All rights reserved by SMART HYDRAULICS.

DBD-10 series direct pressure relief valves

MACHYDRA

CONTENT

1. Three kinds of connection methods. Insert-type: Thread connection; Plate connection
2. Seven kinds of pressure level 2.5, 5, 10, 20, 31.5, 40 and 63MPa
3. Three kinds of regulating forms: Regulating bolt with protection cover; Regulating handle with lock





ORDERING DETAILS

DBD _ _ _ **10** _ _ _

Series code
DBD = Direct pressure relief valve

Regulating method
S = Regulating bolt with protection cover
H = Regulating handle
A = Regulating handle with lock (NG10)

Drift diameter
1 = 1 drift diameter

Connection method
K = Inset-type
G = Thread connection
P = Plate mounting

Sealing Material
No marks = NBR seal
V = Flurorin rubber seal

The thread connection valve
No marks = British system
2 = Metric system

Pressure rating
2 = Pressure can be adjusted to 2MPa

Series number
10 = 10 series

Note 1

Connection method		G	K	P
G1/4	M14X1.5	6	6	6
G3/8	M18X1.5	8	-	-
G1/2	M22X1.5	10	10	10
G3/4	M27X2	15	-	-
G1	M33X2	20	20	20
G1 1/4	M42X2	25	-	-
G1 1/2	M48X2	30	30	30

Note 2

Drift diameter	10	6, 8, 15 and 20	25 and 30
Pressure rating (Pressure can be adjusted to...)	2.5=2.5MPa	2.5=2.5MPa	2.5=2.5MPa
	5=5MPa	5=5MPa	5=5MPa
	10=10MPa	10=10MPa	10=10MPa
	20=20MPa	20=20MPa	20=20MPa
	31.5=31.5MPa	31.5=31.5MPa	31.5=31.5MPa
	40=40MPa	40=40MPa	
	63=63MPa		

Lectotype attention: DBD direct pressure relief valve has low starting pressure and large flux, but internal leakage is larger than DBD series direct pressure relief valve. For example hydraulic system requires low on the least starting pressure, but as used as small internal leakage safety valve, clients can choose DBD direct pressure relief valves.

TECHNICAL DATA

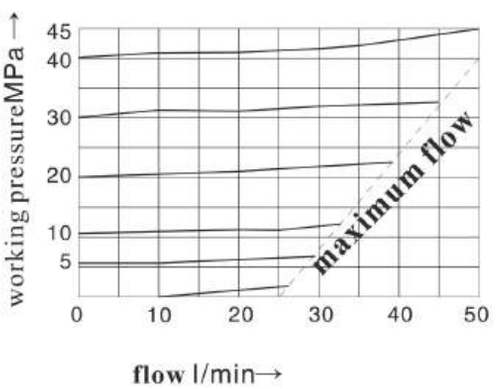
Hydraulic Data

Working medium Suitable for NBR or fluorine rubber seal		Mineral oil			
Suitable for fluorine rubber seal		Phosphate			
Working medium temperature range	°C	-30~+80(Nitrile rubber seal)			
		-20~+80 (Nitrile rubber seal)			
Viscosity range	mm²/s	From 10 to 800			
Oil cleanliness		The maximum oil pollution grade according to NAS1638 class 9 and ISO4406 class 20/18/15			
Working pressure range drift diameter		6, 8	10	15, 20	25, 30
Import	MPa	~ 40	~ 63	~ 40	~ 31.5
Import	MPa	31.5			
Maximum flow	L/min	Refer to the function curve			

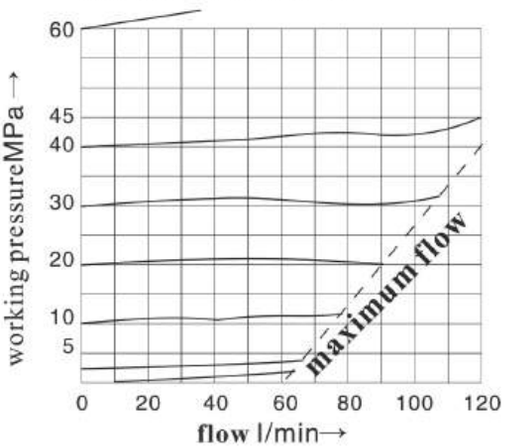
CHARACTERISTIC CURVE

characteristic of flow-pressure (measured by using HLP46, t=40°C)

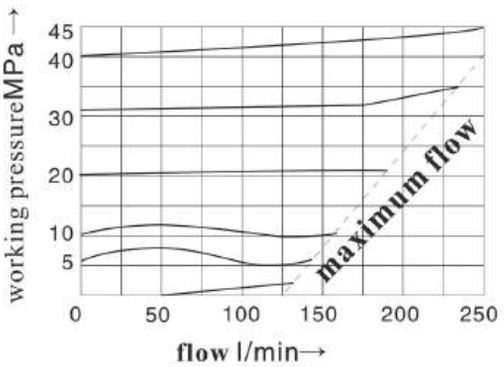
nominal diameter6



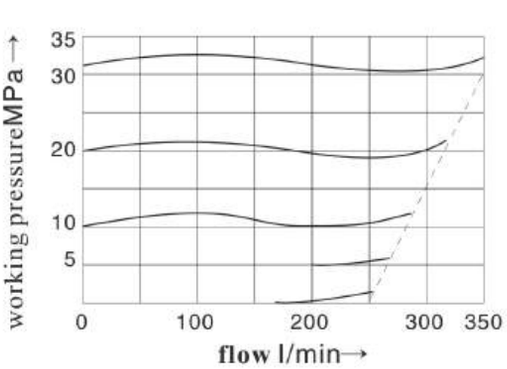
nominal diameter8、10



nominal diameter 15、20



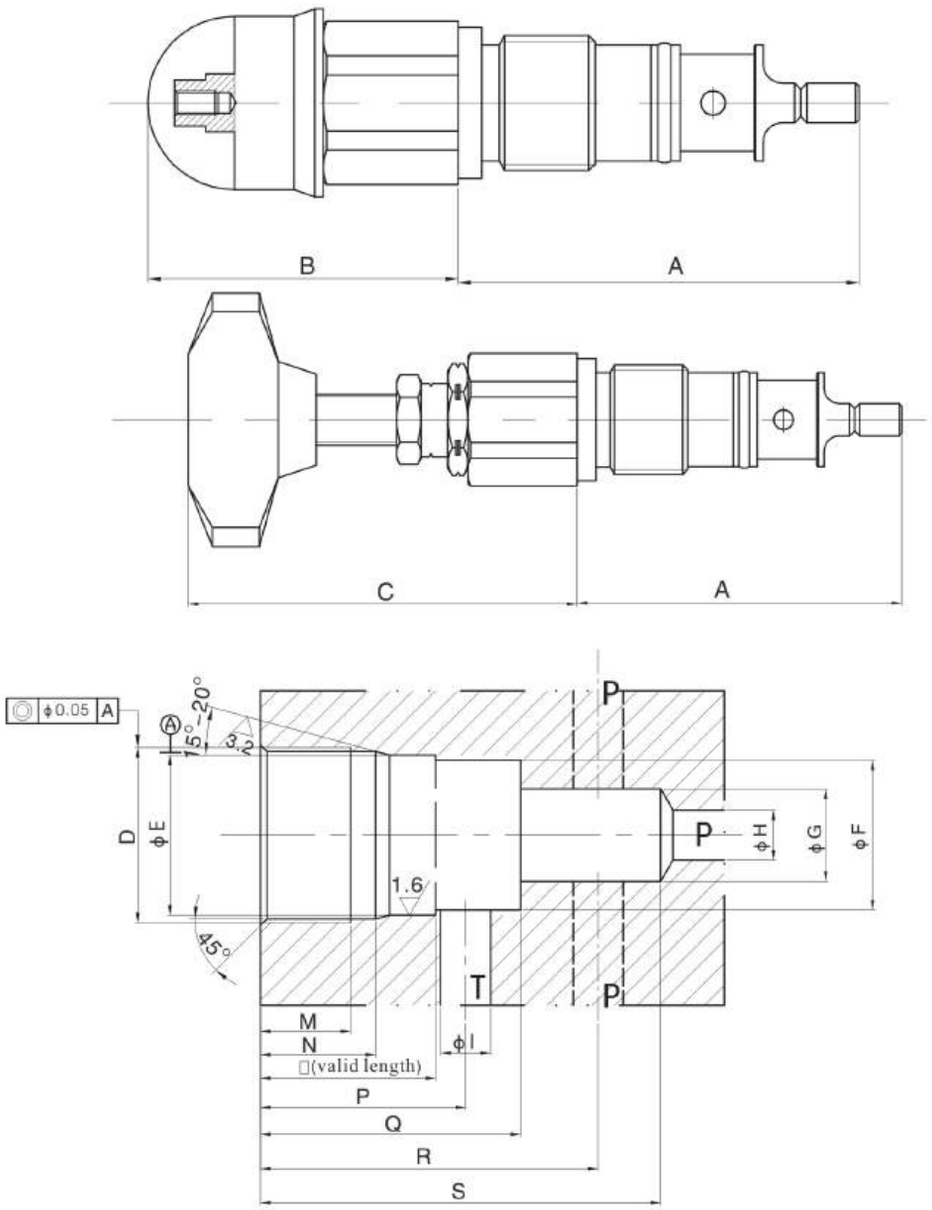
nominal diameter 25、30



All rights reserved by SMART HYDRAULICS.

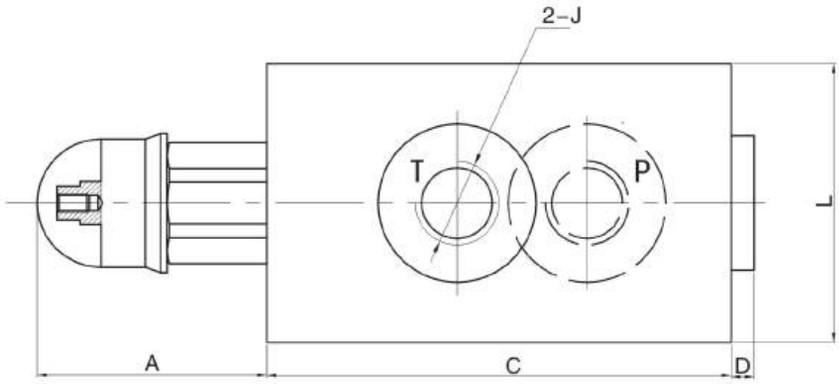
UNIT DIMENSIONS

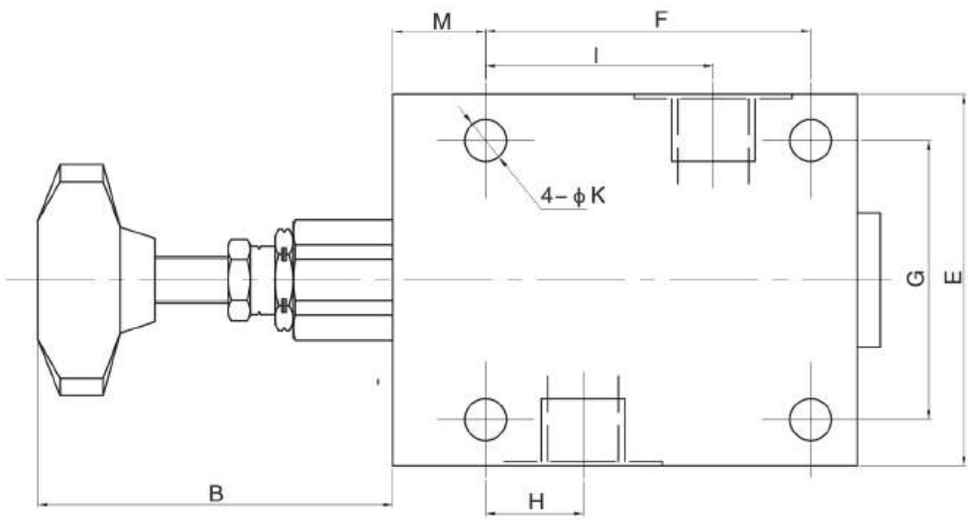
DBD-K



type	A	B	C	D	E	F	G	H	I	M	N	O	P	Q	R	S
DBD6K	64	72	88	M28 × 1.5	25H9	24.9	15	6	6	15	19	39	35	45	56.5 ± 5.5	65
DBD10K	75	68	79	M35 × 1.5	32H9	31.9	18.5	10	10	18	23	35	41	52	67.5 ± 7.5	80
DBD20K	106	65	77	M45 × 1.5	40H9	39.9	24	20	20	21	27	45	54	70	91.5 ± 8.5	110
DBD30K	131	83	56	M60 × 2	50H9	54.9	38.75	30	30	23	29	45	60	84	113.5 ± 11.5	140

DBD-G

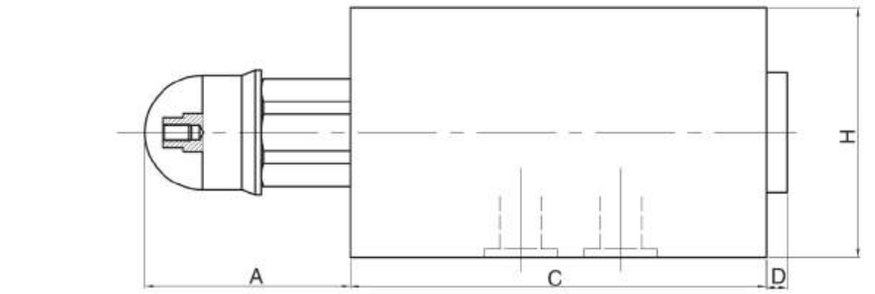


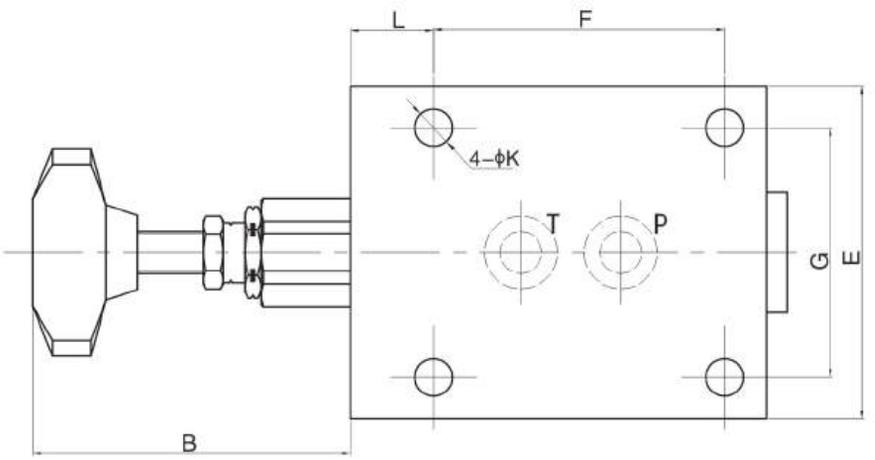


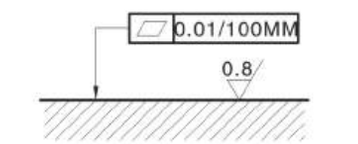
type	A	B	C	D	E	F	G	H	I	J	K	L	M
DBD6G	72	83	80	2	60	55	45	20	40	G1/4;M14×1.5	6.6	40	15
DBD8G	68	79	100	2	80	70	60	21	49	G3/8;M18×1.5	9	60	20
DBD10G	68	79	100	3	80	70	60	21	49	G1/2;M22×1.5	9	60	20
DBD15G	65	77	135	3	100	100	70	34	65	G3/4;M27×2	9	70	20
DBD20G	65	77	135	4	100	100	70	34	65	G1;M33×2	9	70	20
DBD25G	83	56	180	4	130	130	100	35	85	G1¼;M42×2	11	90	25
DBD30G	83	56	180	4	130	130	100	35	85	G1½;M48×2	11	90	25

All rights reserved by SMART HYDRAULICS.

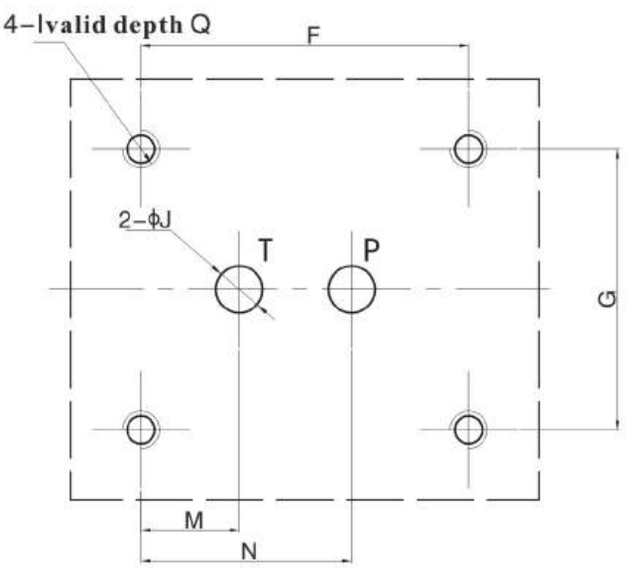
DBD-P







the surface of mating parts
request precision process



type	A	B	C	D	E	F	G	H	I	J	K	L	M	N	Q
DBD6P	72	83	80	2	60	55	45	40	M6	6	6.6	15	20	40	15
DBD10P	68	79	100	3	80	70	60	60	M8	10	9	20	21	45	15
DBD20P	65	77	135	4	100	100	70	70	M8	20	9	20	34	65	22
DBD30P	83	56	180	4	130	130	100	90	M10	30	11	25	35	85	22