Hi-Force®
HYDRAULIC TOOLS



SERVICES CATALOGUE



HI-FORCE SERVICES

Hi-Force is a UK headquartered manufacturer of high pressure hydraulic tools and equipment supplying to over 100 countries worldwide. However the DNA of Hi-Force is still today heavily focussed on a "service first" basis. The origins of Hi-Force and its shareholders go way back to the late 1960s, when sister company HES was formed. HES (Hydraulic Engineering Services) started out as a purely "service company" offering clients tool repair and tool rental services.

When Hi-Force started manufacturing hydraulic tools in the late 1980s, it was always understood that continuing to offer users a full after sales service support, would be mandatory and today all overseas Hi-Force Regional Offices are modelled on the original and highly successful HES blueprint.

This catalogue is our first ever catalogue focused entirely on our "Services" portfolio and includes: Tool Rental, Tool Repair, Maintenance and Calibration, Testing and Service Contracts and Product Use, Service and Repair Training. Hi-Force firmly believes that our "Service First" philosophy is what separates us from the vast majority of our competitors and we believe it continues to help us gain an ever increasing number of loyal customers.

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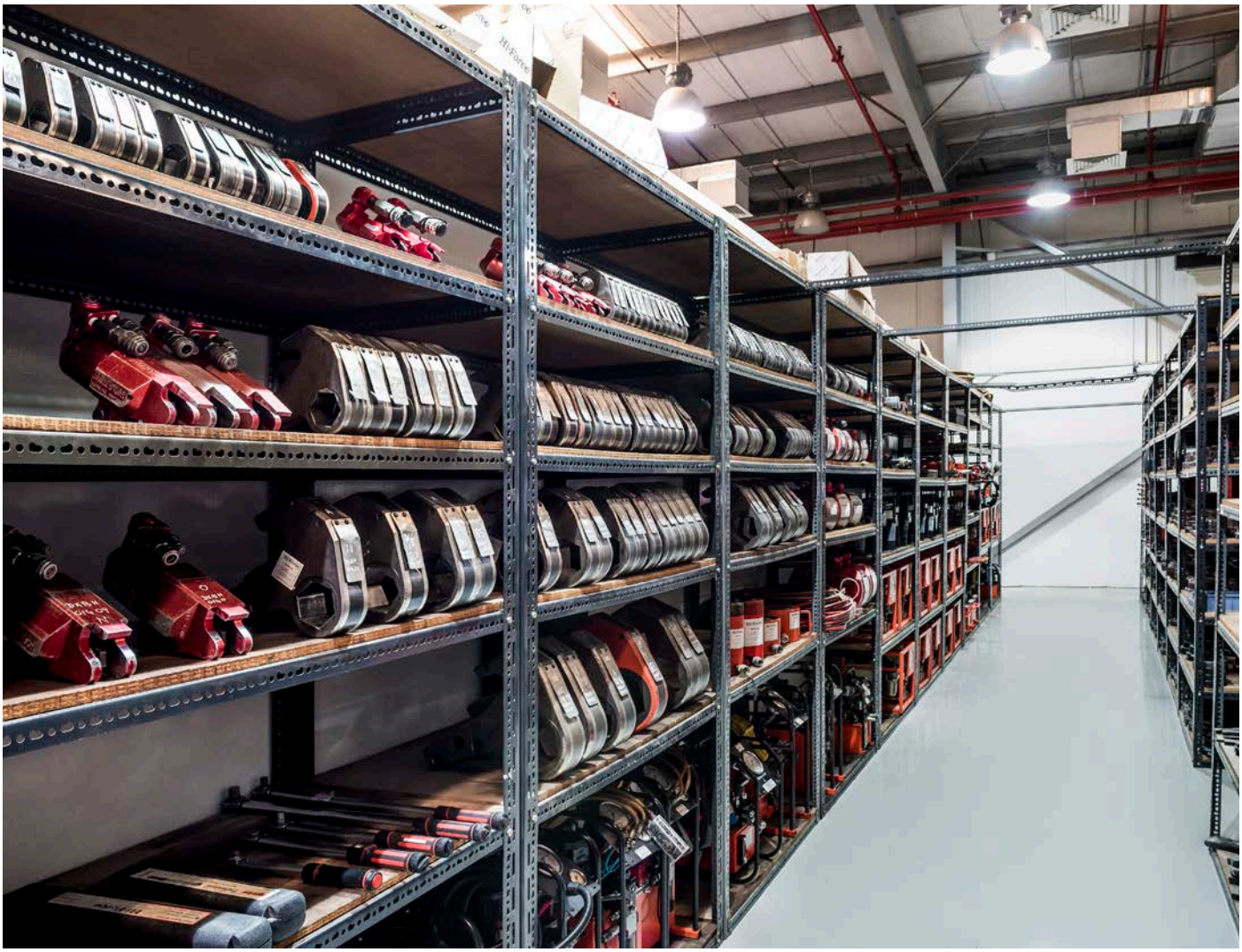
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TOOL RENTAL

The Hi-Force philosophy of offering a complete service package to support the needs and requirements of our valued customers includes tool rental services.

Hi-Force tool rental offers users a fast and economical alternative to purchasing capital-intensive specialised equipment, at short notice. With an extensive array of products available within the Hi-Force range, it is sometimes difficult for our customers to decide on the most suitable tool in which to invest their money. Many clients cannot justify the high capital outlay to purchase especially when their need for the tool is relatively short-term or even simply for a one-off job. In some cases, annual budget restraints also make it difficult to get purchase expenditure approval even though there is a definite requirement.

In most industries, the biggest drain on company profits is the loss of time and productivity, due to delays in the availability of tools, for completing shutdown and maintenance activities. Additionally in new construction projects, delay penalties during construction and commissioning can easily be avoided if the right tools are available to carry out the work correctly from the outset. Hi-Force tool rental provides the perfect solution to help avoid unnecessary and costly delays in the completion of the work.

Our comprehensive fleet of rental tools allows users to easily request on-site demonstrations or even utilise our rental services whilst having their own equipment serviced or repaired. Tool rental also gives our new and existing customers the opportunity to "try out" both our product quality and our level of service support. Once satisfied, these same customers became, brand-loyal purchasers of Hi-Force products on a regular basis.



Hi-Force tool rental is available on both a short and long-term basis and all equipment provided is tested, calibrated and certified prior to mobilisation to site. Tools can be mobilised very quickly from the extensive stocks, held locally, at all Hi-Force group company locations and select Hi-Force Distributors worldwide.

Hi-Force also offers safe and reliable on-site bolting, lifting and jacking services, utilising the high-quality tools from our rental fleet combined with the expertise and experience of our trained personnel. We have a proven track record in the successful delivery of projects across the range of sectors we work in and have been honoured to receive verbal and written testimonials from satisfied customers verifying the excellent performance of our tools and operators as well as our unblemished on-site safety record.





TOOL REPAIR & MAINTENANCE

Every year huge amounts of money are lost to industries worldwide due to the breakdown of capital intensive hydraulic and pneumatic tools. This extensive loss of revenue could be drastically reduced if users and owners were always in a position to call upon specialist repairers, at short notice, to identify the faults and carry out fast, reliable, guaranteed repairs.

Hi-Force is at your service! We have built our success on our "service first philosophy" and a long history of providing customers with a comprehensive repair service for a wide range of hydraulic and pneumatic tools.

All Hi-Force offices worldwide, along with participating Hi-Force Distributors operate a fully equipped workshop repair facility, using the latest "state of the art" repair and testing equipment and techniques, carried out by trained and qualified workshop technicians. Our global network of Hi-Force service centres is modelled on our highly successful and wholly owned UK Distributor company, HES, who have been offering repair services, along with the other services detailed in this catalogue, from two strategically placed locations in England, since the early 1960's. Hi-Force service centres carry good stocks of commonly used spare parts and are able to offer a first class guaranteed repair service for all Hi-Force products as well as international competitor brands. All items repaired carry a 90-day warranty against faulty materials or workmanship and are returned to the customer with an individual test/calibration certificate.

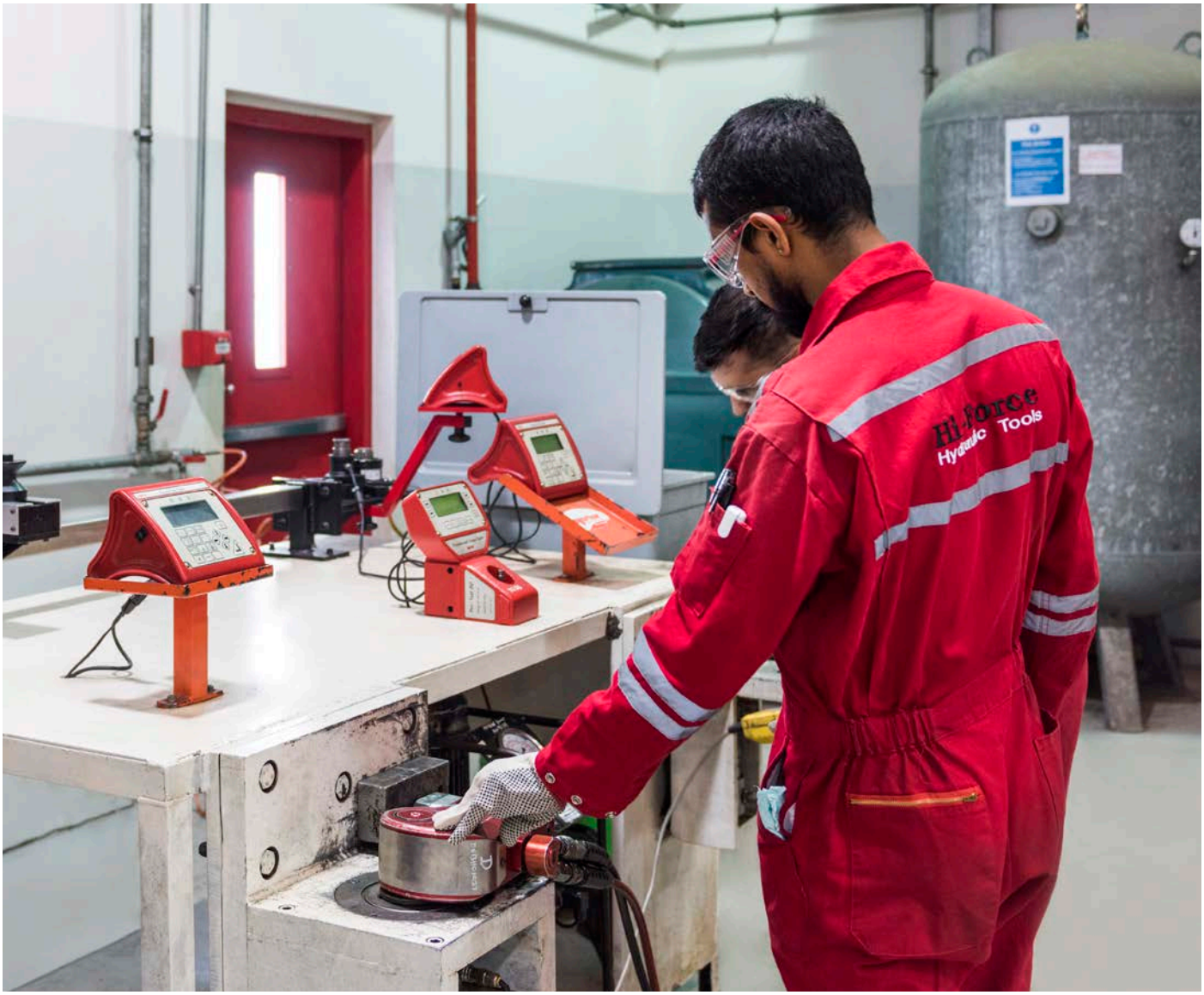
Make the most of your investment in tools through regular servicing and repair through the Hi-Force service network.

TORQUE TOOL CALIBRATION

Manual, pneumatic, electric and hydraulic bolting tools are designed to apply accurate and measurable torque forces, to bolts and nuts, to ensure that the correct amount of tension is applied to maintain the integrity of the bolted joint. In most cases bolting tools are used extensively to tighten hundreds and sometimes thousands of bolts and nuts, it is therefore very important to have these tools regularly checked and tested on independently certified, torque tool calibration equipment. It is recommended that tools be checked, tested and if necessary recalibrated at least every 12 months, however in cases of extensive tool use this should even be considered more frequently than this.

Hi-Force offers in-house torque tool calibration services, utilising the best available calibration equipment, with valid, independently approved "UKAS" calibration certificates, that are regularly renewed in line with international standards and codes of practice. All torque tools tested and calibrated are issued with an individual test and calibration certificate, traceable to the UKAS certified calibration equipment used.

Whether it is a simple hand torque wrench, a manual or powered torque multiplier or a hydraulic torque wrench, from Hi-Force or any other leading brand, utilising the Hi-Force torque tool calibration service, is the best way to ensure torque tools consistently deliver accurate torque.



TRAINING

Hi-Force has been providing training courses in the safe and correct use, application, service and repair of hydraulic tools for many years. In 2013, Hi-Force introduced ECITB (Engineering Construction Industry Training Board) approved training courses. Our UK training school, covering an area of 150 square metres, incorporates a fully equipped classroom, product practical training area and a service and repair training facility.

Hi-Force UK Training Facility



Between 2013 and today, Hi-Force has used the UK training facility as a blueprint for establishing additional training schools at our Regional Offices in UAE, Malaysia, The Netherlands, and in Italy. All Hi-Force training schools worldwide deliver training to the same exacting standards, set by Hi-Force UK and indeed the UK based group training department continually monitors and assesses the standards of training, delivered at all training schools worldwide.

All Hi-Force training courses are designed to provide a first class education, to all delegates, utilising our "state of the art" training school facilities, at all locations. By ensuring that all training courses are delivered to the same standards, using the same training materials and techniques, delegates can attend a Hi-Force training school nearest to their respective location, reducing both travel time and cost.

With everything located under one roof within each Hi-Force training school, delegates can be provided with all the required elements, of both classroom theory and "hands on" practical training. All training facilities are equipped with an ECITB approved training rig, plus an extensive range of the latest Hi-Force hydraulic tools, including all the required ECITB bolting tools for delivery of ECITB Mechanical Joint Integrity Training. Similarly our service and repair training facilities are fully equipped, with all the required workshop equipment and tooling, to deliver high quality hydraulic tool service and repair training.

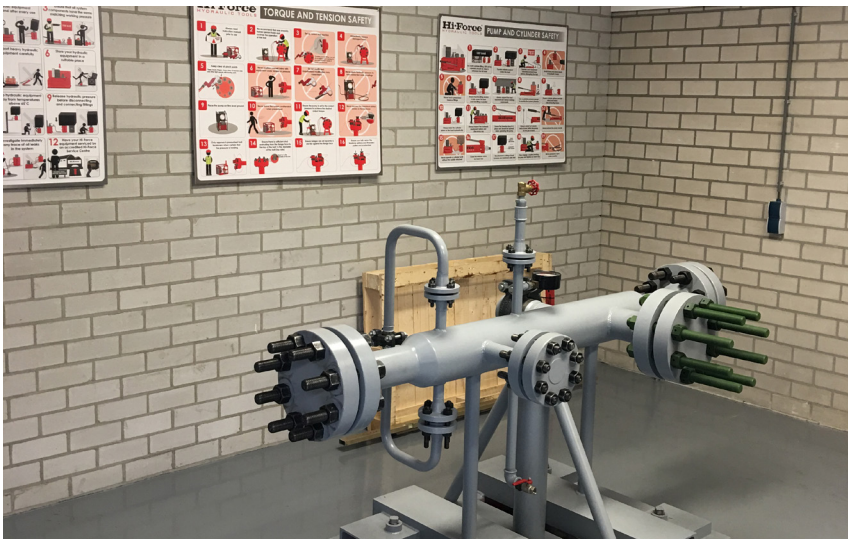
Hi-Force Dubai Training Facility



Hi-Force Malaysia Training Facility



Hi-Force Netherlands Training Facility



Hi-Force training courses are ideally suited for field sales engineers, sales office personnel, on-site supervisors and engineers, technicians and everyone else involved within the sales, service and repair, on-site supervision and operation of high pressure hydraulic tools, to a wide variety of industries worldwide.

Hi-Force is totally committed to improving the technical knowledge of our own employees, those of our Distributors and the many thousands of users, of Hi-Force hydraulic tools, throughout the world. Hi-Force's investment in world class training facilities, is testament to our ongoing commitment to not only offer products of the highest quality, but to also ensure that our network of regional offices and distributors continue to offer users the correct and proper technical advice and support, whilst discussing individual customer specific requirements for hydraulic tools.



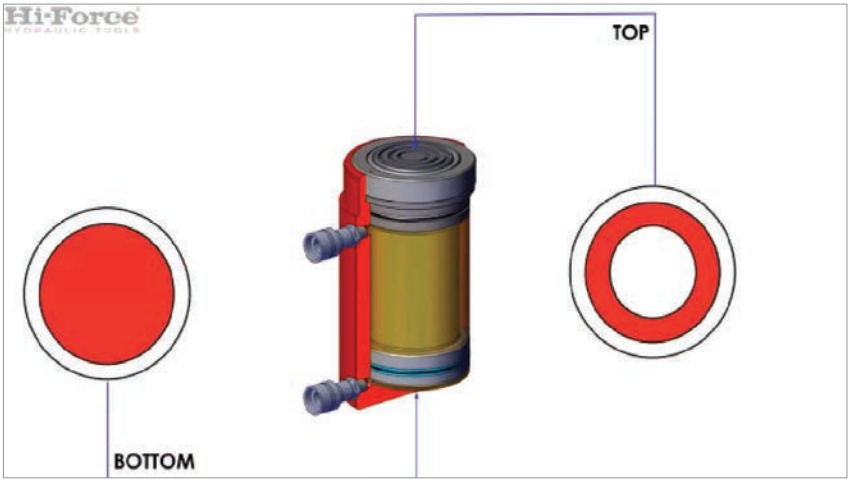
TRAINING

PRODUCT TRAINING COURSES

With our ever expanding network of Hi-Force regional offices and authorised distributors worldwide, Hi-Force has identified technical product and application training as an essential core competency for us to maintain our continued growth in the hydraulic tools market.

The latest, updated version of our Product Training Course, is divided into various product groups, each of which cover all aspects of technical sales, industry specific application selling, special product design, practical and theoretical operation, health & safety and general maintenance. Hi-Force believes that our Product Training courses are at the leading edge of the high pressure hydraulic tools industry worldwide.

To cater for the large number of different countries in which our products are now distributed and sold, we have designed our Product Training Courses in such a way that animations and graphics are used wherever possible, minimising the need for sometimes difficult to understand explanations. This enables us to easily translate the text of the various training modules into different languages to suit local market requirements. The moving graphics used within the Hi-Force Product Training Courses vary from a simple hand pump and cylinder, through to complex multiple lifting applications, using split flow pumps, hydraulic torque wrenches and stud bolt tensioners, all of which clearly demonstrate how our products operate, in the most simplistic way.







When delegates experience the visual learning provided by these graphics and then move to the practical training area to put theory into practice by operating our tools in real and simulated situations, the retention of knowledge is far greater than learning just from presentation slides, or books, containing only text and pictures.

Hi-Force Product Training courses can be delivered from any of our worldwide training school locations, from within the facilities of one of our authorised distributors, or even on-site, at the facilities of an end user of our products, provided there is a suitable classroom and practical training area available, as well as the required selection of Hi-Force products, for completing all the practical elements of the applicable training module.

Hi-Force Product Training courses can be tailored to suit individual needs and can be held for any number of days from one up to a full working week of five days. All Training courses will incorporate a written and verbal test, for all participating delegates, to ensure that the required level of learning is achieved. Delegates achieving the required minimum pass level will receive a certificate, in recognition of their achievement.

Whilst primarily focussed on our own global sales team and that of our distributors, we also offer Hi-Force Product Training to end users of our products.



TRAINING

ECITB MECHANICAL JOINT INTEGRITY TRAINING COURSES

Hi-Force is an ECITB (Engineering Construction Industry Training Board) licensed training provider committed to delivering Mechanical Joint Integrity (MJI) training courses that adhere to industry standards and best practices. These courses cater specifically to personnel involved in mechanical joint integrity and flange management activities, ensuring their competency is in line with industry guidelines and client-specific requirements.

Hi-Force takes pride in our trainers' extensive technical knowledge and practical experience. With years of "hands-on" expertise in several industries and applications involving bolted joint technology, our trainers are qualified to deliver exceptional training and are fully proficient in utilizing various mechanical and high-pressure hydraulic tools during the training sessions. They also possess the necessary theoretical and practical expertise to conduct the required Technical Testing (TMJI) as mandated by the ECITB, ensuring delegates receive their completion certificates upon meeting the course requirements.





At Hi-Force, we offer flexible training options to cater to different learning preferences. In addition to instructor-led on-site training at our global training centres, we provide e-Learning and blended learning Mechanical Joint Integrity courses. The e-Learning course is delivered through an interactive online platform, allowing delegates to access the training material and complete the modules at their own pace. Upon successful completion of the online course, delegates will receive an e-Learning Certificate issued by Hi-Force.

The blended learning is a two-part training course, the first part being the e-Learning course followed by a face-to-face practical training session. Delegates who have completed the e-Learning course and received the e-Learning Certificate can proceed to the practical component, which includes a one-day on-site training and assessment session at the Hi-Force training centre. This allows delegates to apply their knowledge in a controlled environment under the guidance of experienced Hi-Force instructors, ensuring competence in mechanical joint integrity practices.

At Hi-Force, health and safety are of paramount importance as we continuously strive to enhance the competence levels of personnel in the bolting industry, aiming to minimize the potential risk of accidents or incidents whenever possible. We are also capable of developing and providing training courses tailored to client specifications and can offer advice on applicable industry standards. Please contact your regional Hi-Force office or local Hi-Force distributor for more details.

TRAINING

ECITB MECHANICAL JOINT INTEGRITY TRAINING COURSES

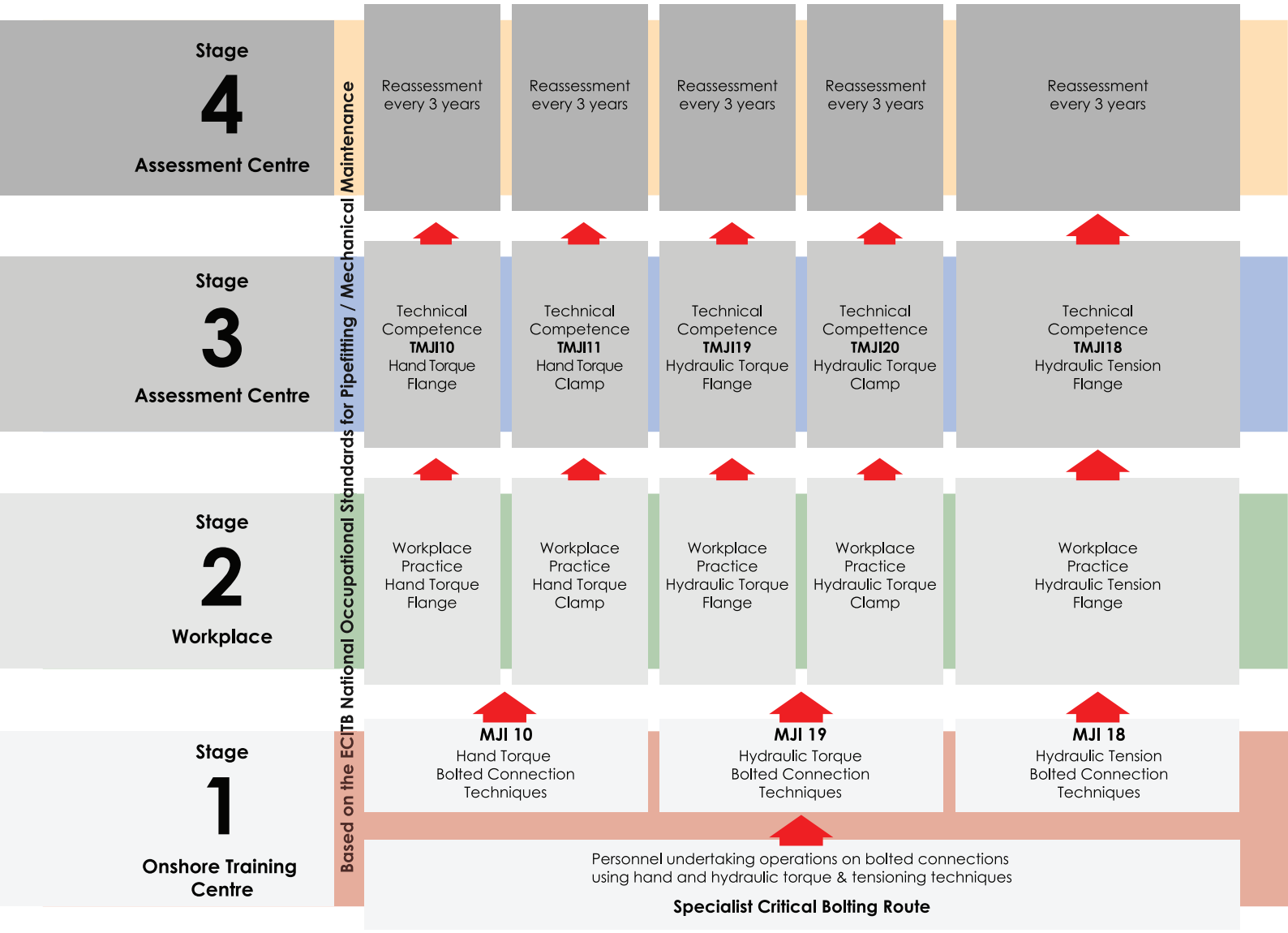
Hi-Force is a member of the ECITB and our Training Schools and Trainers are approved to deliver the following Training Courses and Technical Test Units.

Training (Stages 1 & 2) – "Theoretical & Practical" – Duration 3 days

- MJI10 Hand Torque Bolted Connection Techniques
- MJI18 Hydraulically Tensioned Bolted Connection Techniques
- MJI19 Hydraulically Torqued Bolted Connection Techniques

Technical Tests (Stage 3) – "Theoretical and Practical" – Duration 1½ days

- TMJI10 Dismantle, Assemble and Hand Torque Flanged Joints
- TMJI11 Dismantle, Assemble and Hand Torque Clamp Connectors
- TMJI18 Dismantle, Assemble and Tension Bolted Connections (Hydraulic Tensioning)
- TMJI19 Dismantle, Assemble and Hydraulically Torque Flanged Joints
- TMJI20 Dismantle, Assemble and Hydraulically Torque Clamp Connector Joints



The Four Stage Process to ECITB Accreditation

The overall course consists of two main elements: Training (stages 1 and 2) and Technical Tests (stage 3), both of which include a theoretical and practical component. After completing stage 1 training, delegates must successfully complete a series of workplace-specific practical exercises (stage 2) that reinforce the skills and knowledge acquired during stage 1 before proceeding to the Technical Tests (stage 3). Delegates are expected to complete the Technical Tests within 3 to 12 months following the conclusion of stage 1 training. All ECITB training courses are thoroughly documented, and additional information about the course content can be provided upon request.

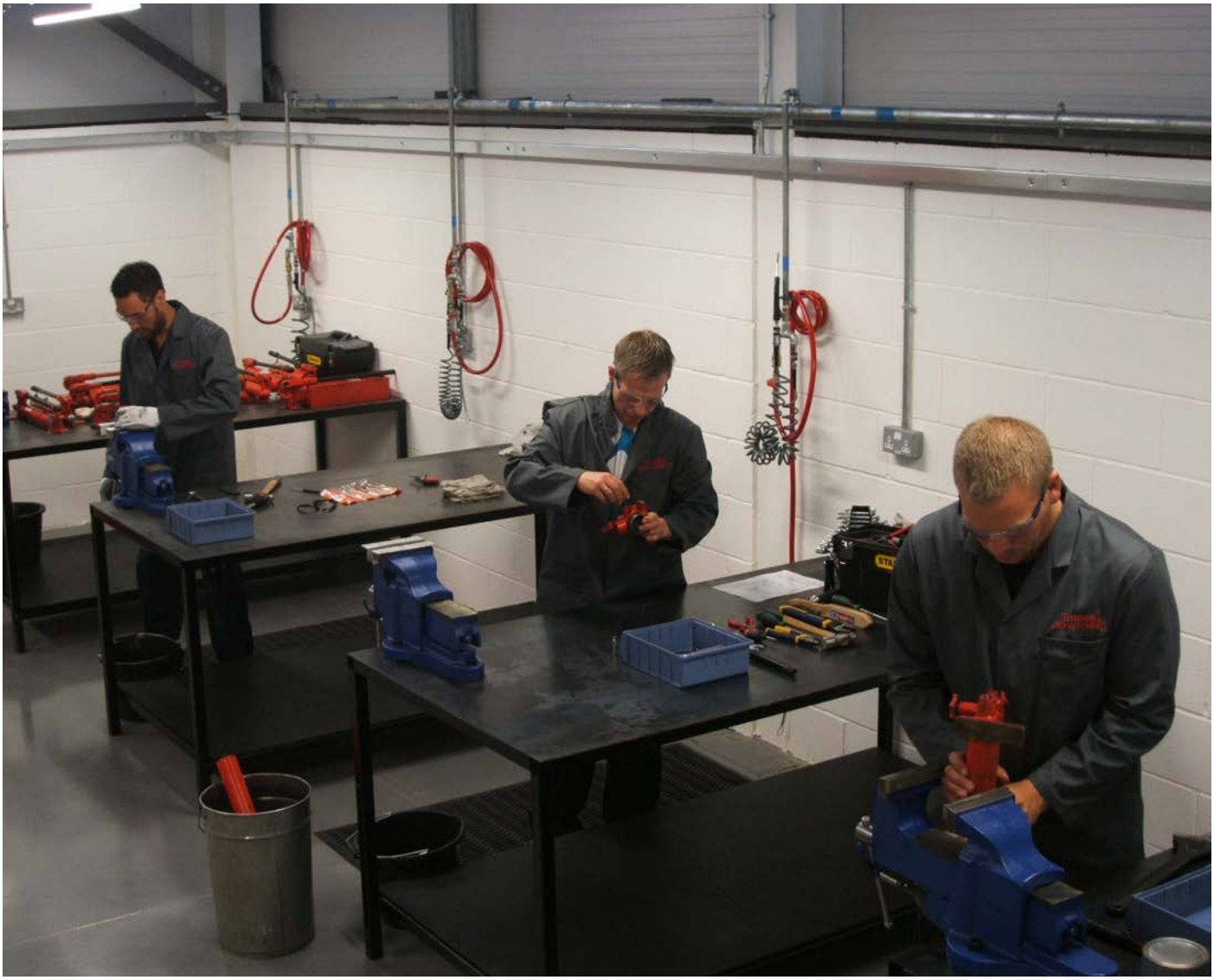
Delegates attending the training are registered with the ECITB and successful completion of stages 1, 2, and 3 will earn them their ECITB accreditation certificate. It is important to note that delegates awarded ECITB accreditation must undergo reassessment every three years (stage 4) to maintain the validity of their certification. The duration of this course is one and a half days.

Industry Compliance

Hi-Force continually monitors ASME and European directives and any changes that are introduced and implemented will under guidance of the ECITB, be incorporated into our training modules and applied as required.

Hi-Force ECITB training modules comply with the following training standards and guidelines:

- ASME PCC-1-2013 Appendix A: Guidelines for pressure boundary bolted flange joint assembly
- BS EN 1591-4:2013 Part 4: Flanges and their joints Qualification of personnel competency in the assembly of the bolted connections of critical service pressurized systems



TRAINING

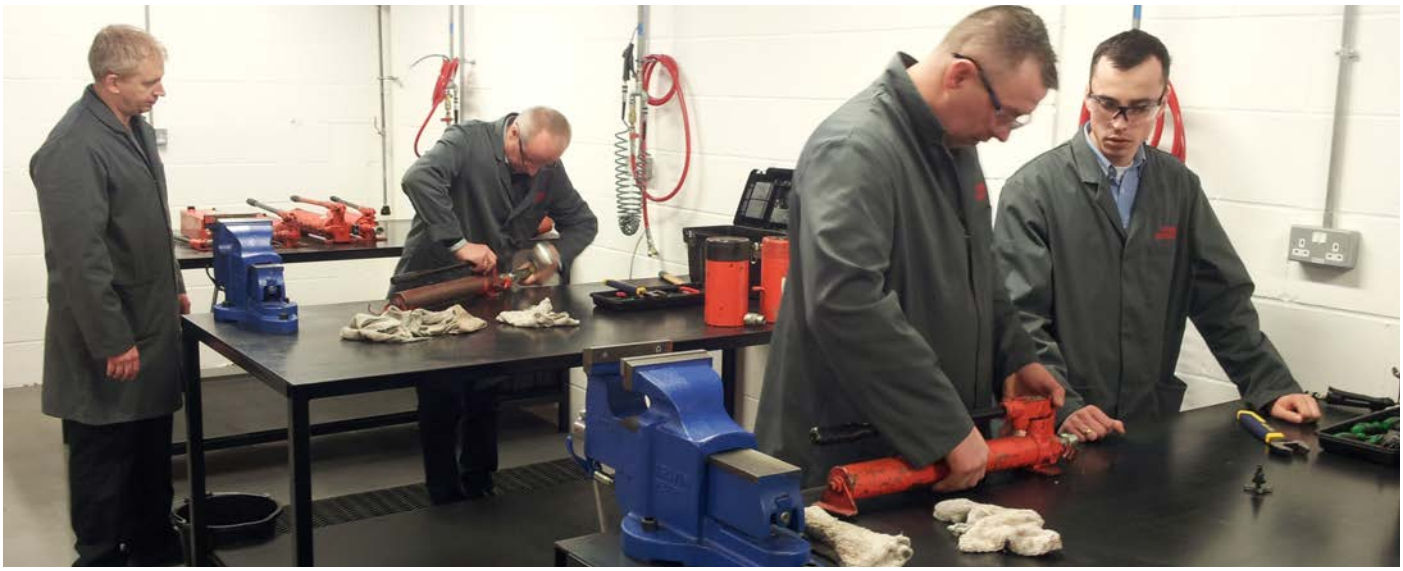
SERVICE & REPAIR TRAINING COURSES

As a rapidly expanding manufacturer and supplier of high pressure hydraulic tools, Hi-Force recognises the very important role that after sales service and repair plays in achieving future sales growth. Ultimately the entire success of the Hi-Force brand is dependent on not only manufacturing and supplying tools of the highest quality and performance, but also ensuring that users of our products are able to access a high quality after sales service, with readily available spare parts, wherever they are in the world. To achieve these standards, we are placing the continuing establishment of fully equipped Hi-Force Service Centres, manned by fully trained service and repair technicians as a top priority. To ensure this is achieved, Hi-Force has invested in and is proud to offer modular training courses, in the correct service and repair of our complete range of products.

Hi-Force Service and Repair Training Courses are primarily available to our Global Distributor Network and are designed to enable our Distributors to gain the highly prestigious Hi-Force Authorised Service Centre accreditation. To achieve this, our Distributors need to send personnel for training and establish a fully equipped Service Centre facility within their own premises. All Hi-Force offices globally, operate a fully equipped Service Centre facility and in the future certain elements of our Service and Repair Training Courses will be made available within our Regional Office network.







Establishing a Hi-Force Authorised Service Centre offers many advantages to our distributors, including an increased revenue stream, through chargeable service and repair work, greater customer loyalty gained from the benefits of offering full after sales support, authorisation to carry out warranty work on behalf of Hi-Force and of course the added opportunity to invest in Tool Rental Services, given that a service centre is vital for supporting this additional activity. To help achieve our goals of establishing a professional, worldwide network of Authorised Service Centres, we offer several financial incentives to our Distributors, to assist them with becoming an Authorised Hi-Force Service Centre.

We are also able to offer Service and Repair Training to end users of our products, that prefer to have their own in-house tool repair facilities. One of the major advantages of the modular designed Service and Repair Training courses, is that we can tailor courses to suit specific individual requirements of our end user customers.

As with all of our Hi-Force training packages, we offer a mixture of theoretical classroom training with full hands on practical training, within the one designated Training School. Our trainers are vastly experienced in all aspects of the courses we provide. Contact your local Hi-Force office for further details on all of our first class training packages.

Hi-Force offers over 2000 standard products and customised solutions to meet your project requirements;



Hydraulic Cylinders

Page 5 of Product Catalogue

The extensive range of Hi-Force hydraulic cylinders includes a wide choice of options related to capacity, stroke length and single or double acting operation, steel or aluminium construction, hollow piston centre hole and mechanical failsafe lock ring designs. All models are 700 bar maximum working pressure and capacities range from 4.5 tonnes to 1012 tonnes, with special design cylinders also available on request.





Hydraulic Pumps

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The Hi-Force range of manual and powered hydraulic pumps comprises of standard models, with additional factory fitted options, of electric solenoid valves and 60 Hz motors, available to order. The range comprises of manual, battery, electric, air and petrol engine driven options, all suitable for use at pressures up to 700 bar maximum, excluding the HPX hand pump range, which offers even greater output pressure options, for specialist ultra-high pressure applications. Both the manual and the powered pump options are available in either single or two stage output flow rates and the extensive range and choice of models available.

Also available are the synchronous lifting systems with fixed or variable speed control, which have been designed for precise lifting and lowering of heavy loads using multiple synchronised hydraulic cylinders. The system can control from 4 to 32 lifting points in different operating modes including manual, pre-load, automatic control, depressurisation, centre of gravity and indicative weighing.



System Components

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The Hi-Force range of system components is designed and manufactured to provide all the essential accessory items required to complete the required high pressure hydraulic system.



Jacks

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The Hi-Force range of hydraulic jacks offers a wide choice of lifting capacities, closed and extended heights, material construction and design. From self-contained aluminium and remote pump operated, steel toe lift jacks to compact low height jacks for confined space applications, the Hi-Force hydraulic jack range offers the user a wide choice of options to suit every application. All jacks are supplied prefilled with oil ready to use.



ToughLift Jacking System

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The Hi-Force Toughlift Jacking System offers users the easiest and safest method of lifting heavy plant and construction vehicles, in the mining and construction and locomotives in the railway industry, when critical maintenance and breakdown repair work is required. Suitable for lifting even the largest vehicles currently in production around the world, the Hi-Force Toughlift is available in 50, 100, 150 & 200 tonne lifting capacities.



Skates

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The Hi-Force range of skates comprises of a choice of six different designs, all manufactured to provide a flexible and dependable solution for heavy load movements. A wide range of accessories like turntables, stabilisers, spacer bars and steering handles is also available.



Presses

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The Hi-Force range of workshop presses offers a choice of models with capacities from 10 to 200 tonnes, supplied with all the necessary hydraulic components, ready for immediate use. A wide variety of hydraulic systems are available from simple manually operated pump to air or electric driven versions.



Torque Tools

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The extensive range of Hi-Force torque tools includes manual torque wrenches and multipliers, pneumatic torque wrenches, square drive and hexagon direct drive hydraulic torque wrenches, all capable of providing accurate and correctly controlled bolt torque loads, in a wide variety of industrial applications. A comprehensive range of accessory items including heavy duty sockets, extended reaction arms, hexagon reducer bushes, back up wrenches, hydraulic torque wrench pumps, hoses and hose reels to operate with these controlled bolt torque tools is also available.



Bolt Tensioners

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The Hi-Force range of hydraulic stud bolt tensioners, includes both spring assisted and manual piston retraction top side tensioners, sub-sea tensioners, hydraulic tensioner nuts, special design tensioners made to customer specifications, along with a range of manual and air driven hydraulic bolt tensioner pumps, hoses and accessories. The modular design of Hi-Force hydraulic stud bolt tensioners enables the user to maximise the range of bolt sizes covered by selecting interchangeable accessories to cover multiple bolt sizes, from each size of hydraulic bolt tensioner load cell.



Nut Splitters & Spreaders

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The Hi-Force range of hydraulic nut splitters provides the perfect answer for removal of worn, damaged or corroded fasteners. Manufactured from high quality steel, the range includes single acting and double acting versions, designed for splitting hexagon nuts from 17 mm to 136 mm AF sizes.

The flange spreader range offers mechanical and hydraulic spreader options and provides the ideal solution for opening flanges safely in the marine and oil & gas industries.



Hydrotest Pumps

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The Hi-Force range of hydrotest pumps offers a choice of two speed manual operated models, with maximum output pressure up to 1000 bar, through to an extensive range of air driven models offering output pressure up to 2931 bar. All air driven models can also be factory fitted with an integral chart recorder if required. Both manual and air driven versions can also be factory fitted with special seals, manufactured from viton and ethylene propylene for use with special fluids or chemicals.



Puller Kits

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The extensive range of Hi-Force hydraulic pullers include models with pulling capacities from 4.5 to 50 tonnes, with a wide variety of pulling configurations, including 2 & 3 way pullers, internal pullers, bearing separators, all supplied with the necessary hydraulic components. Additionally within the range, Hi-Force offers hydraulic pin and bush puller and instalment tool kits.



Crimpers & Cutters

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The Hi-Force range of hydraulic cable crimping tools, offers a choice of self-contained manually operated tools with inbuilt hydraulic pump, crimper heads for use with a remote manual or powered hydraulic pump and battery driven tools. All models are suitable for correctly crimping a wide range of electrical connections to cables. Hi-Force also offers a range of hydraulic cutters, with a choice of inbuilt or remote pump hydraulic operation.



Speciality Tools

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Hi-Force speciality tools includes hydraulic hole punchers and hydraulic pipe benders. All tools operate at 700 bar maximum working pressure and are suitable for operation with standard range Hi-Force pumps and accessories.

Hi-Force®
HYDRAULIC TOOLS

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