



TRUSTED SOLUTIONS AND INNOVATION

Max Control™ Servo-Drive In-Die Tapping Units

- ◆ Taps up to M20 [3/4"]
- ◆ Multiple tap applications
- ◆ Taps up to 150 strokes per minute
- ◆ Taps millions of parts with little maintenance



Service We Deliver and Quality You Can Depend On

IEM, a division of Connell Limited Partnership, is a leading manufacturer of die sets and die component products supplied globally to the parts forming industry. Backed by years of tool and die experience, quality and innovation are some of the reasons why our name is respected throughout the world. We have taken the lead role in creating and bringing new products to customers and helping them find solutions that improve their operations. Based on the capabilities **IEM** offers, we can help you to meet the demands of quick deliveries, technical support, quality products and competitive prices. **IEM** and its' broad distribution channels and direct sales personnel will assist you in any way to make your product a better and more profitable one.

Whether you purchase on-line or in person, you will receive the same reliable service **IEM** is known for. We understand the demanding schedules of die builders and production personnel and have developed efficient manufacturing processes to shorten product lead times as well as put inventory on our shelves so you can have it in your facility when you need it. Put the **IEM** network to work for you. We've got the service you've been looking for.

Included in our full line offering are both inch and metric size die sets and die components that are designed to numerous die standards including ISO, NAAMS, JIS and many large automotive and appliance manufacturers' standards. The complete product offering includes:

- Ball bearing and friction style die sets including custom and catalog sets
- Machined plate
- Guide posts & bushings
- ISO and JIS Die springs
- In-die tapping units for both mechanical and hydraulic presses
- Formathane[®] Urethane springs, strippers, sheets, bars, rods and die cover film
- Diemakers' supplies such as pry bars, dowel pins, hoist rings, clamps and fasteners
- Standard and self-lubricating wear product including wear plate, wear strips, gibs, keeper plates and guide blocks
- Cam units, including Milfab[®], Mini[™], Aerial and Die Mount styles
- Accubend[™] Rotary Benders
- Standard and Ball lock punches and retainers
- Coil Safe
- Air presses
- Pad retainers
- Nitrogen gas springs



Our facility has been Registered by Underwriters Laboratories, Inc. to the International Organization for Standardization ISO 9001 Series Standards for Quality.
Registered by UL to ISO 9001.

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Max Control™

Servo-Drive In-Die Tapping System

Choose Max Control™ for your in-die tapping needs

SERVO
DRIVE
MOTOR WITH
TAPPING
HEAD



CONTROLLER



Max Control™ Gives You:

- ◆ Maximum Productivity
 - Faster than mechanical units
- ◆ Maximum Flexibility
 - Easy to move from job to job
- ◆ Simple Installation
 - Completely programmed; ready to drop into your application

Featuring:

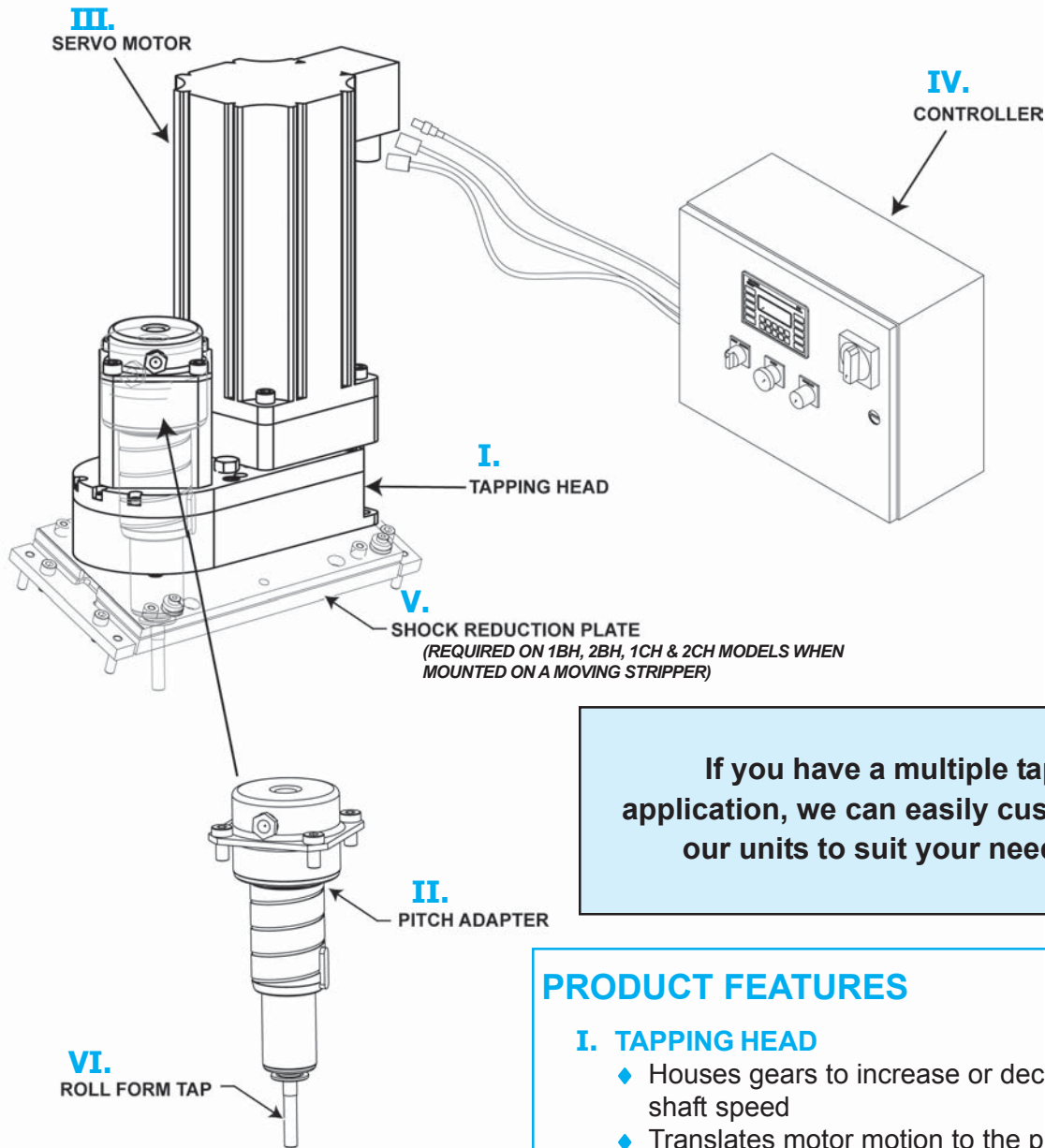
- ◆ Rapid acceleration & deceleration of the tap
 - Maximizes your throughput
- ◆ Modular designs
 - Easy to design into multiple jobs
 - Simple and dependable
- ◆ Preprogrammed controller
 - Ready to drop into your application
 - No setup programming
- ◆ Multiple tap capability
 - Run more than one tap with our servo units
 - Extremely cost effective systems
- ◆ Reliable delivery
 - Allows you to keep your project on track

In-die tapping is a productive alternative to tapping off-line. It can eliminate secondary operations and, in today's competitive environment, every second counts. Many companies already take advantage of mechanical in-die tapping units to maximize throughput and efficiency.

Using a Max Control™ Servo-Drive In-Die Tapping Unit can increase your efficiency over a mechanically driven unit. Mechanical tapping units are driven by the motion of the press. The tap accelerates and decelerates with each stroke. With a servo-driven unit, acceleration and deceleration are virtually instantaneous. This allows more tapping to take place in a shorter amount of time, which leads to more finished parts.

Max Control™ Servo-Drive In-Die Tapping Units can easily be fitted into multiple dies, allowing you to use the tool on more than one job. Additionally, servo-driven units have built-in overload protection which reduce failures and increase uptime. Finally, die sensors can be used in conjunction with the servo to maximize productivity and reduce downtime.

Max Control™ Servo-Drive In-Die Tapping System



If you have a multiple tap application, we can easily customize our units to suit your needs.

PRODUCT FEATURES

- I. TAPPING HEAD**
 - ◆ Houses gears to increase or decrease shaft speed
 - ◆ Translates motor motion to the pitch adapter
- II. PITCH ADAPTER**
 - ◆ Synchronizes vertical motion to rotation
 - ◆ Holds the tap
- III. SERVO MOTOR**
 - ◆ Provides torque and rotation to the tapping head
- IV. CONTROLLER**
 - ◆ Turns servo motor on and off
- V. SHOCK REDUCTION PLATE**
 - ◆ Cushions the horizontal unit when the unit is not stationary
- VI. ROLL FORM TAP**
 - ◆ Forms stronger threads

Selection Guide – Unit Capability

This selection guide is designed to aid you in selecting the best Max Control™ In-Die Tapping Unit for your tapping requirement.

There are several things that will help in your selection:

1. Type of material (Steel, Aluminum, Stainless, Brass)
2. Hole Size _____
3. Available envelope for the unit _____

Use the appropriate chart for the material you will be tapping. Look at the appropriate column for the size hole you will be tapping. At this point you have narrowed your choices to several units. It is probably best to check the rough size of the units to determine the unit you would prefer.

The envelope dimensions for the units are located on the next page.

Hole Size		Aluminum/Brass																		
		Metric					English													
		5	6	8	10	12	14	6	8	10	12	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"			
Model	1AV	X	X									X	X	X	X					
	1BH	X	X	X								X	X	X	X					
	1CH	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X
	1CV	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X
	2AV	X	X									X	X	X	X					
	2BH	X	X	X								X	X	X	X					
	2CH	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X
	2CV	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X

Hole Size		Steel																		
		Metric					English													
		5	6	8	10	12	14	6	8	10	12	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"			
Model	1AV	X	X									X	X	X	X					
	1BH	X	X									X	X	X	X					
	1CH	X	X	X								X	X	X	X					
	1CV	X	X	X								X	X	X	X					
	2AV	X	X									X	X	X	X					
	2BH	X	X	X								X	X	X	X					
	2CH	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X
	2CV	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X

Hole Size		Stainless																		
		Metric					English													
		5	6	8	10	12	14	6	8	10	12	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"			
Model	1AV											X	X	X	X					
	1BH	X										X	X	X	X					
	1CH	X	X									X	X	X	X	X				
	1CV	X	X									X	X	X	X	X				
	2AV	X	X									X	X	X	X	X				
	2BH	X	X									X	X	X	X	X				
	2CH	X	X	X								X	X	X	X	X	X			
	2CV	X	X	X								X	X	X	X	X	X			

X Recommended unit for hole size and material

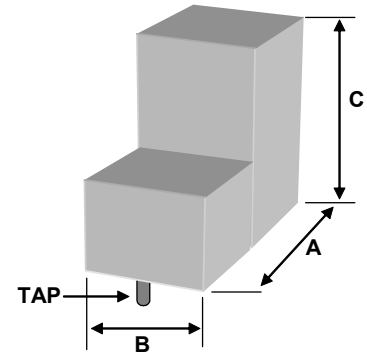
X Unit capable of tapping hole size and material

■ Unit not capable of tapping hole size and material

Selection Guide – Envelope Dimensions

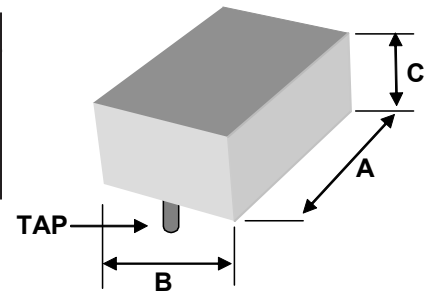
VERTICAL MOUNT UNITS

Model	A		B		C	
	in	mm	in	mm	in	mm
1AV	5.04	128.0	3.54	90.0	10.47	266.0
2AV					11.04	280.4
1CV	8.25	210.0	3.88	100.0	9.74	248.0
2CV						



HORIZONTAL MOUNT UNITS

Model	A		B		C	
	in	mm	in	mm	in	mm
1BH	11.46	291.0	5.25	134.0	4.00	101.0
2BH						
1CH	13.00	334.0	4.50	100.0	5.40	137.2
2CH						



HORIZONTAL MOUNT UNITS WITH SHOCK MOUNTING

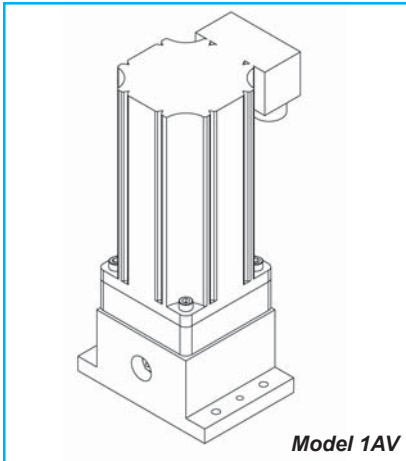
Model	A		B		C	
	in	mm	in	mm	in	mm
1BH	13.27	337.0	6.00	152.4	4.85	123.3
2BH					5.02	127.7
1CH	14.07	357.5	7.72	196.0	6.69	170.0
2CH						

TAP SPEED

(Maximum Head Speed)

Model	(RPM)
1AV	4000
1BH	3333
1CH	2000
1CV	2000
2AV	4000
2BH	3333
2CH	2000
2CV	2000

Model 1AV



Product Features

- ◆ For high speed, small hole applications
- ◆ Simple direct drive unit
- ◆ Smallest footprint of any unit
- ◆ Built-in shock mounting for moving stripper applications

Unit Specifications

Aluminum Capacity	1/4"	M6
Steel Capacity	1/4"	M6
Stainless Capacity	#12	

	Length	Width	Height
Envelope (in)	5.04	3.54	10.47
Envelope (mm)	128.0	90.0	266.0

Max Tap Head Speed 4000 RPM

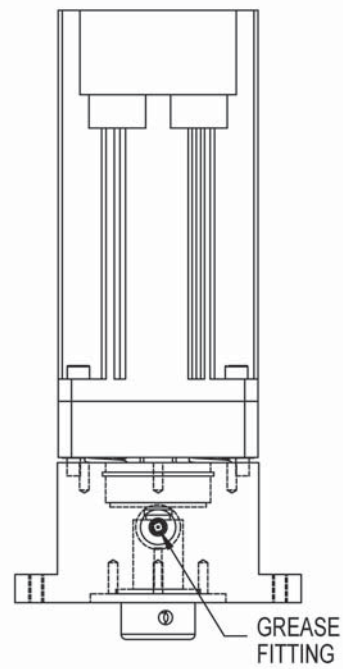
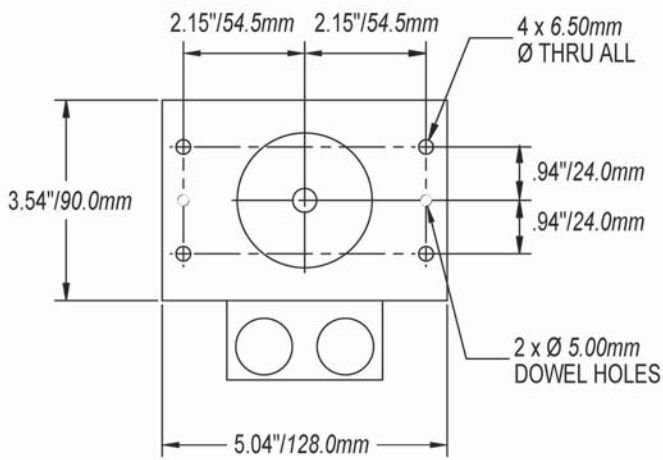
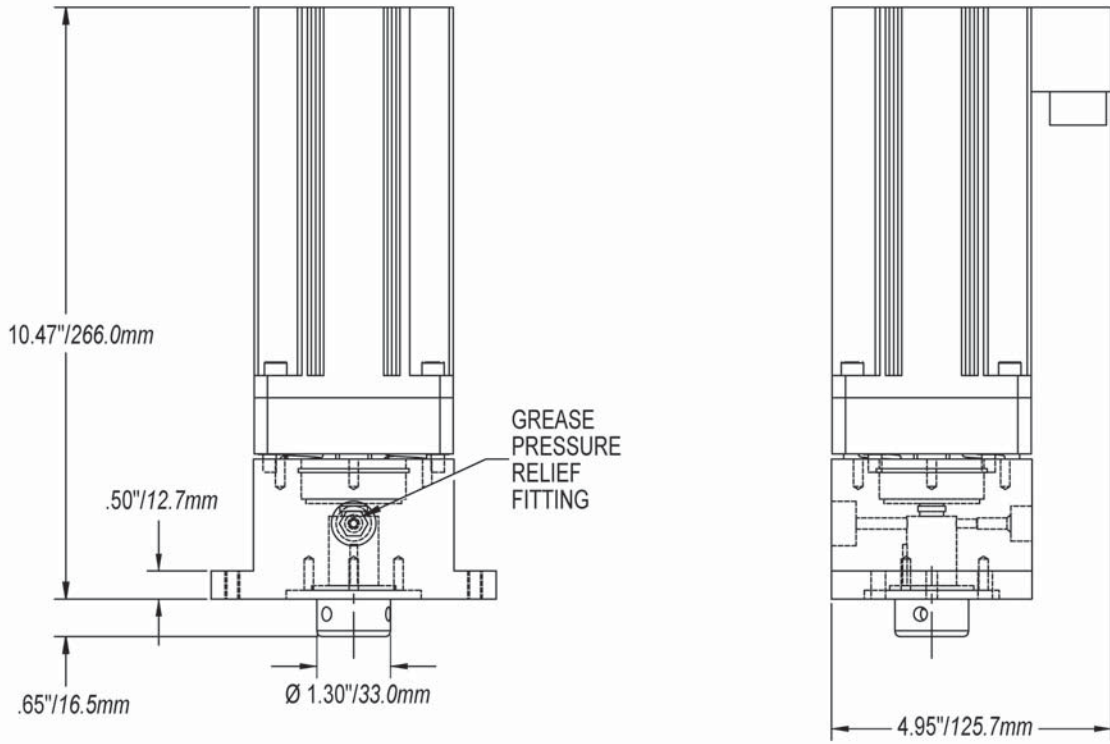
Pitch Adapter & Forming Tap Options:

Choose your pitch adapter and forming tap based on the tap size and pitch for your requirement.

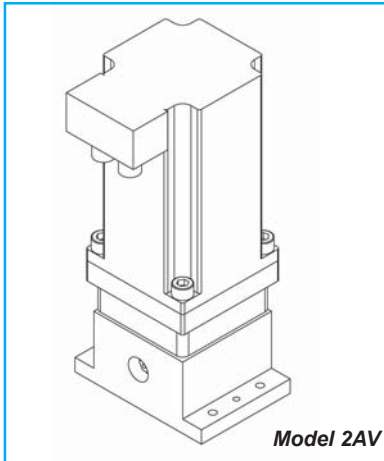
INCH				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
#2	56	RH3	R-002024	R-006004
#4	48	RH5	R-002025	R-006009
#4	40	RH5	R-002026	R-006008
#4	40	RH7	R-002026	R-006033
#5	40	RH5	R-002026	R-006010
#6	40	RH5	R-002026	R-006013
#6	32	RH5	R-002027	R-006012
#6	32	RH7	R-002027	R-006031
#8	32	RH5	R-002027	R-006014
#8	32	RH7	R-002027	R-006030
#10	32	RH6	R-002027	R-006017
#10	32	RH8	R-002027	R-006032
#10	24	RH6	R-002029	R-006016
#12	28	RH6	R-002028	R-006019
#12	24	RH6	R-002029	R-006018
1/4"	28	RH6	R-002031	R-006021
1/4"	20	RH6	R-002030	R-006020

METRIC				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
M2	0.4	D5	R-002068	R-006042
M2.5	0.45	D5	R-002067	R-006044
M3	0.5	D5	R-002066	R-006045
M3.5	0.6	D6	R-002065	R-006046
M4	0.7	D6	R-002064	R-006047
M5	0.8	D7	R-002062	R-006049
M6	1.0	D8	R-002060	R-006050

Model 1AV



Model 2AV



Product Features

- ◆ Excellent choice when speed is important
- ◆ Simple direct drive construction
- ◆ Smallest footprint of any unit
- ◆ Built-in shock mounting for moving stripper applications

Unit Specifications

Aluminum Capacity	1/4"	M6
Steel Capacity	1/4"	M6
Stainless Capacity	1/4"	M6

	Length	Width	Height
Envelope (in)	5.04	3.54	11.04
Envelope (mm)	128.0	90.0	280.4

Max Tap Head Speed 4000 RPM

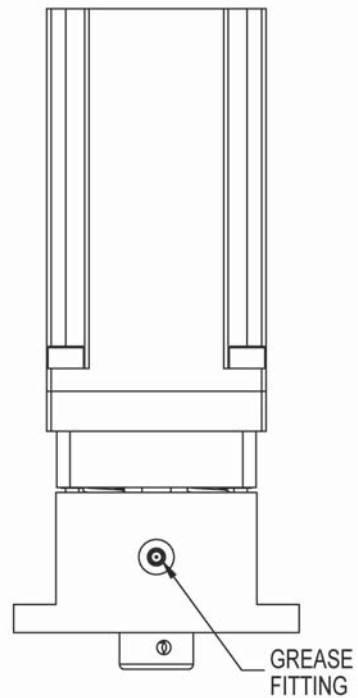
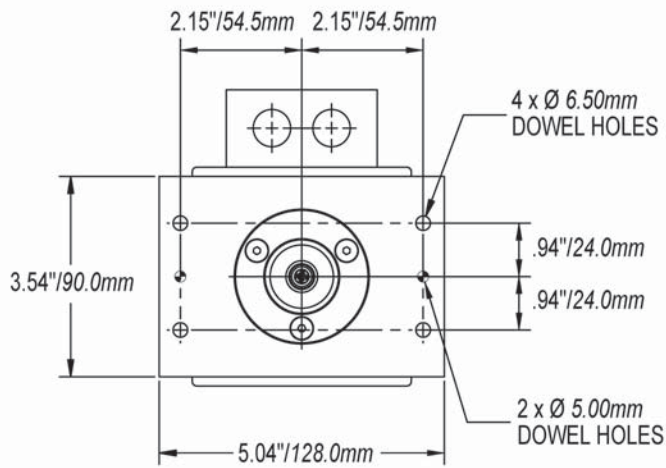
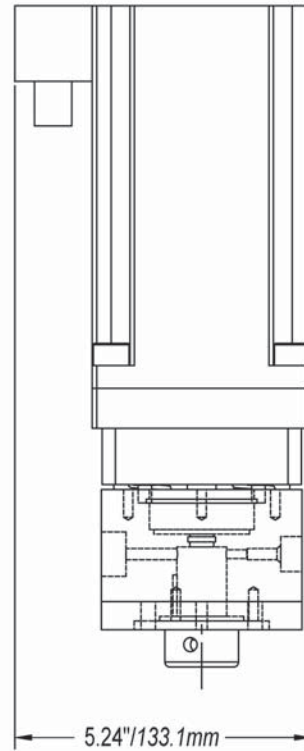
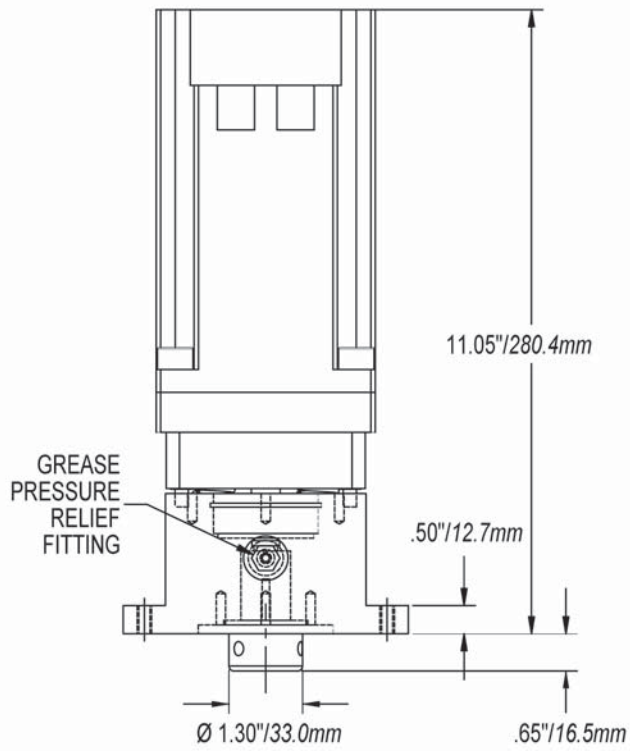
Pitch Adapter & Forming Tap Options:

Choose your pitch adapter and forming tap based on the tap size and pitch for your requirement.

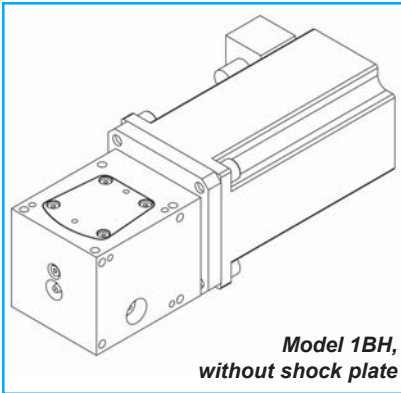
INCH				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
#2	56	RH3	R-002024	R-006004
#4	48	RH5	R-002025	R-006009
#4	40	RH5	R-002026	R-006008
#4	40	RH7	R-002026	R-006033
#5	40	RH5	R-002026	R-006010
#6	40	RH5	R-002026	R-006013
#6	32	RH5	R-002027	R-006012
#6	32	RH7	R-002027	R-006031
#8	32	RH5	R-002027	R-006014
#8	32	RH7	R-002027	R-006030
#10	32	RH6	R-002027	R-006017
#10	32	RH8	R-002027	R-006032
#10	24	RH6	R-002029	R-006016
#12	28	RH6	R-002028	R-006019
#12	24	RH6	R-002029	R-006018
1/4"	28	RH6	R-002031	R-006021
1/4"	20	RH6	R-002030	R-006020

METRIC				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
M2	0.4	D5	R-002068	R-006042
M2.5	0.45	D5	R-002067	R-006044
M3	0.5	D5	R-002066	R-006045
M3.5	0.6	D6	R-002065	R-006046
M4	0.7	D6	R-002064	R-006047
M5	0.8	D7	R-002062	R-006049
M6	1.0	D8	R-002060	R-006050

Model 2AV

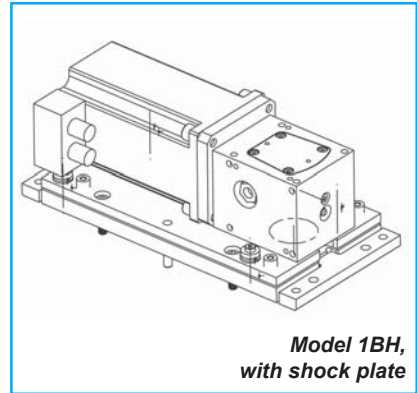


Model 1BH



Product Features

- ◆ A great choice for low shut height applications
- ◆ The most economical horizontal choice
- ◆ The fastest and smallest horizontal unit



Unit Specifications

Aluminum Capacity	5/16"	M8
Steel Capacity	1/4"	M6
Stainless Capacity	#12	M5

	Length	Width	Height
Envelope (in)	11.3	5.25	4.65
Envelope (mm)	288.0	133.0	117.0

Max Tap Head Speed 3333 RPM

Unit Specifications with Shock Mounting

Aluminum Capacity	5/16"	M8
Steel Capacity	1/4"	M6
Stainless Capacity	12	M5

	Length	Width	Height
Envelope (in)	13.27	6.0	4.85
Envelope (mm)	337.0	152.4	123.25

Max Tap Head Speed 3333 RPM

Pitch Adapter & Forming Tap Options:

Choose your pitch adapter and forming tap based on the tap size and pitch for your requirement.

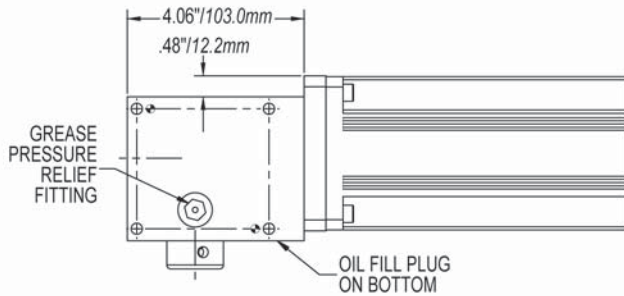
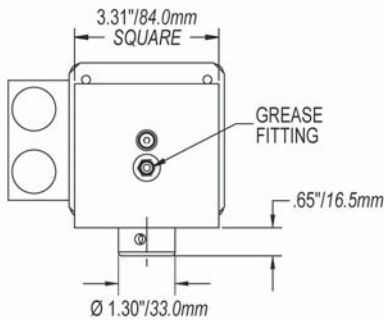
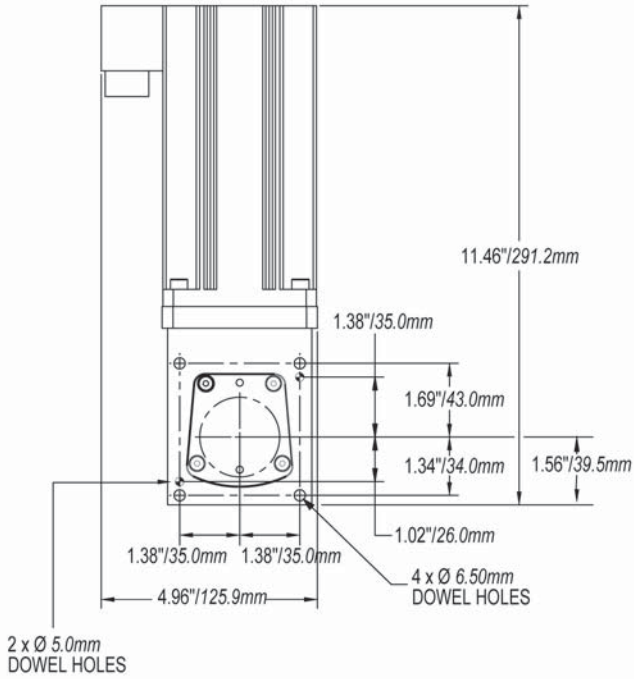
INCH				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
#2	56	RH3	R-002024	R-006004
#4	48	RH5	R-002025	R-006009
#4	40	RH5	R-002026	R-006008
#4	40	RH7	R-002026	R-006033
#5	40	RH5	R-002026	R-006010
#6	40	RH5	R-002026	R-006013
#6	32	RH5	R-002027	R-006012
#6	32	RH7	R-002027	R-006031
#8	32	RH5	R-002027	R-006014
#8	32	RH7	R-002027	R-006030
#10	32	RH6	R-002027	R-006017
#10	32	RH8	R-002027	R-006032
#10	24	RH6	R-002029	R-006016
#12	28	RH6	R-002028	R-006019
#12	24	RH6	R-002029	R-006018
1/4"	28	RH6	R-002112	R-006090
1/4"	20	RH6	R-002114	R-006091
5/16"	24	RH6	R-002113	R-006093
5/16"	18	RH7	R-002115	R-006094

METRIC				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
M2	0.4	D5	R-002068	R-006042
M2.5	0.45	D5	R-002067	R-006044
M3	0.5	D5	R-002066	R-006045
M3.5	0.6	D6	R-002065	R-006046
M4	0.7	D6	R-002064	R-006047
M5	0.8	D7	R-002062	R-006049
M6	1.0	D8	R-002060	R-006050
M8	1.0	D8	R-002116	R-006096
M8	1.25	D8	R-002117	R-006097

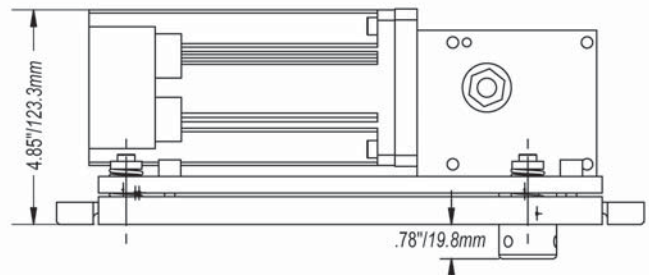
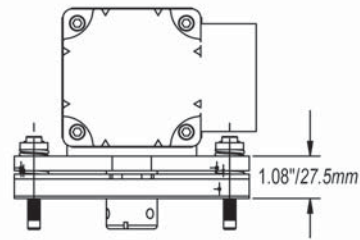
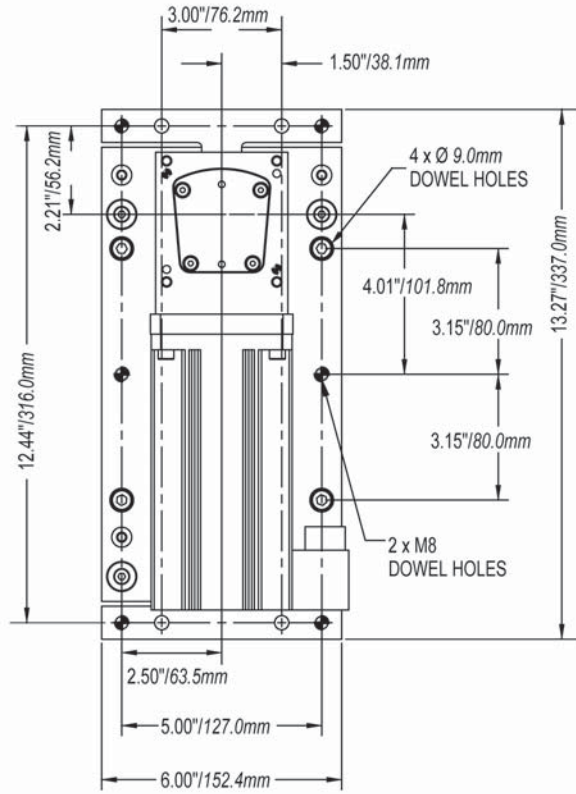
NOTE: Shock mounting plate is required on applications where unit is not stationary (Part #247460).

Model 1BH

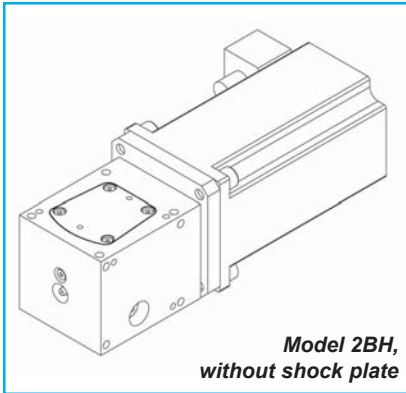
Without Shock Reduction Plate



With Shock Reduction Plate

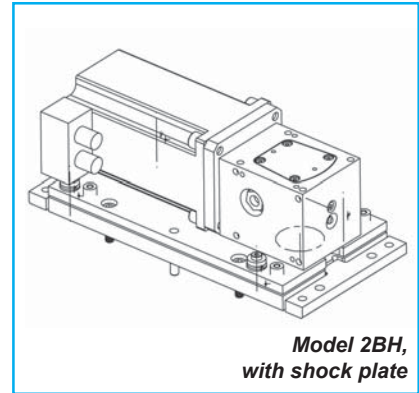


Model 2BH



Product Features

- ◆ The lowest shut height unit
- ◆ The choice when shut and speed are important
- ◆ The fastest horizontal unit



Unit Specifications

Aluminum Capacity	5/16"	M8
Steel Capacity	5/16"	M8
Stainless Capacity	1/4"	M6

	Length	Width	Height
Envelope (in)	11.3	5.25	4.65
Envelope (mm)	288.0	133.0	117.0

Max Tap Head Speed 3333 RPM

Unit Specifications with Shock Mounting

Aluminum Capacity	5/16"	M8
Steel Capacity	5/16"	M8
Stainless Capacity	1/4"	M6

	Length	Width	Height
Envelope (in)	13.27	6.05	5.0
Envelope (mm)	337.0	152.4	127.7

Max Tap Head Speed 3333 RPM

Pitch Adapter & Forming Tap Options:

Choose your pitch adapter and forming tap based on the tap size and pitch for your requirement.

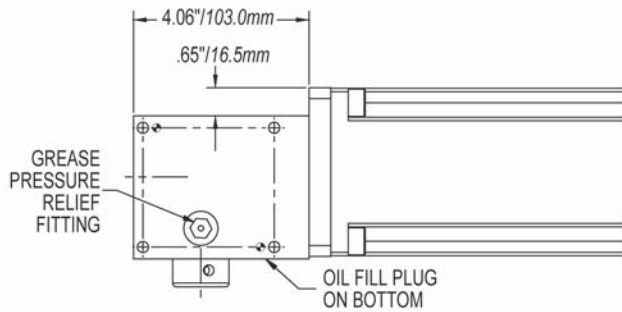
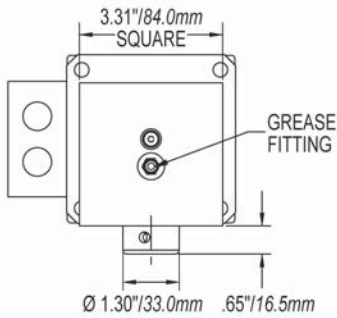
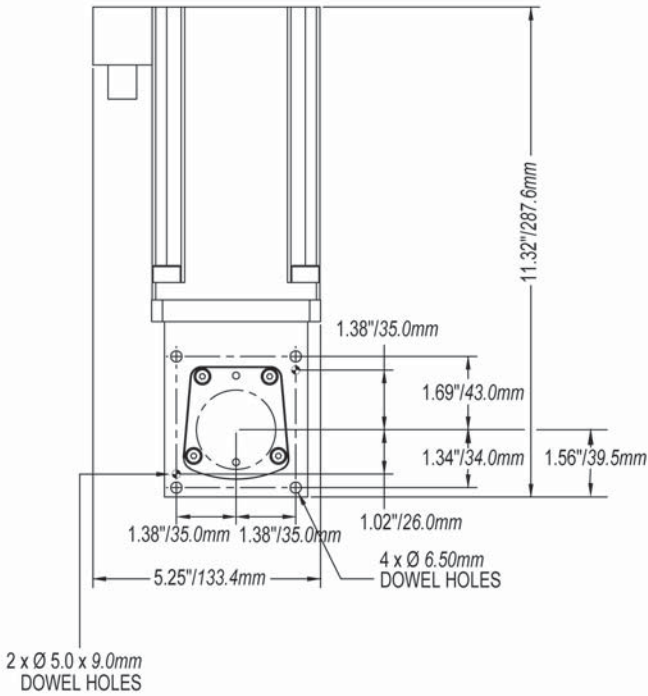
INCH				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
#2	56	RH3	R-002024	R-006004
#4	48	RH5	R-002025	R-006009
#4	40	RH5	R-002026	R-006008
#4	40	RH7	R-002026	R-006033
#5	40	RH5	R-002026	R-006010
#6	40	RH5	R-002026	R-006013
#6	32	RH5	R-002027	R-006012
#6	32	RH7	R-002027	R-006031
#8	32	RH5	R-002027	R-006014
#8	32	RH7	R-002027	R-006030
#10	32	RH6	R-002027	R-006017
#10	32	RH8	R-002027	R-006032
#10	24	RH6	R-002029	R-006016
#12	28	RH6	R-002028	R-006019
#12	24	RH6	R-002029	R-006018
1/4"	28	RH6	R-002112	R-006090
1/4"	20	RH6	R-002114	R-006091
5/16"	24	RH6	R-002113	R-006093
5/16"	18	RH7	R-002115	R-006094

METRIC				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
M2	0.4	D5	R-002068	R-006042
M2.5	0.45	D5	R-002067	R-006044
M3	0.5	D5	R-002066	R-006045
M3.5	0.6	D6	R-002065	R-006046
M4	0.7	D6	R-002064	R-006047
M5	0.8	D7	R-002062	R-006049
M6	1.0	D8	R-002060	R-006050
M8	1.0	D8	R-002116	R-006096
M8	1.25	D8	R-002117	R-006097

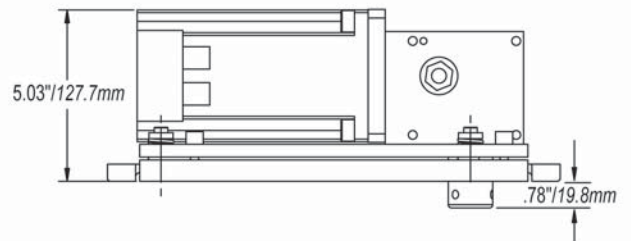
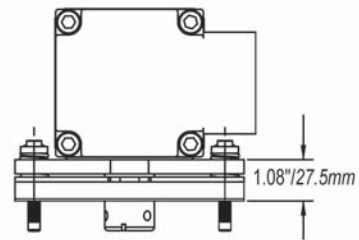
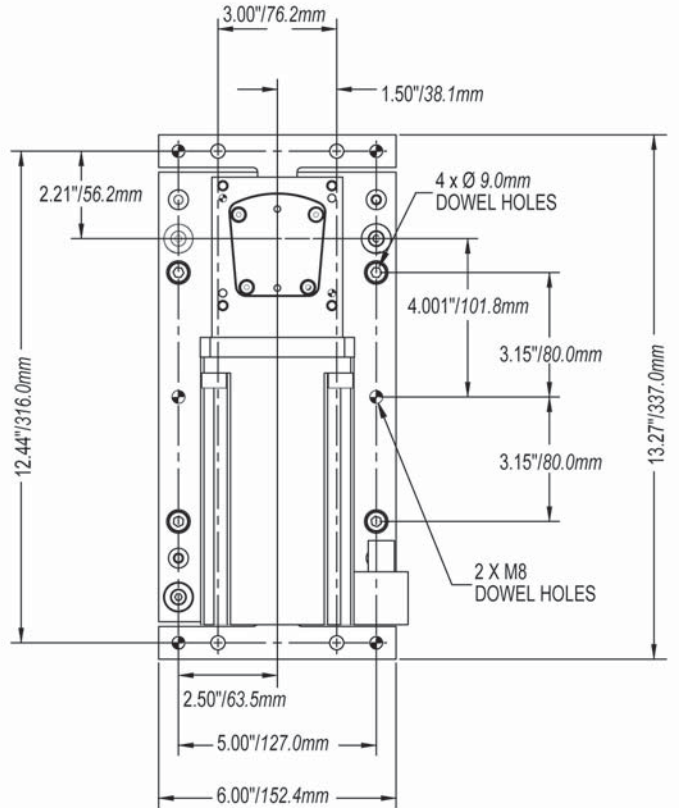
NOTE: Shock mounting plate is required on applications where unit is not stationary (Part #247460).

Model 2BH

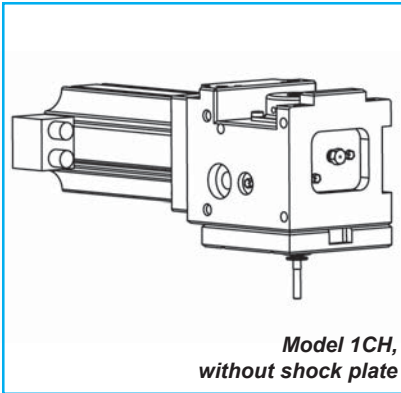
Without Shock Reduction Plate



With Shock Reduction Plate

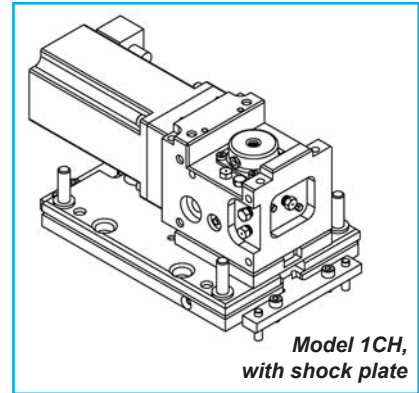


Model 1CH



Product Features

- ◆ An economical unit for larger hole sizes
- ◆ For horizontal mounting
- ◆ For lower shut height applications



Unit Specifications

Aluminum Capacity	9/16"	M14
Steel Capacity	5/16"	M8
Stainless Capacity	1/4"	M6

	Length	Width	Height
Envelope (in)	13.0	4.5	5.40
Envelope (mm)	333.5	114.3	137.2

Max Tap Head Speed 2000 RPM

Unit Specifications with Shock Mounting

Aluminum Capacity	9/16"	M14
Steel Capacity	5/16"	M8
Stainless Capacity	1/4"	M6

	Length	Width	Height
Envelope (in)	14.07	7.72	6.69
Envelope (mm)	357.5	196.0	170.0

Max Tap Head Speed 2000 RPM

Pitch Adapter & Forming Tap Options:

Choose your pitch adapter and forming tap based on the tap size and pitch for your requirement.

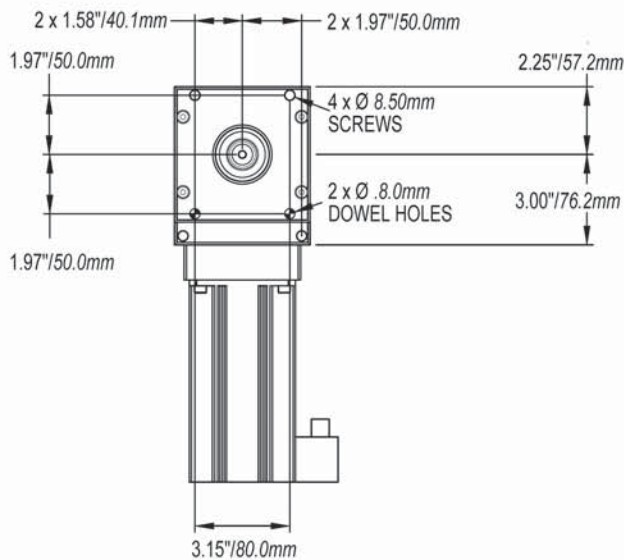
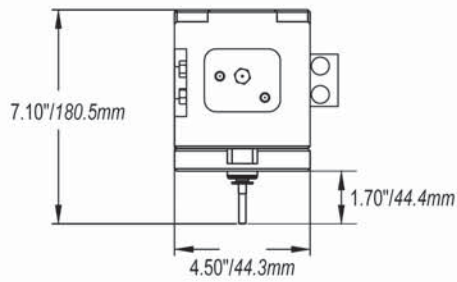
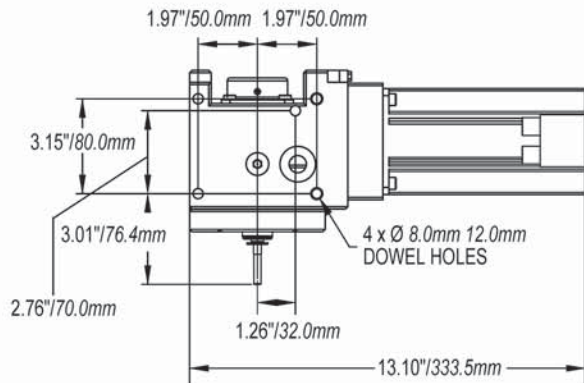
INCH				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
1/4"	28	RH6	250858	100058
1/4"	20	RH7	250857	100057
5/16"	24	RH7	250860	100060
5/16"	18	RH8	250859	100059
3/8"	24	RH7	250862	100062
3/8"	16	RH8	250861	100061
7/16"	20	RH8	250864	100064
7/16"	14	RH9	250863	100063
1/2"	20	RH8	250866	100066
1/2"	13	RH10	250865	100065
9/16"	18	RH8	250868	100068
9/16"	12	RH10	250867	100067

METRIC				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
M6	1	D9	250879	100079
M8	1.25	D10	250880	100080
M10	1.5	D11	250881	100081
M12	1.75	D12	250882	100082
M14	2	D10	250883	100083

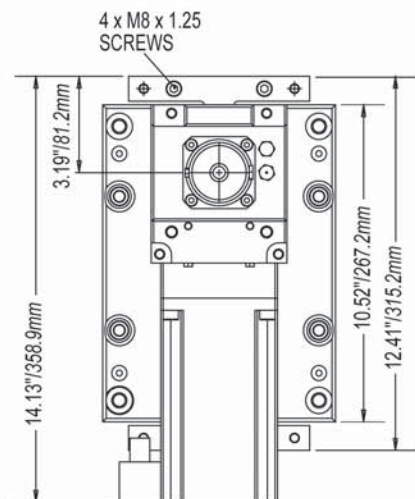
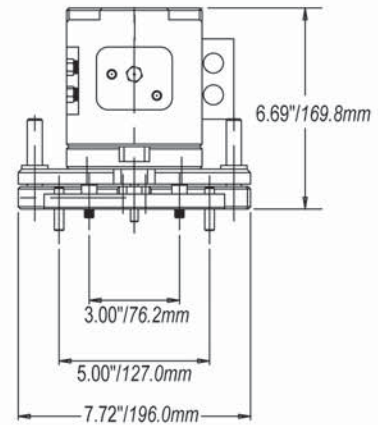
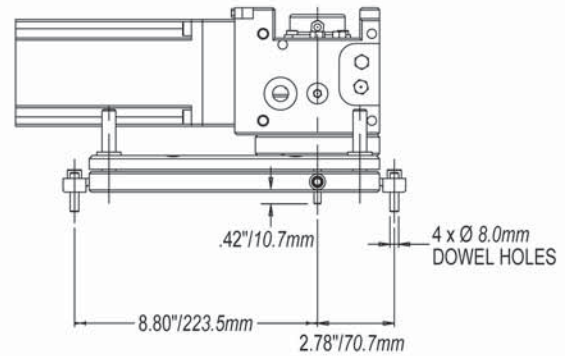
NOTE: Shock mounting plate is required on applications where unit is not stationary (Part #249824).

Model 1CH

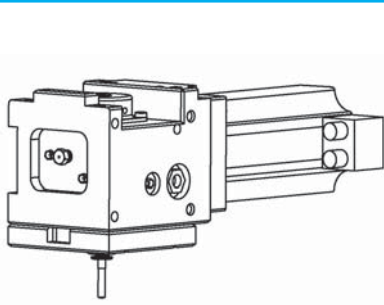
Without Shock Reduction Plate



With Shock Reduction Plate



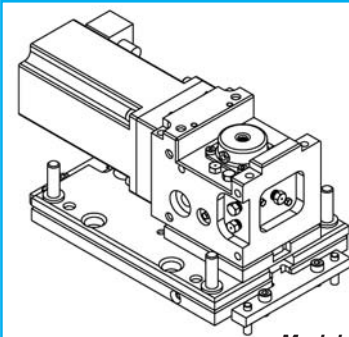
Model 2CH



Model 2CH,
without shock plate

Product Features

- ◆ The largest capacity horizontal unit
- ◆ Horizontal mounting for lower shut height applications



Model 2CH,
with shock plate

Unit Specifications

Aluminum Capacity	9/16"	M14
Steel Capacity	9/16"	M14
Stainless Capacity	5/16"	M8

	Length	Width	Height
Envelope (in)	13.00	4.50	5.40
Envelope (mm)	333.5	114.3	137.2

Max Tap Head Speed 2000 RPM

Unit Specifications with Shock Mounting

Aluminum Capacity	9/16"	M14
Steel Capacity	9/16"	M14
Stainless Capacity	5/16"	M8

	Length	Width	Height
Envelope (in)	14.07	7.72	6.69
Envelope (mm)	357.5	196.0	170.0

Max Tap Head Speed 2000 RPM

Pitch Adapter & Forming Tap Options:

Choose your pitch adapter and forming tap based on the tap size and pitch for your requirement.

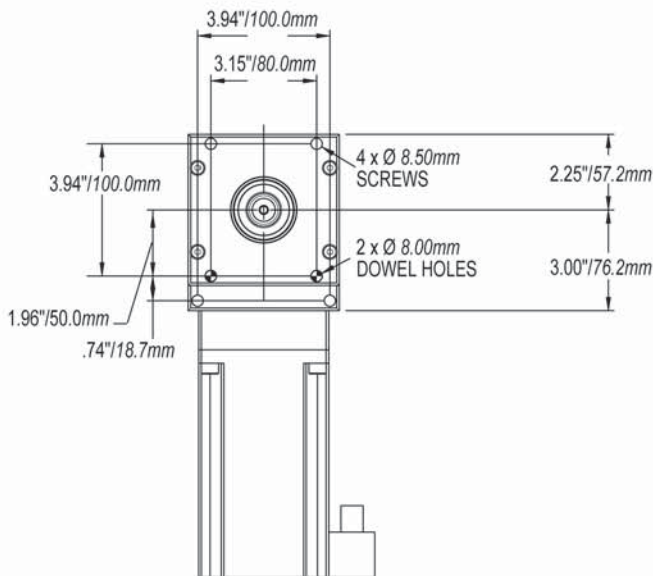
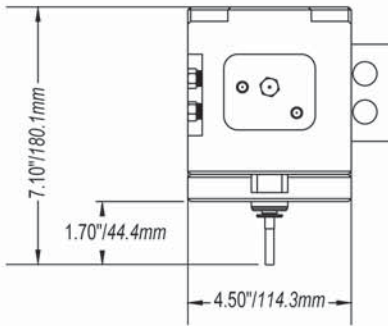
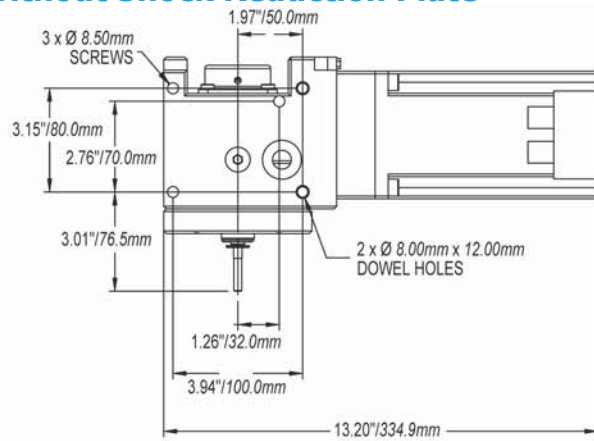
INCH				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
1/4"	28	RH6	250858	100058
1/4"	20	RH7	250857	100057
5/16"	24	RH7	250860	100060
5/16"	18	RH8	250859	100059
3/8"	24	RH7	250862	100062
3/8"	16	RH8	250861	100061
7/16"	20	RH8	250864	100064
7/16"	14	RH9	250863	100063
1/2"	20	RH8	250866	100066
1/2"	13	RH10	250865	100065
9/16"	18	RH8	250868	100068
9/16"	12	RH10	250867	100067

METRIC				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
M6	1	D9	250879	100079
M8	1.25	D10	250880	100080
M10	1.5	D11	250881	100081
M12	1.75	D12	250882	100082
M14	2	D10	250883	100083

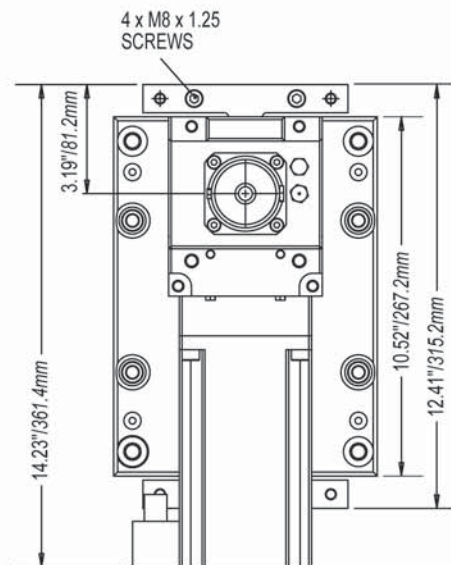
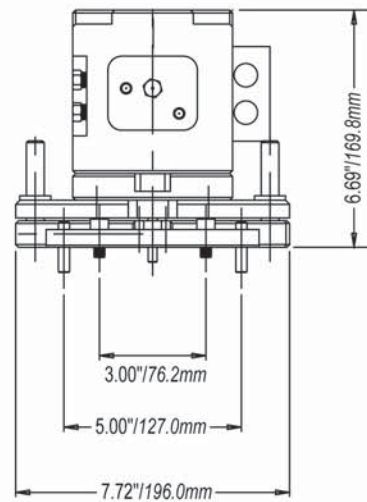
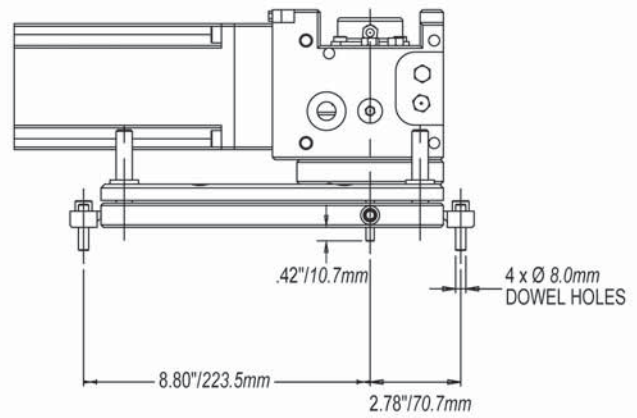
NOTE: Shock mounting plate is required on applications where unit is not stationary (Part #249824).

Model 2CH

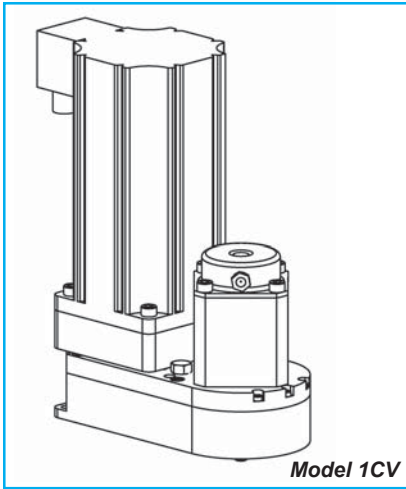
Without Shock Reduction Plate



With Shock Reduction Plate



Model 1CV



Product Features

- ◆ An economical unit for large holes
- ◆ Built-in shock mounting for moving stripper applications

Unit Specifications

Aluminum Capacity	9/16"	M14
Steel Capacity	5/16"	M8
Stainless Capacity	1/4"	M6

	Length	Width	Height
Envelope (in)	5.07	6.83	9.74
Envelope (mm)	129.0	174.0	248.0

Max Tap Head Speed 2000 RPM

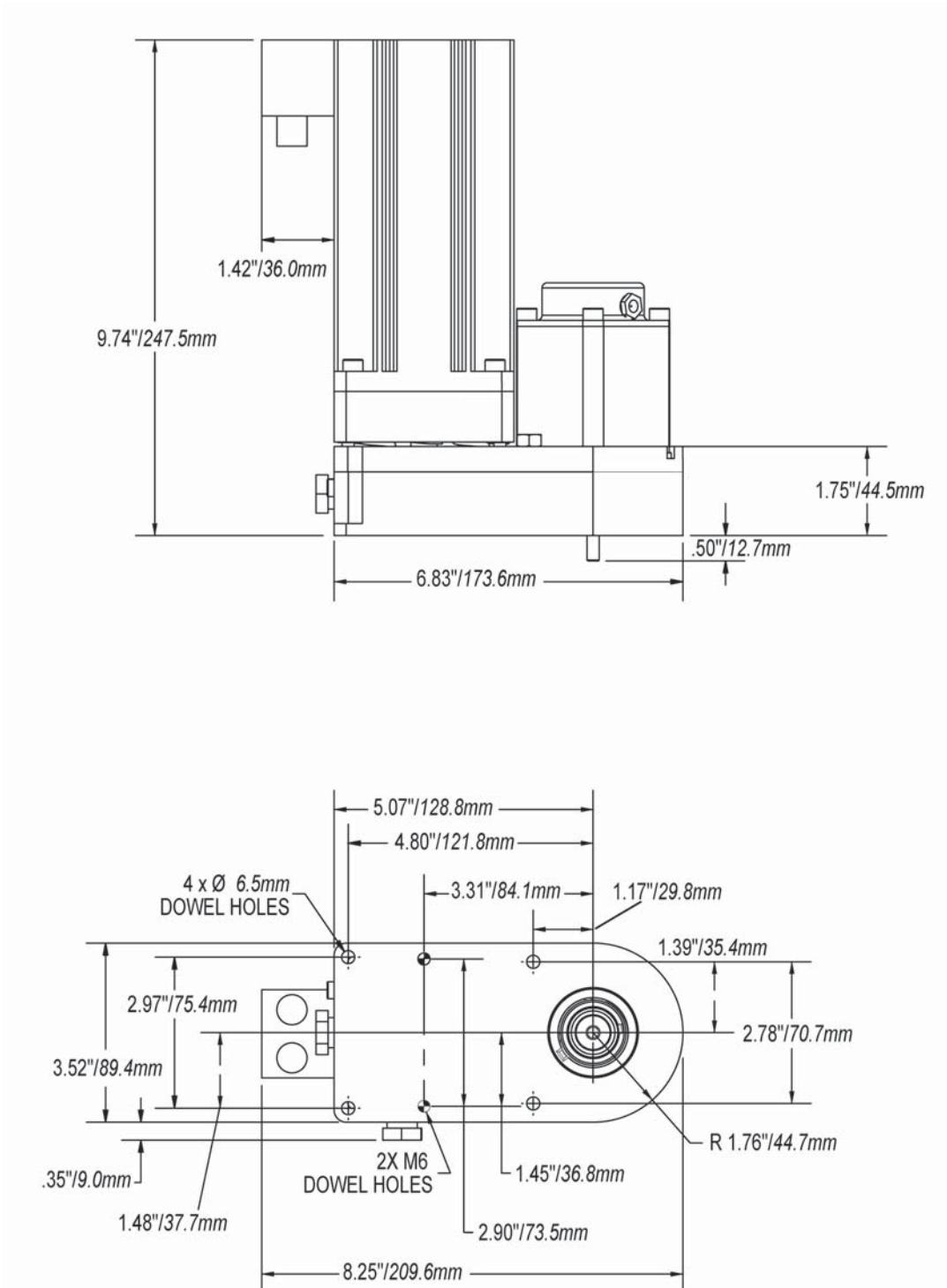
Pitch Adapter & Forming Tap Options:

Choose your pitch adapter and forming tap based on the tap size and pitch for your requirement.

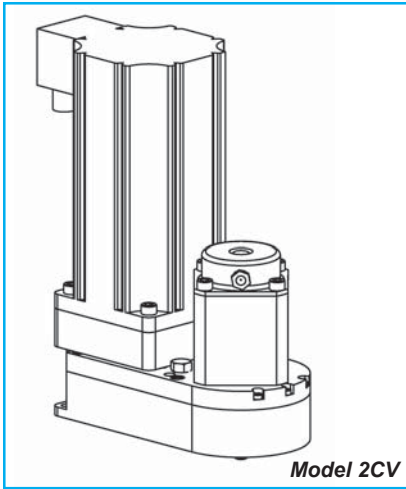
INCH				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
1/4"	28	RH6	251958	100058
1/4"	20	RH7	251957	100057
5/16"	24	RH7	251960	100060
5/16"	18	RH8	251959	100059
3/8"	24	RH7	251962	100062
3/8"	16	RH8	250961	100061
7/16"	20	RH8	251964	100064
7/16"	14	RH9	251963	100063
1/2"	20	RH8	251966	100066
1/2"	13	RH10	251965	100065
9/16"	18	RH8	249987	100068
9/16"	12	RH10	249801	100067

METRIC				
Tap Size	Pitch	D Pitch Limit	Adapter Part #	Forming Tap Part #
M6	1	D9	251979	100079
M8	1.25	D10	251980	100080
M10	1.5	D11	251981	100081
M12	1.75	D12	251982	100082
M14	2	D10	249988	100083

Model 1CV



Model 2CV



Product Features

- ◆ The largest capacity vertical unit
- ◆ For use when minimum shut height is large
- ◆ Built-in shock mounting for moving stripper applications

Unit Specifications

Aluminum Capacity	9/16"	M14
Steel Capacity	9/16"	M14
Stainless Capacity	5/16"	M8

	Length	Width	Height
Envelope (in)	5.07	6.83	9.74
Envelope (mm)	129.0	174.0	248.0

Max Tap Head Speed 2000 RPM

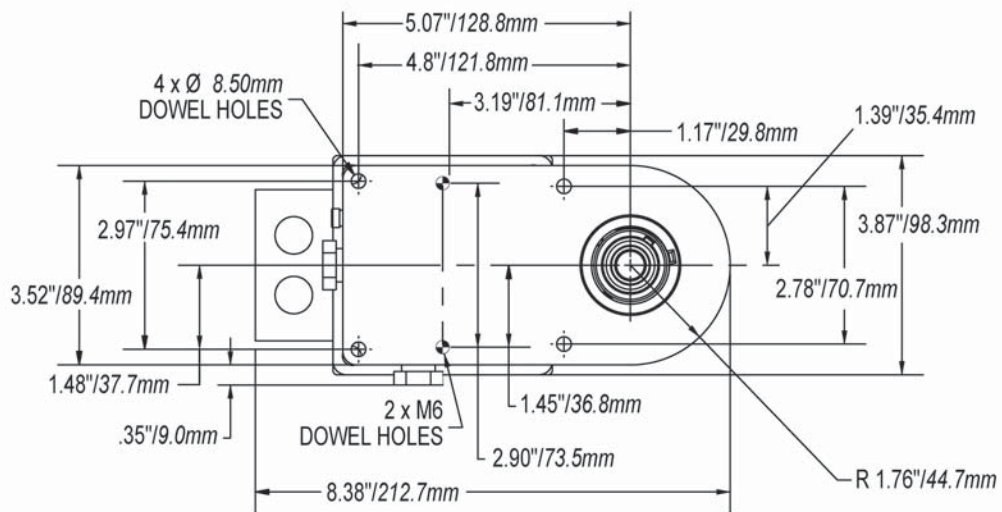
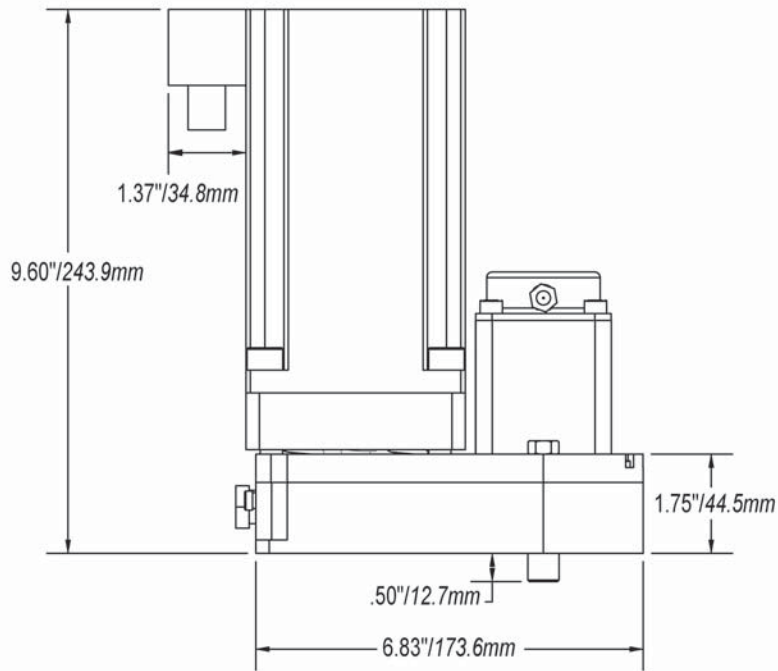
Pitch Adapter & Forming Tap Options:

Choose your pitch adapter and forming tap based on the tap size and pitch for your requirement.

INCH				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
1/4"	28	RH6	251958	100058
1/4"	20	RH7	251957	100057
5/16"	24	RH7	251960	100060
5/16"	18	RH8	251959	100059
3/8"	24	RH7	251962	100062
3/8"	16	RH8	250961	100061
7/16"	20	RH8	251964	100064
7/16"	14	RH9	251963	100063
1/2"	20	RH8	251966	100066
1/2"	13	RH10	251965	100065
9/16"	18	RH8	249987	100068
9/16"	12	RH10	249801	100067

METRIC				
Tap Size	Pitch	D Limit	Pitch Adapter Part #	Forming Tap Part #
M6	1	D9	251979	100079
M8	1.25	D10	251980	100080
M10	1.5	D11	251981	100081
M12	1.75	D12	251982	100082
M14	2	D10	249988	100083

Model 2CV



Recommended Prehole Sizes

Prehole Sizes

Using the proper hole size is critical to long tool and tap life.

Prior to the final operation of tapping the hole, a must be created.
The following charts are a guide to using the proper hole size.

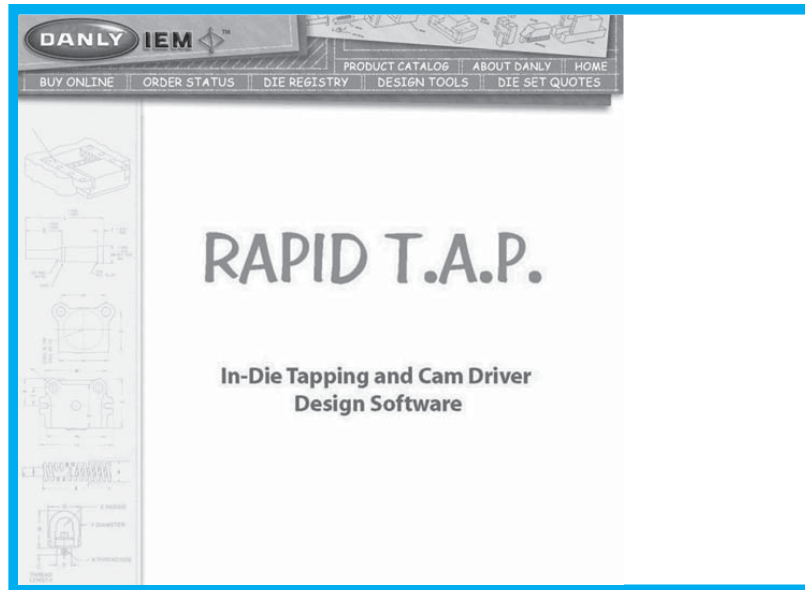
NOTE: Hole sizes on these charts are for 65% thread engagement.

INCH		
Tap Size	Pitch	Hole Size (in)
2	56	0.078
4	40	0.118
5	40	0.118
6	40	0.118
6	32	0.152
8	32	0.152
10	32	0.152
10	24	0.209
12	28	0.176
12	24	0.209
1/4"	28	0.176
1/4"	20	0.255
5/16"	24	0.209
5/16"	18	0.286
3/8"	24	0.209
3/8"	16	0.324
7/16"	20	0.255
7/16"	14	0.373
1/2"	20	0.255
1/2"	13	0.403
9/16"	18	0.286
9/16"	12	0.438

METRIC		
Tap Size	Pitch	Hole Size (mm)
M2	0.4	1.7
M2.5	0.45	2.0
M3	0.5	2.3
M3.5	0.6	2.8
M4	0.7	3.4
M5	0.8	3.9
M6	1	5.0
M8	1.25	6.4
M10	1.5	7.8
M12	1.75	9.1
M14	2	10.5

A 65% thread engagement is recommended for maximum tap life. Higher and lower thread engagements can be achieved using different preholes. Please consult our engineering staff if a different thread engagement is required, or if you have questions about your application.

Rapid T.A.P. Software



Rapid T.A.P. Software (Tapping Application Program)

This software aids in the development of dies with our in-die tapping tools. This software is designed to educate die designers and stamping facilities on the benefits of In-Die Tapping (**IDT**) and to provide easy ways to design dies that incorporate the IDT tools. *Rapid T.A.P.* replaces *Campro*, an earlier DOS-based computer program.

Rapid T.A.P. can aid in determining the right unit for your application. Based on press stroke, hole size and other factors, *Rapid T.A.P.* will calculate the achievable press cycle rate for a given unit.

Ordering Guide

For a new Max Control™ Servo-Drive In-Die Tapping Unit, you should order a minimum of three parts:

1. Model Unit – Includes Gearbox, Servo Motor, Controller, and required cables
2. Pitch Adapter
3. Forming Tap

NOTE: Shock mounting plates are required on models 1BH, 2BH, 1CH and 2CH if the unit is on a moving stripper.

Required Equipment:

1. Select Model (Choose one):

1AV	Page 6
2AV	Page 8
1BH	Page 10
2BH	Page 12
1CH	Page 14
2CH	Page 16
1CV	Page 18
2CV	Page 20



Servo-Drive



Controller

INCLUDES:
Controller, Servo motor, Controller programming,
gear box and cables.

NOTE: Shock mounting plates are required if the unit is on a moving stripper.

On models:

- 1BH and 2BH, use mounting plate #247460
- 1CH and 2CH, use mounting plate #249824

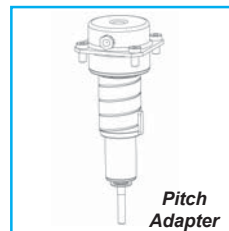
Model # _____

Shock Mounting Plate # _____

2. Select Pitch Adapter & Forming Tap:

- a. Turn to the page indicated for model.
- b. Choose pitch adapter and forming tap for your application.

NOTE: If you don't see the tap and pitch adapter for your requirements, we can design one for you.



Pitch Adapter



Taps are sold in packs of 12.

Pitch Adapter # _____

Forming Tap # _____

Ordering Guide *(continued)*

Additional Options:

3. Oil Lubrication System:



1 Pump System

Product Features

- ◆ Cam valve for off-the-ram operation
- ◆ Electric valve option for PLS
- ◆ 1 – 4 pump capacity
- ◆ Mounts directly to the press
- ◆ Reusable polyethylene reservoir



2 Pump System

EZ-1-PM	1 Pump System
EZ-2-PM	2 Pump System
EZ-3-PM	3 Pump System
EZ-4-PM	4 Pump System

EZ-1-PM-S	1 Pump System, with solenoid option
EZ-2-PM-S	2 Pump System, with solenoid option
EZ-3-PM-S	3 Pump System, with solenoid option
EZ-4-PM-S	4 Pump System, with solenoid option

System Model # _____

MB1201	Mag-based spray assembly
QCFB01	QuickChange nozzles
QCMB01	QuickChange mag nozzles

NOTE: Nozzles come standard with 110° standard fan tip. Alternative tip styles are available upon request.

EZ-041	Mag base for valves
EZ-072	Extra reservoirs

Extras # _____

Ordering Guide *(continued)*

Additional Options:

4. Lubrication – Tapping Fluid:



Forming Tap Lubrication

Product Features

- ◆ Designed specifically for forming taps
- ◆ Faster tapping speeds
- ◆ Extends tap life

R-EDP00002	Pint Bottle
R-EDP00003	Case of 12 Pint Bottles
R-EDP00006	Case of 4 Gallon Bottles (case only)
R-EDP00004	5-Gallon Pail

Lubrication # _____

Max Control™ Servo-Drive In-Die Tapping Application Sheet

CUSTOMER INFORMATION

Date: _____

Company Name: _____

Contact Name: _____

Contact Phone: _____

Contact Email: _____

Address: _____

State: _____ ZIP: _____

PRESS INFORMATION

Press Type: Mechanical Hydraulic

Press Stroke: _____

Tapping Stroke: _____

Stripper Travel: _____

Desired Speed: _____

PART INFORMATION

Material Type: _____

Diameter & Pitch: _____

Number of Taps: _____

Hole Layout: _____

Tapping Direction (check one):

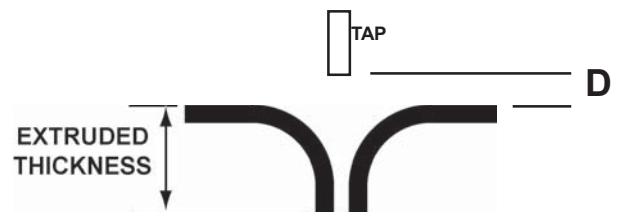
Top Down Bottom Up Sideways

Extruded Thickness: _____

(Include extrusion and material thickness)

Tap-to-Material distance (D) _____

Indicate Hole Layout



Part Print Sent? Yes No

Strip Layout Sent? Yes No

Part and layout prints are very helpful to ensure proper unit selection. Please send
TO THE ATTENTION OF: **In-Die Tapping Application Engineering Department**, at

FAX: 800-833-2659

or

EMAIL: indietapping@danly.com

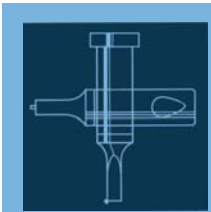
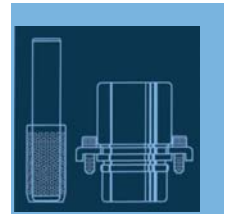
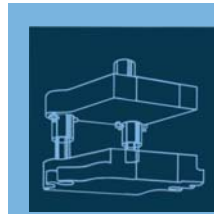
Notes

The IEM Value Proposition

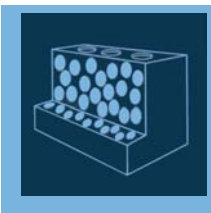
- I. **IEM** is recognized as the leader in manufacturing quality die sets and related products to the global parts forming industry. Our reputation has been built by satisfying customer needs, and we are very strong in the automotive and appliance industries.
- II. **IEM** offers outstanding delivery on a consistent basis. Choosing us as a supplier means that our customers have a competitive advantage in delivering their products to the market.
- III. **IEM** has complex machining capabilities on die sets at several strategically located facilities. Locations throughout the USA means lower shipping costs and allowing **IEM** to machine complex die sets means the customer's machining centers have additional capacity.
- IV. **IEM's** vast breadth of products assures innovative solutions. We strive to address customer problems by utilizing our research and development department as well as other technical professionals.
- V. **IEM** has a technically trained sales force and distributor channels with engineering support. Sales, marketing and engineering professionals are available to support our product lines.

➤ Competitive Prices

➤ Reliability and Performance



**...A LEADING MANUFACTURER
AND INNOVATOR OF DIE SETS
AND DIE COMPONENTS
SUPPLIED GLOBALLY TO THE
METAL FORMING INDUSTRY...**



- High Quality Design & Construction
- Outstanding Service & Support



Max Control™ Servo-Drive In-Die Tapping Units



IEM

6779 Engle Road, Suite A
Cleveland, OH 44130

www.danly.com
indietapping@danly.com

WITHIN THE USA & CANADA

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FAX: 800-833-2659

OUTSIDE THE USA & CANADA

CALL: 001-216-898-6280

FAX: 001-216-898-6278

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