



Best Engineered For Energy Absorption Technology

Shock Absorber
Hydraulic Buffer



Overview

In many of industrial fields, production speed increased in high face for better productivity. In addition, the needs for high energy capacity with compact shock absorber has increased whereas the application product size is getting bigger.

Through intensive technical development, IZMAC upgrade all shock absorber models more than 200% capacity of previous ones and improve collision speed allowance range as 0.1m/sec~5 m/sec. Thanks to production management, IZMAC can provide low cost, long life products with short delivery time.

IZMAC would do its best to supply products that customer satisfy by way of on-going research and development with advanced production & quality management.



Applications

Factory Automation

Automotive

- Car manufacturing(Assembly/Transfer/ Inspection/Pick & Place robot line)
- Car-Welding, Assembly line, Tire line
- Electric actuator, Rodless cylinder, High speed cylinder, Guide cylinder, Stopper cylinder, Handling system, Linear module protection
- Pneumatic components
Grippers, Pneumatic cylinder, Pneumatic valve, Fluid control components
- Electronics
Semi-conductor equipment, Circuit breaker
- Factory
Steel factory, Paper factory
- Safety : Brake cylinder, Tie rod cylinder, Compact cylinder, Brake unit, Linear guide, Emergency stop

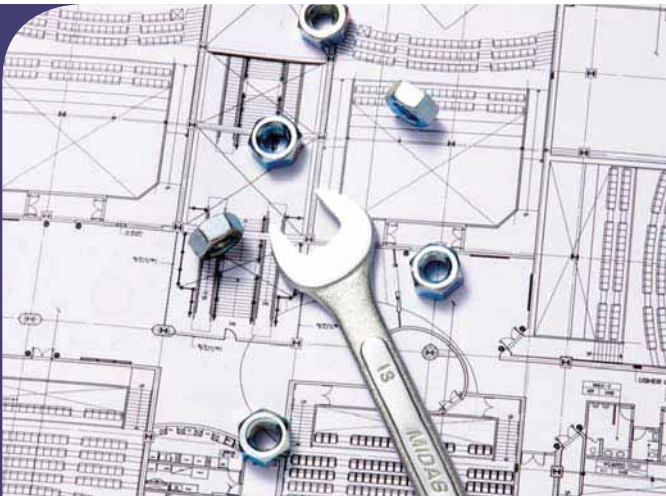
* Warehouse Automation



Features

- Upgrade precision degree
- Secure stability, Optimizing control
- Reliability of production lines
- Max productivity
- Decrease failure ratio
- Increase output quality level

Production Process



01

Design

What is technology? It will be the one which makes differences. IZMAC always open ears to hear customer's voices for renovation. IZMAC makes endless R&D and it supports to develop quality of products for customer's productivity. On time customizing is also one of helpful features of IZMAC.



02

Machining process

Clean machining clean products. IZMAC has its own fleets to doing machining process. To minimize defect ratio into "0", skillful engineers manage all over the process. Advanced machineries are helpful to carry out complicate & difficult output process.



03

Part inspection

IZMAC only supply products after total inspection process. If there are any small defects found it goes directly to the beginning process. Perfect product delivery is what IZMAC quality assurance system is aiming at.

04

Assembly

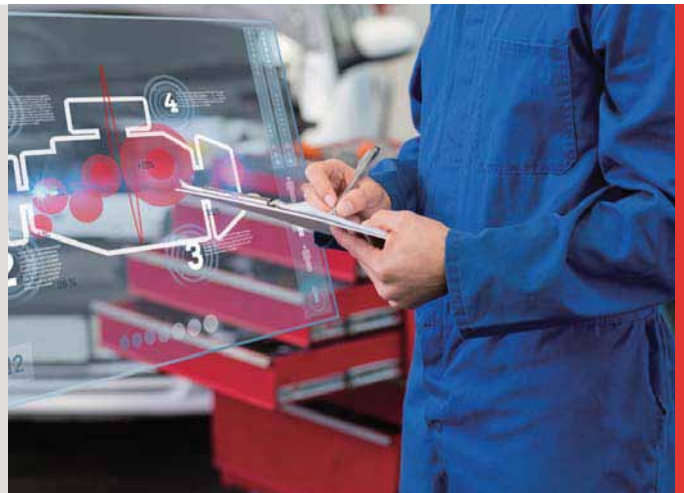
Assembly is one of very important process of production. Every part should be inserted into the right position to do its right function.



05

Product inspection / Test

Through product inspection In the final qualifying process, IZMAC products are ready to deliver customer's places. Defective products are automatically transferred to the beginning process of production or trashed to prevent quality trouble.



06

Shipping

IZMAC only supply products in perfect condition of packing. If there are any small defects found or manager feels that package is not settled well, the packaging system is reset for safe delivery. Perfect product delivery is what IZMAC quality assurance system is looking for.



Damper & Rate Control

IHC Series Speed Control

NEW

IZMAC Hydro Check

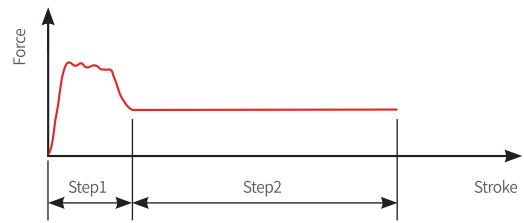
DESCRIPTION

IHC is an absorption function added product that absorbs the initial collision of the existing product, in addition to the capability of precise speed control according to the control range, it is possible to control the constant speed of various weights according to the stroke, so it protects the equipment and extends the life of the machine tool.



- Process

- ① Step1 : shock absorption
- ② Step2 : Control same speed



FEATURES

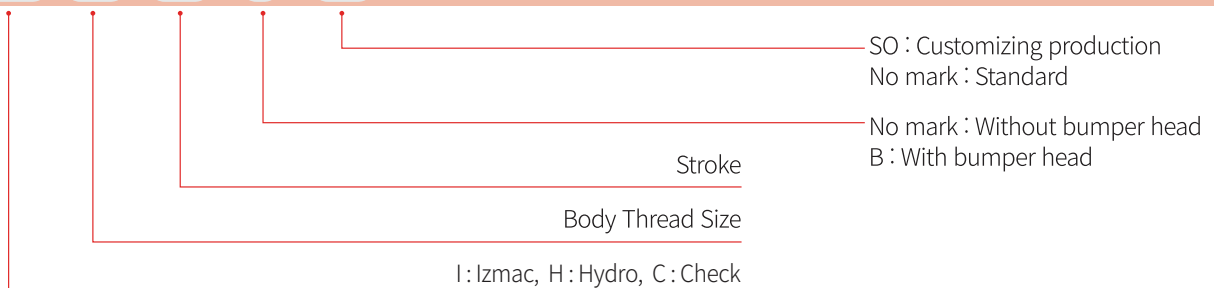
- 1 The device enables easy control precise speed according to 30 steps of adjustment Knob.
- 2 It can be installed simply by using snap ring mounting block, and it can be changed the location also. In addition it can be fixed easily.
- 3 Oil is internally filtered by itself, and speed is controlled always at the same speed.
- 4 Application : Auto feed drilling, Cutting machine, Grinding machine, Boring machine, Sawing machine etc. that require same speed control.
- 5 Application temperature : -10~80°C • Special -30~100°C
- 6 Accurate two step speed control

APPLICATION

Widely used where speed control is required, such as drilling, cutting, safety devices, and drilling machines.

IHC SERIES ORDERING INFORMATION

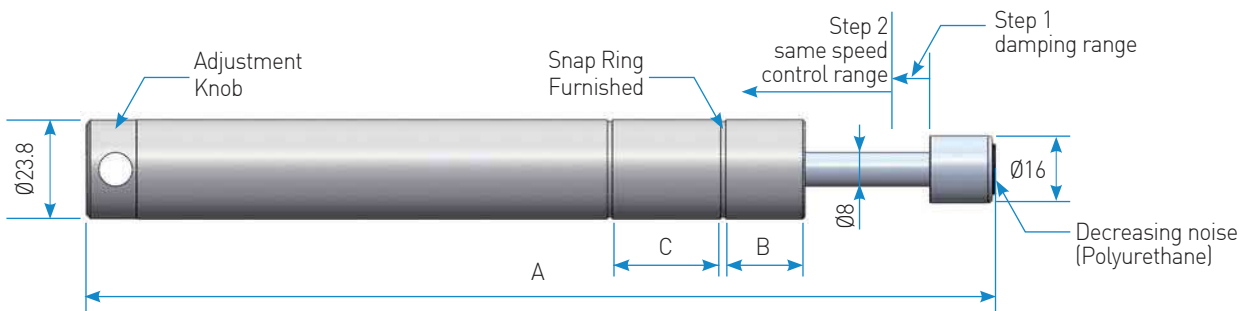
IHC - 24 - 13 - B - SO



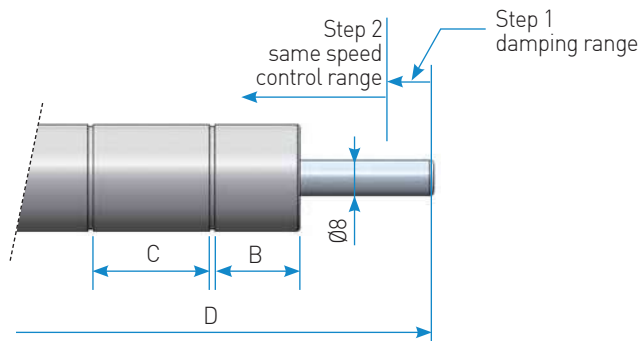
IHC24 Series

Engineering Data

Model	Damping Range [mm] Step1	Stroke [mm] Step2	Dimensions [mm]				Max. Load Angle [°]	Speed Adjustment Range		Weight (g)
			A	B	C	D		Load Limits [N]	Feed Rate Limits [mm/s]	
IHC24 - 13B	5	13	174	21		165.4	0.5			415
- 25B	5	25	213	19	26	204.4	1	100~3,000	0.2~30	465
- 51B	5	51	314	16		305.4	0.5			645

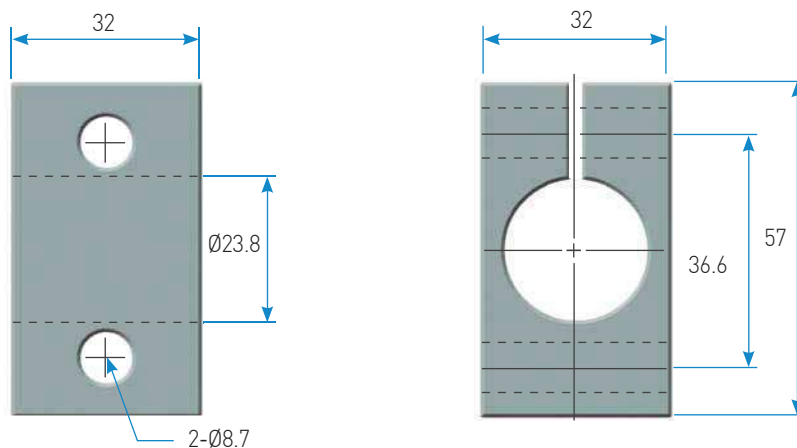


Steel head+Hard PU button
[B TYPE : Black]



Mount Block

MB 24



ICD Series Crash Damper

NEW

IZMAC Crash Damper

DESCRIPTION

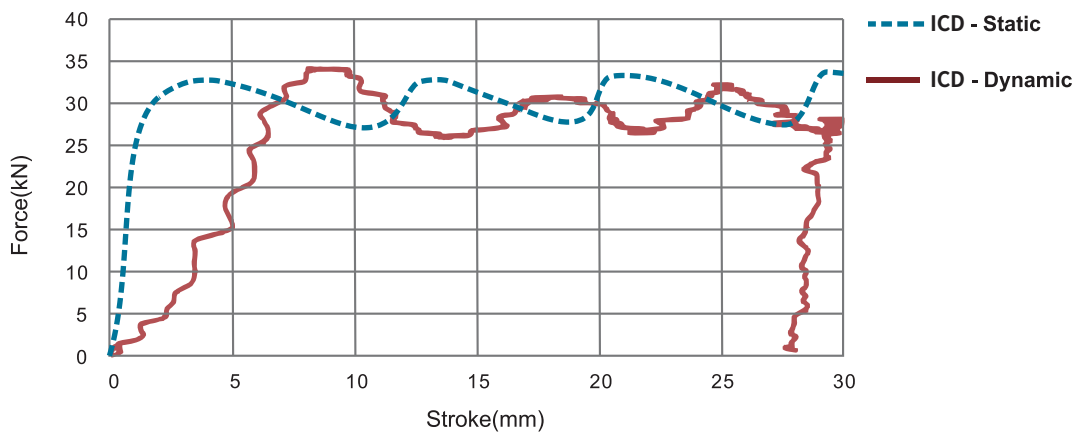
ICD has multi-steps bumpy shape and it absorbs shock energy on collision moment with compressing step by step. Engineered to maintain rather low peak & recoil force.

FEATURES

- 1 Shock absorption response function is steady and absorption efficiency is high.
- 2 It has multi-steps bumpy shape and it absorb shock energy on collision moment with compressing step by step.
- 3 Compact (small and sturdy) and easy to handling.
- 4 Body surface strongly treated to prevent corrosion by nickel plating or alloy plating (black).
- 5 Various sizes, forces, strokes with customizing models are available.
- 6 Temperature range : -40 ~ 90°C



GRAPH



ICD SERIES ORDERING INFORMATION

ICD - 087 - 53

Nominal stroke

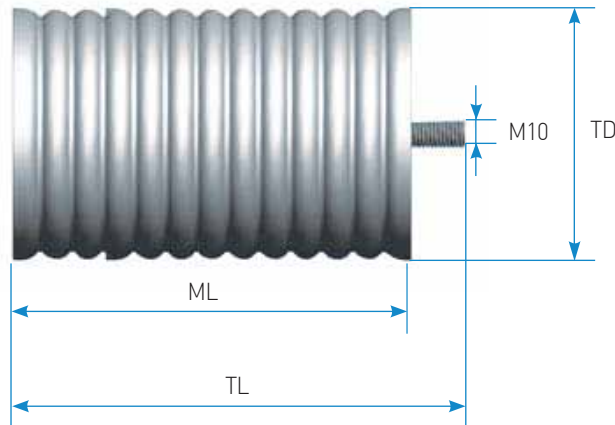
Tube outer diameter

I : IZMAC
C : Crash
D : Damper

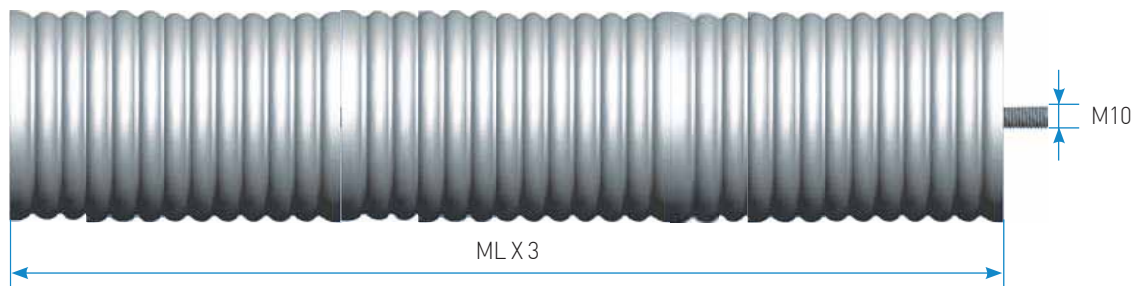
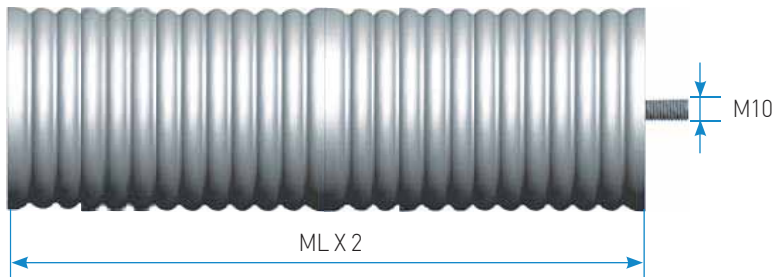
ICD87 Series

■ Dimensions & Engineering Data

Model	TD	ML	TL	Thread	stroke[mm]	Force[kN]	Energy[J]
ICD - 87 - 53	87.5	110	134.3	M10	53	30	1450
- 106	87.5	220	244	M10	105	30	2900



■ How to use



IPC Series Crash Damper

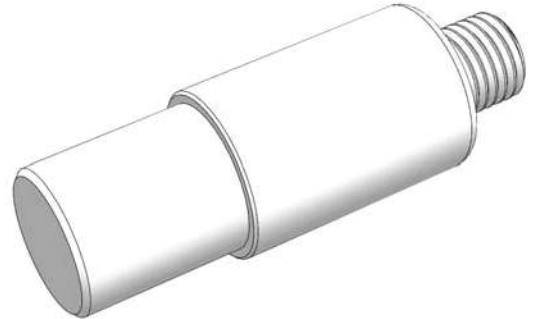
NEW

IZMAC Plastic Type Crash Damper

DESCRIPTION

IPC is a disposable damping product that absorbs high energy by being made of heterogeneous engineering plastics, and it has a structure that converts kinetic energy from impact into deformation energy.

We provide damping solutions to meet the best performance in various industries. This product is suitable for emergency purpose.

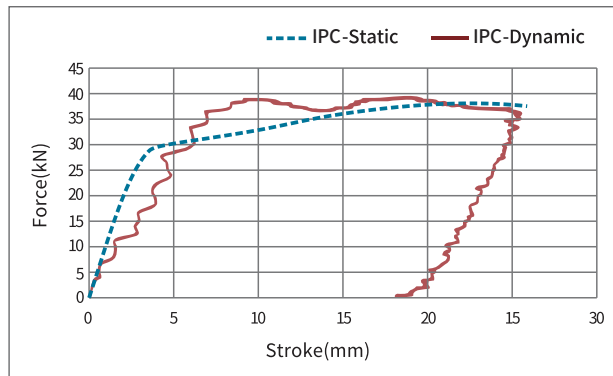


FEATURES

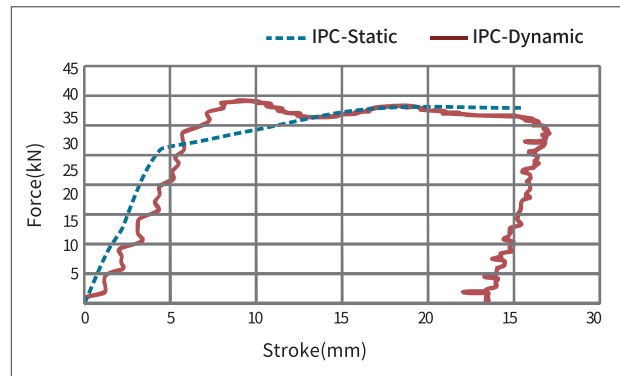
- 1 High deceleration performance.
- 2 Shock absorption response function is steady and absorption efficiency is high.
- 3 Low price, narrow space installation is available.
- 4 No maintenance required, no corrosion.
- 5 Customization is possible for various sizes, forces, strokes and capacities.
- 6 Operating temperature: -40~90°C

GRAPH

IPC 2-038-030

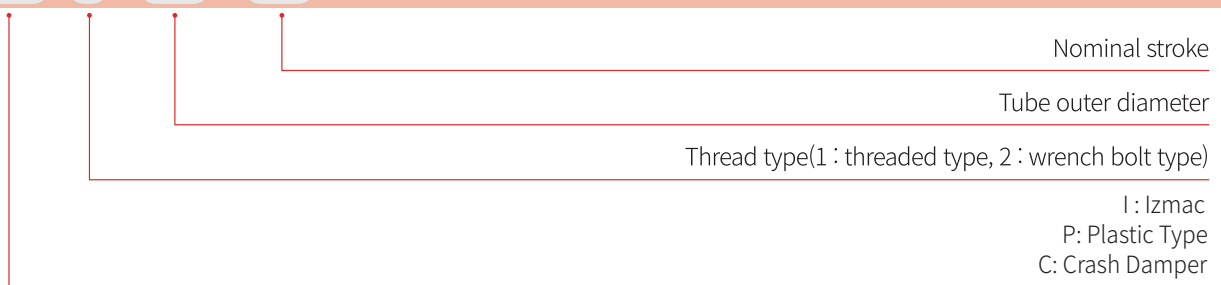


IPC 2-034-030



IPC SERIES ORDERING INFORMATION

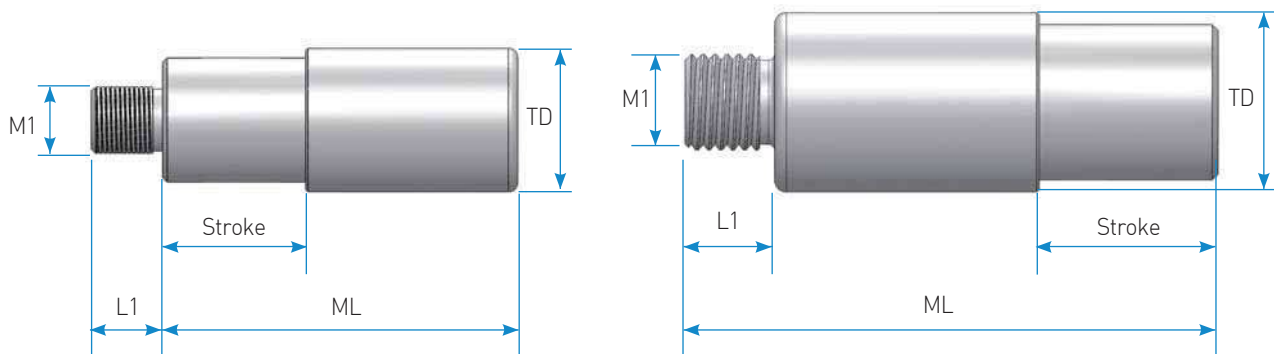
IPC - 1 - 028 - 035



IPC20 ~ 24 Series

■ Dimensions & Engineering Data

Model	Stroke[mm]	Fn[kN]	En[J]	TD[mm]	ML[mm]	M1[mm]	L1[mm]
IPC-1-20-15	15	9.1	122.8	20	43.0	M12	10
-32-25	25	28.0	631	32	70.0	M16	15
-40-30	30	46.5	1255.4	40	85.0	M20	18
-52-40	40	82.9	2985.6	52	111.0	M30	25
-64-50	50	129.9	5,846.2	64	136.5	M36	30
IPC-2-24-30	30	15.6	420.7	24	74.5	M8 x 1.25P	14.5
-34-30	30	34.8	940	34	79.0	M12 x 1.75P	18
-38-30	30	44.6	1204.3	38	81.0	M12 x 1.75P	21
-52-40	40	88.3	3180.6	52	108.0	M16 x 2.00P	19
-64-50	50	137.5	6,187.1	64	132.5	M20 x 2.50P	23.5



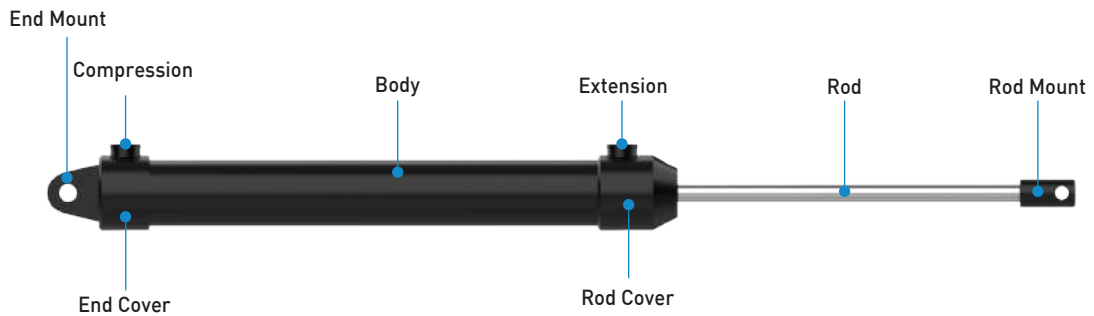
IRD Series Rate Controls

NEW

IZMAC Rate control Double dial

DESCRIPTION

IRD provides stable and accurate single directional/bi-directional speed control for the object when it moves from one position to another. This product is designed to set precise adjustment dial in 12 steps according to the user's application conditions. With speed control, you can significantly reduce shock and vibration to the machine which may effect on uncontrolled & unexpected operation troubles.



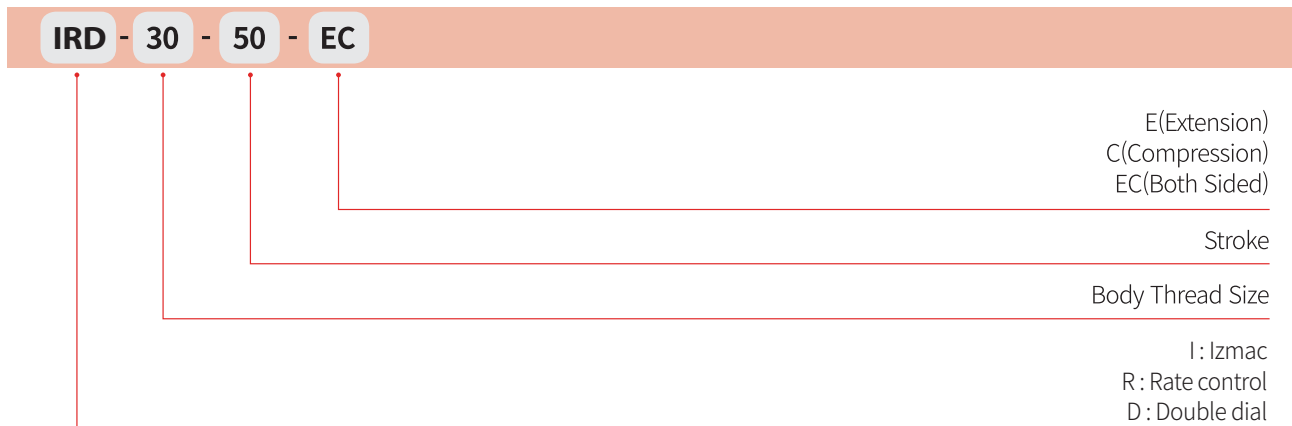
FEATURES

- 1 Guarantees product life through perfect quality control.
- 2 Reinforced materials are used to enhance durability.
- 3 Perfect speed control : For safe machine operation and longer machine life
- 4 For safety device : Equipment cover (open / close)
- 5 Operating temperature : -10 ~ 80°C • Special -30 ~ 100°C

APPLICATION

Automotive , mechanical engineering, electronics industries.

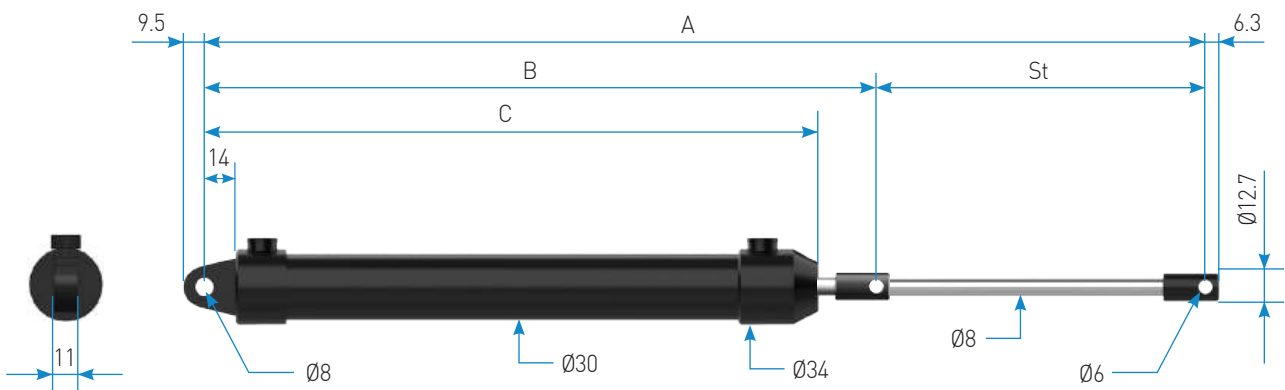
IRD SERIES ORDERING INFORMATION



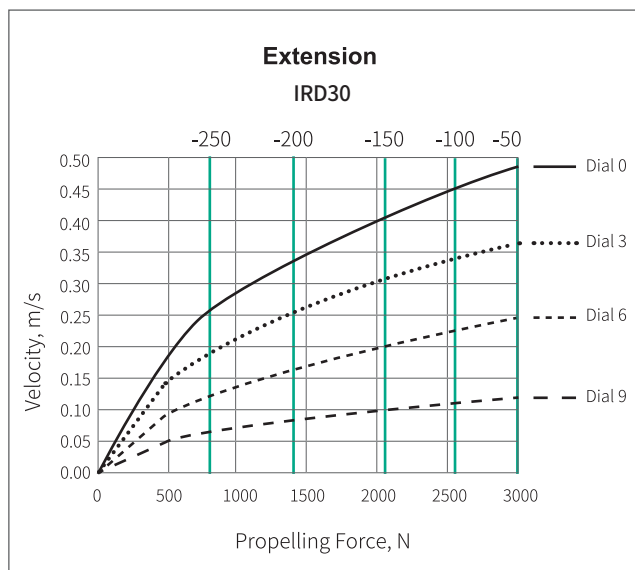
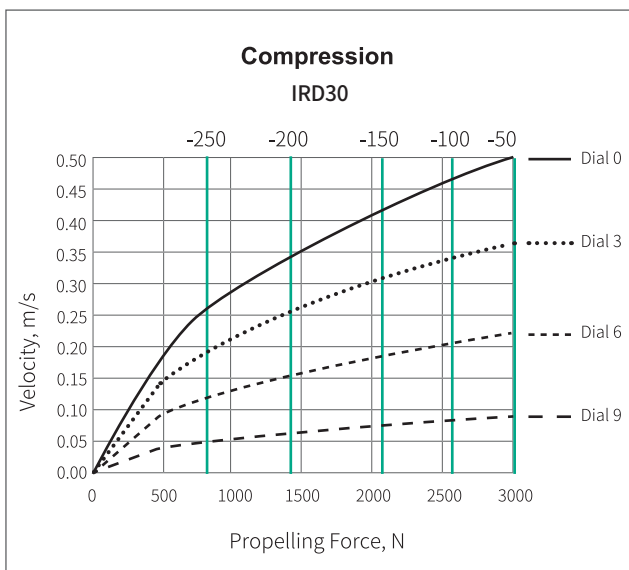
IRD30 Series

■ Dimensions & Engineering Data

Model	Stroke (mm) s	Max. Propelling Force (N)		Weight (g)	Dimensions (mm)			Direction
		Ext	Comp		A	B	C	
IRD30 - 50	50	3,000	3,000	310	250	200	176	E,C,E&C
- 100	100	3,000	2,600	380	350	250	226	E,C,E&C
- 150	150	3,000	2,100	450	450	300	276	E,C,E&C
- 200	200	3,000	1,400	530	550	350	326	E,C,E&C
- 250	250	3,000	800	600	650	400	376	E,C,E&C



■ Graph



ISR Series Shock Absorber : Short Type

NEW

IZMAC Short Range Absorber

DESCRIPTION

ISR can be installed in a limited space and is suitable for industrial applications requiring high energy absorption. And it is a suitable compact industrial hydraulic product. Unlike general absorber series, it is designed with a unique structure and by way of fast braking time, shock, and noise reduction function, it provides optimum results of best productivity improvement.

FEATURES

- 1 There are various models of different sizes from M16 to M32.
- 2 Specially, it has more than three times maximum energy performance compared to other existing products.
- 3 Improve noise reduction function and increase product durability
- 4 Thanks to the unique orifice structure, it enables smooth absorption characteristics to stop collision material softly.
- 5 Maximum impact speed : 0.05 ~ 3m/s
- 6 Piston rod : Hard Chrome : 25µm
- 7 Available to use without an external stopper.

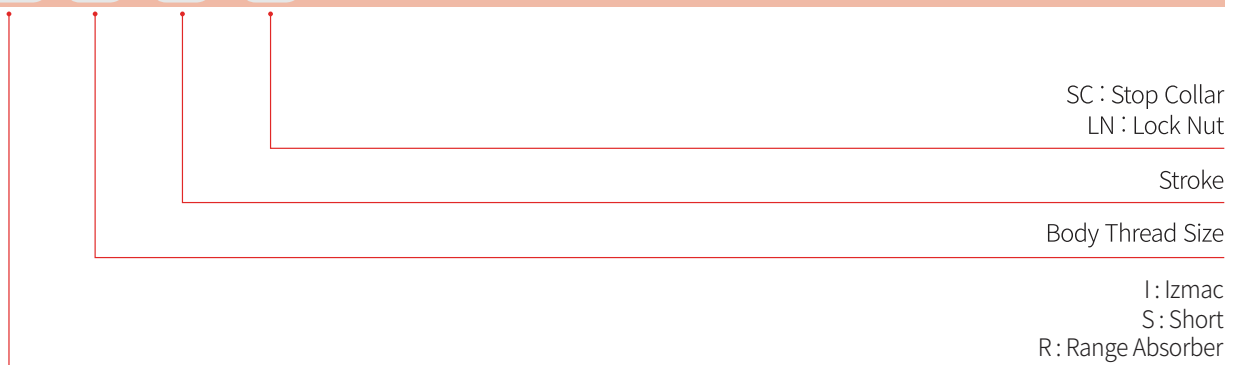


APPLICATION

Automotive , Mechanical engineering, Electronics industries

ISR SERIES ORDERING INFORMATION

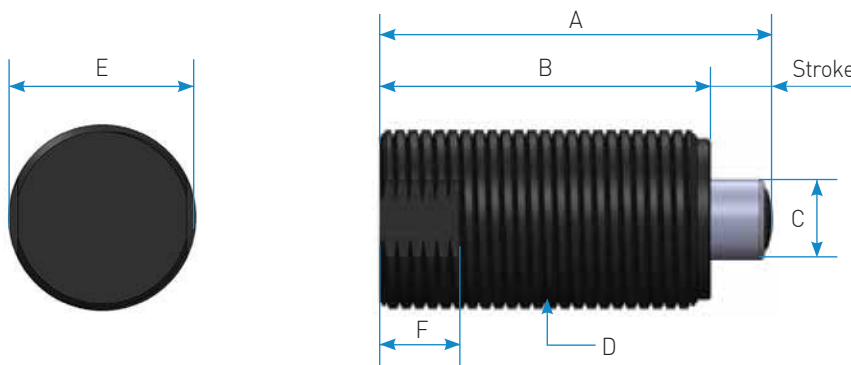
ISR - 16 - 04 - LN



ISR16 ~ 25 Series

Engineering Data

Model	Stroke (mm)	Max. Energy / Cycle (Nm) E _T	Max. Energy / Hour (Nm / h) E _{T-C}	Recoil Forec(N)		Weight (g)
				Ext.	Comp.	
ISR16 - 04	4	12	18,000	8	16	1.25
- 09	9	28	42,300	8	17	1.4
ISR20 - 07	7	40	64,600	11	18	65
- 12	12	70	110,700	12	18	75
ISR25 - 08	8	70	108,900	15	20	105
- 15	15	130	204,000	16	21	115



Dimensions

(unit : mm)

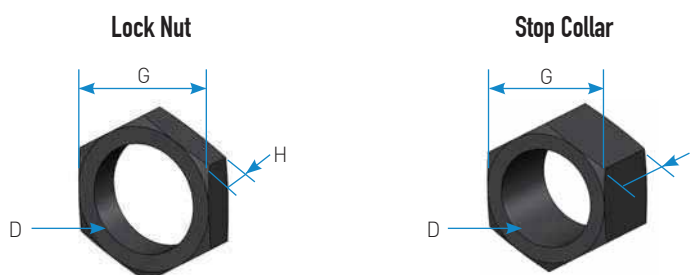
Model	Stroke	A	B	C	D	E	F
ISR16 - 04	4	31	27	6	M16 X 1.5P	14	7
- 09	9	49	41	6	M16 X 1.5P	14	7
ISR20 - 07	7	44.5	37.5	9	M20 X 1.5P	18	9
- 12	12	63.5	51.5	9	M20 X 1.5P	18	9
ISR25 - 08	8	52	44	12	M25 X 1.5P	23	10
- 15	15	78	63	12	M25 X 1.5P	23	10

Accessories

- Two Lock Nuts included for each absorber
- Other accessories to be ordered separately

(unit : mm)

Model	G	H	I
ISR16 - 04	19	6	12
ISR20 - 07	24	6	16
ISR25 - 08	32	8	18



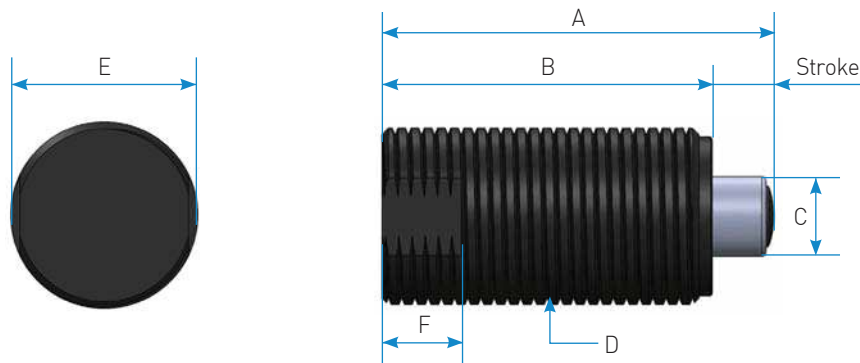
ISR30 ~ 32 Series

Best engineered
for energy absorption
technology



Engineering Data

Model	Stroke (mm)	Max.Energy / Cycle(Nm) E _r	Max.Energy / Hour (Nm / h) E _r C	Recoil Forec(N)		Weight (g)
				Ext.	Comp.	
ISR30 - 09	9	120	186,000	17	30	200
- 15	15	200	311,000	17	31	210
ISR32 - 13	13	210	323,000	17	30	270
- 20	20	330	498,000	17	31	280



Dimensions

(unit : mm)

Model	Stroke	A	B	C	D	E	F
ISR30 - 09	9	61.5	52.5	16	M30 X 1.5P	28	12
- 15	15	88.5	73.5	16	M30 X 1.5P	28	12
ISR32 - 13	13	76	63	18	M32 X 1.5P	30	13
- 20	20	105	85	18	M32 X 1.5P	30	13

Accessories

- Two Lock Nuts included for each absorber
- Other accessories to be ordered separately

(unit : mm)

Model	G	H	I
ISR30 - 09	36	8	20
ISR32 - 13	44	8	25

