



Photo courtesy of AF Theriault & Portland Fire Dept. / City of Portland

## Jastram Digital Input Devices

A complete Jastram steering system will include some or all of our input devices combined with the appropriate control and hydraulic systems. The Jastram Digital Input Devices can only be used with the Jastram Digital Control system.

The current line of Jastram Digital Input Devices include:

- Digital Helms (with Digital Helm Manifolds)
- Digital Wheels



## Digital Helm (DH36)

U.S. Patent 6,564,739 / Cdn. Patent 2,353,053

This patented hybrid hydraulic / electric unit provides full follow-up digital electric control as well as emergency manual hydraulic control. Under power steering, the steering wheel is turned producing a rudder command signal the rudder then follows up to the position requested by the wheel. In the event of a power failure the digital helm seamlessly transfers to manual hydraulic steering. Under emergency manual hydraulic steering the number of turns depends on the size of the actuators.

- Compatible with the Jastram Digital steering system
- To be used in conjunction with a Digital Helm Manifold (DHM)
- Under power steering mode:
  - \* Adjustable number of wheel turns, programmable from 1/4 turn to 10 turns lock to lock
  - \* Effort to turn the wheel does not change regardless of operating conditions
- When taking over control of the steering system the Digital wheel takes over at the present position of the rudder. Other systems usually move the rudder back to center before acquiring control of the steering.
- Capable of Manual steering

### Wheel:

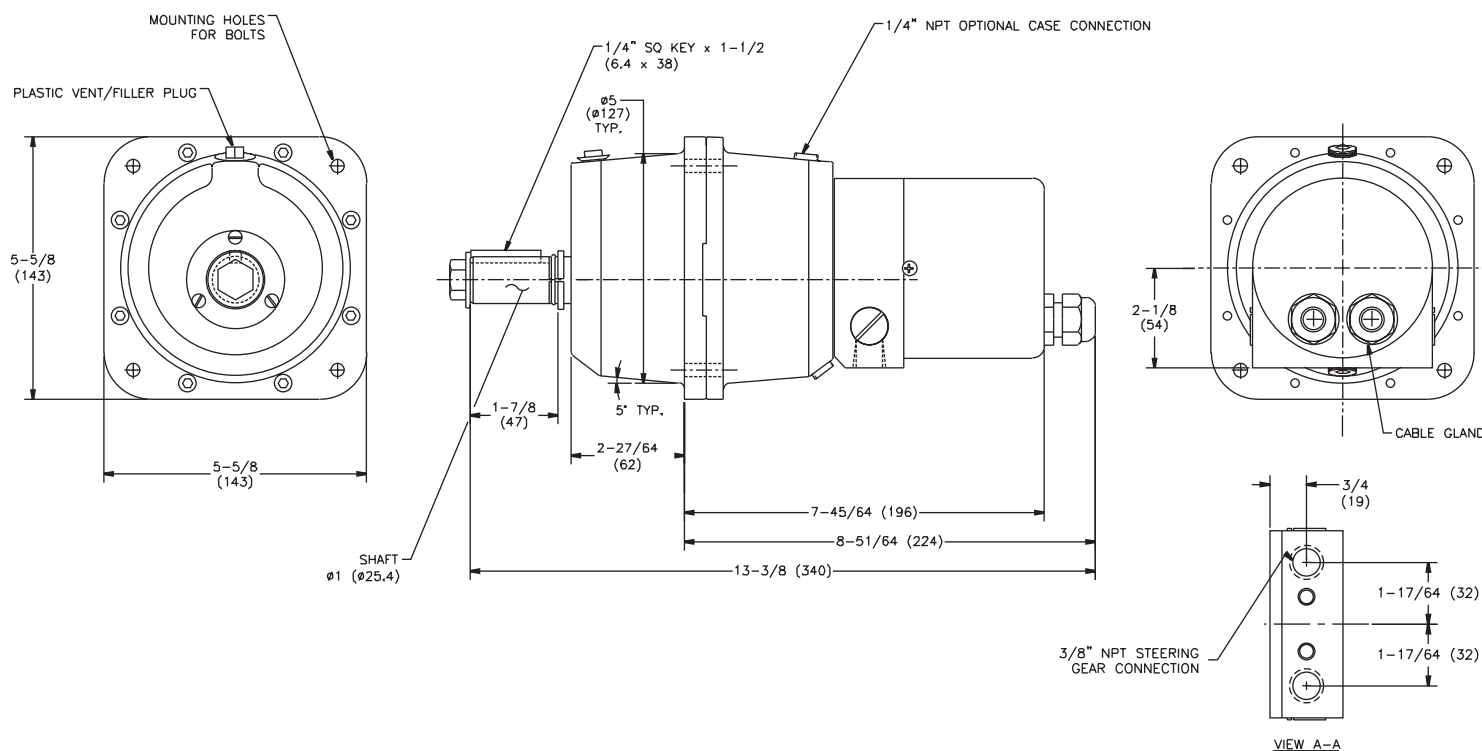
A wheel is not supplied with the digital helm.

DH36 shaft dimensions are:

- 1" by 1 7/8" shaft with a 1/4" square key

### Specifications:

Output Voltage:	12 or 24 VDC
Connector:	Terminal Block
Recommended Cable:	16 AWG 2 wire, not shielded



## Digital Helm (cont)

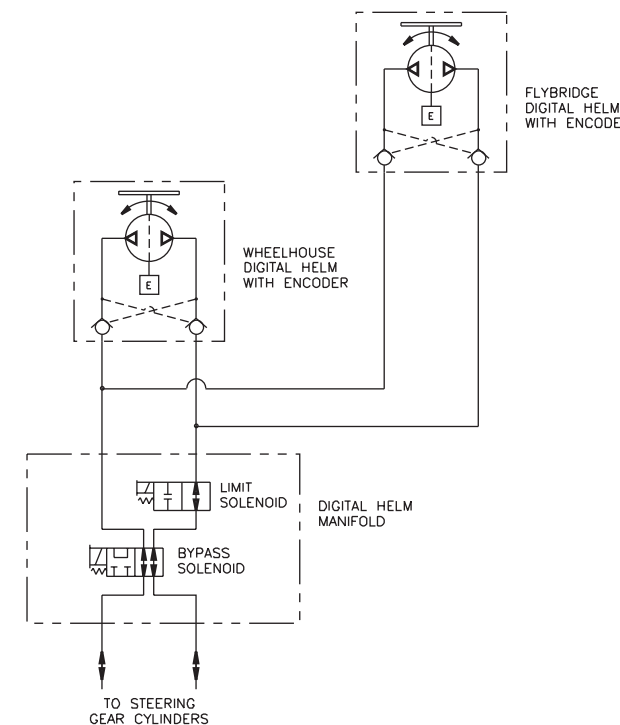
### Two versions available:

- DH36 - 1 is the standard unit and produces one output signal
- DH36 - 2 produces two output signals - the second signal for control redundancy, or for operation of a second steering system where independent twin steering gears are installed

### Notes:

### Warning: Do not use brake fluid or transmission oil

- Requires Hydraulic Oil ISO Grade 32
- The DH36 has a displacement of 3.6 cubic inches per revolution
- SAE O-ring fittings are used for hydraulic connections
- Waterproof and corrosion resistant housing, IP 66



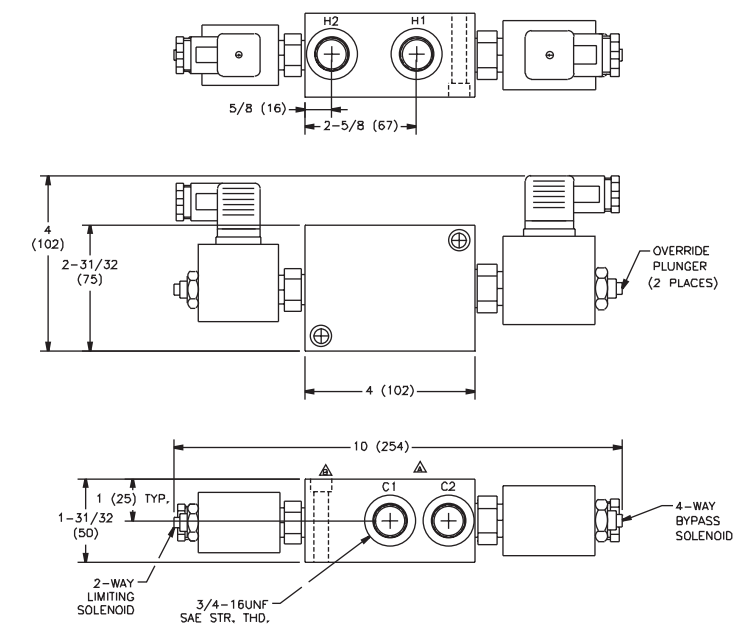
## Digital Helm Manifold (DHM)

The Digital Helm Manifold (DHM) is a small, compact manifold which provides seamless transfer from fly-by-wire steering to emergency manual hydraulic steering in the event of a power failure.

- To be used in conjunction with the Jastram Digital Helm
- Within certain parameters, a single DHM can service multiple DH-36 helms

### Specifications:

Output Voltage:	12 or 24 VDC
Connector:	DIN Connectors
Recommended Cable:	16 AWG 2 wire, not shielded





## Digital Wheel (DW)

Digital Wheels are unique input devices which provide full follow-up digital electric control. The two main features of the Digital Wheel over the standard electric wheel are:

1. A programmable number of wheel turns from ¼ to 10 turns lock to lock and
2. When taking over control of the steering system the Digital wheel takes over at the present position of the rudder

Under power steering, the steering wheel is turned producing a rudder command signal. The rudder then follows up to the position requested by the wheel.

- Only compatible with Jastram Digital steering systems
- Two version of the DW are available:
  - \* DW-1 is the standard unit and produces one output signal
  - \* DW-2 produces two output signals - the second signal for control redundancy, or for operation of a second steering system where independent twin steering gears are installed
- Effort to turn the wheel does not change regardless of operating conditions

### Steering Wheel:

The wheel is not supplied with the digital wheel.

DW shaft dimensions are:

- 1" by 1 7/8" shaft with a ¼" square key

### Mechanical information:

#### Warning: Do not use brake fluid or transmission oil

- Requires Hydraulic Oil ISO Grade 32
- Housing:
  - \* High strength cast aluminum
  - \* Powder painted housings
  - \* Waterproof and corrosion resistant, IP 66



### Specifications:

Output Voltage:	12 or 24 VDC
Connector:	DIN connectors
Recommended Cable:	16 AWG 2 wire, not shielded

*Data is subject to change without notice.*