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传动精品 传递真情

GTR-B 卷扬驱动 GTR-T行走驱动
GTR-B Winch drive GTR-T Travel Drives

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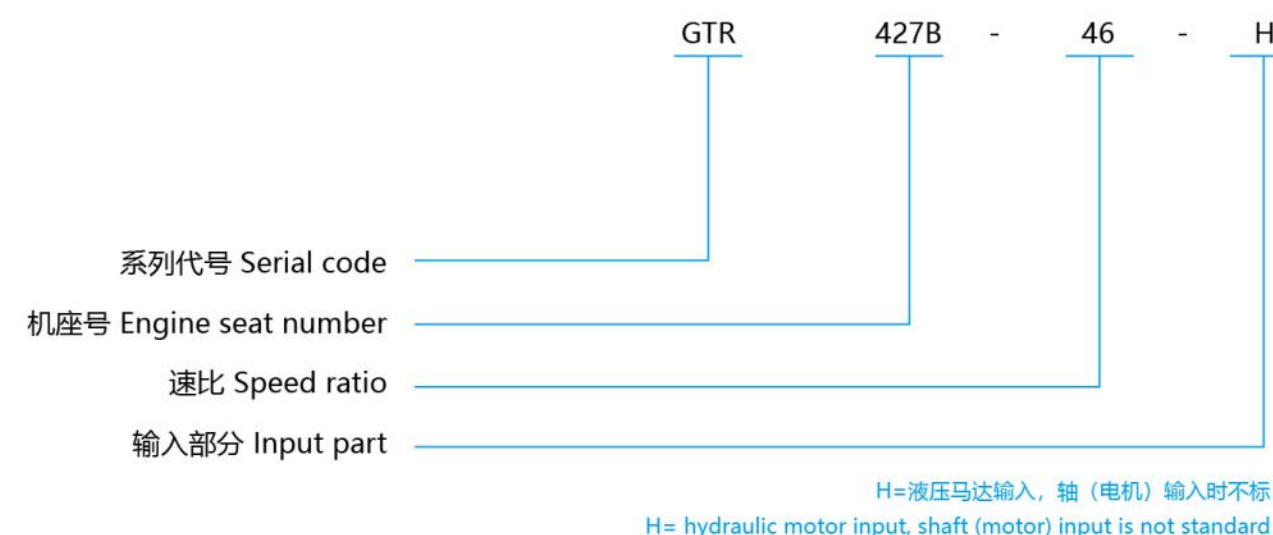
GTR-B行星内藏式卷扬齿轮箱 GTR-B planetary internal hoist gearbox

1 产品简介 Product introduction

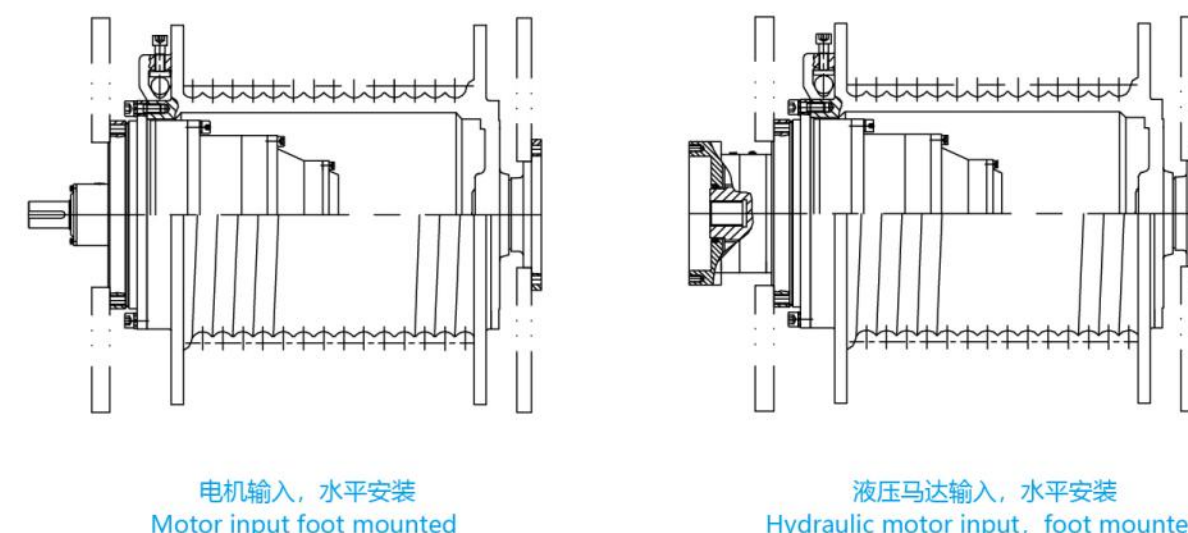
- GTR-B行星内藏式卷扬齿轮箱是卷扬机构的理想驱动装置。结构紧凑,可直接安装于卷筒内部,节省空间,特别是在空间窄小的情况下,它是更经济的解决方案。在繁重工作条件和恶劣环境下能提供卓越的品质和性能,并经过考验。
- 太阳轮、行星轮均采用优质合金钢渗碳淬火处理,内齿圈采用优质合金钢表面硬化处理,所有齿轮均磨齿加工。
- 行星架和内齿圈连接法兰均采用球墨铸铁材料,且均通过计算机模拟变形和应力分析等优化设计。
- 所有轴承采用知名品牌,轴承系统承载能力高,安全裕度大。
- 高度的模块化设计,批量生产更加经济,有效提高供货速度。
- 两级、三级和四级行星齿轮传动设计,速比覆盖范围广。
- 运转噪音低,传动效率高,使用寿命长。安装简单,维护方便。
- The GTR-B planetary internal hoist gearbox is the ideal driving device for the hoist. Compact, it can be installed directly inside the drum, saving space, especially in the case of narrow space, it is a more economical solution. Proven to deliver superior quality and performance under heavy working conditions and harsh environments.
- The sun wheel and planet wheel are carburized and quenched by high quality alloy steel, the inner gear ring is hardened by high quality alloy steel, and all gears are grinded.
- The connecting flanges of the planetary frame and the inner gear ring are made of ductile iron material, and are optimized by computer simulation deformation and stress analysis.
- All bearings use well-known brands, bearing system bearing capacity is high, large safety margin.
- Highly modular design, mass production is more economical, effectively improve the speed of delivery.
- Two-stage, three-stage and four-stage planetary gear transmission design with a wide range of speed ratios.
- Low running noise, high transmission efficiency, long service life. Simple installation and easy maintenance.



2 型号表示 Type indication



3 输入方式 Input modes



产品配备电动机、液压马达两种模块化输入系统。液压马达输入时,输入轴为DIN5480规格的花键轴,带具有压力释放弹簧装置的液压多片式驻车制动系统。该制动安全装置是独立的活塞或制动器,其释放压力最小为15bar,最大承压为320bar。

The product is equipped with two modular input systems: motor and hydraulic motor. When the hydraulic motor is input, the input shaft is a spline shaft of DIN5480 specification with a hydraulic multi-plate parking brake system with pressure release spring device. The brake safety device is an independent piston or brake with a minimum release pressure of 15bar and a maximum pressure of 320bar.

注意事项!必须严格遵守以下各项!
Note: You must conform to the following instructions

- 样本中的结构示意图、外形图及其他附图只属范例，无严格比例要求。(未注尺寸单位均为mm)。
- 所注重量仅为平均值，并不具有约束力。
- 为防止意外事故发生，所有旋转部件均按照使用者所在国家和地区的安全规范由购置方加罩保护。
- 试车之前必须认真阅读使用说明书。
- 齿轮箱在供货时已处于准运行状态，运行前需加注润滑油。
- 说明书中注油量只作为参考值，实际注油量应以油镜上的标记为准。
- 润滑油粘度应按齿轮箱使用工况及使用环境温度选取。
- 只能采用国际知名品牌的润滑油。
- All the construction figures, dimension drawings and other drawings in the catalogue are only the examples, no strict scale defined.(The unmarked dimension units are mm)
- The marked weight is only the average value, no binding.
- To avoid the accident, all the rotation components should be covered by customer according to the local safety regulations and laws.
- Read the instructions carefully before operating.
- Fill the lubrication oil before running.
- The oil quantity in the instructions is only for reference.The actual oil value should be done as the oil glass level.
- The adhesiveness of lubrication is depended on the operating condition and the ambient temperature.
- Only choose the international famous brand lubrication oil.

产品功能标识 The functional label of gearbox


 油镜 /Oil glass


 通气帽 /Breather


 进油孔 /Oil filler


 放油孔 /Oil drain

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GTR-B planetary internal hoist gearbox

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GTR-T 行走驱动齿轮箱
GTR-T travel drive gearbox

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4 选型说明 Selection instructions

4.1 使用说明

GTR-B 行星齿轮箱额定动态输出扭矩 $T_{dyn\ max}$ 按欧洲起重机械联合会标准 FEM (FEM—Federation Europeenne de la Manutention) 第三版第一章, 驱动机构等级 M5, 负载分组 L2 (P= 常数, =15rpm), 工况等级 T5 分组设计。工作环境温度 +20℃。

如果卷扬机构分级为其它工作级别, 则其所需输出扭矩必须采用系数 K 进行修正。

T_2 : 输出扭矩 /output torque (N · m)

F_{nom} : 单绳拉力 /single rope pull (N)

D_w : 相应卷绕直径 /rope strands diameter (m)

$$T_2 = \frac{F_{nom} \cdot D_w}{2}$$

T_{2k} : 修正后的输出扭矩 /output torque with multiplied factor (N · m)

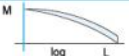
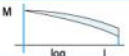
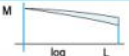
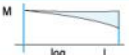
K: 工况系数 (设备分组工况系数) /application factor (the relative factor for drive unit group and load conditions)

$$T_{2k} = T_2 \cdot K$$

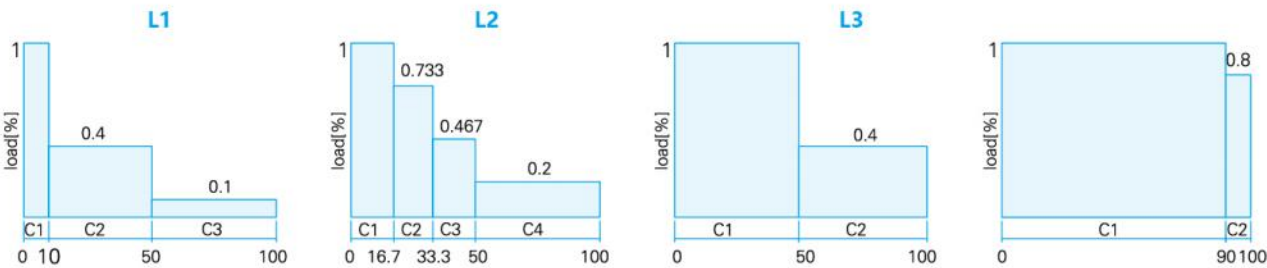
注: 齿轮箱选型时 T_{2k} 必须 $\leq T_{dyn\ max}$ (设计扭矩或样本扭矩) Note: $T_{2k} \leq T_{dyn\ max}$ (design torque or sample torque)

4.2 工况系数(机构利用等级和载荷状态分级)

Application factor K (running time classification and load conditions)

工况等级 Running time classification	运行时间级别/Symbol	T2	T3	T4	T5	T6	T7	T8
	一年内,日平均工作时间 (小时) Mean running time per day in hours,related to one year	0.25至/to0.5	0.5至/to1	1至/to1	2至/to4	4至/to8	8至/to16	多于/over16
负载情况 Loadconditions	使用寿命 (小时)8年, 200天/年 Life in hours 8 years,200 days/year	400至/to 800	800至/to 1600	1600至/to 3200	3200至/to 6300	6300至/to 12500	12500至/to 25000	25000至/to 50000
	集合系数/Collective coefficient Km	设备分组工况系数/Drive unit class Application Factor K						
L1	 至/to0.125	M1 0.90	M2 0.90	M3 0.90	M4 0.92	M5 0.92	M6 1.1	M7 1.36
L2	 0.125至/to0.250	M2 0.90	M3 0.92	M4 0.96	M5 1	M6 1.07	M7 1.3	M8 1.6
L3	 0.250至/to0.500	M3 1.05	M4 1.09	M5 1.17	M6 1.23	M7 1.28	M8 1.53	M8 1.89
L4	 0.500至/to1.000	M4 1.32	M5 1.36	M6 1.46	M7 1.53	M8 1.58	M8 1.8	M8 2.22

4.3 起重机械典型载荷谱 Typical load spectrum for crane



4.4 设备分级指导 Classification Guidance

起重机类型/Type of Crane (name)	工作元件 Working accessories	驱动机构类型/Type of mechanism				
		起升 Hoisting	回转 Slewing	变幅 Luffing	小车运行 Traverse	大车运行 Travel
安装用起重机/Erection cranes		M2-M3	M2-M3	M1-M2	M1-M2	M2-M3
桥式起重机/Bridge crane	吊钩 Hook duty	M5-M6	M4	-	M4-M5	M5-M6
桥式起重机/Bridge crane	抓斗或磁铁 Grab or magnet	M7-M8	M6	-	M6-M7	M7-M8
车间用起重机/Workshop cranes	抓斗或磁铁 Grab or magnet	M6	M4	-	M4	M5
天车, 旁锤起重机。废钢场起重机 Crane, Ram crane, Scrap mill crane	吊钩或磁铁 Hook or magnet	M8	M6	-	M6-M7	M7-M8
卸料桥, 集装箱用门式起重机 Unloading bridge, Container gantry crane	吊钩 Hook duty	M6-M7	M5-M6	M3-M4	M6-M7	M4-M5
其它门式起重机(带小车和/或转台) Other gantry crane(with crab and/or slewingjib crane)	抓斗或磁铁 Grab or magnet	M4-M5	M4-M5	-	M4-M5	M4-M5
卸料桥, 集装箱用门式起重机 (带小车或转台) Unloading bridge, Container gantry crane (withcrab and/or slewing jib crane)	吊钩 Hook duty	M8	M5-M6	M3-M4	M7-M8	M4-M5
船台起重机船坞起重机、拆卸用起重 rane, Bisassembly'crane		M5-M6	M4-M5	M4-M5	M4-M5	M5-M6
港口起重机(可转动,门式), 浮式起重机, 浮式起重架 Dockside cranes (slewing, on, gantry, etc.), floating cranes and pontoon derricks	吊钩 Hook duty	M6-M7	M5-M6	M5-M6	-	M3-M4
港口起重机(可转动,门式), 浮式起重机, 浮式起重架 Dockside cranes (slewing, on, gantry, etc.), floating cranes and pontoon derricks	抓斗或磁铁 Grab or magnet	M7-M8	M6-M7	M6-M7	-	M4-M5
浮式起重机和浮式起重架, 用于非常高的负荷 (一般在100t以上) Floating cranes and pontoon derricks for very heavy loads (usually'greater than 100t)		M3-M4	M3-M4	M3-M4	-	-
甲板起重机/Deck cranes	吊钩 Hook duty	M4	M3-M4	M3-M4	M2	M3
甲板起重机/Deck cranes	抓斗或磁铁 Grab or magnet	M5-M6	M3-M4	M3-M4	M4-M5	M3-M4
塔式起重机用于建筑工地 Tower cranes for building		M4	M5	M4	M3	M3
门式塔架/Derricks		M2-M3	M1-M2	M1-M2	-	-
铁路起重机, 批准用于铁路维修 Railway cranes allowed to run in train		M3-M4	M2-M3	M2-M3	-	-
车辆起重机/ Mobile cranes	吊钩 Hook duty	M3-M4	M3-M4	M2-M3	-	-

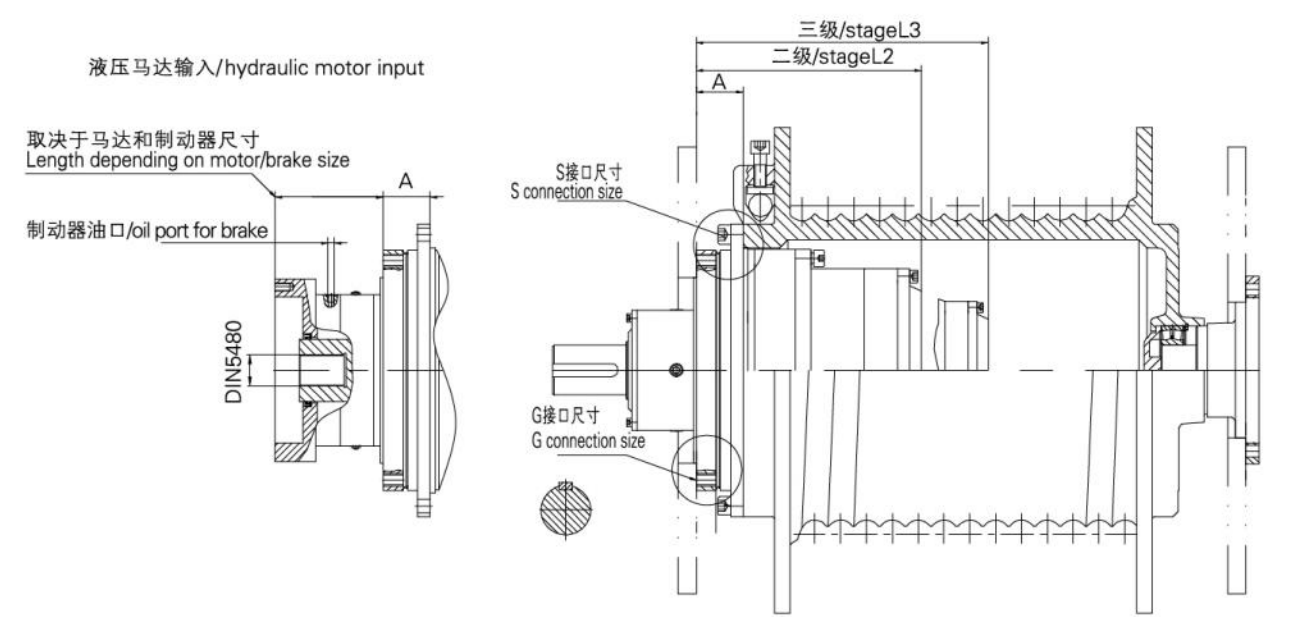
备注:仅列出了卷扬机构的一些典型范围以供参考 Note: Above are only some typical applications for hoisting winch.

5 传动比 Gear ratio

传动比 Gear ratio	413B	415B	419B	420B	422B	424B	425B	426B	427B	429B	431B	432B	433B	434B	436B	438B	440B
2级同轴 Two-stage coaxial																	
21	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
25	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
29	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
3级同轴 Three-stage coaxial																	
45		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
53		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
60		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
63		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
70		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
71		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
83		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
93		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
99		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
107					●	●	●	●	●	●	●	●	●	●	●		
112		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
127		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
147					●	●	●	●	●	●	●	●	●	●	●		
4级同轴 Four-stage coaxial																	
173		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
206		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
245		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
267		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
301		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
317		●	●	●	●	●	●	●	●	●	●	●	●	●	●		
357		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
429		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
464		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
557		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
670		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
761		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
866		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
1000		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

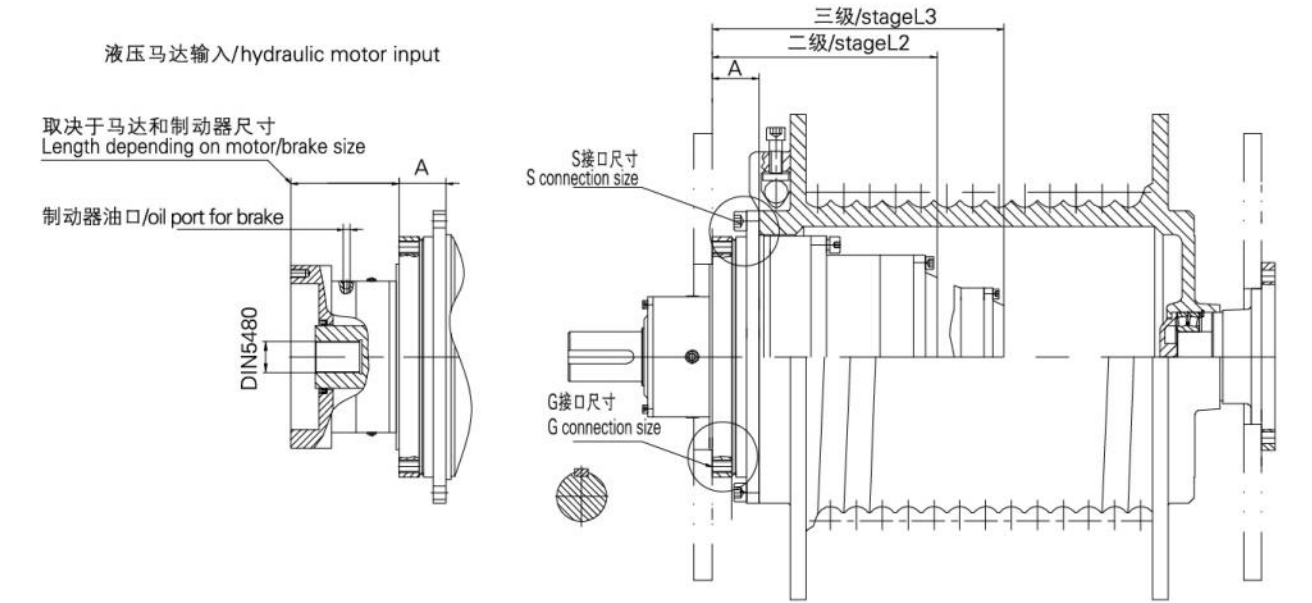
其他未标注的传动比请垂询 Please contact us for other unmarked gear ratios

6 外形尺寸及传动能力 Dimensions and transmission capability



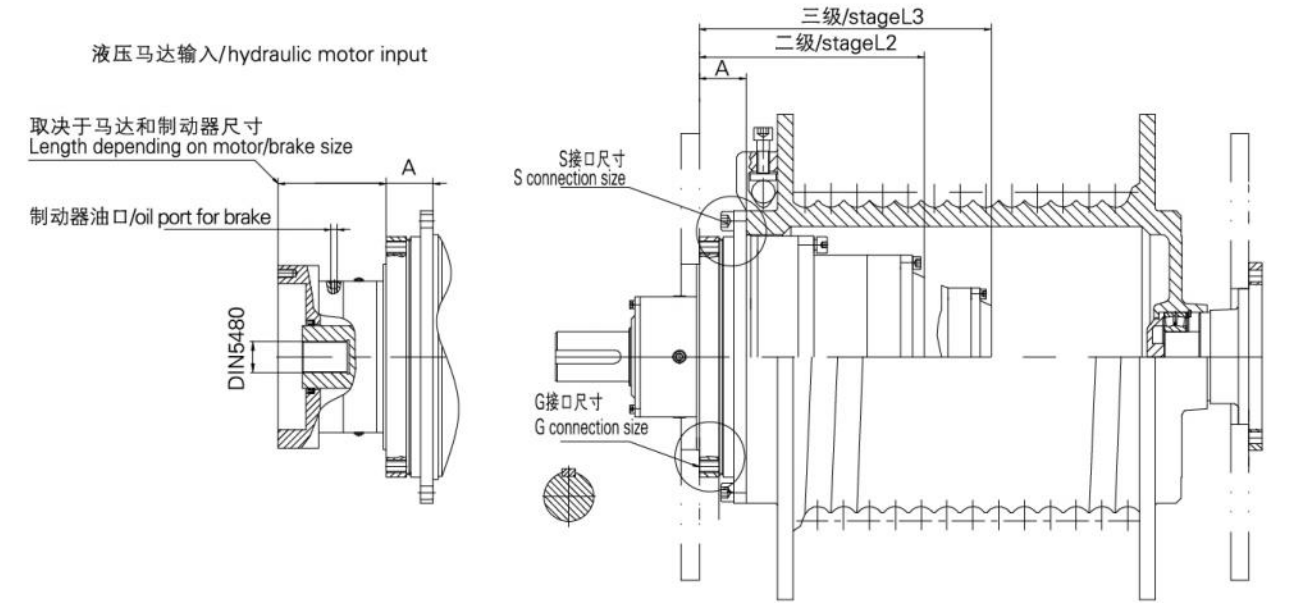
型号 Model	公称数据 Nominal data			最大 输入 转速 Max input Rotational speed n _{in} (rpm)	A	G 减速机与结构连接螺栓强度等级10.9 Reducer and structural connection bolt strength class 10.9						S 减速机与液筒连接螺栓强度等级8.8 Reducer and cylinder connection bolt strength class 8.8					
	T动态 T Dynamics Single rope i	T静态 T Static 最大 Max i	单绳 拉力 Single rope tension F _{nom} (kN)			G ₁ 止口 Front edge ∅	G ₂ 分度圆 Reference circle ∅ ±0.2	G ₃ 外径 Outside diameter ∅	G ₄ 分布 distribution	G ₅	G ₆	S ₁ 止口 Front edge ∅	S ₂ 分度圆 Reference circle ∅ ±0.2	S ₃ 外径 Outside diameter ∅	S ₄ 分布 distribution	S ₅	S ₆
413B	1650	2650	17	由于传动比和制动问题的不同而选用 2000-5000转/分 Due to the difference in transmission ratio and brake, 2000-5000 RPM is selected	40	125	145	167	30° 12*M10	16	5	145	185	203	30° 12*φ11	10	9
	1750	2800	18														
415B	4000	6400	33		55	155	185	213	20° 16*M12	24	5	225	245	265	20° 18*φ11	10	9
	4150	6650	34														
419B	7000	11200	46		60	190	225	255	20° 16*M16	25	5	265	290	310	15° 24*φ14	12	9
	7300	11700	48														
420B	11200	18000	67		60	200	255	285	20° 16*M16	25	5	295	320	340	15° 24*φ14	12	9
	11600	18500	69														
422B	18800	30000	95		60	230	280	315	15° 22*M16	25	5	330	360	390	20° 18*φ18	16	9
	19400	31000	98														
424B	25000	40000	116		60	270	320	355	15° 22*M16	25	5	370	400	430	15° 24*φ18	16	9
	25500	41000	119														

按欧洲起重机械联合会标准FEIM第一章，驱动机构等级M5，负载分组L2(IP=常数，=15rpm)，工况等级T5分组。
According to the European Lifting Machinery Federation standard FEIM Chapter 1, the drive mechanism grade M5, the load group L2(IP= constant, =15rpm), the working condition class T5 group.



型号 Model		公称数据 Nominal data			最大 输入 转速 Max input Rotat- ional speed n# (rpm)	A	G 减速机与结构连接螺栓强度等级10.9 Reducer and structural connection bolt strength class 10.9						S 减速机与液筒连接螺栓强度等级8.8 Reducer and cylinder connection bolt strength class 8.8					
GTR-B	输出扭矩(Nm) T动态 Dynamics 单绳 Single rope i	T静态 T Static 最大 Max i	单绳 拉力 Single rope tension Fnom (kN)	G ₁ 止口 Front edge Ø			G ₂ 分度圆 Reference circle Ø ±0.2	G ₃ 外径 Outside diameter Ø	G ₄ 分布 distribution	G ₅	G ₆	S ₁ 止口 Front edge Ø	S ₂ 分度圆 Reference circle Ø ±0.2	S ₃ 外径 Outside diameter Ø	S ₄ 分布 distribution	S ₅	S ₆	
425B	35000	56000	143	由于传动比和制动器的不同而选用 2000-5000转/分Due to the difference in transmission ratio and brake, 2000-5000 RPM is selected	75	300	350	385	15° 22*M20	30	5	400	440	480	20° 18*φ22	20	9	
	36000	57500	147															
426B	47000	75000	180		75	330	390	425	15° 22*M20	30	5	440	480	520	15° 24*φ22	20	9	
	48000	77000	184															
427B	61000	97500	213		90	355	420	460	15° 22*M24	38	5	470	520	560	20° 18*φ26	24	9	
	63000	101000	220															
429B	102000	163000	304		90	430	480	530	15° 22*M24	38	5	550	590	630	15° 24*φ26	24	9	
	105000	168000	313															
431B	150000	240000	395		110	515	565	615	15° 24*M30	47	5	640	690	750	15° 24*φ33	30	9	
	155000	248000	408															
432B	229000	366500	549		110	580	630	680	15° 24*M30	47	5	700	755	815	15° 24*φ33	30	9	
	236000	377500	566															

按欧洲起重机械联合会标准FEIM第一章，驱动机构等级M5，负载分组L2(IP=常数，=15rpm)，工况等级T5分组。
According to the European Lifting Machinery Federation standard FEIM Chapter 1, the drive mechanism grade M5, the load group L2(IP= constant, =15rpm), the working condition class T5 group.



型号 Model		公称数据 Nominal data			最大 输入 转速 Max input Rotat- ional speed n转 (rpm)	A	G 减速机与结构连接螺栓强度等级10.9 Reducer and structural connection bolt strength class 10.9						S 减速机与液筒连接螺栓强度等级8.8 Reducer and cylinder connection bolt strength class 8.8					
GTR-B	输出扭矩(Nm)		单绳 拉力 Single rope tension Fnom (kN)	G ₁ 止口 Front edge Ø			G ₂ 分度圆 Reference circle Ø ±0.2	G ₃ 外径 Outside diameter Ø	G ₄ 分布 distribution	G ₅	G ₆	S ₁ 止口 Front edge Ø	S ₂ 分度圆 Reference circle Ø ±0.2	S ₃ 外径 Outside diameter Ø	S ₄ 分布 distribution	S ₅	S ₆	
	T动态 Dynamics 单绳 Single rope i	T静态 T Static 最大 Max i																
433B	300000	480000	637	由于传动比和转速的不同选用 2000-3000转/分Due to the difference in transmission ratio and brage, 2000-3000 RPM is selected	110	670	720	770	12° 30*M30	47	5	790	840	890	12° 30*φ33	30	9	
	311000	497500	660															
434B	392000	627000	760		120	720	770	820	10° 36*M30	47	5	850	900	950	10° 36*φ33	30	9	
	406000	649500	787															
436B	623000	997000	1038		120	840	900	960	10° 36*M36	56	5	1000	1055	1120	10° 36*φ39	36	9	
	644000	1030500	1073															
438B	1050000	1680000	1450		130	1060	1140	1210	#10° 36*M30	78	26	1240	1320	1390	#10° 36*φ33	45	13	
	1100000	1760000	1520															
440B	1400000	2240000	1820		130	1160	1240	1310	#10° 36*M30	78	26	1340	1420	1490	#10° 36*φ33	45	13	
	1500000	2400000	1950															

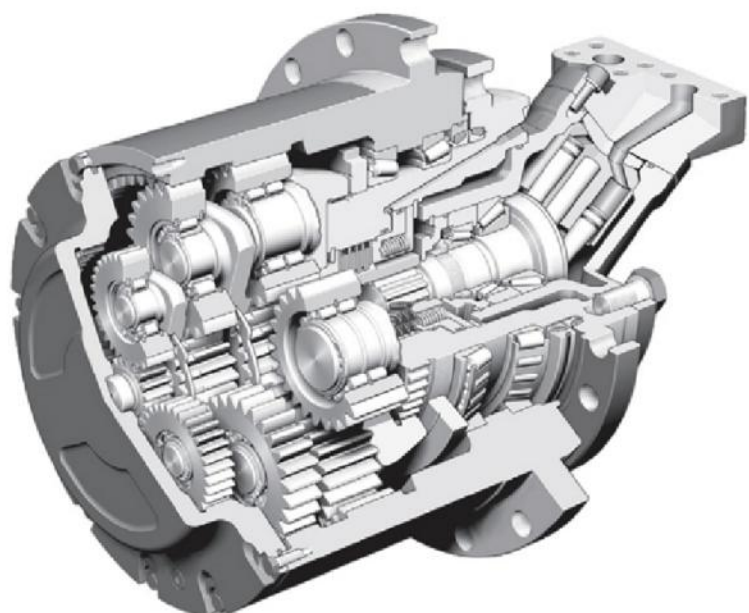
按欧洲起重机械联合会标准FEIM第一章，驱动机构等级M5，负载分组L2(IP=常数，=15rpm)，工况等级T5分组。
According to the European Lifting Machinery Federation standard FEIM Chapter 1, the drive mechanism grade M5, the load group L2(IP= constant, =15rpm), the working condition class T5 group.

GTR-T 行走驱动齿轮箱 GTR-T travel drive gearbox

1 产品简介 Product introduction

GTR-T 系列非常适合履带式挖掘机和铣刨设备。这一解决方案凭借其紧凑坚固的设计、高扭矩、非凡负载能力以及可选的机械式终身密封件，成为机器的最佳选择。所有装置均配有失效保护驻车制动器，大多数都可以选择插装式固定排量或可变排量系统。可根据需要为所有尺寸提供不同的分离系统。

The GTR-T series is ideal for crawler excavators and milling equipment. This solution is the best choice for machines thanks to its compact and robust design, high torque, exceptional load capacity and optional mechanical lifetime seals. All units are equipped with fail-safe parking brakes, and most have a choice of plug-in fixed displacement or variable displacement systems. Different separation systems are available for all sizes as required.



2 产品特点 Product characteristics

- 结构紧凑
- 性能优越
- 每级可布置 3-5 个行星轮
- 集成制动器
- 不同速比
- Compact structure
- Superior performance
- Each stage can be arranged with 3-5 planetary wheels
- Integrated brake
- Different speed ratios

3 GTR-T场景应用 GTR-T scenario Application



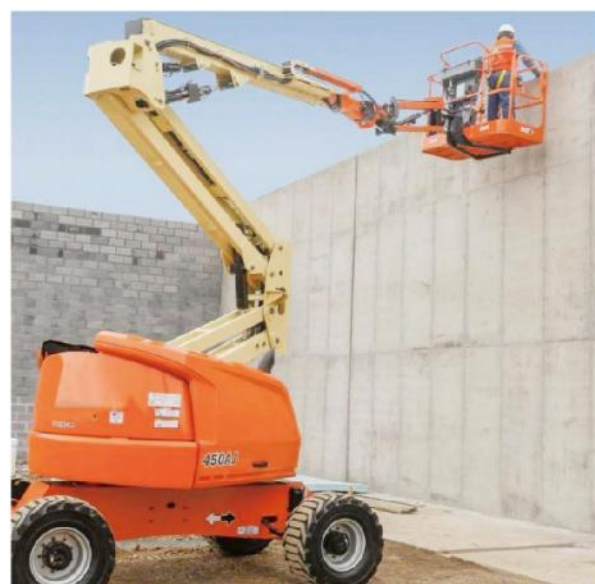
用于挖掘机履带驱动 Used for excavator track drive



用于垃圾压实车辆车轮驱动 Used for refuse compacting vehicle wheel drive



用于钻探设备履带驱动 Used for drilling equipment track drive



用于登高车的车轮驱动
Wheel drive for climbing vehicles



用于收割机的车轮驱动
Wheel drive for harvesters

4 GTR-T结构特点 GTR-T Structural characteristics

液压马达 Hydraulic Motors

变量或定量插入式液压马达采用直接法兰连接。最好采用 Brueninghaus Hydromatik 公司的产品。
The compactly shaped, plug-in type hydraulic motor, with variable or constant displacement, preferably Hydromatik make, will be directly flanged to the unit.

制动器 Brake

按照标准, 传动装置中装有一个弹簧制动液压松开的弹簧多片式停车制动器。

The standard supply scope includes a spring-loaded, hydraulically released multiple-disk parking brake arranged on the input side.

$$T_{\text{最小静态制动}} = 1 \cdot T_1 \text{ (输入扭矩)}$$

$$T_{\text{Br sta. min}} = 1 \cdot T_1 \text{ (input torque)}$$

停车力矩可根据所选择的传动比进行匹配。多片式停车制动器不能用作动态工作制动器。

The holding torque multiplies as a function of the selected transmission ratio. The multiple-disk parking brake is not a dynamically operating service brake.

密封 Sealing

采用高质轴向-转动环密封对传动设备的固定不动部分和旋转部分进行密封。这样, 即使在极端使用条件下, 潮气和脏物均不能进入传动机构。

Tightness of the joint between stationary and rotating gear-box sections is ensured by means of a high-grade axial mechanical seal so as to prevent moisture and dirt entering the gear unit even under extreme operating conditions.

换油 Oil changing

驱动装置除了按周期换油外, 无需维护, 换油也很容易。只能使用“使用指南”中规定的油类。

Save for regular oil changes the drive units do not require maintenance. Changing the oil is done very easily. Exclusively the oil brands recommended in the operating manual must be used for this work.

减速机的设计 Gear Unit Design

减速机的设计是建立在多年使用经验基础之上的。

输出扭矩是按挖掘机的行走驱动需求设计的。也可为其用途设计比已确定的传动装置更大的输出扭矩。因此, 在这种情况下进行协商是必要的。我们可在方案设计阶段为所有客户提供与使用有关的咨询服务。

The gearbox design is based on many years of practical application experience.

The output torque rates are tailored to the application requirements of an excavator travel drive. For other application higher output torques than those specified may be permissible for the relevant gearbox.

Please consult the Factory in such cases.

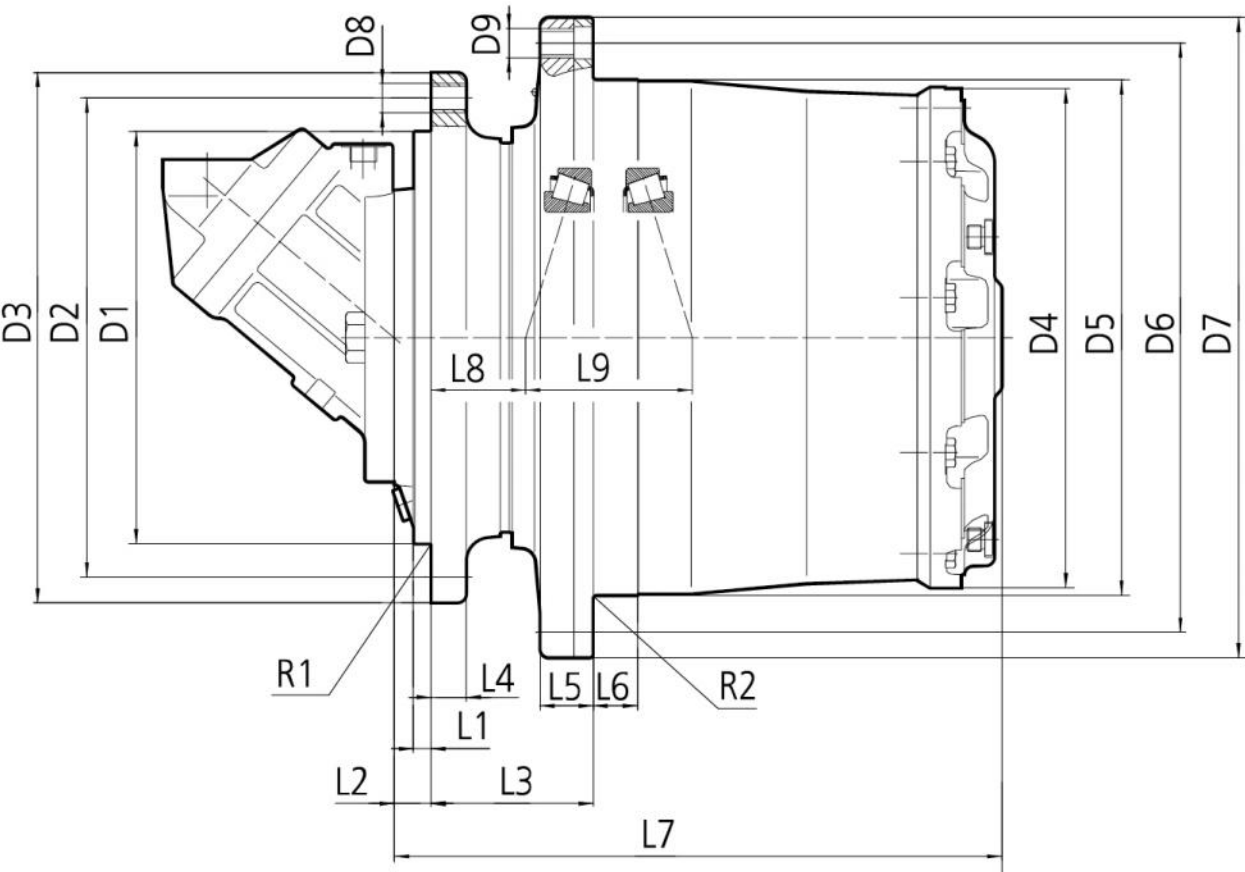
Application-related consultation is available to all users as early as in the project stage.

设计变型 Design Variants

所列出的型号表示本公司可供现货的产品尺寸和型号, 我们也可根据用户要求提供其它型号, 有任何要求可与本公司联系。

To meet future requirements more product versions may follow. Please consult.

5 外形尺寸 Overall dimension



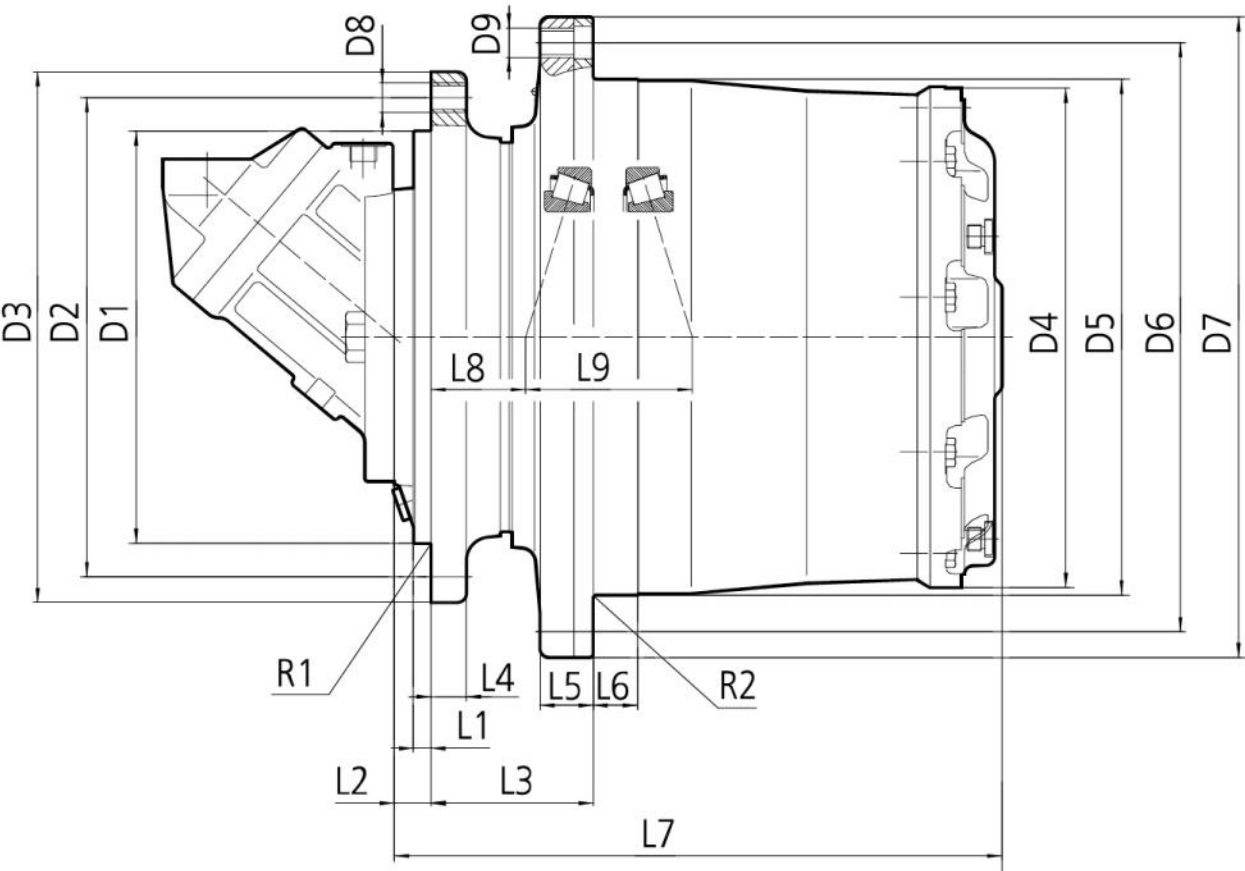
6 技术数据 Technical data

		GTR05T	GTR10T	GTR30T	GTR40T	GTR55T
输出扭矩 ² Output torque ²	kNm	5	10	30	40	55
传动比 ³ Ratio ³	i	30	35	61(19) ¹	61(19) ¹	63(16) ¹
		35	51	66(32) ¹	66(22) ¹	85(32) ¹
		53	65	81	81(26) ¹	87(22) ¹
				90	85(32) ¹	94(32) ¹
				101	101	117
				114	110	124
				121	117	137
				137	124	148
				171	142	185
				228	181	
				305		
承载能力 CAPACITY OF BEARING						
动载能力 C-dynamic	kN	194	132	132/194	224	224
静载能力 Co-static	kN	315	255	255/235	405	405
重量 ⁵ Weigh ⁵	kg	43	45	94	115	165
停车制动 MULTI-DISK BRAKE						
制动力矩 Locking torque	Nm		200	300 (255;400) ⁴	420	420 (390;500) ⁴
最小释放压力 Release pressure min	bar		17	16 (16;22) ⁴	18	15 (15;21) ⁴
液压马达 Hydraulic motor						
定量 Plug in fixed	ccm		28	40	40	80
					45	90
			30	45	56	
			32	56	60	
				60	63	
			63			
变量 Plug in variable	ccm		28	55	55	80
			45	60	60	
尺寸 DIMENSIONS						
L1	mm	8	10	13	16	12
L2	mm	8	30	25	16	25
L3	mm	70	72	75	91	110
L4	mm	19	13.5	15	21	24
L5	mm	18.5	15	29	34	36
L6	mm	20	16	25	26	30
L7	mm	220	230	323(278) ¹	338(308) ¹	413(374) ¹
L8	mm	38.4	28	28.5	38	64
L9	mm	80.2	79	89	100	113
R1	mm	0.6	0.6	2.5	2.5	1
R2	mm	0.6	0.6	2.5	2.5	2.5
D1	mm	165	190	240	240	280
D2	mm	192	230	275	285	325
D3	mm	215	256	304	320	360
D4	mm	190	216	269	294	340
D5	mm	204	220	270	295	350
D6	mm	232	260	305	335	400
D7	mm	255	290	335	370	435
D8/D9	M	12/12	16/16	16/16	20x1.5 16x1.5	20x1.5
Qty- D8/D9		9/9	12/8	18/18	20/20	24/20

1) 二级传动
2) 此力矩是短时间内达到的峰值
3) 可根据要求提供其他的传动比
4) 可选制动力矩
5) 不带液压马达

1) 2-stage
2) Stated torques are peak values for short duration
3) Other ratios on demand
4) Optional brake torques
5) Without Hydraulic motor

5 外形尺寸 Overall dimension



		GTR80T	GTR100T	GTR130T	GTR180T	GTR220T
输出扭矩 ² Output torque ²	kNm	80	100	130	180	220
传动比 ³ Ratio ³	i	61(19) ¹ 81 101 114 121 137 147 171 187 206	77(21) ¹ 84(22) ¹ 95(32) ¹ 121 142 175 192 226	81 85 115 159 167 180 206	206 281 (412) ⁷ (824) ⁷	97 119 190 248 290 345 (744) ⁷ (805) ⁷

承载能力 CAPACITY OF BEARING						
动载能力 C-dynamic	kN	300	498	523	787	765
静载能力 Co-static	kN	570	1010	980	1650	1660
重量 ⁵ Weigh ⁵	kg	215	325	452	636	740

停车制动 MULTI-DISK BRAKE						
制动力矩 Locking torque	Nm	600(375;550;1000) ⁴	600(900) ⁴	750	1375 (800) ⁴	1200
最小释放压力 Release pressure min	bar	18(18;19;28) ⁴	13(13) ⁴	17	35 (35) ⁴	15

液压马达 Hydraulic motor						
定量 Plug in fixed		80 90	107 125	107 125 160 180	160 180	107 180
	ccm					

变量 Plug in variable	ccm	80	107 110	107 160	160	160 200 250
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尺寸 DIMENSIONS						
L1	mm	20	35	45	30	18
L2	mm	35	35	45	30	52
L3	mm	90	165	190	168	166.5
L4	mm	22	28	35	40	40
L5	mm	37	53	58	56	61
L6	mm	24	43	45	21.5	35
L7	mm	415	461	530	534.5	580.5
L8	mm	34	32	50.5	50.3	16
L9	mm	123	139	147	141.4	187.5
R1	mm	4	10/60	25	4	35°/16/16
R2	mm	2.5	5	4	3	4
D1	mm	330	390	390	450	460
D2	mm	370	460	500	510	600
D3	mm	410	500	550	560	650
D4	mm	374	407	449	528	540
D5	mm	400	408	450	535	542
D6	mm	450	460	500	600	600
D7	mm	490	500	550	650	650
D8/D9	M	24x2	24x2	24x2	24x2 27x2	24x2
Qty- D8/D9		20/20	30/24	32/32	30/30	38/38

1) 二级传动
2) 此力矩是短时间内达到的峰值
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