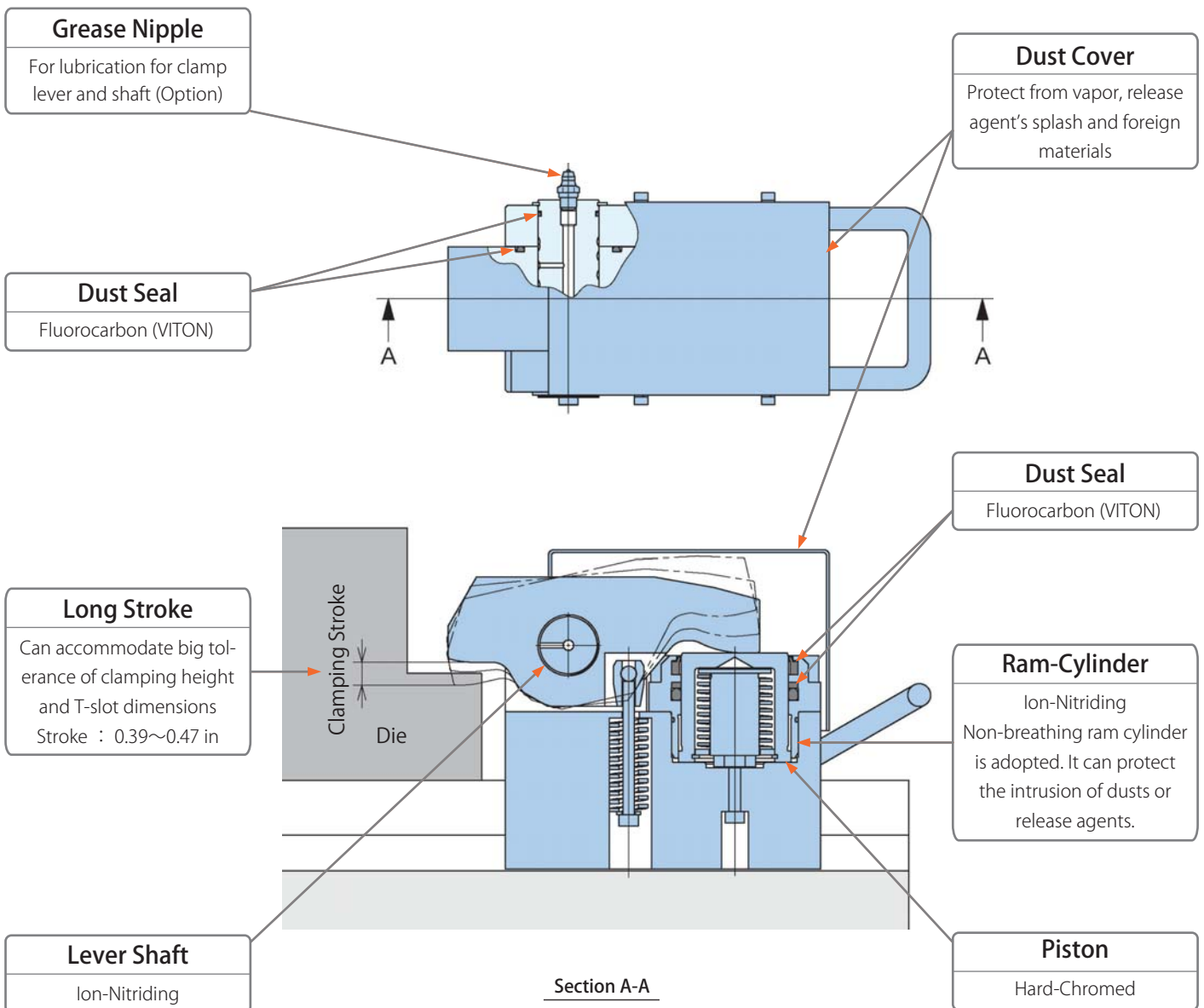


# Construction and features of Pascal Clamp model **TYB**

**Assures high durability and reliability even under severe operating condition (Heat, vapor, splash of release agent, etc.).**

- Perfect protection against dust or die release agents
- Best solution for heat and corrosion
- Clamp force 8800, 13800, 22000, 35000 lbs  
55000 lbs type now developing



# Data of Pascal Clamp model TYB

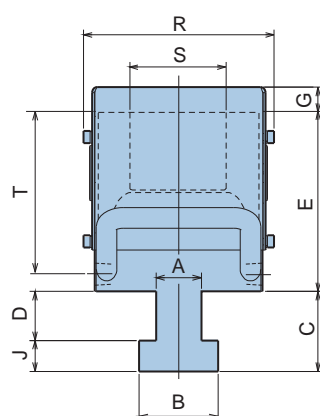
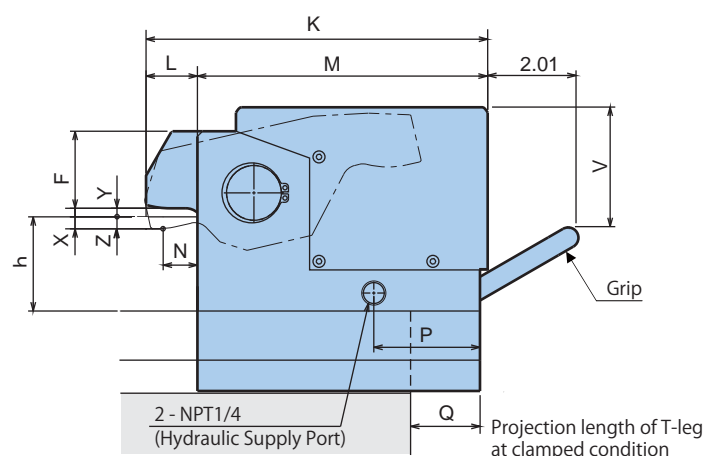
## Specifications

Model	TYB4DGNV	TYB6DGNV	TYB10DGNV	TYB16DGNV
Clamping force at hydraulic pressure 3550 psi (lbs)	8800	13800	22000	35000
Full stroke : X (in)	0.39	0.39	0.47	0.47
Clamping stroke : Y ※1 (in)	0.16	0.16	0.16	0.16
Safety stroke : Z ※1 (in)	0.23	0.23	0.31	0.31
Cylinder capacity at full stroke (in <sup>3</sup> )	1.01	1.59	2.88	4.77
Mass ※2 (lbs)	10	20	33	55

Proof pressure : 5320 psi Working temperature range : 41 ~ 248 °F

※1 Clamping stroke and safety stroke shown above are the standard. Strokes are subject to change based on dimensions of die and T-slot.

※2 Mass varies according to the dimension of T-slot or "h" dimension.



※ Dimensions "A, B, C, D, J" to be determined based on T-slot dimensions.

(in)

Model	F (h) ※1	G	K	L	M	N	P	MAX. Q ※2	R	S	T	V	MIN. E	MIN. J ※3	h ※4 MIN.~ MAX.
TYB4DGNV	1.08 (1.69 ≤ h) 1.28 (1.50 ≤ h < 1.69) 1.48 (1.30 ≤ h < 1.50)	0.51	5.71	0.91	4.80	0.63	2.05	1.26	3.27	1.56	2.46	-	2.93	Standard : 0.41 S1 : — S2 : 0.35	1.30 ~ 1.97
TYB6DGNV	1.16 (1.89 ≤ h) 1.56 (1.50 ≤ h < 1.89) 1.95 (1.10 ≤ h < 1.50)	0.51	6.61	1.18	5.43	0.79	1.97	1.42	4.06	1.95	2.70	2.28	3.21	Standard : 0.55 S1 : 0.45 S2 : 0.37	1.10 ~ 2.36
TYB10DGNV	1.77 (2.20 ≤ h) 2.17 (1.81 ≤ h < 2.20) 2.56 (1.42 ≤ h < 1.81)	0.55	7.87	1.18	6.69	0.79	2.44	1.77	4.49	2.15	3.72	2.99	4.13	Standard : 0.63 S1 : 0.51 S2 : 0.43	1.42 ~ 2.76
TYB16DGNV	2.36 (2.28 ≤ h) 2.76 (1.89 ≤ h < 2.28) 3.15 (1.50 ≤ h < 1.89)	0.59	9.25	1.18	8.07	0.79	3.15	2.17	5.24	2.35	4.33	3.78	4.80	Standard : 0.75 S1 : 0.61 S2 : 0.51	1.50 ~ 3.15

※1 "F" dimension to be determined by "h" dimension.

※2 There are cases when the projection length of T-leg exceeding the Max. Q figure may be used according to the T-slot dimensions. In such case, ask us for details.

※3 Dimension varies according to the material of the body. (Standard : SS400、S1 : S45C、S2 : SCM435)

※4 Special specifications prepared in case "h" dimension is out of the range.

## Selection of clamping system

Die locking force of machine	Clamp		Hydraulic control unit (See Page 7)
	Model × Quantity ※1	Total clamping force ※2	
~ 220 US ton	TYB 4 DGNV × 8	35200 lbs	HCS D-HG2SSS-N HCL D-HG2SSS-N
~ 390 US ton	TYB 6 DGNV × 8	55200 lbs	
~ 600 US ton	TYB10 DGNV × 8	88000 lbs	
~ 940 US ton	TYB16 DGNV × 8	140000 lbs	
~ 1400 US ton	TYB16 DGNV × 12	210000 lbs	HCL D-HG2SSS-N
~ 2000 US ton	TYB16 DGNV × 16	280000 lbs	

※1 Quantity for one machine.

※2 Clamping force per platen. Inquire the clamp selection, when the actual die opening force is greater than above value.

## Model designation

**TYB** ① ②

① Clamping force  
4, 6, 10, 16  
(refer to Specification Table)

② Variation

**D** : With cover

**G** : With grip

**N** : NPT port

**P** : With grease nipple

**V** : Viton seal

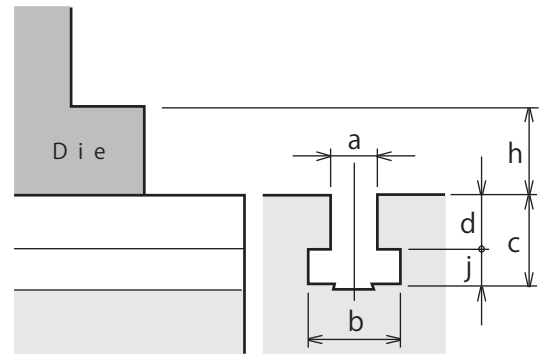
**S1** : Body material S45C

**S2** : Body material SCM435

# Check points for introduction of Pascal die clamping system

## T-slot dimensions and clamping height

- Specify T-slot dimensions "a, b, d, j" and clamping height (sub-plate thickness) "h".
- Regarding "d" dimension  
 Retrofit : Specify to 0.01 in.  
 New machine : Machining tolerance shall be  $\pm 0.01$  in or better.
- Recommended T-slot dimensions are shown in the following table.
- Minimum T-slot dimensions are also shown. Contact Pascal if your T-slot dimensions are less than these figures.

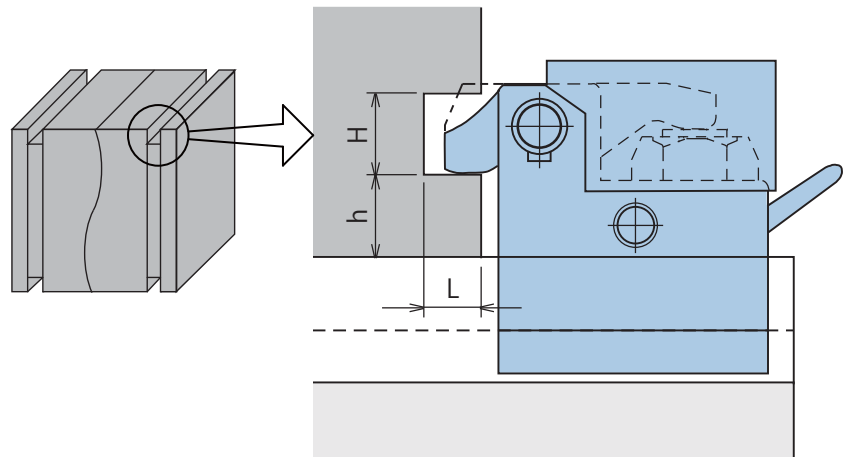


(in)

Model	Recommended T-slot dimensions				Minimum T-slot dimensions		
	a	b	d	j	a	d	j
TYB4DGNV	0.87 <sup>+0.02</sup> <sub>0</sub>	1.46 <sup>+0.12</sup> <sub>0</sub>	0.87 ± 0.008	0.63 <sup>+0.08</sup> <sub>0</sub>	0.59	0.55	0.47
TYB6DGNV	1.10 <sup>+0.02</sup> <sub>0</sub>	1.81 <sup>+0.16</sup> <sub>0</sub>	1.10 ± 0.008	0.79 <sup>+0.08</sup> <sub>0</sub>	0.75	0.63	0.63
TYB10DGNV	1.10 <sup>+0.02</sup> <sub>0</sub>	1.81 <sup>+0.16</sup> <sub>0</sub>	1.10 ± 0.008	0.79 <sup>+0.08</sup> <sub>0</sub>	0.91	0.71	0.71
TYB16DGNV	1.26 <sup>+0.02</sup> <sub>0</sub>	2.09 <sup>+0.16</sup> <sub>0</sub>	1.10 ± 0.008	0.94 <sup>+0.08</sup> <sub>0</sub>	1.06	0.83	0.83

## Clamp area details (Groove)

Specify groove dimensions "h, H, L" on your die.  
 Pascal can prepare special-shape lever to accommodate these dimensions.  
 Note : See minimum "h, H, L" dimensions for the following table.



(in)

Model	Minimum groove dimensions		
	h	H	L
TYB4DGNV	0.98	0.98	0.59
TYB6DGNV	0.98	1.18	0.79
TYB10DGNV	0.98	1.77	0.98
TYB16DGNV	1.57	1.77	0.98