FLUID CONTROLS PRIVATE LIMITED

INSTRUMENTATION HOOK-UPS

Customised Close Coupled and Prefabricated Hook Ups for Pressure Transmitter, Pressure Gauge and Flow Transmitter

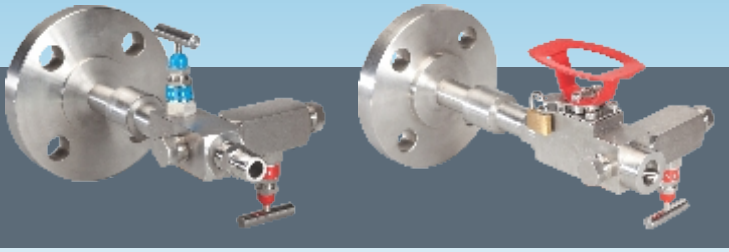


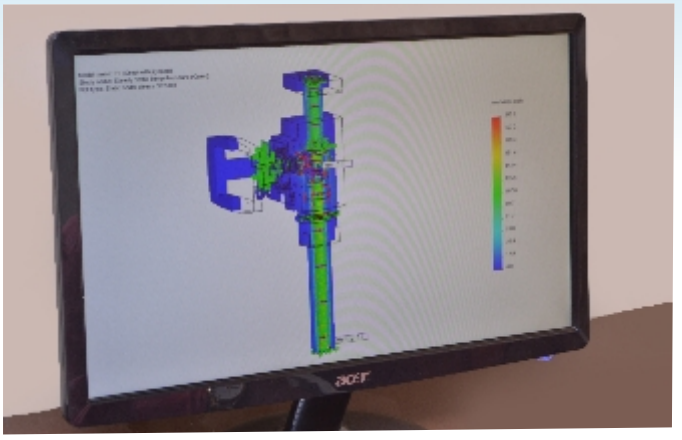

PROFILE

The Valves Unit of Fluid Controls Private Limited was founded in 1979 by Dr. Y.E. Moochhala, a Ph.D in Mechanical Engineering from Northwestern University, USA. The unit was earlier known as Hyd-Air Engineering Works Lonavla and was subsequently merged with Fluid Controls Private Limited in December 2013.

Headquartered in Mumbai, the Fluid Controls valves team has 35 years of expertise in the design, engineering and manufacturing of valves, manifolds, hook-ups, air manifolds and special gas valves. Our clients in India and abroad include large industrial houses, process, power generation and oil / gas industries.

"THE VALVE EXPERTS"



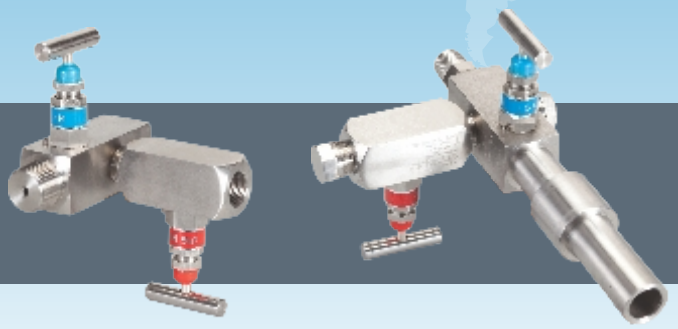


IN HOUSE 2D AND 3D DESIGN CAPABILITIES

ENGINEERING FLOW CONTROL

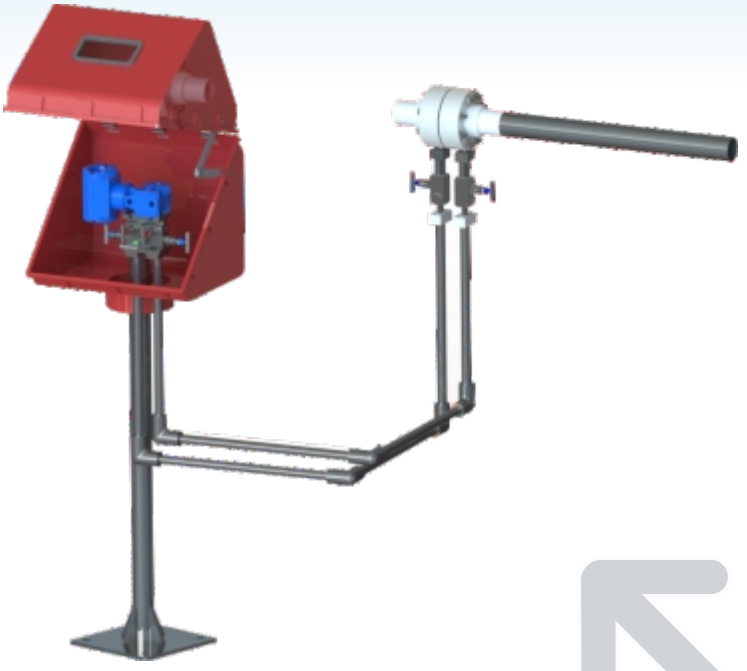
CERTIFICATIONS:

ISO 9001:2008
PED Certification
MSS-SP-99
ASTM F-1387-99 (2012)
Fire Safe Ball Valves (API 607/ISO 10497)
Fugitive Emission Testing (ISO 15848)



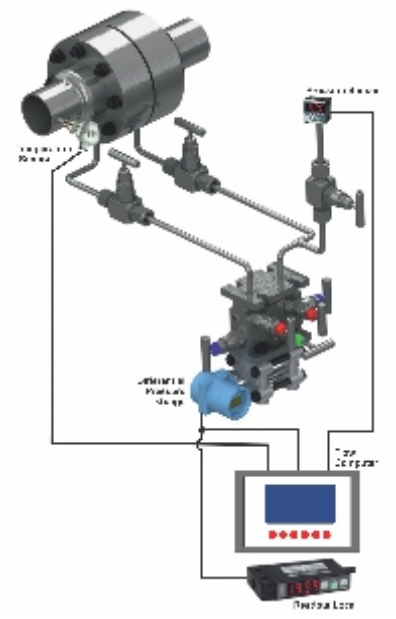
KEY CLIENTS

Bharat Heavy Electricals Ltd.
Cameron surface systems
Daelim Industrial Co Ltd.
DMDE - Secunderabad
Econosto Netherlands
Essar oil, power & steel
Emerson Process Management
Engineers India Ltd.
Gas Authority of India Ltd.
Indian Oil Corporation Ltd.
IGCAR – Kalpakkam
Jindal Power & Steel Ltd.
Larsen & Toubro Ltd.
Mangalore Refinery & Petrochemicals Ltd.
Nuclear Power Corporation of India
National Thermal Power Corporation
Oil & Natural Gas Corpn. Ltd.
Samsung Engineering
Toyo Engineering
Tata Steel



Instrumentation Hook-ups

Instrument Hookups are a convenient way of eliminating impulse piping by using sandwich construction valves. The valves have an isolating block attached to a manifold on which the transmitter / instrument is mounted. The design of the sandwich valves allows for removal with adequate isolation protection of the instrument / gauge with or without the manifold. The flange type construction for connection to the orifice flange assembly for differential pressure instruments and the flange assembly for pressure instruments makes for convenient assembly at site.



Conventional System

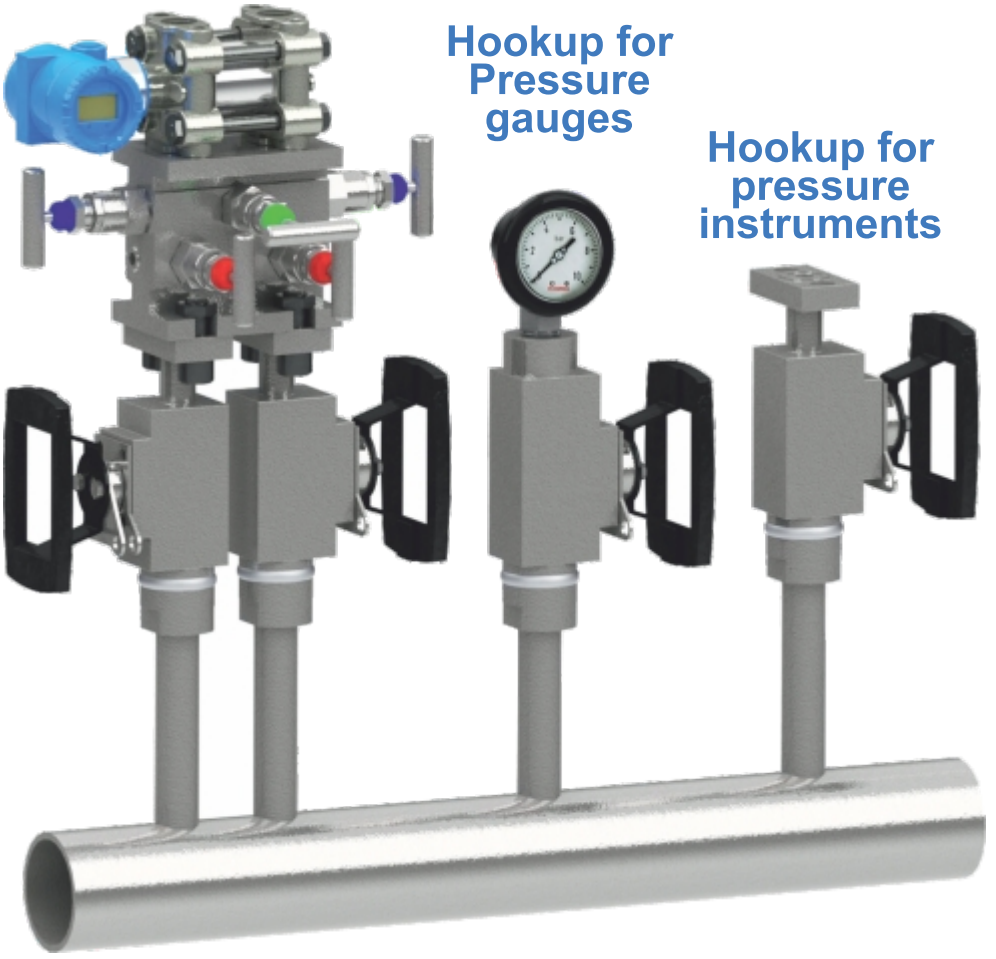
Fluid Controls Hookup System

Unique propositions :

- 3D Model for each design made in-house by a profound R&D team
- Finite Element Analysis, using customer specifications such as temperature-flow and ambient, flow medium properties, surrounding environment conditions
- PDMS/PDS modeling which facilitates Hook-up alignment with existing layout
- End-to-End in-house Manufacturing
- Complete traceability based on compliance to Quality controlled documents
- Simplified packaging per TAG numbers
- Optional site assistance, if required, while installation

ENGINEERING FLOW CONTROL

Hookup for differential pressure flow transmitters



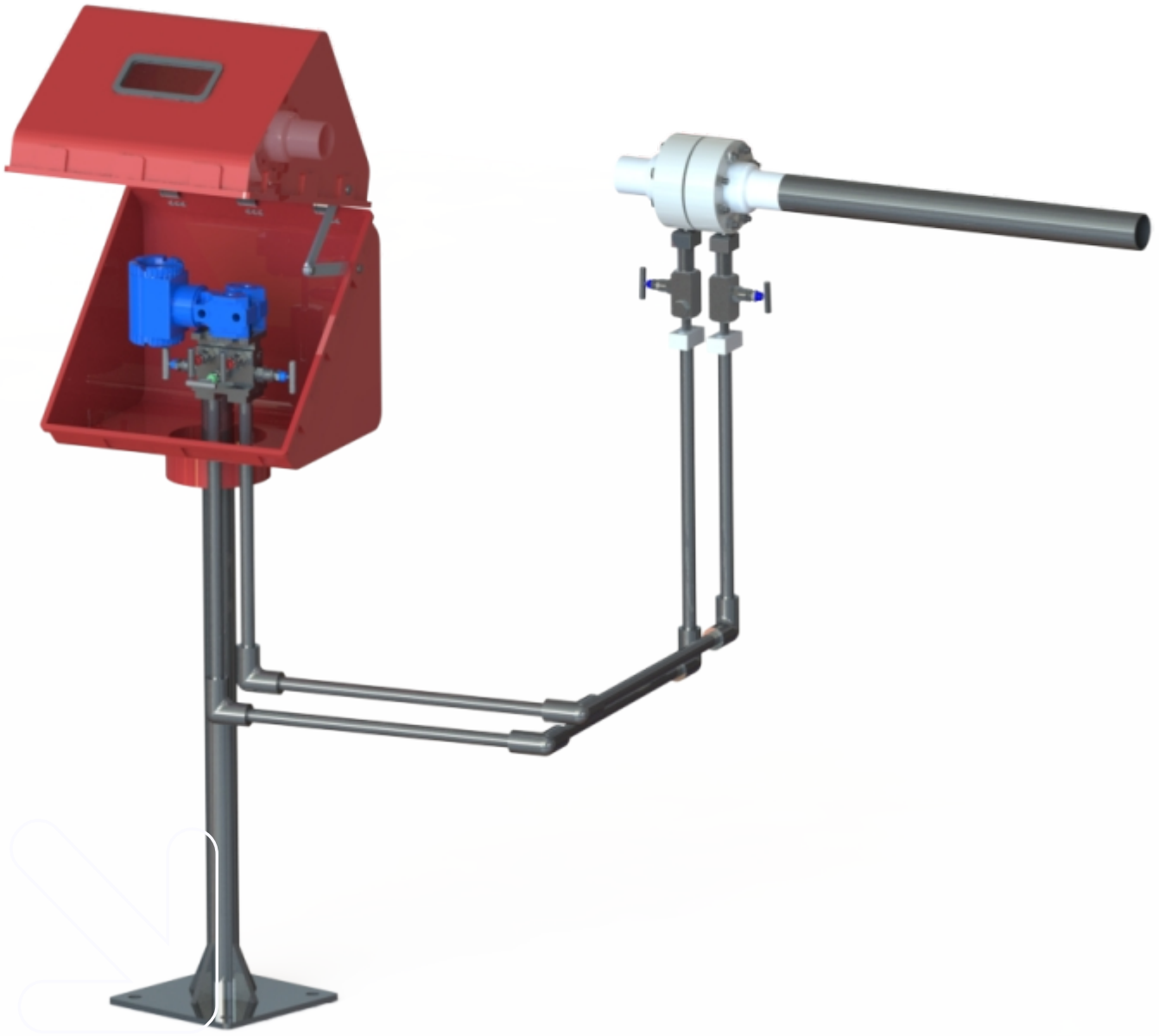
Close Coupled Instrument Hookups can be used for mounting differential pressure flow transmitters, pressure gauges and pressure instruments.

Close Coupled Instrument Hookups from Fluid Controls are custom designed to our clients needs and are available with different end connections and materials to suit site conditions.

Fluid Controls offers Close Coupled Instrument Hookups for differential pressure transmitters, pressure gauges values and pressure transmitters with options such as root valves, monoflange valves, double block and bleed valves.

Fluid Controls also offers services for design and supply for prefabricated close coupled instrument hookups.

Remote mounted hookup with enclosure stand unit



Instrument Hookups from Fluid Controls are custom designed to our clients needs and are available with different end connections and materials to suit site conditions.

Fluid Controls offers clients a complete hookup solution including specially designed enclosures and other accessories required for site installation.

ENGINEERING FLOW CONTROL

Instrument Hookups for Differential Pressure Flow Transmitters

'H' Type 5 Valve Manifold connected to orifice plate with an option of two types of valves

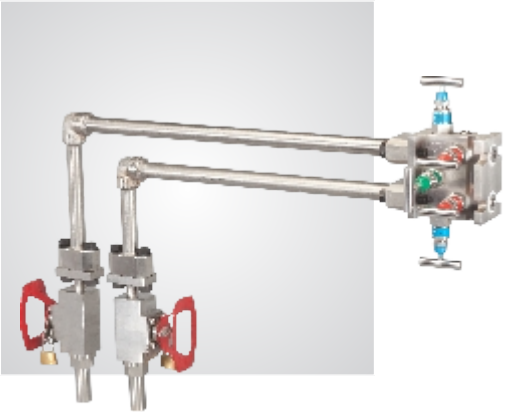
1) Isolation Ball Valve - One end Instrument flange - connected to 5 valve process side, Second end depends on Orifice plate assembly - connected to Orifice plate

OR

2) Isolation Needle Valve - One end Instrument flange - connected to 5 valve process side, Second end depends on Orifice plate assembly - connected to Orifice plate

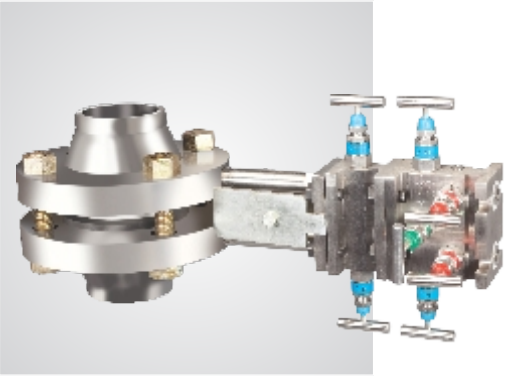
Temperature	:	Up to 540°C (1004°F)
Pressure	:	6000 PSIG (PN 400)
Gland Packing Material	:	Up to 180°C - PTFE, Above 180°C to 540°C - Graphoil with inconal inhibitor
Material	:	A 182 Gr. F 316 SS, A 479 SS 316, A 276 SS 316, A 182 Gr. F SS 316 L, A 479 SS 316 L, A 276 SS 316 L, A 182 Gr. F 304 SS, A 479 SS 304, A 276 SS 304, A 182 Gr.F SS 304 L, A 479 SS 304 L, A 276 SS 304 L

NOTE: The close coupled instrument hookups shown are those that have been manufactured and supplied by Hyd-Air, Each client has their own specific requirements based on site conditions, and each Fluid Controls close -coupled instrument hookup is custom designed using 2D and 3D modeling techniques.



VHU-FT-8PE/5H

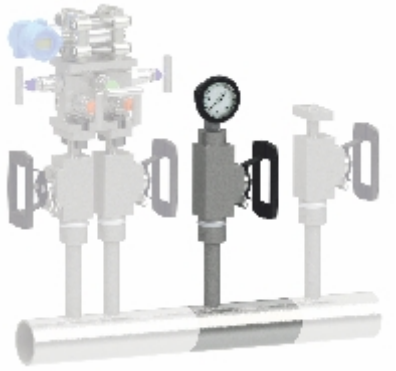
HOOK UP FLOW TRANSMITTER WITH ½" PLANE x INST. ISOLATION BALL VALVE WITH FIVE VALVE MANIFOLD



5VHU-DT-EL-GPHL

HOOK UP FLOW TRANSMITTER WITH ½" NPT(M) x FIVE VALVE MANIFOLD EXTRA LONG NIPPLE GRAPHOIL SEAL

Instrument Hookups for Pressure Gauges



Pressure Gauge Hook up assembly consisting of a Multiport Isolation Ball Valve or Multiport Isolation Needle Valve

Temperature	: Up to 540°C (1004°F)
Pressure	: 6000 PSIG (PN 400)
Gland Packing Material	: Up to 180°C - PTFE, Above 180°C to 540°C - Graphoil with inconel inhibitor
Material	: A 182 Gr. F SS 316 L, A 479 SS 316 L, A 276 SS 316 L, A 182 Gr. F 304 SS, A 479 SS 304, A 276 SS 304, A 182 Gr. F SS 304 L, A 479 SS 304 L, A 276 SS 304 L

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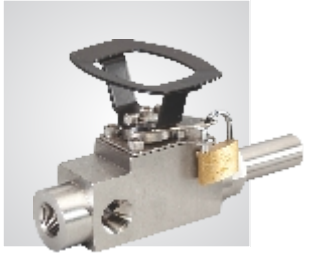


VHU-PG-12PE/8FN
Hook up pressure guage with 3/4" plane X 1/2"NPT(F) end

VHU-PG-24F3/8FN
Hook up pressure guage with 1-1/2" flange 300# X 1/2" NPT(F) end

VHU-PG-24F3/8FN-EL-GPHL
Hook up pressure gauge with 1-1/2" flange 300# connected with SW coupling X 1/2"NPT(F) end graphoil seal

VHU-PG-24F3/8FN-GPHL
Hook up pressure gauge with 1-1/2" flange 300# X 1/2"NPT(F) end graphoil seal

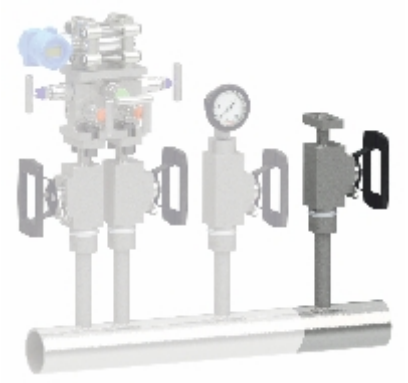
2VHU-CG-GPHL
Hook up pressure guage with 3/4" NPT(M) X ½ "NPT(F) end graphoil seal

VHU-PG-12PE/8FN-GPHL
Hook up pressure gauge with 3/4" plane X 1/2" NPT(F) end graphoil seal

VHU-PG-12PE/8FN
Hook up pressure gauge with 3/4" NB PE SCH 80X 1/2"NPT(F) end

ENGINEERING FLOW CONTROL

Instrument Hookups for Pressure Instruments



Pressure Instrument Hook up assembly consisting of a Multiport Isolation Ball Valve or Multiport Isolation Needle Valve

Temperature	:	Up to 540°C (1004°F)
Pressure	:	6000 PSIG (PN 400)
Gland Packing Material	:	Up to 180°C - PTFE, Above 180°C to 540°C - Graphoil with inconel inhibitor
Material	:	A 182 Gr. F SS 316 L, A 479 SS 316 L, A 276 SS 316 L, A 182 Gr. F 304 SS, A 479 SS 304, A 276 SS 304, A 182 Gr. F SS 304 L, A 479 SS 304 L, A 276 SS 304 L

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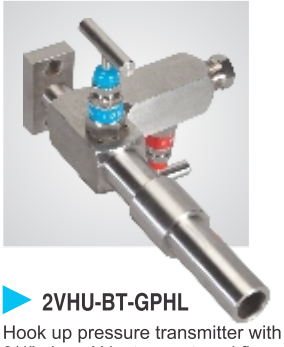
VHUPT-24F6/8MN-GPHL
Hook up flow transmitter with ½" plane X inst. isolation ball valve with five valve manifold

VHU-PT-24F6/8MN
Hook up pressure transmitter with 1-1/2" flange 600# X 1/2"NPT(M) end

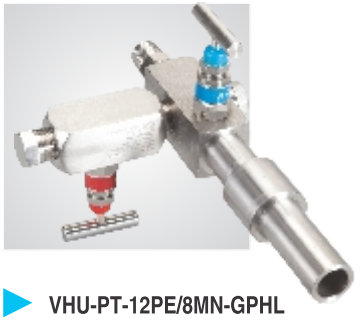
2VHU-AT-GPHL
Hook up pressure transmitter with 3/4" flange 150# X instrument ovel flange graphoil seal

2VHU-CT-GPHL
Hook up pressure transmitter with 3/4" NPT(M) X instrument ovel flange graphoil seal

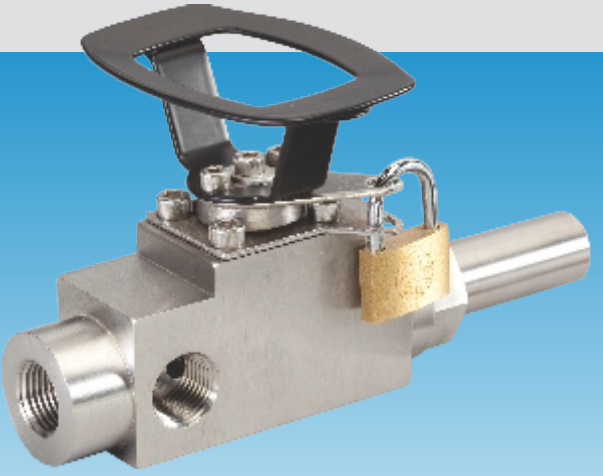


2VHU-BT-GPHL
Hook up pressure transmitter with 3/4" plane X instrument ovel flange graphoil seal

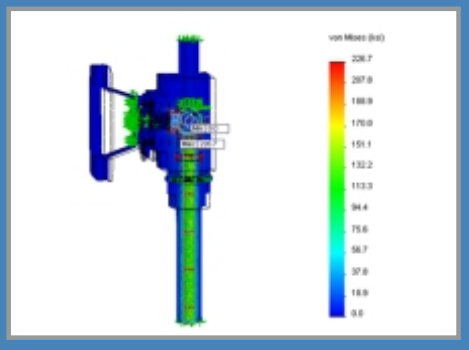
2VHU-BT
Hook up pressure transmitter with 3/4"plane X instrument flange



VHU-PT-12PE/8MN-GPHL
Hook up pressure transmitter with 3/4"NB PE SCH 80 X 1/2"NPT(M) end graphoil seal



PARTNERING with YOU from CONCEPT to COMMISSIONING

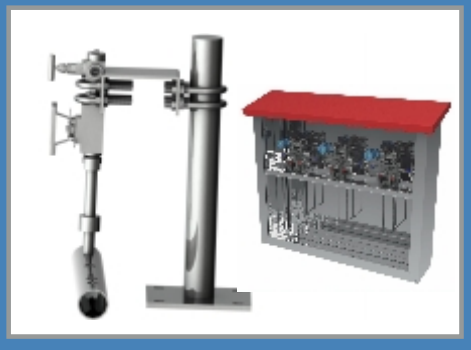


▶ TOTAL DESIGN SOLUTIONS

- Custom designed hookups
- 3D modelling
- PDS / PDMS files for easy integration
- FEA / Simulation analysis if required

▶ SUPPLY OF HOOKUPS

- In-house manufacture
- Testing of each hookup
- Complete component traceability
- Fluid Controls guarantee



▶ PROVISION OF ACCESSORIES

- Locking provision
- Housing arrangements
- Mounting brackets
- Clamping equipment

▶ SITE SUPPORT

- Support at site during installation if needed

ENGINEERING FLOW CONTROL

Proven track record

LARSEN & TOUBRO LIMITED

Power Project Management Services – EPC Power

L&T Knowledge City (IT / ITES) SEZ, East Block, 3rd floor, NH 8, Ajwa - Waghodia Crossing, Vadodara - 390 019 • Tel.: +91-265-2451000 • Fax: +91-265-2456713

Ref:

E-mail:
Date: 23.06.2010

PERFORMANCE CERTIFICATE

To whom it may concern

This is to certify that M/s. Hyd Air Engineering Works Lonavla have supplied close coupled manifolds for 238.5 MW IOCL Panipat captive power project. The performance of the close coupled manifolds is satisfactory.

R K Mitra
Head- E &I

Close Coupled Instruments Hookups for IOCL Panipat Refinery Project (Captive Power Project) at the Naptha Cracker Complex.

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Associated companies and products:

H-A® Hyd-Air

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