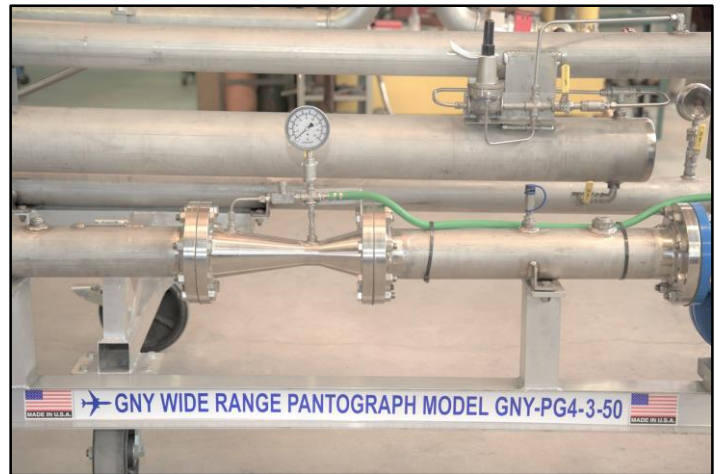
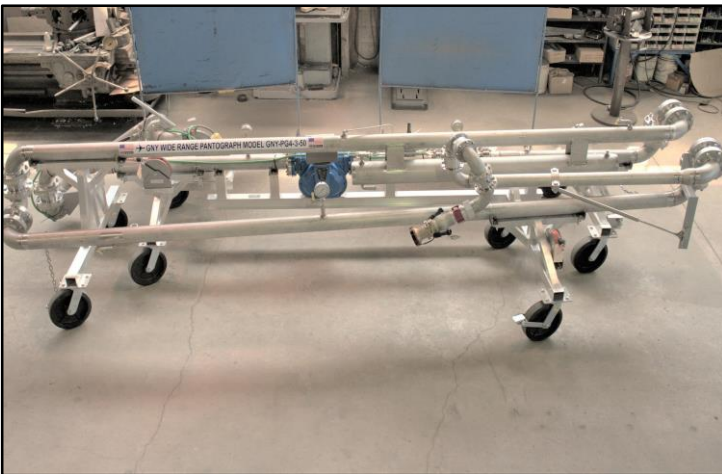
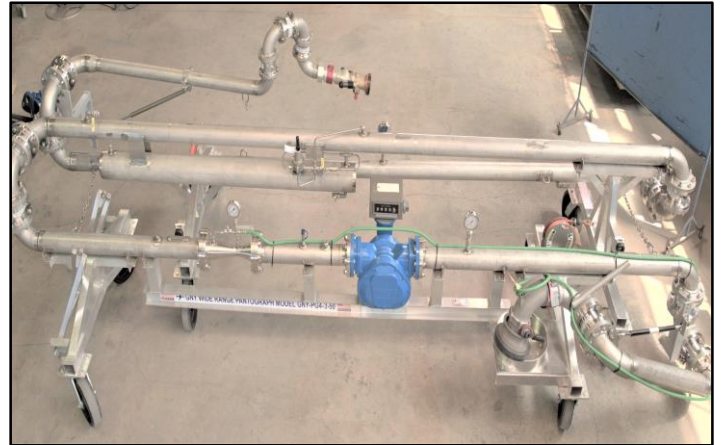
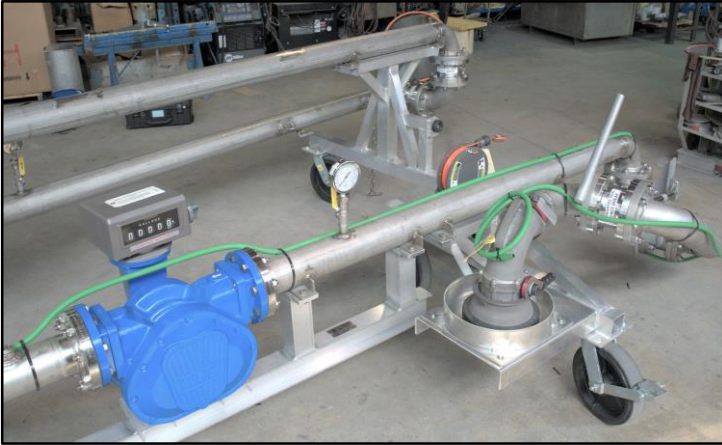


# GNY WIDE RANGE MOVABLE PANTOGRAPH

## MODEL: GNY-PG4-3-50F



Wide Range Pantograph is an Aviation Refueling Equipment with movable fueling arm. It is used to refuels at a military pressure type hydrant system wide body aircraft and tactical aircraft through fuselage connection. The fueling operation can be done with ease, maintenance free, and with lowest operation cost. The wide range unit designed to coupled to the hydrant system by a military hydrant coupler.

Wide Range Pantograph Assembly consists of main hard pipe of three sections, plus one hydrant section and one fueling-end section with total twelve swivel joint (nine NOS. 4" and three NOS. 3") including light-weight non-lubricated swivel joint with fueling nozzle.

Wide Range Pantograph included with Pressure Equalizing Tank with adjustable Pressure Relief Valve Assembly, Drain and Sampling Assembly, Venturi with Pressure Gauge, Detonation proof Venting Valve Assembly, Bolts with Nylon Locknuts, Grounding Cable Reels, Flow Meter, Elbows, Flanges and SST Gas Spring Mechanical Balance for easy balancing Fueling-end section. Hydrant end is also mechanical balanced for easy coupling to the hydrant system.

- GNY Pantograph Swivel joint, Non-Lubricated, FULL BORE, with total four hardened bearings (two ball and two rollers), four Viton® seals of main seal, O-ring, two built-in O-rings seals adjoining flanges, with three years performance warrantee, considering warrantee seal is NOT broken. Electrically Conductive without external bridges.
- GNY Pantograph Non-lubricated Swivel joint is specially designed to refuel Aviation fuel.

- A tow bar is attached for pulling the pantograph on the apron and movable by 5 MPH tow speed.
- 4 Ea. Aluminum Support Structures is attached for carrying the pipe construction and each structure with 2 Ea. casters.
- API and non-controlling 4" hydrant coupler with holder tray is attached to the support structure.
- The unit is equipped with 5 Ea. Lockable supports with chain to secure the movable pipe sections while towing the unit.
- The GNY Fueling Pantographs are approved for all fuel servicing operations by US Air Force AFSSEA team. Approved is included in technical order T.O. 00-25-172, ground servicing of Aircraft and static grounding/bonding. Technical specifications as per article UFGS-33 52 43.12 (August 2018).

## **Technical Specifications: (Model: GNY-PG4-3-50F)**

Piping Sections	3 Section (4" Diameter (≈100 mm)); Total length: 50 Ft. (Each 200" length) 1 Hydrant Section (4" Diameter (≈100 mm)) 1 Fueling End (3" Diameter (≈80 mm))
Flow Meter	4" Diameter with 360° Turntable Swivel Register
Flow Rates	Up to 600 GPM
Working Pressure	Up to 150 PSI
Venturi	4" Diameter with Pressure Gauge
Swivel Joints (Non-lubricated and Maintenance free)	4" x 150 lbs. built-in flange-ends. Unit weight 35 lbs. (D2000-4-PGSJ) 4" with special TTMA flanged ends. Unit weight 18 lbs. (D2000-4-PGSJ-T) 3" X 150 lbs. built-in flange-ends. Unit weight 22 lbs. (D2000-3-PGSJ) 3" with special TTMA flanged ends. Unit weight 11 lbs. (D2000-3-PGSJ-T)
Pressure Fueling Nozzle	Military D-1/D-2 Conf. with Hose-End Regulator, Single Point Refueling, Dry Break Quick Disconnect and Strainer Unit
Wheels/Casters	8 Ea. 12" Diameter heavy duty casters 2 Ea. With brake and 2 Ea. With straight going assembly. (Hand activated lock)

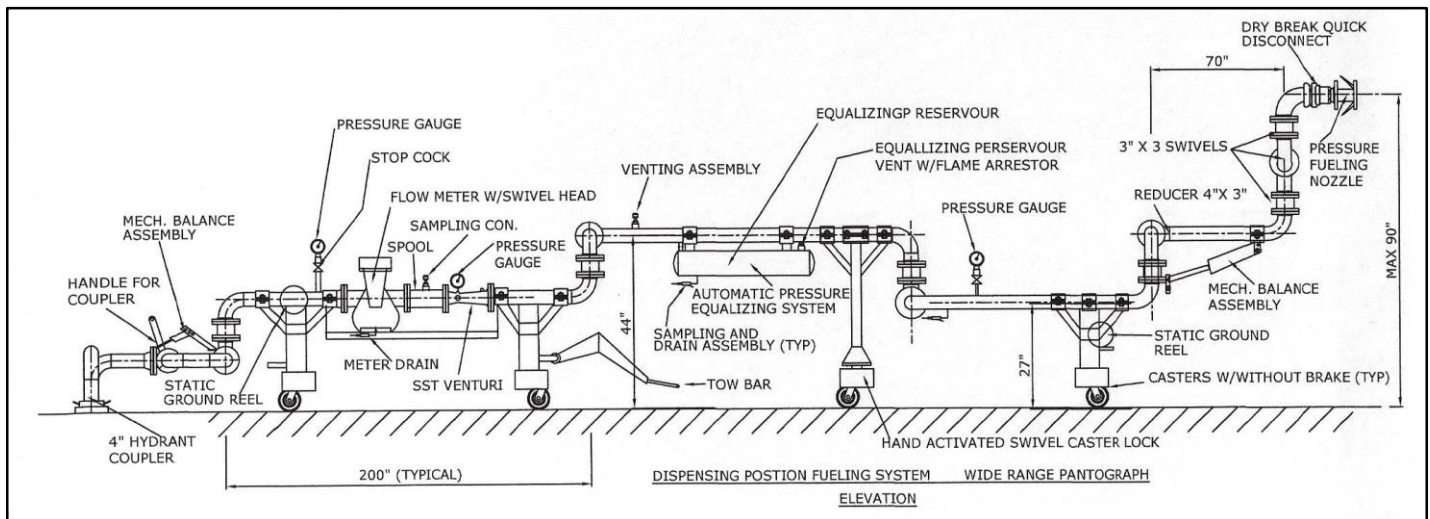
## **Materials:**

Pipe, Elbows and Flanges	Stainless Steel 304L
Venturi	Stainless Steel 304L
Flow Meter	Aluminum
Sealing	Viton® (Fluorocarbon)
Balancing System	Stainless Steel 304L
Swivel Joint	Stainless Steel 316L
Parking Latch and clamp	Stainless Steel 304L
Sampling, Drains and Vent	Stainless Steel 304L
Supporting Structure	Aluminum
Nuts and Bolts	Stainless Steel Self Locking

## Testing and other information:

- All welding by qualified welders.
- Hydro-static test: A complete unit will be Hydro tested at 200 psi or as required.
- Quality Control Certificate from QA/QC inspector witnessing, factory assembled and sealed GNY Swivel joints with Hydro-stated at 200 psi. Quality certificates with performance guarantee are provided.
- The overall electrical resistance between the flanged end and the pressure fueling nozzle is not exceed 1 kilo ohm. Grounding straps across swivel joints are not included.
- All units are supplied fully assembled, ready to use.
- Approx. Gross Weight: 2200 LBS. (1800 LBS. Unit Weight)
- Shipping Wooden Box size: 226" L x 80" W x 62" H
- Variations to the standard design as per requirements are available.
- **Project Completed- FB1777:** Wide Range Pantograph, For.....Client: US Navy, Spain, Descriptions: Qty. 2) 4" x 3 section of 25 feet total 75 feet open-length with 12" Caster assembly....year 2019.
- **FB1781:** Wide Range Pantograph, For.....Client: US Navy, Japan, Descriptions: Qty. 4) 4" x 3 section of 17 feet total 50 feet open-length, as shown in sketch and photo ...year 2019.

## Wide Range Pantograph Drawing: (Model: GNY-PG4-3-50F)



January 3, 2020

