



— MODEL — **413-01**

Fuel Discharge Valve



FEATURES

- Closes tight when excessive water is present.
- "Fail-Safe"construction.
- Single seat with resilient disc insures tight seal.
- Position Indicator is standard equipment.
- No packing glands assure leak-proof service.

PURCHASE SPECIFICATIONS

The valve shall consist of a main valve,an auxiliary control valve,and an ejector assembly.The main valve shall be a pilot-operated,diaphragm actuated,globe type valve containing a single seat,and resilient disc.It shall be pilot controlled and hydraulically operated by line pressure.It shall be equipped for operation by a pilot control located at a remote point External packing glands are not permitted.Diaphragm must not be used as a seating surface.It the diaphragm becomes damaged,the valve must close tight. The auxiliary control valve shall be of the same design.Valve shall close tight when pressure from the remote pilot control is applied to the auxiliary control valve.When this pressure is removed,the valve shall open wide. Valve must be similar in all respects to the Model 413-01 as manufactured by Cla-Val Newport Beach,California,or approved equal.

The Fuel Discharge Valve is installed on the outlet of the Fuel Water Filter/ Separator.It automatically closes to stop the discharge when the incoming fuel is contaminated with a quantity of water exceeding the draining capacity of the Water Drain Valve.

This valve is controlled by a float operated pilot control which responds to changes in level of the interface surface of the water and fuel in the water sump.Several types of Cla-Val Float Controls may be used,however, the Filter/Separator configuration will dictate the most efficient one to use.

CFF18TH
CFF21H2

The Float Control automatically operates the Water Drain Valve (Ref.Form E-V4100-34)and the 413-01 Fuel Discharge Valve.There is no need for manual attention after the water draining period which follows automatic closure of the fuel discharge valve due to excess water. The 413-01 is a diaphragm actuated,hydraulically operated,single seated valve.This valve fails "safe"because it closes should the diaphragm be damaged.The valve is designed to operate on a minimum pressure of 4.54 p.s.i.(15 ft.head of fuel)at valve inlet.The auxiliary valve installed on the valve cover provides immediate response to operating pressure from the Float Control and requires less than one ounce of actuating fluid to close it When closed,the the under full line pressure is directed to the top of the diaphragm of the main valve thus closing it drip tight When the auxiliary valve opens, pressure is relieved from the main valve cover chamber and the valve opens to permit full flow.

MILITARY SPEC. MIL-F 254D

SIZES 1 1/2"-8"
END DETAILS flanged:
Ductile Iron 125 ASA B16.42
Cast Steel 150 ASA 816.5
Cast Aluminum 125 ASA

PRESSURE RATINGS 150 class —175 psi
150 class —275 psi
250 class —300 psi
300 class —400 psi

TEMPERATURE RANGE -40 °F.to +180 °F.

FLUIDS Aviation fuels:
MIL-5572 and MIL-T-5624

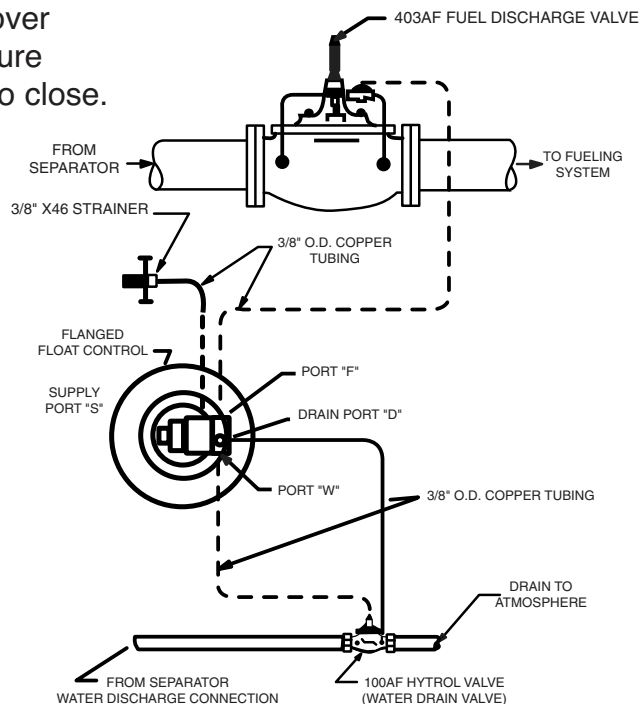
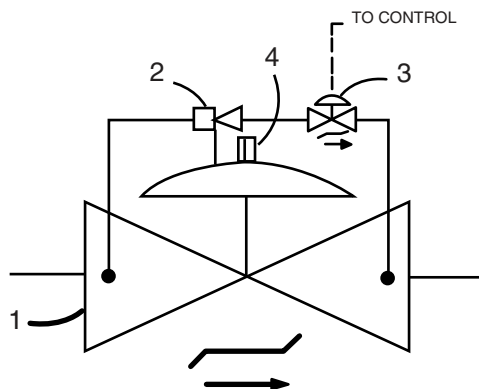
MATERIALS *main valve body and cover:*
Ductile iron ASTM A536
Cast Steel ASTM A216 WCB
Cast Aluminum 356-T6
main valve trim:
Bronze or Stainless Steel

pilot control systems:
Bronze and Stainless Steel or all
Stainless Steel as specified
tubing and fittings:Copper or Stainless
Steel.as specified

OTHER MATERIALS AND PRESSURE RATINGS rubber parts:
Buna-N® Synthetic Rubber or
Viton as specified
Available on special order,
Bronze,Ductile Iron or
Stainless Steel

1. *Opening:* When remote control relieves pressure from the cover chamber of auxiliary valve (3), the cover chamber pressure of the main valve (1) is released through the ejector (2) and main valve opens.

2. *Closing:* When remote control applies pressure to cover chamber of auxiliary valve (3), it closes and line pressure flows into cover chamber of main valve (1), causing it to close.



1 100KHR HYTROL MAIN VALVE 1

2 X47A (4\"&SMALLER)1
X50 EJECTOR (6\"&LARGER)1

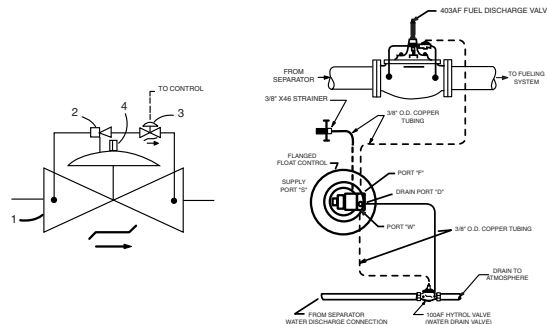
3 100 KR HYTROL AUXILIARY VALVE 1

4 X101 VALVE POSITION INDICATOR 1

DIMENSIONS

DIMENSIONS IN INCHES

Size	1 1/2	2	2 1/2	3	4	6	8
A	8/12	9/38	11	12	15	20	25 3/8
B	5 5/8	6 3/4	8	9 1/4	11 1/2	15 3/4	20
C	7 1/4	8 1/4	9 3/8	9 5/8	14 3/8	17 1/8	20
D	2	2 1/2	2 7/8	3 1/8	4 1/4	6	7 5/8
Ship. wt.	25	45	60	80	150	300	525
Alum. only	16	27	40	55	100	185	300



E-413-01 (R-01/2018)

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