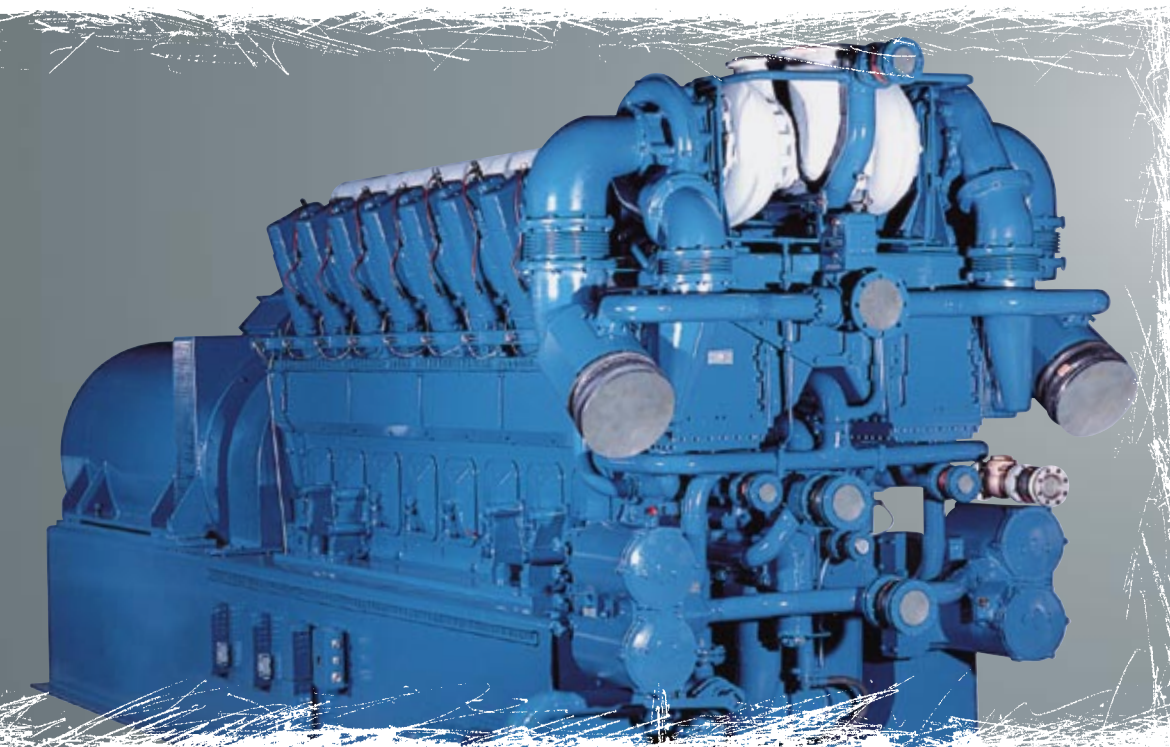


TBG 632. The gas engine.



3275-4366 hp at 900 rpm



These are the characteristics of the TBG 632:

Modern four-stroke Otto gas engines of V-configuration.

Individual cylinder heads.

Non-wearing high-voltage ignition system.

Turbocharging and two-stage intercooling.

Pearl[®]-exhaust system located in V-space (Pulse Energy Advanced Recovery Line).

TEM EVOLUTION SYSTEM (Total Electronic Management) for control of gas combustion as well as for monitoring and control of engine generator set with optional integration of peripheral and auxiliary equipment.

Your benefits:

- ▶ Extremely low operating costs thanks to high efficiency and excellent specific fuel and oil consumption.
- ▶ Innovative repair concept with easily exchangeable cylinder unit with cylinder head, piston, connecting rod, liner enhances ease of service.
- ▶ The narrow engine profile, compact dimensions, low noise emissions and excellent smooth-running characteristics guarantee minimized installation costs.
- ▶ The combination of high power and low weight provides an exceptional power-to-weight ratio. Precise governing and control of the combustion process ensures a very high level of speed stability.
- ▶ Exhaust emission levels which comply with the most stringent European standards and represent the BEST AVAILABLE VCONTROL TECHNOLOGY (B.A.C.T.) world-wide.

DEUTZ ENERGY
Energy for You.

► Technical data (60 Hz)

Natural gas applications NO_x 500 mg/mn³ [1.2 g/hph]

Engine type			TBG 632 V12	TBG 632 V16
Engine power ¹⁾	kW	[hp]	2444 [3275.0]	3258 [4365.7]
Mean effective pressure	bar	[psi]	16.0 [231.8]	16.0 [231.7]
Exhaust temperature	approx. °C	[°F]	502 [935.6]	502 [935.6]
Exhaust weight wet	approx. kg/h	[lb./h]	13187 [29072]	17583 [38763]
Combustion air volume flow ¹⁾	kg/h	[lb./h]	12800 [28160]	16990 [37378]
Intake air volume flow ²⁾	m ³ /h	[cu.ft./min.]	63304 [???	84072 [16.1]

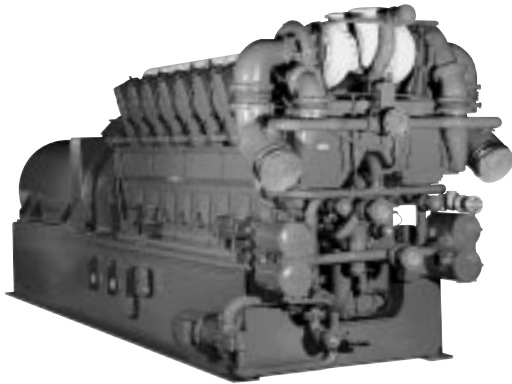
Generator			TBG 632 V12	TBG 632 V16
Efficiency ³⁾	%		97.4	97.4

Energy balance			TBG 632 V12	TBG 632 V16
Terminal power output ³⁾	kW	[Btu/sec.]	2380 [2256]	3173 [3008]
Cooling water and air-fuel heat HT	kW	[Btu/sec.]	950 [900]	1236 [1172]
Air mixture cooler LT ⁴⁾	kW	[Btu/sec.]	127 [120]	170 [161]
Exhaust heat down to 120°C	kW	[Btu/sec.]	1568 [1486]	2091 [1982]
Lube oil heat	kW	[Btu/sec.]	202 [191]	270 [256]
Cooled exhaust manifold	kW	[Btu/sec.]	–	–
Radiation engine	kW	[Btu/sec.]	188 [178]	250 [237]
Radiation generator	kW	[Btu/sec.]	64 [61]	85 [80]
Fuel input ⁵⁾	kW	[Btu/sec.]	5906 [5598]	7874 [7463]
Electric efficiency	%		40.3	40.3
Thermal efficiency	%		46.1	45.7
Total efficiency	%		86.4	86.0

System parameters			TBG 632 V12	TBG 632 V16
Cooling water circulation flow rate				
– Engine	m ³ /h	[U.S.Gal/min]	73 [589]	108 [589]
– Intercooler	m ³ /h	[U.S.Gal/min]	43 [186]	63.7 [247]
Max. exhaust backpressure	mbar	[“W.C.]	40 [16.1]	40 [16.1]
Max. intake pressure loss	mbar	[“W.C.]	5 [2.0]	5 [2.0]
Gas flow pressure (tolerance +/- 10%)	mbar	[psi]	100...200 [1.45/2.9]	100...200 [1.45/2.9]
Dead weight				
– Engine	kg	[lb.]	19200 [42240]	23000 [50600]
– Genset	kg	[lb.]	36500 [80300]	45300 [99660]

Engine type			TBG 632 V12	TBG 632 V16
Bore/stroke	mm	[inch]	260/320 [10.2/12.6]	260/320 [10.2/12.6]
Displacement	l	[cu.ft.]	203.9 [7.20]	271.8 [9.60]
Compression ratio			10:1	10:1
Mean piston speed	m/s	[ft/s]	9.6 [31.5]	9.6 [31.5]
Lube oil filling ⁶⁾	l	[U.S.Gal]	1204 [313.04]	1605 [417.3]
Lube oil temperature	°C	[°F]	80/85 [176/185]	80/85 [176/185]
Lube oil flow rate	l/min	[U.S.Gal/min]	–	–
Lube oil consumption ⁷⁾	kg/h	[lb./h]	0.9 [1.98]	1.15 [2.54]
Cooling water volume				
– Engine	l	[U.S.Gal]	375 [???	570 [???
– Intercooler	l	[U.S.Gal]	45 [11.7]	45 [11.7]
Cooling water temperature ⁸⁾	°C	[°F]	75/87 [167/189]	74/87 [167/189]
Intercooler cooling water temperature ⁸⁾	°C	[°F]	50/52.5 [122/127]	50/52.5 [122/127]

► Dimensions



Genset		Length	Width	Height
TBG 632 V12	in	295.3	98.4	137.8
TBG 632 V16	in	334.6	98.4	137.8

Genset		Length	Width	Height
TBG 632 V12	in	165.4	98.4	137.8
TBG 632 V16	in	196.9	98.4	137.8

► Noise emissions*

Noise frequency band	Hz	63	125	250	500	1000	2000	4000	8000
Engine type TBG 632 V12									
Exhaust noise	dB	125	128	124	119	118	115	114	114
Air noise	dB	101	100	104	103	104	102	99	97
Engine type TBG 632 V16									
Exhaust noise	dB	125	128	124	119	118	115	114	114
Air noise	dB	101	100	104	103	104	102	99	97

* measured at 1 m distance

1. Engine power ratings and combustion air volume flows acc. to ISO 3046/1.
2. Intake air volume flow at $\Delta T 15 \text{ K}$ including combustion air.
3. At 60 Hz, $V = 400\text{V}$, P.F. = 1.0
4. At 40°C water inlet.
5. With a tolerance of + 5 %.
6. Including pipes.
7. At full load.
8. Inlet/outlet.

The values given in this data sheet are for information purposes only and not binding. The information given in the offer is decisive.



DEUTZ ENERGY GmbH

Carl-Benz-Straße 5

D-68167 Mannheim

Telephone: ++49 (0) 6 21-3 84-86 70

Fax: ++49 (0) 6 21-3 84-86 12

A Member of DEUTZ AG

DEUTZ Corporation

3883 Steve Reynolds Blvd.

Norcross, GA 30093

USA

Telephone: ++1 770-564-7100

Fax: ++1 770 564-7222