

شركة السوائل الميكانيكيه لصيانه المعدات Fluid Mech Equipment Maintenance Co. Professional in fluid power Engineering





















Professional in fluid power Engineering

COMPANY PROFILE

FLUID MECH is an organization, Professional in Fluid Power System Engineering and engaged in Design, Manufacture, Recondition, Rebuild and Modifying Equipment and Machinery, integrated with Hydraulic, Hydro Mechanical and Pneumatic Operating Systems, controlled with Manual, Electrical, Electronic or PLC Unit, as per client requirement.

FLUID MECH can offer Complete Engineering Solution for any Project, related with Fluid Power Engineering.

FLUID MECH, Strongly believe that, designing is the key Factor, Keeping this in mind, we make our design reference to International Standards such as, SAE; ISO; NAS; DIN; CETOP; JIS; BS; ANSI; ASW; API & IS.

Aimed with objective to increase efficiency, reliability and interchangeability, we use Design Software like CAD 3D and Solid Work for Schematic Drawing, Simulation and Documentation for Engineering Projects.

FLUIDMECH can execute Hydraulic System and Project as:

Oil and Gas Terminal's Marian Loading Arm's Complete Hydraulic Operating System with power fails back up and remote control operating Unit (option), manufacturing and site commissioning with Explosion Proof Electrical Panel.

Hydro Motor Driven Unit, for Multiphase Crude Oil Pump, to Inject Crude oil in Pipeline or transfer to Reservoirs, with Skid Mounted Engine Driven Hydraulic Unit with Explosion Proof (ATEX).

Complete Hydraulic System to operated ROV (Remote Operated Valves) Designing, Manufacturing and Site Commissioning with Explosion Proof (ATEX), for Refinery and Oil Terminal with Hydraulic Actuator for main Valve and Power Unit.

Hydraulic System for Oil Well Cement Unit, with Hydro motor Drive for Mixing Agitator, Metering Pump and Feed controls with Built-in Hydraulic Power Unit.

Can also Re-Engineer and modify completed unit with engineering and fabrication.

Coiled Tubing Unit Hydraulic Systems to Operating Injector Head Varia-Block Gripper and Gooseneck. Re-engineering and modification of existing units.

BOP Control Systems,

Diesel Engine Driven Hydraulic Power Unit For Oil Field,

Hydraulic Oil Rig Skidding Unit,

Diesel Engine Driven Hydraulic Power Pack, Hydraulic Cylinder, Hydro Motor with Planetary Gear Unit, For HDD, TBM and WDM and Re-engineering and modification of existing machines.

Hydraulic Jacking Systems for Heavy load,

Custom built Hydraulic Power units for any application, size 3 LPM to 2000 LPM flow and pressure rating up to 300 bar, max tank sizes 20000 liters, power rated up to 1200 KW (with multiple electrical motors and pumps or Diesel Engine driven with split Shaft gear unit for multiple Pump's Drive.

For higher flow rate, the system is specially designed by incorporating slip in cartridge Valves, logic control block as per DIN 24342. (ISO 7368)

Kindly contact us for your requirements or if you may need any additional information.



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We offer, International Brands of Products & Equipments :

































GREAVES COTTON LIMITED

















Power and productivity for a better world[™]





Hydraulic & Pneumatics Assessories



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Fluid Mech can provide all accessories for Hydraulic and Pneumatic system: Pressure Gauges; Gauge Isolators; Oil Level Indicator; Float Switches; Temperature Indicator/ Controls; Contact Manometer; Pressure Switches; Differential Pressure Gauges; Air Breather/filler; Breathing Bags; Diffusers; Return Line Filters; Off Line Filter; Pressure Line Filter; Magnetic Tank Cleaners; Hydraulic tank compensator, Ball Housing; Couplings; Pneumatic FLR Unit; Moisture Separators; Oil Removal Filters; Auto Drain Valve; Air Pressure Relief Valves and Shut off Valves.



Hydraulic & Pneumatic Hose & Fittings



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Fluid Mech industries offer a diversified line of SAE and ISO compliant hose and fittings products.

This covers every aspect of the hose assembly process, so you can count on being comfortable and confident when using any hose assembly that carries testing at maximum test pressure after crimping.

Hose end fittings are to suit hose, standard such as SAE, DIN. Different kind of end fittings such as Fixed male / female, Swivel female, JIC hose – SAE 100, R1, R2, R3, R4, R5, R6, R7, R9, R12, 4SH, 4SN, Spiral, Wire Braided size ; 1/8" ID to 4" ID, Pressure ranging from 100 to 450 bar depending on type and size, with maximum pressure rated up to 1000 bar.

Material : Stainless Steel, Brass (from extruded bar of forging) Surface treatment : Steel – Zinc coated (A3C) or Phosphate, Trivalent Stainless Steel – Electro polished.

Offer High pressure steel fittings as per DIN 2353 and ISO 8434-1 specification, for ease of interchangeability. These fittings are available for pressure rating from 100 to 630 bar type. Flare less Bite type (Single Ferrule) Weld Nipple type, Standard DIN 2353/ISO 8434-1 series; LL (light), L (Medium), S (Heavy), size 4 to 42 mm; 1/8" OD to 2" OD; 1/8" NB to 2" NB Pressure rating from 100 to 630 bar depending on the type and size of material.: Steel, Stainless Steel, Brass (from extruded bar or forging) surfaces treatment : Steel – Zinc coated (A3C) of Phosphate coated, Trivalent stainless steel – Electro polished, silver plated.

Socket weld fitting as per ANSI B16.11 standard. It is available in different class i.e. 3000 & 6000 PSI type; Forged fittings – Socket weld or Flange. Material – ASTM A105 / ASTM A182. Dimension – ANSI B16.11 size 1/8" OD to 2" OD, 1/8" NB to 2: NB class: 3000 to 6000.



Hydraulic Pumps & Motors



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Hydraulic Pump:

Gear Pump (External Type) Flow rate 1 cc/rev to 200cc/rev; Pressure rating maximum 250 Bar, RPM 3000;

Vane Pump: Flow rate 8cc/rev to 350 cc/rev; Pressure rating maximum 280 Bar, RPM 3000;

Axial Piston: Flow rate 20cc/rev to 500cc Pressure rating maximum 350 Bar, RPM 3000 with Fix and Variable Displacement, Open Loop or Close Loop,

Radial Piston Pump: Flow rate 5 cc/rev to 90cc/rev; Pressure rating maximum 700 Bar, RPM 3000.

Hydraulic Motor

Gear; Vane; Axial Piston (in line & Bent Axis Type); Radial Piston Motors, Orbit Motors (LSHT) Gerotor; Gerolar Type, Speed Min 20 RPM and maximum 8000 RPM with Torque 1 Nm/mt bar to 100 Nm/mt bar, Flow rate 10 CC/rev to 1000CC/rev; for Industrial and Mobile application.

Pumps and Motors are available with SAE (AA) to SAE (F) & ISO- 80 to ISO- 200 Flange, 2 & 4 bolt mounting, with straight key shaft, 30 Degree involutes Spline shaft and Taper shaft; Suction and discharge port with BSP, NPT Fitting or Flange Type, SAE and ISO to Suit the requirement.

Please contact us for your requirements and detailed information.







Professional in fluid power Engineering



Fluid Mech can offer complete range of Hydraulic Control Valves for Industrial and Mobile applications:

Directional Control Valves (Industries) size CETOP 3; 5; 7 & 8 with Flow rate of 650 LPM; Mobile Valves Section and Monoblock type with or without Load Sensing and flow rate up to 1200 LPM, maximum 2 inch Fitting, these valves can be operated with maximum Pressure of 350 Bar.

Control Valves offered are: Pressure Relief Valves Direct operated and Pilot operated with Maximum Flow of 600 LPM and Pressure rate 350 Bar. Flow control valve ; Check Valve ; Load control Valve ; Counter balance Valve ; Over centering Valve; Cross Port Relief Valve ; Pressure reducing Valve; Sequence Valves; Shuttle Valves and Flow Divider/Combiner, are offered with Flow Rate of 600 LPM and Pressure of 350 Bar.

Circuit saver (Hydraulic integrated Control Block) for Specific application can be offered are: Pressure Intensifier; Hydro Static Transmission; Regenerative Circuit blocks ; Load Lowering valve blocks; Winch Brake Release Unit; Decompression Blocks ; High Flow Unloading; Pressure Intensification Safety System in Larger Cylinder etc.

Slip in Cartridge Valve logic Blocks are offer for large flow rate up to 5700 LPM, with max size of NG 63 as per DIN 24342 (ISO 7368). This systems are Special Design as per application requirement. (Please Contact us for your Requirement and details information.)



Auger & Cutting Tools Unit fo Earth Drilling



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Hydraulic Augers, Earth Drills are manufactured with high quality materials and latest manufacturing techniques. This Augers unit can be used in smallest fencing job to major piling works and it will deliver excellent earth & rock drilling approach for most of the work in Constructions, Plantation and Landscaping. All Auger units can be made & supplied with Hydraulic Motor, Planetary Gear Unit; Auger Screw & Cutting Bits as per requirements, with Hydraulic Diesel Engine driven Power Unit.

Auger with Hydro Motor, Planetary Gear unit with attachment for any Earth Moving Equipments (Back hoe; Excavator; any Mobile Equipment built in, with Hydraulic Power unit) can be offered.

Auger size available, 150mm to 1500mm Diameter and length 1200mm to 3000mm with Cutting Tip Bits for Normal and Hard Ground.

Application: Stand Auger Drilling, HDD (Horizontal Directional Drilling) TBM (Tunnel Boring Machine) and Water Drilling Machine.







Grabs

Hydraulic Orange Peel Grab



Hydraulic Scrap Cutter



Hydraulic Sand Grab

The Grabs are manufactured of high wear resistant steel. The grabs can be executed with a Hydraulic Rotator (360° rotation) or Hydraulic rotation by means of slewing ring and hydro-motor (360° rotation) A connection link to your excavator can be executed according to your specifications. For the connection link we need the shaft diameter and boom width of your excavator and backhoe.

We also undertake Repair, retrofit, Refurbishment and Modifying of existing Grabs; Scrap Cutters and Can Offer Complete new Units. As Per Requirement.

Please Contact us for Detail information.



Mobile Equipment

Fluid Mech Offers Complete Repair and carry out Modification of Hydraulic systems, Structure Reconditioning, Replacement of Hydraulic Cylinders, Pumps, Valves, Hoses with Fitting, and GET (Ground Engaging Tool) for all Mobile Equipment e.g. Excavator; Backhoe Loader; Track Dozer; Motor Graders; Wheel Loader; Pipe Layers; Skidders; Pay weld Tractors and Truck Cranes.

With Hydraulic Motors, Planetary Gear Unit, for Track Drive; Wheel Drive; Swing operation, Boom, Stick, Bucket Operation and Winches.

We offer Hydrostatic Transmission with Pump and Motor unit up to 350 Cc/rev and Pressure 300 Bar with or without Planetary Gear Unit.

All Pumps and Motors, we offer are interchangeable with Ref to Mounting, Flow and Pressure.







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System Engineering for Oil and Gas Industries with Design; building; fabrication; retrofitting and refurbishment with major bought out components and equipment from International leading manufacturer with API Norm's.

For Oil Drilling Rigs, HDD (Horizontal Directional Drilling); TBN (Tunnel boring machine)

Size range from 15 KW (20 HP) to 970 KW (1300 HP); Pressure range 70 Bar (1000 PSI) to 340 Bar (5000 PSI); Flow rate 20 to 500 GPM; SPM range from 120 to 320 and Piston size 40 to 180 mm, with Diesel Engine; Hydraulic or Electrical Drives; Complete unit with Splash lubrication; Herringbone Gear set. Safely Relief Valve; Pulsation Dampener; Manifold Block and Fluid end Modules, Inlet and outlet Check Valves, with high Pressure piping, Flanges fitting, assembled in transportable Skid.

We also undertake Repair, retrofit, Refurbishment and Modifying of existing Mud Pump unit, Utilizing bought out Spare like, Valves and Seats; liner; Liner Packing; Pistons; Seals; Piston Rods; Plunger and Connecting Rods.



Mud Recycler Unit (Mud Fluid Cleaning Equipment) For HDD; TBM; WDR & Oil Drilling Riv









Fluid Mech can manufacture Mud Recycling System with the Flow range of 200 GPM / 500 GPM / 1000 GPM / 1500 GPM / 2500 GPM and solid separation within 20 microns, incorporating, Linear or Balanced Elliptical Motion Shale Shakers with core and fine Filter Screen, Hydro Cyclone (Desander and Disilter units), Jet Mixer, Transfer Pump/Motor Units and Agitators, available in Skid mounted Hydraulic Jack up unit or Trailed mounted unit for HDD, TBM and water well drilling unit.

Also offer, the above System with Hydraulic drive for Transfer Pump and Agitators, built-in with Hydraulic Power Unit, this makes the System more Compact and Lighter in weight.

Designing and Manufacture Larger Size, Higher Flow Output with Multiple Tanks Unit for Oil Drilling Rigs, can be done as per requirement. Please contact us for your requirements and detailed information.



Oil & Gas Pipeline Construction Equipments





Pipe Line Clamps Pneumatics Operated

Size 18" to 22" Min Size & 48" to 52" Max, with 9 Size Ranges as per Requirement, these Clamps need Maximum 10 bar air pressure and 72 to 160 CFM (FAD) flow rate. These Clamps built-in with surge air Tank, Auto Drain Valve, FLR Unit, Pneumatic Valve, Pipe and fittings with Air Motor Propelled Unit, Pneumatic Brakes available with Pneumatic Pilot control or Electrical DC 12 volt control.

Pipe Line Clamps Hydraulic Operated

Size 18" to 24" Min & 48" to 54" Max, with 6 Size Ranges as per Requirement, with build-in 24 volt DC Hydraulic Power Unit

Pipe Facing Machine

Size 12" to 30" and 26" to 48" and ring Frame type facing Machine Size 4" to 30" with Hydraulic Operated.

Hydraulic Operated Pay Welding Tractor

With Diesel Engine Drive, range of 90 KW to 140 KW with Split Shaft PTO Unit for selection of Tractor movement or Hydraulic Power Unit Drive to Operate 3 Hydro Motors 1) Alternator, 2) Compressor, 3) Water Pumps.

The Tractor is also Built-in with 2 ton Truck Crane & Gas Bottle Basket with Hydraulic lifting & Lowering System at the rear side.

Hydraulic Pipe Bending Machine

Size 16" to 32" with the Bending Force 250 tons, Built-in with Diesel Engine Hydraulic Power Units.

Hydraulic Pipe Mandel

Size 16" to 20" / 20" to 24" / 24" to 32" with Electrical Motor or Diesel Engine Hydraulic Power Units.

Fluid Mech also, undertake Modification, Reconditioning & repairing of all above Pipe Line Constructions Equipments exesting with the Customer. Please Contact us for Detailed information.



Hydraulic Systems



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Power range 1 KW to 1200 KW, Flow rate 5 to 3000 LPM with Pressure rating 40 to 300 bars and Oil tank capacity from 20 to 20,000 Liters with Electrical Motor Drive (415/50 Hz, 380/60 Hz and 230/50 Hz) or Diesel Engine Drive.

Hydraulic System is in co-operated with Control Valve Block, Filtration and Cooling unit, Piping with Fittings, Pressure Gauges, Oil Level indicators, Air breathers, inspection Cover, Diffuser, Magnetic Tank Cleaner, Float Switch, Temperature Indicator and Accumulator Unit. The system can be offered with Electrical Control Panel or PLC unit as per the requirement and also supported with the supply of Hydraulic activators (Hydraulic Cylinders, Rotary actuators and Hydraulic Motors with or without Gear Drives).

Hydraulic system is available in standard range or custom built units, with application range includes:

Oil and Gas Industries, Oil Rigs, Refineries, Oil and Gas Marine loading terminals, Mobile and Earth moving equipments, Oil and Gas Pipe Line Construction, Engineering Industries, Steel Mills, Manufacturing units, Construction Industries, Marine and Ship Building, Railways, Material Handling, Pre Cast Unit, Power Plants and Chemical Industry.

Any Hydraulic system can be designed and manufactured as per the Clients requirement.

Fluid Mech also undertake reconditioning and repair of all types of Hydraulic Pumps, Valve blocks, Accumulators and complete Hydraulic systems with testing's and certifications.

Please contact us for your requirements and detailed information.





Hydraulic Cylinders, Rotary Activators, Manifold Blocks & Prefill Valve



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We have the Expertise and Capacity to manufacture Hydraulic Cylinders range from 40 to 320 Bore as per ISO standards in Double acting version. Special Cylinders in Single acting, Double acting can be manufactured as per clients requirements, Pressure rating 160 to 700 Bars and Maximum Bore of 1000 mm. with Stroke up to 6000mm.

Fluid Mech also undertake reconditioning repair and modification of all types of Hydraulic Cylinders Single and Double acting with Pressure testing.

Rotary Activators Torque range from 40 to 30,000 Kg/meter with the working maximum Pressure of 210 Bars, this Rotary Activators can be used for the rotation of 90, 180, 270 and 360 degree.

Manifold Blocks are made as per client's requirement with the flow of 30 to 1000 LPM and 350 Bar Pressure. High Pressure Manifold Block with logic control screw in cartridge Valves, rated Pressure of 500 Bars can be made as per requirements. For higher flow rate above 700 LPM and maximum 3500 LPM, we can offer logic control block with slip in cartridge valve with maximum size of NG 63 as per DIN 24342 (ISO 7368).

Prefill Valves These Valves are used in huge cylinders mainly in Hydraulic Press application for high speed approach, requiring large volume of Oil flow. Prefill valves can be supplied in the range maximum flow rate of 5700 LPM with Flow velocity of 3mt/sec with or without decompression features.

Please contact us for your requirements and detailed information.





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Product Features

Bonfiglioli Cranes are Telescopic Knuckle Boom Crane, with Structural made of High Strength Steel, easy to mount and it requires Minimum space for Mounting.

Can be Mounted Behind the Cabin or Rear Part of Truck Body, the Truck carriage remains free for Transportation of Goods

The Crane has a Slewing of up to 360 Degree

Hydraulic Power Can be provisioned at the end of the Boom. Lifting / Clamping, Options can be provisioned making the Crane more versatile.

General Materials Lifting of various size and load with standard Hook arrangement for Construction Sites / Mines / Projects / Logistics Requirements Handling Concrete Block for Building / Projects through Rotary Brick Clamp Man Lift or Cherry Picker for Maintenance on Electricity Poles / Overhead Lines etc.

Fluid Mech Offers Bonfiglioli Truck MTG Hydraulics Cranes as per requirements, Please Contact us for your Requirement

- 1) Model : P 3500 L/2 SI , Max. lifting capacity 990kg; Max. outreach 6200mm.
- 2) Model : P 5000 L/2 SI , Max. lifting capacity 208kg; Max. outreach 6350mm.
- 3) Model : P 7200 L/2 SI , Max. lifting capacity 2860kg; Max. outreach 7000mm.
- 4) Model: P 10200 L/2 SI, Max. lifting capacity 4100kg; Max. outreach 8000mm.



Electrical Motor & Alternator Repair & Rewinding



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Electrical Motor and Alternator Recondition and Rewinding Fluid Mech also undertake rewinding of Electrical Motors and Alternators

Induction Motor Range 0.75 KW to 160 KW; 4 Poles 1500 RPM; Main Supply 230/400 Volt AC or 415 Volt AC; 50 Hz. Induction Motor Range 0.60 KW to 152 KW; 4 Poles, 1800 RPM; Main Supply 380 Volt AC or 460 Volt AC; 60 Hz. And Winding of Motors with 2 Poles 3000 RPM; 6 Poles1000 RPM and 8 Poles 750 RPM in 50 Hz or 60 Hz can done. Alternator Range 20 KVA to 300 KVA with PF 80%; 50 Hz or 60 Hz.

Please contact us for your requirements and detailed information.



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