



A Caterpillar Brand

**THE PERFORMANCE
YOU NEED.
THE SUPPORT
YOU EXPECT**





THE PERFORMANCE YOU NEED. THE SUPPORT YOU EXPECT.

As part of our commitment to our growing customer base worldwide, Caterpillar is proud to serve utility customers through our SEM brand. Formerly Shandong SEM Machinery Co., Ltd, Caterpillar (Qingzhou) Ltd. (CQL) offers both SEM and Cat branded products.

We're committed to continually expanding our offerings and improving the quality of our products. We focus on research and development and follow the Caterpillar Production System and advanced management philosophies to safely, efficiently and profitably manufacture products. We have recently acquired additional property to expand capacity of our CQL lines as well as other key components.

SEM equipment is targeted at utility customers for Chinese domestic and select growth markets around the world. SEM products meet or exceed

regional industry requirements for quality and reliability and target customers who emphasize initial acquisition cost over long-term total cost of ownership.

We have a well-established distribution network in more than 80 countries, including the following regions: Southeast Asia, Africa and Middle East, Russia and Eurasia countries, and Latin and Central America.



TIMELINE: A HISTORY OF GROWTH

1958	1976	1985-1990	2003	2008	2009	2010	2011	2013	2016
SEM founded in Qingzhou	First countershaft wheel loader in China, JZ425, launched	SEM assembly, machining and parts painting facilities established	Caterpillar / SEM Joint Venture established	SEM fully acquired by Caterpillar	First Global SEM Dealer Conference held in Beijing, with participation from dealers representing 14 countries	First SEM Soil Compactor launched	First SEM Motor Grader and Landfill Compactor launched; more than 1,500 machines exported for first time	Shandong SEM Machinery, Ltd. becomes Caterpillar (Qingzhou) Ltd.	SEM brand becomes a Caterpillar brand

OUR SUCCESS LEADS TO OUR CUSTOMERS' SUCCESS

Our business development relies on customer satisfaction. This is our operating principle and a commitment to our customers. We know that when they succeed, we succeed. We are committed to developing products with an open mind and creating markets with innovative concepts.

This philosophy has allowed SEM to become a leader in the industry, with our products highly regarded by our customers and by Caterpillar.

In addition to product leadership, CQL is committed to being a leader in our communities and our country. We take responsibility for promoting

progress in our society, protecting the environment, helping vulnerable groups and participating in community development. From building roads and digging wells, to donating education funds, to responding to natural disasters, CQL is committed to being a good corporate citizen.



AWARD-WINNING PRODUCTS AND FACILITIES

2016 Machinery Award
Top 50 Products of China Construction
SEM656D Wheel Loader

2014 Technology Innovation Award
Top 50 Products of China Construction
SEM816 LGP Track-Type Tractor

2013 Top 50 Products of China
Construction Machinery
SEM658C Wheel Loader

Caterpillar Chairman's Quality Award
SEM 650B Wheel Loader

Caterpillar Chairman's Quality Award Finalist
SEM650B LNG Wheel Loader

2013 Top 10 Scraper Machinery
SEM658C Wheel Loader

National Machinery Industry Outstanding
Workshop Award
SEM Axle/Transmission Value Stream facility



WHEEL LOADERS

A MODEL FOR EVERY APPLICATION

SEM Wheel Loaders have been manufactured in China for nearly 60 years. We offer compact, small and midsize loaders to meet the needs of every application. Our SEM 66X Series Wheel Loaders are designed for heavy working conditions and higher load capacities. SEM 65X Series Wheel Loaders feature low-speed engines for increased efficiency and a number of productivity enhancing features. The SEM 63X Series Wheel Loaders are the ideal choice for light working conditions, with an enlarged bucket and improved dump height for a 10 percent boost in productivity. SEM 61X Series Wheel Loaders features 10% higher dump clearance than others and provides various work tools through quick coupler.

MODEL	BUCKET CAPACITY (m ³)	RATED POWER (kW)
SEM616B	0.9	55
SEM618B	1.0	60
SEM630B	1.53	92
SEM636B	1.7	92
SEM638	1.53	92
SEM639B	1.7	92
SEM639C	1.7	97
SEM652B	2.7	162
SEM655D	3.0	162
SEM656D	3.0	162
SEM658C	3.0	162
SEM659C	3.0	162
SEM660B	3.5	178
SEM660D	4.0	178
SEM668C	3.5	175
SEM669C	3.5	175



TRACK-TYPE TRACTORS

HIGH EFFICIENCY AND RELIABILITY

As a product brand of Caterpillar, SEM is able to leverage over 100 years of Caterpillar technology and design experience to provide a series of track-type tractors that meet the needs of a variety of applications. The hydrostatic system on all models delivers higher efficiency and maximum output traction force. The world-class undercarriage ensures high reliability and resistance to wear, and the planetary final drive design delivers increased torque ratio for higher transmission efficiency and lower maintenance costs. Joystick controls provide comfortable, precise blade operation. Advanced structure welding techniques and stress analysis ensure durability and long life.

MODEL	OPERATION WEIGHT (kg)	FLYWHEEL ENGINE POWER (kW/hp)
SEM816	17230	120/160
SEM816 LGP	19720	120/160
SEM822	23680	162/220
SEM822 LGP	25400	162/220
SEM822 WH	28500	162/220



MOTOR GRADERS

EXCEPTIONAL COMFORT AND PRODUCTIVITY

SEM Motor Graders feature a large cab mounted on the front frame for an exceptional view to the blade and front axle even during articulation. With a height of 1.9 meters, the cab is about 30 percent larger than competitive models, for exceptional operator comfort and productivity. A 7-position link bar with electric over hydraulic controls allows ease of operation from within the cab, and optimum blade reach capability improves productivity. A standard blade float function allows the blade to lower without hydraulic pressure for increased versatility. Maximum strength and durability are delivered by the A-frame tubular design drawbar, a flanged box section that removes welds from high-stress areas, and continuous top and bottom plate construction.

MODEL	OPERATION WEIGHT (kg)	RATED POWER (kW)
SEM919	15130	140
SEM921	15930	162
SEM922 AWD	16550	162



SOIL COMPACTORS

HIGH PERFORMANCE AND VERSATILITY

SEM Soil Compactors are essential tools in a variety of applications, including road, railway, airfield and industry yard compaction. The 50-mm drum delivers compaction performance up to 15 percent greater than competitive models. The eccentric vibrate pod design extends system life by up to 50 percent, with a sealed gear that eliminates contamination and prolongs bearing life. The electronically controlled transmission is easier to shift, reducing operating fatigue, improving efficiency and delivering high reliability. Reliability is further enhanced by a three-level alarm system that diagnoses issues and notifies the operator with indicator lights and audio alarms.

MODEL	OPERATION WEIGHT (kg)	RATED POWER (kW)
SEM518	18000	129
SEM520	20000	129
SEM522	22000	140



CAT® PRODUCT LINK™

MACHINE MONITORING AND MANAGEMENT TOOL

Effective equipment management is essential to reducing operating costs and improving overall site operations. Cat® Product Link™ is an important tool in this effort, monitoring machines and communicating relevant data about their condition and performance in a timely and effective manner. Product Link provides all-around monitoring of the equipment fleet, including tracking, remote monitoring and management of the maintenance cycle. The system can also conduct targeted monitoring of a single piece of equipment. The system features an intuitive interface, and data can be easily transmitted to other commercial software to meet different application requirements.



FIRST-CLASS SPEED, SERVICE AND SUPPORT

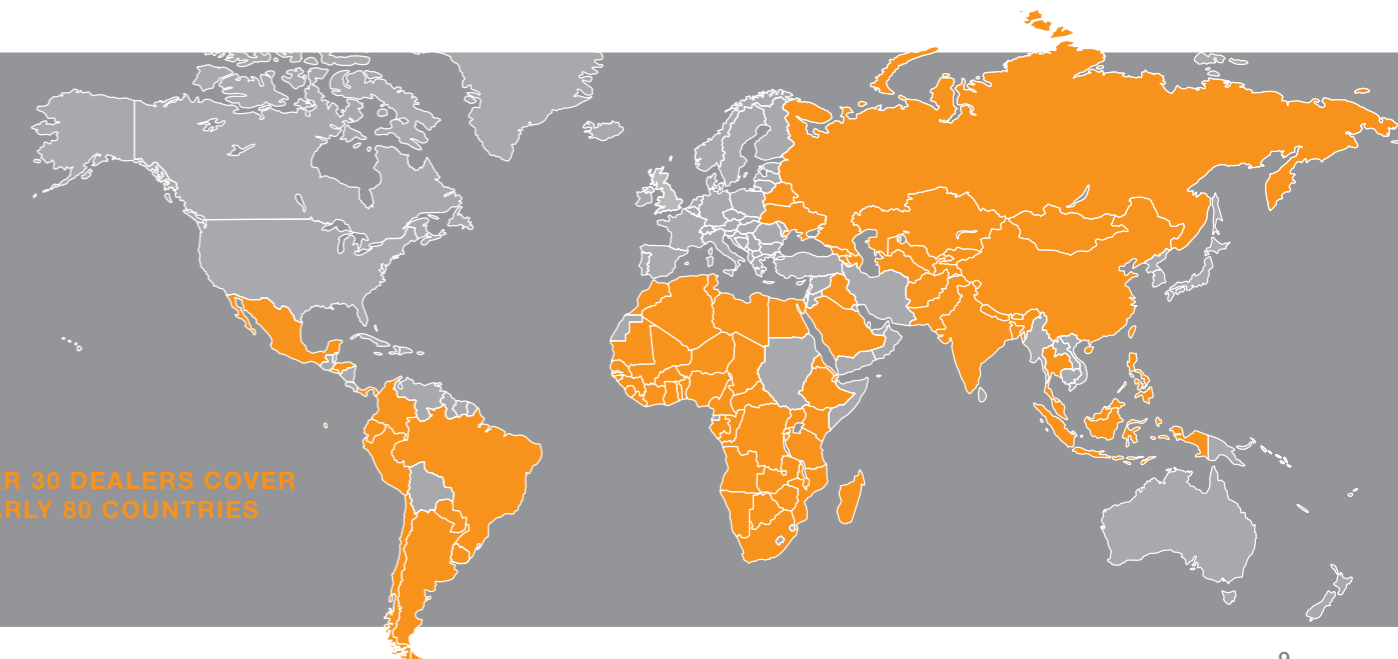
SEM is committed to providing the support customers need before, during and after their equipment goes to work on the job site. We promise first-class response speed, service skills and parts support. In addition, our after-market consulting services help sites address overall challenges beyond equipment management.

All SEM repair technicians must take required training, pass a strict evaluation and gain technical authentication on related products. We provide hands-on repair training for technicians at the well-equipped Training Center of Caterpillar, as well as product training for key customers and students at Weifang Engineering Vocational College, which is jointly operated by CQL.

CQL provides a one-year quality assurance and warranty period and guarantees equipment service at customer sites throughout China within 24 hours. The CQL parts center is located at the northeast of

our headquarters location, covering 7,020 square meters and manned by more than 60 employees. Its second phase construction layout is about 5,000 square meters. Currently, CQL parts center has about 15,000 categories of parts for SEM products. The parts center not only supplies parts to China domestic dealers, but also to overseas dealers, and it is the storage and logistic center for SEM brand parts. An additional eight parts centers are located throughout China to guarantee timely parts delivery.

OVER 30 DEALERS COVER
NEARLY 80 COUNTRIES





OUR VALUES IN ACTION

CQL is proud to be an integral part of Caterpillar's commitment to China. We consider our reputation as one of our greatest assets and share the responsibility to protect it. Our values define what we stand for and believe in, and we are committed to putting these values into action every day.

INTEGRITY

THE POWER OF HONESTY

EXCELLENCE

THE POWER OF QUALITY

TEAMWORK

THE POWER OF WORKING TOGETHER

COMMITMENT

THE POWER OF RESPONSIBILITY

SUSTAINABILITY

THE POWER OF ENDURANCE



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Materials and specifications are subject to change without notice. Featured machines in photos may include optional equipment. Check with your local SEM dealer for available options.

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