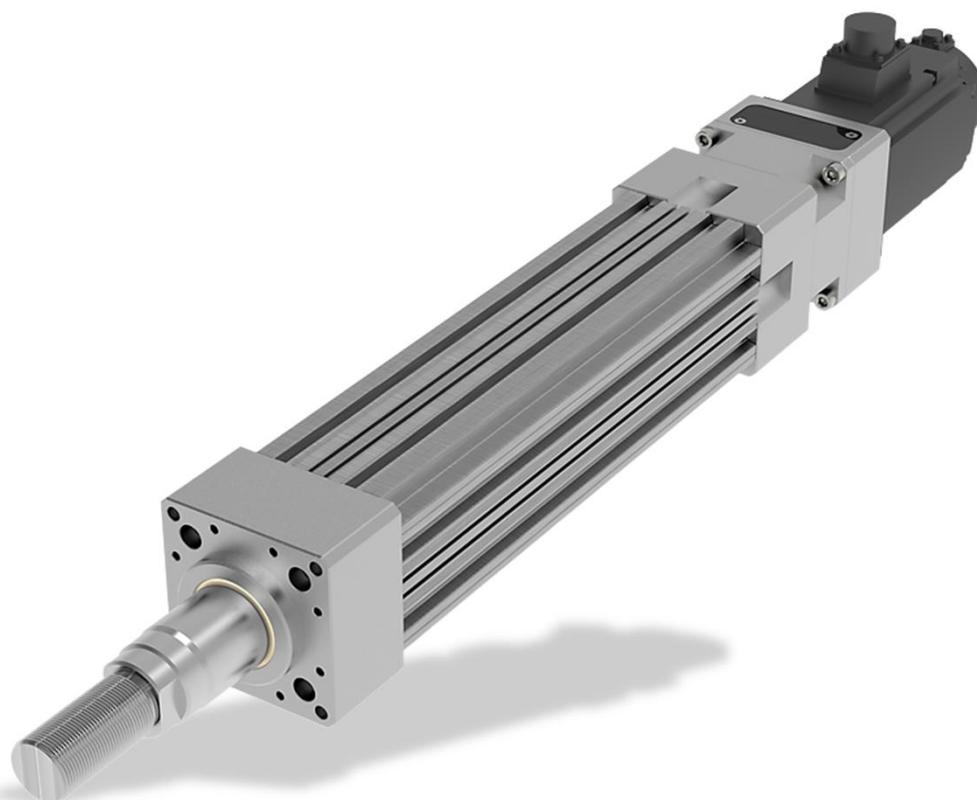


HIGH PERFORMANCE ROBO CYLINDER

HYPER CYLINDER

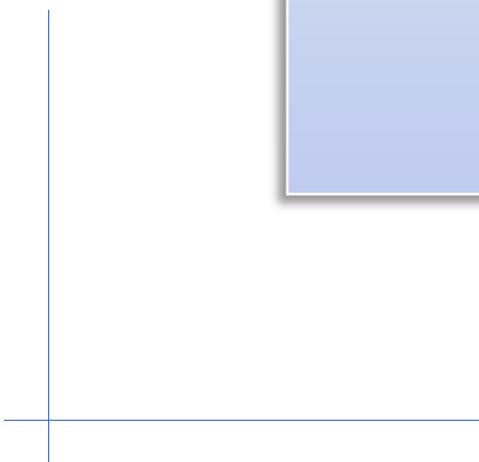
HES series



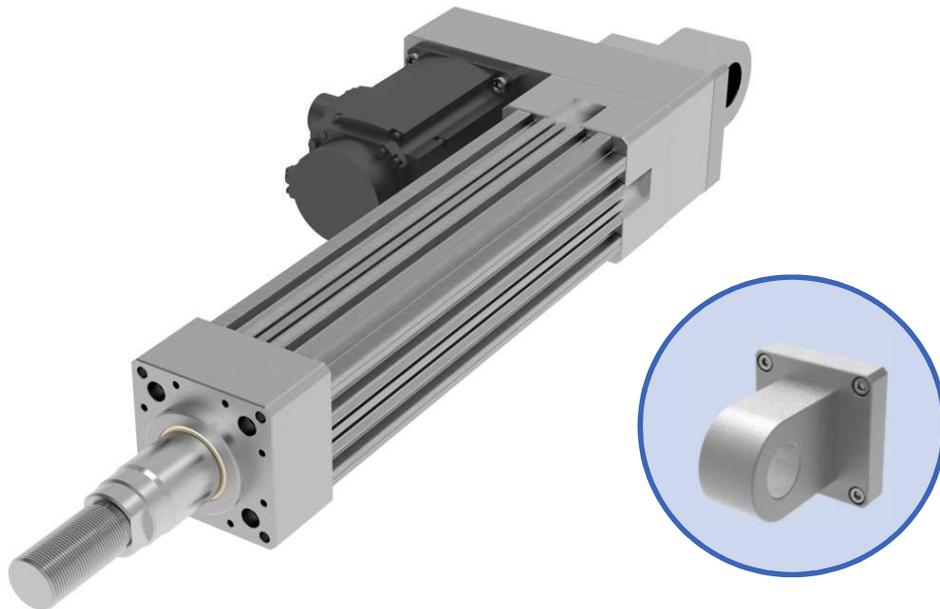
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TMS

PREMIUM BALL SCREW APPLIED



HYPER CYLINDER HES 110



ORDER CODE

HES 110

HES 110 NS - P 100 - W 010 G 10 - S3 - M - FM
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

1. Series

HES TMS Hyper Cylinder Series

2. Frame (Body Frame Size)

HES 110 110mm X 110mm
HES 130 130mm X 130mm
HES 150 150mm X 150mm
HES 180 180mm X 180mm
HES 220 220mm X 220mm

3. LEAD (Ball Screw)

LS Ball Screw LEAD 05mm
NS Ball Screw LEAD 10mm
GS Ball Screw LEAD 12mm
FS Ball Screw LEAD 16mm
HS Ball Screw LEAD 20mm
US Ball Screw LEAD 32mm
HE Ball Screw LEAD 40mm

4. Mounting Type

NONE without Type
S Servo Motor Straigh Type
P Servo Motor Parallel Type

5. Stroke

100 The standard stroke is in units of 100 mm.
000 Customized specifications are available.

6. Color

W Body Color - White Anodizing
B Body Color - Black Anodizing

7. Motor

NONE without Servo Motor
008 Servo Motor 750W
010 Servo Motor 1.0kW
035 Servo Motor 3.5kW
070 Servo Motor 7.0kW
110 Servo Motor 11.0kW

8. Reducer

NONE Without Gear
G With Gear

9. Ratio

NONE without Ratio
03 ~ 10 Gear Ratio

10. Sensor (magnetic, NPN, 3wire)

NONE Without Sensor
S3 (P) Standard Spec. NO(Origin-1) + NC(Limit-2)
A3 (P) NO(Normal Open), 3EA
B3 (P) NC(Normal Close), 3EA

※ () is the PNP order specification.

11. ROD Shape

M Male Thread
F Female Thread
RB Rod End Bearing
RC Rod Clevis

12. Options (Mount Bracket)

NONE without Options
FM Flange Mount
FF Flange Foot Mount
PC Pulley Cover Clevis Mount
TRN Trunnion Mount

Mounting Types and Options: Reference Views

None type



Without servo motors

S type



Straight-mounted servo motors

P type



Parallel-mounted servo motors

OPTIONS

S type (Straight-mounted servo motors)

FM



Flange Mount type

FFB



Flange Foot Mount B type

FFC



Flange Foot Mount C type

TRN



Trunnion type

OPTIONS

P type (Parallel-mounted servo motors)

FMA



Flange Mount A type

FMB



Flange Mount B type

FFB



Flange Foot Mount B type

FFC



Flange Foot Mount C type

PC



Pulley Cover Clevis type

TRN



Trunnion type

TECHNICAL DATA

HES 110 NS

FORCE TABLE

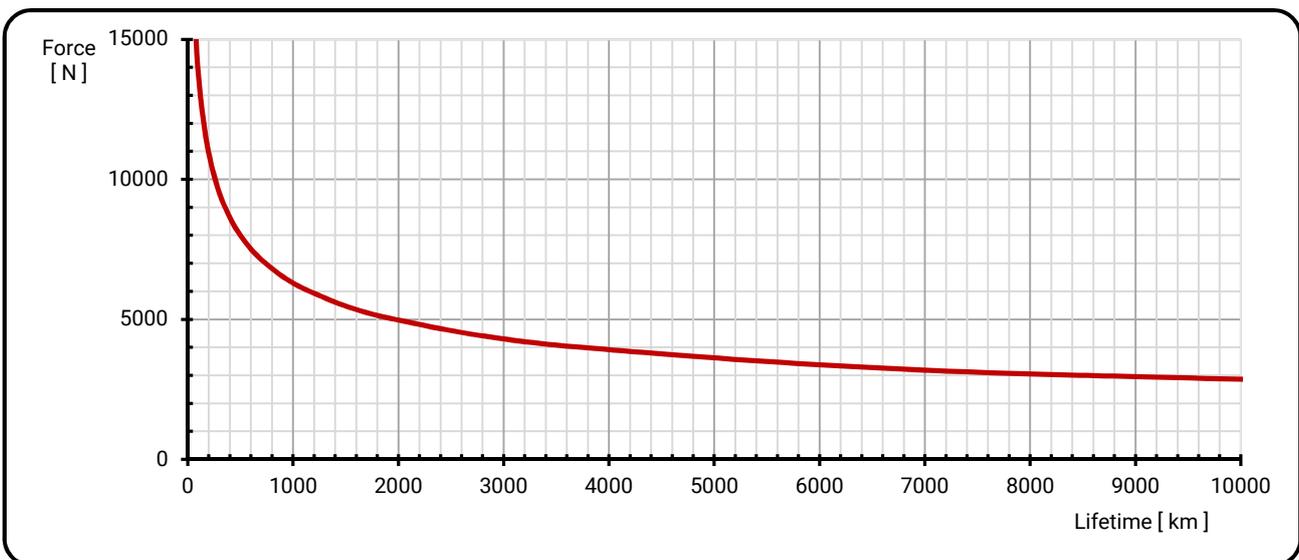
HES 110 NS

Servo Motor (kW)	Gear	Ratio	Speed ¹ (mm/sec)	Force (kN)					
				50%	60%	70%	80%	90%	100%
1.0	□ 90	3	111	4.0	4.9	5.8	6.7	7.5	8.4
		4	83	5.5	6.6	7.8	9.0	10.2	11.3
		5	66	6.9	8.4	9.9	11.3	12.8	14.2
		6	55	8.4	10.1	11.9	13.6	15.4	17.2
		7	47	9.8	11.9	13.9	16.0	18.0	20.1
		8	41	11.3	13.6	16.0	18.3	20.6	23.0
		9	37	12.7	15.4	18.0	20.6	23.3	25.9
		10	33	14.2	17.1	20.0	23.0	25.9	28.8
1.5	□ 120	3	111	6.2	7.4	8.8	10.1	11.4	12.7
		4	83	8.4	10.1	11.8	13.6	15.3	17.1
		5	66	10.5	12.7	14.9	17.1	19.3	21.5
		6	55	12.7	15.3	18.0	20.6	23.2	25.8
		7	47	14.9	17.9	21.0	24.1	27.1	
		8	41	17.0	20.6	24.1	27.6		
		9	37	19.2	23.2	27.1			
		10	33	21.4	25.8				

Note 1. The speeds indicated above are based on the servo motor's rated speed of 2,000 RPM
The settings in the table above are based on a 500mm stroke.

LIFETIME GRAPH

HES 110 NS



The above graph is based on the following criteria: 500 strokes, a speed of 100 mm/sec, and continuous operation.

TECHNICAL DATA

HES 110 HS

FORCE TABLE

HES 110 HS

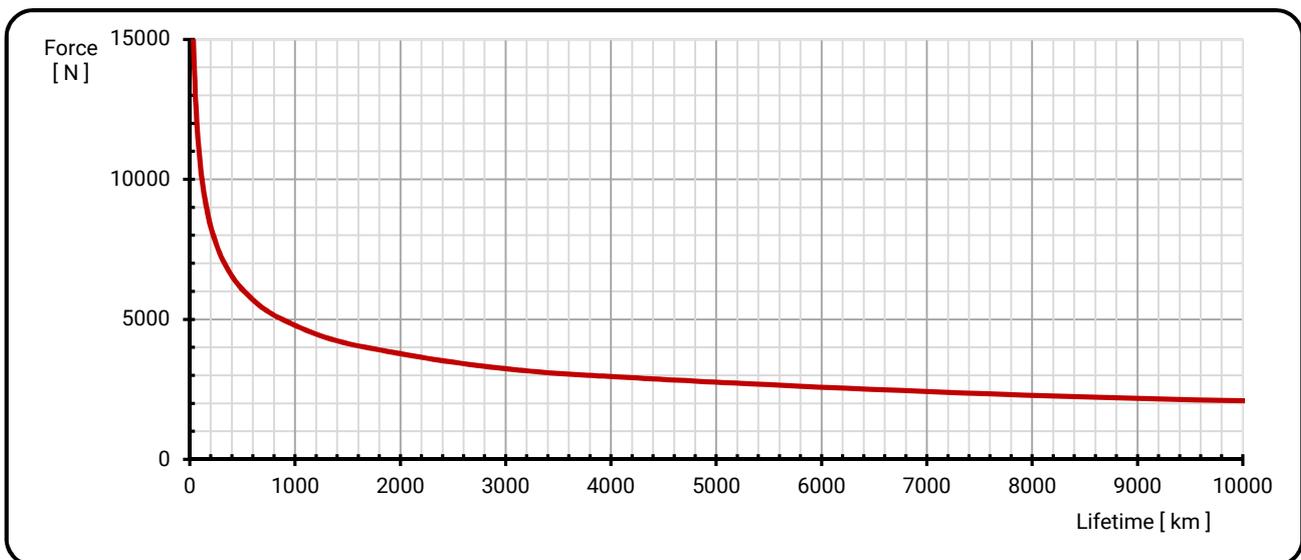
Servo Motor (kW)	Gear	Ratio	Speed ¹ (mm/sec)	Force (kN)					
				50%	60%	70%	80%	90%	100%
1.0	□ 90	3	222	1.8	2.3	2.7	3.1	3.6	4.0
		4	166	2.5	3.1	3.7	4.3	4.9	5.5
		5	133	3.3	4.0	4.8	5.5	6.2	7.0
		6	111	4.0	4.9	5.8	6.7	7.5	8.4
		7	95	4.7	5.8	6.8	7.8	8.9	9.9
		8	83	5.5	6.6	7.8	9.0	10.2	11.3
		9	74	6.2	7.5	8.8	10.2	11.5	12.8
		10	66	6.9	8.4	9.9	11.3	12.8	14.2
1.5	□ 120	3	222	2.8	3.5	4.2	4.8	5.5	6.2
		4	166	3.9	4.8	5.7	6.6	7.5	8.4
		5	133	5.0	6.1	7.2	8.3	9.5	10.6
		6	111	6.1	7.4	8.8	10.1	11.4	12.7
		7	95	7.2	8.8	10.3	11.8	13.4	14.9
		8	83	8.3	10.1	11.8	13.6	15.4	17.1
		9	74	9.4	11.4	13.4	15.3	17.3	19.3
		10	66	10.5	12.7	14.9	17.1	19.3	21.5

Note 1. The speeds indicated above are based on the servo motor's rated speed of 2,000 RPM

The settings in the table above are based on a 500mm stroke.

LIFETIME GRAPH

HES 110 HS



The above graph is based on the following criteria: 500 strokes, a speed of 150 mm/sec, and continuous operation.

HES 110 NS - 200 - W - S3 - M

SPECIFICATIONS

MODEL	HES 110 NS	HES 110 HS
FRAME SIZE	□ 110	
ROD DIAMETER	Ø 45	
BALL SCREW LEAD	10	20
MAX. ALLOWABLE CAPACITY	3.5kW(Direct drive : without reduction gear)	
RATED RPM	2000	2000
NORMAL PAYLOAD	500kgf	375kgf
MAX. PAYLOAD	1000kgf	750kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)	



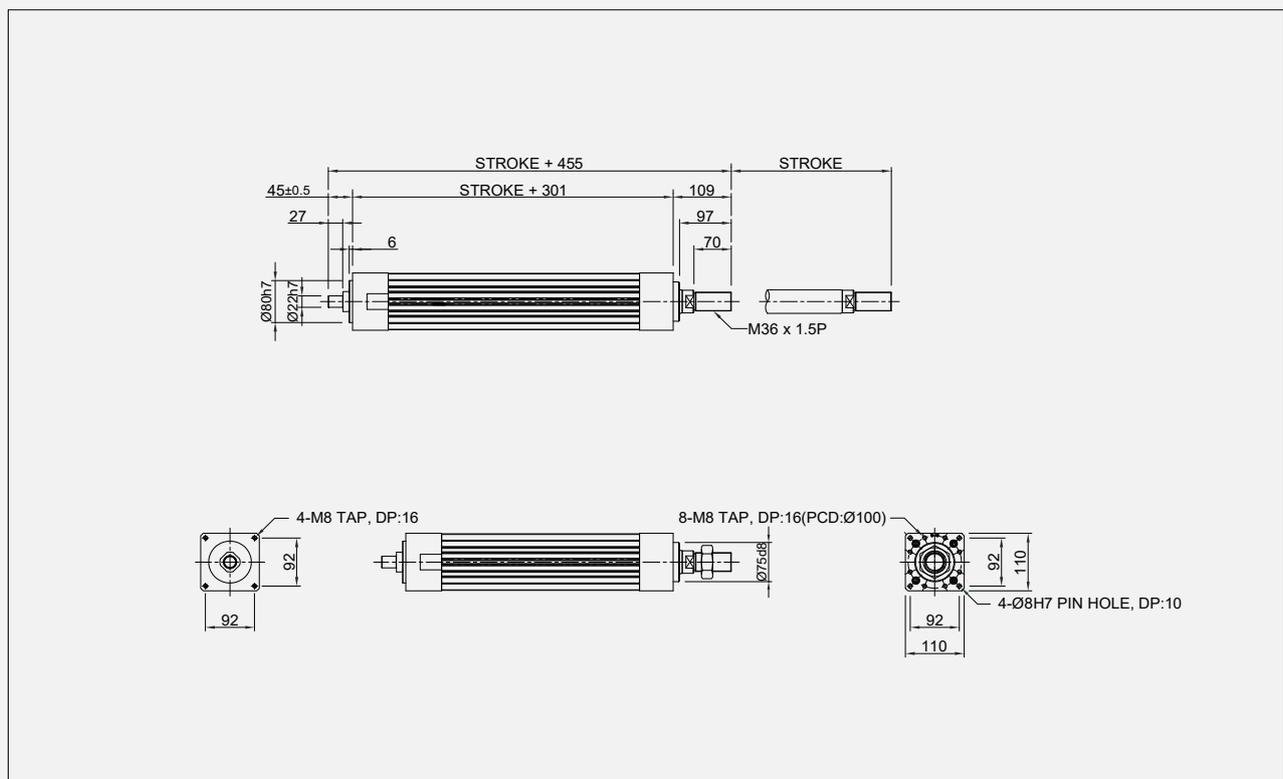
UP TO **22 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	15.93	18.07	20.21	22.35	24.49	26.63	28.77	30.91

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HES 110 NS - S 200 - W 010 G10 - S3 - M

SPECIFICATIONS

MODEL	HES 110 NS	HES 110 HS
FRAME SIZE	□ 110	
ROD DIAMETER	Ø 45	
BALL SCREW LEAD	10	20
MAX. ALLOWABLE CAPACITY	3.5kW(Direct drive : without reduction gear)	
RATED RPM	2000	2000
NORMAL PAYLOAD	500kgf	375kgf
MAX. PAYLOAD	1000kgf	750kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)	



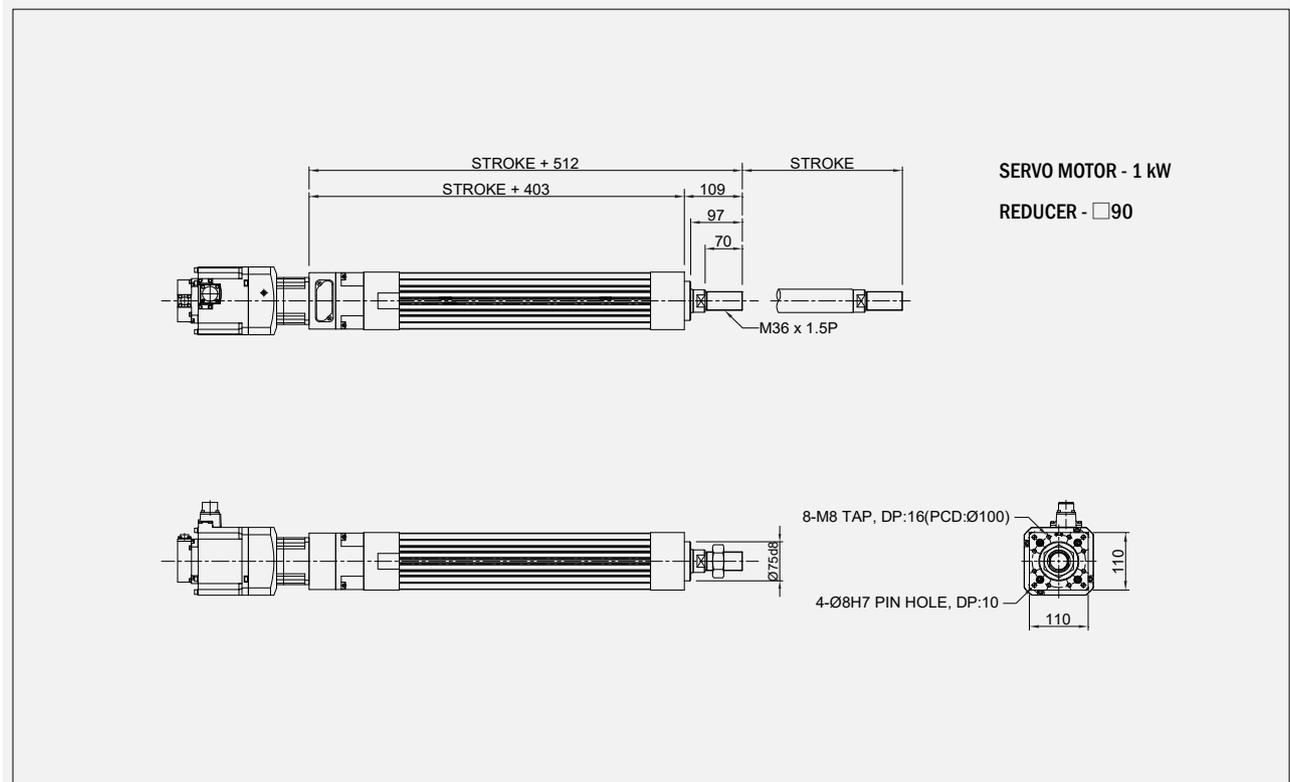
UP TO **22 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	18.05	20.19	22.33	24.47	26.61	28.75	30.89	33.02
SERVO MOTOR / GEAR	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89
TOTAL WEIGHT	27.94	30.08	32.22	34.36	36.50	38.64	40.78	42.91

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 110

OPTIONS



FLANGE MOUNT

HES 110 NS - S 200 - W 010 G10 - S3 - M - FM

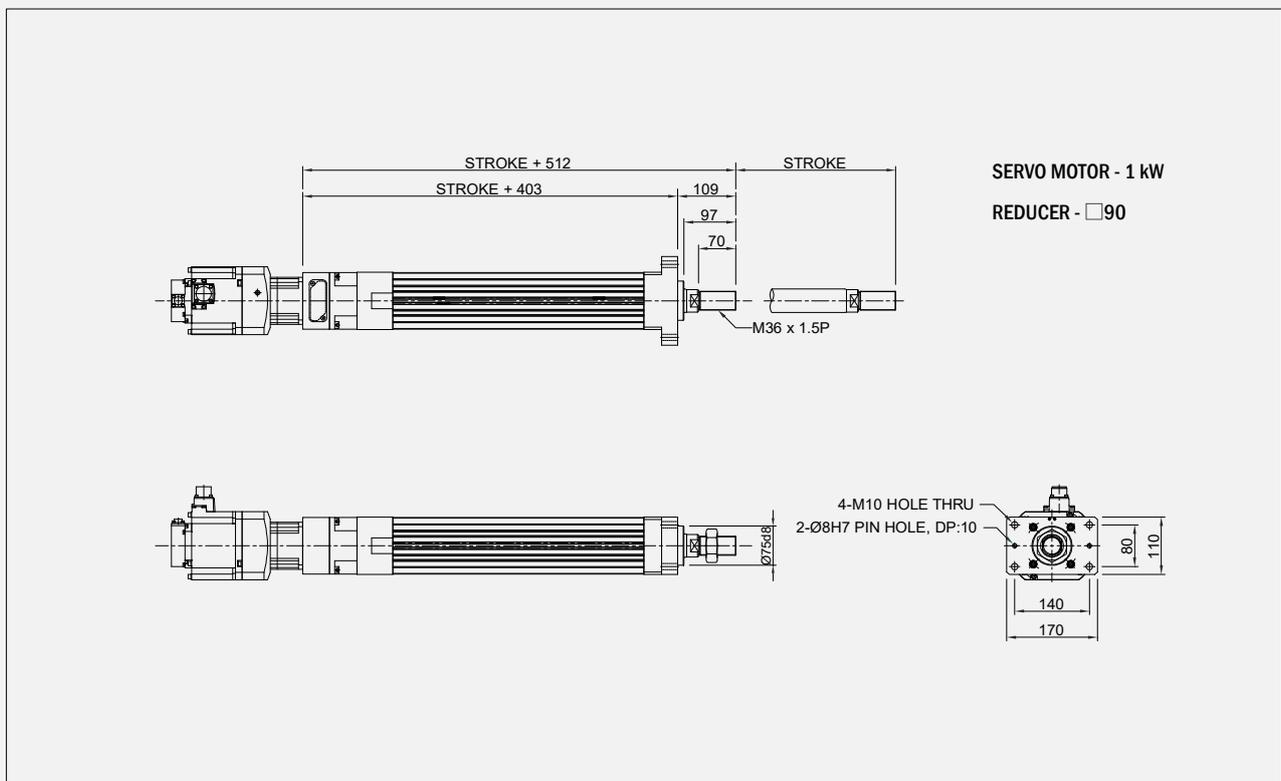
UP TO **22 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	18.58	20.72	22.86	25.00	27.16	29.28	31.41	33.55
SERVO MOTOR / GEAR	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89
TOTAL WEIGHT	28.47	30.61	32.75	34.89	37.05	39.17	41.30	43.44

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 110

OPTIONS

FFB

FLANGE FOOT MOUNT B TYPE

HES 110 NS - S 200 - W 010 G10 - S3 - M - FFB

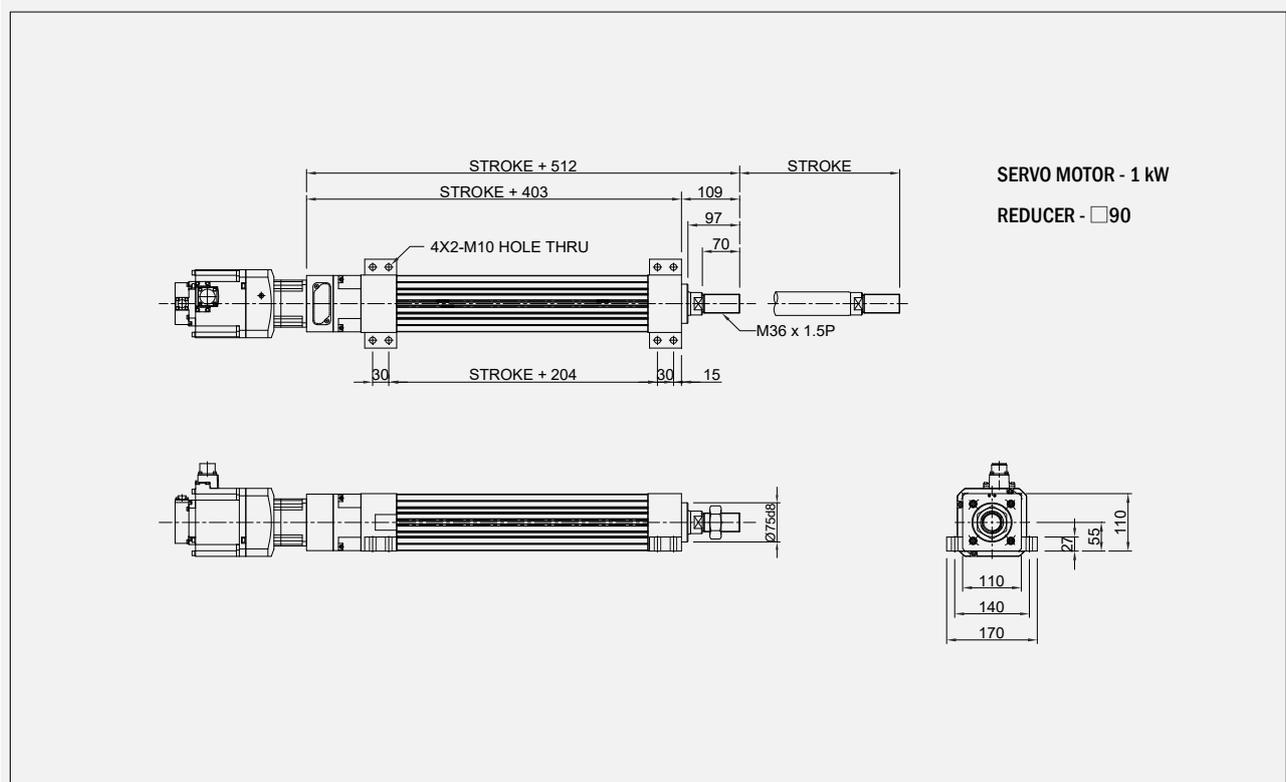
UP TO **22 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	18.50	20.63	22.77	24.91	27.05	29.19	31.33	33.47
SERVO MOTOR / GEAR	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89
TOTAL WEIGHT	28.39	30.52	32.66	34.80	36.94	39.08	41.22	43.36

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

OPTIONS

FFC

FLANGE FOOT MOUNT C TYPE

HES 110 NS - S 200 - W 010 G10 - S3 - M - FFC

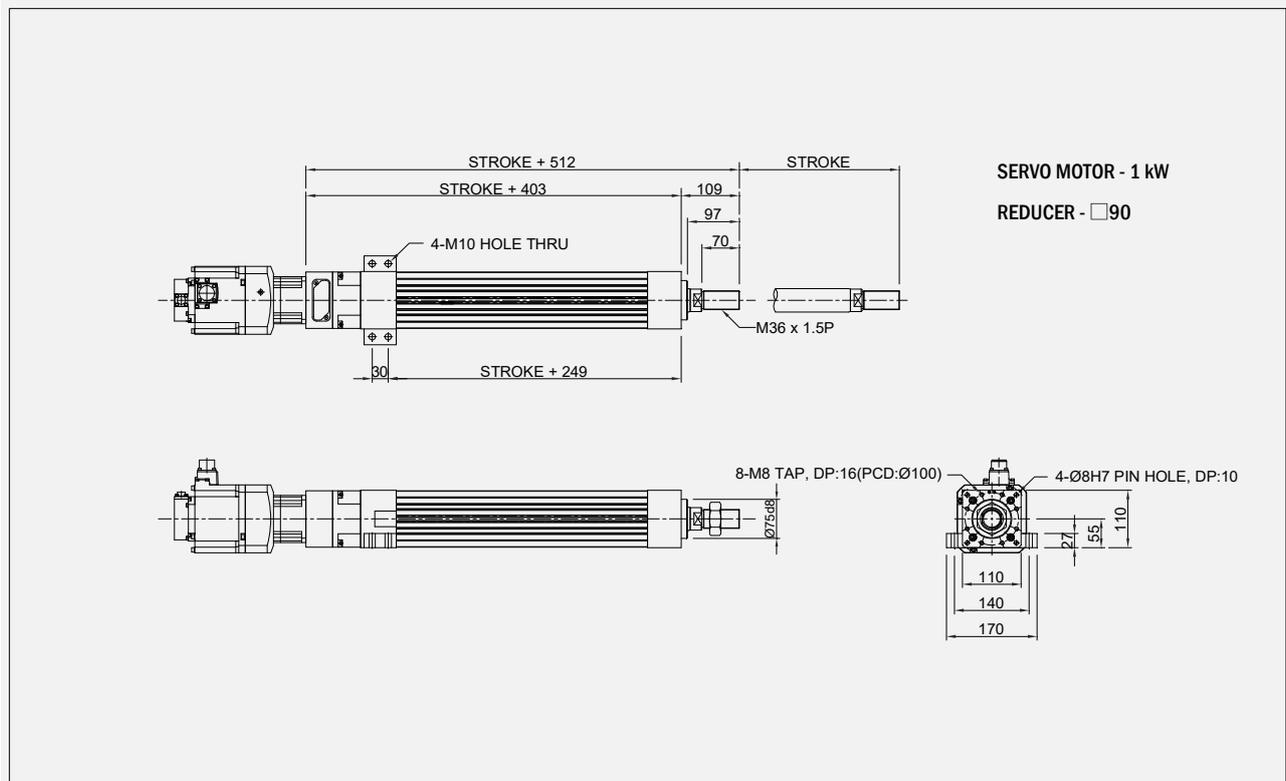
UP TO **22 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	18.29	20.43	22.57	24.71	26.85	28.99	31.12	33.26
SERVO MOTOR / GEAR	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89
TOTAL WEIGHT	28.18	30.32	32.46	34.60	36.74	38.88	41.01	43.15

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.



HES 110 NS - S 200 - W 015 G10 - S3 - M

SPECIFICATIONS

MODEL	HES 110 NS	HES 110 HS
FRAME SIZE	□ 110	
ROD DIAMETER	Ø 45	
BALL SCREW LEAD	10	20
MAX. ALLOWABLE CAPACITY	3.5kW(Direct drive : without reduction gear)	
RATED RPM	2000	2000
NORMAL PAYLOAD	500kgf	375kgf
MAX. PAYLOAD	1000kgf	750kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)	



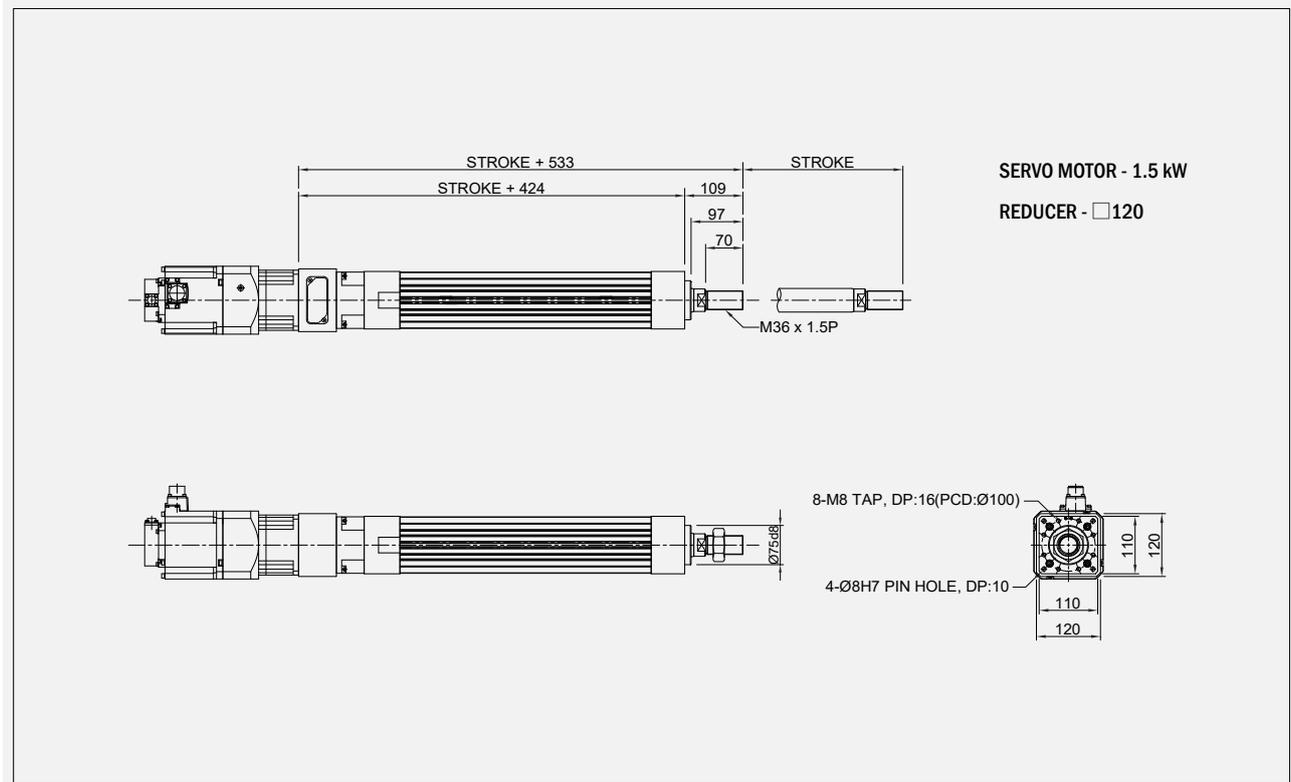
UP TO **22 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	18.55	20.69	22.83	24.97	27.11	29.25	31.39	33.53
SERVO MOTOR / GEAR	15.93	15.93	15.93	15.93	15.93	15.93	15.93	15.93
TOTAL WEIGHT	34.48	36.62	38.76	40.90	43.04	45.18	47.32	49.46

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 110

OPTIONS



FLANGE MOUNT

HES 110 NS - S 200 - W 015 G10 - S3 - M - FM

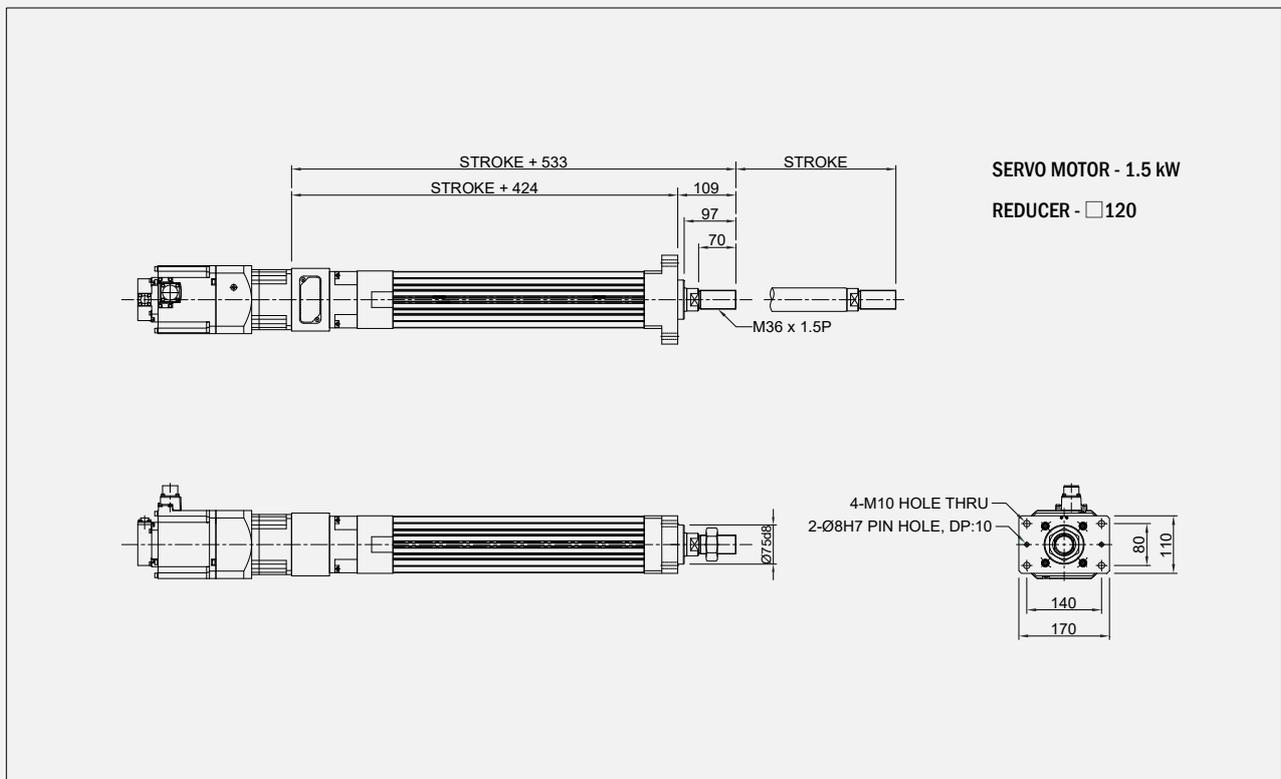
UP TO **22 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	19.08	21.22	23.36	25.50	27.64	29.78	31.92	34.06
SERVO MOTOR / GEAR	15.93	15.93	15.93	15.93	15.93	15.93	15.93	15.93
TOTAL WEIGHT	35.01	37.15	39.29	41.43	43.57	45.71	47.85	49.99

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 110

OPTIONS

FFB

FLANGE FOOT MOUNT B TYPE

HES 110 NS - S 200 - W 015 G10 - S3 - M - FFB

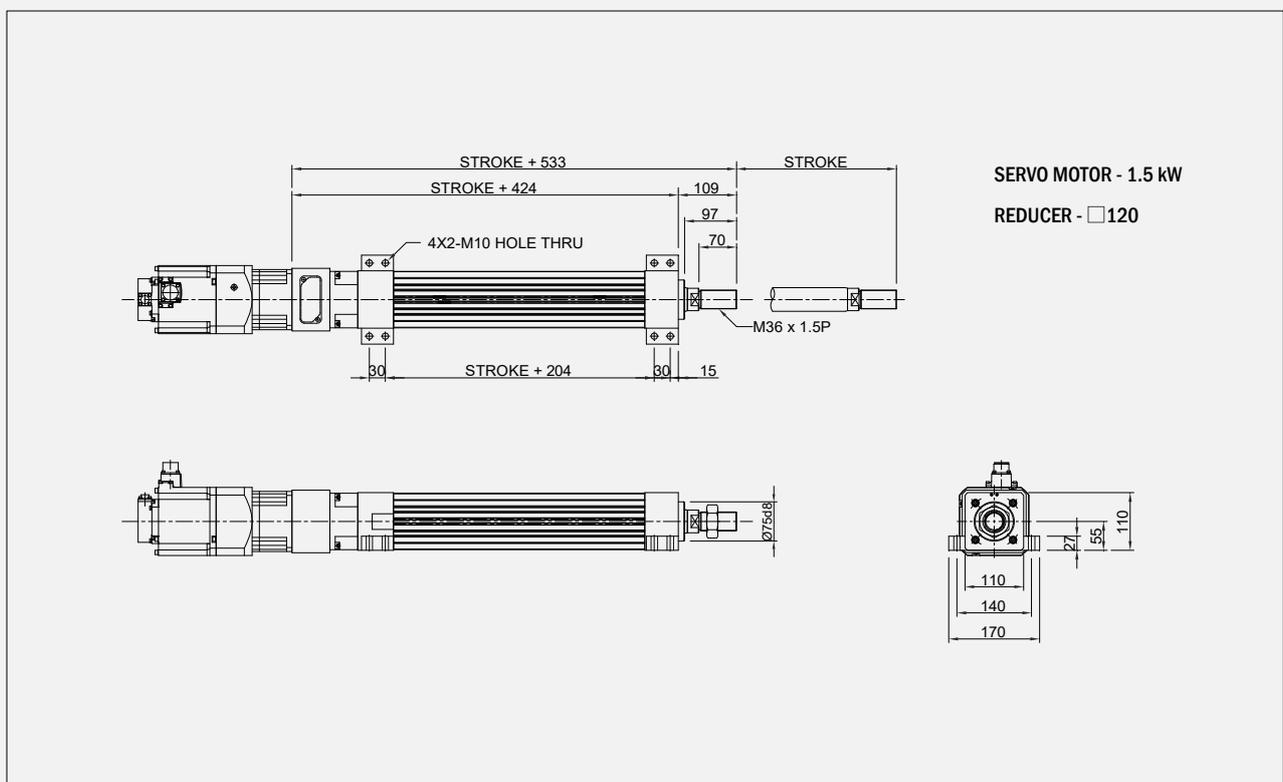
UP TO **22 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	19.00	21.14	23.28	25.42	27.56	29.70	31.84	33.98
SERVO MOTOR / GEAR	15.93	15.93	15.93	15.93	15.93	15.93	15.93	15.93
TOTAL WEIGHT	34.93	37.07	39.21	41.35	43.49	45.63	47.77	49.91

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

OPTIONS

FFC

FLANGE FOOT MOUNT C TYPE

HES 110 NS - S 200 - W 015 G10 - S3 - M - FFC

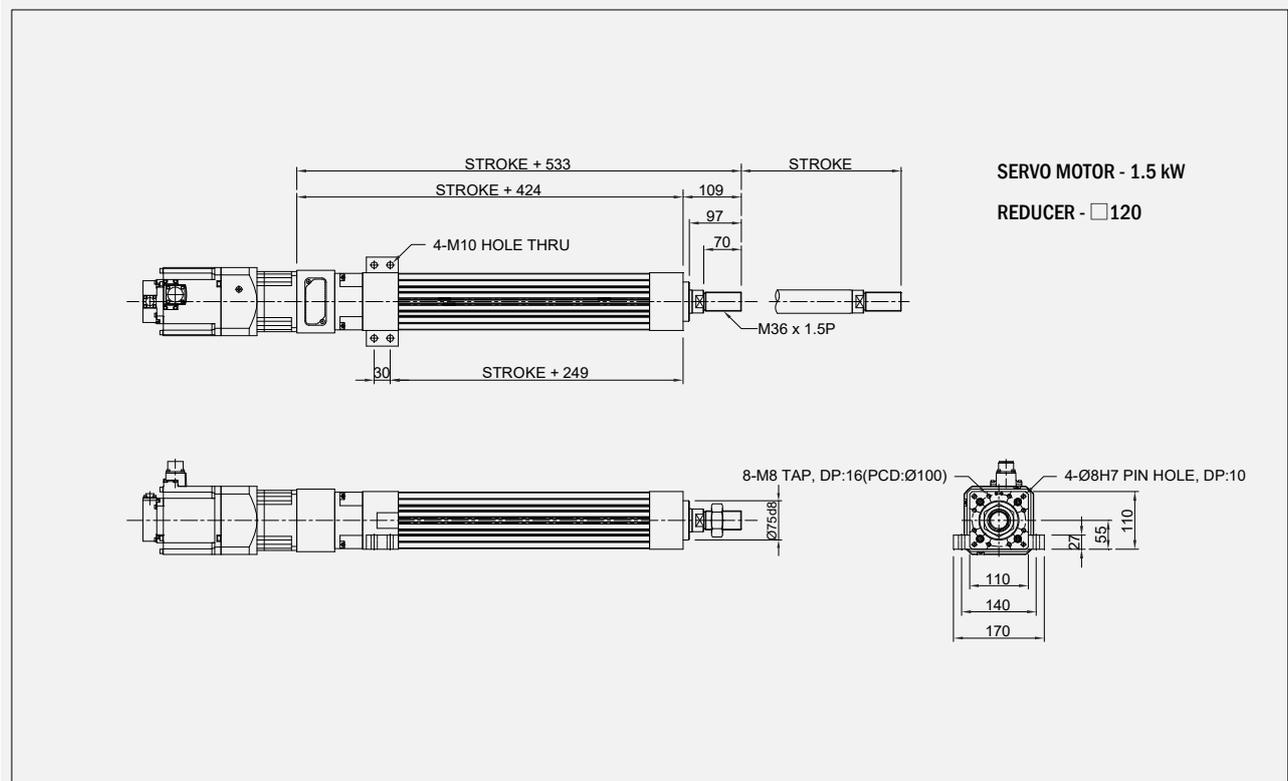
UP TO **22 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	18.79	20.93	23.07	25.21	27.35	29.49	31.63	33.77
SERVO MOTOR / GEAR	15.93	15.93	15.93	15.93	15.93	15.93	15.93	15.93
TOTAL WEIGHT	34.72	36.86	39.00	41.14	43.28	45.42	47.56	49.70

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HES 110 NS - P 200 - W 010 G10 - S3 - M

SPECIFICATIONS

MODEL	HES 110 NS	HES 110 HS
FRAME SIZE	□ 110	
ROD DIAMETER	Ø 45	
BALL SCREW LEAD	10	20
MAX. ALLOWABLE CAPACITY	3.5kW(Direct drive : without reduction gear)	
RATED RPM	2000	2000
NORMAL PAYLOAD	500kgf	375kgf
MAX. PAYLOAD	1000kgf	750kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)	



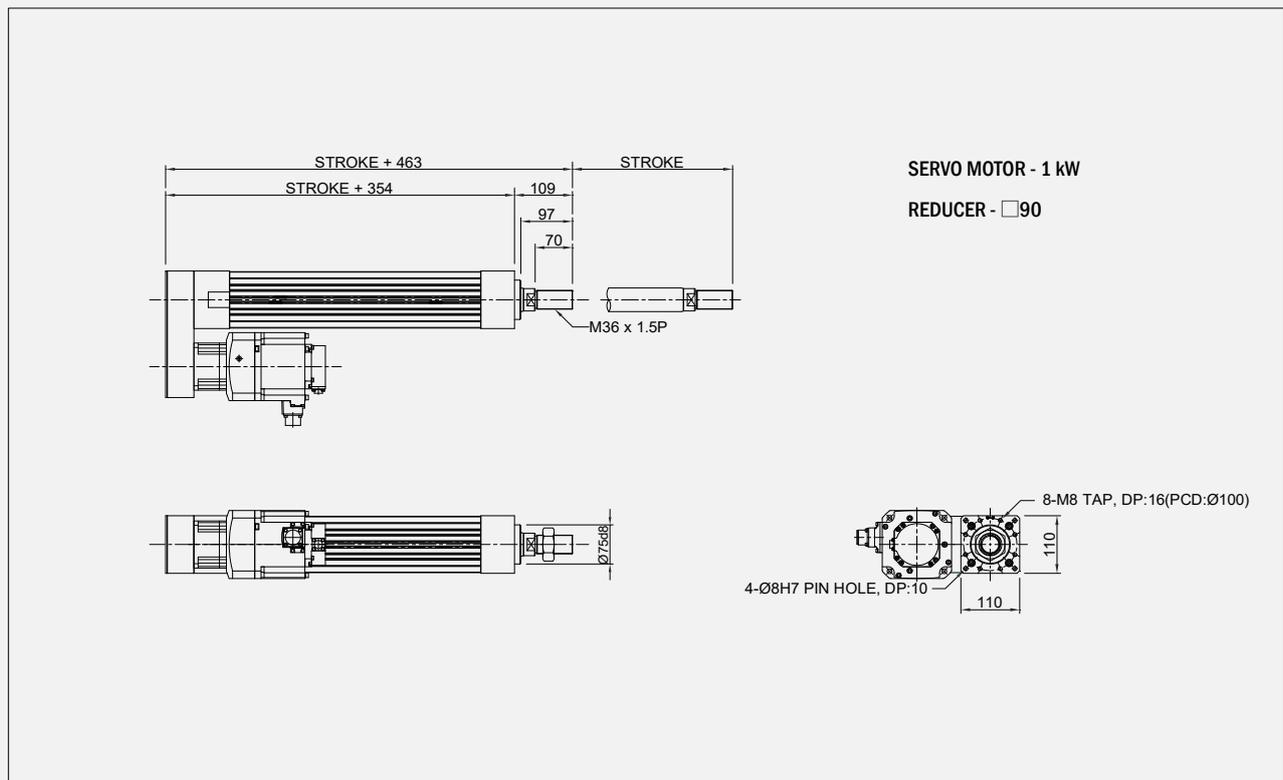
UP TO **22 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	19.09	21.23	23.37	25.51	27.65	29.79	31.93	34.07
SERVO MOTOR / GEAR	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89
TOTAL WEIGHT	28.98	31.12	33.26	35.40	37.54	39.68	41.82	43.96

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 110

OPTIONS

FMA

FLANGE MOUNT A TYPE

HES 110 NS - P 200 - W 010 G10 - S3 - M - FMA

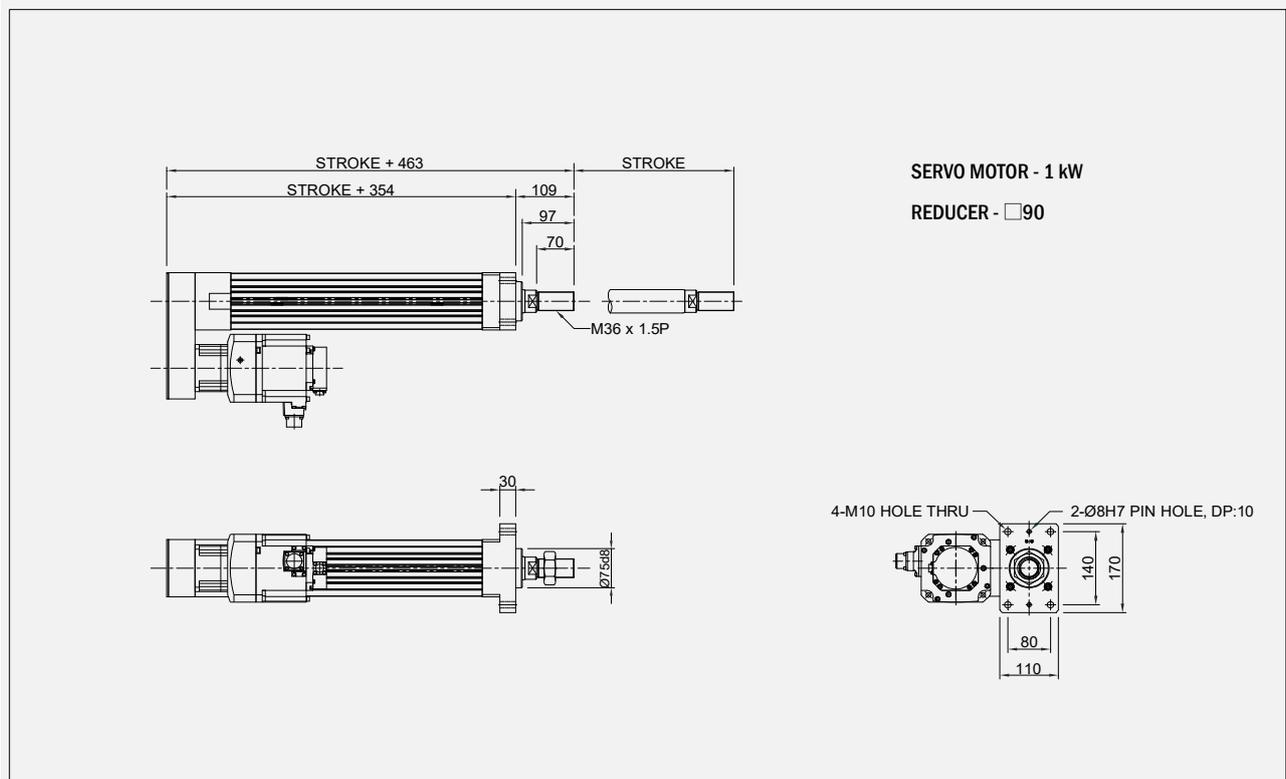
UP TO **22 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	19.62	21.76	23.90	26.04	28.18	30.32	32.46	34.60
SERVO MOTOR / GEAR	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89
TOTAL WEIGHT	29.51	31.65	33.79	35.93	38.07	40.21	42.35	44.49

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 110

OPTIONS

FMB

FLANGE MOUNT B TYPE

HES 110 NS - P 200 - W 010 G10 - S3 - M - FMB

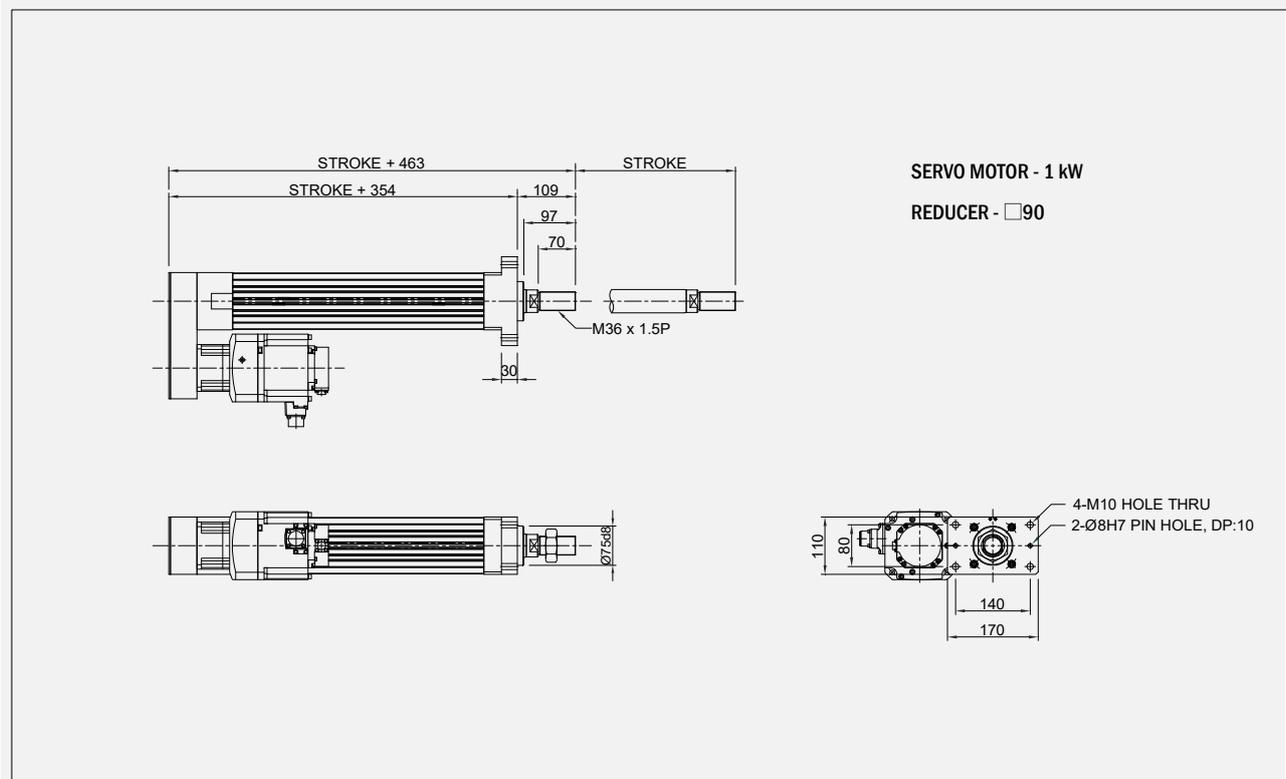
UP TO **22 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	19.62	21.76	23.90	26.04	28.18	30.32	32.46	34.60
SERVO MOTOR / GEAR	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89
TOTAL WEIGHT	29.51	31.65	33.79	35.93	38.07	40.21	42.35	44.49

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 110

OPTIONS

FFB

FLANGE FOOT MOUNT B TYPE

HES 110 NS - P 200 - W 010 G10 - S3 - M - FFB

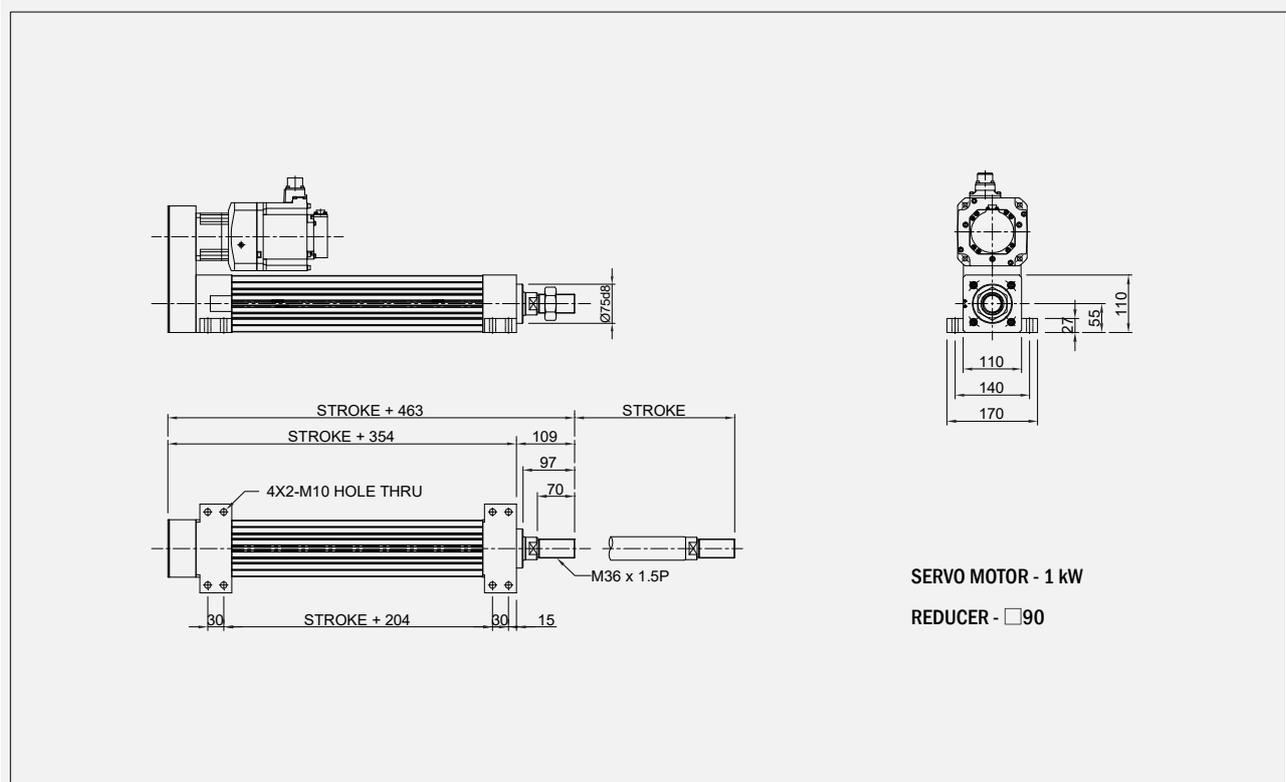
UP TO **22 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	19.54	21.68	23.82	25.96	28.10	30.24	32.38	34.52
SERVO MOTOR / GEAR	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89
TOTAL WEIGHT	29.43	31.57	33.71	35.85	37.99	40.13	42.27	44.41

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 110

OPTIONS

FFC

FLANGE FOOT MOUNT C TYPE

HES 110 NS - P 200 - W 010 G10 - S3 - M - FFC

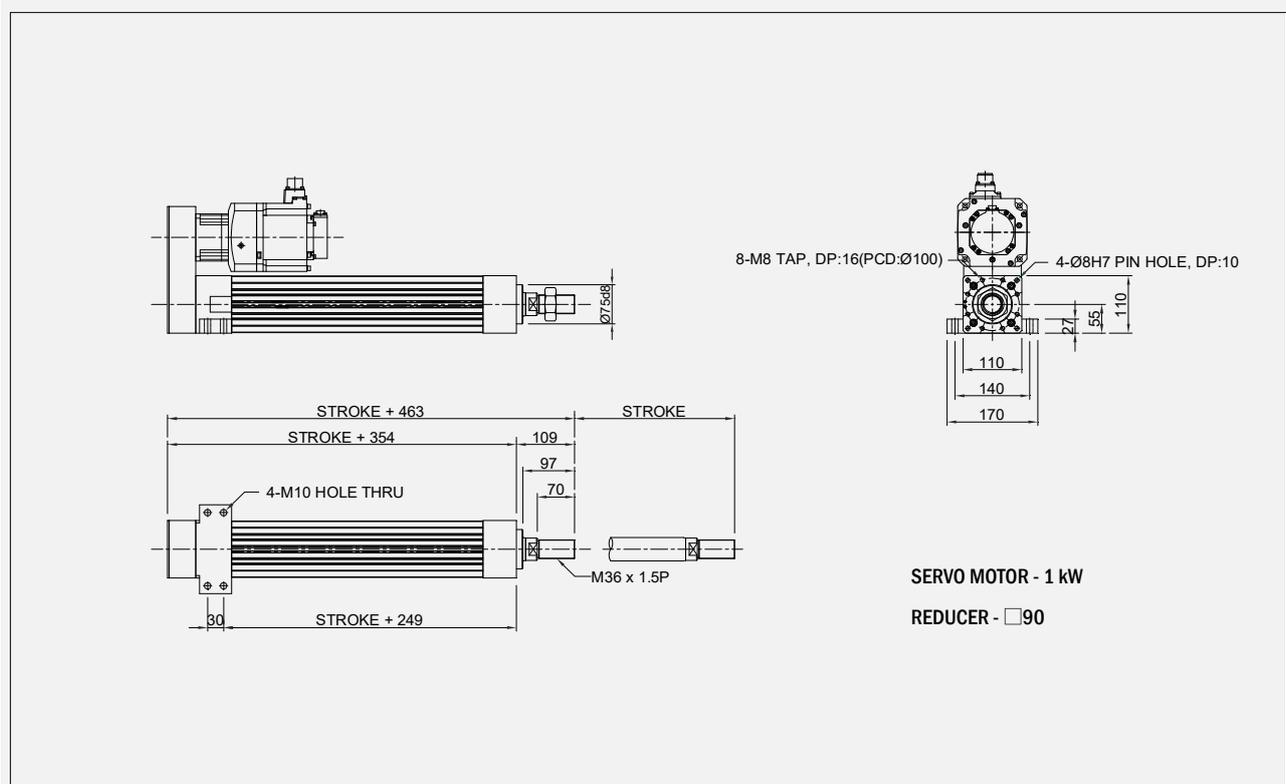
UP TO **22 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



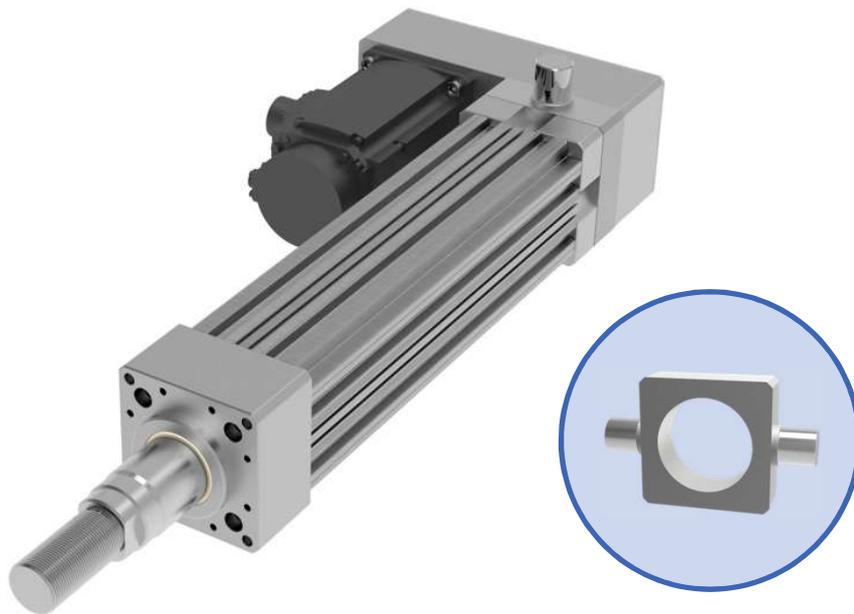
STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	19.33	21.47	23.61	25.75	27.89	30.03	32.17	34.31
SERVO MOTOR / GEAR	9.89	9.89	9.89	9.89	9.89	9.89	9.89	9.89
TOTAL WEIGHT	29.22	31.36	33.50	35.64	37.78	39.92	42.06	44.20

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES 130



ORDER CODE

HES 130

HES 130 NS - P 800 - W 020 G 10 - S3 - M - FM
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

1. Series

HES TMS Hyper Cylinder Series

2. Frame (Body Frame Size)

HES 110 110mm X 110mm
HES 130 130mm X 130mm
HES 150 150mm X 150mm
HES 180 180mm X 180mm
HES 220 220mm X 220mm

3. LEAD (Ball Screw)

LS Ball Screw LEAD 05mm
NS Ball Screw LEAD 10mm
GS Ball Screw LEAD 12mm
FS Ball Screw LEAD 16mm
HS Ball Screw LEAD 20mm
US Ball Screw LEAD 32mm
HE Ball Screw LEAD 40mm

4. Mounting Type

NONE without Type
S Servo Motor Straigh Type
P Servo Motor Parallel Type

5. Stroke

100 The standard stroke is in units of 100 mm.
000 Customized specifications are available.

6. Color

W Body Color - White Anodizing
B Body Color - Black Anodizing

7. Motor

NONE without Servo Motor
008 Servo Motor 750W
010 Servo Motor 1.0kW
035 Servo Motor 3.5kW
070 Servo Motor 7.0kW
110 Servo Motor 11.0kW

8. Reducer

NONE Without Gear
G With Gear

9. Ratio

NONE without Ratio
03 ~ 10 Gear Ratio

10. Sensor (magnetic, NPN, 3wire)

NONE Without Sensor
S3 (P) Standard Spec. NO(Origin-1) + NC(Limit-2)
A3 (P) NO(Normal Open), 3EA
B3 (P) NC(Normal Close), 3EA

※ () is the PNP order specification.

11. ROD Shape

M Male Thread
F Female Thread
RB Rod End Bearing
RC Rod Clevis

12. Options (Mount Bracket)

NONE without Options
FM Flange Mount
FF Flange Foot Mount
PC Pulley Cover Clevis Mount
TRN Trunnion Mount

Mounting Types and Options: Reference Views

None type



Without servo motors

S type



Straight-mounted servo motors

P type



Parallel-mounted servo motors

OPTIONS

S type (Straight-mounted servo motors)

FM



Flange Mount type

FFB



Flange Foot Mount B type

FFC



Flange Foot Mount C type

TRN



Trunnion type

OPTIONS

P type (Parallel-mounted servo motors)

FMA



Flange Mount A type

FMB



Flange Mount B type

FFB



Flange Foot Mount B type

FFC



Flange Foot Mount C type

PC



Pulley Cover Clevis type

TRN



Trunnion type

TECHNICAL DATA

HES 130 NS

FORCE TABLE

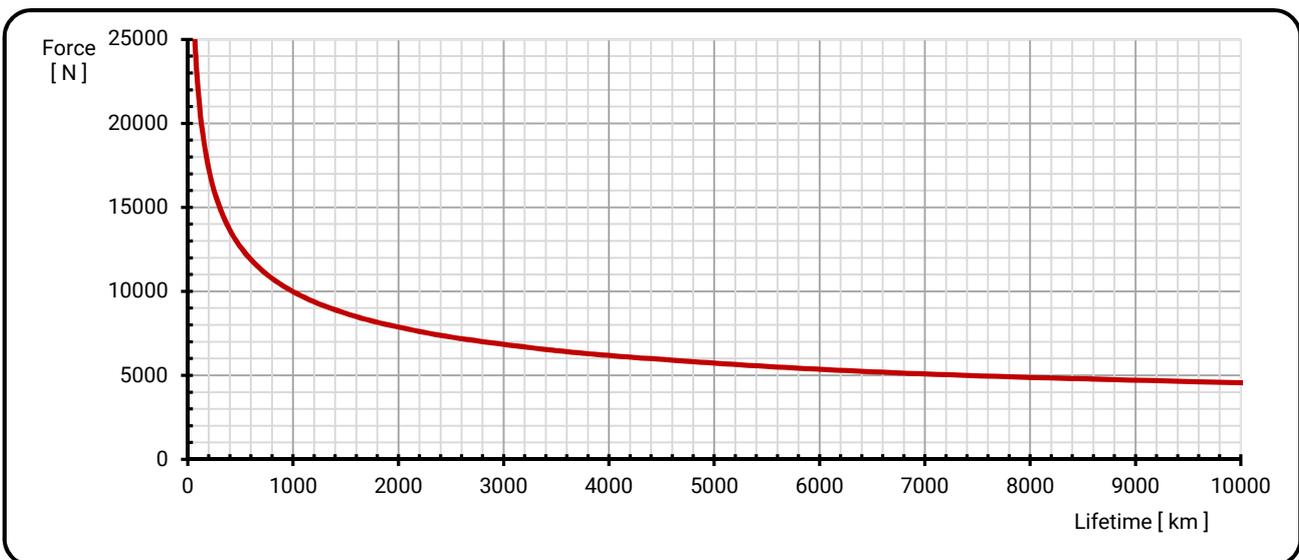
HES 130 NS

Servo Motor (kW)	Gear	Ratio	Speed ¹ (mm/sec)	Force (kN)					
				50%	60%	70%	80%	90%	100%
1.5	□ 120	3	111	6.0	7.4	8.7	10.0	11.3	12.6
		4	83	8.2	10.0	11.8	13.5	15.3	17.0
		5	66	10.4	12.6	14.8	17.0	19.2	21.4
		6	55	12.6	15.2	17.9	20.5	23.1	25.8
		7	47	14.8	17.9	20.9	24.0	27.1	30.1
		8	41	17.0	20.5	24.0	27.5	31.0	34.5
		9	37	19.1	23.1	27.0	31.0	34.9	38.9
		10	33	21.3	25.7	30.1	34.5	38.9	43.2
2.0	□ 120	3	111	7.2	9.3	11.1	12.9	14.7	16.5
		4	83	10.2	12.8	15.2	17.6	19.9	22.3
		5	66	13.1	16.3	19.2	22.2	25.1	28.0
		6	55	16.0	19.7	23.3	26.8	30.3	33.8
		7	47	18.9	23.2	27.3	31.4	35.5	39.6
		8	41	21.8	26.7	31.4	36.0	40.7	45.3
		9	37	24.8	30.1	35.4	40.6		
		10	33	27.7	33.6	39.4			

Note 1. The speeds indicated above are based on the servo motor's rated speed of 2,000 RPM
The settings in the table above are based on a 500mm stroke.

LIFETIME GRAPH

HES 130 NS



The above graph is based on the following criteria: 500 strokes, a speed of 100 mm/sec, and continuous operation.

TECHNICAL DATA

HES 130 HS

FORCE TABLE

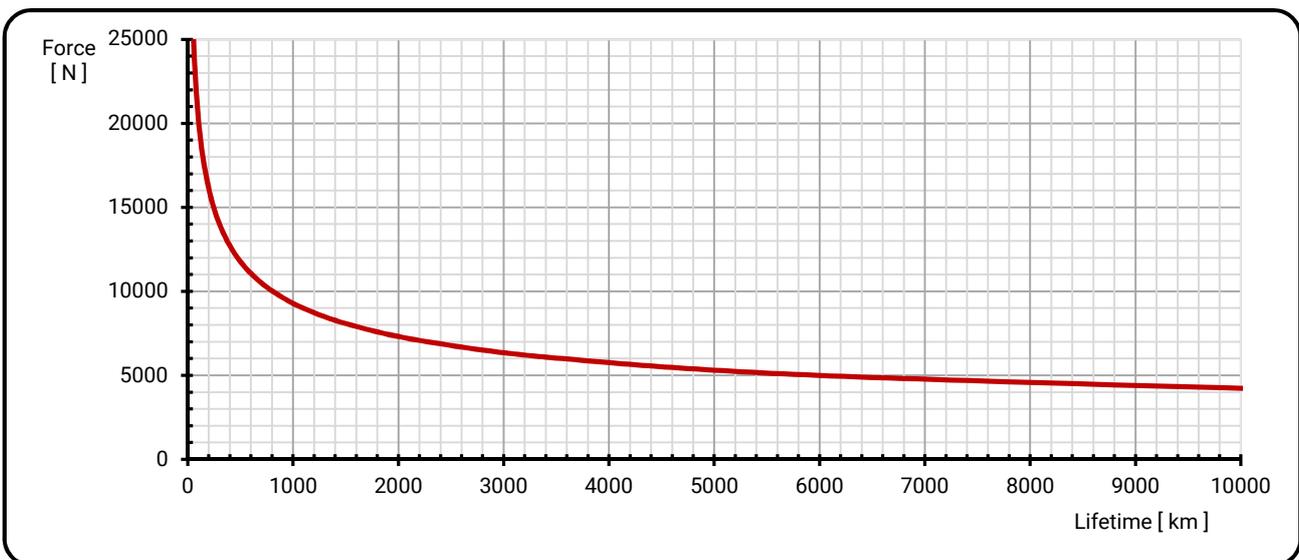
HES 130 HS

Servo Motor (kW)	Gear	Ratio	Speed ¹ (mm/sec)	Force (kN)					
				50%	60%	70%	80%	90%	100%
2.0	□ 120	3	222	3.0	4.0	5.0	5.9	6.9	7.8
		4	166	4.5	5.8	7.1	8.3	9.5	10.7
		5	133	6.0	7.6	9.1	10.6	12.1	13.6
		6	111	7.5	9.3	11.1	12.9	14.7	16.5
		7	95	8.9	11.1	13.2	15.3	17.3	19.4
		8	83	10.4	12.8	15.2	17.6	19.9	22.3
		9	74	11.8	14.5	17.2	19.9	22.5	25.2
		10	66	13.3	16.3	19.2	22.2	25.1	28.0
3.5	□ 142	3	222	5.6	7.4	9.1	10.8	12.4	14.0
		4	166	8.3	10.6	12.7	14.9	17.0	19.1
		5	133	10.9	13.6	16.3	19.0	21.6	24.2
		6	111	13.4	16.7	19.9	23.1	26.2	29.3
		7	95	16.0	19.8	23.5	27.1	34.4	
		8	83	18.5	22.8	27.0	31.2	35.3	
		9	74	21.1	25.9	30.6	35.2		
		10	66	23.6	28.9	34.1			

Note 1. The speeds indicated above are based on the servo motor's rated speed of 2,000 RPM
The settings in the table above are based on a 500mm stroke.

LIFETIME GRAPH

HES 130 HS



The above graph is based on the following criteria: 500 strokes, a speed of 150 mm/sec, and continuous operation.

HES 130 NS - 200 - W - S3 - M

SPECIFICATIONS

MODEL	HES 130 NS	HES 130 HS
FRAME SIZE	□ 130	
ROD DIAMETER	Ø 60	
BALL SCREW LEAD	10	20
MAX. ALLOWABLE CAPACITY	7kW(Direct drive : without reduction gear)	
RATED RPM	2000	2000
NORMAL PAYLOAD	750kgf	725kgf
MAX. PAYLOAD	1500kgf	1450kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)	



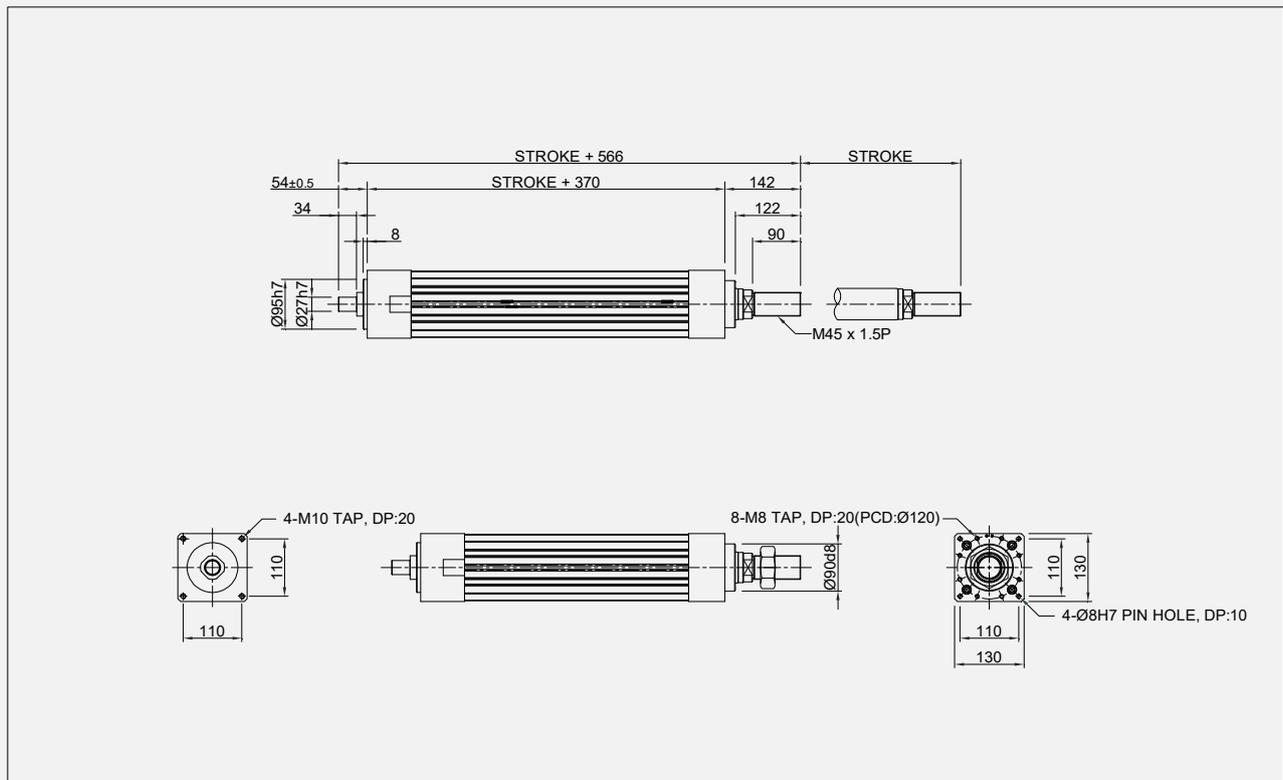
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	27.60	30.93	34.26	37.59	40.93	44.26	47.59	50.92

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HES 130 NS - S 200 - W 020 G10 - S3 - M

SPECIFICATIONS

MODEL	HES 130 NS	HES 130 HS
FRAME SIZE	□ 130	
ROD DIAMETER	Ø 60	
BALL SCREW LEAD	10	20
MAX. ALLOWABLE CAPACITY	7kW(Direct drive : without reduction gear)	
RATED RPM	2000	2000
NORMAL PAYLOAD	750kgf	725kgf
MAX. PAYLOAD	1500kgf	1450kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)	



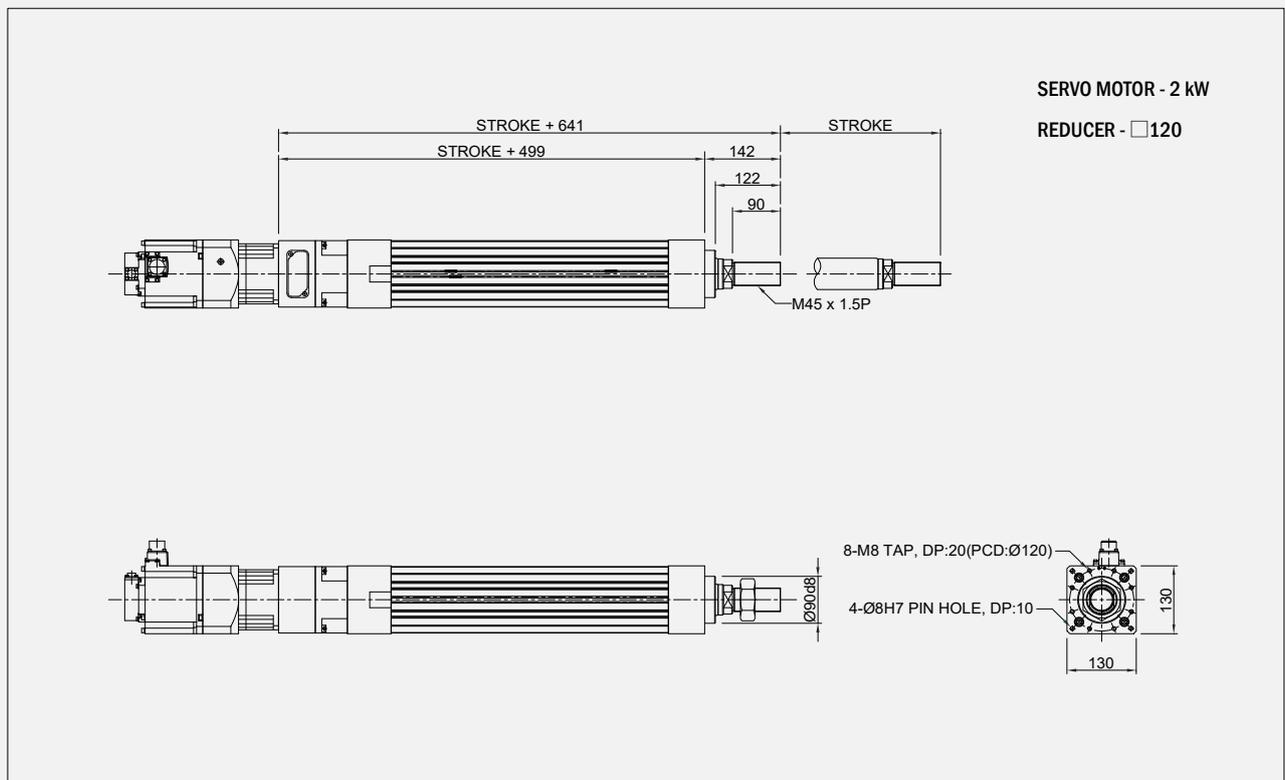
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	31.40	34.73	38.07	41.40	44.73	48.06	51.39	54.72
SERVO MOTOR / GEAR	19.63	19.63	19.63	19.63	19.63	19.63	19.63	19.63
TOTAL WEIGHT	51.03	54.36	57.70	61.03	64.36	67.69	71.02	74.35

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 130

OPTIONS

FM

FLANGE MOUNT

HES 130 NS - S 200 - W 020 G10 - S3 - M - FM

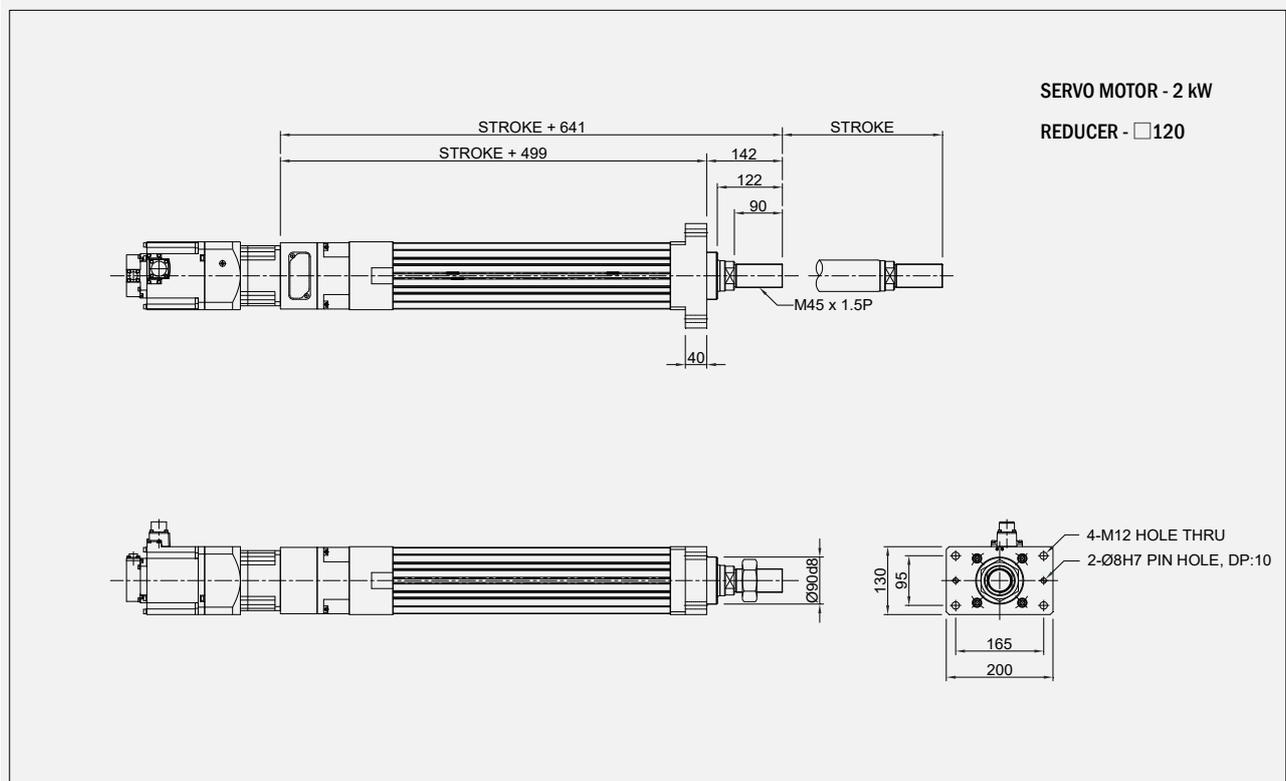
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	32.39	35.72	39.05	42.38	45.71	49.04	52.37	55.70
SERVO MOTOR / GEAR	19.63	19.63	19.63	19.63	19.63	19.63	19.63	19.63
TOTAL WEIGHT	52.02	55.35	58.68	62.01	65.34	68.67	72.00	75.33

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 130

OPTIONS

FFB

FLANGE FOOT MOUNT B TYPE

HES 130 NS - S 200 - W 020 G10 - S3 - M - FFB

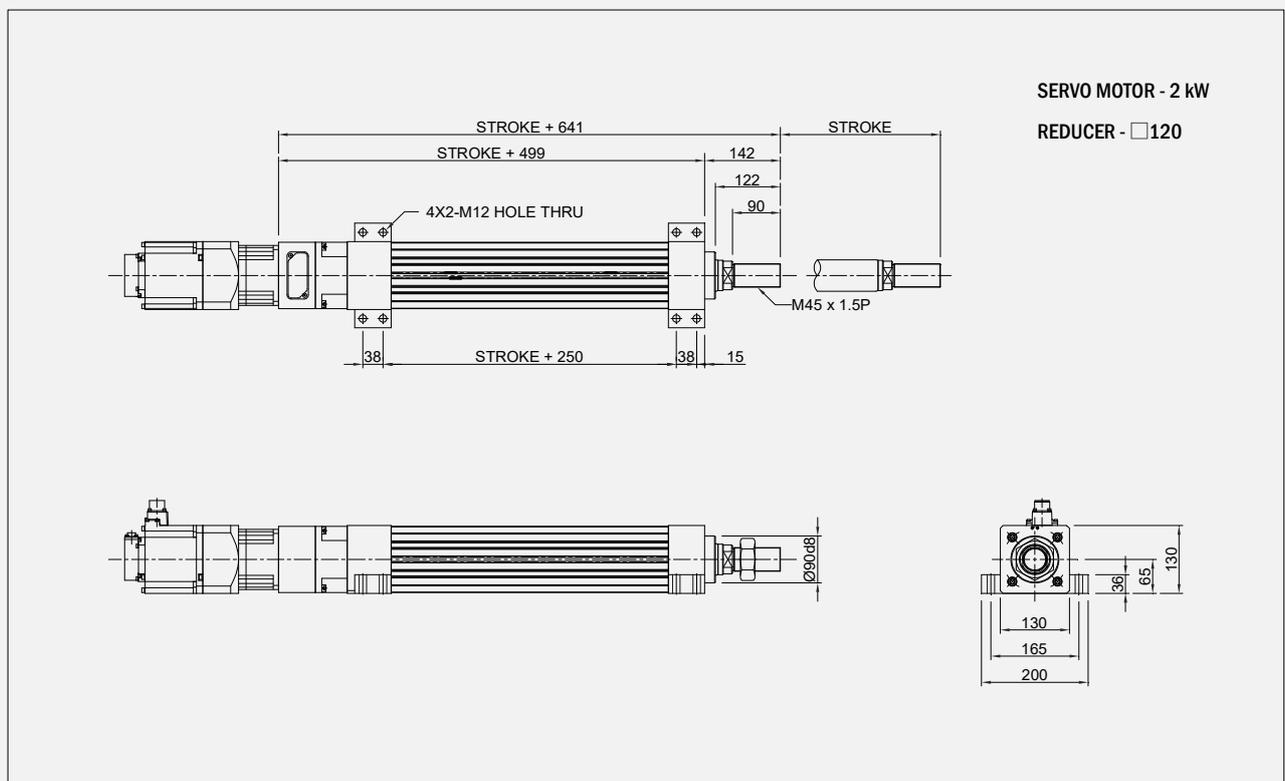
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	32.33	35.66	38.99	42.32	45.65	48.98	52.31	55.64
SERVO MOTOR / GEAR	19.63	19.63	19.63	19.63	19.63	19.63	19.63	19.63
TOTAL WEIGHT	51.96	55.29	58.62	61.95	65.28	68.61	71.94	75.27

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 130

OPTIONS

FFC

FLANGE FOOT MOUNT C TYPE

HES 130 NS - S 200 - W 020 G10 - S3 - M - FFC

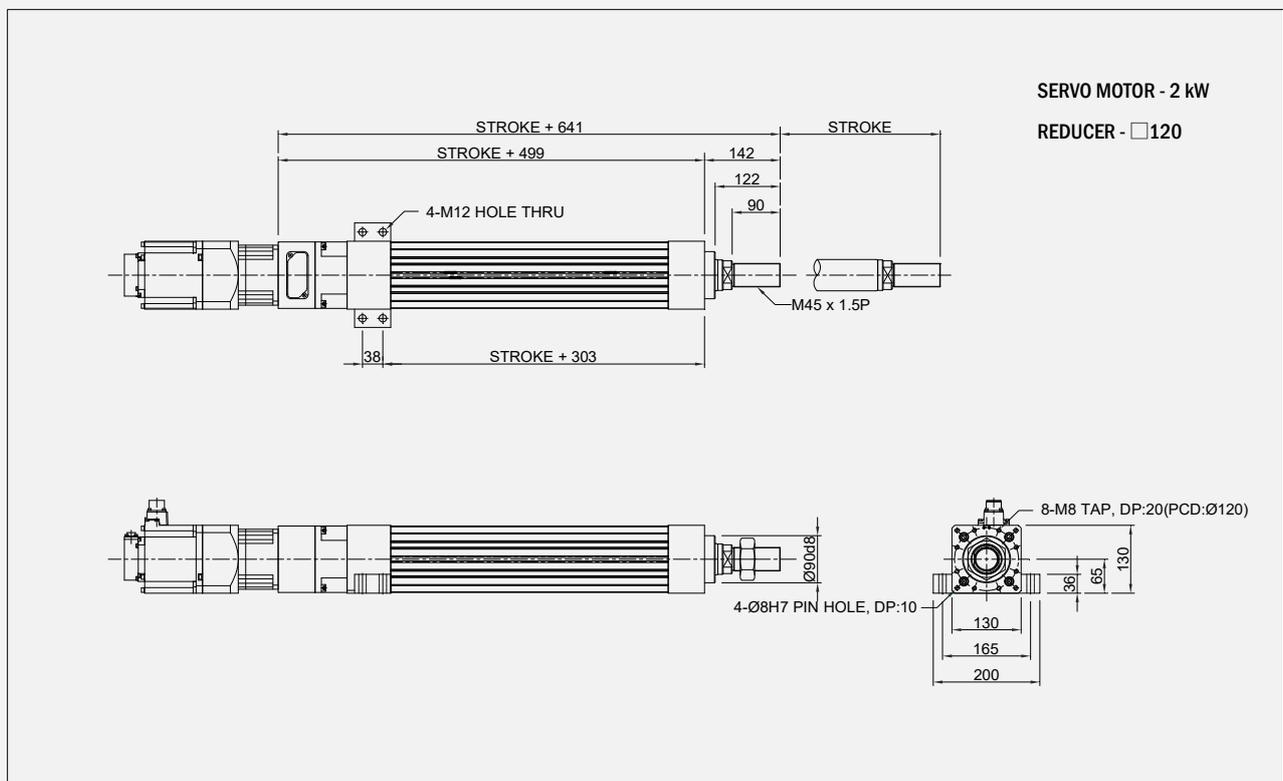
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	31.87	35.20	38.53	41.86	45.19	48.52	51.85	55.18
SERVO MOTOR / GEAR	19.63	19.63	19.63	19.63	19.63	19.63	19.63	19.63
TOTAL WEIGHT	51.50	54.83	58.16	61.49	64.82	68.15	71.48	74.81

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.



HES 130 HS - S 200 - W 035 G10 - S3 - M

SPECIFICATIONS

MODEL	HES 130 NS	HES 130 HS
FRAME SIZE	□ 130	
ROD DIAMETER	Ø 60	
BALL SCREW LEAD	10	20
MAX. ALLOWABLE CAPACITY	7kW(Direct drive : without reduction gear)	
RATED RPM	2000	2000
NORMAL PAYLOAD	750kgf	725kgf
MAX. PAYLOAD	1500kgf	1450kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)	



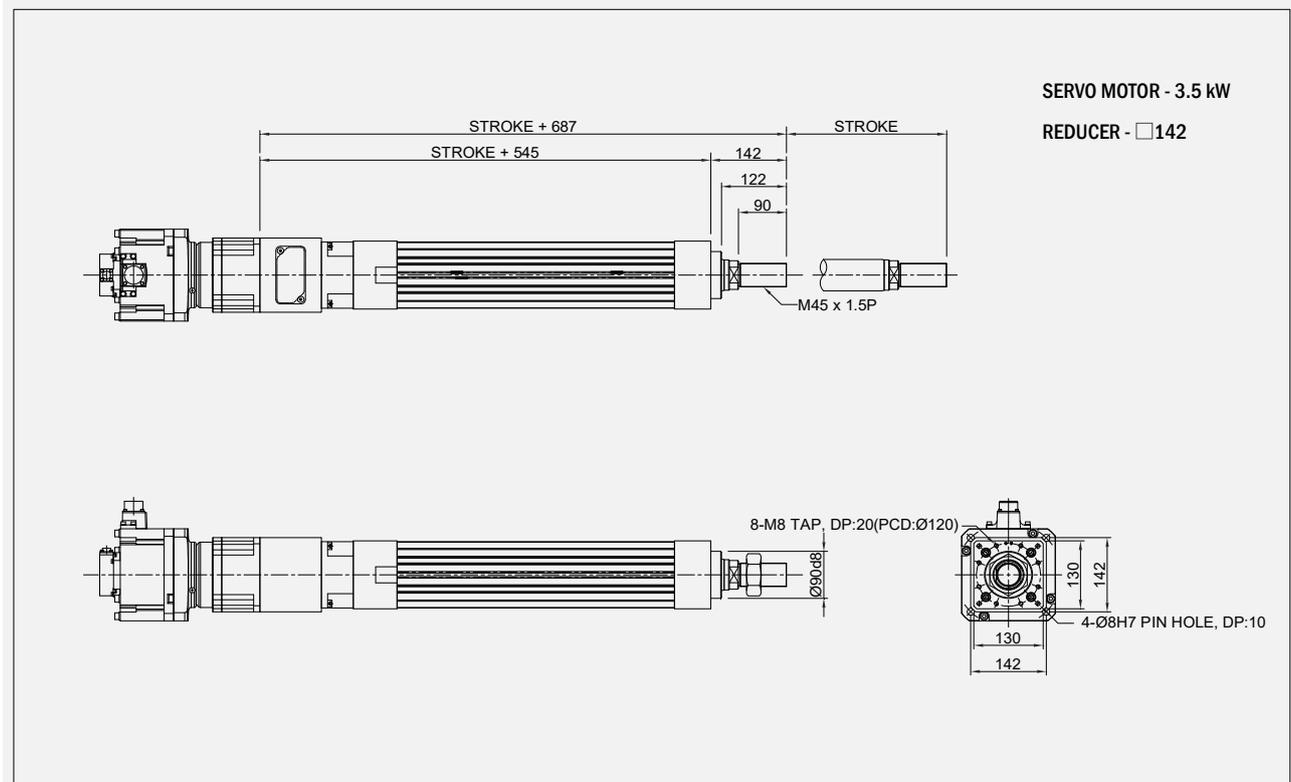
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	32.91	36.24	39.57	42.90	46.23	49.56	52.89	56.22
SERVOMOTOR / GEAR	30.55	30.55	30.55	30.55	30.55	30.55	30.55	30.55
TOTAL WEIGHT	63.46	66.79	70.12	73.45	76.78	80.11	83.44	86.77

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 130

OPTIONS



FLANGE MOUNT

HES 130 HS - S 200 - W 035 G10 - S3 - M - FM

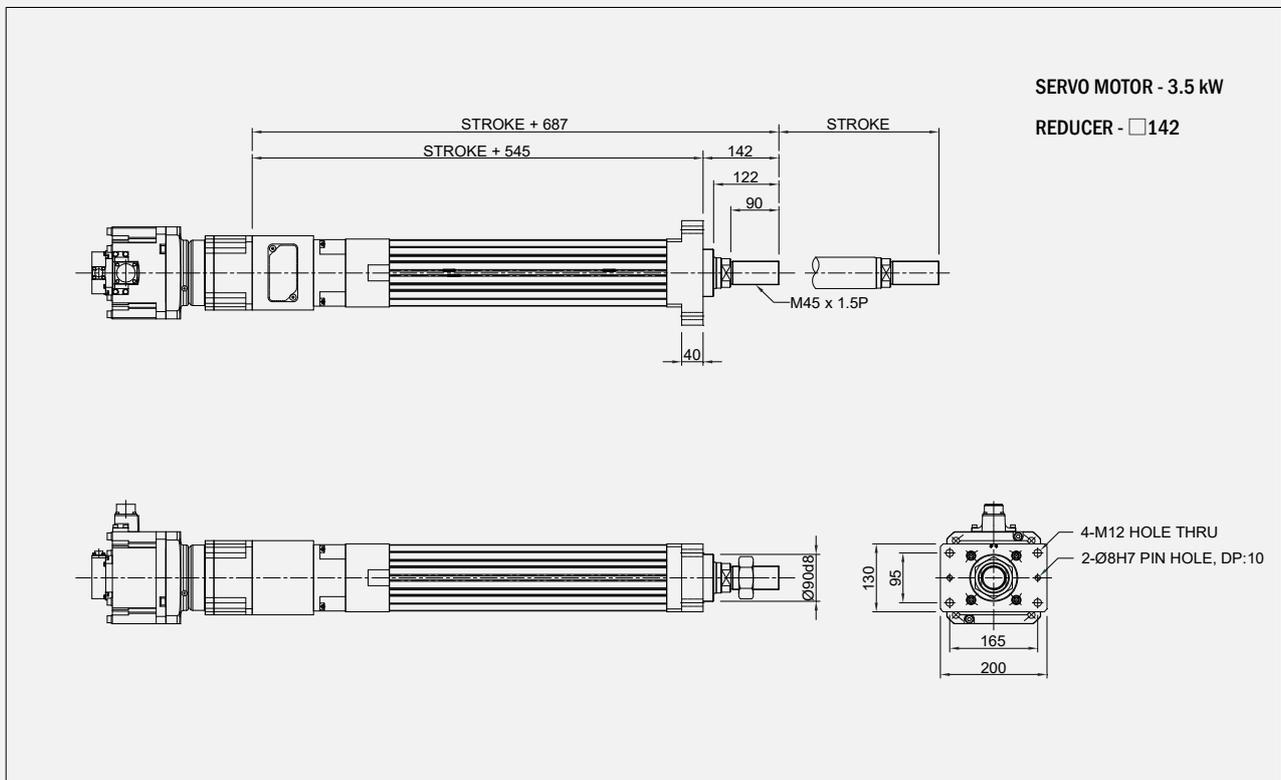
UP TO 35 kN

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	33.89	37.22	40.55	43.89	47.22	50.55	53.88	57.21
SERVO MOTOR / GEAR	30.55	30.55	30.55	30.55	30.55	30.55	30.55	30.55
TOTAL WEIGHT	64.44	67.77	71.10	74.44	77.77	81.10	84.43	87.76

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 130

OPTIONS

FFB

FLANGE FOOT MOUNT B TYPE

HES 130 HS - S 200 - W 035 G10 - S3 - M - FFB

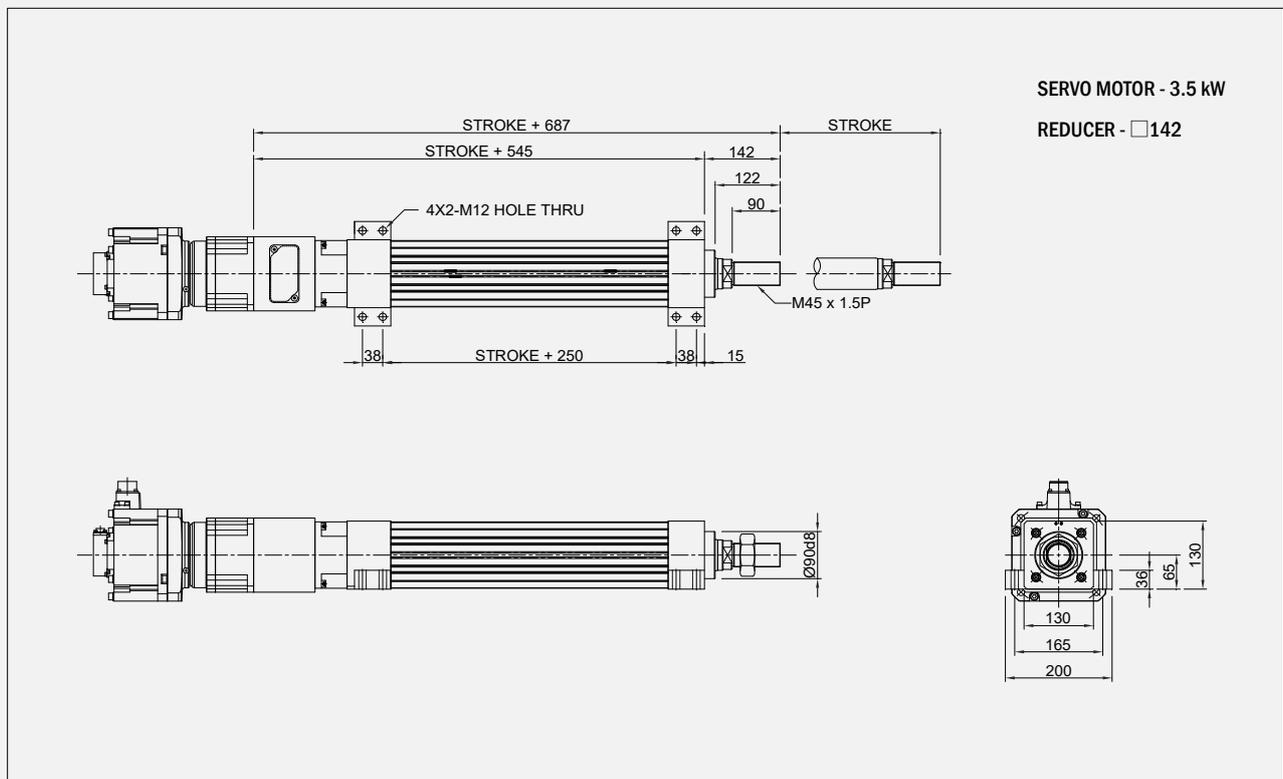
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	33.84	37.17	40.50	43.83	47.16	50.49	53.82	57.15
SERVO MOTOR / GEAR	30.55	30.55	30.55	30.55	30.55	30.55	30.55	30.55
TOTAL WEIGHT	64.39	67.72	71.05	74.38	77.71	81.04	84.37	87.70

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 130

OPTIONS

FFC

FLANGE FOOT MOUNT C TYPE

HES 130 HS - S 200 - W 035 G10 - S3 - M - FFC

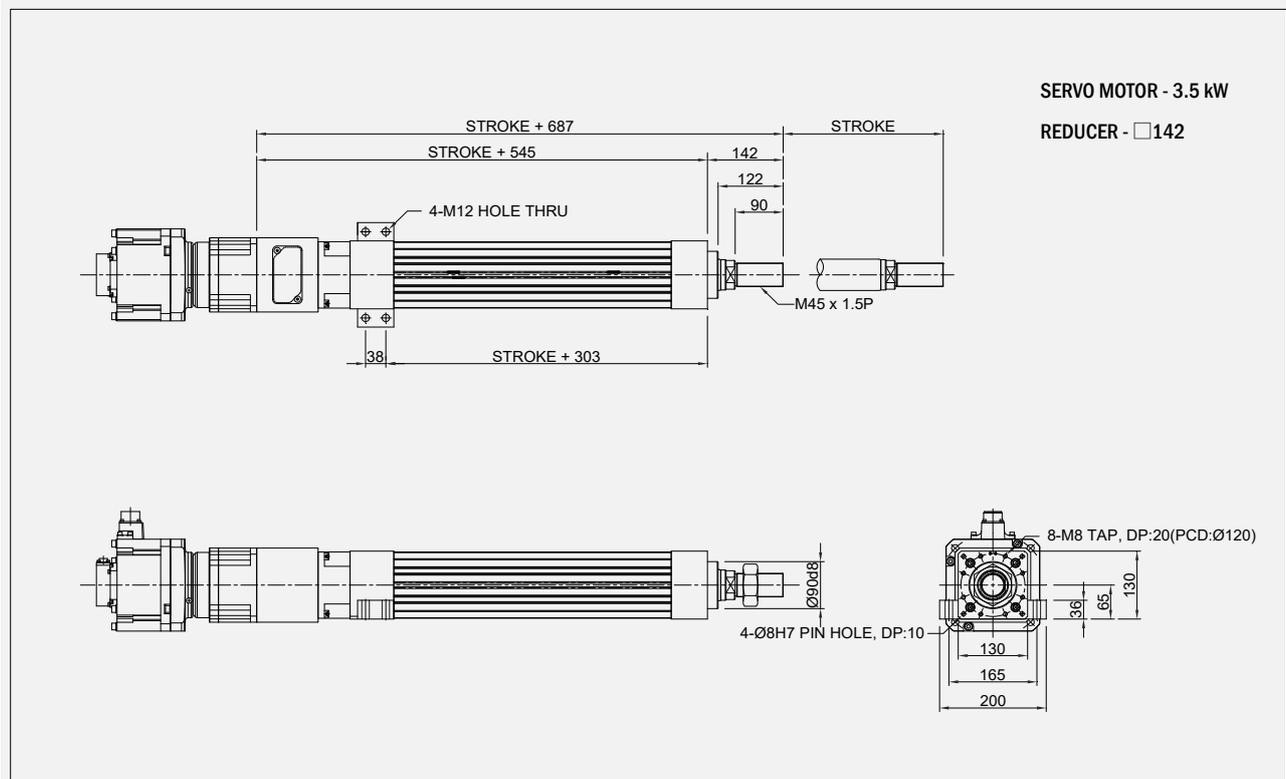
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	33.37	36.70	40.03	43.36	46.70	50.03	53.36	56.69
SERVO MOTOR / GEAR	30.55	30.55	30.55	30.55	30.55	30.55	30.55	30.55
TOTAL WEIGHT	63.92	67.25	70.58	73.91	77.25	80.58	83.91	87.24

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HES 130 NS - P 200 - W 020 G10 - S3 - M

SPECIFICATIONS

MODEL	HES 130 NS	HES 130 HS
FRAME SIZE	□ 130	
ROD DIAMETER	Ø 60	
BALL SCREW LEAD	10	20
MAX. ALLOWABLE CAPACITY	7kW(Direct drive : without reduction gear)	
RATED RPM	2000	2000
NORMAL PAYLOAD	750kgf	725kgf
MAX. PAYLOAD	1500kgf	1450kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)	



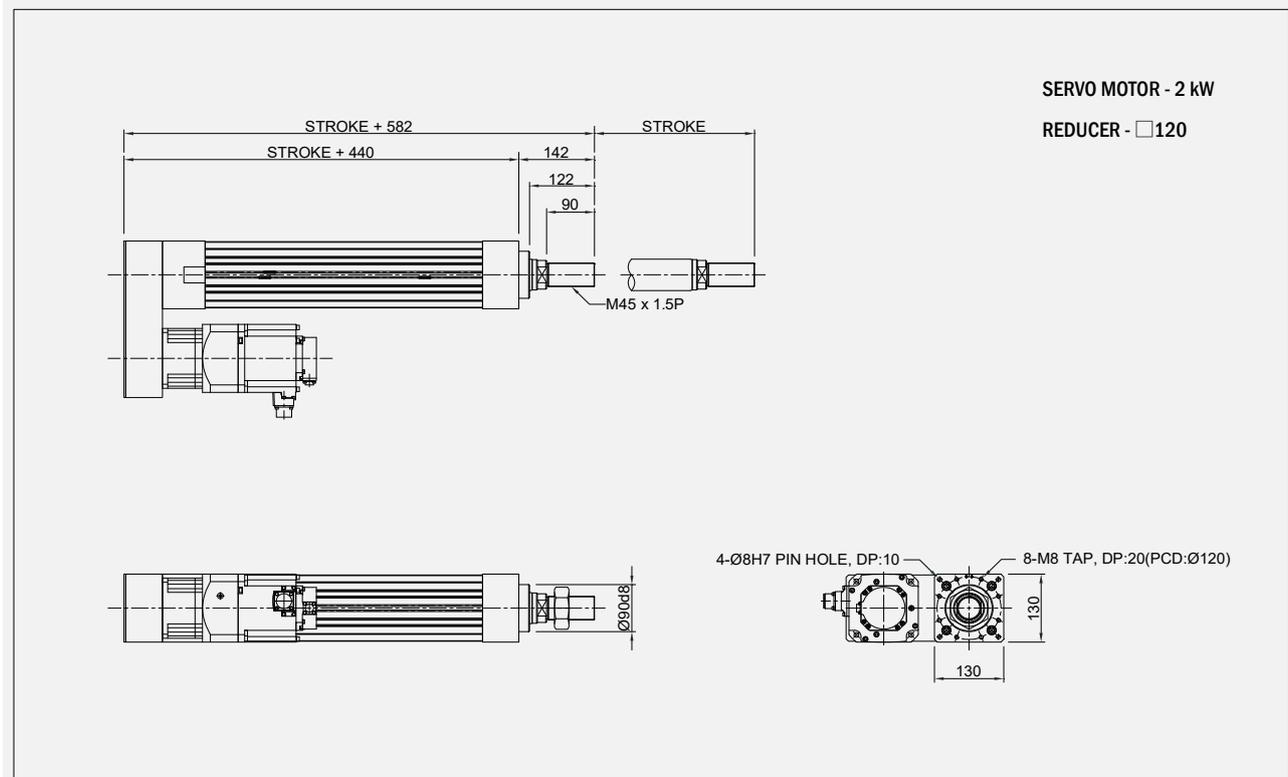
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	34.11	37.44	40.77	44.10	47.43	50.76	54.09	57.42
SERVO MOTOR / GEAR	19.63	19.63	19.63	19.63	19.63	19.63	19.63	19.63
TOTAL WEIGHT	53.74	57.07	60.40	63.73	67.06	70.39	73.72	77.05

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 130

OPTIONS

FMA

FLANGE MOUNT A TYPE

HES 130 NS - P 200 - W 020 G10 - S3 - M - FMA

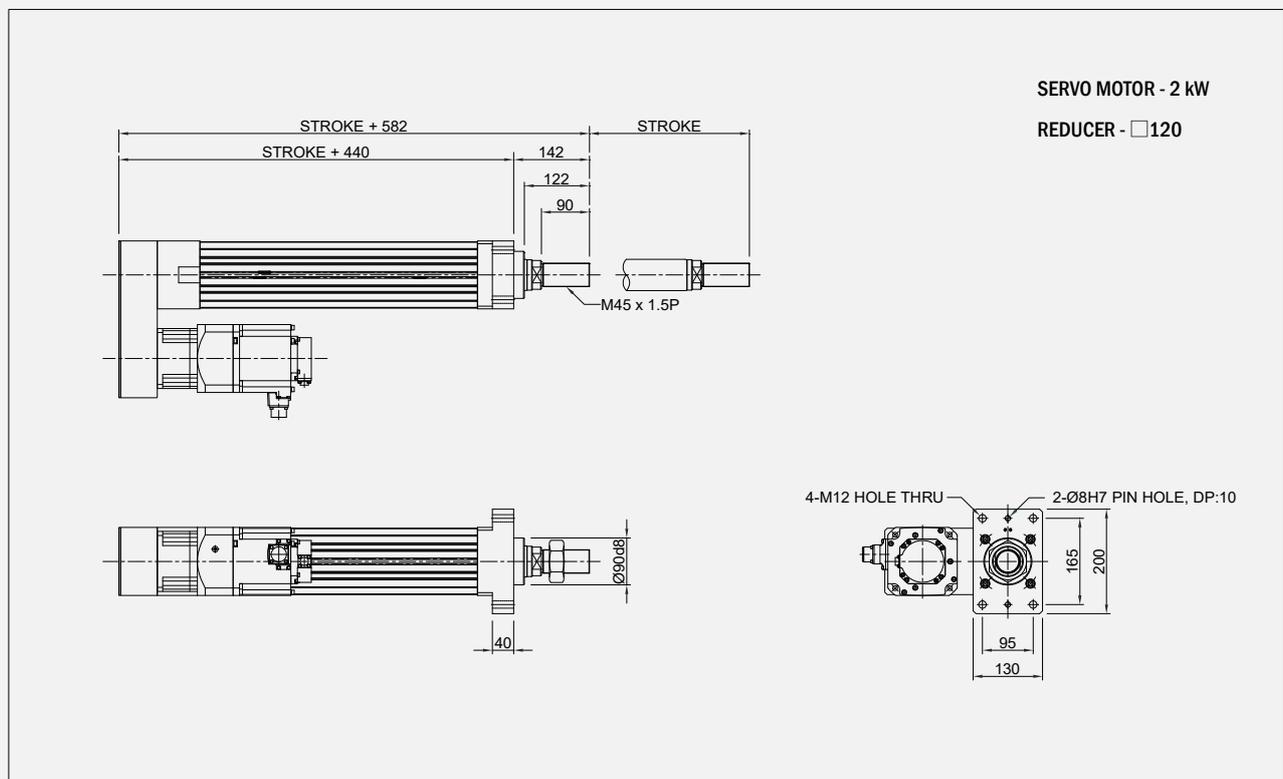
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	35.09	38.42	41.75	45.08	48.41	51.74	55.07	58.40
SERVO MOTOR / GEAR	19.63	19.63	19.63	19.63	19.63	19.63	19.63	19.63
TOTAL WEIGHT	54.72	58.05	61.38	64.71	68.04	71.37	74.70	78.03

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 130

OPTIONS

FMB

FLANGE MOUNT B TYPE

HES 130 NS - P 200 - W 020 G10 - S3 - M - FMB

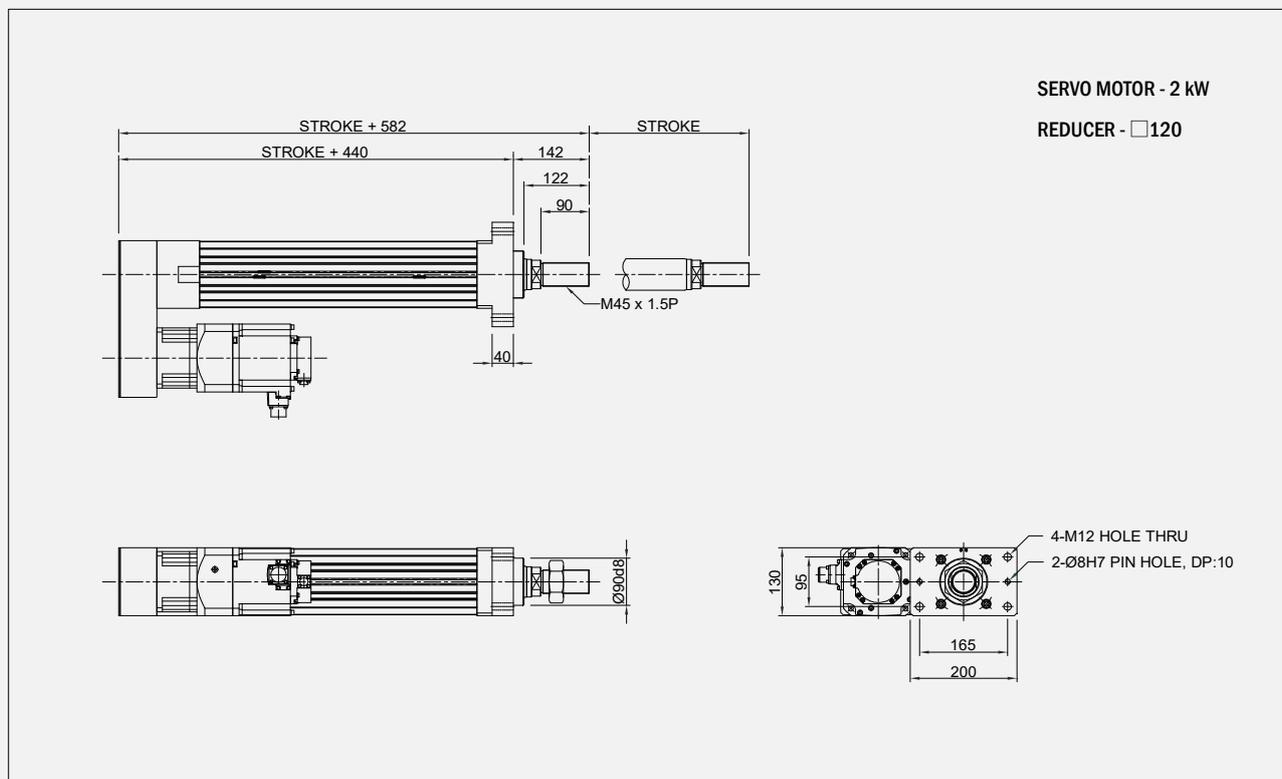
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	35.09	38.42	41.75	45.08	48.41	51.74	55.07	58.40
SERVO MOTOR / GEAR	19.63	19.63	19.63	19.63	19.63	19.63	19.63	19.63
TOTAL WEIGHT	54.72	58.05	61.38	64.71	68.04	71.37	74.70	78.03

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 130

OPTIONS

FFB

FLANGE FOOT MOUNT B TYPE

HES 130 NS - P 200 - W 020 G10 - S3 - M - FFB

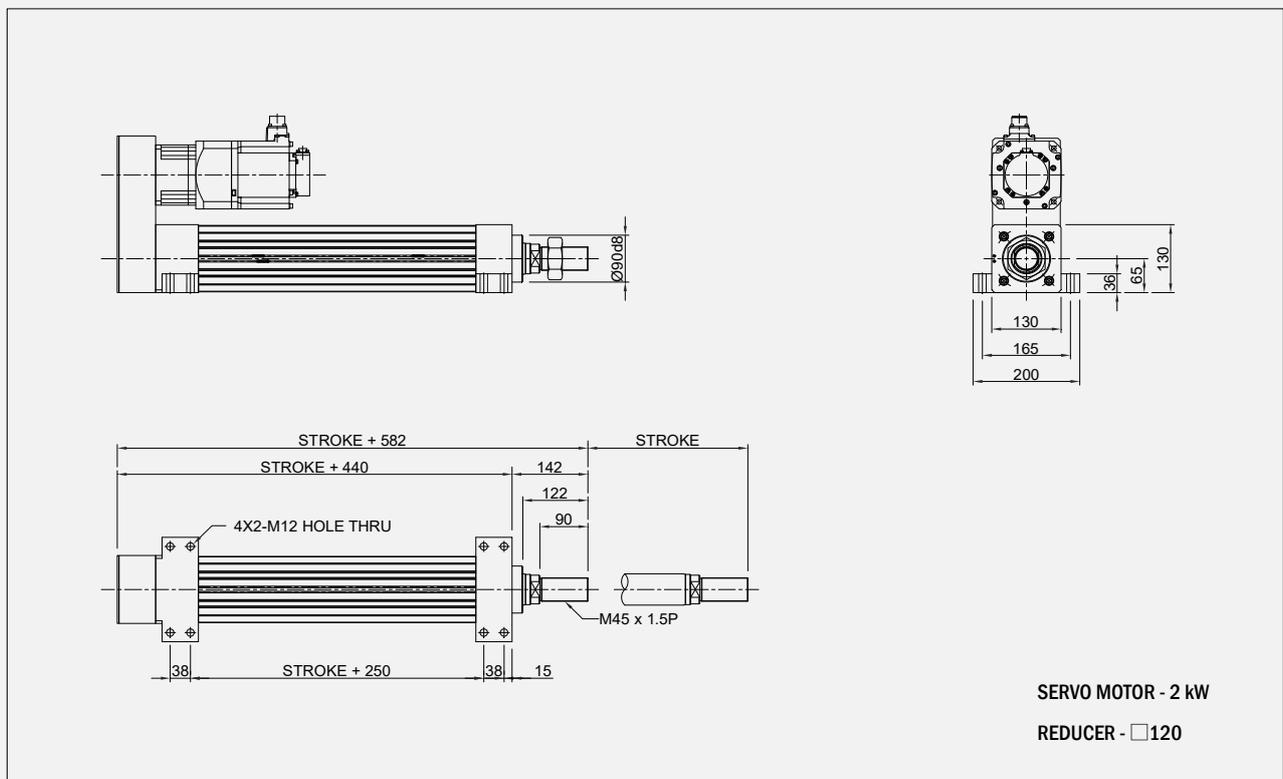
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	35.03	38.36	41.69	45.03	48.36	51.69	55.02	58.35
SERVO MOTOR / GEAR	19.63	19.63	19.63	19.63	19.63	19.63	19.63	19.63
TOTAL WEIGHT	54.66	57.99	61.32	64.66	67.99	71.32	74.65	77.98

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 130

OPTIONS

FFC

FLANGE FOOT MOUNT C TYPE

HES 130 NS - P 200 - W 020 G10 - S3 - M - FFC

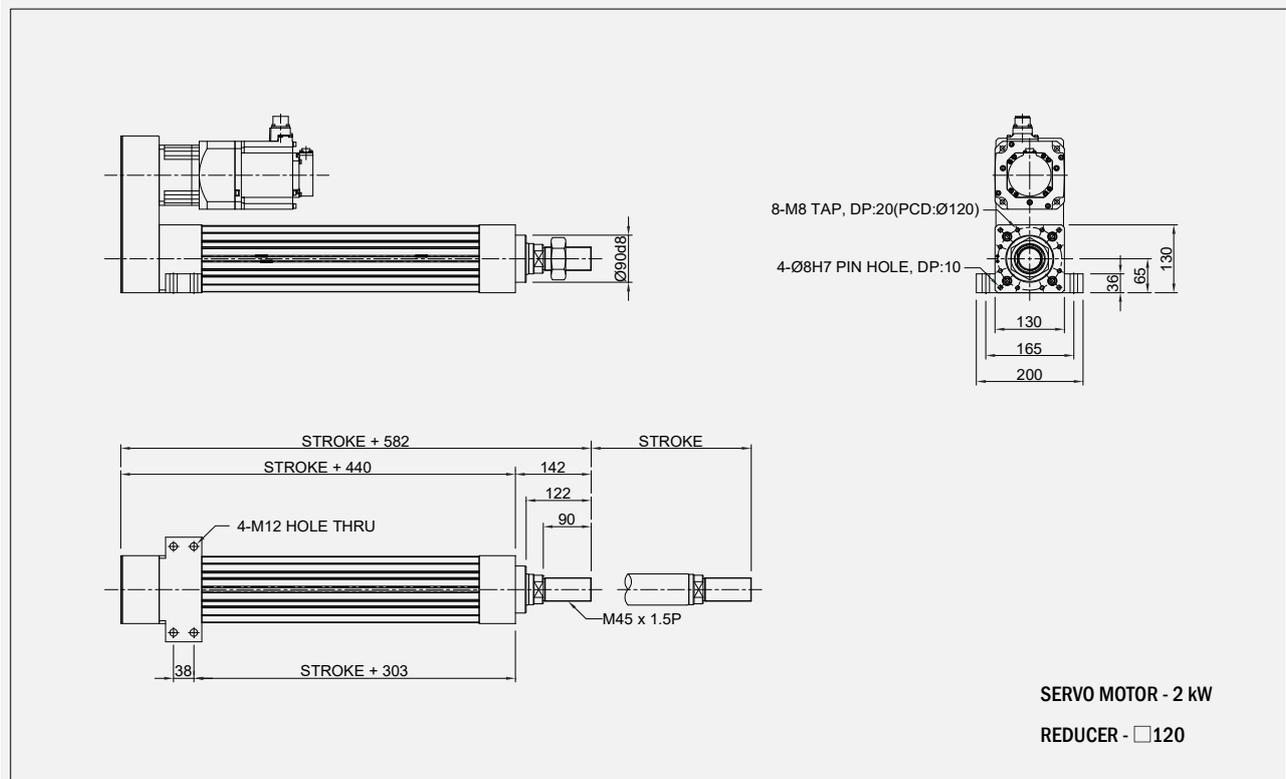
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	34.57	37.90	41.23	44.56	47.89	51.22	54.55	57.88
SERVO MOTOR / GEAR	19.63	19.63	19.63	19.63	19.63	19.63	19.63	19.63
TOTAL WEIGHT	54.20	57.53	60.86	64.19	67.52	70.85	74.18	77.51

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.



HES 130 HS - P 200 - W 035 G10 - S3 - M

SPECIFICATIONS

MODEL	HES 130 NS	HES 130 HS
FRAME SIZE	□ 130	
ROD DIAMETER	Ø 60	
BALL SCREW LEAD	10	20
MAX. ALLOWABLE CAPACITY	7kW(Direct drive : without reduction gear)	
RATED RPM	2000	2000
NORMAL PAYLOAD	750kgf	725kgf
MAX. PAYLOAD	1500kgf	1450kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)	



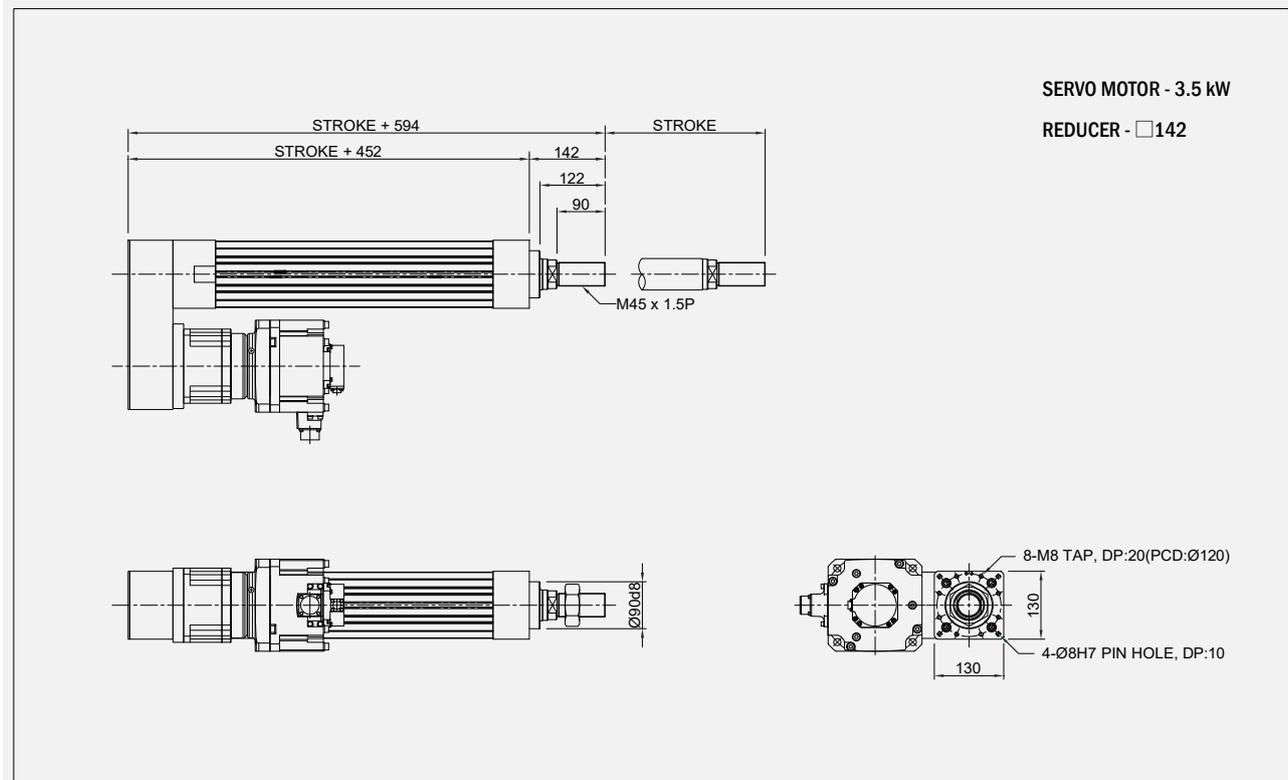
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	36.52	39.85	43.18	46.52	49.85	53.18	56.51	59.84
SERVO MOTOR / GEAR	30.55	30.55	30.55	30.55	30.55	30.55	30.55	30.55
TOTAL WEIGHT	67.07	70.40	73.73	77.07	80.40	83.73	87.06	90.39

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 130

OPTIONS

FMA

FLANGE MOUNT A TYPE

HES 130 HS - P 200 - W 035 G10 - S3 - M - FMA

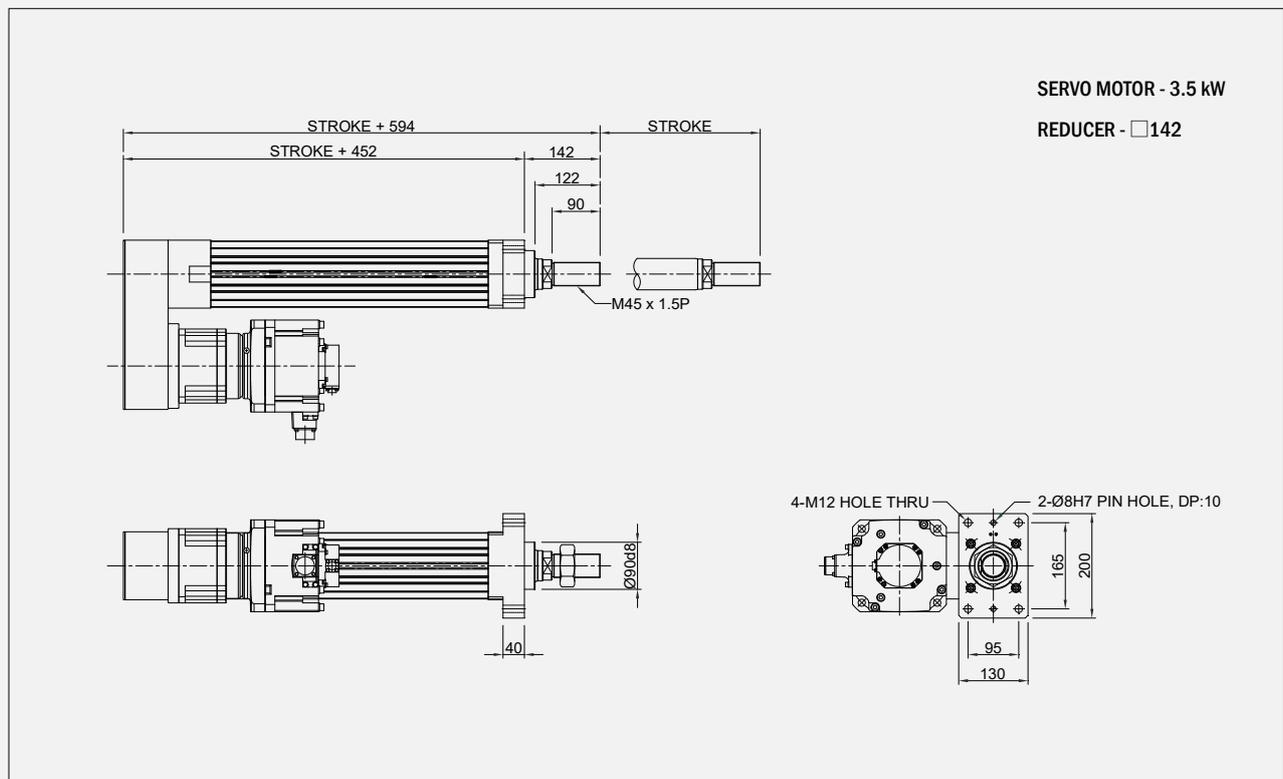
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	37.51	40.84	44.17	47.50	50.83	54.16	57.49	60.82
SERVO MOTOR / GEAR	30.55	30.55	30.55	30.55	30.55	30.55	30.55	30.55
TOTAL WEIGHT	68.06	71.39	74.72	78.05	81.38	84.71	88.04	91.37

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 130

OPTIONS

FMB

FLANGE MOUNT B TYPE

HES 130 HS - P 200 - W 035 G10 - S3 - M - FMB

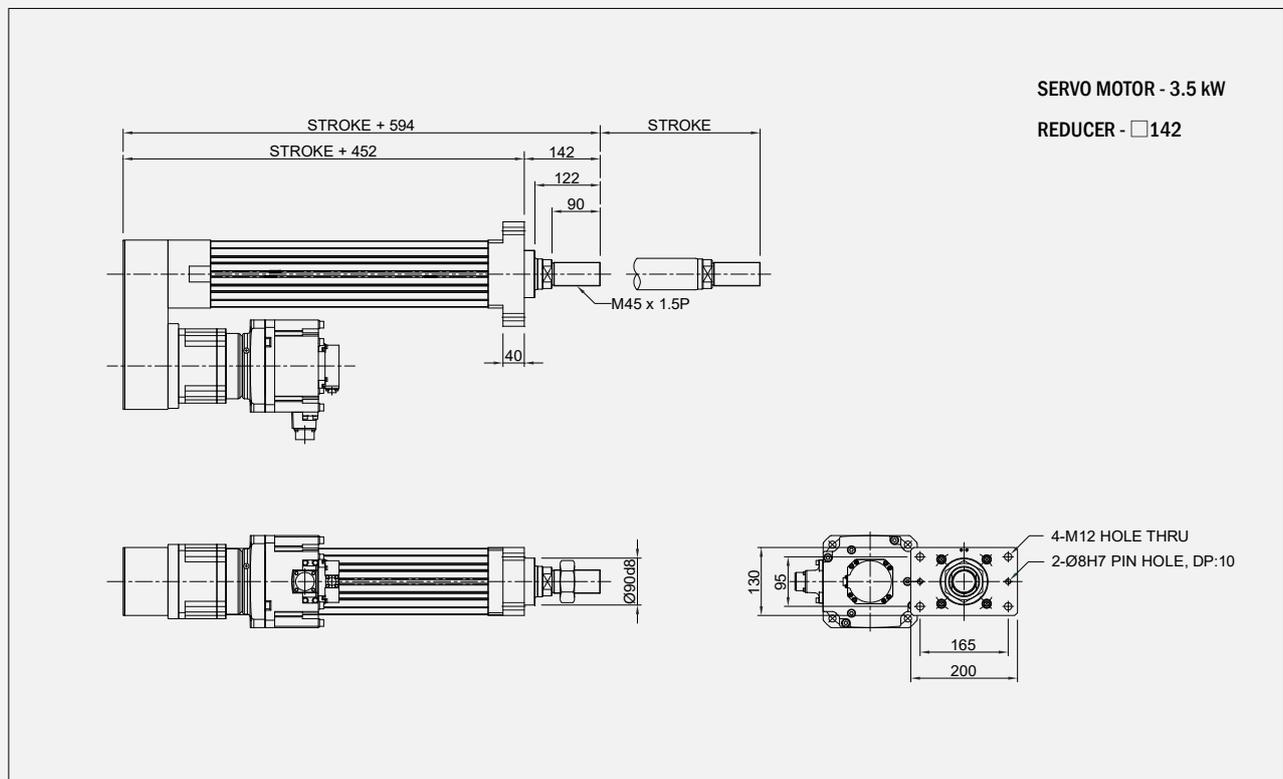
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	37.51	40.84	44.17	47.50	50.83	54.16	57.49	60.82
SERVO MOTOR / GEAR	30.55	30.55	30.55	30.55	30.55	30.55	30.55	30.55
TOTAL WEIGHT	68.06	71.39	74.72	78.05	81.38	84.71	88.04	91.37

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 130

OPTIONS

FFB

FLANGE FOOT MOUNT B TYPE

HES 130 HS - P 200 - W 035 G10 - S3 - M - FFB

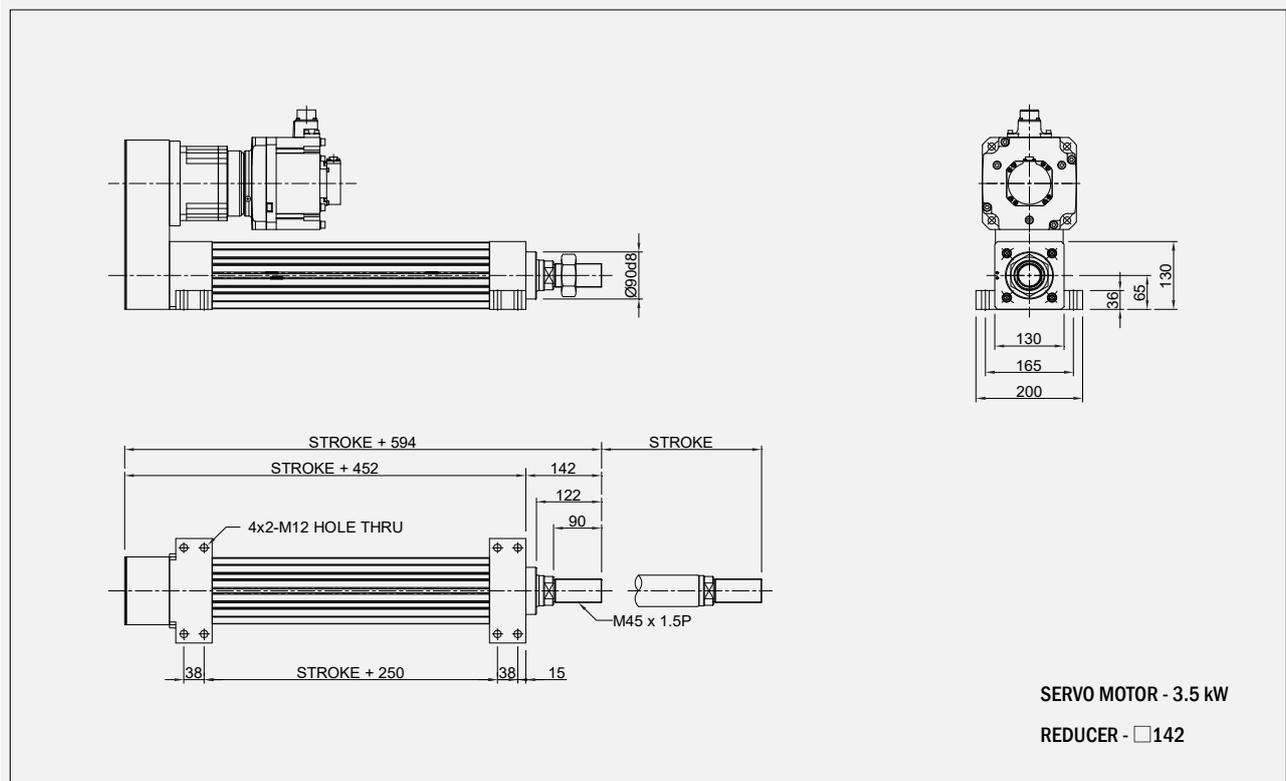
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	37.45	40.78	44.11	47.44	50.77	54.10	57.43	60.76
SERVO MOTOR / GEAR	30.55	30.55	30.55	30.55	30.55	30.55	30.55	30.55
TOTAL WEIGHT	68.00	71.33	74.66	77.99	81.32	84.65	87.98	91.31

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 130

OPTIONS

FFC

FLANGE FOOT MOUNT C TYPE

HES 130 HS - P 200 - W 035 G10 - S3 - M - FFC

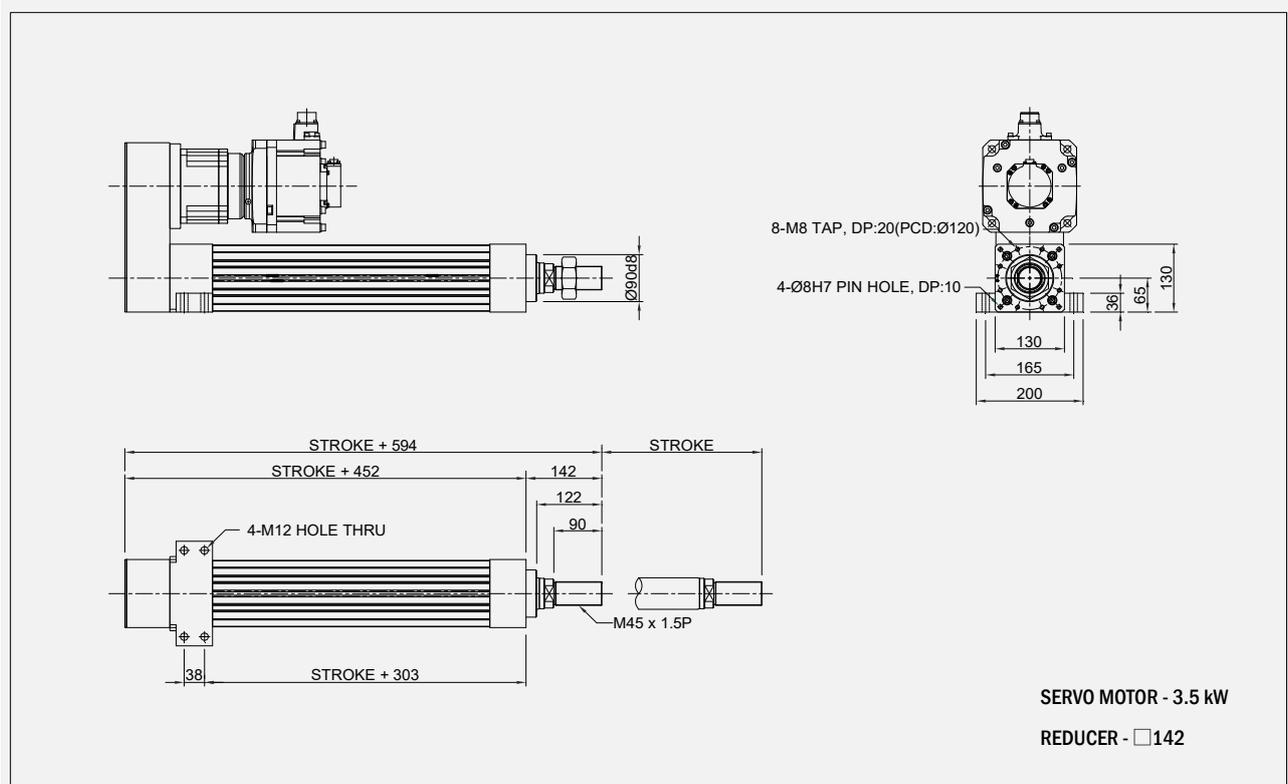
UP TO **35 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	36.99	40.32	43.65	46.98	50.31	53.64	56.97	60.30
SERVO MOTOR / GEAR	30.55	30.55	30.55	30.55	30.55	30.55	30.55	30.55
TOTAL WEIGHT	67.54	70.87	74.20	77.53	80.86	84.19	87.52	90.85

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES 150



www.tms-korea.co.kr



ORDER CODE

HES 150

HES 150 HS - P 600 - W 050 G 10 - S3 - M - FM
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

1. Series

HES TMS Hyper Cylinder Series

2. Frame (Body Frame Size)

HES 110 110mm X 110mm

HES 130 130mm X 130mm

HES 150 150mm X 150mm

HES 180 180mm X 180mm

HES 220 220mm X 220mm

3. LEAD (Ball Screw)

LS Ball Screw LEAD 05mm

NS Ball Screw LEAD 10mm

GS Ball Screw LEAD 12mm

FS Ball Screw LEAD 16mm

HS Ball Screw LEAD 20mm

US Ball Screw LEAD 32mm

HE Ball Screw LEAD 40mm

4. Mounting Type

NONE without Type

S Servo Motor Straigh Type

P Servo Motor Parallel Type

5. Stroke

100 The standard stroke is in units of 100 mm.

000 Customized specifications are available.

6. Color

W Body Color - White Anodizing

B Body Color - Black Anodizing

7. Motor

NONE without Servo Motor

008 Servo Motor 750W

010 Servo Motor 1.0kW

035 Servo Motor 3.5kW

070 Servo Motor 7.0kW

110 Servo Motor 11.0kW

8. Reducer

NONE Without Gear

G With Gear

9. Ratio

NONE without Ratio

03 ~ 10 Gear Ratio

10. Sensor (magnetic, NPN, 3wire)

NONE Without Sensor

S3 (P) Standard Spec. NO(Origin-1) + NC(Limit-2)

A3 (P) NO(Normal Open), 3EA

B3 (P) NC(Normal Close), 3EA

※ () is the PNP order specification.

11. ROD Shape

M Male Thread

F Female Thread

RB Rod End Bearing

RC Rod Clevis

12. Options (Mount Bracket)

NONE without Options

FM Flange Mount

FF Flange Foot Mount

PC Pulley Cover Clevis Mount

TRN Trunnion Mount

Mounting Types and Options: Reference Views

None type



Without servo motors

S type



Straight-mounted servo motors

P type



Parallel-mounted servo motors

OPTIONS

S type (Straight-mounted servo motors)

FM



Flange Mount type

FFB



Flange Foot Mount B type

FFC



Flange Foot Mount C type

TRN



Trunnion type

OPTIONS

P type (Parallel-mounted servo motors)

FMA



Flange Mount A type

FMB



Flange Mount B type

FFB



Flange Foot Mount B type

FFC



Flange Foot Mount C type

PC



Pulley Cover Clevis type

TRN



Trunnion type

TECHNICAL DATA

HES 150 NS

FORCE TABLE

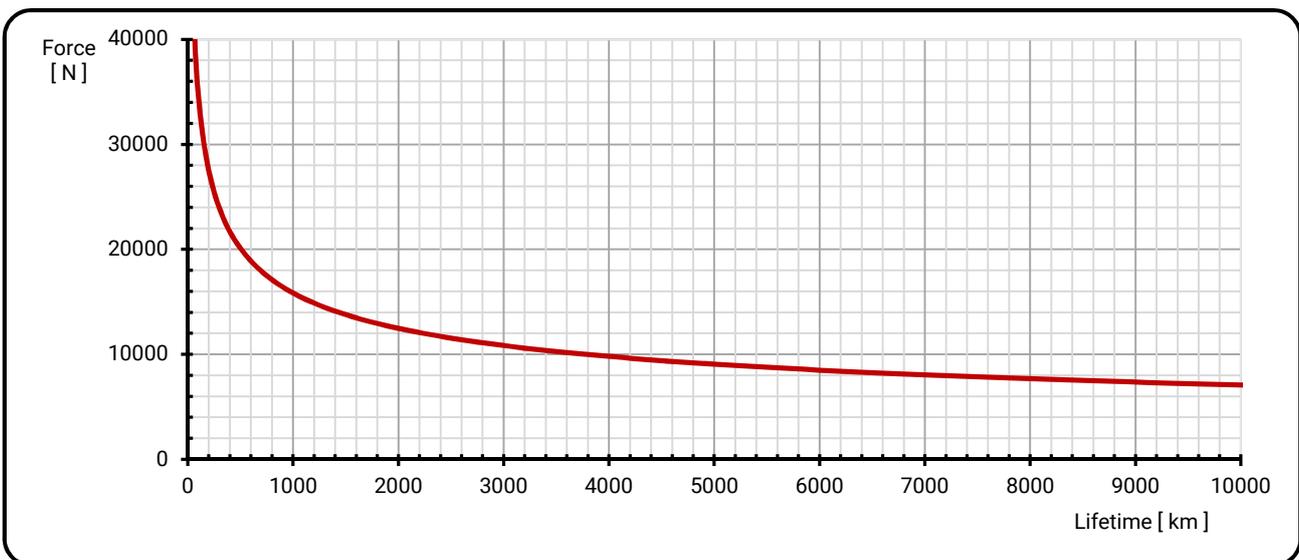
HES 150 NS

Servo Motor (kW)	Gear	Ratio	Speed ¹ (mm/sec)	Force (kN)					
				50%	60%	70%	80%	90%	100%
2.2	□ 120	3	111	6.9	8.8	10.7	12.5	14.3	16.1
		4	83	9.9	12.4	14.8	17.2	19.6	21.9
		5	66	12.8	15.8	18.8	21.8	24.8	27.7
		6	55	15.7	19.3	22.9	26.4	30.0	33.5
		7	47	18.6	22.8	26.9	31.1	35.2	39.2
		8	41	21.5	26.3	31.0	35.7	40.3	45.0
		9	37	24.4	29.7	35.0	40.3	45.5	50.8
		10	33	27.3	33.2	39.0	44.9	50.7	56.5
3.5	□ 142	3	111	13.1	16.4	19.6	22.8	25.9	29.0
		4	83	18.3	22.5	26.8	30.9	35.1	39.2
		5	66	23.4	28.7	33.9	39.0	44.2	49.3
		6	55	28.5	34.8	41.0	47.2	53.3	59.5
		7	47	33.5	40.8	48.1	55.3	62.4	
		8	41	38.6	46.9	55.2	63.4		
		9	37	43.7	53.0				
		10	33	48.7	59.1				

Note 1. The speeds indicated above are based on the servo motor's rated speed of 2,000 RPM
The settings in the table above are based on a 500mm stroke.

LIFETIME GRAPH

HES 150 NS



The above graph is based on the following criteria: 500 strokes, a speed of 100 mm/sec, and continuous operation.

TECHNICAL DATA

HES 150 HS

FORCE TABLE

HES 150 HS

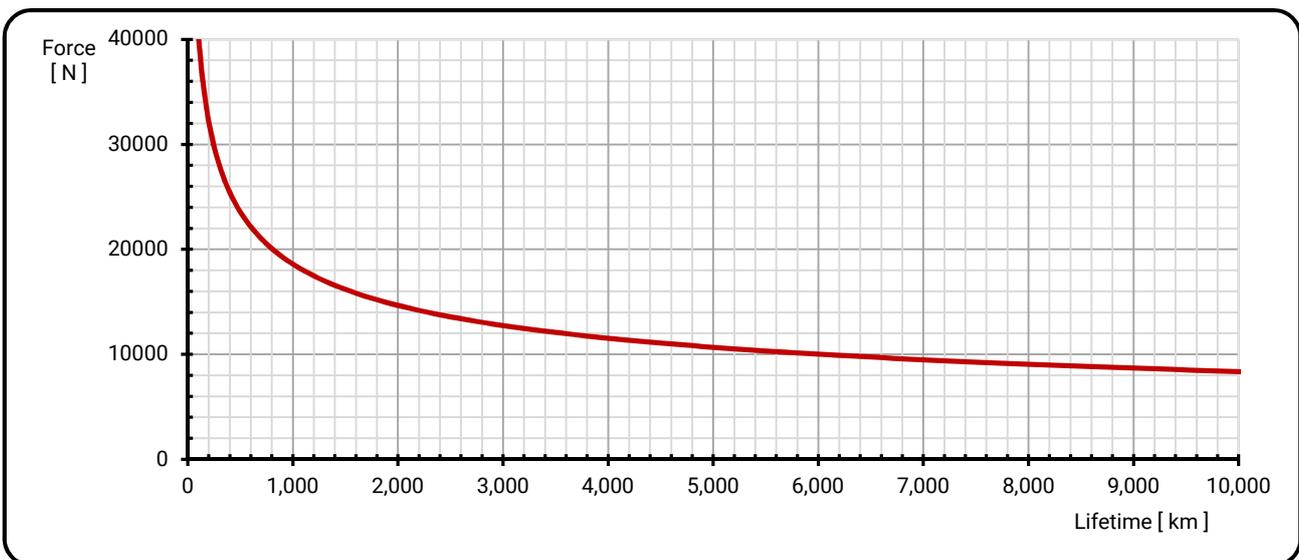
Servo Motor (kW)	Gear	Ratio	Speed ¹ (mm/sec)	Force (kN)					
				50%	60%	70%	80%	90%	100%
3.5	□ 142	3	222	5.3	7.1	8.9	10.5	12.1	13.7
		4	166	8.0	10.3	12.5	14.6	16.8	18.9
		5	133	10.6	13.4	16.1	18.7	21.4	24.0
		6	111	13.2	16.5	19.7	22.8	25.9	29.1
		7	95	15.8	19.5	23.2	26.9	30.5	34.1
		8	83	18.3	22.6	26.8	31.0	35.1	39.2
		9	74	20.8	25.6	30.3	35.0	39.7	44.3
		10	66	23.4	28.7	33.9	39.1	44.2	49.4
5.0	□ 142	3	222	8.6	11.1	13.4	15.7	18.0	20.2
		4	166	12.4	15.5	18.6	21.6	24.6	27.6
		5	133	16.1	19.9	23.7	27.5	31.2	34.9
		6	111	19.7	24.3	28.8	33.3	37.7	42.1
		7	95	23.4	28.7	33.9	39.1	44.3	49.4
		8	83	27.0	33.1	39.0	44.9	50.8	56.7
		9	74	30.7	37.4	44.1	50.7	57.3	63.9
		10	66	34.3	41.8	49.2	56.5	63.8	

Note 1. The speeds indicated above are based on the servo motor's rated speed of 2,000 RPM

The settings in the table above are based on a 500mm stroke.

LIFETIME GRAPH

HES 150 HS



The above graph is based on the following criteria: 500 strokes, a speed of 150 mm/sec, and continuous operation.

HES 150 HS - 200 - W - S3 - M

SPECIFICATIONS

MODEL	HES 150 NS	HES 150 HS
FRAME SIZE	□ 150	
ROD DIAMETER	Ø 70	
BALL SCREW LEAD	10	20
MAX. ALLOWABLE CAPACITY	13kW(Direct drive : without reduction gear)	
RATED RPM	2000	2000
NORMAL PAYLOAD	1250kgf	1500kgf
MAX. PAYLOAD	2500kgf	3000kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)	



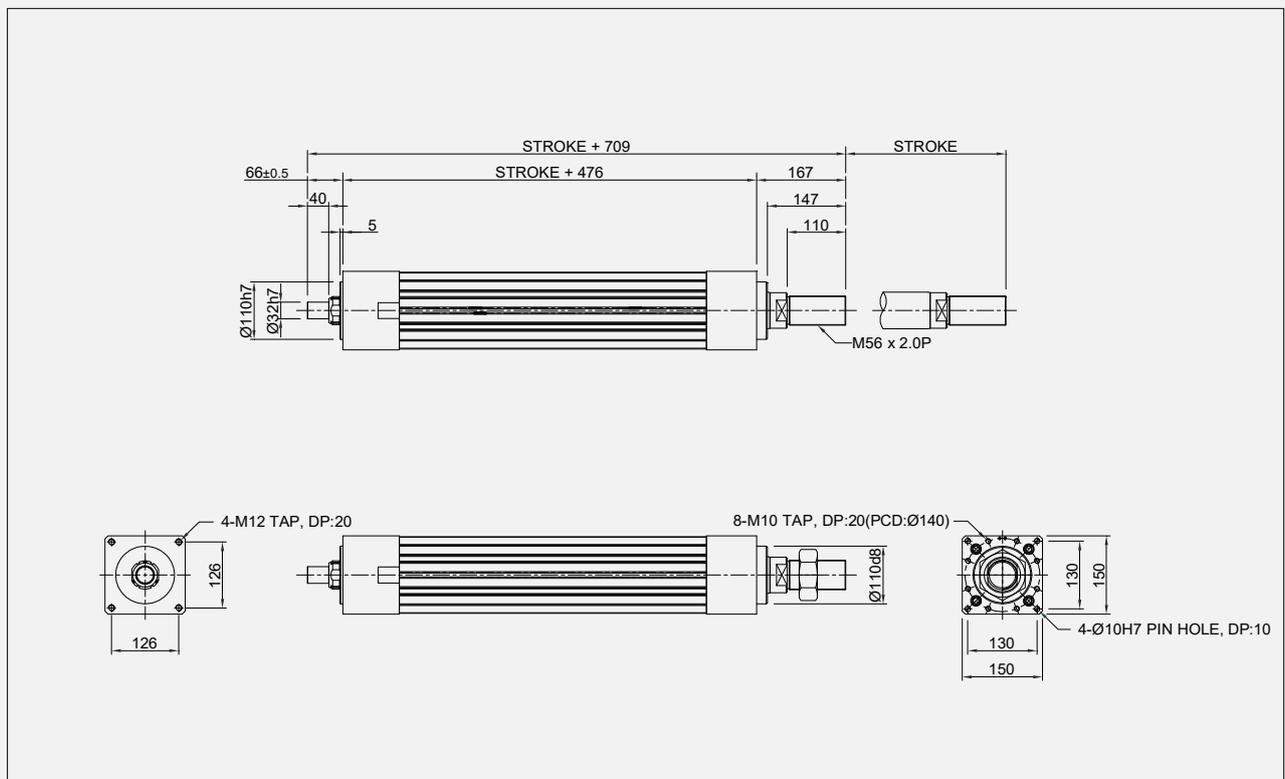
UP TO **51 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	46.4	48.6	55.3	59.7	64.1	68.5	72.9	77.3

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HES 150 HS - S 200 - W 050 G10 - S3 - M

SPECIFICATIONS

MODEL	HES 150 NS	HES 150 HS
FRAME SIZE	□ 150	
ROD DIAMETER	Ø 70	
BALL SCREW LEAD	10	20
MAX. ALLOWABLE CAPACITY	13kW(Direct drive : without reduction gear)	
RATED RPM	2000	2000
NORMAL PAYLOAD	1250kgf	1500kgf
MAX. PAYLOAD	2500kgf	3000kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)	



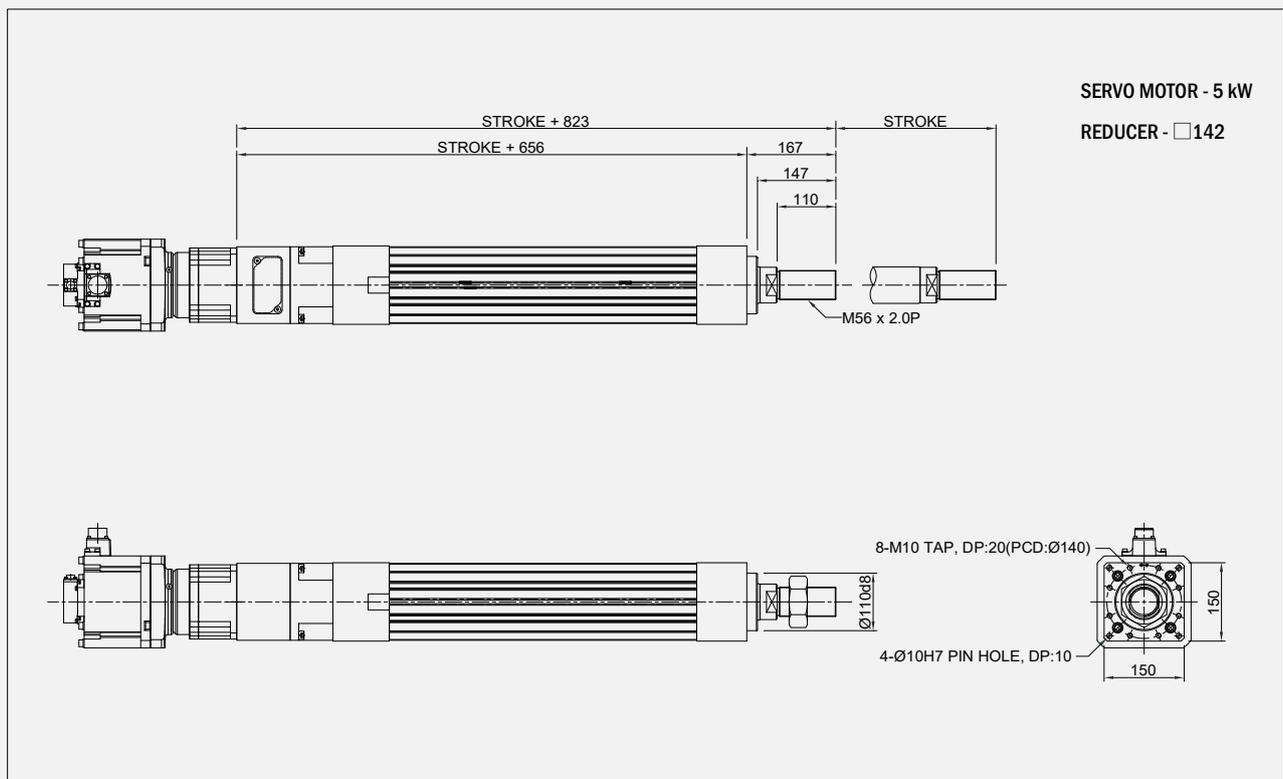
UP TO **51 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	53.5	55.7	62.3	66.7	71.2	75.6	80.0	84.4
SERVO MOTOR / GEAR	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6
TOTAL WEIGHT	88.1	90.3	96.9	101.3	105.8	110.2	114.6	119.0

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 150

OPTIONS

FM

FLANGE MOUNT

HES 150 HS - S 200 - W 050 G10 - S3 - M - FM

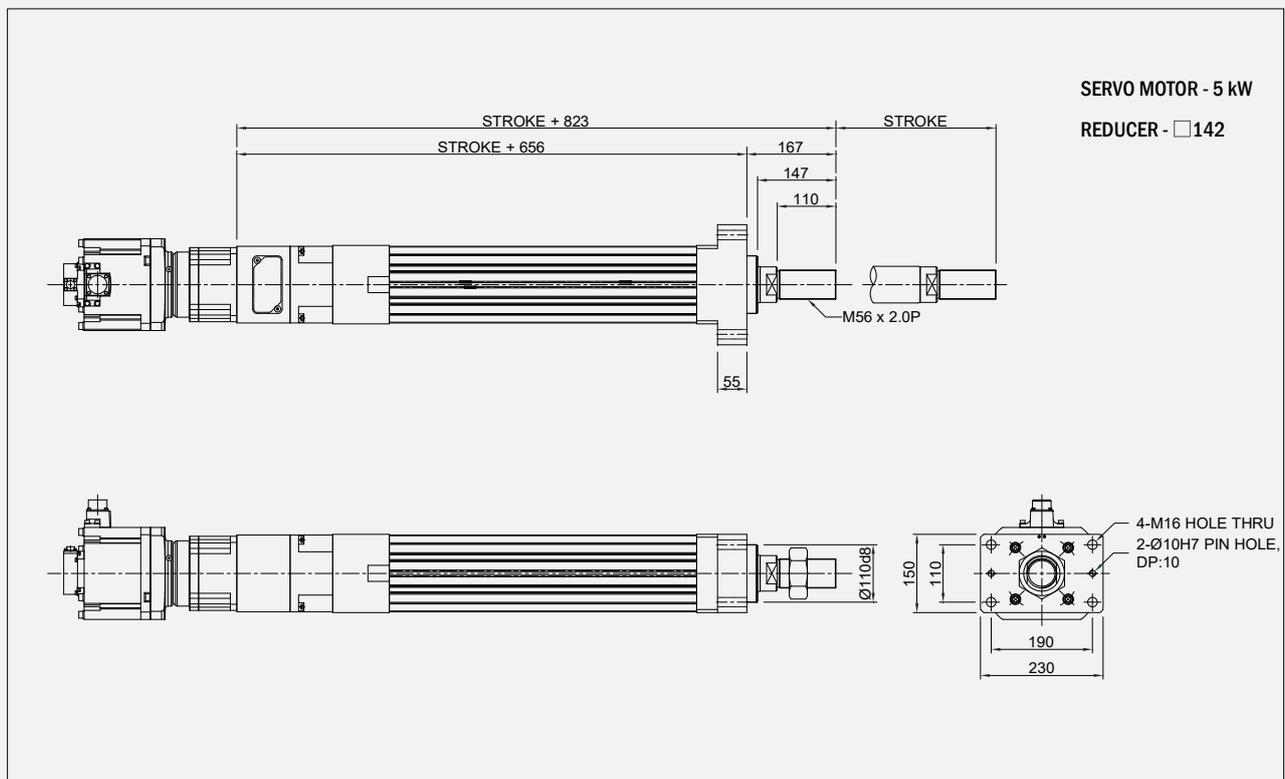
UP TO **51 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	55.3	57.5	64.1	68.5	72.9	77.4	81.8	86.2
SERVO MOTOR / GEAR	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6
TOTAL WEIGHT	89.9	92.1	98.7	103.1	107.5	112.0	116.4	120.8

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 150

OPTIONS

FFB

FLANGE FOOT MOUNT B TYPE

HES 150 HS - S 200 - W 050 G10 - S3 - M - FFB

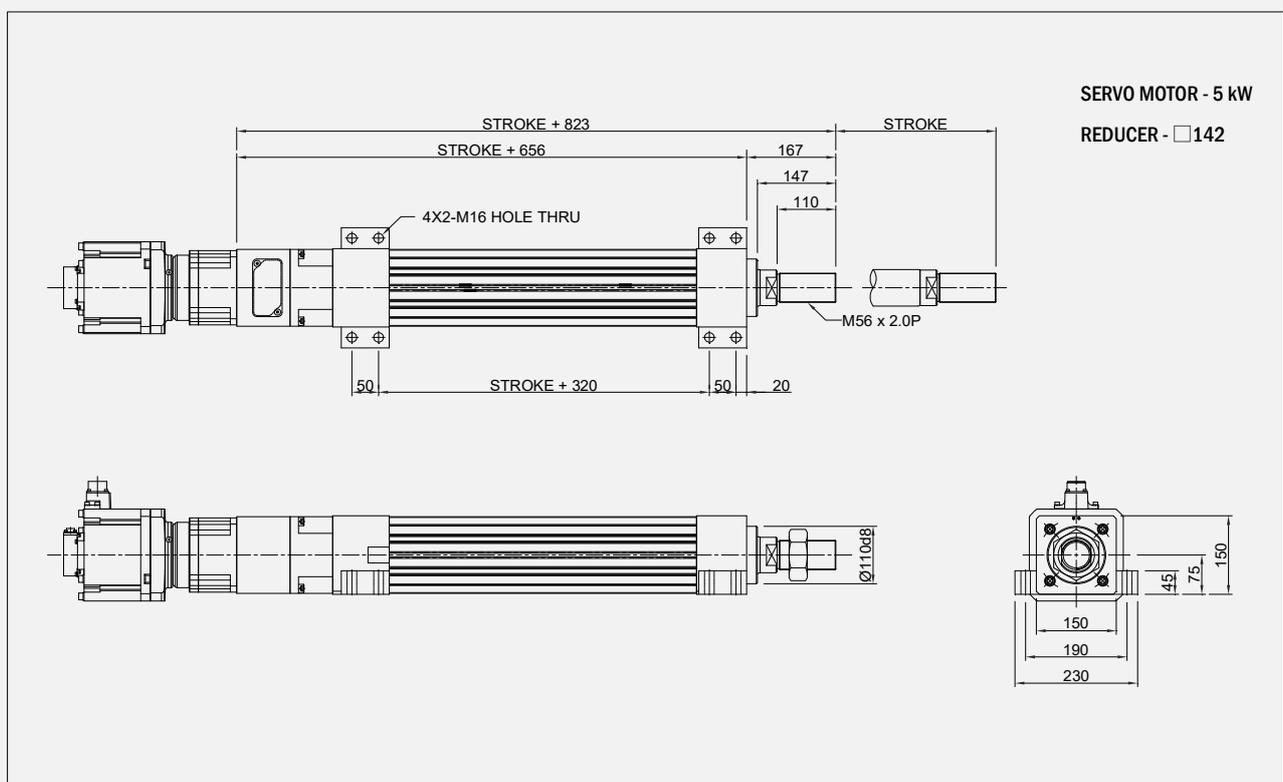
UP TO **51 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	55.3	57.5	64.1	68.5	72.9	77.3	81.7	86.1
SERVO MOTOR / GEAR	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6
TOTAL WEIGHT	89.9	92.1	98.7	103.1	107.5	111.9	116.3	120.7

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 150

OPTIONS

FFC

FLANGE FOOT MOUNT C TYPE

HES 150 HS - S 200 - W 050 G10 - S3 - M - FFC

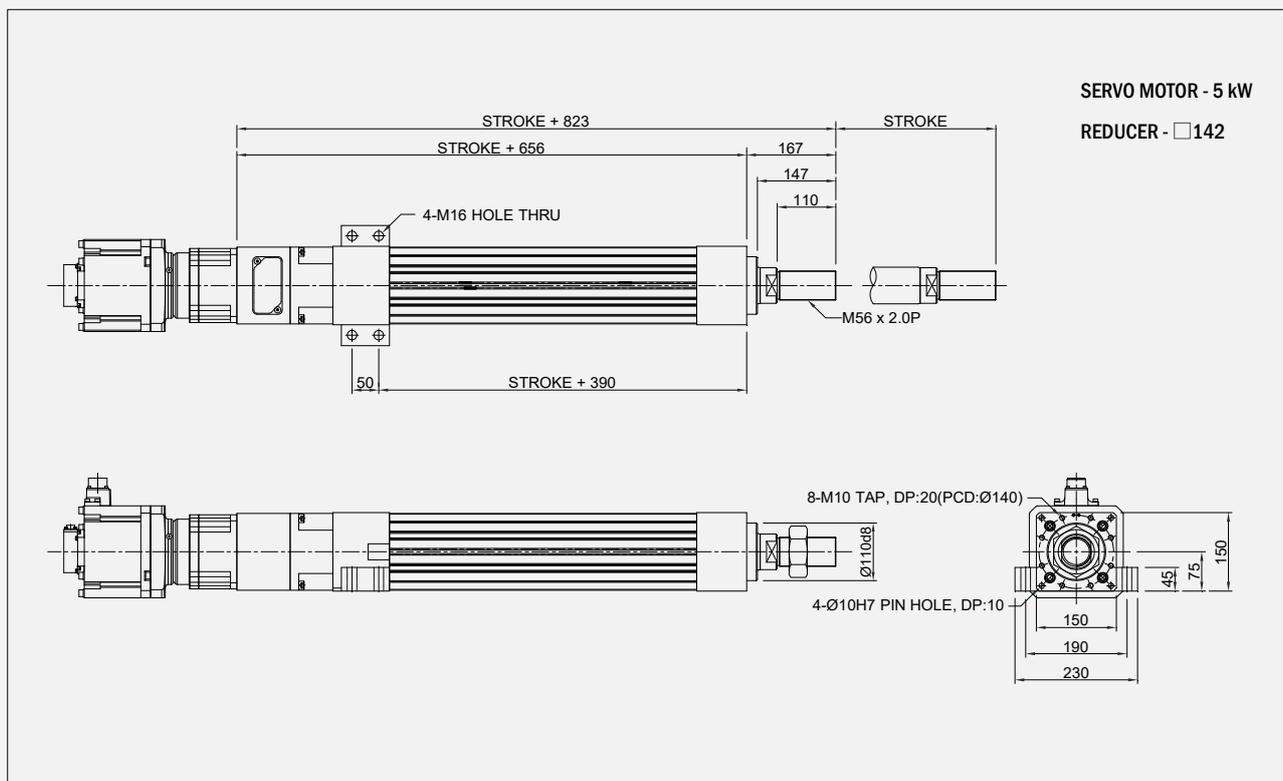
UP TO **51 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	54.4	56.6	63.2	67.6	72.0	76.4	80.9	85.3
SERVO MOTOR / GEAR	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6
TOTAL WEIGHT	89.0	91.2	97.8	102.2	106.6	111.0	115.5	119.9

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.



HES 150 HS - P 200 - W 050 G10 - S3 - M

SPECIFICATIONS

MODEL	HES 150 NS	HES 150 HS
FRAME SIZE	□ 150	
ROD DIAMETER	Ø 70	
BALL SCREW LEAD	10	20
MAX. ALLOWABLE CAPACITY	13kW(Direct drive : without reduction gear)	
RATED RPM	2000	2000
NORMAL PAYLOAD	1250kgf	1500kgf
MAX. PAYLOAD	2500kgf	3000kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)	



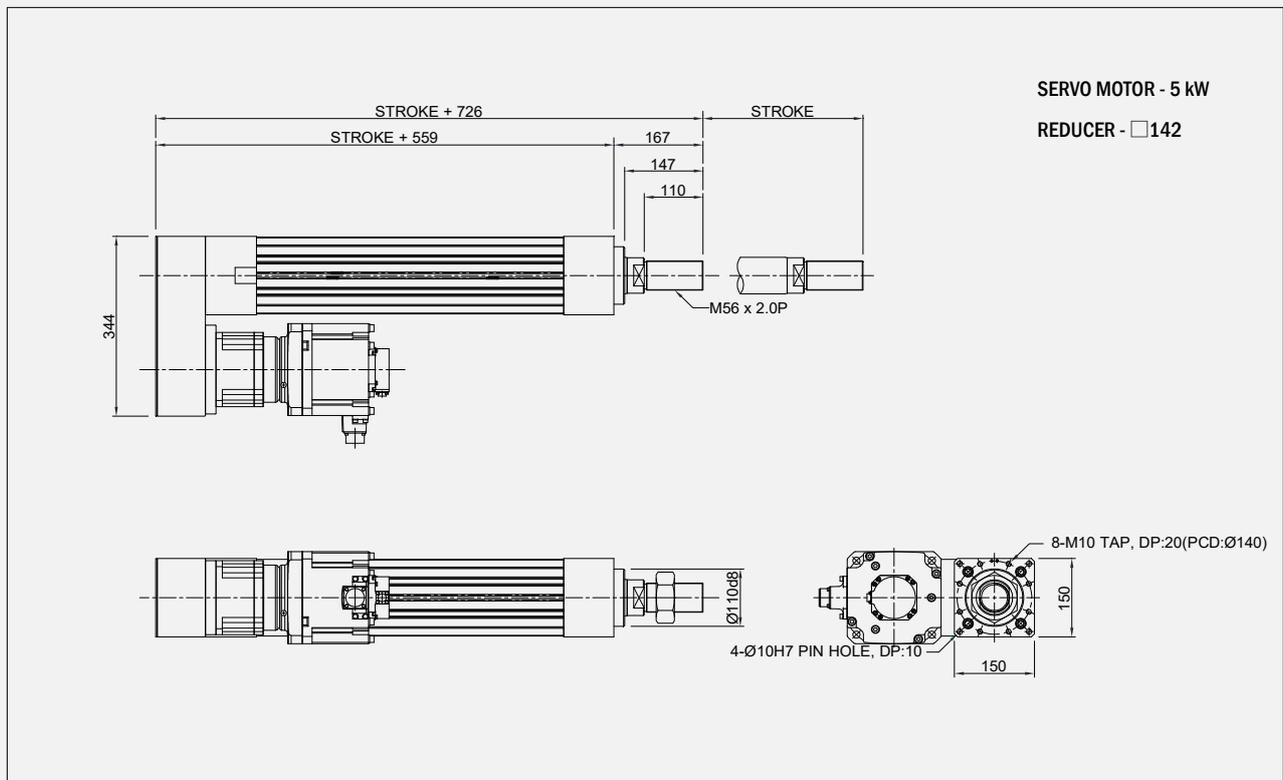
UP TO **51 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	58.1	60.3	66.9	71.4	75.8	80.2	84.6	89.0
SERVO MOTOR / GEAR	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6
TOTAL WEIGHT	92.7	94.9	101.5	106.0	110.4	114.8	119.2	123.6

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 150

OPTIONS

FMA

FLANGE MOUNT A TYPE

HES 150 HS - P 200 - W 050 G10 - S3 - M - FMA

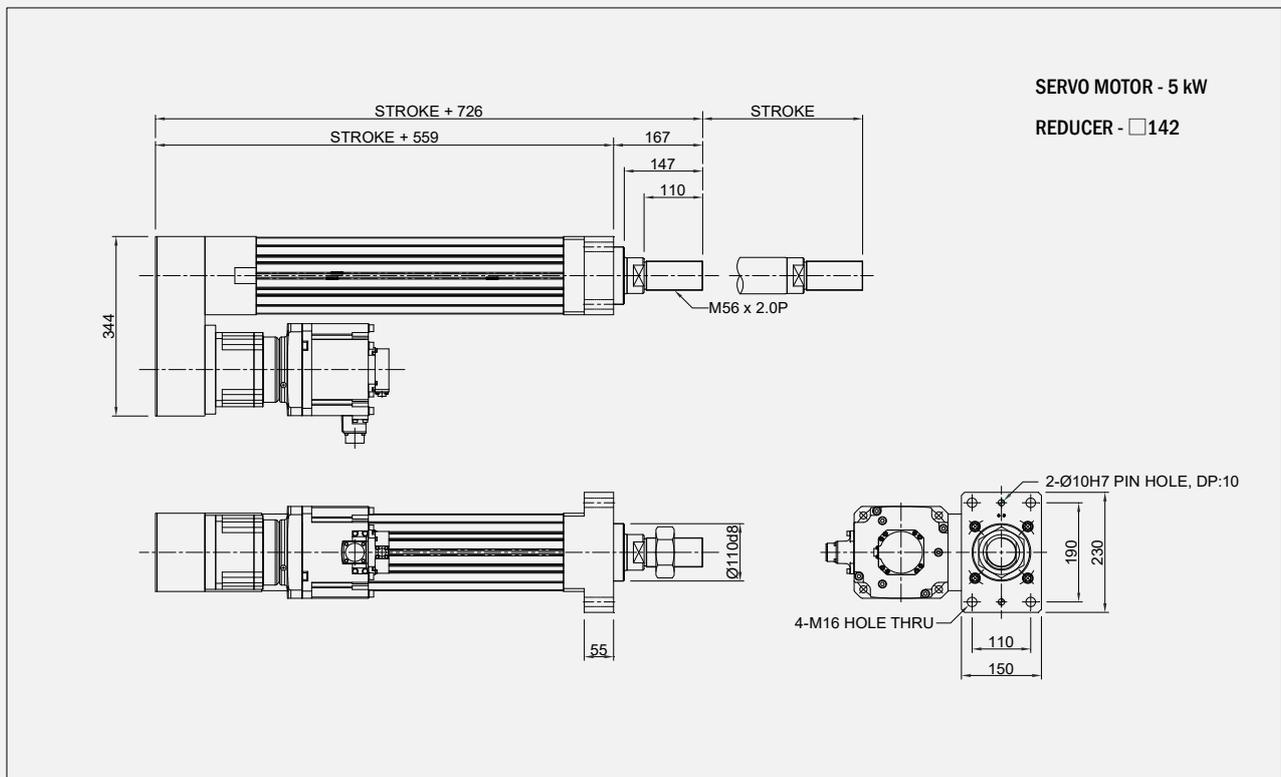
UP TO **51 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	59.9	62.1	68.7	73.1	77.5	82.0	86.4	90.8
SERVO MOTOR / GEAR	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6
TOTAL WEIGHT	94.5	96.7	103.3	107.7	112.1	116.6	121.0	125.4

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 150

OPTIONS

FMB

FLANGE MOUNT B TYPE

HES 150 HS - P 200 - W 050 G10 - S3 - M - FMB

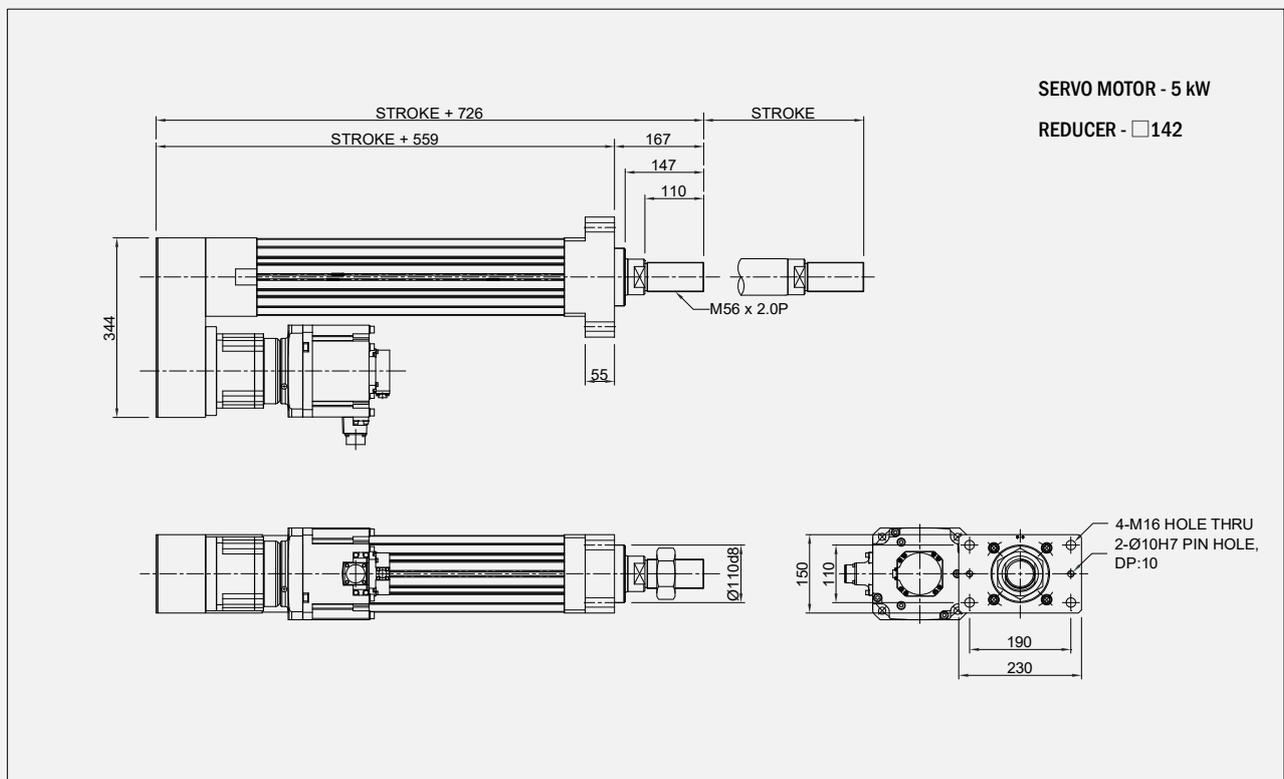
UP TO **51 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	59.9	62.1	68.7	73.1	77.5	82.0	86.4	90.8
SERVO MOTOR / GEAR	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6
TOTAL WEIGHT	94.5	96.7	103.3	107.7	112.1	116.6	121.0	125.4

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 150

OPTIONS

FFB

FLANGE FOOT MOUNT B TYPE

HES 150 HS - P 200 - W 050 G10 - S3 - M - FFB

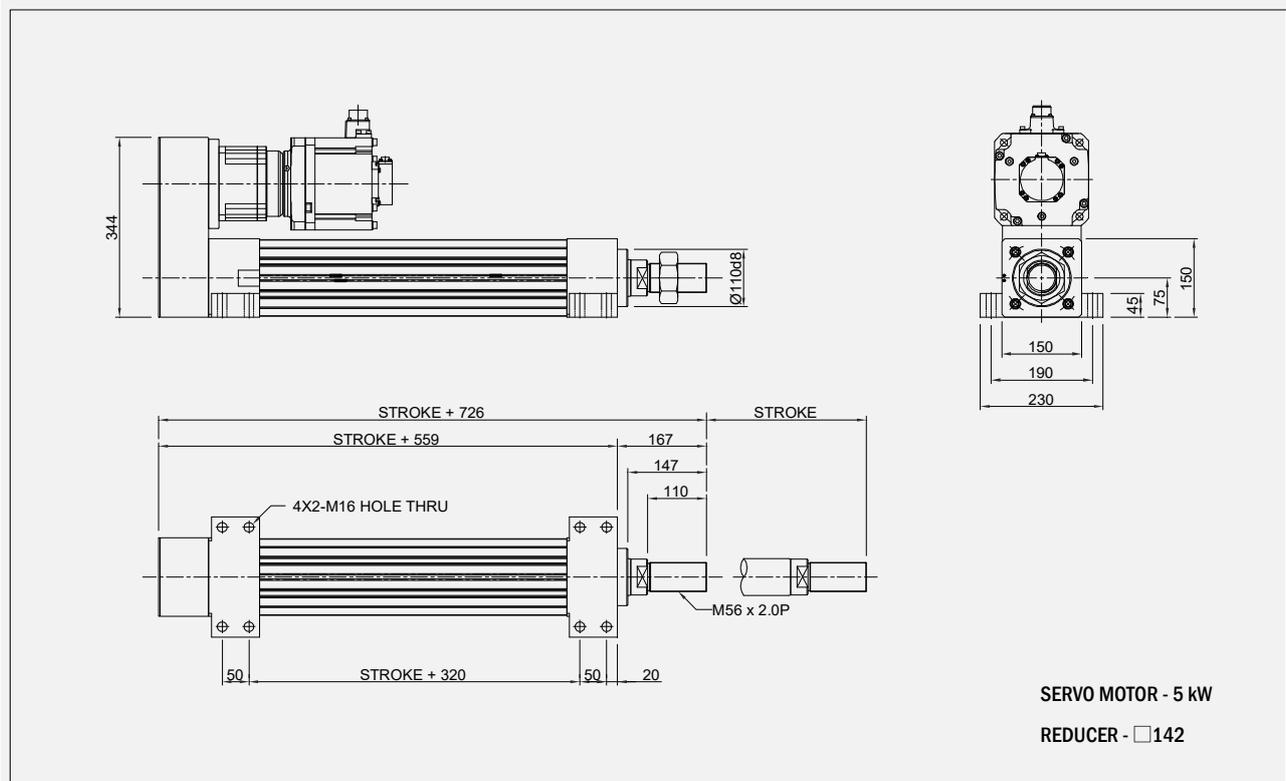
UP TO **51 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	59.9	62.1	68.7	73.1	77.5	81.9	86.3	90.8
SERVO MOTOR / GEAR	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6
TOTAL WEIGHT	94.5	96.7	103.3	107.7	112.1	116.5	120.9	125.4

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

OPTIONS

FFC

FLANGE FOOT MOUNT C TYPE

HES 150 HS - P 200 - W 050 G10 - S3 - M - FFC

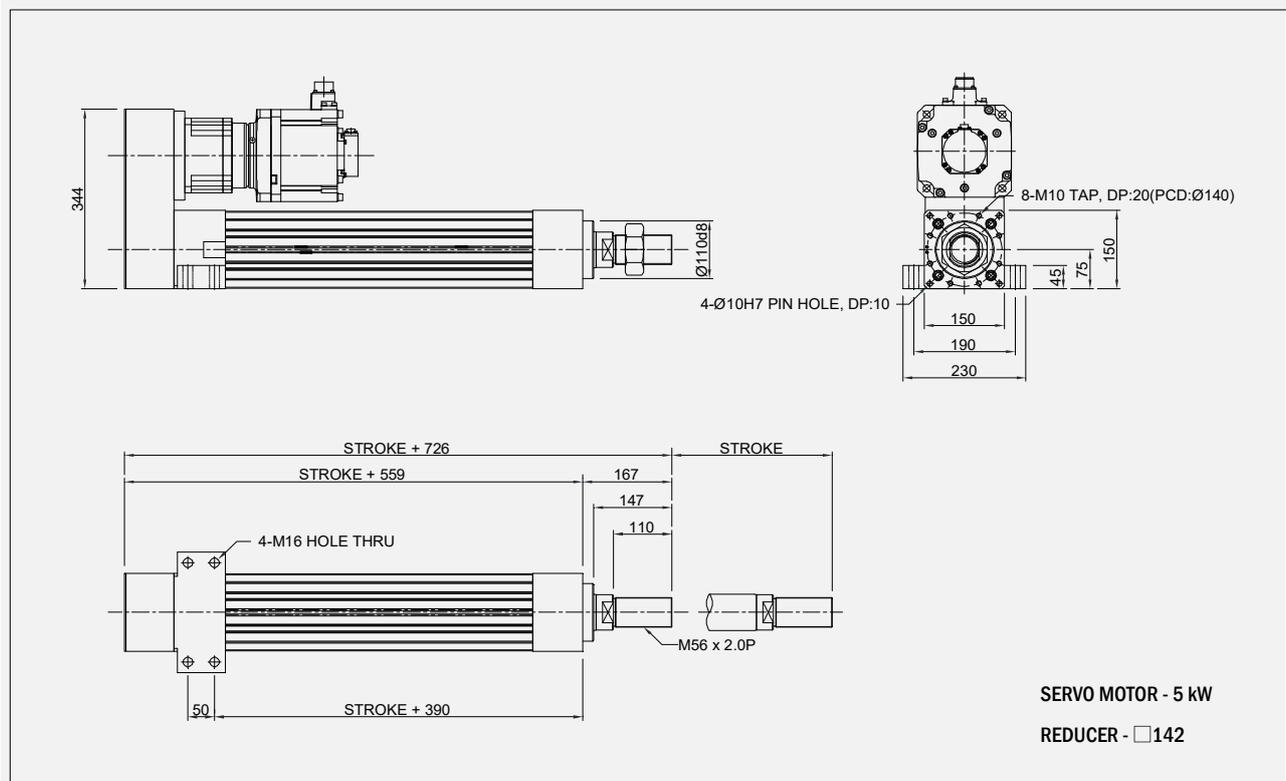
UP TO **51 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	59.0	61.2	67.8	72.2	76.6	81.1	85.5	89.9
SERVO MOTOR / GEAR	34.6	34.6	34.6	34.6	34.6	34.6	34.6	34.6
TOTAL WEIGHT	93.6	95.8	102.4	106.8	111.2	115.7	120.1	124.5

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES 180



ORDER CODE

HES 180

HES 180 HS - P 500 - W 070 G 10 - S3 - M - FM
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

1. Series

HES TMS Hyper Cylinder Series

2. Frame (Body Frame Size)

HES 110 110mm X 110mm

HES 130 130mm X 130mm

HES 150 150mm X 150mm

HES 180 180mm X 180mm

HES 220 220mm X 220mm

3. LEAD (Ball Screw)

LS Ball Screw LEAD 05mm

NS Ball Screw LEAD 10mm

GS Ball Screw LEAD 12mm

FS Ball Screw LEAD 16mm

HS Ball Screw LEAD 20mm

US Ball Screw LEAD 32mm

HE Ball Screw LEAD 40mm

4. Mounting Type

NONE without Type

S Servo Motor Straigh Type

P Servo Motor Parallel Type

5. Stroke

100 The standard stroke is in units of 100 mm.

000 Customized specifications are available.

6. Color

W Body Color - White Anodizing

B Body Color - Black Anodizing

7. Motor

NONE without Servo Motor

008 Servo Motor 750W

010 Servo Motor 1.0kW

035 Servo Motor 3.5kW

070 Servo Motor 7.0kW

110 Servo Motor 11.0kW

8. Reducer

NONE Without Gear

G With Gear

9. Ratio

NONE without Ratio

03 ~ 10 Gear Ratio

10. Sensor (magnetic, NPN, 3wire)

NONE Without Sensor

S3 (P) Standard Spec. NO(Origin-1) + NC(Limit-2)

A3 (P) NO(Normal Open), 3EA

B3 (P) NC(Normal Close), 3EA

※ () is the PNP order specification.

11. ROD Shape

M Male Thread

F Female Thread

RB Rod End Bearing

RC Rod Clevis

12. Options (Mount Bracket)

NONE without Options

FM Flange Mount

FF Flange Foot Mount

PC Pulley Cover Clevis Mount

TRN Trunnion Mount

Mounting Types and Options: Reference Views

None type



Without servo motors

S type



Straight-mounted servo motors

P type



Parallel-mounted servo motors

OPTIONS

S type (Straight-mounted servo motors)

FM



Flange Mount type

FFB



Flange Foot Mount B type

FFC



Flange Foot Mount C type

TRN



Trunnion type

OPTIONS

P type (Parallel-mounted servo motors)

FMA



Flange Mount A type

FMB



Flange Mount B type

FFB



Flange Foot Mount B type

FFC



Flange Foot Mount C type

PC



Pulley Cover Clevis type

TRN



Trunnion type

TECHNICAL DATA

HES 180 HS

FORCE TABLE

HES 180 HS

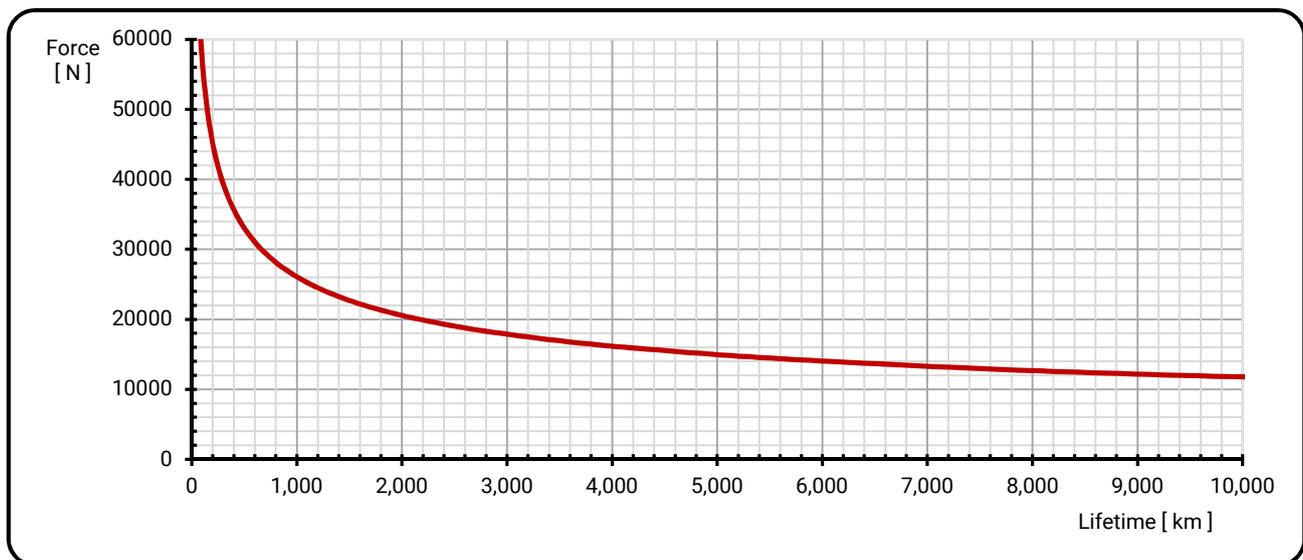
Servo Motor (kW)	Gear	Ratio	Speed ¹ (mm/sec)	Force (kN)					
				50%	60%	70%	80%	90%	100%
5.0	□ 142	3	222	7.2	9.9	12.4	14.8	17.2	19.5
		4	166	11.2	14.5	17.7	20.8	23.8	26.9
		5	133	14.9	19.0	22.9	26.7	30.4	34.2
		6	111	18.6	23.4	28.0	32.5	37.0	41.5
		7	95	22.3	27.8	33.1	38.4	43.6	48.8
		8	83	26.0	32.1	38.2	44.2	50.1	56.0
		9	74	29.6	36.5	43.3	50.0	56.7	63.3
		10	66	33.3	40.9	48.4	55.8	63.2	70.5
7.0	□ 180	3	222	10.3	14.1	17.6	20.9	24.2	27.4
		4	166	15.7	20.4	24.9	29.3	33.5	37.8
		5	133	21.0	26.7	32.1	37.5	42.8	48.0
		6	111	26.2	32.8	39.3	45.6	51.9	58.2
		7	95	31.3	39.0	46.4	53.8	61.1	68.4
		8	83	36.4	45.1	53.6	61.9	70.2	78.5
		9	74	41.5	51.2	60.7	70.1	79.4	
		10	66	46.6	57.3	67.8	78.2	88.5	

Note 1. The speeds indicated above are based on the servo motor's rated speed of 2,000 RPM

The settings in the table above are based on a 500mm stroke.

LIFETIME GRAPH

HES 180 HS



The above graph is based on the following criteria: 500 strokes, a speed of 150 mm/sec, and continuous operation.



HES 180 HS - 200 - W - S3 - M

SPECIFICATIONS

MODEL	HES 180 HS
FRAME SIZE	□ 180
ROD DIAMETER	Ø 80
BALL SCREW LEAD	20
MAX. ALLOWABLE CAPACITY	18kW(Direct drive : without reduction gear)
RATED RPM	2000
NORMAL PAYLOAD	2000kgf
MAX. PAYLOAD	4000kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)



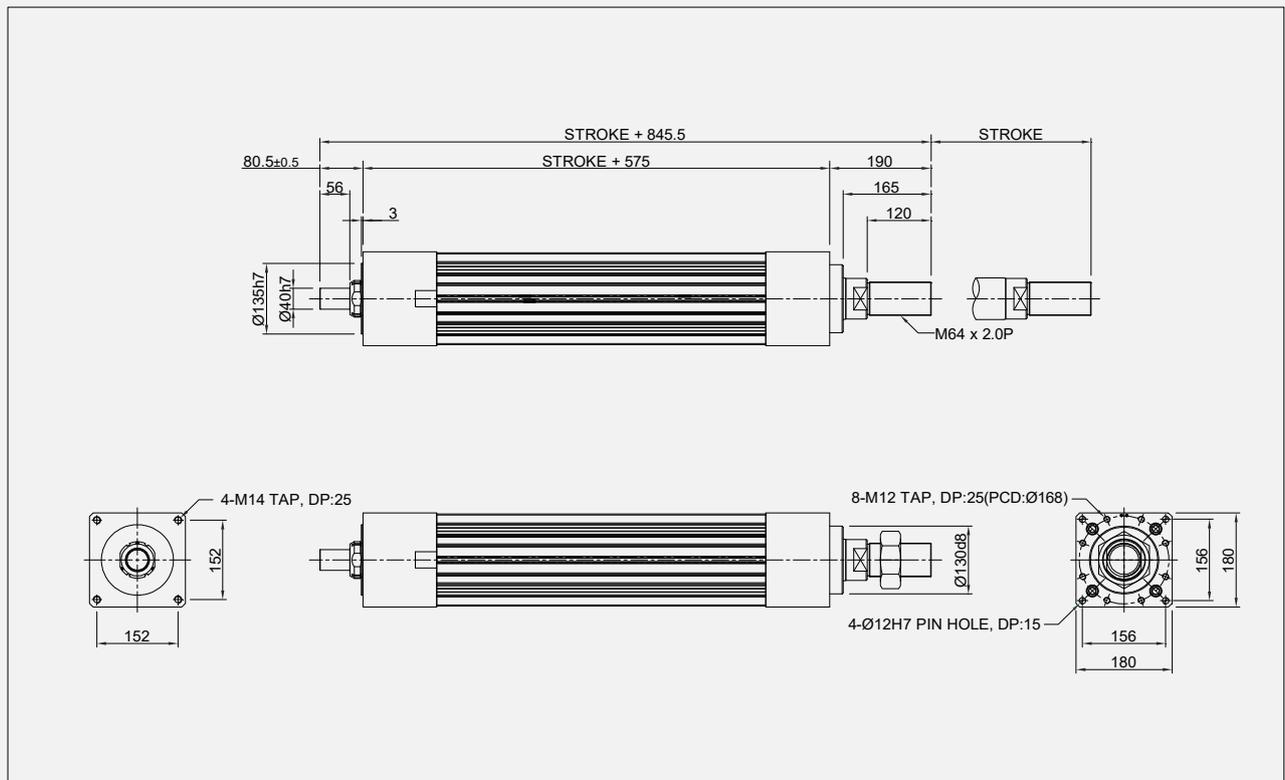
UP TO **70 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	73.2	77.9	82.5	87.2	91.9	96.6	101.2	105.9

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HES 180 HS - S 200 - W 070 G10 - S3 - M

SPECIFICATIONS

MODEL	HES 180 HS
FRAME SIZE	□ 180
ROD DIAMETER	Ø 80
BALL SCREW LEAD	20
MAX. ALLOWABLE CAPACITY	18kW(Direct drive : without reduction gear)
RATED RPM	2000
NORMAL PAYLOAD	2000kgf
MAX. PAYLOAD	4000kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)



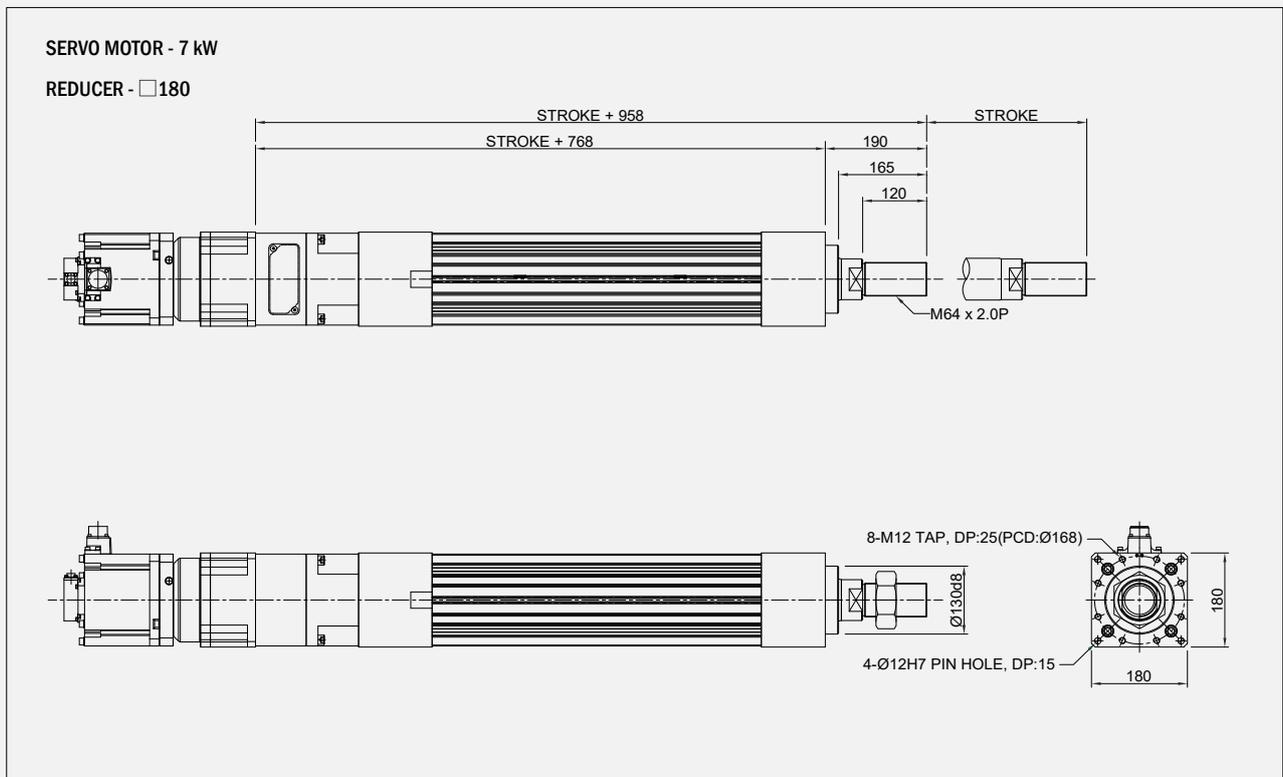
UP TO **70 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	83.6	88.3	92.9	97.6	102.3	107.0	111.6	116.3
SERVO MOTOR / GEAR	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
TOTAL WEIGHT	138.9	143.6	148.2	152.9	157.6	162.3	166.9	171.6

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 180

OPTIONS



FLANGE MOUNT

HES 180 HS - S 200 - W 070 G10 - S3 - M - FM

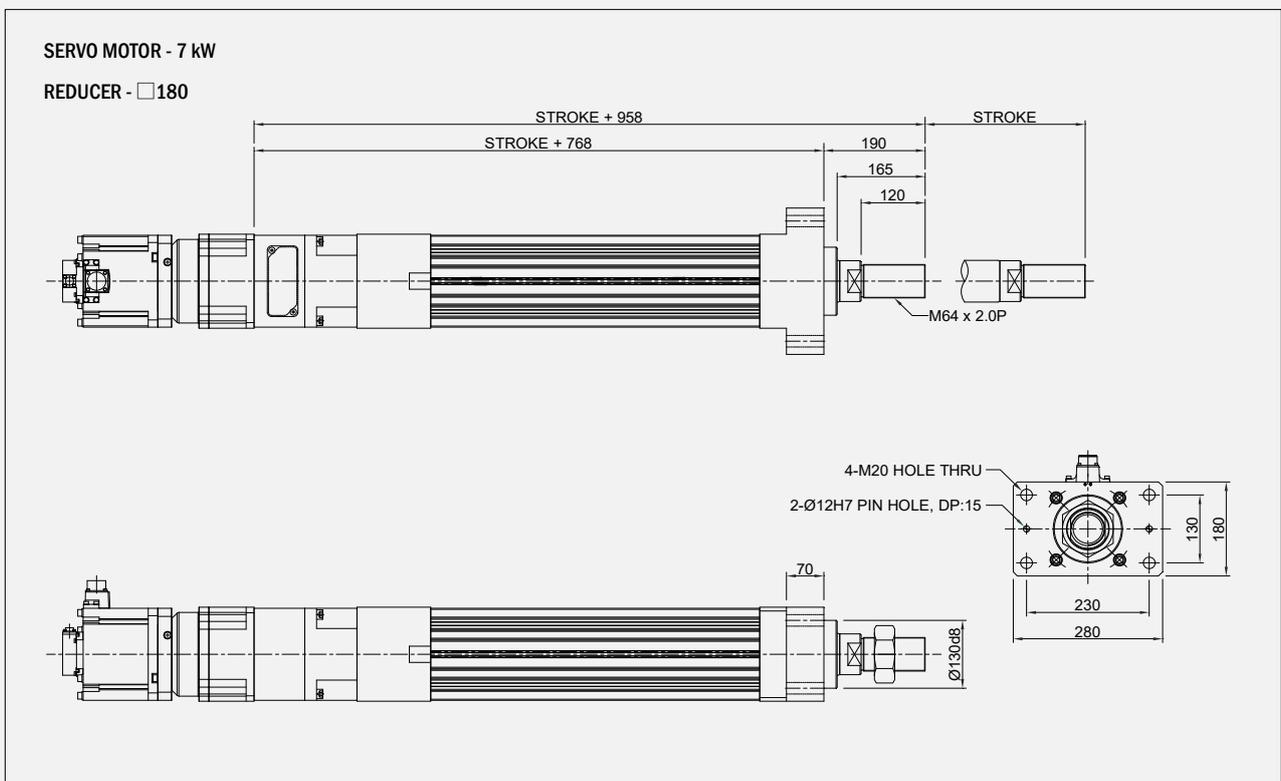
UP TO **70 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	87.0	91.7	96.3	101.0	105.7	110.4	115.0	119.7
SERVO MOTOR / GEAR	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
TOTAL WEIGHT	142.3	147.0	151.6	156.3	161.0	165.7	170.3	175.0

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 180

OPTIONS

FFB

FLANGE FOOT MOUNT B TYPE

HES 180 HS - S 200 - W 070 G10 - S3 - M - FFB

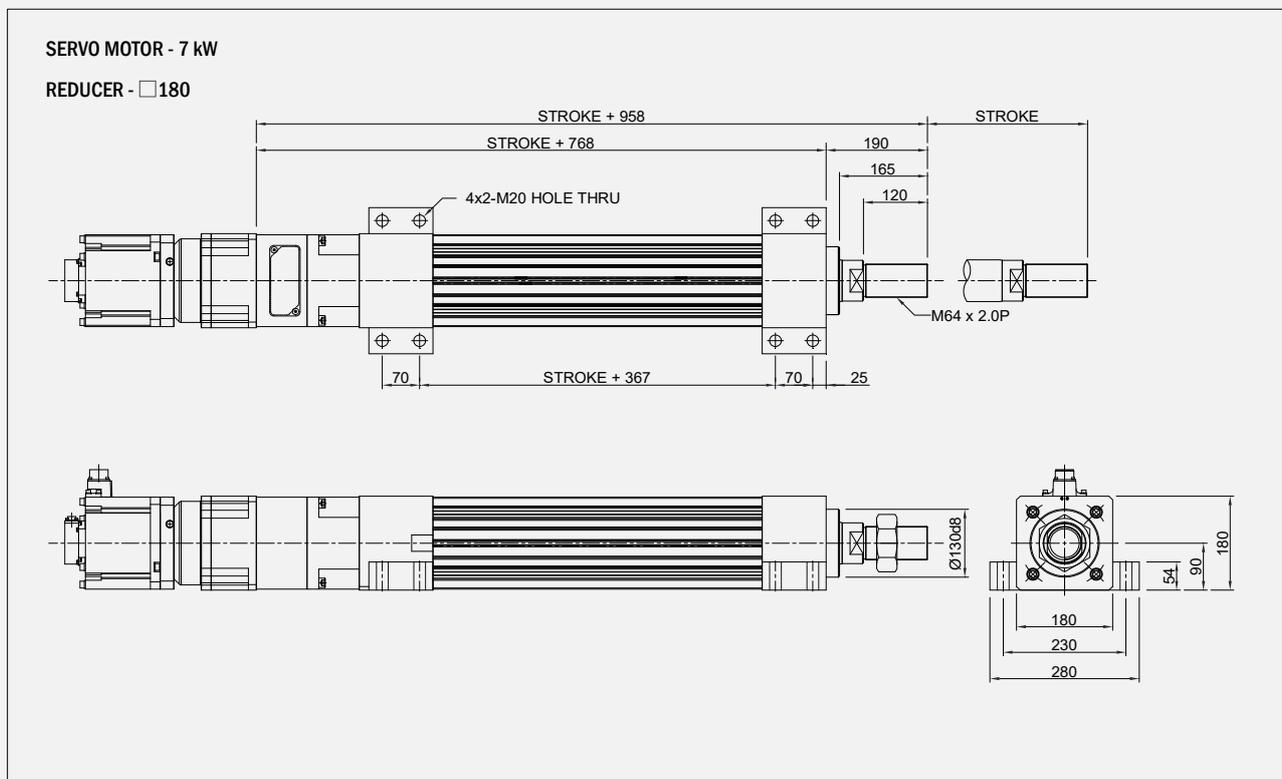
UP TO **70 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	87.1	91.7	96.4	101.1	105.8	110.5	115.1	119.8
SERVO MOTOR / GEAR	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
TOTAL WEIGHT	142.4	147.0	151.7	156.4	161.1	165.8	170.4	175.1

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

OPTIONS

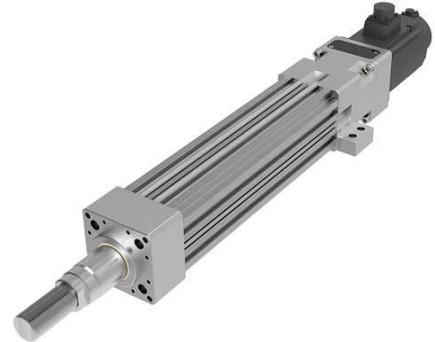
FFC

FLANGE FOOT MOUNT C TYPE

HES 180 HS - S 200 - W 070 G10 - S3 - M - FFC

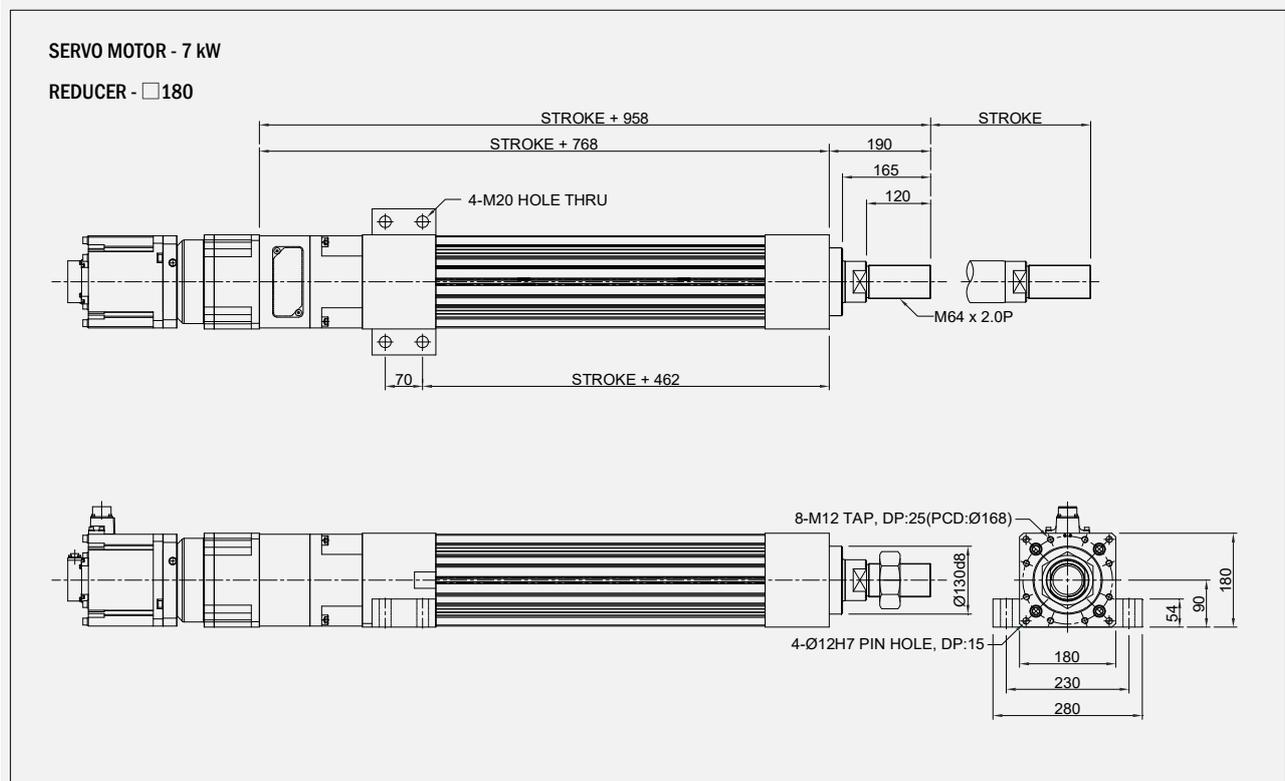
UP TO **70 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	85.3	90.0	94.7	99.4	104.0	108.7	113.4	118.1
SERVO MOTOR / GEAR	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
TOTAL WEIGHT	140.6	145.3	150.0	154.7	159.3	164.0	168.7	173.4

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.



HES 180 HS - P 200 - W 070 G10 - S3 - M

SPECIFICATIONS

MODEL	HES 180 HS
FRAME SIZE	□ 180
ROD DIAMETER	Ø 80
BALL SCREW LEAD	20
MAX. ALLOWABLE CAPACITY	18kW(Direct drive : without reduction gear)
RATED RPM	2000
NORMAL PAYLOAD	2000kgf
MAX. PAYLOAD	4000kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)



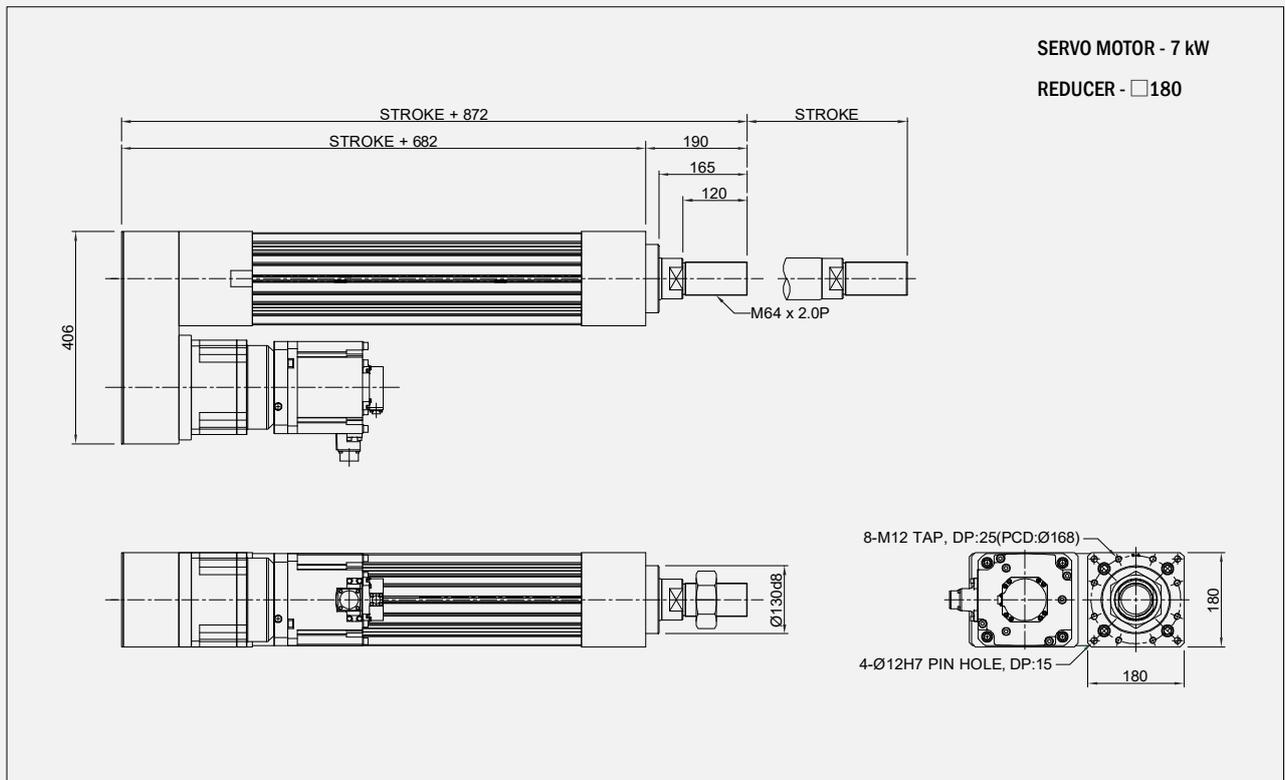
UP TO **70 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	91.5	96.2	100.8	105.5	110.2	114.9	119.6	124.2
SERVO MOTOR / GEAR	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
TOTAL WEIGHT	146.8	151.5	156.1	160.8	165.5	170.2	174.9	179.5

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 180

OPTIONS

FMA

FLANGE MOUNT A TYPE

HES 180 HS - P 200 - W 070 G10 - S3 - M - FMA

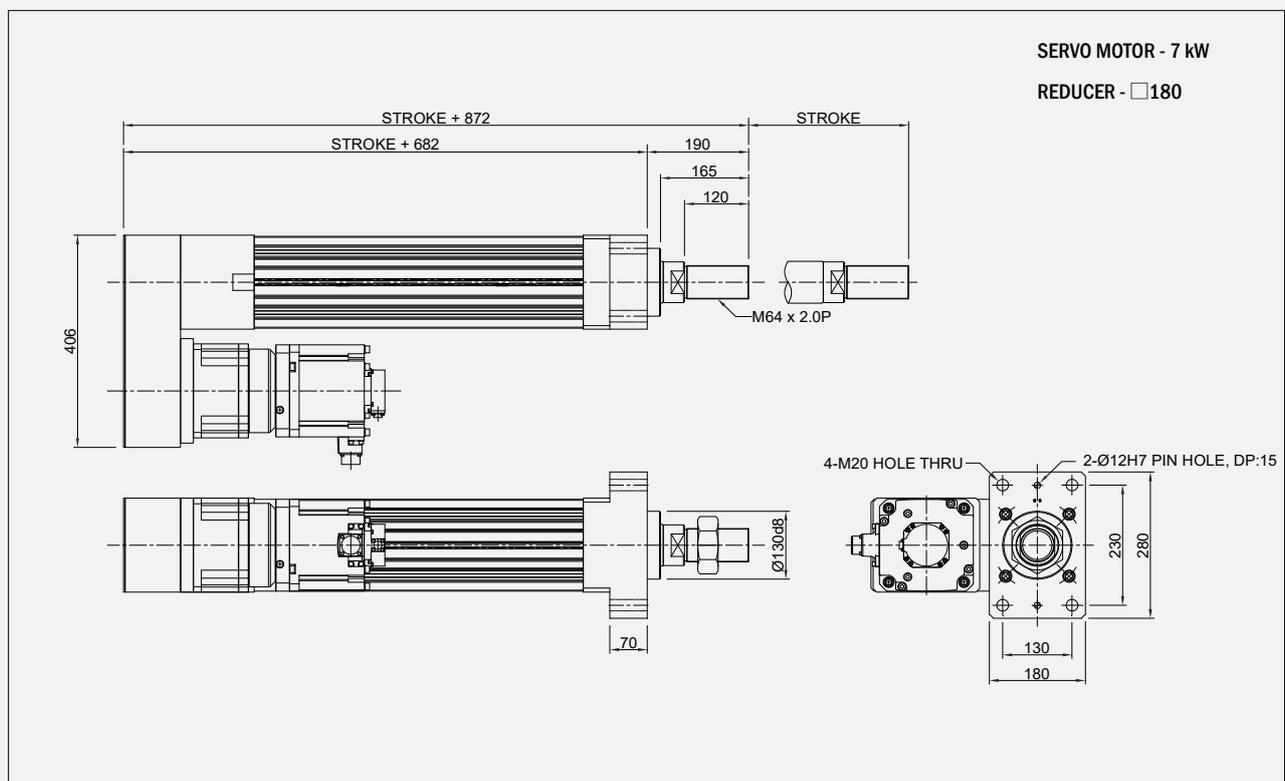
UP TO **70 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	94.9	99.6	104.2	108.9	113.6	118.3	123.0	127.6
SERVO MOTOR / GEAR	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
TOTAL WEIGHT	150.2	154.9	159.5	164.2	168.9	173.6	178.3	182.9

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 180

OPTIONS

FMB

FLANGE MOUNT B TYPE

HES 180 HS - P 200 - W 070 G10 - S3 - M - FMB

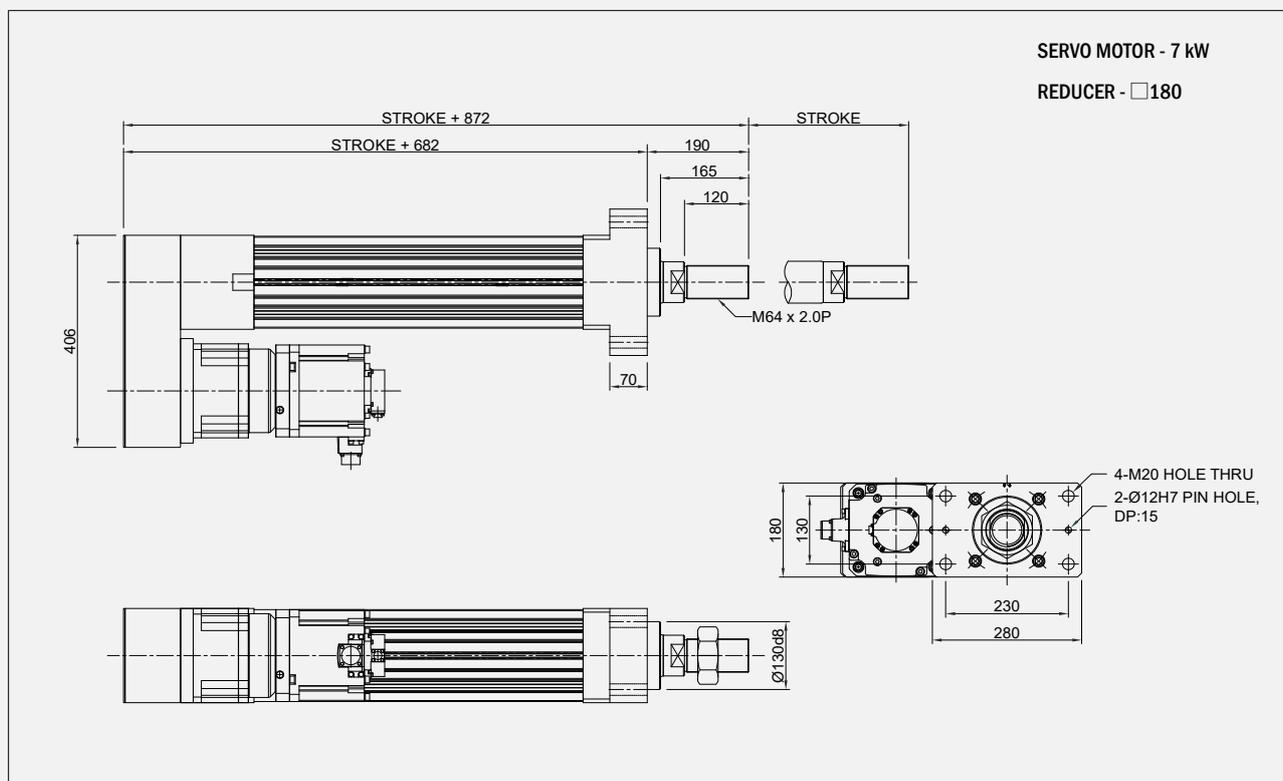
UP TO **70 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	94.9	99.6	104.2	108.9	113.6	118.3	123.0	127.6
SERVO MOTOR / GEAR	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
TOTAL WEIGHT	150.2	154.9	159.5	164.2	168.9	173.6	178.3	182.9

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES series

HES 180

OPTIONS

FFB

FLANGE FOOT MOUNT B TYPE

HES 180 HS - P 200 - W 070 G10 - S3 - M - FFB

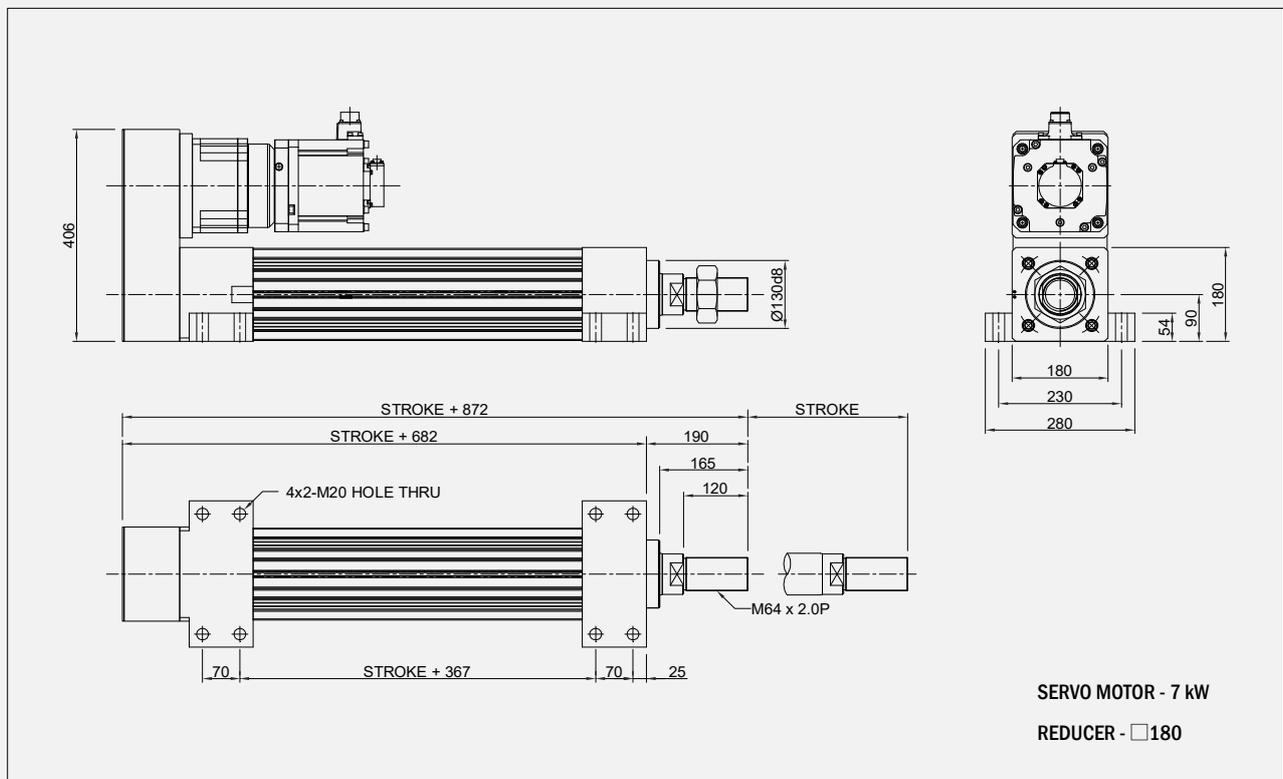
UP TO **70 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	95.0	99.7	104.3	109.0	113.7	118.4	123.1	127.7
SERVO MOTOR / GEAR	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
TOTAL WEIGHT	150.3	155.0	159.6	164.3	169.0	173.7	178.4	183.0

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

OPTIONS

FFC

FLANGE FOOT MOUNT C TYPE

HES 180 HS - P 200 - W 070 G10 - S3 - M - FFC

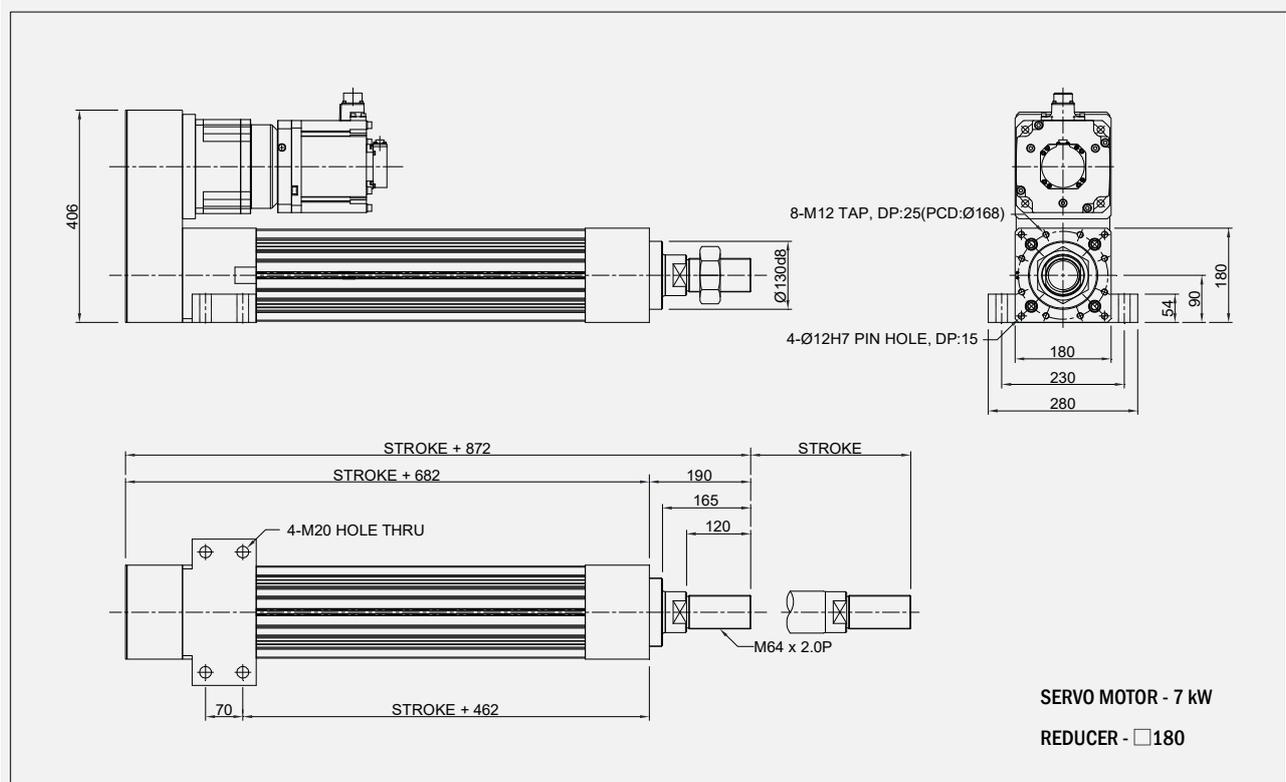
UP TO **70 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.



DIMENSIONS

unit : mm



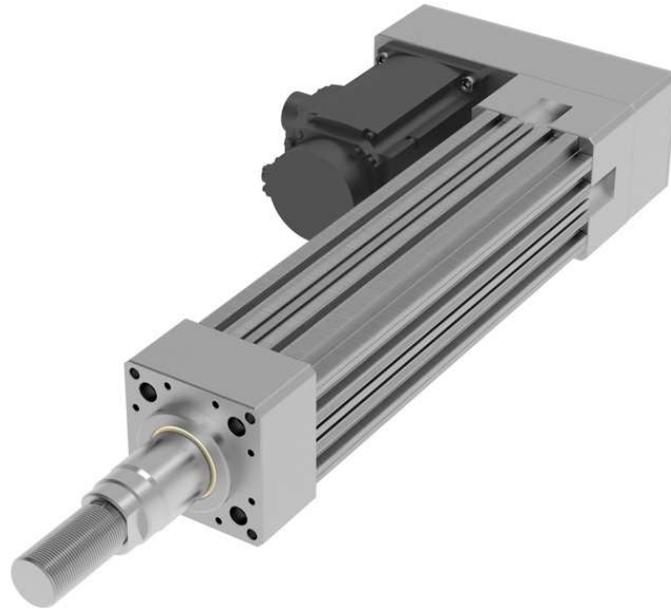
STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	93.2	97.9	102.6	107.3	111.9	116.6	121.3	126.0
SERVO MOTOR / GEAR	55.3	55.3	55.3	55.3	55.3	55.3	55.3	55.3
TOTAL WEIGHT	148.5	153.2	157.9	162.6	167.2	171.9	176.6	181.3

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER HES 220



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ORDER CODE

HES 220

HES 220 HS - P 300 - W 110 G 10 - S3 - M - FM
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

1. Series

HES TMS Hyper Cylinder Series

2. Frame (Body Frame Size)

HES 110 110mm X 110mm

HES 130 130mm X 130mm

HES 150 150mm X 150mm

HES 180 180mm X 180mm

HES 220 220mm X 220mm

3. LEAD (Ball Screw)

LS Ball Screw LEAD 05mm

NS Ball Screw LEAD 10mm

GS Ball Screw LEAD 12mm

FS Ball Screw LEAD 16mm

HS Ball Screw LEAD 20mm

US Ball Screw LEAD 32mm

HE Ball Screw LEAD 40mm

4. Mounting Type

NONE without Type

S Servo Motor Straigh Type

P Servo Motor Parallel Type

5. Stroke

100 The standard stroke is in units of 100 mm.

000 Customized specifications are available.

6. Color

W Body Color - White Anodizing

B Body Color - Black Anodizing

7. Motor

NONE without Servo Motor

008 Servo Motor 750W

010 Servo Motor 1.0kW

035 Servo Motor 3.5kW

070 Servo Motor 7.0kW

110 Servo Motor 11.0kW

8. Reducer

NONE Without Gear

G With Gear

9. Ratio

NONE without Ratio

03 ~ 10 Gear Ratio

10. Sensor (magnetic, NPN, 3wire)

NONE Without Sensor

S3 (P) Standard Spec. NO(Origin-1) + NC(Limit-2)

A3 (P) NO(Normal Open), 3EA

B3 (P) NC(Normal Close), 3EA

※ () is the PNP order specification.

11. ROD Shape

M Male Thread

F Female Thread

RB Rod End Bearing

RC Rod Clevis

12. Options (Mount Bracket)

NONE without Options

FM Flange Mount

FF Flange Foot Mount

PC Pulley Cover Clevis Mount

TRN Trunnion Mount

Mounting Types and Options: Reference Views

None type



Without servo motors

S type



Straight-mounted servo motors

P type



Parallel-mounted servo motors

OPTIONS

S type (Straight-mounted servo motors)

FM



Flange Mount type

OPTIONS

P type (Parallel-mounted servo motors)

FMA



Flange Mount A type

FMB



Flange Mount B type

TECHNICAL DATA

HES 220 HS

FORCE TABLE

HES 220 HS

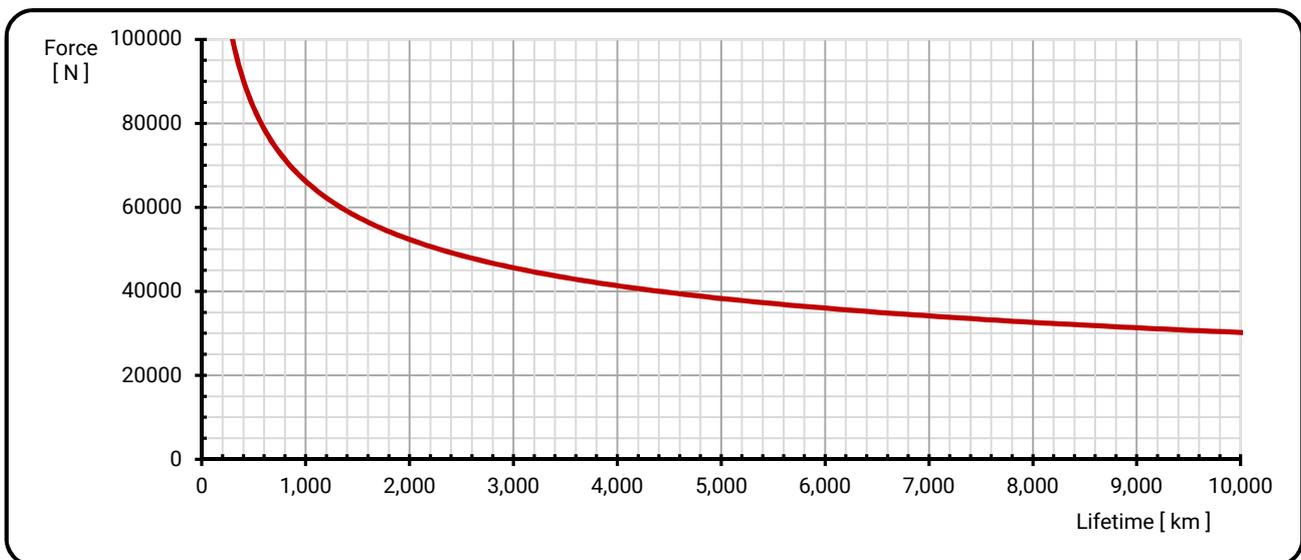
Servo Motor (kW)	Gear	Ratio	Speed ¹ (mm/sec)	Force (kN)					
				50%	60%	70%	80%	90%	100%
7.0	□ 180	3	222	9.5	13.4	17.0	20.4	23.7	26.9
		4	166	15.2	19.9	24.4	28.8	33.1	37.4
		5	133	20.5	26.2	31.7	37.1	42.4	47.6
		6	111	25.8	32.4	38.9	45.3	51.6	57.8
		7	95	30.9	38.6	46.1	53.5	60.8	68.0
		8	83	36.1	44.7	53.2	61.6	69.9	78.2
		9	74	41.2	50.8	60.3	69.7	79.1	88.3
11.0	□ 180	10	66	46.3	56.9	67.4	77.9	88.2	98.5
		4	166	15.4	25.4	33.7	41.4	48.7	55.8
		5	133	24.8	35.7	45.4	54.6	63.4	72.1
		6	111	33.5	45.7	56.9	67.6	78.0	88.2
		7	95	41.9	55.5	68.2	80.5	92.4	104.2
		8	83	50.2	65.3	79.5	93.3	106.9	120.2
		9	74	58.4	74.9	90.7	106.1	121.3	
		10	66	66.5	84.6	102.0	118.9		

Note 1. The speeds indicated above are based on the servo motor's rated speed of 2,000 RPM

The settings in the table above are based on a 500mm stroke.

LIFETIME GRAPH

HES 220 HS



The above graph is based on the following criteria: 500 strokes, a speed of 150 mm/sec, and continuous operation.



HES 220 HS - 200 - W - S3 - M

SPECIFICATIONS

MODEL	HES 220 HS
FRAME SIZE	□ 220
ROD DIAMETER	Ø 100
BALL SCREW LEAD	20
MAX. ALLOWABLE CAPACITY	35kW(Direct drive : without reduction gear)
RATED RPM	2000
NORMAL PAYLOAD	5000kgf
MAX. PAYLOAD	10000kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)



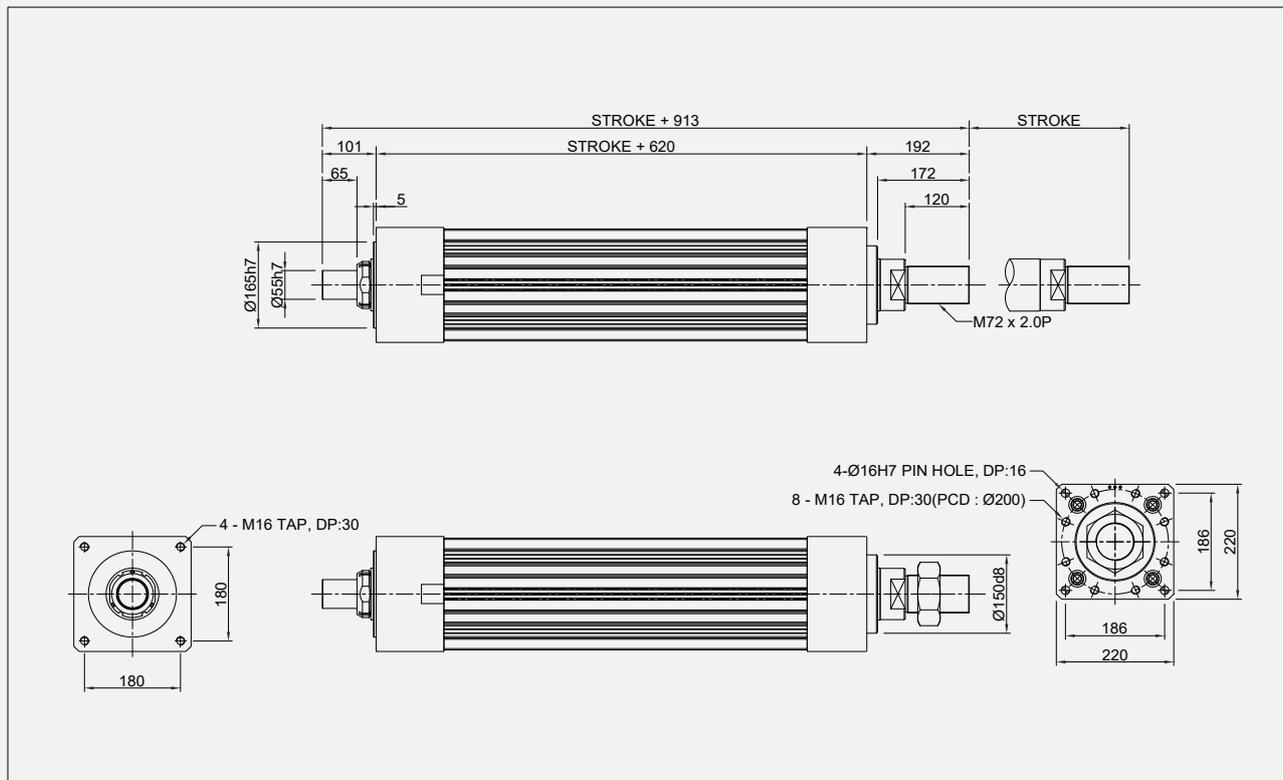
UP TO **100 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	126	136	146	156	166	175	185	195

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HES 220 HS - S 200 - W 110 G10 - S3 - M

SPECIFICATIONS

MODEL	HES 220 HS
FRAME SIZE	□ 220
ROD DIAMETER	Ø 100
BALL SCREW LEAD	20
MAX. ALLOWABLE CAPACITY	35kW(Direct drive : without reduction gear)
RATED RPM	2000
NORMAL PAYLOAD	5000kgf
MAX. PAYLOAD	10000kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)



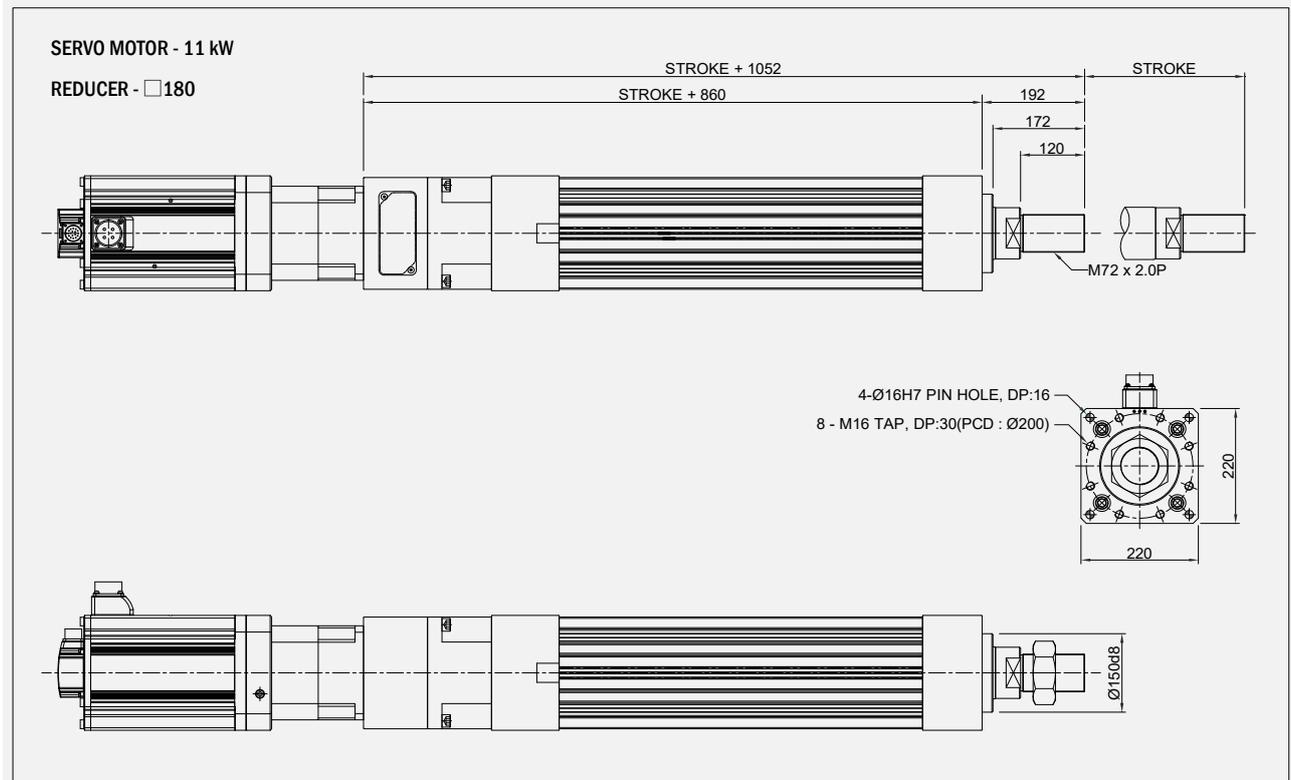
UP TO **100 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	150	159	169	179	189	199	209	218
SERVO MOTOR / GEAR	95	95	95	95	95	95	95	95
TOTAL WEIGHT	245	254	264	274	284	294	304	313

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HES 220 HS - P 200 - W 110 G10 - S3 - M

SPECIFICATIONS

MODEL	HES 220 HS
FRAME SIZE	□ 220
ROD DIAMETER	Ø 100
BALL SCREW LEAD	20
MAX. ALLOWABLE CAPACITY	35kW(Direct drive : without reduction gear)
RATED RPM	2000
NORMAL PAYLOAD	5000kgf
MAX. PAYLOAD	10000kgf
REPEATABILITY	C7 (0.02) / C5 (0.01mm)



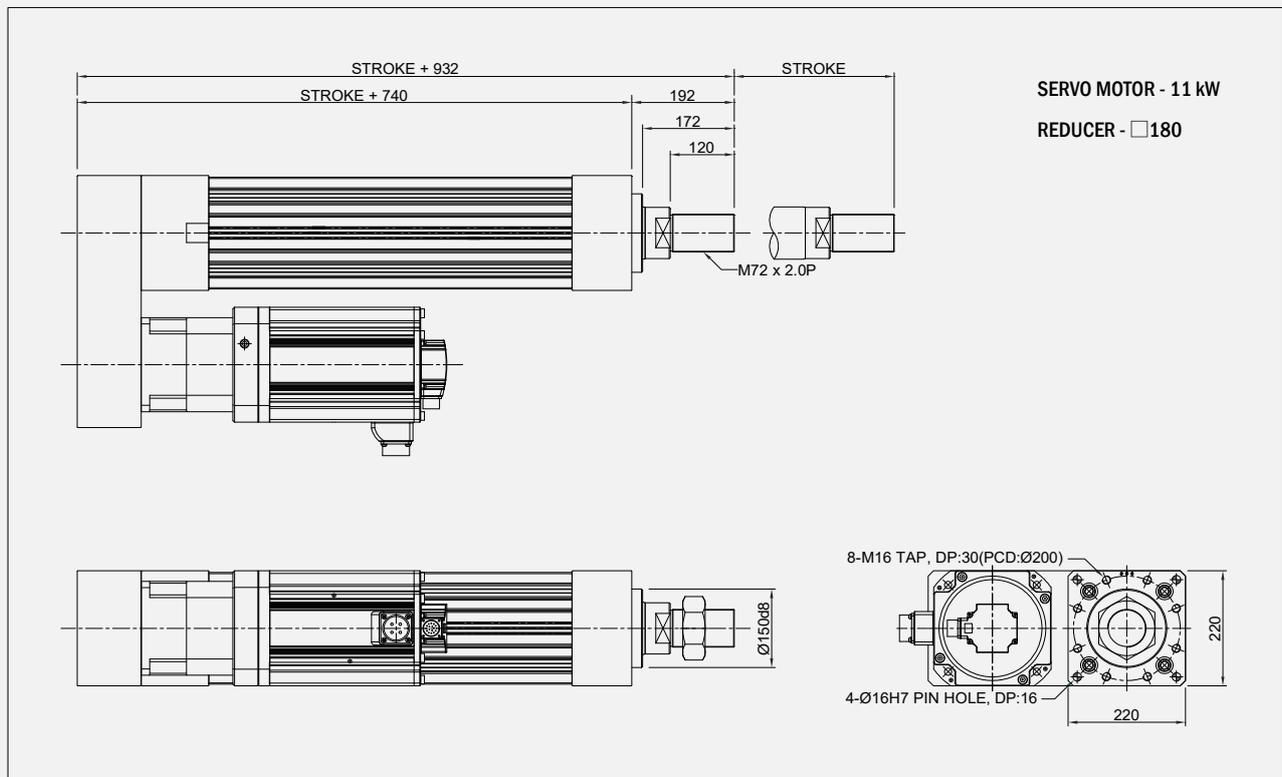
UP TO **100 kN**

The values indicated represent the maximum allowable load. For higher load capacities, please consult with TMS for customized solutions.

CAUTION : Overuse of the indicated capabilities may cause overheating, buckling and resonance, and a sudden decrease in lifespan of the unit.

DIMENSIONS

unit : mm



STROKE WEIGHT

unit : kg

STROKE (mm)	100	200	300	400	500	600	700	800
UNIT WEIGHT	159	168	178	188	198	208	217	227
SERVO MOTOR / GEAR	95	95	95	95	95	95	95	95
TOTAL WEIGHT	254	263	273	283	293	303	312	322

※ The indicated strokes are not the maximum limits. Please contact TMS if a longer stroke is required for your application.

HYPER CYLINDER

HIGH PERFORMANCE ROBO CYLINDER



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