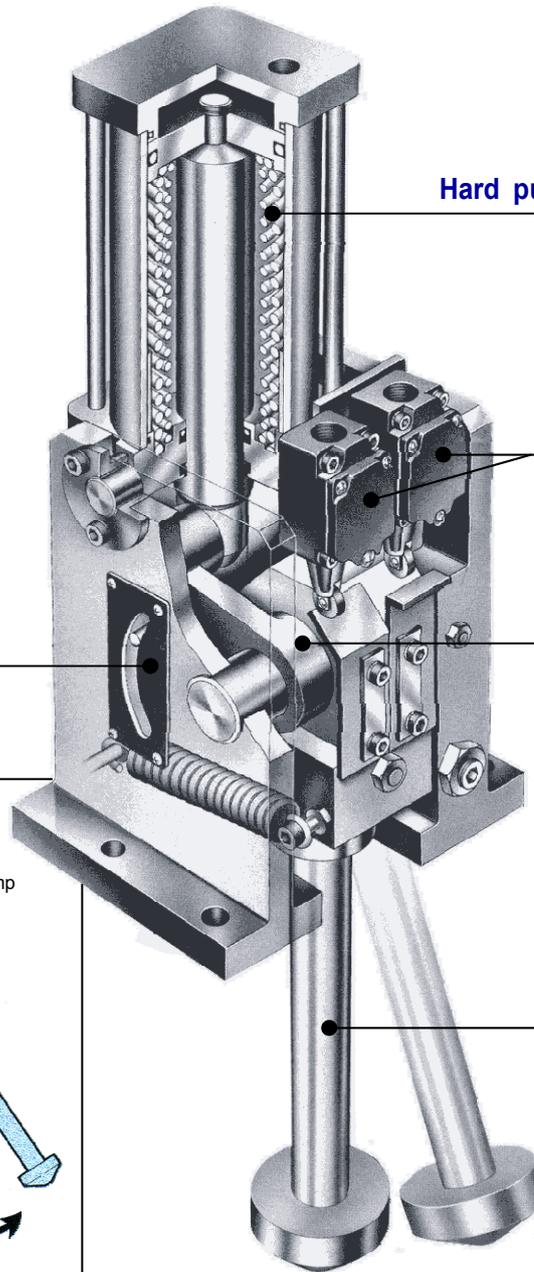


Pascal rod-swing clamp

air-operated

model **TNA**

Die holding force
39, 69, 108 kN



Hard pull-up spring for safety

- Powerful die holding force even at no air pressure
- Ideal for upper die of press machine

Limit switch activation

- Clamp and unclamp can be detected by clamp rod's position.

Eccentric clamp mechanism

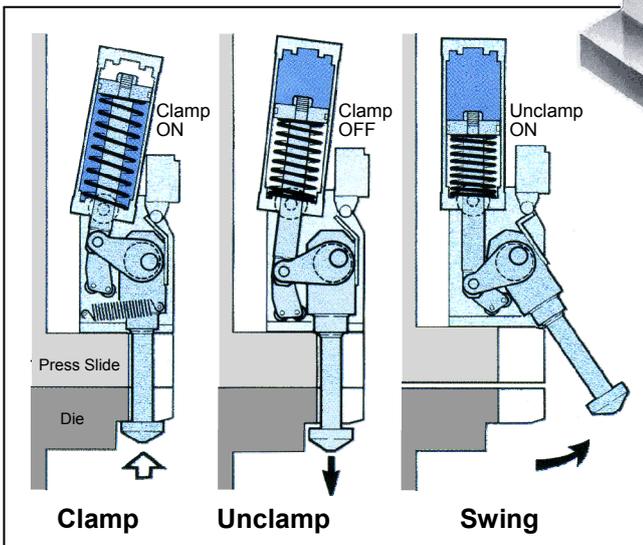
- Efficient and durable
- Prepared for shock and vibration
- No lubrication required

Clamp rod with high durability

- Thorough heat and surface treatment on chrome-molybdenum steel

Position indicator of clamp rod

- Visual confirmation of clamp / unclamp / swing positions.



■ Features

- ① Compact size came out from simplified eccentric clamp mechanism, bearing high power along with durability and impact-resistance.
- ② At clamping, air cylinder output is enlarged by **eccentric clamp mechanism**, and it gives a large pull-up force and holding force to clamp rod. The model TNA□A and TNA□B are equipped with hard pull-up spring inside air cylinder. Thus the die holding force is kept even when air supply is cut off. Even when press machine is not in use, die is securely clamped.
- ③ Position indicator on the body presents clamp / unclamp / swing conditions.
- ④ The limit switches for clamp and unclamp detection are provided to set up the safety interlock.
- ⑤ All of mechanisms are based on maintenance-free concept.



Pascal

Pascal rod-swing clamp

air-operated

model **TNA**

Model and Specifications

TNA size ① ② - ③

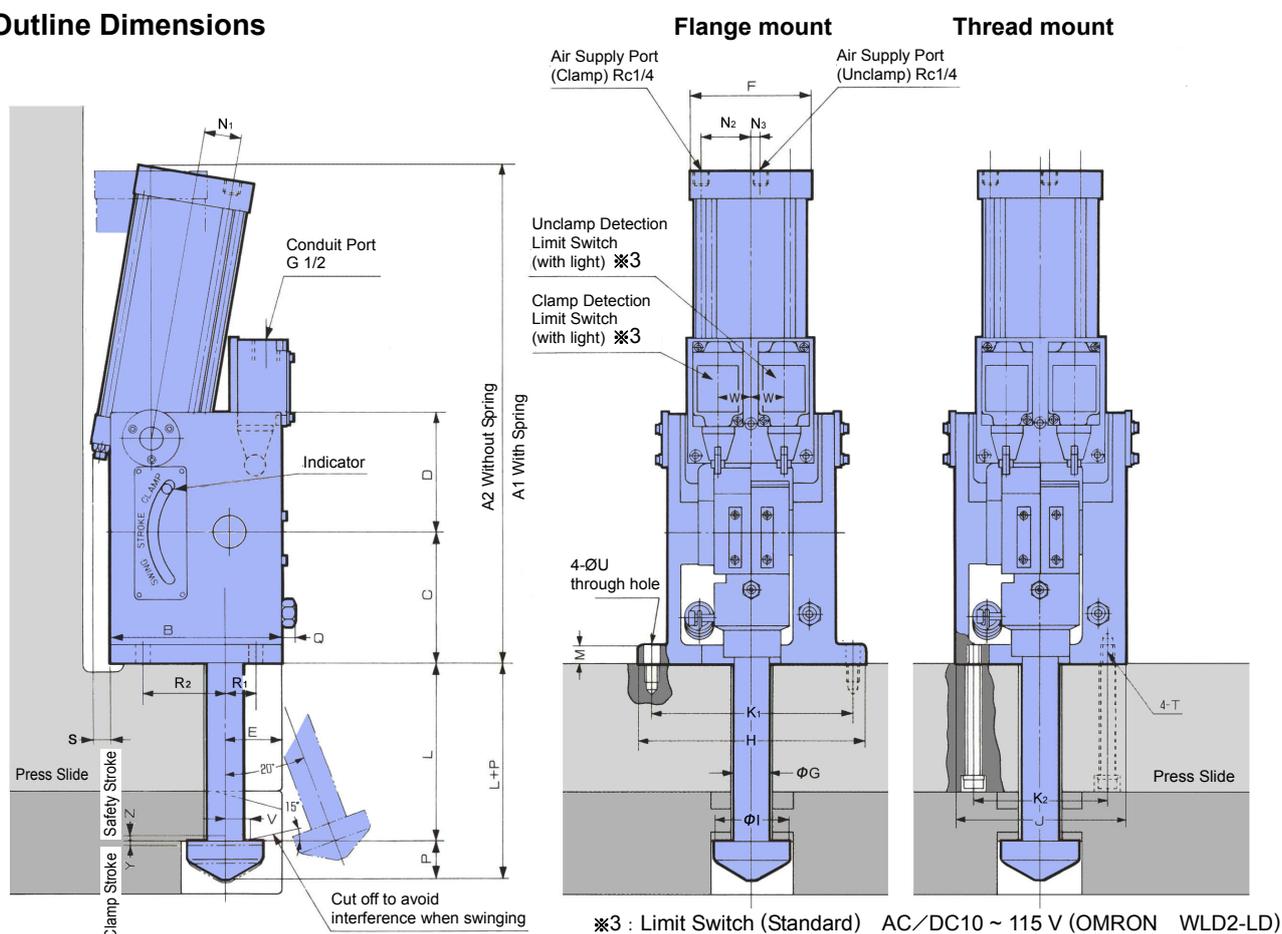
- ① Pull-up spring and Mounting ----- A With spring · Flange B With spring · Thread mount
 Type (see drawing below) C Without spring · Flange mount D Without spring · Thread mount
- ② Swing angle ----- 20° (other angle available on request)
- ③ Clamp rod length ----- L mm

Model	Pull-up force ※1 kN			Clamp rod break force kN	Clamp stroke mm	Safety stroke mm	Swing angle ※2 (Standard)	Air pressure MPa		Ambient temperature °C
	Air 0.5MPa	Air 0.5MPa	Air 0MPa					Rated	Max.	
TNA040A/TNA040B	19.6	39.2	10.7	58.8	3.0	0.5	20°	0.49	0.68	0~70
TNA040C/TNA040D	14.7	28.4	—							
TNA063A/TNA063B	30.4	68.6	19.6	98.0	3.0	1.0				
TNA063C/TNA063D	21.5	49.0	—							
TNA100A/TNA100B	49.0	107.8	29.4	147.0	3.5	1.0				
TNA100C/TNA100D	34.3	78.4	—							

※1 : Pull-Up force and holding force vary with the tolerance of ±10% from the figure.

※2 : Swing angle is set as designated at factory before delivered.

Outline Dimensions



Model	A1 (H)	A2 (N)	B	C	D	E	F	G	H	I	J	K1	K2	M	N1	N2	N3	P	Q	R1	R2	S	T	U	V	W	Y	Z
TNA040	353	290	110	90	82	34	80	22	150	50	100	130	80	17	25	30.5	0	25	18	20	20	16	M10	11	20	21.1	3.0	0.5
TNA063	397	354	135	105	95	45	96	28	180	60	145	160	105	16	29	39.0	7	30	18	25	40	13	M10	11	20	26.0	3.0	1.0
TNA100	465	412	158	135	120	43	118	34	225	75	178	200	110	20	31	47.0	8	40	19	20	50	13	M12	14	30	27.5	3.5	1.0

Specifications are subject to change without prior notice.

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