Jiangsu Liquid Damper Machinery Technology Co.,Ltd

No.209 Chengnan Road, Xinwu District, Wuxi, Jiangsu, China

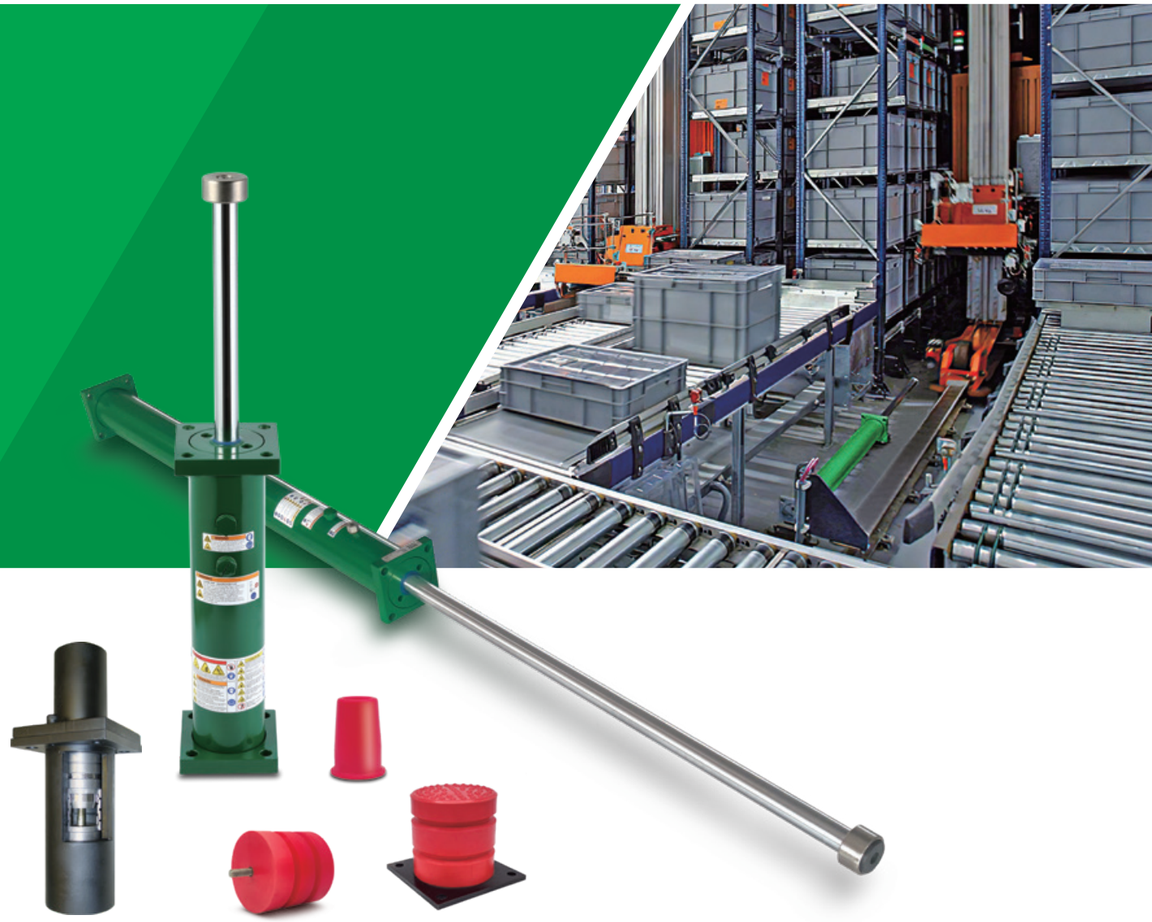
Tel：+86 510 82801575
Fax：+86 510 82801575
Email：Office@ekdchina.com

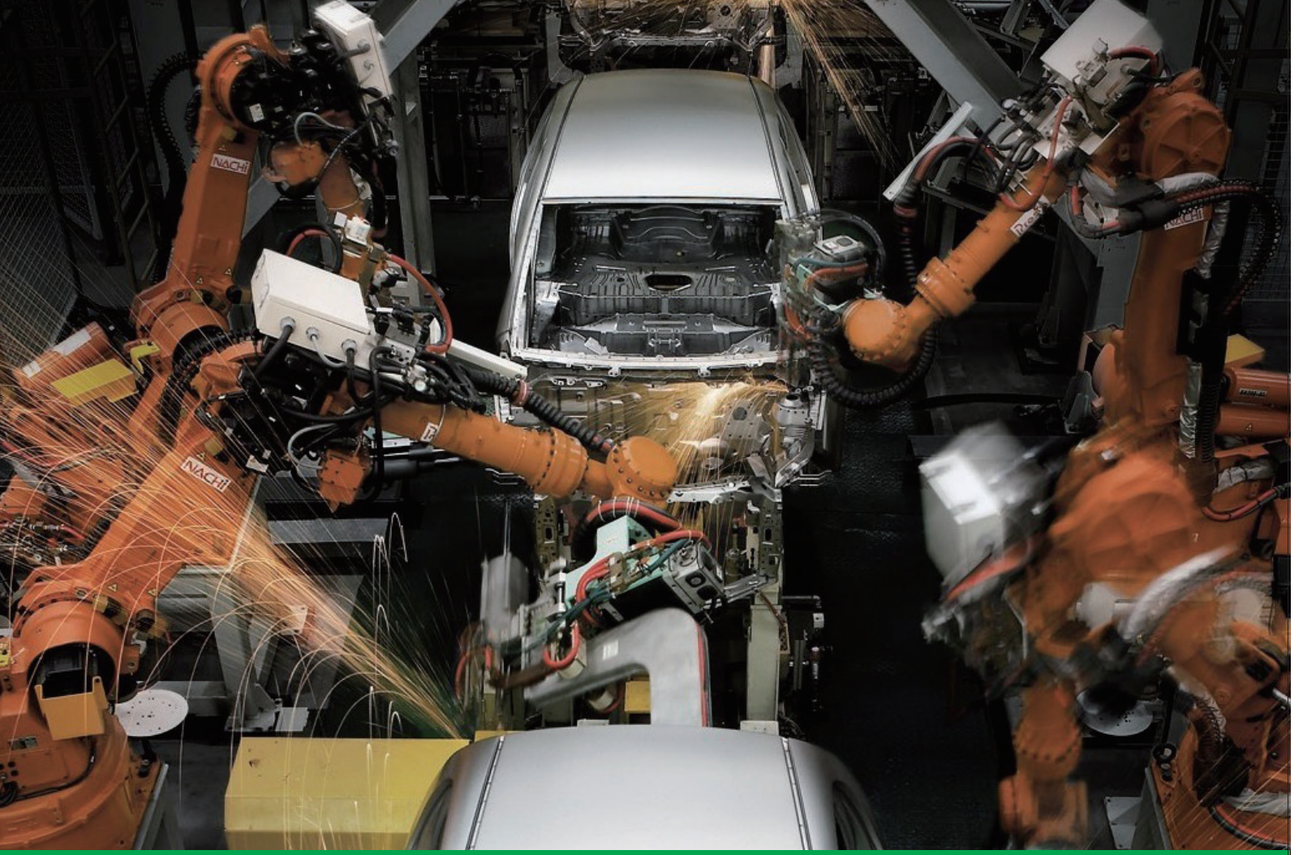
www.ekdchina.com

力科丹普

Energy Absorption
Vibration Control

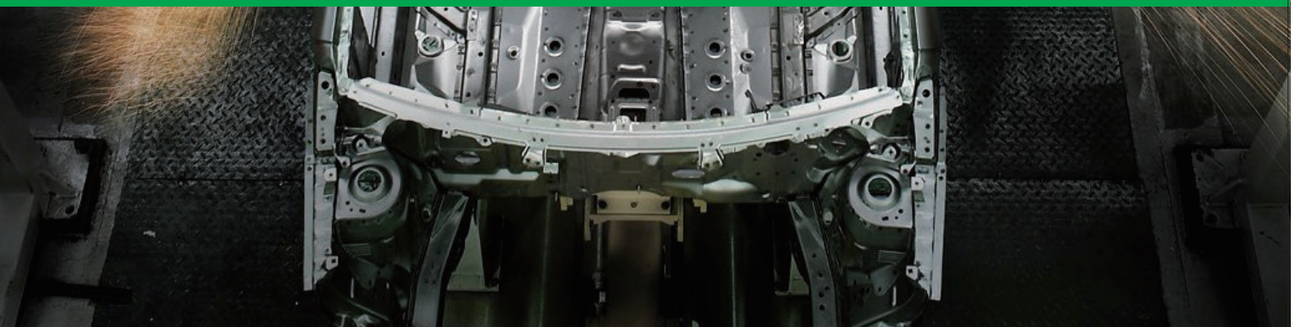
Logistics Industry Shock Absorbers





EKD

FOCUSES ON COST-EFFECTIVE ENERGY ABSORPTION AND VIBRATION ISOLATION SOLUTIONS.



EKD
力科丹普

Table of Contents

EXCELLENT IN QUALITY AND VALUE FOR ENERGY ABSORPTION AND VIBRATION ISOLATION PRODUCTS

COMPANY PROFILE

Jiangsu EKD Mechanical Technology Co., Ltd..has served the military industry and products for civil use. It is specialized in the development and production of energy absorption and vibration and noise reduction products. It cooperates with domestic famous vibration and noise research institutes to develop the industrial standards for multiple vibration isolation products for the navy. It currently owns over 30 employees. Members of the core team have worked for over 15 years in the industry and have accumulated rich techniques and management experiences. By adhering to the philosophy of high quality and technical guidance, the Company provides high quality solutions for products for military and civil uses!

Main qualifications and achievements:

- High-tech enterprise, ISO9001, ROHS, CE
- 5 invention patents, 1 product appearance patent.
- Over 50 utility models, 3 software copyrights.

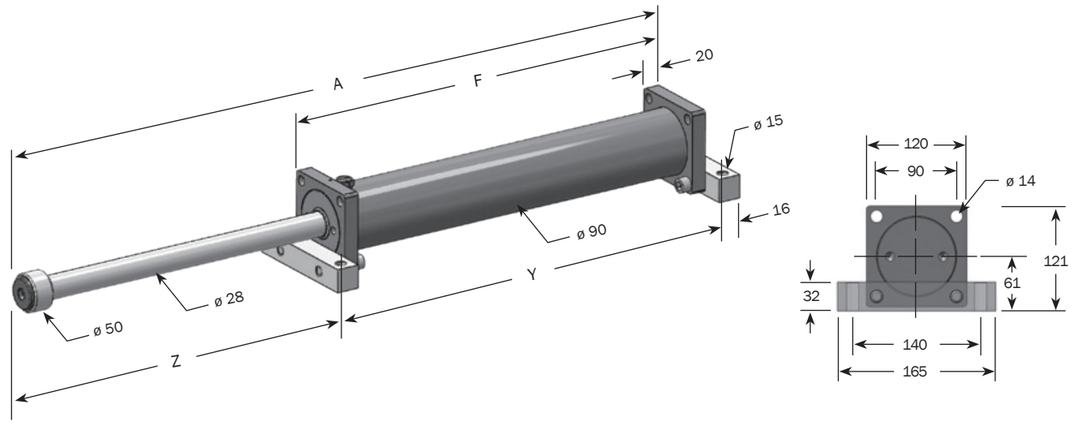
The services provided include:

- Various types of Shock Absorbers, dampers and vibration absorption products.
- Dampers with various structures, including steel wire ropes and fully metallic and steel wire cushion and rubber products.
- Providing structural calculation and analysis and developing a complete set of damping solutions to meet the customers' needs.
- Supporting welding parts and machining pieces.

Performance and advantages

- Absorbing the impact energy from the stacker with high efficiency to ensure that the equipment is braked stably.
- The unique shock tube design ensures that the shock resistance in the emergency condition is increased while the speed is stably reduced.
- The brand new wear resistant seal effectively extends the standby life by meeting the requirement for long-time standby operation in the logistics industry.
- Multiple fittings are available for selection by the customers and include：
  → Protective shield
  → Safety cable
  → Reset sensor
  → Urethane Cap
- Multiple solutions are provided:
  → Standard PU Shock Absorbers
  → Cup-shaped counter-acting force PU Shock Absorbers
  → Uniquely designed metallic friction damper (without hydraulic oil, adapting to various extreme conditions)

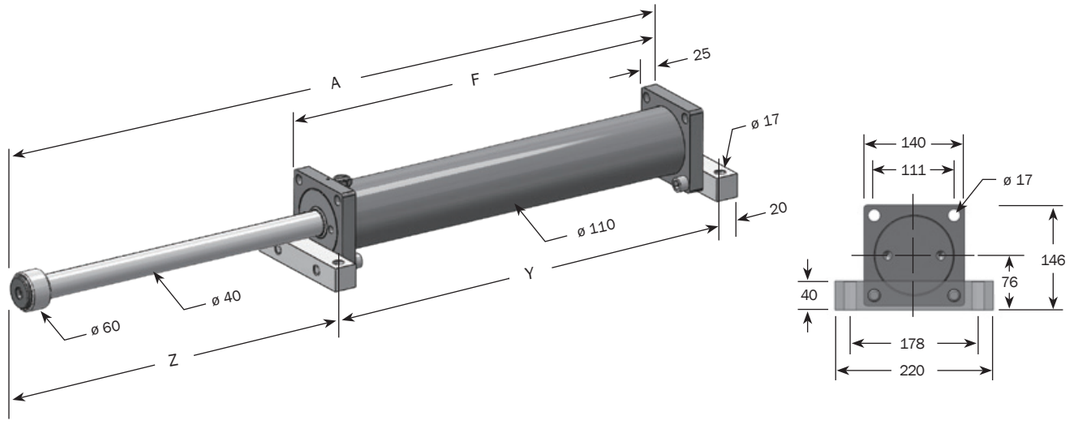
EDS 1.5 x 2 ➡ EDS 1.5 x 32 Series



Note: the front base and dimensions are excluded for the fixation of TF, FF and FR.

Model	Speed index	(S) Stroke mm	(E_T) Max. Energy Nm/C	(E_TC) Max. Energy Nm/h	(F_P) Max. Shock Force N	Nominal Return Force N	A mm	F mm	Y mm	Z mm	Weight kg
EDS 1.5 x 2	Low-speed model Vx≤120m/min	50	3 200	189 000	70 060	320	310	208	240	86	10
EDS 1.5 x 4		100	6 100	368 000	70 060	410	410	258	290	136	12
EDS 1.5 x 6	Medium-speed model 120m/min<Vx≤220m/min	150	9 100	546 700	70 060	450	510	308	340	186	12
EDS 1.5 x 8	High-speed model 220m/min<Vx≤360m/min	200	12 200	732 500	70 060	525	613	360	392	237	13
EDS 1.5 x 10		250	15 200	781 000	70 060	600	715	411	443	288	14

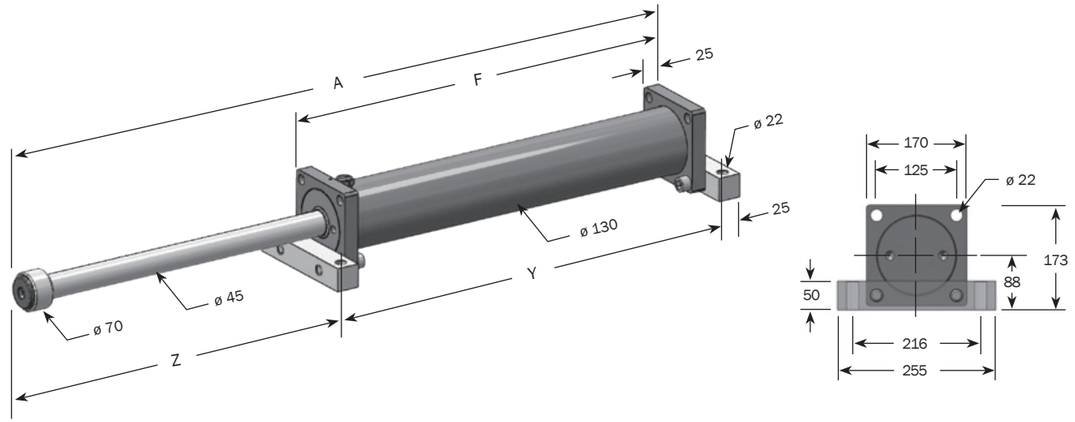
EDS 2.0 x 6 ➡ EDS 2.0 x 56 Series



Note: the front base and dimensions are excluded for the fixation of TF, FF and FR.

Model	Speed index	(S) Stroke mm	(E_T) Max. Energy Nm/C	(E_TC) Max. Energy Nm/h	(F_P) Max. Shock Force N	Nominal Return Force N	A mm	F mm	Y mm	Z mm	Weight kg
EDS 2.0 x 6	Low-speed model Vx≤120m/min	152	14 400	862 100	111 200	870	553	339	379	194	23
EDS 2.0 x 8		203	19 200	913 700	111 200	1 040	655	390	430	245	25
EDS 2.0 x 10		250	24 000	1 033 200	111 200	1 340	757	441	481	296	23
EDS 2.0 x 12		300	28 600	1 152 700	111 200	2 290	859	492	532	347	25
EDS 2.0 x 14		350	32 300	1 272 100	111 200	2 290	960	543	583	397	27
EDS 2.0 x 16		400	36 000	1 391 600	111 200	2 290	1 062	594	634	448	29
EDS 2.0 x 18	Medium-speed model 120m/min<Vx≤220m/min	450	39 700	1 511 100	111 200	2 290	1 164	645	685	499	31
EDS 2.0 x 20		500	43 300	1 628 300	111 200	2 290	1 265	695	735	550	33
EDS 2.0 x 24		600	50 700	1 867 200	111 200	2 290	1 469	797	837	652	36
EDS 2.0 x 28	High-speed model 220m/min<Vx≤360m/min	700	58 200	2 106 200	111 200	2 290	1 672	899	939	753	42
EDS 2.0 x 32		800	70 700	2 527 900	111 200	2 290	1 953	1 079	1 119	854	49
EDS 2.0 x 36		900	77 900	2 762 200	100 000	2 290	2 151	1 179	1 219	952	53
EDS 2.0 x 40		1 000	84,400	2 996 500	84 500	2 290	2 351	1 279	1 319	1 052	56
EDS 2.0 x 48		1 200	95 400	3 465 000	60 000	2 290	2 751	1 479	1 519	1 252	64
EDS 2.0 x 56		1 400	104 200	3 957 000	35 100	2 290	3 171	1 689	1 729	1 462	73

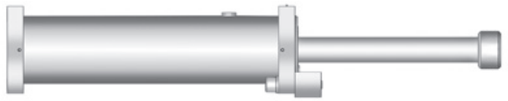
EDS 3.0 x 2 ➡ EDS 3.0 x 72 Series



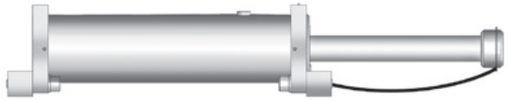
Note: the front base and dimensions are excluded for the fixation of TF, FF and FR.

Model	Speed index	(S) Stroke mm	(E_T) Max. Energy Nm/C	(E_TC) Max. Energy Nm/h	(F_P) Max. Shock Force N	Nominal Return Force N	A mm	F mm	Y mm	Z mm	Weight kg
EDS 3.0 x 2	Low-speed model Vx≤120m/min	50	9 600	578 500	222 400	1 130	336	203	253	108	21
EDS 3.0 x 3		75	14 600	659 000	222 400	1 810	387	229	279	133	22
EDS 3.0 x 5		125	24 200	805 700	222 400	2 895	489	280	330	184	25
EDS 3.0 x 8		200	35 700	1 021 500	222 400	2 895	640	355	405	260	29
EDS 3.0 x 10		250	43 200	1 168 300	222 400	2 895	742	406	456	311	32
EDS 3.0 x 12		300	50 700	1 315 000	222 400	2 895	844	457	507	362	35
EDS 3.0 x 14		350	62 900	1 605 700	222 400	2 895	995	558	608	412	43
EDS 3.0 x 16		400	70 400	1 752 400	222 400	2 895	1 097	609	659	463	45
EDS 3.0 x 18		450	77 900	1 899 200	222 400	2 895	1 199	660	710	514	48
EDS 3.0 x 20	Medium-speed model 120m/min<Vx≤220m/min	500	85 400	2 046 000	222 400	2 895	1 301	711	761	565	51
EDS 3.0 x 24		600	100 300	2 336 600	222 400	2 895	1 504	812	862	667	57
EDS 3.0 x 28		700	115 300	2 630 100	222 400	2 895	1 707	914	964	768	62
EDS 3.0 x 32	High-speed model 220m/min<Vx≤360m/min	800	130 200	2 920 700	180 200	2 895	1 910	1 015	1 065	870	68
EDS 3.0 x 36		900	147 700	3 349 500	160 100	2 895	2 156	1 164	1 214	967	77
EDS 3.0 x 40		1 000	159 600	3 637 200	140 000	2 895	2 356	1 264	1 314	1 067	85
EDS 3.0 x 48		1 200	179 700	4 212 800	95 600	2 895	2 756	1 464	1 514	1 267	94
EDS 3.0 x 56		1 400	196 700	4 788 300	55 600	2 895	3 156	1 664	1 714	1 467	106
EDS 3.0 x 60		1 500	206 800	5 116 300	53 200	2 895	3 384	1 778	1 828	1 581	106
EDS 3.0 x 64		1 629	217 100	5 210 400	53 200	2 895	3 688	1 980	2 030	1 683	110
EDS 3.0 x 72		1 830	238 000	6 242 000	53 200	2 895	4 012	2 092	2 142	1 895	118

Typical mounting methods are shown below. Special mounting requirements can be accommodated upon request.

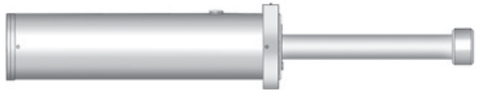


TM：Rear Flange Front Foot Mount



FM：Front and Rear Foot Mount. Also shown is optional safety cable, typically used in overhead applications.

TF：Front and Rear Flanges



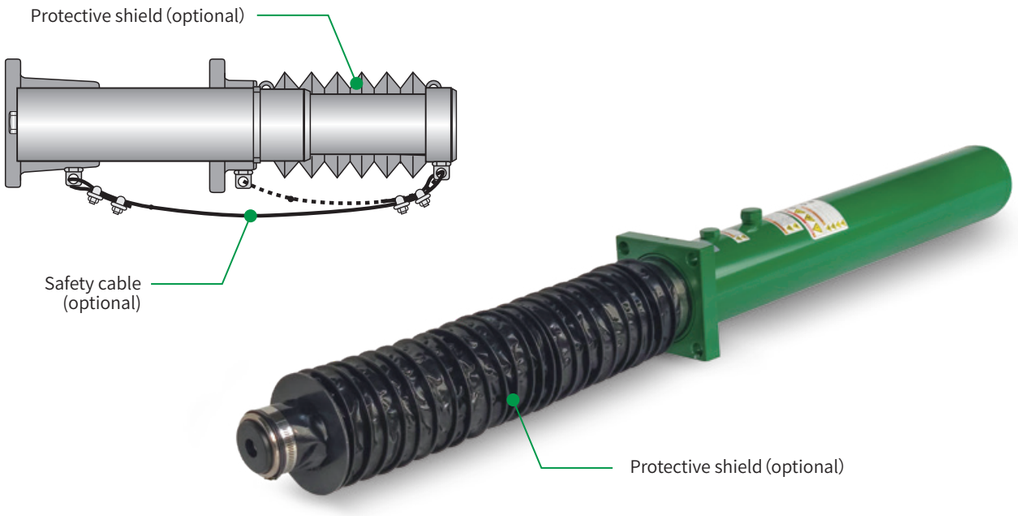
FF：Front Flange

CM：Clevis Mount

FR：Rear Flange
Note: Rear flange mounting not recommended for stroke lengths above 12 inches.(300mm)

EDS 3.0 x 2 Series

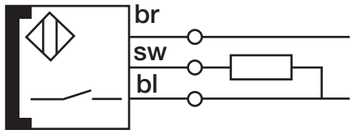
Protective shield



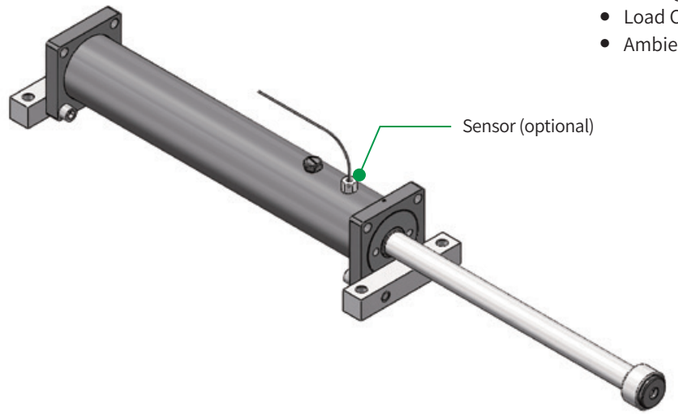
Optional Piston Rod Return Sensor

- Magnetic proximity sensor indicates complete piston rod return with 10-foot(3m) long cable
- If complete piston rod does not return the circuit remains open. This can be used to trigger a system shut-off.
- Contact EKD company for other sensor types.

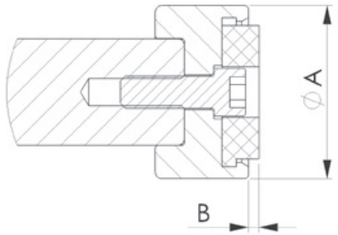
Sensor Specifications

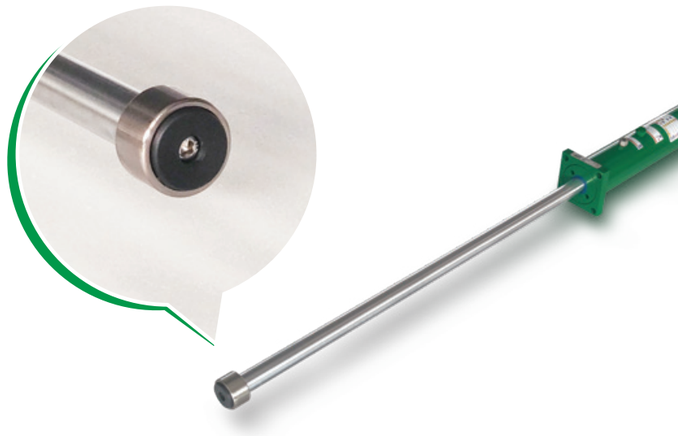


- Voltage10-30V
- Load Current⩽ 200 mA
- Leakage Current ⩽ 80 mA
- Load Capacitance ⩽ 1.0 mF
- Ambient Temperature：-26°～ 71°C



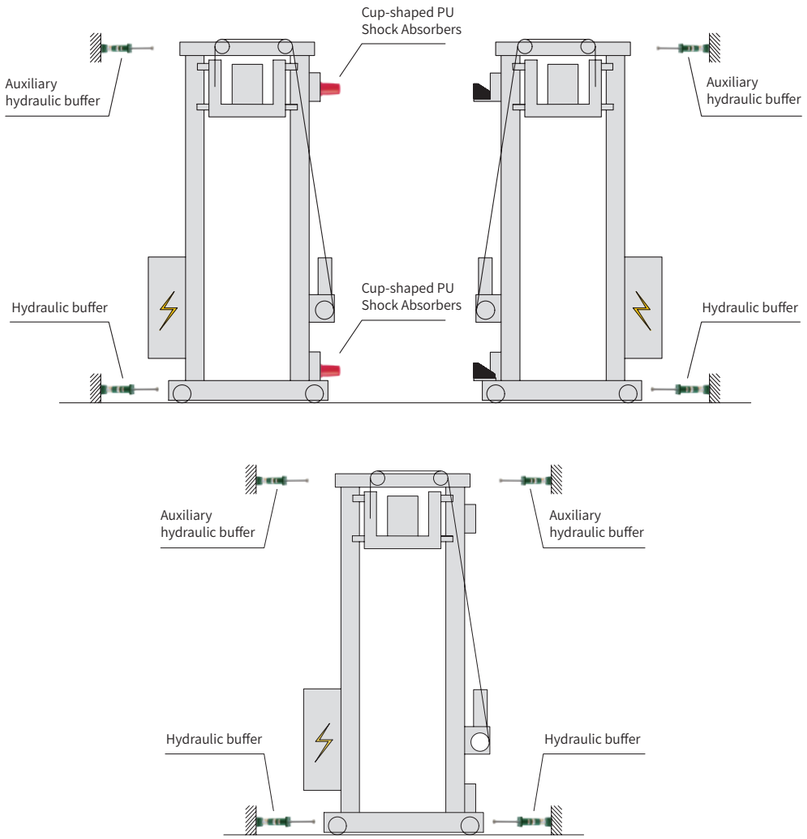
Urethane Cap





EDS

Schematics for the application



Stacker application-EDS model list

Operational speed		Low-speed condition (L model) Vx≤120m/min				Medium-speed condition (M model) 120m/min<Vx≤220m/min				High-speed condition (H model) 220m/min<Vx≤360m/min			
Motor power		Motor operation is not considered	P≤5.5KW	5.5KW<P≤11KW	11KW<P≤22KW	Motor operation is not considered	P≤5.5KW	5.5KW<P≤11KW	11KW<P≤22KW	Motor operation is not considered	P≤11KW	11KW<P≤22KW	22KW<P≤45KW
Total stacker weight	W≤2000kg	EDS1.5X10-L	EDS1.5X10-L	EDS1.5X10-L	EDS1.5X10-L	EDS1.5X10-M	EDS1.5X10-M	EDS1.5X10-M	EDS2.0X10-M	EDS2.0X10-H	EDS2.0X10-H	EDS2.0X10-H	EDS2.0X16-H
	2000kg<W≤4000kg	EDS1.5X10-L	EDS1.5X10-L	EDS1.5X10-L	EDS1.5X10-L	EDS1.5X10-M	EDS1.5X10-M	EDS2.0X10-M	EDS2.0X10-M	EDS2.0X16-H	EDS2.0X16-H	EDS2.0X16-H	EDS2.0X20-H
	4000kg<W≤6000kg	EDS1.5X10-L	EDS1.5X10-L	EDS1.5X10-L	EDS1.5X10-L	EDS2.0X10-M	EDS2.0X10-M	EDS2.0X10-M	EDS2.0X10-M	EDS2.0X24-H	EDS2.0X24-H	EDS2.0X24-H	EDS3.0X18-H
	6000kg<W≤8000kg	EDS1.5X10-L	EDS1.5X10-L	EDS1.5X10-L	EDS2.0X10-L	EDS2.0X10-M	EDS2.0X10-M	EDS2.0X10-M	EDS2.0X16-M	EDS2.0X32-H	EDS2.0X40-H	EDS2.0X40-H	EDS3.0X20-H
	8000kg<W≤10000kg	EDS1.5X10-L	EDS1.5X10-L	EDS1.5X10-L	EDS2.0X10-L	EDS2.0X16-M	EDS2.0X16-M	EDS2.0X16-M	EDS2.0X16-M	EDS2.0X40-H	EDS2.0X40-H	EDS2.0X40-H	EDS3.0X28-H
	1000kg<W≤13000kg	EDS1.5X10-L	EDS1.5X10-L	EDS2.0X10-L	EDS2.0X10-L	EDS2.0X16-M	EDS2.0X20-M	EDS2.0X20-M	EDS2.0X20-M	EDS3.0X28-H	EDS3.0X36-H	EDS3.0X36-H	EDS3.0X36-H
	13000kg<W≤17000kg	EDS2.0X10-L	EDS2.0X10-L	EDS2.0X10-L	EDS2.0X10-L	EDS2.0X24-M	EDS2.0X24-M	EDS2.0X40-M	EDS2.0X40-M	EDS3.0X40-H	EDS3.0X40-H	EDS3.0X48-H	EDS3.0X48-H

EDS

Ordering Example

4 – EDS 2.0 x 24 – TM – C – Speed index

1 2 3 4 5

Ordering Code Example for Heavy Duty Shock Absorbers

1 - Quantity

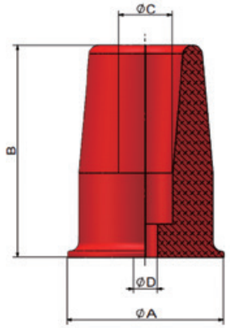
2 - Model Selection
EDS (Non-adjustable)

3 - Model Size
Select Size from Engineering Data Chart
EDS - 1.5, 2.0, 3.0

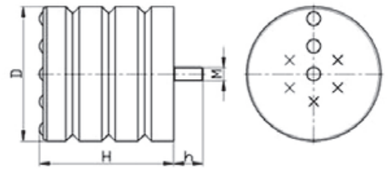
4 - Mounting Method
TM (Rear flange front foot mount)
FM (Front and rear foot mount)
TF (Front and rear flanges)
FF (Front flange)
FR (Rear flange)

Speed index (Required for EDS Models)
–Low-speed model Vx≤120m/min
–Medium-speed model 120m/min<Vx≤220m/min
–High-speed model 220m/min<Vx≤360m/min

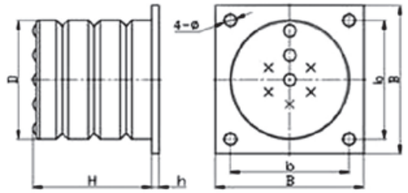
5 - Options
C (Sensor Cable)
B (Dust Guard)
SC (Safety Cable)
UC (Urethane Cap)



Model	ØA mm	B mm	ØC mm	ØD mm	Repeated impact			Maximum impact energy J
					Energy J	Stroke mm	Counter-acting force daN	
EKD-D-1	60	95	25	10.5	150	50	1000	600
EKD-D-2	85	85	25	10.5	280	40	1700	850
EKD-D-3	110	110	30	12.5	550	50	3400	1500
EKD-D-4	130	130	40	19	650	60	3000	1900
EKD-D-5	170	170	45	23	1300	70	6000	3900
EKD-D-6	210	210	60	28	2200	85	7800	6600

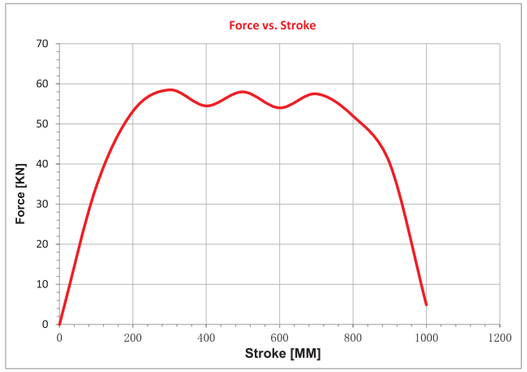


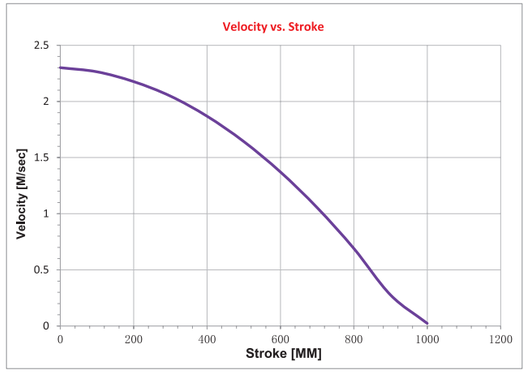
Specification	Model	D mm	H mm	M mm	h mm	Buffering capacity KN • m	Stroke mm	Buffering force KN	Weight Kg
JHQ-A-1	EKD-A-1	65	80	16	35	0.265	60	28	0.3
JHQ-A-2	EKD-A-2	80	80	16	35	0.4	60	42	0.4
JHQ-A-3	EKD-A-3	80	100	16	35	0.502	75	42	0.5
JHQ-A-4	EKD-A-4	100	80	16	35	0.628	60	66	0.6
JHQ-A-5	EKD-A-5	100	100	16	35	0.785	75	66	0.7
JHQ-A-6	EKD-A-6	100	125	16	35	0.98	94	66	0.8
JHQ-A-7	EKD-A-7	125	100	16	35	1.227	75	103	1.2
JHQ-A-8	EKD-A-8	125	125	16	35	1.533	94	103	1.4
JHQ-A-9	EKD-A-9	125	160	16	35	1.96	120	103	2.1
JHQ-A-10	EKD-A-10	160	125	16	35	2.512	94	169	2.3
JHQ-A-11	EKD-A-11	160	160	16	35	3.215	120	169	2.7
JHQ-A-12	EKD-A-12	160	200	16	35	4.019	150	169	3.2
JHQ-A-13	EKD-A-13	200	160	20	45	5.024	120	265	4.3
JHQ-A-14	EKD-A-14	200	200	20	45	6.28	150	265	5.1
JHQ-A-15	EKD-A-15	200	250	20	45	7.85	188	265	6.2
JHQ-A-16	EKD-A-16	250	200	20	45	9.81	150	414	8.1
JHQ-A-17	EKD-A-17	250	250	20	45	12.266	188	414	9.6
JHQ-A-18	EKD-A-18	250	320	20	45	15.7	240	414	11.8
JHQ-A-19	EKD-A-19	320	250	20	45	20.096	188	675	15.7
JHQ-A-20	EKD-A-20	320	320	20	45	25.732	240	675	19.4



Specification	Model	D mm	H mm	h mm	B mm	b mm	∅ mm	Buffering capacity KN • m	Stroke mm	Buffering force KN	Weight Kg
JHQ-C-1	EKD-C-1	65	80	6	100	70	12	0.265	60	28	0.6
JHQ-C-2	EKD-C-2	80	80	6	115	85	12	0.4	60	42	0.8
JHQ-C-3	EKD-C-3	80	100	6	115	85	12	0.502	75	42	0.9
JHQ-C-4	EKD-C-4	100	80	8	130	100	14	0.628	60	66	1.4
JHQ-C-5	EKD-C-5	100	100	8	130	100	14	0.785	75	66	1.5
JHQ-C-6	EKD-C-6	100	125	8	130	100	14	0.98	94	66	1.6
JHQ-C-7	EKD-C-7	125	100	8	165	130	14	1.227	75	103	2.4
JHQ-C-8	EKD-C-8	125	125	8	165	130	14	1.533	94	103	2.63
JHQ-C-9	EKD-C-9	125	160	8	165	130	14	1.96	120	103	2.9
JHQ-C-10	EKD-C-10	160	125	10	200	160	18	2.512	94	169	4.6
JHQ-C-11	EKD-C-11	160	160	10	200	160	18	3.215	120	169	5.1
JHQ-C-12	EKD-C-12	160	200	10	200	160	18	4.019	150	169	5.5
JHQ-C-13	EKD-C-13	200	160	10	250	200	18	5.024	120	265	7.9
JHQ-C-14	EKD-C-14	200	200	10	250	200	18	6.28	150	265	8.6
JHQ-C-15	EKD-C-15	200	250	10	250	200	18	7.85	188	265	9.6
JHQ-C-16	EKD-C-16	250	200	12	310	250	22	9.81	150	414	14.9
JHQ-C-17	EKD-C-17	250	250	12	310	250	22	12.266	188	414	16.4
JHQ-C-18	EKD-C-18	250	320	12	310	250	22	15.7	240	414	18.4
JHQ-C-19	EKD-C-19	320	250	12	390	315	22	20.096	188	675	26.3
JHQ-C-20	EKD-C-20	320	320	12	390	315	22	25.732	240	675	29.7
JHQ-C-21	EKD-C-21	320	400	12	390	315	22	32.154	300	675	33.6

You only need to enter your application parameters. You may use the EKD online selection software to calculate the energy needing to be absorbed and the recommended model.
The product 2D drawing and 3D model can be also immediately downloaded.





Our factory is located in Wuxi, Jiangsu Province, providing matching welded parts, welded parts and related delicate machined parts for customers' stackers.

Heavy-duty product production line


Lab equipment


Lab equipment

Small product production line


Lab equipment


Lab equipment

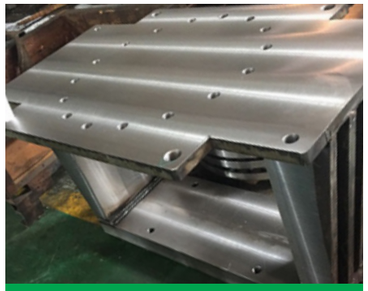
Oil filling and product cleaning

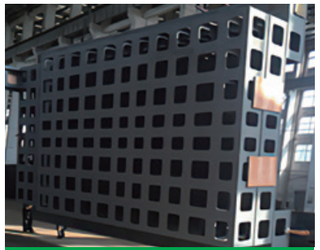

A photo of the workshop

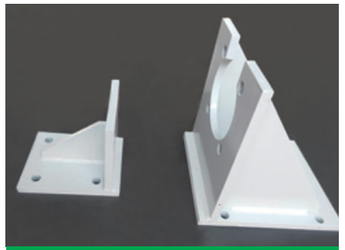

A photo of the workshop


Welding part


Welding part


Welding part

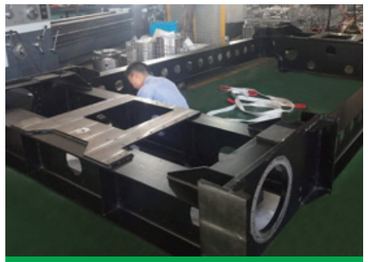

Cradle


Buffer installation bracket


Buffer leg bracket


Logistics bracket


Logistics bracket


Logistics bracket