YDA-YDR

Shock absorbers

YDA series self-compensating and YDR series progressive adjustable shock absorbers are used to provide a linear deceleration and to let the impacting object stop smoothly. Two lock nuts and impact cap are standard supplied (version without cap upon request).

Advantages:
- Production rate increase
- Machine life extension
- Reduction of vibrations and noise levels
- Reduction of maintenance costs

TECHNICAL CHARACTERISTICS

Ambient temperature	-10 ÷ 85 °C
Stroke	6 - 7 - 10 - 12 - 15 - 25 - 40 - 50 mm
Energy absorption per cycle	3 ÷ 300 Nm
Energy absorption per hour	7000 ÷ 100000 Nm
Effective mass	6 ÷ 1400 Kg
Impact speed	0,3 ÷ 5 m/s

CONSTRUCTIVE CHARACTERISTICS

Body	steel
Piston rod	chromium-plated carbon steel
Piston	carbon steel
Sealings	nitrile rubber (NBR)

CODIFICATION KEY

Y	D	A	0	8	0	6
1			2		3	

1 Series
YDA = Self-Compensating
YDR = Adjustable

2 Thread
08 = M8 x 1
10 = M10 x 1
12 = M12 x 1
14 = M14 x 1,5
20 = M20 x 1,5
25 = M25 x 1,5
27 = M27 x 1,5
36 = M36 x 1,5

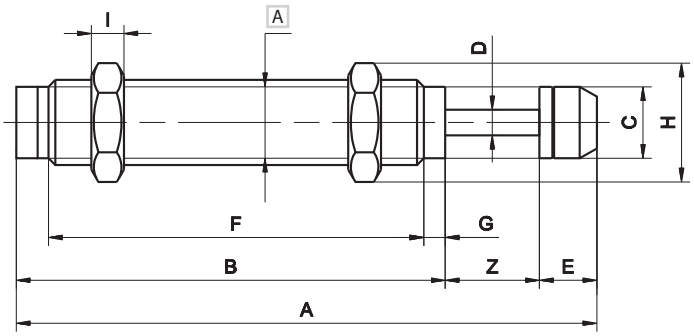
3 Stroke
06 = 6 mm
07 = 7 mm
10 = 10 mm
12 = 12 mm
15 =15 mm
25 = 25 mm
40 = 40 mm
50 = 50 mm

> **THREAD SIZE/STROKE**

Stroke (mm)	YDA							YDR			
	M8	M10	M12	M14	M20	M25	M27	M14	M20	M25	M36
6	■										
7		■									
10			■								
12				■							
15					■			■			
25						■	■		■	■	■
40										■	
50											■

Special strokes upon request

YDA Dimensions



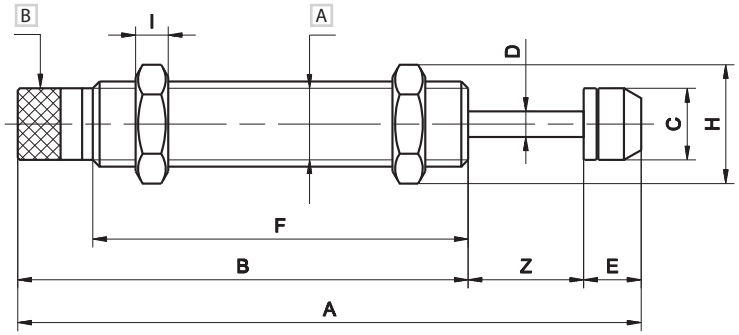
A Thread

Z = Stroke

Stroke (mm)	Thread	A	B	C	D	E	F	G	H	I	Part no.
6	M8x1	51,6	40,6	6,6	2,9	8,6	33,6	2	11	3	**YDA0806**
7	M10x1	62,6	47	8,6	3	8,6	39	3	12,7	3	**YDA1007**
10	M12x1	71,1	52,5	10,3	3	8,6	44	3	14	4	**YDA1210**
12	M14X1,5	90	67	12	4	11	58	4	19	5	**YDA1412**
15	M20X1,5	103	73	18	6	15	62	4	26	7	**YDA2015**
25	M25X1,5	140,5	99	18	8	16	82	_	32	9	**YDA2525**
25	M27x1,5	143	99	22	8	19	89	5	32	6	**YDA2725**

Max energy per cycle (Nm)	Max energy per hour (Nm)	Max effective mass (Kg)	Max impact speed (m/s)	Temperature (°C)	Weight (Kg)	Part no.
3	7000	6	0,3-2,5	-10 ÷ 85	0,017	**YDA0806**
6	12400	12	0,3-3,5	-10 ÷ 85	0,028	**YDA1007**
12	22500	22	0,3-4	-10 ÷ 85	0,032	**YDA1210**
20	33000	40	0,3-5	-10 ÷ 85	0,070	**YDA1412**
59	38000	120	0,3-5	-10 ÷ 85	0,16	**YDA2015**
80	60000	180	0,3-5	-10 ÷ 85	0,295	**YDA2525**
147	72000	270	0,3-5	-10 ÷ 85	0,375	**YDA2725**

YDR Dimensions



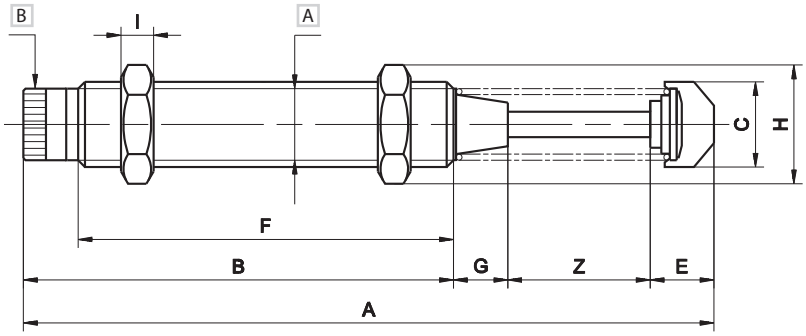
A Thread
B Adjustment screw

Z = Stroke

Stroke (mm)	Thread	A	B	C	D	E	F	H	I	Part no.
15	M14x1,5	127,5	102	12	4	10,5	86	19	5	**YDR1415**
25	M20X1,5	157	117	18	6	15	101	26	7	**YDR2025**
25	M25X1,5	162,5	118,5	22	8	19	101	32	9	**YDR2525**

Max energy per cycle (Nm)	Max energy per hour (Nm)	Max effective mass (Kg)	Max impact speed (m/s)	Temperature (°C)	Weight (Kg)	Part no.
22	26400	80	3	-10 ÷ 85	0,095	**YDR1415**
39	39000	312	3,5	-10 ÷ 85	0,24	**YDR2025**
85	51000	400	3,5	-10 ÷ 85	0,35	**YDR2525**

YDR Dimensions



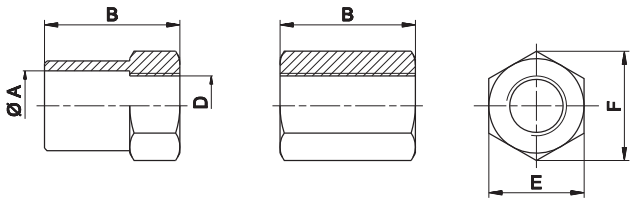
A Thread
B Adjustment screw

Z = Stroke

Stroke (mm)	Thread	A	B	C	D	E	F	G	H	I	Part no.
40	M25X1,5	221,5	144,5	22	8	37	117	10	32	9	**YDR2540**
25	M36X1,5	183,8	133	35,5	10	25,8	103	10	46	15	**YDR3625**
50	M36X1,5	246,8	171	35,5	10	25,8	134	17	46	15	**YDR3650**

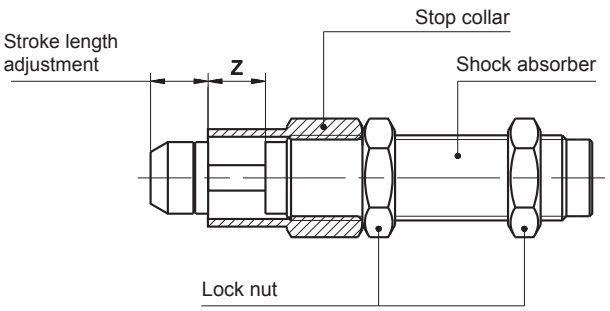
Max energy per cycle (Nm)	Max energy per hour (Nm)	Max effective mass (Kg)	Max impact speed (m/s)	Temperature (°C)	Weight (Kg)	Part no.
100	84000	700	3,5	-10 ÷ 85	0,455	**YDR2540**
150	90000	1400	3,2	-10 ÷ 85	0,955	**YDR3625**
300	108000	1400	3,2	-10 ÷ 85	1,1	**YDR3650**

Stop collar dimensions

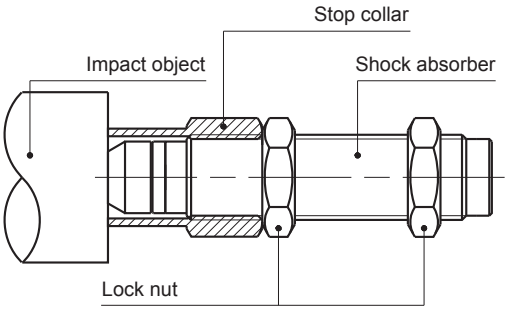


Use of stop nut

> Setting position



> Stroke end



Z = Stroke

Ø A	B	D	E	F	Stop collars	Shock absorbers
-	14	M8 x 1	11	12,5	**YDG08**	**YDA0806**
-	16	M10 x 1	13	14,5	**YDG10**	**YDA1007**
-	20	M12 x 1	14	16	**YDG12**	**YDA1210**
18	27	M14 x 1	19	21,5	**YDG14**	**YDA1412/YDR1415**
25	35	M20 x 1,5	26	28,7	**YDG20**	**YDA2015/YDR2025**
31,5	45	M25 x 1,5	32	36,7	**YDG25**	**YDA2525/YDR2525**
31,5	65	M25 x 1,5	32	36,7	**YDG25L**	**YDR2540**
31,5	45	M27 x 1,5	32	36,7	**YDG27**	**YDA2725**
45	80	M36 x 1,5	46	53	**YDG36**	**YDA3625/YDR3650**

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> Assembly instruction

1. The installation must be designed so that the impact body is perpendicular to the shock absorber's axial center
2. Install the stop collar so that the load stops at about 1mm before the stroke end, and use it to adjust the stroke
3. Do not disassemble it. Do not paint threaded body and rod
4. Do not expose shock absorbers to cutting oil, water, dust, solvent, etc.
5. When installing more than 2 pieces of shock absorbers, please be sure that they have the same stroke
6. YDA self-compensating type does not need adjustment
7. YDR adjustable type is equipped with a stope collar with graduated scale to adjust the absorption rate. The maximum absorption is achieved when the highest number on the scale is reached. In order to adjust the shock absorber, set the adjustment screw to a medium level. If the absorption is too soft, increase the adjustment by turning the adjustment screws.