

slides

# GeoSlide Series

VDMA 24562, DIN/ISO 6431 and ISO/FDIS 15552



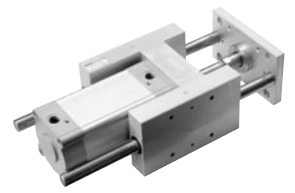
# NUMATICS®

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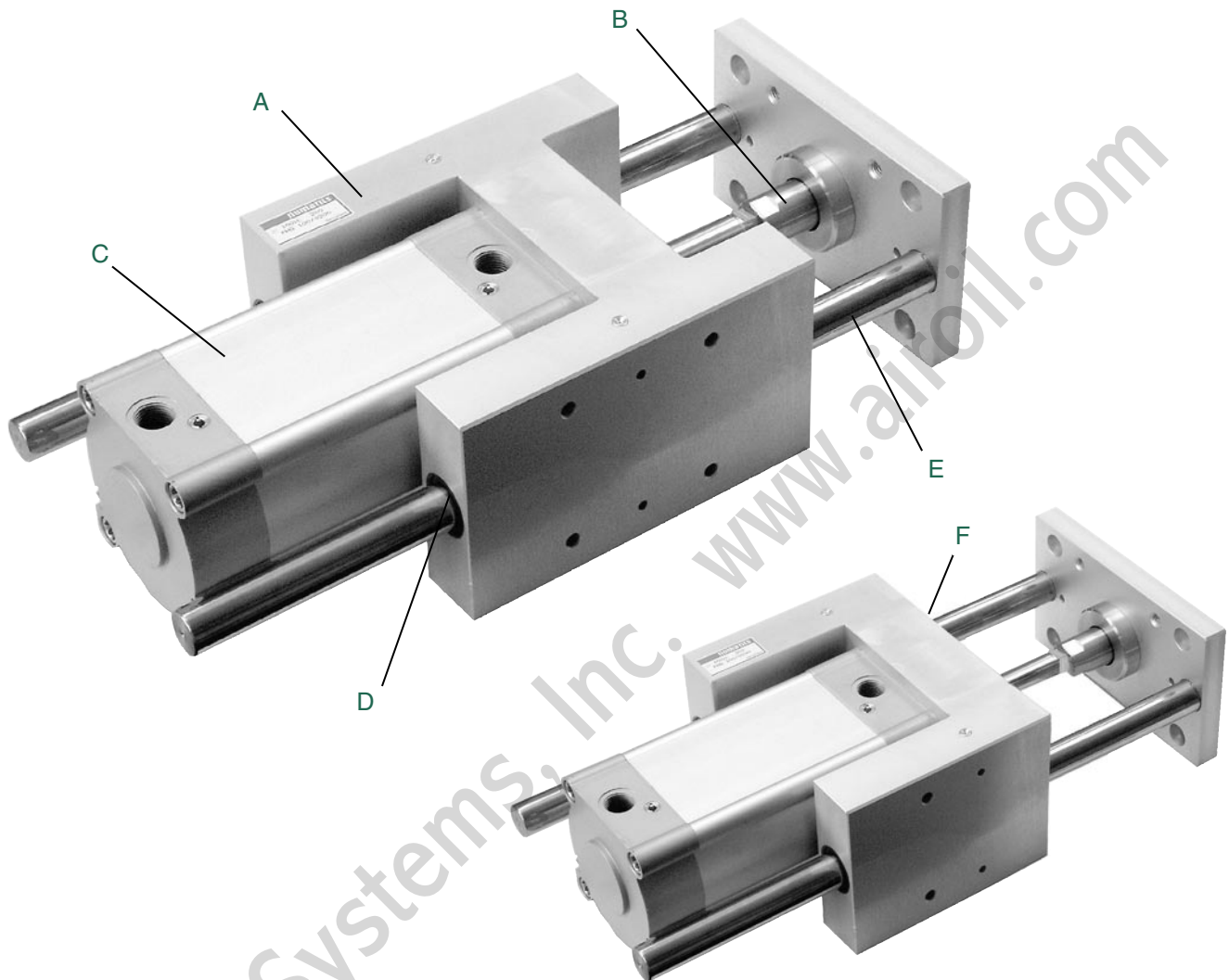
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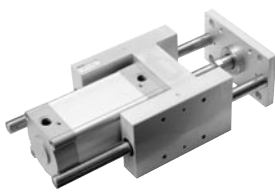
Air-Oil Systems, Inc. [www.airoil.com](http://www.airoil.com)



The ISO VDMA Guide units conform to the ISO standards. Utilizing the GeoMetric cylinders these guide units offer high load carrying capabilities.

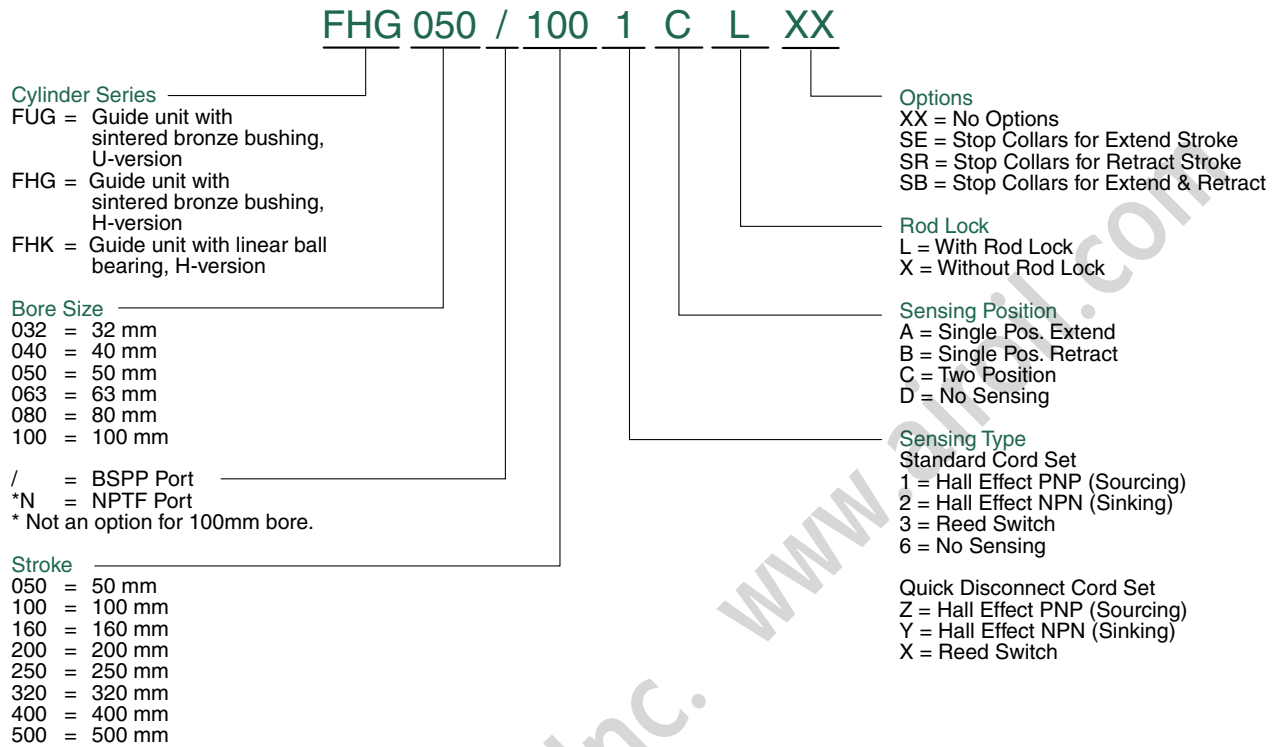


- A. Clear anodized Aluminum Body
- B. Alignment coupler isolates Piston Rod from side loading
- C. The rugged repairable ISO VDMA 6431 GeoMetric cylinder. Available with RodLock.
- D. Available bearing options include linear ball or bronze bushings.
- E. Precision ground hardened steel guide shafts.
- F. U-Style body with bronze bushings for light load applications



### How to Order Complete Guide Units

(Guide Units Include Cylinder)



Order example: **FHG050/1001CLXX**

Part Description: H-Style with bronze bushing, 50 mm bore, BSPP ports 100 mm stroke with Hall PNP switches 2 position and Rodlock, no stop collars.

### Weights (kg)

Type FUG; Piston Diameter (mm)	32	40	50	63		
0 mm stroke	0.75	1.23	2.15	2.89		
To be added per 100 mm stroke	0.17	0.31	0.50	0.50		

Type FHG; Piston Diameter (mm)	32	40	50	63	80	100
0 mm stroke	1.30	2.40	3.50	4.60	8.40	11.8
To be added per 100 mm stroke	0.17	0.31	0.50	0.50	0.77	0.77

Type FHK; Piston Diameter (mm)	32	40	50	63	80	100
0 mm stroke	1.30	2.40	3.50	4.60	8.40	11.8
To be added per 100 mm stroke	0.17	0.31	0.50	0.50	0.77	0.77

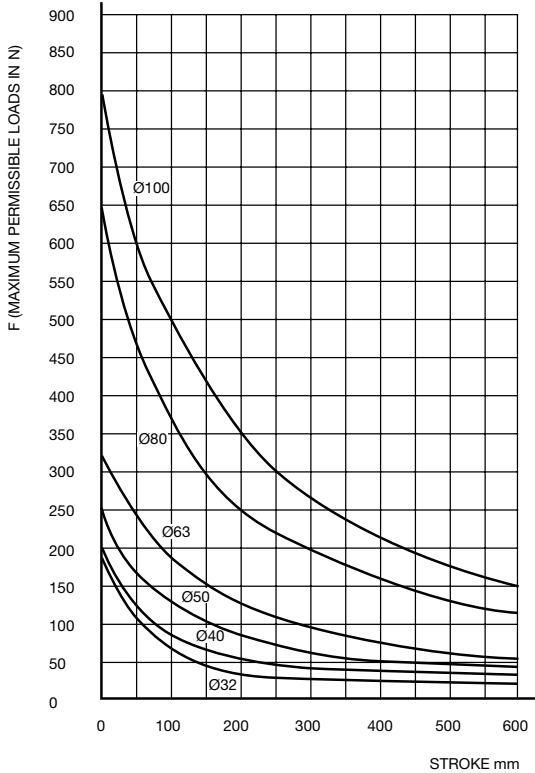
Lbs. = Kg X 2.205

Weights for guide unit only, see page 2 for cylinder weight.



### Maximum permissible loads in relation to stroke

FUG Sintered Bronze bushing  
Static ratings (Dynamic = load X .5)



**FUG:** Guide unit, short, with sintered bronze bushing

**FHG:** Guide unit, long, with sintered bronze bushing

**FHK:** Guide unit, long, with linear ball bearing

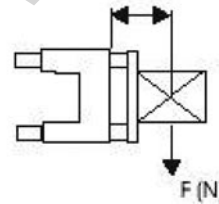
- With short strokes up to 60 mm, a reduction of load with linear ball bearings occurs. This is already taken into account in the diagrams.
- Increasing of max. load by 25 %, results in a reduction of lifetime of linear ball bearing to  $2 \times 10^6$  m.
- For shock applications with linear ball bearings multiply load capacity by factor 0.5.

**FHG:** Guide unit, long, with sintered bronze bushing

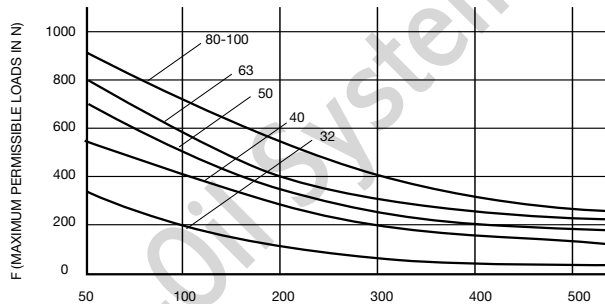
**FHK:** Guide unit, long, with linear ball bearing

- The total deflection of the guide rods against rod projection is the sum of deflection by own weight and deflection by load.
- Deflection in function of load is linear (with double load double deflection)

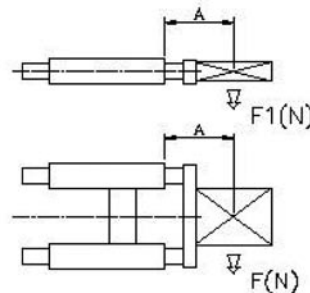
Maximum Permissible Loads



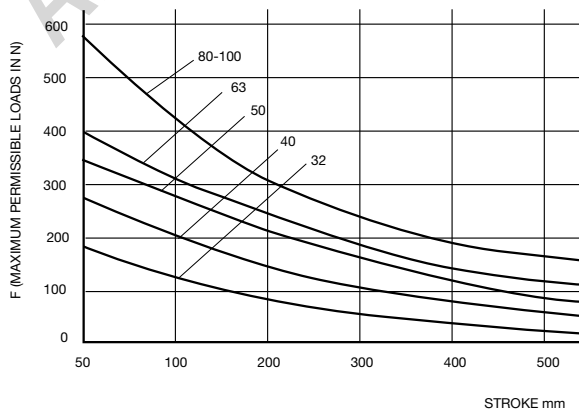
FHG Sintered Bronze bushing  
Static ratings (Dynamic = load X .5)

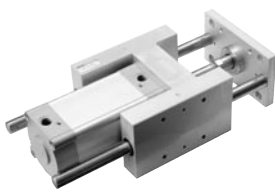


$$F1 = F \times 0.9N$$



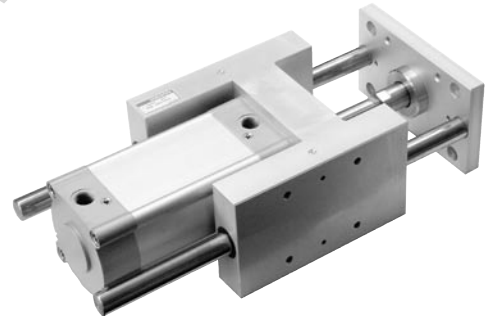
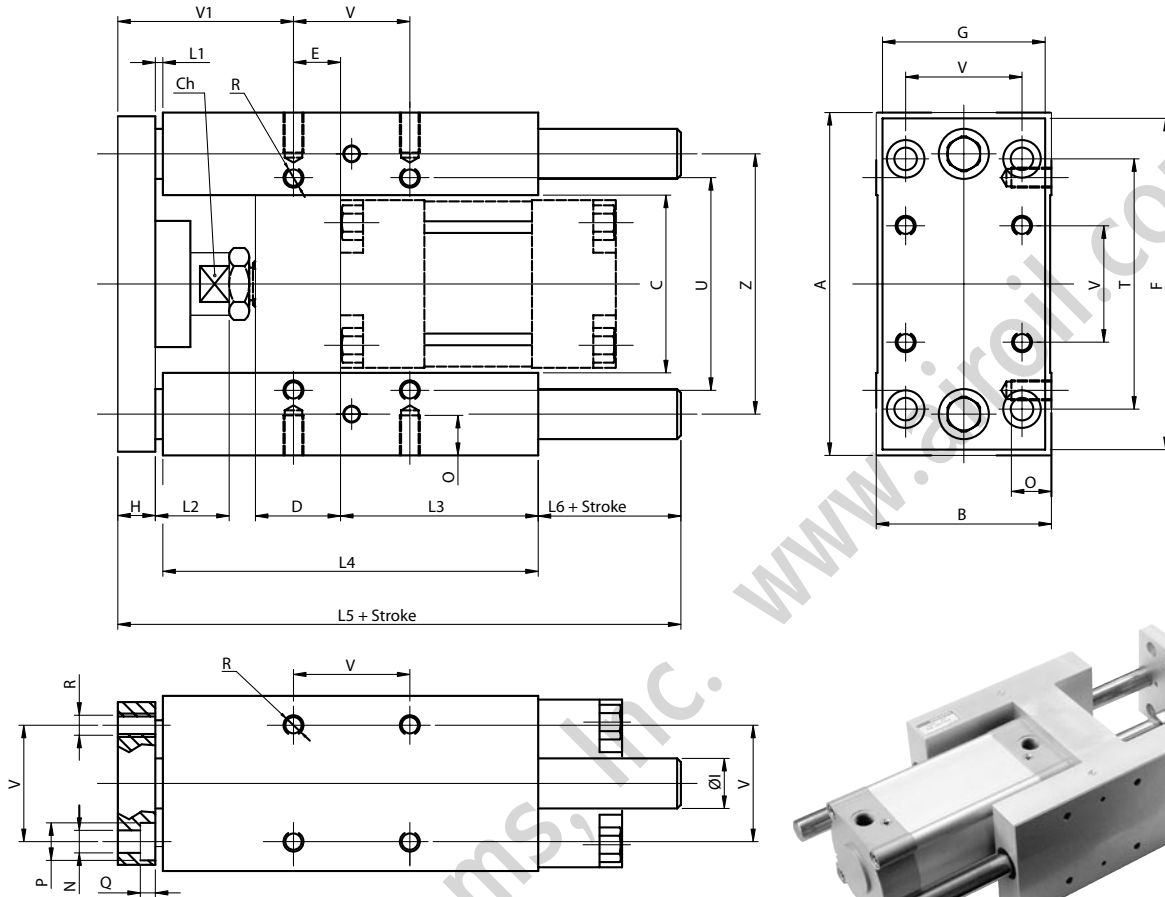
FHK Linear Ball  
Static ratings (Dynamic = load X .65)





### Guide Units

Guide Unit FHG and FHK, version "H" with Sintered Bronze Bushing or Linear Ball Bearing

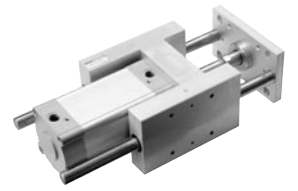


### Dimensions (mm)

Type	Piston Ø	A	B	C	Ch	D	E	F	G	G	ØI	L1*	L2	L3	L4	L5*	L6
FHG/FHK	32	97	49	51	15	24	4.3	93	45	12	12	3	19	75	125	187	47
FHG/FHK	40	115	58	58.2	15	28	11	112	55	12	16	3	24	80	140	207	52
FHG/FHK	50	137	70	70.2	20	34	18.8	134	65	15	20	3	27	78	148	223	57
FHG/FHK	63	152	85	85.2	20	34	15.3	147	80	15	20	3	27	106	178	243	47
FHG/FHK	80	189	105	105.5	26	50	25	180	100	20	25	3	27	111	195	267	49
FHG/FHK	100	213	130	130.5	26	55	30	206	120	20	25	3	27	128	218	290	49

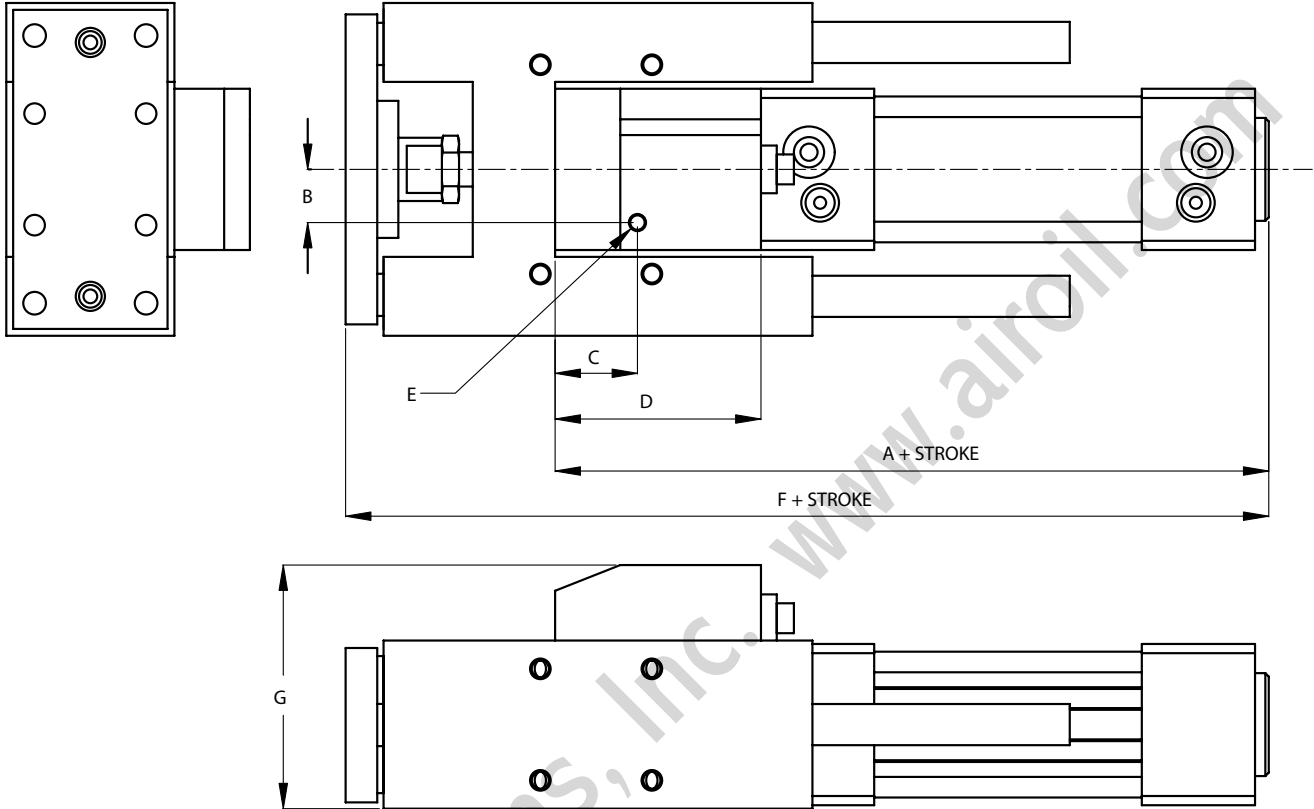
\*Add an additional 22 mm when ordered with retract stop collars.

Type	Piston Ø	N	O	P	Q	R	T	U	V	V1*	Z
FHG/FHK	32	6.6	12	11	6.5	M6	78	61	32.5	60.7	74
FHG/FHK	40	6.6	12	11	6.5	M6	84	69	38	64	87
FHG/FHK	50	9	16	15	8.5	M8	100	85	46.5	70	104
FHG/FHK	63	9	16	15	9	M8	105	100	56.5	74.7	119
FHG/FHK	80	11	20	18	11	M10	130	130	72	82	148
FHG/FHK	100	11	20	18	11	M10	150	150	89	83	173



### Guide Units

32mm - 100mm Bores with Rod Lock



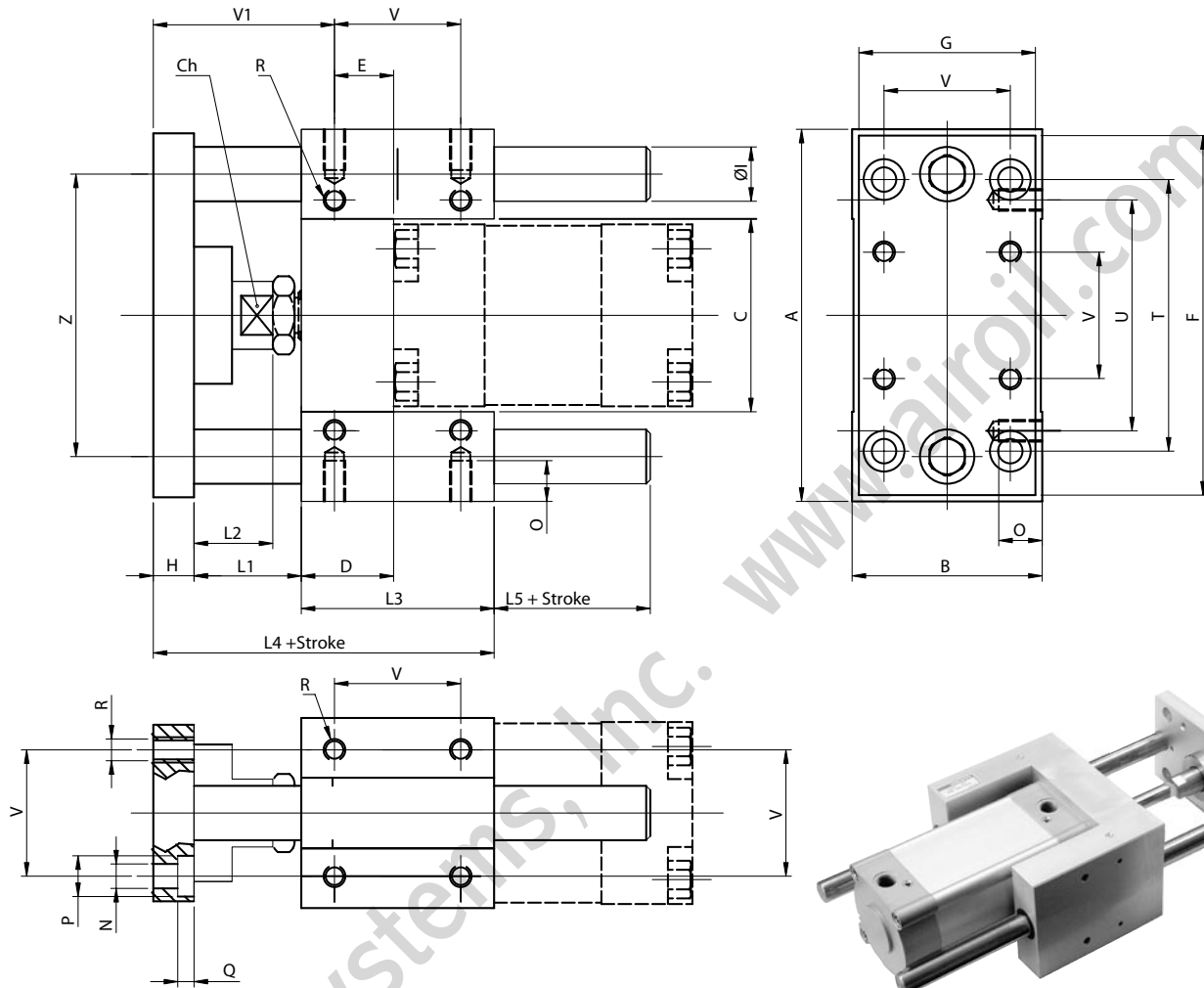
### Dimensions (mm)

Piston Ø	A	B	C	D	E	F	G
32	218.0	39.0	24.0	60.0	M5	283.0	70.0
40	244.0	43.5	28.5	65.0	1/8" G	323.0	80.0
50	278.0	54.3	32.8	78.0	1/8" G	371.0	94.0
63	307.0	64.0	40.5	92.0	1/8" G	402.0	108.0
80	345.0	79.0	49.0	103.0	1/8" G	457.0	133.0
100	385.0	95.5	69.0	133.0	1/4" G	503.0	163.0



## Guide Units

Guide Unit FUG, version "U" with sintered Bronze Bushing



### Dimensions (mm)

Ø	A	B	C	Ch	D	E	F	G	H	ØI	L1	L2	L3	L4	L5	N	O
32	97	49	51	15	17	9.25	93	46	12	12	42	25	48	102	18	6.6	12
40	115	58	58.2	15	21	11	112	55	12	15	43	25	58	113	17	6.6	12
50	137	70	70.2	20	25	18.8	134	65	15	20	48	29	58	123	20	9	16
63	152	85	85.2	20	25	15.3	147	80	15	20	49	29	76	140	21	9	16

Ø	P	Q	R	T	U	V	V1	Z
32	11	6.5	M6	78	61	32.5	61.75	74
40	11	6.5	M6	84	69	38	65	87
50	15	8.5	M8	100	85	46.5	70.2	104
63	15	9	M8	105	100	56.5	73.7	119



# NUMATICS®

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## World Headquarters

### Numatics Incorporated

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### Germany – European Headquarters

Numatics GmbH  
Phone: 011-49-22 41-31 60-0  
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