

How to leverage your eCatalog investment.



Learn how PHD, Inc. continues to “Future Proof” its CAD 25 years later.





Enabling Productivity Throughout the World

PHD, Inc. has established itself as a manufacturer of modular automation devices by providing a broad line of reliable, cost effective, quality products that enhance productivity.

We are committed to providing our customers with what they need, when they need it. This is accomplished by our focus on the needs of the customer, and continually improving the effectiveness of our organization and the quality of our products.

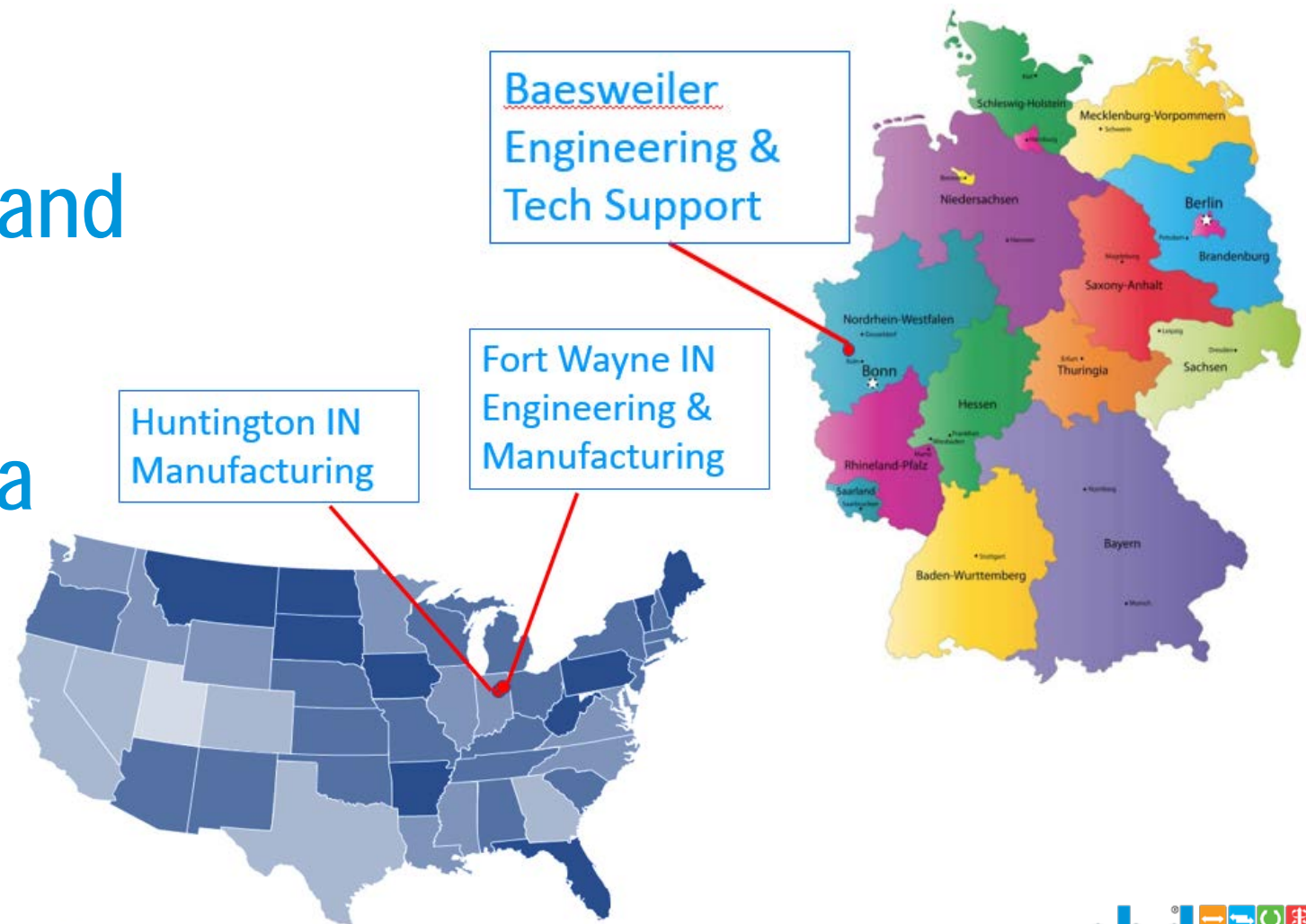
About **phd**.inc.

Established in 1957

Multiple Manufacturing and Engineering Facilities

Fort Wayne IN, USA Area

Baesweiler, Germany



About **phd**.inc.[®]

Local Factory
Trained Technical
Support to Provide
Solutions
Throughout the
World



About **phd**.inc.

Designer's Resource[®]
myphd[®]



Powerful Engineering Resources
that Saves Design time

“Size, Select, Configure, CAD
Models, Replacement Parts,
Product Information”

CAD Drawings in over 80 Formats
that create design efficiency

Focus Industries



AUTOMOTIVE



BATTERY
MANUFACTURING



CARPET



PACKAGING



FILLING



TIRE



FOOD



INDUSTRIAL
LAUNDRY



MACHINE BUILDERS



MATERIAL
HANDLING



MEDICAL



WORKHOLDING



BLOW MOLDING



INJECTION
MOLDING



PRINTING



ROBOTICS



SEMICONDUCTOR



WELDING



ALUMINUM
SMELTING

About **phd**.inc.[®]

Pneumatic

Electric

Cylinders

Linear Slides

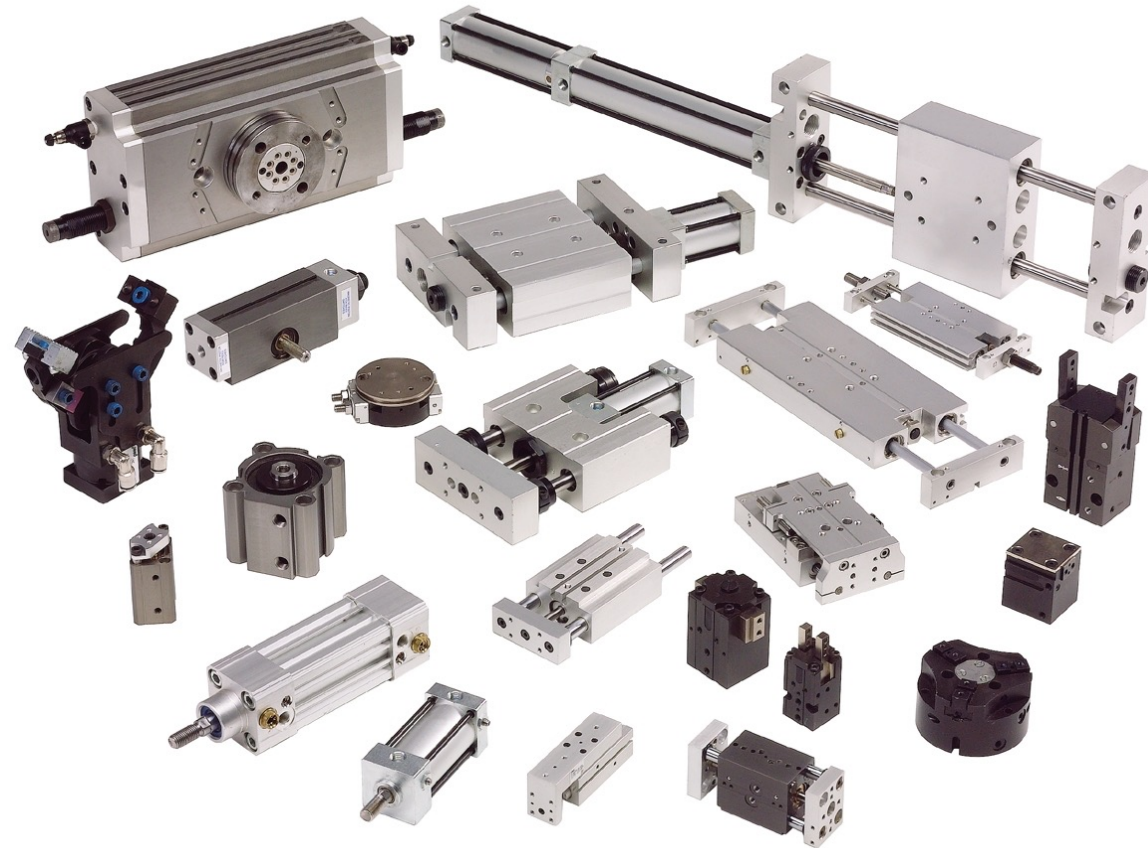
Rotary Actuators

Grippers

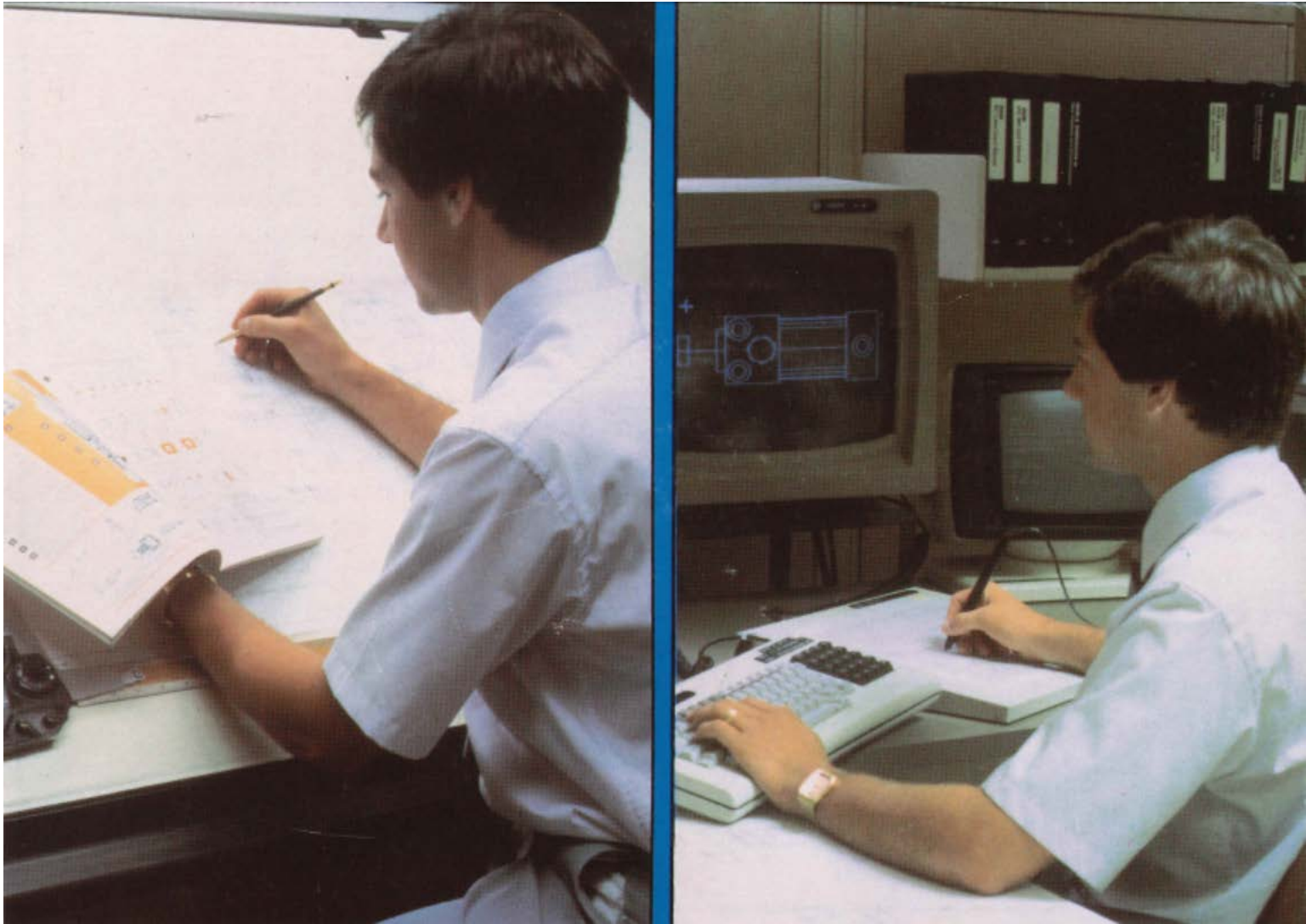
Clamps

Escapements

Switches



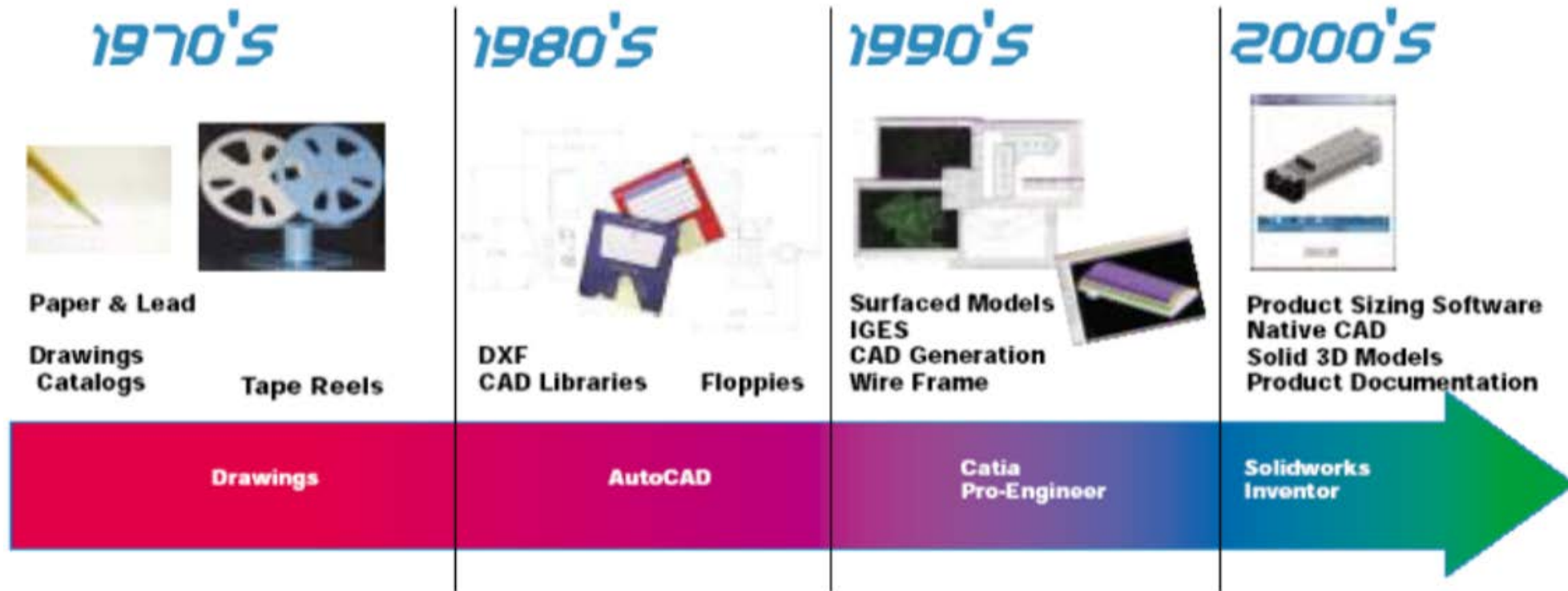
About Me



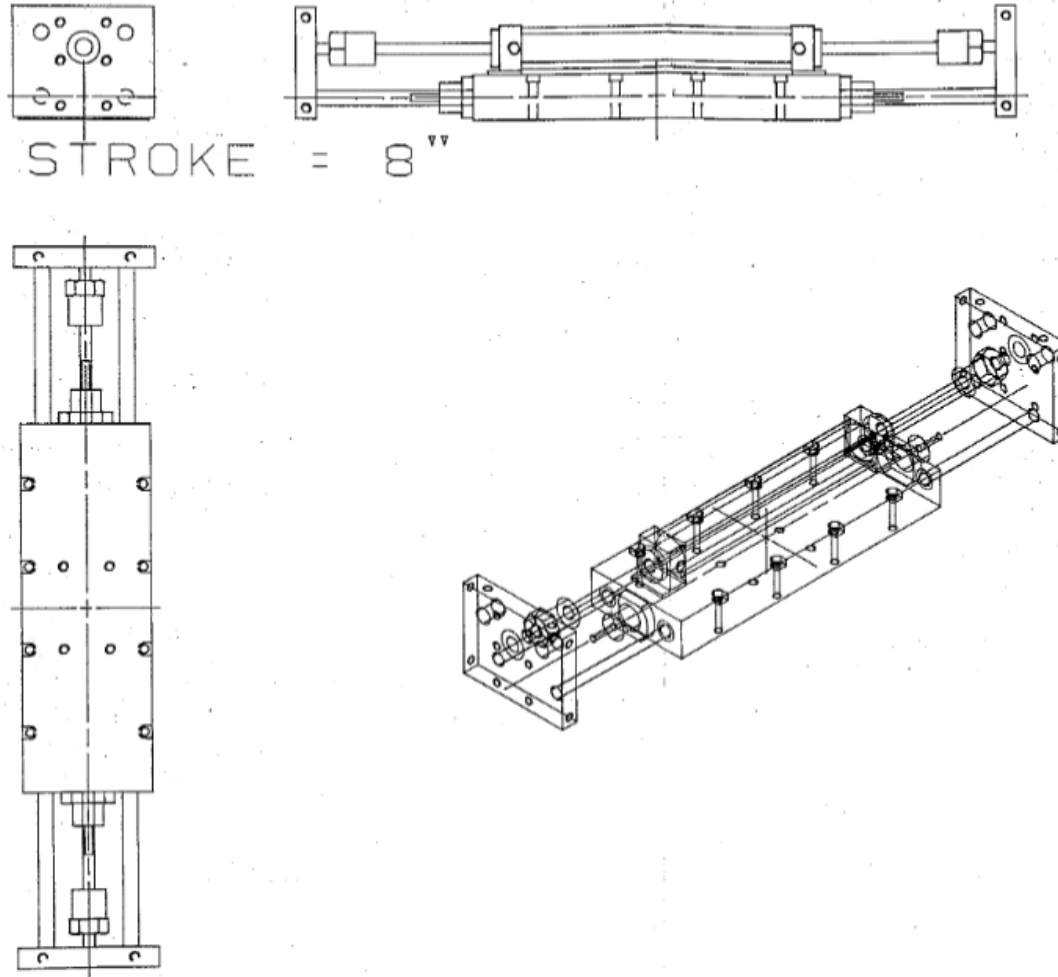
Agenda

- CAD Models need attention. Pull the weeds and add fertilizer.
- Having an eCatalog is just the beginning. Adding support systems around your eCatalog to get more value.
- Utilize a Trusted Partner who shares the vision

The Journey of customer CAD for PHD



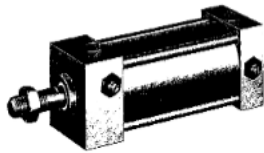
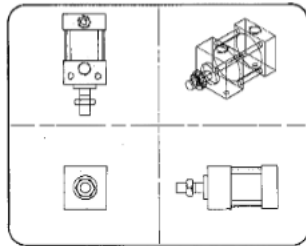
Early days (1986)



phd, inc. SCALE: 1/4
PHD FILE NAME: PHDSU04

User had to Modify

● phd Introducing: C.A.D. Software on Medium Duty Cylinders



- Allows PHD product drawings (models) to be stored on the customers C.A.D. System.
- Available on 1600 BPI Magnetic Tape or on 5 1/4" Floppy Disc.
- Provides Actual Scale Geometry saving hours of time when designing with PHD Products.
- Provides both Two and Three Dimensional Views. (See example).
- Available in an *I.G.E.S. Format for compatibility with most C.A.D. Systems.

*Initial Graphics Exchange Specification

SPECIFICATIONS	SOFTWARE AVAILABLE
Magnetic Tape - 1600 BPI	Grippers \$55.00 LIST
Floppy Disc -	Rotary Actuators \$55.00 LIST
5 1/4" Double Side, Double Density	Medium Duty Cylinders \$55.00 LIST

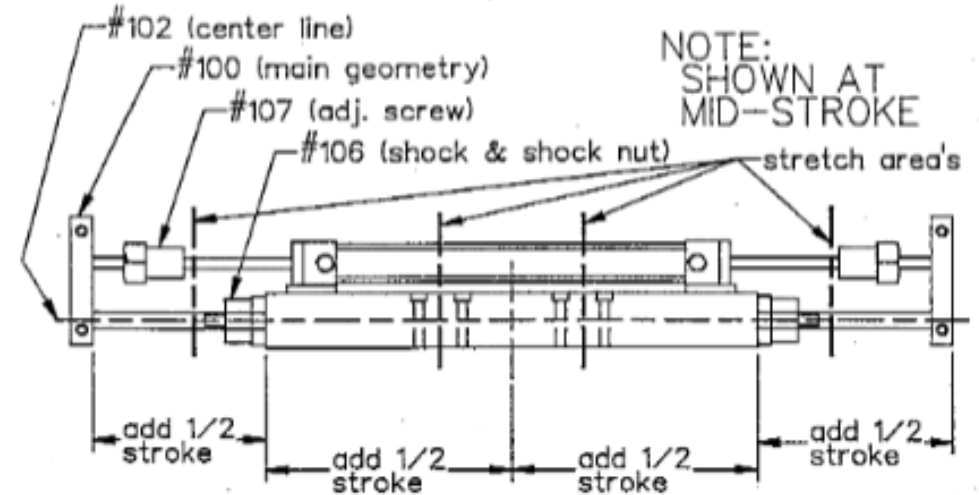
PHD, INC., AIRPORT AND PIPER DRIVE, FORT WAYNE, IN 46809
(AC219) 747-6151 TELEX 23-2611
MAILING ADDRESS: P.O. BOX 9070, FORT WAYNE, IN 46899

MODIFYING MODELS FOR VARIOUS OPTIONS

U SERIES (U03, U04, U06)

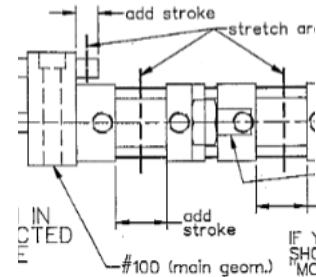
The "U" Series slide is shown at different strokes (shown below), and the user must add the desired stroke to the proper locations shown below. (Indicated by "stretch area").

THE (#) STANDS FOR CLASS,LAYER,LEVEL OF GEOMETRY.



MODELS FOR VARIOUS SIZES (Co
MODELS (N75, N18)

slide is shown at zero stroke, and th
stroke to the proper locations shown be
MODEL IS DESIRED REFER TO "MODIFYING I
(#) STANDS FOR CLASS,LAYER,LEV



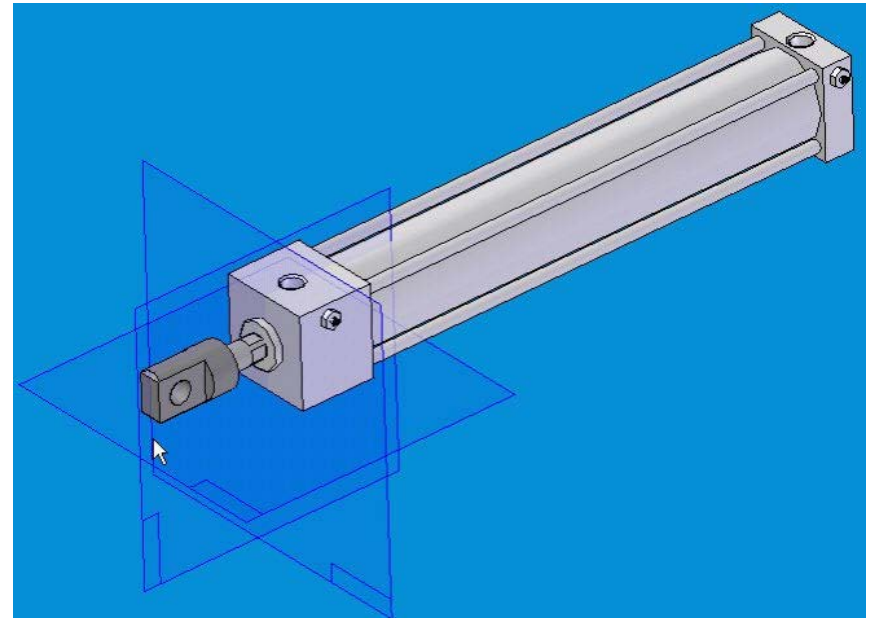
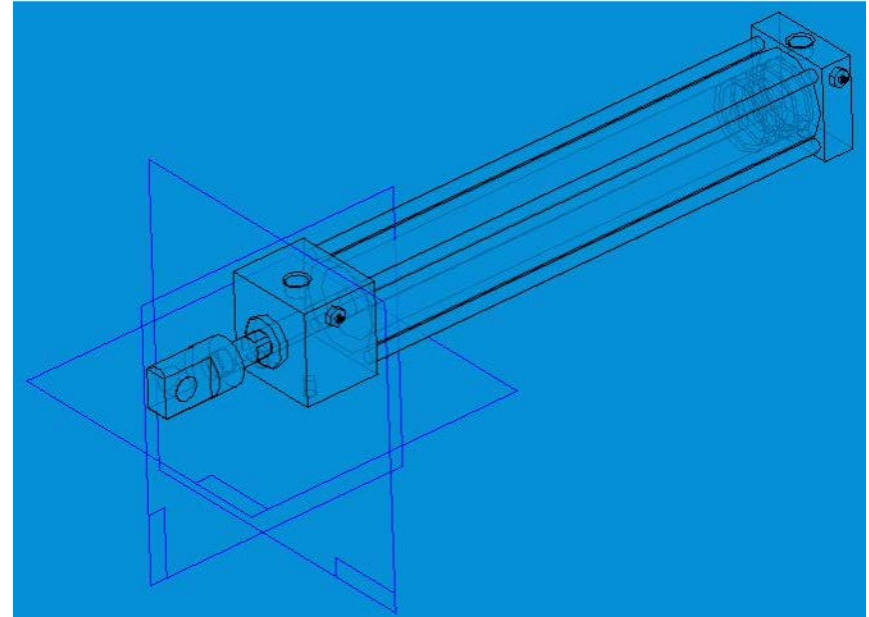
NOTE:
03 = 4" STROKE
04,06 = 8" STROKE

IF YOUR MODEL HAS A CUSHION OR SHOCK PAD, PLEASE REFER TO (PG. 5) "MODIFYING MODELS FOR CUSHION AND SHOCK PADS"

IF YOUR MODEL HAS A CUSHION OR SHOCK PAD, PLEASE REFER TO (PG. 5) "MODIFYING MODELS FOR CUSHION AND SHOCK PADS"

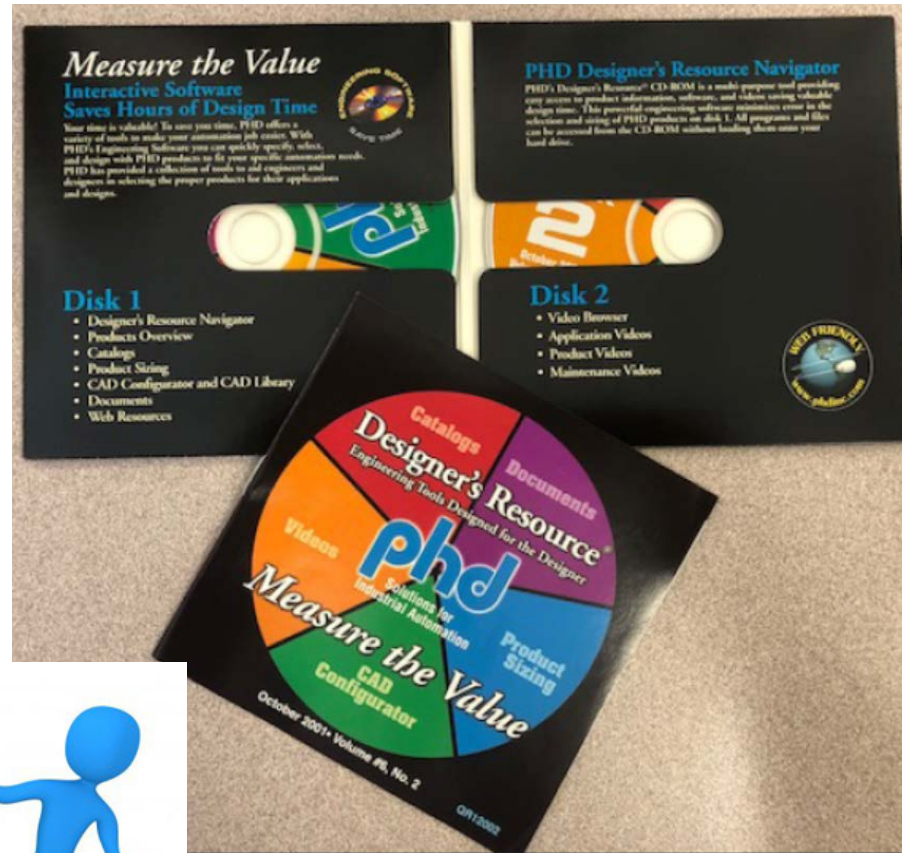
Static CAD

- 100's of models
- CAD Library
 - Drawn at zero stroke
 - User must stretch to length
 - Only one port location
 - Simple mountings
 - User must add additional geometry
- Started with 2D only
- Added 3D – IGES and DWG
- Added 3D Surfaced Models



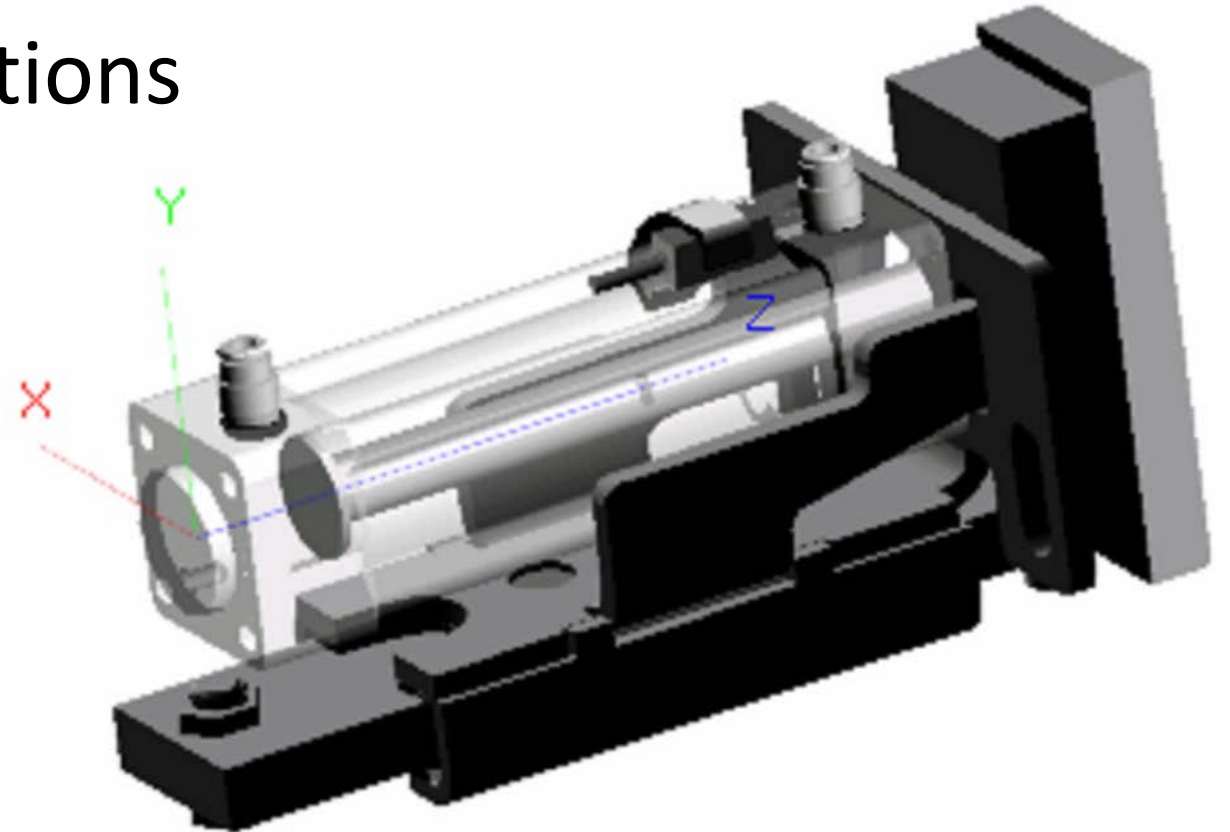
Distributing CAD Changes

- Reel to Reel
- Floppy Disk
- CD-ROM
- WEB



Moved to Dynamic CAD – Cadenas/Partsolutions

- Over 750 million combinations
- Configurator
 - Stroke Length
 - Mountings
 - Port Locations
 - Features



Accurate Models - Key concepts

1. Pull the weeds

- Fix issues as you find them
 - A. Errors in models, Fix them.
 - B. Changes in designs, Fix them.
 - C. Products we no longer offer, Remove them.



2. Add Fertilizer

- Add new features
 - Geometry improvements : Switches, accessories, detail
 - Interface Improvements: Graphical Configuration, preferences



Pull the Weeds – Errors in Models (Fix Them)

Technical Assistance Request

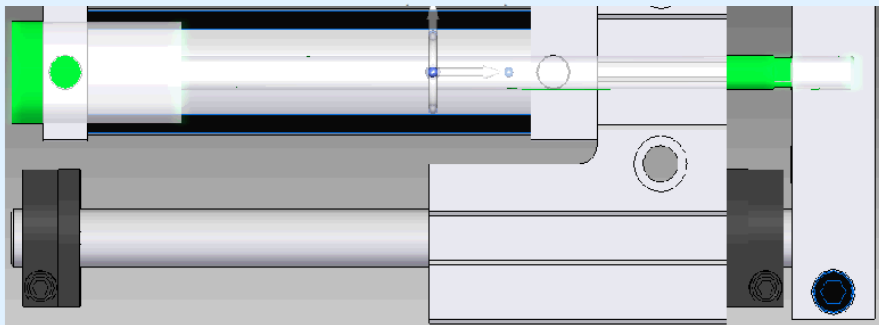
TAR ID: DMAS-AKXG7V

Requested By: Douglas Mathias
Dept: Customer Service
Location: Adm

Status: Completed

Approved By: Carey Webster; 03/30/2017
Send Request To: Cathy Walters
Carbon Copy:

Brief Description:
 CAD file from web incorrect



Detail Description:

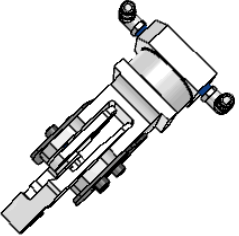
PHD number GRM2TN-6-12-00-LAA-B08-PB3E9

CAD is not correct, missing switch (PB3E9).

Get CAD Now
Add To Briefcase
Get Replacement Parts
Get Quote

Copy Part Number
Reset Part Number

GRM 2 T N - 6 - 12 - 00 - LAA -
 B08 - - - - - P B 3
 E 9 - - - -



Machine / Tooling / Document Numbers




TAR Routing Information:

Status: Completed

Douglas Mathias	Created	03/30/2017
Carey Webster	Approved	03/30/2017
Cathy Walters	Completed	03/31/2017 (date actually completed)

Pull the Weeds – Errors in Models (Fix Them)

Catalog Corrections

Division	Standard
Catalog Code	CAT-PHDV2 
Catalog Description	CATALOG; PHD MAIN; 2016; FEB
Page Numbers	2-78
Product Type	Powered Slides 
Product Model	SGx Saddle 
Description of Problem	Dimensions were corrected
Corrections	See Mark-ups attached below
Request Status	Approved
Catalog Status	Active
Entered By	Josh Buckland on 04/28/2016
Approved By	Scott Thorn on 05/12/2016
Notes	

Attachments:



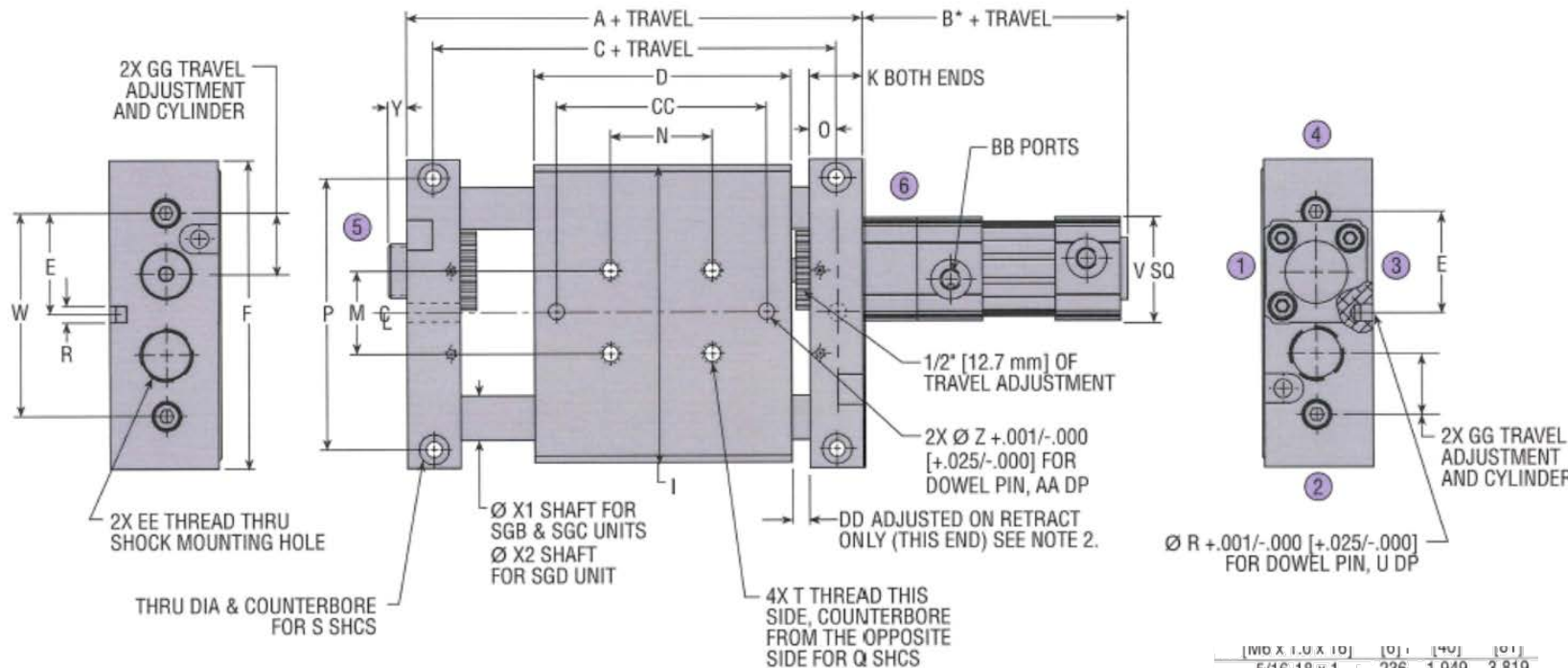
SG 05-23-16.pdf



SG Catalog Charts with Changes 5-23-16.xlsx

Pull the Weeds – Errors in Models (Fix Them)

DIMENSIONS: SERIES SG SLIDES



SER DIMENSION									
H	I	J	K	L	M	N	O	P	Q
1.259	3.543	.039	.748	1.220	1.358	1.516	.374	3.130	#6
[32]	[90]	[1]	[19]	[31]	[34.5]	[38.5]	[9.5]	[79.5]	[M4]
1.615	4.213	.039	.748	1.575	1.358	1.516	.374	3.780	#6
[41]	[107]	[1]	[19]	[40]	[34.5]	[38.5]	[9.5]	[96]	[M4]
1.811	4.803	.039	.984	1.772	1.378	1.968	.492	4.252	#10
[46]	[122]	[1]	[25]	[45]	[35]	[50]	[12.5]	[108]	[M5]
2.046	5.630	.039	.984	2.008	1.535	1.870	.492	4.960	1/4
[52]	[143]	[1]	[25]	[51]	[39]	[47.5]	[12.5]	[126]	[M6]
2.323	6.338	.039	.984	2.283	1.417	2.284	.492	5.790	5/16
[59]	[161]	[1]	[25]	[58]	[36]	[58]	[12.5]	[147]	[M8]
2.480	6.811	.039	.984	2.441	1.594	2.559	.492	6.300	3/8
[63]	[173]	[1]	[25]	[62]	[40.5]	[65]	[12.5]	[160]	[M10]

SER DIMENSION									
X2	Y	Z	AA	BB	CC	DD	EE	FF*	GG
.394	.672	.1879	.45	1/8 NPT	2.598	.335	M14 x 1.5	5.653	.768
[10]	[17]	[5]	[11.5]	[1/8 BSP]	[66]	[8.5]		[144.5]	[19.3]
.472	.672	.1879	.45	1/8 NPT	2.598	.335	M14 x 1.5	6.870	.885
[12]	[17]	[5]	[11.5]	[G 1/8 BSPP]	[66]	[8.5]		[174.5]	[22.5]
.630	.354	.3129	.49	1/8 NPT	3.012	.335	M20 x 1.5	7.343	.984
[16]	[9]	[8]	[12.5]	[G 1/8 BSPP]	[76.5]	[8.5]		[186.5]	[25.0]
.787	.354	.3129	.49	1/8 NPT	3.956	.335	M25 x 1.5	9.213	1.142
[20]	[9]	[8]	[12.5]	[G 1/8 BSPP]	[100.5]	[8.5]		[234]	[29.0]
.984	.354	.3129	.49	1/4 NPT	4.488	.335	M25 x 1.5	10.000	1.226
[25]	[9]	[8]	[12.5]	[G 1/4 BSPP]	[114]	[8.5]		[254]	[31.2]
1.181	.354	.3129	.49	1/4 NPT	5.492	.335	M25 x 1.5	10.000	1.371
[30]	[9]	[8]	[12.5]	[G 1/4 BSPP]	[139.5]	[8.5]		[254]	[34.8]

[WID X L U X ID]	[U]	[V]	[U]
5/16-18 x 1	.236	1.949	3.819
[M8 x 1.25 x 25]	[6]	[49.5]	[97]
3/8-16 x 1	.236	2.205	4.192
[M8 x 1.25 x 25]	[6]	[56]	[106.5]
1/2-13 x 1	.236	2.205	4.606
[M10 x 1.5 x 25]	[6]	[56]	[117]

Handwritten annotations in red circles:

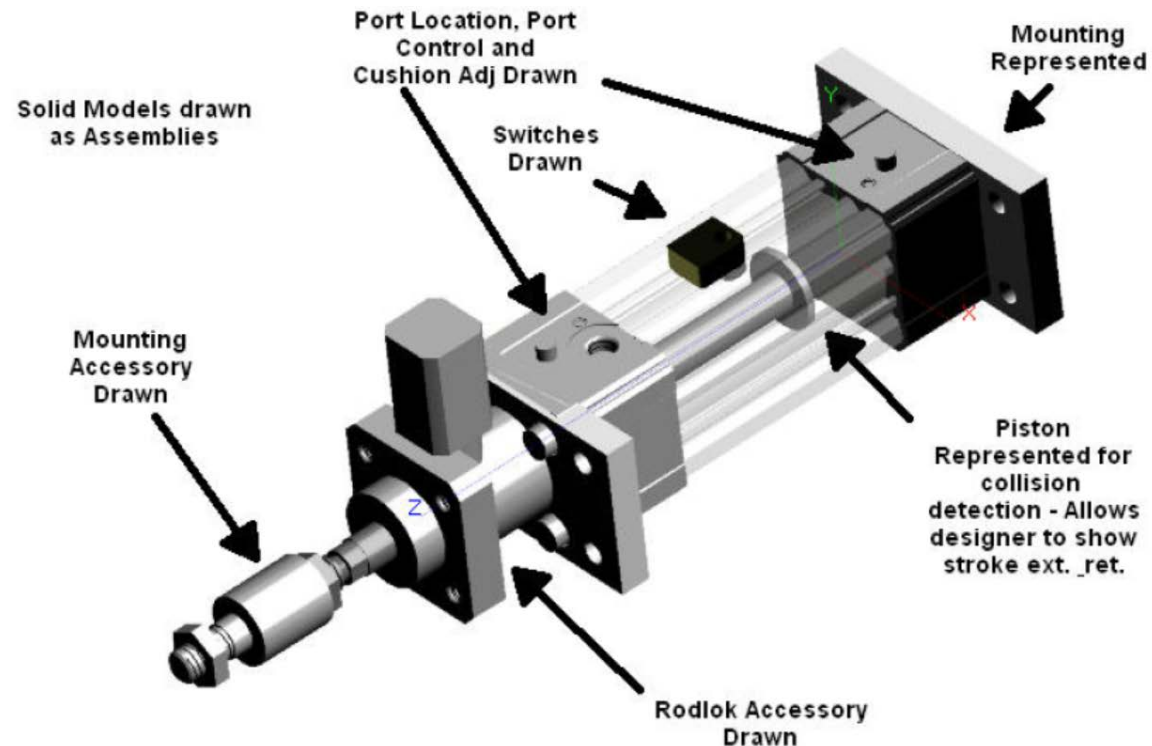
- 143.6
- 153
- 1760
- 31.1
- 12.7
- 500

Add Fertilizer (help it grow)

- Add Fertilizer

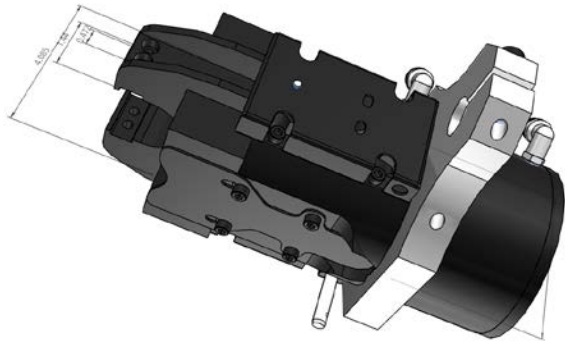
- Add new features

- Example: Add Switches, shocks, accessories and more details to geometry



Add Fertilizer (help it grow)

- Add new products
 - Part of Product Release Process



PHD Releases New Complete Product Catalog

PHD, Inc. is pleased to announce the release of their new product catalog, available in a [traditional printed version](#) and on the PHD website.



The new PHD main catalog features:

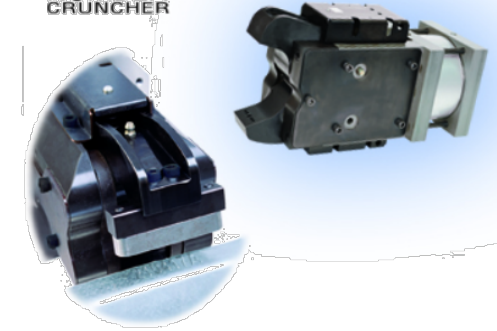
- PHD's complete comprehensive standard product line
- 21 new products
- The Optimax® line of global drop-in actuators
- The PHD Plus® line of electromechanical actuators
- Updated cutaway views, including improved graphics
- An updated shipping schedule
- An updated guide to each product section
- Detailed overviews of PHD's e-tools (myPHD), Unlimited® Unique Solutions, Blow Molding Solutions (PPC Group), Yamaha Robotics, and PHD's Rebuilt Program

★ Featured

New! Series PNC66
Pneumatic Identification
Stamping Clamp

Series PNC66

NUMBER
CRUNCHER



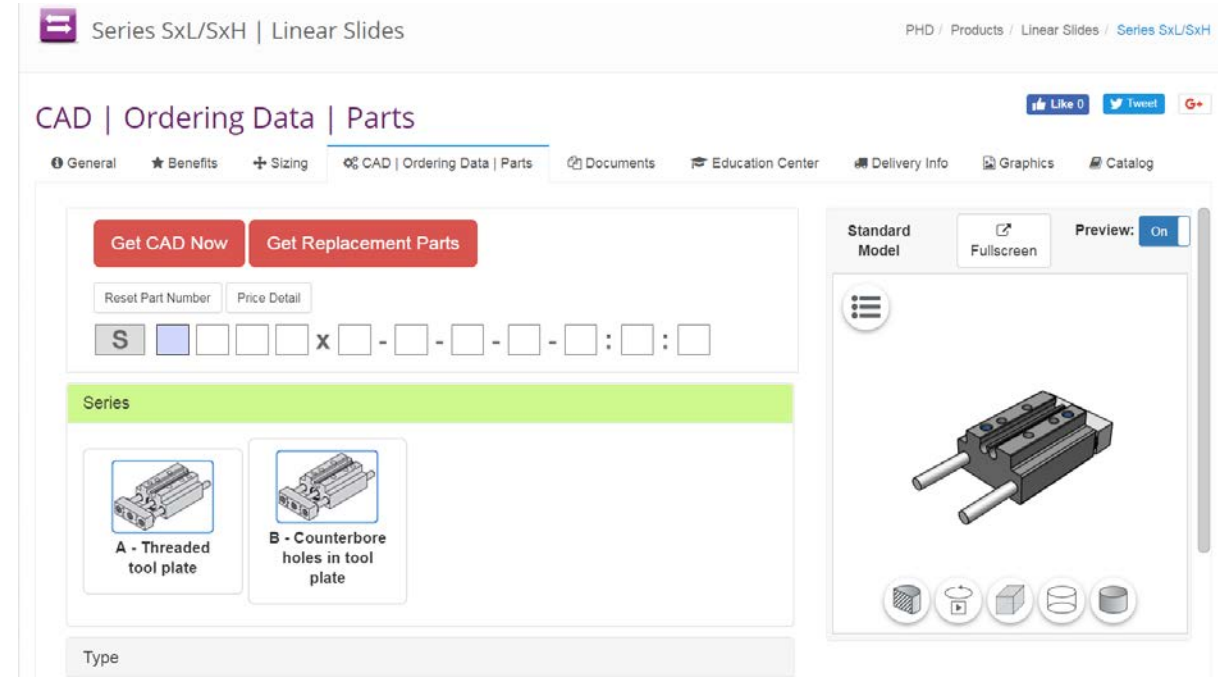
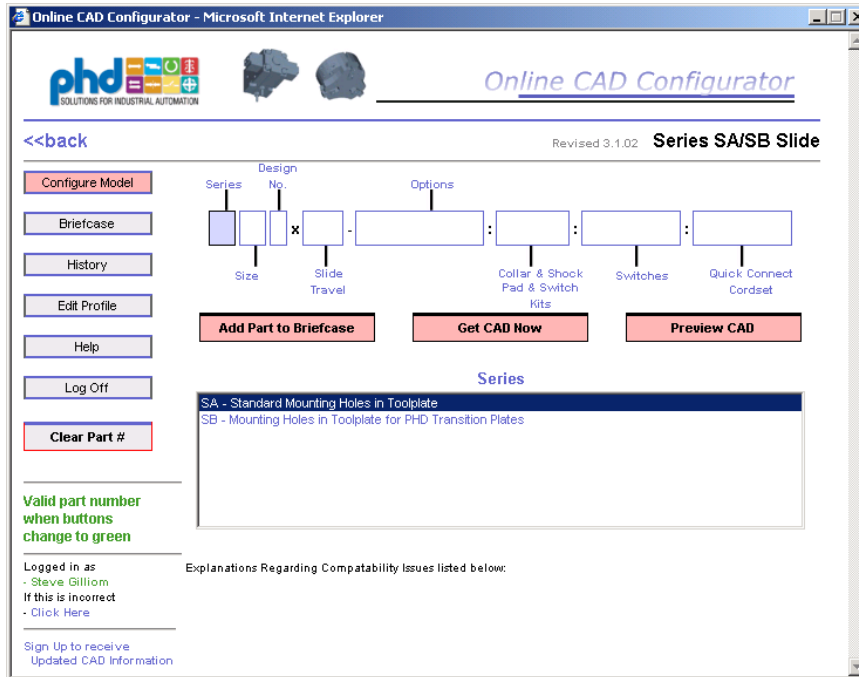
[Click for more details!](#)

Add Fertilizer (help it grow)

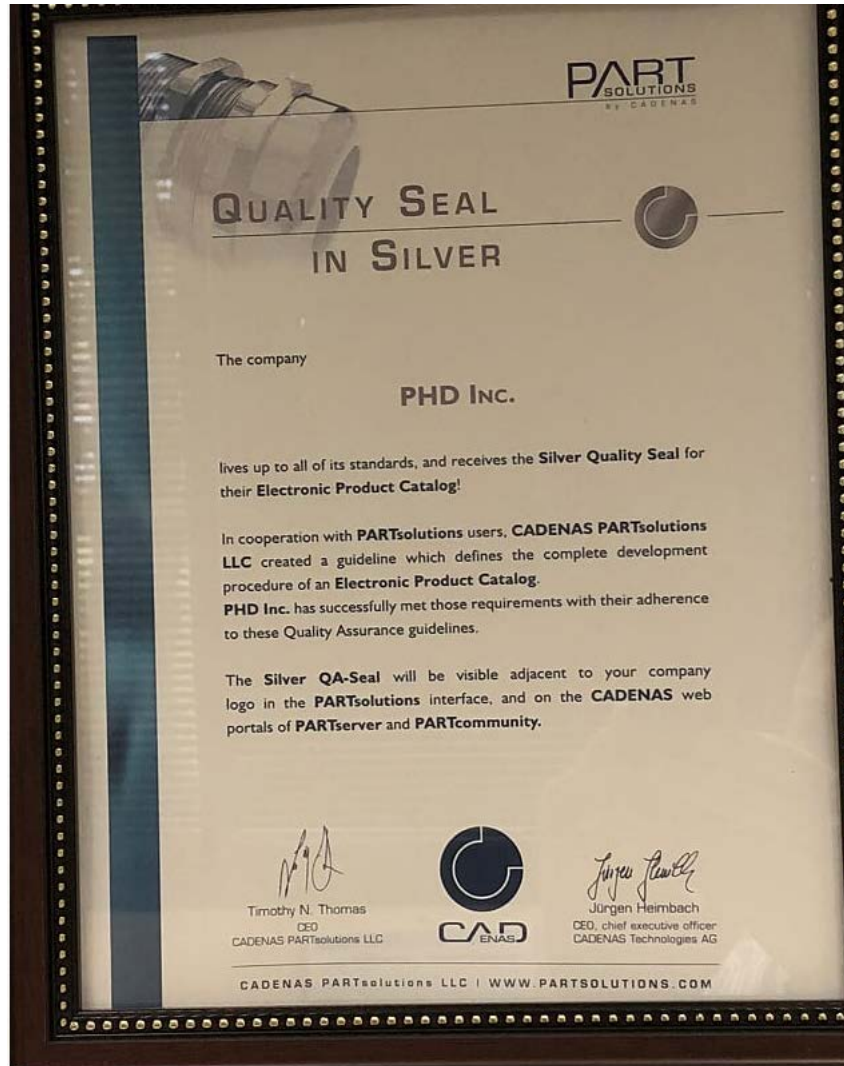
- Add Fertilizer
 - Enhance Interface (Graphical selections)

2002

2018



Accurate CAD Models – “Get noticed”





We have CAD and Ordering Data What else can we do?

- What other systems can use this?
- What additional support can we provide our Customers?
- What additional support can we provide our Distributors?

What else can we do with our Configurator?

- “Ordering Data” – No Cad – Accurate part number

The screenshot displays the 'Series STP | Linear Slides' configurator interface. The top navigation bar includes 'PHD / Products / Linear Slides / Series STP'. The main content area is titled 'CAD | Ordering Data | Parts' and features a tabbed interface with 'CAD | Ordering Data | Parts' selected. Below the tabs are two red buttons: 'Get CAD Now' and 'Get Replacement Parts'. A 'Reset Part Number' button is also present. The part number is displayed as 'STP D [] x [] - [] - [] - [] : [] : []'. Below this, a 'Design No.' section offers two options: '1 - Imperial' and '5 - Metric', each with a corresponding ruler icon. Further down, there are input fields for 'Bore Size' and 'Slide Travel'. On the right side, a 'Standard Model' preview window shows a 3D model of the linear slide, with a 'Preview: On' toggle and a 'Fullscreen' button. The PHD logo and tagline 'SOLUTIONS FOR INDUSTRIAL AUTOMATION' are located in the bottom right corner.

“Link-to” our Configurator – Product Sizing to CAD

Step 1 - Enter App Settings

Slide Type: **Cantilever** | Saddle

Bearing/Bushing Type: **Any Bearing** | Rod | Rail

Unit Type: **Both** | Metric Slides | Imperial Slides

Position Count: [Input field]

© PHD, Inc. 2018 - Privacy Terms [Next](#)

Step 2 - Enter App Inputs

Application inputs: View Images for: SCV, OSP, OSX, SD/BE, SK/BL, SxH

Orientation: **Horizontal (Flat)** | Horizontal (On Side) | Vertical (Pull Up) | Vertical (Push Up)

Load Mounting (OBW Only): **Table Load Mounting** | Tool Plate Load Mounting

Travel: 1.0000 in | Load: 1.0000 lb | Travel Time: 0.250 sec | Inlet Pressure: 87.00 psi | Cycle Rate: 1,200.00 per hour

Center of Gravity (CG) Location: **Forward (Pitch)** | To Slide (Roll)

Forward (b): 0.0000 in

Actuator selection...: **8xH108x1-AE**

Actuator Series: STP

Slide: 8xH108x1-AE

Type: Cantilever | Swamp: shaft | Status: **Successful**

Recommended Config: **Travel Adjustment required**

Thrust: 6.0480 | Impact Velocity: 16.00

PHD SOLUTIONS FOR INDUSTRIAL AUTOMATION

Get CAD Now | Add To Briefcase | Get Replacement Parts | Get Quote

STP | D | 1 | 08 | x | 1

Travel Adjustment Option

- AE1 - Travel adjustment and shock pad on extend, positive
- AE2 - Travel adjustment and shock pad on extend, positive
- AR - Travel adjustment and shock pad on retract

Continue

CAD Menu

Step 3 - Sizing Summary

1. Based on these inputs/results

STPD108x1

Inputs	
Type	Slide
Actuator Series	STP
Travel:	1.0000 in
Load:	1.0000 lb
Travel Time:	0.250 sec
Inlet Pressure	87.00 psi
Cycle Rate	1,200.00 per hour
Center of Gravity (CG) Location:	Forward
Orientation	Horizontal (Flat)

Results	
Status:	Successful (-AE1 requires -AE2)
Unit Weight	0.5500 lb
Moment	2.4420 in-lb
Thrust	13.9200 lb
KineticEnergy	0.4111 in-lb

2. Save / Print

Save | Email | Print

Distributor Contact Info: Neff - Fort Wayne (25)

3. Get CAD Model

CAD Configurator

- Graphical Configurator ensures that a proper PHD part number is generated and handles compatibility in real-time
- Features and options such as stroke, shocks, switches and mountings are represented in the geometry
- Available in most popular CAD formats
- Download CAD models directly from your browser or have them emailed

Get CAD for STPD108x1

Still not sure? Call Us (800) 624-8511 | Email Us | View Product Info

Contact Your Distributor

NEFF

Company: Neff - Fort Wayne
Phone: (260) 4890963
Email: customerservice-in@neffautomation.com
Website: www.neffautomation.com

Links “from” our Configurator

- Replacement Parts
- Product Pricing



[Back to Pricing](#)
[Print Page](#)
[Add To Price List](#)
[Price Now](#)
[Get CAD Now](#)
[Get Replacement Parts](#)

: :

Travel Adjustment Option - AE1

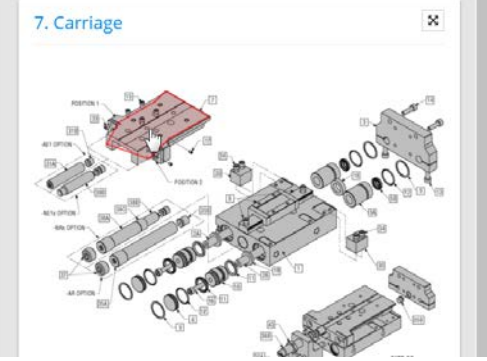


- AE1 - Travel adj
- AE2 - Travel adj
- AR - Travel adj

Replacement Parts

Available Parts for STPD112x2-1/2 [Show All Parts for Series](#)

Key	Name	Part Number
1	Housing Assembly	STPD112x2-1/2-H4800
2A	Piston and Rod Assembly Switch Side	STPD112x2-1/2-H1000
2B	Piston and Rod Assembly Port Side	STPD112x2-1/2-H1010
3	Tool Plate	STPD112x2-1/2-H6400
5	Cartridge Assembly	STPD112x2-1/2-H3410
5A	Rod Seal Cartridge	Sold as part of Cartridge Assembly
5B	Rod Seal	Sold as part of Seal Kit
		Sold as part of Cartridge Assembly
6	Bore Plug	70729
7	Carriage	STPD112x2-1/2-H6300
8	Slide/Rail Assembly	STPD112x2-1/2-H7000



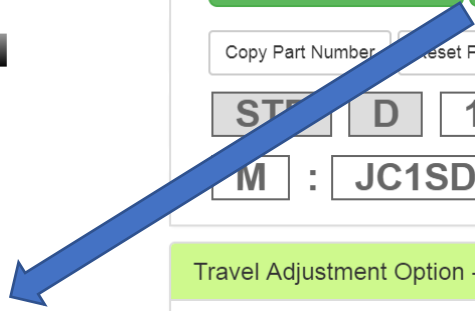
Pricing Results

Part Number: JC1SDN-5
 Description: JC1SDN-5 SWITCH; NPN, DC SOLID STATE, 5 METER CABLE
 Quantity: 1
 Individual Price: 52,60 €
Total: 52,60 €

Part Number: STPD112x2-1/2-AE1-NR2-M
 Description: STPD112X21/2-AE1-M-NR2
 Quantity: 1
 Individual Price: 951,20 €
Total: 951,20 €

- Options:
- AE1 Travel Adj, Shock Pad Ext Pos1
 - NR2 Shock Abs, Damping Constant
 - M Reed Magnet

Total Price for All Products Listed = 1.003,80 €



“myPHD” – Engineer Dashboard

- Save preferences
- Review History
- Edit ordering data
- Replacement Parts

phdinfo@phdinc.com (800) 624-8511

phd SOLUTIONS FOR INDUSTRIAL AUTOMATION

PRODUCTS INDUSTRIES E-TOOLS RESOURCES SUPPORT ABOUT CONTACT

Get CAD Now Add To Briefcase Get Replacement Parts Get Quote

Reset Part Number Price Detail

S A L 1 10 x 1/2 -

Corrosion Resistance

No Corrosion Resistance Option

Q6 - Total corrosion resistant guide shafts

Z1 - Total corrosion resistant unit

CAD Menu

phdinfo@phdinc.com (800) 624-8511

phd SOLUTIONS FOR INDUSTRIAL AUTOMATION

PRODUCTS INDUSTRIES E-TOOLS RESOURCES SUPPORT ABOUT CONTACT myphd HI, STEVE

myPHD Dashboard

NATIVE CAD ONLINE
New Configuration
Open Recent CAD Configurations


Series	Ordering Data	Created	
SAL/SAH	SAL110x1/2	1/16/2018 8:07:06 AM	Open
SAL/SAH	SAL110x1/2	1/16/2018 7:54:45 AM	Open
STP	STPD112x2-1/2	11/15/2017 11:40:34 AM	Open
GRK	GRK-1-58x20-FSR2	11/13/2017 11:03:34 AM	Open
SAL/SAH	SAL110x1/2	10/23/2017 3:32:29 PM	Open

UNIT SIZING ONLINE
New Sizing Project
Open Recent Sizing Project

Product	Title	Created	
Slide	Slide sizing test - oct 2017	10/10/2017 10:37:19 AM	Open
Electric Size	Testing of EGRR	8/1/2017 10:51:37 AM	Open
Electric Size	Electric ECV test	1/30/2017 3:04:13 PM	Open
Clamp	PNC sizing test	10/18/2016 9:11:00 AM	Open

Leverage the Configurator

myPHD Dashboard



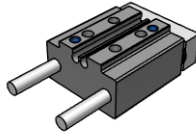
New Configuration

Open Recent CAD Configurations

Search CAD Configurations...

Series	Ordering Data	Created	
SAL/SAH	SAL110x1/2	1/16/2018 8:07:06 AM	Open
SAL/SAH	SAL110x1/2	1/16/2018 7:54:45 AM	Open
STP	STPD112x2-1/2	11/15/2017 11:40:34 AM	Open
GRK	GRK-1-58x20-FSR2	11/13/2017 11:03:34 AM	Open
SAL/SAH	SAL110x1/2	10/23/2017 3:32:29 PM	Open

Updated Model Fullscreen Preview: On



CAD Menu

phdinfo@phdinc.com (800) 624-8511

phd SOLUTIONS FOR INDUSTRIAL AUTOMATION

PRODUCTS INDUSTRIES E-TOOLS RESOURCES SUPPORT ABOUT

Get CAD Now Add To Briefcase Get Replacement Parts Get Quote

Reset Part Number Price Detail

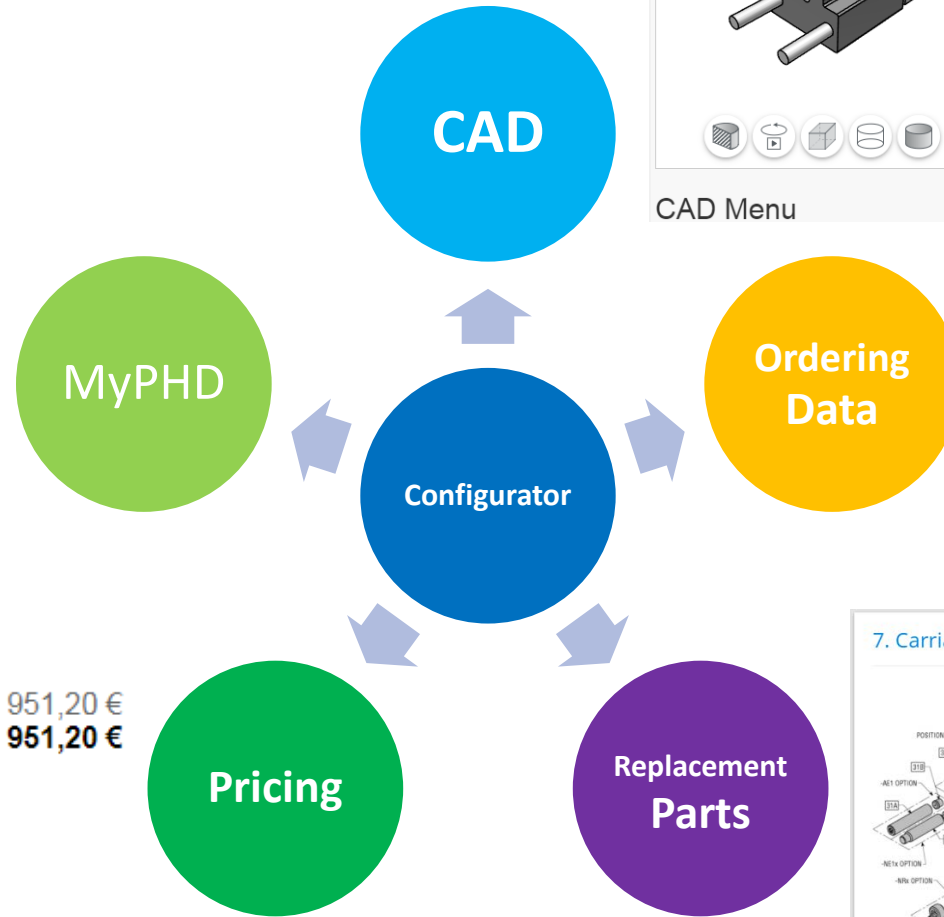
S A L 1 10 x 1/2 - - - - :

Corrosion Resistance

No Corrosion Resistance Option

Q6 - Total corrosion resistant guide shafts

Z1 - Total corrosion resistant unit



Part Number: STPD112x2-1/2-AE1-NR2-M
 Description: STPD112X21/2-AE1-M-NR2
 Quantity: 1

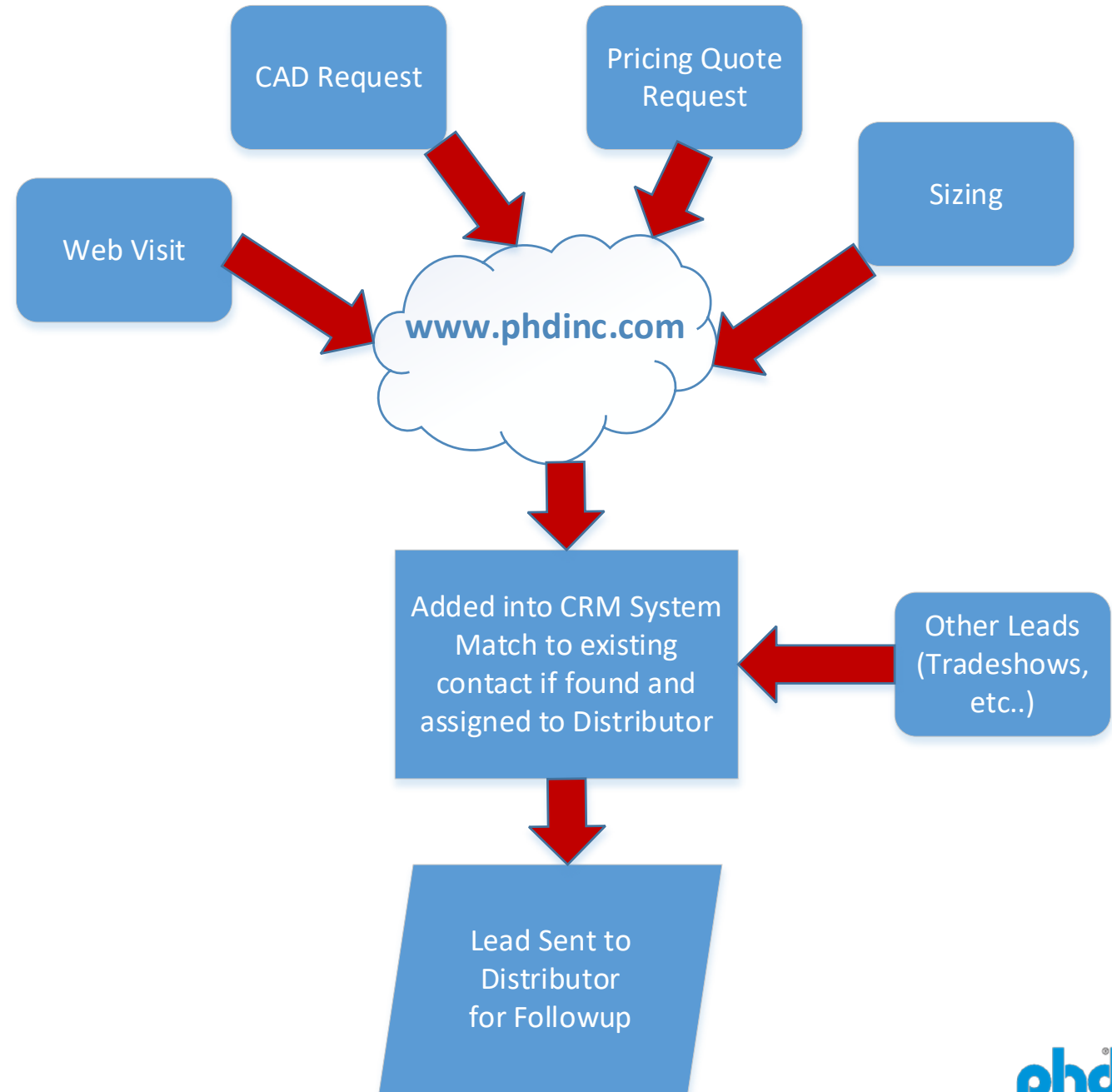
Individual Price: 951,20 €
 Total: 951,20 €

Options:

AE1	Travel Adj, Shock Pad E
NR2	Shock Abs, Damping C
M	Reed Magnet

7. Carriage

Marketing - Leads



Utilize a Trusted Partner

- Utilize a Trusted Partner who shares the vision
 - Challenges – Nothing is ever perfect. But you can find a solution.
 - Working with vendor to improve



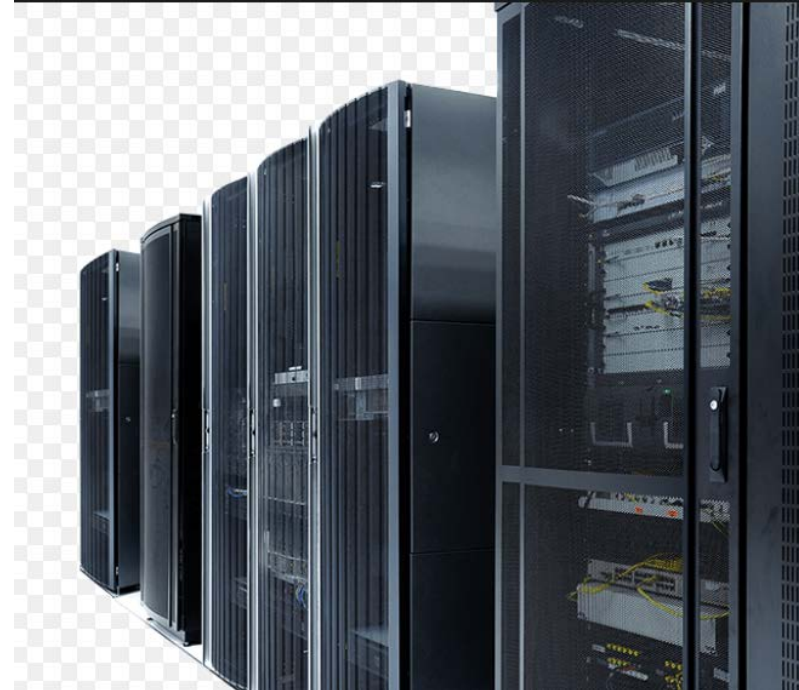
Utilize a Trusted Partner

- Utilize a Trusted Partner who shares the vision and grows with you
 - Challenges – Nothing is ever perfect. But you can find a solution.
 - Working with vendor since 2001

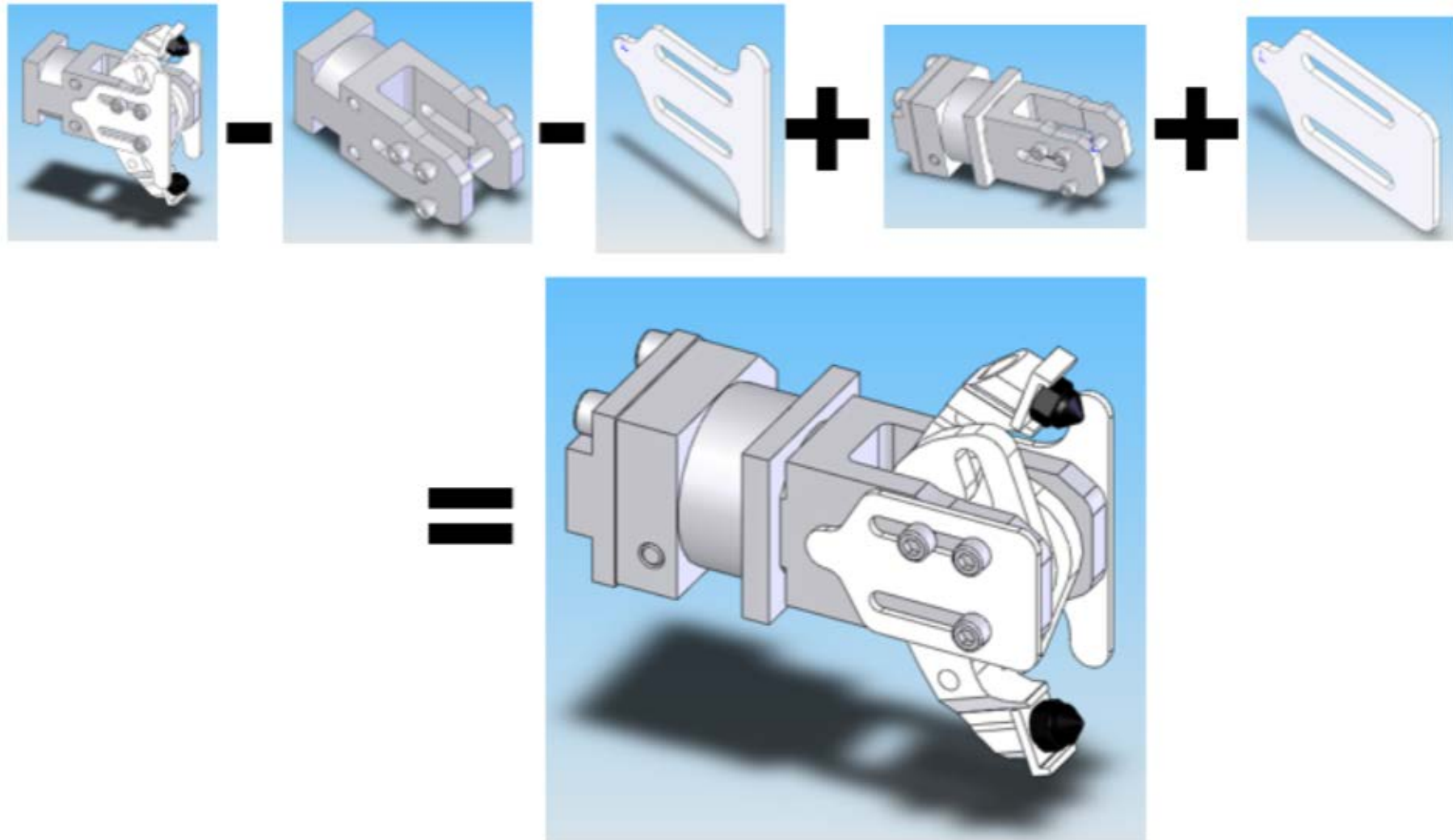
Then



Now

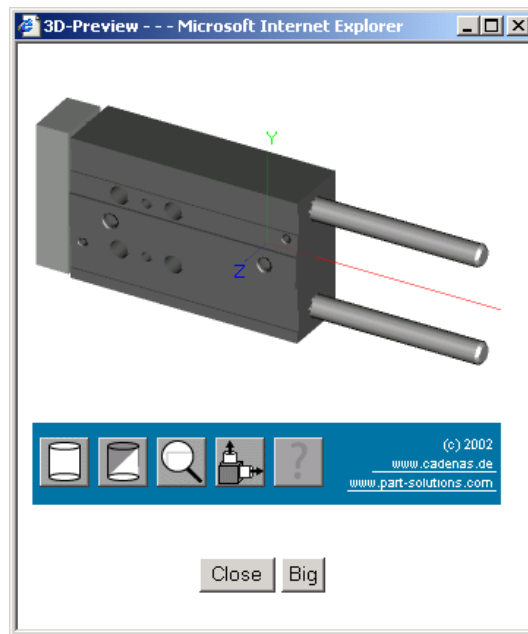


Our first Challenge - Assemblies



Utilize a Trusted Partner

- Utilize a Trusted Partner who shares the vision
 - Product Improvements – Example Preview



phdinfo@phdinc.com (800) 624-8511

Find My Distributor Distributor Login

Search Go

phd SOLUTIONS FOR INDUSTRIAL AUTOMATION

PRODUCTS ▾ INDUSTRIES ▾ E-TOOLS ▾ RESOURCES ▾ SUPPORT ▾ ABOUT ▾ CONTACT

myphd HI, STEVE ▾

Get CAD Now Add To Briefcase Get Replacement Parts Get Quote

Reset Part Number Price Detail

STP D 1 12 x 2-1/2 - - - : :
□

Travel Adjustment Option

Position 1

AE1 - Travel adjustment and shock pad on extend, position 1
 AE2 - Travel adjustment and shock pad on extend, position 2

Updated Model Fullscreen Preview: On

3D model of a mechanical part with dimensions: 5.67, 0.394, 4.287, 5.67.

Utilize a Trusted Partner

- Utilize a Trusted Partner who shares the vision
 - New features – Continue to add more value.
 - Adding them to solution
 - 3D PDF
 - Ability to Brand with Distributor Information
 - 2nd Page added to Information sheet



Personal Product Spec Sheet

Your Ordering Data:

SAL110x1/2

Order From Your Local Distributor:

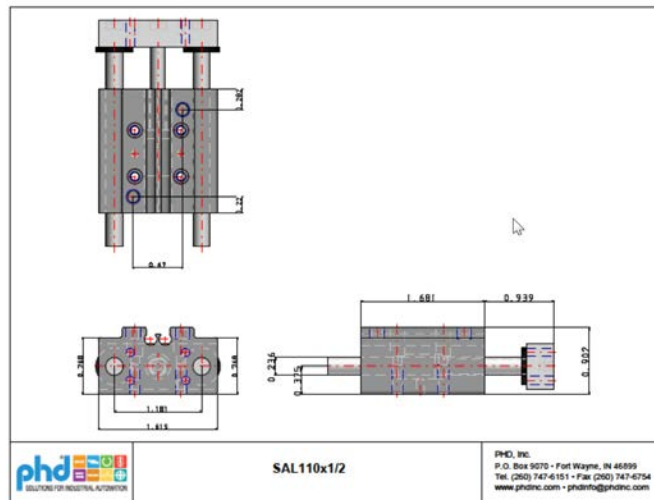
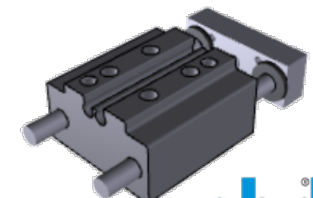
Mueller Maschinentechnik GmbH
 Felix-Wankel-Str 11
 Dueren, 52351
 Germany
 PHONE: (+49)(0)2421-49548-0
 FAX: (+49)(0)2421-49548-11
 EMAIL: info@mueller-maschinentechnik.de
 WEB SITE: <http://www.mueller-maschinentechnik.de>

automation solutions from PHD.

Series SxL/SxH Compact Linear Pneumatic Slide

Series SxL/SxH Slides feature a compact cantilever design and are available in nine sizes to accommodate a wide range of applications. Two bearing types are available with travel lengths up to 8 inches. NEW! 40, 50, and 63mm sizes are now available. Units offer high capacity TC composite bearings with oversize shafts providing exceptional load and KE stopping capacity.

Advantages: Compact, high load capacity, nine sizes, robust, long life.



Mobile

This app is only available on the App Store for iOS devices.

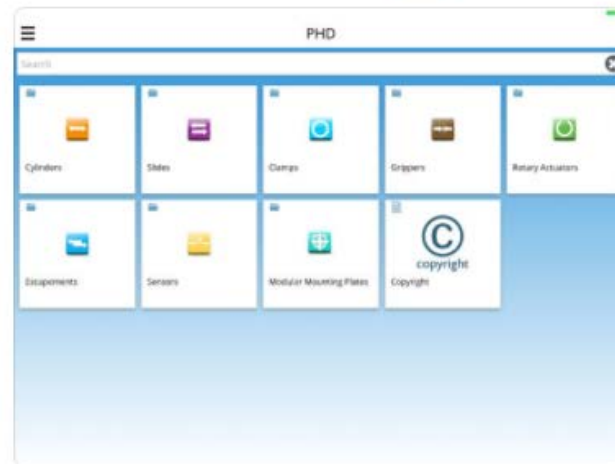


PHD 3D 4+

PHD, Inc.

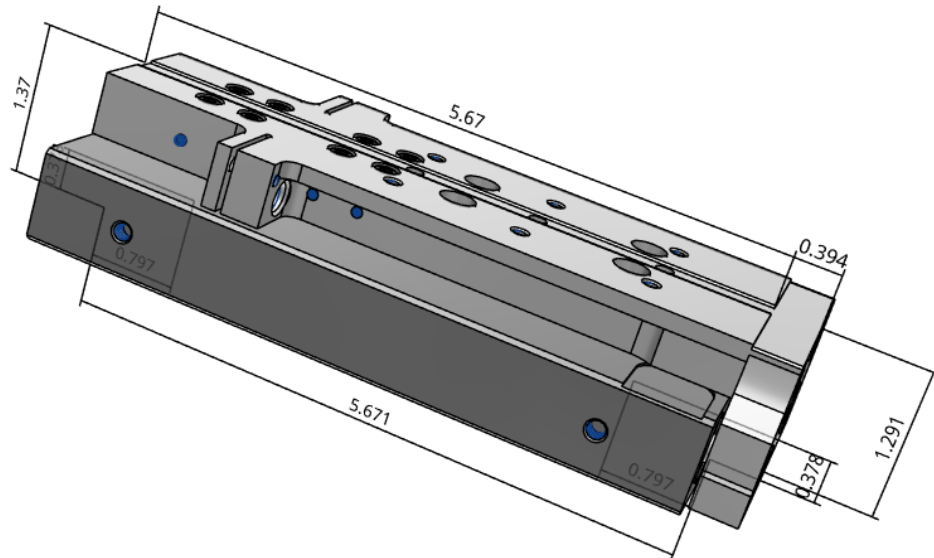
Free

Screenshots [iPhone](#) [iPad](#)



Continued updates

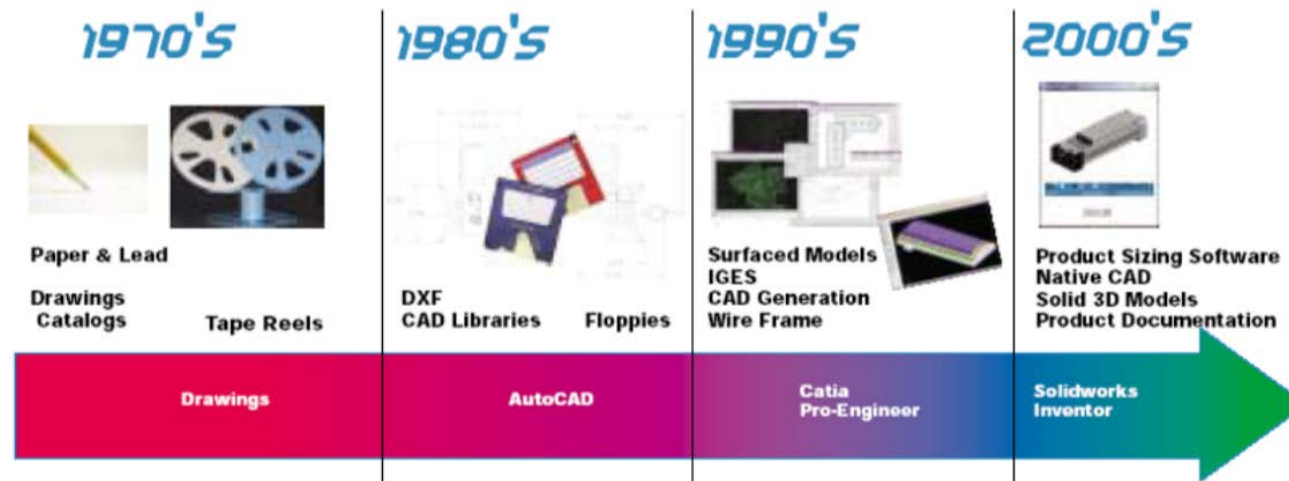
- Continued support of CAD Vendors
- New Features - Dimentions



Native 3D Formats	Native 2D Formats	Neutral 3D Formats	Neutral 2D Formats
<input type="checkbox"/> AutoCAD >=V14 i	<input type="checkbox"/> Catia IUA V4 i	<input type="checkbox"/> 3D Studio MAX	<input type="checkbox"/> Allplan 2008
<input type="checkbox"/> BeckerCAD	<input type="checkbox"/> HP ME 10 >=V9	<input type="checkbox"/> ASCON C3D	<input type="checkbox"/> BMP (2D View)
<input type="checkbox"/> Caddy++ SAT-V4.2	<input type="checkbox"/> Medusa >=2000i i	<input type="checkbox"/> Allplan 2008	<input type="checkbox"/> BMP (3D View)
<input type="checkbox"/> Catia (Macro)>=V5 i	<input type="checkbox"/> VX (Varimetrix) >=V5.0	<input type="checkbox"/> Aveva PDMS / Marine	<input type="checkbox"/> DWF ASCII 5.5
<input type="checkbox"/> Catia >=V5		<input type="checkbox"/> COLLADA	<input type="checkbox"/> DWF Binary 5.5
<input type="checkbox"/> Catia IUA V4 i		<input type="checkbox"/> DWG AUTOCAD VERSION 2004 - 20 i	<input type="checkbox"/> DWF Compressed 5.5
<input type="checkbox"/> CoCreate Modeling >=2007 i		<input type="checkbox"/> DWG AUTOCAD VERSION 2007 - 20 i	<input type="checkbox"/> DWF DWF V6, ASCII
<input type="checkbox"/> Creo Elements/Direct Modeling >=17.0 i		<input type="checkbox"/> DWG AUTOCAD VERSION 2010 - 20 i	<input type="checkbox"/> DWF V6, UNCOMPRESSED BINARY
<input type="checkbox"/> Creo Elements/Pro 5.0		<input type="checkbox"/> DWG AUTOCAD VERSION 2013 i	<input type="checkbox"/> DWG AUTOCAD VERSION 2004 - 20 i
<input type="checkbox"/> Creo Parametric 1.0		<input type="checkbox"/> DXF AUTOCAD VERSION 2004 - 20 i	<input type="checkbox"/> DWG AUTOCAD VERSION 2007 - 20 i
<input type="checkbox"/> Creo Parametric 2.0		<input type="checkbox"/> DXF AUTOCAD VERSION 2007 - 20 i	<input type="checkbox"/> DWG AUTOCAD VERSION 2010 - 20 i
<input type="checkbox"/> Creo Parametric 3		<input type="checkbox"/> DXF AUTOCAD VERSION 2010 - 20 i	<input type="checkbox"/> DWG AUTOCAD VERSION 2013 i
<input type="checkbox"/> Creo Parametric 4		<input type="checkbox"/> DXF AUTOCAD VERSION 2013 i	<input type="checkbox"/> DXF AUTOCAD VERSION 2004 - 20 i
<input type="checkbox"/> Inventor 2011		<input type="checkbox"/> IFC2x mesh	<input type="checkbox"/> DXF AUTOCAD VERSION 2007 - 20 i
<input type="checkbox"/> Inventor 2012		<input type="checkbox"/> IGES	<input type="checkbox"/> DXF AUTOCAD VERSION 2010 - 20 i
<input type="checkbox"/> Inventor 2013		<input checked="" type="checkbox"/> JT	<input type="checkbox"/> DXF AUTOCAD VERSION 2013 i
<input type="checkbox"/> Inventor 2014		<input type="checkbox"/> KOMPAS	
<input type="checkbox"/> Inventor 2015			
<input type="checkbox"/> Inventor 2016			
<input type="checkbox"/> Inventor 2017			
<input type="checkbox"/> Inventor 2018			
<input type="checkbox"/> MegaCAD SAT V2.0			

Summary

- It's a journey not a destination

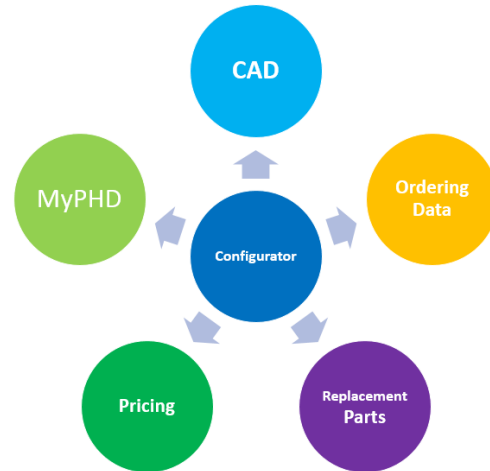


- Pull the Weeds and add Fertilizer



Summary

- Leverage the investment. What else can you do?



- Utilize a partner who has a shared vision





Enabling Productivity Throughout the World