

Auxiliary Function Modules for Proportional Valves

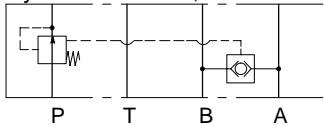
Hydrostat, Parallel-Flow-Path, Pilot Shuttle and Tapping Modules

Functional Symbols

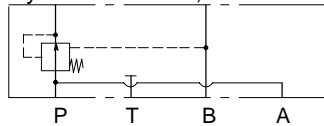
For typical applications of these modules see next three pages

Size 03

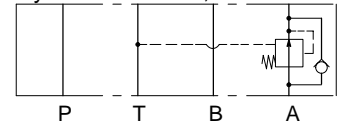
Hydrostat module, P to A or B



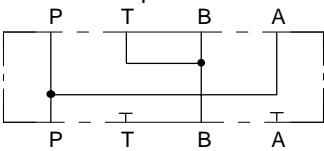
Hydrostat module, P to P



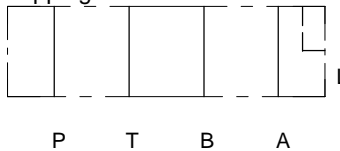
Hydrostat module, A to T



Parallel-flow-path module

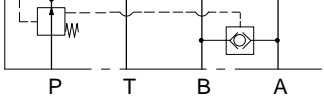


Tapping module

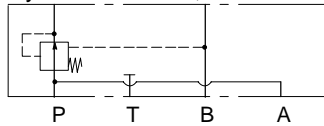


Size 05

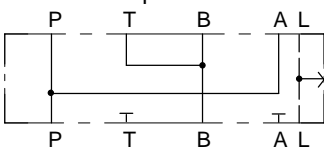
Hydrostat module, P to A or B



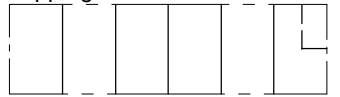
Hydrostat module, P to P



Parallel-flow-path module

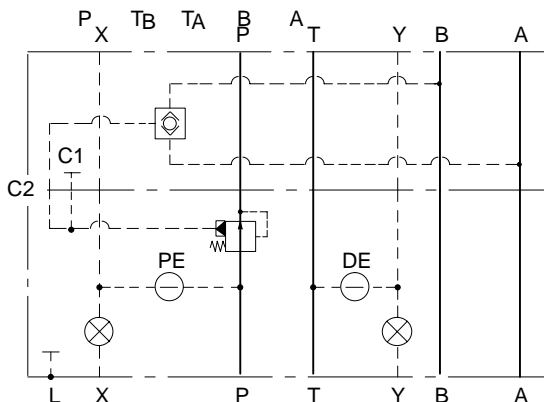


Tapping module



Sizes 07 and 08

Hydrostat module with pilot shuttle module. These two modules must be used together.



Warning: Electromagnetic Compatibility (EMC)

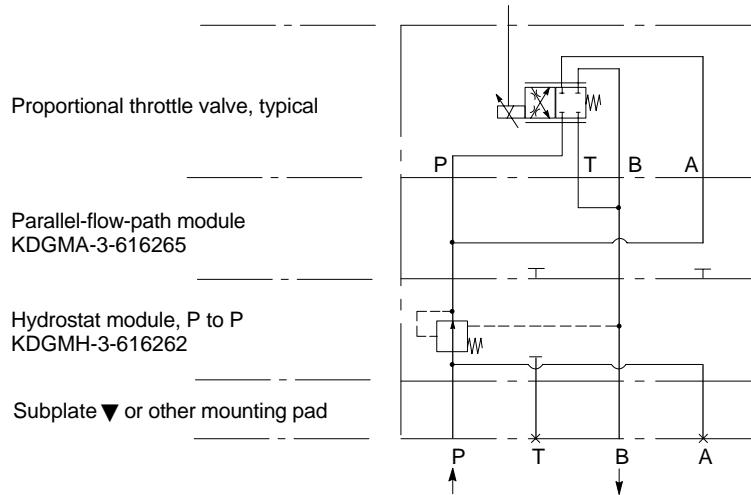
The European Community directives for electromagnetic compatibility (EMC) do not apply to this product.

Typical Applications

Proportional Throttle Valves

KTG4V-3 example ●

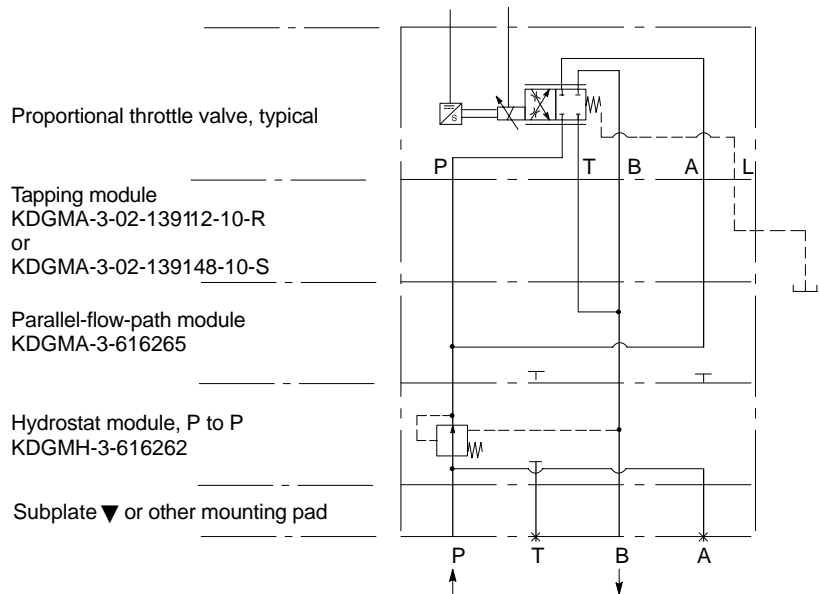
Maximum system pressure with this flow configuration is 210 bar (3000 psi) (maximum pressure for port T).



KFTG4V-3 example ●

Maximum system pressure with this flow configuration is 210 bar (3000 psi) (maximum pressure for port T).

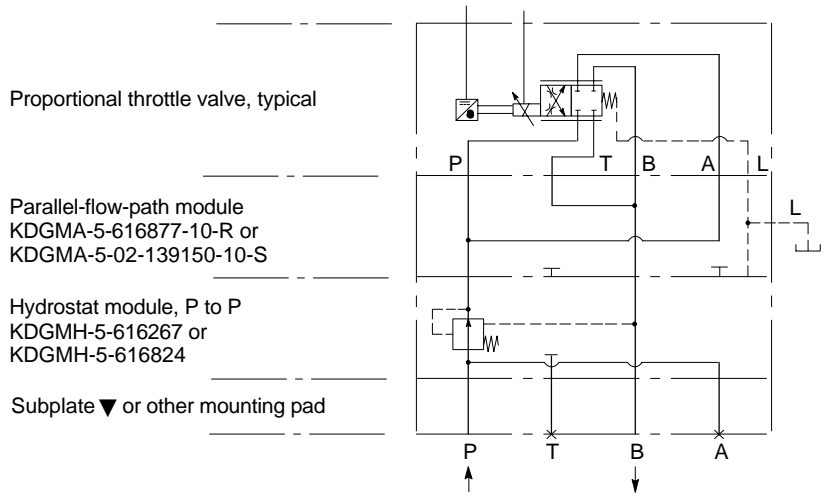
Note: A tapping module (for port L external drain) is required only if pressure at port T exceeds 160 bar (2320 psi) up to the maximum rating of port T, 210 bar (3000 psi).



● See catalogs 539 and 2466, "Proportional Directional Valves, Size 03".
See catalog 2425, "Subplates and Auxiliary Connection Plates".

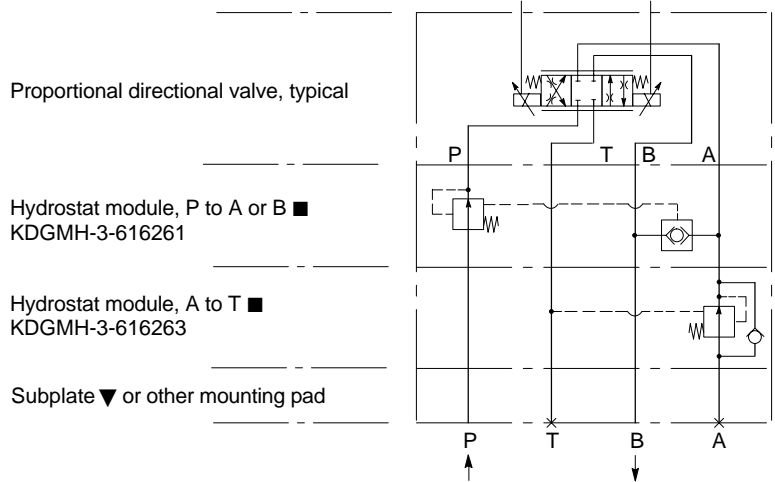
KFTG4V-5 example ♦

Maximum system pressure with this flow configuration is 210 bar (3000 psi) (maximum pressure for port T). For system pressure not exceeding 160 bar (2320 psi) max., port L external drain connection may be plugged.



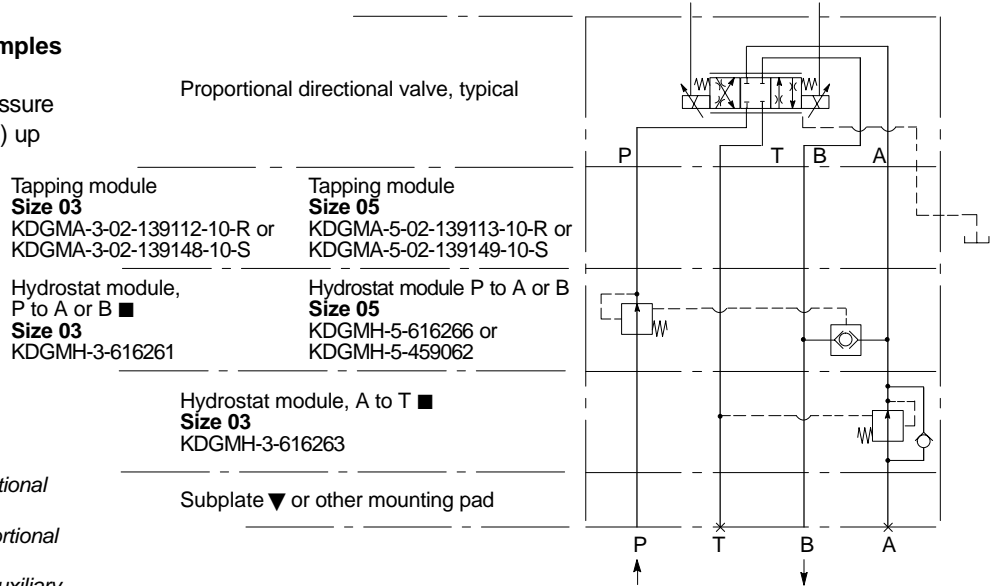
Single-Stage Proportional Directional Controls

KDG4V-3 example ●



KDG4V-3 ● and KDG4V-5 ♦ examples

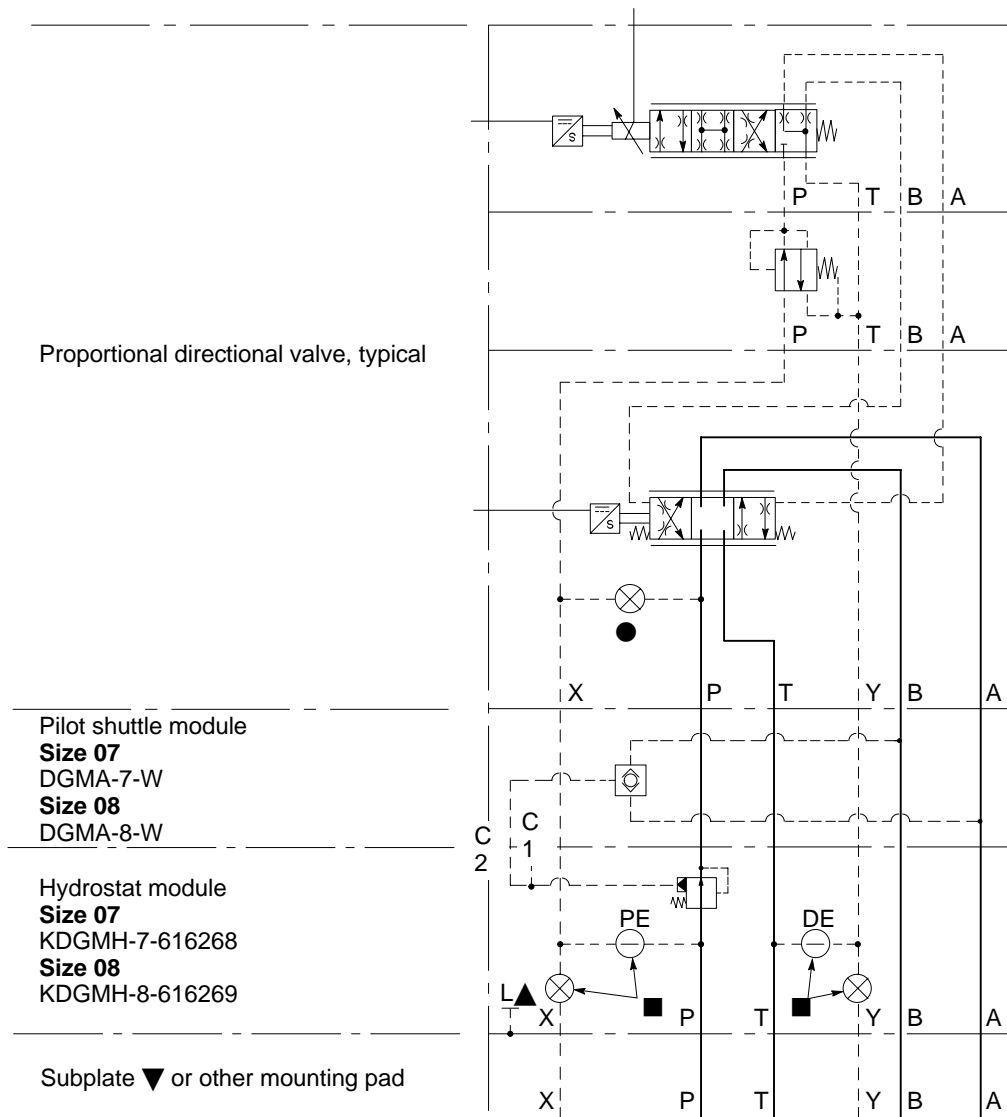
Note: A tapping module (for port L external drain) is required only if pressure at port T exceeds 160 bar (2320 psi) up to the max. rating of port T.



- Only one of these two types can be installed in any one stack.
- See catalogs 539 and 2466, "Proportional Directional Valves, Size 03".
- ♦ See catalogs 2452 and 2467, "Proportional Directional Valves, Size 05". See catalog 2425, "Subplates and Auxiliary Connection Plates".

Two-Stage Proportional Directional Controls

KF/HDG5V-7/8 example ■



■ Important

Hydrostats are supplied with plugs fitted in ports X and Y (see ⊗). Before installing hydrostats, relocate plug(s) according to valve mode.

(Note that the “internal drain” option must not be used.)
For internal pilot/external drain mode

Relocate port Y plug to position DE.

For external pilot/external drain mode

Relocate port Y plug to position DE. Relocate port X plug to position PE. See installation drawing for location of plugs.

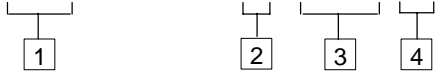
- ▲ Blind port, fitted with O-ring.
- ⊗ Plugged, as supplied, see ■.
- Unplugged, as supplied, see ■.

- See catalogs 2325 and 2457, “Proportional Directional Valves, Sizes 05, 07 and 08”.
- ▼ See catalog 2425, “Subplates and Auxiliary Connection Plates”.
- To be plugged when hydrostat module is used.

Model Codes

For Hydrostat Modules

(F3-)KDG MH- * -*** -1***



1 Fluid compatibility

Blank = Antiwear hydraulic oil
 F3 = Phosphate esters or antiwear hydraulic oil

2 Mounting size code (ISO 4401)

3 = 03
 5 = 05
 7 = 07
 8 = 08

3 Function

KDG MH-3-616261 = P to A or B control
 KDGMH-3-616262 = P to P control
 KDGMH-3-616263 = A to T control
 KDGMH-5-459062 = P to A or B control
 KDGMH-5-616266 = P to A or B control
 KDGMH-5-616267 = P to P control
 KDGMH-5-616824 = P to P control
 KDGMH-7-616268 = P to A or B control
 KDGMH-8-616269 = P to A or B control

Hydrostat flow ratings and control Δp are detailed in "Max. pressures and flow ratings" on page 6

4 Design number, 10 series ▲

▲ *Subject to change. Installation dimensions unaltered for design numbers 10 to 19 inclusive.*

For Pilot Shuttle Modules

DGMA- * -W -1*



1 Mounting size code (ISO 4401)

7 = 07
 8 = 08

2 Design number, 10 series ▲

For Parallel-Flow-Path Modules

KDGMA- * , 10 series ▲



1 Available options

KDGMA-3-616265-1*
 KDGMMA-5-616877-1*-R
 KDGMMA-5-02-139150-1*-S

For Tapping Modules

KDGMA- * , 10 series ▲



1 Available options

KDGMA-3-02-139112-1*-R
 KDGMMA-3-02-139148-1*-S
 KDGMMA-5-02-139113-1*-R
 KDGMMA-5-02-139149-1*-S

Operating Data

Max. pressures	See table below
Flow ratings	See table below
Hydraulic fluids: KDGMMH hydrostat modules DGMA shuttle modules	See 1 in “Model Codes” Antiwear hydraulic oil or phosphate esters
Installation dimensions	See page 7
Mass: KDGMMH-3 KDGMMH-5 KDGMMH-7 KDGMMH-8 DGMA-7 DGMA-8 KDGMA-3 KDGMA-5	1,1 kg (2.4 lb) approx. 6,2 kg (13.7 lb) approx. 16 kg (35.3 lb) approx. 30 kg (66.1 lb) approx. 4,1 kg (9.0 lb) approx. 5,6 kg (12.3 lb) approx. 0,5 kg (1.1 lb) approx. 1,5 kg (3.3 lb) approx.
Fastening kits	See catalog 2314

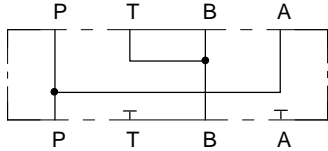
Max. Pressures and Flow Ratings

Model	Max. pressure, bar (psi) for ports:					Rated flow L/min (USgpm)	Datum Δp bar (psi) for rated flow
	P, A & B	T	X	Y	L		
KDGMMH-3-616261	315	210			10	25	8
KDGMMH-3-616262	(4567)	(3000)	–	–	(145)	(6.6)	(116)
KDGMMH-3-616263							
KDGMMH-5-616266						50	4
KDGMMH-5-616267	315	210	–	–	2	(13.2)	(58)
KDGMMH-5-459062	(4567)	(3000)			(29)	70	8
KDGMMH-5-616824						(18.5)	(116)
KDGMMH-7-616268						180	
	250	250	250	5	–	(47.5)	8
KDGMMH-8-616269	(3625)	(3625)	(3625)	(72)	–	360	(116)
						(95.0)	
DGMA-7-W	<i>Must be placed between K*DG5V-7 directional valves and KDGMMH-7-616268 hydrostat modules ▲</i>						
DGMA-8-W	<i>Must be placed between K*DG5V-8 directional valves and KDGMMH-8-616269 hydrostat modules ▲</i>						
KDGMA-3	No functional limitations:						
KDGMA-5	dependent on valves used						

▲ *If both of these are to be used together.*

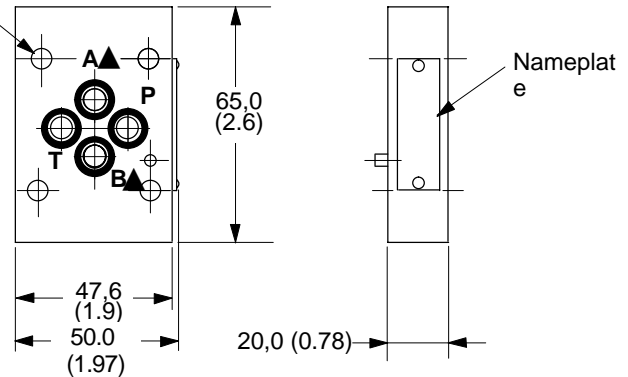
Installation Dimensions mm (inches)

Size 03 Parallel-Flow-Path Module KDGMA-3-616265-1*



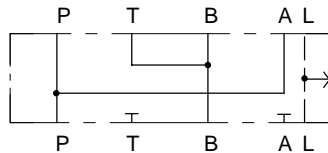
Typically used for doubling effective flow capability of single solenoid proportional valves (throttle valves), as illustrated in "Typical Applications".

4 holes $\varnothing 5,6$ (0.22 dia), counterbored to $\varnothing 9,5$ (0.374 dia)



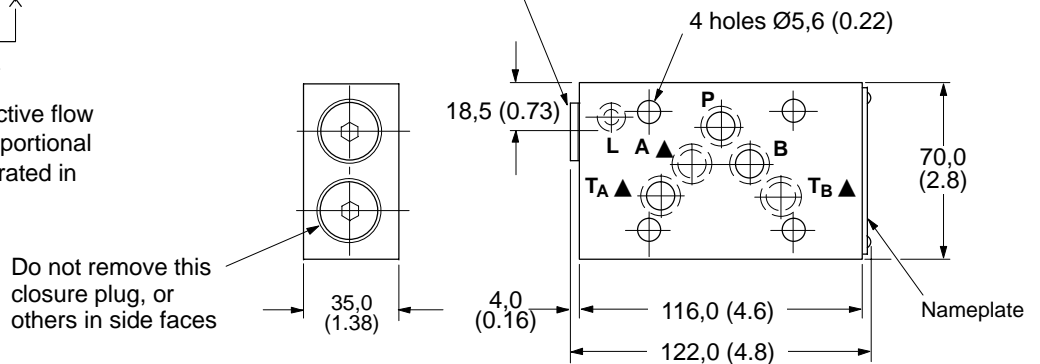
▲ A and B ports at subplate face are blind holes fitted with O-seals.

Size 05 Parallel-Flow-Path Modules KDGMA-5-616877-1*-R KDGMA-5-02-139150-1*-S



Typically used for doubling effective flow capability of single solenoid proportional valves (throttle valves), as illustrated in "Typical Applications".

Supplied with port L plugged. Remove plug for external drain connection if required. (See table for tapping and socket A/F sizes)



Do not remove this closure plug, or others in side faces

▲ A, T_A and T_B ports at subplate face are blind holes fitted with O-seals.

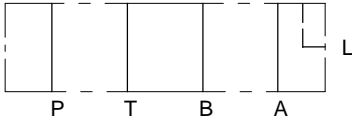
Model	Port L thread	Socket wrench A/F for plug removal
KDGMA-5-616877-1*-R	G ¹ / ₄ (1/4" BSPF) × 11,0 (0.43) full thread depth	6,0 (0.23)
KDGMA-5-02-139150-1*-S	9/16"-18 UNF × 12,7 (0.5) full thread depth	6,3 (0.25)

Size 03 Tapping Modules

KDGMA-3-02-139112-1*-R

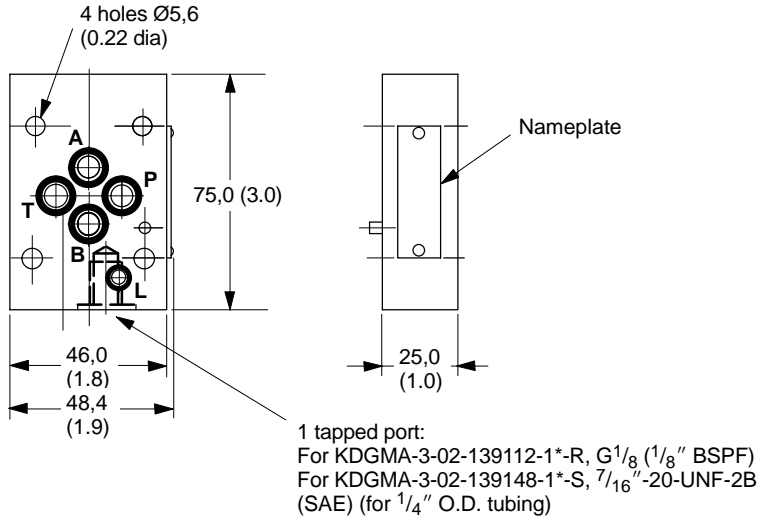
KDGMA-3-02-139148-1*-S

Port L Tapping Plates



Provide external drain connection where port L is not present in subsequent stackable valves or in subplate/manifold block, e.g. in retro-fit work. Typically used for proportional and other valves having the port L drain connection, e.g.:

- K(A)FDG4V-3
- K(A)FTG4V-3
- K(A)SDG4V-3

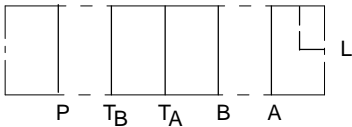


Size 05 Tapping Modules

KDGMA-5-02-139113-1*-R

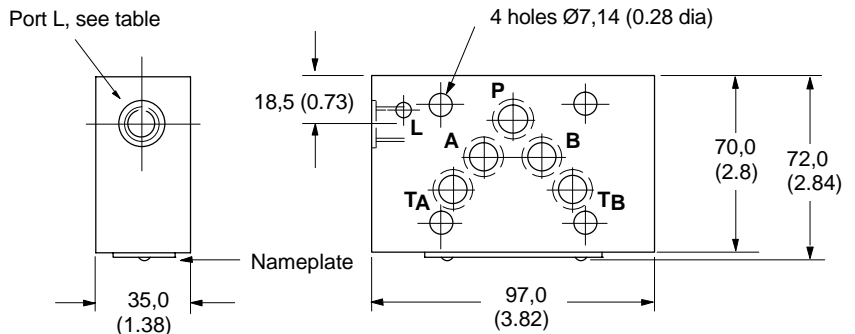
KDGMA-5-02-139149-1*-S

Port L Tapping Plates



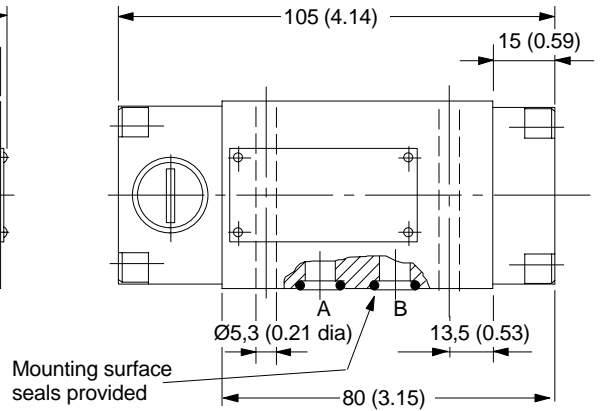
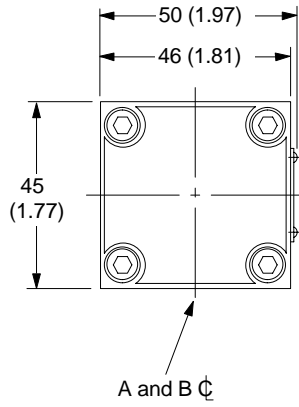
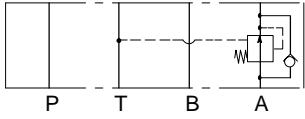
Provide external drain connection where port L is not present in subplate/manifold block, or in subsequent stackable valves, e.g. in retro-fit work. Typically used for proportional and other valves having the port L drain connection, e.g.:

- K(A)FDG4V-5
- K(A)FTG4V-5

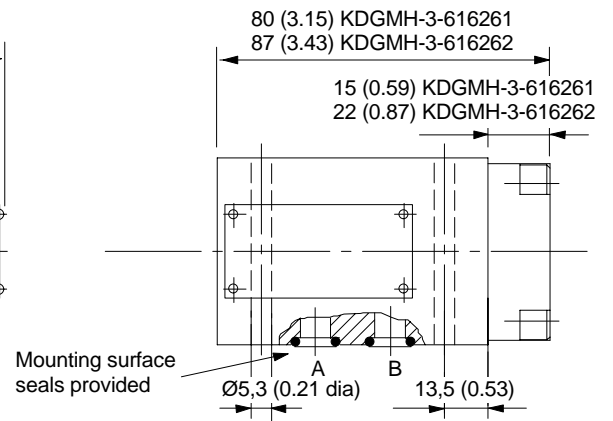
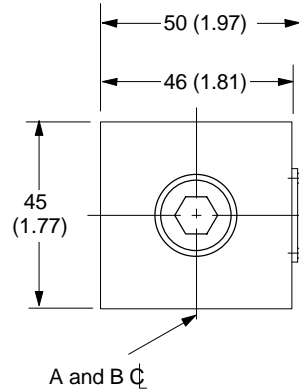
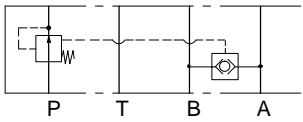


Model	Port L thread
KDGMA-5-02-139113-1*-R	G ¹ / ₄ (1/4" BSPF) x 11,0 (0.43) full thread depth
KDGMA-5-02-139149-1*-S	9/16"-18 UNF x 12,7 (0.5) full thread depth

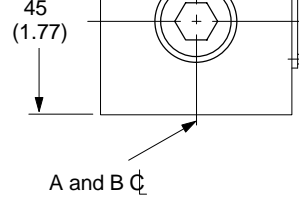
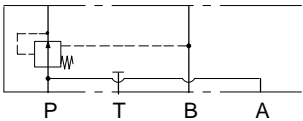
**Size 03 Hydrostat Module
KDGMH-3-616263**



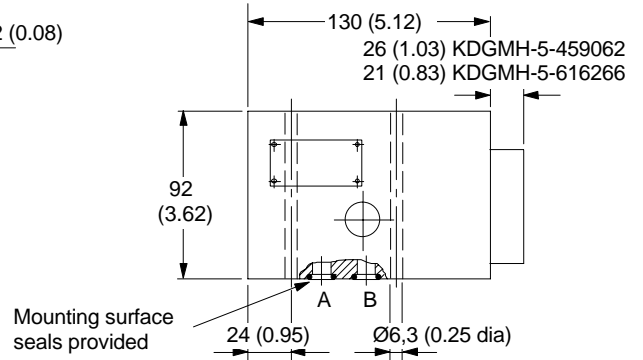
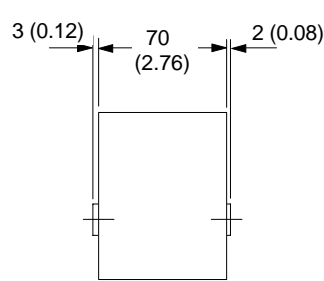
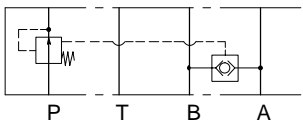
**Size 03 Hydrostat Module
KDGMH-3-616261**



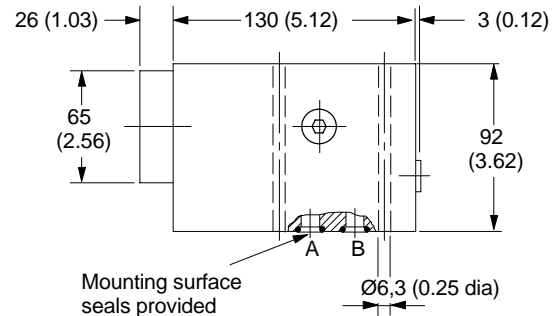
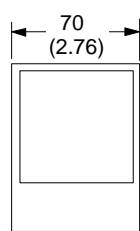
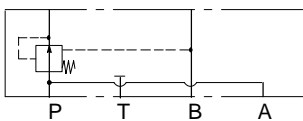
**Size 03 Hydrostat Module
KDGMH-3-616262**



**Size 05 Hydrostat Modules
KDGMH-5-459062 and
KDGMH-5-616266**

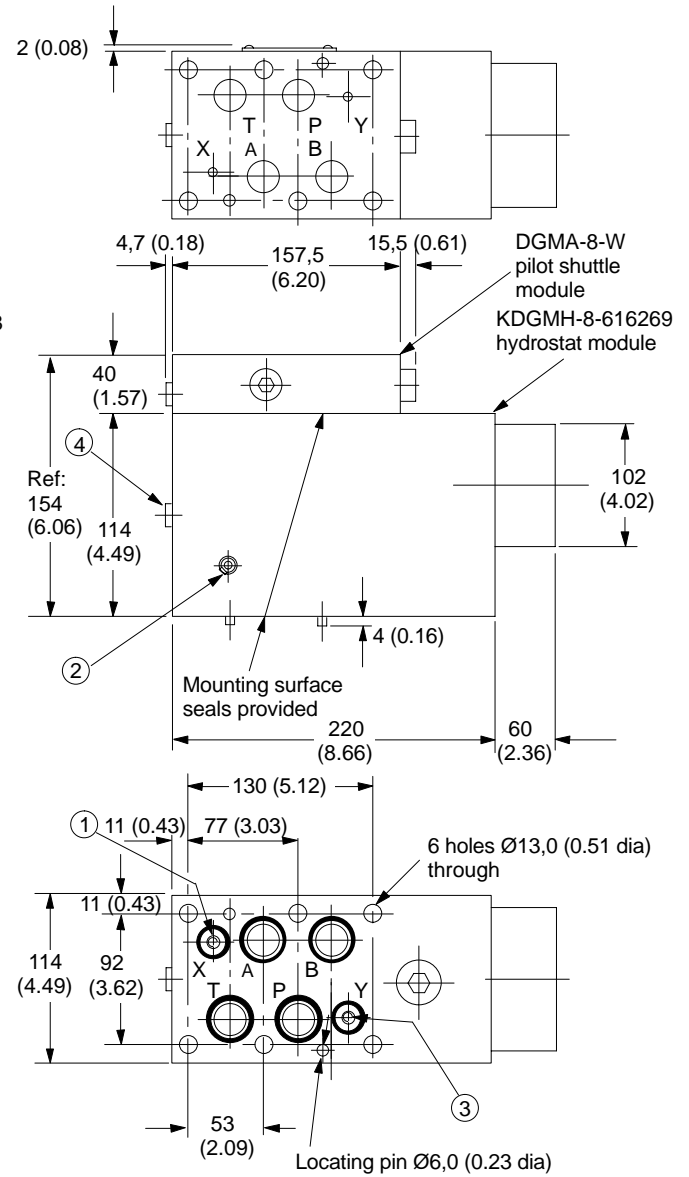
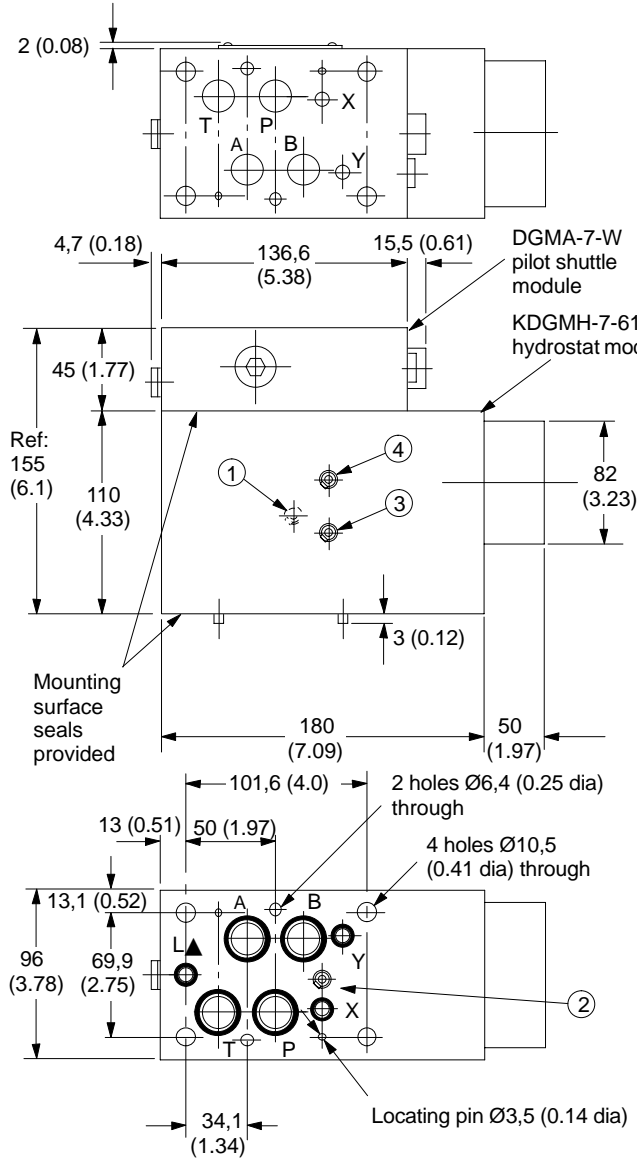


**Size 05 Hydrostat Modules
KDGMH-5-616267 and
KDGMH-5-616824**



**KDGMH-7-616268 Hydrostat Module
with DGMA-7-W Pilot Shuttle Module**

**KDGMH-8-616269 Hydrostat Module
with DGMA-8-W Pilot Shuttle Module**



Pilot Pressure and Drain Conversions

See "Important" note six pages back then relocate plug(s) to suit required operating mode as below.

Condition (◆)		Plugs ■	
Pilot pressure	Pilot drain	Fitted	Omitted
As supplied		① ③	② ④
Internal (P)	External (Y)	① ④	② ③
External (X)	External (Y)	② ④	① ③

Operating modes

- Hex. sockets in plugs for:
 KDGMH-7 4 (0.155) A/F
 KDGMH-8 5 (0.196) A/F
 Torque to hand-tightness.
- ◆ Effective port in main-stage mounting surface.
- ▲ Blind port.

