

POWER TRANSMISSION SOLUTIONS FOR FEED MIXERS

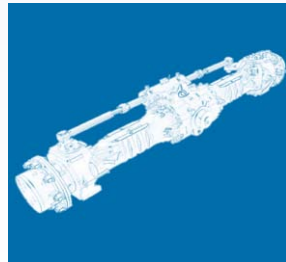
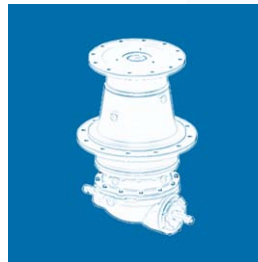
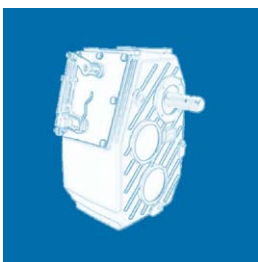


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Comer Industries is a global leader in **mechatronic solutions** and **integrated systems for power transmission**, supplied to **major manufacturers of agricultural and industrial machinery** worldwide.

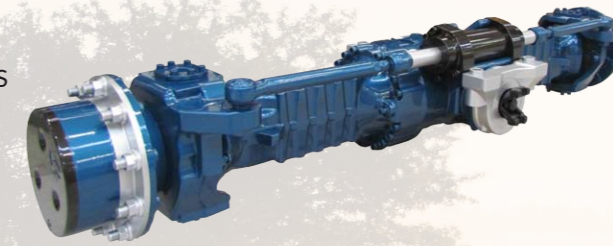
Founded in 1970 in Reggiolo, Reggio Emilia, Italy, for the manufacturing of gearboxes for agricultural machinery, the company has progressively enlarged its range with complete transmissions also for the industrial and mobile markets, to ensure customers added value and competitive advantages.

Industrial operations are structured in five plants in **Italy**, specialized by product line, plus two facilities in **China** (Pinghu) and **India** (Bangalore).

Comer Industries plants worldwide have been designed following the principles of **World Class Manufacturing (WCM)**, a Japanese work-based integrated production methodology developed in the USA in the 1990s which involves the entire organization, from safety to environment, maintenance, logistics and quality. It targets the elimination of all wastes with the ultimate objective of achieving zero defects, zero accidents, zero breakdowns and zero inventory.



HEAVY-DUTY SPEED CHANGE GEARS



RIGID AND STEERING AXLES



MODULAR AUGER DRIVES



PROFESSIONAL DRIVESHAFTS AND SAFETY DEVICES



PLANETARY WHEEL DRIVES

QUALITY MANAGEMENT SYSTEM & CUSTOMER CARE

- **PPAP** (Production Part Approval Process) in compliance with the IATF 16949 automotive requirements
- **SIX SIGMA** culture on the basis of total quality management (TQM) standards
- **FMEA** (failure mode and effects analysis)



MECHATRONICS RESEARCH CENTER

To develop and test advanced product solutions, Comer Industries established its **Mechatronics Research Center**, (1996), equipped with the latest technologies and experimental tools. Covering an area of 2,100 m², this facility has 1 climate chamber and 16 soundproofed test cells, 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.



2,100 m²
Facility



36,500
Testing hours

16
Test cells

1
Climatic chamber

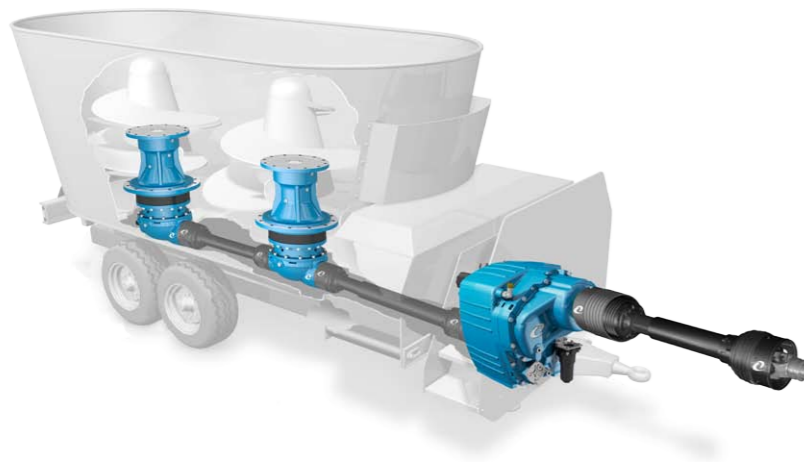
16
People

MAIN TESTS

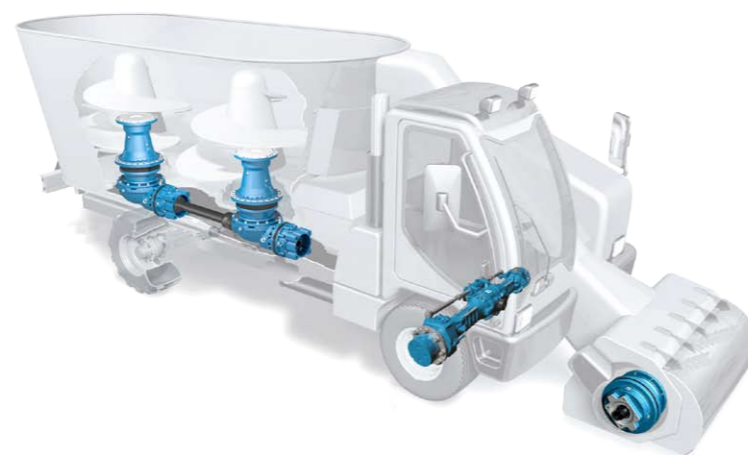
- Functional
- Field load data monitoring
- Crash test
- Static overload
- Endurance
- Structural fatigue

KEY STRENGTHS

- **Complete systems for power transmission:**
 - **Rigid and Steering Axles**
 - > best braking and efficiency performance.
 - **Professional Range of Driveshafts and Safety Devices**
 - > high safety performance
 - > ease of maintenance
 - > long greasing intervals.
 - **Heavy-Duty Speed Change Gears**
 - > low-noise helical gear transmission featuring gears
 - > internal pre-load mechanism enabling gear change and automatic re-engagement
 - > electric actuator device to pilot change gear.
 - **A-614 POWERSHIFT TRANSMISSION**
 - > shift underload without tractor PTO stop
 - > 30% fuel saving and reduction in mixing time through piloting gearshift from final machine's panel and using always best gear
 - > reduced size of the tractor thanks to high reduction ratio
 - > low noise transmission due to helical gear design
 - > designed for 10,000 hours life
 - > monitoring of input/output speed, pressure and temperature (sensors) to protect unit from wrong utilization of shift gear system.
 - **Modular Auger Drives**
 - > transmission of the vertical and horizontal drive to the augers
 - > compact and versatile solutions that can be combined with hydraulic motors.
 - **Planetary Wheel Drives**
 - > compact drives
 - > high level of performances
 - > robustness
 - > easy and economical installation on machines
 - > reliability for the application
 - > excellent mobility required by vehicle type.
- **Wide product range:** highly personalized, versatile and cutting-edge transmissions.
- **Boosted efficiency and attention to the environment.**
- **A proven 25 year- track record in the design and manufacturing of power transmissions for feed mixers:**
 - From the 90s
 - > production of parallel axis speed change gears
 - > development of modular auger drives.
 - In the 2000s
 - > offer enlarged with axles.
- **Strong engineering competences and continuing input towards excellence** from R&D.
- **Long-time experience in field testing, powering duty cycle machinery and solving customer' expectations.**



TRAILED VERTICAL FEED MIXERS

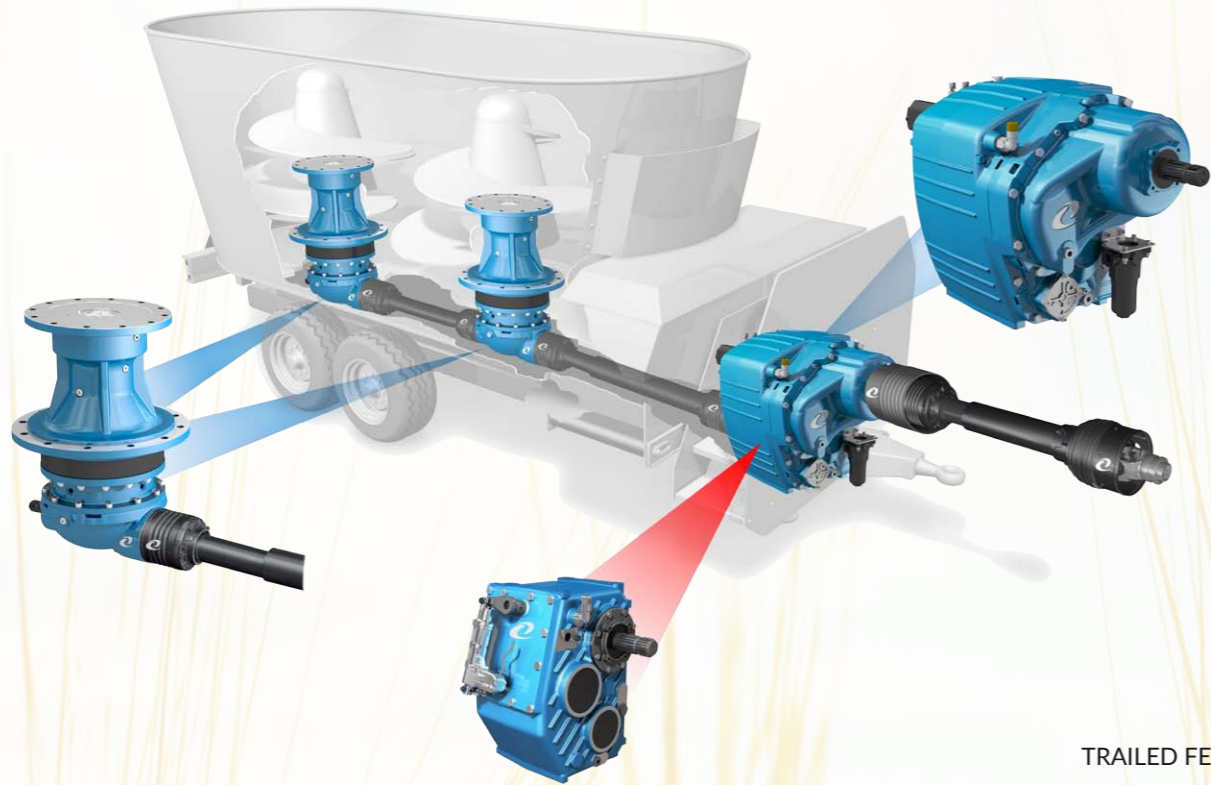


SELF-PROPELLED VERTICAL FEED MIXERS

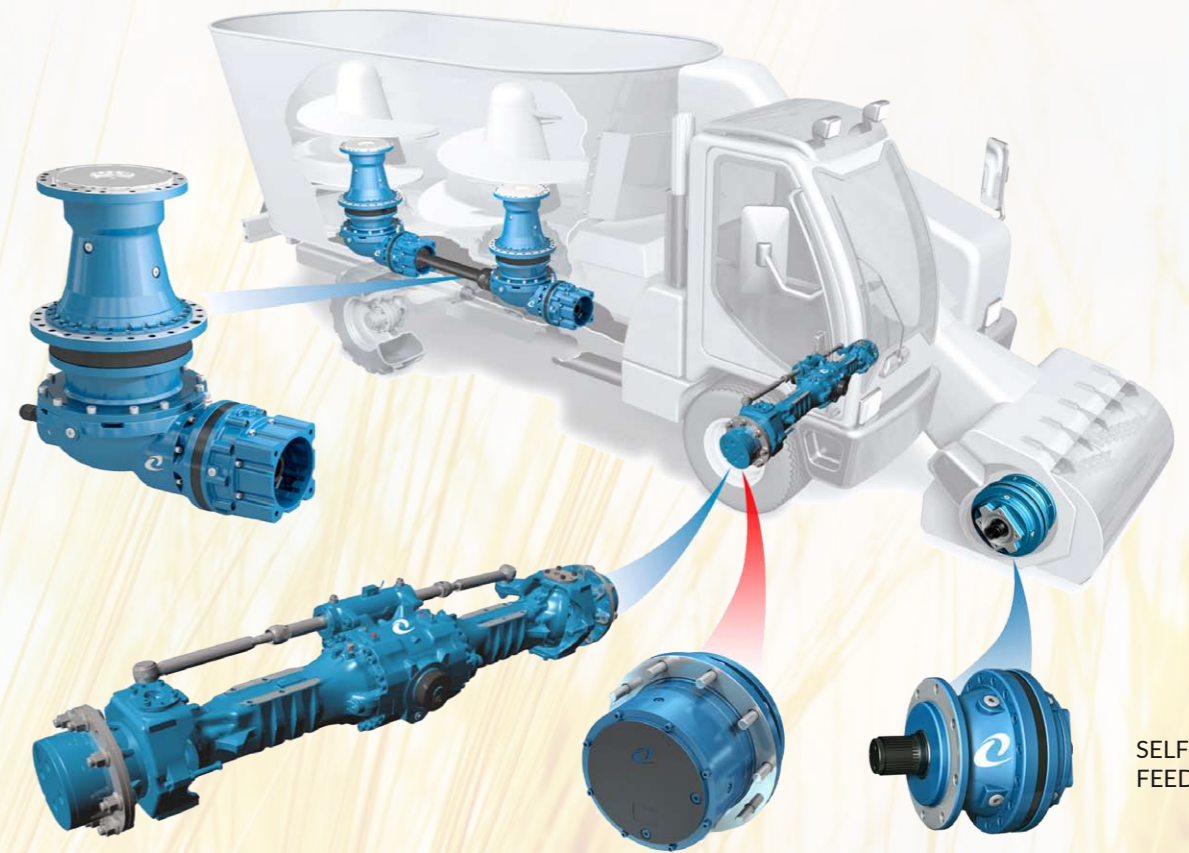


STATIONARY MACHINES

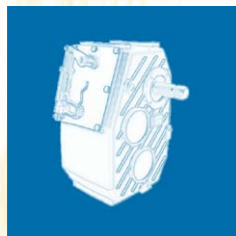
SOLUTIONS FOR VERTICAL FEED MIXERS



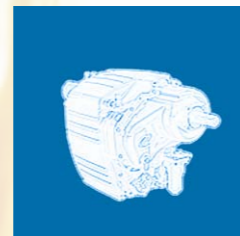
TRAILED FEED MIXER



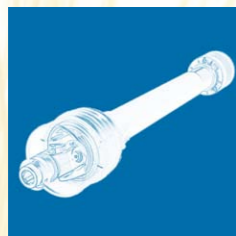
SELF-PROPELLED FEED MIXER



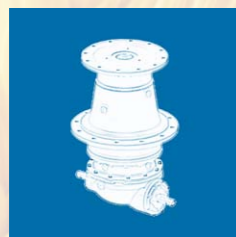
N-673J
DP-732A
C-3A
A-613R



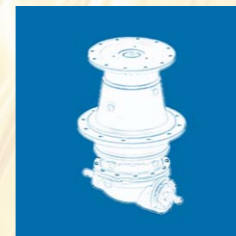
A-614A
A-614B



VP-6 EN-60
VP-7 EN-80
VP-8 EN-90
VP-9
VP-10



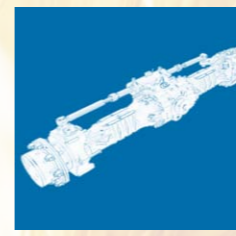
PGA-502 PGA-1702/3 PGA-4203
PGA-1002/3 PGA-2102/3
PGA-1202 PGA-2502
PGA-1602/3 PGA-3003/4



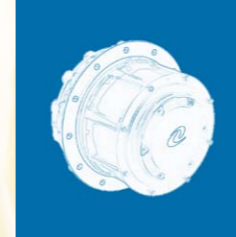
PGA-1603
PGA-1703
PGA-2103
PGA-2503

PGA-3400
PGA-4204

MILLING HEAD:
PG-161
PG-251
PG-501



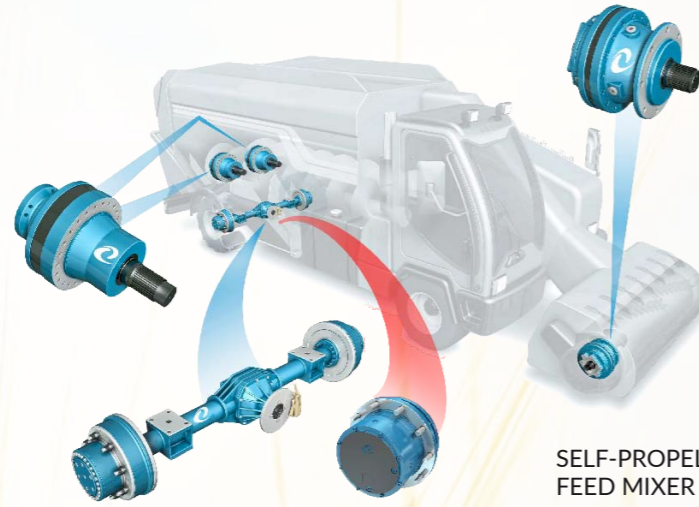
F-238 F-358
S-238 S-358
F-328
S-328



PGR-802 W PGR-4802/3 W
PGR-1702/3 W
PGR-2502/3 W
PGR-3602/3 W

SOLUTIONS FOR HORIZONTAL FEED MIXERS

SOLUTIONS FOR STATIONARY MACHINES



SELF-PROPELLED
FEED MIXER



AUGER:
PG-1602
PG-2502

MILLING HEAD:
PG-161
PG-251
PG-501

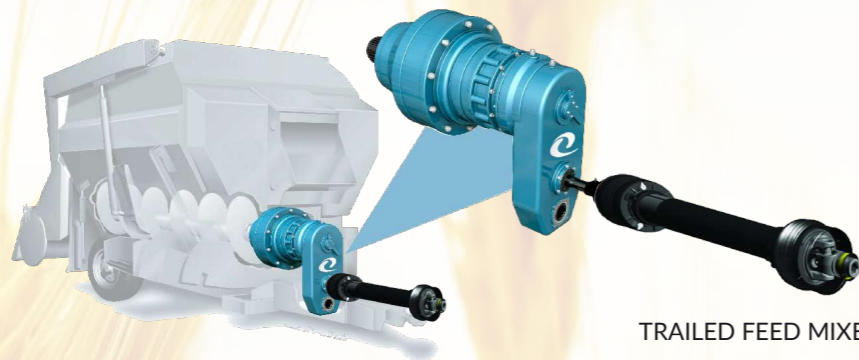


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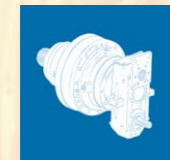


PGR-802 W
PGR-1702/3 W
PGR-2502/3 W
PGR-3602/3 W

PGR-4802/3 W



TRAILED FEED MIXER



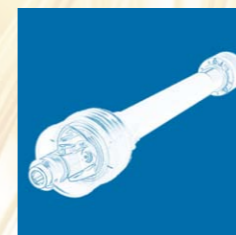
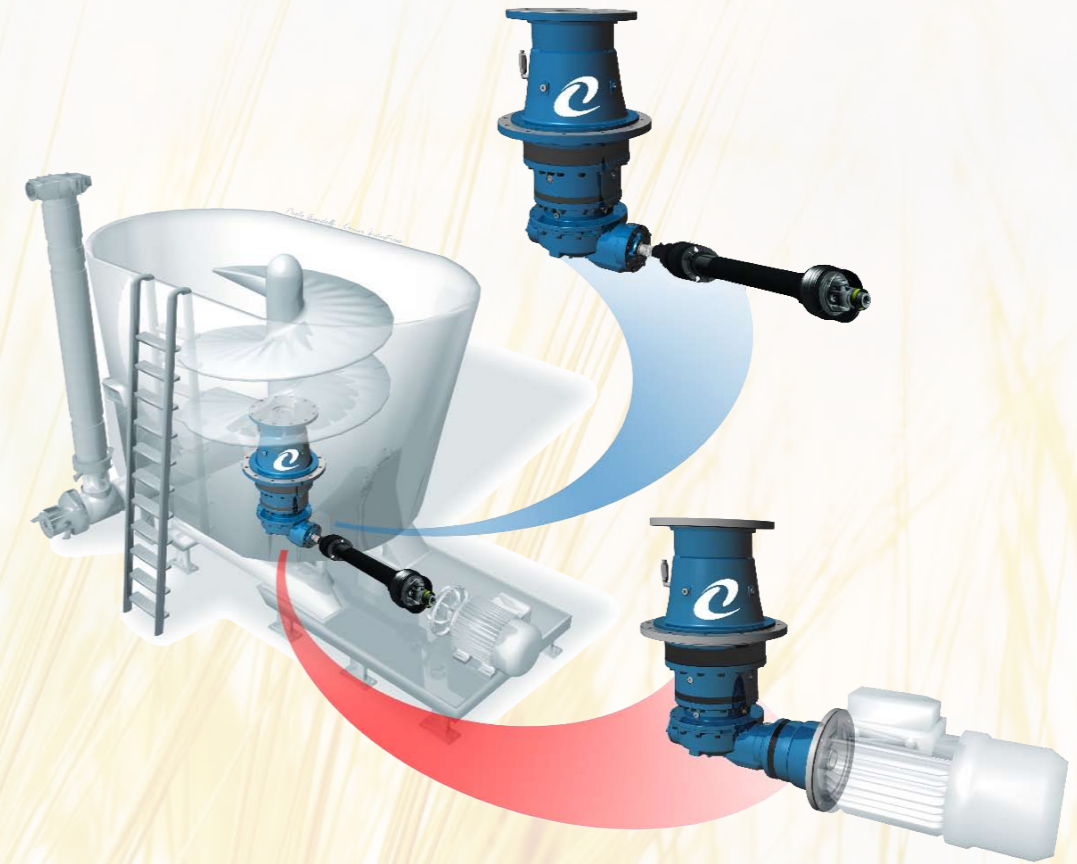
PG-702
PG-1002
PG-1602
PG-1802

PG-2502
PG-3002
PG-3503



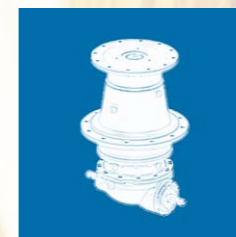
VP-6
VP-7
VP-8
VP-9
VP-10

EN-60
EN-80
EN-90



VP-6
VP-7
VP-8
VP-9
VP-10

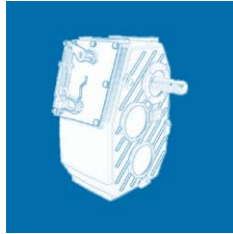
EN-60
EN-80
EN-90



PGA-502
PGA-1002/3
PGA-1202
PGA-1602/3

PGA-1702/3
PGA-2102/3
PGA-2502/3
PGA-3003/4

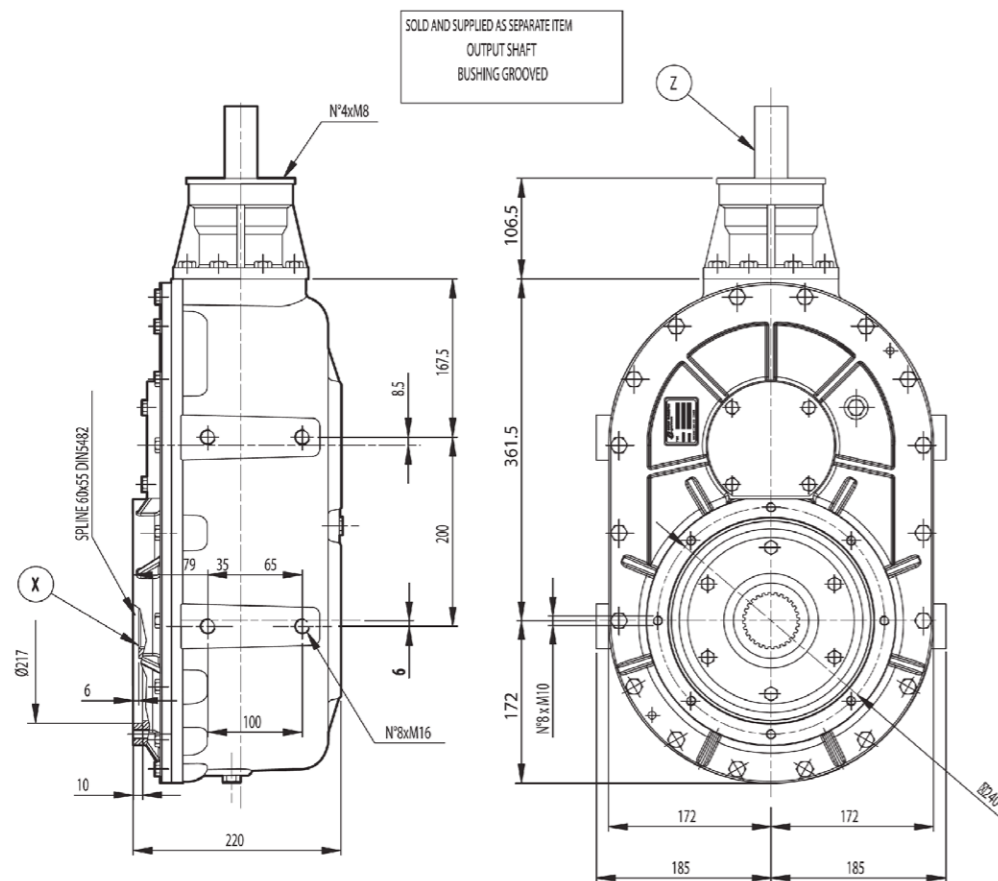
PGA-4203/4



HEAVY-DUTY SPEED CHANGE GEARS

HEAVY-DUTY SPEED CHANGE GEARS FOR TRAILED VERTICAL FEED MIXERS

N-673J gearbox equips single auger trailed vertical feed mixers (up to 4 m³). The unit is compact, with **helical bevel** and **parallel axis transmission**.

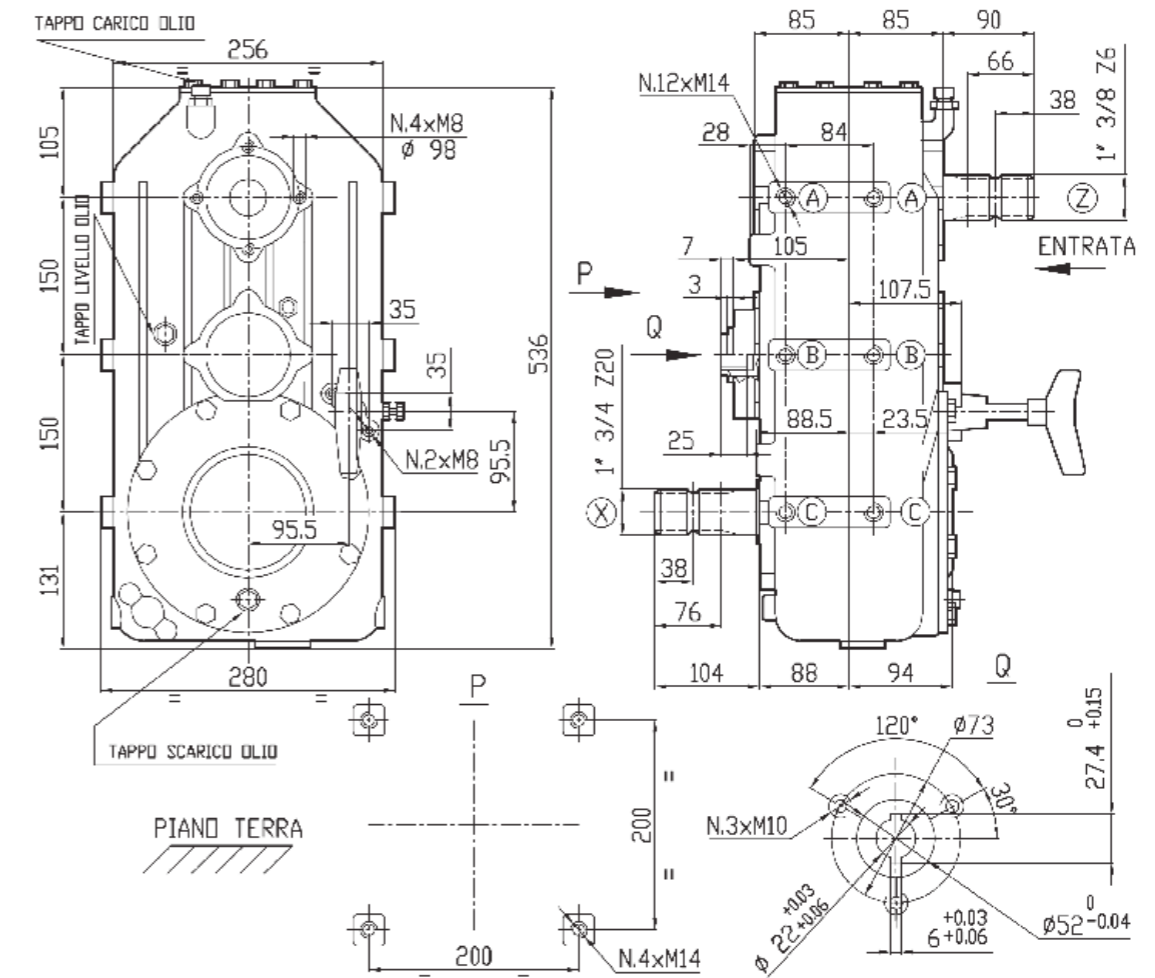


Type	Transmission Ratio i	Transmissible Power HP	Maximum Torque Nm	Maximum Input Speed rpm	Input	Weight kg
N-673J	10.8:1	75.0	1,022	540	Z	110
	15.0:1	45.0	895			

The 2-speed change gear **DP-732A** gearbox is applied on single or double augers trailed vertical feed mixers (up to 10-12 m³ for single auger).

The gearbox is available with following options:

- **hydraulic actuator** for gear shifting
- **electric actuator with two positions** for gear shifting
- **electric actuator with three positions** (neutral) for gear shifting
- **pump coupling**
- **optional left output shaft to cutters.**



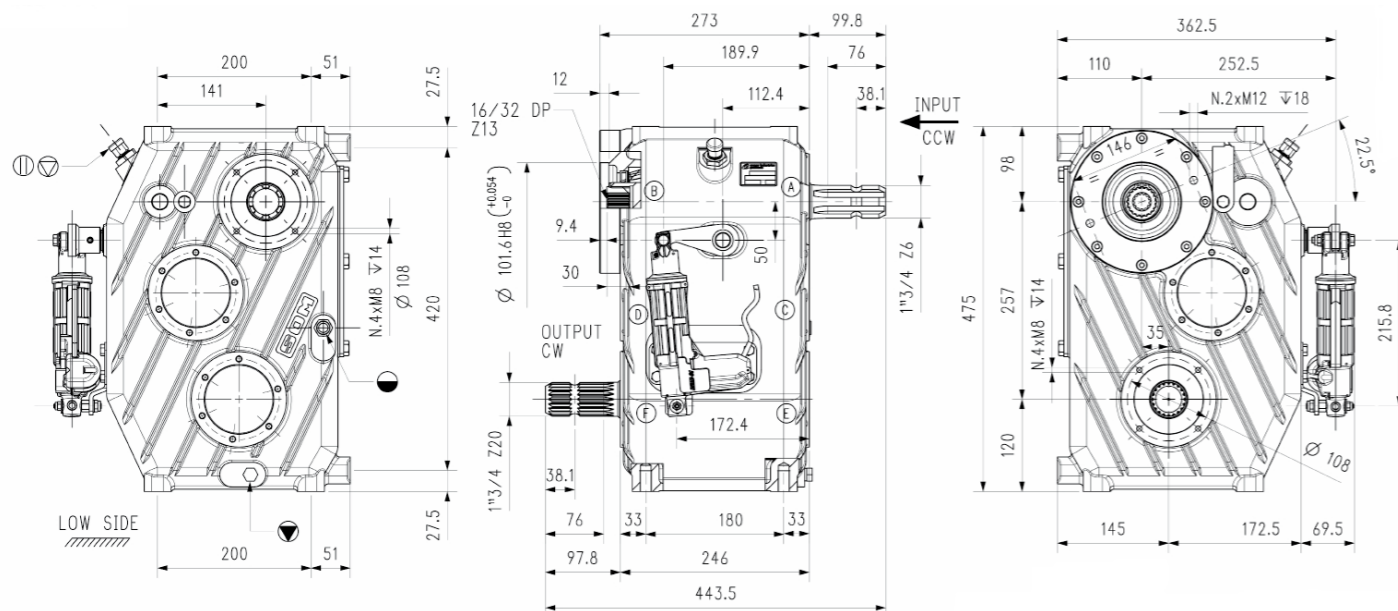
Type	Transmission Ratio i							Transmissible Power HP	Maximum Input Speed rpm	Input	Weight kg
DP-732A	1:1/1.16:1	1:1/1.23:1	1:1/1.41:1	1:1/1.52:1	1:1/1.68:1	1:1/1.88:1	1:1/1.93:1	80.0	540	Y	62

The 2-speed change gear **C-3A** gearbox equips trailed vertical feed mixers. The unit is available in two versions:

- **C-3A standard version** (single auger up to 16 m³ and double augers up to 32 m³)
- **C-3A reinforced version** (single augers up to 18 m³ and double augers up to 38 m³)

The gearbox is available with following options:

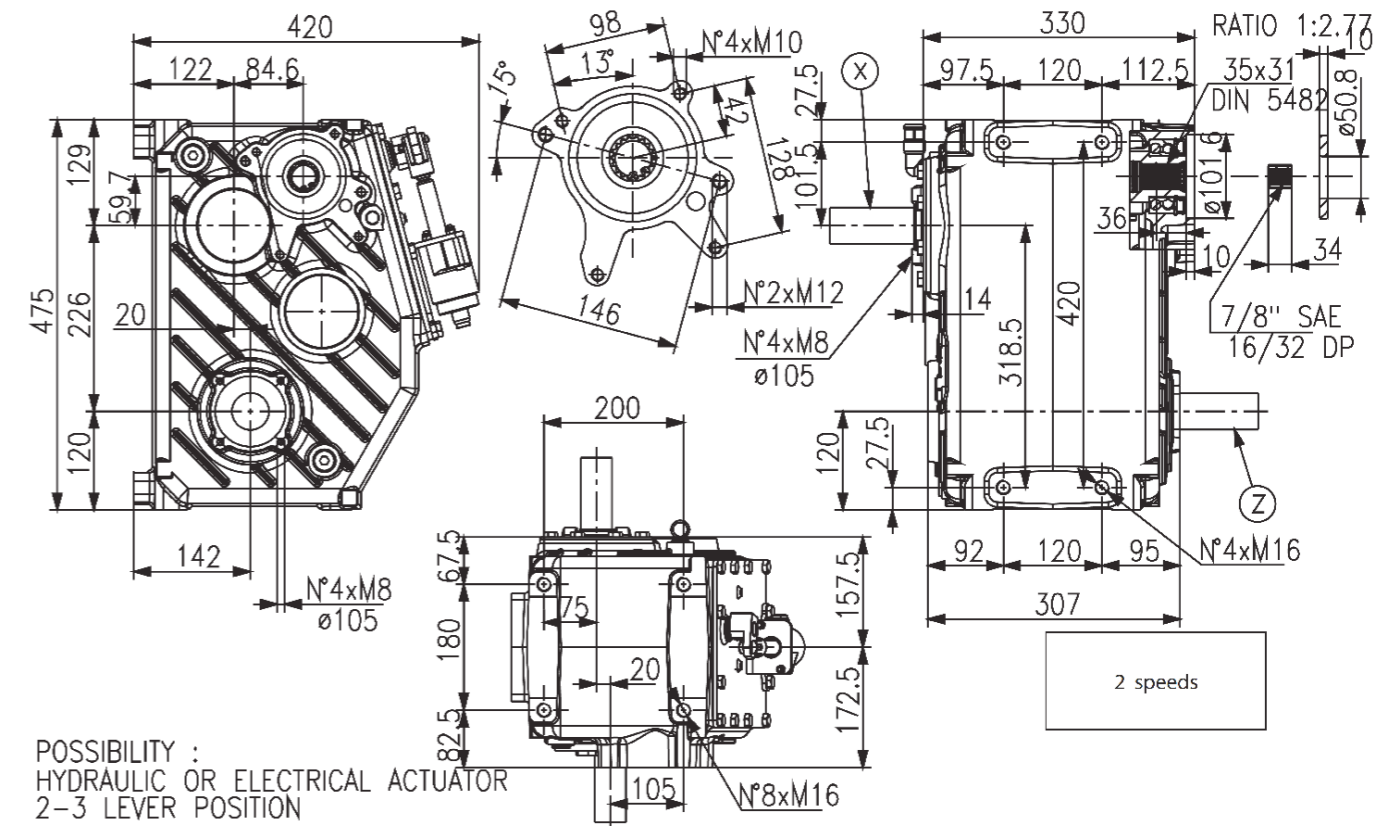
- **“Easy-Shift” system** for shifting gear with preload mechanism inside the unit
- **hydraulic actuator with two positions** for gear shifting
- **electric actuator with two positions** for gear shifting
- **electric actuator with three positions (neutral)** for gear shifting
- **pump coupling**.



The 2-speed change gear **A-613R** gearbox with low noise helical gears is applied on double or triple augers trailed vertical feed mixers (from 35 m³ for double augers).

The gearbox is available with following options:

- **hydraulic actuator** for gear shifting
- **electric actuator with two positions** for gear shifting
- **electric actuator with three positions (neutral)** for gear shifting
- **high speed pump connection** standard
- optional **low speed pump connection**.



POSSIBILITY :
HYDRAULIC OR ELECTRICAL ACTUATOR
2-3 LEVER POSITION

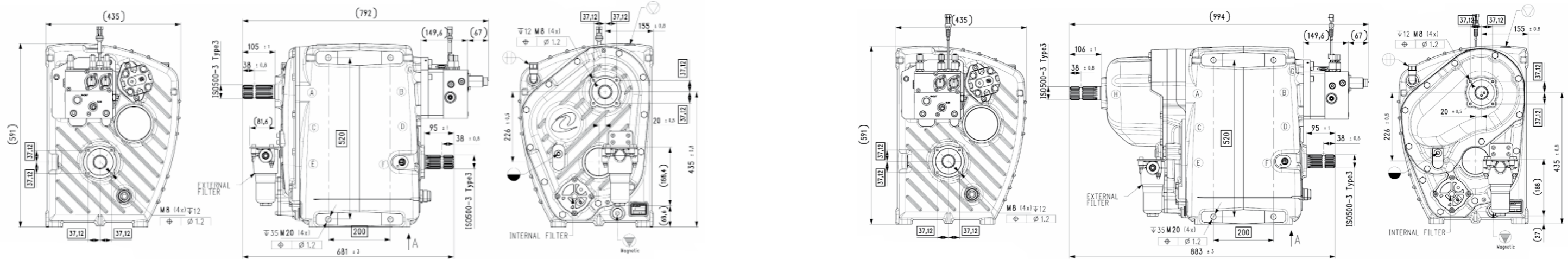
Type	Transmission Ratio i			Transmissible Power HP	Maximum Input Speed rpm	Input	Weight kg
C-3A	1:1/1.5:1	1:1/1.8:1	1:1/2.18:1	125	540	X	100
	1.28:1/2.30:1	1.8:1/2.73:1	1.8:1/3.2:1	175	1,000		
C-3A reinforced	1:1/1.8:1	1.25:1/1.67:1		150	540	X	100
	1.57:1/3.26:1			205	1,000		

Type	Transmission Ratio i				Transmissible Power HP	Maximum Input Speed rpm	Input	Weight kg
A-613R	1:1/1.3:1	1:1/1.5:1	1:1/1.8:1	1.8:1/2.7:1	180	540	Z	105
					245	1,000		

A-614A and **A-614B** shift underload integrated transmissions are applied respectively on double and triple augers trailed feed mixers (from 30 m³ for double augers).

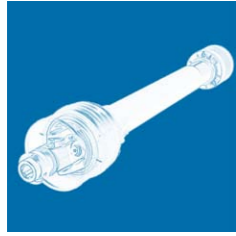
Transmissions main features are the following:

- **complete mechatronic package: 2- or 3- speed** helical gears transmission integrated with **hydraulic system**, **Electronic Control Unit (ECU)** to manage gear shifting
- capacity to shift gear under load **without stopping augers rotation**
- **CAN bus interface** to monitor gear position, temperature, in/out speed and pressure
- available in **2-speeds** (model A-614A), standard ratio 1:1 / 1.8:1
- available in **3-speeds** (model A-614B), standard ratio 1:1 / 1.8:1 / 3.2:1
- optional **cooling system**.



Type	Transmission Ratio i	Transmissible Power HP	Input Speed rpm	Input	Weight kg
A-614A	1:1/1.8:1	250	540/1,000	ISO500-3 TYPE3	255

Type	Transmission Ratio i	Transmissible Power HP	Input Speed rpm	Input	Weight kg
A-614B	1:1/1.8:1/3.2:1	250	540/1,000	ISO500-3 TYPE3	325



PROFESSIONAL DRIVESHAFTS & SAFETY DEVICES

VP DRIVESHAFT PROFESSIONAL SERIES FOR TRAILED FEED MIXERS AND STATIONARY MACHINES (BIOGAS, OTHER APPLICATIONS)

The **VP driveshaft professional series** is designed to meet the demands of **high performance intensive use**. VP driveshafts offer enhanced **safety** and **reliability** through advanced solutions such as **hexalobate profiles** and **tubes with NITREG treatment**, which allows:

- increased **wear resistance**
- reduced **axial thrusts in extension**
- extended **maintenance intervals**.

The new **VP series protection** has passed all Irstea tests with greasing intervals every 250 hours.

Type	Power HP	Continuous Torque		Maximum Dynamic Torque		Speed rpm	ASAE Category	
		Nm	in-lb	Nm	in-lb		Regular Duty	Heavy Duty
VP-6	54	707	6,257	1,350	11,949	540	5	4
	83	582	5,152			1,000		
VP-7	69	901	7,977	1,580	13,985	540	6	4
	106	744	6,588			1,000		
VP-8	90	1,166	10,323	2,100	18,587	540	6	5
	136	954	8,446			1,000		
VP-9	110	1,431	12,670	2,430	21,508	540	7	5
	166	1,164	10,305			1,000		
VP-10	132	1,714	15,172	2,930	25,933	540	8	7
	200	1,403	12,416			1,000		

EN DRIVESHAFT SERIES FOR TRAILED FEED MIXERS AND STATIONARY MACHINES (BIOGAS, OTHER APPLICATIONS)

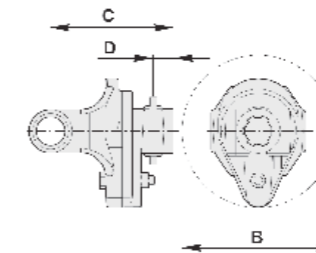
Principal characteristics of **EN guard** are the following:

- **retractable cones** for easier attachment/removal of the transmission to the PTO
- **quick and easy cone engagement/disengagement** for excellent access to transmission grease points
- **interchangeable cones** on both sides.

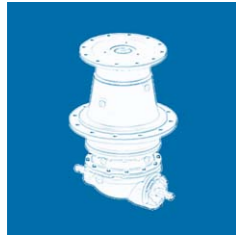
Type	Power HP	Continuous Torque		Maximum Dynamic Torque		Speed rpm	ASAE Category	
		Nm	in-lb	Nm	in-lb		Regular Duty	Heavy Duty
EN-60	68	880	7,790	1,510	13,360	540	5	4
	105	740	6,510			1,000		
EN-80	100	1,300	11,500	2,390	21,150	540	6	5
	154	1,080	9,550			1,000		
EN-90	120	1,560	13,800	2,900	25,700	540	7	6
	190	1,340	11,850			1,000		

TORQUE LIMITER SAFETY DEVICE

The **torque limiter** interrupts the power transmission when the torque exceeds the setting value, by shearing the bolt. Transmission is restored by inserting a new bolt in the device.



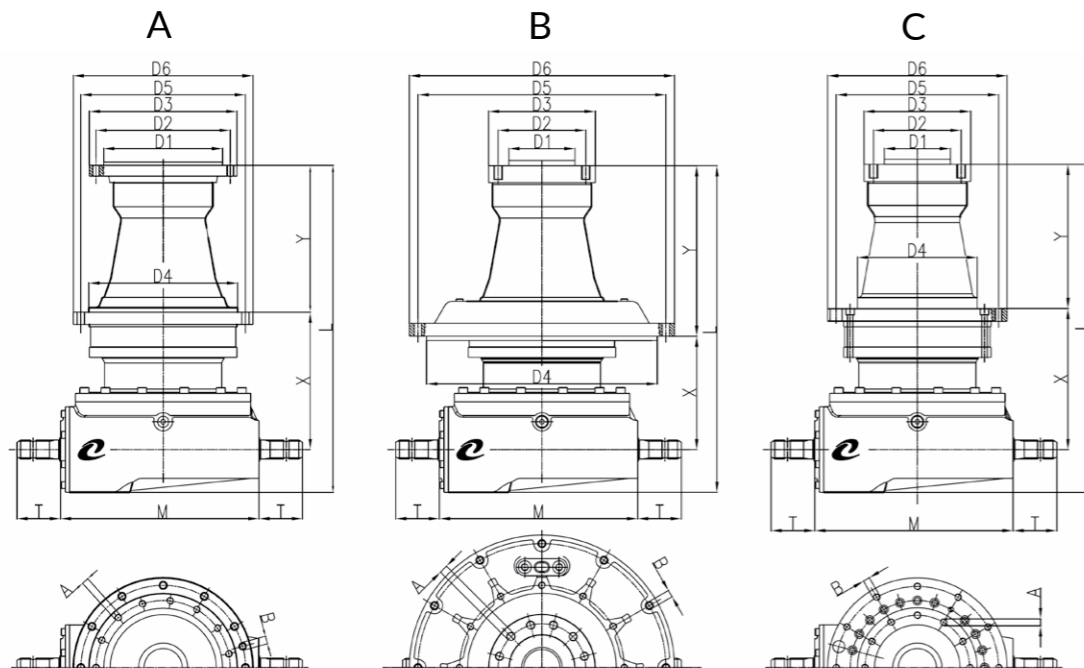
Type	B mm	C mm	D mm	Maximum Torque	
				Nm	in-lb
60	162	137	22	2,500	22,100
80	162	146	22	3,500	30,900
90	162	152	22	4,000	35,400



MODULAR AUGER DRIVES

Comer Industries' **modular auger drives** are designed to suit feed mixers up to 52 m³ (1,836 cubic-ft). This product range is large and extremely versatile because of its modularity that features **high power density** and **reliability**. One out of two feed mixers currently in the field are equipped with Comer Industries' modular auger drives. Comer Industries is an undisputed **market leader** thanks to its **continuous investment in new product technology** and an **unparalleled value** it can offer to its customers.

PGA MODULAR AUGER DRIVES FOR TRAILED VERTICAL FEED MIXERS AND STATIONARY MACHINES (BIOGAS, OTHER APPLICATIONS)



Dimensions (mm)

Size	Type	D1	D2	D3	A	D4	D5	D6	B	L (*)	X (*)	Y	M	T
PGA-502	C	140 H8	160	185	M16 x N°12	190 F7	220	244	Ø10,5 x N°16	492.2	221	192	260	82
PGA-1002/3	C	160 H8	195	225	M16 x N°12	280 F7	314	346	Ø15 x N°18	688.2/760.5	254.7/327	321	464	105
PGA-1202	C	160 H8	195	225	M16 x N°12	280 F7	314	346	Ø15 x N°16	670	254.5	321	376.5	102
PGA-1602/3	A	278 H8	314	345	M16 x N°15	348 H8	385	420	Ø17 x N°12	764.5/836.5	321.5/394	343	464	102
	B	154.8 H8	205	250	M20 x N°12	540 H8	580	620	Ø17.5 x N°12	764/836.5	265/337.5	399	464	102
	C	154.8 H8	205	250	M20 x N°12	348 H8	385	420	Ø17 x N°12	764/836.5	321.5/394	342.5	464	102
PGA-1702/3	A	278 H8	314	345	M16 x N°15	348 H8	385	420	Ø17 x N°12	764.5/836.5	321.5/394	343	464	102
	B	154.8 H8	205	250	M20 x N°12	540 H8	580	620	Ø17.5 x N°12	764/836.5	265/337.5	399	464	102
	C	154.8 H8	205	250	M20 x N°12	348 H8	385	420	Ø17 x N°12	764/836.5	321.5/394	342.5	464	102
PGA-2102/3	A	278 H8	314	345	M16 x N°20	348 H8	385	420	Ø17 x N°23	783/855.5	321.5/394	343	464	102
	B	154.8 H8	205	250	M20 x N°18	540 H8	580	620	Ø17.5 x N°12	782.5/855	265/337.7	399	464	102
	C	154.8 H8	205	250	M20 x N°18	348 H8	385	420	Ø19 x N°12	782.5/855	321.5/394	342.5	464	102
PGA-2502	A	140 H7	425	470 H8	M22 x N°12	480 H8	520	580	Ø25 x N°12	868.5	368.5	400	464	102
PGA-3003/4	A	140 H7	425	470 H8	M22 x N°12	480 H8	520	580	Ø25 x N°12	1.027.5	527.5	400	464	102
PGA-4203	A	140 H7	425	470 H8	M22 x N°24	480 H8	520	580	Ø25 x N°24	1.084	584	400	464	102

(*) First number refers to second stage. Second number refers to third stage.

Size	Continuous Torque Nm	Maximum Torque Nm	Input Speed rpm	Transmission Ratio (Min-Max) i	Input Shaft
PGA-502	3,810	7,620	540	12.36-15.51	1"3/8 Z6
PGA-1002/3	8,500	17,000	540	16.8-30.6	1"3/4 Z20
PGA-1202	11,600	23,200	540	11.1-19.4 (*)	1"3/4 Z20
PGA-1602/3	15,700	31,400	540	13.4-47.5	1"3/4 Z20
PGA-1702/3	15,700	31,400	540	13.4-47.5	1"3/4 Z20
PGA-2102/3	21,000	47,000	540	12.1-62.1	1"3/4 Z20
PGA-2502	23,780	48,000	540	13.6-23.6 (*)	1"3/4 Z20
PGA-3003/4	30,760	61,520	540	25.7-84.4	1"3/4 Z20
PGA-4203	42,000	142,000	540	27.8-91.4	1"3/4 Z20

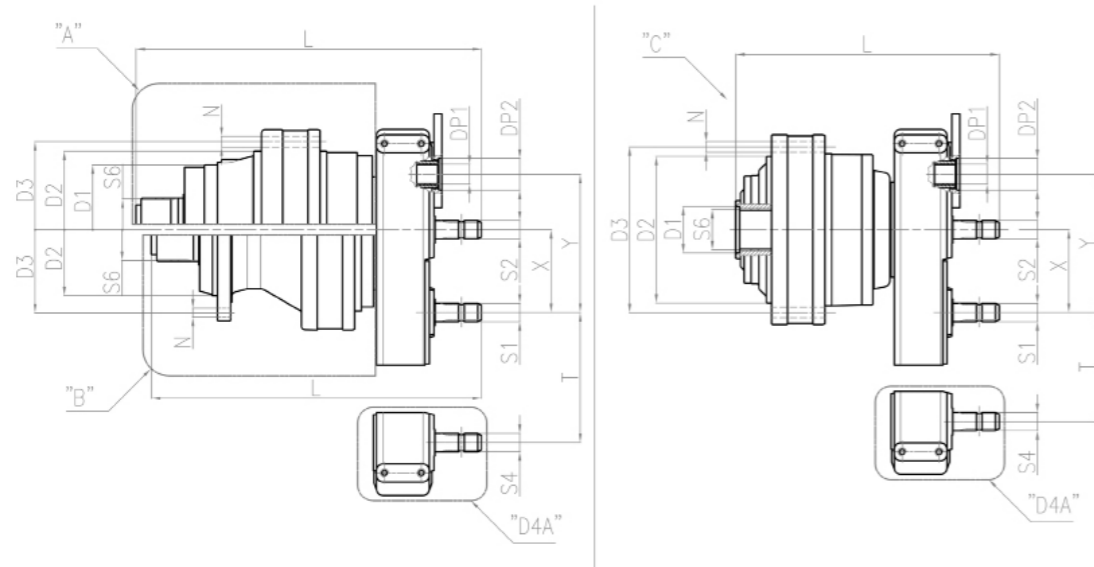
(*) Values referred to continuous torque and maximum torque may vary.

PGA MODULAR AUGER DRIVES FOR SELF-PROPELLED VERTICAL FEED MIXERS AND STATIONARY MACHINES (BIOGAS, OTHER APPLICATIONS)

Size	Continuous Torque Nm	Maximum Torque Nm	Transmission Ratio (Min-Max) i
PGA-1603	15,700	31,400	24.4-116.9
PGA-1703	15,700	31,400	24.4-116.9
PGA-2103	21,000	47,000	31.8-126.5
PGA-2503	23,780	48,000	35.7-142.2
PGA-3004	30,760	61,520	97.4-612.3
PGA-4204	42,000	142,000	105.4-662.8

(*) Motor predispositions SAE C / SAE D, IEC, NEMA and others.

PG MODULAR AUGER DRIVES FOR TRAILED HORIZONTAL FEED MIXERS

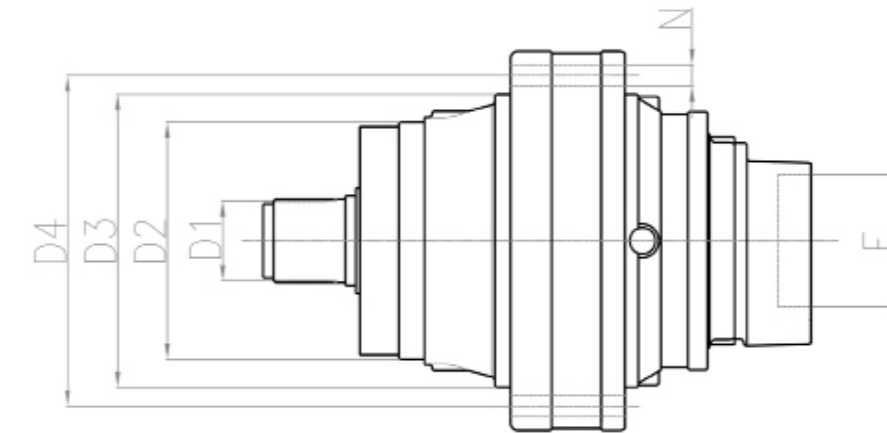


Size	Transmission Ratio (*) i	Output Type	D1	D2	D3	N	L	S6
PG-702	18.2	B		200 F7	250	Ø15 x N°12	646.5	70x64 DIN5482
PG-1002	18.3	B		230 F7	295	Ø17 x N°10	627.5	80x74 DIN5482
PG-1602	13.4-33.6	B		230 F7	295	Ø17 x N°10	693	100x94 DIN5482
		C	88 H8	278 F7	314	Ø15 x N°18	490.5	80x74 DIN5482
PG-1802	15.7-29.9	B		230 F7	295	Ø17 x N°10	714	100x94 DIN5482
		C	88 H8	278 F7	314	Ø15 x N°18	499.5	80x74 DIN5482
PG-2502	14.6-20-36.2	A	245 F7	340 F7	370	Ø17 x N°15	798.5	100x94 DIN5482
		C	102 H7	340 F7	370	Ø17 x N°15	595.5	100x94 DIN5482
PG-3002	45.3	C	102 H7	340 F7	370	Ø17 x N°15	601	100x94 DIN5482
PG-3503	53.7	C	122 H7	340 F7	370	Ø17 x N°15	680.5	120x22x5 DIN5480

(*) Suggested ratios. Other ratios available on request.

Size	D3A						D4A	
	S1	S2	DP1	DP2	X	Y	S4	T
PG-702	1" 3/8 Z6	1" 3/8 Z6	40x36 DIN5482	60.3 H8	157	262		
PG-1002	1" 3/8 Z6	1" 3/8 Z6	40x36 DIN5482	60.3 H8	157	262		
PG-1602	1" 3/8 Z6	1" 3/8 Z6	40x36 DIN5482	60.3 H8	157	262		
	1" 3/8 Z6	1" 3/8 Z6	40x36 DIN5482	60.3 H8	157	262	1" 3/8 Z6	156.8
PG-1802	1" 3/8 Z6	1" 3/8 Z6	40x36 DIN5482	60.3 H8	157	262		
	1" 3/8 Z6	1" 3/8 Z6	40x36 DIN5482	60.3 H8	157	262	1" 3/8 Z6	156.8
PG-2502	1" 3/8 Z6	1" 3/8 Z6	40x36 DIN5482	60.3 H8	157	262		
	1" 3/8 Z6		40x36 DIN5482	60.3 H8	157	262	1" 3/8 Z6	156.8
PG-3002	1" 3/8 Z6		40x36 DIN5482	60.3 H8	157	262	1" 3/8 Z6	156.8
PG-3503	1" 3/8 Z6		40x36 DIN5482	60.3 H8	157	262	1" 3/8 Z6	156.8

PG MODULAR AUGER DRIVES FOR SELF-PROPELLED HORIZONTAL FEED MIXERS

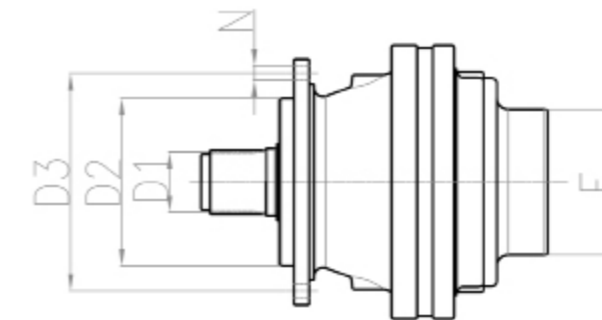


Size	Transmission Ratio (*) i	D1	D2	D3	D4	N	E (**)
PG-1602	22.14-33.6	80x74 DIN5482	225 F7	278 F7	314	Ø15 x N°18	SAE B / SAE C
PG-2502	20-36.2	100x94 DIN5482	245 F7	340 F7	370	Ø17 x N°15	SAE B / SAE C

(*) Suggested ratios. Other ratios available on request.

(**) Others available on request.

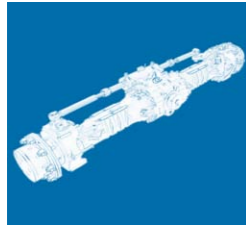
PG MODULAR DRIVES FOR MILLING HEAD ON SELF-PROPELLED FEED MIXERS



Size	Transmission Ratio (*) i	D1	D2	D3	N	E (**)
PG-161	3.55-2.49-5.60	40x36 DIN5482	110 F7	165	Ø10.5 x N°8	SAE A / SAE B / SAE BB / OMTS
PG-251	4.13-5.17-6.00	58x53 DIN5482	150 F7	195	Ø13 x N°10	SAE A / SAE B / SAE BB / OMTS
PG-501	4.13-5.17-6.00	58x53 DIN5482	150 F7	195	Ø13 x N°10	SAE A / SAE B / SAE BB / OMTS

(*) Suggested ratios. Other ratios available on request.

(**) Others available on request.

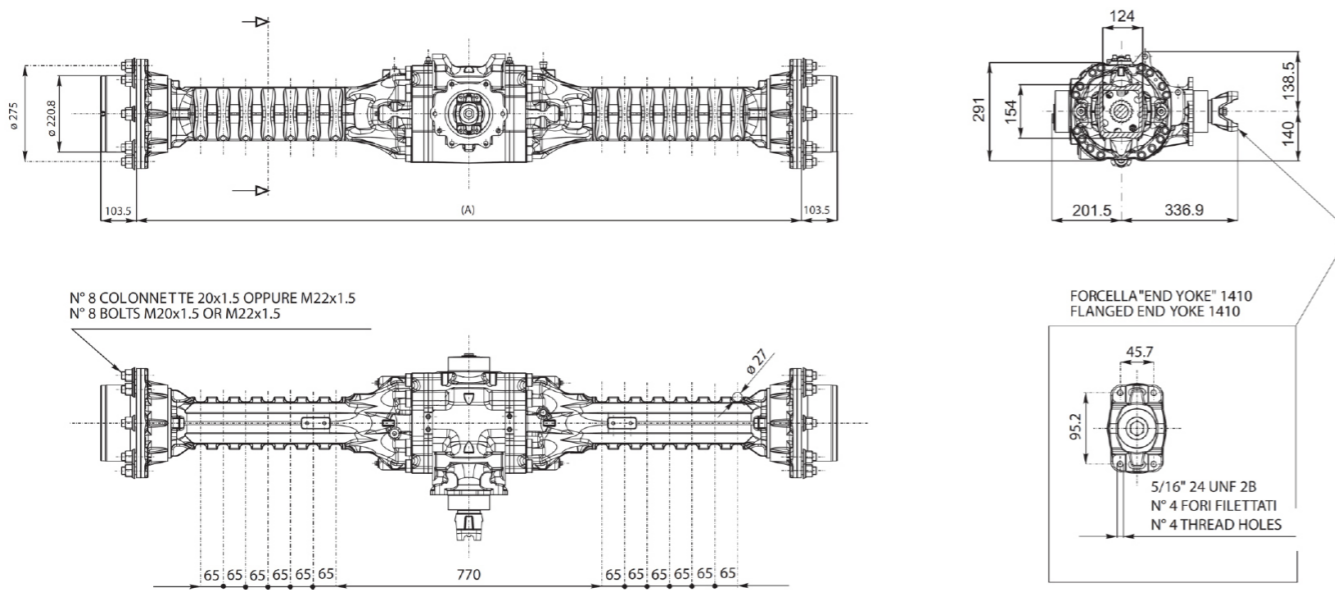


RIGID AND STEERING AXLES

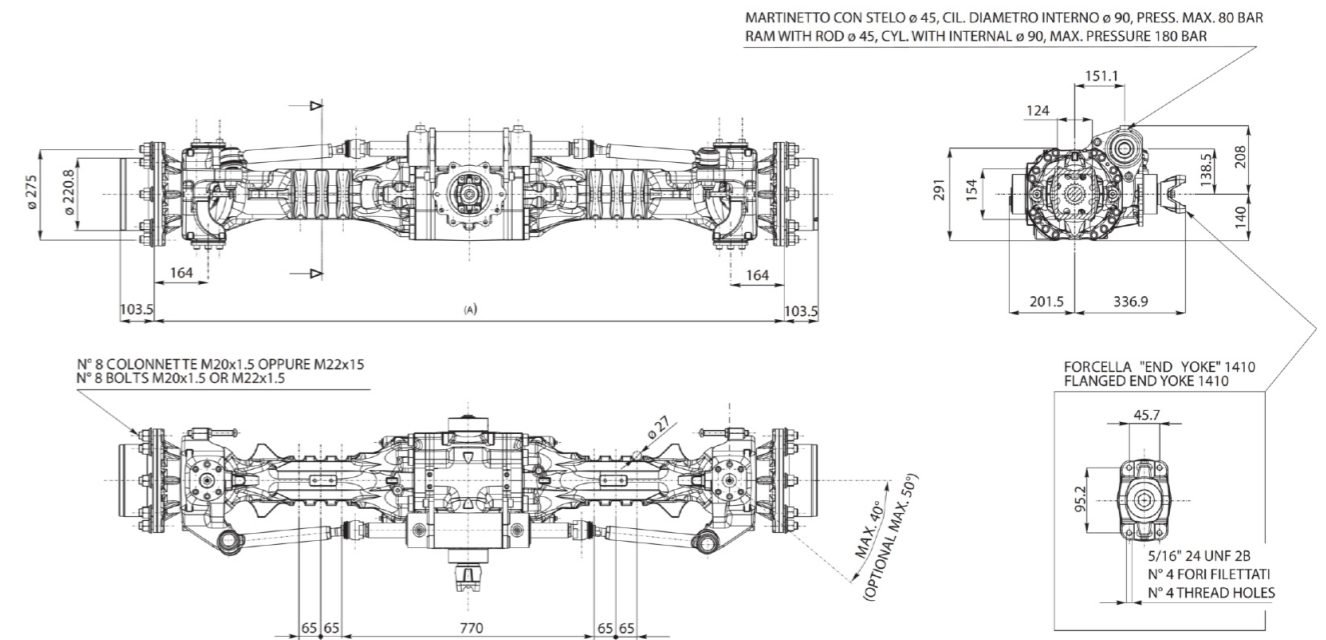
Comer Industries **axles** are suitable for self-propelled feed mixers up to 24 m³. With their **steering and rigid versions**, these axles fit both 2-Wheel-Steer and 4-Wheel-Steer vehicles and, thanks to their **modularity**, they easily meet market demand in terms of **brake options, reduction ratios and differential types**.

For 2-Wheel-Drive vehicles, the **hydraulic motor** can be directly mounted on axle input. For 4-Wheel-Drive vehicles, the axle can be equipped with **double speed gearbox S-528 series** to manage different speeds for transfer as well as for work mode. The gearbox can be provided with the 4-Wheel-Drive disconnection option which allows the user to disengage the transmission between front and rear axles in transfer mode.

RIGID AXLES FOR SELF-PROPELLED VERTICAL FEED MIXERS



STEERING AXLES FOR SELF-PROPELLED VERTICAL FEED MIXERS



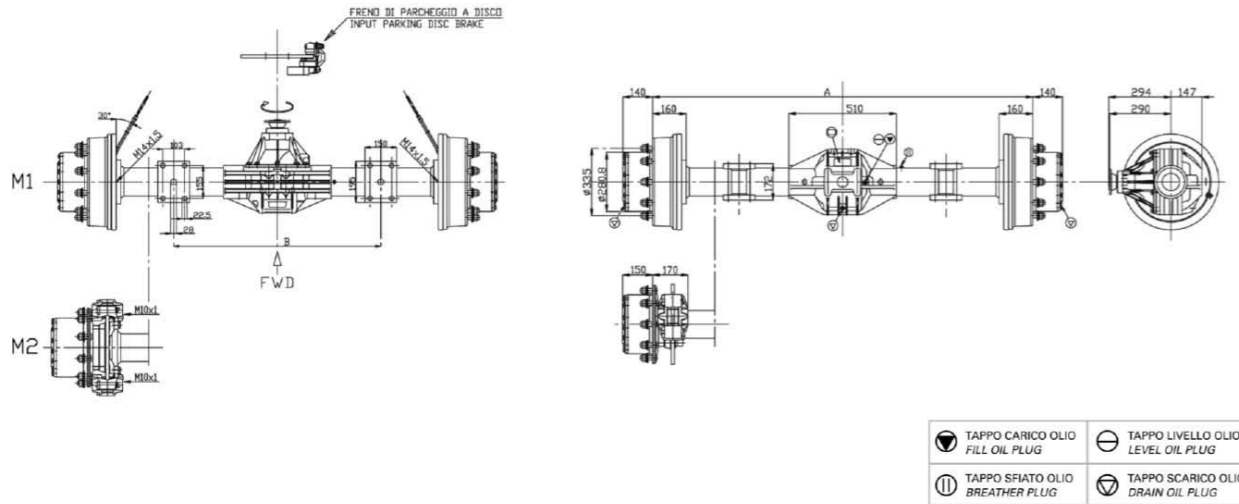
Type	Maximum Dynamic Load daN	Maximum Output Torque daNm	BCD (Bolt Circle Diameter) mm	Reduction Ratio at Wheels	Total Reduction Ratio	Track-Dimension A mm	Service Brake Type
S-238	9,300 (*)	3,400	275/335	6:1	from 13.41:1 to 24.66:1	from 1,790 to 2,050	Oil Immersed Brake Discs
S-328	12,000 (*)	5,800	335	6.4:1	from 13.72:1 to 28:1	from 1,920 to 2,180	Oil Immersed Brake Discs
S-358	15,000 (*)	6,500	335/425	6.4:1	from 15.76:1 to 28:1	from 2,050 to 2,310	Oil Immersed Brake Discs

(*) The dynamic load values refer to pivoting axles.

Type	Maximum Dynamic Load daN	Maximum Output Torque daNm	BCD (Bolt Circle Diameter) mm	Reduction Ratio at Wheels	Total Reduction Ratio	Track-Dimension A mm	Service Brake Type
F-238	9,300 (*)	3,400	275/335	6:1	from 13.41:1 to 24.66:1	from 1,790 to 2,050	Oil Immersed Brake Discs
F-328	12,000 (*)	5,800	335	6.4:1	from 13.72:1 to 28:1	from 1,920 to 2,180	Oil Immersed Brake Discs
F-358	15,000 (*)	6,500	335/425	6.4:1	from 15.76:1 to 28:1	from 2,050 to 2,310	Oil Immersed Brake Discs

(*) The dynamic load values refer to pivoting axles.

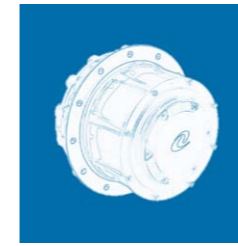
5970 RIGID AXLE FOR SELF-PROPELLED HORIZONTAL FEED MIXERS



Type	Maximum Dynamic Load daN	Maximum Output Torque daNm
5970	15,000	3,000

Type	Reduction Ratio at Differential						Reduction Ratio at Wheels	Total Reduction Ratio					
	2.687	3.23	3.7	4.455	5.30	6.428		5.25:1	14.107	16.958	19.425	23.389	27.825
5970	2.687	3.23	3.7	4.455	5.30	6.428	5.25:1	14.107	16.958	19.425	23.389	27.825	33.747

Type	Wheel Hub Type	Track-Dimension A mm	Service Brake Type
5970	M1	1,800-2,000	Drum Brake 400x80
	M2	1,781-2,000	Disc Brake Ø380 with Caliper



PLANETARY WHEEL DRIVES

PGR W PLANETARY WHEEL DRIVE SERIES FOR SELF-PROPELLED FEED MIXERS

Comer Industries' **planetary wheel drive PGR W series**, available with either **two or three stages of reduction**, can deliver maximum torque between 10,000 Nm and 48,000 Nm and can be used on most self-propelled feed mixers available to the market.

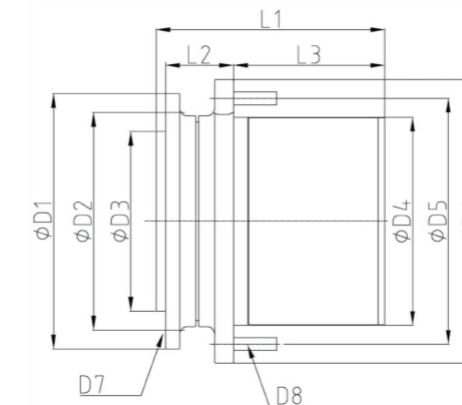
The **compact design** of the PGR W series allows **seamless integration** on agricultural applications, such as feed mixers, at a **competitive price**. Comer Industries' drives deliver **enhanced performance** in line with the reliability, travel speed and desired mobility necessary to succeed in these applications.

By incorporating a **disconnect feature**, offered as a product option for the PGR W series, Comer Industries' planetary wheel drives allow a vehicle to be towed in case of failure within the hydraulic system.

Additionally, these drives can readily accept a **SAE flange hydraulic motor**, as well as **cartridge style 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	10,000	150-300	3,500	15-20	58
PGR-1702/3 W	19-141	18,000	320-460	3,500	15-20	98
PGR-2502/3 W	16-151	25,000	200-600 (*)	3,500	15-20	120
PGR-3602/3 W	16-151	36,000	200-600 (*)	3,500	15-20	140
PGR-4802/3 W	16-151	48,000	200-600 (*)	3,500	15-20	170

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



Size	D1	D2	D3	D4	D5	D6	L1		L2	L3		D7	D8
							2/3 Stages			2/3 Stages			
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	222/240	M20x20	M18x1.5x20		
PGR-3602/3 W	350 (*)	310 (*)	270 (*)	320	380	420	340/361 (*)	90	220/241	M20x16	M22x1.5x16		
PGR-4802/3 W	350 (*)	310 (*)	270 (*)	350	400	435	350/370 (*)	91	229/249	M20x16	M22x1.5x16		

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

GLOBAL PRESENCE - SALES

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, India, 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.



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