



EVERY™ TON. QSK23



**CERTIFIED AND NON-CERTIFIED ENGINES
FOR MINING APPLICATIONS**

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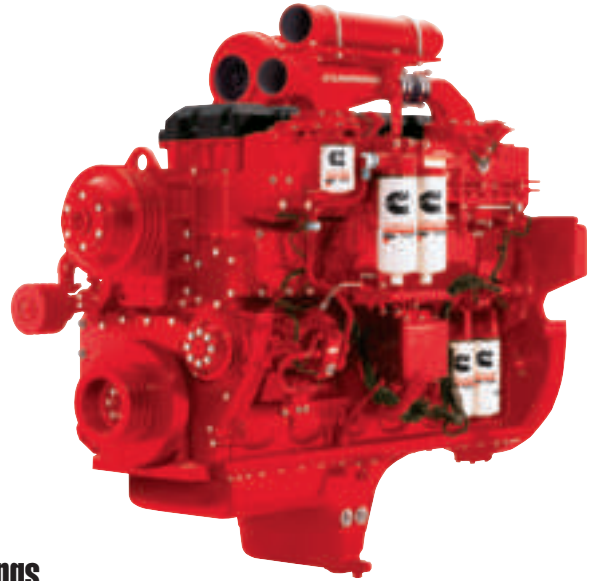
QSK23

Performance.

The QSK23 combines rugged productivity with a high power density and advanced engine management technology to deliver the lowest operating cost per ton of any mining engine in its class. Its high-pressure injection (HPI) fuel system (up to 29,000 psi/200,000 kPa) results in more complete combustion for superior engine response across the entire power curve and the lowest fuel consumption in its class. Its compact and balanced inline six-cylinder design and proven durability in the toughest mine sites make it a great choice to repower vee engines of similar displacement.

The one-piece Ferrous Cast Ductile (FCD) iron pistons and robust cylinder head work to improve long-term durability and dependability. A one-piece cast-iron block, forged-steel crankshaft and a large-diameter camshaft ensure long, reliable performance between overhauls, with the capability of multiple rebuild cycles.

Rated from 760-950 hp (567-708 kW) in both emissions-certified and non-certified specifications, the QSK23 is the ideal choice for haul trucks, excavators and other heavy-duty mining equipment around the world. It has the proven technology you need to raise productivity and lower costs. Every ton.



Ratings

ENGINE MODEL	ADVERTISED HP (kW) @ RPM	PEAK TORQUE LB-FT (N•M) @ RPM	RATING TYPE
TIER 2 CERTIFIED RATINGS			
QSK23 950	950 (708) @ 2100	2897 (3928) @ 1400	INTERMITTENT
QSK23 950	950 (708) @ 1800	2785 (3776) @ 1400	INTERMITTENT
QSK23 860	860 (641) @ 2100	2785 (3776) @ 1400	INTERMITTENT
QSK23 860	860 (641) @ 1800	2785 (3776) @ 1400	INTERMITTENT
QSK23 760	760 (567) @ 2100	2558 (3468) @ 1350	INTERMITTENT
QSK23 760	760 (567) @ 1800	2558 (3468) @ 1350	CONTINUOUS
NON-CERTIFIED RATINGS			
QSK23 950	950 (708) @ 2100	2893 (3922) @ 1400	INTERMITTENT
QSK23 900	900 (671) @ 2100	2700 (3661) @ 1400	INTERMITTENT
QSK23 860	860 (641) @ 2100	2600 (3525) @ 1400	INTERMITTENT
QSK23 800	800 (597) @ 2100	2440 (3308) @ 1400	INTERMITTENT
QSK23 760	760 (567) @ 2100	2401 (3255) @ 1300	INTERMITTENT

Additional ratings may be available. Check with your Cummins distributor or dealer.

Specifications

ENGINE TYPE	INLINE 6-CYLINDER	
ASPIRATION	TURBOCHARGED AND CHARGE AIR COOLED	
DISPLACEMENT	1,404 CU IN	23 LITERS
BORE AND STROKE	6.69 IN X 6.69 IN	170 MM X 170 MM
OIL SYSTEM CAPACITY	54.8 U.S. QT	52 LITERS
COOLANT CAPACITY	48.8 U.S. QT	46.2 LITERS
LENGTH	78.5 IN	1994 MM
WIDTH	42.0 IN	1067 MM
HEIGHT	67.7 IN	1720 MM
DRY WEIGHT	5,709 LB	2,590 KG
WET WEIGHT	6,300 LB	2,858 KG

Features And Benefits.

- High-pressure injection (HPI) fuel system provides optimum combustion for low emissions and good fuel economy.
- One-piece cast-iron block features wide cylinder spacing for long life and excellent rebuild capability.
- One-piece FCD iron pistons provide the strength and durability to handle high cylinder pressures for long life.
- Twin piston-cooling nozzles direct cooling streams of oil beneath each piston crown and bowl rim for long life in high-load applications with increased reliability.
- Precision-honed FCD iron cylinder liners are machined for durability. Expansion and contraction will not create excess wear.
- Electronic control system allows users to tailor fuel system calibrations to application requirements. CENSE™ electronic monitoring reads engine operating conditions and automatically adjusts for peak operation.
- Large 105-mm camshaft handles the loads associated with high-pressure fuel injection.
- Seven-bolt cylinder head supports increased power output with improved breathing and improved cooling efficiency.
- Two-stage Cummins oil filters, also available as Fleetguard®, combine full-flow and bypass filtration to effectively remove harmful sludge and up to three times as many contaminants to reduce engine wear.

A Name You Can Trust. Every Time. Everywhere.

Cummins possesses a vast amount of knowledge in mine operations. We are ready to assist you with experienced and dedicated local mining business leaders and high-horsepower-engine technical support – fully backed by the strength of Cummins industry-leading technology and total support of top management. When you buy a piece of equipment with a Cummins QSK23, you get more than just an engine. You get:

- Full life cycle support, with proven engineering expertise from engine commissioning through final overhaul.
- Immediate parts and service availability.
- An established worldwide network with over 500 distributor facilities in nearly 190 countries, dedicated and empowered to service your needs. Every hour, every day.
- The best warranty in the business, which includes full coverage for unlimited hours during the first year, extending through two years or 2,000 hours (whichever comes first). The base warranty also includes 3-year/10,000-hour standard protection on major components. Extended warranties are available as well.



With the strength of Cummins at your side, your mine can process more material with increased uptime and greater productivity at a low cost per ton. Most important, our worldwide presence and comprehensive support make Cummins a proven, committed mining partner you can always depend on.

For more about the proven advantages of Cummins QSK23 and all our advanced technology for mining applications, see your local Cummins distributor.



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Bulletin 4087145 Printed in U.S.A. 9/08
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Every™ Power.

Cummins Power Products.





In today's business world, you need a total package – one that delivers value of ownership, the most advanced technology and second-to-none support. Cummins Power Products offers a total solution for your power-unit needs, with a full range of diesel and compressed gas products from 60 hp to 1500 hp (45-1119 kW) and options designed to meet your specific needs.

Power By Design.

What is a power unit? Essentially, a power unit is “torque in a box,” specifically engineered to provide a solution for a mechanical power need. Every product we make is powered exclusively by a Cummins engine, the most rugged, reliable and advanced technology available. Customized to the unique specifications necessary to meet your power demands, Cummins Power Products designs the right product, with the right fit, to do the job right, backed by our global parts and service network.

Ready For Tier 4 Final.

Our Tier 4 Final technology solution for power units builds on the proven durability of our Tier 3 and Tier 4 Interim power units. Cummins has a unique advantage in that we design and develop all of the critical engine subsystems and aftertreatment components. Cummins Power Products then upfits the base engine and validates the entire power unit design to offer a completely integrated power package. The total system is optimized to minimize installation impact and achieve the lowest cost of operation.

Every Application.

There is added value in working with Cummins Power Products. We eliminate the need to search for the right components. We have done that for you, and the result is a package designed specifically for your job. We offer turnkey solutions in both open and enclosed platforms from a standard line of base-engine models or a customized unit specifically engineered for a unique piece of equipment in virtually any application. We have the people, processes and products to make it happen. Cummins Power Products employs a qualified engineering staff with decades of experience in Pro/ENGINEER design. Our power units are built for everything from brush chippers and rock crushers to dewatering pumps and rail maintenance units. And if your need for power is larger than that, we also work on mud pumps, frac rigs and other heavy-duty applications.



Durable and reliable power for oil field equipment.



Locomotive and rail maintenance track packs keep business moving.

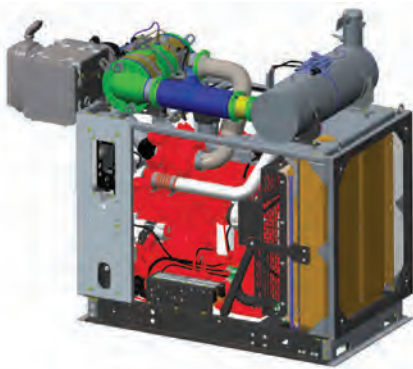
The Cummins Power Products Difference.

Quality. Experience. Support. All customized for you. We don't take these things lightly. Our quality standards are unmatched in the power unit industry. Through our state-of-the-art production processes and a battery of product tests, each power unit provides unparalleled quality and dependability. Since 1997, we have produced over 30,000 power units designed to unique standards. And each one has the backing of Cummins worldwide parts and service network to support you.

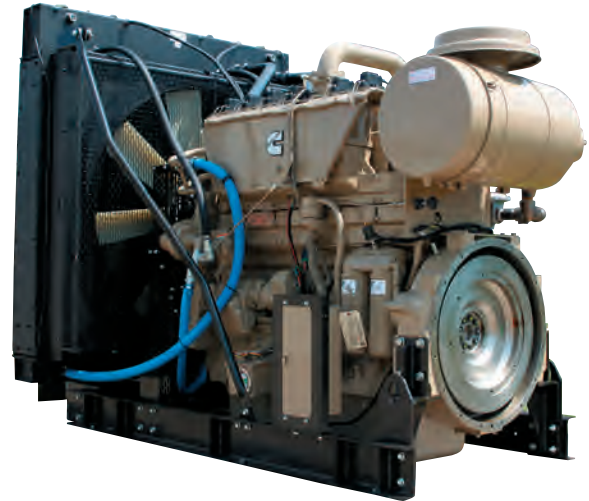
1,500 By Design. One For You.

With over 1,500 options available, a design may already exist to fit your exact need. We have already done the work to meet Tier 4 emissions requirements, with a number of models available. If no existing models meet your need, Cummins Power Products utilizes virtual prototyping to ensure a correct design and fit for your specific application. Our prototyping is very competitive, and allows close accuracy to the actual part production pricing. Some of the customizable options available include:

- Electronic or mechanical controls
- Cooling packages
- Mounting options
- Intake and exhaust locations
- Instrument panel locations



QSB6.7 Tier 4 Final Standard Package



Every Strength.

There is power in our power units. Cummins Power Products power units last longer because they are built better. Our enclosure housings use 12-gauge steel. All metals are powder-coated, which increases chip resistance and allows our units to pass 1,000-hour salt spray tests. Components are bolted, not welded, so they resist mounting distortion and are easier to service. Each engine design is fully tested by Cummins Power Products to meet or exceed Cummins application guidelines. In addition, the electrical systems on each of our power units are tested before they leave our factory. Our power units are built and tested to handle the most extreme conditions.



Cummins Power Products' advanced engineering design process utilizes 3D prototyping in a virtual environment to customize each power unit to the exact needs of the customer and application.

Our Confidence. Total Coverage.

The warranty for Cummins Power Products power units mirrors the Cummins Industrial warranty. The first year is completely covered regardless of the number of hours run. Coverage continues through the second year or until 2,000 hours of operation have been reached (whichever occurs first).

World-Class Service. Every Time.

Cummins Power Products is a global provider of power units. Our value with customers overseas is realized in the dependability and durability of our products. We've shipped units to customers all over the world. Each power unit is backed by Cummins worldwide parts and service network. With over 6,600 authorized service locations around the world, your power unit will have support wherever you need it. Qualified technicians and Genuine Cummins Parts are never far away, even in the most remote location.



Every Advantage.

Cummins QuickServe® offers you factory-trained technicians, the most sophisticated diagnostic and repair tools in the industry and the largest international parts and service network of any engine manufacturer. Our worldwide team of mobile service technicians is always ready to deliver service when and where you need it. Every minute. Every day. Every year. Plus, Cummins distributors have access to an entire library of parts and service information for Cummins engines on the Internet. QuickServe Online provides engine part numbers, diagrams, service bulletins and alerts, up-to-date supersessions and more – 24 hours a day, for nearly 11 million Cummins engines. The Cummins Power Products web site is linked through QuickServe Online for rapid serial number identification.



Every Contact.

Cummins Power Products offer the best long-term value for your equipment needs and cost of ownership, whether your power unit is one of our standard configurations or designed specifically for your application and equipment. To learn more about Cummins Power Units, and to realize the power of our design, contact your local Cummins distributor location. Find out how we can design the exact power to work for you.

Cummins Power Products.

Engine Ratings Gross Horsepower (w/o Fan)

ENGINE MODEL	EMISSIONS TIER	HORSEPOWER RANGE (BHP)	HORSEPOWER RANGE (kW)	DISPLACEMENT (CU IN)	LENGTH (IN)	OPEN			ENCLOSED				
						WIDTH (IN)	HEIGHT (IN)	WEIGHT (LB)	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)	WEIGHT (LB)	CENTERLINE HEIGHT (IN)
Diesel Products													
QSF2.8 CAC	4F	49-74	37-55	171	50.15	38.00	50.60	1187	46.28	37.53	50.60	NA	12.5
QSF2.8 Non-CAC	4F	49-65	37-48	171	50.15	38.00	50.60	1187	46.28	38.53	50.60	NA	12.5
B3.3NA-P	4i	60-65	45-48	199	40.20	33.68	47.20	842	47.88	30.00	53.28	884	12.50
B3.3T-P	4i	74	55	199	40.20	33.68	47.60	842	36.98	30.00	53.28	884	12.50
B3.3TAA-P	3	75-85	56-63	199	53.24	39.49	58.56	1017	41.75	33.68	58.56	1121	12.50
QSB3.3-P	4i	85-120	63-89	199	NA	NA	NA	NA	43.82	29.46	53.05	NA	12.50
QSB3.3-P	3	80-110	60-82	199	53.24	39.49	58.56	1017	41.75	33.68	58.56	1121	12.50
QSF3.8	4F	74-130	55-97	232	65.60	52.00	50.50	1740	64.67	49.50	60.00	NA	13.13
B4.5-P	2	80	60	275	47.40	29.25	69.40	1208	47.44	31.54	58.13	1332	13.06
B4.5T-P	2	92-99	68-74	275	52.30	29.25	65.40	1208	43.00	31.55	60.34	1332	13.06
QSB4.5	4F	121-173	90-129	275	56.52	32.93	67.06	1860	56.52	32.93	67.06	1950	13
QSB4.5-P	4i	110-163	82-122	272	59.40	38.50	56.40	1431	53.80	35.00	56.40	1574	13.14
QSB4.5-P	3	110-170	82-127	272	57.45	31.88	65.40	1270	48.00	31.88	61.82	1461	13.14
QSB6.7	4F	173-300	129-223	408	81.00	45.27	69.06	2590	81.09	45.27	69.06	2750	14
QSB6.7-P	4i	146-173	109-129	409	65.31	40.82	57.13	1915	58.00	36.30	66.50	2165	14.10
QSB6.7-P	4i	190-300	142-223	409	65.31	40.82	57.13	1915	58.00	36.30	66.50	2165	14.10
QSB6.7-P	3	190-275	142-205	409	68.48	33.91	81.80	1800	58.00	33.91	69.91	2050	14.10
QSC8.3-P	3	305	172-227	506	77.25	41.32	82.26	2380	64.75	41.32	81.03	2755	16.50
QSL9	4F	250-380	186-283	543	86.11	53.57	76.41	3150	86.11	53.57	76.41	3573	16.5
QSL9-P	4i	230-380	172-283	543	74.20	41.30	61.70	NA	64.80	41.30	72.40	2794	16.50
QSL9-P	3	300-365	224-272	543	77.25	41.32	82.26	2380	64.75	41.32	81.03	2755	16.50
QSM11-P	3	300-400	224-298	660	77.38	46.88	70.07	3394	74.49	43.10	82.22	3718	20.00
QSX11.9	4i	350-500	261-373	726	85.90	48.00	78.50	4121	NA	NA	NA	NA	20.00
QSX15	4F	472-675	352-503	915	98.50	71.83	84.60	6250	98.50	71.83	84.60	6656	20
QSX15-P	4i	400-600	298-447	912	87.80	57.50	85.50	5034	NA	NA	NA	NA	20.00
QSX15-P	3	375-630	280-470	915	106.25	62.75	84.05	5140	106.25	62.75	94.29	5750	20.00
QSK19-P	3	560-700	418-522	1159	115.13	61.88	78.78	6570	NA	NA	NA	NA	16.02
QSK19-P	2	525-700	391-522	1150	116.13	62.81	78.64	7100	NA	NA	NA	NA	15.88
QSK19-P	2	755-800	563-597	1150	116.13	62.81	78.64	7200	NA	NA	NA	NA	16.00
QSK19-P	1	755-800	563-597	1150	114.25	62.00	78.52	6530	NA	NA	NA	NA	16.02
QSK23-P	2	760-950	567-708	1412	NA	NA	NA	NA	NA	NA	NA	NA	23.00
QST30-P	1	760-1200	567-895	1861	156.00	59.71	92.27	11400	NA	NA	NA	NA	27.00
QST30-P	1	1350-1500	1007-1119	1861	131.34	95.00	110.66	16120	NA	NA	NA	NA	27.00
QST30-P	2	760-1200	567-895	1861	142.00	82.00	96.71	11400	NA	NA	NA	NA	27.00
QST30-P	2	1350-1500	1007-1119	1861	NA	NA	NA	NA	NA	NA	NA	NA	27.00
QSK38-P	2	920	686	2300	146.66	86.13	103.06	NA	NA	NA	NA	NA	30.00
Natural Gas Products													
G5.9	NA	41-99	31-74	359	65.74	33.91	64.72	1530	64.52	33.91	70.41	1641	17.65
G5.9e	NA	70-99	52-74	359	NA	NA	NA	NA	68.02	33.91	69.51	1899	17.65
G8.3	NA	99-135	74-101	505	67.38	41.32	73.80	1860	60.69	41.32	71.75	2525	17.75
G8.3e	NA	99-118	74-88	505	NA	NA	NA	NA	72.81	41.32	69.26	2444	17.75
GTA8.3 SLB	NA	175	131	505	78.50	48.88	71.50	NA	77.25	43.90	75.50	NA	17.75
G855	NA	157-188	117-140	855	92.50	42.76	66.38	3900	NA	NA	NA	NA	22.38
G855e	NA	157-188	117-140	855	83.17	42.70	77.59	3944	NA	NA	NA	NA	22.38
GTA855	NA	213-286	159-213	855	100.00	59.76	74.25	4596	NA	NA	NA	NA	22.38
GTA855e	NA	225	168	855	93.00	62.25	84.75	NA	NA	NA	NA	NA	22.38
KTA19GC	NA	265-420	198-313	1125	112.57	60.00	74.87	6495	NA	NA	NA	NA	21.13
KTA19GC SLB	NA	380-420	283-313	1125	104.96	62.25	80.50	6495	NA	NA	NA	NA	21.13
KTA38GC SLB	NA	635-850	474-634	2300	153.78	85.25	100.75	16500	NA	NA	NA	NA	29.89
KTA38GC-E	NA	635-760	474-567	2300	NA	NA	NA	NA	234.60	85.50	152.30	26,114	29.89

- Dimensions and weights will vary slightly depending on the exact engine configuration.
- All ratings are restricted unless otherwise noted. Some ratings are intermittent.
- Height dimensions are measured from bottom of rail to highest point on unit, usually the muffler.
- Natural gas power unit centerline height indicated with high-capacity oil pans.
- 4i Refers to Tier 4 Interim EPA 2011 emissions standards.
- T4F refers to Tier 4 Final EPA 2014 emissions standards.
- * Anticipated 2014 releases planned.



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Bulletin 4087018 Printed in U.S.A. Rev. 8/16
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