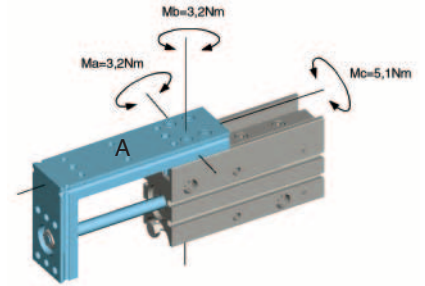
## Path-time diagram

Travel time against the extension load.



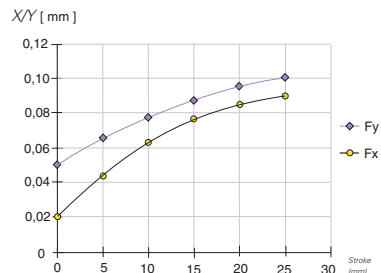
## Forces and Moments

Max allowable static forces and moments on face A.

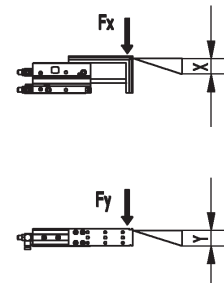


## Loads diagram

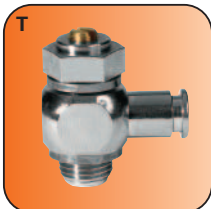
Divitation under load against the stroke.



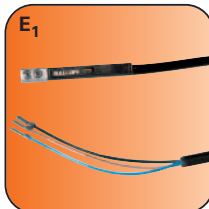
Test run with recommended handling weight.



## Accessory list



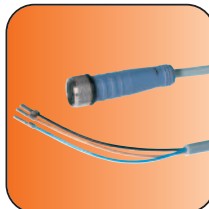
Pneumatic fittings  
Order no. DRVM3x3



Magnetic field sensor  
Order no. MFS303KHC30



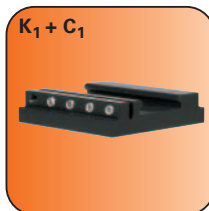
Magnetic field sensor  
Order no. MFS303SKHC30



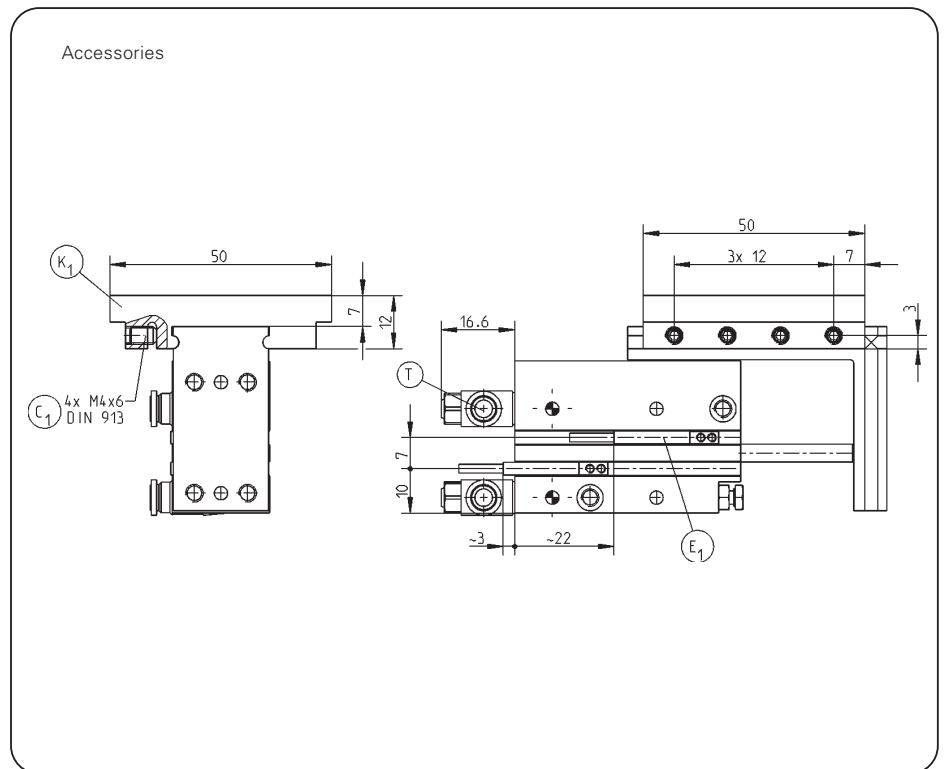
Cable straight plug  
Order no. KAG500



Plug 3-pole  
Order no. S12-G-3



Base plate  
Order no. APLS10G



Magnetic field sensor incl. mounting block

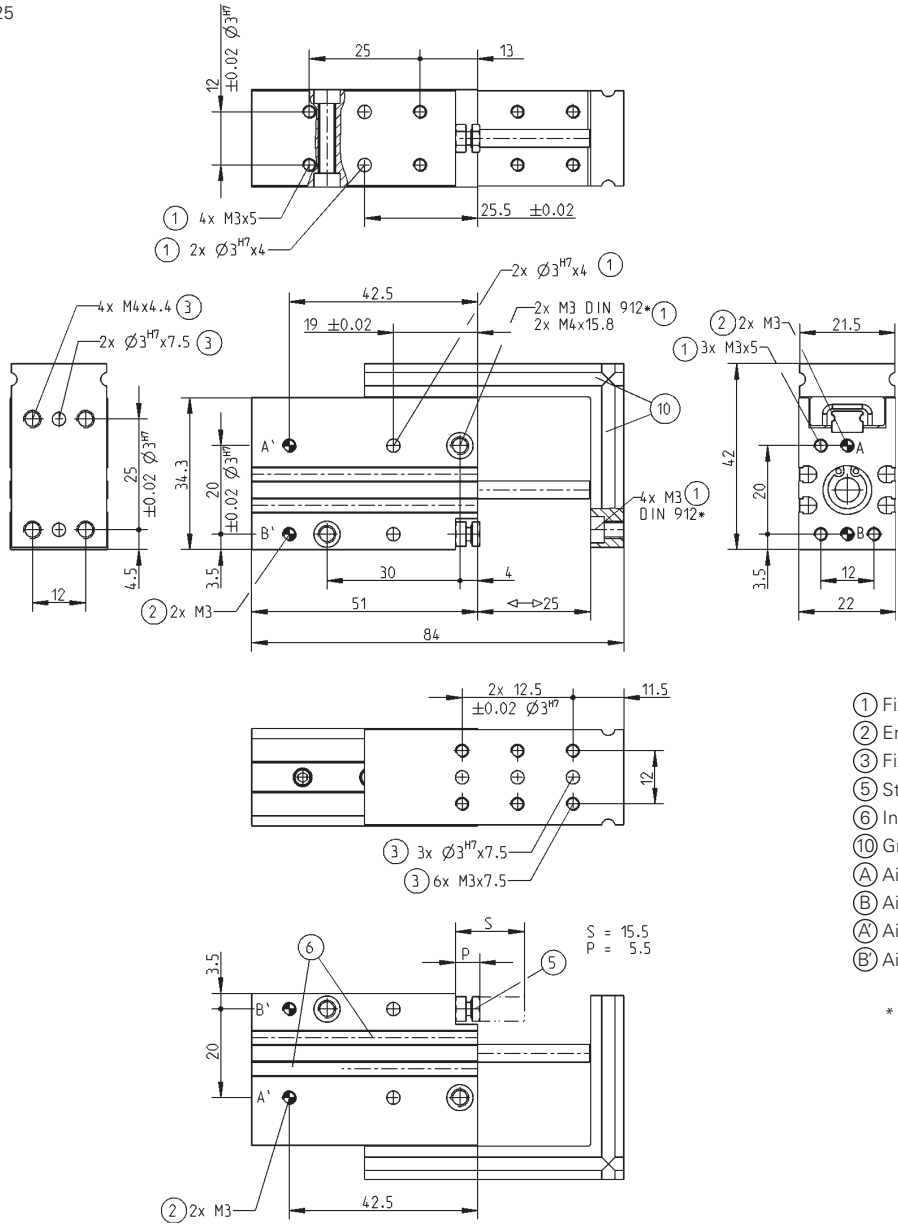
Subject to change without prior notice



Order no.:	LS10-25
Stroke [mm]:	25
Extension force max. [N]:	40
Retraction force max. [N]:	30
Piston diameter [mm]:	10
Recommended handling weight [kg]*:	2
Guide rail size [mm]:	7
Air volume per cycle [cm <sup>3</sup> ]:	3,6
Min./max. operating temperature [°C]:	5/80
Weight [g]:	150

All data measured at 6 bar  
\* on face A

LS10-25

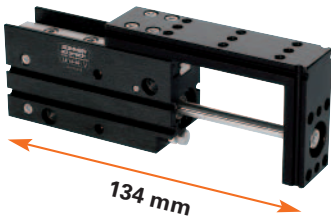


- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑤ Stop screw for stroke limitation
- ⑥ Inquiry groove for magnetic field sensor
- ⑩ Groove for base plate
- A Air connection (retract)
- B Air connection (extend)
- A Air connection alternate (retract)
- B Air connection alternate (extend)

\* replaced by DIN EN ISO 4762

Subject to change without prior notice

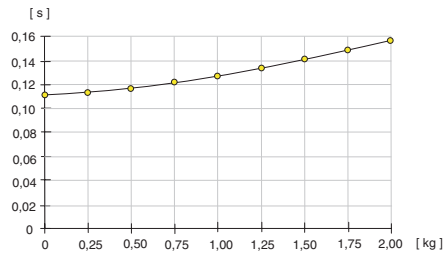
# Linear rail slide



Picture shows LS16-50

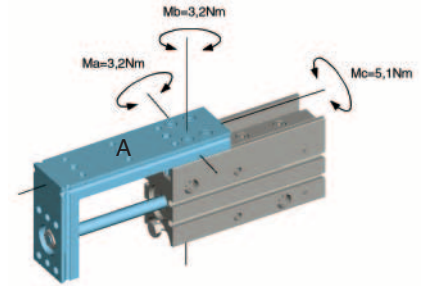
## Path-time diagram

Travel time against the extension load.

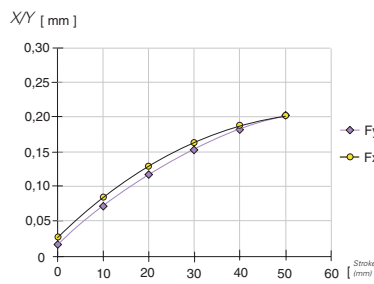


## Forces and Moments

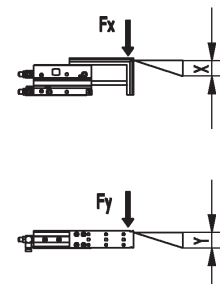
Max allowable static forces and moments on face A.



Divitiation under load against the stroke.



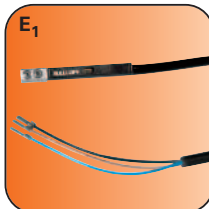
Test run with recommended handling weight.



## Accessory list



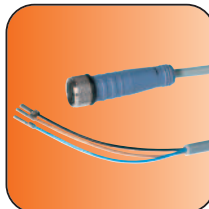
Pneumatic fittings  
Order no. DRVM3x3



Magnetic field sensor  
Order no. MFS303KHC30



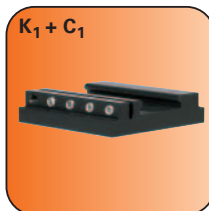
Magnetic field sensor  
Order no. MFS303SKHC30



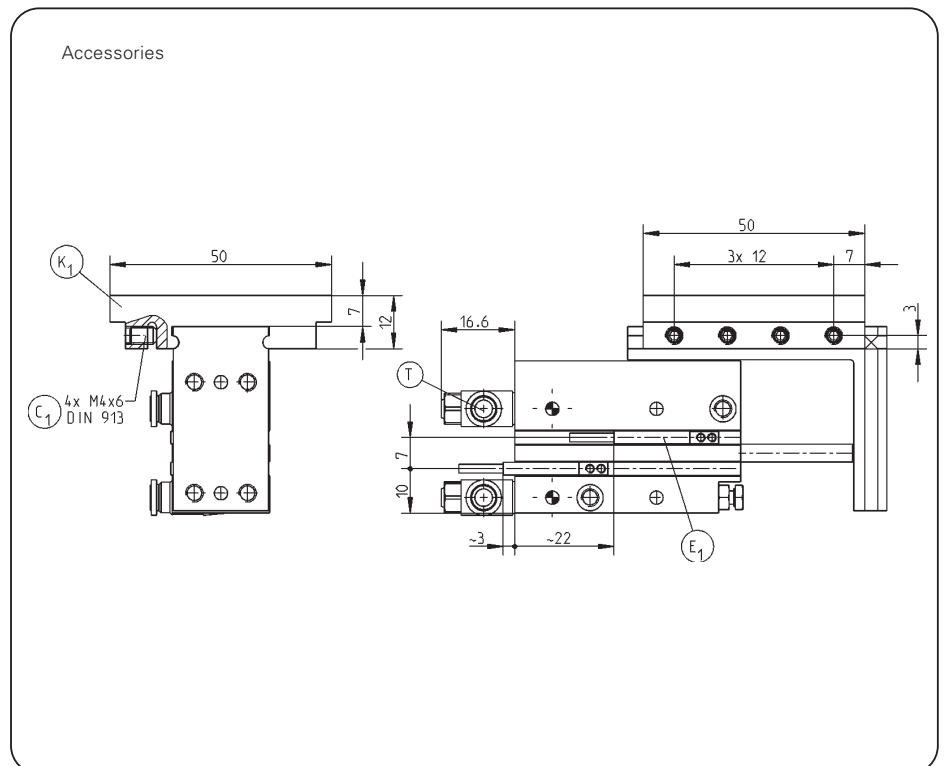
Cable straight plug  
Order no. KAG500



Plug 3-pole  
Order no. S12-G-3



Base plate  
Order no. APLS10G

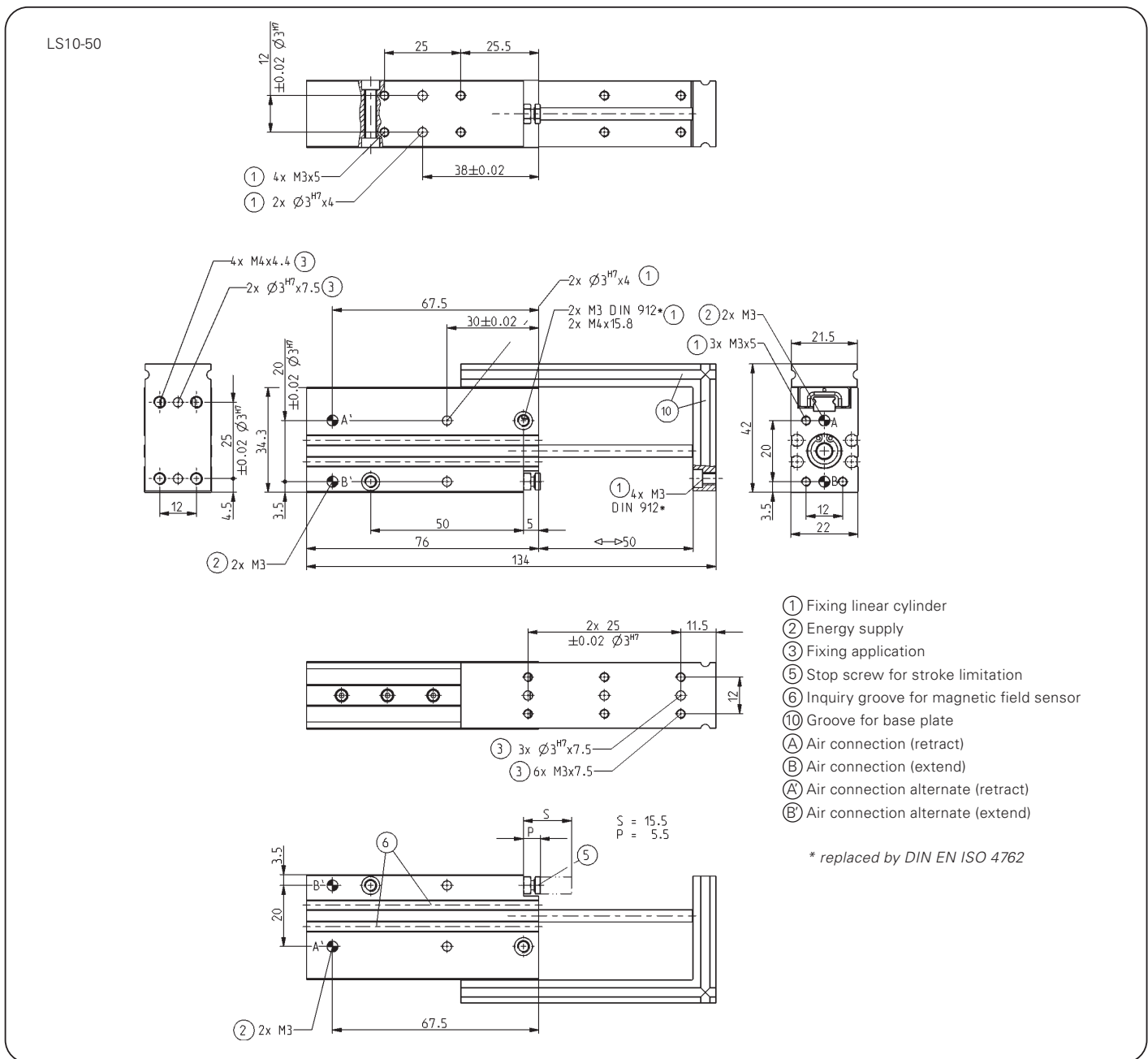


Magnetic field sensor incl. mounting block

Subject to change without prior notice

<b>Order no.:</b>	<b>LS10-50</b>
Stroke [mm]:	50
Extension force max. [N]:	40
Retraction force max. [N]:	30
Piston diameter [mm]:	10
Recommended handling weight [kg]*:	2
Guide rail size [mm]:	7
Air volume per cycle [cm <sup>3</sup> ]:	7,2
Min./max. operating temperature [°C]:	5/80
Weight [g]:	200

All data measured at 6 bar  
\* on face A

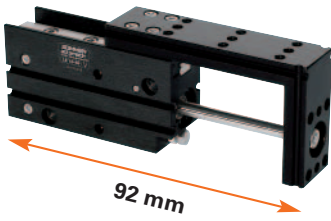


- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑤ Stop screw for stroke limitation
- ⑥ Inquiry groove for magnetic field sensor
- ⑩ Groove for base plate
- A Air connection (retract)
- B Air connection (extend)
- A' Air connection alternate (retract)
- B' Air connection alternate (extend)

\* replaced by DIN EN ISO 4762

Subject to change without prior notice

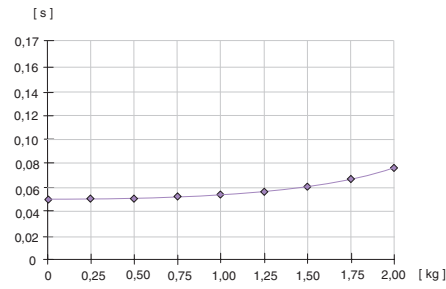
# Linear rail slide



Picture shows LS16-50

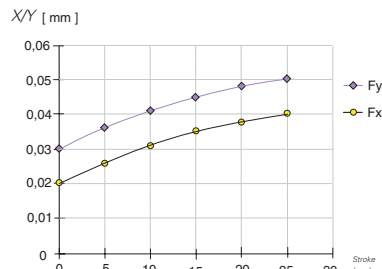
## Path-time diagram

Travel time against the extension load.



## Loads diagram

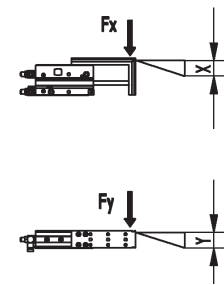
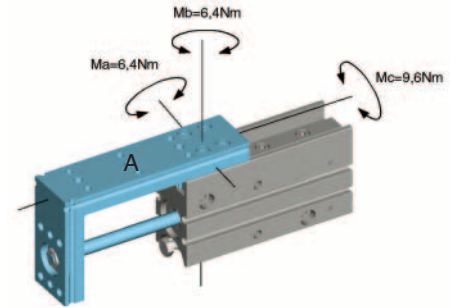
Divitiation under load against the stroke.



Test run with recommended handling weight.

## Forces and Moments

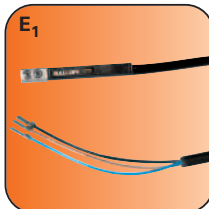
Max allowable static forces and moments on face A.



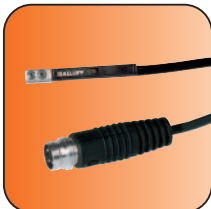
## Accessory list



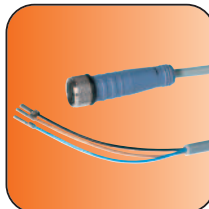
Pneumatic fittings  
Order no. DRVM5x4



Magnetic field sensor  
Order no. MFS303KHC30



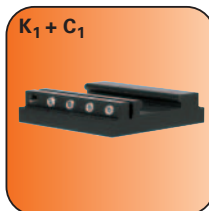
Magnetic field sensor  
Order no. MFS303SKHC30



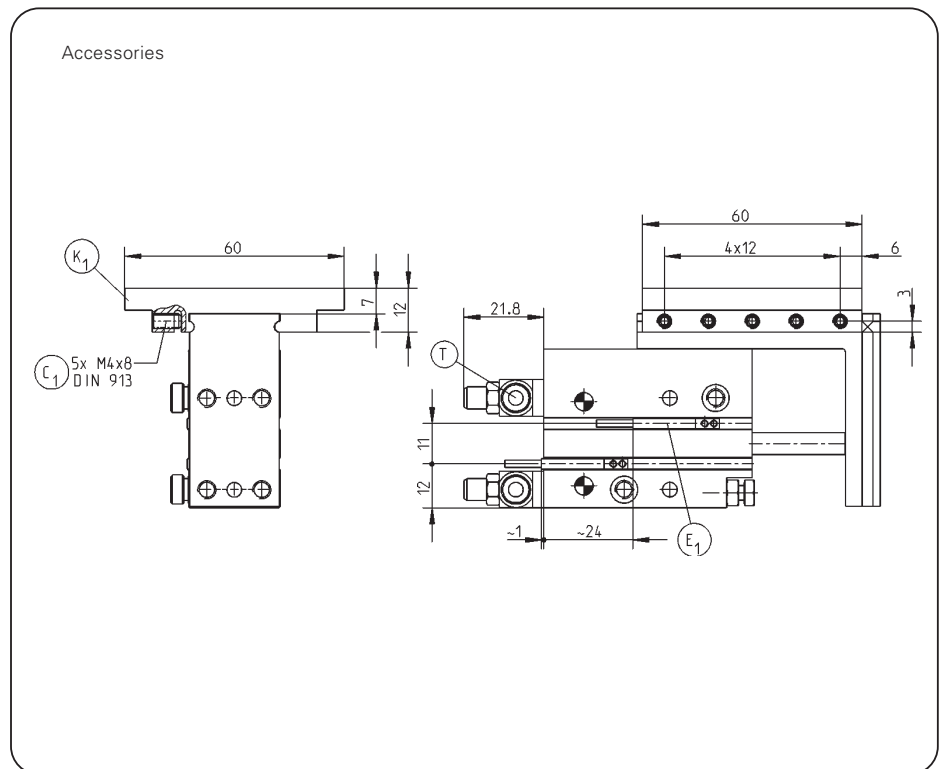
Cable straight plug  
Order no. KAG500



Plug 3-pole  
Order no. S12-G-3



Base plate  
Order no. APLS16G

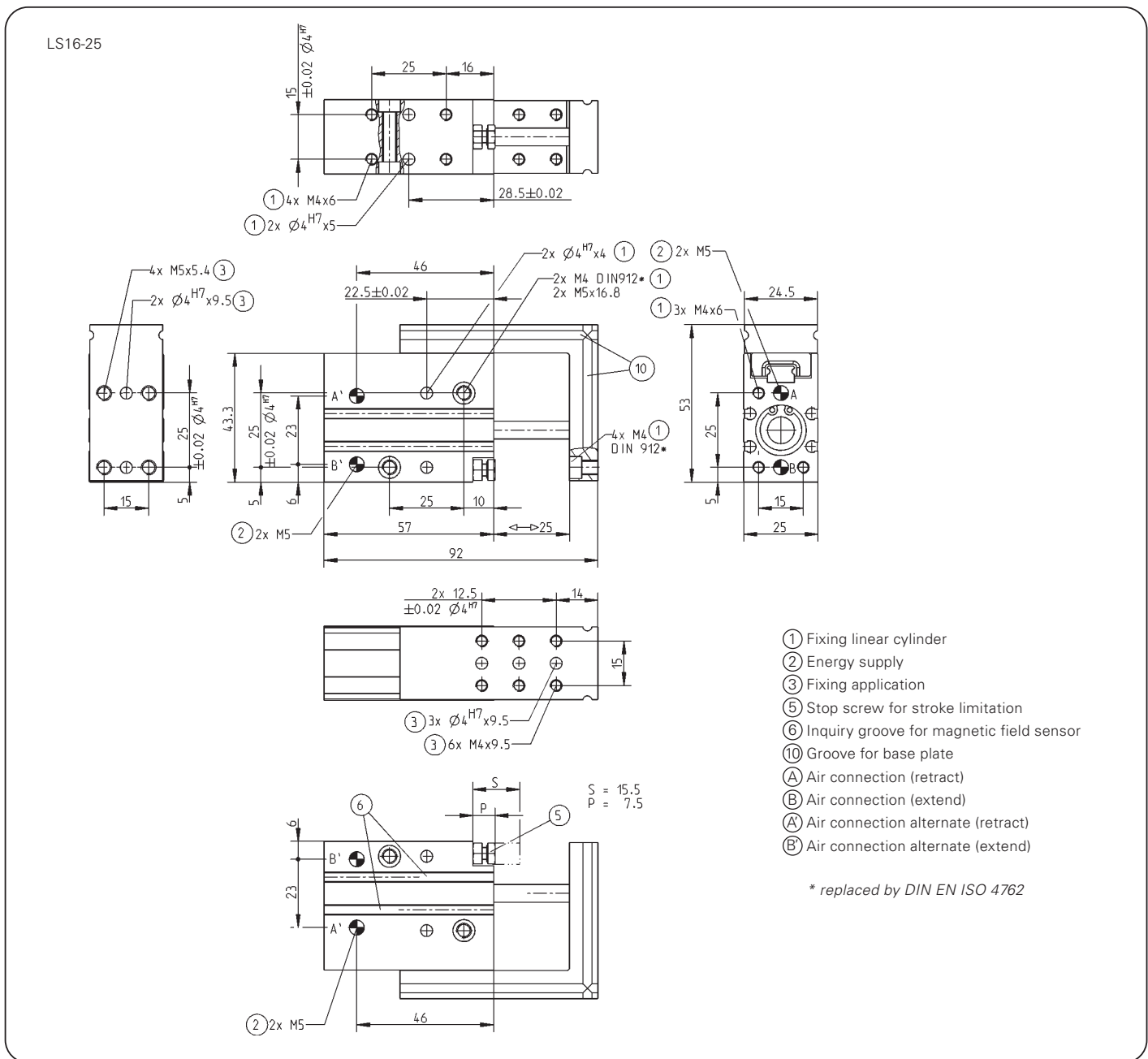


Magnetic field sensor incl. mounting block

Subject to change without prior notice

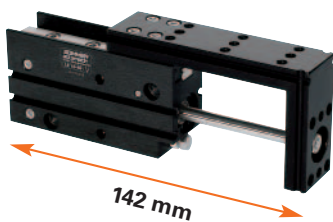
Order no.:	LS16-25
Stroke [mm]:	25
Extension force max. [N]:	100
Retraction force max. [N]:	85
Piston diameter [mm]:	16
Recommended handling weight [kg]*:	6
Guide rail size [mm]:	9
Air volume per cycle [cm <sup>3</sup> ]:	9,6
Min./max. operating temperature [°C]:	5/80
Weight [g]:	250

All data measured at 6 bar  
\* on face A



Subject to change without prior notice

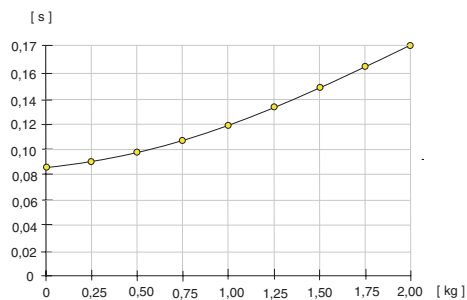
# Linear rail slide



Picture shows LS16-50

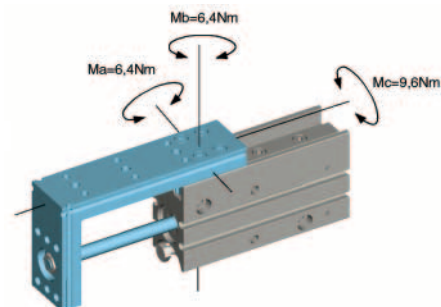
## Path-time diagram

Travel time against the extension load.



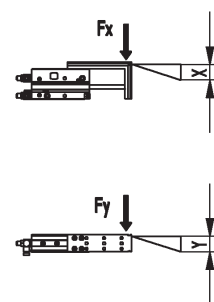
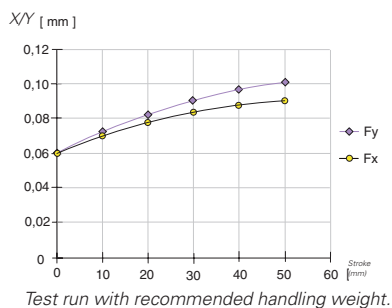
## Forces and Moments

Max allowable static forces and moments on face A.



## Loads diagram

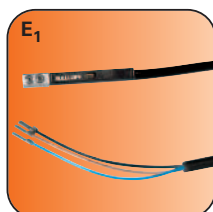
Divitation under load against the stroke.



## Accessory list



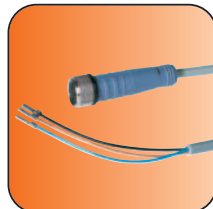
Pneumatic fittings  
Order no. DRVM5x4



Magnetic field sensor  
Order no. MFS303KHC30



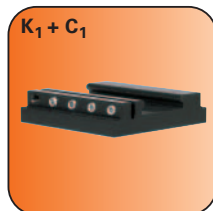
Magnetic field sensor  
Order no. MFS303SKHC30



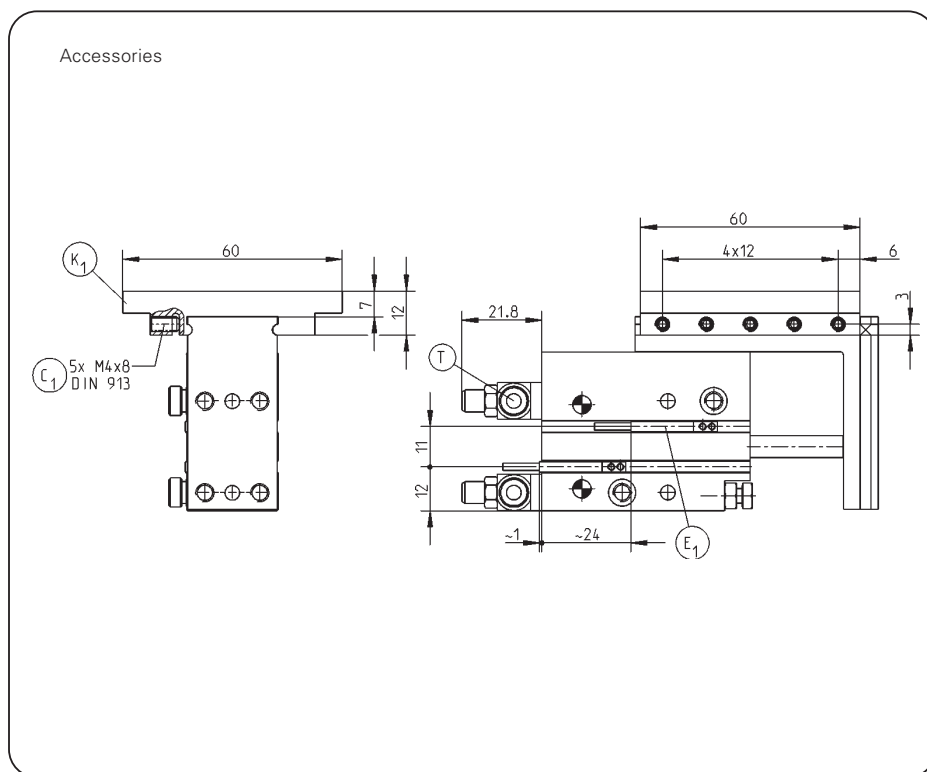
Cable straight plug  
Order no. KAG500



Plug 3-pole  
Order no. S12-G-3



Base plate  
Order no. APLS16G

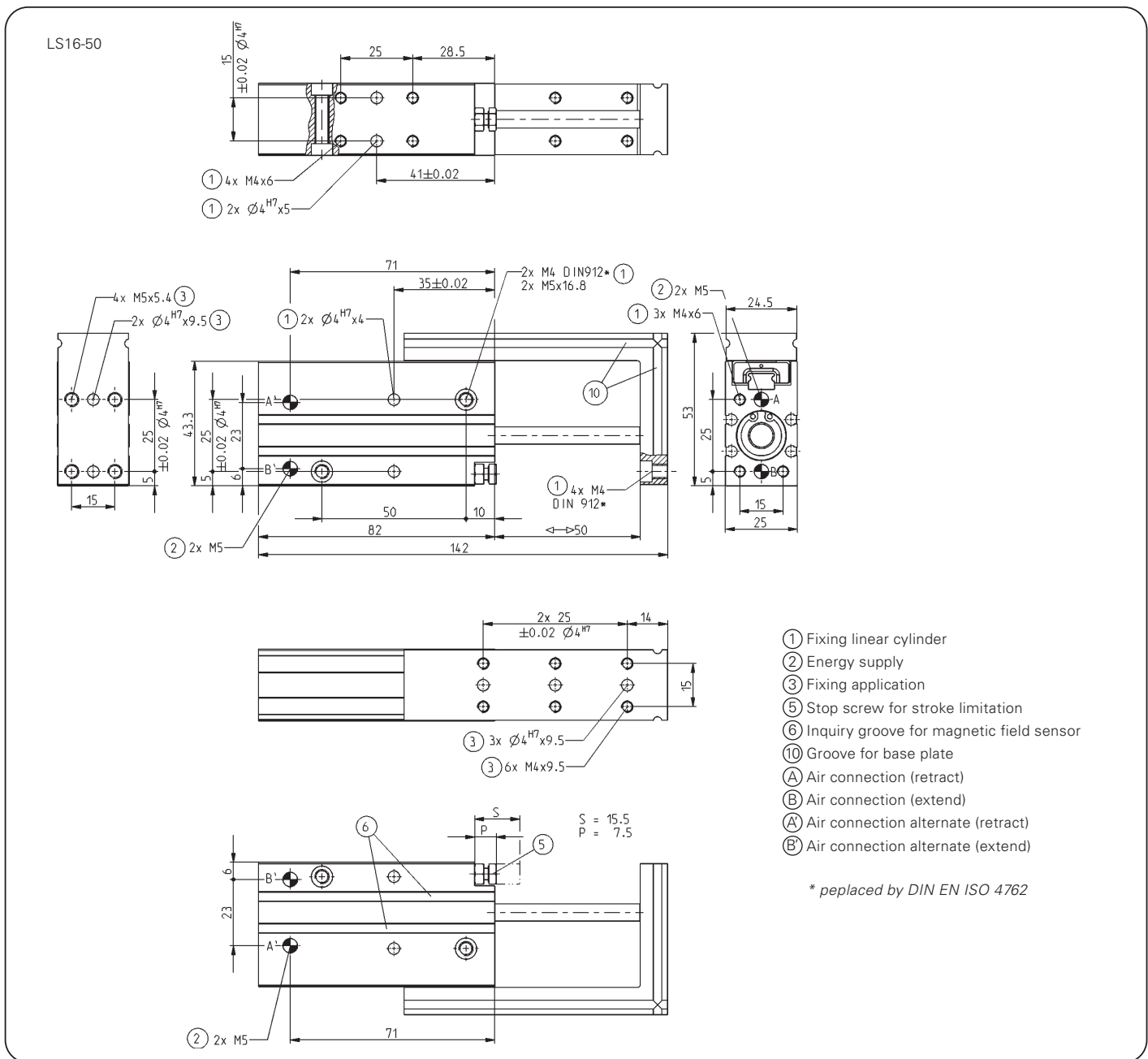


Magnetic field sensor incl. mounting block

Subject to change without prior notice

<b>Order no.:</b>	<b>LS16-50</b>
Stroke [mm]:	50
Extension force max. [N]:	100
Retraction force max. [N]:	85
Piston diameter [mm]:	16
Recommended handling weight [kg]*:	6
Guide rail size [mm]:	9
Air volume per cycle [cm <sup>3</sup> ]:	19,2
Min./max. operating temperature [°C]:	5/80
Weight [g]:	300

All data measured at 6 bar  
\* on face A



- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ⑤ Stop screw for stroke limitation
- ⑥ Inquiry groove for magnetic field sensor
- ⑩ Groove for base plate
- A Air connection (retract)
- B Air connection (extend)
- A Air connection alternate (retract)
- B Air connection alternate (extend)

\* replaced by DIN EN ISO 4762

Subject to change without prior notice





# Linear rail slide

*pneumatic*



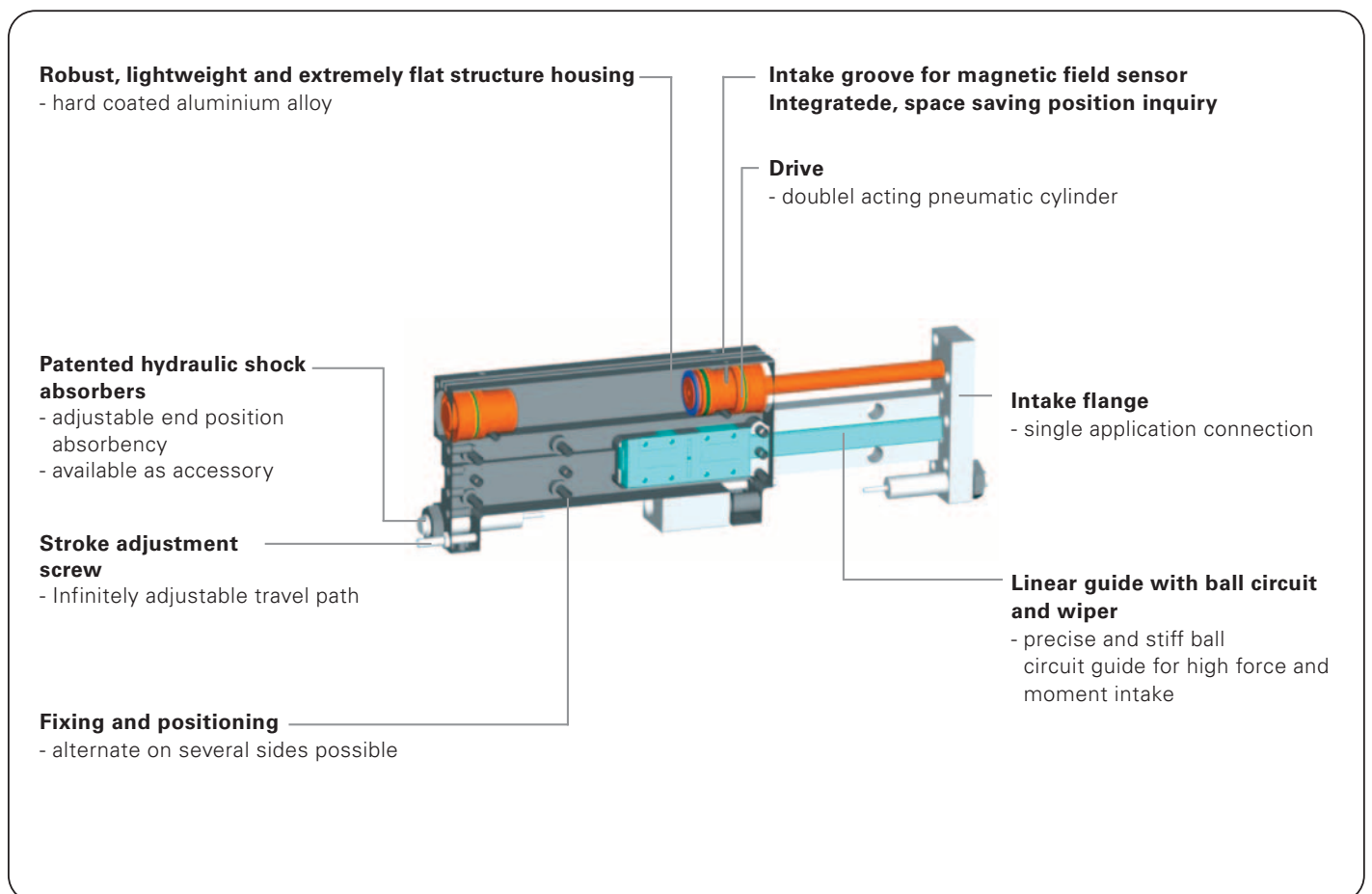
*LSF Series*

# Linear rail slide

## Features

- extremely flat structure
- covered linear guide with ball circuit and wiper
- adjustable stroke up to 50 mm and pressure force up to 100 N
- position inquiry using magnetic field sensors and inductive proximity switches
- stop position absorbency possible via hydraulic shock absorbers

## Functional diagram



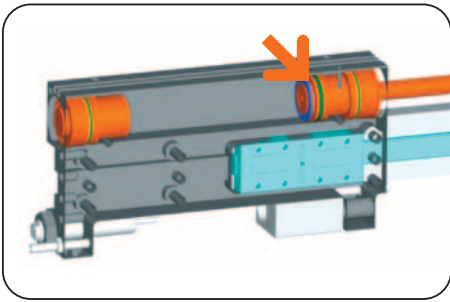
**Terms**

- Handling weight:** max. allowable extension load
- Cycle:** one complete movement of the piston forward and back
- Maintenance:** maintenance free up to 10 Mio. cycle  
 (please see the owner's manual for conditions,  
 download from [www.sommer-automatic.com](http://www.sommer-automatic.com))
- long maintenance intervals keep costs down
  - long durability

**Model**

<b>Order no.</b>	<b>Stroke</b>	<b>Extension force</b>	<b>Retraction force</b>	<b>Recommended handling weight</b>
LSF25-50	50 mm	265 N	220 N	15 kg
LSF25-100	100 mm	265 N	220 N	15 kg

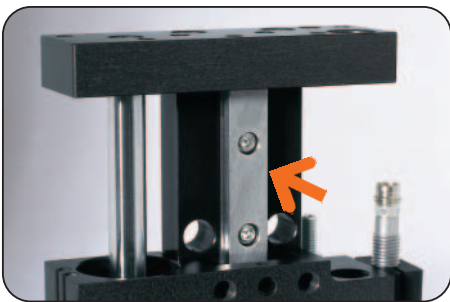
# Linear rail slide



## Drive

### Double acting pneumatic cylinder

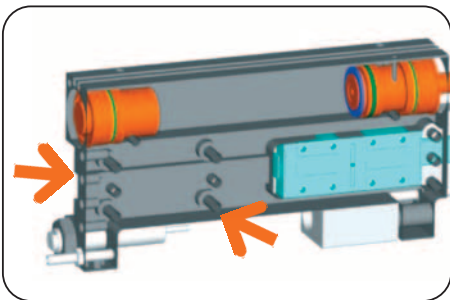
- maximum drive force in extend and retract movement
- pressure force up to 265 N



## Guide

### Profile rail guide with wiper and double guiding wagon

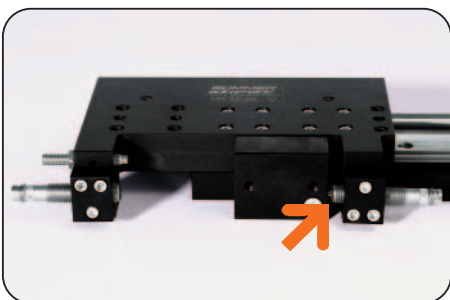
- high stiffness even with torque load
- high force and torque intake, independent of installation position



## Machine connection

### Energy feed, fixing and positioning possibilities on several sides

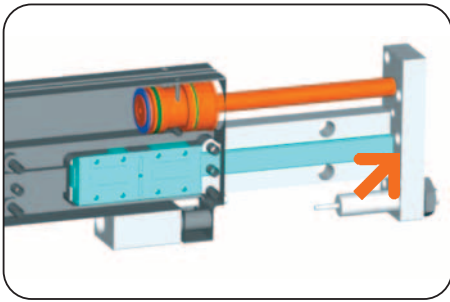
- optimum integration in the workroom
- hoseless direct connection possible, no additional interference contours
- exhaust air control valve recommended for speed regulation



## Position sensing

### Via inductive proximity switch

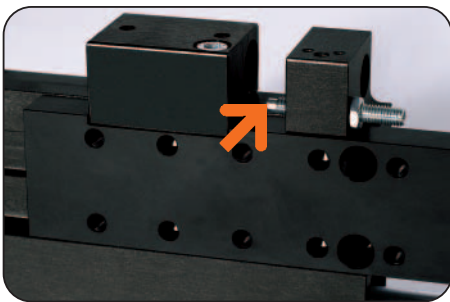
- process safe
- mounting blocks and switching plates available as accessories



### Intake flange

**Direct connection of customer specific application**

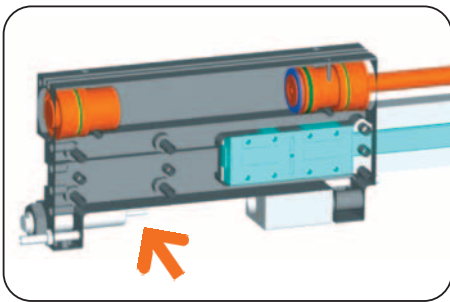
- low design effort
- simple connection



### Travel path

**Infinitely adjustable**

- up to 100 mm
- easy alignment via adjustment screw



### End position damping

**Hydraulic shock absorber with spiral groove technology**

- low wear approach to end position, gentle energy absorption due to profiled spiral groove
- available as accessory

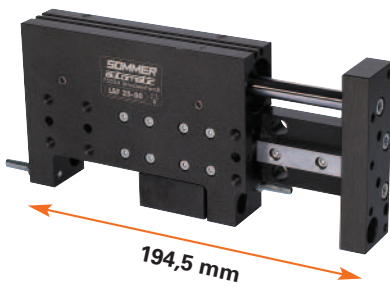


### Position sensing

**via magnetic field sensor**

- process safe
- compact

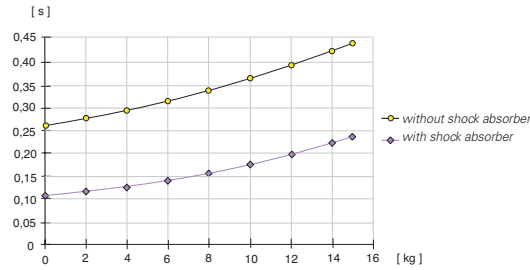
# Linear rail slide



Picture shows LSF25-50

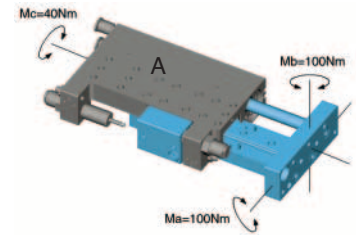
## Path-time diagram

Travel time against the extension load.



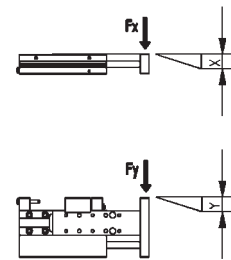
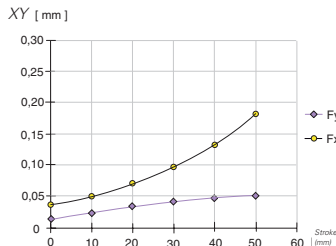
## Forces and Moments

Max allowable static forces and moments on face A.



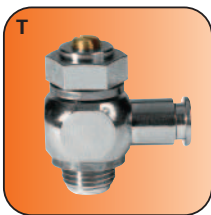
## Loads diagram

Divitation under load against the stroke.

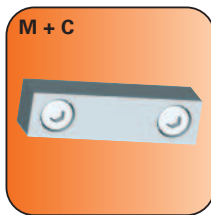


Test run with recommended handling weight.

## Accessory list



Pneumatic fittings  
Order no. DRVM5x4



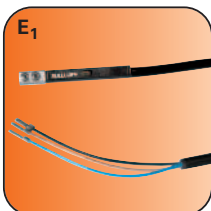
Switch cam  
Order no. SN09



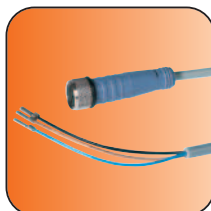
Mounting block  
Order no. KB8



Proximity switch  
Order no. NJ8-E2S



Magnetic field sensor  
Order no. MFS303KHC30



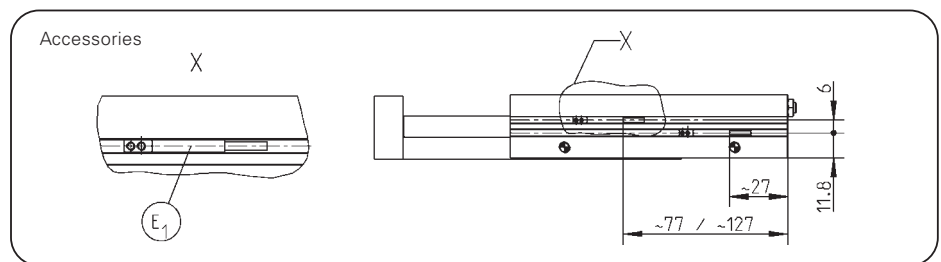
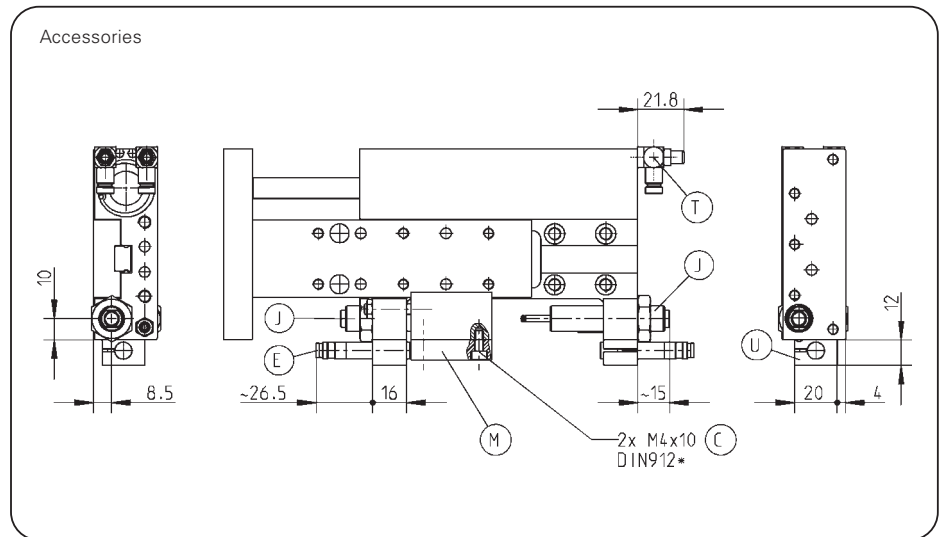
Cable straight plug  
Order no. KAG500



Plug 3-pole  
Order no. S12-G-3



Industrie-shock absorbers  
Order no. M12x1S-06

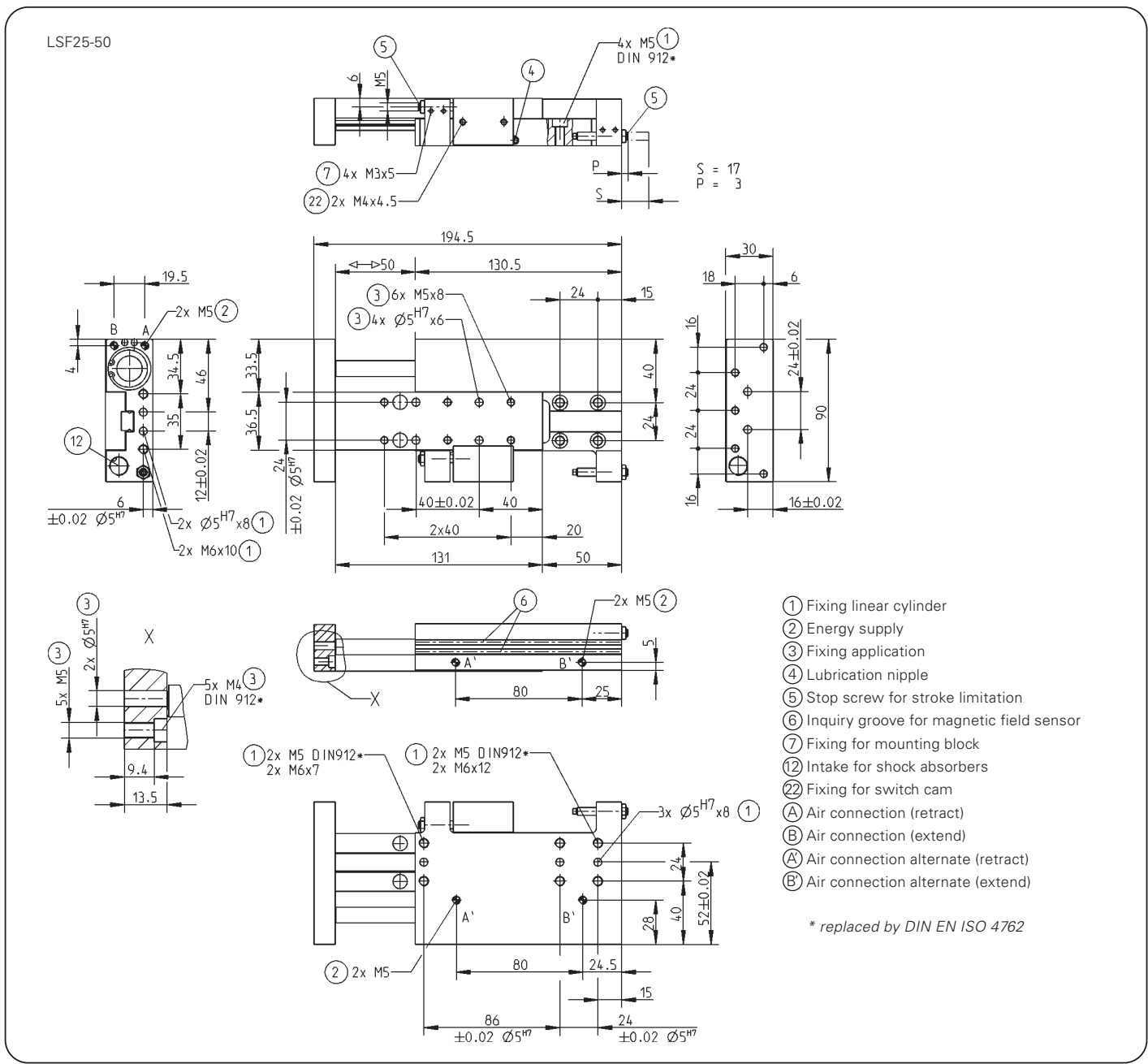


Magnetic field sensor incl. mounting block

Subject to change without prior notice

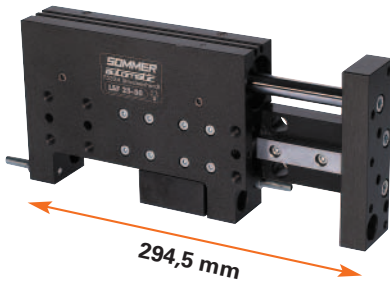
<b>Order no.:</b>	<b>LSF25-50</b>
Stroke [mm]:	50
Extension force max. [N]:	265
Retraction force max. [N]:	220
Piston diameter [mm]:	25
Recommended handling weight [kg]*:	15
Guide rail size [mm]:	12
Air volume per cycle [cm³]:	45
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	1

All data measured at 6 bar  
\* on face A



Subject to change without prior notice

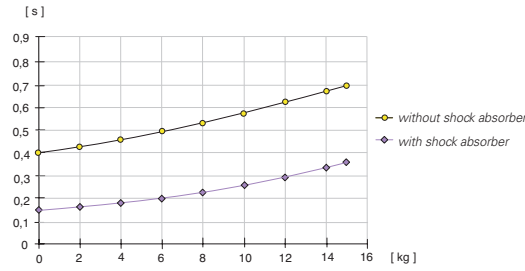
# Linear rail slide



Picture shows LSF25-50

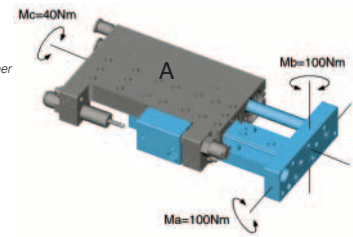
## Path-time diagram

Travel time against the extension load.



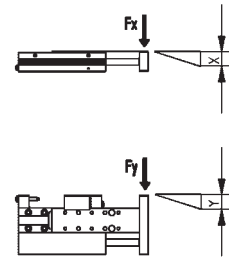
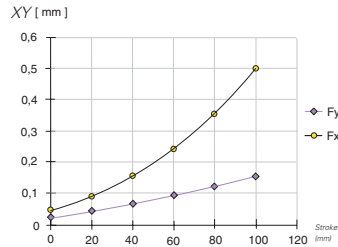
## Forces and Moments

Max allowable static forces and moments on face A.



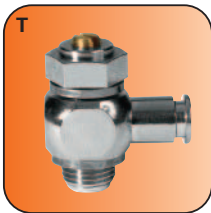
## Loads diagram

Divitation under load against the stroke.

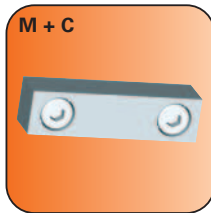


Test run with recommended handling weight.

## Accessory list



Pneumatic fittings  
Order no. DRVM5x4



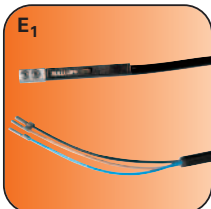
Switch cam  
Order no. SN09



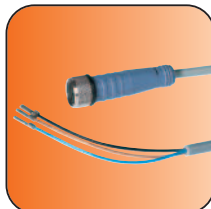
Mounting block  
Order no. KB8



Proximity switch  
Order no. NJ8-E2S



Magnetic field sensor  
Order no. MFS303KHC30



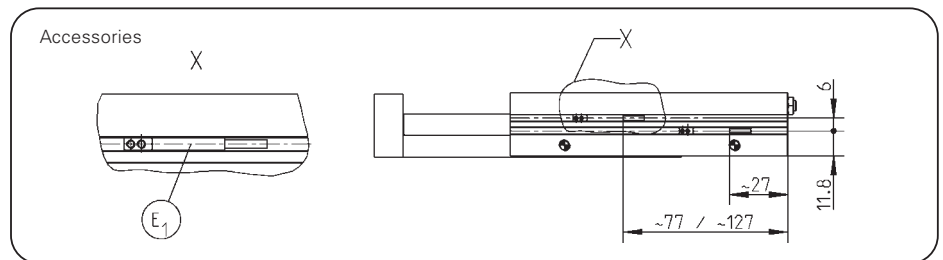
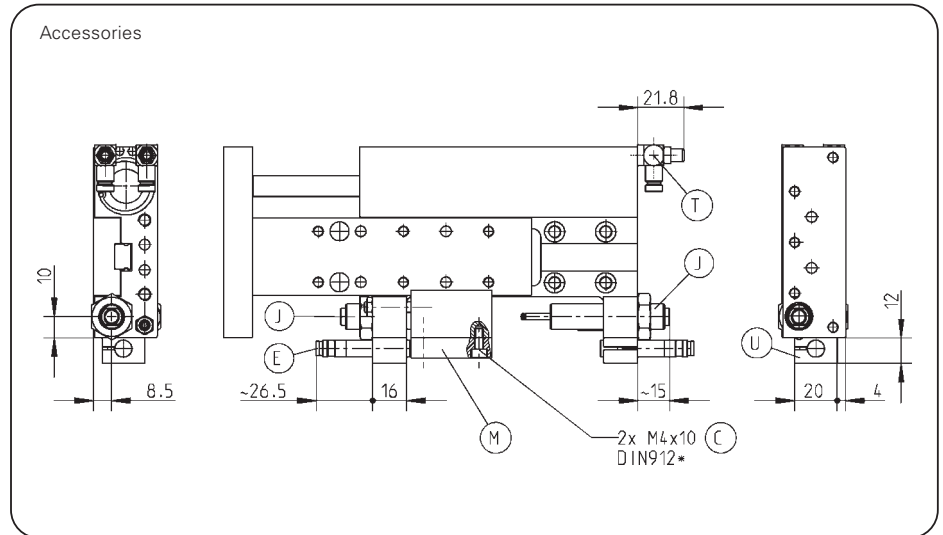
Cable straight plug  
Order no. KAG500



Plug 3-pole  
Order no. S12-G-3



Industrie-shock absorbers  
Order no. M12x15-06



Magnetic field sensor incl. mounting block

Subject to change without prior notice



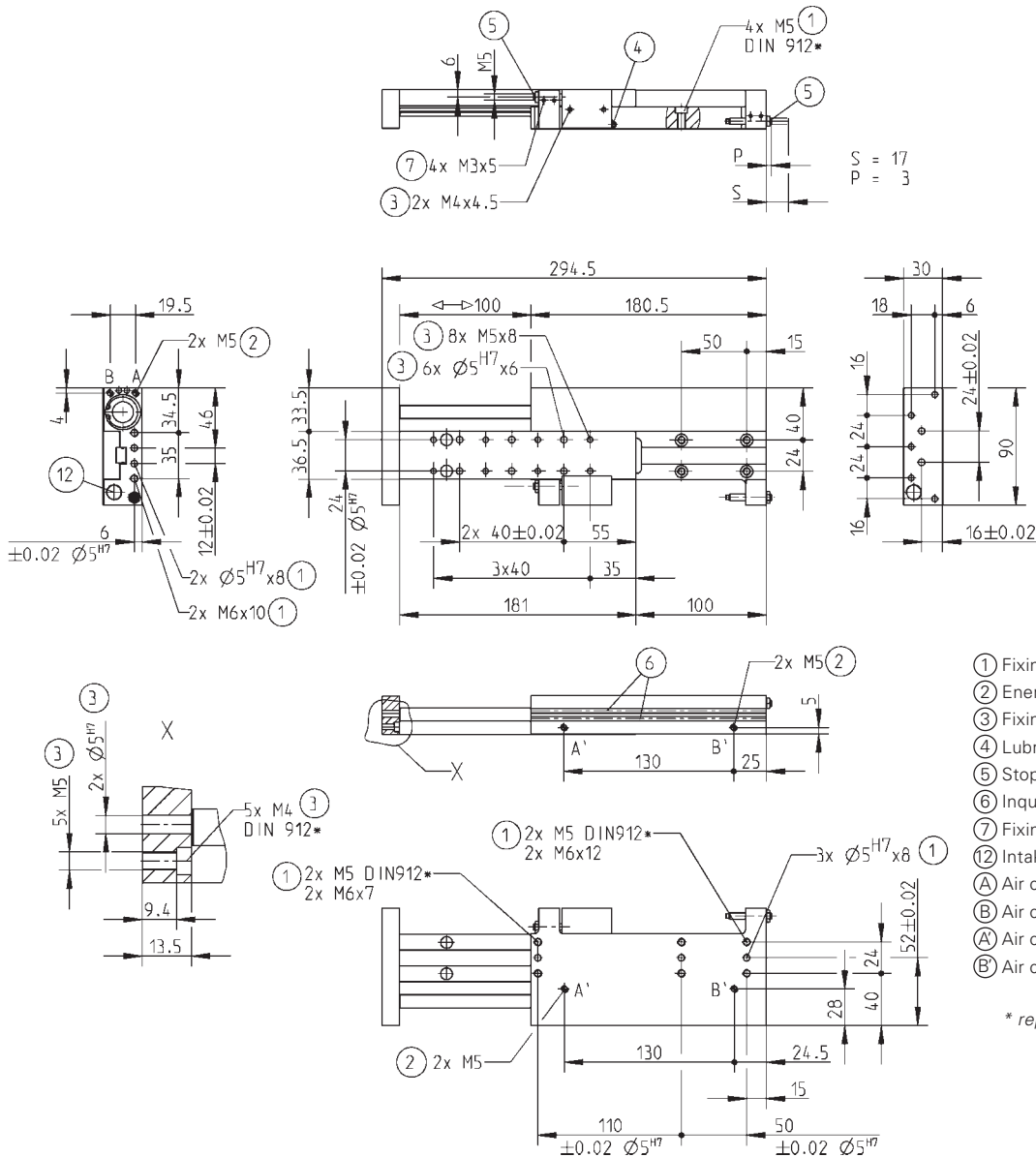


Order no.:	LSF25-100
Stroke [mm]:	100
Extension force max. [N]:	265
Retraction force max. [N]:	220
Piston diameter [mm]:	25
Recommended handling weight [kg]*:	15
Guide rail size [mm]:	12
Air volume per cycle [cm <sup>3</sup> ]:	90
Min./max. operating temperature [°C]:	5/80
Weight [g]:	1,3

All data measured at 6 bar

\* on face A

LSF25-100



- ① Fixing linear cylinder
- ② Energy supply
- ③ Fixing application
- ④ Lubrication nipple
- ⑤ Stop screw for stroke limitation
- ⑥ Inquiry groove for magnetic field sensor
- ⑦ Fixing for mounting block
- ⑫ Intake for shock absorbers
- A Air connection (retract)
- B Air connection (extend)
- A' Air connection alternate (retract)
- B' Air connection alternate (extend)

\* replaced by DIN EN ISO 4762

Subject to change without prior notice



# *Linear rail slide*

*pneumatic*



*LSX Series*

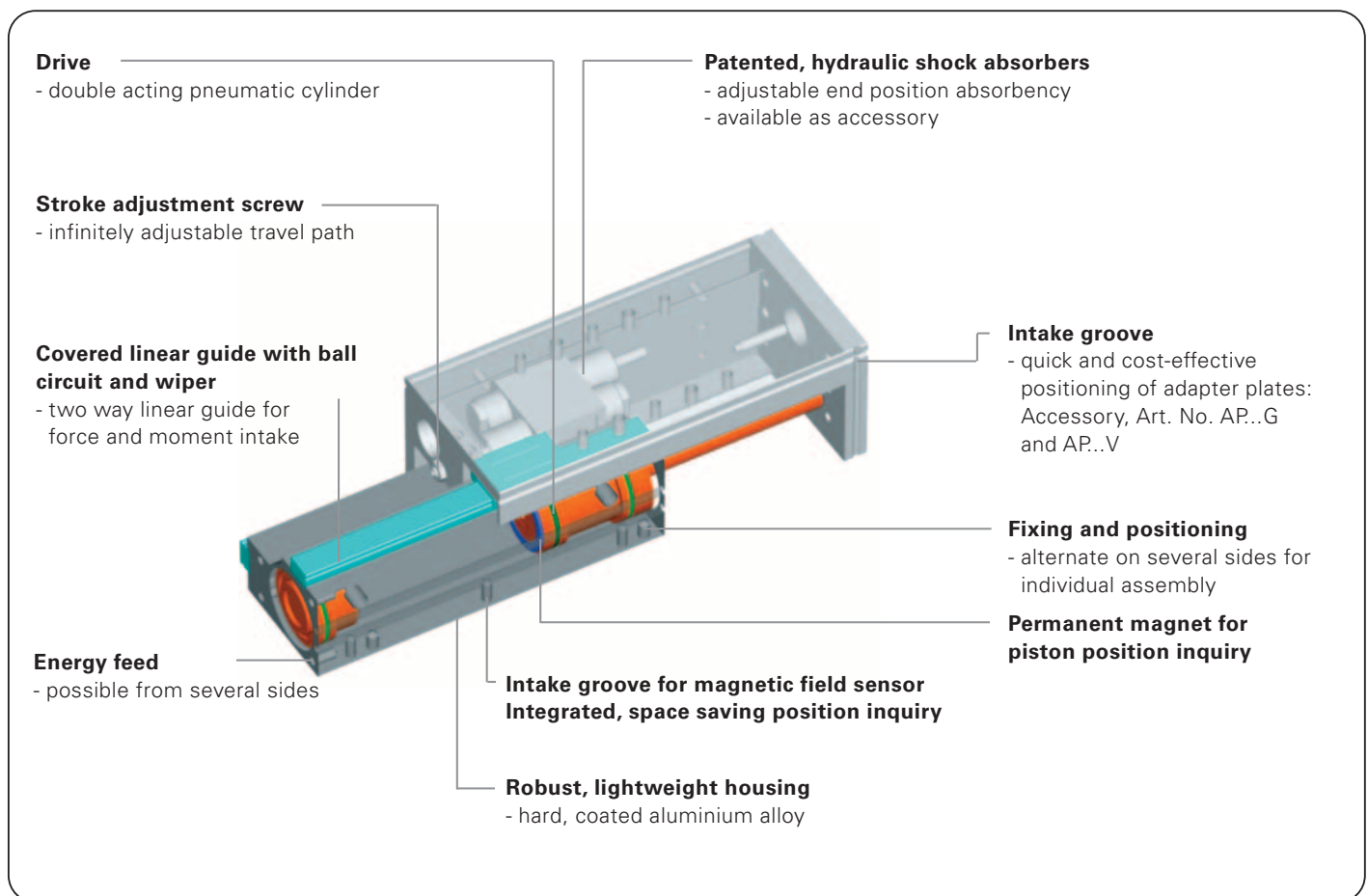
**SOMMER**  
*automatic*

# Linear rail slide

## ➤ Features

- covered, dual linear guide with ball circuit and wiper
- five different sizes, adjustable stroke up to 200 mm, pressure force up to 750 N
- position inquiry via magnetic field sensors
- optional, hydraulic shock absorber stop position

## Functional diagram





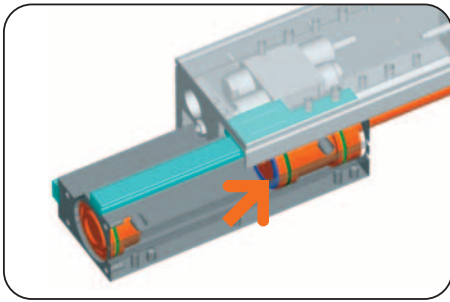
**Terms**

- Handling weight:** max. allowable extension load
- Cycle:** one complete movement of the piston forward and back
- Maintenance:** maintenance free up to 10 Mio. cycle  
 (please see the owner's manual for conditions,  
 download from [www.sommer-automatic.com](http://www.sommer-automatic.com))
- long maintenance intervals keep costs down
  - long durability

**Model**

<b>Order no.</b>	<b>Stroke</b>	<b>Extension force</b>	<b>Retraction force</b>	<b>Recommended handling weight</b>
LSX25-50	50 mm	265 N	220 N	15 kg
LSX25-100	100 mm	265 N	220 N	15 kg
LSX25-200	200 mm	265 N	220 N	15 kg
LSX40-100	100 mm	750 N	680 N	40 kg
LSX40-200	200 mm	750 N	680 N	40 kg

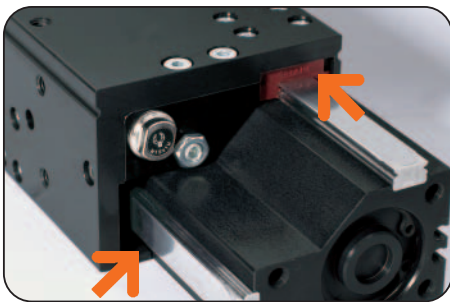
# Linear rail slide



## Drive

### Double acting pneumatic cylinder

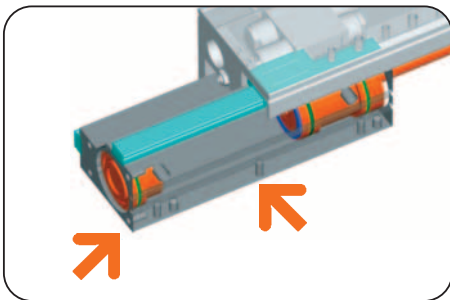
- maximum drive force in extend and retract movement
- pressure force up to 750 N



## Guide

### Doubled profile rail guide with ball circuit and wiper

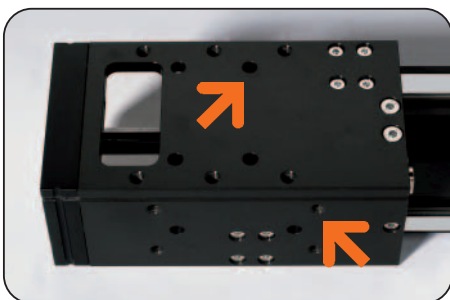
- high stiffness for greater positioning accuracy
- extremely high torsion stiffness



## Machine connection

### Energy feed, fixing and positioning possibilities on several sides

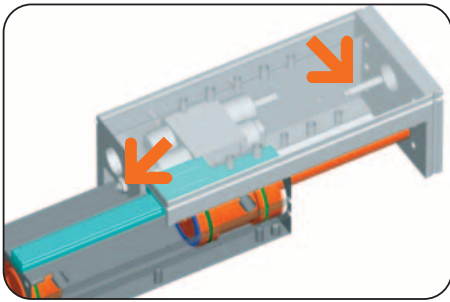
- optimum integration in the workroom
- hoseless direct connection possible, no additional interference contours
- exhaust air control valve recommended for speed regulation



## Intake flange

### Direct connection of customer specific application

- possible on several sides
- with intake groove for adapter plate



### Travel path

#### Infinitely adjustable

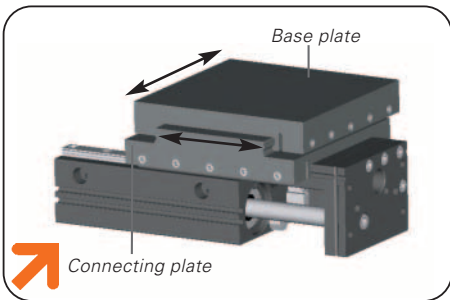
- up to 200 mm
- easy alignment via adjustment screw



### Position sensing

#### via magnetic field sensor

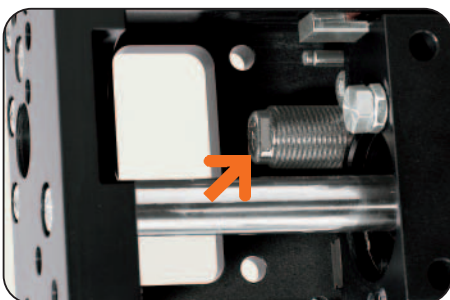
- process safe
- compact



### Adapter plate

#### Easiest connection and positioning of application

- low design effort
- available as accessory

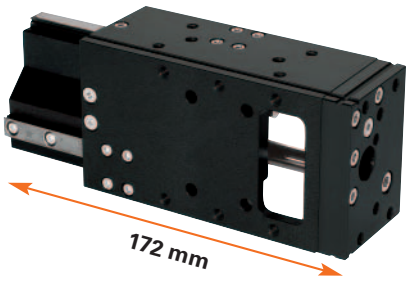


### End position absorbency

#### Hydraulic shock absorber with spiral groove technology

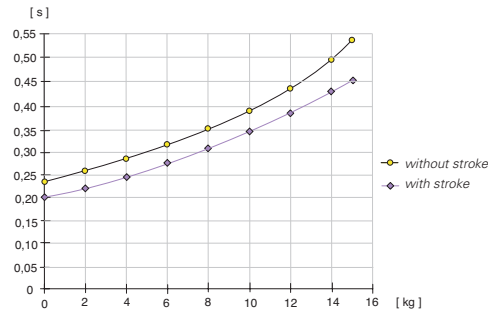
- low wear approach to end position, gentle energy absorption due to profiled spiral groove
- available as accessory

# Linear rail slide



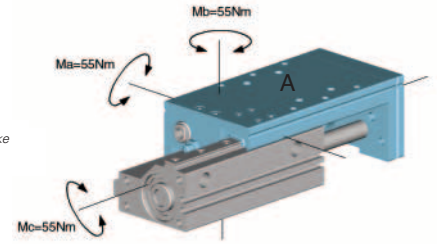
## Path-time diagram

Travel time against the extension load.



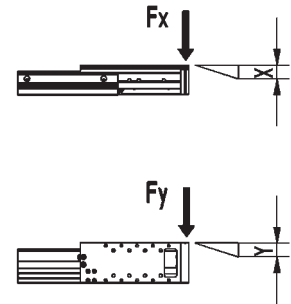
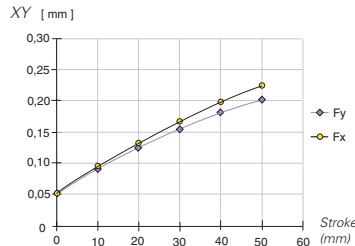
## Forces and Moments

Max allowable static forces and moments on face A.

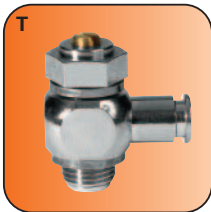


## Loads diagram

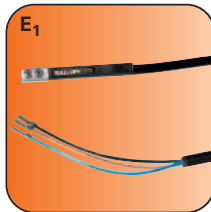
Divitation under load against the stroke.



## Accessory list



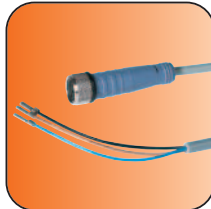
Pneumatic fittings  
Order no. DRV1/8x6



Magnetic field sensor  
Order no. MFS303KHC30



Magnetic field sensor  
Order no. MFS303SKHC30



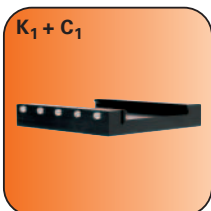
Cable straight plug  
Order no. KAG500



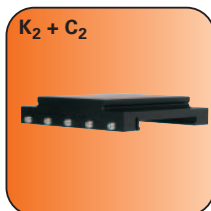
Plug 3-pole  
Order no. S12-G-3



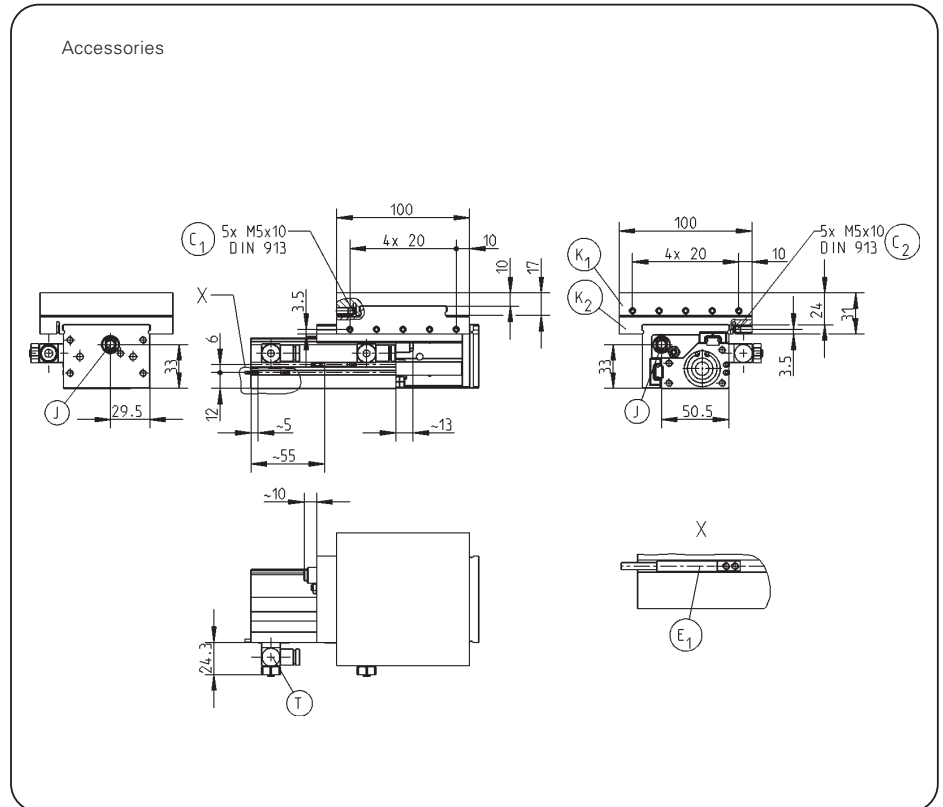
Industrie-shock absorbers  
Order no. M12x1S-06



Base plate  
Order no. APLSX25G



Connecting plate  
Order no. APLSX25V



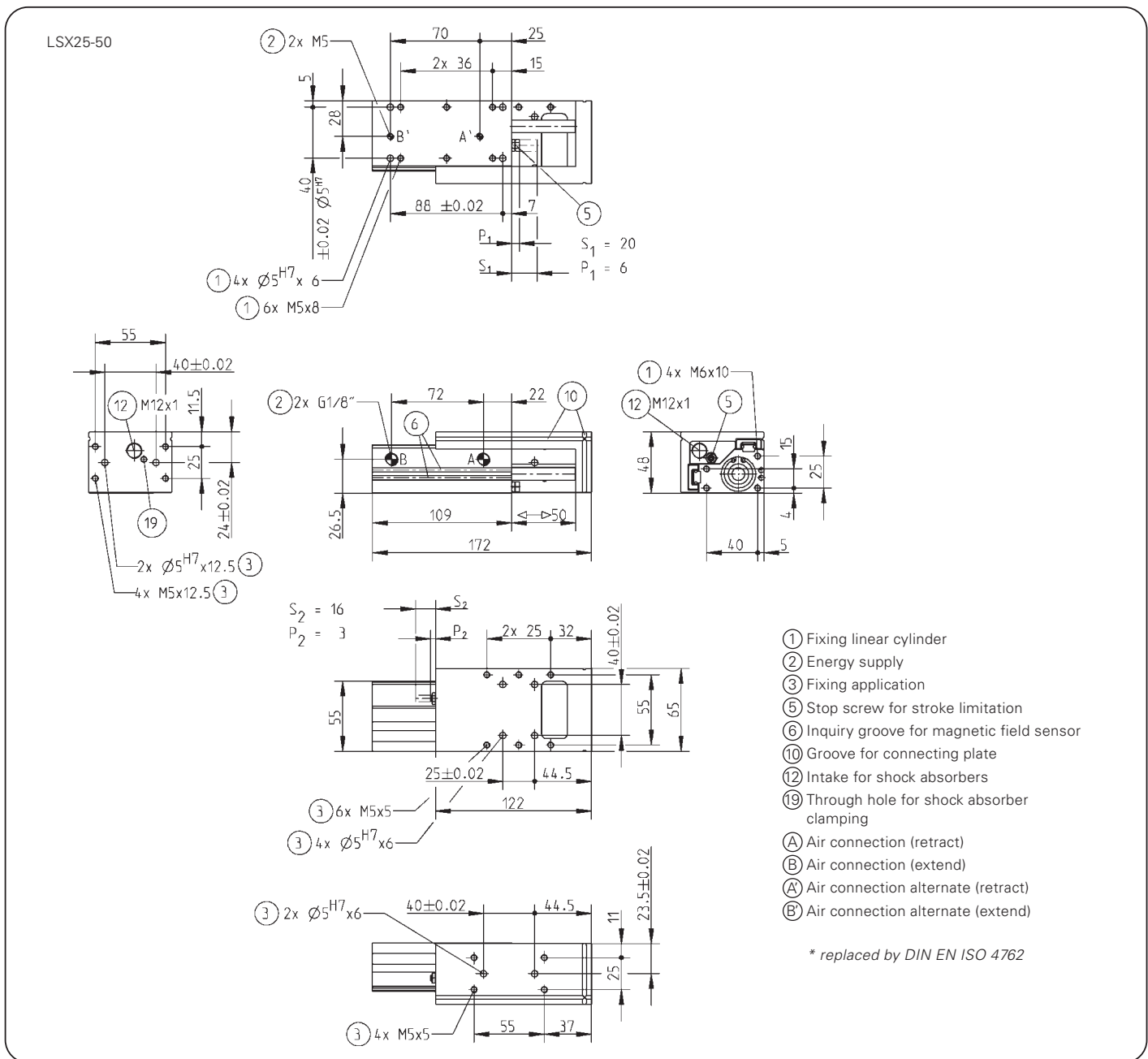
Magnetic field sensor incl. mounting block

Subject to change without prior notice



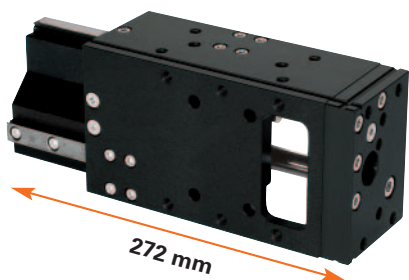
<b>Order no.:</b>	<b>LSX25-50</b>
Stroke [mm]:	50
Extension force max. [N]:	265
Retraction force max. [N]:	220
Piston diameter [mm]:	25
Recommended handling weight [kg]*:	15
Guide rail size [mm]:	2x9
Air volume per cycle [cm <sup>3</sup> ]:	45
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	1

All data measured at 6 bar  
\* on face A



Subject to change without prior notice

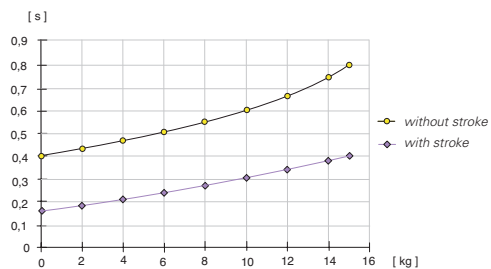
# Linear rail slide



Picture shows LSX25-50

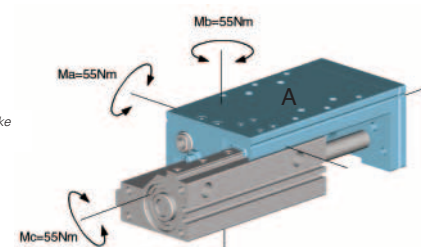
## Path-time diagram

Travel time against the extension load.



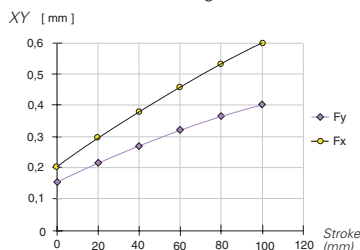
## Forces and Moments

Max allowable static forces and moments on face A.

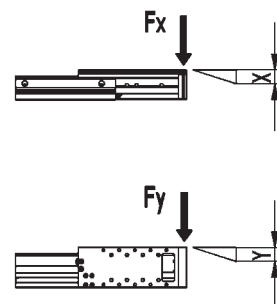


## Loads diagram

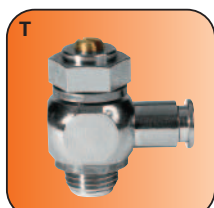
Divitation under load against the stroke.



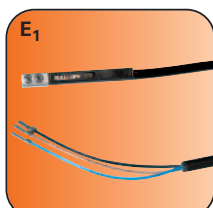
Test run with recommended handling weight.



## Accessory list



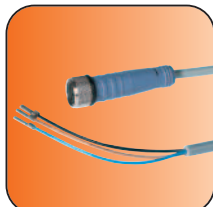
Raccordi filettati per aria compressa  
N°ord. DRV1/8x6



Magnetic field sensor  
Order no. MFS303KHC30



Magnetic field sensor  
Order no. MFS303SKHC30



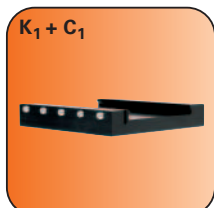
Cable straight plug  
Order no. KAG500



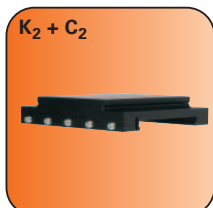
Plug 3-pole  
Order no. S12-G-3



Industrie-shock absorbers  
Order no. M12x1S-06

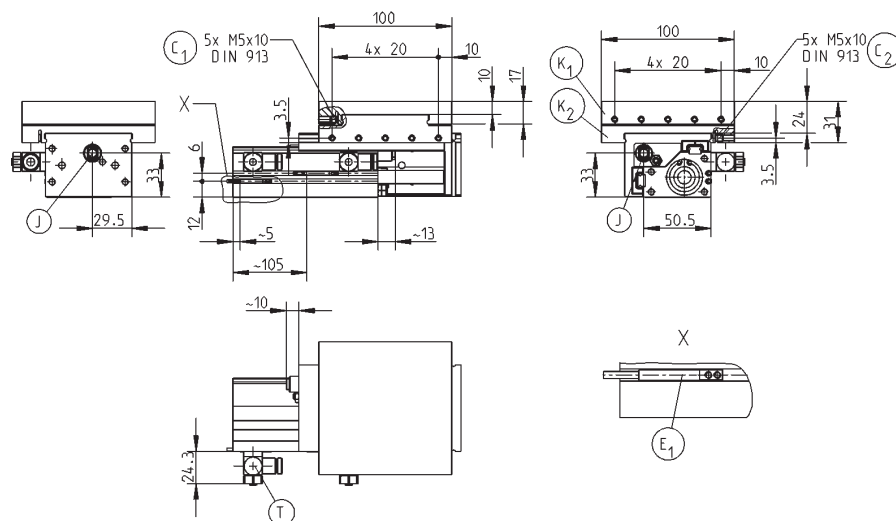


Base plate  
Order no. APLSX25G



Connecting plate  
Order no. APLSX25V

## Accessories

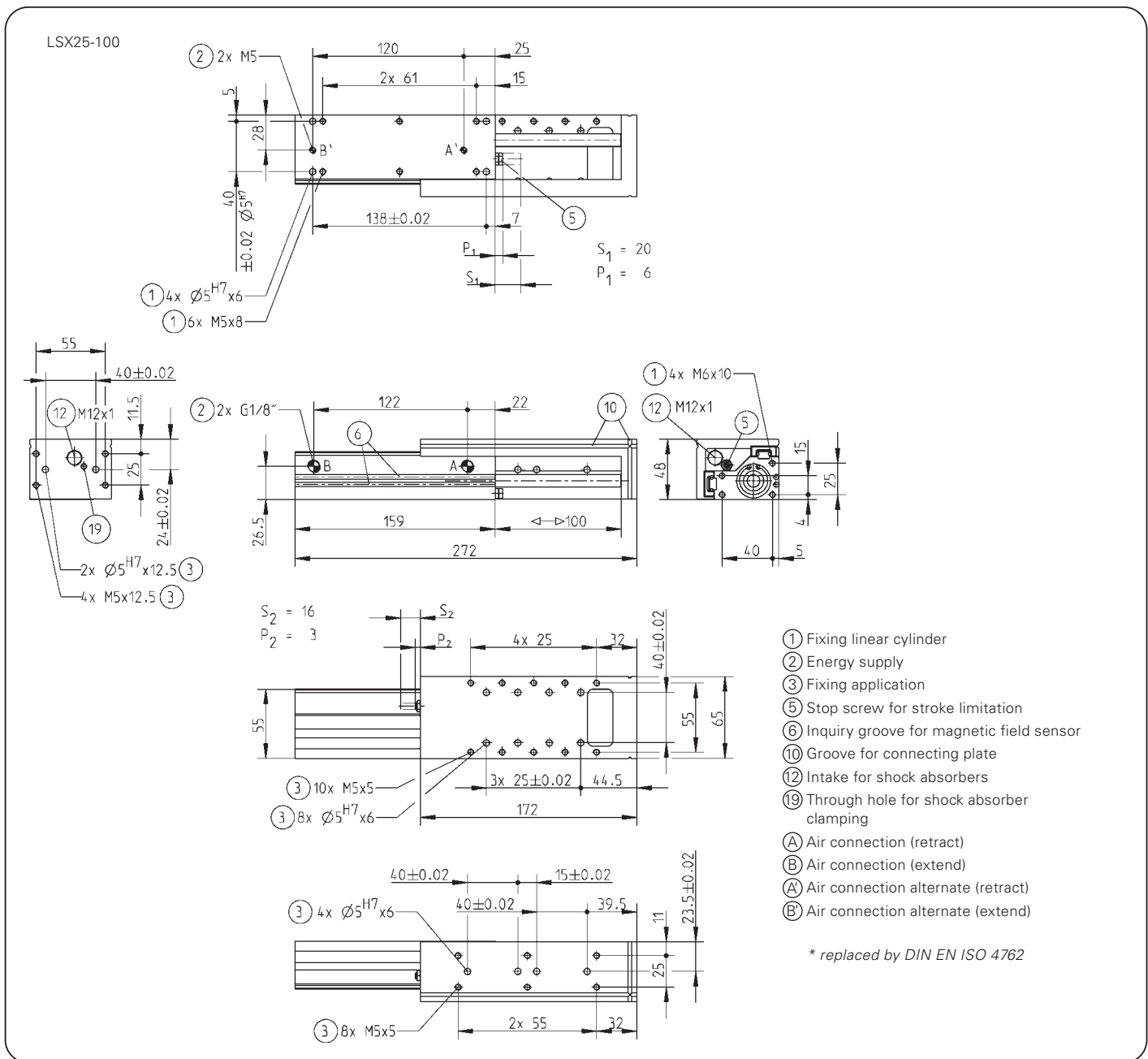


Magnetic field sensor incl. mounting block

Subject to change without prior notice

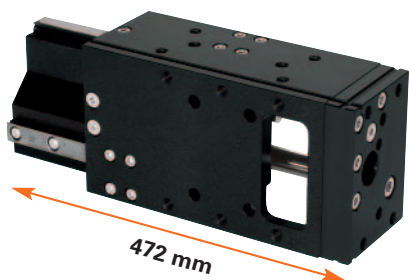
<b>Order no.:</b>	<b>LSX25-100</b>
Stroke [mm]:	100
Extension force max. [N]:	265
Retraction force max. [N]:	220
Piston diameter [mm]:	25
Recommended handling weight [kg]*:	15
Guide rail size [mm]:	2x9
Air volume per cycle [cm <sup>3</sup> ]:	90
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	1,3

All data measured at 6 bar  
\* on face A



Subject to change without prior notice

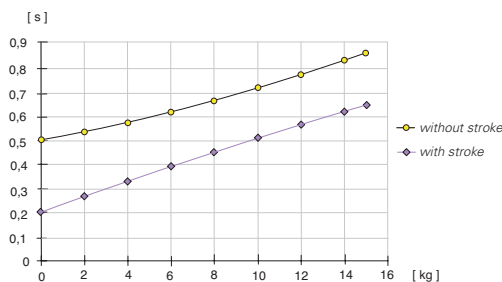
# Linear rail slide



Picture shows LSX25-50

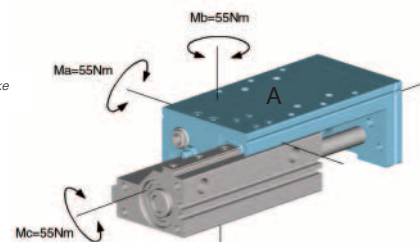
## Path-time diagram

Travel time against the extension load.



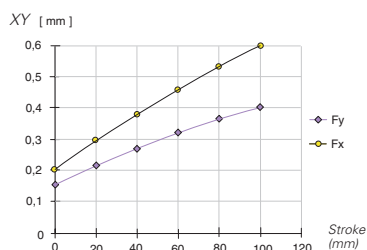
## Forces and Moments

Max allowable static forces and moments on face A.

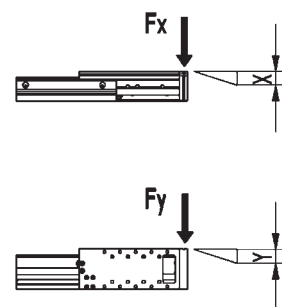


## Loads diagram

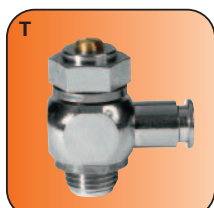
Divitation under load against the stroke.



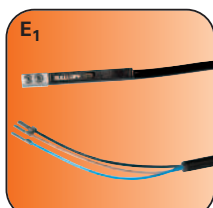
Test run with recommended handling weight.



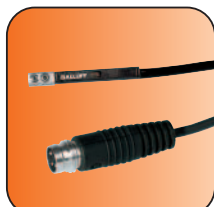
## Accessory list



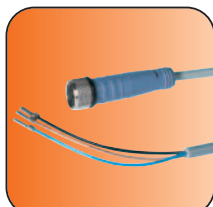
Raccordi filettati per aria compressa  
N°ord. DRV1/8x6



Magnetic field sensor  
Order no. MFS303KHC30



Magnetic field sensor  
Order no. MFS303SKHC30



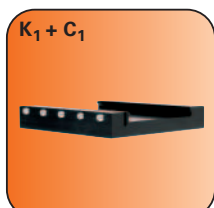
Cable straight plug  
Order no. KAG500



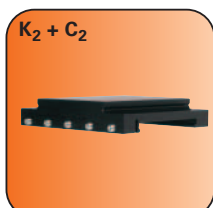
Plug 3-pole  
Order no. S12-G-3



Industrie-shock absorbers  
Order no. M12x1S-06

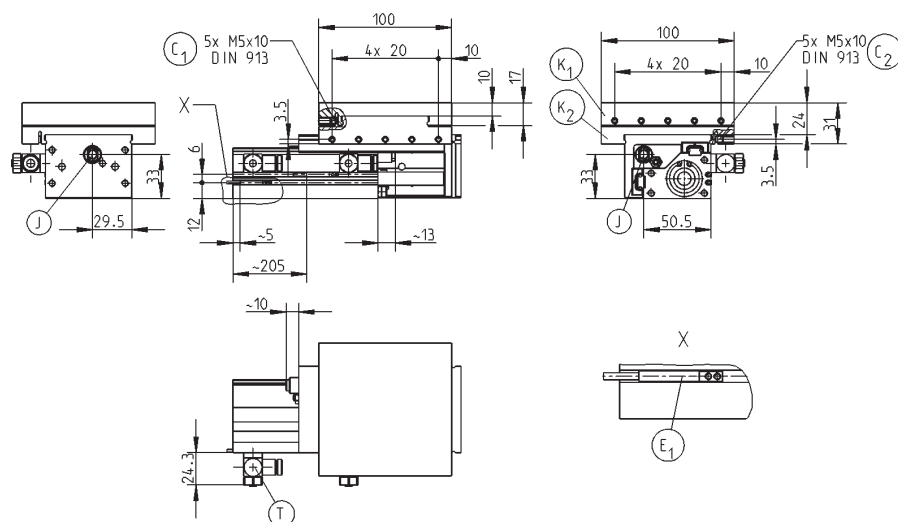


Base plate  
Order no. APLSX25G



Connecting plate  
Order no. APLSX25V

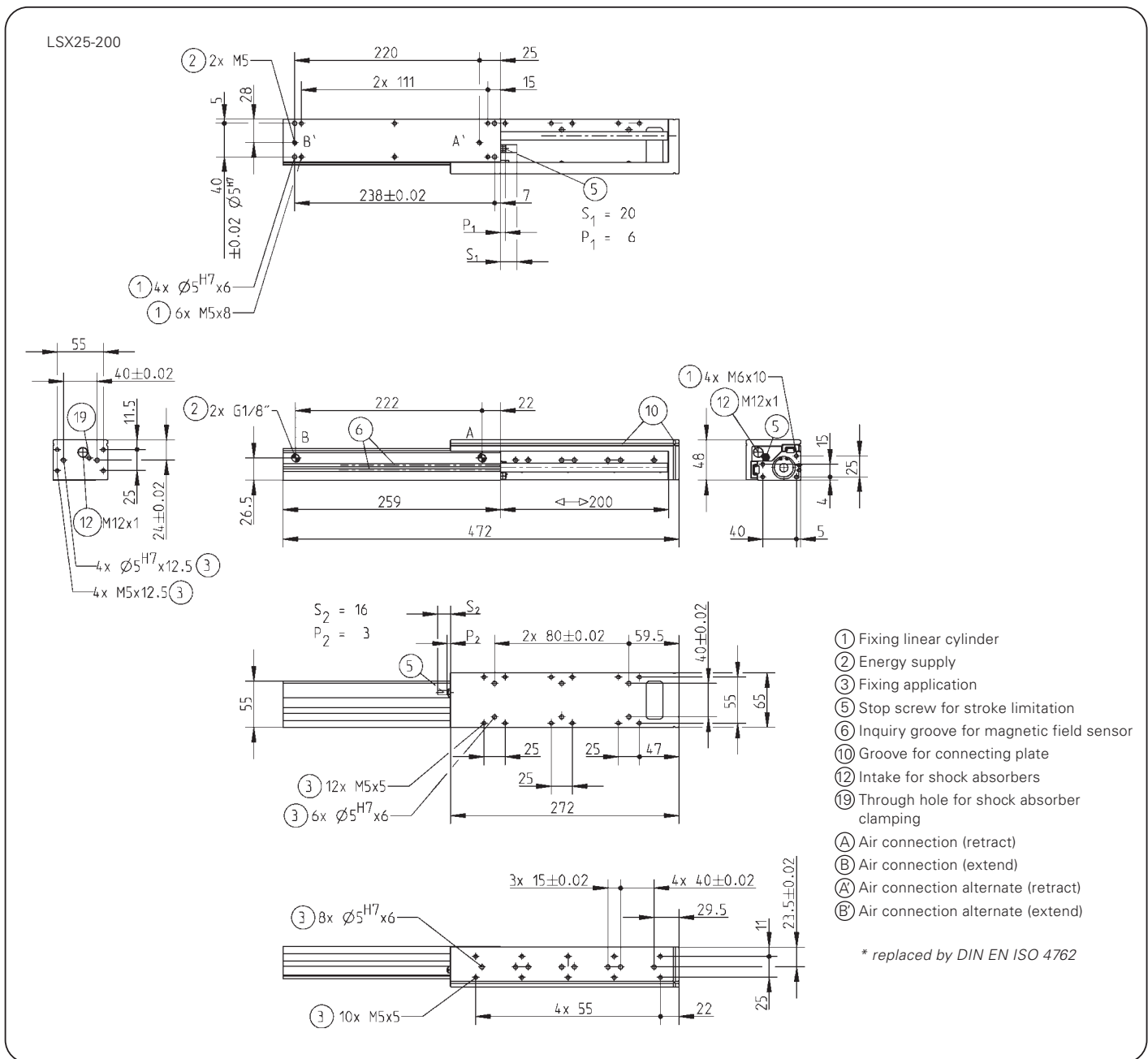
## Accessories



Subject to change without prior notice

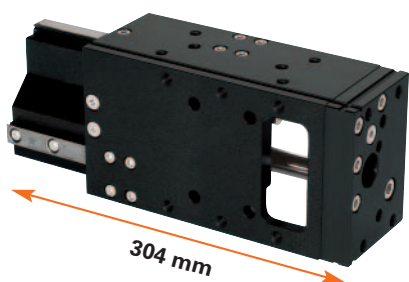
<b>Order no.:</b>	<b>LSX25-200</b>
Stroke [mm]:	200
Extension force max. [N]:	265
Retraction force max. [N]:	220
Piston diameter [mm]:	25
Recommended handling weight [kg]*:	15
Guide rail size [mm]:	2x9
Air volume per cycle [cm <sup>3</sup> ]:	180
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	1,9

All data measured at 6 bar  
\* on face A



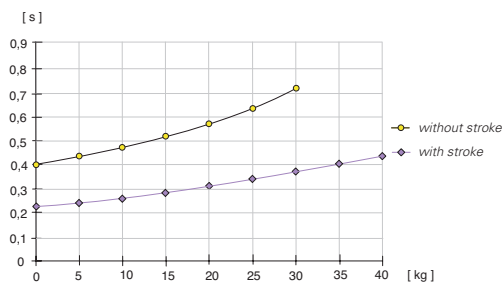
Subject to change without prior notice

# Linear rail slide



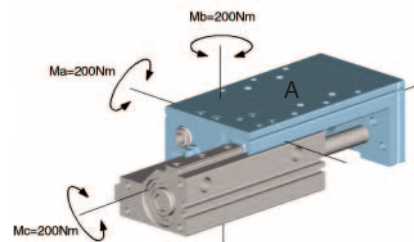
## Path-time diagram

Travel time against the extension load.



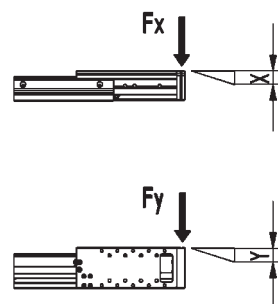
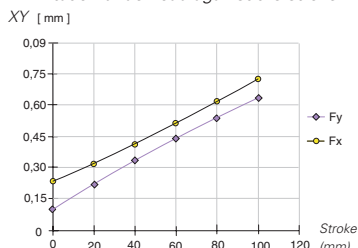
## Forces and Moments

Max allowable static forces and moments on face A.

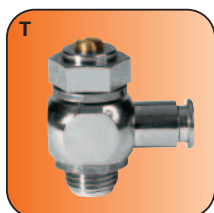


## Loads diagram

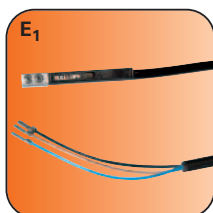
Divitation under load against the stroke.



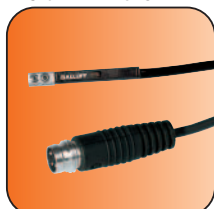
## Accessory list



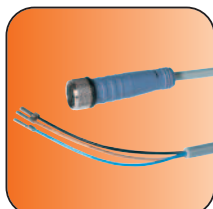
Raccordi filettati per aria compressa  
N°ord. DRV1/8x6



Magnetic field sensor  
Order no. MFS303KHC30



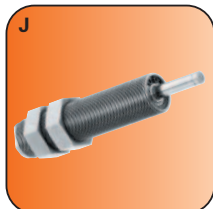
Magnetic field sensor  
Order no. MFS303SKHC30



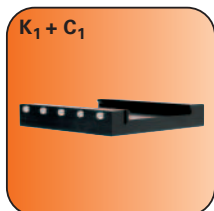
Cable straight plug  
Order no. KAG500



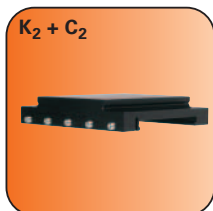
Plug 3-pole  
Order no. S12-G-3



Industrie-shock absorbers  
Order no. M20x1.5S-06

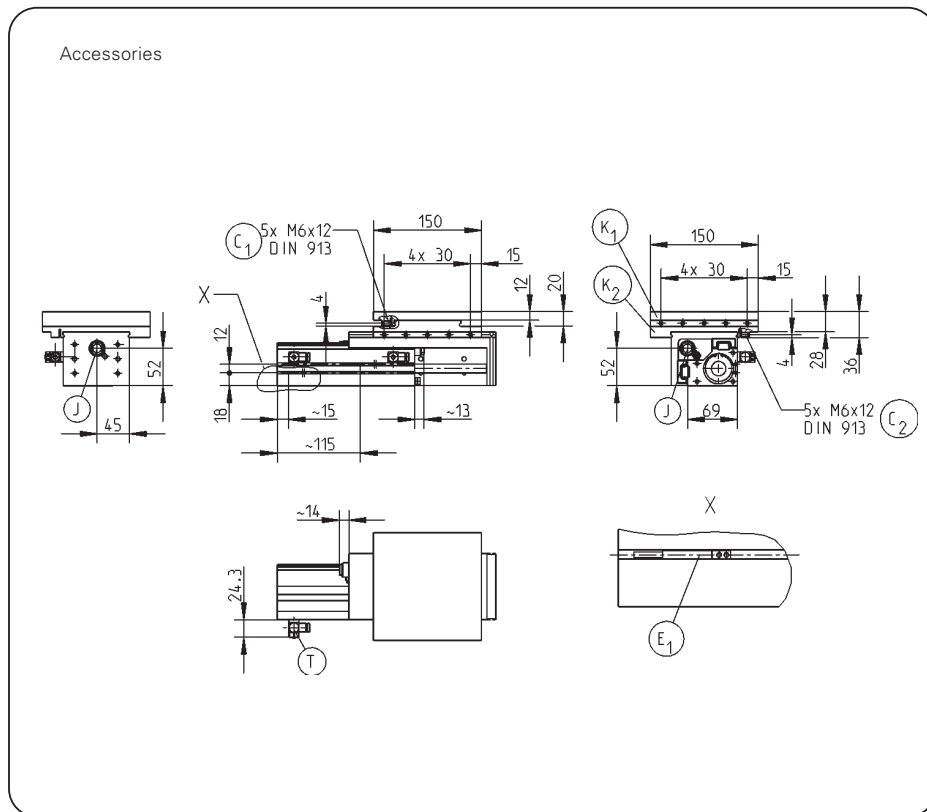


Base plate  
Order no. APLSX40G



Connecting plate  
Order no. APLSX40V

Test run with recommended handling weight.

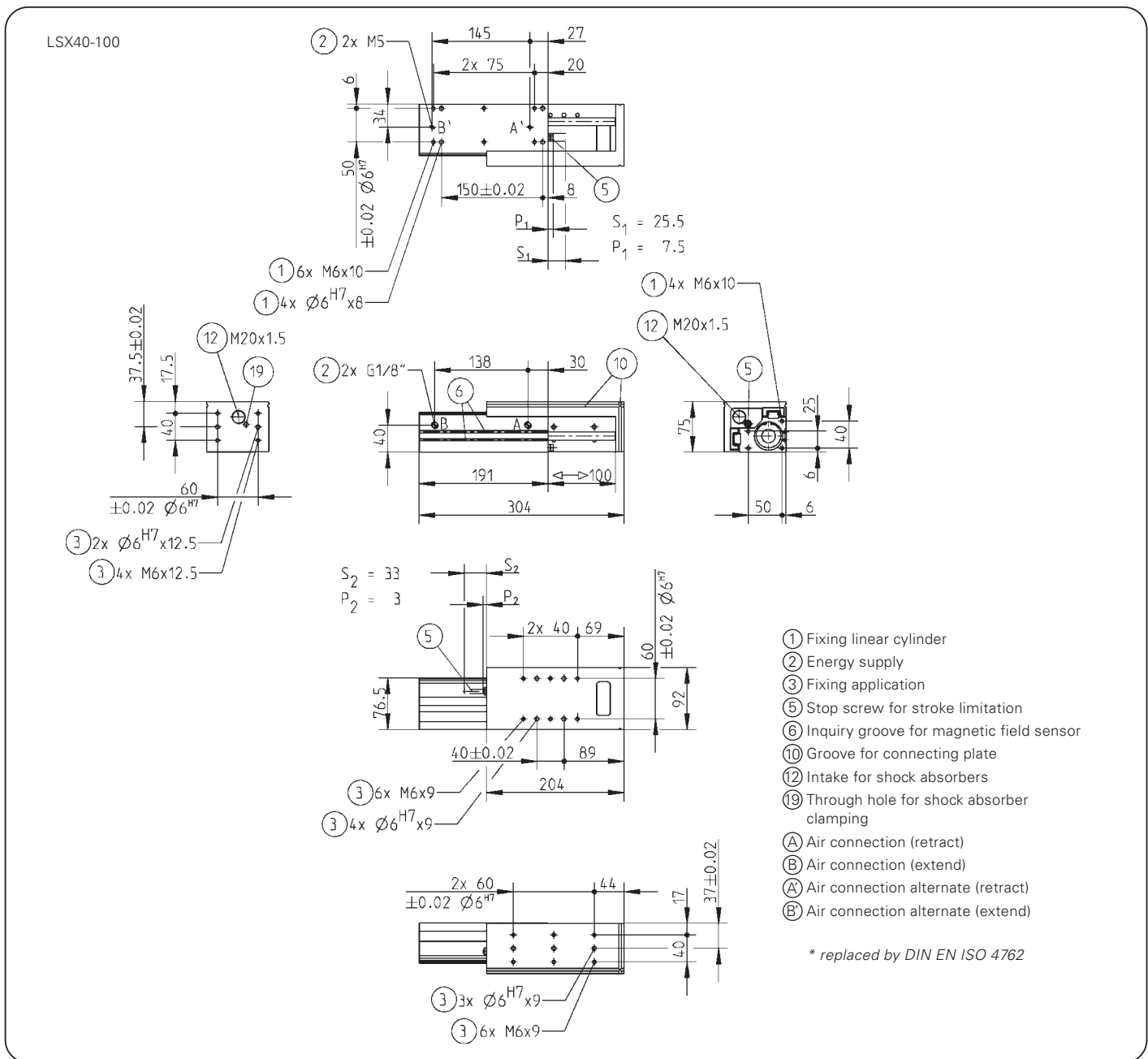


Magnetic field sensor incl. mounting block

Subject to change without prior notice

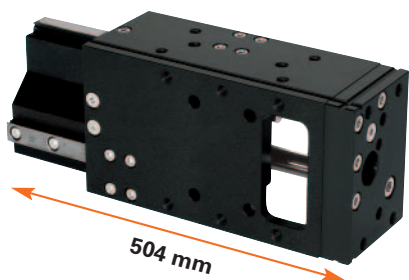
Order no.:	LSX40-100
Stroke [mm]:	100
Extension force max. [N]:	750
Retraction force max. [N]:	680
Piston diameter [mm]:	40
Recommended handling weight [kg]*:	40
Guide rail size [mm]:	2x15
Air volume per cycle [cm <sup>3</sup> ]:	235
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	3,2

All data measured at 6 bar  
\* on face A



Subject to change without prior notice

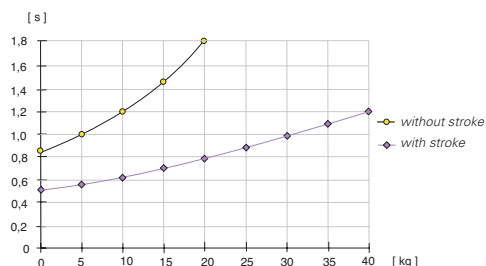
# Linear rail slide



Picture shows LSX40-100

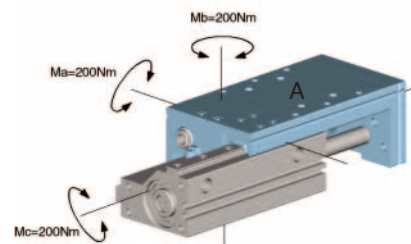
## Path-time diagram

Travel time against the extension load.



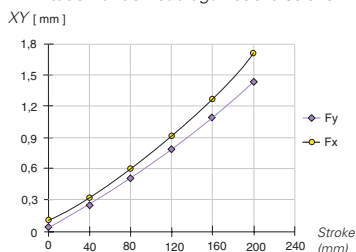
## Forces and Moments

Max allowable static forces and moments on face A.

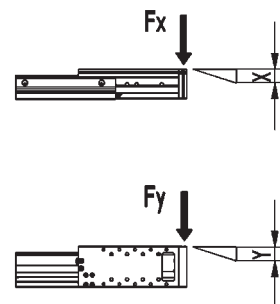


## Loads diagram

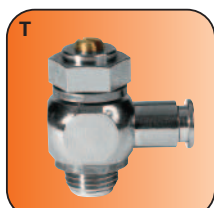
Divitiation under load against the stroke.



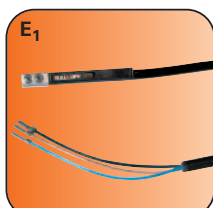
Test run with recommended handling weight.



## Accessory list



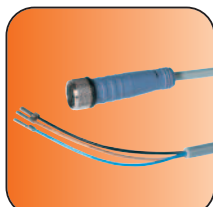
Raccordi filettati per aria compressa  
N°ord. DRV1/8x6



Magnetic field sensor  
Order no. MFS303KHC30



Magnetic field sensor  
Order no. MFS303SKHC30



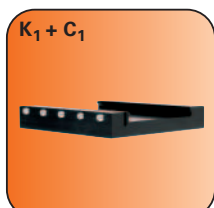
Cable straight plug  
Order no. KAG500



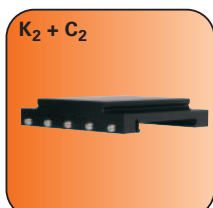
Plug 3-pole  
Order no. S12-G-3



Industrie-shock absorbers  
Order no. M20x1.5S-06

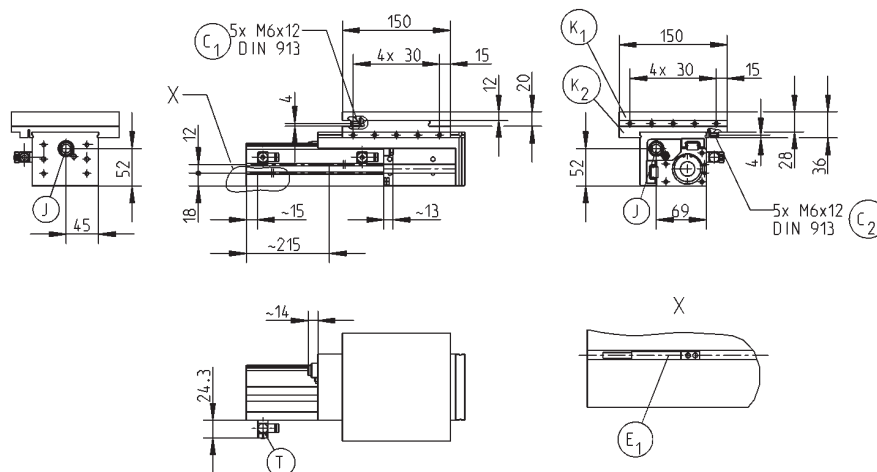


Base plate  
Order no. APLSX40G



Connecting plate  
Order no. APLSX40V

## Accessories



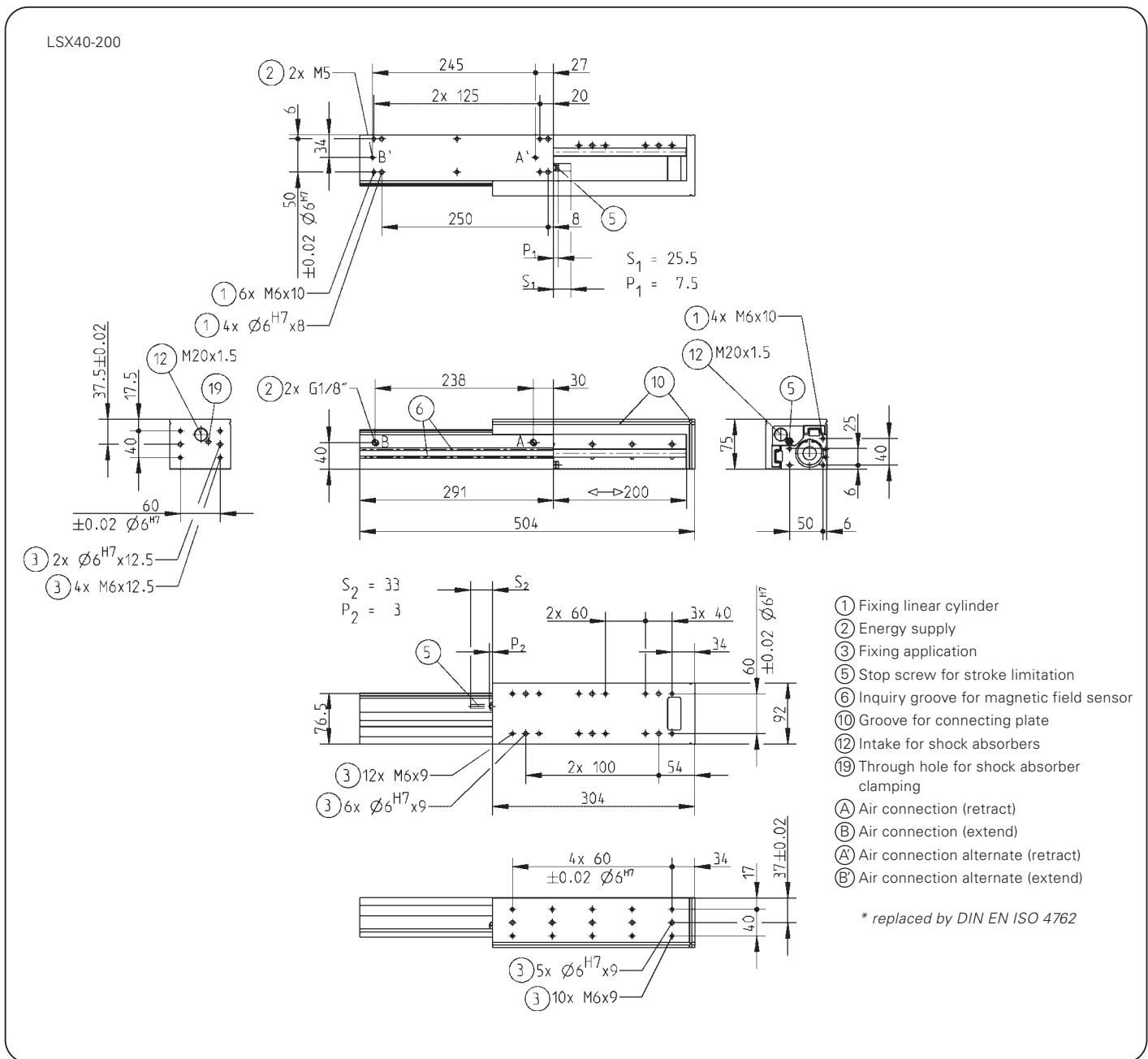
Magnetic field sensor incl. mounting block

Subject to change without prior notice



Order no.:	LSX40-200
Stroke [mm]:	200
Extension force max. [N]:	750
Retraction force max. [N]:	680
Piston diameter [mm]:	40
Recommended handling weight [kg]*:	40
Guide rail size [mm]:	2x15
Air volume per cycle [cm <sup>3</sup> ]:	470
Min./max. operating temperature [°C]:	5/80
Weight [kg]:	4,4

All data measured at 6 bar  
\* on face A



Subject to change without prior notice



➤ <b>Grippers</b> <i>pneumatic</i>	01
➤ <b>Grippers</b> <i>electrical</i>	02
➤ <b>Grippers</b> <i>hydraulic</i>	03
➤ <b>Grippers</b> <i>Special</i>	04
➤ <b>Grip &amp; Rotate Modules</b> <i>pneumatic</i>	05
➤ <b>Separators</b>	06
➤ <b>Swivel Units</b> <i>pneumatic</i>	07
➤ <b>Swivel Units</b> <i>electrical</i>	08
➤ <b>Swivel Units</b> <i>hydraulic</i>	09
➤ <b>Rotation Jaws</b> <i>pneumatic</i>	10
➤ <b>Axial Compensation Modules</b>	11
➤ <b>Tool Changers</b>	12
➤ <b>Robotics Accessories</b>	13
➤ <b>Linear Cylinders</b>	14
➤ <b>Shock Absorber</b>	15
➤ <b>Air Vane Motors</b>	16
➤ <b>Rotary Cylinders</b>	17
➤ <b>Vacuum Components</b>	18