

ZP*

Reducing Modular Valves
Size: NG16, NG22, Ng32
Max. operating pressure up to 350 bar
Max. flow up to 800 L/min



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Specifications

Model Number	Max. Operating Pressure Kg/cm ²	Max. Flow L/min.
(F-) ZP*-16-*-10T	350	300
(F-) ZPA-22-*-30T-H01	250 (For 70 Design 350)	500
(F-) ZPB-22-*-30T-H01		
(F-) ZPW-22-*-30T-H01		
(F-) ZPA-32-*-30T/3090	250	800
(F-) ZPB-32-*-30T/3090		
(F-) ZPW-32-*-30T/3090		



Ordering code

Seals:									
Mineral oil		= No code							
Phosphate ester		= F							
Pilot Operated Check Valve for A-Line		= ZPA							
Pilot Operated Check Valve for B-Line		= ZPB							
Pilot Operated Check Valve for A&B -Line		= ZPW							
Valve Size									
NG16		= 16							
NG22		= 22							
NG32		= 32							
Port Tapping Feature of Pilot-Drain Port^{*1}									
Taper Thread		= No code							
Straight Thread (Applicable only for Japanese std. "JIS")		= S							
Cracking Pressure Kg/cm²									
2		= 2							
4		= 4							
Pilot-Drain Connection^{*2}									
Internal Pilot- Internal Drain		= No code							
External Pilot- External Drain		= X							
External Pilot- Internal Drain		= Y							
Design Numbers									
10 (only for NG16)		= 10T							
30 (Internal Pilot- Internal Drain)		= 30T							
70 (External Pilot- External Drain, External Pilot- Internal Drain)		= 70T							
Design Standard^{*3}									
Internal Pilot- Internal Drain		= H01							
External Pilot- External Drain		= -							
External Pilot- Internal Drain		= -							

^{*1}This item applies only to External Pilot or External Drain Type.

^{*2}Only "None: Internal Pilot-Internal Drain Type" is available for MPW (for "A&B-Lines").

^{*3}Design Standards: None.....Japanese Standard "JIS" and European Design Standard 90.....N. American Design Standard



Graphic Symbols

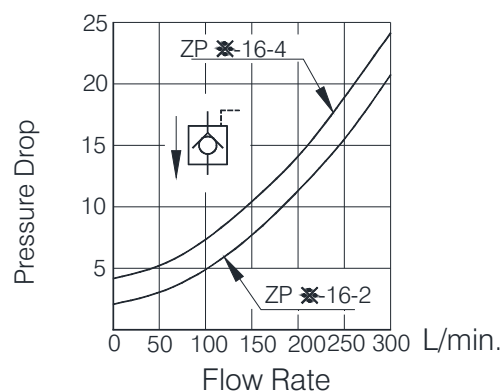
Pilot- Drain type Model No.	Internal Pilot- Internal Drain Type	External Pilot- External Drain Type (X)	External Pilot- Internal Drain Type (Y)
ZPA	 ZPA-*-*	 ZPA-*-*-X	 ZPA-*-*-Y
ZPB	 ZPB-*-*	 ZPB-*-*-X	 ZPB-*-*-Y
ZPW	 ZPW-*-*	—	—

Typical Performance Characteristics NG16

Hydraulic Fluid: Viscosity 35cSt, Specific Gravity 0.850

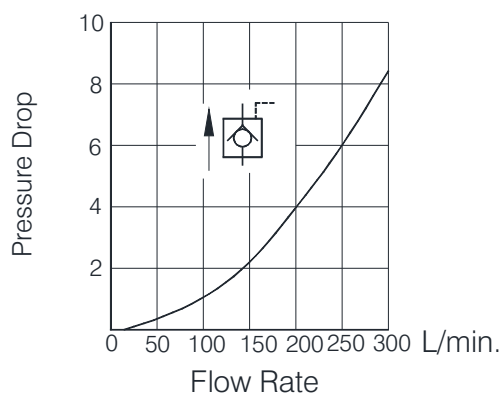
Pressure Drop for Free Flow

Kgf/cm²



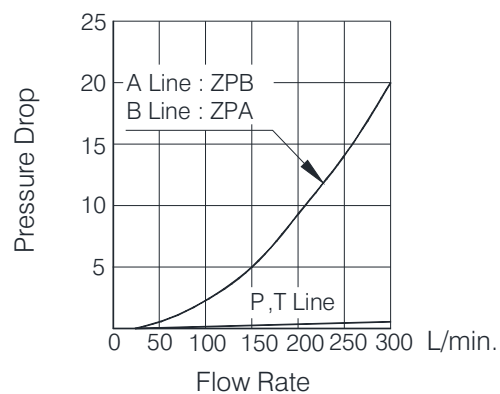
Pressure Drop For Reversed

Kgf/cm² **Controlled Flow**



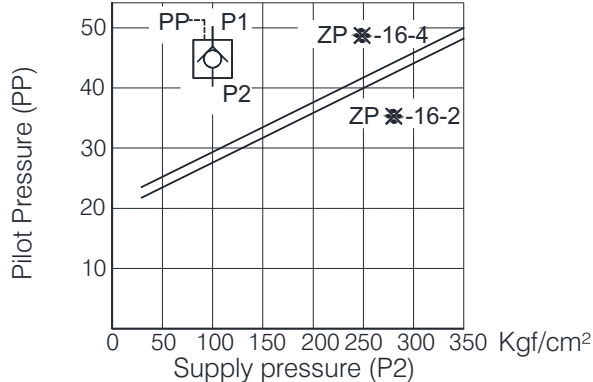
Pressure Drop

Kgf/cm²



Minimum pilot pressure

Kgf/cm²



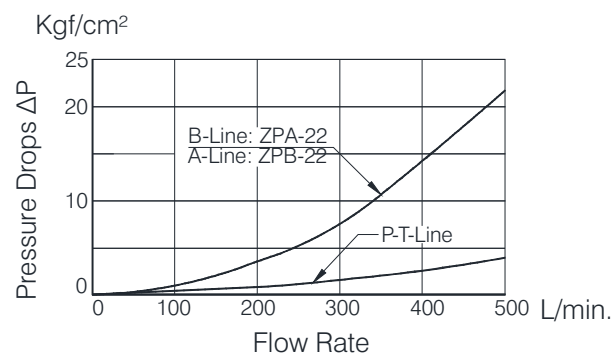


Typical Performance Characteristics NG22

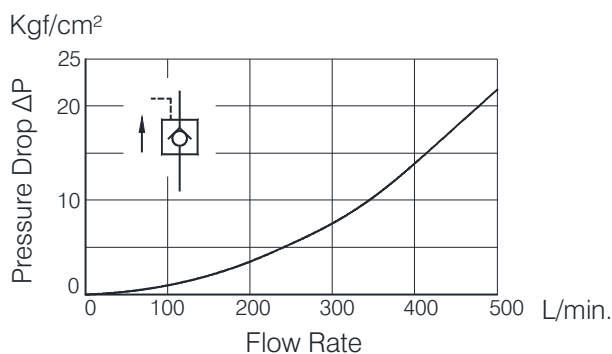
ZP*-22-30H01

Hydraulic Fluid: Viscosity 35cSt, Specific Gravity 0.850

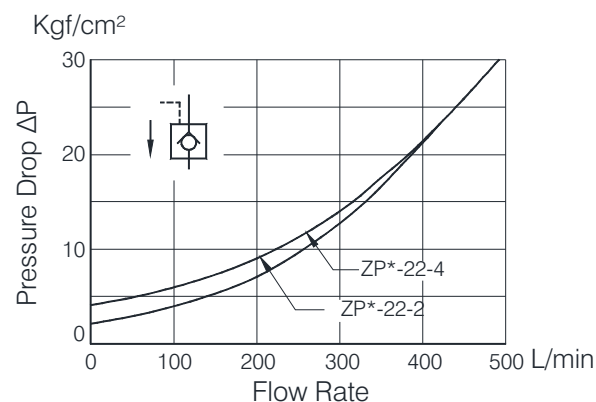
Pressure Drop



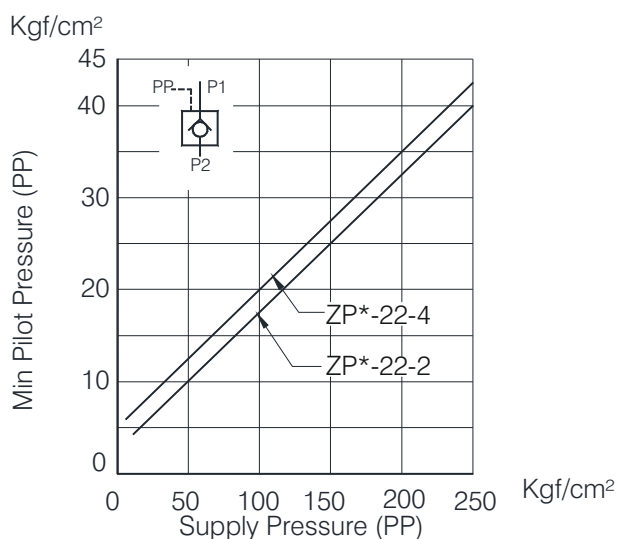
Pressure Drop for Reversed Controlled Flow



Pressure Drop for Free Flow



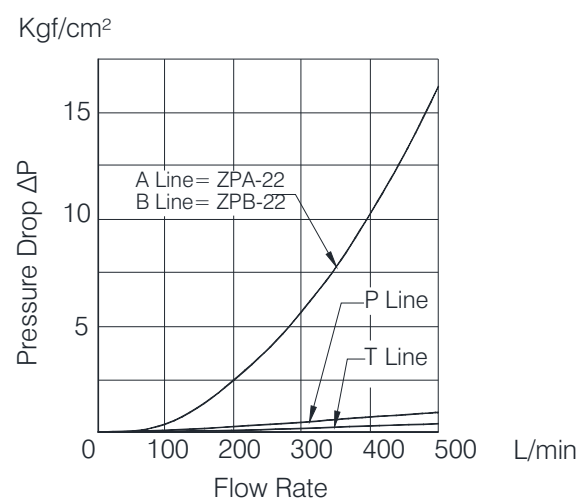
Min. Pilot Pressure



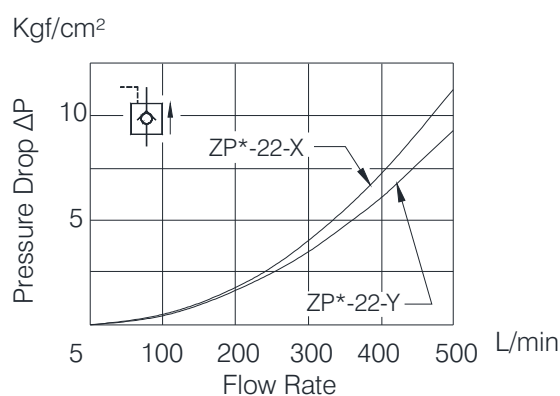
ZP*-22-*-70

Hydraulic Fluid: Viscosity 35cSt, Specific Gravity 0.850

Pressure Drop



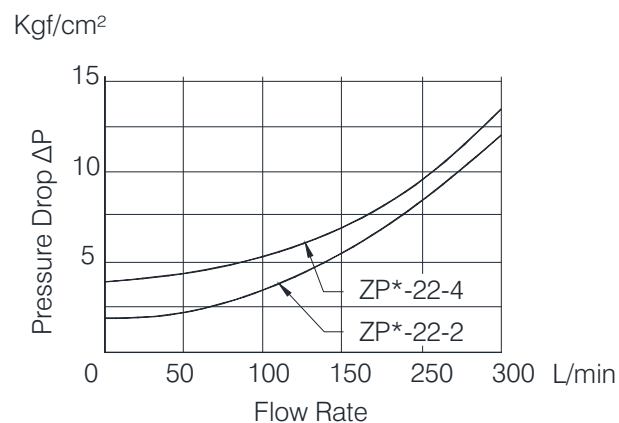
Pressure Drop for Reversed Controlled Flow



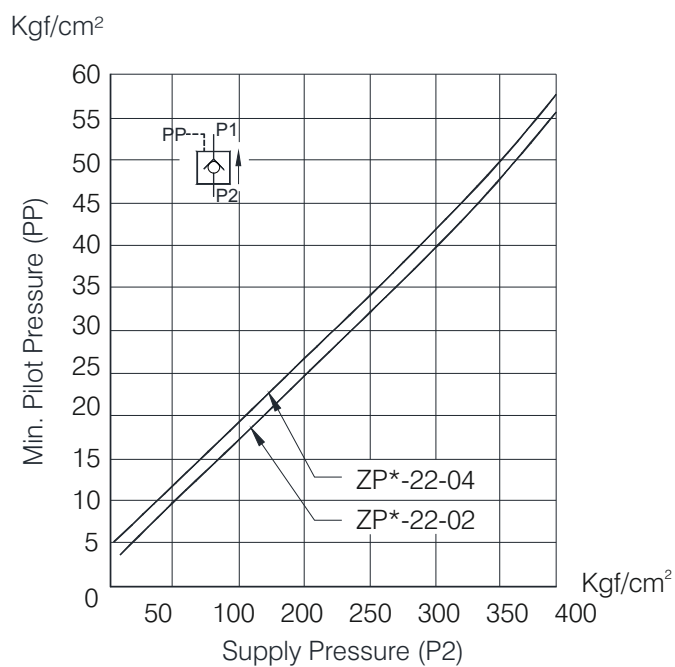


Typical Performance Characteristics NG22

Pressure Drop for Free Flow

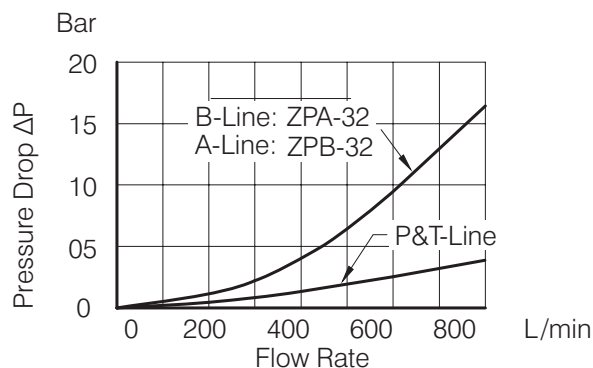


Min. Pilot Pressure

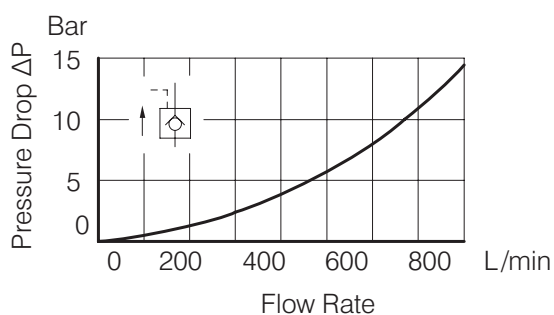


Typical Performance Characteristics NG32

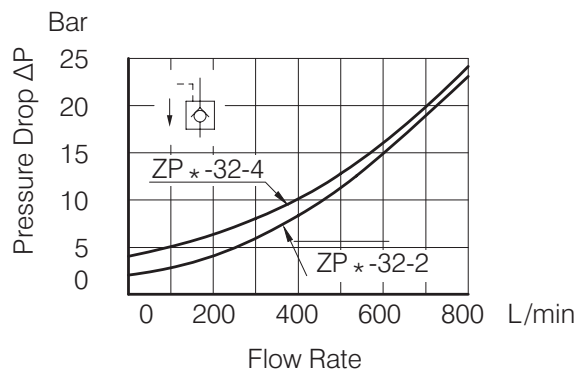
Pressure Drop



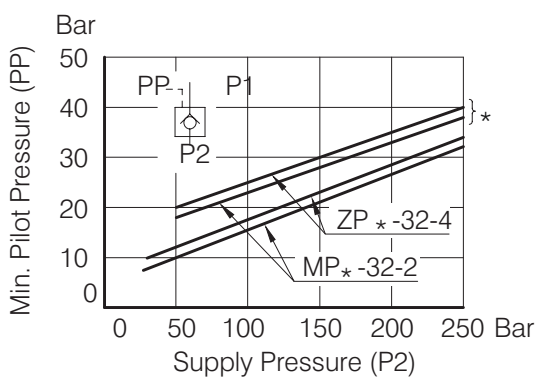
Pressure Drop for Reversed Controlled Flow



Pressure Drop for Free Flow



Min. Pilot Pressure



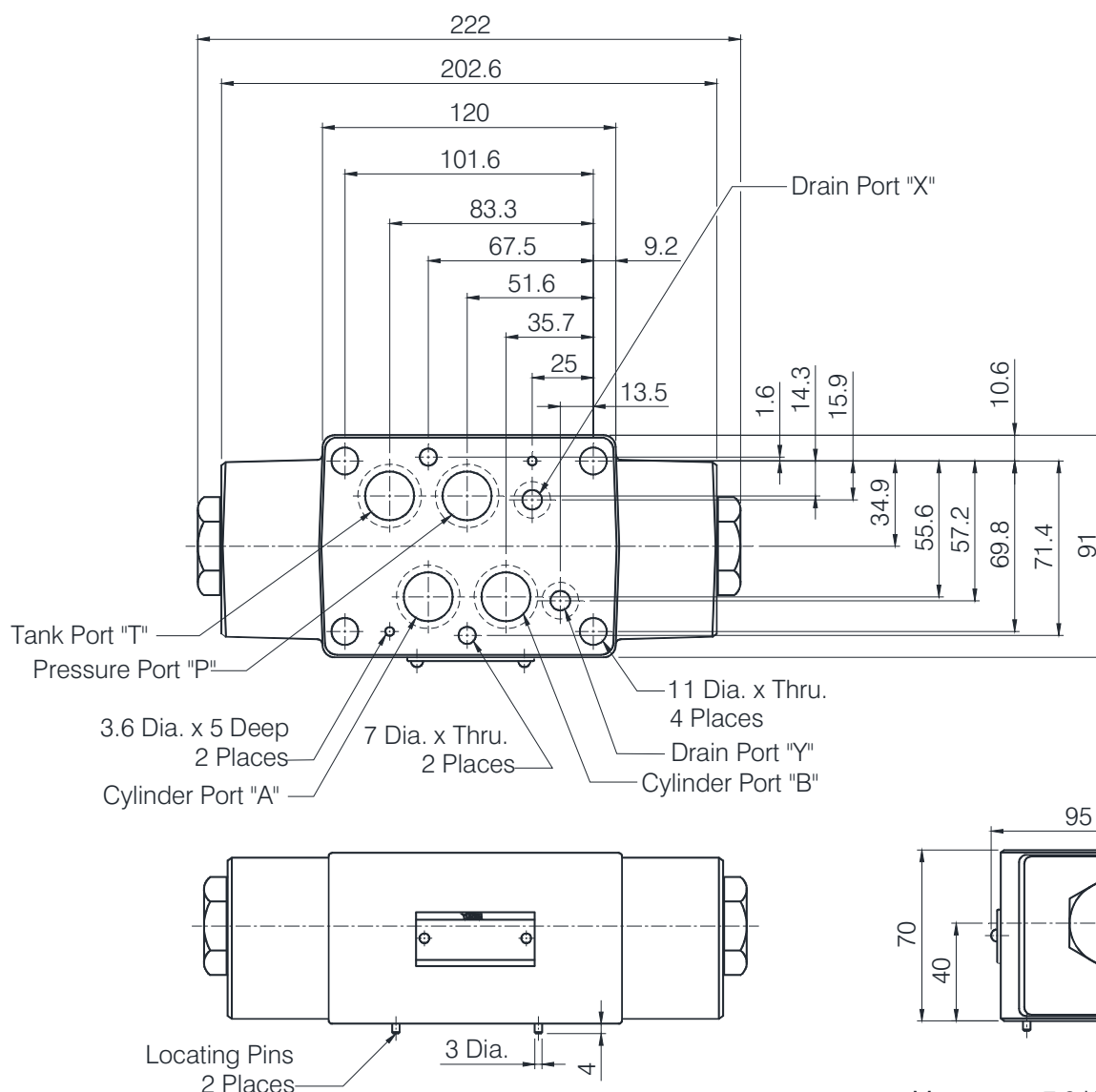
* In case of 500 L/min or more.



Unit Dimensions NG16

(Dimensions in mm)

(F-) ZP*-16-*-10



Mass 7.3 Kg. (Approx.)

Spare Parts List

List of Seals

Sl no.	Name of parts	Parts Numbers	Qty.
1	O-Ring	SO-NB-P26	2
2	O-Ring	SO-NB-P22	4
3	O-Ring	SO-NB-P9	2

Model Numbers	Seal Kit Numbers
ZPA-16	KS-ZPA-16-10
ZPB-16	
ZPW-16	



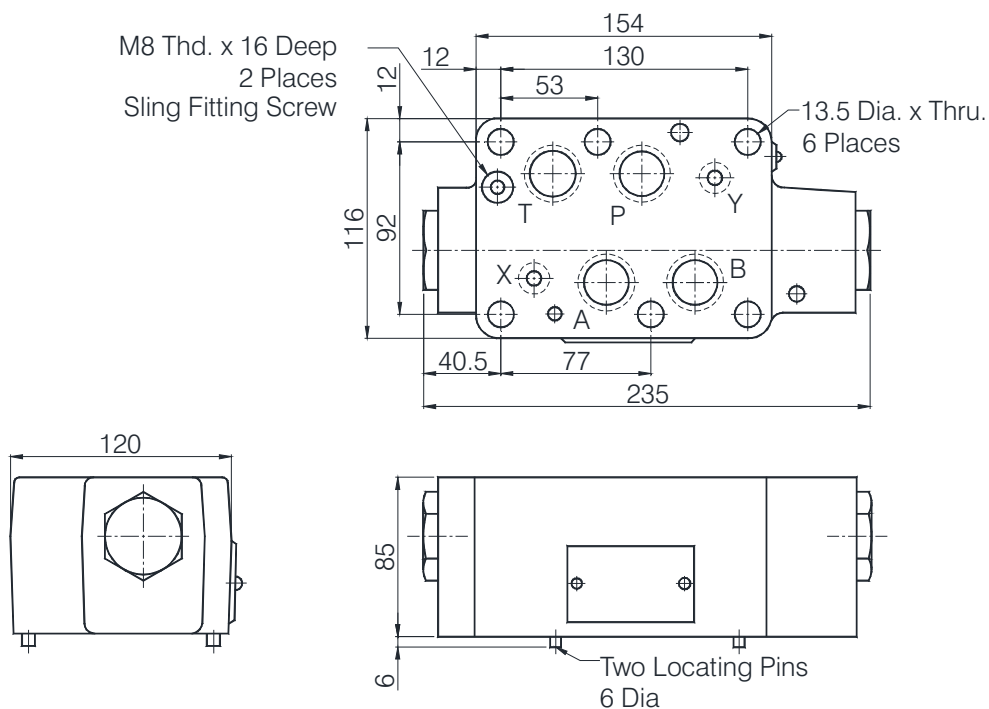
Unit Dimensions NG22

(Dimensions in mm)

ZPA-22-*-30H01

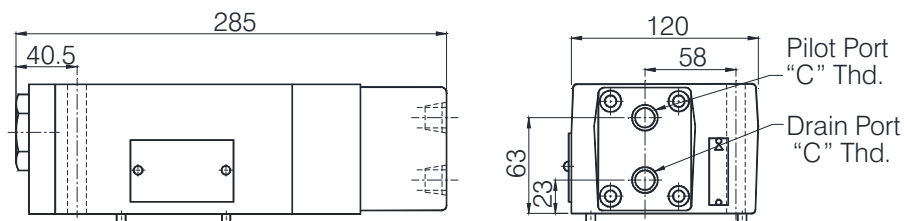
ZPB-22-*-30H01 (Internal Pilot-Internal Drain Type)

ZPW-22-*-30H01



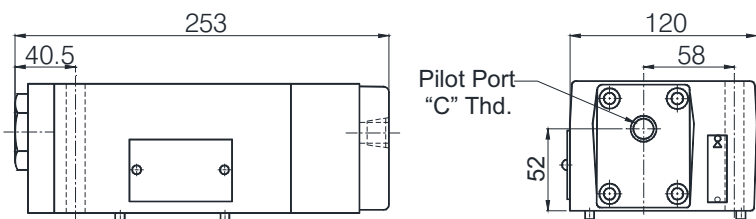
Approx. Mass..... 11.6 Kg.

ZPA-22-*-X-70 (External Pilot -External Drain type)



Approx. Mass..... 13 Kg.

ZPA-22-*-Y-70 (External Pilot -Internal Drain type)



Model Numbers	Thread Size "C" Thd
ZPA-22-*-Y-70	Rc 1/4 = 1/4 BSPT.r.
ZPA-22S-*-Y-70	G 1/4

Approx. Mass..... 11.6 Kg.

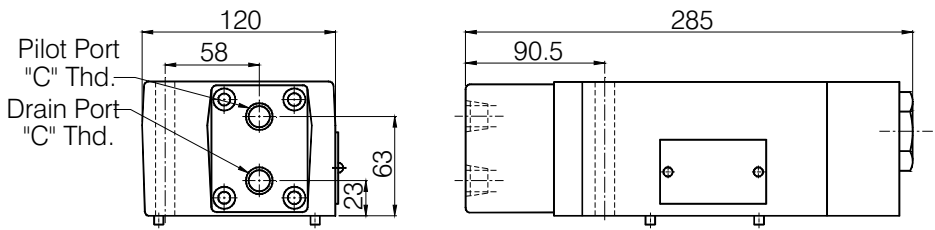
For other dimensions, refer to "Internal Pilot-Internal drain type" drawing above



Unit Dimensions NG22

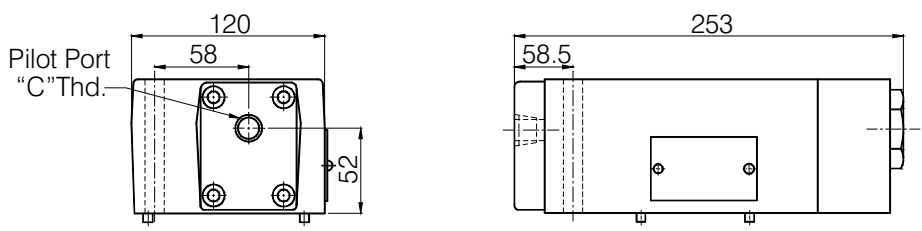
(Dimensions in mm)

ZPB-22-*-X-70 (External Pilot -External Drain type)



Approx. Mass..... 13 Kg.

ZPB-22-*-X-70 (External Pilot -Internal Drain type)



For other dimensions, refer to "Internal Pilot-Internal drain type" drawing above.

Model Numbers	Thread Size "C" Thd
ZPB-22-*-X-70	Rc 1/4 = 1/4 BSPT.Tr.
ZPB-22S-*-X-70	G 1/4

Spare Parts List

List of Seals

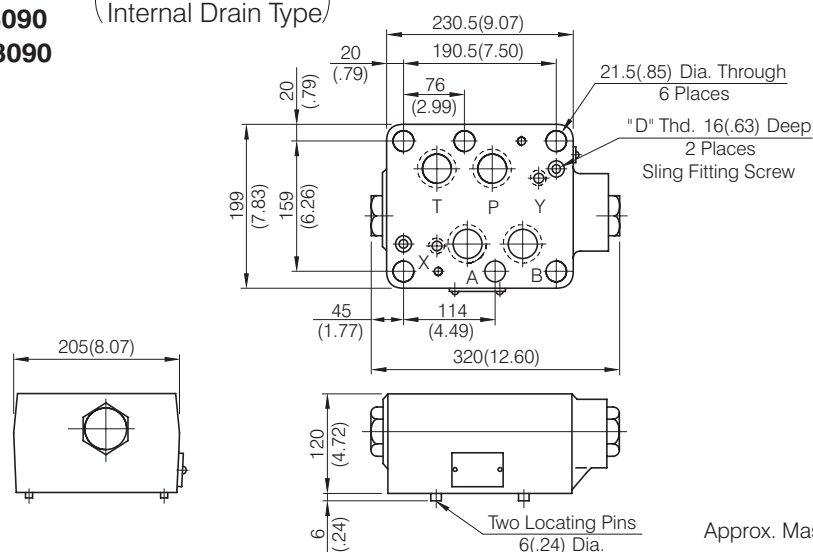
Sl no.	Name of parts	Parts Numbers	Qty.		
			Internal Pilot-Internal Drain	External Pilot-External Drain	External Pilot-Internal Drain
1	O-Ring	SO-NB-P14	2	2	2
2	O-Ring	SO-NA-P26	-	1	-
3	O-Ring	SO-NB-P28	4	4	4
4	O-Ring	SO-NB-P32	2	1	1
5	O-Ring	SO-NB-P36	-	1	1

Model Numbers	Seal Kit Numbers
ZPA-22	KS-ZPA-22-30
ZPB-22	
ZPW-22	
ZPA-22-*-X	KS-ZPA-22-X-70
ZPB-22-*-Y	
ZPA-22-*-X	KS-ZPA-22-Y-70
ZPB-22-*-Y	



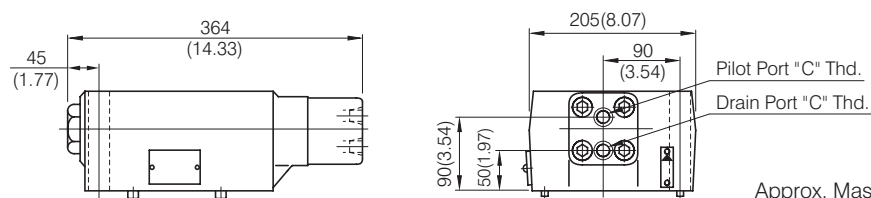
Unit Dimensions NG32

(Dimensions in mm)

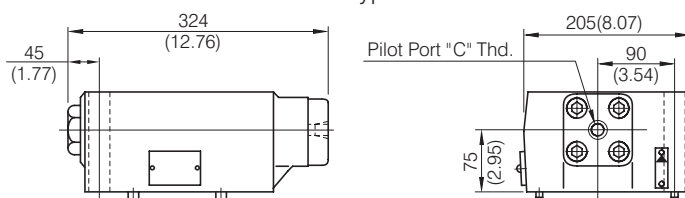
ZPA-32-*-30/3090(Internal Pilot-
Internal Drain Type)**ZPB-32-*-30/3090****ZPW-32-*-30/3090**

Model Numbers	"D" Thd.
MP*-10-*-30	M8
MP*-10-*-3090	5/16-18 UNC

Approx. Mass.....36.5 kg (80.5 lbs.)

ZPA-32-*-X-30/3090(External Pilot-
External Drain Type)

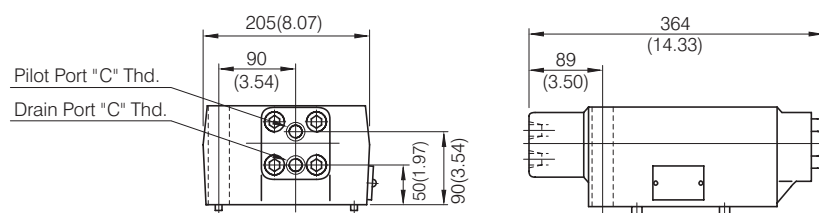
Approx. Mass.....38 kg (83.8 lbs.)

ZPA-10-*-Y-30/3090(External Pilot-
Internal Drain Type)

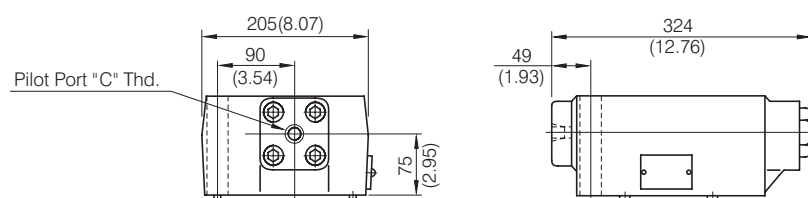
Approx. Mass.....36.5 kg (80.5 lbs.)

Model Numbers	Thread Size "C" Thd.
MPA-10- *- *-30	Rc 3/8 = 3/8 BSP. Tr
MPA-10- *- *-3090	3/8 NPT
MPA-10S- *- *-30	G 3/8

For other dimensions, refer to "Internal pilot-Internal drain type" drawing above.

ZPB-10-*-X-30/3090(External Pilot-
External Drain Type)

Approx. Mass.....38 kg (83.8 lbs.)

ZPB-32-*-Y-30/3090(External Pilot-
Internal Drain Type)

Approx. Mass.....36.5 kg (80.5 lbs.)

Model Numbers	Thread Size "C" Thd.
MPB-10- *- *-30	Rc 3/8 = 3/8 BSP. Tr
MPB-10- *- *-3090	3/8 NPT
MPB-10S- *- *-30	G 3/8

For other dimensions, refer to "Internal pilot-Internal drain type" drawing above.

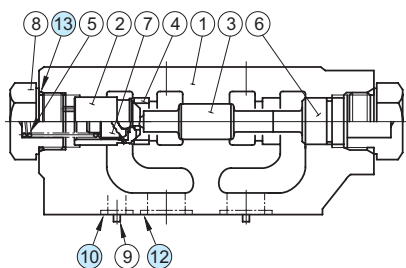


Unit Dimensions NG32

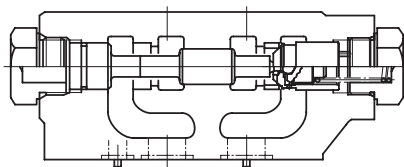
(Dimensions in mm)

Spare Parts List

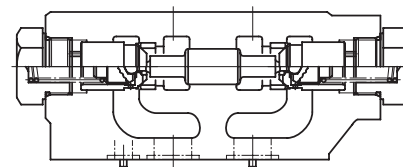
Internal Pilot- Internal Drain Type



ZPA-32-*-30/3090

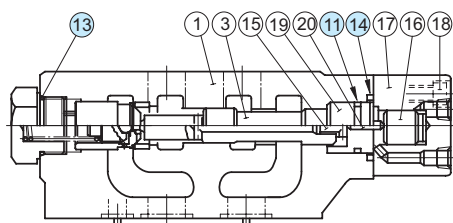


ZPB-32-*-30/3090

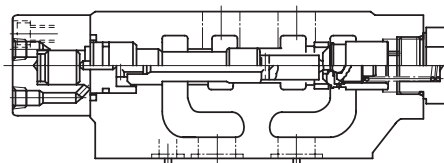


ZPW-32-*-30/3090

External Pilot- External Drain Type

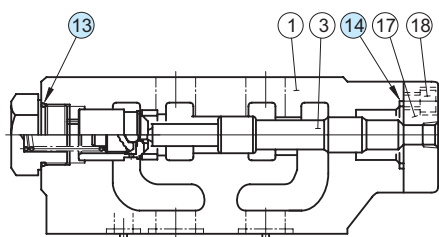


ZPA-32-*-X-30/3090

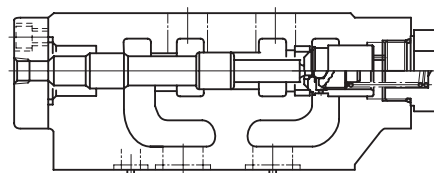


ZPB-32-*-X-30/3090

External Pilot- Internal Drain Type



ZPA-32-*-Y-30/3090



ZPB-32-*-Y-30/3090

Spare Parts List

List of Seals

Sl no.	Name of parts	Parts Numbers	Qty.		
			Internal Pilot- Internal Drain	External Pilot- External Drain	External Pilot- Internal Drain
10	O-Ring	SO-NB-P16	2	2	2
11	O-Ring	SO-NB-P34	-	1	-
12	O-Ring	SO-NB-P40	4	4	4
13	O-Ring	SO-NB-P44	2	1	1
14	O-Ring	SO-NB-P46	-	1	1

Model Numbers	Seal Kit Numbers
ZPA-32	KS-ZPA-32-10
ZPB-32	
ZPW-32	
ZPA-32-*-X	KS-ZPA-32-X-10
ZPB-32-*-Y	
ZPA-32-*-X	KS-ZPA-32-Y-10
ZPB-32-*-Y	

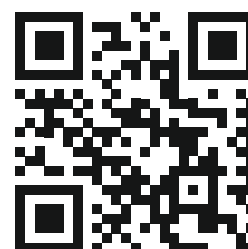
Note: When ordering seals, please specify the seal kit number from the table right.

The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.



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