

MODEL YGDA

Flow divider-combiner assembly

CAPACITY: 3 - 15 gpm



sunhydraulics.com/model/YGDA

This valve assembly uses 3 divider/combiner valves to provide 4 equal bidirectional flows. In the dividing mode, flow coming into AB is divided into 4 equal flows, A1, A2, B1, B2. In the combining mode the assembly throttles the 4 flows coming into A1, A2, B1, B2 keeping them equal.

## 

AB

## **TECHNICAL DATA** NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Body Type	Line mount			
Capacity	3 - 15 gpm			
Mounting Hole Thread	.375-16 UNC - 2B in.			
Mounting Hole Depth	.62 in.			
Mounting Hole Quantity	4			

**NOTES:** • *Important:* Carefully consider the maximum system pressure. The pressure rating of the manifold is dependent on the manifold material, with the port type/size a secondary consideration. Manifolds constructed of aluminum are not rated for pressures higher than 3000 psi (210 bar), regardless of the port type/size specified.

• For detailed information regarding the cartridges contained in this assembly, click on the models codes shown in the Included Components tab.

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## **OPTION SELECTION EXAMPLE: YGDAXANA**

CONTROL (		LOW SPLIT	(A)	SEAL	MATERIAL	(N)
X Not Adjustable	А	<b>A</b> 50/50		N	Buna-N	
				٧	Viton	
PRIMARY CARTRIDGE						(A)
A (with ESDA primary or	cartridge Closed center flow of	divider combiner valve)				

## **TECHNICAL FEATURES**

- Operating characteristics cause the leg of the circuit with the greatest load to receive the higher percentage of flow in dividing mode. If a rigid mechanism is used to tie actuators together, the lead actuator may pull the lagging actuator and cause it to cavitate.
- In combining mode, compensating characteristics will cause the leg of the circuit with the lowest load to receive the higher percentage of flow. If a synchronization feature is not included, an additive accuracy error will be experienced with each full stroke of the actuator.
- In applications involving rigid mechanisms between multiple actuators, operating inaccuracy will cause the eventual lock-up of the system. If the mechanical structure does not allow for the operating inaccuracy inherent in the valve, damage may occur.
- In motor circuits, rigid frames or mechanisms that tie motors together, and/or complete mechanical synchronized motion of the output shaft of the motors, either by wheels to the pavement or sprockets to conveyors, will contribute to cavitation, lock-up and/or pressure intensification.
- Variations in speed and lock-up can be attributed to differences in motor displacement, motor leakage, wheel diameter variance and friction of wheels on the driving surface.
- Extreme pressure intensification can occur on multiple wheel drive vehicles.
- Flow between ports is limited to spool leakage. This does not provide leak proof holding capability, but can be useful in minimizing cross flow and drift.
- Differential slip for tractive drive systems must be achieved with orifices in the body/manifold.
- Divisional and combining accuracy are equal.
- Below the minimum flow rating there is not enough flow for the valve to modulate. It is effectively a tee. If flow starts at zero and rises, there will be
  no dividing or combining control until the flow reaches the minimum rating.

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