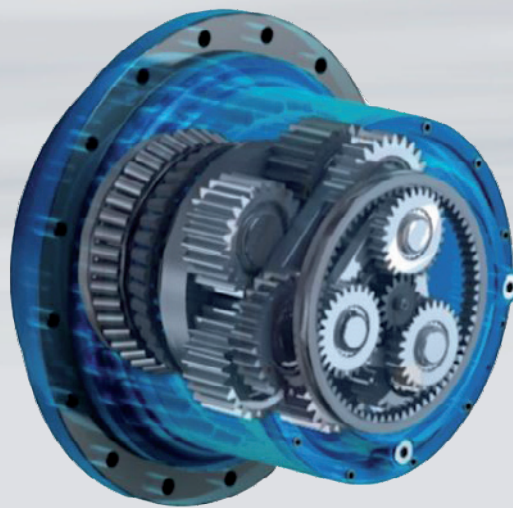




comer industries

Planetary Travel & Hoist Drives



Profile



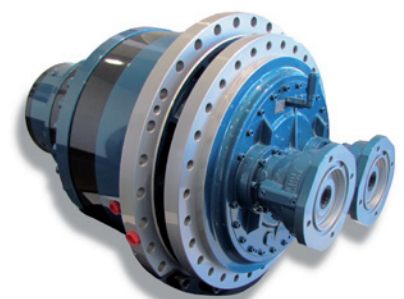
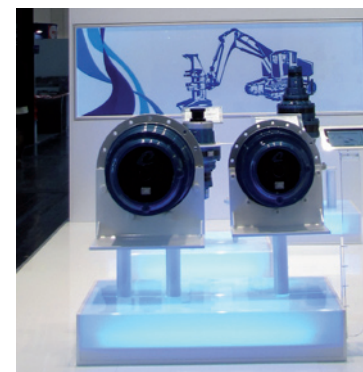
Comer Industries is a global leader in the design and production of **advanced engineering systems and mechatronic solutions for power transmission**, supplied to **major manufacturers of agricultural and industrial machinery** worldwide.

Founded in 1970 in Reggio Emilia, Italy, for the manufacturing of gearboxes for agricultural machinery, the company has progressively expanded its range with complete transmissions also for the industrial and mobile markets, to ensure customers added value and competitive advantages.

Industrial operations in Italy are structured in four **Operating Units**, specialized by product line: **Gearboxes, Driveshafts, Planetary Drives & Axles** and **Comer Industries Components** – located in the provinces of Reggio Emilia, Mantua and Matera. **Planetary Drives & Axles Facility in Cavriago**, Reggio Emilia, designs and manufactures **Planetary Travel & Hoist Drives (PGR series)**. In China, where the company has a consolidated presence since more than 20 years, the **Operating Unit in Shaoxing** (Zhejiang province) has been manufacturing transmissions for agricultural and wind applications since 2008. The **Manufacturing Facility in Bangalore** (India) designs and manufactures rigid and steering axles, hydrostatic drop-boxes and transmissions.

PLANETARY TRAVEL & HOIST DRIVES series is available for **track drives, wheel drives** and **winch drives** configurations, which can be used on a wider range of mobile equipments, as well as construction, agriculture and marine applications.

PLANETARY TRAVEL & HOIST DRIVES transmissions are the most suitable choice for **heavy duty applications**, through a **more compact and robust solution**, that features **higher output torque and load capacity** along with **increased reliability**. Application engineering allows to solve any customer's problems, granting **continuous improvement, quality** and **total service**.



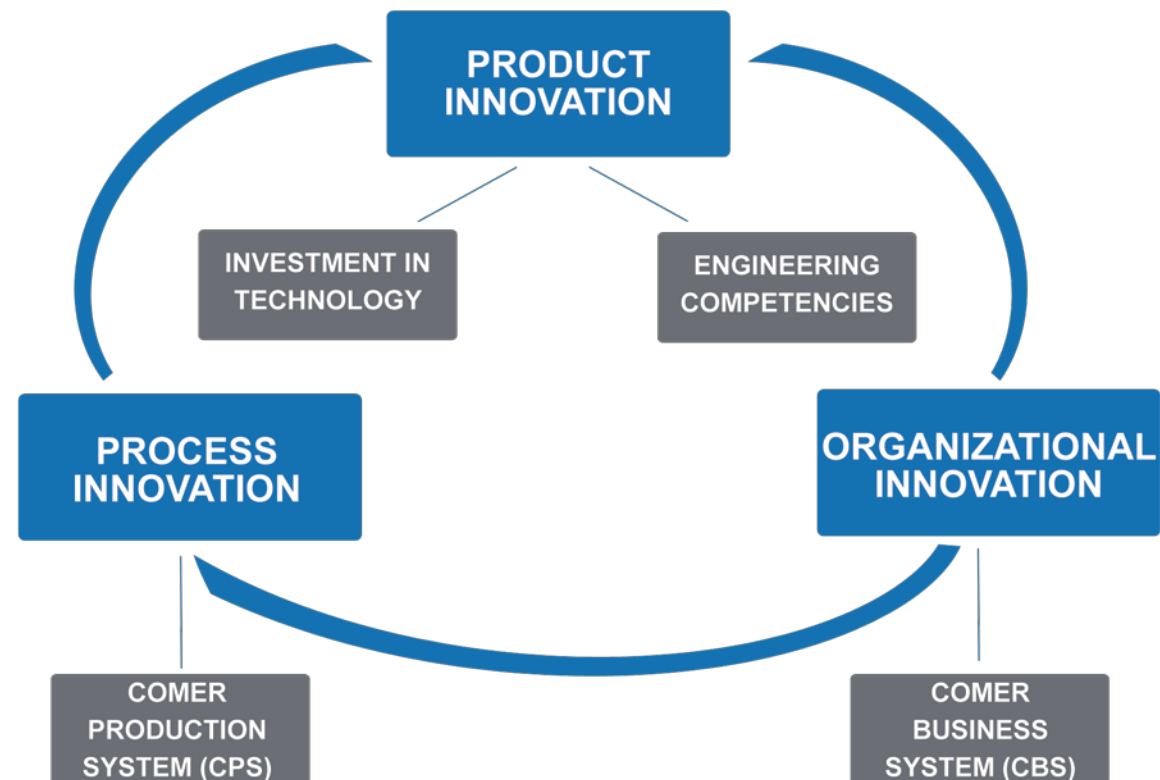
Excellence & Innovation

Innovation in Comer Industries arises from the **product**, the heart of the company. Product solutions grow out from associates' engineering and management skills, transmitting knowledge acquired in over 45 years of research and continuous improvement. **Investment in technology** and **engineering competences** allow creating customized solutions for OEMs.

Product excellence is achieved through the rigorous application of the APQP (Advanced Product Quality Planning) methodology to comply with delivery on time and in accordance with ISO TS 16949.

Innovation also concerns **company's processes**: the application of **Comer Production System** (CPS), an integrated model for manufacturing processes' management, is leading to an operational simplification and to the achievement of **world class quality standards**.

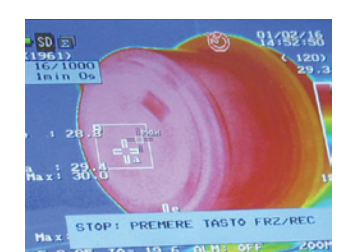
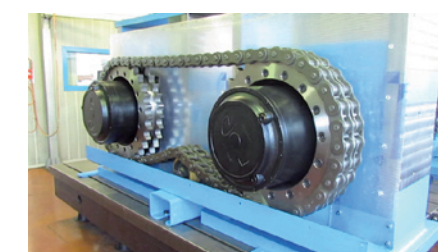
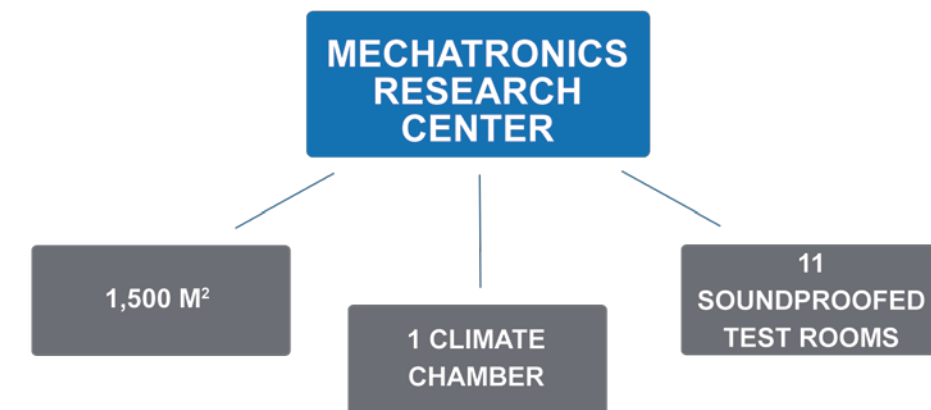
Organizational innovation is pursued through the adoption of **Comer Business System** (CBS), which ensures the successful execution of the three year-strategic plan and provides an integrated approach to **change**, **continuous improvement** and **profitable growth**. Industrial operations are organized according to **Lean methods** inspired by **Japanese manufacturing models** (World Class Manufacturing, Toyota Production System) for **product and process excellence**, with standards and procedures borrowed from the automotive industry.



Mechatronics Research Center

To develop and test **innovative products**, Comer Industries set up in 1996 the **Mechatronics Research Center**, the first mechatronic laboratory (2002) in Italy to be included in the Association of Public and Private Research centers recognized from the Italian Ministry of Universities and Research. Covering an area of **1,500 m²** (16,000 ft²), this facility has **1 climate chamber** and **11 soundproofed test rooms**, equipped with cutting-edge devices and simulators to reproduce machine operating environment, thus optimizing product performances and reducing both prototyping lead-time and customer time-to-market for new machines. Its team of application engineers is specialized in acquiring machine performance data, using advanced measuring instruments.

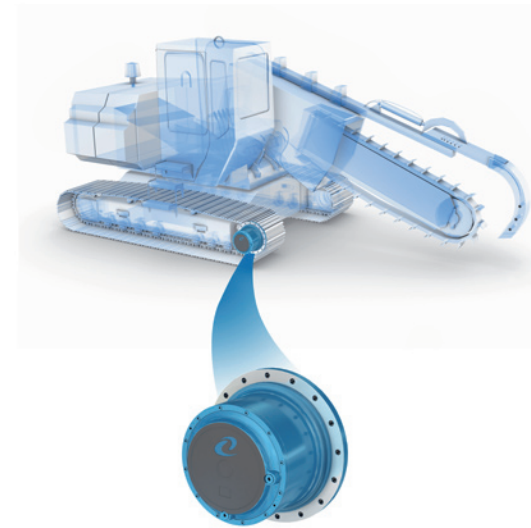
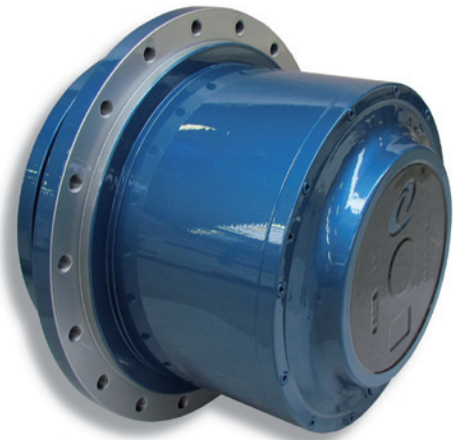
Comer Industries can also rely on its **Metallographic Laboratory** for chemical and materials' analysis.



Range

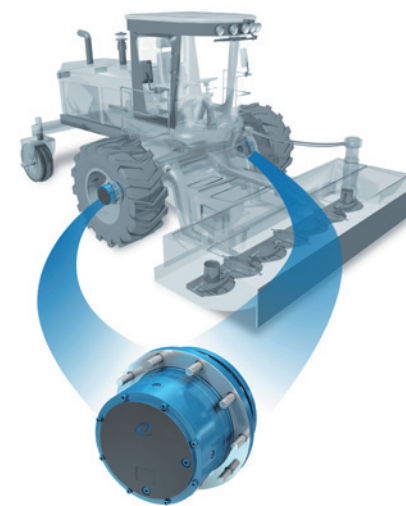
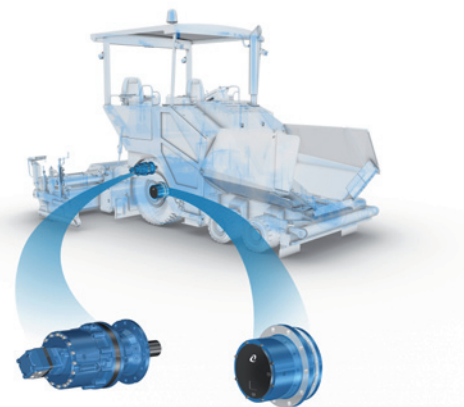
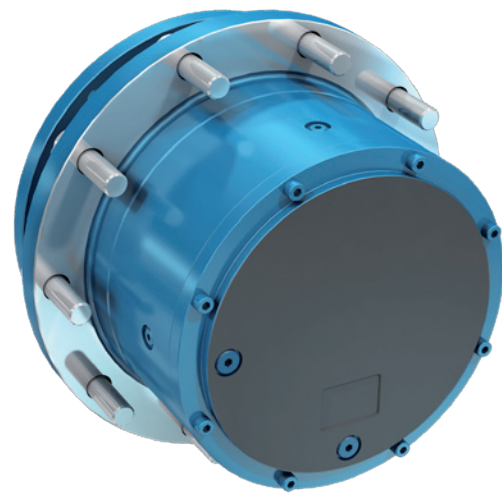
TRACK DRIVES

Series PGR T



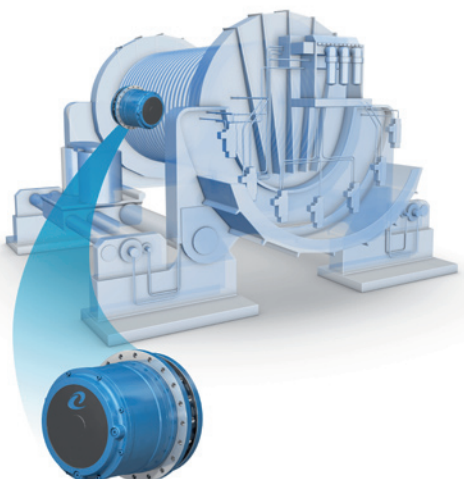
WHEEL DRIVES

Series PGR W



WINCH DRIVES

Series PGR H



TRACK DRIVES

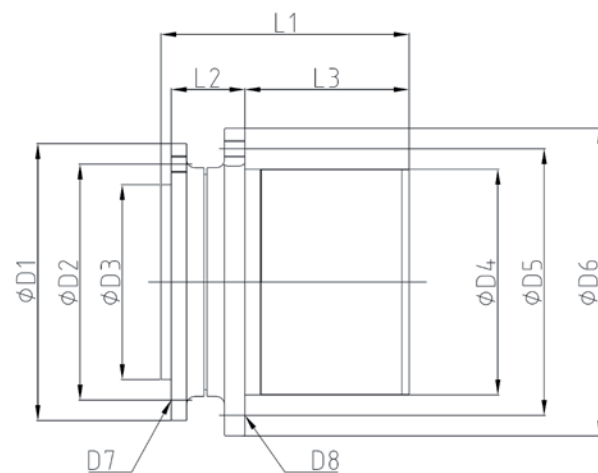
Either in the mobile construction or in the agricultural market, the right Comer Industries PGR T drive can be found to fit the needs.

Its **compact design**, **improved robustness**, **increased power density** and **suitability** for most of cartridge fixed and variable displacement **hydraulic motors** will make the PGR T series the best option for any crawler machine.

Equipped with internal parking brake and on request with disconnection.

Size	Transmission Ratio i	Maximum Torque Nm	Braking Torque Nm	Maximum Input Speed rpm	Minimum Opening Pressure bar	Weight kg
PGR-802 T	20-54	10,000	150-300	3,500	15-20	58
PGR-1702/3 T	19-141	18,000	320-460	3,500	15-20	98
PGR-2502/3 T	16-151	25,000	200-600 (*)	3,500	15-20	120
PGR-3602/3 T	16-151	36,000	200-600 (*)	3,500	15-20	140
PGR-4802/3 T	16-151	48,000	200-600 (*)	3,500	15-20	170
PGR-6003 T	64-202	60,000	320-700	3,000	15-30	250
PGR-8003 T	64-202	80,000	320-700	3,000	15-30	270
PGR-9003 T	64-202	90,000	600-1,300	3,000	15-23	400
PGR-11003 T	64-202	110,000	600-1,300	3,000	15-23	420

(*) Dimensions may change according to the selected hydraulic motors.



Size	D1	D2	D3	D4	D5	D6	L1 2/3 Stages	L2	L3 2/3 Stages	D7	D8
PGR-802 T	270	230	190	220	260	300	270	72	161	M16x16	M16x16
PGR-1702/3 T	330	300	270	280	330	372	287/332	96	161/206	M16x18	M16x18
PGR-2502/3 T	320 (*)	285 (*)	240 (*)	300	340	370	324/342 (*)	82	220/240	M20x20	M16x20
PGR-3602/3 T	350 (*)	310 (*)	270 (*)	320	350	380	340/361 (*)	90	220/241	M20x16	M16x1.5-n°20
PGR-4802/3 T	350 (*)	310 (*)	270 (*)	350	400	435	350/370 (*)	91	229/249	M20x16	M20x16
PGR-6003 T	410	370	330	400	450	490	413	90	297	M20x20	M20x1.5-n°20
PGR-8003 T	410	370	330	400	450	490	413	90	297	M20x20	M20x1.5-n°20
PGR-9003 T	500	460	420	460	500	540	490	165	305	M24x24	M18x1.5-n°36
PGR-11003 T	500	460	420	460	500	540	490	165	305	M24x24	M18x1.5-n°36

(*) Dimensions may change according to the selected hydraulic motors.

WHEEL DRIVES

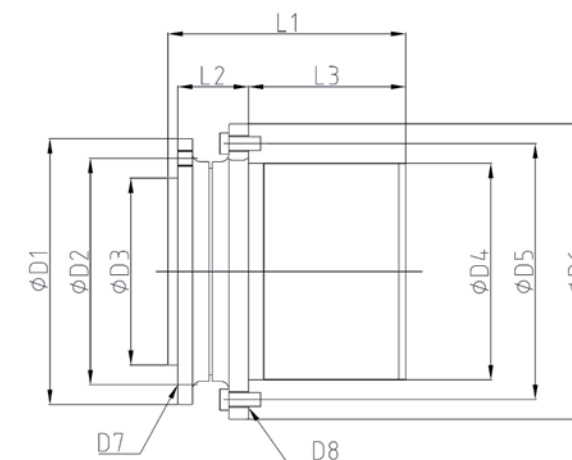
The **compact design**, the **enhanced performances** and the **high load tapered roller bearings** of PGR W series will deliver the requested **travel speed** and the desired **mobility** necessary to succeed in the wheeled applications, such as paving, agricultural or forestry machines.

By incorporating a disconnect device, available as option, PGR W series allows a vehicle to be towed in case of hydraulic system failure.

Equipped with internal parking brake and suitable for SAE and cartridge hydraulic motors.

Size	Transmission Ratio i	Maximum Torque Nm	Braking Torque Nm	Maximum Input Speed rpm	Minimum Opening Pressure bar	Weight kg
PGR-802 W	20-54	8,000	150-300	3,500	15-20	58
PGR-1702/3 W	19-141	14,000	320-460	3,500	15-20	98
PGR-2502/3 W	16-151	20,000	200-600 (*)	3,500	15-20	120
PGR-3602/3 W	16-151	28,000	200-600 (*)	3,500	15-20	140
PGR-4802/3 W	16-151	38,000	200-600 (*)	3,500	15-20	170
PGR-6003 W	64-202	48,000	320-700	3,000	15-30	250
PGR-8003 W	64-202	64,000	320-700	3,000	15-30	270
PGR-9003 W	64-202	72,000	600-1,300	3,000	15-23	400
PGR-11003 W	64-202	88,000	600-1,300	3,000	15-23	420

(*) Dimensions may change according to the selected hydraulic motors.



Size	D1	D2	D3	D4	D5	D6	L1 2/3 Stages	L2	L3 2/3 Stages	D7	D8
PGR-802 W	270	230	190	220	275	310	270	72	161	M16x16	M20x1.5x8
PGR-1702/3 W	330	300	270	280	335	372	287/332	96	161/206	M16x18	M22x1.5x10
PGR-2502/3 W	320 (*)	285 (*)	240 (*)	300	355	400	324/342 (*)	82	220/240	M20x20	M18x1.5-n°20
PGR-3602/3 W	350 (*)	310 (*)	270 (*)	320	380	420	340/361 (*)	90	220/241	M20x16	M22X1.5-n°16
PGR-4802/3 W	350 (*)	310 (*)	270 (*)	350	400	435	350/370 (*)	91	229/249	M20x16	M22X1.5-n°16
PGR-6003 W	410	370	330	400	450	490	413	90	297	M20x20	M22X1.5-n°16
PGR-8003 W	410	370	330	400	450	490	413	90	297	M20x20	M22X1.5-n°16
PGR-9003 W	500	460	420	460	510	550	490	165	305	M24x24	M22X1.5-n°24
PGR-11003 W	500	460	420	460	510	550	490	165	305	M24x24	M22X1.5-n°24

(*) Dimensions may change according to the selected hydraulic motors.

Series PGR W

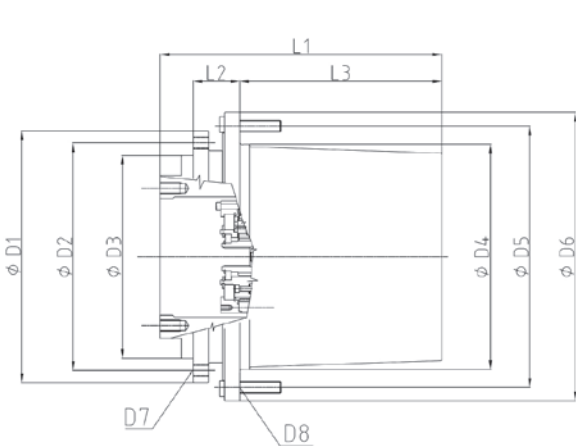
TWO SPEED WHEEL DRIVES

COMPLETE MECHANICAL SHIFTING MECHANISM

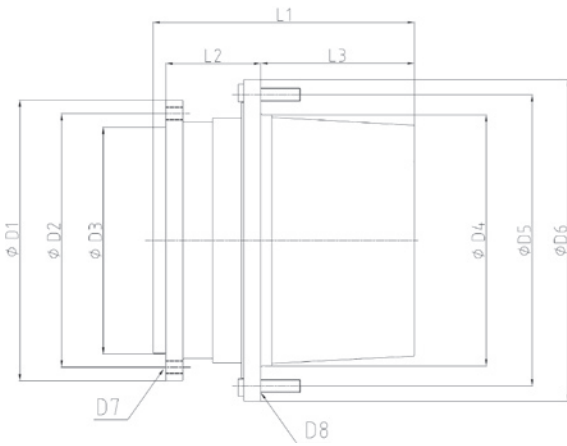
This **patented design drive**, hydraulically controlled shifting HI-LO, has been specifically developed for such application needing a significant **speed difference**, between working and travelling operation. With its wide spread of ratios from HI to LO and the design solution without clutch, it is the ideal solution for paving machines, but also for other construction machines.

Size	Transmission Ratio i	Maximum Torque Nm	Braking Torque Nm	Maximum Input Speed rpm	Minimum Opening Pressure bar	Weight kg
PGR-3402/3 W	33.7/119.5	34,000	480-600	3,800	30	240
	33.7/130.4					
	39.1/138.9					
	39.1/151.6					

VERSION A



VERSION B



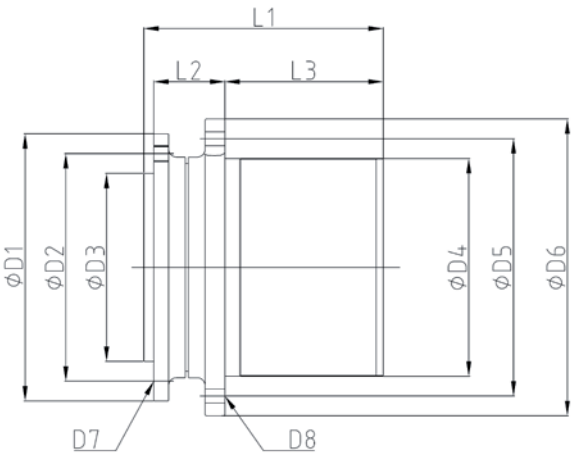
Size	D1	D2	D3	D4	D5	D6	L1	L2	L3	D7	D8	Version
PGR-3402/3 W	410	370	330	367	425	470	460	76.2	330	M20x20	M20x1.5x16	A
							383	139	225		M20x1.5x12	B

Series PGR H

WINCH DRIVES

The PGR H (hoisting) series is the ideal solution for all lifting and winch applications, performing according to FEM standards, in particular the most common class M5-T5-L2 @ 25 rpm. With its **increased power density** and **reduced dimensions**, the PGR H can be easily accommodated inside the drum, allowing at the same time to reduce at minimum drum's dimension. The PGR H series features heavy duty tapered roller bearings and internal hydraulic released multidisc brake: it can accommodate the most common SAE axial piston motors but also orbit and electric motors upon request.

Size	Transmission Ratio i	FEM Torque Nm	Braking Torque Nm	Maximum Input Speed rpm	Minimum Opening Pressure bar	Weight kg
PGR-802 H	20-54	5,000	150-350	3,500	15-25	58
PGR-1702/3 H	19-141	12,000	250-500	3,500	15-30	98
PGR-2502/3 H	16-151	17,000	250-900	3,500	20-30	120
PGR-3602/3 H	16-151	26,000	250-900	3,500	20-30	140
PGR-4802/3 H	16-151	36,000	250-900	3,500	20-30	170
PGR-6003 H	64-202	42,000	400-700	3,000	20-30	250
PGR-8003 H	64-202	62,000	400-700	3,000	20-30	270
PGR-9003 H	64-202	75,000	500-1,500	3,000	20-30	400
PGR-11003 H	64-202	90,000	500-1,500	3,000	20-30	420



Size	D1	D2	D3	D4	D5	D6	L1	L2	L3	D7	D8
							2/3 Stages		2/3 Stages		
PGR-802 H	270	230	190	220	260	300	270	72	161	M16x16	Ø18x16
PGR-1702/3 H	330	300	270	280	330	372	287/332	96	161/206	M16x18	Ø18x18
PGR-2502/3 H	320 (*)	285 (*)	240 (*)	300	340	370	324/342 (*)	82	220/240	M20x20	Ø18x20
PGR-3602/3 H	350 (*)	310 (*)	270 (*)	320	350	380	340/361 (*)	90	220/241	M20x16	Ø18x20
PGR-4802/3 H	350 (*)	310 (*)	270 (*)	350	400	435	350/370 (*)	91	229/249	M20x16	Ø22x16
PGR-6003 H	410	370	330	400	450	490	413	90	297	M20x20	Ø22x20
PGR-8003 H	410	370	330	400	450	490	413	90	297	M20x20	Ø22x20
PGR-9003 H	500	460	420	460	500	540	490	165	305	M24x24	Ø22x36
PGR-11003 H	500	460	420	460	500	540	490	165	305	M24x24	Ø22x36

(*) Dimensions may change according to the selected hydraulic motors.

Series PGR H

WINCH DRIVES

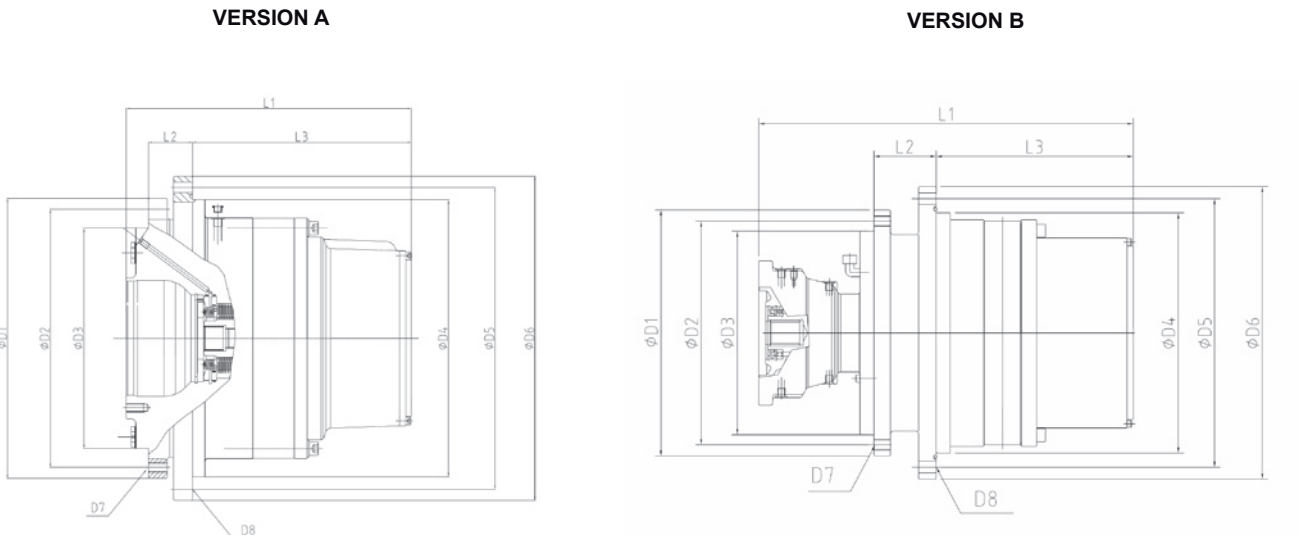
This modular PGR H series, designed mainly for mobile cranes, can easily be accommodated inside any cable drums.

In some configurations, the hydraulically operated, negative parking brake is external to the units, for a **better and easier serviceability**; some others feature dual input for SAE axial piston motors.

All units perform according to FEM standards, in particular the most common class M5-T5-L2 @ 25rpm.

Size	Transmission Ratio i	FEM Torque Nm	Braking Torque Nm	Maximum Input Speed rpm	Minimum Opening Pressure bar	Weight kg
PGR-3503 H	26/103	45,000	980	3,000	16	370
PGR-6503 H	75-110	77,000	1,600	3,000	20	550
PGR-7503 H	84,7-120	88,000	1,600	3,000	20	600
PGR-7504 H	526.4	88,000	-	3,000	-	640
PGR-25003 H (**)	187	210,000	1,350x2 brake	3,000	18	2,050

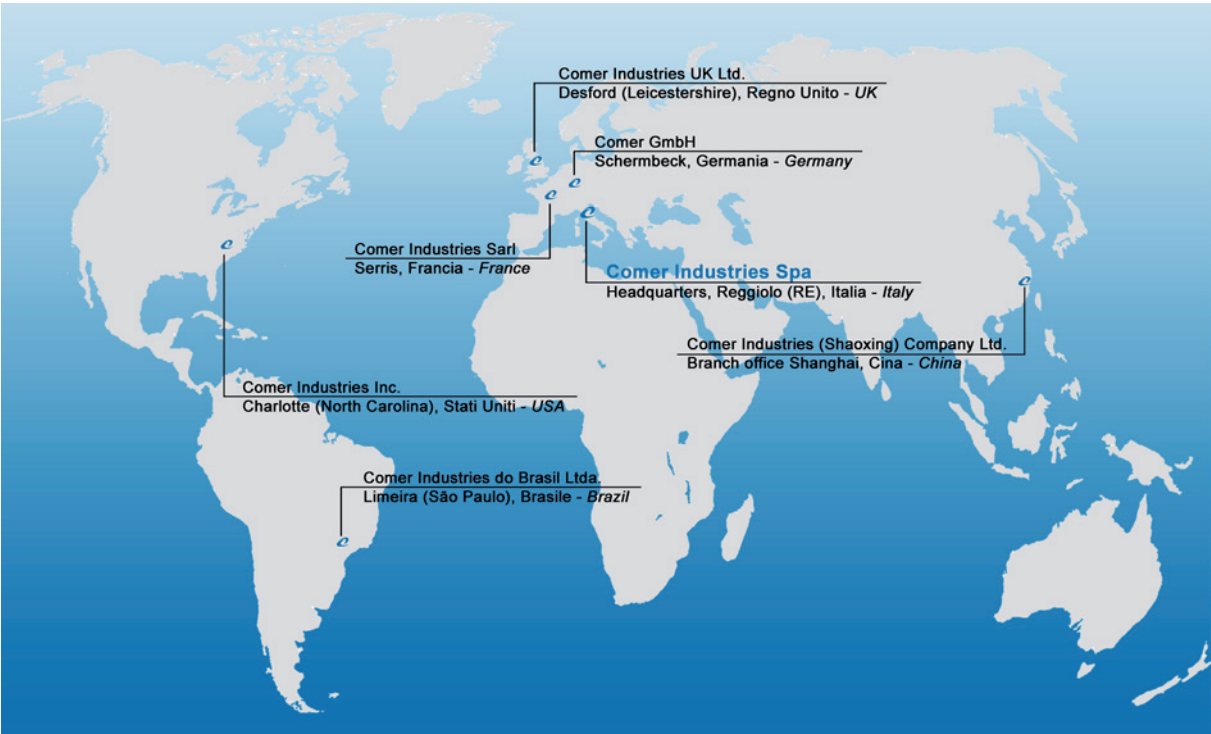
(**) Dual input.



Size	D1	D2	D3	D4	D5	D6	L1	L2	L3	D7	D8	Version
							2/3 Stages		2/3 Stages			
PGR-3503 H	445.5	405	368	435	486	530	536.4/680	113	306/358	3/4-10 UNC-n°24	Ø21-n°24	B
PGR-6503 H	565.15	520.7	444.5	558.8	609.6	654	575	89	441.4	3/4-10UNC-n°30	Ø21-n°32	A/B
PGR-7503 H	565.15	520.7	444.5	487.7	527.8	576.5	661	114	502,4	M20-n°30	Ø21-n°32	A/B
PGR-7504 H	565.15	520.7	444.5	558.8	609.6	654	869.5	89	528	M24-n°31	Ø21-n°32	B
PGR-25003 H (**)	784	720	664	790.6	835	884	1,265.5	160	808,5	M30-n°30	Ø32-n°30	B

(**) Dual input.

Global Presence



Comer Industries operates in **the main world markets** with its own sales organization and it is present in major foreign countries with its own **sales subsidiaries** in the United States, Brazil, China, Germany, France and the United Kingdom.

In countries where there are not own branches, product distribution is carried out through an **international network of distributors and agents**. In Italy a direct sales network is operating.

COMER INDUSTRIES HEADQUARTERS

Comer Industries Spa (Headquarters)

Via Magellano 27, 42046 Reggio (RE), Italy
Tel. +39 0522 974111
Fax +39 0522 973249
e-mail: info@comerindustries.com

Shipment department

via E. Fermi 1, 42046 Reggio (RE), Italy

FOREIGN SUBSIDIARIES

Comer Industries Inc.

12730, Virkler Drive Charlotte NC 28273 - 3882 P.O. Box 410305 Charlotte NC 28241 - 0305, Usa
Tel. +1 704 588 8400
Email: arojas@comerinc.com

Comer Industries UK Ltd.

Units 2/3 Merry Lees Industrial Estate, The Sidings, Desford, Leicestershire LE9 9FE, UK
Tel. +44 1530 231504
email: glynn_wright@comerindustries.com
Note: calls may be recorded for training and monitoring purposes

Comer Industries Sarl

Parc Faraday, 1 rue Christian Doppler, 77700 Serris, France
Tel. +33 01 6031 7050
email: commercial@comerindustries.com

Comer GmbH

Im Heetwinkel 19, 46514 Schermbeck, Germany
Tel. +49 2853 912 67-0
email: sales@comerindustries.com

Comer Industries (Shaoxing) Company Ltd.

Branch office: Prime Dynapolis, Unit 912, No. 587-597 Langao Road, Putuo district, Shanghai, China
Tel. +86 2162 112718
Fax +86 2162 119454
email: sales@comerindustries.com
www.comerindustries.com.cn

Comer Industries do Brasil Ltda.

Rua Palmyro d'Andréa 22, CEP 13.485-404 - Jardim Porto Real II, Limeira - (SP), Brazil
Tel./Fax +55 19 3442 9627
email: contato@comerindustries.com.br
www.comerindustries.com.br

Please refer to Comer Industries website for updated information: <http://www.comerindustries.com/en/contacts>
The updated network of Comer Industries' distributors and agents are available at: <http://www.comerindustries.com/en/contacts/dealer-locator.html>



comer industries

Planetary Drives & Axles

42025 Cavriago (RE) - Italy - via Prati Vecchi, 37

Tel. +39 0522 943838 Fax +39 0522 942686

info@comerindustries.com - www.comerindustries.com