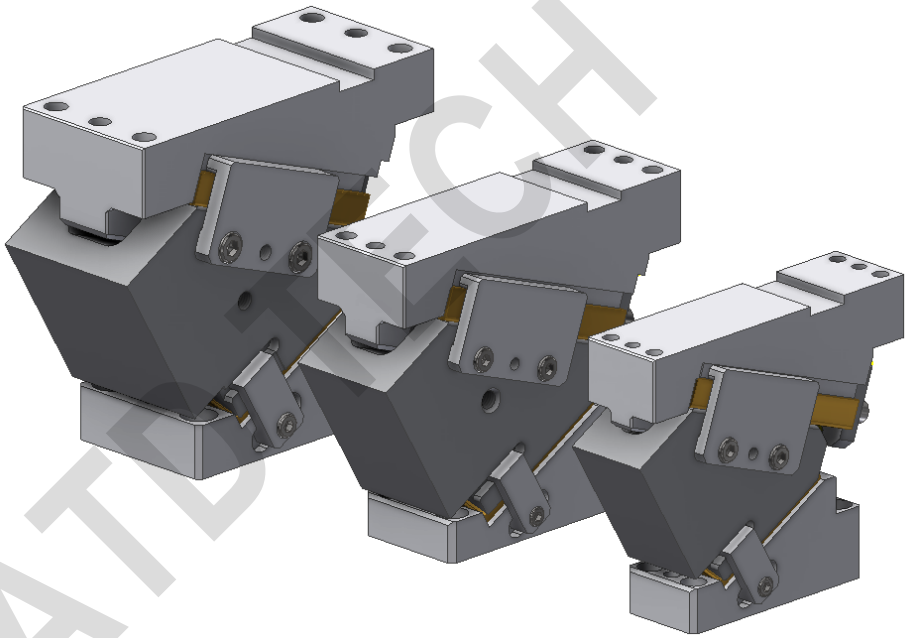
PRESS DIE STANDARD COMPONENTS

ATD TECH.
Analog To Digital Technologies

YouTube / ATD TECH

ATD PRO CAM UNITS
APCA Series



VOL. A3-APCA-EN-R4

Distributor

ATD TECH. E-mail : atdtechcam@gmail.com 2D/3D : www.atdtech.co.kr

CI & PATENT

CI

ATD TECH.
Analog To Digital Technologies

Creative Innovation

- Address : E1902-4, 30 Song-Do mirae ro, Yeon-Soo gu, Incheon, Korea
- E-mail : atdtechcam@gmail.com
- Webhard: www.webhard.net ID/PW : atdtech
- Tel. : +82-10-2048-1352
- Fax. : +82-504-449-1352

PATENT

Korea

International

Europe

Europe

Japan

China

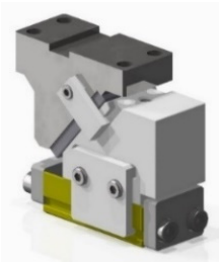
PRODUCTS LINE UP

ATD TECH.
Analog To Digital Technologies

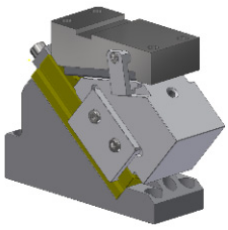
E-mail : atdtechcam@gmail.com www.webhard.net ID&PW : atdtech

ATD TECH.
Analog To Digital Technologies

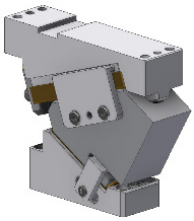
Cam Slide Unit & Piercing Unit



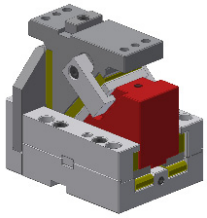
Horizontal PRO Cam Unit
APC **A1**



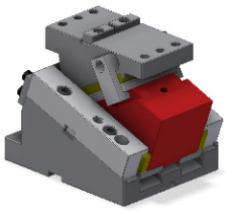
Inclined PRO Cam Unit
APC **A2**



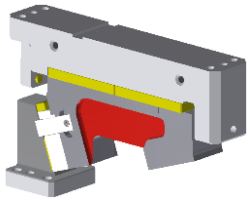
Aerial PRO Cam Unit
APCA **A3**



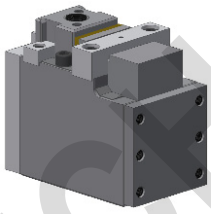
Steel Cam Unit
ADCDG **A4**



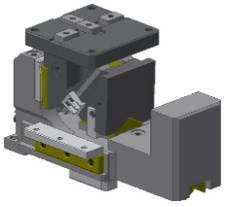
Inclined Steel Cam Unit
ATCDG **A5**



Long Body Cam
ALC **A6**



Reverse Cam Unit
AVC **A7**



Double Action Cam Unit
AUC **A8**

Coming Soon

Piercing Unit
APU **A9**

Coming Soon

Roller Cam Unit
ARC **A10**

Coming Soon

Dual Return Cam
ADR **A11**

Coming Soon

Drop Cam Unit
ASC **A12**

- Please contact to ATD sales team or global network for market standard cam units
- For technical support from ATD technical engineer, contact our network with panel data by e-mail

PRODCTS LINE UP

ATD TECH. Analog To Digital Technologies

DISK STRIPPER & DISK PAD GIDE MODLE

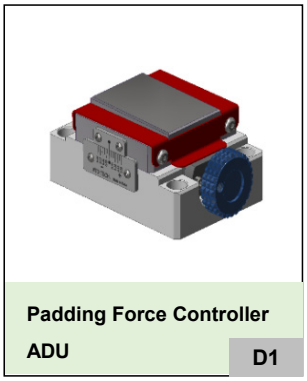
Disk Stripper
ADS B1

Disk Stripper
ADS-M B1

Disk Pad Gide
ADP C1

Disk Pad Gide Module
ADPM C1

Balance Controller



Padding Force Controller
ADU D1

Spring Guide Lifter

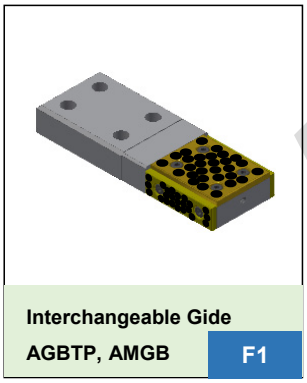
Spring guide Lifter
ACST E1

Cam Support Block

Coming Soon

Cam Support Block
ACTG H1

Market Standard



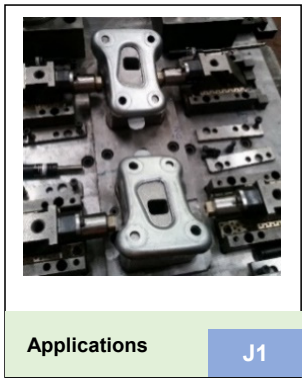
Interchangeable Gide
AGBTP, AMGB F1

Functional Devices

- The other market standard products can be supplied.
- Contact ATD sales or engineering department for special design, customer required products.
- Coming soon developing components.
- 2D/3D cad data can be downloaded from web hard as below

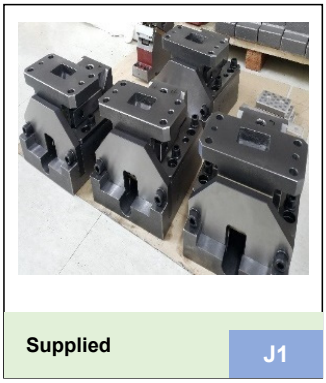
www.webhard.co.kr ID/PW : atdtech

Application



Applications J1

Supplied



Supplied J1

Technical

Technical Support J1

E-mail : atdtechcam@gmail.com www.webhard.net ID&PW : atdtech

Patent Pending

APCA Pro cam series are rigid-structured cam series

Compact Cam Unit with High Durability and Force

The APCA Series stands out with its exceptionally compact design, ideal for dies requiring medium to high stroke volumes over extended tool life.
It features a sintered or bronze glide system paired with a hardened carbon steel surface, ensuring smooth motion and wear resistance.
All wear components are part of ATD's Standard Parts lineup, offering high availability and easy replacement.

▪ Features of APCA Pro Cam

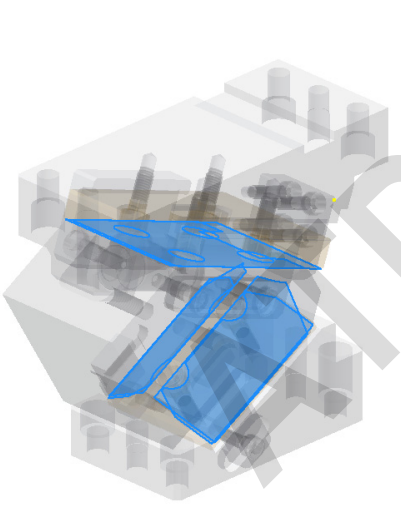
• Hardened Surface & Maximized Guide Area

Optimized Guide Surface for Stability and Performance

The APCA Series features an enhanced guiding structure that maximizes the contact area between sliding components.

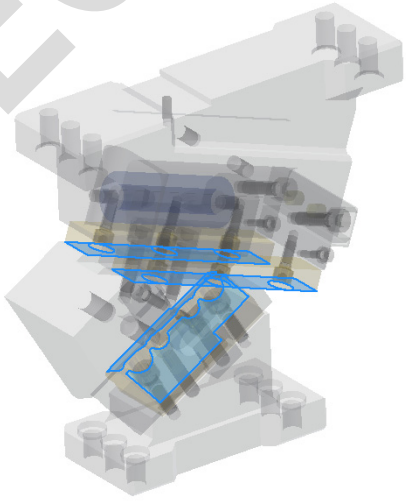
All body surfaces in contact are heat-treated and hardened, providing superior wear resistance and contributing to stable, high-performance stamping operations.

APCA



Guide Area : 16,280 mm²

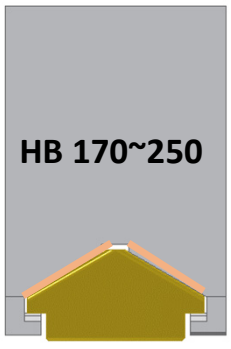
Similar width's Cam



Guide Area : 11,156 mm²

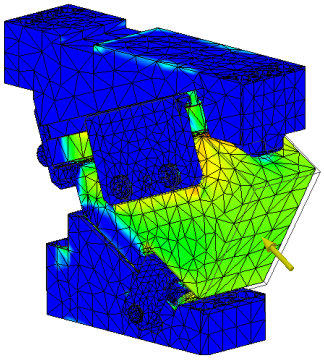
Carbon Steel Body

Cast Iron Body



Patent Pending

• Next generation Cam series



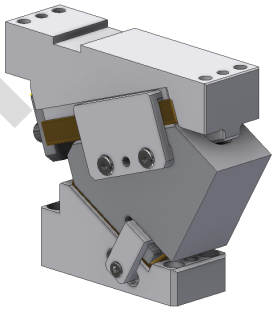
Compact Aerial Cam for HSS and High-Speed Production

The APCA Series is a standardized aerial steel cam unit designed for high-strength steel (HSS) and thick material applications.

As the most compact aerial cam in its class, it is ideal for progressive dies and high-speed press lines.

Developed through CAE-based optimization, its simplified structure enhances both reliability and operational efficiency.

• Various mounting width and working angles



Mounting Flexibility and Customization

The APCA Series is available in three standard mounting widths: 50 mm, 65 mm, and 90 mm.

Working angles range from 0° to 80°, adjustable in 5° increments.

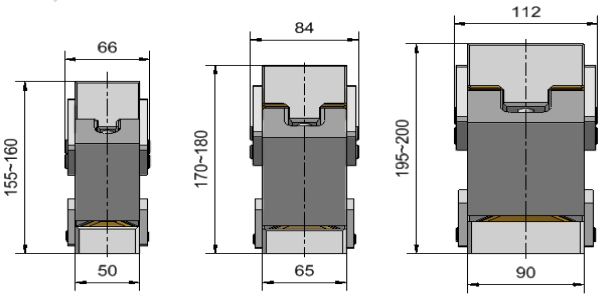
Custom widths, angles, and customer-specific configurations are available upon request.

A3

• Space utilization by compact structure

Lowest Shut Height in a Compact Form

The APCA Series offers the lowest shut height and a reduced overall width, making it ideal for space-constrained die layouts.



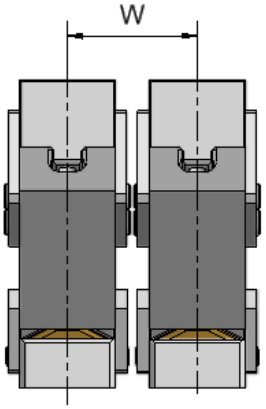
APCA 50 **APCA 65** **APCA 90**

• Mountable into small spaces

Rear-Side Disassembly for Dense Mounting

The APCA Series supports rear-side disassembly, allowing closer spacing between units and greater flexibility in compact die layouts.

Series	50	65	90
W	70mm	85mm	115mm

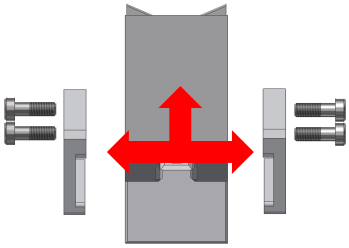


ATD TECH. Analog To Digital Technologies

Patent Pending

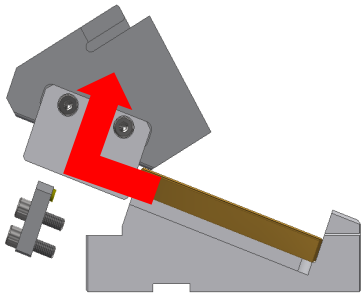
• Cam slider disassembly & Backup setting

- **Upward**



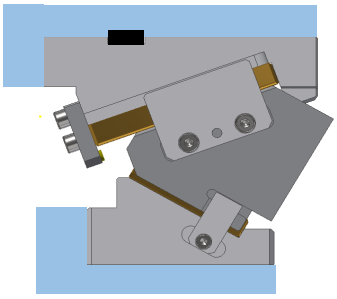
Remove both side guider

- **Backward**



Remove rear stopper

- **Backup**



More back up, Better performance

Cam unit in the tool can be removed towards the rear

▪ How to order / Code

①	②	③	④
APCA - 50	- 00	- GK	- S

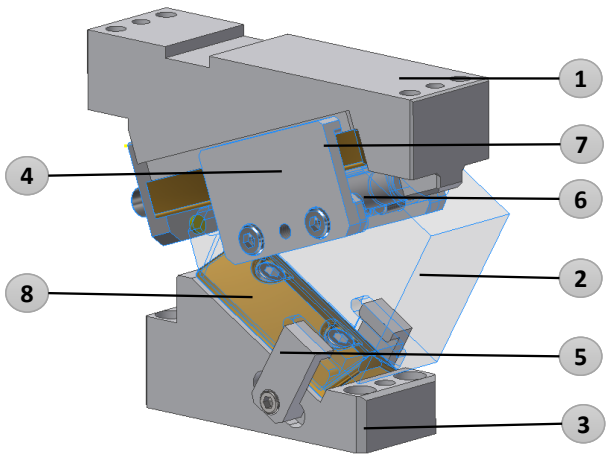
① **Cam slider width : 50mm, 65mm, 90mm**

② **Working angle : 0°~80° / every 5°**

③ **Options :**
- Gas Spring Brand
  GK(Kaller), **GD**(Dadco), **GP**(Powertec)
  NG(without gas spring)
- Wide Slider (APCA 90 Series only)
  WC (Ref. Page A3-4)
- Stepped Slider for trimming, flanging
  B (Ref. Page A3-4)

④ **Special order : Customized design, Additional M/C work**

▪ Components

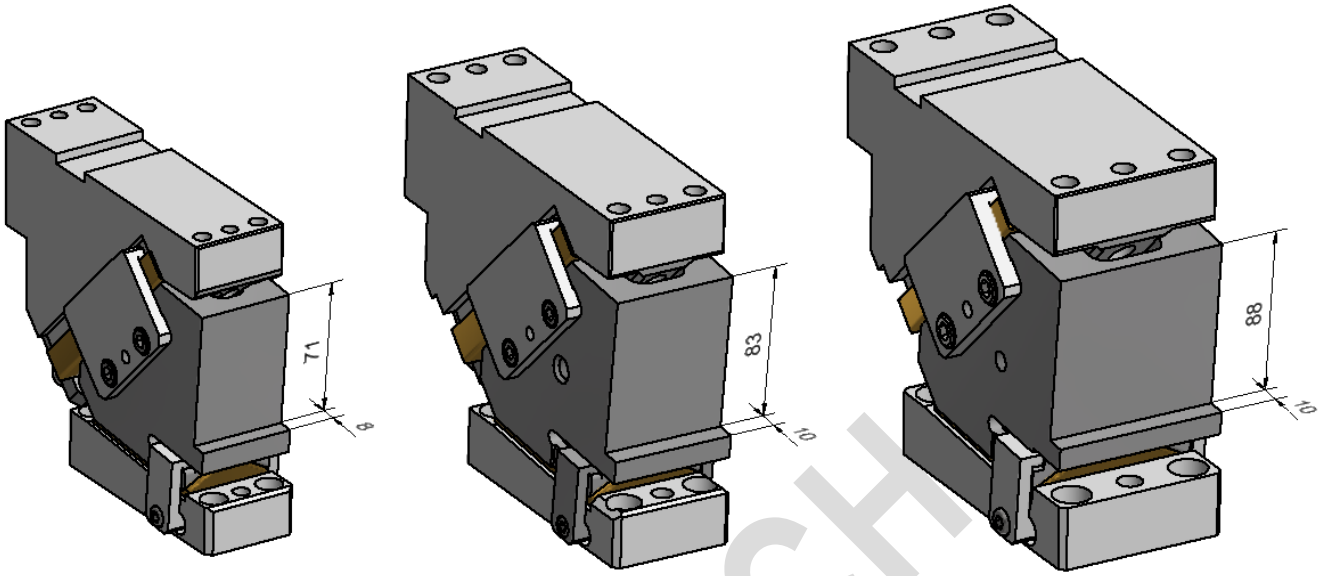


No.	PARTS	Mat'l
1	Cam Base	Steel
2	Cam Slider	Steel, HQT
3	Cam Driver	Steel
4	Side Plates	Steel, HQT
5	Return Plates	Steel, HQT
6	Gas Spring	Ref. Page A3-5
⑦	Slide Plate	Self-Lube.
⑧	V-shape Guide	Self-Lube.

• ⑦, ⑧ : **Maintenance Parts**

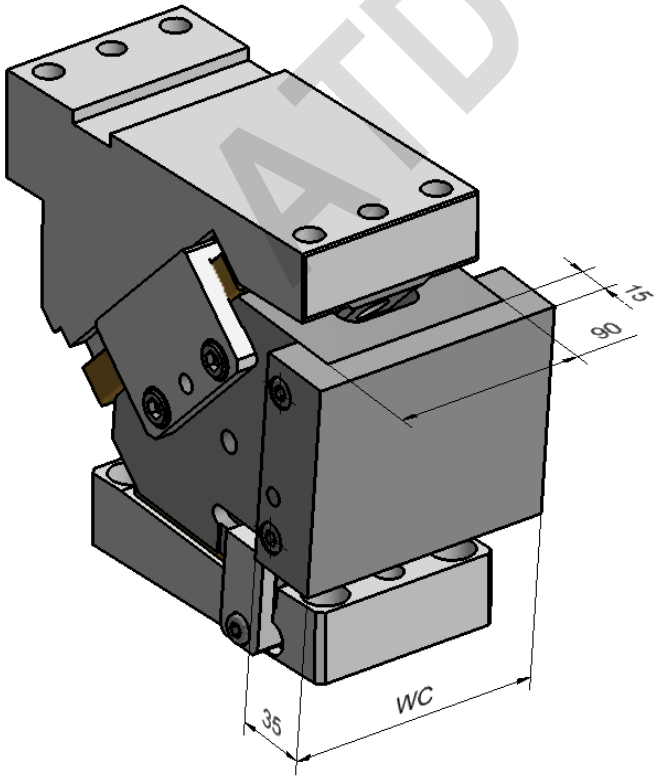
A3

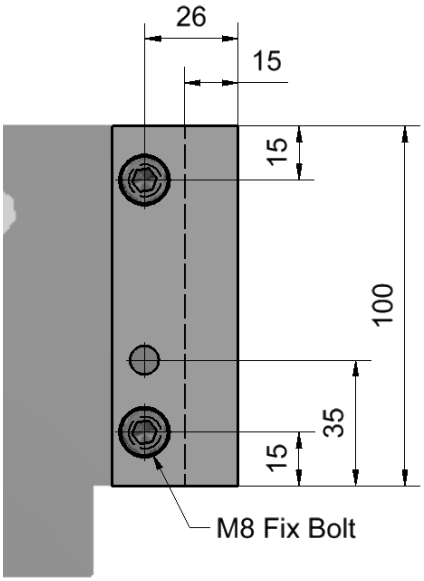
- **B option** (Stepped Slider for Steel Block)



APCA 50 Series | APCA 65 Series | APCA 90 Series

- **WC** option (Wide Slider, APCA 90 Series only)





WC : 110mm ~ 150mm (every 10mm)

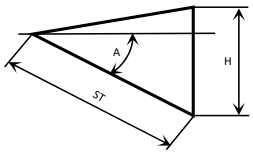
ATD TECH. Analog To Digital Technologies

Patent Pending

▪ Gas Spring Forces

Kaller Dadco Powertec

Working Angle	APCA 50		APCA 65		APCA 90	
	Gas Springs	Final Force	Gas Springs	Final Force	Gas Springs	Final Force
00º	R15-38-Yellow C.070.038.YW PS70-38-YW	1.0 kN 105 kgf	R19-038-Yellow C.090.038.YW PK100-38-YW	1.2 kN 122 kgf	X320-038 U.0325.038 PX320-38	5.2 kN 535 kgf
05º						
10º						
15º						
20º						
25º						
30º						
35º						
40º						
45º						
50º						
55º						
60º		0.96 kN 98 kgf		1.17 kN 119 kgf		5 kN 518 kgf
65º	R15-25-Yellow C.070.025.YW PS70-25-YW	0.95 kN 97 kgf		1.13 kN 115 kgf		4.8 kN 490 kgf
70º		0.9 kN 93 kgf	R19-025-Yellow C.090.025.YW PK100-25-YW	1.28 kN 131 kgf	X320-025 U.0325.025 PX320-25	5.2 kN 530 kgf
75º	R15-15-Yellow C.070.015.YW PS70-15-YW	0.91 kN 93 kgf		1.19 kN 121 kgf	X320-019 U.0325.019 PX320-19	5.0 kN 510 kgf
80º	R15-13-Yellow C.070.013.YW PS70-13-YW	0.87 kN 89 kgf	R19-015-Yellow C.090.015.YW PK100-15-YW	1.25kN 127kgf	X320-015 U.0325.015 PX320-15	4.8 kN 495 kgf



▪ Cam Diagram

APCA		Working Angle (A)																
		00º	05º	10º	15º	20º	25º	30º	35º	40º	45º	50º	55º	60º	65º	70º	75º	80º
50	ST	23.5	25.9	28.4	31	33.6	36.5	39.6	43	46.9	51.4	56.8	61	60	56.8	58.5	54.1	57.6
	H	28	28	28.4	29	29.8	30.9	32.3	34.1	36.5	39.5	43.5	50	52	51.5	55	52.2	56.7
65	ST	23.8	26.3	28.8	31.4	34.1	37	40.2	43.6	47.6	52.1	57.6	64.5	68	68.6	70.2	69.5	74.9
	H	28.3	28.5	28.8	29.3	30.2	31.3	32.7	34.6	37	40.1	44.1	52.8	58.9	62.2	65.9	67.2	73.9
90	ST	23.8	26.3	28.8	31.4	34.1	37	40.2	43.6	47.6	52.1	57.6	64.5	68	68.6	70.2	69.5	74.9
	H	28.3	28.5	28.8	29.3	30.2	31.3	32.7	34.6	37	40.1	44.1	52.8	58.9	62.2	65.9	67.2	73.7

A3

Patent Pending

▪ Working Forces

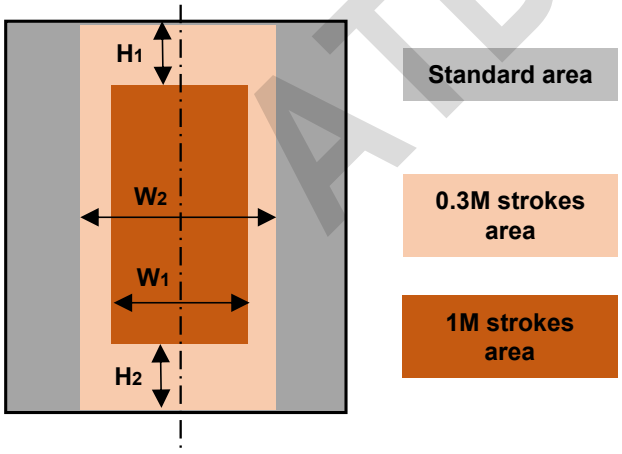
*CENTER LOAD working forces

APCA		Working Force [kN (tonf)]		
Width	Angle	Standard	* 1M strokes	* 0.3M strokes
50	00 ~ 50	24.5 (2.5)	36.3 (3.7)	49.0 (5.0)
	55	27.0 (2.75)	40.2 (4.1)	53.9 (5.5)
	60 ~ 80	29.4 (3.0)	44.1 (4.5)	58.8 (6.0)
65	00~50	42.1 (4.3)	62.7 (6.4)	83.3 (8.5)
	55	44.1 (4.5)	65.7 (6.7)	88.2 (9.0)
	60 ~ 80	46.0 (4.7)	69.6 (7.1)	93.1 (9.5)
90	00 ~ 50	58.8 (6.0)	88.2 (9.0)	117.6 (12.0)
	55	60.7 (6.2)	91.1 (9.3)	122.5 (12.5)
	60 ~ 80	63.7 (6.5)	95.0 (9.7)	127.4 (13.0)

Force Ratings and Maintenance Considerations

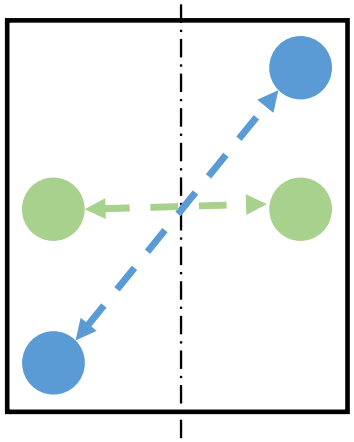
Working force values are derived from structural CAE analysis. Wear strips may require more frequent replacement depending on die configuration, punch distribution, and stamping conditions.

▪ Load distribution diagram



Working Force Areas		Cam width		
		50	65	90
1M strokes	W1	10	15	20
	H1	10	15	15
	H2	10	10	10
0.3M strokes	W2	35	45	65

▪ Symmetric distribution

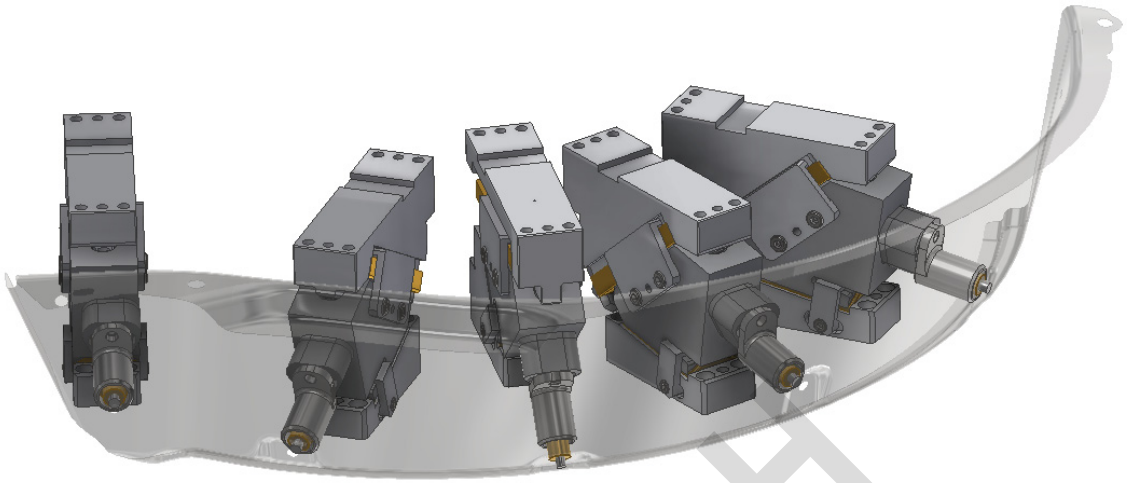


- To minimize thrust forces and ensure stable operation, symmetric load distribution is recommended
- When symmetrically loaded, the APCA Series can support combined working forces of up to one million strokes, even within standard mounting areas

A3

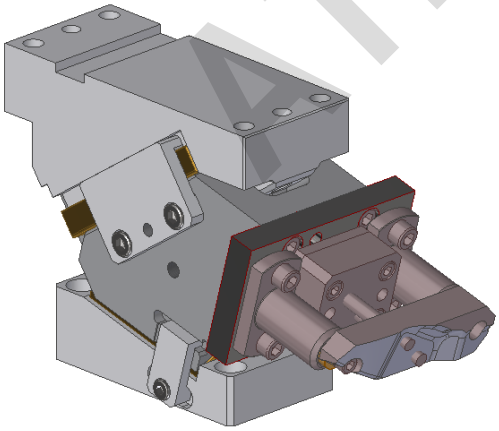
▪ Applications

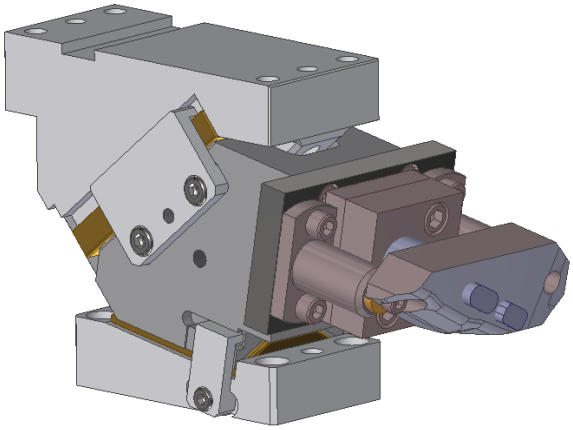
• Cam piercing with ADS



The ATD standard Disk Stripper (ADS) provides secure and consistent punch withdrawal. ADS models are categorized by punch holder thickness, available in 25 mm, 30 mm, and 41 mm (Ball Lock type).

• Cam piercing with ADP Modules





The Disc Pad Module (ADPTM) is recommended when punching occurs from a closer position or when the punch holder thickness exceeds 25 mm.