FISCO
Strategic Synergy

COMPANY PROFILE

PT FISCO STRATEGIC SYNERGY

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WELCOME FROM OUR CEO

PT FISCO STRATEGIC SYNERGY

FISCO STRATEGIC SYNERGY is part of FISCO GROUP,

A business unit engaged in Engineering Consulting, Engineering Assessment, Manpower Supply, Safety Inspection , Equipment Maintenance, Audit Safety Management System, Trainee Certification, Supply Goods, Chemicals, Tools, and Procurement.

We always try to do an evaluation and innovation to every service we provide, and we continuously strive to develop each business unit up at the optimal point.
In optimizing every business unit, we did some strategies that we adapt to the present until future needs, social condition and cultural environment condition. We always give innovation in order to give the best service. Our head office in South of Jakarta in the capital city of Indonesia and several branch office in other city of Indonesia province or overseas, we have many different challenges to manage. However we recognise that it is the enthusiasm, quality and dedication of our people that underpins our success, and as we continue to grow and expand further we need to retain and attract the very best talent we can.

Thanks again for your interest.
We look forward to your partnership.
We hope we can inspire you to become part of our journey.

Fistareni Nirbita
Chief Executive Officer of FISCO GROUP
FISCO STRATEGIC SYNERGY

WHY US?

PT FISCO STRATEGIC SYNERGY

BECAUSE WE ARE ALWAYS BE

- **Committed**

Have high commitment and enthusiasm to provide satisfaction to Partners and Customers.

- **Professional**

We try to provide the best and on time to all our customers and partners

- **The Best in Quality Assurance**

We always control products and quality according to SOP to maintain the quality of our products

- **Reliable Human Resorces**

We have a team and partners who are professional and have experience in their respective fields.

- **Competitive Prices**

We can adjust your budget and needs according to your wishes and needs

- **Flexible**

We strive to provide convenience for customers and of course with the best service

- **Collaborative**

We are ready to collaborate with partners who have the same passion and goals as us especially in order to meet achievement targets reliably and accurately

OUR VISION & MISSION

PT FISCO STRATEGIC SYNERGY

VISION :

Being a leading company in the state and has a High Dedicate Global Innovative in delivering the supply of goods & services as a professional, reliable, secure, and be The Best in the alignment of accuracy, quality, and quantity.

MISSION :

For working implementation,
we always provide priority to give and to be :

- The Best Quality
- Trusted
- Guaranteed
- Full of Innovative
- Accurate
- Competitive
- Flexible
- Collaborative

FISCO

Strategic Synergy

OUR

SERVICES

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OUR SERVICES

PT FISCO STRATEGIC SYNERGY

1.ASSESSMENT

- Remaining Life Assessment (RLA)
- Risk Assessment
- Fitness For Service (FFS)
- Risk Base Inspection (RBI)

2.ENGINEERING CONSULTING

- Engineering Design & Calculation
- Review Design Engineering
- Oil & Gas Production Optimization
- Asset Integrity Management Review & Evaluate

3.ENGINEERING PROCUREMENT & CONSTRUCTION (EPC)

4.MANPOWER SUPPLY

5.TRAINING PROGRAM

6.PROCUREMENT & SUPPLY GOODS, SUPPLY CHEMICALS, SUPPLY TOOLS

7.REPAIR & MAINTENANCE

- Preventive Maintenance
- Corrective Maintenance
- Emergency Maintenance

8.MSMS (Mining Safety Management System)

9.CONSTRUCTION, ARCHITECTURE & INTERIOR DESIGN

10. SAFETY INSPECTION

11. FIRE PROTECTION SYSTEM & HYDRANT SYSTEM

ASSESSMENT

Remaining Life Assessment (RLA)

Remaining Life Assessment (RLA)

The remaining life assessment is an attempt to measure, and predict the residual life equipment, the technician can plan the replacement or repair. Effective management of major equipment requires capital-intensive strategic decision-making as the equipment is nearing the end of its useful life anticipated. If the treatment can be done to extend the life of equipment, expenditures may be delayed, have and a positive effect on the company's financial performance.

We will help you to do the Remaining Life Assessment for:

- Pressure Vessels
- Storage Tanks
- Pipeline And Vertical Pipe
- Pressure Safety Valve
- Rotating (Compressor, Pumps, etc)
- Electrical
- Crane
- Rig
- Platform
- Etc

Benefits of Doing RLA:

1. You become knowledgeable about the remaining life of your equipment, to prevent premature deterioration.
2. You can avoid the occurrences of unwanted suddenas the bursting of your equipment due to already working outside the limits having have been unsuitable

The Data Required To Perform RLA:

1. NDT (Non-Destructive Testing) Report
2. Inspection Report
3. Thickness Testing Report
4. Maintenance Report

ASSESSMENT
Risk Assessment

Risk Assessment

A systematic process that involves identifying, analyzing, and evaluating potential risks associated with various activities, operations, and projects in the industry. The goal is to manage and mitigate these risks to ensure the safety of personnel, protect the environment, and safeguard assets. Here are key aspects of risk assessment in the oil and gas industry:

1. Hazard Identification:
   - Identify potential hazards associated with exploration, drilling, production, transportation, and refining activities.
   - Hazards can include well blowouts, fires, explosions, toxic releases, equipment failures, natural disasters, and human errors.
2. Risk Analysis:
   - Quantify and qualify the likelihood and consequences of identified hazards.
   - Use tools like risk matrices, fault tree analysis, and event tree analysis to assess the overall risk level of specific scenarios.
3. Consequence Assessment:
   - Evaluate the potential consequences of an event, including impacts on human health, safety, the environment, and assets.
   - Consider both immediate and long-term consequences.
4. Likelihood Assessment:
   - Assess the probability of an event occurring, taking into account factors such as historical data, industry standards, and engineering judgment.
5. Risk Evaluation:
   - Combine consequence and likelihood assessments to determine the overall risk level.
   - Prioritize risks based on severity and likelihood to focus resources on the most significant threats.
6. Risk Mitigation:
   - Develop and implement strategies to reduce or eliminate identified risks.
   - Mitigation measures may include engineering controls, safety protocols, emergency response plans, and the use of advanced technologies.
7. Emergency Response Planning:
   - Develop comprehensive emergency response plans to address potential incidents.
   - Train personnel in emergency procedures and conduct regular drills to ensure preparedness.
8. Regulatory Compliance:
   - Ensure compliance with industry regulations, standards, and government requirements related to health, safety, and environmental protection.
9. Continuous Improvement:
   - Regularly review and update risk assessments to account for changes in technology, operations, and external factors.
   - Learn from incidents and near misses to enhance risk management processes.
10. Stakeholder Communication:
    - Communicate risks and risk management measures to stakeholders, including employees, regulatory agencies, and local communities.

ASSESSMENT

Fitness For Service (FFS)

Fitness For Service (FFS)

Fitness for Service (FFS) is a best practice and standard used by the oil & gas and chemical process industries for in-service equipment to determine its fitness for continued service. FFS serves as a rational basis for defining flaw acceptance limits and allows engineers to distinguish between acceptable and unacceptable flaws.

Most equipment can continue in service despite small flaws,and to repair or replace equipment that can still be used would be an unnecessary and costly expense. In addition, unnecessary weld repairs can do more harm than good and create unnecessary risks to personnel in many cases.

We used the reference of API RP 579-1 / ASME FFS-1

Requires increasing amounts of data, calculations, effort, and cost to arrive at the most accurate outcomes and possible longer equipment remnant life. In addition to calculations, FFS involves the consideration of additional data (e.g. pitting patterns and depths, corrosion morphology or shape and depth, crack depths and lengths, operating conditions, materials properties, etc.).
Inspection information is often critical input to an FFS assessment.

We provide FFS For :

- Pipe and pipeline
- Tank
- Pressure Vessel
- Crane
- Pressure Safety Valve
- Rotating
- Electrical
- Etc.

ASSESSMENT

Risk Base Inspection (RBI)

Risk·Base Inspection (RBI)

Risk-based inspection is the process of developing a scheme of inspection based on knowledge of the risk offailure. The essential process is a risk analysis. This is the combination of an assessment of the likelihood (probability) of failure due to flaws damage, deterioration, or degradation with an assessment of the consequences of such failure.

The information gained from this process is used to identify

a) The type of damage that may potentially be present
b) Where such damage could occur
c) The rate at which such damage might evolve
d) Where failure would give rise to danger. Areas at high risk usually have credible damage mechanisms combined with high consequences from structural failure, the release of hazardous substances, or stored energy.

A suitable inspection scheme will deploy techniques ata frequency that provides adequate confidence about the condition, taking account of the damage mechanisms and the reliability of the inspection techniques used.

We used references: API Recommended Practice580 and Base Resource Document 581

ENGINEERING CONSULTING

Engineering Design & Calculation

Engineering Design & Calculation

This is the decision-making process (often repeatedly) in which the basic sciences, mathematics, and engineering sciences are applied to convert resources optimally to meet the stated objectives. Among the basic elements of the design process are the establishment of objectives and criteria, synthesis, analysis, construction, testing, and evaluation.

The engineering design process is a multi-step process including research, conceptualization, feasibility assessment, defining the design requirements, preliminary design, detailed design, production planning and design tools, and finally production.

“We will assist you in designing and calculating an industrial equipment of your form: ”

For Chemical Process Industry, Oil and Gas Industry, and the like:
Engineering Design & Calculation :

- Piping Stress Analysis
- Flow Calculation
- Pressure Drop
- Back Pressure
- Process Design Calculation
- Pressure Vessel Calculation
- Tank Calculation
- Electrical

And we also can help with the As-Built and Re-drawing of the equipment you are

ENGINEERING CONSULTING

Review Design Engineering

Review Design Engineering

The process of evaluating or examining the design engineering aspects of a project, system, or product. This review is conducted to ensure that the design meets specified requirements, standards, and objectives. The aim is to identify any potential issues, improvements, or compliance issues in the design before moving on to the next phases of the project.

The review of design engineering can occur at various stages of a project, including the conceptual design phase, detailed design phase, and even during the construction or manufacturing phase. It may involve interdisciplinary teams, including designers, engineers, quality assurance personnel, and project managers.

The goals of a design engineering review may include:

- Ensuring that the design aligns with the project requirements and specifications.
- Identifying and addressing any potential flaws, errors, or omissions in the design.
- Verifying that the design complies with relevant industry standards and regulations.
- Assessing the feasibility and practicality of the design in terms of construction, operation, and maintenance.

Overall, the "Review Design Engineering" process contributes to the quality assurance and successful implementation of engineering projects by addressing design-related challenges and ensuring that the final product or system meets the intended objectives.

ENGINEERING CONSULTING

Oil & & Gas Production Optimization

We help you to perform a Production Optimization Exploitation of Oil and Gas, byanalysis, calculation, and simulation models. Optimization of the production can be:

1. Production System Analysis
   - Nodal System Analysis Model
   - Nodal System Analysis Application

2. Reservoir Performance
   - Equations and Inflow Performance Relationship
   - Real-Time Performance of Oil Wells
   - Performance Prediction of Oil Wells
   - Real-Time Performance of Gas Wells
   - Performance Prediction of Gas Wells
   - Effect of Water Production

3. Pressure Drop of Fluid Flow in Pipes
   - General Equations and Concepts
   - Fluid Properties: Density, Compressibility Factor, etc.
   - Well-Flow Correlations
   - Pipeline Flow Correlations
   - Chokes and Valves Pressure Drop
   - Effect of Velocity

4. Total System Analysis
   - Tubing Design
   - Flow line Size
   - Effect of Stimulation
   - Chokes and Valves
   - Effect of Completion

5. Artificial Lift Method
   - Gas Lift
   - Submersible Pump
   - Sucker Rod Pump
   - Hydraulic Pump

6. Nodal Analysis and Production Optimization
   - Pressure Drop Calculation in Steam Line
   - Pressure Calculation in Injection Wells
   - Pressure Calculation in Production Wells
   - Total Analysis Approach for Production Optimization
   - Production Optimization Application

7. EOR Methods

ENGINEERING CONSULTING

Asset Integrity Management Review & Evaluate

The process of systematically examining and assessing the effectiveness of Asset Integrity Management (AIM) practices within an organization. Asset integrity management involves ensuring that assets (such as equipment, facilities, and infrastructure) operate safely, reliably, and efficiently throughout their lifecycle. The review and evaluation process is essential for identifying strengths, weaknesses, and opportunities for improvement in the organization's asset management strategies.

The review process may encompass various aspects:

- Documentation and Procedures: Assessing the adequacy and effectiveness of documented procedures and protocols related to asset integrity.
- Compliance: Ensuring that the organization complies with relevant industry standards, regulations, and best practices in asset integrity management.
- Risk Assessment: Evaluating the effectiveness of risk assessment processes in identifying and addressing potential threats to asset integrity.
- Inspection and Maintenance Practices: Reviewing the methods and frequency of inspections, maintenance activities, and monitoring systems in place to preserve asset integrity.
- Data Management: Assessing how data related to asset conditions, inspections, and maintenance activities are collected, managed, and utilized.
- Performance Monitoring: Evaluating the effectiveness of performance monitoring systems to detect deviations from expected asset performance.
- Training and Competence: Ensuring that personnel involved in asset integrity management are adequately trained and competent.

The goal of the review and evaluation process is to identify areas where improvements can be made to enhance the reliability, safety, and efficiency of the assets. It may involve recommendations for process improvements, the adoption of new technologies, or adjustments to existing practices.

Ultimately, a robust Asset Integrity Management Review & Evaluate process contributes to the overall success and sustainability of an organization's operations by safeguarding its critical assets and infrastructure.

QUALITY ASSURANCE & QUALITY CONTROL ENGINEERING

“WE PROVIDE QA/QC ENGINEER SERVICES”

Our Quality Assurance and Quality Control (QA/QC) services can be rolled out in any sector – electric power and generation, oil and gas, chemical, civil engineering, etc. – and at any stage of a project. Our QA/QC services focus on:

PROJECT QUALITY

Development of a Project Quality Manual to incorporate procedures and flowcharts. Once established, the manual is extended to encompass second- and third-tier documentation covering all aspects of the operations.
Development of a Project Quality Plan, audit schedule and the appropriate data packages, including advice on their suitability to achieve effective control of the project.
Maintenance of a non-conformance register for the project, issuance of non-conformance reports (NCRs) and follow-up on corrective action and closure.
Review of all design activities to ensure conformance with project specifications.

PROCUREMENT QUALITY

Auditing and surveillance activities at the vendor’s facilities/works during the manufacturing of equipment or modules to ensure compliance with the required code, standard or project specification.
Adherence to the approved Project Quality Plans is verified and can cover mechanical and electrical packages.

CONSTRUCTION QUALITY

Provide site surveillance and auditing by specialist engineers and inspectors (both pre-commissioning, as well as during manufacture, construction and installation) to ensure quality compliance in the areas of construction management, supervision and engineering.
Report on results of inspections, providing recommendations to address any area of non-conformance by the contractor.

ENGINEERING PROCUREMENT & CONSTRUCTION (EPC)

We provide Engineering, Procurement & Construction in one line and one stop to make synergy from the first step to end step, make it more efficiency and effective to get the best budget with low cost and the best Quality.

MANPOWER SUPPLY

We provide employee placement services according to the needs of our clients. We are looking for the best candidates for employment, from fresh graduates to experienced workers.

The workforce we provide includes:

- Oil and Gas field workforce: Engineers, Inspectors, Operators, and Maintenance Technicians
- Management and Engineering experts
- Professional support services: finance, Marketing, Law, and Administration
- Other supporting staff: Driver, OB, and Cleaning Service

TRAINING PROGRAM

We provide training programs & certification every month and can be adjusted based on requests from interested participants.

Software Training :

- INSPECT CODEWARE
- ASN
- AUDIT SMKP
- Engineering Solution
- TKDN MIGAS
- ETC

PROCUREMENT & SUPPLY GOODS, SUPPLY CHEMICALS, SUPPLY TOOLS

As a leading provider in the realm of procurement and supply, our company excels in delivering an extensive array of services tailored to meet the diverse needs of our clients. With a steadfast commitment to excellence, we specialize in the procurement and supply of goods, chemicals, and tools essential for various industries and sectors. Our comprehensive approach encompasses meticulous vendor selection, rigorous quality control measures, and streamlined logistics to ensure seamless delivery of high-quality products. Whether it's sourcing raw materials for manufacturing, supplying specialty chemicals for research and development, or providing a wide range of tools for various applications, our dedicated team strives to exceed expectations and uphold the highest standards of reliability, efficiency, and customer satisfaction. With our expertise and unwavering dedication, we stand ready to be your trusted partner in procurement and supply, empowering your business to thrive in today's competitive landscape.

REPAIR & MAINTENANCE

Preventive Maintenance

Preventive maintenance is an activity of care and precautions taken to prevent damage to your equipment. The equipment will experience the value of depreciation (decrease) when used continuously. Therefore, the need for inspection, assessment, and servicing regularly or periodically. It is also useful to prevent damage - damage to the unexpected and find the conditions or circumstances that may lead to the production facilities being damaged during the production process. So, all the production facilities of the treatment (preventive maintenance) would be guaranteed continuity of work and always worked in conditions or circumstances that are ready to beused for any operations or the production process at any time.

Preventive maintenance that we do between are:

1. Painting and Coating
2. Corrosion Preventive System

Corrective Maintenance

Corrective maintenance (CM) is a maintenance activity carried out after the machine or production facilities were damaged or interference that can not function and produce properly.

Emergency Maintenance

Emergency Maintenance (Emergency Care) is performed when the sudden death or the equipment can not be used in a period of unexpected (sudden damage) because of damage or abnormalities that cause such equipment can not be operated. This treatment is not planned and carried out repairs to prevent more serious consequences.

MSMS (MINING SAFETY MANAGEMENT SYSTEM)

MSMS Audit is a systematic and independent examination of the fulfillment of established criteria to measure the results of activities that have been plannedand implemented in the implementation of MSMS by the company.

- The Companymakes the Procedurefor the Implementation of the **MSMS Audit**
- Objectives of Internal Audit: Determine Effectiveness and achievement of Vocational School Implementation
- Basis of Audit: Results of Risk Assessmentsand Previous Audit Results

CONSTRUCTION, ARCHITECTURE & INTERIOR DESIGN

Examples of Architecture Design services we provide are:

- Design Housing
- Design office
- Design Hotel
- Design School
- Design Fuel (SPBU)
- Design SPBG
- Design Place of Worship
- Design Working Space
- Etc

Example of Interior Design services we provide are:

- Design of interior fixed, mobile, and Decorative temporary

SAFETY INSPECTION

Function Safety Inspection:

- Can detect a damage to the equipment before the accident risk was greater (things wear out)
- Can provide feedback (feedback) on whether the equipment is purchased or sufficient trained workers (people are not perfect)
- Can detect the changes/modifications (conditions change) in the operating unit are adequate and do not create new problems
- To increase confidence in the management of tasks and their responsibility to prepare a safe workplace

We provide inspections for equipment:

- Pipe and Pipeline
- Tank
- Vessel
- Crane
- Rotating
- Electrical
- Pressure Safety Valve

FIRE PROTECTION SYSTEM

We can provide and design the fire protection system for your House, Office, Hospital, Public Space, Pabric, Smelter, Refinery, Mining Fields, Oil and Gas Fields

Function of a Fire Protection System from our company

- Early detection : Fire protection systems include detectors that can identify the presence of smoke, heat, or flames early on, allowing for a swift response.
- Alarm activation : Once a potential fire is detected, the system activates alarms to alert occupants, enabling quick evacuation and minimizing potential harm.
- Emergency communication : Integrated systems may facilitate communication with emergency services and provide information to aid in a coordinated and efficient response.
- Evacuation Guidance : Fire protection systems can include features like exit signs and emergency lighting to guide occupants safely out of the building during a fire

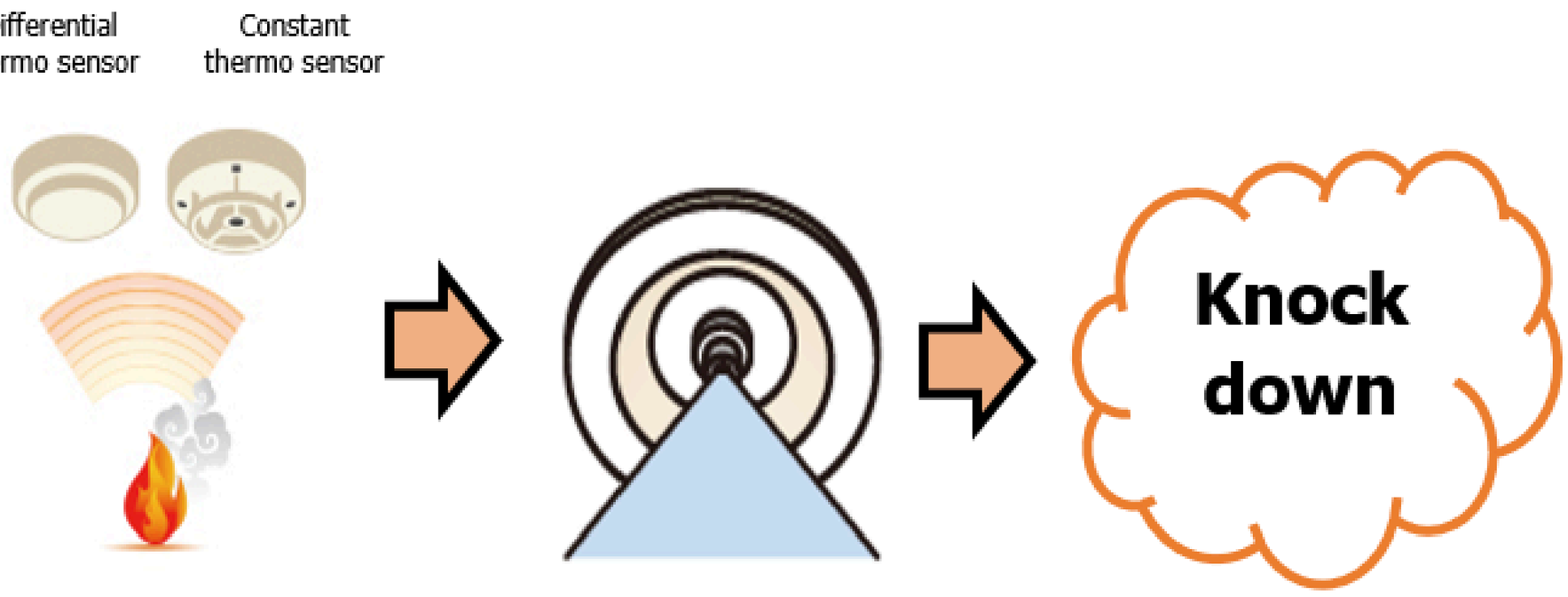
APAR (ALAT PEMADAM API RINGAN)

SPRINEX

Sprinex is a liquid agent package type automatic fire extinguishing equipment which was devised and developed as lessons from a catastrophic fire occurred at special elderly nursing home in 1987 in Japan.

Integrated control multiple-line fire extinguishing system for building. It can be used at various scene such as; hotels, dormitories, apartments, hospitals, social welfare facilities, kindergartens, schools for disabled students, group homes. Main unit can be installed inside or outside of building. Each system line covers floor area up to 13m2 or 21m2 depending upon extinguishing agent capacity.

SPRINEX 3-step automatic fire extinguishing



SPRINEX starts activating only after both of two thermo sensors are activated

SPRINEX

Advantage of SPRINEX Comparing With Sprinkler System

- Easier installation & space saving
- Quicker and securer fire detection
- Higher fire extinguishing performance
- Less secondary damage
- Stronger & tougher for accidents
- Easier maintenance

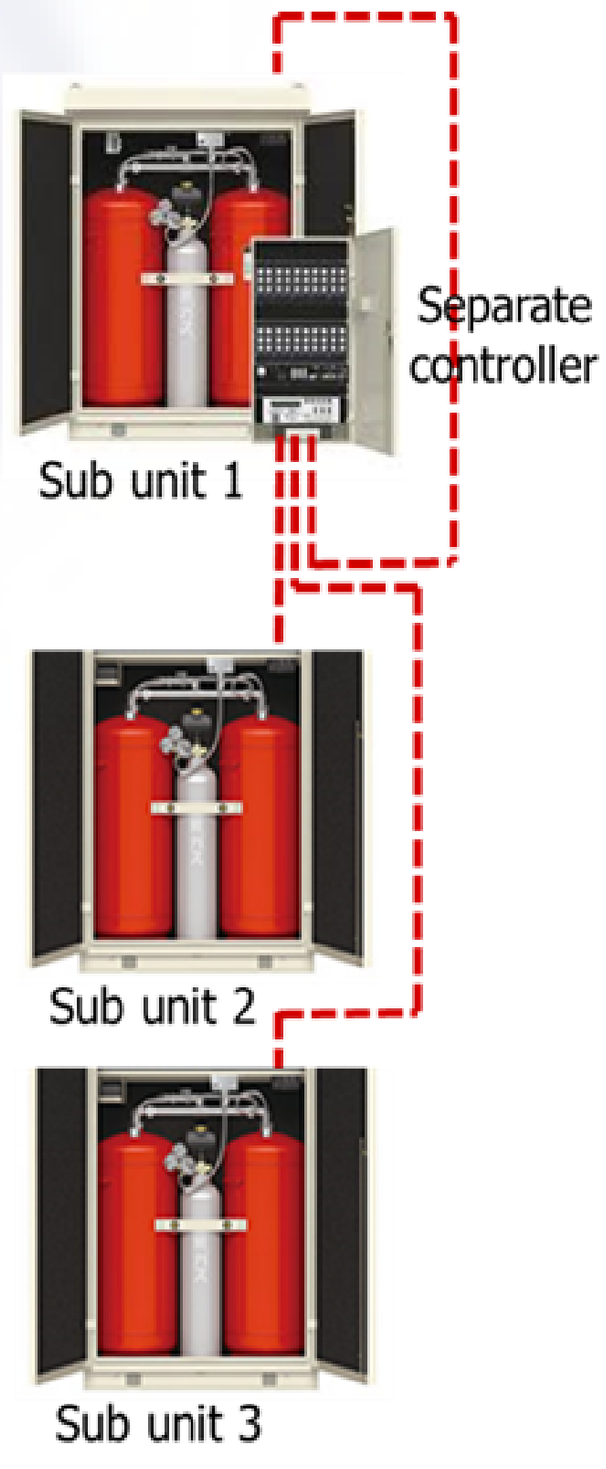
SPRINEX TECHNICAL DATA

1) SPRINEX (FSSM500IV)

Specifications

Authorization number in Japan	PGA-006
Model	FSSM500IV
Type	Separate controller multiple-line type
Number of sub unit for 1 controller	Max. 3 units
Capacity of fire extinguishing agent	216 L / each sub unit
Max. covering line	50-line/125-line/175-line
Covering floor area	21m^2/each line
Number of discarge nozzle in each line	4 pcs or 9 pcs
Agent discharge time	Approx. 140 sec
External electric power	AC100V

Dimension & weight	Type	Width (mm)	Depth (mm)	Height (mm)	Weight (kg)
Controller	50-line	550	211	960	51
	125-line	550	211	1800	85
	175-line	1065	211	1436	115
Sub unit	Indoor	1050	450	1350	480
	Outdoor	1087	560	1454	540

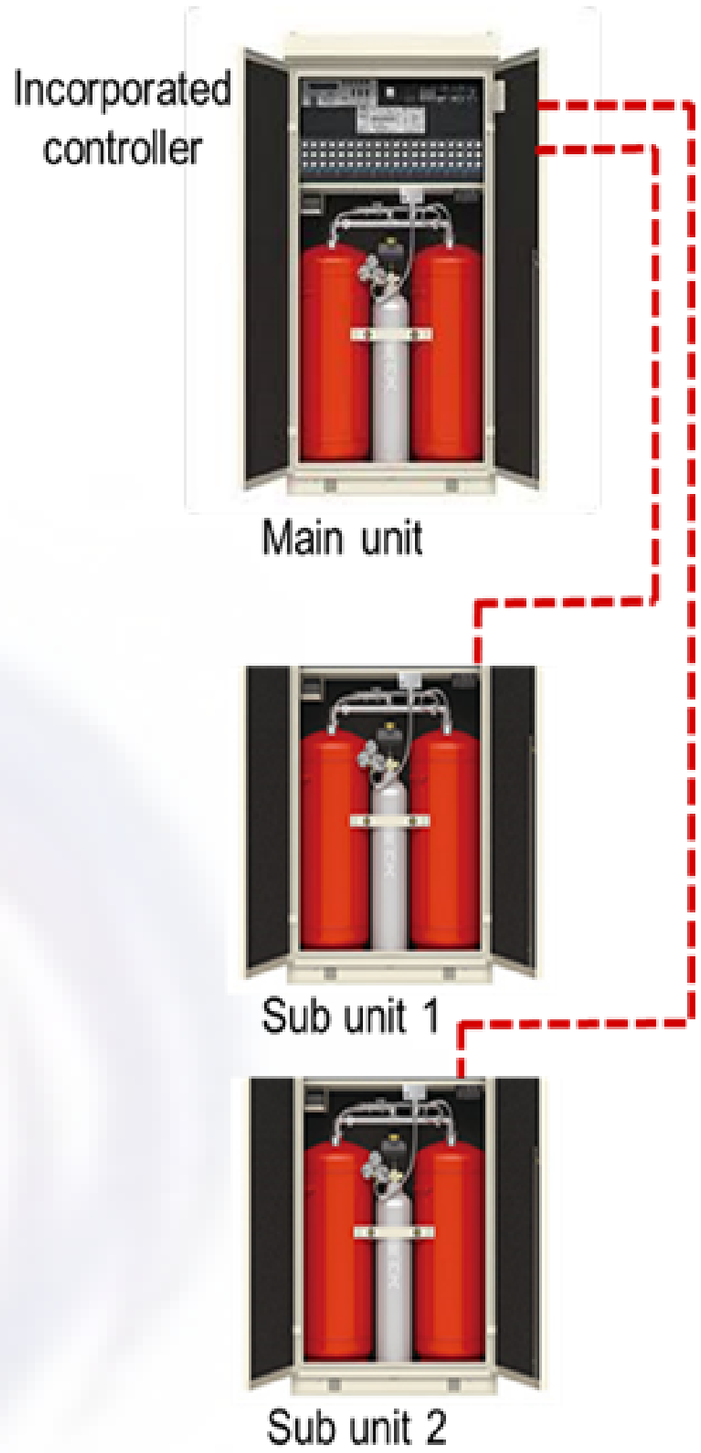


2) SPRINEX (FSSM500IV)

Specifications

Authorization number in Japan	PGA-006
Model	FSSM500IV
Type	Incorporated controller multiple-line type
Number of sub unit for 1 main unit	Max. 2 units
Capacity of fire extinguishing agent	216 L / each unit
Max. covering line	50-line
Covering floor area	21m^2/each line
Number of discarge nozzle in each line	4 pcs or 9 pcs
Agent discharge time	Approx. 140 sec
External electric power	AC100V

Dimension & weight	Type	Width (mm)	Depth (mm)	Height (mm)	Weight (kg)
Main unit	Indoor	1050	450	1800	540
	Outdoor	1087	560	1910	610
Sub unit	Indoor	1050	450	1350	480
	Outdoor	1087	560	1454	540



3) SPRINEX (FSSM013H)

Specifications

Authorization number in Japan	PGA-008
Model	FSSM013H
Type	Independent multiple-line type
Capacity of fire extinguishing agent	108 L
Max. covering line	30-line
Covering floor area	13m^2/each line
Number of discarge nozzle in each line	4 pcs
Agent discharge time	Approx. 60 sec
External electric power	AC100V

Dimension & weight	Type	Width (mm)	Depth (mm)	Height (mm)	Weight (kg)
Unit	Indoor	720	560	2000	350

4) SPRINEX mini

Specifications

Authorization number in Japan	PGA-001	PGA-002	PGA-017	PGA-009
Model	CPW13044	CPW13092	CPW13161B	CPW13094
Installation (indoor)	Wall mount	Closet storage	Corner install	Floor standing
Type	Independent stand-alone single-line type			
Capacity of fire extinguishing agent	16 L	18 L	16 L	36 L
Covering floor area	$13m^2$			
Number of discarge nozzle	4 pcs			
Agent discharge time	Approx. 18 sec	Approx. 28 sec	Approx. 31 sec	Approx. 28 sec
External electric power	No need because of self-contained battery			

Dimension & weight	Width (mm)	Depth (mm)	Height (mm)	Weight (kg)
CPW13044	900	180	400	43
CPW13092	380	205	830	44
CPW13161B	230	205	1400	42
CPW13094	734	195	830	87

CPW13044 

CPW13092 

CPW13161B 

CPW13094 

FIRE HYDRANT SYSTEM

Fire hydrant systems can be classified into three types, as follow :

- Building Hydrant System
- Field/Yard Hydrant System
- Municipal/ City Hydrant System.

Building Hydrant System: is a extinguishing system installed in buildings by the building owner.

Field/Yard Hydrant System: is a fire extinguishing system that is installed outside the building or in the yard, generally there is a hydrant pillar.

City / Municipal Hydrant System: which is specifically installed by the city government and supplied from PDAM. The fire hydrant system consists of a hydrant pump which functions to channel water from the storage tank to the nozzle.

Types of Fire Hydrant System Pumps :

- Jockey pump, this pump is the most commonly used pump for firefighting because this pump distributes hydrant water when in standby position therefore, the water is always in the network.
- Electrical pump is a pump that functions to circulate water in the system with a greater flow rate capability compared to the previous pump. This pump works based on a certain pressure according to needs. This pump works when the water flow requirement is high.
- Diesel Pump, this pump works using diesel as a driving force, therefore, this type of pump is very useful when PLN cuts off electricity.

FISCO

Strategic Synergy

OUR PRODUCTS

WWW.FISCOSS.TECH

APD
ALAT PELINDUNG DIRI

SAFETY SHOES

SAFETY SUIT

SAFETY HELMET

SAFETY MASK

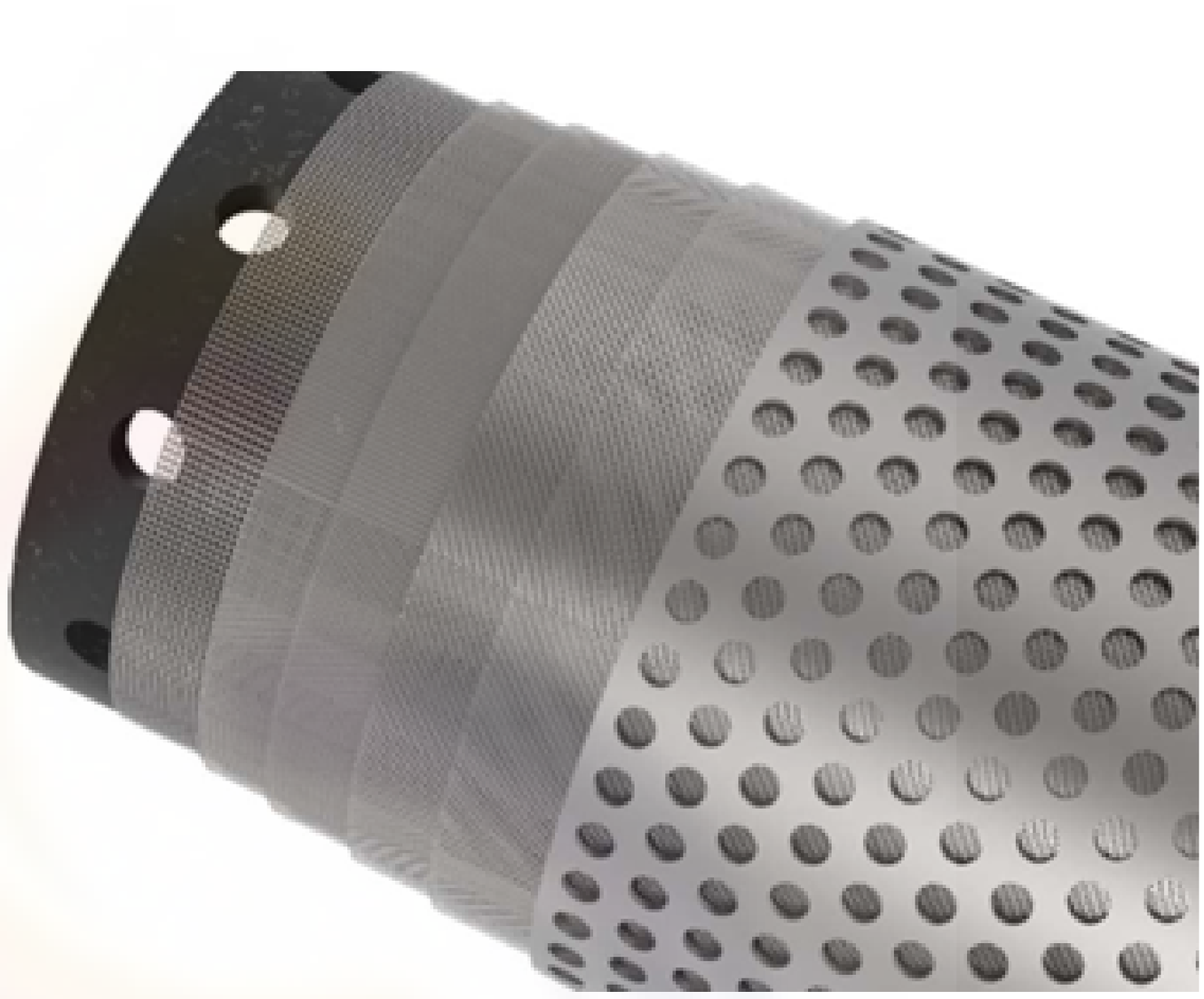
SAFETY GLOVES

EAR PROTECTION

SAFETY GOGGLE

VISTROMAX

PREMIUM MESH SCREEN



Vistromax Screen Pro is a premium screen designed to response to have a more robust screen cons for conducting sand control in harsh installation environment such as long, open hole horizontal wells.

The Vistromax Screen comprises of multiple woven metal screen layers wrapped on a base pipe and protected byperforated outer shroud.Although the screenhas a multi metal screen layers and covered by an outer shroud, it is thinner than a standard Pre-Packedscreen witha much higher inflow area, offering less fluid pressure differential across.

APPLICATION

- Open hole and casedhole well completion.
- Long open hole horizontal well completion.
- Able to pass medium range hole deviation angle for installation.

BENEFIT

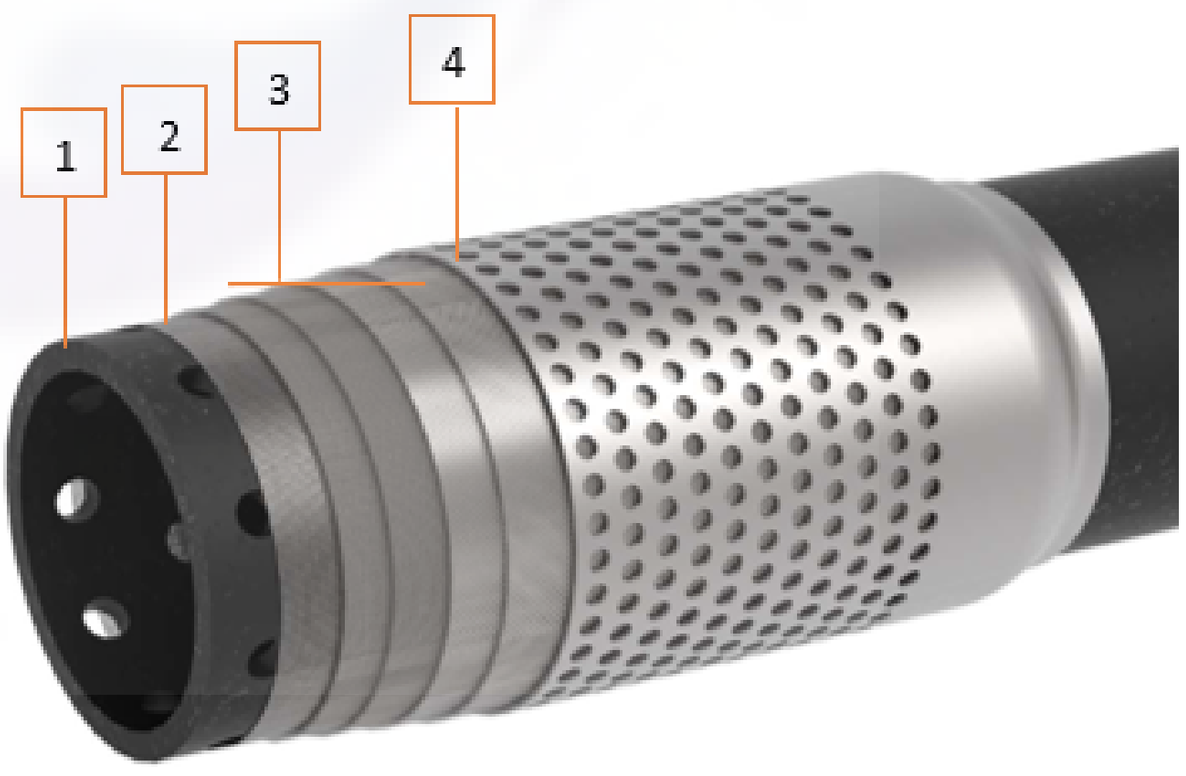
- Fully customizing filter media micron rating range 60 up to 400 suit to each wells characteristics.
- Protective shroud to ensure mechanical stability and erosion.
- Best in the upper part of a vertical well, in horizontal wells, and in open hole completions.

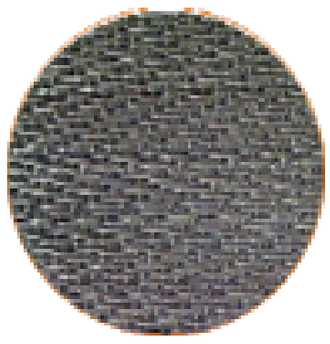
VISTROMAX FEATURE

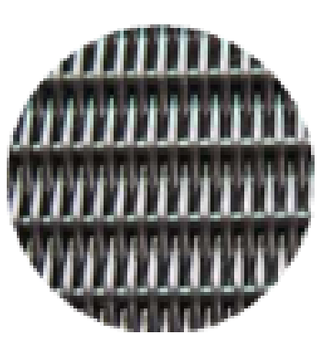
- Dutch weave or square weave filtration media, available in S/S 304 or 316.
- Sintered filtration construction for filtration media for design customizing.
- Easy to clean surface filtration media.
- All weldedconstruction.
- Fully customized micron ratings from 60 to 400, to suit application.
- All filtration media ratings fully confirmed and verified by reliable glass bead testing.
- Perforated outer Shroud to provide integrity and protection during installation.

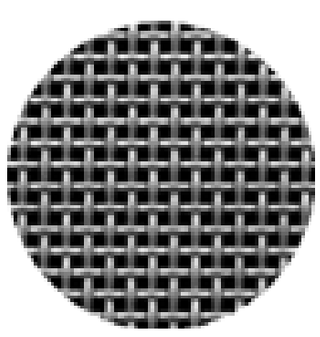
VISTROMAX CONSTRUCTION

1.Base Pipe – perforated to supply the required flow rate for the application.
2.Inner Drainage Layer – forming a solid “stand-off” area between the base pipe and the Filtration Media.
3.Filtration Media – specific by technical specification.
4.Stainless Steel, spiral welded protective Shroud forms the outer most later. This is perforated in order to allow the exact flow rate specified.




BroadCast™ mesh


Dutch Wave Filtration


Square Mesh Filtration

QA & QC

- Our QA/QC process will ensure that we deliver a product or performed service are set of quality criteria or meets the requirements of the client or customer.
- All of our screen product are complywith ISO 17824 : Petroleum and natural gas industries - Down hole equipment - Sand screens

SPECIFICATION VISTROMAX

Base Pipe Size (inch)	Base Pipe Weight (lb/ft)	Outer Shroud Diameter (inch)	Max. Tensile Rating (lbf)	Max Collapse Pressure (psi)	Max. Brust Pressure (psi)	Max. Torque Rating (lb.ft)	Max. Flow Rate-Liquid (qpm/ft)	Max. Flow Rate-Gas (MMSCFD/ft)
1.315	1.70	1.800	11,800	8,475	4562	840	63	0.34
1.900	3.65	2.400	16,700	6,575	3421	1,670	85	0.49
2.375	4.60	2.850	16,685	6,865	2881	1,981	100	0.62
2.875	6.40	3/350	19,678	6,506	2451	2,747	118	0.73
3.500	9.20	4.000	28,192	6,271	2053	4,699	141	0.87
4.000	11.00	4.500	31,784	4,227	1824	5,959	159	0.98
4.500	11.60	5.000	35,375	4,048	1642	7,370	176	1.09
5.000	15.00	5.500	38,966	4,622	1493	8,930	194	1.19
5.500	17.00	6.000	42,558	4,074	1369	10,639	211	1.30
6.625	24.00	7.100	42,124	3,672	1156	12,462	250	1.54
7.000	26.00	7.500	53,332	3,449	1095	16,666	264	1.63
7.625	29.70	8.100	48,109	2,168	1013	16,237	285	1.76
9.625	40.00	10.100	54,095	1,970	902	25,284	356	2.19

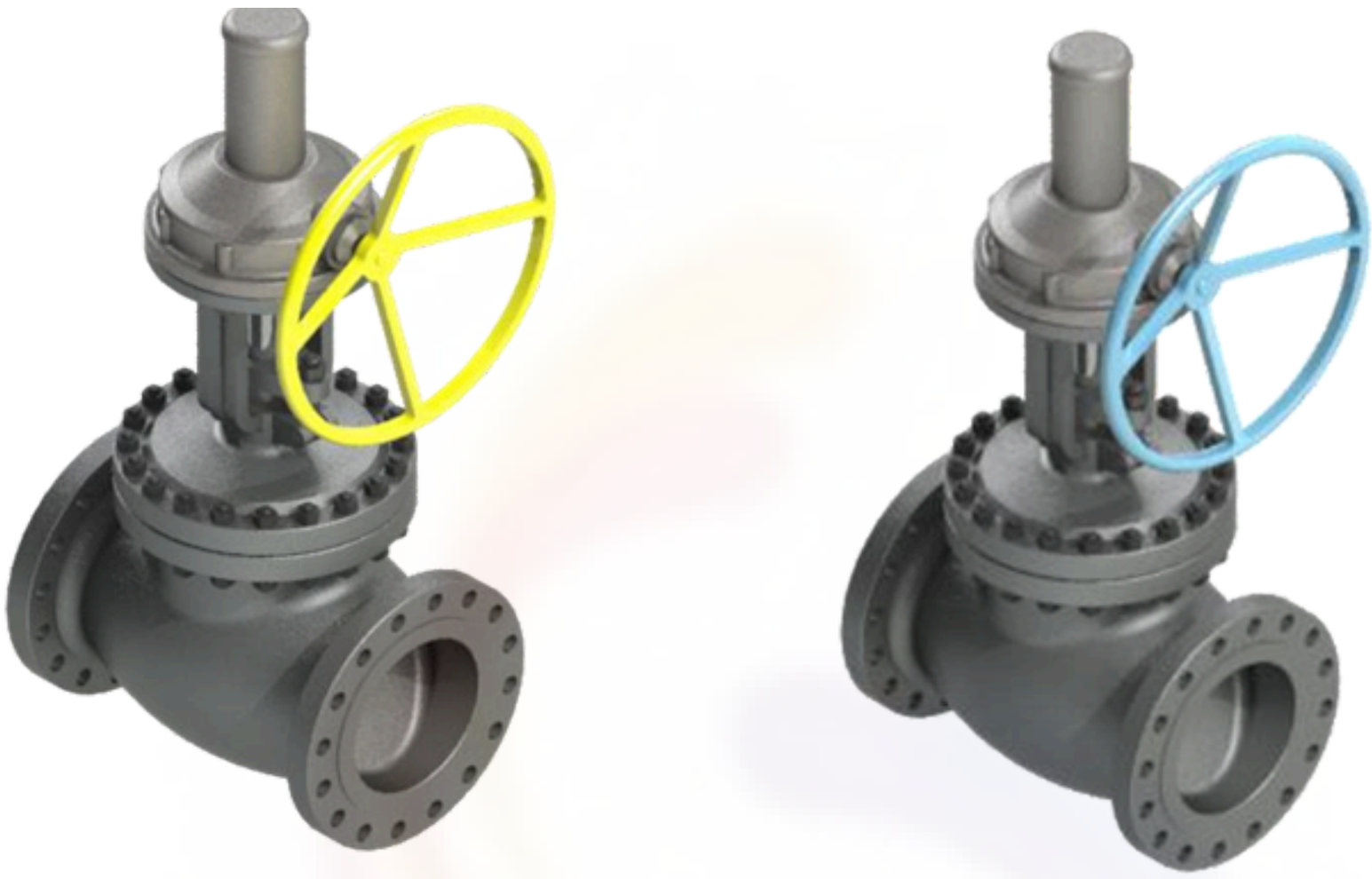
CASTING VALVES

GATE VALVE

Design	API 600, ASME B16.34
Testing	API 598
End Connection	ASME B16.5
Face to Face	ASME B16.10
Size Range	1/2" - 24" (>24" upon request)
Class / Rating	150# - 2500#
Material	Carbon Steel & Stainless Steel
Seats	Metal to Metal (TR01~ TR12)
Firesafe Design	Certified Firesafe Test API 6FA

CASTING VALVES

GLOBE VALVE



Design	API 623, BS 1873
Testing	API 598
End Connection	ASME B16.5
Face to Face	ASME B16.10
Size Range	2" - 24" (>24" upon request)
Class / Rating	150# - 2500#
Material	Carbon Steel & Stainless Steel
Seats	Metal to Metal (TR01~ TR12)
Firesafe Design	Certified Firesafe Test API 6FA

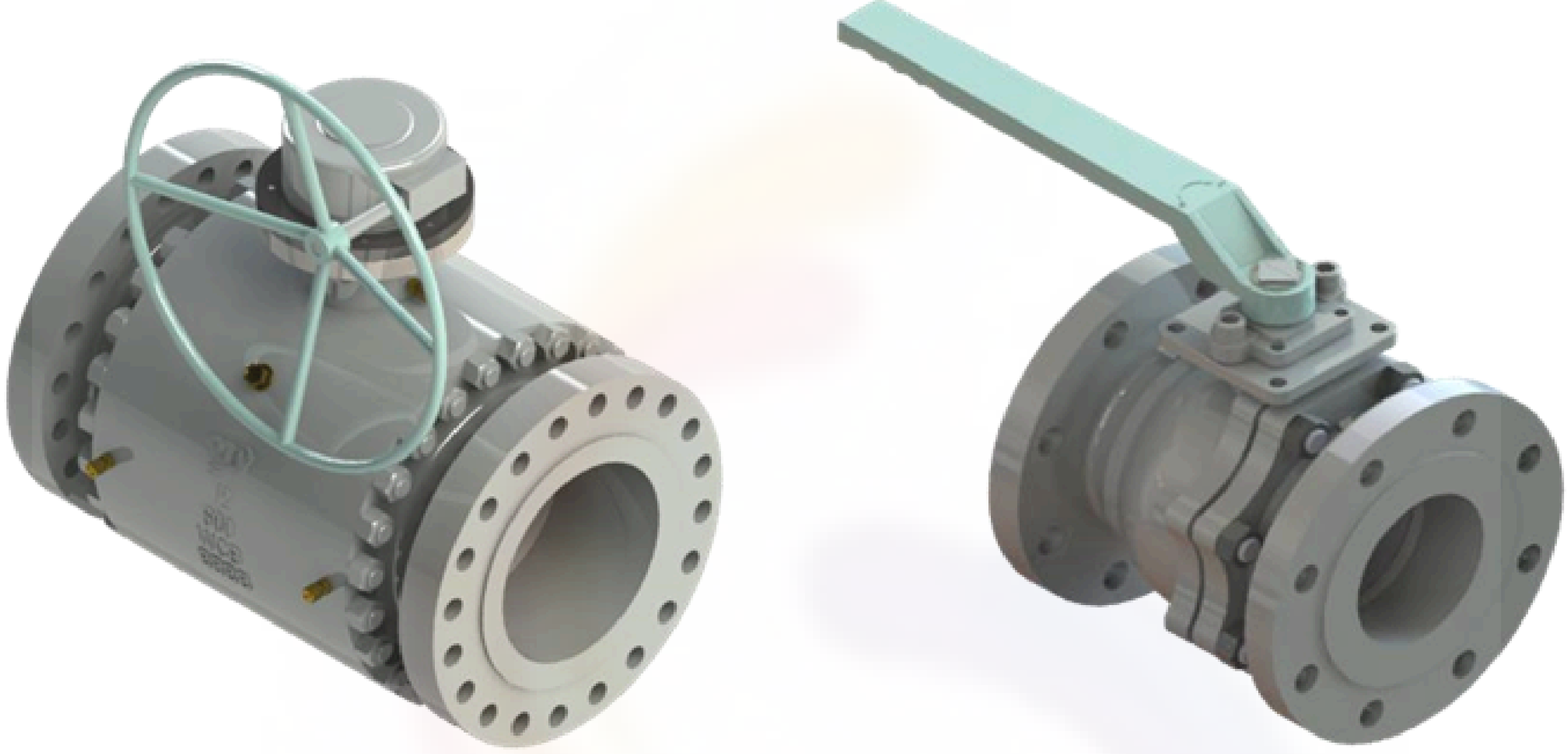
CASTING VALVES

SWING CHECK VALVE

Design	API 6D, BS 1868
Testing	API 6D
End Connection	ASME B16.5
Face to Face	ASME B16.10
Size Range	2" - 24"
Class / Rating	150# - 2500#
Material	Carbon Steel & Stainless Steel
Seats	Metal to Metal (TR01~ TR12)
Firesafe Design	Certified Firesafe Test API 6FD

FORGED VALVES

BALL VALVE



Design	API 6D, BS5351
Testing	API 6D
End Connection	ASME B16.5
Face to Face	ASME B16.10
Size Range	1/2" - 24" (>24" upon request)
Class / Rating	150# - 2500#
Material	Carbon Steel & Stainless Steel
Seats	Soft Seat (PTFE, RPTFE, Devlob, Peek, Nylon)
Firesafe Design	Certified Firesafe Test API 607

FORGED VALVES

FORGED GATE VALVE

Design	API 602
Testing	API 598
End Connection	ASME B16.25, B16.5
Face to Face	ASME B16.10
Size Range	1/2" - 2"
Class / Rating	150# - 2500#

WELLHEAD & CHRISTMAS TREE

CHRISTMAS TREE

Design	API 6A Ed. 21
Testing	API 6A
Size Range	2 1/16" – 7 1/16"
Class / Rating	3000# - 15000#
PSL	1 - 2
Material Grade	AA, BB, DD, EE
Temp. Rating	K, L, N, P, S, T, U, V, X, Y

WELLHEAD & CHRISTMAS TREE

WELLHEAD EQUIPMENT

Design	API 6A Ed. 21
Testing	API 6A
Size Range	7 1/16" – 21 1/4"
Class / Rating	3000# - 15000#
PSL	1 - 2
Material Grade	AA, BB, DD, EE
Temp. Rating	K, L, N, P, S, T, U, V, X, Y

FORGED FLANGES

WELDING NECK FLANGES

Dimension	ANSI B16.5 & ANSI B16.47 Series A/B
End Connection	RF, RTJ, FF
Size Range	1/2" – 60″
Class / Rating	150# - 2500# (>2500# Upon Request – API 6A)
Schedule	Sch. 10, Sch. 40, Sch. Std, Sch. 80, Sch. 160, Sch. XXS
Material Grade	- Carbon Steel : A105, A350 LF1, LF2 - Stainless Steel : A182, F304/304L, F316/F316L
Surface Treatment	Anti-rust oil, Yellow paint, Black paint, Hot dip galvanize, Zinc

SLIP ON FLANGE

Dimension	ANSI B16.5 & ANSI B16.47 Series A/B
End Connection	RF, RTJ, FF
Size Range	1/2" – 60″
Class / Rating	150# - 2500#
Material Grade	- Carbon Steel : A105, A350 LF1, LF2 - Stainless Steel : A182, F304/304L, F316/F316L
Surface Treatment	Anti-rust oil, Yellow paint, Black paint, Hot dip galvanize, Zinc

FORGED FLANGES

SPECTACLE BLIND FLANGE

Dimension	ANSI B16.48
End Connection	RF, RTJ, FF
Size Range	1/2" – 24 (>24" Upon Request)
Class / Rating	150# - 2500#
Material Grade	- Carbon Steel : A105, A350 LF1, LF2 - Stainless Steel : A182, F304/304L, F316/F316L
Surface Treatment	Anti-rust oil, Yellow paint, Black paint, Hot dip galvanize, Zinc

FORGED FITTINGS

OUTLET (OLET)

Type	Weldolet, Sockolet, Nipolet, Threadolet
Standard	ASTM A105/ASTM A/SA182 & MSS SP-97
Size	1/2" – 24″

PLUG / UNION / PIPE NIPPLE

Type	Hex Head Plug, Bull Plug
Standard	ASTM/ASME A/SA182, A/SA105, A/SA312
Size	1/8" – 4″

PIPES

Carbon Steel Pipes (SMLS)

Grade:

- SA/A53 Gr.B
- SA/A106 Gr.B
- API-5L Gr.B
- API-5L X-42
- API-5L X-52
- SA/A333 Gr.6
- A335-P11 (Alloy Steel)

Stainless Steel Pipes (SMLS & WELD)

Grade:

- SA/A 304/304L
- SA/A 316/316L
- SA/A 317L
- SA/A 321/H
- S31803 (Duplex)

FITTINGS

Carbon Steel Fitting

Grade:

- SA/A 234 WPB
- SA/S 420 WPL6
- SA/A 860 WPHY-52
- SA/S 860 WPHY-65
- SA/A 105N
- SA/A 350 LF2

Stainless Steel Fittings

Grade:

- 304/304L
- 316/316L
- S31803 (Duplex)

VALVES

Stainless & Carbon Steel Valves

- A351 – CF8 = 304
  CF8M = 316
  CF3 = 304L
  CF3M = 316L
- A216 – WCB & A105

OCTG

Casing

Pipe

- Grade H-40, J55, K-55, N-80, L-80
- OD 41/2” – 20”

Tubing

Pipe

- Grade H-40, J55, K-55, N-80, L-80
- OD 23/8” – 41/2”

Accessories

Pup Joint, Cross Over, Coupling

- Grade H-40, J55, K-55, N-80, L-80
- OD : 41/2” – 20”

FLANGES

Carbon Steel Flanges

Grade:

- SA/A 105N
- SA/A 350-LF2

Stainless Steel Flanges

Grade:

- 304/304L
- 316/316L
- A182-F51 (Duplex)

PLATES & LONG PROFILE

Rebar

- Round Bar U24 size 6-32 mm
- Deformed Bar U40 size 10-32 mm

Carbon Steel Plate

- SS400 / A36
- SM 490 YA

H-Beam

WF-Beam

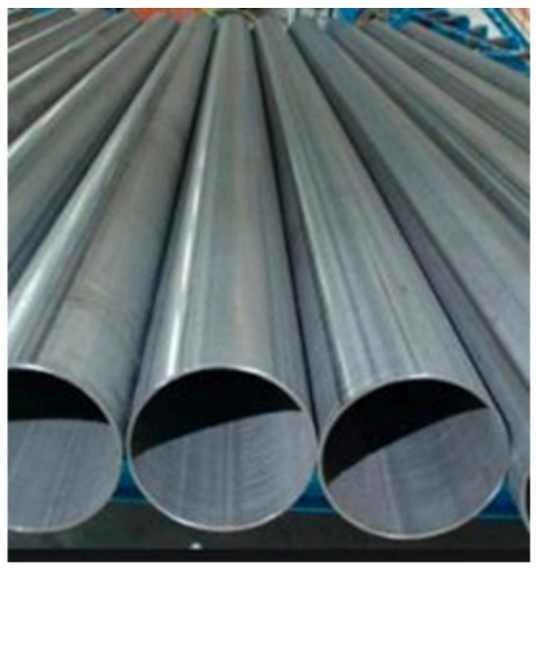
Welded Beam

Angle Bar & U-Channel

PRODUCT STANDARD

PIPE	CARBON STEEL FITTINGS	FORGED FLANGE	FORGED FITTING	STAINLESS STEEL FITTINGS
✓ API 5L	✓ ASTM A 234	✓ ASTM A 105	✓ ASTM A 105	✓ ASTM A 403
✓ ASTM A53	✓ ASTM A 420	✓ ASTM A 182	✓ ASTM A 182	✓ ANSI B 16.9
✓ ASTM A106	✓ ANSI B 16.9	✓ ASTM A 350 LF2	✓ ASTM A 350	✓ ANSI B 16.25
✓ ASTM A120	✓ ANSI B 16.25	✓ ANSI B 16.5	✓ ANSI B 16.11	✓ ANSI B 16.28
✓ ASTM A333	✓ ANSI B 16.28	✓ ANSI B 16.47-A	✓ MSS SP-97	
✓ ASTM A335		✓ ANSI B 16.47-B	✓ MSS SP-95	
✓ ASTM A312				






WATERWELL DRILL TH10LM

DTH, ROTARY AIR AND MUD DRILLING

WATERWELL DRILL TH10LM

DTH, ROTARY AIR AND MUD DRILLING

EFFICIENT IN DRILLING HIGHER ON RETURNS

THE TH10LM IS HYDRAULICALLY POWERED WATERWELL DRILL DESIGNED FOR AIR FOAM, MUD ROTARY AND DOWN THE HOLE DRILLING. IT CAN BE COMBINED WITH A CHOICE OF CIRCULATION SYSTEM AND DRILL PIPE TO ENABLE DRILLING IN SEMI-CONSOLIDATED, CONSOLIDATED FORMATIONS USING AIR, AIR FOAM, MUD ROTARY OR DHD, DEPENDING UPON THE FORMATION WITH SUITABLE DRILLING ACCESSORIES AND TOOLS.

+ Simplicity at its best

The TH10LM features a simple, reliable power source and hydraulic system. The diesel deck engine powers the drill hydraulics. The hydraulic rotary top-head drive generates a hefty torque for each class of drill in the range. The simplistic design of the driller's console allows the driller to quickly become familiar with this drilling rig.

We also provide a standard manifold that connects to on-board mud system or an air compressor mounted off board to meet different drilling requirements. The connections are standard 2" hammer joint coupling which are very easy to couple or decouple. This makes it even better for drillers to optimize the drilling operation.

+ Build to last

At Epiroc we have a rich mining history of designing products for the world's worst environments. This design philosophy is translated to our TH10LM water well drill rig resulting in our customers enjoying decades of operation from our equipment.

+ Global service and parts support

Buying capital equipment from Epiroc is only the beginning of your great experience with us. With our strong customer centers, distributors & dealers network we can support you from all corners of the world.

Dimensions	Metric	Imperial
Length	8.8 m	28.8 ft
Width	2.4 m	7.8 ft
Height tower down	4.2 m	13.7ft
Travel speed	Depends on truck	
Weight	20 to 22 tons	44k to 48k lbs

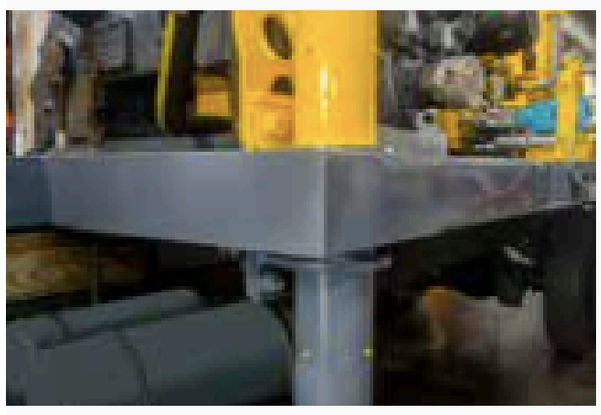
- Note: dimensions and weight is subject to vary depending on the truck selection

WATERWELL DRILL TH10LM

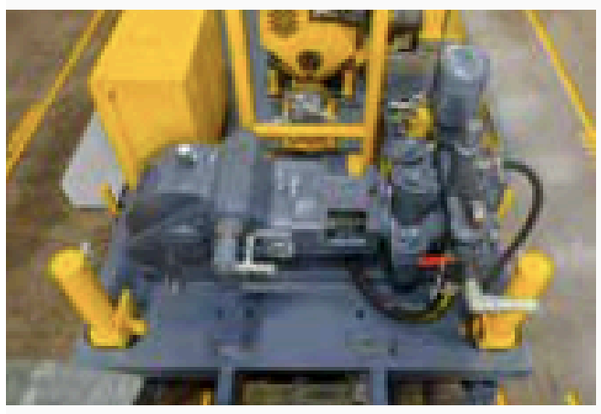
DTH, ROTARY AIR AND MUD DRILLING

Features and benefits

Long mast, long life feed system - The TH10LM has a robust long mast designed to handle up to 6m (20ft) drill pipes and casing pipes. With a reduced number of pipe joints the TH10LM achieves greater depth in a short time thus increasing drilling efficiency. The lattice tower structure is wide enough to store bigger diameter sheaves of feed system that gives better (D/d) ratio resulting in longer life of the ropes & sheaves. The rotation head slides on the guide bars with guide shoes and replaceable nylon pads that makes it easy to replace and costs less to maintain.

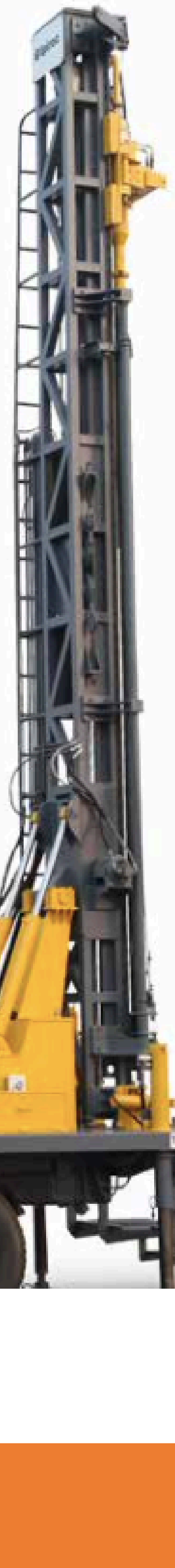


Longevity - A heavy duty machine's life is dependent on the quality of materials, welds performed, assembly procedure and tools that are used to make it. We carry more than 100 years of history of producing robust mining machines and the same is implemented for our water well drills. Rigs produced in our factory have branded components, heavy structures are welded by certified welders and assembled by certified technicians with industries latest assembly procedures and tools.



Modular concept - The TH10LM's modular approach ensures the rig is easily adaptable to change even after the customer has taken delivery of the unit. The rig has a plug-and-play feel to it that means the customer can easily add or remove components as desired. This allows the customer to buy kits even after the rig is purchased. Also, this feature enables to mount the rig on local trucks of customer's choice.

Operator comfort & safety - When drilling in tough conditions, it is important that operators and helpers get maximum safety & comfort to work. Our machines come with a full width steel and anti-skid platforms that gives maximum comfort to the drilling crew, resulting in safe working conditions and efficiency in completing a well faster.



WATERWELL DRILL TH10LM

DTH, ROTARY AIR AND MUD DRILLING

Technical specifications

		Metric	Imperial
Feed system	Pullback	11,338 Kgf	25,000 lbf
	Pulldown	6,802 Kgf	15,000 lbf
	High speed up	24.5 m/min	80 ft/min
	High speed down	35.7 m/min	117 ft/min
Derrick capacity	Rated	15,000 Kgf	33,609 lbf
Deck engine	Make, model & type	Deutz, BF6L914 & air cooled	
	Power	121 kW @ 2000rpm	162 hp @ 2,000 rpm
	Make, model & type	MWM, 6.10TCA & water cooled	
	Power	147 kW @ 200 rpm (South American market)	197 hp @ 2,000 rpm
Rotary head	Torque	760 Kg.m	5,500 ft.lb
	Rotation speed	0-75 rpm (variable)	
	Spindle	2.7/8 API IF or 2.3/8 API Reg	
	Head travel	7 m	22.9 ft
Table	-	Can be split opened by removing the pin	
	Table opening	400 mm	15.7 inch
Levelling	-	Hydraulically operated	
	Number, stroke	Four jacks, stroke 762 mm	Four jacks, stroke 30 inch
Winch	Main	8,163 Kgf	18k lbf
	Line speed, rope diameter, spooling capacity	0-50 m/min, 16 mm, 50 m	0-164 ft/min, 5/8 inch 164 ft
	Auxiliary	1,000 Kgf or 1,814 Kgf	2.2 klbs or 4 klbs
Rod & casing handling	Drill pipe elevator	3 m or 6m	10 ft or 20ft
Water injection	Piston pump	45 lpm @ 31 bar	0-12 gpm @ 450 psi
Mud system	Centrifugal	1,134 lpm @ 10 bar	300 gpm @ 145 psi
	Piston	568 lpm @ 21 bar	150 gpm @ 304 psi
	Piston	536 lpm @ 22 bar	142 gpm @ 310 psi
Lubricator	DHD	0-17.5 bar or 0-24 bar	0-250 psi or 0-350 psi
Welder	Amperes	300 A	300 A

- Note: For truck selection contact your local customer center, our drill module can be mounted on local trucks.

Standard scope items

- Feed system driven by hydraulic feed cylinder and rope
- Sturdy long mast and mainframe
- High torque rotation head with hydraulic motors
- Four hydraulic operated levelling jacks
- Ergonomically designed driller console
- Bubble level
- Efficient hydraulic system
- Drill pipe elevators
- Standard tools
- Maintenance & overhaul tool box
- High quality lamps for night drilling
- Lifting bail

DM30 XC BLASTHOLE DRILLS

MULTI-PASS ROTARY AND DOWN-THE-HOLE (DTH) DRILLING

NEXT-GEN DRILLING POWER

THE EPIROC DM30 XC IS A CRAWLER MOUNTED, HYDRAULIC TOPHEAD DRIVE, MULTI-PASS ROTARY OR DTH DRILLING RIG FEATURING A 9.1 M (30 FT) DRILL PIPE CHANGE. WITH A STARTER ROD UNDER THE ROTARY HEAD, THE DM30 XC HAS A TOTAL CLEAN DEPTH CAPACITY OF 45.1 M (148 FT), DEPENDENT ON THE DRILL PIPE SIZE.

THE EPIROC DM30 XC IS DESIGNED TO HANDLE 101.6 MM (4 IN) UP TO 159 MM (6 1/4 IN) DRILL PIPE. THE DRILL HAS A WEIGHT ON BIT OF 20,000 KGS (44,000 LBS), AND OFFERS EITHER A LOW OR A HIGH PRESSURE COMPRESSOR, MAKING IT SUITABLE FOR ROTARY OR DTH DRILLING APPLICATIONS.

BUILT FOR THE JOB

HIGH QUALITY AT AN EXCELLENT VALUE SETS THE DM30 XC APART FROM OTHER DRILLS IN ITS CLASS. THE DRILL IS DESIGNED FOR MINING SO THE STRUCTURAL COMPONENTS WILL HOLD UP TO THE HEAVY DUTY CYCLES REQUIRED IN A MINING DRILL – THE FRAME AND TOWER WELDMENTS ARE DESIGNED TO LAST THE LIFE OF THE MACHINE.

POWERFUL PERFORMANCE

FOR SINGLE PASS APPLICATIONS THE DM30 XC CAN ACHIEVE A CLEAN HOLE DEPTH OF 28 FT (8.5 M) AND FOR MULTI PASS DEPTH CAN ACHIEVE DEPTHS OF UP TO 148 FT (45.1 M). THE 300 GL (1134 L) FUEL TANK ALLOWS THE RIG TO RUN FOR 16 HOURS BEFORE REFILL

OPTIONS TO FIT YOUR APPLICATION

THE SMALL FOOTPRINT OF THE DM30 XC MAKES IT EASY TO MANEUVER ON TIGHT BENCHES AND SIMPLE TO TRANSPORT OVER THE ROAD BETWEEN PITS.

A SPACIOUS ONE PIECE FOPS (FALLING OBJECT PROTECTIVE STRUCTURE) RATED CAB WITH ELECTRIC OVER HYDRAULIC CONTROLS THAT ARE COMMON ACROSS THE DM SERIES MAKES IT EASY TO OPERATE, ESPECIALLY FOR DRILLERS WHO HAVE EXPERIENCE IN OTHER DM SERIES MACHINES – THE ERGONOMIC CONTROLS LAYOUT ALLOWS IMMEDIATE SWITCH OVER FROM DRILLING TO TRAMMING MODE, THEREFORE INCREASING PRODUCTIVITY.

THE ELECTRONIC AIR REGULATION SYSTEM (EARS) ALLOWS YOU TO EASILY ADJUST YOUR COMPRESSOR TO SAVE HORSEPOWER AND FUEL CONSUMPTION TO DECREASE TCO.

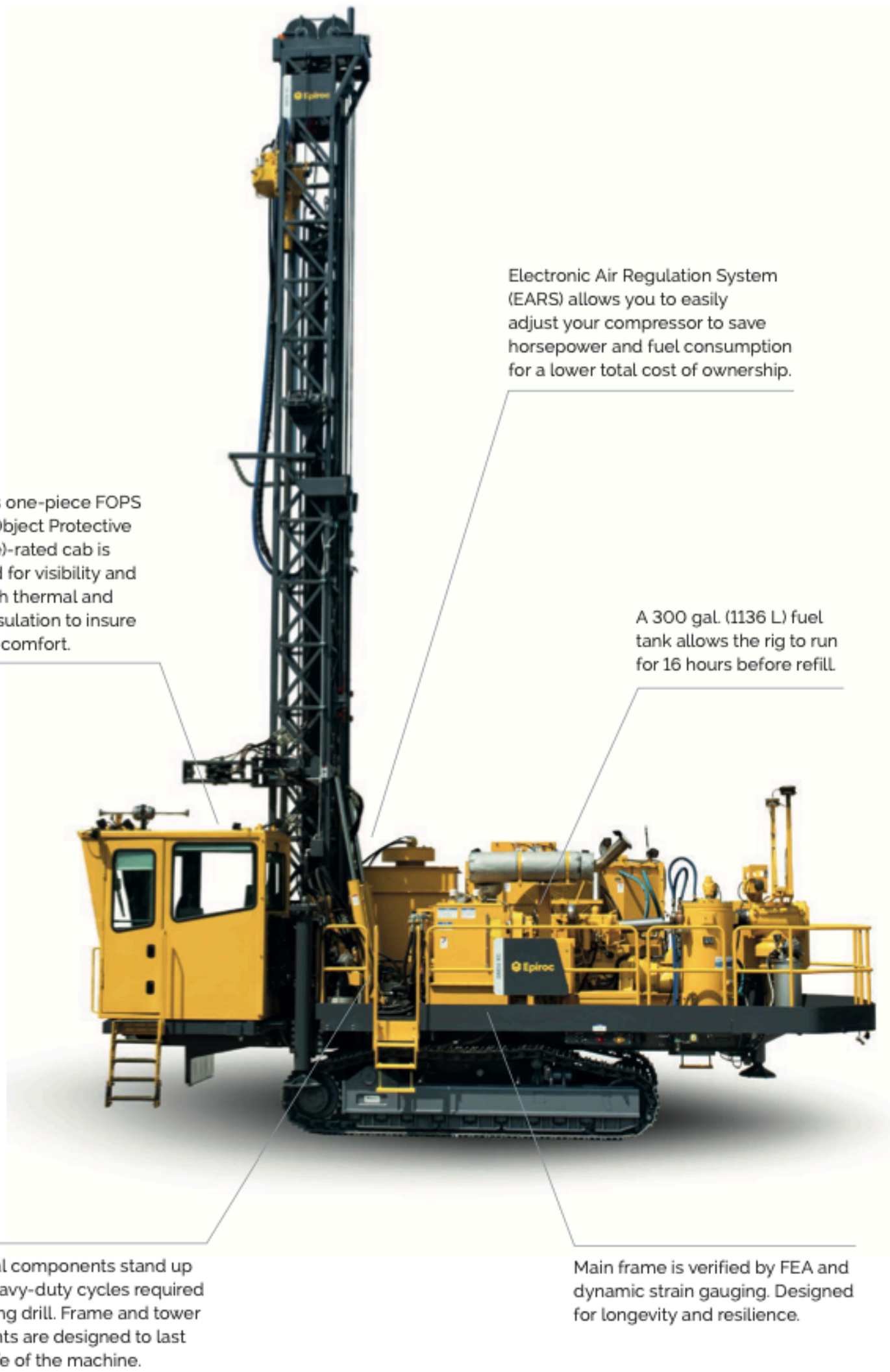
DM30 XC BLASTHOLE DRILLS

MULTI-PASS ROTARY AND DOWN-THE-HOLE (DTH) DRILLING

· OPERATOR COMFORT
INSULATED, PRESSURIZED CAB WITH TINTED GLASS AND 6 WAY ADJUSTABLE SUSPENSION SEAT ELECTRIC OVER HYDRAULIC CONTROLLERS. ALL OPERATIONAL FUNCTIONS CONTROLLED FROM THE DRILLER'S CONSOLE ERGONOMIC CONTROL LAYOUT (IMPROVES EFFICIENCY). EXCELLENT VISIBILITY 80 DBA RATING CAB

· EASE OF MAINTENANCE
DECK LAYOUT FOR EASY ACCESS TO ALL MAJOR SERVICEABLE COMPONENTS AVAILABLE OPTIONS TO FACILITATE SERVICEABILITY:
-FAST FLUID FILL
-TOWER ACCESS WITH FALL RESTRAINT
-CENTRAL LUBRICATION
-FLUID SAMPLING PORTS
CONTACT YOUR LOCAL EPIROC REPRESENTATIVE FOR A FULL LIST.

· ENHANCED SAFETY
FOPS CAB
AIREND SAFETY SHUT-DOWN SYSTEM FOR HIGH TEMPERATURE BACK-UP ALARM
HEAD UP PROPEL INTERLOCK TRAMMING INCLINOMETER
LOCKABLE BATTERY AND STARTER ISOLATORS JACKS UP INDICATOR LIGHTS



Service and support

Epiroc offers several types of service agreements to meet your operational requirements and maximize your productivity:

Variable-price repairs
Service when you need it.

Fixed-price repairs
Service with controlled costs.

Equipment audit
Scheduled equipment quality control.

Preventive maintenance programs
Peace of mind so you can focus on your core business.

FLEXIBILITY FOR THE FUTURE
ADD FLEXIBILITY TO YOUR DM SERIES DRILL RIG WITH EPIROC'S RCS LITE. BUILT ON THE RCS 5 PLATFORM THAT COMES STANDARD ON THE PIT VIPER SERIES, RCS LITE OFFERS A NUMBER OF SAFETY AND INTERLOCK FEATURES. IT ALSO PROVIDES A CONVENIENT FOUNDATION TO ADD MORE FUNCTIONALITY AND TECHNOLOGY OPTIONS IN THE FUTURE WITHOUT A MAJOR REBUILD OF THE MACHINE. IN ADDITION, RCS LITE ALLOWS ALL EPIROC ROTARY DRILLS TO HAVE THE SAME ONBOARD DISPLAY AND SYSTEM FOR CONSISTENT OPERATOR TRAINING AND SERVICE. IT'S A MODULAR SOLUTION THAT DELIVERS EFFICIENCY NOW, ALONG WITH THE OPPORTUNITY TO ENHANCE YOUR EQUIPMENT DOWN THE ROAD AS YOUR MINING REQUIREMENTS GROW.

DM30 XC BLASTHOLE DRILLS

MULTI-PASS ROTARY AND DOWN-THE-HOLE (DTH) DRILLING

HOME SCREEN: ALL SELECTIONS ARE DONE FROM THE MAIN MENU.

DRILLING: SHOWS INFORMATION ABOUT PRESSURES AND FLOWS FOR VARIOUS SYSTEMS DURING DRILLING.

SETUP AND PROPEL: SHOWS MACHINE CONDITIONS DURING SETUP AND WHILE PROPELLING.

DRILL PLAN: SHOWS THE INTERACTIVE DRILL PLAN.

USER: SETS THE CONTROL SYSTEM LANGUAGE. LOGS IN USERS TO THE CONTROL SYSTEM AND SHOWS USER INFORMATION.

PERFORMANCE: SHOWS STATISTICS ABOUT THE MACHINE AND DRILLING CONSUMABLES.

Technical specifications

Sub structure

Mainframe 66 kg/m (44.35 lb/ft)	
• Weld fabricated I-beam type using wide flange structural steal beam for both rails and crossbeams • Designed by Epiroc, main frame is verified by FEA and strain gauge testing	
Leveling jack	
Type	Hydraulic cylinder
Quantity	3
Jack pad diameter	457 mm (18 in)
Position indication	"Jack up" indicator lights on console or RCS screen
Capacities	
Fuel tank	1134 L (300 gal)
Water tank	795 L (210 gal)
Hydraulic tank	397 L (105 gal)
Undercarriage and propel system	
Make	Epiroc or Caterpillar 320L
Mounting	Oscillating walking beam: 5° each side, total 10°
Total length	4.45 m (175 in)
Ground contact	3.65 m (144 in)
Take-up adjustment	Grease slack adjustment; hydraulic recoil
Rollers	9 lower / 2 upper
Location	Strategically located for load distribution relative to the tower position (vertical or horizontal)
Roller bearings	Sealed for life
Track pads	Type: Triple bar grouser Width: 500 mm (19.69 in) Ground pressure: 89.6 kPa (13 psi)
Drive	Hydrostatic closed loop through planetary speed reducer
Propel motors	Two - Hydraulic, axial piston, fixed displacement rating (each): 120 kW (160 HP)
Propel speed range	0 - 3.22 km/hr (0 – 2.0 mph)

DM30 XC BLASTHOLE DRILLS

MULTI-PASS ROTARY AND DOWN-THE-HOLE (DTH) DRILLING

Epiroc

Technical specifications

Tower, carousel and drill rod handling

Tower	
Tower construction	Fully welded four main member with open front ASTM A500; rectangular steel tubing
Tower raising	Two hydraulic cylinders; live tower (raise and lower with full carousel and rotary head at top of tower)
Rod support	Hydraulic cylinder clamping and actuation to center drill rod
Rated capacity	
Single pass depth	8.5 m (28 ft)
Maximum hole depth	45.1 m (30 ft)
Carousel (carousel internal to the tower with key-lock retention)	
Rod length	9.1 m (30 ft)
Capacity	• Four pieces of 101.6 mm (4 in), 114 mm (4-1/2 in) or 127 mm (5 in) rod diameter • Two pieces of 140 mm (5-1/2 in) • One piece of 159 mm (6-1/4 in)
Actuation	One worm gearbox and one hydraulic cylinder for 101.6 mm (4 in), 114 mm (4-1/2 in) or 127 mm (5 in) rod diameter Two hydraulic cylinders for 140 mm (5-1/2 in) rod diameter One hydraulic cylinder for 159 mm (6-1/4 in) rod diameter
Safety	Drill pipe is held securely in carousel by "key lock design" mechanism No bump system to prevent damage if carousel not stowed

Drill rods		
Drill pipe diameter x 9.1 m (30 ft)	**Thread**	**Suggested bit diameter**
102 mm (4 in)	2-7/8 in API	127 mm - 152 mm (5 in - 6 in)
114 mm (4-1/2 in)	3-1/2 in API	140 mm – 171 mm (5-1/2 in – 6-3/4 in)
127 mm (5 in)	3-1/2 in API or BECO	171 mm (6-3/4 in)
140 mm (5-1/2 in)	3-1/2 in BECO	7-7/8 in (200 mm)
159 mm (6-1/4 in)	4 in BECO	200 mm - 220 mm (7-7/8 in - 8-5/8 in)

Rotary head	
Speed range	Variable 0 – 180 RPM (need to adjust controller)
Torque	Variable 0 – 9,300 Nm (0 – 6,870 lbf-ft)
Number of motors	One
Type of motor	Variable displacement axial piston
Reduction	15.36 : 1
Horsepower	120 kW (160 HP)
Travel length	10.8 m (35 ft 5 in)
Feed system	
Pulldown capacity	Up to 176.4 kN (40,000 lbf)
Pullback capacity	0 – 57.3 kN (0 – 13,000 lbf)
Weight on bit	Variable, 0 – 19,800 kg (0 – 44,000 lbs)
Mechanism type	Hydraulic cylinder with sheave block and cable
Number of cables - diameter	Two pulldown, two pullback – 19 mm (3/4 in)
Number of sheaves - outside diameter	Twelve – 397 mm (15.6 in)
Feed speed	33.8 m/min (111 ft/min)
Retract speed	97.5 m/min (320 ft/min)

DM30 XC BLASTHOLE DRILLS

MULTI-PASS ROTARY AND DOWN-THE-HOLE (DTH) DRILLING

Epiroc

Technical specifications

Cab and controls

Cab	
• Thermally insulated and pressurized • Adjustable suspension swivel seat with seat belt • Two hinged and lockable doors • Quiet (tested at 80 dBA) • Falling Object Protective Structure (FOPS) certified • Side-mounted air conditioning (easier to service as no roof access required) • Ergonomically designed wrap-around console • Windshield wiper on drilling and rear tramming window	
Controls	
	All drilling and propelling functions are hydraulically powered with ergonomically grouped controls
Panels	• Drilling function • Compressor function • Propel, leveling and tower raising function • Gauges for system pressure, temperature, etc. • Engine start and gauges
Hydraulic system	
• Hydraulic pumps mounted on a single three-hole gearbox driven off the engine through a drive shaft • Two variable displacement main pumps for propel, drill feed and rotation functions • One double pump for setup, auxiliary functions and cooling fan	

Power package

Airend	
Tier 4 engine only	29.7 m^3/min @ 7.6 bar (1,050 cfm @ 110 psi) 25.5 m^3/min @ 24 bar (900 cfm @ 350 psi) 29.7 m^3/min @ 24 bar (1,050 cfm @ 350 psi)
Diesel engine (1,800 RPM)	
Diesel engine – Non Tier 4	CAT C15 – 354 kW (475 HP) CAT C15 – 403 kW (540 HP) Cummins QSK15 – 354 kw (475 HP) Cummins QSK15 – 395 kw (530 HP)
Diesel engine – Tier 4	Cummins QSX15 – 410 kW (550 HP)

DM30 XC BLASTHOLE DRILLS

MULTI-PASS ROTARY AND DOWN-THE-HOLE (DTH) DRILLING

Epiroc

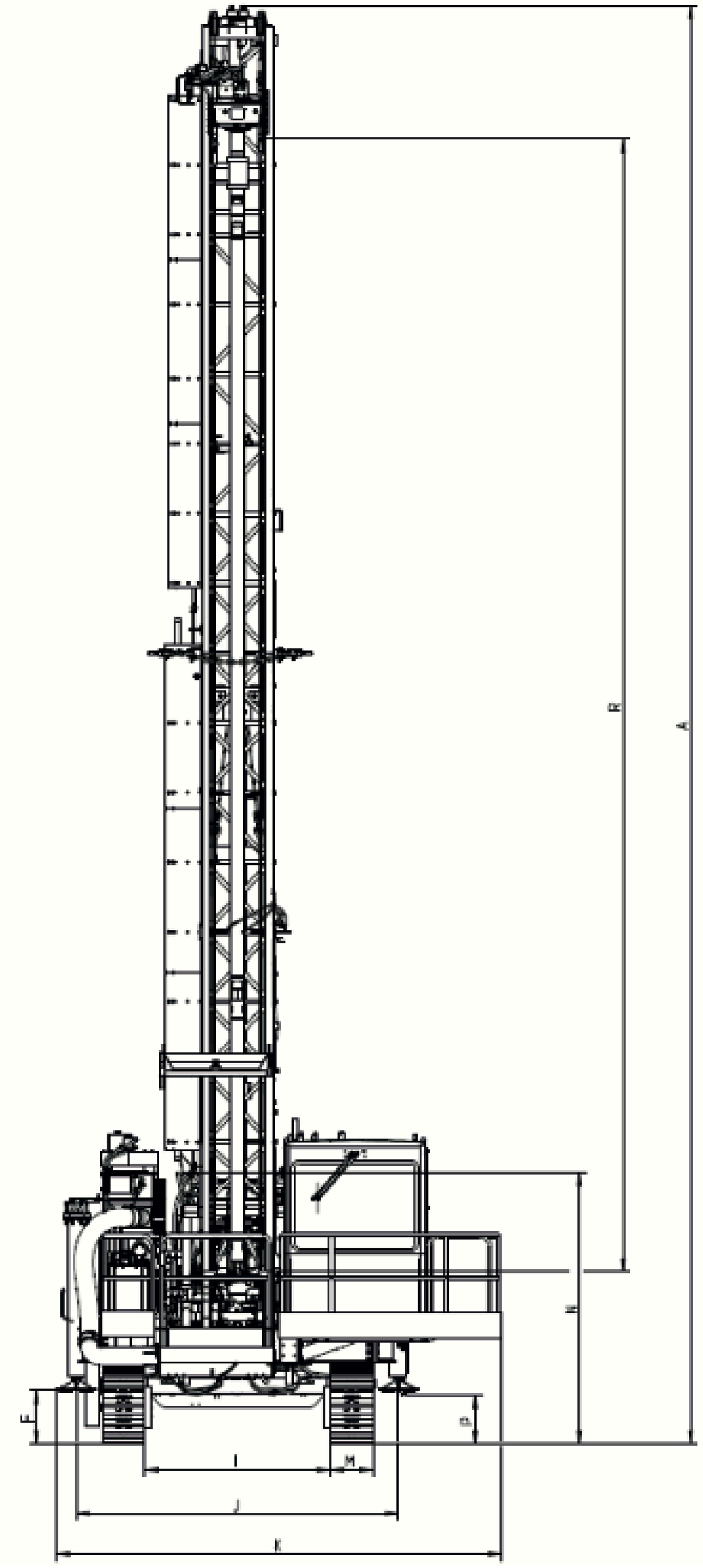
Technical specifications

Dimensions and weight

Operating weight	
Estimated weight	70,000 – 78,000 lbs (32 – 35 tonnes)

Operating dimensions
(Dimensions for DM30 XC)

	Description	Dimensions mts (in)
A	Height – tower up	14.8 (586.2)
B	Distance – cab to decking non drill end	7.8 (310)
C	Length – tower down	14.3 (564.8)
D	Length – undercarriage	4.4 (175.4)
E	Length – jack center to jack center	5.3 (29.7)
F	Height – jack to ground, drill end	0.61 (24.5)
H	Height – tower down	5.11 (201)
I	Width – track inside to track inside	2.16 (85)
J	Width – jack center to jack center, drill end	3.76 (148)
K	Width – overall	4.71 (185.3)
M	Width – track	19.7 (500)
N	Height – tower off	2.92 (115)
P	Height – to lowest point	0.56 (22.2)
R	Rotary head travel	10.2 (402.4)
S	Cab width	1.67 (65.8)
V	Height – top of cab to ground	3.55 (140)
AA	Height – jack to ground, non drill end	0.62 (24.4)
AB	Height – decking to ground	1.35 (53.2)
AC	Length – DCS decking	7.25 (285.3)
AD	Length – CS decking	6.97 (274.2)
AE	Width – decking	3.45 (136)
AJ	Height – tower bottom to ground	3.31 (130.3)
AK	Distance – frame non drill end to tower end	6.47 (254.8)
AL	Distance - Cab to decking non drill end	9.31 (366.7)
AM	Length - Decking cab side	9.84 (387.3)
AN	Width - Overall	5.18 (204.1)
AP	Height - Overall with folded extension drill table	6.47 (254.8)

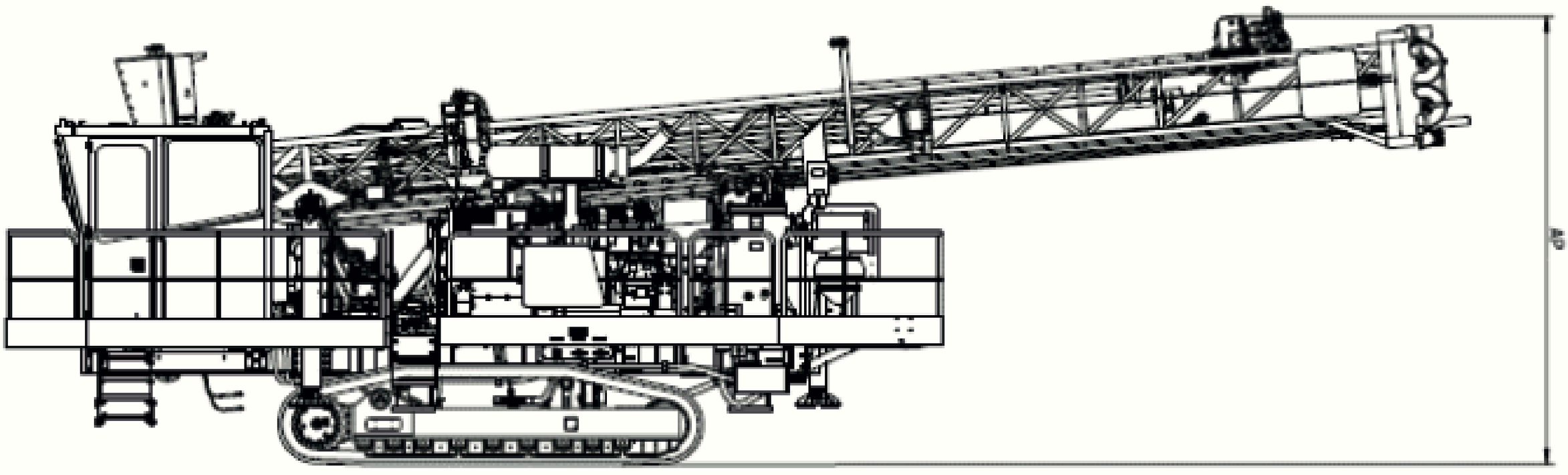


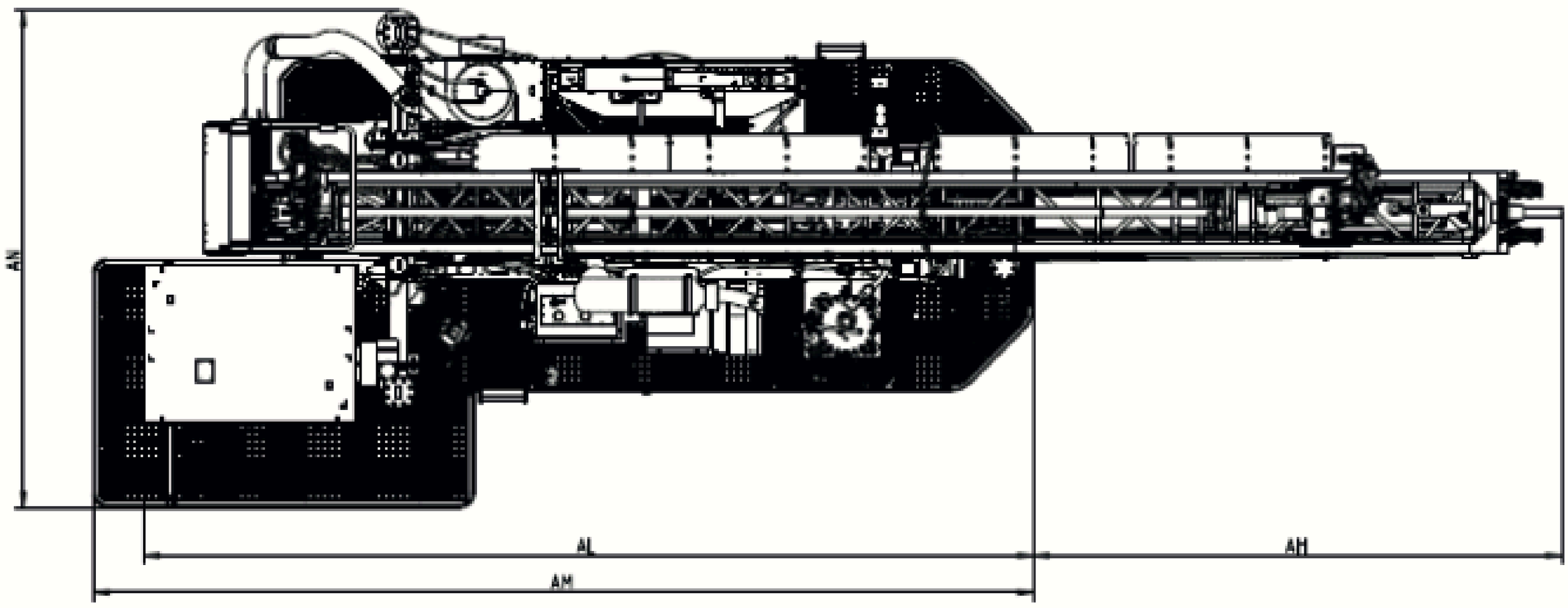
DM30 XC BLASTHOLE DRILLS

MULTI-PASS ROTARY AND DOWN-THE-HOLE (DTH) DRILLING

Epiroc

Technical specifications





DM30 XC BLASTHOLE DRILLS

MULTI-PASS ROTARY AND DOWN-THE-HOLE (DTH) DRILLING

OPTIONAL EQUIPMENT

FOR A COMPREHENSIVE LIST, PLEASE CONTACT YOUR LOCAL EPIROC CUSTOMER CENTER.

- ANGLE DRILL PACKAGE – 0-30 DEGREES
- EPIROC DUST COLLECTOR
- WATER INJECTION
- WIGGINS CENTRAL SERVICE
- COLD WEATHER OPTIONS
- CUSHION SPINDLE SUB
- RCS LITE
  - BASIC: DRILL DEPTH, PENETRATION RATE AND AUTO LEVEL.
  - CONNECTED: REAL TIME COMMUNICATION, DATA STORAGE AND TRANSMISSION
  - NAVIGATION: GPS AND MOVING MAP DISPLAY OF PATTERN
- AUTOMATIC LUBE SYSTEM
- TOW HOOKS ON NON-DRILL END
- TOWER ACCESS LADDER
- TOWER FALL RESTRAINT
- MAINTENANCE WALKWAYS
- CAB AND TOWER STROBE LIGHTS

POWERROC T50

SURFACE DRILL RIG FOR QUARRYING AND OPEN PIT MINING
HOLE DIAMETER: 102–152 MM (4"–6")

POWERROC T50

SURFACE DRILL RIG FOR QUARRYING AND OPEN PIT MINING
HOLE DIAMETER: 102–152 MM (4"–6")

Trustful performer

Everything about the PowerROC T50 says performance and ease of ownership. Its straightforward design provides you with high performance and reliability.

PowerROC T50 is developed and designed for the demanding applications of lime-stone and aggregate, as well as mines. Thanks to the new developed rock drill COP 3060, the PowerROC T50 provides high penetration rate. Meanwhile, the perfectly matched engine in either Tier 3 or Tier 4 provides more tons per liter fuel , which results in high efficiency and productivity, while conforming to your local emission standards.

Main benefits

Reliability – tough, Epiroc quality

High performance – fast penetration rates give more meters per shift

Easy and quick positioning thanks to the extendable boom

POWERROC T50

SURFACE DRILL RIG FOR QUARRYING AND OPEN PIT MINING
HOLE DIAMETER: 102–152 MM (4"–6")

Excellent driller with striking efficiency

Thanks to its modular design and a high degree of commonality with other Epiroc products, reserve parts are only a phone call away thanks to our global service network.

+ Working faster than you expect

Our rigs are built tough. The PowerROC T50 is designed to operate in environments where productivity, durability, and availability are essential. Its straightforward design and power gives you a workhorse you can depend on year after year.

+ Get it right the first time

Our rock drills are known for their high efficiency and constant hole bottom contact due to the double dampening system. Not only does PowerROC T50 have the powerful COP 3060 rock drill, we've also matched it with an Atlas Copco air compressor that provides sufficient amounts of air to ensure a high quality hole. The PowerROC T50 is also equipped with aluminium feed instead of a steel feed, for much straighter and more consistent holes.

+ Put holes in the ground and not in your pocket

When it comes to work, the PowerROC T50 is all business and easy to own. Simplified hydraulic and electrical systems ensure easier operation and less downtime. All vital functions are at your fingertips for excellent drilling control. Because we understand that long work shifts can drain an operator's energy and productivity, for added comfort the cabin has great visibility, extra vibration dampers, and is ROPS and FOPS certified.

A comprehensive service offering

Even the best equipment needs to be serviced regularly to make sure it sustains peak performance. An Epiroc service solution offers peace of mind, maximizing availability and performance throughout the lifetime of your equipment. We focus on safety, productivity and reliability.

By combining genuine parts and an Epiroc service from our certified technicians, we safeguard your productivity – wherever you are.

POWERROC T50

SURFACE DRILL RIG FOR QUARRYING AND OPEN PIT MINING
HOLE DIAMETER: 102–152 MM (4"–6")

Epiroc

Technical specifications

Main components

- Track frames with triple grouser pads, cleaning holes and hydraulic track oscillation and two speed traction
- Tier 3 (Stage IIIA) diesel engine/Tier 4 final (Stage IV) diesel engine, CAT C9/CAT C9.3
- Screw type air compressor
- Air-conditioned cabin, ROPS and FOPS certified
- Extendable boom
- Motor driven aluminium feed system
- Carousel type rod handling system
- Hydraulic rock drill
- Dust collection system

Engine

CAT turbo charged, diesel engine C 9, Tier 3/Stage IIIA	Metric	US
Power rating at 1 800 rpm	261 kW	350 hp
CAT turbo charged, diesel engine C 9.3, Tier 4 final/Stage IV		
Power rating at 1 800 rpm	261 kW	350 hp

Feed

	Metric	US
Feed extension	1 900 mm	74.8"
Feed rate, max	0.7 m/s	138 ft/min
Feed force, max	50 kN	11 240 lbf
Tractive pull, max	50 kN	11 240 lbf
Total length	9 370 mm	369"
Travel length	5 400 mm	212.6"

Compressor

Atlas Copco C146, screw type air compressor	Metric	US
Working pressure, max	10.5 bar	152 psi
FAD, at normal working pressure	232 l/s	492 cfm

Electrical system

Voltage	24 V
Batteries	2 x 12 V, 235 Ah
Alternator	24 V, 95 A
Work lights, front	4 x 70 W
Work lights, rear	2 x 70 W
Work lights, feed	2 x 70 W
Warning lamp and reverse alarm buzzer	

Hydraulic system

Hydraulic oil cooler	Metric	US
Max ambient temperature	50°C	122°F

Volumes

Hydraulic oil tank	380 l	100 US gal
Hydraulic system, total	470 l	124 US gal
Compressor oil	55 l	14.7 US gal
Diesel engine oil	32 l	7.9 US gal
Diesel engine, cooling water	51 l	13.5 US gal
Diesel engine, fuel tank	500 l	132 US gal
Traction gear	3 l	0.8 US gal
Lubrication tank (ECL)	7 l	1.8 US gal

Dust collector

	Metric	US
Filter area	20 m^2	215 sq ft
Number of filter elements	20 pcs	20 pcs
Cleaning air pressure, max	8.0 bar	116 psi
Cleaning air consumption	2–4 l/pulse	0.06–0.12 cu.ft./pulse

Hole range(recommended)

Type of drilling	Drill steel type	Drilling diameter		Max hole depth		Drill steel length	
Single pass	T51, T-Wiz 60	102-152 mm	4–6"	5.08 m	16'8"	4 270/3 660/6 096 mm	14'/12'/20'
Extension drilling				35 m	118'	4 270 x 7	14' x 7
						3 660 x 7	12' x 7

Hydraulic rock drill

Rock drill	Impact power		Hydraulic pressure		Impact rate	Max torque		Weight approx	
COP 3060	30 kW	40.2 hp	240 bar	3 481 psi	50 Hz	2 770 Nm	2 043 lbf/ft	355 kg	783 lb
			225 bar	3 263 psi	43 Hz				

POWERROC T50

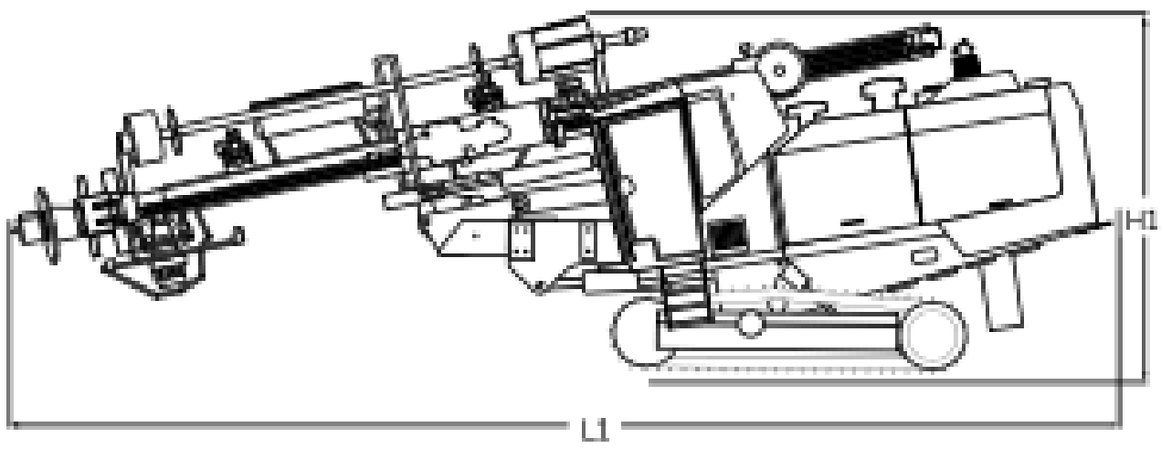
SURFACE DRILL RIG FOR QUARRYING AND OPEN PIT MINING
HOLE DIAMETER: 102–152 MM (4"–6")

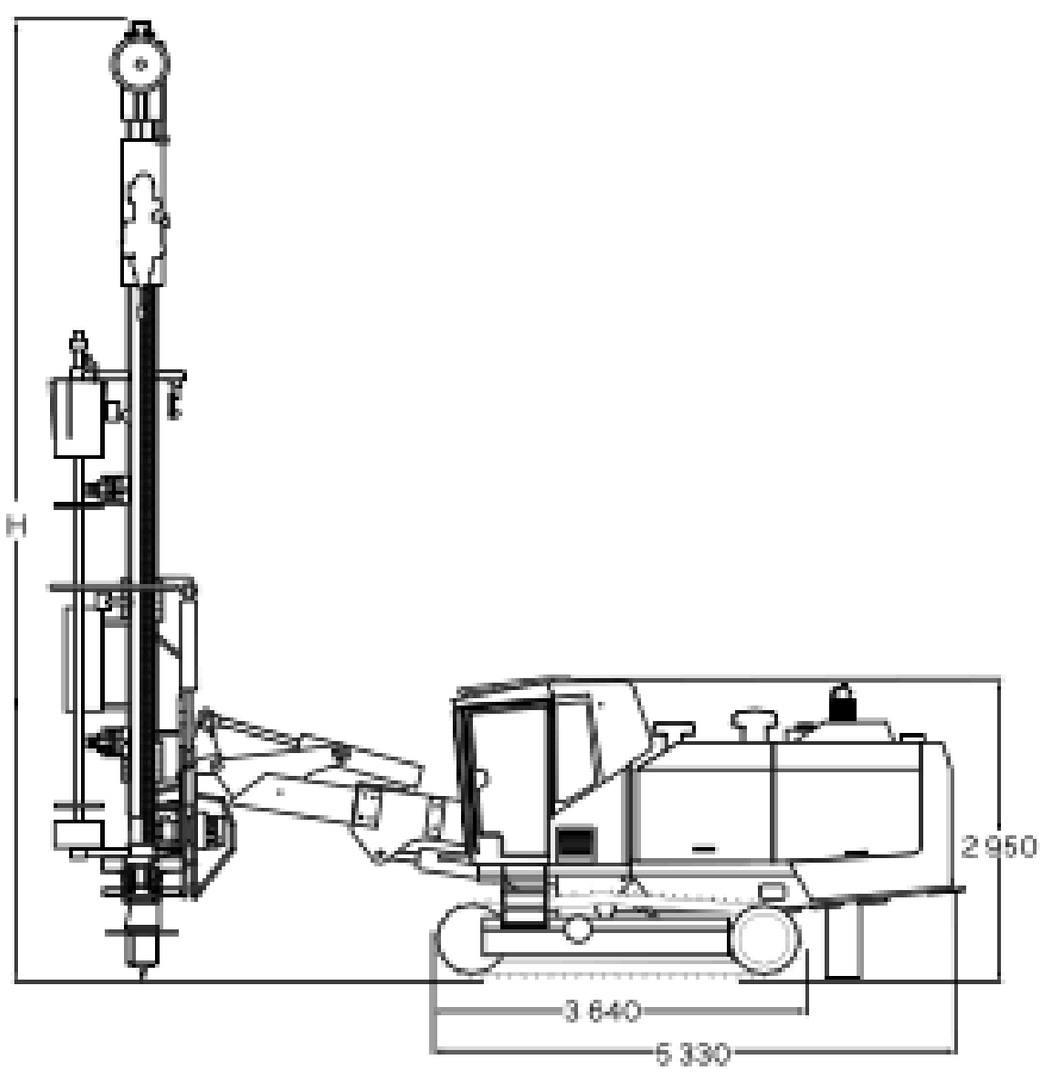
Epiroc

Technical specifications

Transport dimensions

	Metric	US
Height (H1)	3 485 mm	137.2"
Length (L1)	10 900 mm	429.1"
Feed height (H)	9 370 mm	368.9"
Weight		
Tier 3/Stage IIIA	22 200 kg	48 943 lb
Tier 4 final/Stage IV	22 800 kg	50 265 lb





Selection of options

Carrier
- Hydraulic support leg
- Super rotation system
- Service hand lights inside canopy
- Combined warning sound and warning light, beacon type
- Engine air filter pre-cleaner
- Compressor air filter pre-cleaner
- Electric pump for filling hydraulic oil
- Electric fuel filling pump
- Fast fuel filling system
- Cold weather kit +5°C to -25 °C, including diesel engine heater and compressor regulation heating kit
- Rock drill lubrication oil collection system

Safety Cabin
- Radio
- Reverse camera with cab mounted monitor

Hole measuring systems
- 2D angle indicator
- 3D angle indicator

Lube oil, lube system and water mist system
- Central lubrication system
- Thread greasing device, spray system
- Artic hydraulic oil, VG 32
- Tropical hydraulic oil, VG 68
- Biological hydraulic oil, VG 46
- Water mist system with water pump and 400l water tank

Feed
- Wide feed foot
- RHS for T51 - 12'/14' SPEEDROD
- RHS for T51 - 12'/14' with 72 mm coupling
- RHS for T-Wiz 60 - 12'/14' SPEEDROD
- RHS for T-Wiz 60 - 12'/14' with 85 mm coupling
- Sleeve retainer

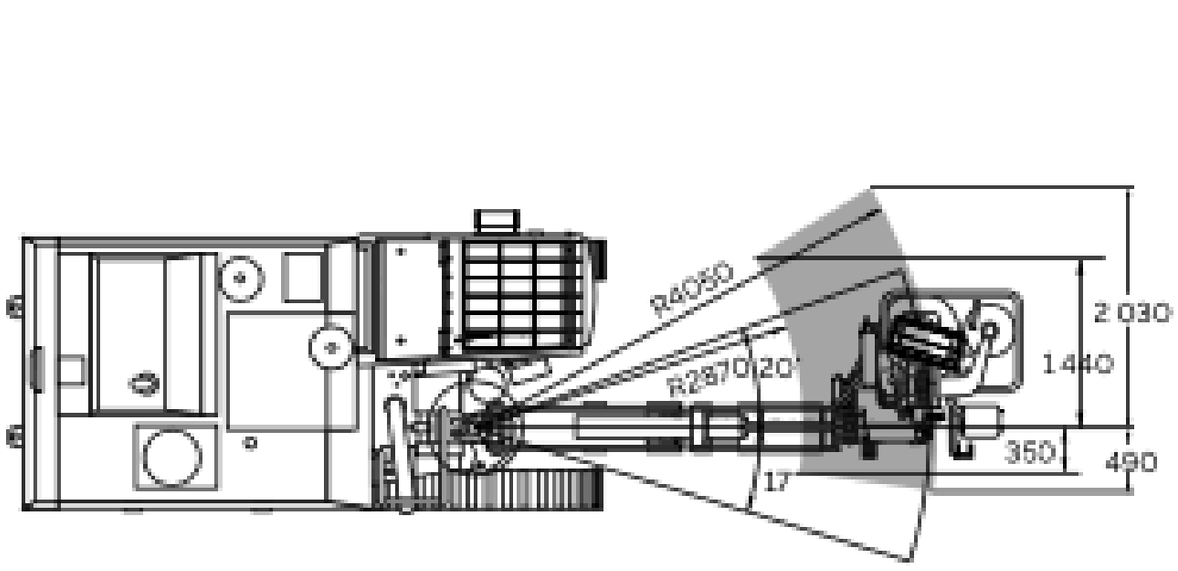
Delivered equipment, not mounted
- Conversion kit T51
- Conversion kit T-Wiz 60

POWERROC T50

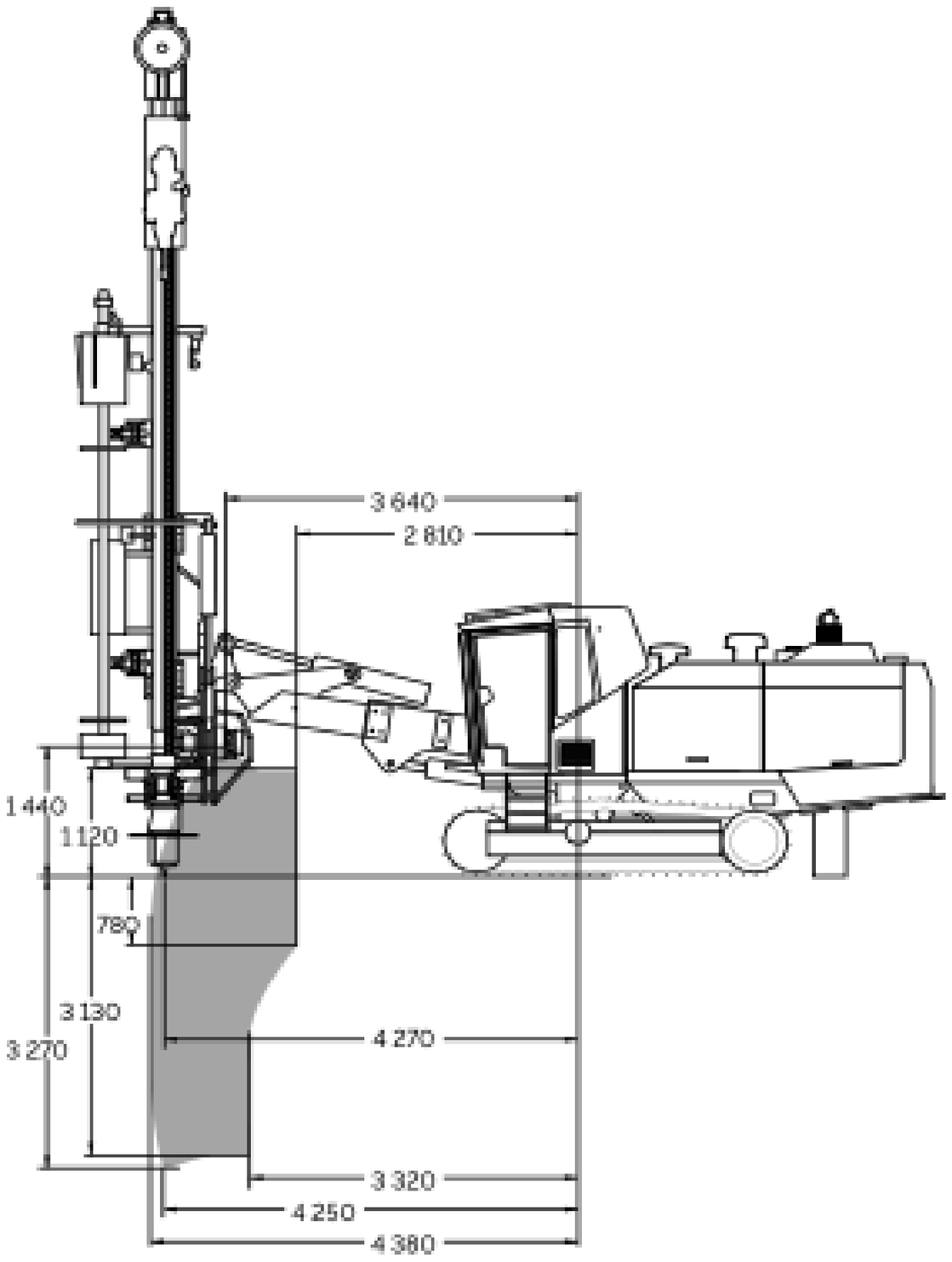
SURFACE DRILL RIG FOR QUARRYING AND OPEN PIT MINING
HOLE DIAMETER: 102–152 MM (4"–6")

Epiroc

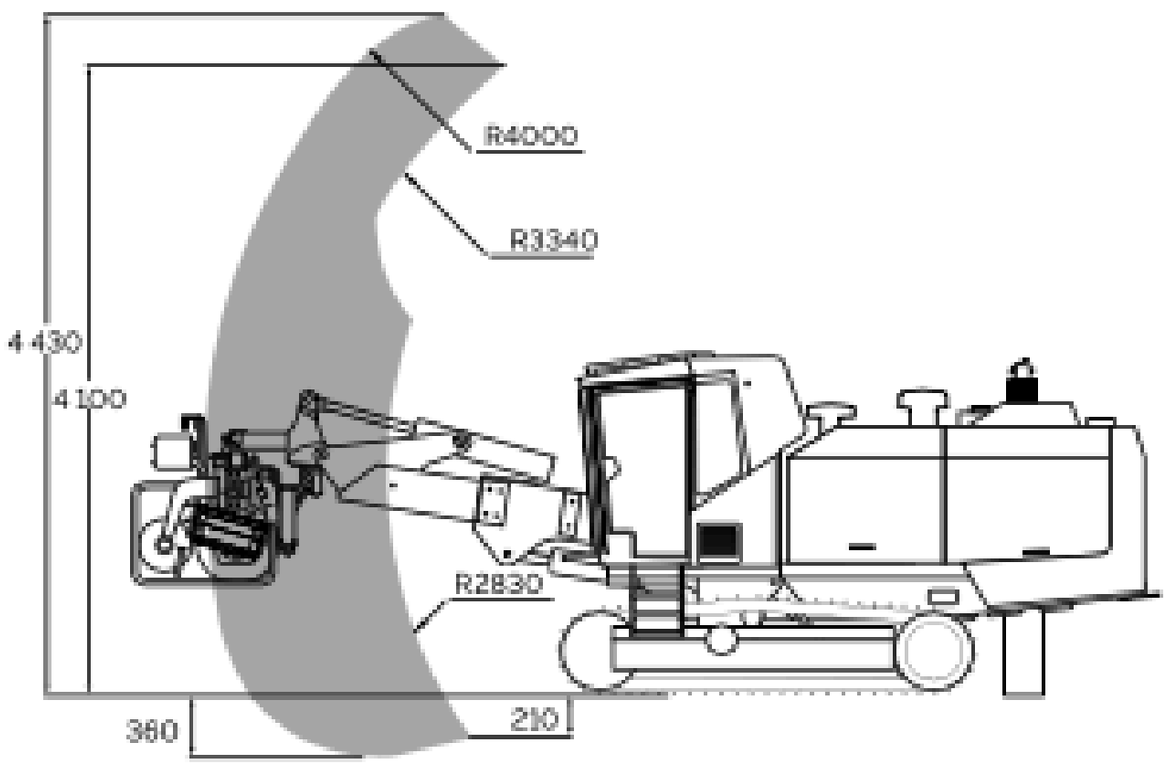
Technical specifications



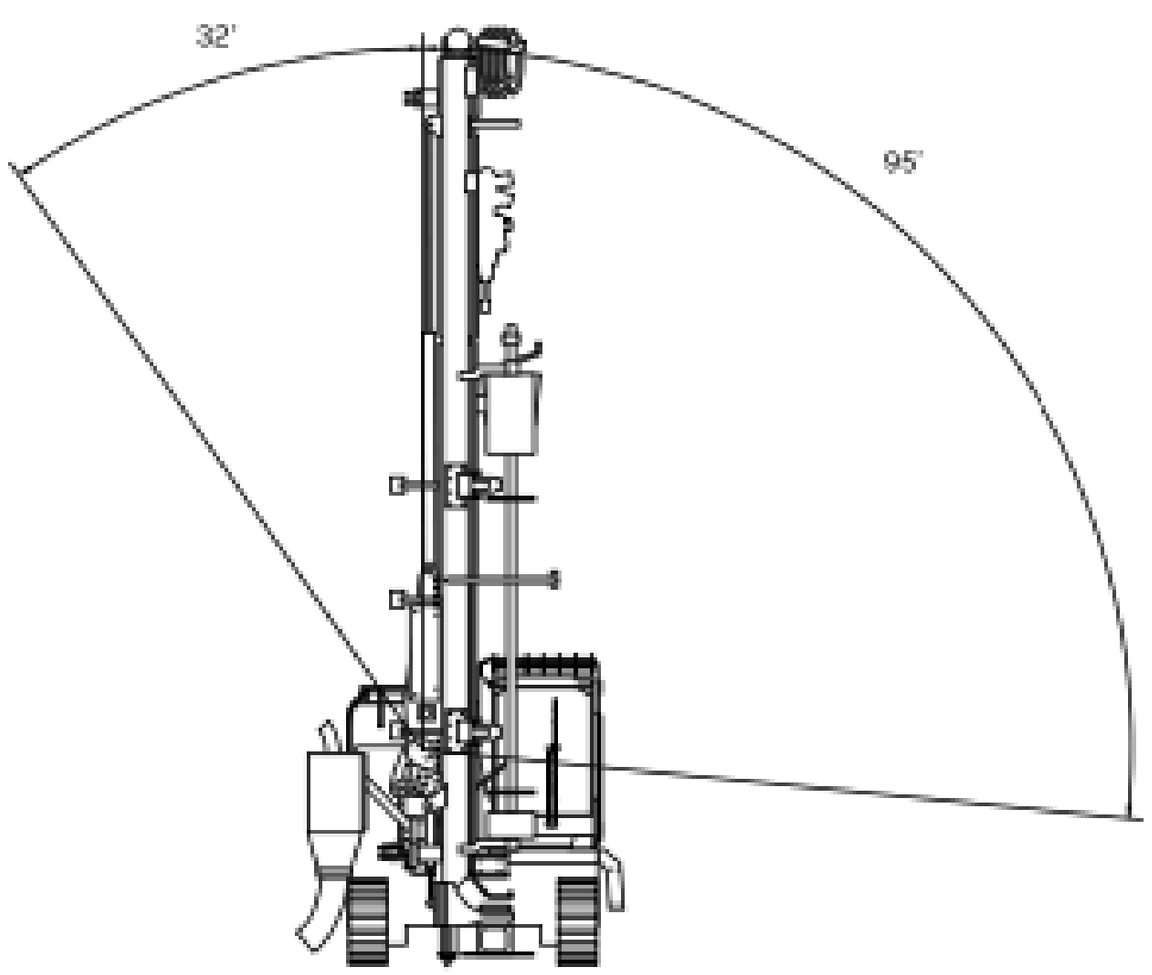
Horizontal reach (mm)



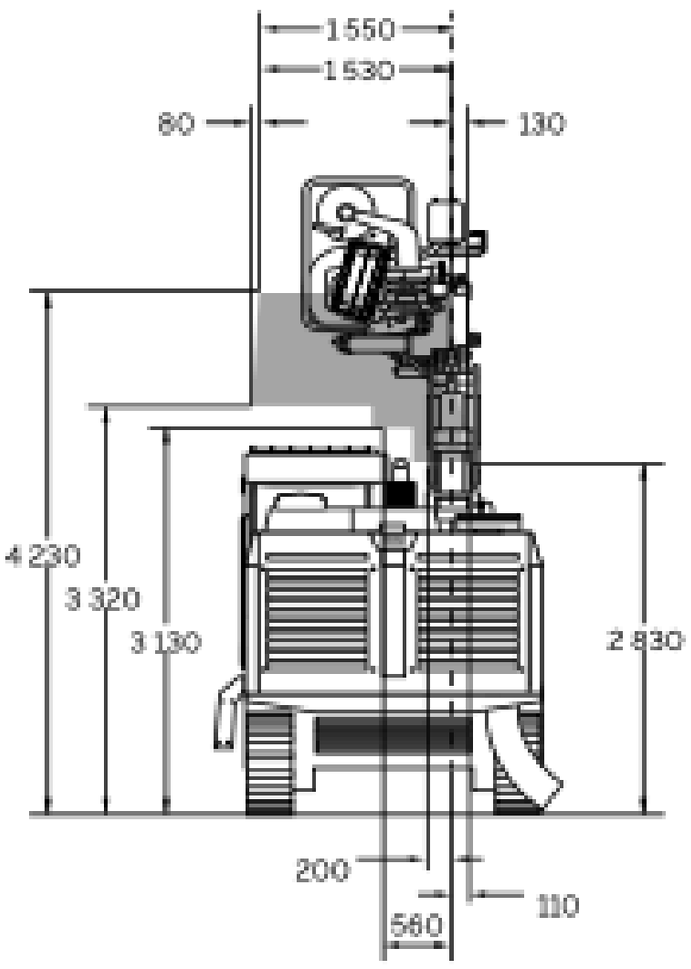
Vertical reach (mm)



Toe-hole drilling reach



Feed swing angles



Vertical reach (mm)

FISCO Strategic Synergy

Volvo Construction Equipment

NEW FMX420 6X4R (EURO 4)

NEW FMX420 6X4R (EURO 4)

Volvo Construction Equipment

Wheelbase .....4300 mm
Front Axle Capacity ..... 10000 kg
Rear Axles Capacity .....38000 kg
Gross Vehicle Weight .....48000 kg

CAB
Single day Cab
Air Condioning
Red Safety Belts
Emergency Roof Hatch

ENGINE

VOLVO D13A-420 TURBOCHARGED, INTERCOOLER, EURO-4 EMISSION STANDARD (EU4SCR)
BIODIESEL B30 CERTIFIED.

Max Output .....420 hp (309 Kw) @ 1400 – 1900 rpm
Max Torque..... 2300 Nm @ 1000-1400 rpm
Number of Cylinders.....6
Displacement.....12.8 dm3
Cylinder bore x stroke ..... 131 x 158 mm
Compression ratio ..... 17.8 : 1
Economy rev. band.....1000 – 1500 rpm
Volvo Engine Brake+ (EBR-VEB+) with maximum 300 Kw Braking Power @ 2300 rpm.

CLUTCH

Single, push-type clutch with large dry friction disc which offer good durability Disc diameter 430 mm. Pneumatic operated electronically controlled.

TRANSMISSION

VOLVO ATO2612F
12 Speed electronically controlled splitter and range change gearbox with automated Gear Changing system with Overdrive and one Crawler Gear, fied with a Power Take Off and Oil Cooler as standard. Special heavy duty package (TRAP-HD) concern to reinforce Split Synchronizer, Main Gear Dog Clutches and Counter shaft brake.

Maximum Torque : .....2600 Nm
Top Gear .....Overdrive
Number of forward gears 12
Number of reverse gears 4
Forward ratio range .....11.73-0.78 : 1
Reverse ratio range .....13.73-2.48 :1

POWER TAKE-OFF & HYDRAULIC PUMP
High speed Gearbox Driven Power Take-off (Standard)

SUSPENSION

FRONT SUSPENSION
Type of Suspension .....Parabolic Springs
Number of springs ..... 4 2 shock absorbers and front stabilizer

REAR AXLE & SUSPENSIONS :
RTH3815 combined with RADD-TR3
Tandem Axle with Hub Reducon, consist of two spiral bevel single units. Differenal lock inter axles and inter wheels , Two Shock absorbers and Rear Stabilizer as standard.
Type of Suspension ..... Reinforced T- Ride Boogie
Type of Spring .....Parabolic – 4 leaf
Capacity ..... 38 Tons
Final reduction ratio .....7.22 : 1

BRAKE SYSTEM
VOLVO BRAKE-ZV (Drum Brake Z-Cam)
Dual Circuit Full Air Brake System with Automatic Adjustment and Asbestos free liners
Auxiliary Parking Brake fitted as standard.
Parking Brake ..... Manually Operated Parking Brake with Electric Button.
Full Pressure Hand Controlled Trailer Brake
ABS (Antilock Braking System) and EBS (Electronic Braking System) fitted as standard.

FUEL TANK
Right hand fitted Steel Fuel Tank with capacity 315 liters.

AD-BLUE TANK (EURO-4 ONLY)
Left hand fitted plastic fuel tank capacity 48 liters.

FRAME
Constant frame width of 850 mm behind the cab made of high tensile steel section height of 300 mm flange width 90 mm. Web and flange thickness are 8 mm.
Full inner liner thickness 5 mm installed as standard.
All members are cold riveted.

TYRE OPTIONS
325/95R24 Tubeless tire Off Road Pattern
Wheels : 8.5"x 24"
Spare wheel same type as front wheel.

STANDARD ACCESSORIES
Exterior :
- Air Drier • Backup Alarm • Exterior Smoke Coloured Front Sun Visor
- Front Close View Mirror • One Front Towing Devices
- Steel Headlamp Protection • Steel Front Bumper
- Two LED Beacon Lamp • Two Roof Mounted Single Tone Chrome Air Horn
- Vertical pipe muffler outlet • V-Shape day Running Light
- White Front Fog Lamps

Interior :
- Audio System • Basic Cruise Control
- Driver seat with regular air suspension and arm rest
- Electrical manually controlled air conditioning • Electrical window lift
- Fire Extinguisher 3kg • Mechanically adjustable steering wheel
- Manual door locking • Medium level instrument cluster
- 12" High Resoluon Colour Multi Information Display Instrument Cluster
- Passenger seat • RED Safety belt • Rubber floor mats
- Standard toolkit with 20T Hydraulic Jack • Tachograph
- Telematic Gateway with 4G Modem and WLAN
- Dynafleet / Volvo Connect ready

**) accessories shown in the picture in this brochure may not be a part of standard equipment.*
VOLVO reserves the right to modify design and equipment for improvement without prior notification.

FISCO Strategic Synergy

Volvo Construction Equipment

NEW FMX460 8X4R (EURO 4)

NEW FMX460 8X4R (EURO 4)

Volvo Construction Equipment

Wheelbase .....6000 mm (Mining)
Front Axle Capacity ..... 20000 kg
Rear Axles Capacity .....38000 kg
Gross Vehicle Weight .....58000 kg

CAB
Single day Cab
Air Condioning
Red Safety Belts
Emergency Roof Hatch.

ENGINE

VOLVO D13A-460 TURBOCHARGED, INTERCOOLER, EURO-4 EMISSION STANDARD (EU4SCR)
BIODIESEL B30 CERTIFIED.

Max Output .....460 hp (338 Kw) @ 1400 – 1900 rpm
Max Torque.....2300 Nm @ 1000-1400 rpm
Number of Cylinders.....6
Displacement.....12.8 dm3
Cylinder bore x stroke .....131 x 158 mm
Compression ratio .....17.8 : 1
Economy rev. band.....1000 – 1500 rpm
Volvo Engine Brake+ (EBR-VEB+) with maximum 375 Kw
Braking Power @ 2300 rpm.

CLUTCH

Single, push-type clutch with large dry friction disc which offer good durability Disc diameter 430 mm. Pneumatic operated electronically controlled.

TRANSMISSION

VOLVO ATO2612
12 Speed electronically controlled splitter and range change gearbox with automated Gear Changing system with Overdrive, fied with a Power Take Off and Oil Cooler as standard. Special heavy duty package (TRAP-HD) concern to reinforce Split Synchronizer, Main Gear Dog Clutches and Counter shaft brake.

Type of Suspension .....Parabolic Springs
Number of springs ..... 4 2 shock absorbers and front stabilizer

Final reduction ratio .....7.22 : 1

REAR AXLE & SUSPENSIONS :
RTH3815 combined with RADD-TR3
Tandem Axle with Hub Reducon, consist of two spiral bevel single units. Differenal lock inter axles and inter wheels , Two Shock absorbers and Rear Stabilizer as standard.
Type of Suspension ..... Reinforced T- Ride Boogie
Type of Spring .....Parabolic – 4 leaf
Capacity ..... 38 Tons

Maximum Torque : .....2600 Nm
Top Gear .....Overdrive
Number of forward gears 12
Number of reverse gears 4
Forward ratio range .....11.73-0.78 : 1
Reverse ratio range ..... 13.73-2.48 :1

POWER TAKE-OFF & HYDRAULIC PUMP
High speed Gearbox Driven Power Take-off (Standard)

SUSPENSION

FRONT SUSPENSION

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Dual Circuit Full Air Brake System with Automatic Adjustment and Asbestos free liners
Auxiliary Parking Brake fitted as standard.
Parking Brake ..... Manually Operated Parking Brake with Electric Button
Full Pressure Hand Controlled Trailer Brake
ABS (Antilock Braking System) and EBS (Electronic Braking System) fitted as standard.

FUEL TANK
Right hand fitted Steel Fuel Tank with capacity 315 liters.

AD-BLUE TANK (EURO-4 ONLY)
Left hand fitted plastic fuel tank capacity 32 liters.

FRAME
Constant frame width of 850 mm behind the cab made of high tensile steel section height of 300 mm flange width 90 mm. Web and flange thickness are 8 mm.
Full inner liner thickness 5 mm installed as standard.
All members are cold riveted.

TYRE OPTIONS
325/95R24 Tubeless tire Off Road Pattern
Wheels : 8.5"x 24"
Spare wheel same type as front wheel.

STANDARD ACCESSORIES

Exterior :
- Air Drier • Backup Alarm • Exterior Smoke Coloured Front Sun Visor
- Front Close View Mirror • One Front Towing Devices
- Steel Headlamp Protection• Steel Front Bumper • Two LED Beacon Lamp
- Two Roof Mounted Single Tone Chrome Air Horn
- Vertical pipe muffler outlet • V-Shape day Running Light

Interior :
- Audio System • Basic Cruise Control
- Driver seat with regular air suspension and arm rest
- Electrical manually controlled air conditioning
- Electrical window lift • Fire Extinguisher 3kg
- Mechanically adjustable steering wheel• Manual door locking
- Medium level instrument cluster
- 12" High Resoluon Colour Multi Information Display Instrument Cluster
- Passenger seat • RED Safety belt • Rubber floor mats
- Standard toolkit with 20T Hydraulic Jack • Tachograph
- Telematic Gateway with 4G Modem and WLAN
- Dynafleet / Volvo Connect ready

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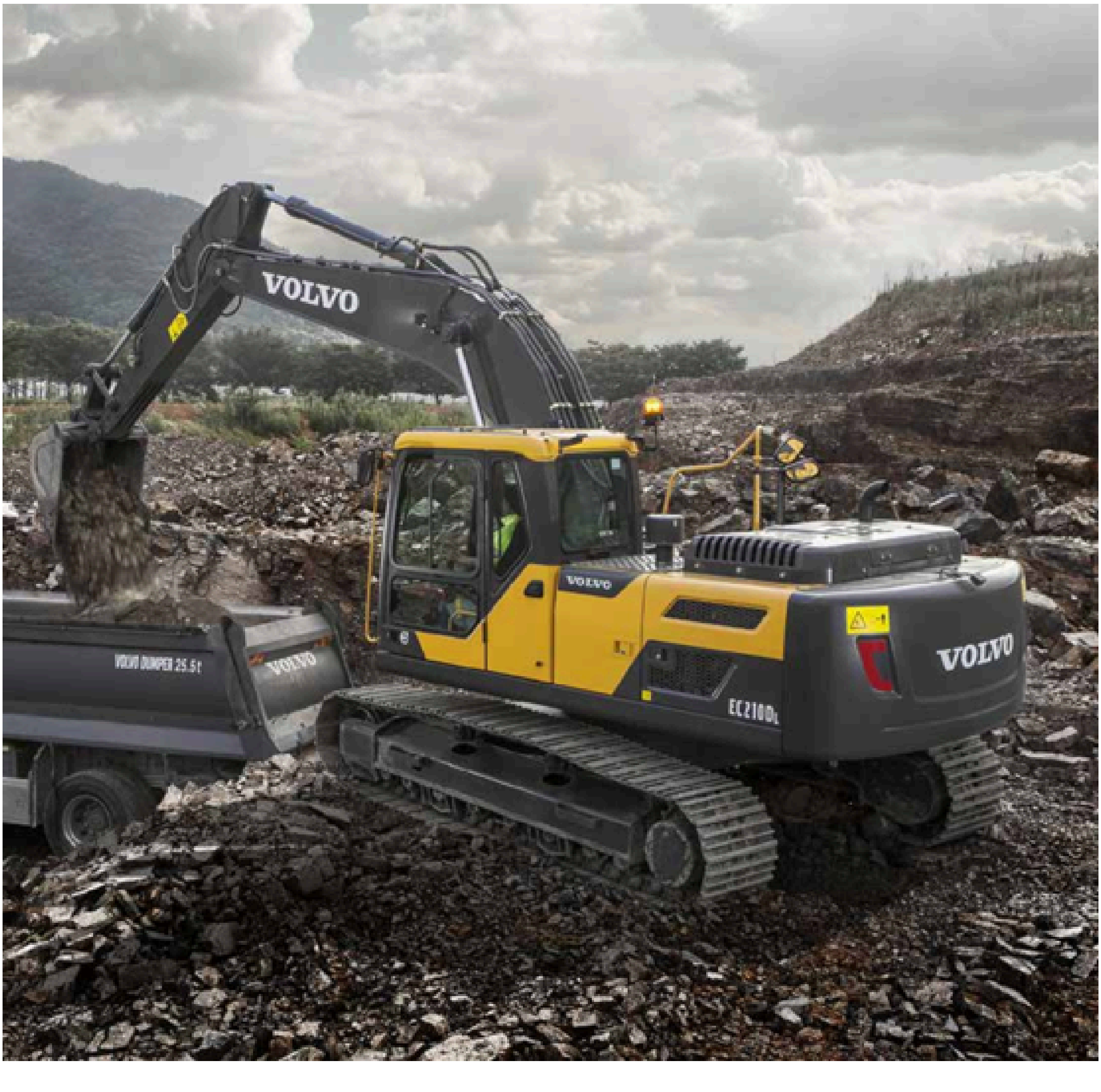
FISCO
Strategic Synergy

Volvo Construction Equipment

EC210D
VOLVO EXCAVATORS 20.5-23.8 T 167 HP



EC210D

VOLVO EXCAVATORS 20.5-23.8 T 167 HP

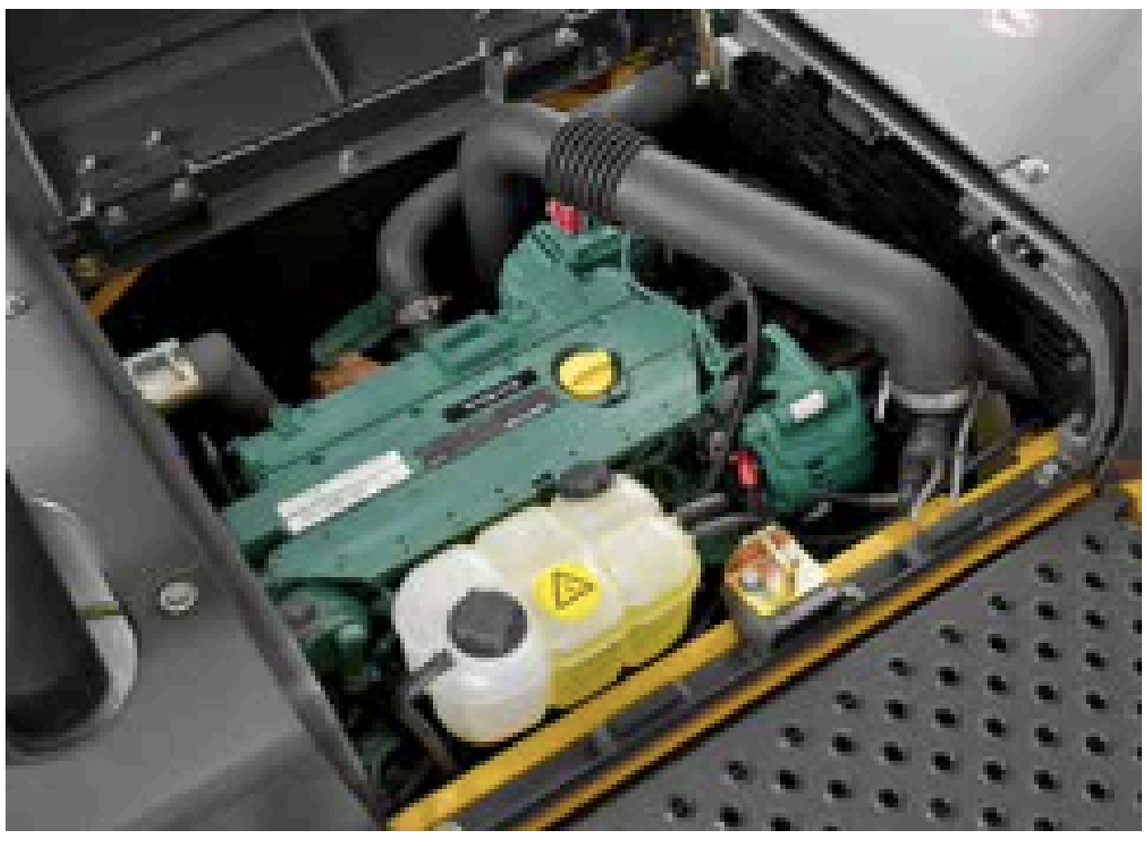
Volvo Construction Equipment

The power to perform

Get the most out of your excavator in any application. The EC210D is equipped with a range of features to ensure a superior performance, shift after shift. Designed with Volvo's extensive experience and expertise, this robust machine delivers ultimate productivity and efficient operation in a wide variety of tasks.

Powerful Volvo engine

Experience optimum power with the EC210D's robust Volvo engine. Working together with the machine's proven hydraulics, this engine delivers high torque at low rpm for the ultimate combination of performance and improved fuel efficiency.

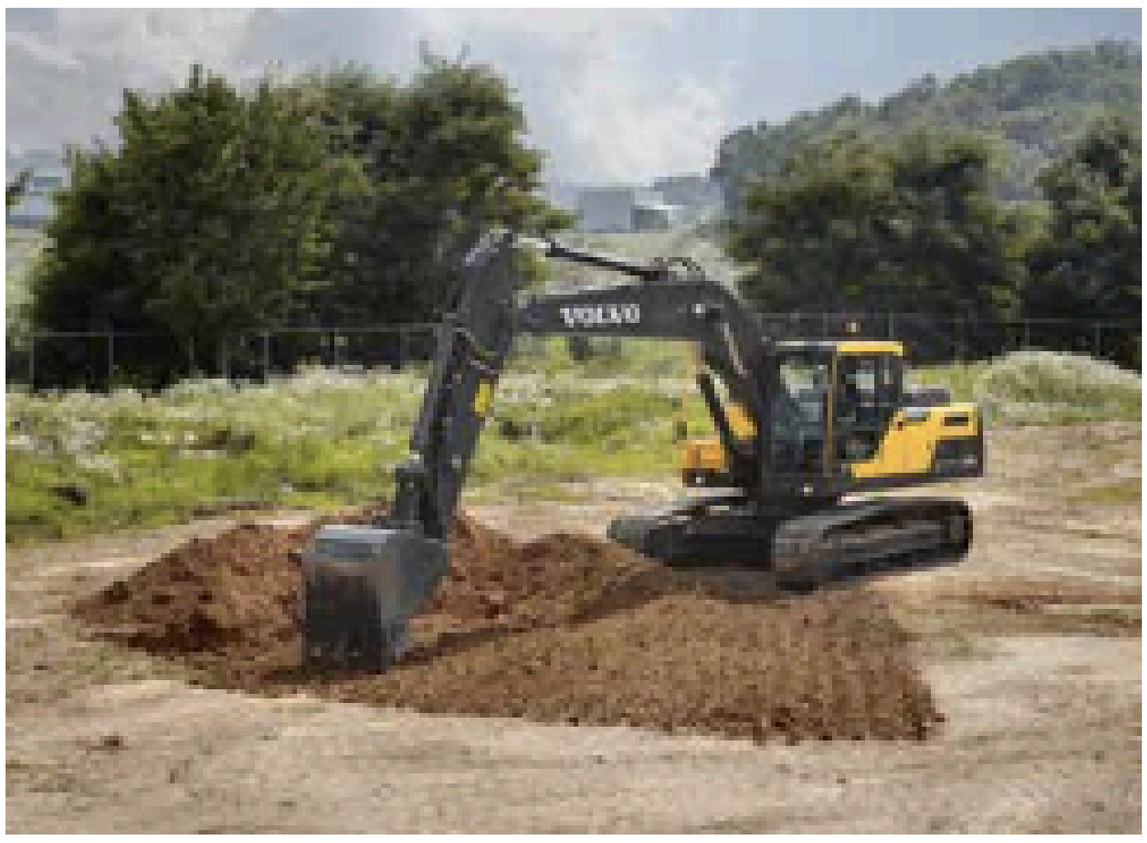


Enhanced operator performance

Operate in comfort for a more productive work shift. The EC210D is equipped with a spacious and safe operator environment offering enhanced all-around visibility, an adjustable seat and ergonomic controls. The improved cab interior features a new I-ECU monitor that displays a range of information for efficient operation.

Excellent controllability

The EC210D features increased hydraulic flow for responsive, accurate control in grading and combined operations. Benefit from smoother and easier movement when traveling and lifting simultaneously as well as better grading quality from the harmonized boom and arm movement.



Efficient work mode

For fast cycle times and optimum fuel consumption, the EC210D is equipped with the new G4 work mode. Operators can choose the best mode to suit the task at hand, selecting from I (Idle), F (Fine), G (General), H (Heavy) and P (Power max) mode. Choose the correct mode according to your working conditions for added versatility and increased productivity.

EC210D

VOLVO EXCAVATORS 20.5-23.8 T 167 HP

Volvo Construction Equipment

Volvo versatility

Make sure you are ready to tackle any job. Volvo CE offers a comprehensive range of attachments that let you handle a wide variety of tasks. The EC210D can be fitted with a selection of buckets and breakers that work in harmony with the machine to ensure optimal performance and profitability in any application.

Quality Volvo buckets

Volvo offers a range of high quality buckets designed to perform efficiently in a variety of materials. Featuring exceptional design and built-in durability, these buckets are equipped with Volvo teeth to handle the toughest applications.

Powerful breakers

The EC210D can be equipped with either a top or side mounted Volvo hydraulic breaker built to break even most demanding materials. With consistent power and high breaking force you'll benefit from maximum impact and durability. Set your Volvo breaker at the right frequency to suit your application needs.

Attachment Management System

Pre-set and adjust hydraulic flow from the monitor inside the cab with this password-protected management system, providing storage for up to 20 different attachments for increased versatility. You can choose between one or two pump flow to maximize profits and productivity.

Optional auxiliary piping

The Volvo-designed hydraulic breaker / shear piping and quick coupler piping option provides optimum flow to the hydraulic attachments. State-of-the-art auxiliary lines allow the correct flow and pressure for special attachments.

*** WITHOUT SHOE GROUSER**

EC210D

VOLVO EXCAVATORS 20.5-23.8 T 167 HP

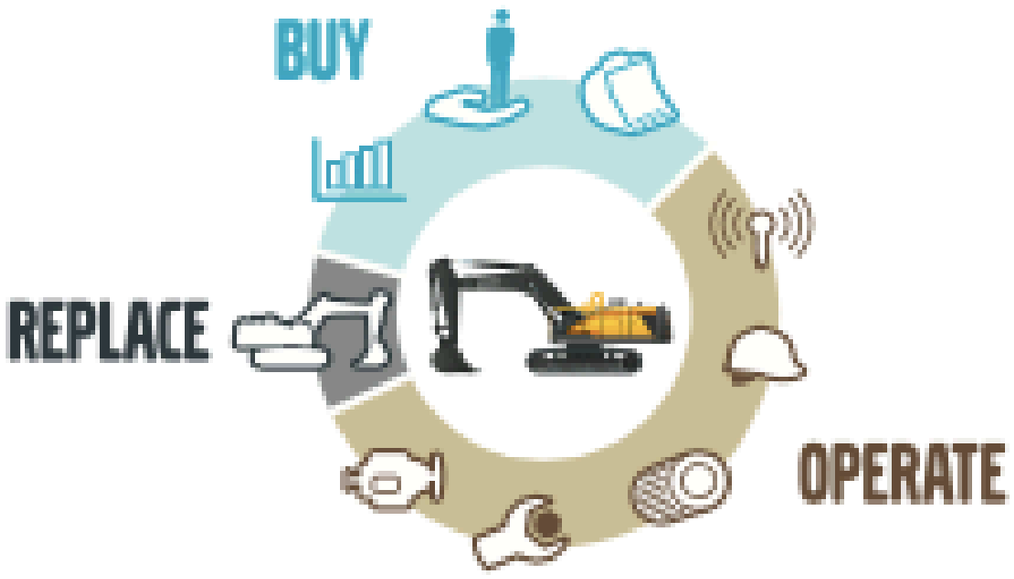
Volvo Construction Equipment

Adding value to your business

Being a Volvo customer means having a complete set of services at your fingertips. Volvo can offer you a long-term partnership, protect your revenue and provide a full range of customer solutions using high quality parts, delivered by passionate people. Volvo is committed to increasing the positive return on your investment and maximising uptime.

Complete Solutions

Volvo has the right solution for you. So why not let us provide all your needs throughout the whole life cycle of your machine? By listening to your requirements, we can reduce your total cost of ownership and increase your revenue.



Genuine Volvo Parts

Our attention to detail is what makes us stand out. This proven concept acts as a solid investment in your machine's future. Parts are extensively tested and approved because every part is vital for uptime and performance. Only by using Genuine Volvo Parts, can you be sure that your machine retains the renowned Volvo quality.

Service Network

In order to respond to your needs faster, a Volvo expert is on the way to your job site from one of our Volvo facilities. With our extensive infrastructure of technicians, workshops and dealers, Volvo has a comprehensive network to fully support you using local knowledge and global experience.

CareTrack

CareTrack is the state-of-the-art Volvo telematics system that provides access to a wide range of machine monitoring information designed to save time and money. Proactively manage service and maintenance schedules, optimize machine and operator performance and reduce fuel costs with CareTrack.

*** WITHOUT SHOE GROUSER**

EC210D

VOLVO EXCAVATORS 20.5-23.8 T 167 HP

Volvo Construction Equipment

A profitable performance

ECO mode

Volvo's intelligent ECO mode increases fuel efficiency without any loss of performance.

Superior durability

Built with durable components for outstanding results in all applications, the EC210D secures lasting machine value.

Enhanced operator performance

A spacious, comfortable operator environment offers enhanced all-around visibility and a new I-ECU monitor.

GET MORE DONE

A robust frame, powerful engine and optimum hydraulic pressure provide superior digging forces and fast cycle times.

FUEL EFFICIENCY

The powerful engine works in harmony with optimized hydraulics and auto-idle function for outstanding fuel efficiency.

Powerful Volvo engine

A robust Volvo engine delivers high torque at low rpm for the ultimate combination of performance and fuel efficiency.

Optional auxiliary piping

The EC210D can be adjusted to take a variety of hydraulic lines, fitted with breaker and shear piping (X1).

Excellent controllability

Increased hydraulic flow ensures responsive, accurate control in grading and combined operations.

A VERSATILE MACHINE

The EC210D is compatible with a range of robust buckets, breakers and piping options so you can adapt to any job.

Efficient work mode

For fast cycle times and optimum fuel consumption, the EC210D is equipped with the new G4 work mode.

CUSTOMER SUPPORT AGREEMENTS

Customer Support Agreements offer preventive maintenance, total repairs and a number of uptime services.

Easy to service

Ground-level service access, centralized lubrication points and anti-slip plates make services quick and easy.

*** WITHOUT SHOE GROUSER**

EC210D

VOLVO EXCAVATORS 20.5-23.8 T 167 HP

Volvo Construction Equipment

Volvo EC210D in detail

Engine

The engine, which provide excellent performance, is equipped with four cylinder, vertical, electronic-controlled high pressure fuel injectors, turbo charger with waste gate, air-to-air intercooler and water cooled diesel type.

Engine	Volvo	D5E
Max power at	r/min	2 000
Net, ISO 9249/SAE J1349	kW	115
	hp	156
Gross, ISO 14396/SAE J1995	kW	123
	hp	167
Max torque	Nm	670
at engine speed	r/min	1 600
No. of cylinders		4
Displacement	l	4.7
Bore	mm	108
Stroke	mm	130

Electrical System

Well protected high-capacity electrical system. Waterproof double-lock connectors are used to ensure corrosion-free connection. Main relays and fuses are located in a shielded electrical distribution box. The master switch is standard. Advanced monitoring of machine functions and important diagnostic information is displayed on the I-ECU.

Voltage	V	24
Batteries	V	2 x 12
Battery capacity	Ah	150
Alternator	V/Ah	28/80
Start motor	V - kW	24 - 5.5

Swing System

The swing system uses an axial piston motors, driving a planetary gearbox for maximum torque. An automatic holding brake and anti-rebound valve are standard.

Max. slew speed	r/min	12.3
Max. slew torque	kNm	76.7

Drive

Each track is powered by an automatic two-speed shift travel motor. The track brakes are multi-disc, spring-applied and hydraulic released. The travel motor, brake and planetary gears are well protected within the track frame.

Max. drawbar pull	kN	183
Max. travel speed (low)	km/h	3.6
Max. travel speed (high)	km/h	5.8
Gradeability	°	35

Undercarriage

Robust X-shaped frame with greased and sealed track chains as standard.

		EC210D
Track shoe		2 x 46
Link pitch	mm	190
Shoe width, triple grouser	mm	600 / 700 / 800 / 900
Shoe width, triple grouser (HD)	mm	600
Bottom rollers		2 x 7
Top roller		2 x 2

		EC210DL
Track shoe		2 x 49
Link pitch	mm	190
Shoe width, triple grouser	mm	500 / 600 / 700 / 800 / 900
Shoe width, triple grouser (HD)	mm	600
Shoe width, double grouser	mm	700
Bottom rollers		2 x 8
Top roller		2 x 2

		EC210DLR
Track shoe		2 x 49
Link pitch	mm	190
Shoe width, triple grouser	mm	800 / 900
Bottom rollers		2 x 8
Top roller		2 x 2

Hydraulic system

The hydraulic system and MCV (main control valve) use intelligent technology to control on-demand flow for high productivity, high-digging capacity and excellent fuel economy.
The summation system, boom, arm and swing priority along with boom and arm regeneration provides optimum performance.
The following important functions are included in the system:
Summation system: Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity
Boom priority: Gives priority to the boom operation for faster raising when loading or performing deep excavations.
Arm priority: Gives priority to the arm operation for faster cycle times in leveling and for increased bucket filling when digging.
Swing priority: Gives priority to swing functions for faster simultaneous operations.
Regeneration system: Prevents cavitation and provides flow to other movements during simultaneous operations for maximum productivity.
Power boost: All digging and lifting forces are increased.
Holding valves: Boom and arm holding valves prevent the digging equipment from creeping.

Main pump. 2 x variable displacement axial piston pumps		
Maximum flow	l/min	2 x 212
Pilot pump. Gear pump		
Maximum flow	l/min	1 x 18
Relief value setting pressure		
Implement	MPa	32.4 / 34.3
Travel circuit	MPa	34.3
Slew circuit	MPa	27.9
Pilot circuit	MPa	3.9

Hydraulic Cylinders

Mono boom		2
Bore x Stroke	ø x mm	125 x 1 235
Arm		1
Bore x Stroke	ø x mm	135 x 1 540
Bucket		1
Bore x Stroke	ø x mm	120 x 1 065
LR Bucket		1
Bore x Stroke	ø x mm	100 x 865

Service Refill

Fuel tank	l	375
Hydraulic system, total	l	300
Hydraulic tank	l	160
Engine oil	l	17
Engine coolant	l	15
Slew reduction unit	l	8.6
Travel reduction unit	l	2 x 5.8

Cab

The Volvo cab features a brand new Volvo styling including a strong cab structure, slim pillars and a large glass area for good visibility, a spacious cab, an ergonomic switch layout, efficient air ventilation and a pressurized cab.

Sound Level		
Sound level in cab according to ISO 6396		
LpA (standard)	dB(A)	73
LpA (tropical)	dB(A)	73.5
External sound level according to ISO 6395 and EU Noise Directive (2000/14/EC)		
LwA (standard)	dB(A)	102.5
LwA (tropical)	dB(A)	103.5

*** WITHOUT SHOE GROUSER**

EC210D

VOLVO EXCAVATORS 20.5-23.8 T 167 HP

Volvo Construction Equipment

Specifications

MACHINE WEIGHTS AND GROUND PRESSURE

Description	Shoe width	Operating weight	Ground pressure	Overall width	Operating weight	Ground pressure	Overall width
Units	mm	kg	kPa	mm	kg	kPa	mm
		EC210D, 5.7m boom, 2.9m arm, 0.92m³ / 870kg bucket, 3 700kg counterweight			EC210D, 5.7m boom, 2.9m arm, 0.92m³ / 870kg bucket, 4 200kg counterweight		
Triple grouser	600	20 670	46.2	2 800	21 170	47.4	2 800
	700	20 830	39.9	2 900	21 330	40.9	2 900
	800	21 260	35.7	3 000	21 600	36.2	3 000
	900	21 960	32.8	3 100	21 870	32.6	3 100
Triple grouser, HD	600	22 920	51.3	2 800	22 130	49.5	2 800
		EC210DL, 5.7m boom, 2.9m arm, 0.92m³ / 870kg bucket, 3 700kg counterweight			EC210DL, 5.7m boom, 2.9m arm, 0.92m³ / 870kg bucket, 4 200kg counterweight		
Triple grouser	500	20 890	52	2 890	21 390	53.2	2 890
	600	21 150	43.8	2 990	21 650	44.9	2 990
	700	21 320	37.9	3 090	21 820	38.8	3 090
	800	21 610	33.6	3 190	22 110	34.4	3 190
	900	21 900	30.3	3 290	22 400	31	3 290
Triple grouser, HD	600	22 180	46	2 990	22 680	47	2 990
Double grouser	700	21 890	38.9	3 090	22 390	39.8	3 090
		EC210DLR, 8.85m boom, 6.25m arm, 0.52m³ / 460kg bucket, 4 900kg counterweight					
Triple grouser	800	23 290	36.2	3 190			
	900	23 570	32.6	3 290			

BUCKET SELECTION GUIDE

Bucket type		Capacity	Cutting width	Weight	Teeth	EC210D				EC210DL			
						5.7m boom		5.7m boom		5.7m boom		5.7m boom	
						600mm shoe, 3 700kg counterweight		600mm shoe, 4 200kg counterweight		600mm shoe, 3 700kg counterweight		600mm shoe, 4 200kg counterweight	
		m³	mm	kg	EA	2.5m arm	2.9m arm	2.5m arm	2.9m arm	2.5m arm	2.9m arm	2.5m arm	2.9m arm
Direct fit Buckets	General purpose	0.92	1 145	862	5	C	C	C	C	C	C	C	C
		0.92	1 145	870	5	C	C	C	C	C	C	C	C
		1.00	1 210	884	5	C	B	C	C	C	C	C	C
		1.00	1 210	895	6	C	B	C	C	C	C	C	C

Please consult with your Volvo dealer for the proper match of buckets and attachments to suit the application.
The recommendations are given as a guide only, based on typical operation conditions.
Bucket capacity based on ISO 7451, heaped material with a 1:1 angle of repose.

Maximum material density

Maximum material density

A	1 200–1 300 kg/m³	Coal, Caliche, Shale
B	1 400–1 600 kg/m³	Wet earth and clay, Limestone, Sandstone
C	1 700–1 800 kg/m³	Granite, Wet sand, Well blasted rock
D	1 900 kg/m³ ~	Wet mud, Iron ore

X : Not recommended

*** WITHOUT SHOE GROUSER**

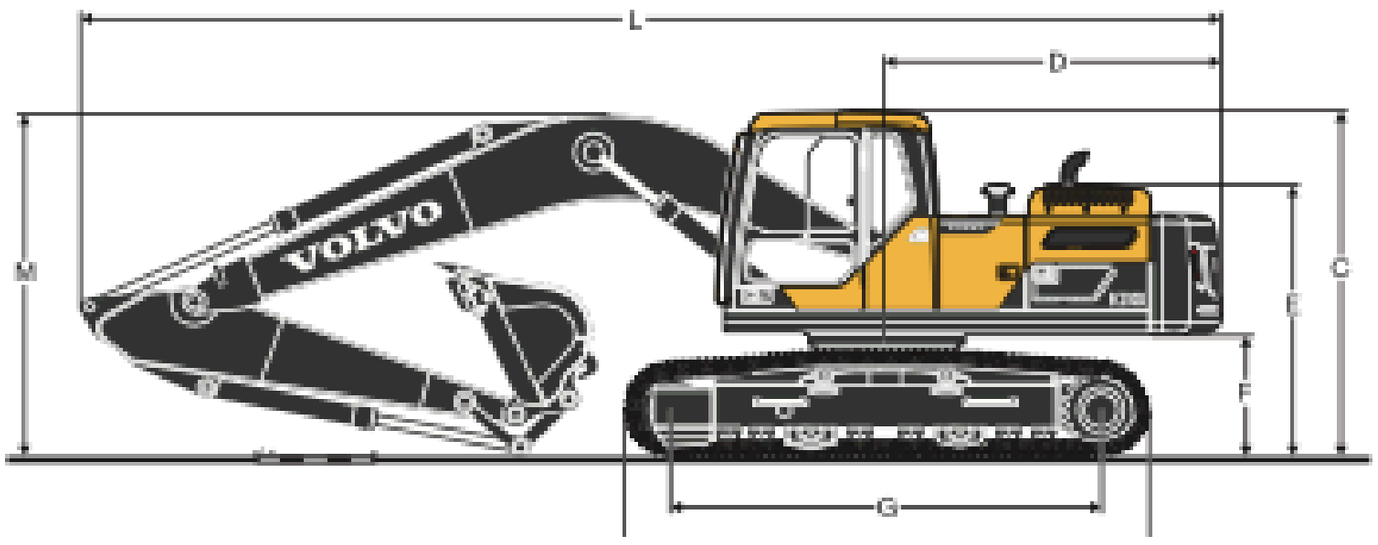
EC210D

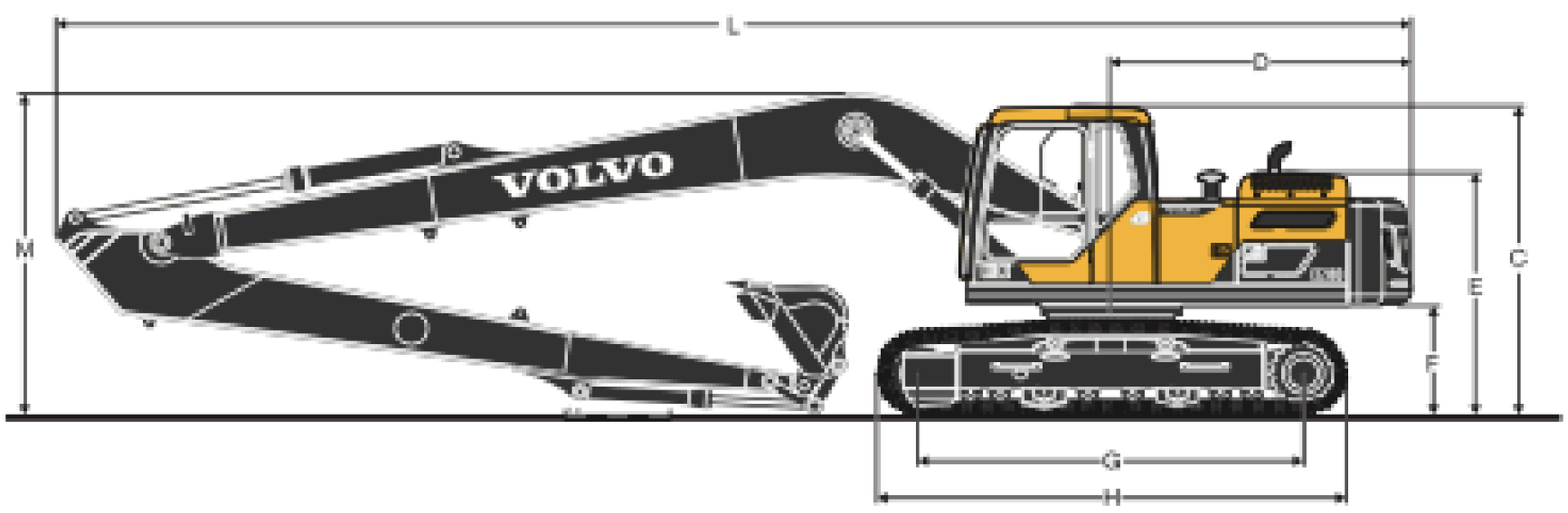
VOLVO EXCAVATORS 20.5-23.8 T 167 HP

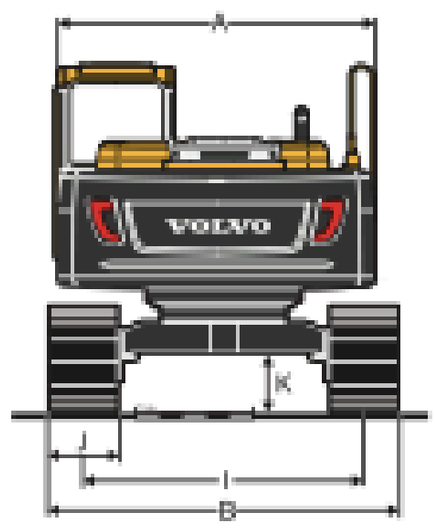
Volvo Construction Equipment

Specifications

DIMENSIONS

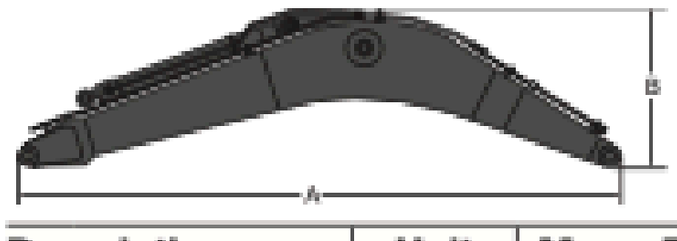


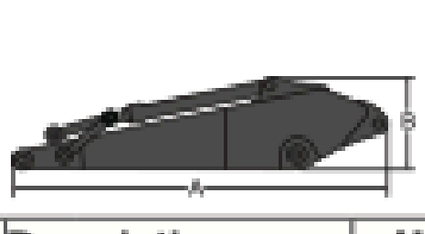




Description		Unit	EC210D		EC210DL		EC210DLR
Boom		**m**	**5.7**	**5.7**	**5.7**	**5.7**	**8.85**
Arm		**m**	**2.5**	**2.9**	**2.5**	**2.9**	**6.25**
A	Overall width of upper structure	mm	2 700	2 700	2 700	2 700	2 700
B	Overall width	mm	2 800	2 800	2 990	2 800	3 190
C	Overall height of cab	mm	2 930	2 930	2 930	2 930	2 930
D	Tail swing radius	mm	2 850	2 850	2 850	2 850	2 850
E	Overall height of engine hood	mm	2 315	2 315	2 315	2 315	2 315
F	Counterweight clearance*	mm	1 025	1 025	1 025	1 025	1 025
G	Tumbler length	mm	3 370	3 370	3 660	3 370	3 660
H	Track length	mm	4 160	4 160	4 460	4 160	4 460
I	Track gauge	mm	2 200	2 200	2 390	2 200	2 390
J	Shoe width	mm	600	600	600	600	800
K	Min. ground clearance*	mm	460	460	460	460	460
L	Overall length	mm	9 745	9 690	9 745	9 690	12 880
M	Overall height of boom	mm	3 080	2 940	3 080	2 940	3 055

* Without shoe grouser





Description		Unit	Mono Boom	Long Reach	Description		Unit			Long Reach
Boom		**m**	**5.7**	**8.85**	**Arm**		**m**	**2.5**	**2.9**	**6.25**
A	Length	mm	5 910	9 060	A	Length	mm	3 525	3 910	7 330
B	Height	mm	1 585	1 460	B	Height	mm	860	860	945
	Width	mm	670	670		Width	mm	440	440	385
	Weight	kg	2 055	2 510		Weight	kg	1 129	1 130	1 309

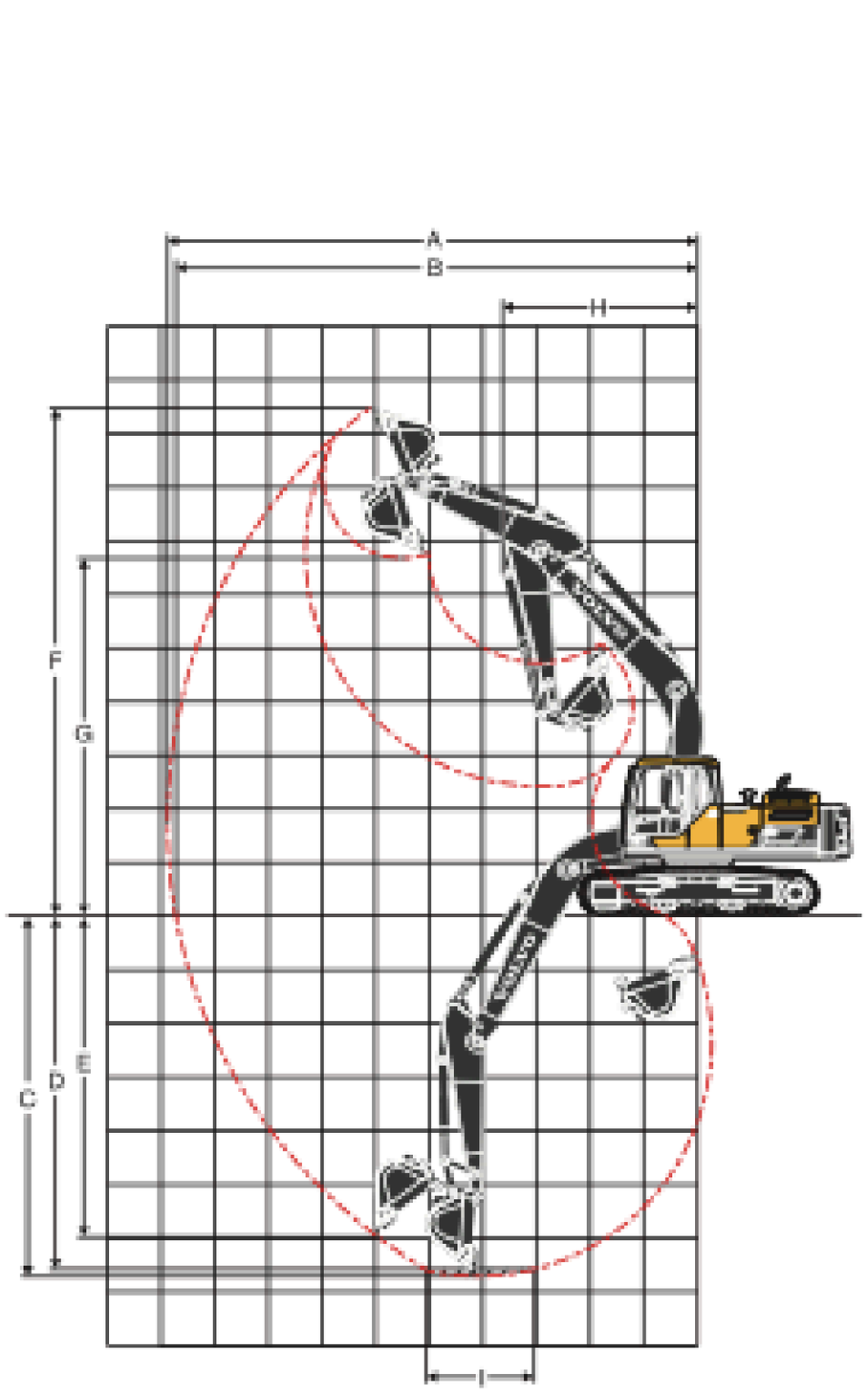
Includes cylinder, piping and pin, excludes boom cylinder pin

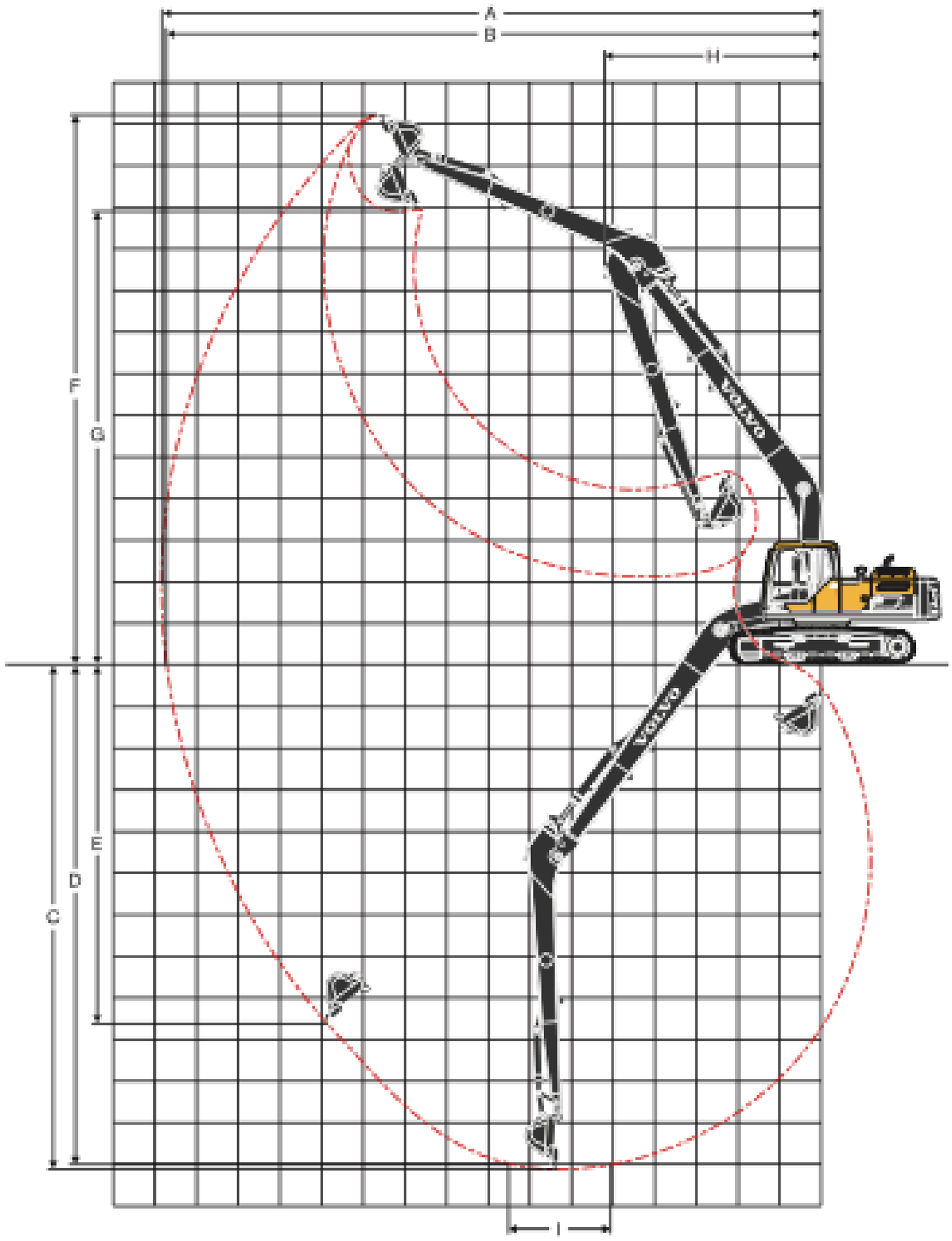
* Includes bucket cylinder, linkage and pin

EC210D

VOLVO EXCAVATORS 20.5-23.8 T 167 HP

Volvo Construction Equipment





WORKING RANGES					
Description			**Unit**	**EC210D/EC210DL**	**EC210DLR**
Boom			**m**	**5.7**	**5.7**	**8.85**
Arm			**m**	**2.5**	**2.9**	**6.25**
A	Max. digging reach		mm	9 550	9 930	15 800
B	Max. digging reach on ground		mm	9 380	9 770	15 700
C	Max. digging depth		mm	6 330	6 730	12 100
D	Max.digging depth (2.44 m level)		mm	6 100	6 540	12 000
E	Max. vertical wall digging depth		mm	5 620	6 090	11 290
F	Max. cutting height		mm	9 220	9 460	13 300
G	Max. dumping height		mm	6 430	6 650	10 950
H	Min. front swing radius		mm	3 670	3 640	5 200
DIGGING FORCES WITH DIRECT FIT BUCKET						
Bucket radius			mm	1 470	1 470	1 248
Breakout force - bucket	Normal	SAE J1179	kN	123	123	68
	Power boost	SAE J1179	kN	130	130	-
	Normal	ISO 6015	kN	136	136	77
	Power boost	ISO 6015	kN	144	144	-
Tearout force - dipper arm	Normal	SAE J1179	kN	112	96	44
	Power boost	SAE J1179	kN	118	102	-
	Normal	ISO 6015	kN	115	99	45
	Power boost	ISO 6015	kN	122	105	-
Rotation angle, bucket			°	175	175	178

EC210D

VOLVO EXCAVATORS 20.5-23.8 T 167 HP

Volvo Construction Equipment

Specifications

LIFTING CAPACITY EC210D

Lifting capacity at the arm end without bucket.
For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

	Lifting hook related to ground level		1.5m		3.0m		4.5m		6.0m		7.5m		Max. reach		
			Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	m
Boom : 5.7m Arm : 2.5m Shoe : 600mm CWT : 3 700kg	7.5 m	kg											*6 280	4 930	5.6
	6.0 m	kg							*6 120	4 440			*6 200	3 600	6.9
	4.5 m	kg					*6 520	*6 520	*5 600	4 270	4 560	2 950	4 460	2 880	7.6
	3.0 m	kg					*8 380	6 110	6 320	4 020	4 460	2 860	4 040	2 670	8.0
	1.5 m	kg					9 430	5 620	6 060	3 780	4 340	2 750	3 890	2 460	8.1
	0 m	kg					9 170	5 400	5 880	3 630	4 250	2 670	3 980	2 500	7.9
	-1.5 m	kg			*10 270	*10 270	9 130	5 370	5 830	3 580			4 370	2 730	7.4
	-3.0 m	kg			*13 690	10 550	9 260	5 470	5 910	3 660			5 330	3 330	6.5
	-4.5 m	kg			*10 530	*10 530	*7 520	5 760					*6 610	5 040	5.0
Boom : 5.7m Arm : 2.9m Shoe : 600mm CWT : 3 700kg	7.5 m	kg							*4 790	4 500			*4 630	4 250	6.2
	6.0 m	kg							*4 700	4 500			*4 310	3 180	7.3
	4.5 m	kg							*5 230	4 320	4 600	2 980	4 110	2 640	8.0
	3.0 m	kg					*7 810	6 220	*6 080	4 050	4 480	2 870	3 740	2 380	8.4
	1.5 m	kg					9 500	5 680	6 090	3 800	4 340	2 740	3 610	2 270	8.5
	0 m	kg			*5 110	*5 110	9 160	5 380	5 870	3 610	4 230	2 640	3 680	2 300	8.3
	-1.5 m	kg	*5 910	*5 910	*9 760	*9 760	9 070	5 310	5 780	3 530	4 200	2 610	3 990	2 490	7.8
	-3.0 m	kg	*10 760	*10 760	*14 440	10 360	9 150	5 370	5 820	3 570			4 760	2 960	6.9
	-4.5 m	kg			*11 710	10 760	*8 320	5 600					*6 350	4 170	5.6
Boom : 5.7m Arm : 2.5m Shoe : 600mm CWT : 4 200kg	7.5 m	kg											*5 280	5 240	5.6
	6.0 m	kg							*5 120	4 720			*5 200	3 750	6.9
	4.5 m	kg					*6 520	*6 520	*5 600	4 560	4 830	3 170	4 730	3 100	7.8
	3.0 m	kg					*8 380	6 530	*6 410	4 310	4 730	3 080	4 290	2 780	8.0
	1.5 m	kg					9 980	6 040	6 420	4 070	4 610	2 960	4 130	2 680	8.1
	0 m	kg					9 720	5 810	6 260	3 920	4 530	2 890	4 230	2 700	7.9
	-1.5 m	kg			*10 270	*10 270	9 690	5 780	6 190	3 870			4 650	2 960	7.4
	-3.0 m	kg			*13 680	11 320	*9 790	5 890	6 280	3 940			5 660	3 590	6.5
	-4.5 m	kg			*10 530	*10 530	*7 520	6 180					*6 610	5 400	5.0
Boom : 5.7m Arm : 2.9m Shoe : 600mm CWT : 4 200kg	7.5 m	kg							*4 790	4 790			*4 630	4 540	6.2
	6.0 m	kg							*4 700	*4 700			*4 310	3 390	7.3
	4.5 m	kg							*5 230	4 610	4 870	3 200	*4 260	2 840	8.0
	3.0 m	kg					*7 810	6 640	*6 080	4 350	4 750	3 080	3 980	2 570	8.4
	1.5 m	kg					*9 570	6 090	6 440	4 080	4 610	2 960	3 840	2 460	8.5
	0 m	kg			*5 110	*5 110	9 720	5 800	6 230	3 900	4 500	2 860	3 920	2 490	8.3
	-1.5 m	kg	*5 910	*5 910	*9 760	*9 760	9 620	5 720	6 150	3 820	4 470	2 830	4 260	2 700	7.8
	-3.0 m	kg	*10 760	*10 760	*14 440	11 120	9 700	5 790	6 190	3 860			5 050	3 200	6.9
	-4.5 m	kg			*11 710	11 520	*8 320	6 020					*6 350	4 490	5.8

Notes: 1. Machine in "Fine Mode-F" (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards.
3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

LIFTING CAPACITY EC210DL

Lifting capacity at the arm end without bucket.
For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

	Lifting hook related to ground level		1.5m		3.0m		4.5m		6.0m		7.5m		Max. reach		
			Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	m
Boom : 5.7m Arm : 2.5m Shoe : 600mm CWT : 3 700kg	7.5 m	kg											*5 280	*5 280	5.6
	6.0 m	kg							*5 120	4 920			*5 200	3 900	6.9
	4.5 m	kg					*6 520	*6 520	*5 600	4 750	5 160	3 290	5 050	3 220	7.8
	3.0 m	kg					*8 380	6 870	*6 410	4 500	5 060	3 200	4 580	2 890	8.0
	1.5 m	kg					*10 010	6 380	6 920	4 250	4 940	3 090	4 420	2 760	8.1
	0 m	kg					10 690	6 130	6 760	4 100	4 850	3 010	4 530	2 820	7.9
	-1.5 m	kg			*10 270	*10 270	*10 550	6 100	6 690	4 050			4 980	3 080	7.4
	-3.0 m	kg			*13 690	12 220	*9 790	6 210	6 780	4 120			6 090	3 750	6.5
	-4.5 m	kg			*10 530	*10 530	*7 520	6 510					*6 610	5 670	5.0
Boom : 5.7m Arm : 2.5m Shoe : 600mm CWT : 3 700kg	7.5 m	kg							*4 790	*4 790			*4 630	*4 630	6.2
	6.0 m	kg							*4 700	*4 700			*4 310	3 520	7.3
	4.5 m	kg							*5 230	4 800	*4 930	3 320	*4 260	2 960	8.0
	3.0 m	kg					*7 810	6 980	*6 080	4 530	5 080	3 210	4 240	2 670	8.4
	1.5 m	kg					*9 570	6 420	6 950	4 270	4 930	3 080	4 100	2 560	8.5
	0 m	kg			*5 110	*5 110	*10 550	6 120	6 730	4 080	4 830	2 980	4 190	2 600	8.3
	-1.5 m	kg	*5 910	*5 910	*9 760	*9 760	10 590	6 040	6 640	4 000	4 790	2 950	4 550	2 810	7.8
	-3.0 m	kg	*10 760	*10 760	*14 440	12 010	*10 070	6 110	6 690	4 040			5 420	3 340	6.9
	-4.5 m	kg			*11 710	*11 710	*8 320	6 350					*6 350	4 890	5.8
Boom : 5.7m Arm : 2.5m Shoe : 600mm CWT : 4 200kg	7.5 m	kg											*5 280	*5 280	5.6
	6.0 m	kg							*5 120	*5 120			*5 200	4 150	6.9
	4.5 m	kg					*6 520	*6 520	*5 600	5 050	*5 270	3 520	*5 280	3 440	7.8
	3.0 m	kg					*8 380	7 310	*6 410	4 900	5 350	3 430	4 940	3 100	8.0
	1.5 m	kg					*10 010	6 800	*7 240	4 550	5 220	3 310	4 680	2 970	8.1
	0 m	kg					*10 730	6 670	7 130	4 400	5 140	3 240	4 800	3 030	7.9
	-1.5 m	kg			*10 270	*10 270	*10 650	6 540	7 090	4 350			5 270	3 320	7.4
	-3.0 m	kg			*13 680	13 040	*9 790	6 650	7 170	4 420			6 440	4 020	6.5
	-4.5 m	kg			*10 530	*10 530	*7 520	6 950					*6 610	6 060	5.0
Boom : 5.7m Arm : 2.9m Shoe : 600mm CWT : 4 200kg	7.5 m	kg							*4 790	*4 790			*4 630	*4 630	6.2
	6.0 m	kg							*4 700	*4 700			*4 310	3 750	7.3
	4.5 m	kg							*5 230	5 100	*4 930	3 550	*4 260	3 170	8.0
	3.0 m	kg					*7 810	7 430	*6 080	4 930	*5 300	3 440	*4 370	2 870	8.4
	1.5 m	kg					*9 570	6 860	*6 970	4 570	5 220	3 310	4 350	2 760	8.5
	0 m	kg			*5 110	*5 110	*10 550	6 560	7 120	4 380	5 110	3 210	4 440	2 800	8.3
	-1.5 m	kg	*5 910	*5 910	*9 760	*9 760	*10 690	6 490	7 030	4 300	5 080	3 180	4 830	3 030	7.8
	-3.0 m	kg	*10 760	*10 760	*14 440	12 840	*10 070	6 550	7 060	4 340			5 740	3 590	6.9
	-4.5 m	kg			*11 710	*11 710	*8 320	6 790					*6 350	5 020	5.6

Notes: 1. Machine in "Fine Mode-F" (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards.
3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

EC210D

VOLVO EXCAVATORS 20.5-23.8 T 167 HP

Volvo Construction Equipment

LIFTING CAPACITY EC210DLR

Lifting capacity at the arm end without bucket.
For lifting capacity including bucket, simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

Boom : 8.85m
Arm : 6.25m
Shoe : 800mm
CWT : 4 900kg

Lifting hook related to ground level		1.5m		3.0m		4.5m		6.0m		7.5m	
		Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC
3.0 m	kg					*4 060	*4 060	*2 920	*2 920	*2 320	*2 320
1.5 m	kg					*5 180	*5 180	*3 520	*3 520	*2 680	*2 680
0 m	kg			*1 710	*1 710	*4 060	*4 060	*4 000	*4 000	*3 010	3 000
-1.5 m	kg	*1 840	*1 840	*2 380	*2 380	*4 090	*4 090	*4 310	3 780	*3 250	2 800
-3.0 m	kg	*2 530	*2 530	*3 120	*3120	*4 610	*4 610	*4 460	3 650	*3 400	2 680
-4.5 m	kg	*3 260	*3 260	*3 930	*3 930	*5 410	*5 410	*4 470	3 620	*3 450	2 630
-6.0 m	kg	*4 040	*4 040	*4 830	*4 830	*5 820	5 660	*4 340	3 660	*3 390	2 640
-7.5 m	kg	*4 880	*4 880	*5 850	*5 850	*5 320	*5 320	*4 030	3 770	*3 180	2 710
-9.0 m	kg			*6350	*6 350	*4 560	*4 560	*3 510	*3 510	*2 760	*2 760
-10.5 m	kg					*3 360	*3 360	*2 600	*2 600	*1 930	*1 930

Lifting hook related to ground level		9.0m		10.5m		12.0m		13.0m		Max. reach		
		Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	Along UC	Across UC	m
12.0 m	kg									*510	*510	10.3
10.5 m	kg									*450	*450	11.6
9.0 m	kg					*940	*940			*420	*420	12.6
7.5 m	kg			*1 330	*1 330	*1 310	*1 310			*410	*410	13.4
6.0 m	kg			*1 430	*1 430	*1 370	*1 370	*950	*850	*400	*400	13.9
4.5 m	kg	*1 720	*1 720	*1 560	*1 560	*1 450	*1 450	*1 210	*1 210	*410	*410	14.3
3.0 m	kg	*1 950	*1 950	*1 720	*1 720	*1 560	*1560	*1450	1 290	*430	*430	14.5
1.5 m	kg	*2 200	*2 200	*1 880	*1 880	*1 670	1 550	*1 520	1 230	*460	*460	14.6
0 m	kg	*2 420	2 320	*2 040	1 830	*1 780	1 460	*1 590	1 170	*510	*510	14.4
-1.5 m	kg	*2 600	2 170	*2 170	1 730	*1 870	1 390	*1 600	1 130	*580	*580	14.2
-3.0 m	kg	*2 720	2 080	*2 260	1 650	*1 920	1 350	*1 100	*1 100	*670	*670	13.7
-4.5 m	kg	*2 770	2 030	*2 290	1 620	*1 930	1 330			*810	*810	13.1
-6.0 m	kg	*2 730	2 030	*2 240	1 630	*1 650	1 360			*1 020	*1 020	12.3
-7.5 m	kg	*2 550	2 090	*2 050	1 700					*1 370	*1 370	11.2
-9.0 m	kg	*2 160	*2 160							*1 890	*1 890	9.7
-10.5 m	kg									*1 860	*1 860	7.6

Notes: 1. Machine in "Fine Mode-F" (Power Boost) for lifting capacities. 2. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards. 3. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 4. Rated loads marked with an asterisk (*) are limited by hydraulic capacity rather than tipping load.

EC210D

VOLVO EXCAVATORS 20.5-23.8 T 167 HP

Volvo Construction Equipment

Equipment

STANDARD EQUIPMENT

Engine

- Turbocharged, 4 stroke diesel engine with water cooling, direct injection and charged air cooler
- Air filter with indicator
- Air intake heater
- Cyclone pre-cleaner
- Fuel filter and water separator
- Extra water separator
- Alternator, 80 A

Electric/Electronic control system

- Contronics
- Advanced mode control system
- Self-diagnostic system
- Machine status indication
- Engine speed sensing power control
- Automatic idling system
- One-touch power boost
- Power max mode (P)
- Safety stop/start function
- Adjustable LCD color monitor
- Master electrical disconnect switch
- Engine restart prevention circuit
- High capacity halogen lights:
- Frame-mounted 2
- Boom-mounted 1
- Batteries, 2 x 12 V / 150 Ah
- Start motor, 24 V / 5.5 kW

Hydraulic system

- Automatic sensing hydraulic system
- Summation system
- Boom priority
- Arm priority
- Swing priority
- Boom and arm regeneration valves
- ECO mode fuel saving technology
- Swing anti-rebound valves
- Boom and arm holding valves
- Multi-stage filtering system
- Cylinder cushioning
- Cylinder contamination seals
- Automatic two-speed travel motors
- Hydraulic oil, ISO VG 68

Superstructure

- Counterweight: 3 700kg
- Access way with handrail
- Tool storage area
- Punched metal anti-slip plates
- Undercovers
- Rear view mirror on counterweight

Cab and interior

- Cab with roof hatch
- Control lock out lever
- Travel pedals and hand levers
- Adjustable operator seat and joystick control console
- Semi-long control joysticks
- Heater & air conditioner, manual
- Flexible antenna
- Radio with USB input
- Cab, all-weather sound suppressed, includes:
- Cup holders
- Door locks
- Tinted glass
- Floor mat
- Horn
- Large storage area
- Pull-up type front window
- Removable lower windshield
- Seat belt
- Safety glass
- Windshield wiper with intermittent feature
- Master key

Undercarriage

- Undercover
- Hydraulic track adjusters
- Greased and sealed track link
- Track guard
- 600 mm with triple grousers

Digging equipment

- Boom: 5.7 m mono
- Arm: 2.9 m
- Linkage

Service

- Tool kit, daily maintenance
- Spare parts kit

EC210D

VOLVO EXCAVATORS 20.5-23.8 T 167 HP

Volvo Construction Equipment

OPTIONAL EQUIPMENT

Engine

- Rain cap or Oil bath pre-cleaner
- Block heater: 240 V
- Water separator with heater
- Fuel filler pump: 35 l/min or 50 l/min with auto stop

Electric

- Extra work lights:
  - Boom-mounted 1
  - Cab-mounted 3
  - Counterweight-mounted 1
- Travel alarm
- Anti-theft with code lock system
- Rotating warning beacon

Hydraulic system

- Boom hose rupture valve (HRV) with overload warning device
- Hydraulic piping:
  - Breaker & shear, 1 or 2 pump flow
  - Quick coupler piping
- Additional return filter for breaker and shear
- Hydraulic oil, ISO VG 32, 46
- Hydraulic oil, longlife oil 32, 46, 68

Cab and interior

- Heater & air conditioner, automatic
- Electric pedal for breaker and shear
- Control joysticks (4 switches, 3 switch & proportional)
- Cab-mounted falling object guard (FOG)
- Cab-mounted falling object protective structure (FOPS)
- Sun screens, front, roof, rear
- Rain shield
- Rear view camera
- Ashtray and lighter
- Safety net for front window
- Specific key

Superstructure

- Counterweight: 4 200kg, 4 900kg

Undercarriage

- Full track guard
- 500 / 600 / 700 / 800 / 900 mm with triple grousers
- 600 mm HD with triple grousers
- 700 mm with double grousers

Digging equipment

- Arm: 2.5m, 6.25m long reach
- Boom: 8.85 m long reach
- Linkage with lifting eye

Service

- Tool kit, full scale

SELECTION OF VOLVO OPTIONAL EQUIPMENT

Rear view camera

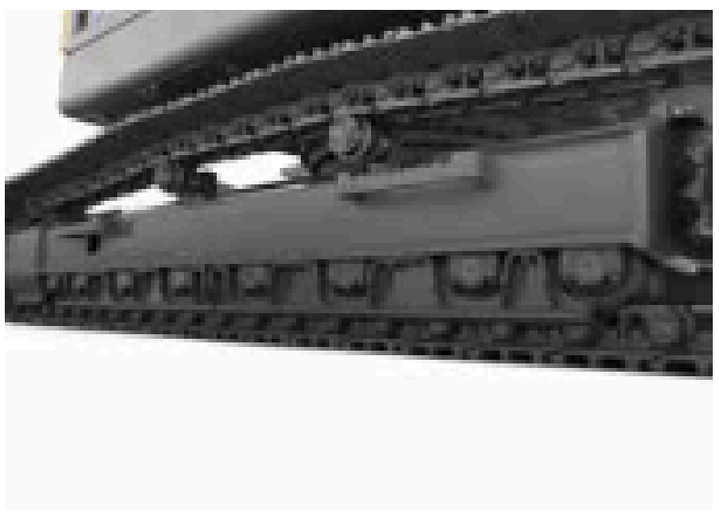
Oilbath pre-cleaner

FOPS

Fuel Filler Pump

Boom & arm configuration

Full trackguard



Not all products are available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.

FISCO

Strategic Synergy

OUR CHEMICALS

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CHEMICALS

PT FISCO STRATEGIC SYNERGY

DRILLING FLUID CHEMICALS

- Oil Based Mud
- Water based Mud
- Emulsifier
- Fluid Loss Additive
- Commodity Chemicals

SPECIALTY CHEMICALS

- Fluid Separation
- Flow Assurance
- Asset Integrity Assurance
- Oil Spill Tretament

ENHANCED OIL RECOVERY (EOR)

- Alkaline
- Surfactant
- Polymer

ADDITIVIES & STIMULATION

- Fuel Additivies
- Dyes
- Acid Stimulation
- Hydraulic Fracturing

OIL AND GAS

Drilling and Completion Chemicals Water Based and Oil Based Fluids

Filtration Control Chemicals (Fluid Loss Control Additives)	Carboxy Methyl Cellulose (CMC HV, CMC LV), Poly Anionic Cellulose (PAC R, PAC LV, PAC ULV), Reinated Lignite, Pergelatinized Starch/Drilling strarch High Temperature, Modified Lignite/Organophilic Lignite, Guar Gum, Sodium Polyacrylate (Liquid and Powdered)
Drilling Polymers	Partialy Hydrolyzed Poly Acrylamide (PHPA) Liquid an Powdered, Cloud Point Glycol (Medium and Low), Xanthan Gum, Hydro Ethyl Cellulose (HEC), Sodium Polyacrylate, Synergistic Polymer
Viscosifiers	Bentonite API, Carboxy Methyl Cellulose (CMC), Poly Anionic Cellulose (PAC), Drilling Starch, Guar Gum, Xanthan Gum (XCD Polymer), Drilling Polymer
Shale Stabilizers	PHPA (Powder and Liquid), Polyamine, Synthetic Gilsonite, Sodium Silicate, Sodium Sulphonated Asphalt, Natural Gilsonite, OBM Fluid Loss Reducer
Dispersants/Thinners	Lignited, Lignosulfonated, Tannin, Polyacrylates, Anionic Polymers
Drilling Mud Lubricant and Spotting Fluids	Extreme Pressure Lubricant (Water Based, Esther Based, For Sodium Silicate Mud, Environmentally Friendly Non Toxic Oil Based, Surfactant Based)
Drilling Mud Surfactants and Spotting Fluids, Clean Up Chemicals	Drilling Detergent, Wellbore Cleaner Surfactant Based, Rig Wash, Spotting Fluid (Non Weighted and Weighted)
Loss Circulation Materi	Walnut Shell (Nut Plug) Coarse, Medium, and Fine, Mica Flakes, Blended LCM and Fiberous LCM, Calcium Carbonate F/M/C and Seized Calcium Carbonate, Total Seal F/M/C

OIL AND GAS

Drilling and Completion Chemicals Water Based and Oil Based Fluids

Emulsifiers for Water Based and Oil Based Systems	Primary Emulsifier, Secondary Emulsifier
Corrosion Inhibitors and Scavengers and Biocides	Corrosion Inhibitor for Oil Line and Gas Line, Acid Corrosion Inhibitor, Oxygen Scavenger, H2S Scavenger, and Biocide
Oil Based Systems and Products	OBM Viscosifier, OBM Filtration Controller, OBM Emulsifiers (Primary and Secondary). OBM Rheology nd Modifier, Organophilic Clay, Organphilic Lignite, Organic Surfactant Emulsifier, OBM Fluid Loss Controller and Amine Treated Lignite, Oil Wetting Agent, Pipe Stuck Additive
Cementing Additivies	Calcium Chloride, Microsilica (Fumed Silica) Gas Block, Silica Flour
Workover and Completion	Calcium Bromide, Zinc Bromide
Commercial Chemicals	Pottasium Chloride (KCL), Pottasium Hydroxide (KOH), Calcium Chloride, Sodium Chloride, Calcium Hydroxide, Pottasium Sulphate, Soda Ash Dense, Sodium Bicarbonate, , Maqensium Oxide, Citric Acid

OIL AND GAS

Oilfield Production Treating and Refinery Chemicals

Production Treating and Refinery Chemicals	Demulsifier/Desalter
	Reverse Demulsifier/Deoiler/Water Clarifier
	Scale Inhibitor (Liquid and Solid Stick)
	Corrosion Inhibitor (Liquid and Solid Stick)
	Pour Point Depressant
	Biocide
	Anti Fouling Agent
	Antifoam/Defoamer
	Oxygen Scavenger
	Petroleum Dyes
	Scale Remover
	Foamer Solid Stick
	Sulfiding Agent
	Antioxidant
	Stabilizers
	Cetane Improvers
	Octane Boosters
	Dewazing Aids
	Sludge Breakers
Raw Material Olifield Production Chemicals	Demulsifier Component (Concentrate)
	Pour Point Depressant (PPD Concentrate)
	Water Clarifier/Deoiler (Cationic Polymer, PAM, Polyether Surfactant, Polydadmac)
	Imidazolines for Corrosion Inhibitor
	Triazine H2S Scavenger
	Phosphonates Antiscalants, Corrosion Inhibitors and Chelating Agents (ATMP, BHMT, HEDP, PBTC, HPAA, EDTA)
	Biocide (THPS, Isothiazoline, Gluteraldehyde, Benazalkonium Chloride)
	Oxygen Scavenger (Morpholine, Cyclohexylamine, Carbohydrazide, Hydrazine)
	Linear Alkyl Benzene Sulphonic Acid (LABSA)
	SUrfacant
	Monoethanolamine (MEA)
	Monoethlene Glycol (MEG)
	Triethyelene Glycol (TEG)
	Propylene Glycol (PG)

OIL AND GAS

Gas Tretaing Chemicals

Gas Treating	Antifoam, Sulfolane, Activated Carbon, Activated Alumina, Ceramic Ball, Molecular Sieve, Antifouling Agent, Purification Adsorbent, Corrosion Inhibitor, H25 Scavenger, Monoethylene Glycol (MEG), Triethylene Glycol (TEG), Monoethanolamine (MEA), Catalyst (C-Donor and D-Donor Catalyst, Chloride Adsorbent, Desulfurizer Catalyst,Hydrogenation Catalyst, Arsenic Adsorbent)

General Chemicals

General Chemicals	Ferric Chloride 40%, Caustic Soda Liquid, Caustic Soda Flake, Hydrochloric Acid 32%, Vanadium Pentoxide, Calcium Hypochlorite, Disodium Phosphate, Trisodium Phosphate, Di Iso Propanol Amine, Furfural, Sodium Carbonate (Soda Ash), Sodium Metabisulfite, Citric Acid, Phosphoric Acid, Dimethyl Disulfide (DMDS)

WASTE WATER TREATMENT AND MINING TREATMENT CHEMICALS

Waste Water Treatment & Boiler Chemicals

Wastewater Treatment	Coagulants/Flocculants
	Dewatering agents
	Defoamers
	Odor control agents
	Desinfectants

Raw Materials for Water Treatment Chemicals Production	PBTC – HEDP – ATMP – CMIT/MIT - BKC
	Poly Acryic Acid
	Maleic Acid
	Poly Carboxylic Acid
	DBNPA – THPS
	Bronopol

Steam and Hot Water Boilers	Oxygen Scavengers
	Corrosion Inhibitor
	Alkalinity Builders
	Scale Inhibitors
	Antifoam
	Sludge Conditioning Agents
	Condensate Treatment Chemicals
	Cleaning Chemicals

Open Re-circulating Cooling System (Coling Towers)	Corrosion Inhibitor
	Scale Inhibitor
	Biocides & Algaecides
	Antifoams
	Dispersants & Sludge Conditioners
	Cleaning Chemicals

WASTE WATER TREATMENT AND MINING TREATMENT CHEMICALS

Waste Water Treatment & Boiler Chemicals

Closed Loop Recirculating Cooling Systems (Chillers)	Corrosion & Scale Inhibitors
	Biocides
	Cleaning Chemicals

Reverse Osmosis Plants	Antisclant
	Biocide
	Cleaning Chemicals

Portable & Domestic Water Pipe Works	Corrosion & Scale Inhibitors
	Flocculant & Coagulants

Commodity Chemicals	Odium Flouride
	TCCA Tablet
	Soda Ash Dense
	Phosphoric Acid
	Activated Carbon
	PAC Liquid
	PAC Power

WASTE WATER TREATMENT AND MINING TREATMENT CHEMICALS

Mining Treatment Chemicals

Maintenance Chemicals	Heavy Duty Cleaner (Degreaser)
	Multi Purpose Cleaner (Degreaser)
	General Cleaner (Degreaser)
	Engine Water Coolant Radiator
	Rust Prevention Control
	Rust Remover

Drilling Exploration	Polymer Liquid/Wet Polymer
	Polymer Powder/Dry Polymer
	Bentonite API 13 A
	PAC LV & PAC R
	Loss Circulation Material

Cool and Dust Treatment	Coal Dust Suppressant
	Road Dust Control

Waste Water Treatment	pH Adjuster
	Flocculant and Coagulant
	Antifoam
	Activated Carbon

CHEMICALS

PT FISCO STRATEGIC SYNERGY

PRODUCTION : INTEGRITY MANAGEMENT

- Corrosion inhibitors, specifically formulated and developed for system conditions, transport pipelines, wet gas lines, sub sea flowlines and process applications.
- Biocides for the control and treatment of oilfield bacteria which can lead to microbial induced corrosion, under deposit corrosion and H2S generation.
- H2S scavengers to reduce the H2S content of sour production. Several chemistry types are available and can be used to treat mixed fluid production, gas production or storage vessels.

PRODUCTION : SEPARATION MANAGEMENT

Experienced in the treatment of separation facilities with a range of demulsifiers, deoilers and foam control additives speciticaliy designed for your system. The products are optimally developed on fresh fluids/emulsion in the field locations by our team of separation specialists, and are designed to meet the requirements of the given system. Monitoring services are also available to track the system over time ensuring fluid characteristics are in specification such as BS & W salt content, low residual oil in water levels.

PRODUCTION : FLOW ASSURANCE MANAGEMENT

We offers an extensive range of Flow assurance solutions. We provides a full flow assurance management service. From initial process system evaluation, modelling, and prediction, to freatment design, application, monoring and support work.

The flow Assurance range includes producis for inorganic scale control, wax and asphallene control, pour point. depressants, hydrate prevention, naphthenale control and loamers for aas well deliaulfication.

CHEMICALS

PT FISCO STRATEGIC SYNERGY

WATER INJECTION MANAGEMENT

We supply all your water injection product requirements including oxygen scavengers, primary and secondary biocides, polyelectrolytes, flocculants, coagulants, scale inhibitors and corrosion inhibitors.

HYDROTESTING, MOTHBALLING & DEWATERING

We developed a full tool box of products for hydrotest, mothball and dewatering operations which includes high performance combination products along with single component biocides, oxygen scavenger and corrosion inhibitors.

GAS TREATMENT

We can supply your needs for gas treatment products, from glycols and amines through to scavengers and antifoams.

WELL SERVICES : OIL BASED MUD CHEMICALS

Oil-based muds (OBMs) are widely used for drilling operations due to their good fluid loss control, shale inhibition properties and drill-bit lubrication, especially at high temperatures we supply a range of additives for OBMs for differing field conditions. The range includes emulsifier packages which stabilize the internal aqueous phase, develop fluid rheology and prevents fluid loss. Additionally, we supply cleaners, wetting agents, rheology modifiers, fluid loss additives, rheology modifiers and thinners to optimise performance.

CHEMICALS

PT FISCO STRATEGIC SYNERGY

WELL SERVICES : WELL BORE CLEANERS

We supply a range of well bore cleaners for the removal of oil based drilling muds from the well bore following drilling operations. The oil based mud cleaners are added at the beginning of well clean up operations and have been developed to:

- Ensure the casing is clean for receiving the completion fluids
- Ensure turbidity & discharge specifications are met
- Reduce clean up times minimizing rig time on site.
- Minimize the environmental impact of the operations

WELL SERVICES : ACID STIMULATION

We supply a range of well stimulation products which can aid increased productivity through use in fracturing and acidizing treatments. We offer hydraulic fracturing and matrix stimulation treatments to restore or enhance well productivity in all types of formations and reservoir environments. We delivers chemicals that address major cementing challenges such as gas migration, loss of circulation, and sustained annulus pressure.

OUR CLIENTS

PT FISCO STRATEGIC SYNERGY

SINCE 2017, WE HAVE BEEN WORKING WITH MANY COMPANIES IN INDONESIA

- PT. Pertamina EP
- PT. Pertamina EP CEPU
- PT. Sucofindo Advisory Utama
- PT. Pertamina Hulu Energi
- PT. Sucofindo
- PT. Indosat Tbk
- PT. Tomo and Son
- PT. Prima Multi Cipta Karya
- PT. XL Axiata Tbk
- PT. Mitra Integrasi Informatika
- PT. EJJV Engineering Indonesia
- PT. Global Teknologi Servisindo
- PT. Bima Asri Intermitra
- PT. Surveyor Indonesia (Persero)
- PT. Emp Tonga
- Tately NV
- Job Pertamina-Medco E&P Simenggaris
- PT. Tiarabumi Petroleum
- Repsol Sakakemang B.V
- PT. Samudra Energy Bwpmeruap
- BUT. Pearloil (Sebuku) LTD
- PT.Wahanakarsa Swandiri
- PT. Berca Hardayaperkasa
- PT. Istech Resources Asia
- PT. Geolog Indonesia
- PT. Dunggio Drilling
- PT. Visiontech Indograha
- PT. Intertek Utama Services
- PT. Asta Rekayasa Unggul
- PT. Nusakura Standarindo
- PGN
- Tropik Energy
- Energy Equity
- PT.Depriwangga
- But.Energy Equipty Epic (Sengkang)
- Petrogas (Basin) Ltd
- PT. Chevron Pasific Indonesia
- Chevron Rapak Ltd
- PT. Asry Amanah Timur
- PT. Yokogawa Indonesia
- PT. Devnusa Roga Planindo
- PT. Luas Biru Utama
- PT. Depriwangga Om
- PT. Spektra Megah Semesta
- PT. Tiara Vibrasindo Pratama
- PT. National Oilwell Varco
- PT. Spektra Solusindo
- PT. SPR Langgak
- PT. Biro Klasifikasi Indonesia
- PT. Dahana (Persero)
- PT. Sarana Solusindo Informatika
- PT. Prosys Bangun Persada
- PT. Opac Barata
- PT. Devi Mandiri
- PT. Dowell Anadrill Schlumberger
- PT. Astra Graphia, Tbk
- PT. Accenture
- PT. Crown Worldwide Indonesia
- PT. Bina Sarana Putra
- PT. Sigma Cipta Utama
- PT. Ulima Nitra, Tbk
- PT. Bayu Maritim Berkah
- PT. Solusi Bangun Indonesia, Tbk
- PT. Mesitechmitra Purnabangun
- PT. BKI
- PT. NPU

CERTIFICATES

PT FISCO STRATEGIC SYNERGY

INTERNATIONAL

CERTIFICATE OF REGISTRATION

This is to Certify that the Quality Management System of :

PT FISCO STRATEGIC SYNERGY

Niffaro Park ITS Tower 9th Floor, Jl. Raya Pasar Minggu KM 18, RT. 01/RW. 01,
Pejaten Timur, Ps. Minggu, Kota Adm. Jakarta Selatan, DKI Jakarta 12510, Indonesia

has been independently assessed and is complying with the requirements of :

ISO 9001:2015

This Certificate is Applicable to the Following Product or Service Ranges :

Provision of Engineering Consulting, Engineering Assessment,
Manpower Supply, Safety Inspection, Equipment Maintenance,
Safety Audit Management System, EPC, Fire Protection System,
Trainee Certification, Supply Chain, Procurement and Catering Services

Date Initial Assessment : Jan, 05th, 2024
Date Registration : Jan, 15th, 2024
1st Surveillance on or before : Dec, 15th, 2024
2nd Surveillance on or before : Dec, 15th, 2025
Recertification on or before : Jan, 14th, 2027

Certificate No. : 2401150032049K001
Date of Expiry : Jan, 14th, 2027

Authorized Signatory

VRC International is the brand of PT. Valuabilitas Reabilitas Certi on conformity assessment service. VRC International has strictly followed all requirement of ISO 17021 for Conformity Assessment body and met all requirements of all Mandatory Documents of International Accreditation Forum for the Management System Certification Scheme

The approval is subject to the company maintaining is system the required standards, which will be monitored by VRC International. The above audited accredited scope shall be monitored by VRC International Management scheme regulation.

VRC International is a Conformity Assessment Body as per requirement of ISO 17021 and meet the requirement of all Mandatory Documents of International Accreditation Forum for the Management System Certification Scheme. In the issuance of this certificate, VRC International assumes no liability to any party other than to the Client and then only in accordance with the agreed upon Certification Agreement. This certificate's validity is subject to the organization maintaining their system in accordance with VRC's requirements for systems certification.

The certificate remains the property of VRC International and, to whom it must be returned upon request

PT. Valuabilitas Reabilitas Certi. Jl. Jatinegara Kaum No. 6, Kel. Pulo gadung Kec. Jatinegara Kaum, Jakarta Timur 13260, Indonesia
E-mail: info@vrcinternational.com Website: www.vrcinternational.com

VRC INTERNATIONAL

INTERNATIONAL

CERTIFICATE OF REGISTRATION

This is to Certify that the Environmental Management System of :

PT FISCO STRATEGIC SYNERGY

Niffaro Park ITS Tower 9th Floor, Jl. Raya Pasar Minggu KM 18, RT. 01/RW. 01,
Pejaten Timur, Ps. Minggu, Kota Adm. Jakarta Selatan, DKI Jakarta 12510, Indonesia

has been independently assessed and is complying with the requirements of :

ISO 14001:2015

This Certificate is Applicable to the Following Product or Service Ranges :

Provision of Engineering Consulting, Engineering Assessment,
Manpower Supply, Safety Inspection, Equipment Maintenance,
Safety Audit Management System, EPC, Fire Protection System,
Trainee Certification, Supply Chain, Procurement and Catering Services

Date Initial Assessment : Jan, 05th, 2024
Date Registration : Jan, 15th, 2024
1st Surveillance on or before : Dec, 15th, 2024
2nd Surveillance on or before : Dec, 15th, 2025
Recertification on or before : Jan, 14th, 2027

Certificate No. : 24011500320414K001
Date of Expiry : Jan, 14th, 2027

Authorized Signatory

VRC International is the brand of PT. Valuabilitas Reabilitas Certi on conformity assessment service. VRC International has strictly followed all requirement of ISO 17021 for Conformity Assessment body and met all requirements of all Mandatory Documents of International Accreditation Forum for the Management System Certification Scheme

The approval is subject to the company maintaining is system the required standards, which will be monitored by VRC International. The above audited accredited scope shall be monitored by VRC International Management scheme regulation.

VRC International is a Conformity Assessment Body as per requirement of ISO 17021 and meet the requirement of all Mandatory Documents of International Accreditation Forum for the Management System Certification Scheme. In the issuance of this certificate, VRC International assumes no liability to any party other than to the Client and then only in accordance with the agreed upon Certification Agreement. This certificate's validity is subject to the organization maintaining their system in accordance with VRC's requirements for systems certification.

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PT. Valuabilitas Reabilitas Certi. Jl. Jatinegara Kaum No. 6, Kel. Pulo gadung Kec. Jatinegara Kaum, Jakarta Timur 13260, Indonesia
E-mail: info@vrcinternational.com Website: www.vrcinternational.com

VRC INTERNATIONAL

INTERNATIONAL

CERTIFICATE OF REGISTRATION

This is to Certify that the Occupational Health and Safety Management System of :

PT FISCO STRATEGIC SYNERGY

Niffaro Park ITS Tower 9th Floor, Jl. Raya Pasar Minggu KM 18, RT. 01/RW. 01,
Pejaten Timur, Ps. Minggu, Kota Adm. Jakarta Selatan, DKI Jakarta 12510, Indonesia

has been independently assessed and is complying with the requirements of :

ISO 45001:2018

This Certificate is Applicable to the Following Product or Service Ranges :

Provision of Engineering Consulting, Engineering Assessment,
Manpower Supply, Safety Inspection, Equipment Maintenance,
Safety Audit Management System, EPC, Fire Protection System,
Trainee Certification, Supply Chain, Procurement and Catering Services

Date Initial Assessment : Jan, 05th, 2024
Date Registration : Jan, 15th, 2024
1st Surveillance on or before : Dec, 15th, 2024
2nd Surveillance on or before : Dec, 15th, 2025
Recertification on or before : Jan, 14th, 2027

Certificate No. : 24011500320445K001
Date of Expiry : Jan, 15th, 2027

Authorized Signatory

VRC International is the brand of PT. Valuabilitas Reabilitas Certi on conformity assessment service. VRC International has strictly followed all requirement of ISO 17021 for Conformity Assessment body and met all requirements of all Mandatory Documents of International Accreditation Forum for the Management System Certification Scheme

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PT. Valuabilitas Reabilitas Certi. Jl. Jatinegara Kaum No. 6, Kel. Pulo gadung Kec. Jatinegara Kaum, Jakarta Timur 13260, Indonesia
E-mail: info@vrcinternational.com Website: www.vrcinternational.com

VRC INTERNATIONAL

SKUPJR7570904145AVS2

KEMENTERIAN ENERGI DAN SUMBER DAYA MINERAL
DIREKTORAT JENDERAL MINYAK DAN GAS BUMI

SURAT KEMAMPUAN USAHA PENUNJANG MIGAS
No. 1682/19.07/DMB/2019

Memperhatikan surat permohonan PT.Fisco Strategic Synergy No. FSS-LO-06/V-2019 tanggal 15 Mei 2019 dan berdasarkan :

1. Peraturan Menteri Energi dan Sumber Daya Mineral No. 14 Tahun 2018 tentang Kegiatan Usaha Penunjang Minyak dan Gas Bumi.
2. Peraturan Menteri Energi dan Sumber Daya Mineral No. 15 Tahun 2013 tentang Penggunaan Produk Dalam Negeri pada Kegiatan Usaha Hulu Minyak dan Gas Bumi.
3. Hasil evaluasi kemampuan usaha penunjang Migas berdasarkan dokumen meliputi aspek legal (status usaha dan finansial), teknis (kemampuan/kapasitas jasa dan sistim manajemen), pengalaman, jaringan rantai suplai dan kualitas jasa.

DIREKTUR JENDERAL MINYAK DAN GAS BUMI

Dengan ini memberikan Surat Kemampuan Usaha Penunjang (SKUP) Migas kepada :

Nama Perusahaan	:	PT.Fisco Strategic Synergy
Alamat	:	Nifarro Park ITS Tower Lt.9 Jl. Raya Pasar Minggu Km.18, RT 001 RW 001, Kel. Pejaten Timur, Kec. Pasar Minggu, Jakarta Selatan
Penanggung Jawab	:	Fistareni Nirbita

sebagai industri penunjang migas yang telah mampu memproduksi barang dalam negeri :

Hasil Produksi	:	*Jasa Non Konstruksi : Penelitian Dan Pengembangan* (data resume dan spesifikasi terlampir)
Rating Perusahaan	:	☆ ☆
Keberpihakan Dalam Negeri	:	Tinggi (800)

Dengan ketentuan dan catatan sebagai berikut :

1. Perusahaan wajib mematuhi ketentuan peraturan dan perundang-undangan yang berlaku.
2. Perusahaan wajib meningkatkan capaian TKDN barang dan / atau jasa hasil produksinya.
3. Perusahaan wajib menyampaikan laporan setiap 6 (enam) bulan sekali dan/atau apabila ada perubahan data dan informasi dalam SKUP Migas ini kepada Direktorat Pembinaan Program Migas
4. Direktorat Jenderal Minyak dan Gas Bumi akan melakukan Asesmen Kemampuan Usaha secara berkala terhadap perusahaan/perorangan pemegang SKUP Migas.
5. Apabila dalam pelaksanaan usaha terbukti tidak memenuhi ketentuan yang berlaku, Direktorat Jenderal Minyak dan Gas Bumi akan memberikan sanksi sampai dengan pencabutan SKUP Migas ini.

Dikeluarkan di Jakarta
Pada tanggal 31 Mei 2019
a.n. Direktur Jenderal Minyak dan Gas Bumi
Direktur Pembinaan Program Migas

Soerjaningsih
NIP. 19660814 199003 2 001

SS-SKUP

FISCO
Strategic Synergy

CONTACT US

021-27842482

087742900905

info@fiscoss.tech

ITS Tower Lt.9, Jalan Raya Pasar Minggu Nomor 18, Kota Adm. Jakarta Selatan, Provinsi DKI Jakarta, 12510

www.fiscoss.tech