

HPA series electric cylinder

1

CONTENTS

Page

1.1 HPA040 series

017

1.2 HPA050 series

031

1.3 HPA063 series

045

1.4 HPA070 series

059

1.5 HPA080 series

071

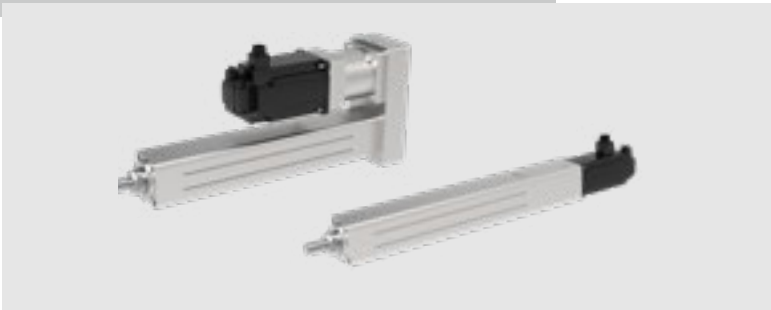
1.6 HPA100 series

083

1.1

HPA series electric cylinder

HPA 040



Contents

Model Description	01
Technical Specifications	04
Performance Chart	07
Electric cylinder size	08
Accessory dimensions	09

Product Features

- Motor linear unit reversing configuration
- Equipped with reducer, brake, and optional anti rotation configuration
- Waterproof rating IP54 or IP65
- Applicable but not limited to various types of mobile and industrial machinery

Model Description

Selection Diagram

040	U	5/10/20	0-700	AS	RB	0	X	1	NO
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

Bore

①	Bore	040	050	063	070	080	100
---	------	-----	-----	-----	-----	-----	-----

Type

②	Type	Switchback	U
		Straight-line	I

Lead

③	Lead	5/10/20	5/10/25	5/10	10/20	10/20
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Stroke

④	Stroke	0-700	0-800	0-1000	0-1500	0-1500
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Tightening components

⑤	Tightening components	Combined form	Code
		Single earring support	AS
		Intermediate trunnion	AT
		Joint bearing tailstock	AL
		Ear shaft mounting seat	TS
		Ear axis	AF
		Tripod	FS
		Spindle tailstock	AB
		Front flange	RF

Rod head component

⑥	Rod head component	Combined form	Code
		Rod end joint bearing	RB
		Rod end joint type I	RI
		Y-shaped rod end joint	RY
		Hex nut	RN
		Compensation coupling	RC

The pole head can rotate

⑦	The pole head can rotate	360 ° free rotation	0
		Non-rotatable	1

Model Description

Motor brand

⑧	Motor brand	Panasonic	S
		Customize	X

Protection level

⑨	Protection level	IP54	1
		IP65	2

Accessories

⑩	Accessories	NPN normally open	NO
		NPN normally closed	NC
		PNP normally open	PO
		PNP normally closed	PC

01

Technical Specifications

Parameter	symbol	Unit	Ball screw lead							
			5							
Mechanical parameters										
Ball screw diameter	φD	mm	16							
Stroke	L	mm	5~800							
Unilateral allowance for over travel margin	δL	mm	1							
Motor power	P	KW	0.2				0.4			
Reduction ratio	R	-	1	1.5 ⁻¹	3	5	1	1.5 ⁻¹	3	5
Work efficiency	η	%	0.65							
0 travel weight	m ₀	kg	5.5	5.7	6.9	6.9	5.5	5.7	6.9	6.9
Weight per 100 millimeters of travel	δm	kg	1.2							
Performance parameters										
Rated output	F	kN	0.52	0.78	1.56	2.60	1.04	1.56	3.12	5.20
Maximum output	F _{max}	kN	1.83	2.73	5.46	8.05	3.64	5.46	8.05	8.05
Rated speed	V	mm/s	250	167	83	50	250	167	83	50
Maximum speed	V _{max}	mm/s	416	389	194	117	416	389	194	117
Rated current ⁻²	I	A	1.5				2.9			
Maximum current ⁻²	I _{max}	A	5.8				11.5			
Dynamic load	C _a	kN	8.05							
Static load	C _{0a}	kN	16.72							
Peak force required torque	M _{max}	N·m	0.637				1.27			
Braking torque	M _{brake}	N·m	1.5							
Braking voltage	U _{brake}	V	DC24							
Environmental parameters										
Operating Temperature	T	° C	-20~+50							
Protection level	IP	-	IP54/IP65							

- 1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5
- 2) The motor can be changed brand according to customer requirements, and the current is for reference only.

Technical Specifications

Parameter	symbol	Unit	Ball screw lead					
			10					
Mechanical parameters								
Ball screw diameter	φD	mm	16					
Stroke	L	mm	5~800					
Unilateral allowance for over travel margin	δL	mm	1					
Motor power	P	KW	0.2			0.4		
Reduction ratio	R	-	1	1.5 ⁻¹	5	1	1.5 ⁻¹	5
Work efficiency	η	%	0.65					
0 travel weight	m ₀	kg	5.5	5.7	6.9	5.5	5.7	6.9
Weight per 100 millimeters of travel	δm	kg	1.2					
Performance parameters								
Rated output	F	kN	0.26	0.39	1.30	0.52	0.78	2.60
Maximum output	F _{max}	kN	0.91	1.37	4.55	1.82	2.73	9.10
Rated speed	V	mm/s	500	333	100	500	333	100
Maximum speed	V _{max}	mm/s	833	778	233	833	778	233
Rated current ^{*2}	I	A	1.5			2.9		
Maximum current ^{*2}	I _{max}	A	5.8			11.5		
Dynamic load	C _a	kN	6.03					
Static load	C _{0a}	kN	12.85					
Peak force required torque	M _{max}	N·m	0.637			1.27		
Braking torque	M _{brake}	N·m	1.5					
Braking voltage	U _{brake}	V	DC24					
Environmental parameters								
Operating Temperature	T	° C	-20~+50					
Protection level	IP	-	IP54/IP65					

1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5

2) The motor can be changed brand according to customer requirements, and the current is for reference only.

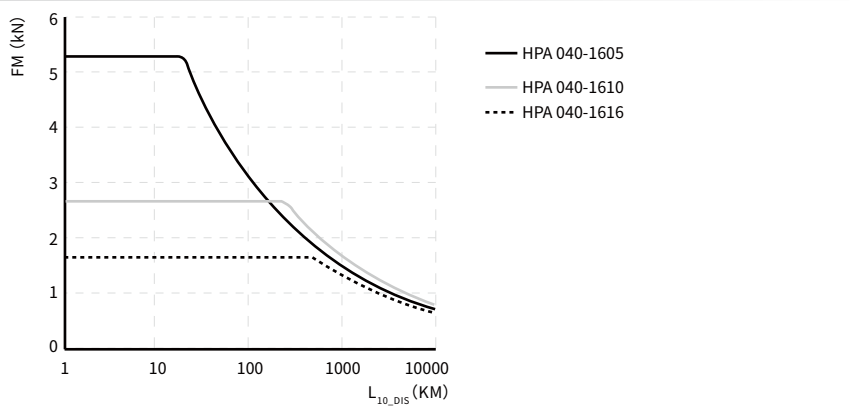
Technical Specifications

Parameter	symbol	Unit	Ball screw lead					
			16					
Mechanical parameters								
Ball screw diameter	φD	mm	16					
Stroke	L	mm	5~800					
Unilateral allowance for over travel margin	δL	mm	1					
Motor power	P	KW	0.2			0.4		
Reduction ratio	R	-	1	1.5 ⁻¹	5	1	1.5 ⁻¹	5
Work efficiency	η	%	0.65					
0 travel weight	m ₀	kg	5.5	5.7	6.9	5.5	5.7	6.9
Weight per 100 millimeters of travel	δm	kg	1.2					
Performance parameters								
Rated output	F	kN	0.16	0.24	0.81	0.32	0.49	1.62
Maximum output	F _{max}	kN	0.57	0.85	2.84	1.14	1.71	5.09
Rated speed	V	mm/s	800	533	160	800	533	160
Maximum speed	V _{max}	mm/s	1333	1244	373	1333	1244	373
Rated current ²	I	A	1.5			2.9		
Maximum current ²	I _{max}	A	5.8			11.5		
Dynamic load	C _a	kN	4.15					
Static load	C _{0a}	kN	8.02					
Peak force required torque	M _{max}	N·m	0.637			1.27		
Braking torque	M _{brake}	N·m	1.5					
Braking voltage	U _{brake}	V	DC24					
Environmental parameters								
Operating Temperature	T	° C	-20~+50					
Protection level	IP	-	IP54/IP65					

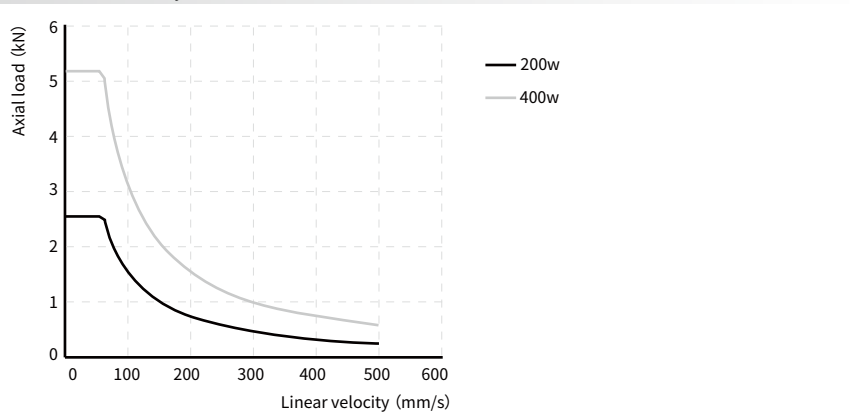
- 1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5
- 2) The motor can be changed brand according to customer requirements, and the current is for reference only.

Performance Chart

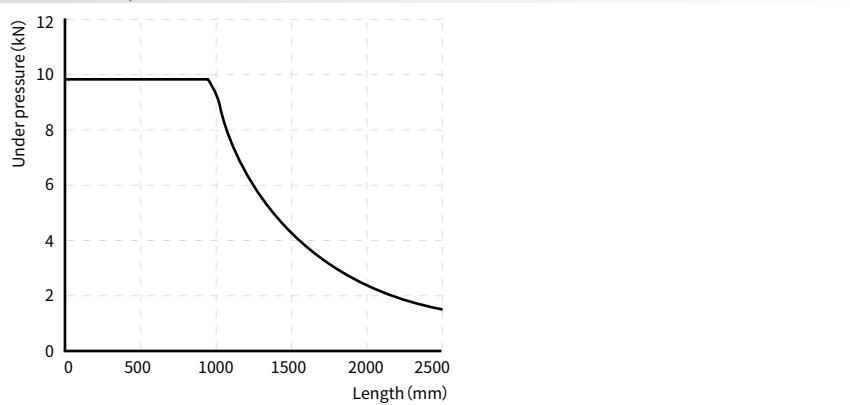
HPA040 Lifespan curve



HPA040 Force velocity curve

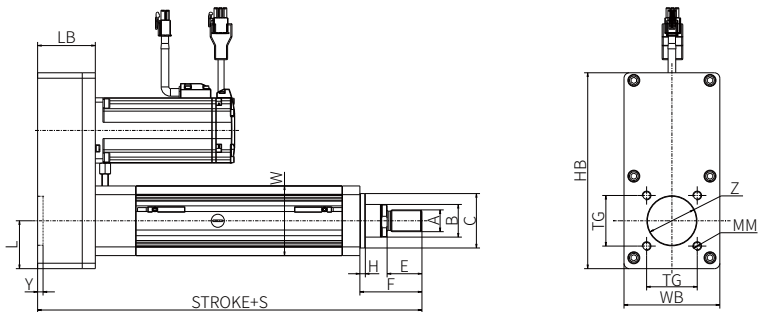


HPA040 Screw pressure curve



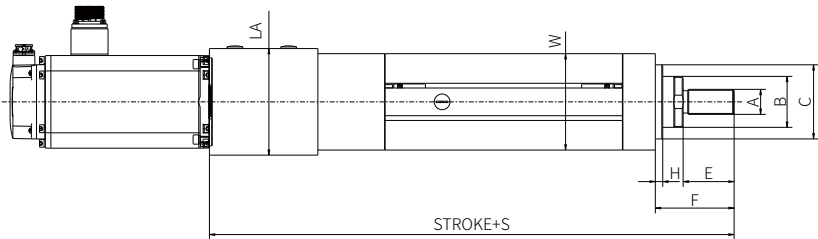
Electric cylinder size

Configuration dimensions of the reversing belt reducer



Dimension Table (mm)																
Lead screw	A	B	C	E	F	H	L	S	W	LB	TG	MM	WB	HB	Y	Z
	M16×1.5	φ25	φ40	25	39	10	37.5	219	□ 53	46	38	M6	80	145	3	φ40

Note: This form is only applicable for tail hinge installation.

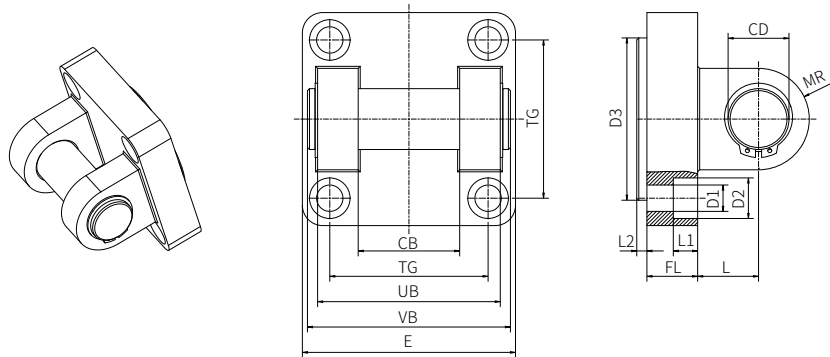


Dimension Table (mm)									
Lead screw	A	B	C	E	F	H	S	LA	W
	M16×1.5	φ25	φ40	25	39	10	249	□ 60	□ 53

Note: The brand of the motor reducer can be changed according to customer needs, and the size of the motor part is for reference only.

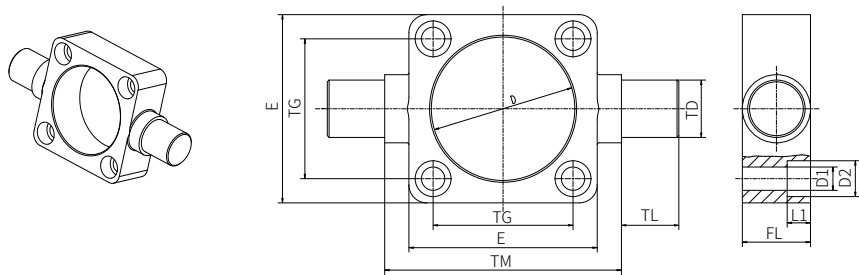
Accessory dimensions

Shaft tailstock AB



Accessory size (mm)															Weight (Kg)
Name	CD	CB	UB	VB	E	D1	D2	L1	D3	L2	L	TG	FL	MR	0.41
Shaft tailstock AB	φ12	28	50	58	□ 53	φ6.5	φ11	9	φ38	4	17	38	12	R12	

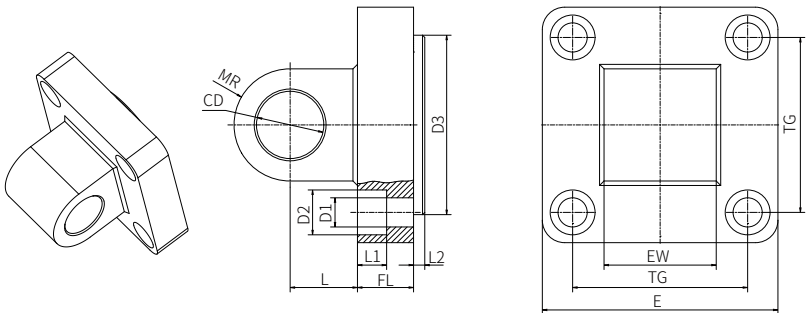
Ear axis AF



Accessory size (mm)											Weight (Kg)
Name	D	E	TD	TL	TM	D1	D2	L1	TG	FL	0.30
Ear axis AF	φ38	53	φ16	16	63	φ6.5	φ11	7	38	20	

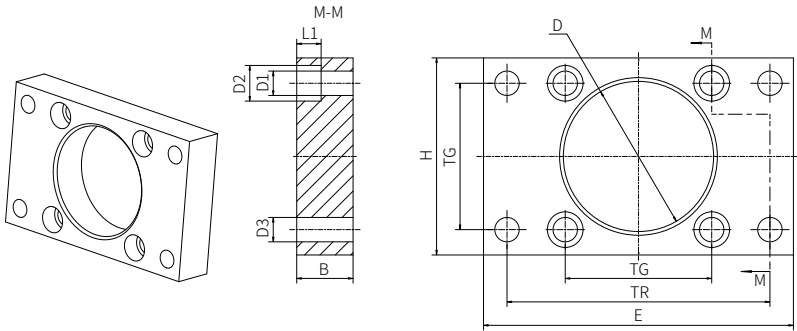
Accessory dimensions

Single earring support AS



Accessory size (mm)													Weight (Kg)
Name	CD	MR	EW	E	D1	D2	L1	D3	L2	L	TG	FL	0.38
Single earring support AS	φ12	R12	28	□ 53	φ6.5	φ11	7	φ38	4	17	38	12	

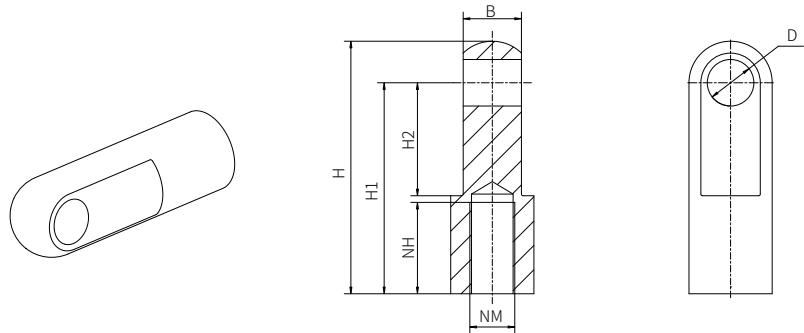
Front flange RF



Accessory size (mm)												Weight (Kg)
Name	D	B	E	H	D1	D2	L1	TG	D3	TR		2.13
Front flange RF	φ38	15	100	53	φ6.5	φ11	7	38	φ11	126		

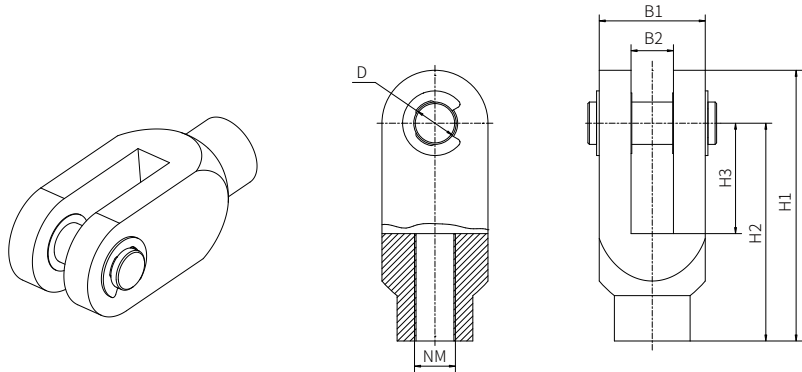
Accessory dimensions

Rod end joint Type I RI



Accessory size (mm)								Weight (Kg)
Name	D	B	H	H1	H2	NM	NH	0.18
Rod end joint Type I RI	φ16	16	76.5	64	32	M16×1.5	23	

Rod end joint Y-shaped RY

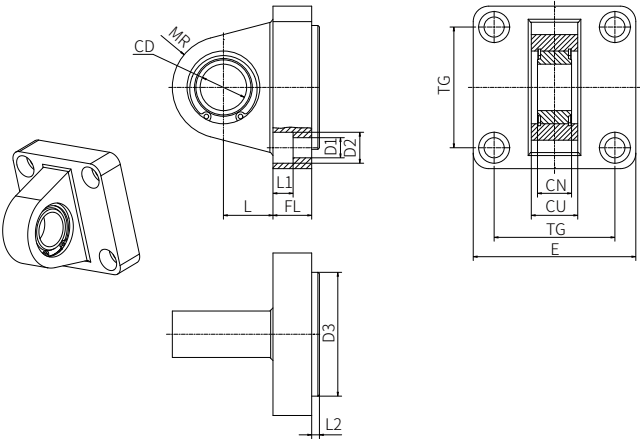


Accessory size (mm)								Weight (Kg)
Name	D	B1	B2	H1	H2	H3	NM	0.3
Rod end joint Y-shaped RY	φ16	32	16	78	64	32	M16×1.5	

01

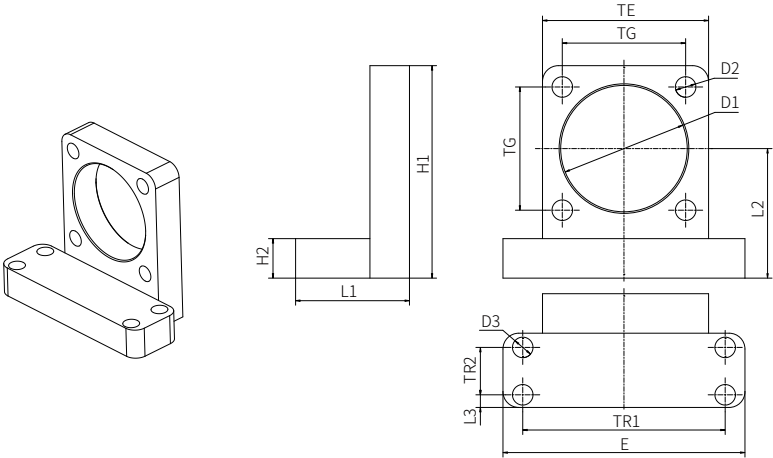
Accessory dimensions

Joint bearing tailstock AL



Accessory size (mm)														Weight (Kg)
Name	CD	CN	CU	E	D1	D2	L1	TG	D3	L2	L	FL	MR	
Joint bearing tailstock AL	φ12	10	16	□ 53	φ6.5	φ11	7	38	φ38	4	17	12	R19	0.4

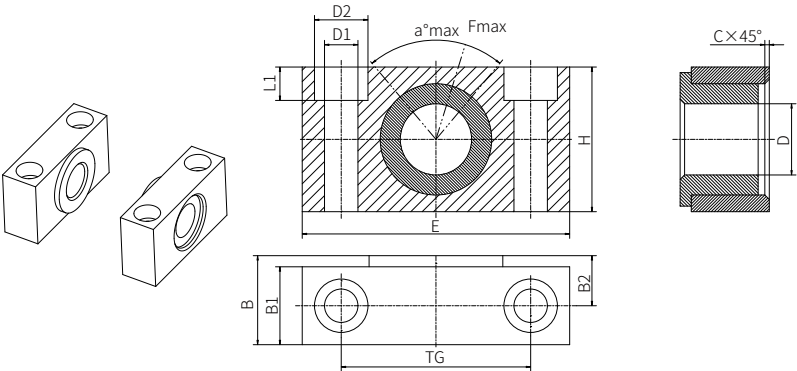
Footstand FS



Accessory size (mm)														Weight (Kg)
Name	D1	L1	L2	E	H1	H2	TE	D2	TG	D3	L3	TR1	TR2	
Footstand FS	φ38	35	45	90	71.5	8	53	6.5	38	φ6.5	5	75	16	0.3

Accessory dimensions

Earshaft mounting seat TS



Accessory size (mm)														Weight (Kg)
Name	D	C	B	B1	E	H	D1	D2	L1	TG	B2	a	F	0.21
Earshaft mounting seat TS	φ16	1.6	21	18	216	36	φ9	φ15	9	36	12	70		

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America

+01 630 995 3674

Germany

+49(30) 72088-0

Japan

+81 03 6809 1696

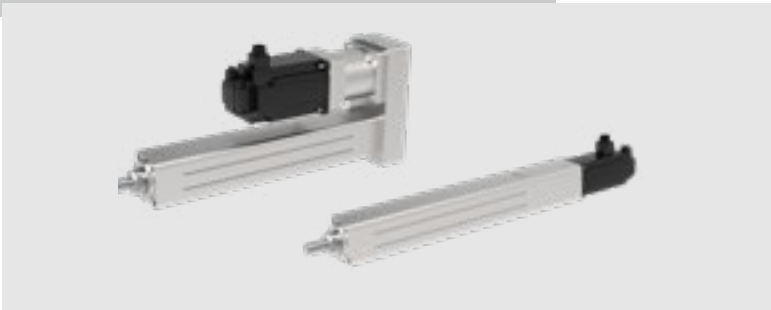


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1.2

HPA series electric cylinder

HPA 050



Contents

Model Description	01
Technical Specifications	04
Performance Chart	07
Electric cylinder size	08
Accessory dimensions	09

Product Features

- Motor linear unit reversing configuration
- Equipped with reducer, brake, and optional anti rotation configuration
- Waterproof rating IP54 or IP65
- Applicable but not limited to various types of mobile and industrial machinery

Model Description

Selection Diagram

050	U	5/10/20	0-700	AS	RB	0	X	1	NO
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

Bore

①	Bore	040	050	063	070	080	100
---	------	-----	-----	-----	-----	-----	-----

Type

②	Type	Switchback	U
		Straight-line	I

Lead

③	Lead	5/10/20	5/10/25	5/10	10/20	10/20
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Stroke

④	Stroke	0-700	0-800	0-1000	0-1500	0-1500
---	--------	-------	-------	--------	--------	--------

Tightening components

⑤	Tightening components	Combined form	Code
		Single earring support	AS
		Intermediate trunnion	AT
		Joint bearing tailstock	AL
		Ear shaft mounting seat	TS
		Ear axis	AF
		Tripod	FS
		Spindle tailstock	AB
		Front flange	RF

Rod head component

⑥	Rod head component	Combined form	Code
		Rod end joint bearing	RB
		Rod end joint type I	RI
		Y-shaped rod end joint	RY
		Hex nut	RN
		Compensation coupling	RC

The pole head can rotate

⑦	The pole head can rotate	360 ° free rotation	0
		Non-rotatable	1

Model Description

Motor brand

⑧	Motor brand	Panasonic	S
		Customize	X

Protection level

⑨	Protection level	IP54	1
		IP65	2

Accessories

⑩	Accessories	NPN normally open	NO
		NPN normally closed	NC
		PNP normally open	PO
		PNP normally closed	PC

01

Technical Specifications

Parameter	symbol	Unit	Ball screw lead							
			5							

Mechanical parameters

Ball screw diameter	ϕD	mm	20							
Stroke	L	mm	5~1000							
Unilateral allowance for over travel margin	δL	mm	1							
Motor power	P	KW	0.4				0.75			
Reduction ratio	R	-	1	1.5 ⁻¹	3	5	1	1.5 ⁻¹	3	5
Work efficiency	η	%	0.65							
0 travel weight	m_0	kg	7.3	7.3	8.7	8.7	8.8	8.8	10.2	10.2
Weight per 100 millimeters of travel	δm	kg	0.9							

Performance parameters

Rated output	F	kN	1.0	1.6	3.1	5.2	2.0	2.9	5.9	9.8
Maximum output	F _{max}	kN	3.6	5.5	10.9	18.2	6.8	10.2	20.5	32.9
Rated speed	V	mm/s	250	167	83	50	250	167	83	50
Maximum speed	V _{max}	mm/s	292	292	292	117	292	292	292	117
Rated current ^{*2}	I	A	2.9				5.1			
Maximum current ^{*2}	I _{max}	A	11.5				19.5			
Dynamic load	C _a	kN	13.6							
Static load	C _{0a}	kN	32.87							
Peak force required torque	M _{max}	N·m	1.27				2.39			
Braking torque	M _{brake}	N·m	1.5				3.2			
Braking voltage	U _{brake}	V	DC24							

Environmental parameters

Operating Temperature	T	° C	-20~+50							
Protection level	IP	-	IP54/IP65							

- 1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5
- 2) The motor can be changed brand according to customer requirements, and the current is for reference only.

Technical Specifications

Parameter	symbol	Unit	Ball screw lead					
			10					

Mechanical parameters

Ball screw diameter	ϕD	mm	20					
Stroke	L	mm	5~1000					
Unilateral allowance for over travel margin	δL	mm	1					
Motor power	P	KW	0.4			0.75		
Reduction ratio	R	-	1	1.5^{-1}	5	1	1.5^{-1}	5
Work efficiency	η	%	0.65					
0 travel weight	m_0	kg	7.3	7.3	8.7	8.8	8.8	10.2
Weight per 100 millimeters of travel	δm	kg	0.9					

Performance parameters

Rated output	F	kN	0.5	0.8	2.6	1.0	1.5	4.9
Maximum output	F _{max}	kN	1.8	2.7	9.1	3.4	5.1	16.4
Rated speed	V	mm/s	500	333	100	500	333	100
Maximum speed	V _{max}	mm/s	583	583	233	583	583	233
Rated current ^{*2}	I	A	2.9			5.1		
Maximum current ^{*2}	I _{max}	A	11.5			19.5		
Dynamic load	C _a	kN	8.74					
Static load	C _{0a}	kN	19.96					
Peak force required torque	M _{max}	N·m	1.27			2.39		
Braking torque	M _{brake}	N·m	1.5			3.2		
Braking voltage	U _{brake}	V	DC24					

Environmental parameters

Operating Temperature	T	° C	-20~+50					
Protection level	IP	-	IP54/IP65					

- 1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5
 2) The motor can be changed brand according to customer requirements, and the current is for reference only.

Technical Specifications

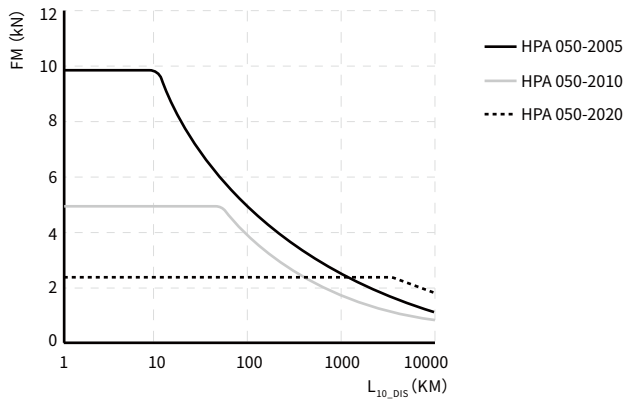
Parameter	symbol	Unit	Ball screw lead					
			20					
Mechanical parameters								
Ball screw diameter	ϕD	mm	20					
Stroke	L	mm	5~1000					
Unilateral allowance for over travel margin	δL	mm	1					
Motor power	P	KW	0.4			0.75		
Reduction ratio	R	-	1	1.5 ⁻¹	5	1	1.5 ⁻¹	5
Work efficiency	η	%	0.65					
0 travel weight	m_0	kg	7.3	7.3	8.7	8.8	8.8	10.2
Weight per 100 millimeters of travel	δm	kg	0.9					
Performance parameters								
Rated output	F	kN	0.3	0.4	1.3	0.5	0.7	2.4
Maximum output	$F_{\max}$	kN	0.9	1.4	4.6	1.7	2.6	8.2
Rated speed	V	mm/s	1000	667	200	1000	667	200
Maximum speed	$V_{\max}$	mm/s	1167	1167	467	1167	1167	467
Rated current ^{*2}	I	A	2.9			5.1		
Maximum current ^{*2}	$I_{\max}$	A	11.5			19.5		
Dynamic load	C_a	kN	13.8					
Static load	C_{0a}	kN	35.1					
Peak force required torque	$M_{\max}$	N·m	1.27			2.39		
Braking torque	M_{brake}	N·m	1.5			3.2		
Braking voltage	U_{brake}	V	DC24					
Environmental parameters								
Operating Temperature	T	°C	-20~+50					
Protection level	IP	-	IP54/IP65					

1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5

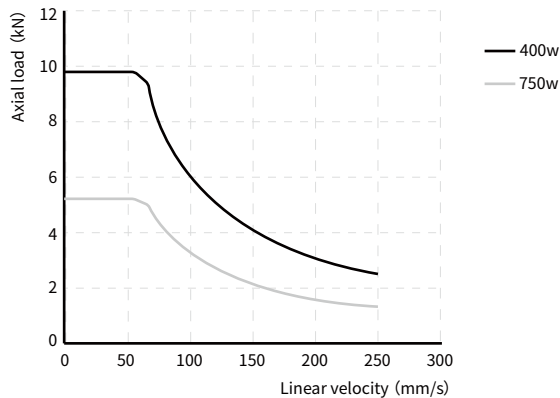
2) The motor can be changed brand according to customer requirements, and the current is for reference only.

Performance Chart

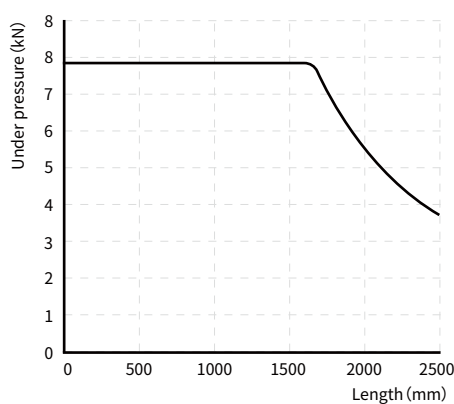
HPA050 Lifespan curve



HPA050 Force velocity curve

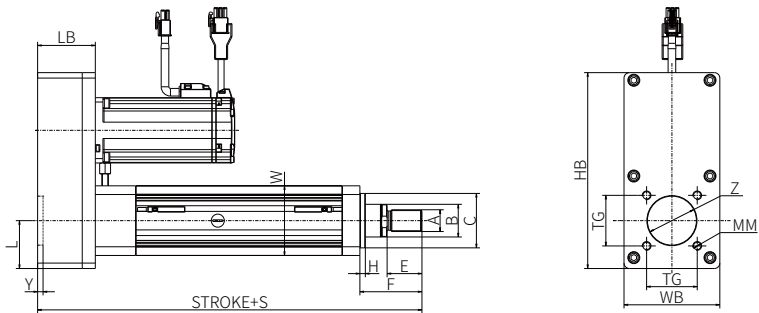


HPA050 Screw pressure curve



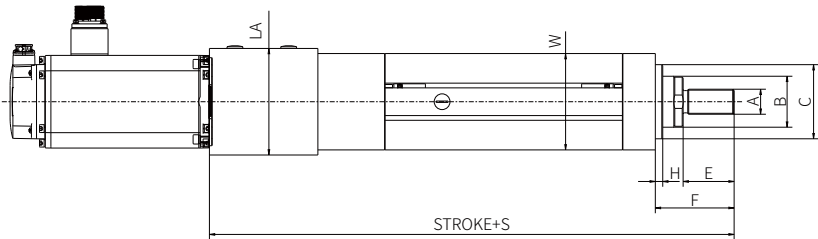
Electric cylinder size

Configuration dimensions of the reversing belt reducer



Dimension Table (mm)																
Lead screw	A	B	C	E	F	H	L	S	W	LB	TG	MM	WB	HB	Y	Z
	M20×1.5	φ30	φ50	32	57	5	44	253	□ 64	53	46.5	M8	88	180	3	φ45

Note: This form is only applicable for tail hinge installation.

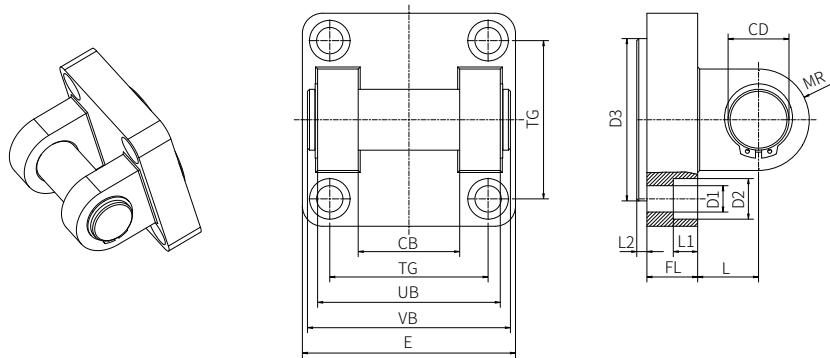


Dimension Table (mm)									
Lead screw	A	B	C	E	F	H	S	LA	W
	M20×1.5	φ30	φ50	32	57	5	347	□ 72	□ 64

Note: The brand of the motor reducer can be changed according to customer needs, and the size of the motor part is for reference only.

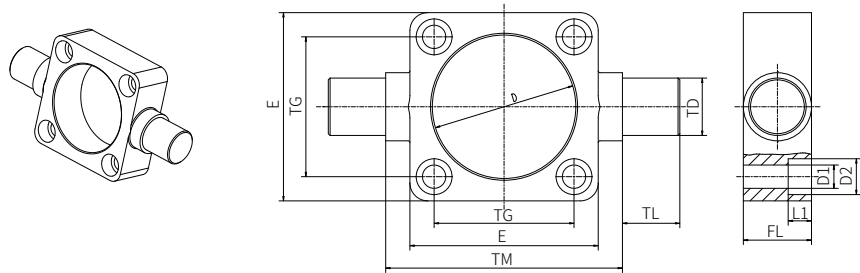
Accessory dimensions

Shaft tailstock AB



Accessory size (mm)														Weight (Kg)	
Name	CD	CB	UB	VB	E	D1	D2	L1	D3	L2	L	TG	FL	MR	0.6
Shaft tailstock AB	φ12	32	60	65	□ 64	φ9	φ15	9	φ45	4	20	46.5	16	R13	

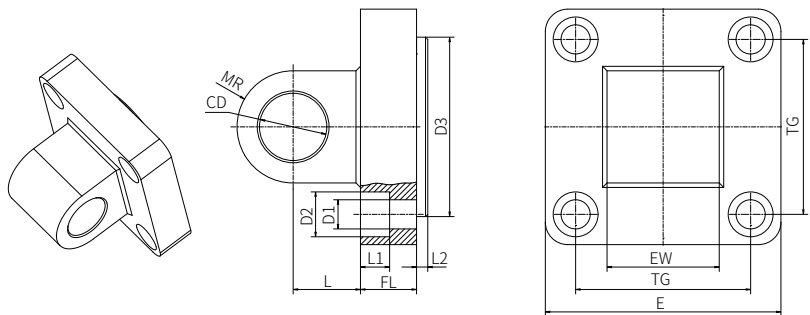
Ear axis AF



Accessory size (mm)											Weight (Kg)	
Name	D	E	TD	TL	TM	D1	D2	L1	TG	FL	0.48	
Ear axis AF	φ45	64	φ16	16	75	φ9	φ15	9	46.5	24		

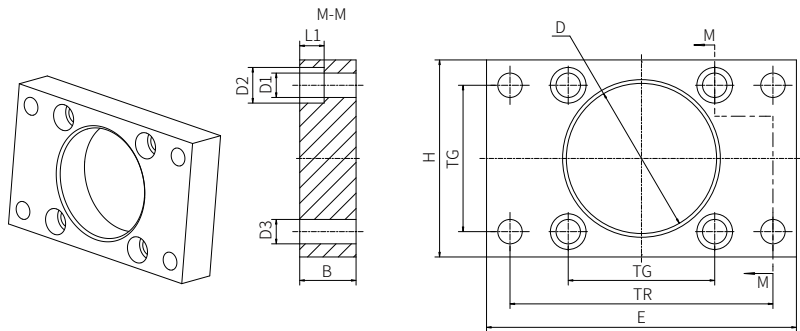
Accessory dimensions

Single earring support AS



Accessory size (mm)													Weight (Kg)
Name	CD	MR	EW	E	D1	D2	L1	D3	L2	L	TG	FL	0.56
Single earring support AS	φ12	R13	45	□ 32	φ9	φ15	11	φ45	4	20	46.5	16	

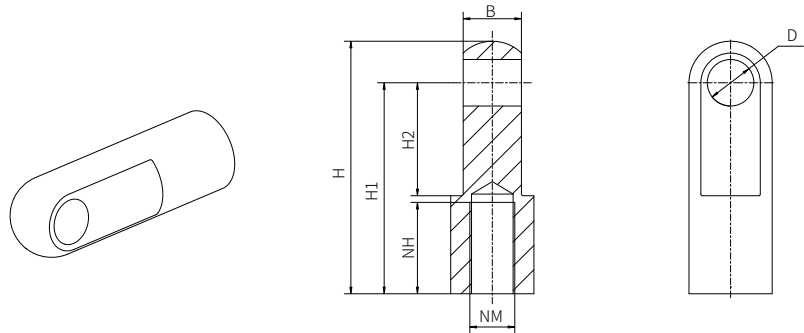
Front flange RF



Accessory size (mm)											Weight (Kg)
Name	D	B	E	H	D1	D2	L1	TG	D3	TR	2.13
Front flange RF	φ70	25	160	95	φ11	φ18	11	72	φ11	126	

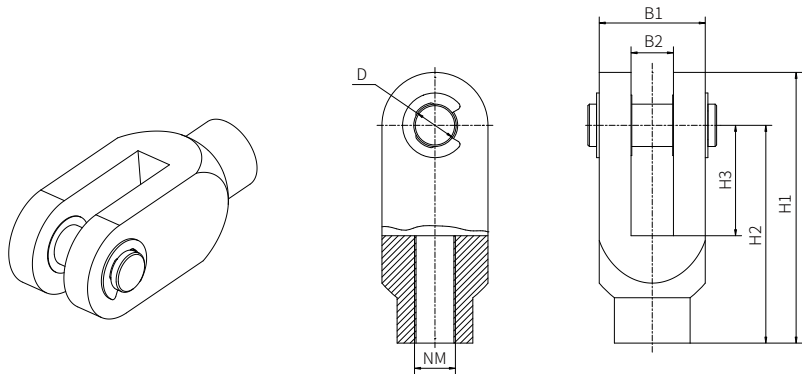
Accessory dimensions

Rod end joint Type I RI



Accessory size (mm)								Weight (Kg)
Name	D	B	H	H1	H2	NM	NH	0.18
Rod end joint Type I RI	φ16	16	76.5	64	32	M16×1.5	23	

Rod end joint Y-shaped RY

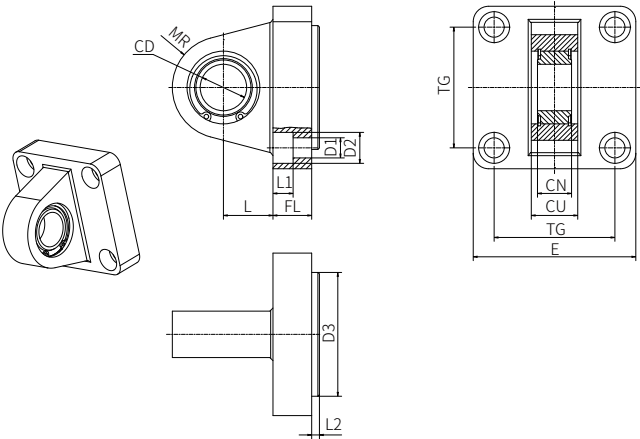


Accessory size (mm)								Weight (Kg)
Name	D	B1	B2	H1	H2	H3	NM	0.3
Rod end joint Y-shaped RY	φ16	32	16	78	64	32	M16×1.5	

01

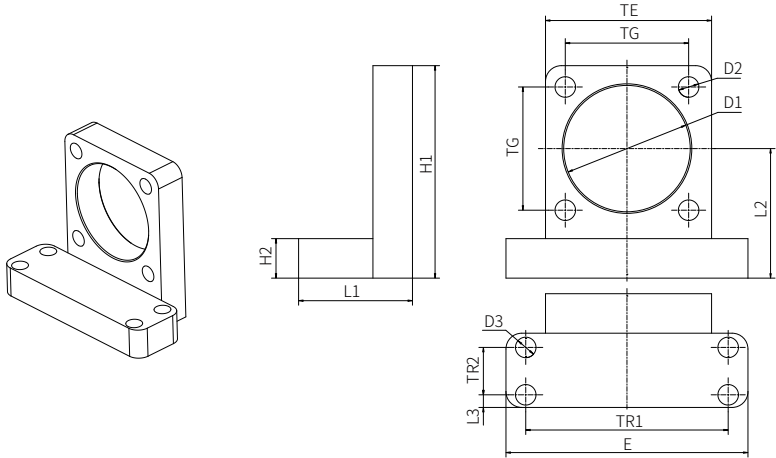
Accessory dimensions

Joint bearing tailstock AL



Accessory size (mm)														Weight (Kg)
Name	CD	CN	CU	E	D1	D2	L1	TG	D3	L2	L	FL	MR	
Joint bearing tailstock AL	φ17	14	20	□ 64	φ9	φ15	9	46.5	φ45	4	36	16	R20	0.58

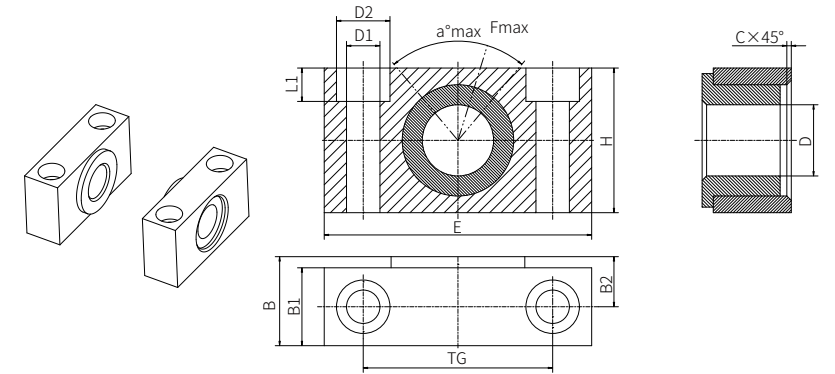
Footstand FS



Accessory size (mm)														Weight (Kg)
Name	D1	L1	L2	E	H1	H2	TE	D2	TG	D3	L3	TR1	TR2	
Footstand FS	φ45	45	60	110	92	10	64	φ9	46.5	9	8	90	18	0.6

Accessory dimensions

Earshaft mounting seat TS



Accessory size (mm)														Weight (Kg)
Name	D	C	B	B1	E	H	D1	D2	L1	TG	B2	a	F	0.21
Earshaft mounting seat TS	φ16	1.6	21	18	216	36	φ9	φ15	9	36	12	70		

01

China

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Germany

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+81 03 6809 1696

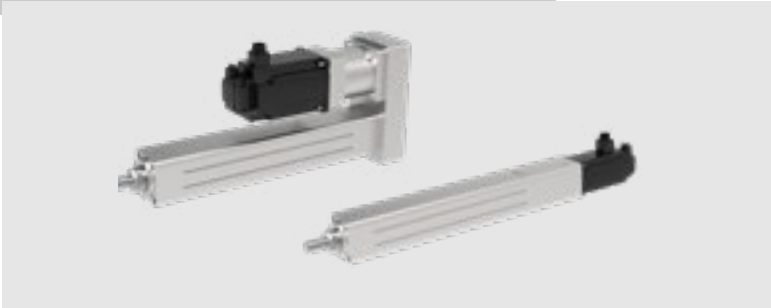


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1.3

HPA series electric cylinder

HPA 063



Contents

Model Description	01
Technical Specifications	04
Performance Chart	07
Electric cylinder size	08
Accessory dimensions	09

Product Features

- Motor linear unit reversing configuration
- Equipped with reducer, brake, and optional anti rotation configuration
- Waterproof rating IP54 or IP65
- Applicable but not limited to various types of mobile and industrial machinery

Model Description

Selection Diagram

063	U	5/10/20	0-700	AS	RB	0	X	1	NO
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

Bore

①	Bore	040	050	063	070	080	100
---	------	-----	-----	-----	-----	-----	-----

Type

②	Type	Switchback	U
		Straight-line	I

Lead

③	Lead	5/10/20	5/10/25	5/10	10/20	10/20
---	------	---------	---------	------	-------	-------

Stroke

④	Stroke	0-700	0-800	0-1000	0-1500	0-1500
---	--------	-------	-------	--------	--------	--------

Tightening components

⑤	Tightening components	Combined form	Code
		Single earring support	AS
		Intermediate trunnion	AT
		Joint bearing tailstock	AL
		Ear shaft mounting seat	TS
		Ear axis	AF
		Tripod	FS
		Spindle tailstock	AB
		Front flange	RF

Rod head component

⑥	Rod head component	Combined form	Code
		Rod end joint bearing	RB
		Rod end joint type I	RI
		Y-shaped rod end joint	RY
		Hex nut	RN
		Compensation coupling	RC

The pole head can rotate

⑦	The pole head can rotate	360 ° free rotation	0
		Non-rotatable	1

Model Description

Motor brand

⑧	Motor brand	Panasonic	S
		Customize	X

Protection level

⑨	Protection level	IP54	1
		IP65	2

Accessories

⑩	Accessories	NPN normally open	NO
		NPN normally closed	NC
		PNP normally open	PO
		PNP normally closed	PC

01

Technical Specifications

Parameter	symbol	Unit	Ball screw lead						
			5						
Mechanical parameters									
Ball screw diameter	φD	mm	25						
Stroke	L	mm	5~1000						
Unilateral allowance for over travel margin	δL	mm	1						
Motor power	P	KW	0.75				0.1		
Reduction ratio	R	-	1	1.5 ⁻¹	3	5	1	1.5 ⁻¹	3
Work efficiency	η	%	0.65						
0 travel weight	m ₀	kg	11.2	11.2	14.5	14.5	11.8	11.8	15.1
Weight per 100 millimeters of travel	δm	kg	1.2						
Performance parameters									
Rated output	F	kN	2.1	3.2	6.3	10.5	2.8	4.2	8.4
Maximum output	F _{max}	kN	7.4	11.0	15.1	15.1	8.4	12.6	15.0
Rated speed	V	mm/s	250	167	83	50	250	167	83
Maximum speed	V _{max}	mm/s	267	267	194	117	267	267	194
Rated current ^{*2}	I	A	5.1				6.9		
Maximum current ^{*2}	I _{max}	A	19.5				21		
Dynamic load	C _a	kN	15.12						
Static load	C _{0a}	kN	41.59						
Peak force required torque	M _{max}	N·m	2.39				3.18		
Braking torque	M _{brake}	N·m	3.2						
Braking voltage	U _{brake}	V	DC24						
Environmental parameters									
Operating Temperature	T	° C	-20~+50						
Protection level	IP	-	IP54/IP65						

1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5

2) The motor can be changed brand according to customer requirements, and the current is for reference only.

Technical Specifications

Parameter	symbol	Unit	Ball screw lead					
			10					
Mechanical parameters								
Ball screw diameter	φD	mm	25					
Stroke	L	mm	5~1000					
Unilateral allowance for over travel margin	δL	mm	1					
Motor power	P	KW	0.75			1		
Reduction ratio	R	-	1	1.5 ⁻¹	5	1	1.5 ⁻¹	5
Work efficiency	η	%	0.65					
0 travel weight	m ₀	kg	11.2	11.2	14.5	11.8	11.8	15.1
Weight per 100 millimeters of travel	δm	kg	1.2					
Performance parameters								
Rated output	F	kN	1.1	1.6	5.3	1.4	2.1	7.0
Maximum output	F _{max}	kN	3.7	5.5	15.0	4.2	6.3	15.0
Rated speed	V	mm/s	500	333	100	500	333	100
Maximum speed	V _{max}	mm/s	533	533	233	533	533	233
Rated current ⁺²	I	A	5.1			6.9		
Maximum current ⁺²	I _{max}	A	19.5			21		
Dynamic load	C _a	kN	15					
Static load	C _{0a}	kN	41.37					
Peak force required torque	M _{max}	N·m	2.39			3.18		
Braking torque	M _{brake}	N·m	3.2					
Braking voltage	U _{brake}	V	DC24					
Environmental parameters								
Operating Temperature	T	° C	-20~+50					
Protection level	IP	-	IP54/IP65					

1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5

2) The motor can be changed brand according to customer requirements, and the current is for reference only.

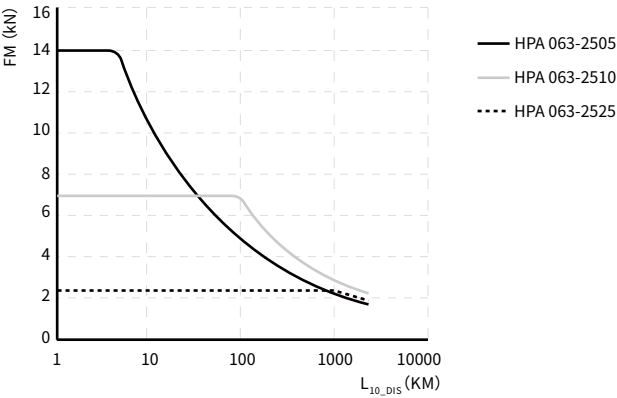
Technical Specifications

Parameter	symbol	Unit	Ball screw lead					
			25					
Mechanical parameters								
Ball screw diameter	φD	mm	25					
Stroke	L	mm	5~1000					
Unilateral allowance for over travel margin	δL	mm	1					
Motor power	P	KW	0.75			1		
Reduction ratio	R	-	1	1.5 ⁻¹	3	1	1.5 ⁻¹	3
Work efficiency	η	%	0.65					
0 travel weight	m ₀	kg	11.2	11.2	14.5	11.8	11.8	15.1
Weight per 100 millimeters of travel	δm	kg	0.9					
Performance parameters								
Rated output	F	kN	0.4	0.6	1.3	0.6	0.8	1.7
Maximum output	F _{max}	kN	1.5	2.2	4.4	1.7	2.5	5.0
Rated speed	V	mm/s	1250	833	417	1250	833	417
Maximum speed	V _{max}	mm/s	1333	1333	972	1333	1333	972
Rated current ²	I	A	5.1			6.9		
Maximum current ²	I _{max}	A	19.5			21		
Dynamic load	C _a	kN	9.45					
Static load	C _{0a}	kN	24.13					
Peak force required torque	M _{max}	N·m	2.39			3.18		
Braking torque	M _{brake}	N·m	3.2					
Braking voltage	U _{brake}	V	DC24					
Environmental parameters								
Operating Temperature	T	° C	-20~+50					
Protection level	IP	-	IP54/IP65					

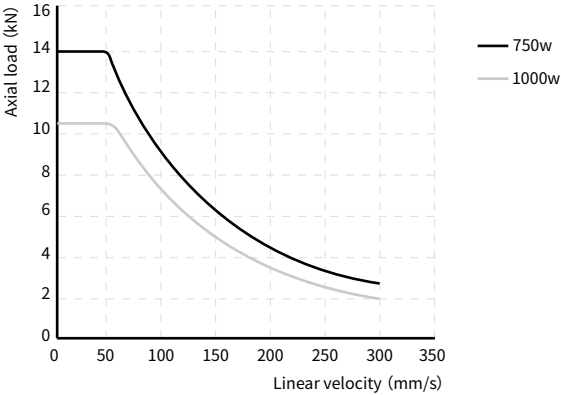
- 1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5
- 2) The motor can be changed brand according to customer requirements, and the current is for reference only.

Performance Chart

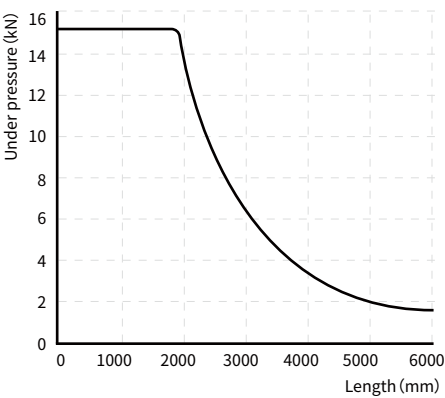
HPA063 Lifespan curve



HPA063 Force velocity curve

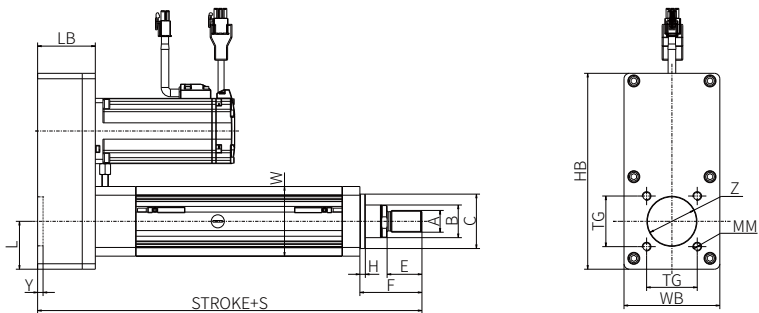


HPA063 Screw pressure curve



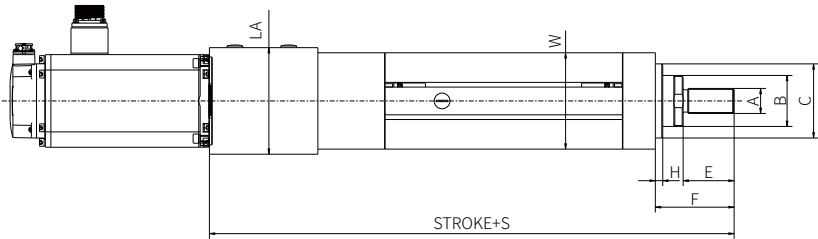
Electric cylinder size

Configuration dimensions of the reversing belt reducer



Dimension Table (mm)																
Lead screw	A	B	C	E	F	H	L	S	W	LB	TG	MM	WB	HB	Y	Z
	M20×1.5	φ36	φ50	32	55	5	50	298.5	□ 74	59	56.5	M8	110	190	5	φ55

Note: This form is only applicable for tail hinge installation.

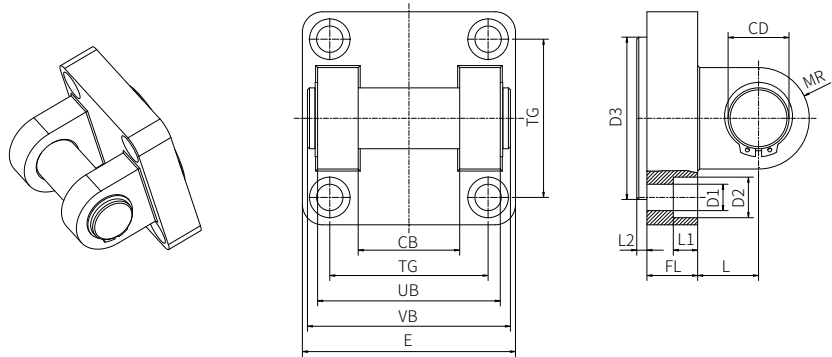


Dimension Table (mm)									
Lead screw	A	B	C	E	F	H	S	LA	W
	M20×1.5	φ36	φ50	32	55	5	347	□ 85	□ 74

Note: The brand of the motor reducer can be changed according to customer needs, and the size of the motor part is for reference only.

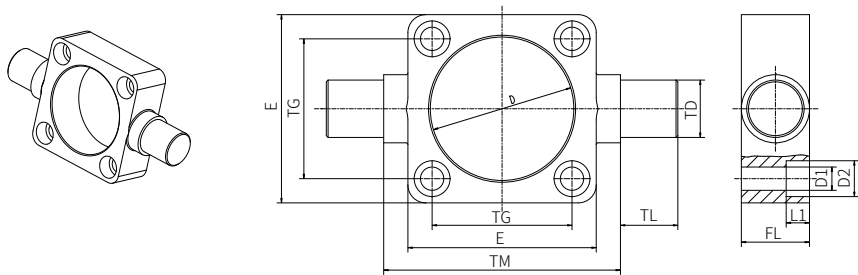
Accessory dimensions

Shaft tailstock AB



Accessory size (mm)														Weight (Kg)
Name	CD	CB	UB	VB	E	D1	D2	L1	D3	L2	L	TG	FL	
Shaft tailstock AB	φ16	40	70	80	□ 75	φ9	φ15	9	φ55	5	24	56.5	16	R18

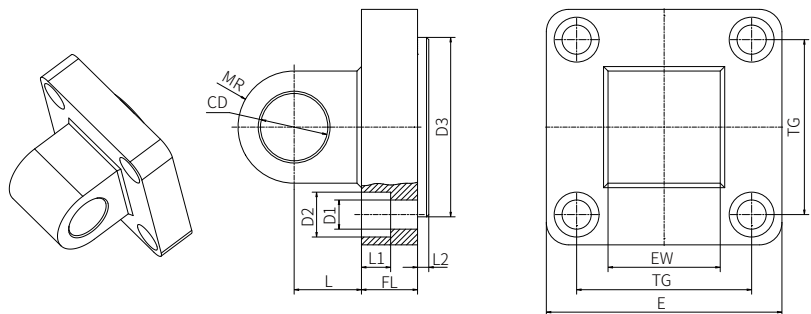
Ear axis AF



Accessory size (mm)											Weight (Kg)
Name	D	E	TD	TL	TM	D1	D2	L1	TG	FL	
Ear axis AF	φ55	75	φ20	20	90	φ9	φ15	9	56.5	20	0.67

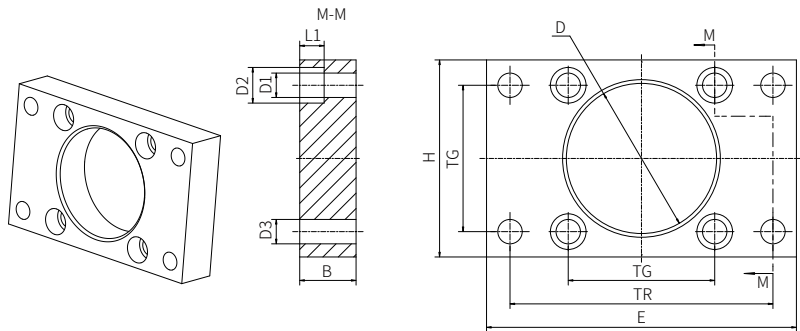
Accessory dimensions

Single earring support AS



Accessory size (mm)													Weight (Kg)
Name	CD	MR	EW	E	D1	D2	L1	D3	L2	L	TG	FL	1.1
Single earring support AS	φ16	R18	40	□ 75	φ9	φ15	9	φ55	5	24	56.5	16	

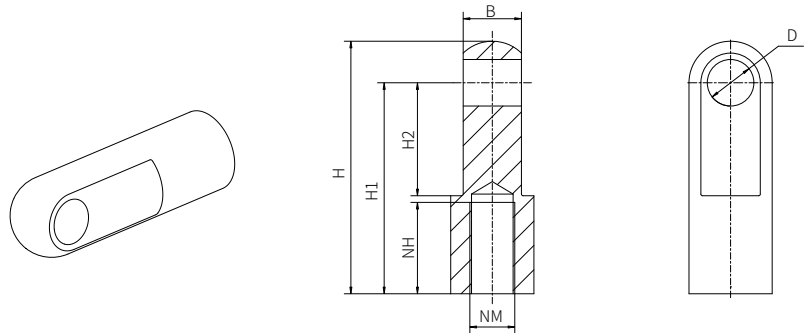
Front flange RF



Accessory size (mm)											Weight (Kg)
Name	D	B	E	H	D1	D2	L1	TG	D3	TR	1.1
Front flange RF	φ55	20	136	75	φ9	φ15	9	56.5	φ9	380	

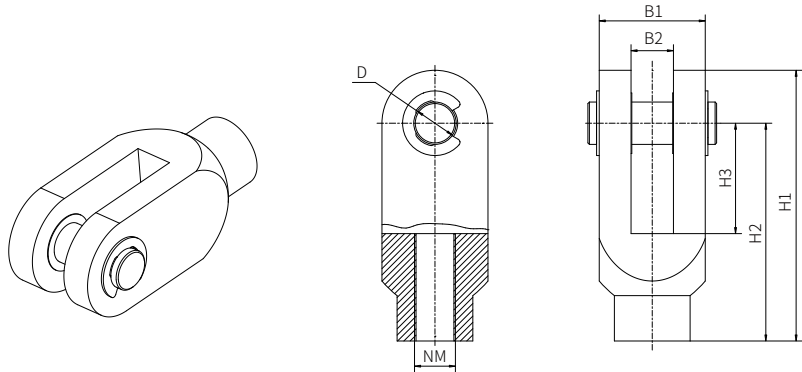
Accessory dimensions

Rod end joint Type I RI



Accessory size (mm)								Weight (Kg)
Name	D	B	H	H1	H2	NM	NH	0.5
Rod end joint Type I RI	φ20	20	98	80	40	M20×1.5	30	

Rod end joint Y-shaped RY

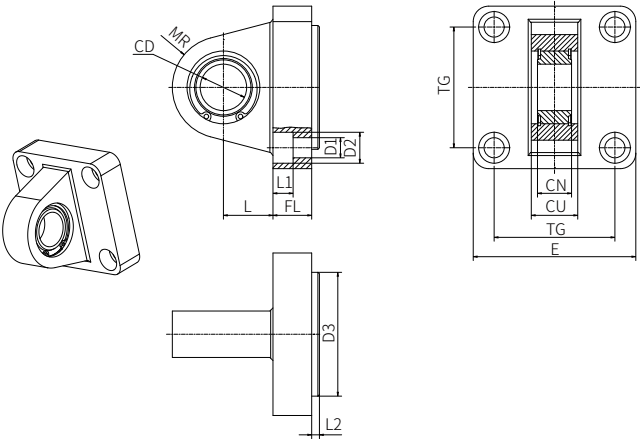


Accessory size (mm)								Weight (Kg)
Name	D	B1	B2	H1	H2	H3	NM	0.8
Rod end joint Y-shaped RY	φ20	44	20	102	80	40	M20×1.5	

01

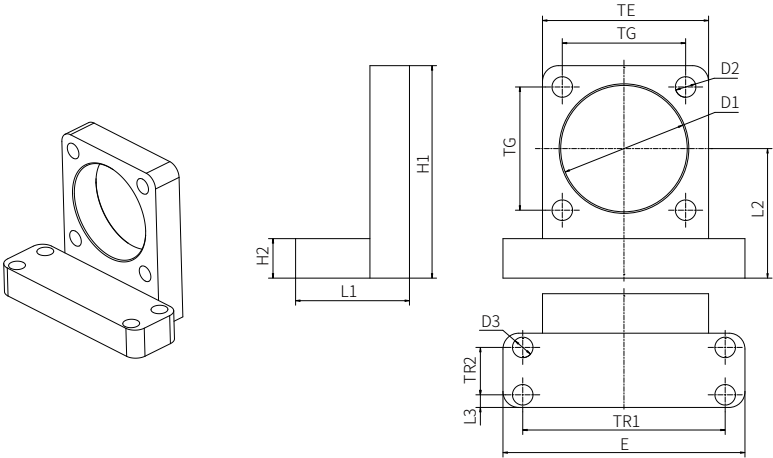
Accessory dimensions

Joint bearing tailstock AL



Accessory size (mm)														Weight (Kg)
Name	CD	CN	CU	E	D1	D2	L1	TG	D3	L2	L	FL	MR	
Joint bearing tailstock AL	φ20	12	16	□ 75	φ9	φ15	9	56.5	φ55	5	24	16	R24	1.1

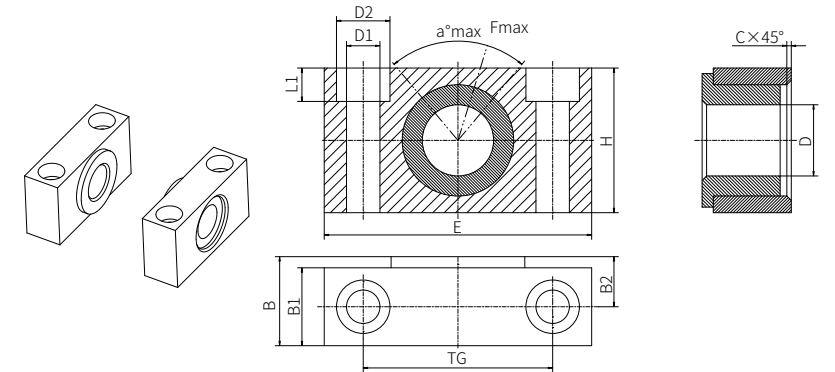
Footstand FS



Accessory size (mm)														Weight (Kg)
Name	D1	L1	L2	E	H1	H2	TE	D2	TG	D3	L3	TR1	TR2	
Footstand FS	φ55	50	60	120	97.5	12	75	φ9	56.5	φ9	9	100	20	0.8

Accessory dimensions

Earshaft mounting seat TS



Accessory size (mm)														Weight (Kg)
Name	D	C	B	B1	E	H	D1	D2	L1	TG	B2	a	F	0.28
Earshaft mounting seat TS	φ20	2	23	20	65	40	φ9	φ15	9	42	13	70		

China

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Japan

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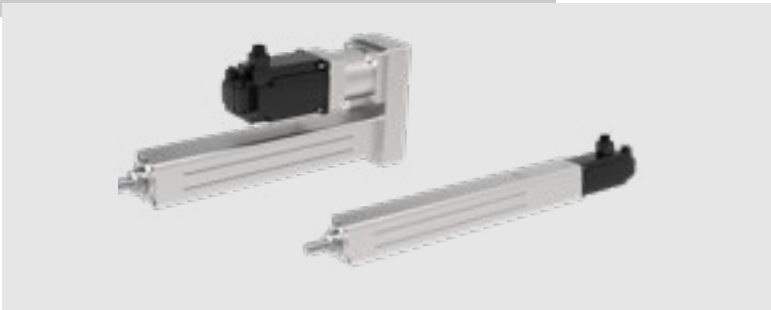


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1.4

HPA series electric cylinder

HPA 070



Contents

Model Description	01
Technical Specifications	04
Performance Chart	06
Electric cylinder size	07
Accessory dimensions	08

Product Features

- Motor linear unit reversing configuration
- Equipped with reducer, brake, and optional anti rotation configuration
- Waterproof rating IP54 or IP65
- Applicable but not limited to various types of mobile and industrial machinery

Model Description

Selection Diagram

070	U	5/10/20	0-700	AS	RB	0	X	1	NO
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

Bore

①	Bore	040	050	063	070	080	100
---	------	-----	-----	-----	-----	-----	-----

Type

②	Type	Switchback	U
		Straight-line	I

Lead

③	Lead	5/10/20	5/10/25	5/10	10/20	10/20
---	------	---------	---------	------	-------	-------

Stroke

④	Stroke	0-700	0-800	0-1000	0-1500	0-1500
---	--------	-------	-------	--------	--------	--------

Tightening components

⑤	Tightening components	Combined form	Code
		Single earring support	AS
		Intermediate trunnion	AT
		Joint bearing tailstock	AL
		Ear shaft mounting seat	TS
		Ear axis	AF
		Tripod	FS
		Spindle tailstock	AB
		Front flange	RF

Rod head component

⑥	Rod head component	Combined form	Code
		Rod end joint bearing	RB
		Rod end joint type I	RI
		Y-shaped rod end joint	RY
		Hex nut	RN
		Compensation coupling	RC

The pole head can rotate

⑦	The pole head can rotate	360 ° free rotation	0
		Non-rotatable	1

Model Description

Motor brand

⑧	Motor brand	Panasonic	S
		Customize	X

Protection level

⑨	Protection level	IP54	1
		IP65	2

Accessories

⑩	Accessories	NPN normally open	NO
		NPN normally closed	NC
		PNP normally open	PO
		PNP normally closed	PC

01

Technical Specifications

Parameter	symbol	Unit	Ball screw lead					
			5					
Mechanical parameters								
Ball screw diameter	φD	mm	32					
Stroke	L	mm	5~1500					
Unilateral allowance for over travel margin	δL	mm	5					
Motor power	P	KW	1.5			2		
Reduction ratio	R	-	1	1.5 ⁻¹	3	1	1.5 ⁻¹	3
Work efficiency	η	%	0.75					
0 travel weight	m ₀	kg	20.9	21.1	24.2	22	22.2	25.3
Weight per 100 millimeters of travel	δm	kg	1.85					
Performance parameters								
Rated output	F	kN	4.5	6.75	13.1	6	9	/
Maximum output	F _{max}	kN	13.47	13.8	13.8	13.8	13.8	
Rated speed	V	mm/s	250	167	83.3	250	167	
Maximum speed	V _{max}	mm/s	417	278	139	417	278	
Rated current ^{*2}	I	A	9.5			12.6		
Maximum current ^{*2}	I _{max}	A	31.6			42		
Dynamic load	C _a	kN	13.79					
Static load	C _{0a}	kN	42.6					
Peak force required torque	M _{max}	N·m	14.3			19.1		
Braking torque	M _{brake}	N·m	8					
Braking voltage	U _{brake}	V	DC24					
Environmental parameters								
Operating Temperature	T	° C	-20~+50					
Protection level	IP	-	IP54/IP65					

1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5

2) The motor can be changed brand according to customer requirements, and the current is for reference only.

Technical Specifications

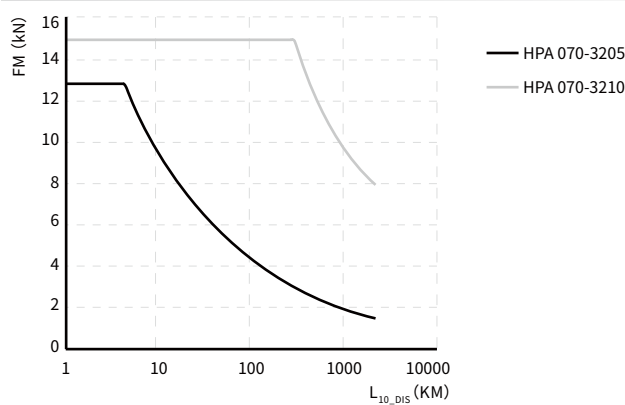
Parameter	symbol	Unit	Ball screw lead											
			10											
Mechanical parameters														
Ball screw diameter	φD	mm	32											
Stroke	L	mm	5~1500											
Unilateral allowance for over travel margin	δL	mm	5											
Motor power	P	KW	1.5						2					
Reduction ratio	R	-	1	1.5 ⁻¹	3	5	10	1	1.5 ⁻¹	3	5	10		
Work efficiency	η	%	0.75											
0 travel weight	m ₀	kg	20.9	21.1	24.2	24.2	24.2	22	22.2	25.3	25.3	25.3		
Weight per 100 millimeters of travel	δm	kg	1.85											
Performance parameters														
Rated output	F	kN	2.25	3.37	6.75	11.3	22.5	3	4.5	9	15	30		
Maximum output	F _{max}	kN	6.74	10.1	20.2	33.7	34.5	9	13.5	17	34.5	34.5		
Rated speed	V	mm/s	500	333	167	100	50	500	333	167	100	50		
Maximum speed	V _{max}	mm/s	833	556	278	167	83.3	833	556	278	167	83.3		
Rated current ^{*2}	I	A	9.5						12.6					
Maximum current ^{*2}	I _{max}	A	31.6						42					
Dynamic load	C _a	kN	34.56											
Static load	C _{0a}	kN	81.82											
Peak force required torque	M _{max}	N·m	14.3						19.1					
Braking torque	M _{brake}	N·m	8											
Braking voltage	U _{brake}	V	DC24											
Environmental parameters														
Operating Temperature	T	°C	-20~+50											
Protection level	IP	-	IP54/IP65											

1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5

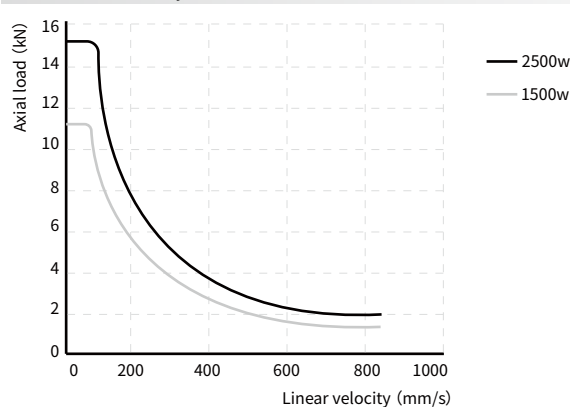
2) The motor can be changed brand according to customer requirements, and the current is for reference only.

Performance Chart

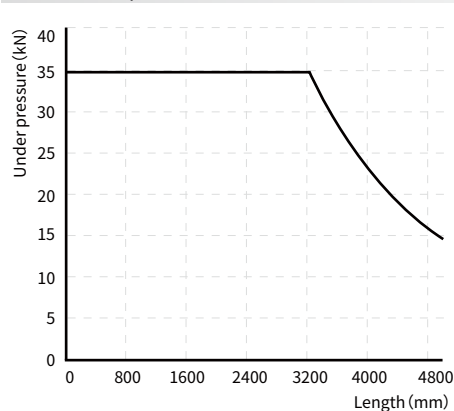
HPA070 Lifespan curve



HPA070 Force velocity curve

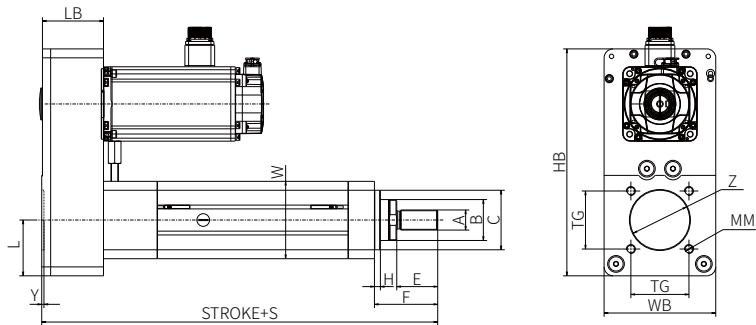


HPA070 Screw pressure curve



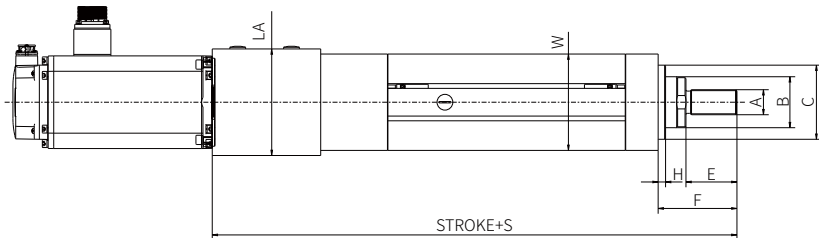
Electric cylinder size

Configuration dimensions of the reversing belt reducer



Dimension Table (mm)																
Lead screw	A	B	C	E	F	H	L	S	W	LB	TG	MM	WB	HB	Y	Z
	M27×2	φ50	φ70	45	75	10	60	380	□ 93	82	72	M10	130	245	3	70

Note: This form is only applicable for tail hinge installation.

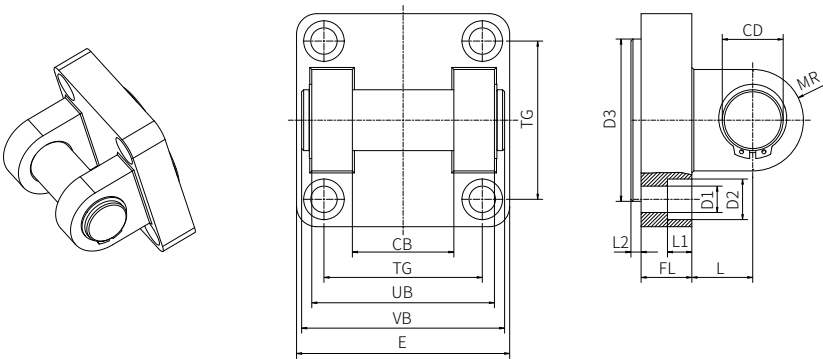


Dimension Table (mm)									
Lead screw	A	B	C	E	F	H	S	LA	W
	M27×2	φ50	φ70	45	75	10	409	□ 100	□ 93

Note: The brand of the motor reducer can be changed according to customer needs, and the size of the motor part is for reference only.

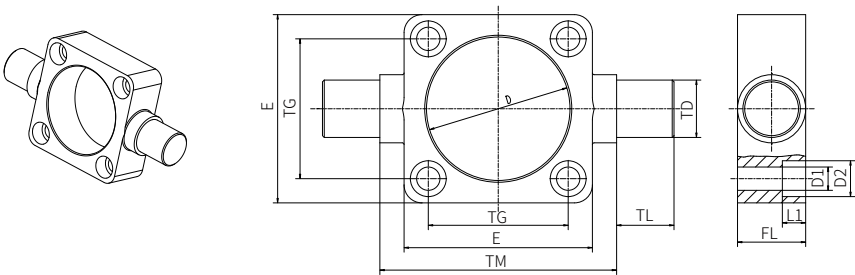
Accessory dimensions

Shaft tailstock AB



Accessory size (mm)															Weight (Kg)
Name	CD	CB	UB	VB	E	D1	D2	L1	D3	L2	L	TG	FL	MR	2.23
Shaft tailstock AB	φ30	32	75	90	□ 98	φ11	φ18	11	φ70	5	28	72	48	R23	

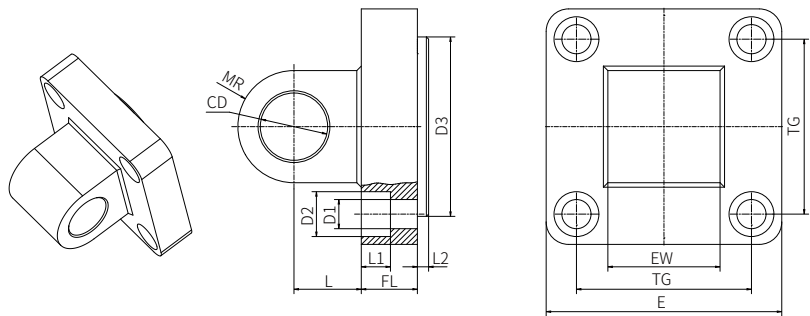
Ear axis AF



Accessory size (mm)											Weight (Kg)
Name	D	E	TD	TL	TM	D1	D2	L1	TG	FL	1.69
Ear axis AF	φ70	95	φ25	25	110	φ11	φ18	11	72	38	

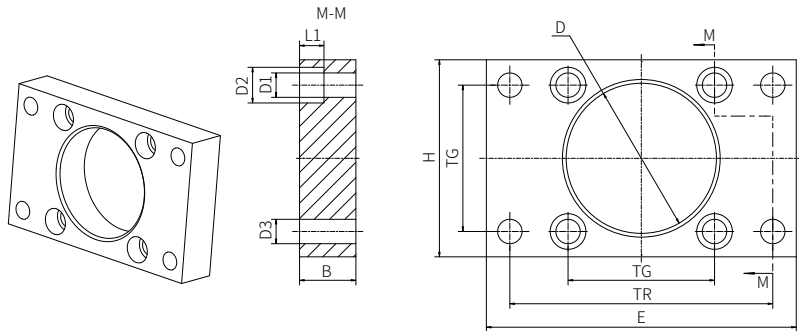
Accessory dimensions

Single earring support AS



Accessory size (mm)													Weight (Kg)
Name	CD	MR	EW	E	D1	D2	L1	D3	L2	L	TG	FL	1.78
Single earring support AS	φ30	R23	45	□ 95	φ11	φ18	11	φ70	5	28	72	20	

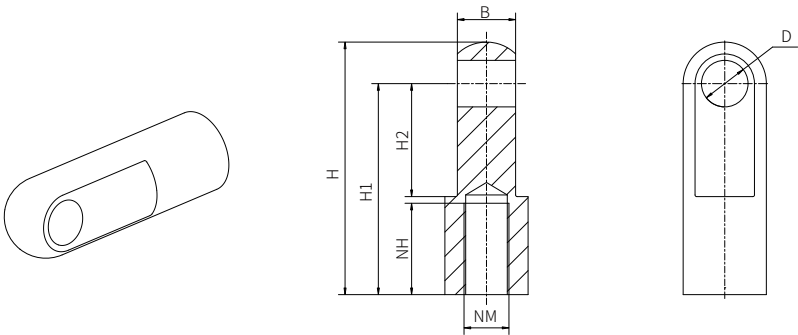
Front flange RF



Accessory size (mm)												Weight (Kg)
Name	D	B	E	H	D1	D2	L1	TG	D3	TR		2.13
Front flange RF	φ70	25	160	95	φ11	φ18	11	72	φ11	126		

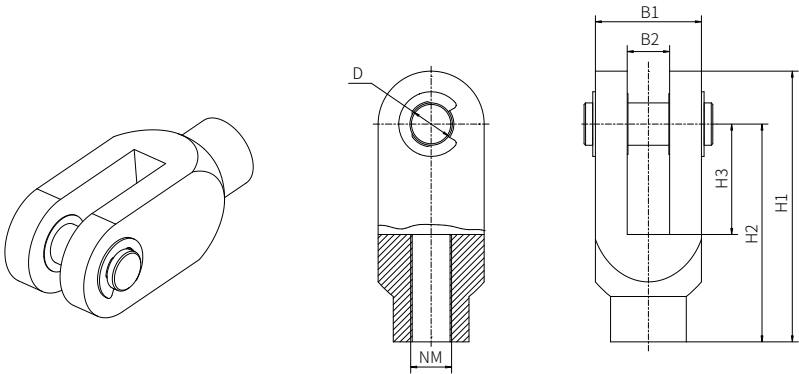
Accessory dimensions

Rod end joint Type I RI



Accessory size (mm)								Weight (Kg)
Name	D	B	H	H1	H2	NM	NH	1.2
Rod end joint Type I RI	φ28	30	139	110	51	M27×2	45	

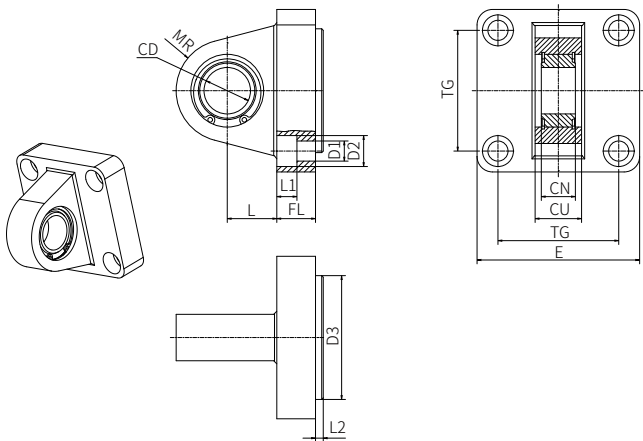
Rod end joint Y-shaped RY



Accessory size (mm)								Weight (Kg)
Name	D	B1	B2	H1	H2	H3	NM	3.73
Rod end joint Y-shaped RY	φ28	54	28	139	110	55	M27×2	

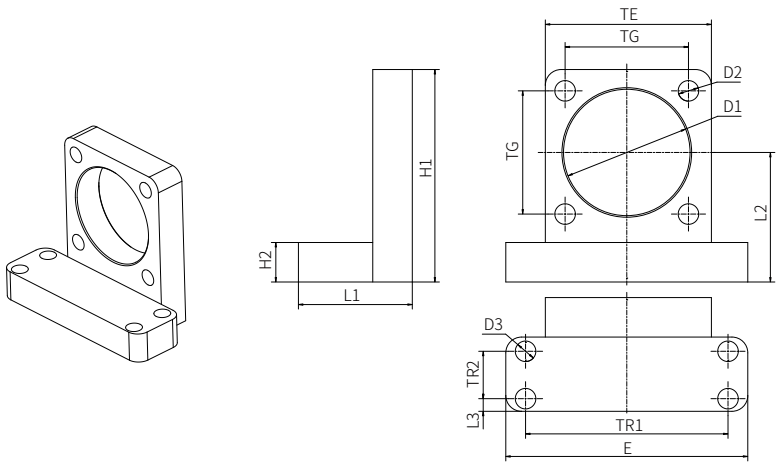
Accessory dimensions

Joint bearing tailstock AL



Accessory size (mm)														Weight (Kg)
Name	CD	CN	CU	E	D1	D2	L1	TG	D3	L2	L	FL	MR	2.51
Joint bearing tailstock AL	φ30	22	30	□ 98	φ11	φ18	11	72	φ70	5	30	20	R30	

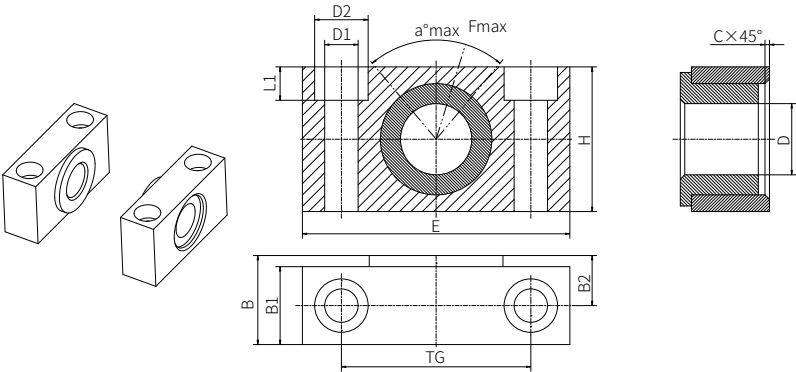
Footstand FS



Accessory size (mm)														Weight (Kg)
Name	D1	L1	L2	E	H1	H2	TE	D2	TG	D3	L3	TR1	TR2	2.55
Footstand FS	φ70	62	77	143	124.5	20	105	φ11	φ18	11	7	118	25	

Accessory dimensions

Earshaft mounting seat TS



Accessory size (mm)														Weight (Kg)
Name	D	C	B	B1	E	H	D1	D2	L1	TG	B2	a	F	1.26
Earshaft mounting seat TS	φ25	1.6	28.5	25	75	50	φ14	φ20	13	50	16	70		

China	America
+86 400 101 8889	+01 630 995 3674
Germany	Japan
+49(30) 72088-0	+81 03 6809 1696

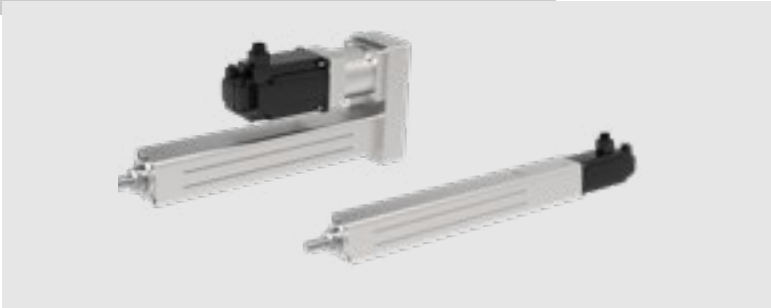


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1.5

HPA series electric cylinder

HPA 080



Contents

Model Description	01
Technical Specifications	04
Performance Chart	06
Electric cylinder size	07
Accessory dimensions	08

Product Features

- Motor linear unit reversing configuration
- Equipped with reducer, brake, and optional anti rotation configuration
- Waterproof rating IP54 or IP65
- Applicable but not limited to various types of mobile and industrial machinery

Model Description

Selection Diagram

080	U	5/10/20	0-700	AS	RB	0	X	1	NO
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

Bore

①	Bore	040	050	063	070	080	100
---	------	-----	-----	-----	-----	-----	-----

Type

②	Type	Switchback	U
		Straight-line	I

Lead

③	Lead	5/10/20	5/10/25	5/10	10/20	10/20
---	------	---------	---------	------	-------	-------

Stroke

④	Stroke	0-700	0-800	0-1000	0-1500	0-1500
---	--------	-------	-------	--------	--------	--------

Tightening components

⑤	Tightening components	Combined form	Code
		Single earring support	AS
		Intermediate trunnion	AT
		Joint bearing tailstock	AL
		Ear shaft mounting seat	TS
		Ear axis	AF
		Tripod	FS
		Spindle tailstock	AB
		Front flange	RF

Rod head component

⑥	Rod head component	Combined form	Code
		Rod end joint bearing	RB
		Rod end joint type I	RI
		Y-shaped rod end joint	RY
		Hex nut	RN
		Compensation coupling	RC

The pole head can rotate

⑦	The pole head can rotate	360 ° free rotation	0
		Non-rotatable	1

Model Description

Motor brand

⑧	Motor brand	Panasonic	S
		Customize	X

Protection level

⑨	Protection level	IP54	1
		IP65	2

Accessories

⑩	Accessories	NPN normally open	NO
		NPN normally closed	NC
		PNP normally open	PO
		PNP normally closed	PC

01

Technical Specifications

Parameter	symbol	Unit	Ball screw lead							
			10							
Mechanical parameters										
Ball screw diameter	φD	mm	40							
Stroke	L	mm	10~1800							
Unilateral allowance for over travel margin	δL	mm	5							
Motor power	P	KW	2				3			
Reduction ratio	R	-	1	1.5 ⁻¹	3	5	1	1.5 ⁻¹	3	5
Work efficiency	η	%	0.75							
0 travel weight	m ₀	kg	29	30	32	33.5	34	34.5	40	40.5
Weight per 100 millimeters of travel	δm	kg	2.36							
Performance parameters										
Rated output	F	kN	3	4.5	9	15	4.5	6.75	13.5	22.5
Maximum output	F _{max}	kN	9	13.5	27	45	13.9	20.8	41.5	65.7
Rated speed	V	mm/s	500	333	167	100	500	333	167	100
Maximum speed	V _{max}	mm/s	833	556	278	167	833	556	278	167
Rated current ²	I	A	12.6				10.5			
Maximum current ²	I _{max}	A	42				33			
Dynamic load	C _a	kN	65.7							
Static load	C _{0a}	kN	179.42							
Peak force required torque	M _{max}	N·m	19.1				29.4			
Braking torque	M _{brake}	N·m	8				20			
Braking voltage	U _{brake}	V	DC24							
Environmental parameters										
Operating Temperature	T	° C	-20~+50							
Protection level	IP	-	IP54/IP65							

1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5
 2) The motor can be changed brand according to customer requirements, and the current is for reference only.

Technical Specifications

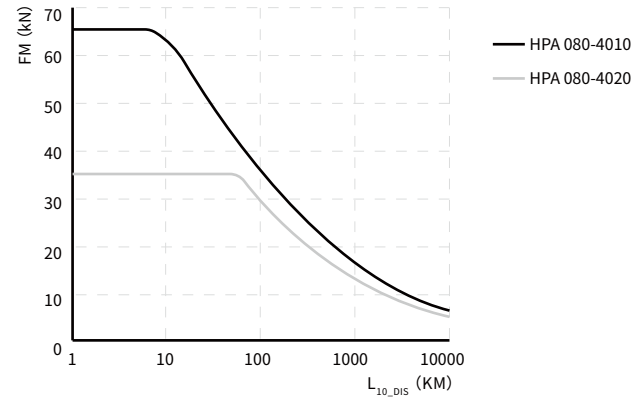
Parameter	symbol	Unit	Ball screw lead							
			20							
Mechanical parameters										
Ball screw diameter	φD	mm	40							
Stroke	L	mm	10~1800							
Unilateral allowance for over travel margin	δL	mm	5							
Motor power	P	KW	2				3			
Reduction ratio	R	-	1	1.5 ⁻¹	3	5	1	1.5 ⁻¹	3	5
Work efficiency	η	%	0.75							
0 travel weight	m ₀	kg	29	30	32	33.5	34	34.5	40	40.5
Weight per 100 millimeters of travel	δm	kg	2.36							
Performance parameters										
Rated output	F	kN	1.5	2.25	4.5	7.5	2.25	3.37	6.75	11.3
Maximum output	F _{max}	kN	4.5	6.75	13.5	34.6	6.92	10.4	20.8	34.6
Rated speed	V	mm/s	1000	667	333	200	1000	667	333	200
Maximum speed	V _{max}	mm/s	1667	1111	556	333	1667	1111	556	333
Rated current ^{*2}	I	A	12.6				10.5			
Maximum current ^{*2}	I _{max}	A	42				33			
Dynamic load	C _a	kN	45.16							
Static load	C _{0a}	kN	116.53							
Peak force required torque	M _{max}	N·m	19.1				29.4			
Braking torque	M _{brake}	N·m	8				20			
Braking voltage	U _{brake}	V	DC24							
Environmental parameters										
Operating Temperature	T	° C	-20~+50							
Protection level	IP	-	IP54/IP65							

1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5

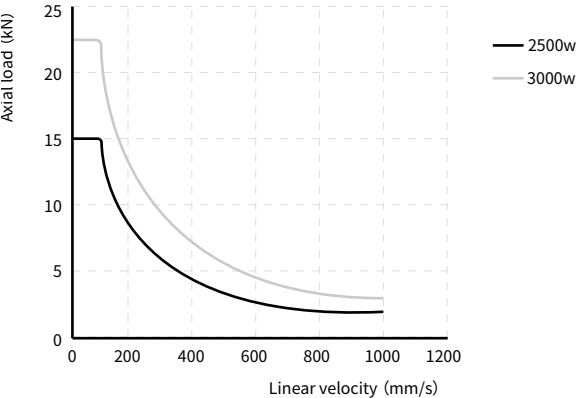
2) The motor can be changed brand according to customer requirements, and the current is for reference only.

Performance Chart

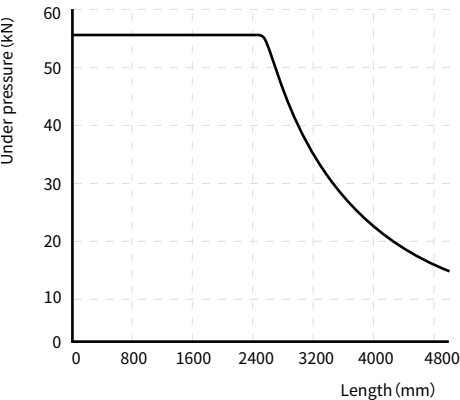
HPA080 Lifespan curve



HPA080 Force velocity curve

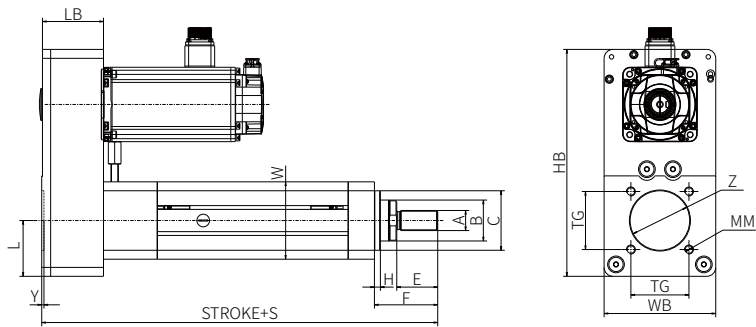


HPA080 Screw pressure curve



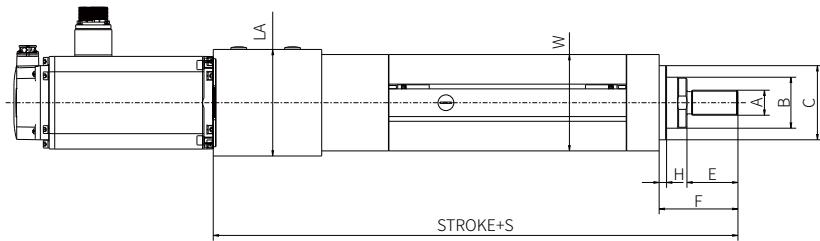
Electric cylinder size

Configuration dimensions of the reversing belt reducer



Dimension Table (mm)																
Lead screw	A	B	C	E	F	H	L	S	W	LB	TG	MM	WB	HB	Y	Z
	M27×2	φ55	φ80	55	85	8	75	432	□ 104	74	78	M12	150	305	3	80

Note: This form is only applicable for tail hinge installation.

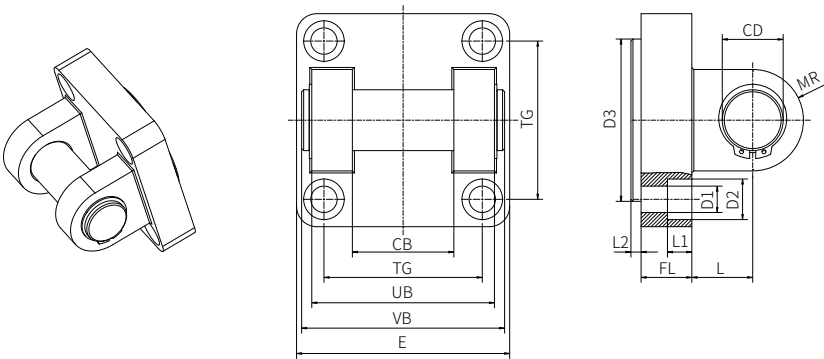


Dimension Table (mm)									
Lead screw	A	B	C	E	F	H	S	LA	W
	M27×2	φ55	φ80	55	85	8	466	□ 115	□ 104

Note: The brand of the motor reducer can be changed according to customer needs, and the size of the motor part is for reference only.

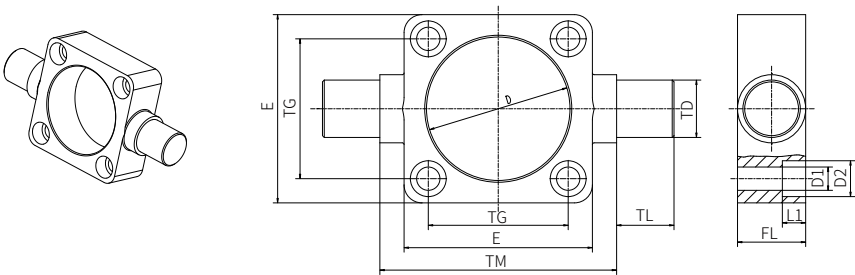
Accessory dimensions

Shaft tailstock AB



Accessory size (mm)															Weight (Kg)
Name	CD	CB	UB	VB	E	D1	D2	L1	D3	L2	L	TG	FL	MR	
Shaft tailstock AB	φ30	50	90	100	□ 105	φ13	φ20	13	φ80	5	30	78	25	R25	

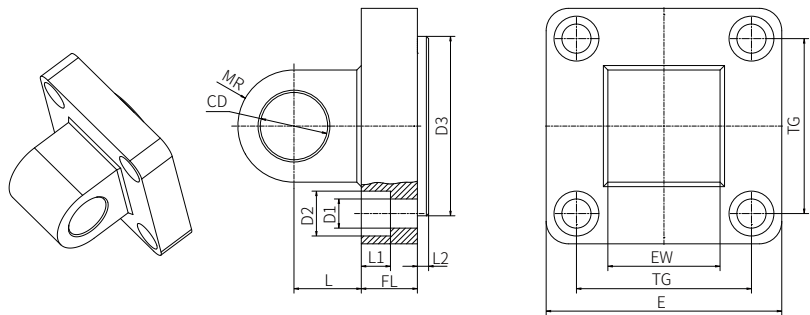
Ear axis AF



Accessory size (mm)											Weight (Kg)
Name	D	E	TD	TL	TM	D1	D2	L1	TG	FL	2.17
Ear axis AF	φ80	105	φ32	32	132	φ13	φ20	13	74	38	

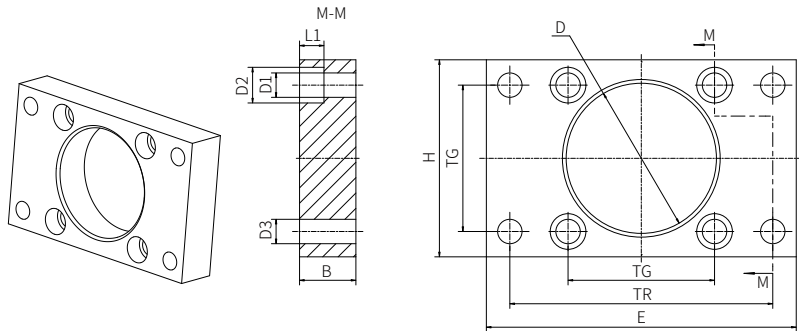
Accessory dimensions

Single earring support AS



Accessory size (mm)													Weight (Kg)
Name	CD	MR	EW	E	D1	D2	L1	D3	L2	L	TG	FL	2.47
Single earring support AS	φ30	R25	50	□ 105	φ13	φ20	13	φ80	5	30	78	25	

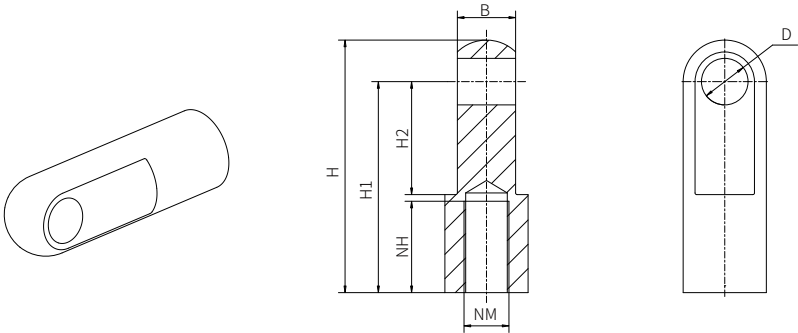
Ear shaft mounting seat RF



Accessory size (mm)												Weight (Kg)
Name	D	B	E	H	D1	D2	L1	TG	D3	TR		2.56
Ear shaft mounting seat RF	φ80	30	165	105	φ13	φ20	13	78	φ9	72		

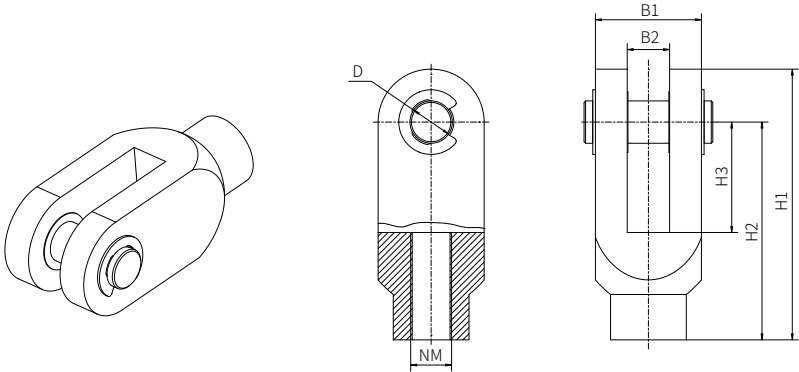
Accessory dimensions

Rod end joint Type I RI



Accessory size (mm)								Weight (Kg)
Name	D	B	H	H1	H2	NM	NH	1.58
Rod end joint Type I RI	φ28	35	155	127	68	M27×2	55	

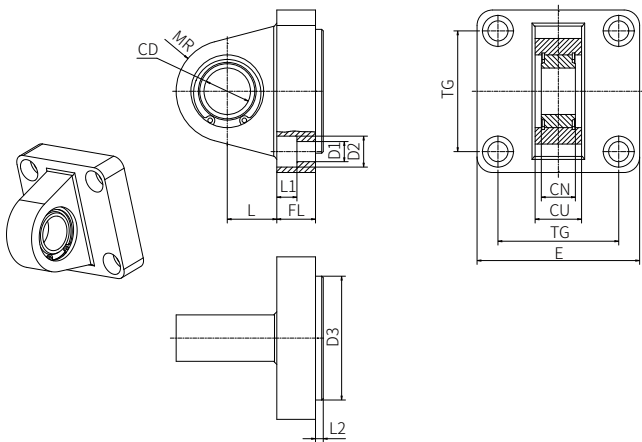
Rod end joint Y-shaped RY



Accessory size (mm)								Weight (Kg)
Name	D	B1	B2	H1	H2	H3	NM	4.11
Rod end joint Y-shaped RY	φ28	70	28	179	144	73	M27×2	

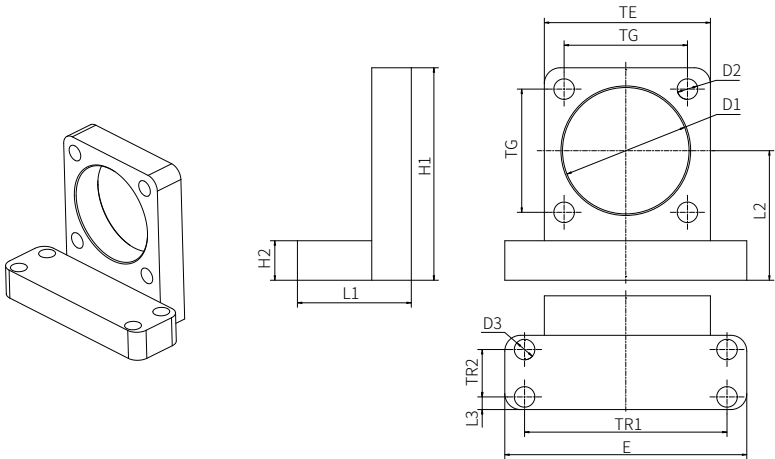
Accessory dimensions

Joint bearing tailstock AL



Accessory size (mm)														Weight (Kg)
Name	CD	CN	CU	E	D1	D2	L1	TG	D3	L2	L	FL	MR	2.51
Joint bearing tailstock AL	φ30	50	90	□ 105	φ13	φ20	13	78	φ80	5	32	25	R25	

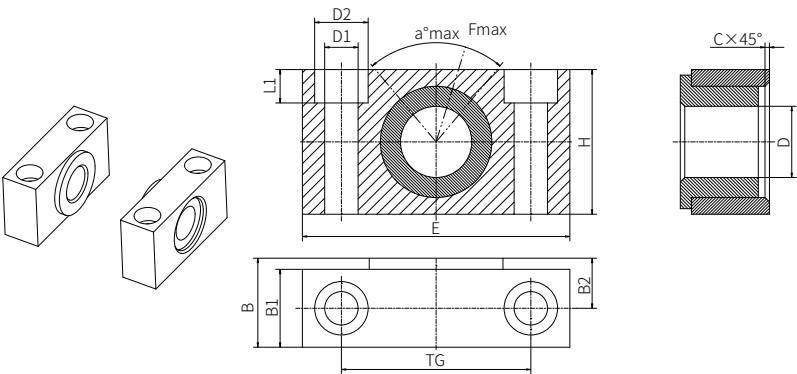
Footstand FS



Accessory size (mm)														Weight (Kg)
Name	D1	L1	L2	E	H1	H2	TE	D2	TG	D3	L3	TR1	TR2	2.96
Footstand FS	φ80	72	82	153	134.5	25	105	φ13	78	φ13	8	128	30	

Accessory dimensions

Earshaft mounting seat TS



Accessory size (mm)														Weight (Kg)
Name	D	C	B	B1	E	H	D1	D2	L1	TG	B2	a	F	
Earshaft mounting seat TS	φ16	2	21	18	55	36	φ9	φ15	9	36	12	80		0.21

China	America
+86 400 101 8889	+01 630 995 3674
Germany	Japan
+49(30) 72088-0	+81 03 6809 1696

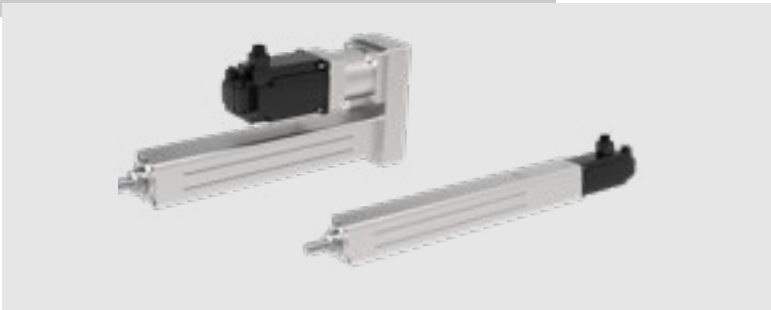


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1.6

HPA series electric cylinder

HPA 100



Contents

Model Description	01
Technical Specifications	04
Performance Chart	06
Electric cylinder size	07
Accessory dimensions	08

Product Features

- Motor linear unit reversing configuration
- Equipped with reducer, brake, and optional anti rotation configuration
- Waterproof rating IP54 or IP65
- Applicable but not limited to various types of mobile and industrial machinery

Model Description

Selection Diagram

100	U	5/10/20	0-700	AS	RB	0	X	1	NO
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩

Bore

①	Bore	040	050	063	070	080	100
---	------	-----	-----	-----	-----	-----	-----

Type

②	Type	Switchback	U
		Straight-line	I

Lead

③	Lead	5/10/20	5/10/25	5/10	10/20	10/20
---	------	---------	---------	------	-------	-------

Stroke

④	Stroke	0-700	0-800	0-1000	0-1500	0-1500
---	--------	-------	-------	--------	--------	--------

Tightening components

⑤	Tightening components	Combined form	Code
		Single earring support	AS
		Intermediate trunnion	AT
		Joint bearing tailstock	AL
		Ear shaft mounting seat	TS
		Ear axis	AF
		Tripod	FS
		Spindle tailstock	AB
		Front flange	RF

Rod head component

⑥	Rod head component	Combined form	Code
		Rod end joint bearing	RB
		Rod end joint type I	RI
		Y-shaped rod end joint	RY
		Hex nut	RN
		Compensation coupling	RC

The pole head can rotate

⑦	The pole head can rotate	360 ° free rotation	0
		Non-rotatable	1

Model Description

Motor brand

⑧	Motor brand	Panasonic	S
		Customize	X

Protection level

⑨	Protection level	IP54	1
		IP65	2

Accessories

⑩	Accessories	NPN normally open	NO
		NPN normally closed	NC
		PNP normally open	PO
		PNP normally closed	PC

01

Technical Specifications

Parameter	symbol	Unit	Ball screw lead							
			10							
Mechanical parameters										
Ball screw diameter	φD	mm	50							
Stroke	L	mm	10~2000							
Unilateral allowance for over travel margin	δL	mm	5							
Motor power	P	KW	4				5			
Reduction ratio	R	-	1	1.5 ⁻¹	3	5	1	1.5 ⁻¹	3	5
Work efficiency	η	%	0.75							
0 travel weight	m ₀	kg	55	56	75	75	58.5	59.5	78.5	78.5
Weight per 100 millimeters of travel	δm	kg	4.4							
Performance parameters										
Rated output	F	kN	6	9	18	30	7.5	11.3	22.5	37.5
Maximum output	F _{max}	kN	18.1	27.1	54.3	72.3	22.5	33.7	67.4	72.3
Rated speed	V	mm/s	500	333	167	100	500	333	167	100
Maximum speed	V _{max}	mm/s	500	500	278	167	500	500	278	167
Rated current ²	I	A	13				15.9			
Maximum current ²	I _{max}	A	40				50			
Dynamic load	C _a	kN	72.33							
Static load	C _{0a}	kN	222.44							
Peak force required torque	M _{max}	N·m	38.4				47.7			
Braking torque	M _{brake}	N·m	20							
Braking voltage	U _{brake}	V	DC24							
Environmental parameters										
Operating Temperature	T	° C	-20~+50							
Protection level	IP	-	IP54/IP65							

- 1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5
- 2) The motor can be changed brand according to customer requirements, and the current is for reference only.

Technical Specifications

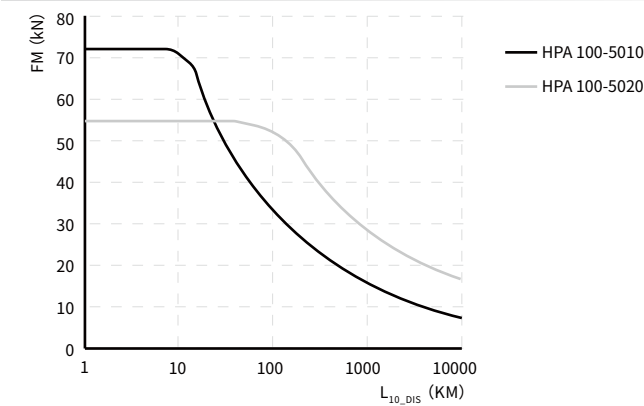
Parameter	symbol	Unit	Ball screw lead							
			20							
Mechanical parameters										
Ball screw diameter	φD	mm	50							
Stroke	L	mm	10~2000							
Unilateral allowance for over travel margin	δL	mm	5							
Motor power	P	KW	4				5			
Reduction ratio	R	-	1	1.5 ⁻¹	3	5	1	1.5 ⁻¹	3	5
Work efficiency	η	%	0.75							
0 travel weight	m ₀	kg	55	56	75	75	58.5	59.5	78.5	78.5
Weight per 100 millimeters of travel	δm	kg	4.4							
Performance parameters										
Rated output	F	kN	3	4.5	9	15	3.75	5.6	11.3	18.8
Maximum output	F _{max}	kN	9.1	13.6	27.1	45.2	11.2	16.9	33.7	56.2
Rated speed	V	mm/s	1000	667	333	200	1000	667	333	200
Maximum speed	V _{max}	mm/s	1000	1000	556	333	1000	1000	556	333
Rated current ^{*2}	I	A	13				15.9			
Maximum current ^{*2}	I _{max}	A	40				50			
Dynamic load	C _a	kN	90.49							
Static load	C _{0a}	kN	247.06							
Peak force required torque	M _{max}	N·m	38.4				47.7			
Braking torque	M _{brake}	N·m	20							
Braking voltage	U _{brake}	V	DC24							
Environmental parameters										
Operating Temperature	T	° C	-20~+50							
Protection level	IP	-	IP54/IP65							

1) Suitable for situations where the speed ratio of the reversing synchronous wheel is 1.5

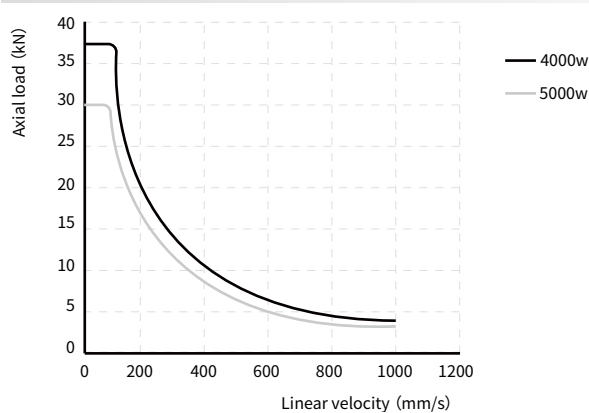
2) The motor can be changed brand according to customer requirements, and the current is for reference only.

Performance Chart

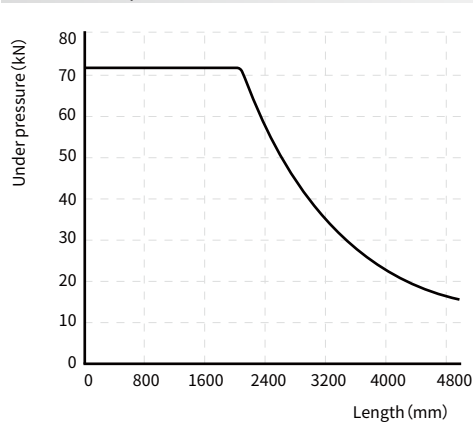
HPA100 Lifespan curve



HPA100 Force velocity curve

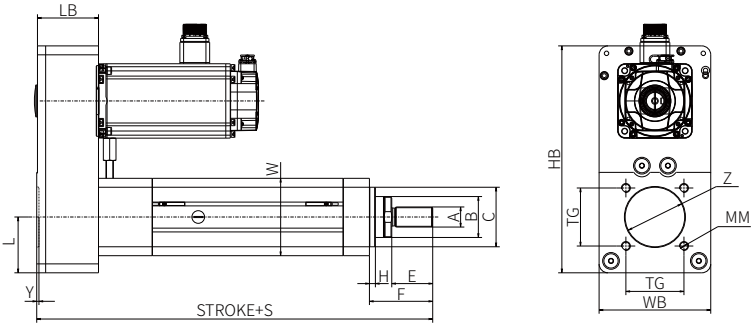


HPA100 Screw pressure curve



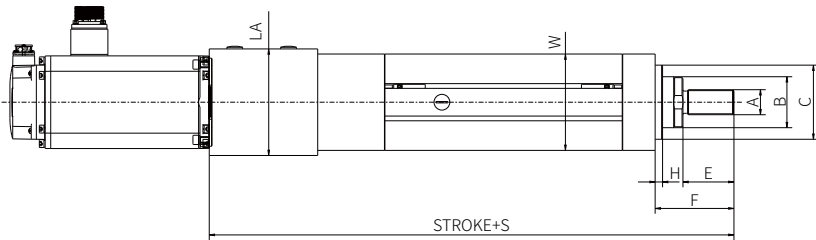
Electric cylinder size

Configuration dimensions of the reversing belt reducer



Dimension Table (mm)																
Lead screw	A	B	C	E	F	H	L	S	W	LB	TG	MM	WB	HB	Y	Z
	M45×3	φ80	φ100	70	117	10	85	557	□ 126	96.5	96	M14	160	330	3	φ100

Note: This form is only applicable for tail hinge installation.

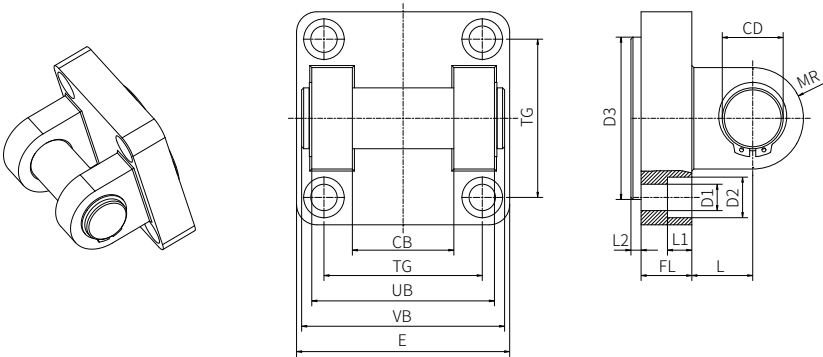


Dimension Table (mm)									
Lead screw	A	B	C	E	F	H	S	LA	W
	M45×3	φ80	φ100	70	117	10	603	□ 140	□ 126

Note: The brand of the motor reducer can be changed according to customer needs, and the size of the motor part is for reference only.

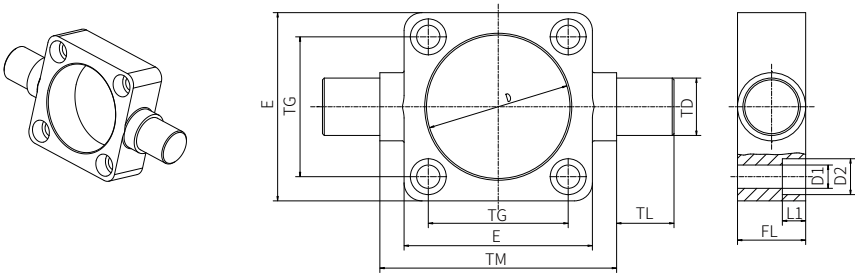
Accessory dimensions

Shaft tailstock AB



Accessory size (mm)															Weight (Kg)
Name	CD	CB	UB	VB	E	D1	D2	L1	D3	L2	L	TG	FL	MR	6.88
Shaft tailstock AB	φ45	60	110	125	□ 128	φ17	φ26	17	φ100	5	55	96	35	R34	

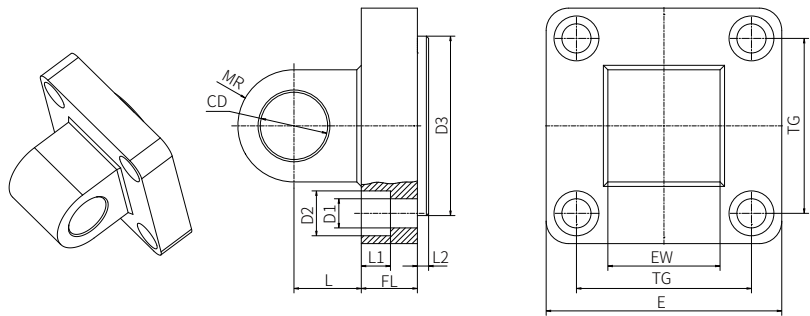
Ear axis AF



Accessory size (mm)												Weight (Kg)
Name	D	E	TD	TL	TM	D1	D2	L1	TG	FL		
Ear axis AF	φ100	□ 128	φ40	40	132	φ17	φ26	17	96	50		3.64

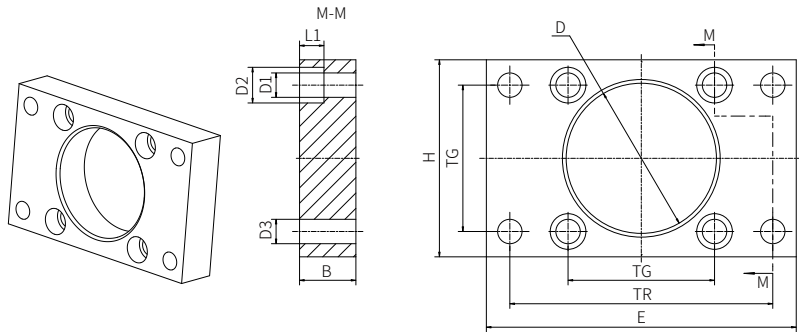
Accessory dimensions

Single earring support AS



Accessory size (mm)													Weight (Kg)
Name	CD	MR	EW	E	D1	D2	L1	D3	L2	L	TG	FL	6.55
Single earring support AS	φ45	R34	90	□ 128	φ17	φ26	17	φ100	5	55	96	35	

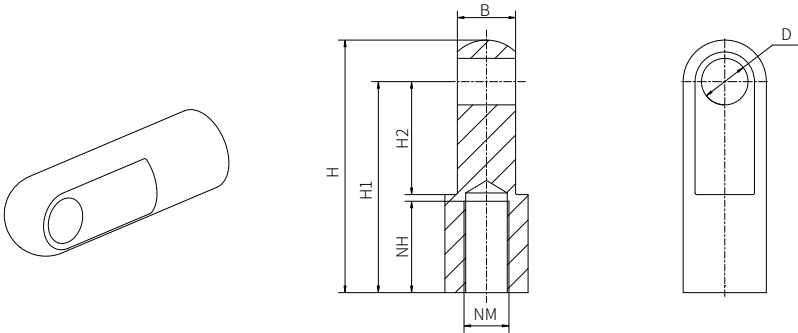
Ear shaft mounting seat RF



Accessory size (mm)												Weight (Kg)
Name	D	B	E	H	D1	D2	L1	TG	D3	TR		5.23
Ear shaft mounting seat RF	φ100	40	210	128	φ17	φ26	17	96	φ17	170		

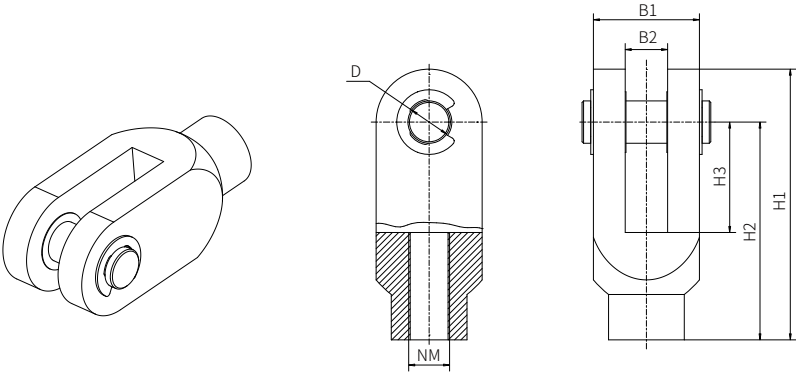
Accessory dimensions

Rod end joint Type I RI



Accessory size (mm)								Weight (Kg)
Name	D	B	H	H1	H2	NM	NH	3.10
Rod end joint Type I RI	φ45	40	181	144	65	M42×3	65	

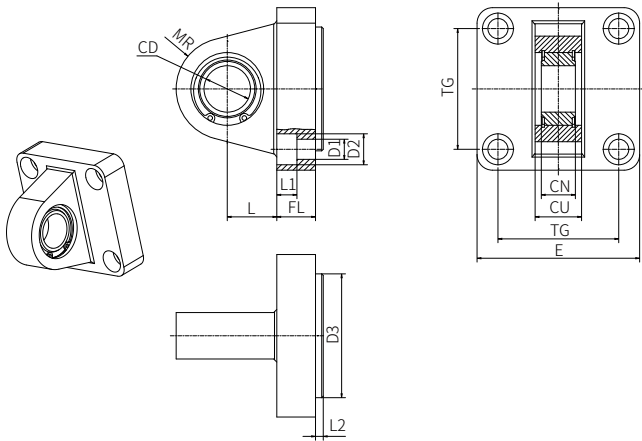
Rod end joint Y-shaped RY



Accessory size (mm)								Weight (Kg)
Name	D	B1	B2	H1	H2	H3	NM	5.37
Rod end joint Y-shaped RY	φ45	85	45	211	168.5	86	M42×3	

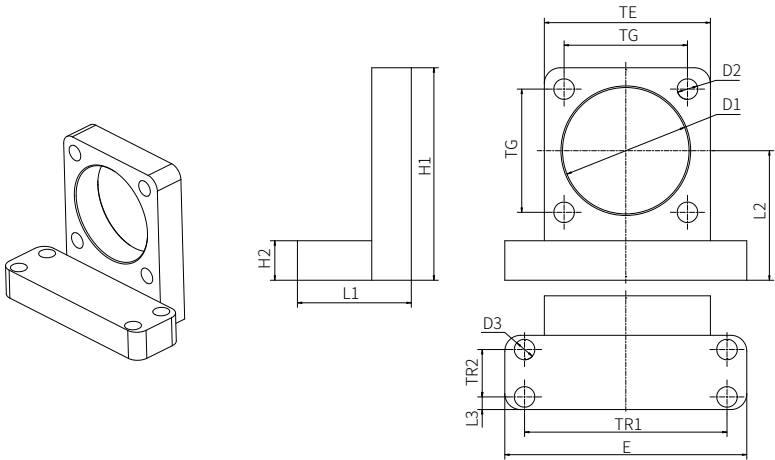
Accessory dimensions

Joint bearing tailstock AL



Accessory size (mm)														Weight (Kg)
Name	CD	CN	CU	E	D1	D2	L1	TG	D3	L2	L	FL	MR	5.55
Joint bearing tailstock AL	φ45	32	40	□ 128	φ17	φ26	17	96	φ100	5	45	35	R45	

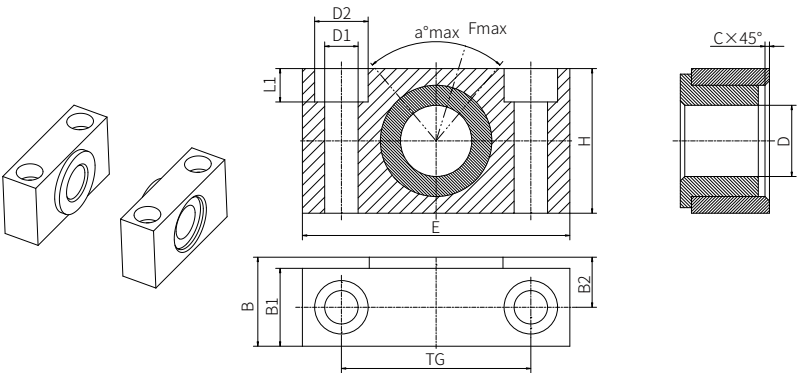
Footstand FS



Accessory size (mm)														Weight (Kg)
Name	D1	L1	L2	E	H1	H2	TE	D2	TG	D3	L3	TR1	TR2	5.34
Footstand FS	φ100	90	99	188	165.5	30	128	φ17	96	φ17	12	158	36	

Accessory dimensions

Earshaft mounting seat TS



Accessory size (mm)														Weight (Kg)
Name	D	C	B	B1	E	H	D1	D2	L1	TG	B2	a	F	1.58
Earshaft mounting seat TS	φ40	2	40	35	120	65	φ15	φ24	15	85	22.5	30		

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