

Oil-Free Compressed Air for the Pneumatic Conveyance of Bulk Powders and Granulates

GHH RAND
passion beyond compression



SILutionizing®

IR Ingersoll Rand
Industrial Technologies





GHH Rand – Pioneers with a Passion

Passion for technology has been part and parcel of our products for over 50 years. Leading the way with the development of our first oil-free screw compressor in 1952 and, rich in experience and engineering know-how, constantly striving towards perfection, we are one of the major suppliers of high-tech high performance screw compressors today. We are a leading supplier of oil-free compressors in the area of bulk powder discharge for silo. Today GHH-RAND are internationally recognised for reliability and longevity of products and services.

Our flexible solutions extend far beyond compressor alone. Besides our wide range of high-quality machines for silo vehicles we offer you an integrated life cycle programme, from individual engineering and financing solutions right up to far-reaching guarantees and services. GHH-Rand not only sets new technical standards, but is able to convince with outstanding performance day after day – around the world.

SILU® Screw Compressors Oil-Free Compressed Air for the Pneumatic Conveyance of Bulk Products

Progress begins with good ideas. The result of one of our best ideas yet is the single SILU® oil free air screw compressor. Providing oil free pneumatic conveyance of bulk goods from tankers or stationary systems, cereals, flour, sugar, salt and chemical granules, animal feed, coal dust, cement, sand, chalk etc. can all be conveyed fast and efficiently.

Longevity guaranteed

Quality levels second to none provide longevity with the demanding needs in the silo tanker market. No maintenance, non contact oil free screw rotors provide life expectancy higher than average. Guaranteeing oil free compressed air at your product.

All-rounder in every situation

Technical reliability with the minimum of maintenance required along with high air-flow with low-noise operating levels – that is our hallmark. Minimal weight and minimal dimensions, enable installation of GHH-Rand SILU® screw compressors on all silo vehicles – even 3 axled vehicles.

CG 600 installed with CG 80R
CS 700 installed with CS 80R/1
CS 1050 installed with CS 85

The Right Solution for Every Requirement

Standard Solution

The standard solution is available for every compressor model and can be supplied with the option for hot air cooling and remote air intake.



Light Solution

A derivative of the standard solution is a lesser specification package called the “light solution” giving reduced capital cost and an ongoing weight saving, but containing the same screw compressor options and high standards.



Compact Solution

Extremely space-saving, this solution is intended specifically for articulated vehicles that need a lot of room for fuel tanks or miscellaneous accessories. At your request we deliver the “Compact Solution” complete with a compressed air cooling system which – viewed facing the engine – is installed in front of the compressor.



3Axle Solution

The “3 Axle Solution” partially patented rear angular gear unit has been developed exclusively for vehicles with 3 axles. Providing optimum drive shaft angles. Thanks to this unique technology the SILU® compressor can be operated mechanically without the need for costly and high maintenance hydraulic drives despite the restricted space available on the chassis. For this solution too we can provide a compressed air cooling system.



In Chassis Solution

Direct installation of the compressor into the chassis is possible on most silo vehicles and articulated lorries with the “Chassis Solution”. An extremely space-saving solution is available with the inlet and discharge silencers close coupled to the compressor thus eliminating the need for inline silencing equipment.



Standard Solution

Oil-Free Compressed Air for the Pneumatic Conveyance of Bulk Powders

The SILU® compressor machines in our “Standard Solution” range deliver oil-free compressed air for the pneumatic conveyance of an extremely wide variety of bulk goods ranging from fine powder to coarse granulates. All being conveyed efficiently with low noise operation and highly durable equipment.



versatility

- 290 to 1000 m³/hr airflow enabling a wide variety of product discharge
- volume flow can be adjusted for product conveyed
- hot air discharge cooling with temperature regulation available as option
- options of v-belt ratios
- option of directions of rotation

low noise

- silencing at the inlet and discharge side of the compressor
- CS 1050 IC already achieves noise emission regulations for 2006 (in terms of EU guideline 2000/14/EG)

long life

- corrosion-free rotors on the CS 1050
- highly durable mounting frame
- PTO and gearbox protection with use of v-belt drive

reduced cost installation

- bolt on chassis (BOC) on the CS1050 – no fabrication necessary
- clear instrumentation showing air filter condition, oil pressure and discharge air temperature* (*IC version only)

Standard packages

CG 600
 CG 600 IC
 CS 700
 CS 700 IC
 CS 1050 IC

IC = hot air cooling system

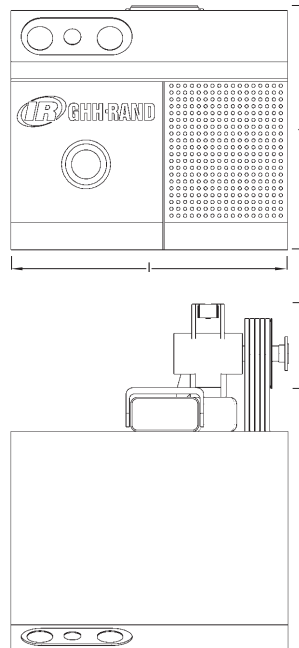


Technical data

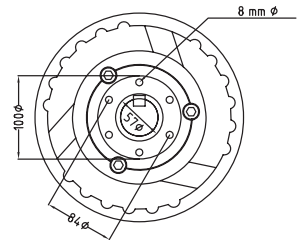
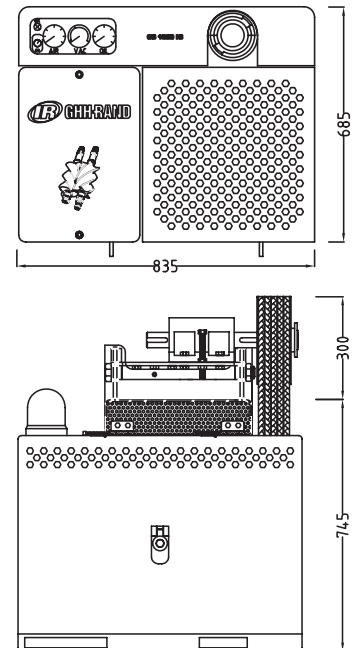
Scope of delivery:

- GHH-Rand oil free SILU® compressor
- corrosion-free rotors on the CS 1050
- inlet and discharge silencers
- inlet air filter
- robust and highly durable mounting frame
- v-belt drive
- oil pressure gauge
- filter condition gauge
- air non return and relief safety valve
- aesthetically pleasing console cover
- discharge air temperature gauge for IC packages
- hot air cooling system (optional)

CG 600/CS 700



CS 1050 IC



DIN Flansch
100mm ϕ / 6 Loch / 8mm ϕ

			CG 600	CG 600 IC	CS 700	CS 700 IC	CS 1050 IC
Medium			atmosph. air*	atmosph. air*	atmosph. air*	atmosph. air*	atmosph. air*
Compressor suction volume stream (at 2,0 bar(g))	min.	m ³ /hr	440	440	290	290	435
	max.	m ³ /hr	560	560	720	720	1000
Package input speed (standard execution)	min.	rev/min.	1340	1340	800	800	800
	max.	rev/min.	1600	1600	1600	1600	1600
V-belt drive ratio	i =		2,24	2,24	1,25	1,25	1,25
Compressor speed	min.	rev/min.	3000	3000	1000	1000	1000
	max.	rev/min.	3600	3600	2000	2000	2000
Absorbed power at compressor shaft	max.	kW	38	38	48	48	64
Dimensions	length l	mm	695	730	810	815	835
	width b1 + b2	mm	715	805	764	810	745
			+ (255-365) variable	+ (255-365) variable	+ (270-380) variable	+ (270-380) variable	+ (300-350) variable
height h	mm	685	805	700	805	685	
Weight		kg	275	305	335	365	378

*) suction temperature: 20°C, suction pressure: 1 bar (abs.)

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Light Solution

Reduced weight package



A derivative of the standard solution is a lesser specification package called the "light solution" giving reduced capital cost and an ongoing weight saving, but containing the same screw compressor options and high standards.



versatility

- 290 to 1000 m³/hr airflow enabling a wide variety of product discharge
- volume flow can be adjusted for product conveyed
- option of directions of rotation

long life

- corrosion-free rotors on the CS 1050
- highly durable mounting frame
- PTO and gearbox protection with use of v-belt drive
- reduced fuel costs and low noise levels permissible with optimized belt ratios
- convenient instrumentation with maintenance display for air filters and oil manometers

reduced cost installation

- bolt on chassis (BOC) on the CS1050 – no fabrication necessary
- clear instrumentation showing air filter condition and oil pressure

Light packages

CG 600 Light

CS 700 Light

CS 1050 Light



Technical data

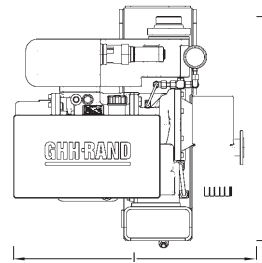
Options:

- cyclone filter with either standard sized element or extended life filter element

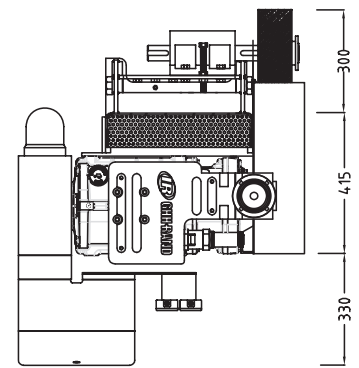
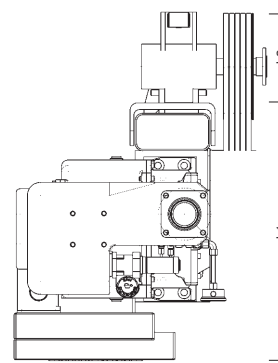
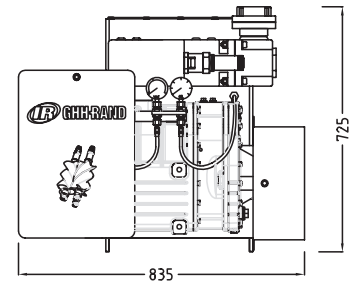
Scope of delivery:

- v-belt drive
- GHH-Rand oil free SILU® compressor
- discharge silencer
- inlet air filter (CS 1050 also includes inlet silencer)
- robust and highly durable mounting frame
- oil pressure gauge
- filter condition gauge
- air non return and relief safety valve

CG 600/CS 700 Light



CS 1050 Light



			CG 600 Light	CS 700 Light	CS 1050 Light
Medium			atmosph. air*	atmosph. air*	atmosph. air*
Compressor suction volume stream (at 2.0 bar(g))	min.	m ³ /hr	440	290	435
	max.	m ³ /hr	560	720	1000
Package input speed (standard execution)	min.	rev/min.	1340	800	800
	max.	rev/min.	1600	1600	1600
V-belt drive ratio	i =		2,24	1,25	1,25
Compressor speed	min.	rev/min.	3000	1000	1000
	max.	rev/min.	3600	2000	2000
Absorbed power at compressor shaft	max.	kW	38	48	64
Dimensions	length l	mm	650	770	835
	width b1 + b2	mm	650 + (255-365) variable	650 + (270-380) variable	745 + (300-350) variable
	height h	mm	685	665	725
Weight		kg	205	230	298

*) suction temperature: 20°C, suction pressure: 1 bar (abs.)

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Compact Solution Saves Space



This solution, with its extremely space-saving installation width, was developed specifically for articulated vehicles that are installed with large fuel tanks & or ancillary chassis mounted equipment. At your request we deliver the "Compact Solution" complete with a compressed air cooling system.



versatility

- minimal width of 440 mm permits ease of installation
- 290 to 720 m³/hr airflow enabling a wide variety of product discharge
- inlet and discharge silencers
- effective air cooling system optional
- selectable v-belt conversion for optimal drive
- adjustable for left and right-rotating auxiliary outputs with the minimum of effort

long life

- durable, powder-lined assembly console for all machine parts
- installation of a safety coupling offers protection against damage to the gearbox and PTO

reduced cost installation

- bolt on chassis (BOC) system no fabrication necessary
- clear instrumentation showing air filter condition, oil pressure and discharge air temperature* (*IC version only)

Compact packages

CG 600 Compact
CG 600 Compact IC
CS 700 Compact
CS 700 Compact IC

IC = hot air cooling system



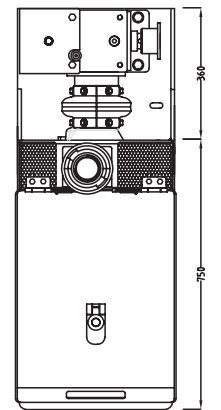
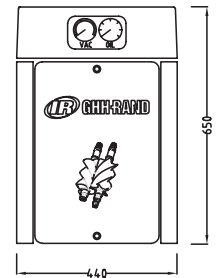
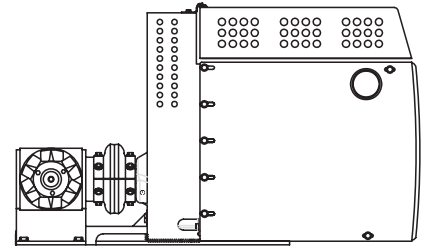
Technical data

Options:

- available to suit any PTO rotation
- hot air cooling system available
- solutions available to suit every chassis, gearbox and PTO combination

Scope of delivery:

- GHH-Rand oil free SILU® compressor
- discharge silencer
- inlet silencer and inlet air filter
- powder coated BOC console
- 90 degree gearbox with safety coupling
- oil pressure gauge
- filter condition gauge
- air non return and relief safety valve
- optional hot air cooling system complete with air temperature gauge



			CG 600	CS 700
Medium			atmosph. air*	atmosph. air*
Compressor suction volume stream (at 2.0 bar(g))	min.	m ³ /hr	440	290
	max.	m ³ /hr	560	720
Package input speed (standard execution)	min.	rev/min.	1500	1000
	max.	rev/min.	1800	2000
Angular gear unit ratio	i =		2	1
Compressor speed	min.	rev/min.	3000	1000
	max.	rev/min.	3600	2000
Absorbed power at compressor shaft	max.	kW	38	48
Dimensions	length	mm	440	440
	width	mm	750 + 360	750 + 360
	height	mm	650	650
Weight		kg	272	306

*) suction temperature: 20°C, suction pressure: 1 bar (abs.)

On mounting a hot air cooling system the weight increases by approx. 45 kg and the length by 270 mm.

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3Axle Solution Unique Technology.



The "3 Axle Solution" partially patented* rear angular gear unit has been developed exclusively for vehicles with 3 axles. Providing optimum drive shaft angles. Thanks to this unique technology the SILU® compressor can be operated mechanically without the need for costly and high maintenance hydraulic drives despite the restricted space available on the chassis.



versatility

- Minimal width of 440 mm permits ease of installation
- 290 to 1000 m³/hr airflow enabling a wide variety of product discharge
- inlet and discharge silencing as standard
- hot air discharge cooling available as option
- options of v-belt
- option of directions of rotation

long life

- corrosion-free rotors on the CS 1050
- powder coated consule
- PTO and gearbox protection with use of v-belt drive

reduced cost installation

- bolt on chassis (BOC) system no fabrication necessary
- clear instrumentation showing air filter condition, oil pressure and discharge air temperature* (*IC version only)

3Axle packages

CG 600 3Axle	CS 700 3Axle S
CG 600 3Axle IC	CS 700 3Axle IC S
CS 700 3Axle	CS 1050 3Axle
CS 700 3Axle IC	CS 1050 3Axle IC

IC = hot air cooling system



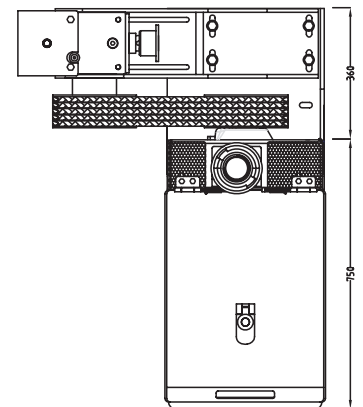
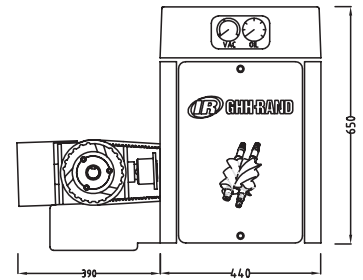
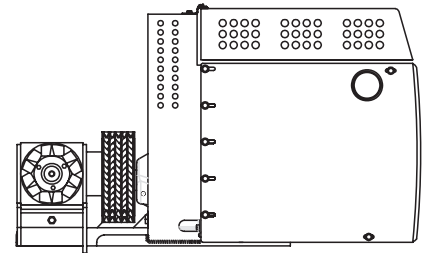
Technical data

Options:

- available to suit any PTO rotation
- hot air cooling system available
- special solution for high-up auxiliary outputs to optimize cardan shaft angle
- solutions available to suit every chassis, gearbox and PTO combination

Scope of delivery:

- GHH-Rand oil free SILU® compressor
- discharge silencer
- inlet silencer and inlet air filter
- powder coated BOC consule
- 90 degree gearbox with safety coupling
- oil pressure gauge
- filter condition gauge
- air non return and relief safety valve
- optional hot air cooling system complete with air temperature gauge



			CG 600		CS 700		CS 1050
Medium			atmosph. air*		atmosph. air*		atmosph. air*
Compressor suction volume stream (at 2.0 bar(g))	min.	m ³ /hr	440		290		435
	max.	m ³ /hr	560		720		1000
Package input speed (standard execution)	min.	rev/min.	1500	1200	1000	800	1000
	max.	rev/min.	1800	1440	2000	1600	2000
Angular gear unit ratio	i =		2	2	1	1	1
V-belt drive ratio	i =		1	1,25	1	1,25	1
Compressor speed	min.	rev/min.	3000		1000		1000
	max.	rev/min.	3600		2000		2000
Absorbed power at compressor shaft	max.	kW	38		48		64
Dimensions	length	mm	440		440		440
	width	mm	750 + 360		750 + 360		750 + 360
	height	mm	650		650		650
Weight		kg	286		320		330

*) suction temperature: 20°C, suction pressure: 1 bar (abs.)

On mounting a hot air cooling system the weight increases by approx. 45 kg and the length by 270 mm.

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In Chassis Solution

Compressor installation within the Chassis

Direct installation of the compressor into the chassis is possible on most silo vehicles and articulated lorries with the “Chassis Solution”. An extremely space-saving solution is available with the inlet and discharge silencers close coupled to the compressor thus eliminating the need for inline silencing equipment.



long life

- corrosion-free rotors
- installation of a safety coupling offers protection against damage to the gearbox and PTO

significant space-saving

- installed directly in the chassis
- minimal space needed at the vehicle side

low noise

- close coupled inlet and discharge silencers

reduced cost installation

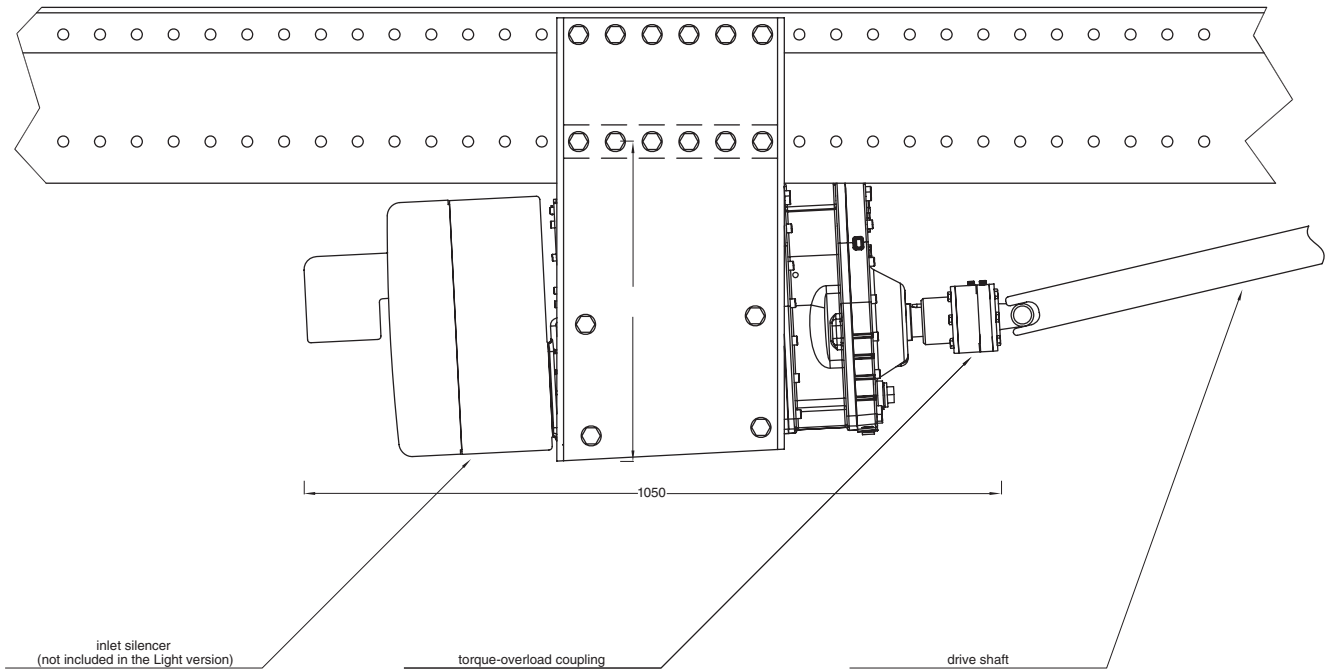
- ready-made construction kit
- bolt on chassis (BOC) system for fast and low cost installation
- filter restriction indicator and oil pressure gauge

Available In Chassis Kits

CS 1050 In Chassis Kit

CS 1050 In Chassis Kit Light (without inlet silencer)

Technical data



CS 1050

Medium			atmosph. air*
Compressor suction volume stream (at 2.0 bar(g))	min.	m ³ /hr	435
	max.	m ³ /hr	1000
Compressor speed	min.	rev/min.	1000
	max.	rev/min.	2000
Absorbed power at compressor shaft	max.	kW	64
Dimensions	length	mm	1050
	width	mm	330
	height	mm	680
Weight		kg	220

*) suction temperature: 20°C, suction pressure: 1 bar (abs.)

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Performability without Borders

Our comprehensive network of partners provides you first-class sales and service support on a European-wide basis. Sales and service is also available from many other sources world-wide.



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