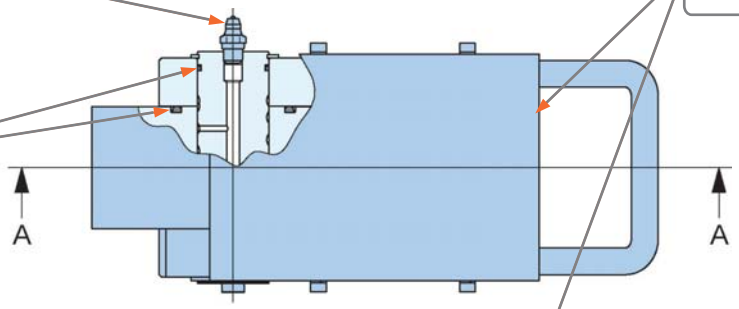
Assures high durability and reliability even under severe operating condition (Heat, vapor, splash of release agent, etc.).

- Perfect protection against dust or die release agents
- Best solution for heat and corrosion
- Clamp force 4, 6, 10, 16 tonf
  25 tonf type now developing

Grease Nipple
For lubrication for clamp lever and shaft (Option)

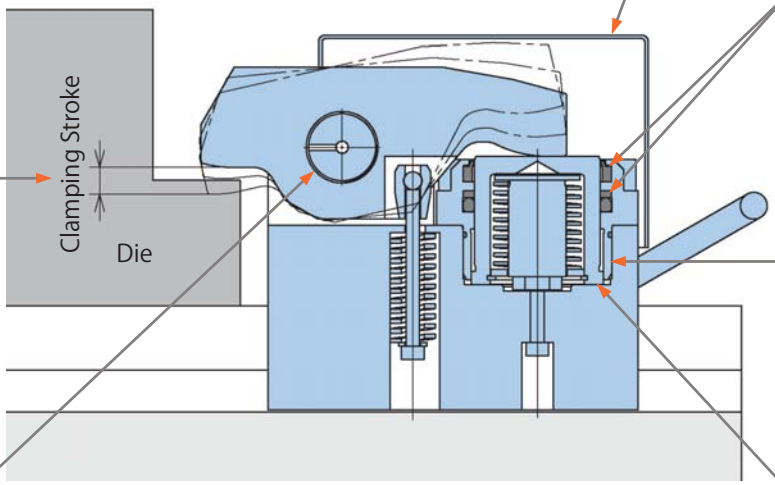
Dust Cover
Protect from vapor, release agent's splash and foreign materials

Dust Seal
Fluorocarbon (VITON)



Dust Seal
Fluorocarbon (VITON)

Long Stroke
Can accommodate big tolerance of clamping height and T-slot dimensions
Stroke ： 10～12 mm



Ram-Cylinder
Ion-Nitriding
Non-breathing ram cylinder is adopted. It can protect the intrusion of dusts or release agents.

Lever Shaft
Ion-Nitriding

Piston
Hard-Chromed

Section A-A

Data of Pascal Clamp model **TYB**

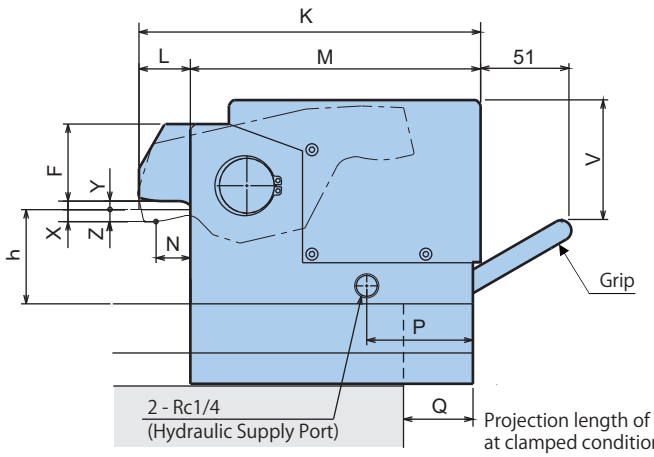
Specifications

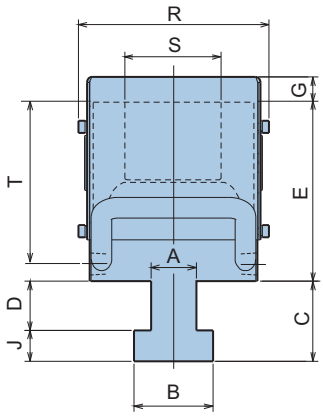
Model	TYB4DGV	TYB6DGV	TYB10DGV	TYB16DGV
Clamping force at hydraulic pressure 24.5 MPa (kN)	39.2	61.7	98.0	156
Full stroke : X (mm)	10	10	12	12
Clamping stroke : Y ※1 (mm)	4	4	4	4
Safety stroke : Z ※1 (mm)	6	6	8	8
Cylinder capacity at full stroke (cm^3)	16.5	26.1	47.2	78.2
Mass ※2 (kg)	4.5	9	15	25

Proof pressure：36.7 MPa　　Working temperature range：5 ~ 120 ℃

※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.

(mm)

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.
TYB4 DGV	27.5 (43≦h) 32.5 (38≦h<43) 37.5 (33≦h<38)	13	145	23	122	16	52	32	83	39.6	62.5	-	74.5	Standard：10.5 S1 ： — S2 ： 9	33 ~ 50
TYB6 DGV	29.5 (48≦h) 39.5 (38≦h<48) 49.5 (28≦h<38)	13	168	30	138	20	50	36	103	49.6	68.5	58	81.5	Standard：14 S1 ：11.4 S2 ： 9.5	28 ~ 60
TYB10 DGV	45 (56≦h) 55 (46≦h<56) 65 (36≦h<46)	14	200	30	170	20	62	45	113	54.6	94.5	76	105	Standard：16 S1 ：13 S2 ：11	36 ~ 70
TYB16 DGV	60 (58≦h) 70 (48≦h<58) 80 (38≦h<48)	15	235	30	205	20	80	55	133	59.6	110	96	122	Standard：19 S1 ：15.5 S2 ：13	38 ~ 80

※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	
~ 2000 kN	TYB 4 DGV × 8	156 kN	HCS D-HG2SSS HCL D-HG2SSS
~ 3500 kN	TYB 6 DGV × 8	246 kN	
~ 5500 kN	TYB10 DGV × 8	392 kN	
~ 8500 kN	TYB16 DGV × 8	624 kN	
~13000 kN	TYB16 DGV ×12	936 kN	HCL D-HG22SSS
~18000 kN	TYB16 DGV ×16	1248 kN	

※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
P ：With grease nipple
V ：Viton seal
S1：Body material S45C
S2：Body material SCM435

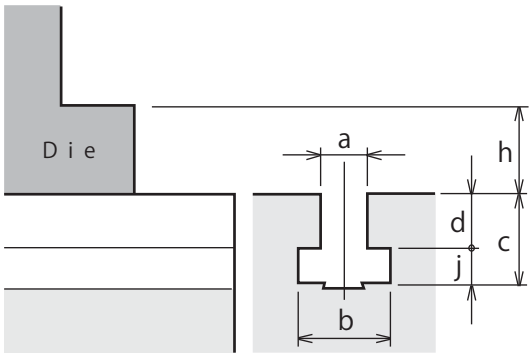
Check points for introduction of Pascal die clamping system

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 0.1 mm.

  New machine ：Machining tolerance shall be ±0.2 mm 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.



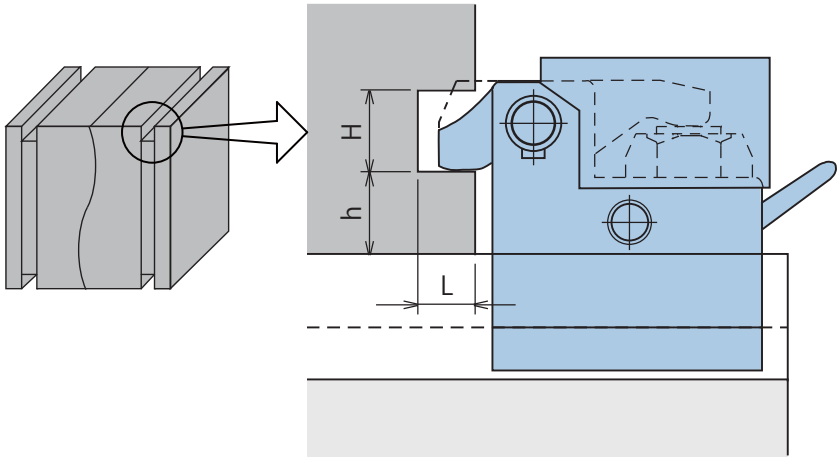
(mm)

Model	Recommended T-slot dimensions				Minimum T-slot dimensions		
	a	b	d	j	a	d	j
TYB4DGV	22 $^{+0.5}_{0}$	37 $^{+3}_{0}$	22 ±0.2	16 $^{+2}_{0}$	15	14	11.5
TYB6DGV	28 $^{+0.5}_{0}$	46 $^{+4}_{0}$	28 ±0.2	20 $^{+2}_{0}$	19	16	15
TYB10DGV	28 $^{+0.5}_{0}$	46 $^{+4}_{0}$	28 ±0.2	20 $^{+2}_{0}$	23	18	17
TYB16DGV	32 $^{+0.5}_{0}$	53 $^{+4}_{0}$	28 ±0.2	24 $^{+2}_{0}$	27	21	20

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.



(mm)

Model	Minimum groove dimensions		
	h	H	L
TYB4DGV	25	25	15
TYB6DGV	25	30	20
TYB10DGV	25	45	25
TYB16DGV	40	45	25