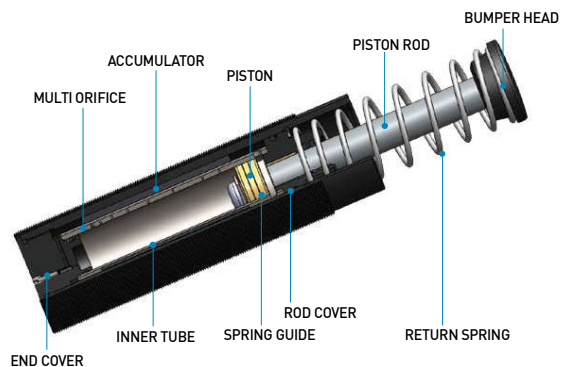


Izmac Absorber Self compensating Straight type

DESCRIPTION

IASS is middle class shock absorber. Operation : when the collision comes piston compress oil chamber in inner tube according to the piston rod moving. Oil flows to accumulator position through outskirt line of tube. In this process, deceleration power comes by flow resistance. And kinetic energy is dissipated in the air by changed as heat energy. Recoil spring returns piston rod into its original position when the load is disappeared.



FEATURES

- 1 Compact design and possible to absorb wide range of high shock energy.
- 2 The effective weight range is significantly expanded, resulting in a wide range of energy absorption capabilities.
- 3 Easy fastening and smooth heat dissipation due to the screw-type body.
- 4 Body surface strongly treated to prevent corrosion by nickel plating or alloy plating. (Black)
- 5 Body and Mount : Black (anodizing) or Ni plating
- 6 Piston Rod : Hard chrome (25μ or more)
- 7 Maximum impact speed : 0.15~5 m/s
- 8 Temperature range standard : -10 ~ 80°C • Special : -40 ~ 100°C

IASS SERIES ORDERING INFORMATION

IASS - 45 - 25 - LN

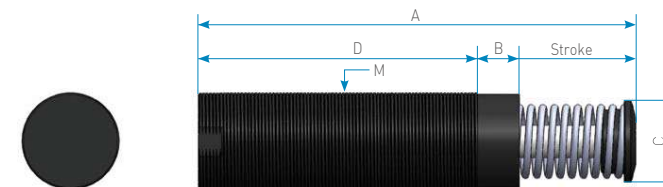
IA : Izmac Absorber
S : Self Compensating
S : Straight type

Stroke
Body Thread Size

SC : Stop Collar
SF : Square Flange
CM : Clamp Mount
LN : Lock Nut

Engineering Data

Model	Stroke (mm)	Max. Energy / Cycle(Nm)	Max. Energy / Hour (nm / h)	Effective Weight(kg)		Recoil Forec(N)		Weight(g)
						Ext.	Comp.	
IASS45 - 25 - 1	25	850	255,000	20	100	75	110	1.2
- 25 - 2	25	850	255,000	88	425	75	110	1.2
- 25 - 3	25	850	255,000	250	1,800	75	110	1.2
- 25 - 4	25	850	255,000	1,500	7,200	75	110	1.2
- 25 - 5	25	850	255,000	6,000	38,500	75	110	1.2
IASS45 - 50 - 1	50	1,300	325,000	32	155	75	150	1.4
- 50 - 2	50	1,300	325,000	134	650	75	150	1.4
- 50 - 3	50	1,300	325,000	385	2,800	75	150	1.4
- 50 - 4	50	1,300	325,000	2,300	11,000	75	150	1.4
- 50 - 5	50	1,300	325,000	3,200	58,900	75	150	1.4
IASS45 - 75 - 1	75	2,100	420,000	52	250	60	185	1.6
- 75 - 2	75	2,100	420,000	217	1,000	60	185	1.6
- 75 - 3	75	2,100	420,000	621	4,550	60	185	1.6
- 75 - 4	75	2,100	420,000	3,810	17,800	60	185	1.6
- 75 - 5	75	2,100	420,000	14,900	95,200	60	185	1.6



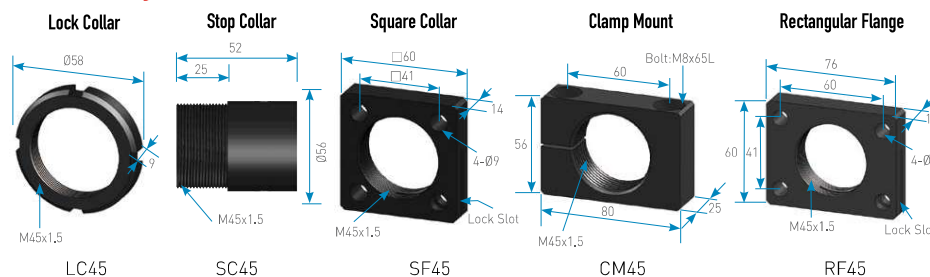
Dimensions

(unit : mm)

Model	Stroke	A	B	C	D	M
IASS45 - 25	25	145	42	35	95	M45 X 1.5P
- 50	50	195	42	35	120	M45 X 1.5P
- 75	75	246	42	35	145	M45 X 1.5P

Accessory

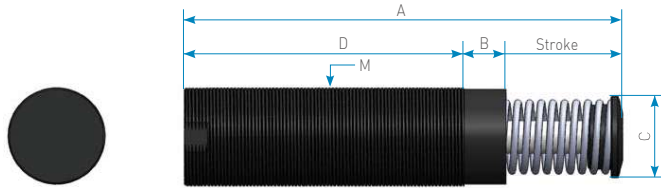
(unit : mm)



IASS64 Series

Engineering Data

Model	Stroke (mm)	Max. Energy / Cycle(Nm)	Max. Energy / Hour (nm / h)	Effective Weight(kg)		Recoil Forec(N)		Weight(g)
						Ext.	Comp.	
IASS64 - 50 - 1	50	2,400	240,000	59	286	95	160	3
- 50 - 2	50	2,400	240,000	248	1,200	95	160	3
- 50 - 3	50	2,400	240,000	710	5,200	95	160	3
- 50 - 4	50	2,400	240,000	4,300	20,400	95	160	3
- 50 - 5	50	2,400	240,000	17,000	108,800	95	160	3
IASS64 - 100 - 1	100	5,000	350,000	123	595	110	275	3.7
- 100 - 2	100	5,000	350,000	517	2,500	110	275	3.7
- 100 - 3	100	5,000	350,000	1,480	10,800	110	275	3.7
- 100 - 4	100	5,000	350,000	9,000	42,500	110	275	3.7
- 100 - 5	100	5,000	350,000	35,600	226,700	110	275	3.7
IASS64 - 150 - 1	150	8,000	400,000	198	952	80	370	5
- 150 - 2	150	8,000	400,000	826	4,000	80	370	5
- 150 - 3	150	8,000	400,000	2,300	17,300	80	370	5
- 150 - 4	150	8,000	400,000	14,500	68,000	80	370	5
- 150 - 5	150	8,000	400,000	16,000	362,000	80	370	5



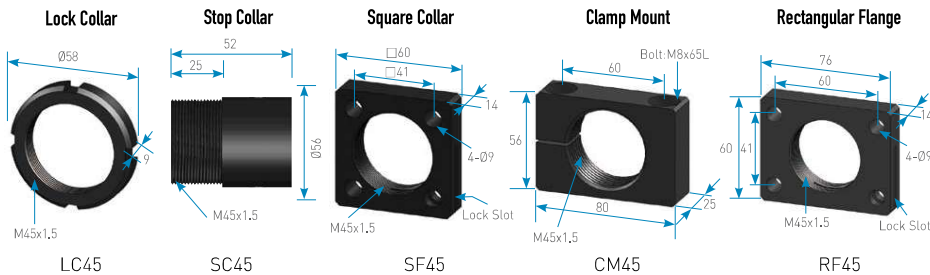
Dimensions

(unit : mm)

Model	Stroke	A	B	C	D	M
IASS64 - 50	50	225	60	48	140	M64 X 2.0P
- 100	100	326	60	48	191	M64 X 2.0P
- 150	150	450	60	48	241	M64 X 2.0P

Accessory

(unit : mm)

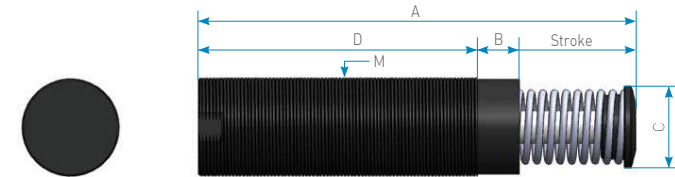


IASS85 Series

Best Engineered
For Energy Absorption
Technology

Engineering Data

Model	Stroke (mm)	Max. Energy / Cycle(Nm)	Max. Energy / Hour (nm / h)	Effective Weight(kg)		Recoil Forec(N)		Weight(g)
						Ext.	Comp.	
IASS85 - 50 - 1	50	4,000	1,200,000	99	470	140	330	7
- 50 - 2	50	4,000	1,200,000	410	2,000	140	330	7
- 50 - 3	50	4,000	1,200,000	1,100	8,600	140	330	7
- 50 - 4	50	4,000	1,200,000	7,200	34,000	140	330	7
- 50 - 5	50	4,000	1,200,000	28,400	181,000	140	330	7
IASS85 - 100 - 1	100	8,500	1,700,000	210	1,000	120	420	9
- 100 - 2	100	8,500	1,700,000	878	4,250	120	420	9
- 100 - 3	100	8,500	1,700,000	2,500	18,400	120	420	9
- 100 - 4	100	8,500	1,700,000	15,400	72,200	120	420	9
- 100 - 5	100	8,500	1,700,000	60,500	385,000	120	420	9
IASS85 - 150 - 1	150	13,500	2,025,000	330	1,600	110	430	12
- 150 - 2	150	13,500	2,025,000	1,400	6,700	110	430	12
- 150 - 3	150	13,500	2,025,000	3,900	29,000	110	430	12
- 150 - 4	150	13,500	2,025,000	24,500	114,000	110	430	12
- 150 - 5	150	13,500	2,025,000	96,100	612,000	110	430	12
IASS85 - 200 - 1	200	19,000	2,660,000	469	2,200	100	430	15
- 200 - 2	200	19,000	2,660,000	1,900	9,500	100	430	15
- 200 - 3	200	19,000	2,660,000	5,600	41,200	100	430	15
- 200 - 4	200	19,000	2,660,000	34,400	161,000	100	430	15
- 200 - 5	200	19,000	2,660,000	135,000	861,000	100	430	15
IASS85 - 250 - 1	250	23,500	2,820,000	580	2,800	95	430	20
- 250 - 2	250	23,500	2,820,000	2,400	11,700	95	430	20
- 250 - 3	250	23,500	2,820,000	6,900	50,900	95	430	20
- 250 - 4	250	23,500	2,820,000	42,600	199,000	95	430	20
- 250 - 5	250	23,500	2,820,000	167,000	1,065,000	95	430	20



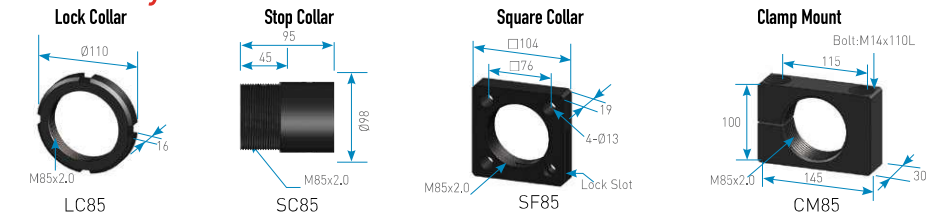
Dimensions

(unit : mm)

Model	Stroke	A	B	C	D	M
IASS85 - 50	50	258	81	68	165	M85 X 2.0P
- 100	100	360	81	68	218	M85 X 2.0P
- 150	150	485	81	68	285	M85 X 2.0P
- 200	200	590	81	68	330	M85 X 2.0P
- 250	250	700	81	68	390	M85 X 2.0P

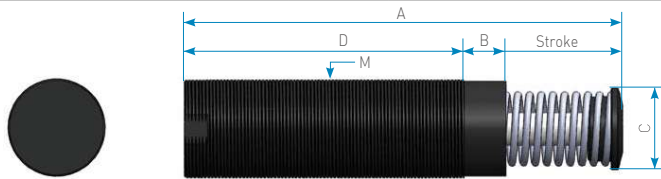
Accessory

(unit : mm)



Engineering Data

Model	Stroke (mm)	Max. Energy / Cycle(Nm)	Max. Energy / Hour (nm / h)	Effective Weight(kg)		Recoil Forec(N)		Weight(g)
						Ext.	Comp.	
IASS115 -50 -1	50	11,000	3,300,000	272	1,300	220	480	12
-50 -2	50	11,000	3,300,000	1,100	5,500	220	480	12
-50 -3	50	11,000	3,300,000	3,200	23,800	220	480	12
-50 -4	50	11,000	3,300,000	19,900	93,500	220	480	12
-50 -5	50	11,000	3,300,000	78,300	498,000	220	480	12
IASS115 -100 -1	100	22,600	4,520,000	558	2,600	220	550	14
-100 -2	100	22,600	4,520,000	2,300	11,300	220	550	14
-100 -3	100	22,600	4,520,000	6,600	49,000	220	550	14
-100 -4	100	22,600	4,520,000	40,900	192,000	220	550	14
-100 -5	100	22,600	4,520,000	160,000	1,024,000	220	550	14
IASS115 -150 -1	150	34,000	5,100,000	840	4,000	200	570	17
-150 -2	150	34,000	5,100,000	3,500	17,000	200	570	17
-150 -3	150	34,000	5,100,000	10,000	73,700	200	570	17
-150 -4	150	34,000	5,100,000	61,600	289,000	200	570	17
-150 -5	150	34,000	5,100,000	242,000	1,541,000	200	570	17
IASS115 -200 -1	200	45,000	6,300,000	1,100	5,300	180	570	20
-200 -2	200	45,000	6,300,000	4,600	22,500	180	570	20
-200 -3	200	45,000	6,300,000	13,300	97,600	180	570	20
-200 -4	200	45,000	6,300,000	81,600	382,000	180	570	20
-200 -5	200	45,000	6,300,000	320,000	2,040,000	180	570	20
IASS115 -250 -1	250	56,000	6,720,000	1,300	6,600	200	620	25
-250 -2	250	56,000	6,720,000	5,700	28,000	200	620	25
-250 -3	250	56,000	6,720,000	16,500	121,000	200	620	25
-250 -4	250	56,000	6,720,000	101,000	476,000	200	620	25
-250 -5	250	56,000	6,720,000	398,000	2,539,000	200	620	25



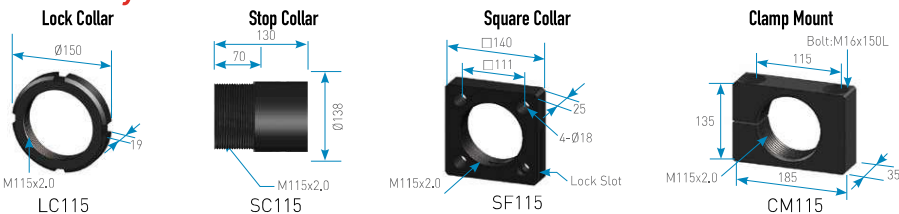
Dimensions

(unit : mm)

Model	Stroke	A	B	C	D	M
IASS115 -50	50	310	111	98	205	M115 X 2.0P
-100	100	420	111	98	265	M115 X 2.0P
-150	150	535	111	98	315	M115 X 2.0P
-200	200	655	111	98	380	M115 X 2.0P
-250	250	770	111	98	435	M115 X 2.0P

Accessory

(unit : mm)



Symbols

Symbol	Unit	Description	Symbol	Unit	Description
W	kg	Weight	r	m	Radius of rotation
W _g	kg	Designed/weight	g	m / s ²	Gravitational acceleration
H	m	Height	d	m / s ²	Deceleration
S	m	Stroke	E _k	Nm	Kinetic energy
V	m / s	Impact velocity	E _w	Nm	Work energy
V _g	m / s	Designed velocity	E _T	Nm	Total energy
ω	rad / s	Angular velocity	F ₀	N	Propelling force
I	Nms ²	Mass moment	F _g	N	Impact force
T	Nm	Torque	η	s	Efficiency rate

Useful Formulas

Maximum Shock Force	FS = ET / S / 0.8 + FD
Stroke	S = V ² / 2 / d / 0.8
Deceleration	d = V ² / 2 / S / 0.8
Deceleration Time	t = 2.6 X S / V

BUFFER SIZING

Arrangement	Design Speed (VE)	Design Weight (WE)
	V	W
	V / 2	2W
	V ₁ + V ₂	$\frac{W_1 \times W_2}{W_1 + W_2}$
	$\frac{V_1 + V_2}{2}$	$\frac{2 \times W_1 \times W_2}{W_1 + W_2}$