

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	1	0
1			2		3	

1 Series	2 Thread		3 Stroke	
YDA = Self-Compensating	08 = M8 x 1	20 = M20 x 1,5	06 = 6 mm	15 = 15 mm
YDR = Adjustable	10 = M10 x 1	25 = M25 x 1,5	07 = 7 mm	25 = 25 mm
	12 = M12 x 1	27 = M27 x 1,5	10 = 10 mm	40 = 40 mm
	14 = M14 x 1,5	36 = M36 x 1,5	12 = 12 mm	50 = 50 mm

> THREAD SIZE/STROKE

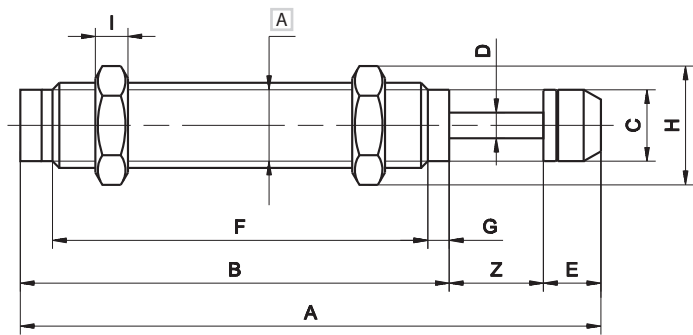
Stroke (mm)	YDA							YDR			
	M8	M10	M12	M14	M20	M25	M27	M14	M20	M25	M36
6	■										
7		■									
10			■								
12				■							
15					■			■			
25						■	■		■	■	■
40										■	
50											■

Special strokes upon request

Subject to change



YDA Dimensions



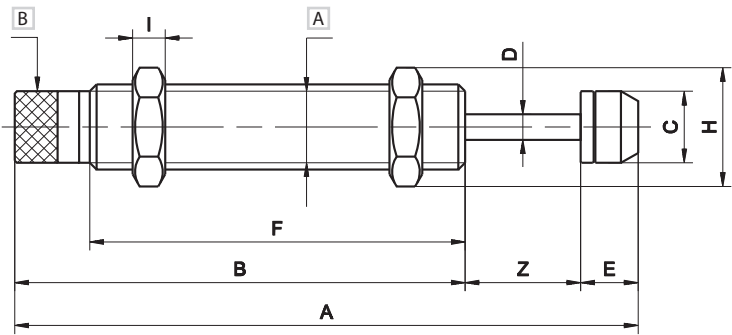
A Thread

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



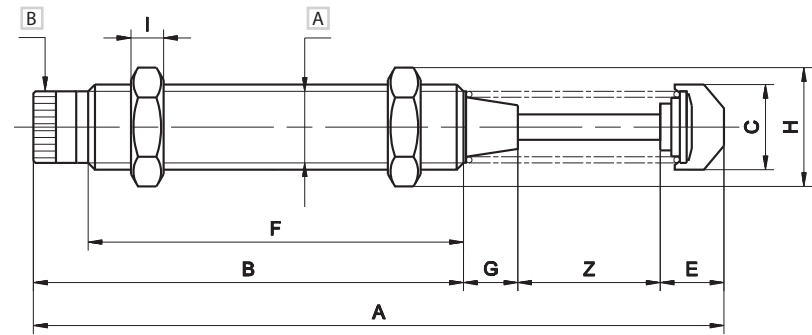
A Thread
B Adjustment screw

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

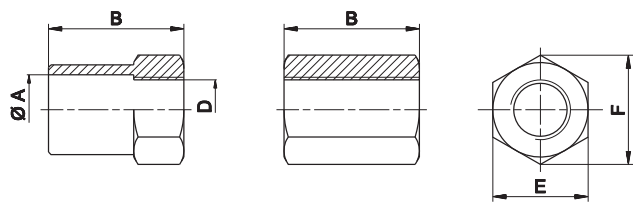
Z = Stroke

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

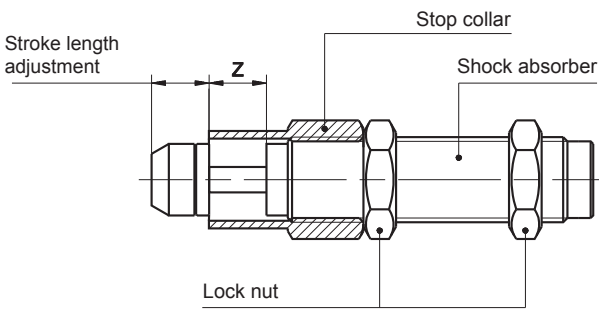
Subject to change

Stop collar dimensions

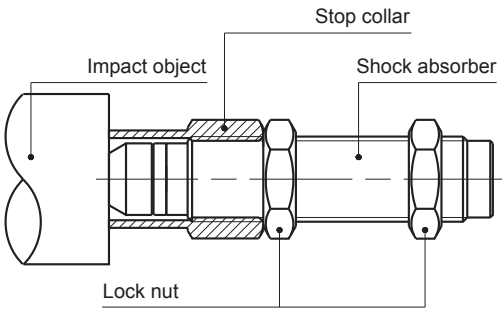


Use of stop nut

> 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

> 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 stop 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.