KOMATSU

WA380-6

ENGINE POWER
143 kW / 192 HP @ 2,100 rpm

OPERATING WEIGHT
17,800 kg

BUCKET CAPACITY
3.1 - 4.5 m³

WA380-6
The WA380-6 wheel loader delivers the perfect blend of performance, comfort and economy. Suitable for all kinds of applications and equipped with a high-performance engine that is both whisper-quiet and extremely economical, it exceeds industry expectations for this class of wheel loader. Whatever the job, the WA380-6 can handle it – thanks to its outstanding tractive force and Closed-centre Load Sensing System (CLSS) hydraulics. Moreover, the new SpaceCab™ offers unrivalled operator comfort and an excellent view of the bucket and wheels. Reliability, ease of service, economy and safety – the WA380-6 sets new standards in all areas.

Outstanding productivity
- CLSS hydraulics with variable-displacement pumps
- Superior dumping height and reach
- Long wheel base
- Torque converter lock-up (option)

Exceptional driver comfort
- Two-door SpaceCab™
- Excellent all-round view
- Automatic transmission with mode selection and variable shifting points
- Electronic, short-stroke levers (option)
- Large armrest and adjustable console
- Fully adjustable steering column
- Air conditioning and CD-radio
- Climate control (option)
- Deluxe heated, air-suspended seat

Diverse and flexible
- Comprehensive range of attachments for a wide variety of uses
Easy maintenance

- Equipment Management and Monitoring System (EMMS)
- Centralised oil and fuel filter arrangement
- Side-by-side radiator mounting for easy cleaning
- Gull-wing doors for easy ground-level access
- Cab-controlled reversible fan
- Automatic central lubrication system
- Komtrax™ Komatsu tracking system

High reliability and long service life

- High-quality original Komatsu components
- Robust, torsionally rigid frame
- Maintenance-free, fully hydraulic, wet-disc service and parking brakes
- Sealed DT wiring harness connectors

Komatsu SAA6D107E-1 engine with high pressure common rail injection delivers ample power in a fuel efficient way. The engine meets EU Stage IIIA and EPA Tier III emissions regulations.
The WA380-6’s new Komatsu SAA6D107E-1 engine features higher torque, better performance at low speed, excellent throttle response and advanced electronics. The result is unequalled productivity and the lowest fuel consumption. The engine develops 143 kW (192 HP) at just 2,100 RPM and delivers 963 Nm of torque at just 1,500 RPM. It is designed and manufactured by Komatsu to the highest engineering and quality standards (including the Komatsu-manufactured electronic components) guaranteeing the highest reliability and durability no matter what the challenge. The engine reaches its max. performance of 152 kW/204 HP at already 2,000 RPM.

**Heavy duty HPCR system**
*(High Pressure Common Rail fuel injection)*
A high pressure pump pumps fuel into an accumulator chamber or ‘Common Rail’. An ECU (electronic control unit) then optimizes fuel injection from the common rail into the engine cylinders. This improves engine power and fuel efficiency, reducing emission and noise levels.

**New combustion system**
Our new combustion system optimizes combustion timing and ignition. Thanks to extensive computer simulations and analyses, its specially designed combustion chamber reduces NOx and particulates emissions, fuel consumption and noise levels.

**Electronic control system**
Komatsu’s electronic control system monitors the vehicle performance, optimising emissions, fuel efficiency and noise levels, even under extreme conditions.

**Air-to-air charge air cooling system**
By cooling the compressed air supplied by the turbocharger to the cylinders, this system optimizes combustion efficiency, reduces emissions and improves engine performance.
Advanced machine design
The WA380-6 features the ideal combination of a highly efficient drive line, powerful hydraulics and excellent stability. Its outstanding rimpull makes it easy to penetrate even the densest materials and enables higher productivity in V-shaped loading. With the powerful hydraulic system, filling the bucket is as fast and efficient as possible. Meanwhile, the high stability ensures the machine is safe to operate even when the loaded material is unexpectedly heavy. Furthermore, the boom suspension system, which is fitted as standard, minimizes spillage when transporting the material. This reduces costs and extends the lifetime of the bearings and bushings.

Precision control with ease
The WA380-6 features variable-displacement pumps on both the hydraulic and steering systems. These pumps deliver the exact amount of oil required, dramatically improving fuel efficiency. Komatsu’s CLSS hydraulics enables extremely precise control of the work equipment, and ensures that the bucket, boom and hydraulically driven attachments can all move smoothly at the same time.

Faster load & carry with optional torque converter lock-up
The optional torque converter lock-up system delivers unbeatable productivity and fuel efficiency in load & carry and short distance transport applications. The operator can engage the system from 3rd to 4th gear. It noticeably increases travel speed, particularly when going uphill, thanks to the larger tractive force. At the same time, it eliminates converter losses significantly reducing fuel consumption.
Wide tread and long wheelbase
A 2,160 mm wide tread and a long wheel base of 3,300 mm give the WA380-6 outstanding stability – enough to handle rough terrain and fast load & carry cycles with the minimum spillage and maximum comfort. With 37° steering articulation to both sides, the WA380-6 is extremely manoeuvrable in tight spaces for faster loading cycles.

Superior dumping height and reach
The long lifting frame allows an enormous dumping height of 2,990 mm and a reach of 1,130 mm that is just as impressive (with 3,1 m³ universal bucket, measured to the cutting edge). With this working range, loading high-sided semi-trailers with a payload of 28 tonnes becomes child’s play.
Simple & Convenient Operation

Smooth ergonomic hydraulic control
The new pilot control levers are designed as finger tip control levers for precise and fatigue-free control of the loading process. The position of the levers and the location of the entire console can be adjusted to suit any operators’ preferred height and reach. EPC equipment is also available as optional equipment for controlling the working hydraulic system. Apart from the electronic pilot control of the finger levers, EPC offers a modulating function for slowing and stopping bucket movements when lowering, that is vibration-free. Furthermore, the upper and lower boom cut out position can be pre-set with a switch that ensures major ease of operation for the operator when work is constantly changing such as in loading lorries. As a third feature, EPC equipment has a semiautomatic excavating function for simple filling buckets.

Multi-function lever (option)
A multi-function lever with integrated forward/reverse switch is also available as optional equipment. The servo-assisted multi-function lever ensures the simplest and most comfortable operation of the equipment. Simultaneously, the driver can change between forward and reverse direction with the rocker switch. The multi-function lever is the right choice for earth moving jobs.

Intelligent gas pedal
Our innovative new thrust-sensing gas pedal automatically helps the operator match the timing of gear shifts to the load. In heavy-duty work, requiring high rimpull and maximum acceleration, the operator tends to press heavily on the gas pedal. The machine anticipates this and shifts up gears as late as possible. In light-duty work, where fuel consumption is a major factor, the operator will intuitively press the gas pedal lightly. Again, the machine anticipates this – and shifts up gears as early as possible to achieve the best fuel efficiency.

New and easy-to-use joystick steering (option)
A new joystick steering system is available as optional equipment, and ensures that steering can be wrist operated easily and conveniently in loading operations. This system allows you to change the direction of travel and gear shifting with push buttons on the joystick. And you may pre-select the steering speed in 2 stages, depending upon whether fast V-loading or precise load & carry is required.
**Perfect driving convenience and the best all-round visibility**

The cabin is the largest in its class and offers you unparalleled driving convenience comparable to that of a passenger car. The large frameless windscreen, ensures an optimum view of the bucket and tyres, and the slanted rear end also gives an excellent view towards the rear. The cabin is mounted on viscose shock absorbers guaranteeing an interior noise level of only 72 dB(A), one of the lowest in this class. That together with air conditioning as standard ensures the operator’s well-being just as much as the air-cushioned multi-adjustable premium drivers seat with seat heater and lumbar support. The easy-to-work hydraulic operating controls on the multi-adjustable hydraulic console makes it possible to operate the wheel loader conveniently and ergonomically. The operator’s well-being is ensured over long and productive hours.

**Safe, convenient access**

For easy and safe entry, the WA380-6 includes an access ladder with self-cleaning, anti-slip steps inclined forward at 8° on both sides of the cabin. The cab doors are hinged at the rear of the cab for the widest opening angle – even the right-side door can be fully opened.
Air conditioner

Hot and cool box

CD radio

12 Volt power supply (option)

Wide, multi-adjustable armrest

Deluxe heated, air-suspended seat

Fully adjustable steering column

Sliding window

Storage compartment

Cup holder
EMMS (Equipment Management and Monitoring System)
This completely new type of monitoring system is clearly structured and easy to read because it is directly in the operator's field of view. If there is a malfunction, it immediately displays the details in the chosen national language and in plain text in the display field. This system not only has an error memory and a self-diagnosis function, but also a service interval display. This significantly simplifies service work and the operator is notified on time of the regular oil and filter changes. The operator and customer-service engineer are constantly informed about the optimum machine state so that problems don't even occur in the first place.

Quick-reverse hydraulic fan
A push-button switch in the cab allows the operator to run the radiator fan in reverse for working in dusty environments. This can be easily done while the machine is in operation and without needing to stop the engine. To further reduce cleaning times, the machine can be equipped with an automatic reversible fan that can be set to clean at intervals between 10 minutes and 2 hours.

Side-by-side radiator mounting
The side-by-side radiator arrangement together with an air conditioner condenser that is mounted in the air stream ensures easy access when intensive cleaning is required. This makes the machine the ideal choice for recycling applications where easy cleaning is an absolute must.

KOMTRAX™ Komatsu Tracking System
The Komatsu Tracking System, KOMTRAX™, provides a revolutionary new way to monitor your equipment, anytime, anywhere. It lets you pinpoint the precise location of your machines and obtain real-time machine data. Using GPS transmitter and satellite technology, it's designed to be future proof and will meet your demands today and tomorrow.
Centralised lubrication system as standard
The centralised lubrication system reduces the daily service work to the absolute minimum. Its robust piping with protective equipment in all areas ensures consistent lubrication amounts, operating reliability and electronic monitoring with a malfunction signal in the cabin. This increases the machine’s service readiness and service life while lowering repair and service costs.

Designed to save time
With long service intervals and best-in-class accessibility, the WA380-6 reduces the time and money you need to suspend on maintenance. A gas spring helps the operator open and close each gull-wing side door for easy daily servicing.

Simple and convenient access to service
The service doors are designed as gull-wing doors. They allow you convenient and safe access to the daily service points from the ground.

Centralised filter arrangement
With all filters collected into a centralised arrangement, the down time for servicing is reduced to a minimum.

External fluid drains
All fluids can be drained through externally mounted valves for easy maintenance and reduced spillage.

Customer service and spare parts supply
When you buy a Komatsu construction machine, you buy a lot more than just the product alone. Our service support accompanies you throughout the entire life of your wheel loader. Programs for preventative maintenance are just as much a part of what we offer as the complete range of dealer service and repair programmes. And, if there is a malfunction, Komatsu’s close-knit network of dealers and excellent parts service ensures you minimum downtime.
Universal bucket
This type of bucket is impressive because of its excellent penetration and loosening properties and its good material holding properties. This universal bucket can be equipped with flush mount adapters and interchangeable teeth.

Earthmoving bucket
The earthmoving bucket with a one-piece bucket bottom is suited both for earthworks and loading cohesive material. The slanted sides give powerful penetration. It is equipped either with flush mount adapters and interchangeable teeth or also with a rear removable edge.

Stock pile bucket
The stock pile bucket is the right solution for handling loose and relatively light materials. The straight sidewalls ensure a high bucket capacity, the rear edge makes levelling and cleaning up jobsites easy. This stock pile bucket can be equipped with flush mount adapters and interchangeable teeth or a bolt-on cutting edge.

Maximum dumping height with high-lift
The dumping height and reach can be increased for special jobs with the optional high-lift lifting frame. You may increase dumping height by approximately 530 mm (with 3.1 m³ universal bucket).

Hydraulic quick coupler
The WA380-6 can change attachments in a matter of seconds with a market compatible or HD wedge type quick coupler. With the wedge type quick coupler, featuring a unique and innovative design, the offset to the original connection points is reduced to a minimum. Thus, lifting forces remain almost the same compared to a direct mounted bucket.

A comprehensive range of attachments
The log grapple: With its sturdy structure and its great hydraulic power and a special tilting cylinder, the WA380-6 is also perfectly suited to work in the timber industry. The robust design of the lifting frame and axles ensures maximum durability.
**ENGINE**

Model: Komatsu SAA6D107E-1
Type: Common rail direct injection, water-cooled, emissionised, turbocharged, after-cooled diesel

Engine power
- at rated engine speed: 2,100 rpm
- ISO 14396: 143 kW / 192 HP
- ISO 9249 (net engine power): 142 kW / 190 HP
- Max. torque / engine speed: 963 Nm / 1,500 rpm

No. of cylinders: 6
Bore x stroke: 107 x 124 mm
Displacement: 6,69 ltr

FAN drive type: Hydraulic
Lubricating system: Gear pump, water-cooled oil cooler, piston cooling nozzles

Filter: Main-flow filter with water separator
Air-filter type: Dry-air filter with automatic dust emission and preliminary purification including a dust display

**TRANSMISSION**

Type: Automatic powershift transmission
Torque converter: One-stage, one-phase, 3-element

**CHASSIS AND TYRES**

System: 4-wheel drive
Front axle: Komatsu HD axle, semi-floating, (LSD-differential optional)
Rear axle: Komatsu HD axle, semi-floating, 26° swing angle (LSD-differential optional)
Differential: Straight bevel gear pair
Final drive: Planetary gear in an oil bath
Tyres: 23.5 R25

**SERVICE REFILL CAPACITIES**

Cooling system: 30,5 ltr
Fuel tank: 300 ltr
Engine oil: 25,5 ltr
Hydraulic system: 180 ltr
Front axle: 40 ltr
Rear axle: 40 ltr
Torque converter and transmission: 47 ltr

**HYDRAULIC SYSTEM**

Type: Komatsu CLSS (Closed Centre Load Sensing System)
Hydraulic pump: Variable piston pump
Working pressure: 320 bar
Maximum pump flow: 205,5 ltr/min
No. of hydraulic/bucket cylinders: 2/1
Type: Double-action
Bore diameter x stroke: 130 x 713 mm
Bucket cylinder: 150 x 535 mm

**STEERING SYSTEM**

System: Articulated frame steering
Type: Completely hydraulic power steering
Steering angle to either side: 37°
Steering pump: Variable piston pump
Working pressure: 250 bar
Pumping capacity: 137,7 ltr/min
No. of steering cylinders: 2
Type: Double-action
Bore diameter x stroke: 75 x 442 mm
Smallest turn (outer edge of the tyre 23.5 R25): 6,660 mm

**CABIN**

Two-door SpaceCab™ in conformity with ISO 3471 with ROPS (roll over protective structure) in conformity with SAE J1040c and FOPS (falling object protective structure) in conformity with ISO 3449. The air-conditioned pressurised cabin is mounted upon hydrobearings and is noise dampened.

**ENVIRONMENT**

Engine emissions: Fully complies with EU Stage IIIA and EPA Tier III exhaust emission regulations

Noise levels
- LwA external: 106 dB(A) (2000/14/EC Stage 2)
- LpA operator ear: 72 dB(A) (ISO 6396 dynamic test)
Measurements and working specifications

<table>
<thead>
<tr>
<th>Bucket type</th>
<th>Universal</th>
<th>Earthmoving</th>
<th>Stockpile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bucket capacity (heaped, ISO 7546) m³</td>
<td>3.1</td>
<td>3.1</td>
<td>3.25</td>
</tr>
<tr>
<td>Sales code</td>
<td>C01</td>
<td>C02</td>
<td>C03</td>
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<tr>
<td>Material density t/m³</td>
<td>1.8</td>
<td>1.8</td>
<td>1.8</td>
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<tr>
<td>Bucket weight kg</td>
<td>1.420</td>
<td>1.480</td>
<td>1.640</td>
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<tr>
<td>Static tipping load, straight kg</td>
<td>15.300</td>
<td>15.220</td>
<td>14.905</td>
</tr>
<tr>
<td>Static tipping load, 37° articulated kg</td>
<td>13.595</td>
<td>13.515</td>
<td>13.210</td>
</tr>
<tr>
<td>Break-out force hydraulic kN</td>
<td>173</td>
<td>172</td>
<td>161</td>
</tr>
<tr>
<td>Lifting capability hydr. at ground level kN</td>
<td>177</td>
<td>172</td>
<td>161</td>
</tr>
<tr>
<td>Operating weight (without add. counterw.) kg</td>
<td>17.570</td>
<td>17.630</td>
<td>17.790</td>
</tr>
<tr>
<td>Turning radius at corner of tyres mm</td>
<td>6.660</td>
<td>6.660</td>
<td>6.660</td>
</tr>
<tr>
<td>Turning radius at bucket edge mm</td>
<td>7.190</td>
<td>7.250</td>
<td>7.215</td>
</tr>
<tr>
<td>a Reach at 45° mm</td>
<td>1.130</td>
<td>1.290</td>
<td>1.165</td>
</tr>
<tr>
<td>b Dump height at 45° mm</td>
<td>2.990</td>
<td>2.830</td>
<td>2.915</td>
</tr>
<tr>
<td>c Hinge pin height mm</td>
<td>4.095</td>
<td>4.095</td>
<td>4.095</td>
</tr>
<tr>
<td>d Height top edge of bucket mm</td>
<td>5.465</td>
<td>5.465</td>
<td>5.465</td>
</tr>
<tr>
<td>e Digging depth mm</td>
<td>80</td>
<td>80</td>
<td>110</td>
</tr>
<tr>
<td>f Max. loading height at 45° mm</td>
<td>3.810</td>
<td>3.810</td>
<td>3.810</td>
</tr>
<tr>
<td>A Overall length, bucket grounded mm</td>
<td>8.105</td>
<td>8.330</td>
<td>8.200</td>
</tr>
<tr>
<td>B Wheelbase mm</td>
<td>3.300</td>
<td>3.300</td>
<td>3.300</td>
</tr>
<tr>
<td>C Bucket width mm</td>
<td>2.915</td>
<td>2.915</td>
<td>2.925</td>
</tr>
<tr>
<td>D Width over tyres mm</td>
<td>2.765</td>
<td>2.765</td>
<td>2.765</td>
</tr>
<tr>
<td>E Track width mm</td>
<td>2.160</td>
<td>2.160</td>
<td>2.160</td>
</tr>
<tr>
<td>F Ground clearance mm</td>
<td>450</td>
<td>450</td>
<td>450</td>
</tr>
<tr>
<td>H Overall height mm</td>
<td>3.390</td>
<td>3.390</td>
<td>3.390</td>
</tr>
</tbody>
</table>

All measurements with tyres 23.5 R25. Details of dumping heights and reach to cutting edge or bolt-on cutting edge.
<table>
<thead>
<tr>
<th>Change in data caused by:</th>
<th>Add. counterweight (rear)</th>
<th>Add. counterweight (rear + sides)</th>
<th>Tyres 23.5 R25 XMINE D2 L5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating weight</td>
<td>+ 325 kg</td>
<td>+ 525 kg</td>
<td>+ 720 kg</td>
</tr>
<tr>
<td>Static tipping load, straight</td>
<td>+ 840 kg</td>
<td>+ 1.250 kg</td>
<td>+ 550 kg</td>
</tr>
<tr>
<td>Static tipping load, 37° articulated</td>
<td>+ 730 kg</td>
<td>+ 1.100 kg</td>
<td>+ 500 kg</td>
</tr>
<tr>
<td>Overall length (A)</td>
<td>+ 140 mm</td>
<td>+ 140 mm</td>
<td>-</td>
</tr>
<tr>
<td>Reach at 45°</td>
<td>-</td>
<td>-</td>
<td>- 25 mm</td>
</tr>
<tr>
<td>Dump height at 45°</td>
<td>-</td>
<td>-</td>
<td>+ 45 mm</td>
</tr>
<tr>
<td>Width over tyres</td>
<td>-</td>
<td>-</td>
<td>+ 35 mm</td>
</tr>
<tr>
<td>Overall height (H)</td>
<td>-</td>
<td>-</td>
<td>+ 45 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material density (kg/m³)</th>
</tr>
</thead>
</table>

- Basalt ..................................................... 1.960
- Bauxite, Kaolin ................................. 1.420
- Earth, dry, ex store .......................... 1.510
- Earth, wet, excavated ...................... 1.600
- Gypsum, broken .................................. 1.810
- Gypsum, crushed ............................... 1.600
- Granite, broken ................................ 1.660
- Limestone, broken ............................ 1.540
- Limestone, crushed ............................ 1.540
- Gravel, unscreened ............................ 1.930
- Gravel, dry ........................................ 1.510
- Gravel, dry, 6-50 mm ......................... 1.690
- Gravel, wet, 6-50 mm .......................... 2.020
- Sand, dry, loose ............................... 1.420
- Sand, damp ......................................... 1.690
- Sand, wet ........................................... 1.840
- Sand and clay, loose .......................... 1.600
- Sand and gravel, dry ......................... 1.720
- Sandstone ........................................... 1.510
- Slate ................................................. 1.250
- Slag, broken ....................................... 1.750
- Stone, crushed ..................................... 1.600
- Clay, natural ....................................... 1.660
- Clay, dry ............................................. 1.480
- Clay, wet ............................................ 1.660
- Clay and gravel, dry ............................ 1.420
- Clay and gravel, wet ........................... 1.540

* Market compatible
WHEEL LOADER

STANDARD EQUIPMENT

- Komatsu SAA6D107E-1 turbocharged common rail direct injection diesel engine, EU Stage IIIA/EPA Tier III compliant
- Alternator 60 A/24 V
- Starter motor 5.5 kW/24 V
- Batteries 143 Ah/2 × 12 V
- Counterweight
- Electronically controlled, load stabiliser (ECSS) 2nd generation
- Hydrostat-driven radiator fan with reversing function
- 2-spool main control valve
- PPC fingertip control, two levers
- Central automatic lubrication
- Fully hydraulic brake system
- Engine cooling fluid corrosion resistor
- Water separator
- Heavy-duty axles
- Electronically controlled ECMV automatic transmission with mode selector and variable transmission cut-off
- Working mode selection system
- Komtrax™ Komatsu tracking system
- EMMS (Equipment Management Monitoring System) with self-diagnostic function and maintenance display
- SpaceCab™ ROPS/FOPS hyper viscous mounted cab with two doors, tinted safety glass windows, front window wiper with intermittent feature, rear window wiper, sun visor, cigarette lighter, ashtray, luggage shelf, floor mat, hot and cool box, heated rear window, vertically and horizontally adjustable steering column, rear view mirror
- Air-suspended, heated seat with seat belt (EU standard)
- Air conditioning
- CD-radio
- 2 halogen main headlights
- 2 spotlights at front and rear
- Reversing light
- Horn
- Handrails on left/right
- External fluid drains
- Emergency steering system
- Vandalism protection

The WA380-6 is equipped in accordance with the safety regulations of the machinery guidelines 89/392 EWG ff and EN474.

OPTIONAL EQUIPMENT

- High-lift equipment
- Add. counterweight 325 kg
- Additional side counterweight 200 kg
- 3-spool main control valve
- Limited-slip differential (LSD) front and rear
- Torque converter lock-up
- Hydrostat-driven radiator fan with automatic reversing function
- Joystick steering with integrated F/R transmission function, 2-stage
- Tyres 23.5 R25 L2, 3, 4, 5
- Tyres 650/65 R25
- Universal bucket 3.1 m³
- Universal bucket (quick coupler mount) 3.1 m³
- Universal bucket (quick coupler mount) 3.25 m³
- Universal bucket (quick coupler mount) 3.25 m³
- Universal bucket (quick coupler mount) 3.25 m³
- Universal bucket (quick coupler mount) 3.25 m³
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- Electronic 2-lever control (EPC) including:
  - Bucket stop modulation
  - Boom stop pre-setting
  - Semiautomatic dig function
  - Filling tool for central lubrication system
  - Climate control
  - 12 Volt power supply
  - Sun roller blind
  - Back-up alarm
  - Beacon light
  - Roof rail
  - Additional lights front and rear
  - Cold area kit (engine and cab pre-heating)
  - Turbo II pre-filter
  - Electronic anti-theft lock
  - Full rear fenders
- Battery main switch
- Fire extinguisher
- Biodegradable oil for hydraulic system
- Special paintwork
- Anti-corrosion specification
- Waste-handler specification
- Tool-set
- Further equipments on request