

GUIDE UNITS SERIES GDHK AND GDMK



Guide units GDHK and GDMK guarantee excellent alignment and anti-rotation of the pneumatic cylinder connected to them. They can be used either singly or in combination to obtain complete handling units. The typical dovetail profile with V-Lock slots allows assembly with other elements in the V-Lock series.

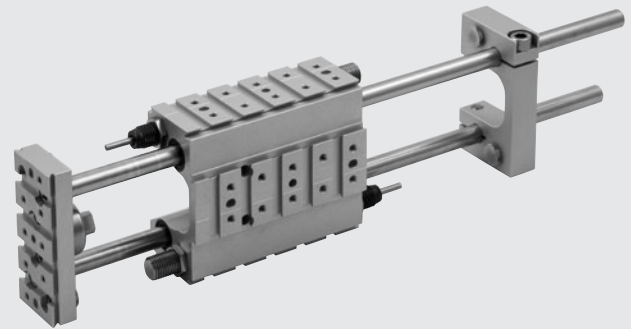
Guide units can be coupled with:

- ISO 6432 cylinders Ø 12, 16, 20 and Ø 25. **You can not use sensor bracket mod. DSW;**
- ISO 15552 series 3 cylinders Ø 32 and 40;
- ISO 15552 STD and type A cylinders Ø 32 and 40. **You can not apply position sensors.**
- Electric cylinder series Elektro ISO 15552 Ø32. It is a version with shorter columns; the cylinder must be an anti-rotation type because the guide coupling is rotary and cannot prevent piston rod rotation.

Series GDHK has bronze bushes and is more suitable for high loads. Series GDMK has recirculating ball bushes and is more suitable for high speeds.

Guide units are available with 5 types of stop mechanism:

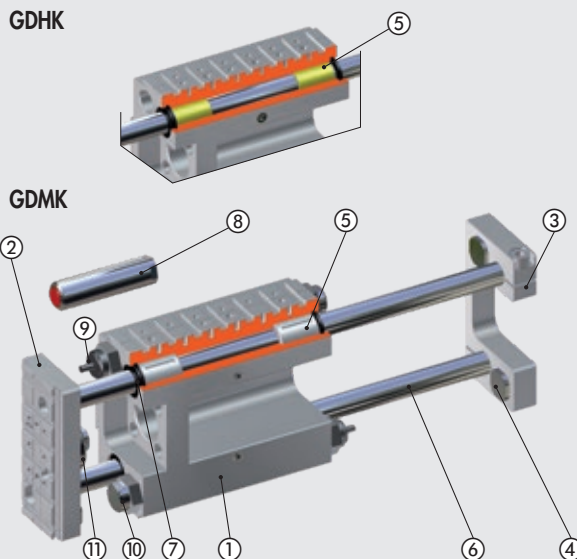
- without stops (stop is provided by the cylinder);
- with buffers for piston rod retraction;
- with a hydraulic shock absorber for piston rod retraction;
- with buffers for piston rod extension and retraction;
- with hydraulic shock absorbers for piston rod extension and retraction.



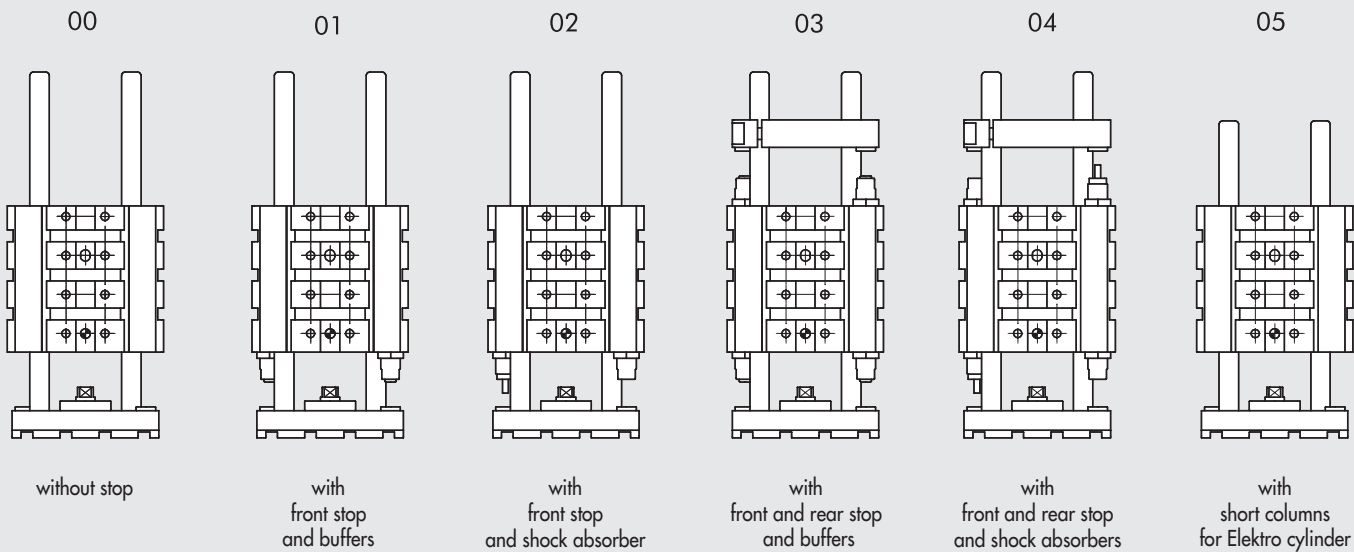
TECHNICAL DATA		Ø 12	Ø 16	Ø 20	Ø 25	Ø 32	Ø 40
Strokes	mm	From 1 to 600					
		The total stroke can be shortened using adjusting stops and/or the rear plate					
Stroke reduction via stop adjustment	mm	-14 per side		-22 per side		-40 per side	-35 per side
Temperature range	°C	-10 to +80					
Recommended maximum speed	m/s	1					
Rear plate torques	Nm	7 ±1		22 ±2			35 ±2
Guide column diameter	mm	10		12		16	20
Maximum impact energy							
with shock absorbers	Ec [J]	5		20		25	70
with buffers	Ec [J]	0.5		1		2	2
without stops		refer to the diagram on page A3.82					
Repeatability (at 6 bar)							
Versions with buffers	mm	±0.02 (with minimum pressure 5 bar)					
Versions with shock absorbers	mm	±0.02					
Lubrication		The guides are supplied lubricated. There are two greasers on the guide bodies (one per column) for periodic lubrication using a pump with a nozzle. The following greases are recommended: - version GDHK: code 9910502 (RHEOLUBE 362 HB) - version GDMK: code 9910506 (RHEOLUBE 363AX1) The lubrication interval depends on numerous factors such as load, temperature, speed, stroke, lubricant, environmental conditions and assembly position. As a general rule, lubrication is recommended every 500.000 – 1.000.000 cycles.					

COMPONENTS

- ① BODY: anodized aluminium
- ② FRONT PLATE: anodized aluminium
- ③ REAR PLATE: anodized aluminium
- ④ STOP: tempered steel
- ⑤ COLUMN GUIDES:
 - sintered bronze (for GDH version)
 - recirculation ball bushes (for GDM version)
- ⑥ GUIDE COLUMNS:
 - C45 grinded chromed steel (for GDH version)
 - tempered steel (for GDM version)
- ⑦ DUST SCRAPER RING: polyurethane or NBR
- ⑧ BUFFER
- ⑨ DECELERATOR
- ⑩ ADJUSTABLE STOP: tempered steel (for versions with shock absorbers)
- ⑪ COUPLING: C45 steel



EXECUTIONS



WEIGHTS AND MOVING MASSES

TOTAL WEIGHTS

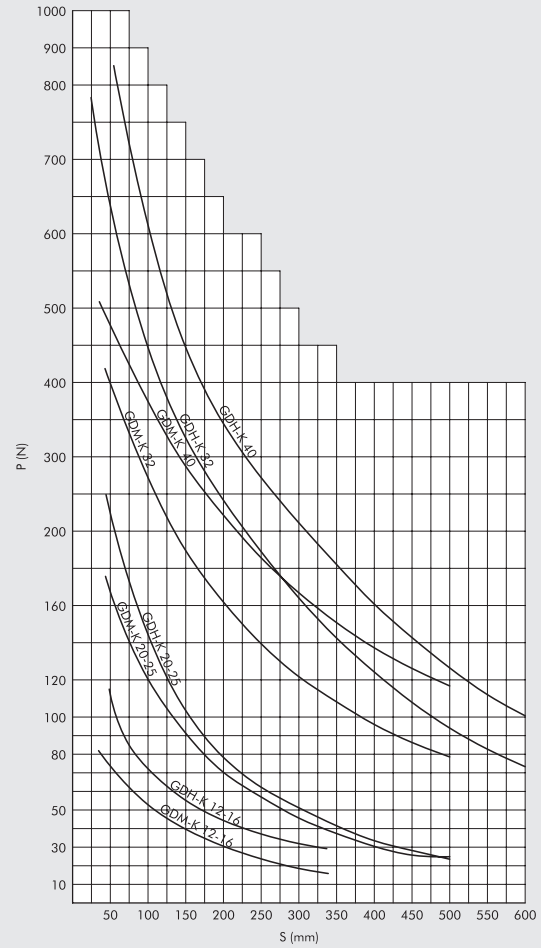
Ø mm	Weight [g] for Stroke = 0 mm						Weight [g] every mm
	Execution						
	00	01	02	03	04	05	
12-16	779	817	823	953	965	-	1.2
20-25	1412	1520	1534	1809	1837	-	1.8
32	2262	2582	2558	3161	3113	2137	3.1
40	4316	4836	4873	5864	5938	-	4.9

TOTAL MOVING MASSES

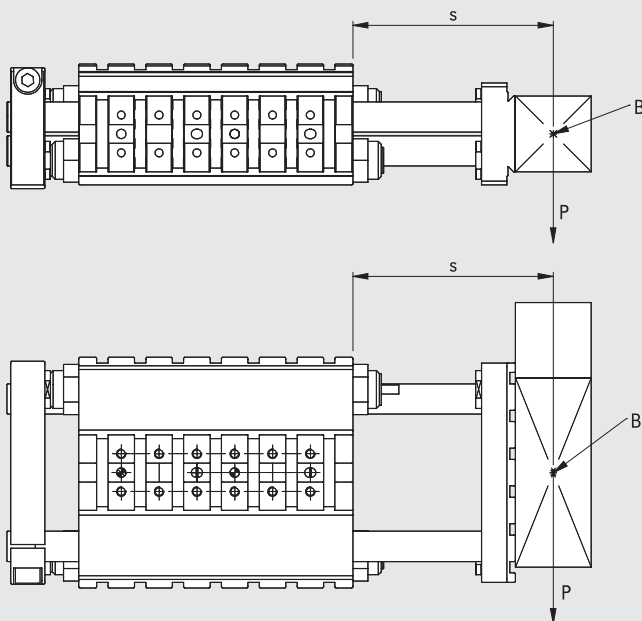
Ø mm	Weight [g] for Stroke = 0 mm						Weight [g] every mm
	Execution						
	00	01	02	03	04	05	
12-16	293	293	293	391	391	-	1.2
20-25	518	518	518	699	699	-	1.8
32	667	667	667	926	926	542	3.1
40	1670	1670	1670	2178	2178	-	4.9

LOAD DIAGRAM

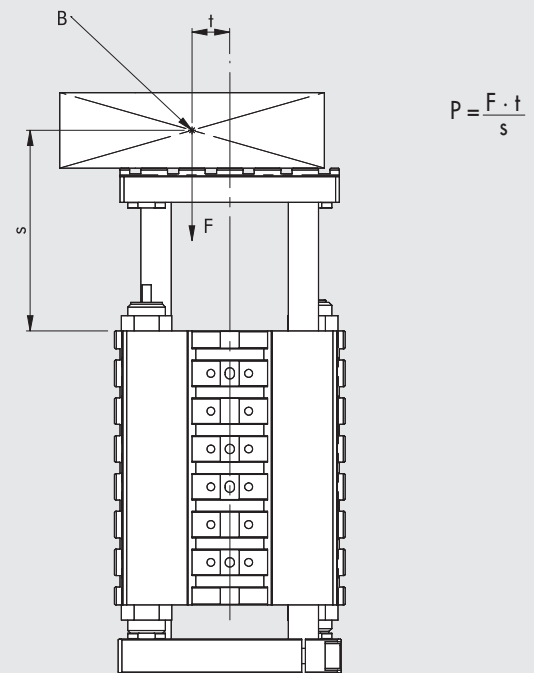
The graph on the right shows the maximum static load that can be applied to the guides as a function of the distance between the body of the guide and the barycenter of the load (with the piston rod extended).



HORIZONTAL APPLICATIONS



VERTICAL APPLICATIONS

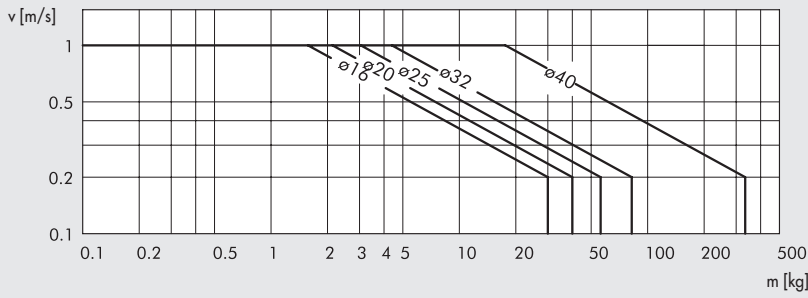


B = Barycentre; S = Projection; P = Useful load

MAXIMUM LOADS AND SPEEDS

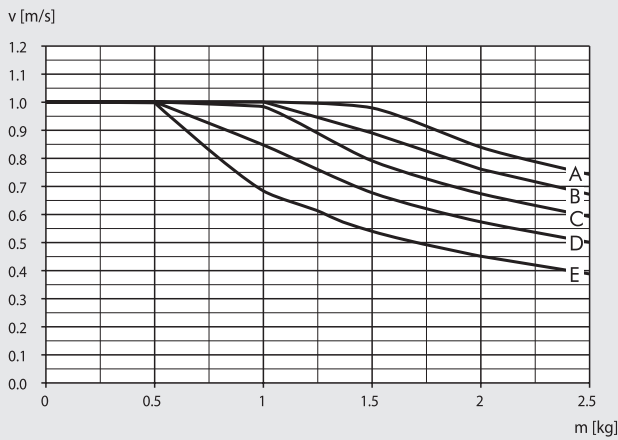
The graphs below show the maximum recommended movable loads "m" (masses) [kg] as a function of the average traverse speed "v" [m/s], defined as stroke/time, slide position (horizontal/vertical) and supply pressure.

MAXIMUM LOADS: VERSIONS WITHOUT STOPS

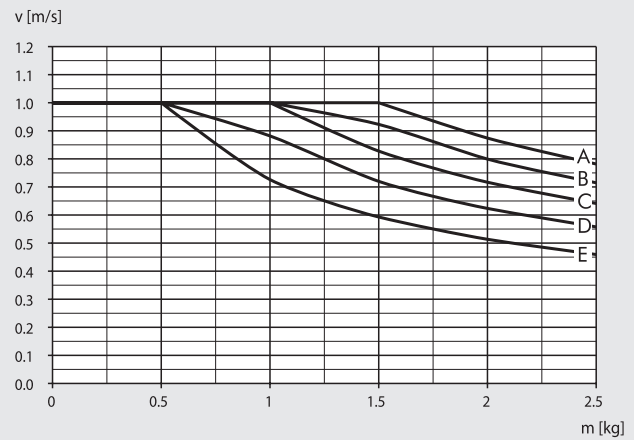


MAXIMUM LOADS: VERSIONS WITH SHOCK ABSORBERS

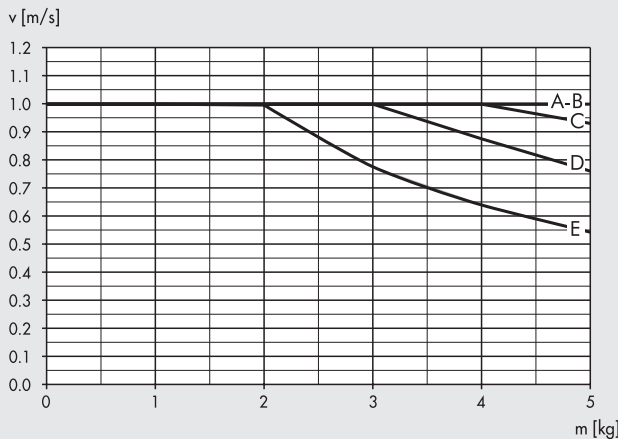
Ø 12-16 - Vertical orientation



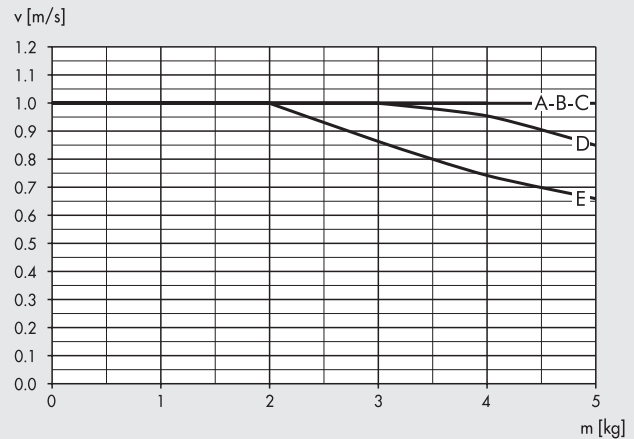
Ø 12-16 - Horizontal orientation



Ø 20-25 - Vertical orientation

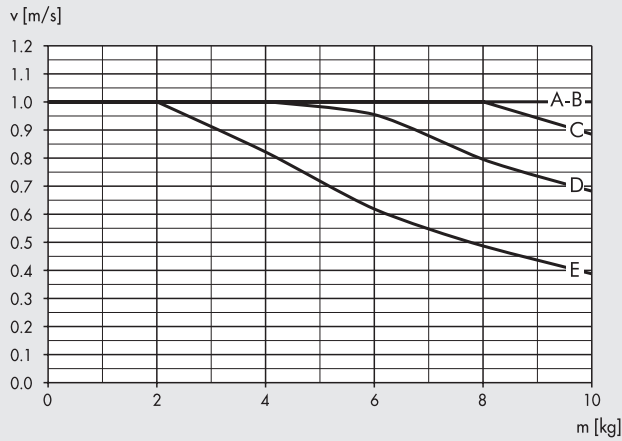


Ø 20-25 - Horizontal orientation

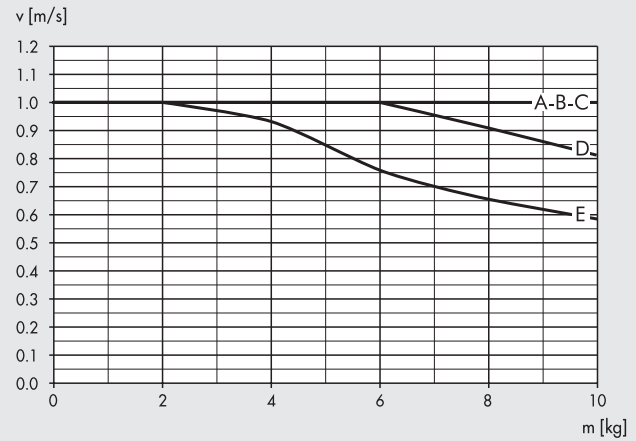


A = 2 bar B = 4 bar C = 6 bar D = 8 bar E = 10 bar

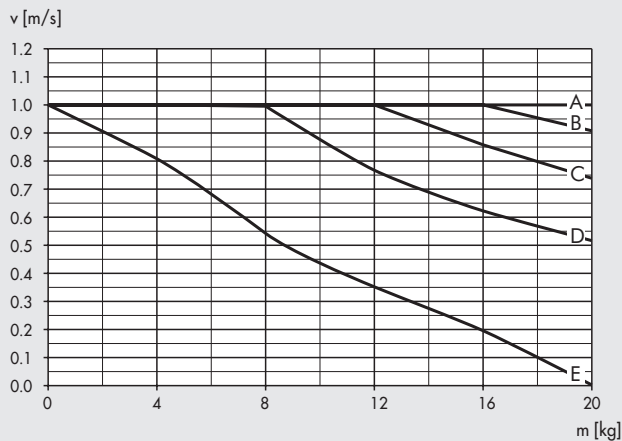
Ø 32 - Vertical orientation



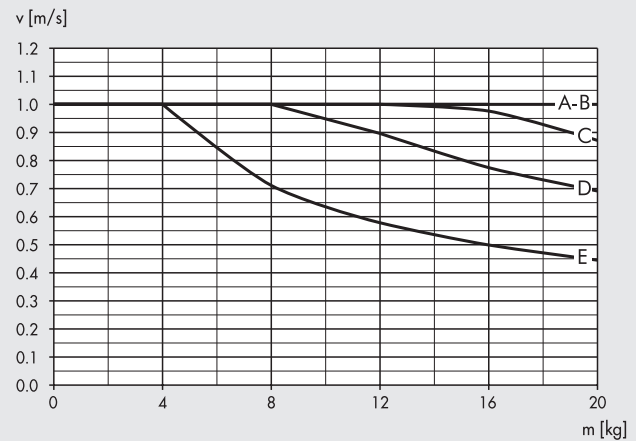
Ø 32 - Horizontal orientation



Ø 40 - Vertical orientation



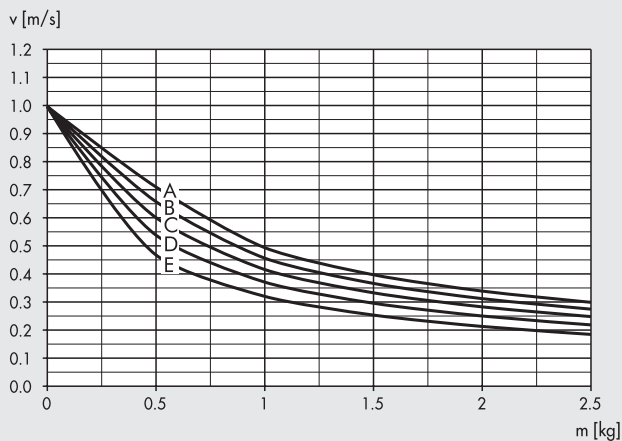
Ø 40 - Horizontal orientation



A = 2 bar B = 4 bar C = 6 bar D = 8 bar E = 10 bar

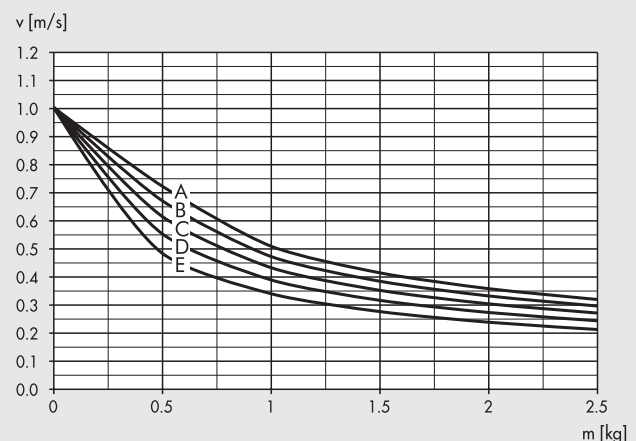
MAXIMUM LOADS: VERSIONS WITH BUFFERS

Ø 12-16 - Vertical orientation

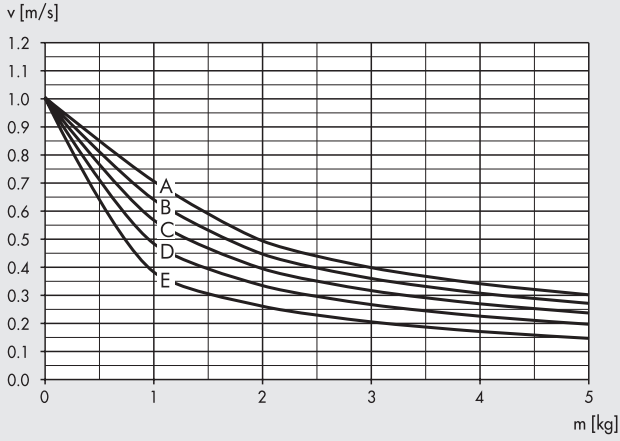


A = 2 bar B = 4 bar C = 6 bar D = 8 bar E = 10 bar

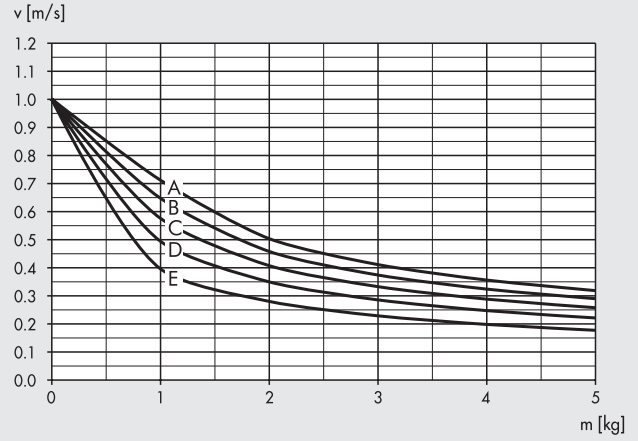
Ø 12-16 - Horizontal orientation



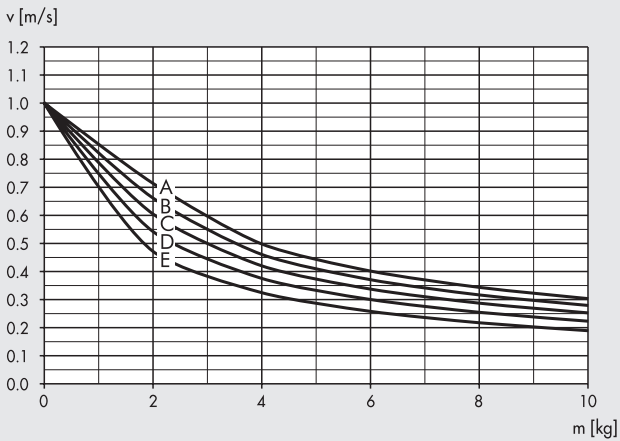
Ø 20-25 - Vertical orientation



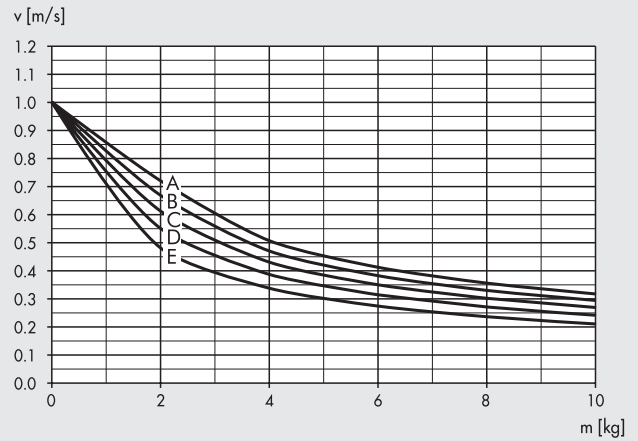
Ø 20-25 - Horizontal orientation



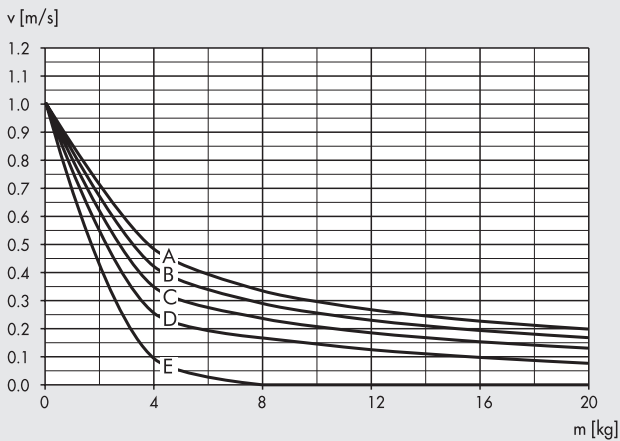
Ø 32 - Vertical orientation



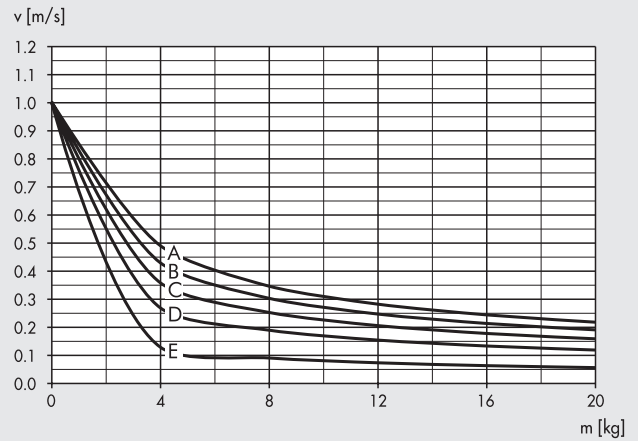
Ø 32 - Horizontal orientation



Ø 40 - Vertical orientation



Ø 40 - Horizontal orientation

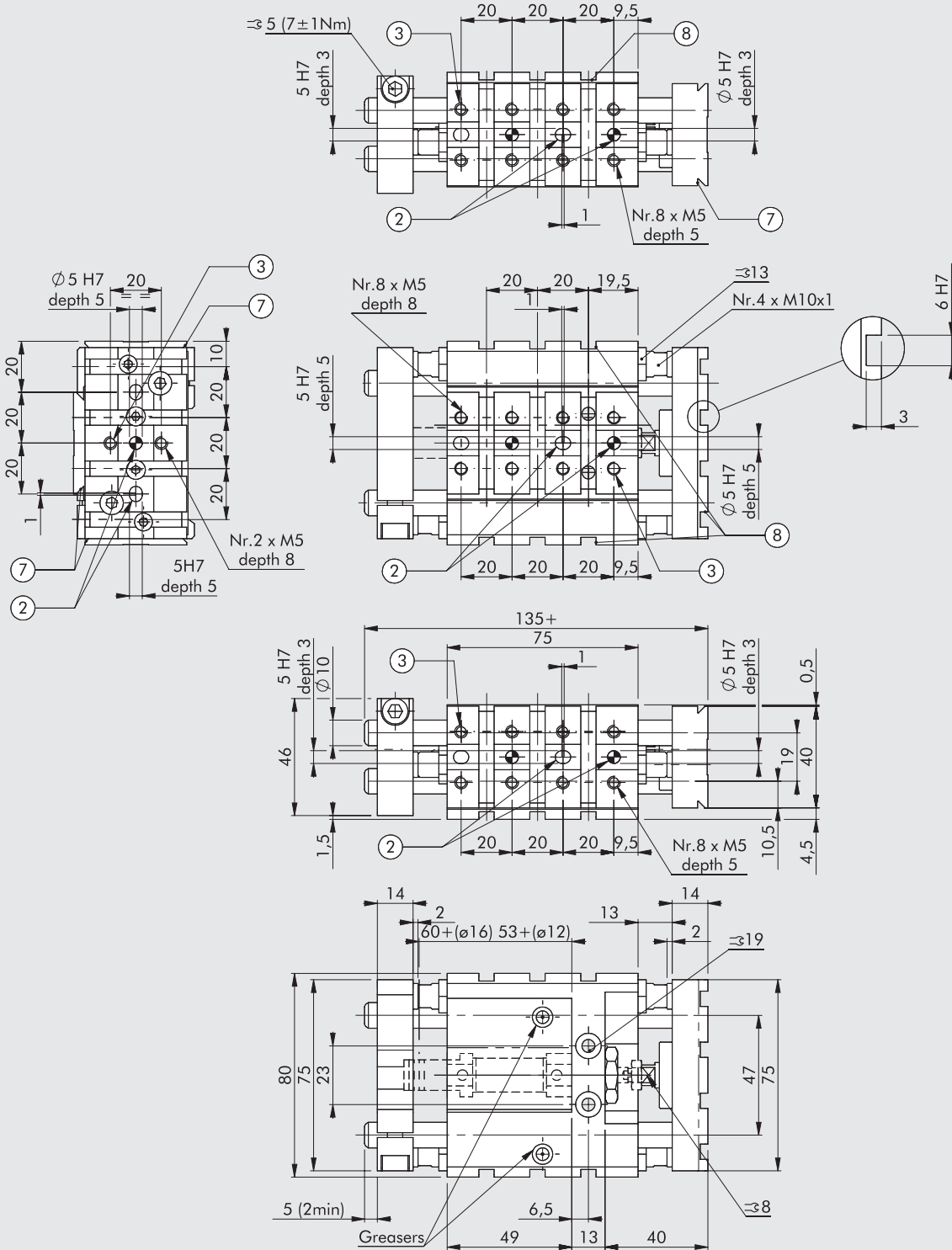


A = 2 bar B = 4 bar C = 6 bar D = 8 bar E = 10 bar

DIMENSIONS Ø 12-16

Versions 03-04

+ = ADD THE STROKE

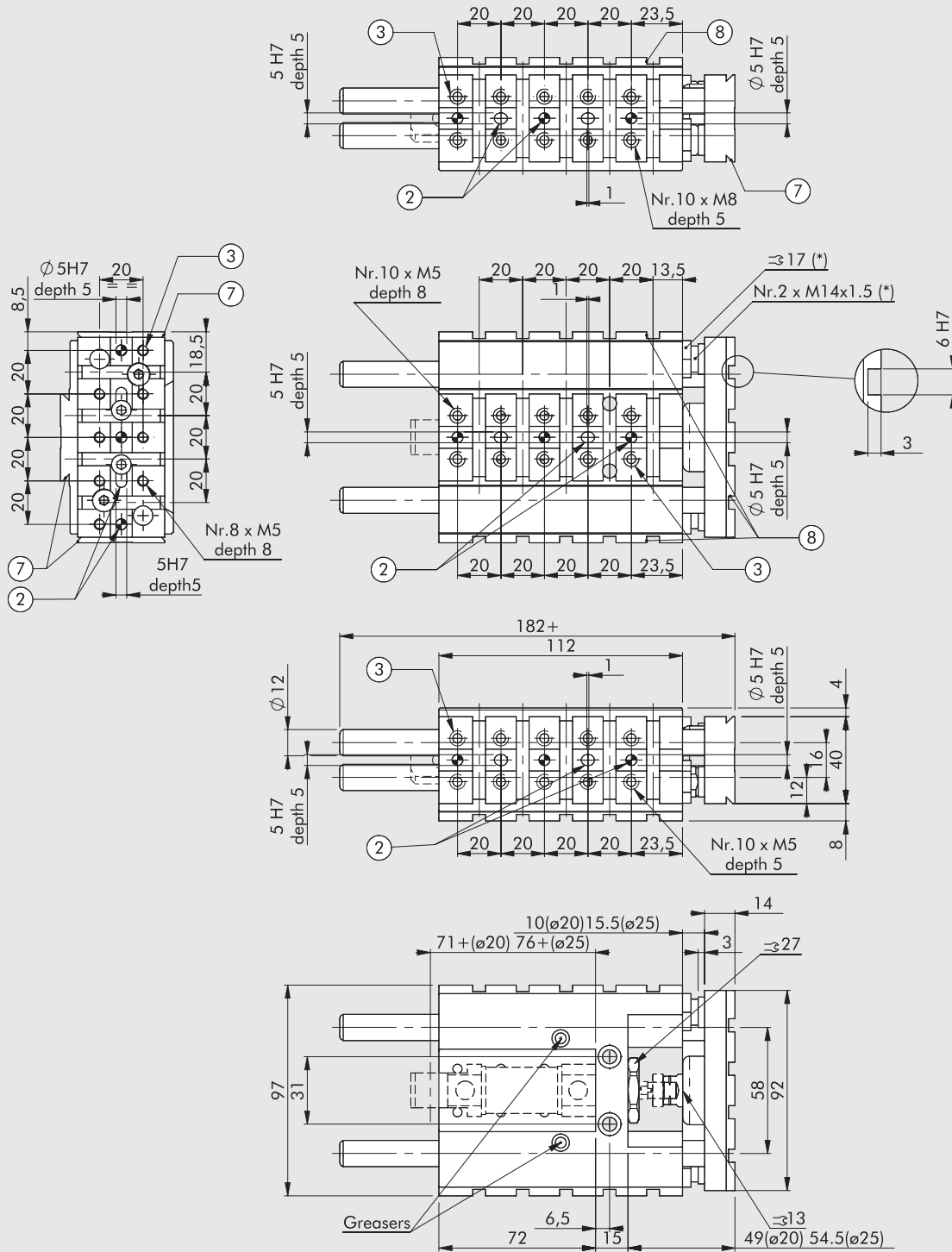


- ② Holes for centring pins
- ③ Threaded holes for fixing
- ⑦ Dovetail for "V-Lock" fixing.
For standard dimensions, see **chapter V-Lock adaptors**
- ⑧ Slot for "V-Lock" precision key

DIMENSIONS Ø 20-25

Versions 00-01-02

+ = ADD THE STROKE

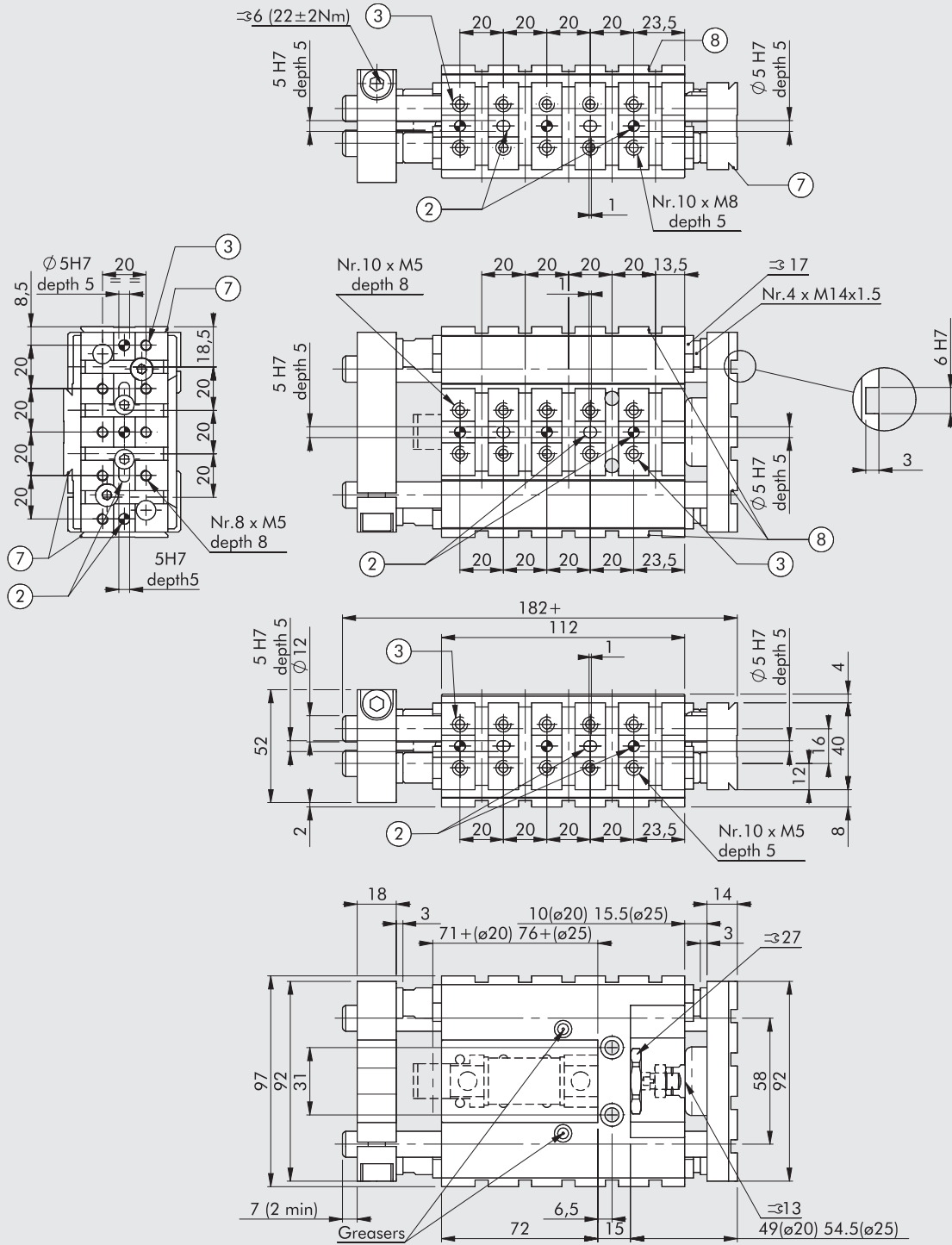


* Not present in version 00
 ② Holes for centring pins
 ③ Threaded holes for fixing
 ⑦ Dovetail for "V-Lock" fixing.
 For standard dimensions, see **chapter V-Lock adaptors**
 ⑧ Slot for "V-Lock" precision key

DIMENSIONS Ø 20-25

Versions 03-04

+ = ADD THE STROKE

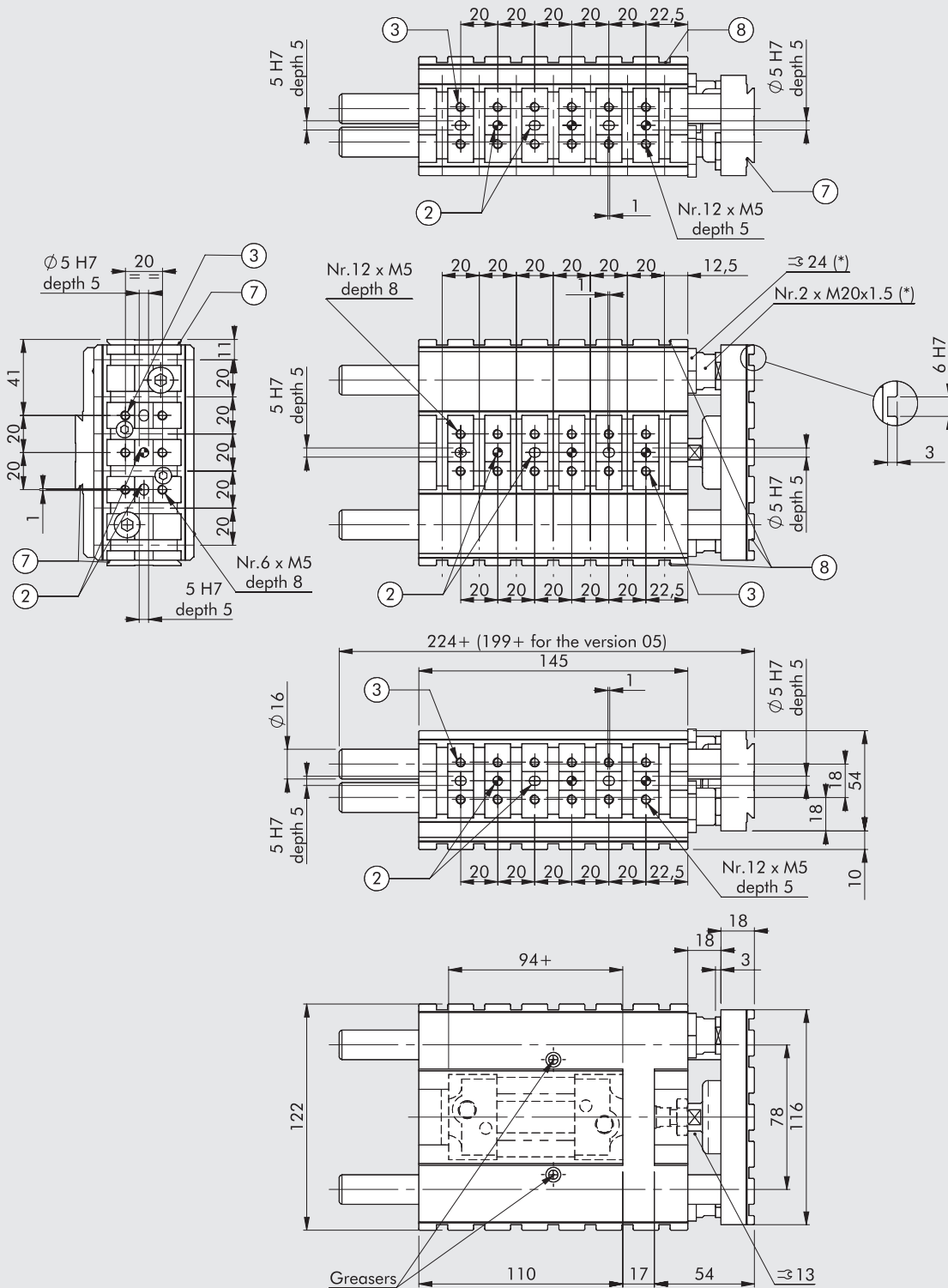


- ② Holes for centring pins
- ③ Threaded holes for fixing
- ⑦ Dovetail for "V-Lock" fixing.
For standard dimensions, see **chapter V-Lock adaptors**
- ⑧ Slot for "V-Lock" precision key

DIMENSIONS Ø 32

Versions 00-01-02-05

+ = ADD THE STROKE

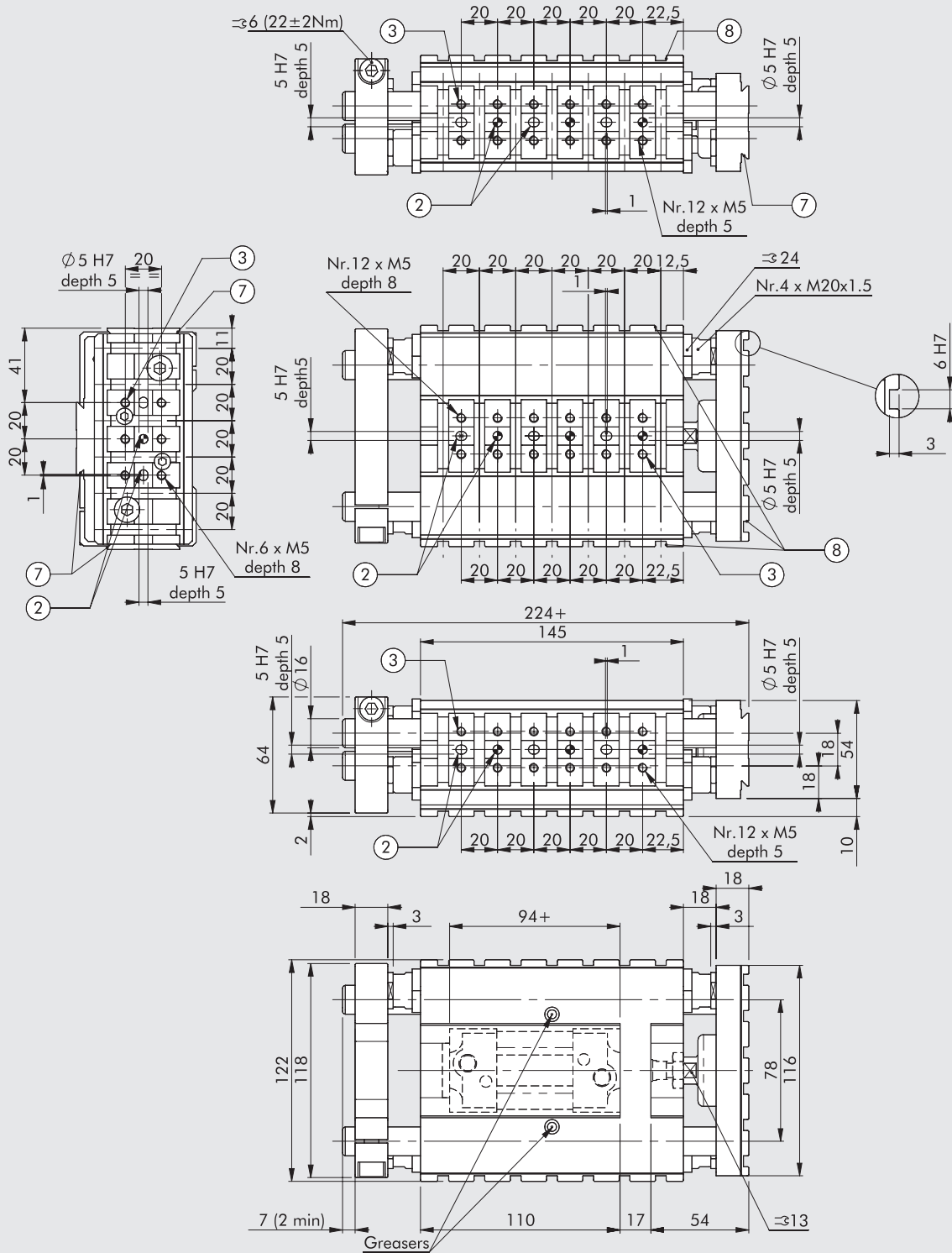


- * Not present in version 00 and 05
- ② Holes for centring pins
- ③ Threaded holes for fixing
- ⑦ Dovetail for "V-Lock" fixing.
For standard dimensions, see **chapter V-Lock adaptors**
- ⑧ Slot for "V-Lock" precision key

DIMENSIONS Ø 32

Versions 03-04

+ = ADD THE STROKE

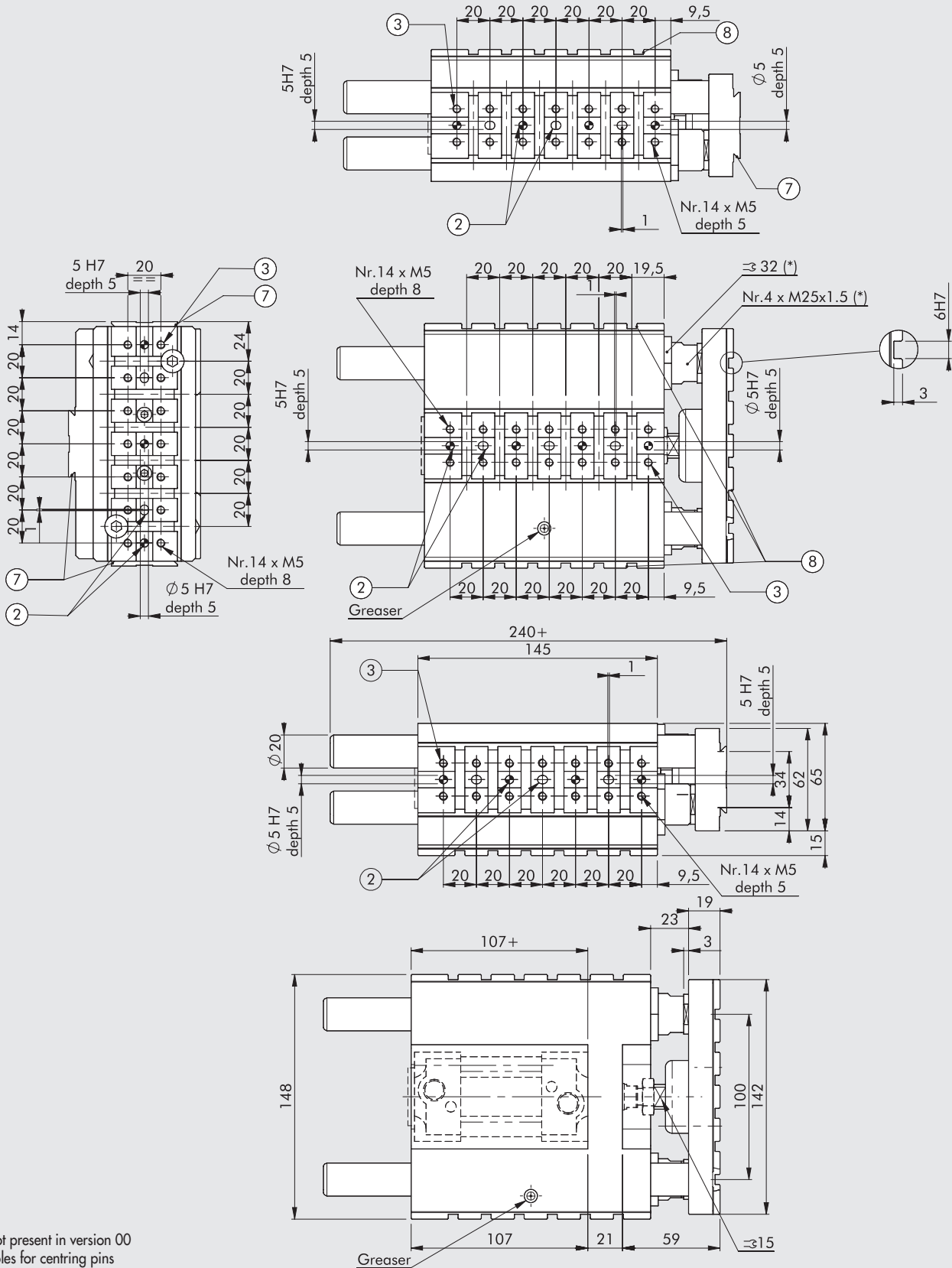


- ② Holes for centring pins
- ③ Threaded holes for fixing
- ⑦ Dovetail for "V-Lock" fixing.
For standard dimensions, see **chapter V-Lock adaptors**
- ⑧ Slot for "V-Lock" precision key

DIMENSIONS Ø 40

Versions 00-01-02

+ = ADD THE STROKE

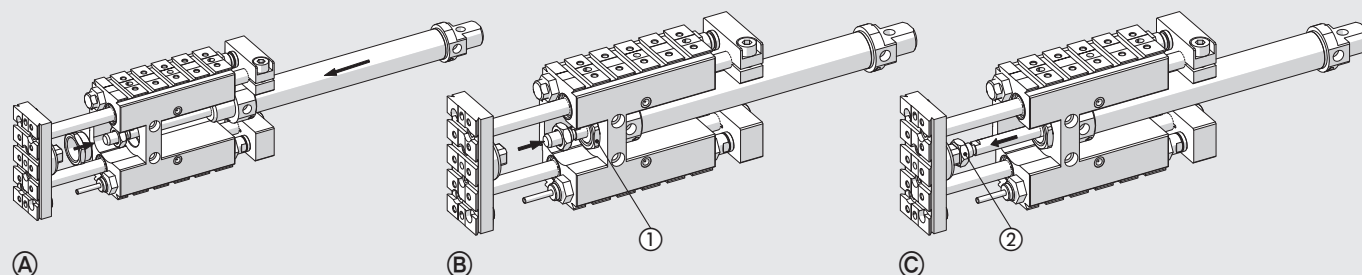


- * Not present in version 00
- ② Holes for centring pins
- ③ Threaded holes for fixing
- ⑦ Dovetail for "V-Lock" fixing.
- For standard dimensions, see **chapter V-Lock adaptors**
- ⑧ Slot for "V-Lock" precision key

MOUNTING ON ISO 6432 CYLINDERS

For mounting on the body of ISO 6432 cylinders:

- Ⓐ Insert the cylinder in the guide.
- Ⓑ Retract the piston rod and tighten the nut ① from the front using a wrench, holding the front end of the cylinder firmly.
- Ⓒ Screw the piston rod onto the coupling and tighten the nut ②.

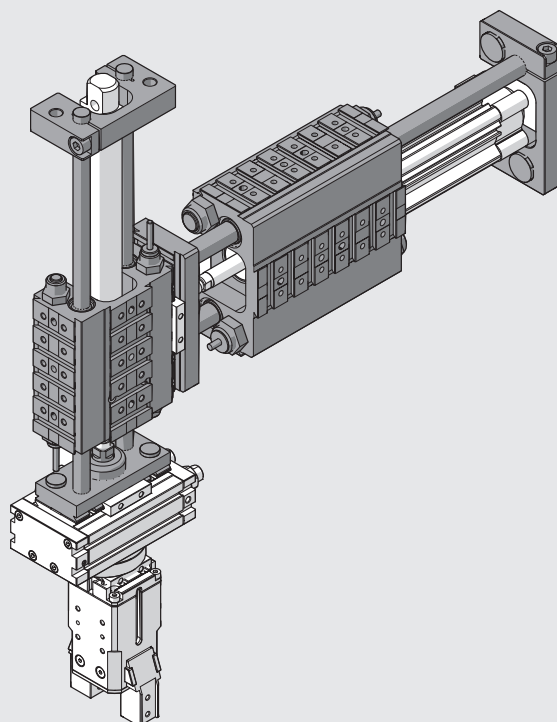


KEY TO CODES

W070	012	2	050	00	K
TYPE	BORE	VERSION	STROKE	EXECUTION	FAMILY
Guide unit	012 12 012 16 020 20 025 25 032 32 040 40	2 Version H 3 Version M	See general technical data	00 Without stop 01 With front stop and buffers 02 With front stop and shock absorber 03 With front and rear stops and buffers 04 With front and rear stops and shock absorbers ■ 05 With short columns for Elektro cylinder	K V-Lock

■ For Ø 32 only

EXAMPLES OF APPLICATION



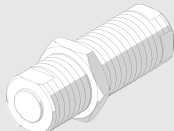
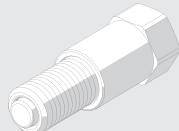
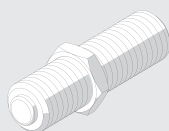
ACCESSORIES AND SPARE PARTS FOR GUIDE UNITS SERIES GDHK AND GDMK

ELASTIC MECHANICAL STOP

Ø12-16

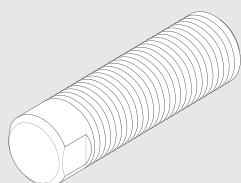
Ø20-25

Ø32-40



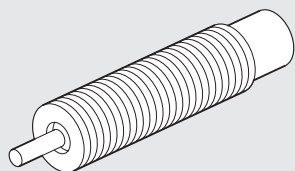
Code	Ø	Description
W0950005401K	12-16	Elastic mechanical stop M10x1 + nut
W0950005402K	20-25	Elastic mechanical stop M14x1.5 + bushing
W0950005403K	32	Elastic mechanical stop M20x1.5 + nut
W0950005404K	40	Elastic mechanical stop M25x1.5 + nut

MECHANICAL STOPS



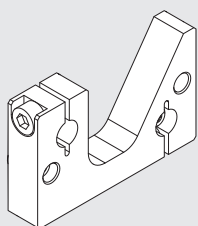
Code	Ø	Description
W0950005501K	12-16	Mechanical stop M10x1 + nut
W0950005502K	20-25	Mechanical stop M14x1.5 + nut
W0950005503K	32	Mechanical stop M20x1.5 + nut
W0950005504K	40	Mechanical stop M25x1.5 + nut

SHOCK ABSORBERS



Code	Ø	Description
W0950005301	12-16	Shock absorbers 2 M10x1 + nut
0950004004	20-25	Shock absorbers ECO25 MC2 + nut M14x1.5
0950004005	32	Shock absorbers ECO50 MC2 + nut M20x1.5
0950004006	40	Shock absorbers ECO100 MF2 + nut M25x1.5

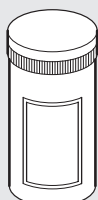
REAR PLATE KITS



Code	Ø	Description
W0950005600K	12-16	Rear plate kit GD_K
W0950005601K	20-25	Rear plate kit GD_K
W0950005602K	32	Rear plate kit GD_K
W0950005603K	40	Rear plate kit GD_K

Note: individually packed with 2 screws

GREASE



Code	Description	Weight [g]
9910502	Tube of RHEOLUBE 362 grease (for GDHK version)	1000
9910506	Tube of RHEOLUBE 363 AX1 grease (for GDMK version)	400