EDVC Dual Velocity and EVC Precision Feed Controllers

Enertrols®

WORLDWIDE SPECIALISTS IN ADVANCED
LINEAR DECELERATION TECHNOLOGY

EDVC Velocity and Feed Controllers

Hydraulic Speed/Feed Controllers from Enertrols are self-contained sealed units designed for precise control of speed in both directions of travel. The travel speed can be adjusted independently in each direction of travel.

These dependable, Enertrols dual velocity controls (EDVC's) are designed to solve automated control and velocity damping problems. EDVC models regulate the speed of moving machinery parts and equipment. They are ideal for applications requiring self-contained units that are simple to install and operate.

Features include: adjustable or fixed orifices, single or dual controls and heavy-duty construction.

Applications include pick and place automation equipment, drill and tapping equipment, machine slides and guards, lids, swinging loads and tooling fixtures.

Technical Data

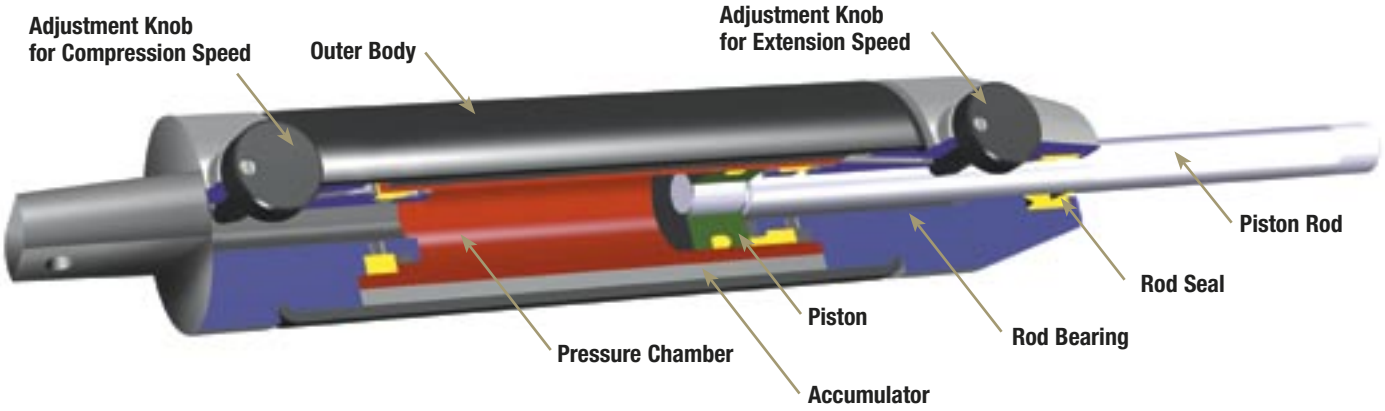
Maximum operating temperature: 150°F (66°C).

Mechanical stop: Provide mechanical stop .04 to .06 inch (1 to 1.5 mm) before end of each stroke direction.

Operating fluid: Automatic Transmission Fluid (ATF) at 104°F (40°C).

Material: Black anodized, aluminum body. Hard chrome plated, steel piston rod. Zinc plated, steel end fittings.

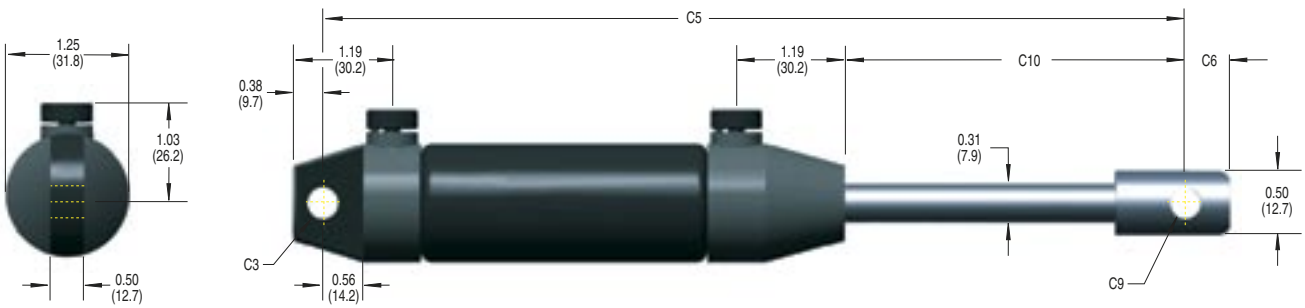
To special order: Special oils and external finishes. Uni-directional damping (free flow in reverse direction).



Ordering Information

EDVC 2 - CCO

EDVC Series	Stroke Length	Mounting Clevis	Velocity Controls
Enertrols Dual Velocity Control	2 (2" or 50 mm)	– Standard	– Controlled, both directions
	4 (4" or 100 mm)	M Metric	-CCO Controlled, compression only
	6 (6" or 150 mm)		-CTO Controlled, tension only



Shown in extended position

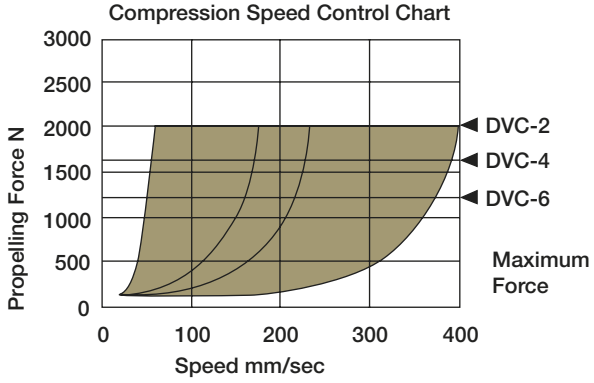
EDVC Dimensions in inches (millimeters)

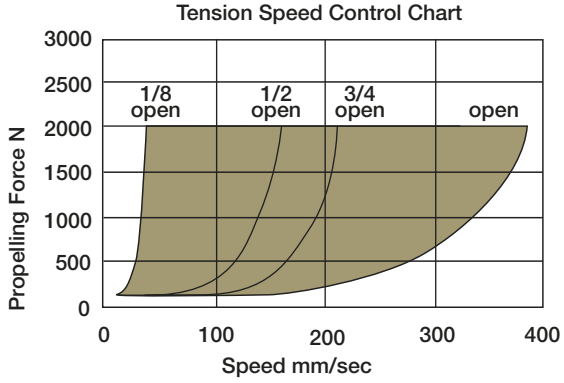
Model	Stroke	C3	C5	C6	C9	C10
EDVC-2	2.00	0.25	9.81	0.25	0.25	2.93
EDVC-2M	(50.0)	(6.0)	(250.0)	(6.4)	(6.0)	(75.2)
EDVC-4	4.00	0.25	13.81	0.25	0.25	4.93
EDVC-4M	(100.0)	(6.0)	(350.0)	(6.4)	(6.0)	(124.4)
EDVC-6	6.00	0.25	17.81	0.25	0.25	6.93
EDVC-6M	(150.0)	(6.0)	(450.0)	(6.4)	(6.0)	(173.6)

EDVC Specifications

	Tension		Compression		
Model	Maximum Propelling Force	Minimum Force to Operate Through Full Stroke	Maximum Propelling Force	Minimum Force to Operate Through Full Stroke	Shipping Weight lbs (kg)
EDVC-2	450 lbs	9.5 lbs	450 lbs	9.5 lbs	0.75 lbs
EDVC-2M	2,000 N	(42 N)	2,000 N	(42 N)	0.34 kgs
EDVC-4	450 lbs		375 lbs		0.90 lbs
EDVC-4M	2,000 N	(External	1,670 N	(External	0.41 kgs
EDVC-6	450 lbs	Mechanical	300 lbs	Mechanical	1.06 lbs
EDVC-6M	2,000 N	Stops Required)	1,335 N	Stops Required)	0.48 kgs

Speed Controls





EVC Velocity and Feed Controllers with Fine Adjustment

Enertrols EVC Precision Feed Controls are sealed hydraulic units fitted with a high precision metering element. When the piston rod is depressed the hydraulic oil is forced through the adjustable precision metering orifice. This provides a constant and precise feed control throughout the stroke length. The feed rate can be adjusted over a wide range by turning the external adjuster knob at the rear end of the unit. The optional threaded outer body helps to simplify installation and the adjustment of feed control travel limits.

Enertrols Precision Feed Controls provide exact speed control for machine motion. They are self-contained, maintenance free, leakproof, and temperature stable. The rolling diaphragm seal, on models 2515 to 2555, provides a hermetically sealed unit and also provides an integral accumulator for the oil displaced during operation. The high precision, adjustable metering system can provide accurate feed rates from as little as 0.47 in/min(12 mm/min) with low propelling forces.

Applications include saws, cutters, drill feeds, grinding and boring machines in the plastics, metal, wood and glass industries.

Technical Data

Feed rate range: min. 0.51 in/min with 90 lbs. (0.013 m/min with 400 N) propelling force. Maximum 1500 in/min with 787 lbs. (38 m/min with 3500 N) propelling force.

Do not rotate piston rod, if excessive rotation force is applied rolling seal may rupture (only applies to EVC 2515 to EVC 2555).

Outer body: Smooth body standard 0.94 inch (23.8 mm) dia., threaded body optional.

Nylon button part no. 250-0268, can be fitted onto piston rod. Unit may be mounted in any position.

When mounting **take care not to damage the adjuster knob.**

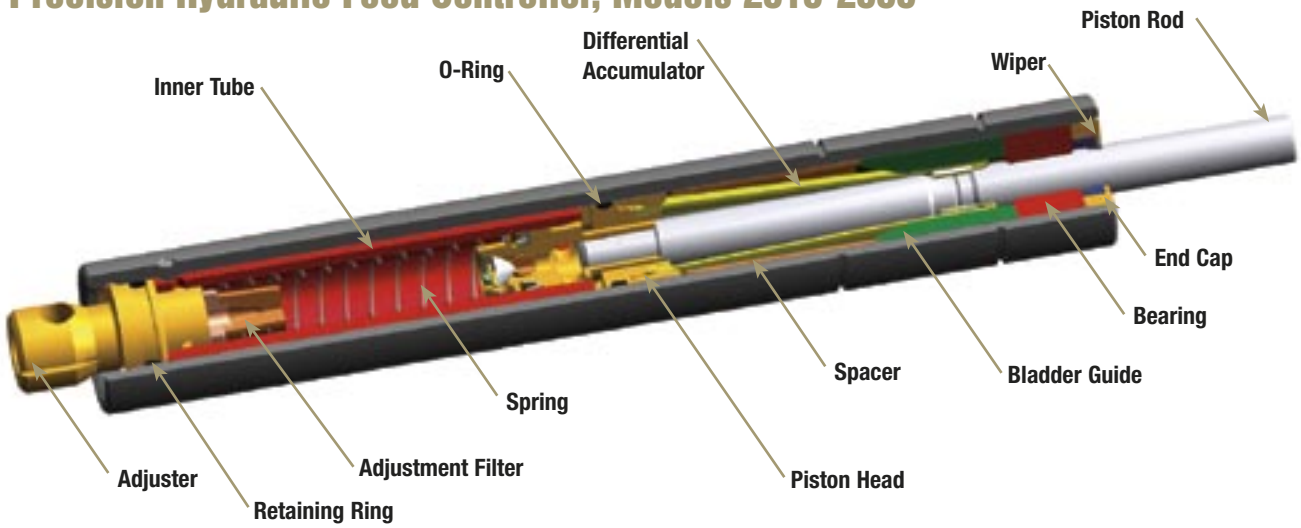
Temperature range: 32° to 140°F (0° to 60°C).

Material: Body heavy duty steel tube with black oxide. Piston rod with hard chrome plating.

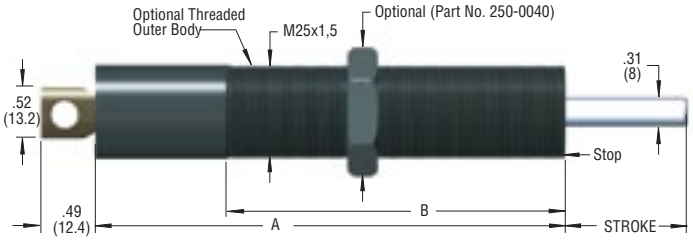
Adjustment: Adjust EVC unit by turning adjustment knob at rear. Zero is full open (fast) and 20 is fully closed (slow).

Note: If the EVC feed control will be in contact with petroleum based oils or cutting fluids, specify optional neoprene rolling seal or install Air Bleed Collar model SP 25 (only applies to EVC 2515 to EVC 2555).

EVC Precision Hydraulic Feed Controller, Models 2515-2555

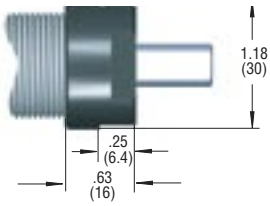


Model EVC 25..



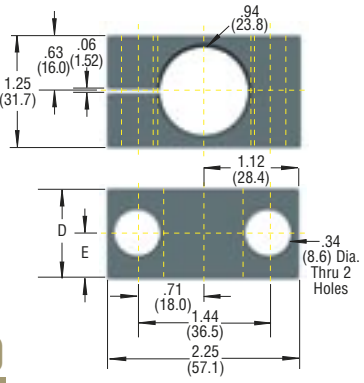
Smooth body - standard Threaded body - optional

Air Bleed Collar Model ESP-25



Part No. 10783-000

Clamp Mount for Smooth Body



See chart below for D & E dimensions

EVC Dimensions in inches (millimeters)

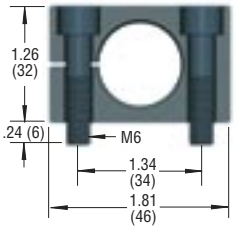
Standard Model	Threaded Model	Stroke	A	B	Weight lbs.	Weight kg
EVC 2515-F	EVC 2515-FT	0.59 (15)	5.04 (128)	3.15 (80)	0.88	(0.4)
EVC 2530-F	EVC 2530-FT	1.18 (30)	6.34 (161)	4.33 (110)	1.10	(0.5)
EVC 2555-F	EVC 2555-FT	2.16 (55)	8.23 (209)	5.19 (130)	1.32	(0.6)
EVC 2575-F	EVC 2575-FT	2.95 (75)	11.14 (283)	5.90 (150)	1.76	(0.8)
EVC 25100-F	EVC 25100-FT	3.94 (100)	12.13 (308)	5.90 (150)	1.98	(0.9)
EVC 25125-F	EVC 25125-FT	4.92 (125)	13.13 (333.5)	5.90 (150)	2.20	(1.0)

F = fine adjuster/smooth body FT = fine adjuster/threaded body

EVC Specifications

Standard Model	Threaded Model	Propelling Force N lbs. min	Propelling Force N lbs. max	Propelling Force N (N) min	Propelling Force N (N) max	Return Force N lbs. min	Return Force N lbs. max	Return Force N (N) min	Return Force N (N) max	Reset Time seconds
EVC 2515-F	EVC 2515-FT	6.74	787	(30	3,500)	1.12	2.25	(5	10)	0.2
EVC 2530-F	EVC 2530-FT	6.74	787	(30	3,500)	1.12	3.37	(5	15)	0.4
EVC 2555-F	EVC 2555-FT	7.87	787	(35	3,500)	1.12	4.50	(5	20)	1.2
EVC 2575-F	EVC 2575-FT	11.24	787	(50	3,500)	7.39	11.56	(33	51)	1.7
EVC 25100-F	EVC 25100-FT	13.49	787	(60	3,500)	6.00	11.56	(27	51)	2.3
EVC 25125-F	EVC 25125-FT	15.74	787	(70	3,500)	5.23	11.23	(23	50)	2.8

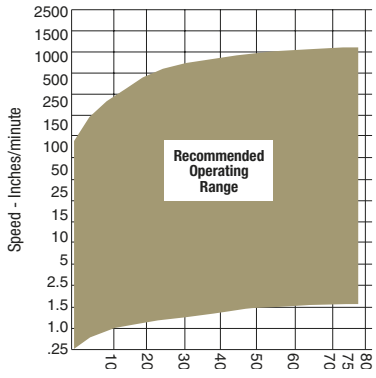
Clamp Mount for Optional Threaded Body



Part No. 10780-000
(all EVC FT Models)
Thickness: .98 (25 mm)
(Mounting bolts not included)

Speed Control Chart

Maximum propelling force = 750 lbs.



Dimensional Chart for Smooth Body Clamp

Model	D	E	Clamp Part No.
EVC 2515-F EVC 2530-F EVC 2555-F	1.25 (31.7)	.63 (16.0)	250-0465
EVC 2575-F EVC 25100-F EVC 25125-F	2.00 (50.8)	1.00 (25.4)	250-0466

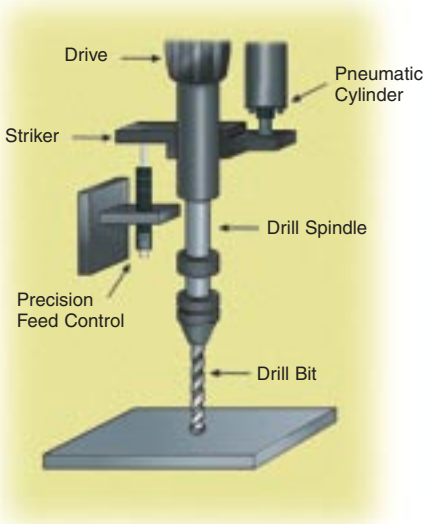
Mounting Examples

Mounting with Clamp Mount

Installed with Air Bleed Collar ESP 25

6 Installation Examples

Drilling Sheet Metal

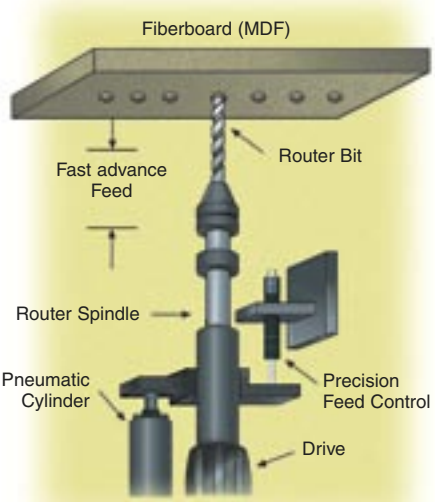


A high force is necessary at the start of drilling when the drill first contacts the sheet.

After the initial cut this high force causes the drill to break through. This results in jagged edges rather than a smooth clean hole and also causes tool breakage.

By installing an Enertrols EVC Feed Control it is possible to precisely control the rate of drill advance. As a result the drilled holes are clean and consistent and drill breakage is considerably reduced.

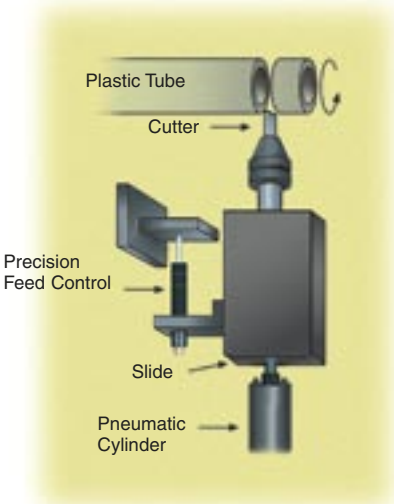
Cutting Holes in MDF Furniture Panels



Originally a pneumatic tandem cylinder was used to provide the initial fast advance. This was then slowed to cutting speed by a complicated regulating device. Despite this, the control and adjustability was unsatisfactory.

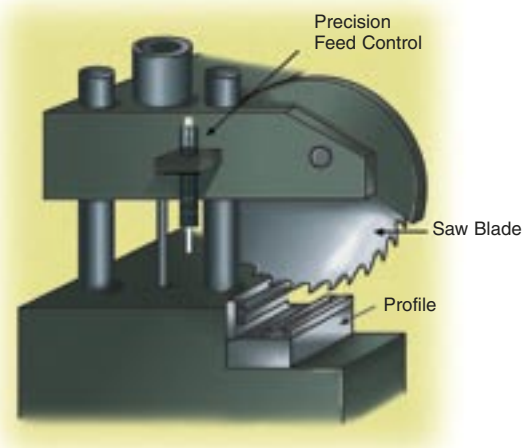
After installing the Enertrols EVC Feed Control the feed rate could be adjusted precisely. The expensive and special tandem cylinder could be replaced by a standard one and the complicated regulating device was no longer required.

Cutting and Chamfering of Plastic Tubes



Precisely adjustable cutting and feed speeds are required depending on the particular material being processed. A standard Enertrols EVC Feed Control with its fine adjustment enables the cutter to be controlled exactly for different materials.

Sawing Aluminum and Plastic Profiles



Varying material types, hardness and wear on the saw blade causes the cutting pressure to vary greatly. However the saw advance speed should remain constant as changes cause breakage of the material being cut or of the saw blade.

An Enertrols EVC Feed Control fitted directly to the cutting head provides a simple and low cost solution. The cutting speed remains constant and can be easily preset.

Enertrols® Other Products
Industrial Hydraulic Shock Absorbers

Enertrols has a complete product line with over 100 standard shock absorber models with capacities from 25 to over 1½ million inch-pounds per cycle. Most models can be equipped with internal accumulators as self-contained units, or equipped with external accumulators and air/oil tanks for maximum heat capacity. They are available in both adjustable and non-adjustable types in all of the basic standard mounting styles.

In addition, we offer industry a choice of primary or welded fixed-flange mounting models in most bore and stroke sizes. Special application models, such as our PROX SHOCK™ line equipped with position-sensing electronic proximity switches, the QCM™ (Quick-Change Mount) Models, Standard Long-Stroke Models and designed-to-order specials are also available.

Gold Line™ Fixed-Flange Mounting Series 3/4" Bore Adjustable Shock Absorbers

Gold Line™ Primary Series 3/4" Bore Adjustable Shock Absorbers

Armor Line™ Non-Adjustable Miniature Self-Compensating Shock Absorber

Quality Assurance

ISO 9001: 2000 CERTIFIED

Every component produced for Enertrols products receives inspection coverage to assure conformance with all the requirements, specifications and drawings of our products. Both management and manufacturing, as well as all other personnel, are in complete agreement that the reliability requirements of our products preclude any compromise in the quality of any component part. Enertrols was awarded ISO 9001: 2000 Certification in 2002.

Enertrols engineering department controls all product drawings and specifications with a system that assures the latest information will be available to, and at the time and place of, inspection. Final inspection is performed on all manufactured parts and processes in accordance with applicable purchase orders, work orders, drawings and specifications.

A sampling plan that is in accordance with mil spec MIL-105-D is used by inspectors whenever feasible to assure the acceptance of quality parts only. All completed assemblies and shock absorbers are inspected for quality and performance prior to shipment. Approved units are then properly packaged to prevent damage during transit.

SILVERLINE™ SASL, Primary Mount Shock Absorber with Rear Flange

Bulletin NA-Sub-Mini

Bulletin A-Mini

Bulletin NA-Mini

Data Sheet PSS102

Full Line Catalog

Bulletin GL-PMS

Bulletin SL-PMS

Bulletin Prox Shock

Bulletin GL-FMS

For more than a quarter-century, Enertrols has been designing and manufacturing high performance industrial hydraulic shock absorbers now used worldwide.

These bulletins, data sheet and catalog, cover most of the more than 100 standard models available with capacities from 4 to 1,700,000 inch-lbs per operating cycle.

Enertrols
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LINEAR DECELERATION TECHNOLOGY

P.O. Box 71 Farmington, MI 48332-0071

734-595-4500 fax: 734-595-6410 email: customerservice@enertrols.com www.enertrols.com

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