

齿轮箱 Gear Units

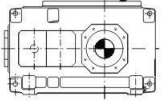
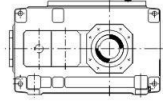
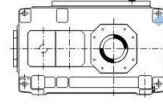
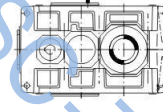
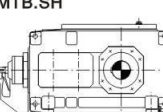
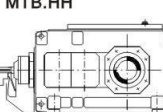
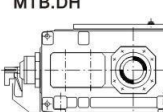
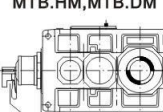
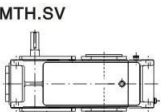
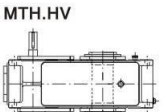
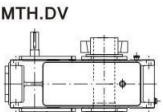
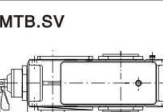
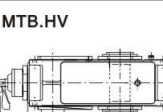
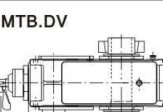
6.1 MTH/MTB 系列目录

6.2	基本类型概括 Summary of basic types	230-232页 Pages 230-232	
6.3	齿轮箱型号表示方法 Gear units designation of types	233页 Pages 233	
6.4	齿轮箱选型, 额定功率, 输出扭矩, 允许的附加径向力 Selection of gear units, nominal power ratings, output torque, permissible additional radial forces.	234-255页 Pages 234-255	
6.5	卧式安装 Horizontal	平行轴齿轮箱 Helical gear units MTH1SH	256-257页 Pages 256-257
		平行轴齿轮箱 Helical gear units MTH2SH, MTH2HH, MTH2DH, MTH2HM, MTH2DM MTH3SH, MTH3HH, MTH3DH, MTH3HM, MTH3DM MTH4SH, MTH4HH, MTH4DH, MTH4HM, MTH4DM	258-275页 Pages 258-275
	立式安装 Vertical	直交轴齿轮箱 Bevel-helical gear units MTB2SH, MTB2HH, MTB2DH, MTB2HM, MTB2DM MTB3SH, MTB3HH, MTB3DH, MTB3HM, MTB3DM MTB4SH, MTB4HH, MTB4DH, MTB4HM, MTB4DM	276-291页 Pages 276-291
		平行轴齿轮箱 Helical gear units MTH2SV, MTH2HV, MTH2DV MTH3SV, MTH3HV, MTH3DV MTH4SV, MTH4HV, MTH4DV	292-303页 Pages 292-303
	直交轴齿轮箱 Bevel-helical gear units MTB2SV, MTB2HV, MTB2DV MTB3SV, MTB3HV, MTB3DV MTB4SV, MTB4HV, MTB4DV	304-315页 Pages 304-315	
6.6	平键及键槽的配合精度, 选用标准 ISO Selection of ISO fits, parallel keys and keyways	316-317页 Pages 316-317	
6.7	带胀紧套联接的空心轴或带平键联接的空心轴 Hollow shaft for shrink disk or parallel key connections	318-321页 Pages 318-321	
6.8	实际速比 i / 转动惯量 J1 Actual ratios i, mass moments of inertia J1	322-329页 Pages 322-329	
6.9	冷却盘管 Cooling coils	330-331页 Pages 330-331	
6.10	立式安装齿轮箱润滑油供给方式 (强制润滑和浸油润滑) Oil supply for vertical gear units (forced and dip lubrication)	332-340页 Pages 332-340	
6.11	布置形式 Design	341页 Pages 341	



齿轮箱 Gear Units

6.2 基本类型概括 Summary of Basic Types

卧式安装 平行轴齿轮箱 类型 MTH1...,MTH2...,MTH3...,MTH4.. 1-...4-级传动, $i_N=1.25-450$		Horizontal mounting position Helical gear units Types MTH1..., MTH2...,MTH3...,MTH4.. 1-...4-stage, $i_N=1.25-450$	
MTH.SH 	MTH.HH 	MTH.DH 	MTH.HM, MTH.DM 
直交轴齿轮箱 Types MTB2...,MTB3...,MTB4.. 2-...4-级传动, $i_N=5-400$		Bevel-helical gear units Types MTB2...,MTB3...,MTB4.. 2-...4-stage, $i_N=5-400$	
MTB.SH 	MTB.HH 	MTB.DH 	MTB.HM, MTB.DM 
立式安装 平行轴齿轮箱 类型 MTH2.V, MTH3.V, MTH4.V 2-...4-级传动, $i_N=6.3-450$		Vertical mounting position Helical gear units Types MTH2.V, MTH3.V, MTH4.V 2-...4-stage, $i_N=6.3-450$	
MTH.SV 	MTH.HV 	MTH.DV 	
直交轴齿轮箱 类型 MTB2.V, MTB3.V, MTB4.V 2-...4-级传动, $i_N=5-400$		Bevel-helical gear units Types MTB2.V, MTB3.V, MTB4.V 2-...4-stage, $i_N=5-400$	
MTB.SV 	MTB.HV 	MTB.DV 	

齿轮箱 Gear Units

性能特点 Characteristic

设计

平行轴和直交轴齿轮箱采用全新设计, 其独特的创新之处在于:

- 零部件种类减少, 而规格型号增加;
- 运转可靠性提高, 传动功率增大;
- 可以提供法兰盘式输出轴, 使齿轮箱满足在狭小空间的安装要求(根据用户要求供货)。

安装方式

- 齿轮箱既可卧式安装, 也可立式安装。
- 如果用户提出要求, 也可采用其他安装形式。
- 安装电机用法兰、扭力支撑装置均为产品的标准配置。

齿轮的噪音特性

- 采用最新设计思想, 通过以下途径彻底改善齿轮的噪音特性:
- 利用吸收噪音的箱体结构;
- 采用特大的齿面接触比。

齿轮箱散热

齿轮箱不仅具有很高的传动效率, 而且具有良好的散热性能, 主要通过以下方法:

- 增大箱体的表面积;
- 采用大风扇及新型导流风扇罩;
- 根据较低的最大允许油温选择齿轮箱。这样, 可因换油周期加长而提高设备运行可靠性, 并能降低设备维护费用。

库存

齿轮箱根据单元结构模块化设计原理, 大大减少了零部件种类。

Design

Gear units are a completely new design. Outstanding innovations are:

- More sizes with a reduced variety of parts;
- Higher operational reliability combined with increased power capacity;
- Flanged output shafts to facilitate assembly of gear units in confined spaces (on request).

Mounting position

- gear units can be supplied for either horizontal or vertical installation.
- Other arrangements are also possible on request.
- Motor bell housings, Torque supports are part of our standard product range.

Noise behaviour

- New concepts were applied to clearly improve the noise emission of the gear units
- Designing noise-absorbing housings
- Achieving exceptionally large contact ratios.

Thermal conduction

gear units not only have a high efficiency but also a favourable thermal conduction

- Through enlarged housing surface areas;
- because large fans incorporating a new type of air conduction fan cowl are being used.
- The selection of gear units is based on a lower maximum oil temperature. By that, the operational reliability will be increased and the cost of maintenance reduced due to longer oil change intervals.

Storing

gear units have been designed according to a new unit construction principle.



齿轮箱 Gear Units

一般说明 General Information

注意事项:

应严格遵守以下各项:

- 样本中的附图只属范例,并不要求严格一致,所注尺寸可以有所变动。
- 所注重量仅为平均值,并不要求严格一致。
- 为防止发生事故,所有旋转部件均应根据国家和当地安全规定加罩防护。
- 试车之前,必须认真阅读设备操作说明书。齿轮箱供货时已作好运行准备,只是未加润滑油。
- 此处给出的加油量只作为参考值。实际油量应以油尺上的标记为准。
- 润滑油粘度须以齿轮箱铭牌上的数值为准。
- 齿轮箱供货时带径向轴封。用户如有特别要求,可提供其它形式的密封装置。
- 转动方向是指输出轴 d2 的方向

Attention:

The following items are absolutely to be observed:

- Illustrations are examples only and are not strictly binding. Dimensions are subject to change
- The weights are mean values and not strictly binding.
- To prevent accidents, all rotating parts should be guarded according to local and national safety regulations.
- Prior to commissioning, the operating instructions must be observed. The gear units are delivered ready for operation but without oil filling.
- Oil quantities given are guide values only. The exact quantity of oil depends on the marks on the oil dipstick.
- The oil viscosity has to correspond to the data given on the name plate.
- The gear units are supplied with radial shaft seals. Other sealing variants on request.
- Directions of rotation referring to output shaft d₂.

在标注尺寸的图纸上使用的符号说明如下:

Explanation of symbols used in the dimensioned drawings:

- = 油尺 Oil dipstick
- = 通气孔 Breather
- = 放油孔 Oil drain
- = 加油孔 Oil filler

规格 13 号以上齿轮箱箱体地脚上配有千斤顶螺丝,箱盖上配有调平面。

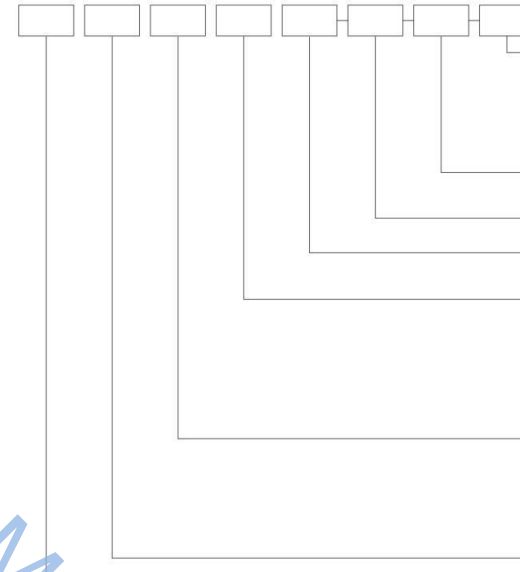
From size 13 up jack screws in the housing feet, and leveling pads on the upper housing part.

基础螺栓的最低性能等级为 8.8 级。

Foundation bolts of min. property class 8.8.

齿轮箱 Gear Units

6.3 型号表示方法 Designation of Types



MTB系列输入轴旋转方向(面对输入轴看)
CW为顺时针,CCW为逆时针,MTH省略)
The direction of rotation of the
MTB series output shaft(view onto the
input shaft: CW is clockwise, CCW is
counterclockwise, ignore MTH)

轴布置形式 (A,B,C,D等)
Design of shaft (A,B,C,D etc)

额定传动比 i_N (见322-325页)
Nominal ratio (Pages P322-325)

规格 1...26
Sizes 1...26

安装形式

- H = 卧式安装
Horizontal
- M = 卧式安装不带底脚
Horizontal design without feet
- V = 立式安装
Vertical

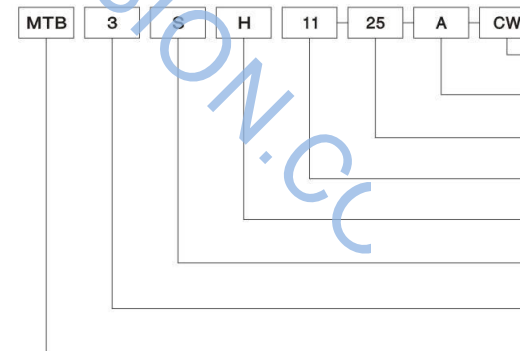
输出轴布置形式 Output shaft of design

- S = 实心轴
Solid shaft
- H = 空心轴
Hollow shaft
- D = 带胀紧盘的空心轴
Hollow shaft for shrink disk

传动级数 No. of stages

类型 Type

- MTH = 平行轴齿轮箱
Helical gear units
- MTB = 直交轴齿轮箱
Bevel-helical gear units



输入轴旋转方向为顺时针
Input is clockwise

轴布置形式 A
Design of shaft A

额定传动比 i_N=25 (见325-327页)
Nominal ratio i_N=25 (Pages P325-327)

规格 11
Sizes 11

H = 卧式安装
Horizontal

S = 实心轴
Solid shaft

传动级数
No. of stages

直交轴齿轮箱
Bevel-helical gear units



齿轮箱 Gear Units

选型指南 Guidelines for the Selection

计算示例 Calculation Example

已知参数:

原动机
电机功率: P₁=75 kW
电机转速: n₁=1500 rpm
最大起动扭矩: T_A=720 N.m

工作机

皮带输送机功率: P₂=66 kW
转速: n₂=26 rpm
工作制: 12 小时 / 天
每小时起动次数: 7
每小时工作周期: E_D=100%
环境温度: 30 °C
室外安装 (风速): (w ≥ 4m/s)
海拔高度: 海平面
重要性与安全要求: 一般

齿轮箱设计

直交轴齿轮箱
安装方式: 卧式安装
输出轴 d₂: 位于齿轮箱右侧 (面对输入轴), 即布置型式 C
输出轴 d₂ 转动方向: ccw

KNOWN CRITERIA:
PRIME MOVER

Electric motor:P₁=75 kW
Motor speed:n₁=1500 rpm
Max. starting torque:T_A=720 N.m

DRIVEN MACHINE

Belt conveyor:P₂=66 kW
Speed:n₂=26 rpm
Duty:12 h/day
Starts per hour:7
Operating cycle per hour:E_D=100%
Ambient temperature:30 °C
Outdoor installation:(w ≥ 4m/s)
Altitude:sea level
Reliability:normal

GEAR UNIT DESIGN

Bevel-helical gear unit
Mounting position: horizontal
Output shaft d₂:on right hand side design C
Direction of rotation of output shaft d₂:ccw

要求: 齿轮箱的类型及规格 Required:Type and size of gear unit

1. 选择齿轮箱的类型及规格: Selection of gear unit type and size

1.1 传动比计算: Calculation of transmission ratio

$$i_s = \frac{n_1}{n_2} = \frac{1500}{26} = 57.7 \quad i_n = 56$$

1.2 确定额定功率 Determination of the gear unit nominal power rating

$$P_n \geq P_2 \times f_1 \times f_2 \times S_A = 66 \times 1.3 \times 1 \times 1.4 = 120 \text{ kW}$$

从额定功率表中选择: 类型 MTB3, 规格 10, 对应的 P_N=122 kW

Selected from power rating table: type MTB3, gear unit size 10, with P_N=122 kW

$$3.33 \times P_2 \geq P_n \quad 3.33 \times 66 = 219.8 \text{ kW} > P_n$$

1.3 检查起动扭矩 Checking the starting torque

$$P_n \geq \frac{T_A \times n_1}{9550} \times f_s = \frac{720 \times 1500}{9550} \times 0.65 = 73.5 \text{ kW} \quad P_n = 122 \text{ kW} > 73.5 \text{ kW}$$

2. 确定热容量 Determination of thermal capacity

2.1 根据表中给出的 MTB3 型齿轮箱参数, 计算不带辅助冷却装置的齿轮箱热容量

2.1 Thermal capacity for gear units without auxiliary cooling, acc. to table for type MTB3

$$P_G = P_{G1} \times f_4 \times f_6 \times f_8 \times f_9 \quad P_G = 78.9 \text{ kW} \times 0.88 \times 1 \times 1 \times (1.23 - 2.80 \times 0.095 \times 0.15) \quad P_G = 82.6 \text{ kW}$$

$$P_2 = 66 \text{ kW} < P_G = 82.6 \text{ kW}$$

结论: 齿轮箱不带辅助冷却装置, 可满足要求!

Conclusion: A gear unit without auxiliary cooling is sufficient!



表1 工作机最低工况系数 f₁

工作机	日带载运行时间(小时)		工作机	日带载运行时间(小时)	
	≤0.5	>0.5-10		≤0.5	>0.5-10
污水 处理	浓缩器	-	回转机构*	1	1.4
	压滤波器	1	1.3	1.5	1.4
	絮凝器	0.8	1	1.3	1.5
	曝气机	-	1.8	2	1.1
	搜集设备	1	1.2	1.3	1.2
	纵向, 回转组合搜集装置	1	1.3	1.5	1.2
	预浓缩器	-	1.1	1.3	1.8
	螺杆泵	-	1.3	1.5	1.5
	水轮机	-	-	2	1.3
	离心机	1	1.2	1.3	1.4
挖泥机	1个活塞容积式泵	1.3	1.4	1.8	1.6
	>1个活塞容积式泵	1.2	1.4	1.5	1.6
	斗式输送机	/	1.6	1.6	1.4
	倾卸装置	/	1.3	1.5	1.5
	行走机构*	1.2	1.6	1.8	1.2
	斗轮式挖掘机: 用于捡拾	/	1.7	1.7	2
	斗轮式挖掘机: 用于粗料	/	2.2	2.2	1.5
	切碎机	/	2.2	2.2	1.7
	拉线机	1.25	1.5	1.75	1.7
	绕线机	1	1.25	1.5	1.4
钢铁 工业	集中驱动辊道 (无反转)	1.25	1.5	1.75	1.4
	单驱动辊道 (无反转)	1.5	1.75	2	1.5
	集中驱动辊道 (有反转)	1.75	2.25	2.5	1.5
	单驱动辊道 (有反转)	2	2.25	2.75	1.4
	织机	1.25	1.5	1.75	1.8
	纺织机	1	1.25	1.5	1.4
	洗染机	1	1.25	1.5	1.6
	斗式输送机	-	1.2	1.5	1.5
	绞车	1.4	1.6	1.6	1.4
	卷扬机	-	1.5	1.8	2
输送 机械	皮带输送机 ≤150K	1.1	1.2	1.3	1.6
	皮带输送机 >151K	1.1	1.3	1.4	1.6
	货用电梯*	-	1.2	1.5	1.6
	客用电梯*	-	1.5	1.8	1.6
	刮板输送机	-	1.2	1.5	1.6
	自动扶梯	-	1.2	1.4	1.6
	轨道行走机构	-	1.5	-	1.6
	起重机械	起重机构*	1	1.4	1.8
	行走机构	1	1.4	1.8	
	提升机构	1.5	1.75	2	
化学 工业	转臂式起重机	1	1.2	1.6	
	挤压机	-	-	1.6	
	调浆机	-	1.8	1.8	
	橡胶研光机	-	1.5	1.5	
	冷却圆筒	-	1.3	1.4	
	混料机,用于均匀介质	1	1.3	1.4	
	混料机,用于非均匀介质	1.4	1.6	1.7	
	搅拌机,用于密度均匀介质	1	1.3	1.5	
	搅拌机,用于非密度均匀介质	1.2	1.4	1.6	
	烘炉	1	1.3	1.5	
离心机	1	1.2	1.3		
风机类	冷却塔风扇	-	-	2	
	风机 (轴流和离心式)	-	1.4	1.5	
	蔗糖生产	甘蔗切碎机	-	-	1.7
	甘蔗碾磨机	-	-	1.7	
	甜菜糖生产	甜菜切碎机	-	-	1.2
	榨取机,机械制冷机,蒸煮机	-	-	1.4	
	甜菜清洗机	-	-	1.5	
	甜菜切碎机	-	-	1.5	
	索道	运货索道	-	1.3	1.4
	缆车	往反系统空中索道	-	1.6	1.8
	T型杆升降梯	-	1.3	1.4	
水泥 工业	连续索道	-	1.4	1.6	
	混凝土搅拌机	-	1.5	1.5	
	破碎机*	-	1.2	1.4	
	回转窑	-	-	2	
	管式磨机	-	-	2	
	选粉机	-	1.6	1.6	
	辊压机	-	-	2	
	造纸机械	各种类型**	-	1.8	2
	碎浆机驱动装置	-	2	2.25	
	往复式压缩机	往复式压缩机	-	1.8	1.9
离心式压缩机	-	1.4	1.5		

工作机额定功率 P₂ 的确定

*) 按最大扭矩确定额定功率.

**) 检验热功率是绝对必要的.



Driven machines		Daily operating time (hour)			Driven machines		Daily operating time (hour)			
		<0.5	>0.5~10	>10	<0.5	>0.5~10	>10			
Waste water-treatment	Thickeners	-	-	1.2	Cranes	Slewing gears	1	1.4	1.8	
	Filter presses	1	1.3	1.5		Luffing gears	1	1.4	1.8	
	Flocculation apparata	0.8	1	1.3		Travelling gears	1.5	1.75	2	
	Aerators	-	1.8	2		Hoisting gears	1	1.1	1.4	
	Raking equipment	1	1.2	1.3		Derricking jib cranes	1	1.2	1.6	
	Combined longitudinal and rotary rakes	1	1.3	1.5		Extruders	-	-	1.6	
	Pre-thickeners	-	1.1	1.3		Dough mills	-	1.8	1.8	
	Screw pumps	-	1.3	1.5		Rubber calendars	-	1.5	1.5	
	Water turbines	-	-	2		Cooling drums	-	1.3	1.4	
	Centrifugal pumps	1	1.2	1.3		Mixers for uniform media	1	1.3	1.4	
Dredgers	Bucket conveyors	/	1.6	1.6	Mixers for non-uniform media	1.4	1.6	1.7		
	Dumping devices	/	1.3	1.5		1	1.3	1.5		
	Caterpillar	1.2	1.6	1.8		1.2	1.4	1.6		
	Bucket wheel excavators: as Pick-up	/	1.7	1.7		1	1.3	1.5		
	Bucket wheel excavators: for primitive material	/	2.2	2.2		-	-	2		
	Cutter heads	/	2.2	2.2		-	1.4	1.5		
		1.25	1.5	1.75	Fan	Cane knives	-	-	1.7	
		1	1.25	1.5		Cane mills	-	-	1.7	
	Steel industry		1.25	1.5	1.75	Beet sugar production	Beet cassettes macerators	-	-	1.2
			1.25	1.5	1.75		Extraction plants,mechanical Refrigerators,juice boilers	-	-	1.4
		1.5	1.75	2		Sugar beet washing machines	-	-	1.5	
		1.75	2.25	2.5		Sugar beet cutters	-	-	1.5	
Textile industry		2	2.25	2.75	Cableways	Material ropeways	-	1.3	1.4	
	Loom	1.25	1.5	1.75		To-and fro system aerial ropeways	-	1.6	1.8	
	Spinning machine	1	1.25	1.5		T-bar lifts	-	1.3	1.4	
	Washing machine	1	1.25	1.5		Continuous ropeways	-	1.4	1.6	
Conveyors	Buckey conveyors	-	1.2	1.5	Cement industry	Concrete micers	-	1.5	1.5	
	Hauling winches	1.4	1.6	1.6		Breakers*	-	1.2	1.4	
	Hoists	-	1.5	1.8		Rotary kilns	-	-	2	
	Belt conveyors ≤150kw	1	1.2	1.3		Tube mills	-	-	2	
	Belt conveyors >151kw	1.1	1.3	1.4		Separators	-	1.6	1.6	
	Goods lifts*	-	1.2	1.5		Roll crushers	-	-	2	
	Passenger lifts*	-	1.5	1.8		Paper machines	Of all kind	-	1.8	2
	Apron conveyors	-	1.2	1.5			Pulper drives	-	2	2.25
	Escalators	-	1.2	1.4		Compressor		-	1.8	1.9
	Rail travelling gears	-	1.5	-				-	1.4	1.5

Design for power rating of driven machine P_2 ; *)Designed power corresponding to max.torque.

齿轮箱 Gear Units
服务系数 Service Factor

Table2 Factor for prime mover	f_2
电机,液压马达,气轮机 Electric motors,hydraulic motors, tubines	1.0
4-6缸,活塞发动机周期变化 1:100至1:200 Piston engines 4-6 cylinders cyclic variation 1:100to 1:200	1.25
1-3缸,活塞发动机周期变化 最高达1:100 Piston engines 1-3 cylinders cyclic variation up to 1:100	1.5

Table3 Peak torque factor	f_3			
	每小时峰值负荷次数 Load peaks per hour			
	1-5	6-30	31-100	>100
f_3 单向载荷 Steady direction of load	0.5	0.65	0.7	0.85
f_3 交变载荷 Alternating direction of load	0.7	0.95	1.10	1.25

Table4 Thermal factor	f_4				
环境温度 Ambient temperature	不带辅助冷却装置或仅带冷却风扇 Without auxiliary cooling or with fan cooling				
	100	80	60	40	20
10°C	1.4	1.20	1.32	1.54	2.04
20°C	1.00	1.06	1.16	1.35	1.79
30°C	0.87	0.93	1.00	1.18	1.56
40°C	0.71	0.75	0.82	0.96	1.27
50°C	0.55	0.58	0.64	0.74	0.98

Table5 Thermal factor	f_5				
环境温度 Ambient temperature	带冷却盘管和带冷却盘管和风扇 For cooling with cooling coil, or with fan and cooling coil				
	100	80	60	40	20
10°C	1.04	1.10	1.21	1.40	1.86
20°C	1.00	1.06	1.16	1.35	1.79
30°C	0.93	0.99	1.08	1.26	1.66
40°C	0.88	0.93	1.02	1.19	1.58
50°C	0.81	0.86	0.94	1.09	1.45

Table7 Factor for altitude	f_7				
系数 Factor	海拔高度(m,高于海平面) Altitude(metres above MSL)				
	高达 Up to	高达 Up to	高达 Up to	高达 Up to	高达 Up to
	1000	2000	3000	4000	5000
f_7	1.0	0.98	0.96	0.94	0.92

Table6 Factor for altitude	f_6				
系数 Factor	不带辅助冷却装置或只带冷却风扇 Without auxiliary cooling or with fan cooling				
	海拔高度(m,高于海平面) Altitude(metres above MSL)				
	高达 Up to	高达 Up to	高达 Up to	高达 Up to	高达 Up to
1000	2000	3000	4000	5000	
f_6	1.0	0.95	0.90	0.85	0.80

Table7 Factor for altitude	f_7				
系数 Factor	带冷却盘管或带冷却盘管和风扇 For cooling with cooling coil, or with fan and cooling coil				
	海拔高度(m,高于海平面) Altitude(metres above MSL)				
	高达 Up to	高达 Up to	高达 Up to	高达 Up to	高达 Up to
1000	2000	3000	4000	5000	
f_7	1.0	0.98	0.96	0.94	0.92

Table15 Safety coefficient	S_A		
重要性与安全要求 Importance and safety requirements	一般设备, 减速机失效仅引起机组停产且易更换备件 The failure of ordinary equipment and speed reducer can only result in production halts of single machine and repla cement of spare parts.	重要设备, 减速机失效引起机组、生产线或全厂停产 The failure of ordinary equipment and speed reducer can only result in production halts of machines, production lines or the whole factory.	高度安全要求, 减速机失效引起设备、人身事故 Higher safety requirements, the failure of speed reducer can cause the incident of equipment and human body.
S_A	1.1-1.3	1.3-1.5	1.5-1.7

齿轮箱 Gear Units

服务系数 Service Factors

表 8 立式安装齿轮箱供油系数。对于卧式安装齿轮箱 $f_8=1.0$; 当采用强制润滑时, $f_8=1.05$ f_8
Table 8 Oil supply factor for vertical gear units. For horizontal gear units $f_8=1.0$, and in case of forced lubrication $f_8=1.05$

齿轮箱类型 Gear unit type	供油方式 Oil supply	规格 1...12 Sizes 1...12				规格 13...18 Sizes 13...18			
		不带辅助冷却装置 Without auxiliary cooling	带冷却风扇 With Fan	带冷却盘管 With Cooling coil	带风扇和冷却盘管 With fan and cooling coil	不带辅助冷却装置 Without Auxiliary cooling	带冷却风扇 With Fan	带冷却盘管 With Cooling coil	带风扇和冷却盘管 With fan and cooling coil
MTH2.V MTH3.V MTH4.V	浸油润滑 Dip lubrication	0.95	*	0.95	*	*	*	*	*
	强制润滑 Forced lubrication	1.15	*	1.05	*	1.15	*	1.05	*
MTB2.V MTB3.V MTB4.V	浸油润滑 Dip lubrication	0.95	0.95	0.95	0.95	*	*	*	*
	强制润滑 Forced lubrication	1.15	1.10	1.10	1.10	1.15	1.10	1.10	1.10

表 9 不带辅助冷却装置齿轮箱的热容量系数 f_9
Table 9 Thermal capacity factor for gear units without auxiliary cooling

齿轮箱类型 Gear unit type	n r/min	速比 i	狭小空间安装* Small confined spaces 规格 Sizes				室内大厅、大车间安装 Large halls workshops 规格 Sizes				室外安装 In the open 规格 Sizes							
			1...6	7...12	13...18	19...22	23...26	1...6	7...12	13...18	19...22	23...26	1...6	7...12	13...18	19...22	23...26	
MTH1SH	750	1.25...2 2.24...5.6	0.80 0.87	0.57 0.64	0.61 0.56	—	0.77 0.81	0.73 0.79	0.75 0.74	—	1.00 1.00	1.00 1.00	1.00 1.00	—	—	—	—	—
	1000	1.25...2 2.24...5.6	0.55 0.69	0.59 0.53	—	—	0.72 0.65	0.63 0.76	— 0.66	0.50	0.99 1.07	0.90 0.99	0.92 0.78	—	—	—	—	—
	1500	1.25...2 2.24...3.55 4...5.6	0.43 0.56 0.74	— — 0.52	— — —	—	0.63 0.76 0.93	— 0.56 0.69	— — —	—	0.92 1.04 1.19	0.88 0.96	— 0.78	—	—	—	—	—
MTH2... MTB2...	750	5...9 10...28	0.86 0.71	0.58 0.68	0.80 0.67	0.60 0.68	0.81 0.81	0.76 0.81	0.76 0.81	—	1.00 1.00	1.00 1.00	1.00 1.00	—	—	—	—	—
	1000	5...9 10...28	0.66 0.75	0.54 0.68	0.51 0.66	0.63	0.83 0.90	0.69 0.84	0.65 0.80	0.77	1.06 1.10	0.95 1.06	0.90 1.03	0.97 0.99	—	—	—	—
	1500	5...6.3 7...9 10...18 18...28	0.56 0.64 0.75 0.81	0.47 0.56 0.69	— 0.54 0.83	— — —	—	0.76 0.82 0.94 0.99	0.59 0.62 0.71 0.88	— — 0.67 0.78	— — 0.81 0.88	1.05 1.10 1.24	0.88 0.87 1.14	0.81 0.86 1.05	0.83 0.88 0.93	—	—	—
MTH3... MTB3...	750	12.5...112	0.71	0.70	0.70	0.70	0.83	0.83	0.83	0.83	1.00	1.00	1.00	1.00	—	—	—	—
	1000	12.5...112	0.78	0.74	0.71	0.70	0.90	0.89	0.86	0.84	1.09	1.09	1.07	1.05	—	—	—	—
	1500	12.5...31.5 35.5...56 63...112	0.77 0.83 0.87	0.62 0.78 0.87	0.54 0.69 0.84	0.53 0.64 0.81	0.86 1.00 1.03	0.82 0.96 1.03	0.87 0.97 1.00	0.85 0.91 0.97	1.21 1.23 1.24	1.10 1.09 1.24	0.95 0.96 1.23	0.88 1.07 1.20	0.88 1.07 1.21	—	—	—
MTH4... MTB4...	750	80...450	0.71	0.72	0.73	0.73	0.84	0.85	0.85	0.85	1.00	1.00	1.00	1.00	—	—	—	—
	1000	80...450	0.76	0.77	0.78	0.78	0.90	0.91	0.91	0.91	1.09	1.09	1.09	1.09	—	—	—	—
	1500	80...112 125...450	0.79 0.84	0.82 0.86	0.80 0.85	0.72 0.85	0.98 1.01	0.99 1.01	0.98 1.01	0.94 1.01	1.21 1.23	1.21 1.22	1.20 1.22	1.18 1.18	—	—	—	—

表 10 带冷却风扇齿轮箱的装置热容量系数 f_{10}
Table 10 Thermal capacity factor for gear units with fan

齿轮箱类型 Gear unit type	n r/min	速比 i	狭小空间安装* Small confined spaces 规格 Sizes				室内大厅、大车间安装 Large halls workshops 规格 Sizes				室外安装 In the open 规格 Sizes							
			1...6	7...12	13...18	19...22	23...26	1...6	7...12	13...18	19...22	23...26	1...6	7...12	13...18	19...22	23...26	
MTH1SH	750		0.89	0.93	0.98	0.98	0.93	0.95	0.99	0.99	1.00	1.00	1.00	1.00	—	—	—	—
MTH2/3... MTB2/3...	1000	1.25...112	1.07	1.13	1.16	1.18	1.11	1.15	1.17	1.17	1.18	1.19	1.19	1.19	—	—	—	—
	1500		1.41	1.46	1.45	1.44	1.43	1.47	1.45	1.44	1.49	1.51	1.47	1.46	—	—	—	—

表 11 带冷却盘管齿轮箱的热容量系数 f_{11}
Table 11 Thermal capacity factor for gear units with cooling coil

齿轮箱类型 Gear unit type	n r/min	速比 i	狭小空间安装* Small confined spaces 规格 Sizes				室内大厅、大车间安装 Large halls workshops 规格 Sizes				室外安装 In the open 规格 Sizes							
			1...6	7...12	13...18	19...22	23...26	1...6	7...12	13...18	19...22	23...26	1...6	7...12	13...18	19...22	23...26	
MTH1SH	750		0.83	0.86	0.85	0.88	0.90	0.92	0.92	0.93	1.00	1.00	1.00	1.00	—	—	—	—
MTH2... MTB2...	1000	1.25...28	0.94	1.00	0.96	0.96	1.04	1.05	1.02	1.02	1.15	1.15	1.10	1.09	—	—	—	—
	1500		1.13	1.15	1.01	0.95	1.24	1.23	1.07	1.02	1.38	1.34	1.17	1.11	—	—	—	—
MTH3... MTB3...	750		0.85				0.82				1.00							
	1000	12.5...112	0.98				1.06				1.15							
	1500		1.19				1.29				1.40							

对于系数 f_9, f_{10} 和 $f_{11} < 0.5$, 请与我们联系! For factors f_9, f_{10} and $f_{11} < 0.5$, please refer to us! *) 根据客户要求 *) On request

齿轮箱 Gear Units

服务系数 Service Factors

表 12 带冷却风扇和冷却盘管的齿轮箱的热容量系数 f_{12}
Table 12 Thermal capacity factor for gear units with fan and cooling coil

齿轮箱类型 Gear unit type	n r/min	速比 i	狭小空间安装* Small confined spaces 规格 Sizes				室内大厅、大车间安装 Large halls workshops 规格 Sizes				室外安装 In the open 规格 Sizes							
			1...6	7...12	13...18	19...22	23...26	1...6	7...12	13...18	19...22	23...26	1...6	7...12	13...18	19...22	23...26	
MTH1SH	750		0.93	0.97	0.98	—	0.96	0.98	0.99	—	1.00	1.00	1.00	—	—	—	—	—
MTH2/3... MTB2/3...	1000	1.25...112	1.14	1.19	1.19	—	1.16	1.20	1.20	—	1.20	1.22	1.21	—	—	—	—	—
	1500		1.53	1.58	1.53	—	1.54	1.59	1.54	—	1.58	1.60	1.54	—	—	—	—	—

对于系数 $f_{12} < 0.5$, 请与我们联系! For factor $f_{12} < 0.5$, please refer to us! *) 根据客户要求 *) On request



平行轴齿轮箱 Helical Gear Units

额定功率 Nominal Power Ratings

类型 MTH2...,MTH3... Types MTH2...,MTH3

规格 3...26 Sizes 3...26

In	n1 r/min	n2 r/min	额定功率 Nominal power ratings																							
			齿数规格 Gear unit sizes																							
			3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
6.3	1500	238	87	157	262	474	785	1383	2143	3574	4830	6360	8190	10320	12840	15750	19050	22740	26820	31290	36150	41400	47040	53070	59490	
7.1	1000	141	52	93	155	281	465	819	1270	2111	2362	2873	3396	4311	4946	5715	6618	7655	8826	10131	11571	13146	14856	16701	18681	
8	1500	188	69	124	207	374	620	1093	1358	1693	2106	2815	3150	3839	4528	5317	6206	7195	8284	9473	10762	12151	13640	15229	16918	
9	1000	117	41	73	122	157	221	279	366	459	645	802	1000	1244	1662	1860	2266	2673	3394	3894	4705	5723	6959	8415	10091	
10	1500	150	55	99	165	212	298	377	495	620	872	1084	1351	1681	2246	2513	3063	3613	4382	5271	6280	7419	8688	10087	11626	
11.2	1000	89	33	59	98	126	177	224	294	368	517	643	801	997	1333	1491	1817	2143	2721	3122	3821	4268	5032	5932	6973	
12.5	1500	120	44	79	132	170	239	302	396	496	697	867	1081	1345	1797	2010	2450	2890	3669	4283	5052	5961	7010	8219	9598	
14	1000	71	26	47	78	100	141	178	234	294	413	513	639	795	1063	1190	1450	1710	2171	2491	3048	3405	4015	4809	5796	
16	1500	93	34	62	103	133	187	236	310	389	546	679	846	1053	1408	1575	1919	2264	2874	3297	3929	4561	5304	6168	7163	
18	1000	56	21	37	62	79	111	141	185	232	325	405	504	627	839	938	1143	1349	1712	1964	2404	2688	3166	3636	4244	
20	1500	75	27	49	82	106	149	188	247	310	436	542	675	840	1123	1257	1531	1806	2293	2631	3149	3587	4241	4909	5701	
22.4	1000	45	16	29	48	64	88	113	146	186	257	325	415	504	721	754	942	1084	1414	1579	1973	2158	2639	2921	3770	
25	1500	60	22	40	69	89	125	158	208	261	366	455	567	706	943	1065	1286	1517	1926	2210	2705	3021	3562	4090	5146	
28	1000	38	14	25	42	54	76	95	125	157	221	275	342	426	569	637	778	915	1162	1333	1631	1822	2149	2467	3104	
31.5	1500	50	18	33	55	71	99	126	165	207	291	361	450	560	749	838	1021	1204	1529	1754	2147	2398	2827	3246	4084	
35.5	1000	32	12	21	35	47	64	83	107	136	188	238	304	370	529	553	691	795	1037	1158	1451	1583	1933	2764		

卧式安装齿轮箱要采用强制润滑 Forced lubrication required on horizontal gear units

平行轴齿轮箱 Helical Gear Units

类型 MTH2...,MTH3... Types MTH2...,MTH3...

热容量 Thermal Capacities

规格 3 ... 26 Sizes 3 ... 26

In	n1 r/min	n2 r/min	热容量PG,KW Thermal capacities PG in KW																							
			齿数规格 Gear unit sizes																							
			3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
6.3	1500	238	87	157	262	474	785	1383	2143	3574	4830	6360	8190	10320	12840	15750	19050	22740	26820	31290	36150	41400	47040	53070	59490	
7.1	1000	141	52	93	155	281	465	819	1270	2111	2362	2873	3396	4311	4946	5715	6618	7655	8826	10131	11571	13146	14856	16701	18681	
8	1500	188	69	124	207	374	620	1093	1358	1693	2106	2815	3150	3839	4528	5317	6206	7195	8284	9473	10762	12151	13640	15229	16918	
9	1000	117	41	73	122	157	221	279	366	459	645	802	1000	1244	1662	1860	2266	2673	3394	3894	4705	5723	6959	8415	10091	
10	1500	150	55	99	165	212	298	377	495	620	872	1084	1351	1681	2246	2513	3063	3613	4382	5271	6280	7419	8688	10087	11626	
11.2	1000	89	33	59	98	126	177	224	294	368	517	643	801	997	1333	1491	1817	2143	2721	3122	3821	4268	5032	5932	6973	
12.5	1500	120	44	79	132	170	239	302	396	496	697	867	1081	1345	1797	2010	2450	2890	3669	4283	5052	5961	7010	8219	9598	
14	1000	71	26	47	78	100	141	178	234	294	413	513	639	795	1063	1190	1450	1710	2171	2491	3048	3405	4015	4809	5796	
16	1500	93	34	62	103	133	187	236	310	389	546	679	846	1053	1408	1575	1919	2264	2874	3297	3929	4561	5304	6168	7163	
18	1000	56	21	37	62	79	111	141	185	232	325	405	504	627	839	938	1143	1349	1712	1964	2404	2688	3166	3636	4244	
20	1500	75	27	49	82	106	149	188	247	310	436	542	675	840	1123	1257	1531	1806	2293	2631	3149	3587	4241	4909	5701	
22.4	1000	45	16	29	48	64	88	113	146	186	257	325	415	504	721	754	942	1084	1414	1579	1973	2158	2639	2921	3770	
25	1500	60	22	40	69	89	125	158	208	261	366	455	567	706	943	1065	1286	1517	1926	2210	2705	3021	3562	4090	5146	
28	1000	38	14	25	42	54	76	95	125	157	221	275	342	426	569	637	778	915	1162	1333	1631	1822	2149	2467	3104	
31.5	1500	50	18	33	55	71	99	126	165	207	291	361	450	560	749	838	1021	1204	1529	1754	2147	2398	2827	3246	4084	
35.5	1000	32	12	21	35	47	64	83	107	136	188	238	304	370	529	553	691	795	1037	1158	1451	1583	1933	2142	2764	

热容量Pg(单位为KW)取决于冷却方式: P_{G1}:无辅助冷却装置; P_{G2}:带冷却风扇; P_{G3}:带冷却盘管; P_{G4}:带风扇和冷却盘管。
Thermal capacity Pg(in KW) dependent on kind of cooling: P_{G1}:without auxiliary cooling, P_{G2}:fan cooling, P_{G3}:cooling coil, P_{G4}:fan and cooling coil.



平行轴齿轮箱 Helical Gear Units

额定功率 Nominal Power Ratings

类型 MTH3...MTH4... Types MTH3... MTH4...

规格 5...26 Sizes 5...26

Table with columns for input speed (n1, n2), gear unit sizes (5-26), and nominal power ratings (PN, kW) for various gear unit configurations.

平行轴齿轮箱 Helical Gear Units

热容量 Thermal Capacities

类型 MTH3...MTH4... Types MTH3...MTH4...

规格 5...26 Sizes 5...26

Table with columns for input speed (n1, n2), gear unit sizes (5-26), and thermal capacities (Pa, kW) for various gear unit configurations.



HIGH POWER REDUCTOR
大功率减速机

HIGH POWER REDUCTOR
大功率减速机



直交轴齿轮箱 Bevel-helical Gear Units

额定功率 Nominal Power Ratings

类型 MTB2...MTB3... Types MTB2...MTB3

规格 1...26 Sizes 1...26

in	n1 r/min	n2	额定功率 Nominal power ratings																								
			齿轮箱规格 Gear unit sizes																								
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
5	1500	300	36	63	97	182	295	559	880	1351	2073																
	1000	200	24	42	65	121	197	373	586	901	1382	2555															
5.6	750	150	18	31	49	91	148	280	440	675	1037	1916															
	1500	268	32	56	87	163	284	500	786	1263	1880																
6.3	1000	179	22	37	58	109	176	334	525	843	1256	2287															
	750	134	16	28	43	81	132	250	393	631	940	1712	1894	2736													

直交轴齿轮箱 Bevel-helical Gear Units

热容量 Thermal Capacities

类型 MTB2...MTB3... Types MTB2...MTB3

规格 1...26 Sizes 1...26

in	IN	PG1	PG2	PG3	PG4	热容量 PG Thermal Capacities PG in KW																							
						热容量 PG (单位为KW)取决于冷却方式: PG1: 无辅助冷却装置; PG2: 带冷却风扇; PG3: 带冷却盘管; PG4: 带风扇和冷却盘管。																							
						1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
5	PG1	34.9	45.6	59.7	86.3	86.9	122	150	233	286	330	797																	
	PG2	38.1	50.6	75.1	101	140	223	272	327	381	456	664																	
	PG3	41.1	59.2	109	135	202	313	391	500	662	831	1318																	
	PG4	45.0	67.5	118	166	250	403	500	662	831	1062	1632																	

卧式安装齿轮箱要采用强制润滑 Forced lubrication required on horizontal gear units



直交轴齿轮箱 Helical Gear Units

额定功率 Nominal Power Ratings

类型 MTB3...MTB4.. Types MTB3...MTB4..

规格 3...26 Sizes 3...26

IN	n1	n2	额定功率 Nominal power ratings																							
			齿轮规格 Gear unit sizes												额定功率 PN, kW Nominal power ratings PN in kW											
			3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
31.5	1500	48	18	33	55	73	103	128	171	216	302	377	442	548	769	970	1005	206	1508	1734	2111					
	1000	32	12.1	22	37	49	69	85	114	144	201	251	295	365	513	600	670	804	1005	1156	1407	1575	1876	2145	2681	3016
35.5	1500	24	9.0	17	28	36	52	64	85	108	151	188	221	274	385	435	505	603	754	867	1055	1181	1407	1608	2010	2262
	1000	16	6.0	11.5	19	24	34	43	56	71	96	120	144	177	240	270	315	381	480	558	672	810	936	1128	1344	1632
40	1500	24	15.8	29	48	64	90	112	150	189	264	330	387	479	673	761	830	1005	1157	1378	1542	1876	2046	2636	2939	
	1000	16	11.1	19	32	43	60	75	100	126	176	220	258	320	449	507	556	705	880	1012	1231	1378	1642	1876	2346	2639
45	1500	25	9.1	17	29	38	54	67	89	113	157	196	230	285	401	453	524	628	785	905	1091	1230	1466	1675	2094	2356
	1000	16	6.3	12	20	26	37	46	62	78	104	130	156	192	264	297	342	426	524	603	726	822	999	1147	1419	1687
50	1500	30	11	21	35	46	64	80	107	135	188	236	276	342	491	543	623	784	942	1083	1319	1476	1759	2010	2513	2827
	1000	20	8	14	23	30	43	53	71	90	120	157	194	238	320	352	419	503	628	723	880	1012	1231	1378	1676	1895
56	1500	24	10.4	17	29	39	54	68	94	118	162	207	246	304	431	483	563	724	882	1023	1260	1417	1701	1952	2454	2767
	1000	16	7.2	12.5	21	28	39	51	65	86	114	144	177	220	297	330	396	495	603	701	858	999	1214	1380	1701	1952
63	1500	24	9.1	17	29	39	54	72	90	120	157	201	246	304	431	483	563	724	882	1023	1260	1417	1701	1952	2454	2767
	1000	16	6.3	12	20	26	37	46	62	78	104	130	156	192	264	297	342	426	524	603	726	822	999	1147	1419	1687
71	1500	24	11.9	21	35	46	64	80	107	135	188	236	276	342	491	543	623	784	942	1083	1319	1476	1759	2010	2513	2827
	1000	16	8.1	14.5	24	32	44	56	75	95	126	163	201	240	306	339	403	495	603	701	858	999	1214	1380	1701	1952
80	1500	24	12.5	22	36	48	66	84	112	144	198	252	306	390	540	594	674	835	996	1137	1374	1530	1812	2073	2616	2929
	1000	16	8.7	15.3	25	34	47	61	80	101	133	171	210	250	316	349	413	505	613	711	868	999	1214	1380	1701	1952
90	1500	18	10.8	18	30	40	56	70	94	120	157	201	246	304	431	483	563	724	882	1023	1260	1417	1701	1952	2454	2767
	1000	12	7.5	13.2	22	29	40	52	68	89	118	151	188	230	297	330	396	495	603	701	858	999	1214	1380	1701	1952
100	1500	15	10.8	18	30	40	56	70	94	120	157	201	246	304	431	483	563	724	882	1023	1260	1417	1701	1952	2454	2767
	1000	10	7.5	13.2	22	29	40	52	68	89	118	151	188	230	297	330	396	495	603	701	858	999	1214	1380	1701	1952
112	1500	13.4	15	20	29	38	54	68	94	118	162	207	246	304	431	483	563	724	882	1023	1260	1417	1701	1952	2454	2767
	1000	8.9	10.3	16.5	22	30	42	56	74	96	126	163	201	240	306	339	403	495	603	701	858	999	1214	1380	1701	1952
125	1500	6.7	7.7	10	14	18	24	30	37	48	62	76	102	121	144	180	216	270	330	393	449	511	561	631	691	751
	1000	8	9.2	12	17	22	28	36	45	58	74	91	118	144	180	216	270	330	393	449	511	561	631	691	751	811
140	1500	10.7	12	16	22	29	38	54	68	94	118	162	207	246	304	431	483	563	724	882	1023	1260	1417	1701	1952	2454
	1000	7.1	8.2	11	15	19	25	32	40	51	66	82	101	121	144	180	216	270	330	393	449	511	561	631	691	751
160	1500	9.4	11	14.3	20	25	33	42	56	74	96	124	152	190	246	279	342	434	532	630	728	826	924	1022	1120	1218
	1000	6.3	7.3	9.6	14	17	22	28	36	45	58	72	90	110	132	156	192	238	294	350	406	462	518	574	630	686
180	1500	8.3	5.4	7.1	10	13	17	21	27	34	42	53	64	75	85	96	107	118	129	140	151	162	173	184	195	206
	1000	5.8	6.5	8.5	12	15	20	25	34	42	53	64	75	85	96	107	118	129	140	151	162	173	184	195	206	217
200	1500	7.5	8.6	11.4	16	20	27	34	42	53	64	75	85	96	107	118	129	140	151	162	173	184	195	206	217	228
	1000	5.8	6.5	8.5	12	15	20	25	34	42	53	64	75	85	96	107	118	129	140	151	162	173	184	195	206	217
224	1500	6.7	4.1	5.5	7.7	9.8	13	16	20	25	31	38	47	58	69	80	91	102	113	124	135	146	157	168	179	190
	1000	4.5	5.2	6.8	9.7	12	16	20	25	31	38	47	58	69	80	91	102	113	124	135	146	157	168	179	190	201
250	1500	3.3	3.8	5.0	7.1	9	12	15	21	26	30	38	47	58	69	80	91	102	113	124	135	146	157	168	179	190
	1000	6	6.9	9.1	13	16	21	27	34	42	51	62	73	84	95	106	117	128	139	150	161	172	183	194	205	216
280	1500	3	3.5	4.6	6.4	8.0	11	14	19	24	28	34	42	51	62	73	84	95	106	117	128	139	150	161	172	183
	1000	2.4	2.8	3.7	5.2	6.5	8.5	11	14	18	22	27	33	40	48	57	66	75	84	93	102	111	120	129	138	147
315	1500	4.8	3.1	4.1	5.8	7.2	10	12	17	21	25	31	38	47	58	69	80	91	102	113	124	135	146	157	168	179
	1000	3.2	3.7	4.9	6.9	8.5	11	14	20	25	29	37	45	54	63	72	81	90	100	110	120	130	140	150	160	170
355	1500	4.2	2.8	3.6	5.2	6.4	8.5	11	15.1	19	22	27	33	40	48	57	66	75	84	93	102	111	120	129	138	147
	1000	2.8	3.2	4.3	6.1	7.5	10	13	17	21	25	31	38	47	58	69	80	91	102	113	124	135	146	157	168	179
400	1500	2.5	3.3	4.3	6.1	7.5	10	13	17	21	25	31	38	47	58	69	80	91	102	113	124	135	146	157	168	179
	1000	1.8	2.2	2.9	4.1	5.1	6.8	8.8	11.5	14.5	18	22	27	33	40	48	57	66	75	84	93	102	111	120	129	138

卧式安装齿轮箱需要强制润滑 Forced lubrication required on horizontal gear units

直交轴齿轮箱 Bevel-helical Gear Units

热容量 Thermal Capacities

类型 MTB3...MTB4.. Types MTB3...MTB4..

规格 3...26 Sizes 3...26

IN	PG1	PG2	PG3	PG4	热容量 PG, kW Thermal capacities PG in kW																									
					齿轮规格 Gear unit sizes												热容量 PG (单位为kW)取决于冷却方式: P01: 无辅助冷却装置; P02: 带冷却风扇; P03: 带冷却盘管; P04: 带风扇和冷却盘管。 Thermal capacity P01 (in kW) depends on kind of cooling: P01 without auxiliary cooling; P02 fan cooling; P03 cooling coil; P04 fan and cooling coil.													
					3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26		
31.5	PG1	28.2	32.0	45.2	53.4	69.7	83.1	95.6	106	131	163	172	205	250	276	301	328	370	403	423	458	742	772	888	932					
	PG2	31.7	41.2	60.5	71.0	93.6	111	132	146	196	245	263	311	378	418	499	545	618	673	688	748	927	965	1110	1165					
	PG3	48.0	49.6	82.7	96.7	138	165	208	240	275	394	428	513	675	752	846	927													
	PG4	50.2	58.2	96.5	113	160	189	240	276	337																				



HIGH POWER REDUCTOR
大功率减速机

平行轴齿轮箱 Helical Gear Units

额定输出扭矩 Nominal Output Torques

类型 MTH1..,MTH2..,MTH3..,MTH4..

Types MTH1..,MTH2..,MTH3..,MTH4..

规格 1..26 Sizes 1...26

Table with columns: IN, 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26. Rows include transmission ratios and nominal output torques for various gear unit sizes.

HIGH POWER REDUCTOR
大功率减速机



直交轴齿轮箱 Bevel-helical Gear Units

额定输出扭矩 Nominal Output Torques

类型 MTB2..,MTB3..,MTB4..

Types MTB2..,MTB3..,MTB4.. 规格 1..26 Sizes 1...26

Table with columns: IN, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26. Rows include transmission ratios and nominal output torques for various gear unit sizes.

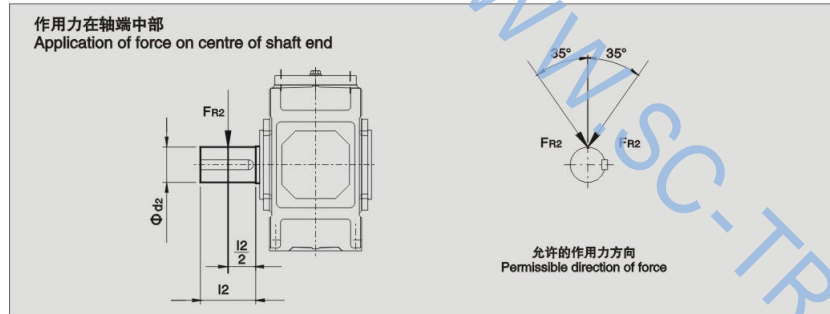


齿轮箱 Gear Units

输出轴 d2 上允许的附加径向力1) Permissible Additional Radial Forces on Output Shaft d2 1)

类型 MTH1SH., MTH2S., MTH3S., MTH4S., MTB2S., MTB3S., MTB4S

Types MTH1SH, MTH2S., MTH3S., MTH4S., MT B2S., MTB3S., MTB4S



允许的附加径向力 FR2 (kN), 作用于输出轴端中部3)

Permissible additional radial forces FR2 in kN with application of force on center of shaft end

类型 Type	布置形式 Design	齿轮箱规格 1), 4) Gearunitsize1), 4)																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
MTH1SH	A/B	2)	-	2)	-	2)	-	2)	-	2)	-	2)	-	2)	-	2)	-	2)	-
MTH2S.	A/B/G/H	-	-	8	10	22	22	30	30	30	45	64	64	150	150	140	205	205	205
	C/D	-	-	8	10	13	13	18	18	10	28	35	35	112	112	85	135	135	135
MTH3S.	A/B/G/H	-	-	-	-	29	29	40	40	40	60	85	85	190	190	185	265	265	265
	C/D	-	-	-	-	18	18	26	26	18	40	50	50	150	150	120	185	185	190
MTH4S.	A/B	-	-	-	-	-	-	26	26	18	40	50	50	150	150	120	185	185	190
	C/D	-	-	-	-	-	-	40	40	40	60	85	85	190	190	185	265	265	265
MTB2S.	A/C	7	10	10	13	27	27	37	37	38	55	78	78	160	160	150	210	210	210
	B/D	4	7	9	12	15	15	17	17	10	30	38	38	110	110	75	145	100	100
MTB3S.	A/C	-	-	9	14	29	29	40	40	40	60	85	85	190	190	185	265	265	265
	B/D	-	-	7	9	18	18	26	26	18	40	50	50	150	150	120	185	185	190
MTB4S.	A/C	-	-	-	-	29	29	40	40	40	60	85	85	190	190	185	265	265	265
	B/D	-	-	-	-	18	18	26	26	18	40	50	50	150	150	120	185	185	190

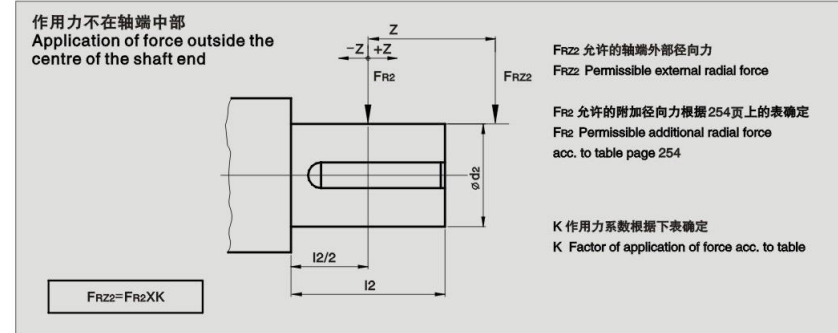
- 表中数据为最小值。如果给出了力的作用角和旋转方向, 通常情况下, 可允许承受较大的附加力。请与我们联系。
Values in tables are minimum values. If the angle of application of force and the direction of rotation are given, significantly higher additional forces can mostly be allowed. Please consult us.
- 根据用户要求供货。On request.
- 当作用力不在轴端中部时, 请参见第 255 页。For application of force outside the center of the shaft end, see Page 255.
- 基础螺栓的最低性能等级为 8.8 级。基础必须干燥, 不得有油脂。如用户要求, 允许输入轴 d1 上附加径向力。
Use foundation bolts of min. Property class 8.8. Foundation must be dry and grease-free. Permissible additional radial forces on input shaft d1 on request.

齿轮箱 Gear Units

输出轴 d2 上允许的附加径向力 Permissible Additional Radial Forces on Output Shaft d2

类型 MTH1SH., MTH2S., MTH3S., Types MTH1SH, MTH2S., MTH3S.,

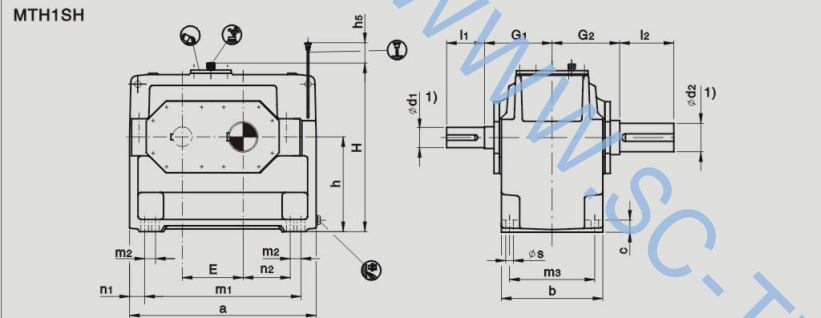
MTH4S., MTB2S., MTB3S., MTB4S MTH4S., MT B2S., MTB3S., MTB4S



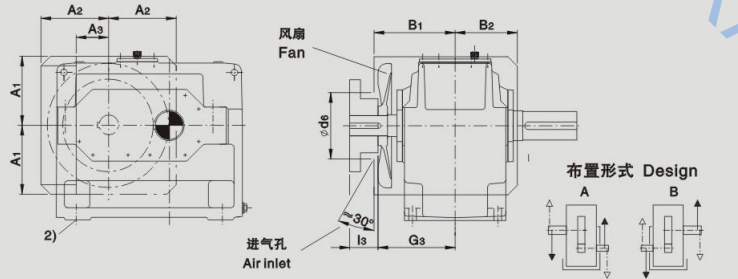
规格 Size	作用力系数 K Factor of application of force K																		
	距离 Z (mm) Distance Z in mm																		
	-200	-150	-100	-75	-50	-25	0	25	50	75	100	150	200	250	300				
1						1.11	1.00	0.81	0.68	0.58	0.51								
2						1.11	1.00	0.83	0.71	0.63	0.56								
3						1.21	1.09	1.00	0.85	0.74	0.65	0.58	0.48						
4						1.17	1.08	1.00	0.86	0.76	0.68	0.62	0.52	0.44					
5+6						1.22	1.14	1.06	1.00	0.88	0.79	0.72	0.66	0.56	0.49	0.43			
7+8						1.19	1.12	1.06	1.00	0.89	0.81	0.74	0.68	0.58	0.51	0.46	0.41		
9+10						1.22	1.15	1.10	1.05	1.00	0.90	0.82	0.76	0.70	0.61	0.54	0.48	0.44	
11+12						1.18	1.13	1.08	1.04	1.00	0.91	0.84	0.78	0.73	0.64	0.57	0.51	0.47	
13+14						1.24	1.15	1.11	1.07	1.03	1.00	0.92	0.86	0.80	0.75	0.67	0.60	0.55	0.50
15+16						1.20	1.12	1.09	1.06	1.03	1.00	0.93	0.87	0.82	0.77	0.69	0.63	0.58	0.53
17+18	1.25	1.17	1.11	1.08	1.05	1.03	1.00	0.94	0.88	0.84	0.79	0.72	0.66	0.60	0.56				



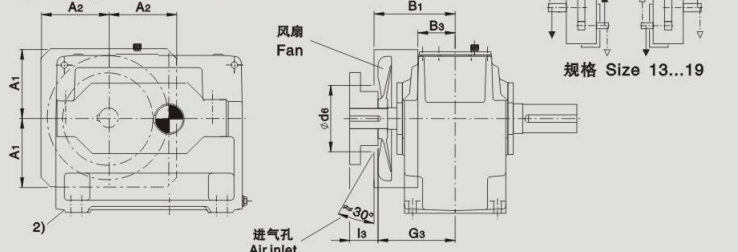
平行轴齿轮箱 Helical Gear Units 单级传动 Single Stage 卧式安装 Horizontal
类型 MTH1SH Type MTH1SH 规格 1...19 Sizes 1...19



MTH1SH
规格 3...11带冷却风扇 Sizes 3...11 with fan



MTH1SH
规格 13...19带冷却风扇 Sizes 13...19 with fan



1) $k_g \leq \phi 50$ $m_g > \phi 50$

有关平键 GB/T1095-1979 型和中心孔, 参见第316页。For parallel key GB/T1095-1979 and for centre hole, see page 316.

2) 在安装基础螺栓前, 应拆下风扇罩。Remove air guide cover before fitting the foundation bolts.

3) 规格1号不带风扇。Sizes 1 without fan.

平行轴齿轮箱 Helical Gear Units 单级传动 Single Stage 卧式安装 Horizontal
类型 MTH1SH Type MTH1SH 规格 1...19 Sizes 1...19

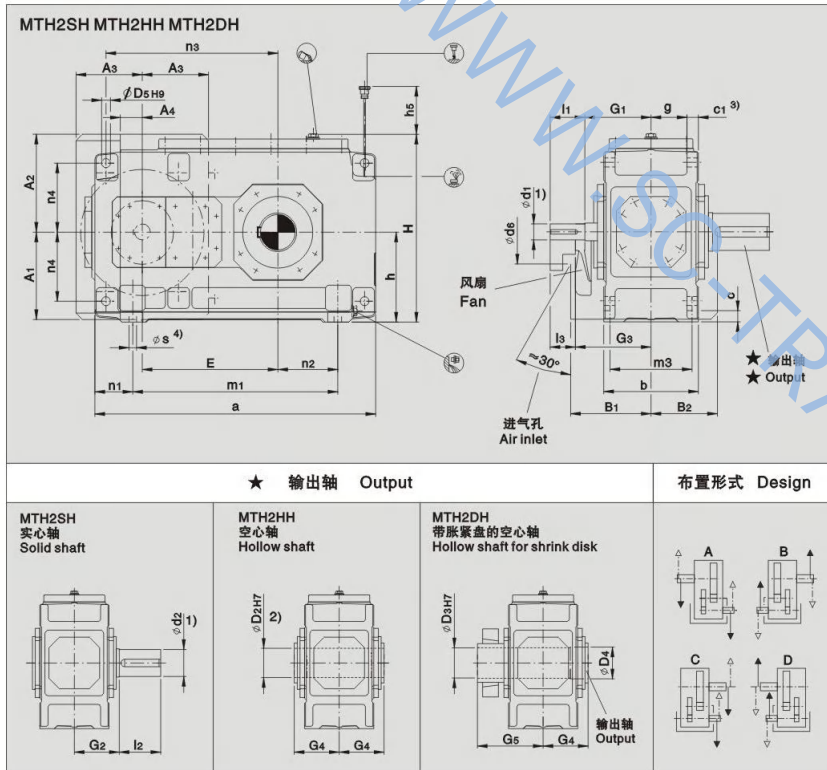
规格 Size	尺寸mm Dimensions in mm																
	输入轴 Input																
	in=1.25-2.8			in=1.6-2.8			in=2-2.8			in=3.15-4			in=4.5-5.6			G1	G3
d1 ¹⁾	l1	ls	d1 ¹⁾	l1	ls	d1 ¹⁾	l1	ls	d1 ¹⁾	l1	ls	d1 ¹⁾	l1	ls			
1	40	70	-						30	50		24	40	-	110		
3	60	125	105						45	100	80	32	80	60	170	190	
5	85	160	130						60	135	105	50	110	80	210	240	
7	100	200	165						75	140	105	60	140	105	250	285	
9	110	200	165						90	165	130	75	140	105	280	315	
11				130	240	205			110	205	170	90	170	135	325	360	
13				150	245	200			130	245	200	100	210	165	365	410	
15							180	290	240	150	250	200	125	250	200	360	410
17							200	330	280	170	290	240	140	250	200	400	450
19							220	340	290	190	340	290	160	300	250	440	490

规格 Size	尺寸mm Dimensions in mm																			
	齿轮箱 Gear units																			
	a	A1	A2	A3	b	B1	B2	B3	c	d _e	E	h	h ₅	H	m ₁	m ₂	m ₃	n ₁	n ₂	s
1	295	-	-	-	150	-	-	-	18	-	90	140	55	275	220	-	120	37.5	80	12
3	420	150	145	80	200	205	130	-	28	130	130	200	85	375	310	-	160	55	110	19
5	580	225	215	115	285	255	185	-	35	190	185	290	100	525	440	-	240	70	160	24
7	690	255	250	120	375	300	230	-	45	245	225	350	75	625	540	-	315	75	195	28
9	805	300	265	140	425	330	265	-	50	280	265	420	50	735	625	-	350	90	225	35
11	960	360	330	190	515	375	320	-	60	350	320	500	40	875	770	-	440	95	280	35
13	1100	415	350	-	580	430	-	150	70	350	370	580	40	1020	870	-	490	115	315	42
15	1295	500	430	-	545	430	-	120	80	450	442	600	10	1115	1025	-	450	135	370	48
17	1410	550	430	-	615	470	-	150	80	445	490	670	-	1235	1170	130	530	120	425	42
19	1590	630	475	-	690	510	-	190	90	445	555	760	-	1395	1290	150	590	150	465	48

规格 Size	尺寸mm Dimensions in mm						润滑油 Oil	重量 Weight (kg)
	输出轴 Output							
	d ₂ ¹⁾	G ₂		l ₂		轴封 Shaft seal (l)		
1	45	110		80		2.5		55
3	60	170		125		7		128
5	85	210		160		22		302
7	105	250		200		42		547
9	125	270		210		68		862
11	150	320		240		120		1515
13	180	360		310		175		2395
15	220	360		350		190		3200
17	240	400		400		270		4250
19	270	440		450		390		5800



平行轴齿轮箱 Helical Gear Units 两级传动 Two stage 卧式安装 Horizontal
类型 MTH2.H Type MTH2.H 规格 3...12 Sizes 3...12



- $k_0 \leq \phi 50$ $m_0 > \phi 50$
有关平键 GB/T1095-1979 型和中心孔, 参见第 316 页。For parallel key GB/T1095-1979 and for centre hole, see page 316.
- 键槽 GB/T1095-1979。Keyway GB/T1095-1979.
- 扭力支撑位于工作侧。Torque support on driven machine side.
- 在安装螺栓前, 应先拆下风罩。Remove air guide cover before fitting the foundation bolts.

平行轴齿轮箱 Helical Gear Units 两级传动 Two stage 卧式安装 Horizontal
类型 MTH2.H Type MTH2.H 规格 3...12 Sizes 3...12

规格 Size	尺寸 mm Dimensions in mm													
	输入轴 Input											G ₁	G ₂	
	n=6.3-11.2			n=8-14			n=12.5-22.4			n=16-28				
d ₁ ¹⁾	h	l _s	d ₁ ¹⁾	h	l _s	d ₁ ¹⁾	h	l _s	d ₁ ¹⁾	h	l _s			
3	35	60	-				28	50				135	-	
4	45	100	80				32	80	60			170	190	
5	50	100	80				38	80	60			195	215	
6				50	100	80				38	80	60	195	215
7	60	135	105				50	110	80			210	240	
8				60	135	105				50	110	80	210	240
9	75	140	110				60	140	110			240	270	
10				75	140	110				60	140	110	240	270
11	90	165	130				70	140	105			275	310	
12				90	165	130				70	140	105	275	310

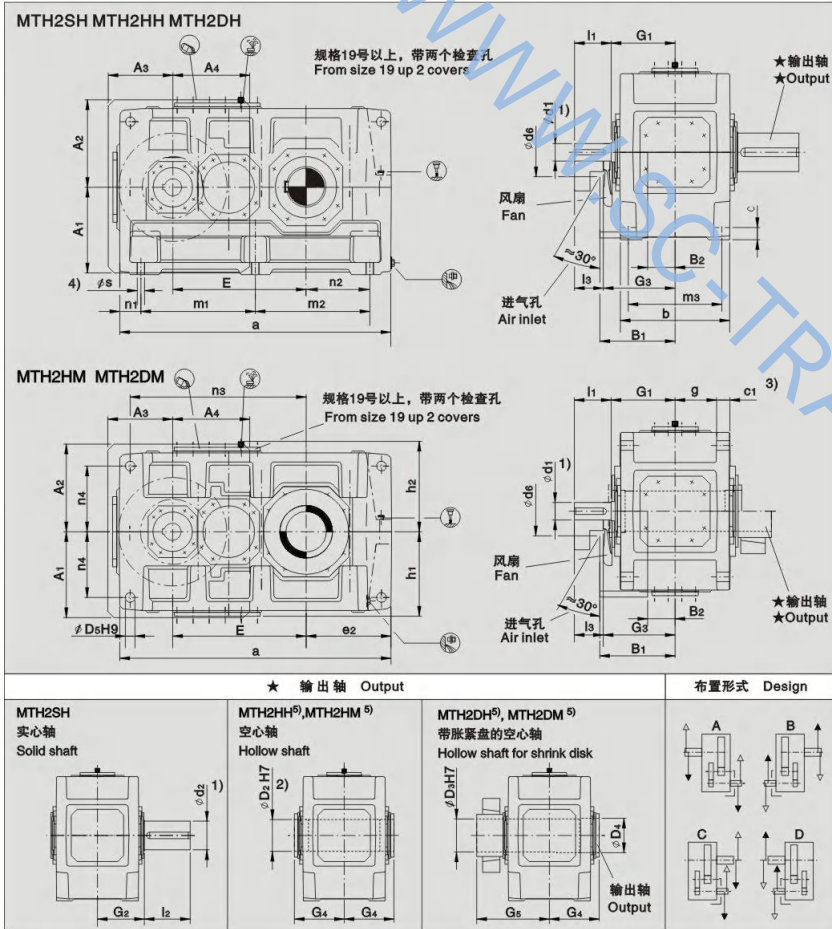
规格 Size	尺寸 mm Dimensions in mm											
	a	A ₁	A ₂	A ₃	A ₄	齿轮箱 Gear units			c	C ₁	D _s	d _s
						b	B ₁	B ₂				
3	450	-	-	-	-	190	-	-	22	24 ± 1	18	-
4	565	195	225	150	30	215	205	158	28	30 ± 1	24	136
5	640	225	260	175	55	255	230	177.5	28	30 ± 1	24	150
6	720	225	260	175	55	255	230	177.5	28	30 ± 1	24	150
7	785	272	305	210	70	300	255	210	35	36 ± 1	28	200
8	890	272	305	210	70	300	255	210	35	36 ± 1	28	200
9	925	312	355	240	100	370	285	245	40	45 ± 1.5	36	200
10	1025	312	355	240	100	370	285	245	40	45 ± 1.5	36	200
11	1105	372	420	285	135	430	325	285	50	54 ± 1.5	40	210
12	1260	372	420	285	135	430	325	285	50	54 ± 1.5	40	210

规格 Size	尺寸 mm Dimensions in mm											
	齿轮箱 Gear units											
	E	g	h	h _s	H	m ₁	m _s	m	n _z	n _s	n ₄	s
3	220	71	175	110	360	160	80	65	285	132.5	15	
4	270	77.5	200	110	415	355	180	105	85	345	150	19
5	310	97.5	230	150	482	430	220	105	100	405	180	19
6	350	97.5	230	150	482	510	220	105	145	440	180	19
7	395	114	280	190	572	545	260	120	130	500	215	24
8	430	114	280	190	582	650	260	120	190	545	215	24
9	450	140	320	205	662	635	320	145	155	585	245	28
10	500	140	320	215	662	735	320	145	205	635	245	28
11	545	61	380	250	782	775	370	165	180	710	300	35
12	615	131	380	250	790	930	370	165	265	780	300	35

规格 Size	尺寸 mm Dimensions in mm								润滑油 Oil	重量 Weight (kg)	
	MTH2SH				MTH2HH						
	d ₂ ¹⁾	G ₂	l ₂	D ₂ ²⁾	G ₄	D _s	D ₄	G _s	轴封 Shaft seal (l)		
3	65	125	140	65	125	70	70	125	180	6	115
4	80	140	170	80	140	85	85	140	205	10	190
5	100	165	210	95	165	100	100	165	240	15	300
6	110	165	210	105	165	110	110	165	240	16	355
7	120	195	210	115	195	120	120	195	280	27	505
8	130	195	250	125	195	130	130	195	285	30	590
9	140	235	250	135	235	140	145	235	330	42	830
10	160	235	300	150	235	150	155	235	350	45	960
11	170	270	300	165	270	165	170	270	400	71	1335
12	180	270	300	180	270	180	185	270	405	76	1615



平行轴齿轮箱 Helical Gear Units 两级传动 Two stage 卧式安装 Horizontal
类型 MTH2.H,MTH2.M Types MTH2.H, MTH2.M 规格 13...22 Sizes 13...22



- $k_0 \leq \Phi 50$ $m_0 > \Phi 50$
有关平键 GB/T1095-1979 型和中心孔, 参见第 316 页。 For parallel key GB/T1095-1979 and for center hole, see page 316.
- 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.
- 扭力支撑位于工作机侧。 Torque support on driver machine side.
- 在安装基础螺栓前, 应拆下风扇罩。 Remove air guide cover before fitting the foundation bolts.
- 规格 13 和 15 号: 速比只有 $i=6.3-18$; 规格 17 和 19 号: 速比只有 $i=6.3-16$ 。
Sizes 13 and 15 : only $i=6.3-18$; Sizes 17 and 19: only $i=6.3-16$.

平行轴齿轮箱 Helical Gear Units 两级传动 Two Stage 卧式安装 Horizontal
类型 MTH2.H,MTH2.M Type MTH2.H,MTH2.M 规格 13...22 Sizes 13...22

规格 Size	尺寸mm Dimension in mm														G ₁	G ₃				
	输入轴 Input																			
	i=6.3-11.2			i=7.1-12.5			i=8-14			i=12.5-20			i=14-22.4				i=16-25			
d ₁ ¹⁾	l ₁	l ₃	d ₁ ¹⁾	l ₁	l ₃	d ₁ ¹⁾	l ₁	l ₃	d ₁ ¹⁾	l ₁	l ₃	d ₁ ¹⁾	l ₁	l ₃	d ₁ ¹⁾	l ₁	l ₃	G ₁	G ₃	
13	100	205	170						85	170	135								330	365
14																85	170	135	330	365
15	120	210	165						100	210	165								365	410
16				120	210	165						100	210	165					365	410
17	125	245	200						110	210	165								420	465
18				125	245	200						110	210	165					420	465
19	150	245	200						120	210	165								475	520
20				150	245	200						120	210	165					475	520
21	170	290	240						140	250	200								495	545
22				170	290	240						140	250	200					495	545

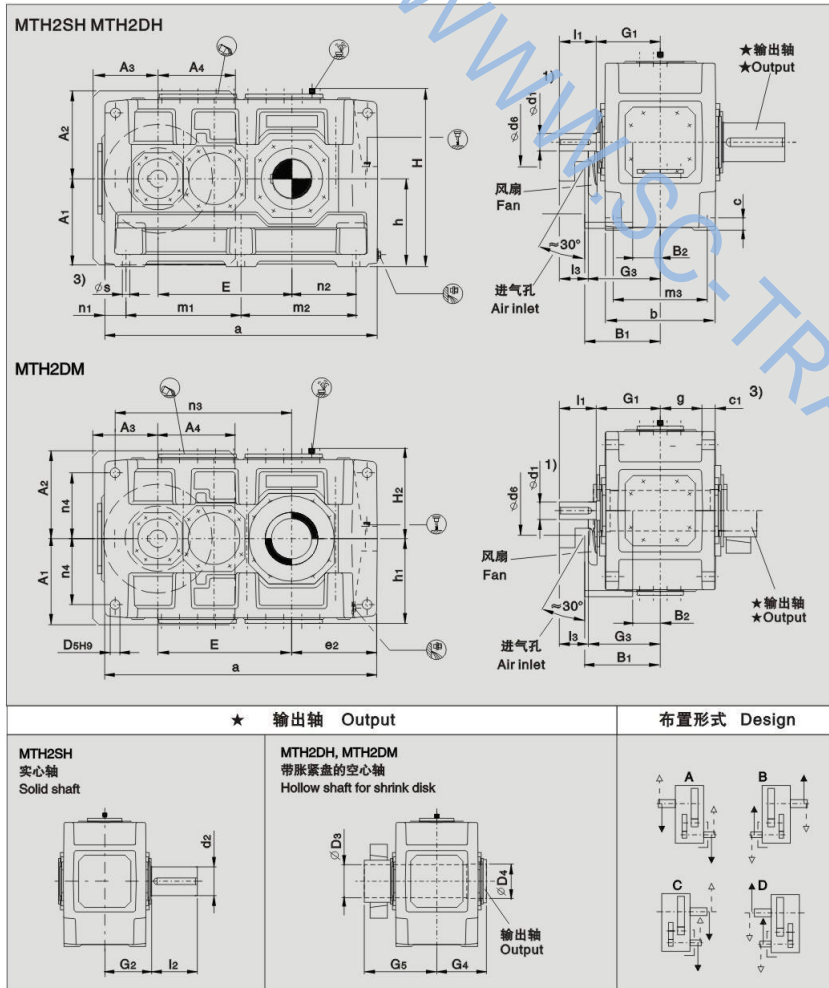
规格 Size	尺寸mm Dimension in mm													
	齿轮箱 Gear units													
	a	A ₁	A ₂	A ₃	A ₄	b	B ₁	B ₂	c	c ₁	d _s	D _s	e ₂	E
13	1290	430	460	330	365	550	385	135	60	61 ± 2	250	48	405	635
14	1430	430	460	330	365	550	385	135	60	61 ± 2	250	48	475	705
15	1550	490	500	370	440	625	430	155	70	72 ± 2	280	55	485	762
16	1640	490	500	370	440	625	430	155	70	72 ± 2	280	55	530	808
17	1740	540	565	435	505	690	485	140	80	81 ± 2	280	55	525	860
18	1860	540	565	435	505	690	485	140	80	81 ± 2	280	55	585	920
19	2010	600	600	500	450	790	540	190	90	91 ± 2	310	65	590	997
20	2130	600	600	500	450	790	540	190	90	91 ± 2	310	65	650	1057
21	2140	680	680	500	610	830	565	200	100	100 ± 2	450	75	655	1067
22	2250	680	680	500	610	830	565	200	100	100 ± 2	450	75	710	1122

规格 Size	尺寸mm Dimension in mm													
	齿轮箱 Gear units													
	g	h	h ₁	h ₂	H	m ₁	m ₂	m ₃	n ₁	n ₂	n ₃	n ₄	s	
13	211.5	440	450	460	900	545	545	475	100	305	835	340	35	
14	211.5	440	450	460	900	545	685	475	100	375	905	340	35	
15	238	500	490	500	1000	655	655	535	120	365	1005	375	42	
16	238	500	490	500	1000	655	745	535	120	410	1050	375	42	
17	259	550	555	560	1110	735	735	600	135	390	1145	425	42	
18	259	550	555	560	1110	735	855	600	135	450	1205	425	42	
19	299	620	615	620	1240	850	850	690	155	435	1345	475	48	
20	299	620	615	620	1240	850	970	690	155	495	1405	475	48	
21	310	700	695	690	1390	900	900	720	170	485	1400	520	56	
22	310	700	685	690	1390	900	1010	720	170	540	1455	520	56	

规格 Size	尺寸mm Dimensions in mm								润滑油 Oil		重量 Weight		
	输出轴 Gear units								MTH2.H	MTH2.M	轴封 Shaft seal (l)		
	MTH2SH		MTH2H ⁵⁾		MTH2M ⁵⁾		MTH2DH ⁵⁾	MTH2DM ⁵⁾	MTH2.H	MTH2.M	(kg)	(kg)	
d ₂ ¹⁾	G ₂	l ₂	D ₂ ²⁾	G ₄	D ₃	D ₄	G ₄	G ₅					
13	200	335	350	190	335	190	195	335	480	135	110	2000	1880
14	210	335	350	210	335	210	215	335	480	140	115	2570	2430
15	230	380	410	230	380	230	235	380	550	210	160	3430	3240
16	240	380	410	240	380	240	245	380	550	215	165	3655	3465
17	250	415	410	250	415	250	260	415	600	290	230	4650	4420
18	270	415	470	275	415	280	285	415	600	300	240	5125	4870
19	290	465	470	-	-	285	295	465	670	320	300	5250	5000
20	300	465	500	-	-	310	315	465	670	340	320	6550	6150
21	320	490	500	-	-	330	335	490	715	320	350	7200	6950
22	340	490	550	-	-	340	345	490	725	340	370	7800	7550



平行轴齿轮箱 Helical Gear Units 两级传动 Two Stage 卧式安装 Horizontal
类型 MTH2.H, MTH2.M Types MTH2.H, MTH2.M 规格 23...26 Sizes 23...26



1) $k_s \leq \Phi 50$ $m_e > \Phi 50$
有关平键 GB/T1095-1979型和中心孔, 参见第316页。For parallel key GB/T1095-1979 and for center hole, see page 316.
2) 键槽 GB/T1095-1979。Keyway GB/T 1095-1979.
3) 扭力支撑位于工作机侧。Torque support on driven machine side.

平行轴齿轮箱 Helical Gear Units 两级传动 Two stage 卧式安装 Horizontal
类型 MTH2.H, MTH2.M Types MTH2.H, MTH2.M 规格 23...26 Sizes 23...26

规格 Size	尺寸 mm Dimensions in mm													
	输入轴 Input						输出轴 Output							
	$i_n = 6.3 - 11.2$			$i_n = 7.1 - 12.5$			$i_n = 12.5 - 20$			$i_n = 14 - 22.4$			G_1	G_3
	$d_1^{(1)}$	l_1	l_3	$d_1^{(1)}$	l_1	l_3	$d_1^{(1)}$	l_1	l_3	$d_1^{(1)}$	l_1	l_3		
23	190	330	280				150	250	200				560	610
24				190	330	280				150	250	200	560	610
25	200	340	290				170	300	250				600	650
26				200	340	290				170	300	250	600	650

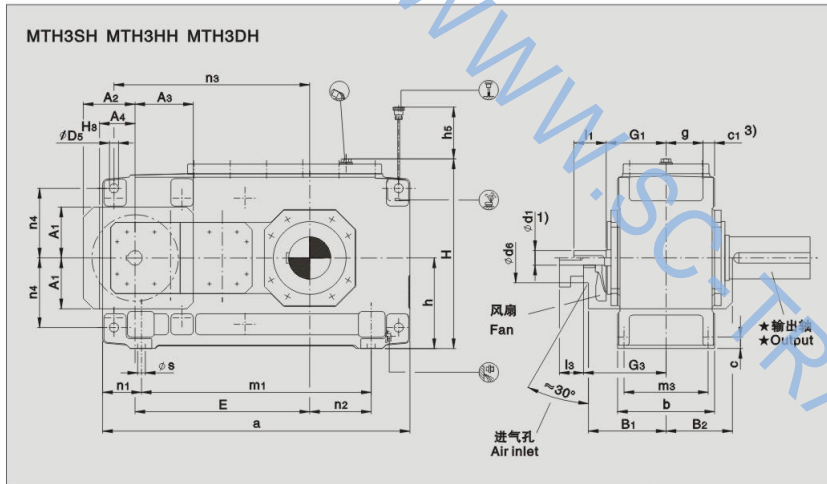
规格 Size	尺寸 mm Dimensions in mm													
	齿轮箱 Gear units													
	a	A ₁	A ₂	A ₃	A ₄	b	B ₁	B ₂	c	c ₁	d ₆	D ₆	e ₂	E
23	2380	770	770	550	550	930	630	220	115	120 ± 2	450	80	730	1185
24	2510	770	770	550	550	930	630	220	115	120 ± 2	450	80	795	1250
25	2580	845	865	550	550	1045	670	240	130	120 ± 2	450	90	790	1325
26	2760	845	865	550	550	1045	670	240	130	120 ± 2	450	90	880	1415

规格 Size	尺寸 mm Dimensions in mm													
	齿轮箱 Gear units													
	g	h	h ₁	h ₂	H	m ₁	m ₂	m ₃	n ₁	n ₂	n ₃	n ₄	s	
23	342	780	770	770	1550	1010	1010	810	180	550	1560	580	56	
24	342	780	770	770	1550	1010	1140	810	180	615	1625	580	56	
25	400	860	860	860	1720	1090	1090	910	200	590	1685	660	66	
26	400	860	860	860	1720	1090	1270	910	200	680	1775	660	66	

规格 Size	尺寸 mm Dimensions in mm							润滑油 Oil		重量 Weight	
	输出轴 Output			输出轴 Output				MTH2.H	MTH2.M	MTH2.H	MTH2.M
	$d_2^{(1)}$	G ₂	l ₂	D ₃	D ₄	G ₄	G ₅	(l)	(l)	(kg)	(kg)
23	310	540	590	360	365	540	785	430	470	11600	11000
24	380	540	590	380	385	540	805	450	500	13000	12300
25	400	605	650	400	405	605	875	600	660	15500	14700
26	420	605	650	430	435	605	900	640	700	17200	16200



平行轴齿轮箱 Helical Gear Units 三级传动 Three Stage 卧式安装 Horizontal
类型 MTH3.H Type MTH3.H 规格 5...12 Sizes 5...12



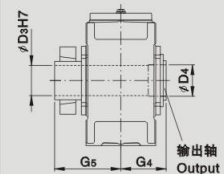
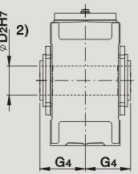
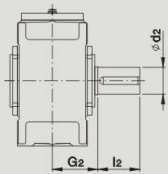
★ 输出轴 Output

布置形式 Design

MTH3SH
实心轴
Solid shaft

MTH3HH
空心轴
Hollow shaft

MTH3DH
带胀紧套的空心轴
Hollow shaft for shrink disk



输出轴
Output

1) $k_0 \leq \phi 50$ $m_0 \leq \phi 50$

有关平键 GB/T1095-1979 型和中心孔, 参见第 316 页。 For parallel key GB/T1095-1979 and for center hole, see page 316.

2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.

3) 扭力支撑位于工作侧。 Torque support on driven machine side.

平行轴齿轮箱 Helical Gear Units 三级传动 Three Stage 卧式安装 Horizontal
类型 MTH3.H Type MTH3.H 规格 5...12 Sizes 5...12

规格 Size	尺寸mm Dimensions in mm														G ₁	G ₃				
	输入轴 Input																			
	IN=25-45			IN=31.5-56			IN=50-63			IN=63-80			IN=71-90				IN=90-112			
d ₁ ¹⁾	l ₁	l _s	d ₁ ¹⁾	l ₁	l _s	d ₁ ¹⁾	l ₁	l _s	d ₁ ¹⁾	l ₁	l _s	d ₁ ¹⁾	l ₁	l _s	d ₁ ¹⁾	l ₁	l _s			
5	40	70	70				30	50	50				24	40	40				160	220
6				40	70	70				30	50	50				24	40	40	160	220
7	45	80	80				35	60	60				28	50	50				185	250
8				45	80	80				35	60	60				28	50	50	185	250
9	60	125	105				45	100	80				32	80	60				230	300
10				60	125	105				45	100	80				32	80	60	230	300
11	70	120	120				50	80	80				42	70	70				255	330
12				70	120	120				50	80	80				42	70	70	255	330

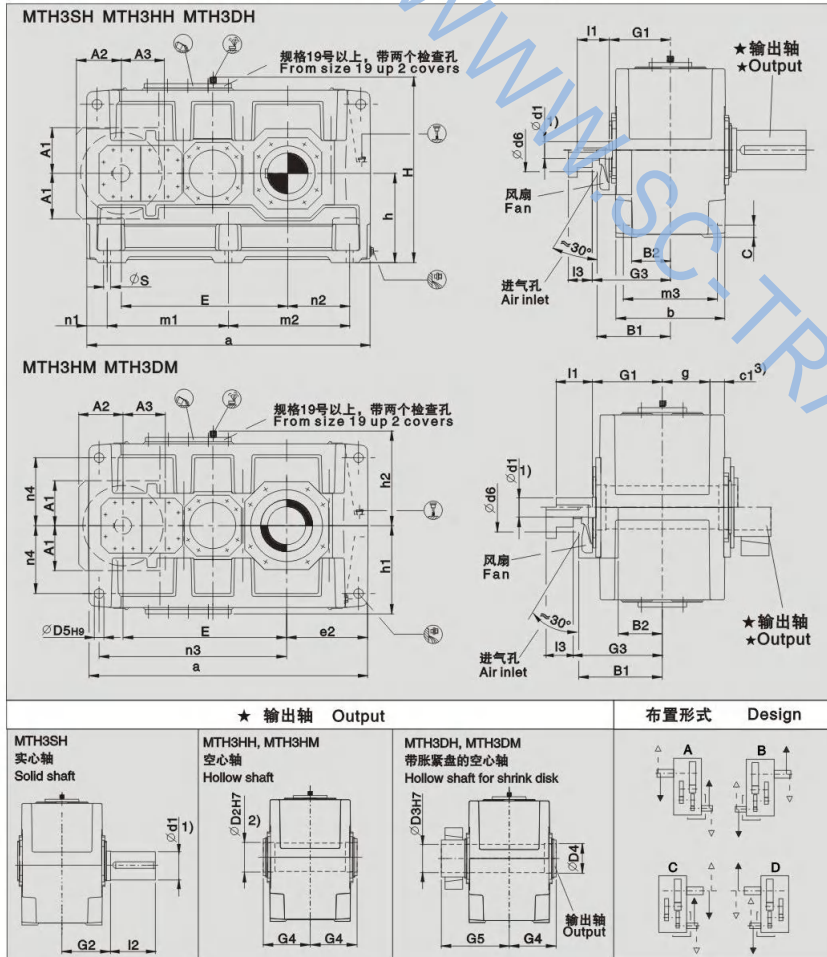
规格 Size	尺寸mm Dimensions in mm											
	齿轮箱 Gear units											
a	A ₁	A ₂	A ₃	A ₄	b	B ₁	B ₂	c	c ₁	d ₆	D ₅	
5	690	137	135	140	80	255	215	175	28	30 ± 1	60	24
6	770	137	135	140	80	255	215	175	28	30 ± 1	60	24
7	845	157	160	180	100	300	245	205	35	36 ± 1	75	28
8	950	157	160	180	100	300	245	205	35	36 ± 1	75	28
9	1000	182	190	205	120	370	295	240	40	45 ± 1.5	90	36
10	1100	182	190	205	120	370	295	240	40	45 ± 1.5	90	36
11	1200	218	220	255	150	430	325	280	50	54 ± 1.5	100	40
12	1355	218	220	255	150	430	325	280	50	54 ± 1.5	100	40

规格 Size	尺寸mm Dimensions in mm											
	齿轮箱 Gear units											
E	g	h	h _s	H	m	m _s	n ₁	n ₂	n ₃	n ₄	s	
5	405	97.5	230	130	482	480	220	105	100	455	180	19
6	440	97.5	230	130	482	560	220	105	145	490	180	19
7	495	114	280	170	572	605	260	120	130	560	215	24
8	540	114	280	160	582	710	260	120	190	605	215	24
9	580	140	320	185	662	710	320	145	155	660	245	28
10	630	140	320	185	662	810	320	145	205	710	245	28
11	705	161	380	180	782	870	370	165	180	805	300	35
12	75	161	380	170	790	1025	370	165	265	875	300	35

规格 Size	尺寸mm Dimensions in mm										润滑油 Oil (l)	重量 Weight (kg)
	输出轴 Output					MTH3DH						
	MTH3SH	MTH3HH	MTH3DH	MTH3SH	MTH3HH	MTH3DH	MTH3SH	MTH3HH	MTH3DH	MTH3SH		
d ₂ ²⁾	G ₂	l ₂	D ₂ ²⁾	G ₄	D ₃	D ₄	G ₄	G ₅	G ₂	G ₄	G ₅	
5	100	165	210	95	165	100	100	165	240	15	320	
6	110	165	210	105	165	110	110	165	240	17	365	
7	120	195	210	115	195	120	120	195	280	28	540	
8	130	195	250	125	195	130	130	195	285	30	625	
9	140	235	250	135	235	140	145	235	330	45	875	
10	160	235	300	150	235	150	155	235	350	46	1020	
11	170	270	300	165	270	165	170	270	400	85	1400	
12	180	270	300	180	270	180	185	270	405	90	1675	



平行轴齿轮箱 Helical Gear Units 三级传动 Three Stage 卧式安装 Horizontal
类型 MTH3.H, MTH3.M Types MTH3.H, MTH3.M 规格 13...22 Sizes 13...22



- 1) $k_0 \leq \phi 50$ $m_6 > \phi 50$
有关平键 GB/T1095-1979型和中心孔, 参见第315页。 For parallel key GB/T1095-1979 and for center hole, see page 315.
- 2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.
- 3) 扭力支撑位于工作机侧。 Torque support on driven machine side.

平行轴齿轮箱 Helical Gear Units 三级传动 Three Stage 卧式安装 Horizontal
类型 MTH3.H, H3.M Types MTH3.H, MTH3.M 规格 13...22 Sizes 13...22

规格 Size	尺寸 mm Dimensions in mm														G ₁	G ₃				
	输入轴 Input																			
	$i_N = 22.4 - 45$			$i_N = 25 - 50$ $i_N = 28 - 56$			$i_N = 50 - 63$			$i_N = 56 - 71$ $i_N = 63 - 80$			$i_N = 71 - 90$				$i_N = 80 - 100$ $i_N = 90 - 112$			
d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3			
13	85	160	130				60	135	105				50	110	80			310	385	
14				85	160	130				60	135	105				50	110	80	310	385
15	100	200	165				75	140	105				60	140	105				350	420
16				100	200	165				75	140	105				60	140	105	350	420
17	100	200	165				75	140	105				60	140	105				380	450
18				100	200	165				75	140	105				60	140	105	380	450
19	110	200	4)				90	185	4)				75	140	4)				430	4)
20				110	200	4)				90	185	4)				75	140	4)	430	4)
21	130	240	4)				110	205	4)				90	170	4)				470	4)
22				130	240	4)				110	205	4)				90	170	4)	470	4)

* 仅指规格14号齿轮箱 Only size 14

规格 Size	尺寸 mm Dimensions in mm													
	齿轮箱 Gear units													
	a	A ₁	A ₂	A ₃	b	B ₁	B ₂	c	c ₁	d ₆	D ₅	e ₂	E	
13	1395	225	225	212	550	380	195	60	61 ± 2	120	48	405	820	
14	1535	225	225	212	550	380	195	60	61 ± 2	120	48	475	890	
15	1680	270	265	252	625	415	205	70	72 ± 2	150	55	485	987	
16	1770	270	265	252	625	415	205	70	72 ± 2	150	55	530	1033	
17	1770	270	265	252	690	445	235	80	81 ± 2	150	55	525	1035	
18	1890	270	265	252	690	445	235	80	81 ± 2	150	55	585	1095	
19	2030				790			90	91 ± 2			65	590	1190
20	2150				790			90	91 ± 2			65	650	1250
21	2340	4)	4)	4)	830			100	100 ± 2	4)		75	655	1387
22	2450				830			100	100 ± 2			75	710	1442

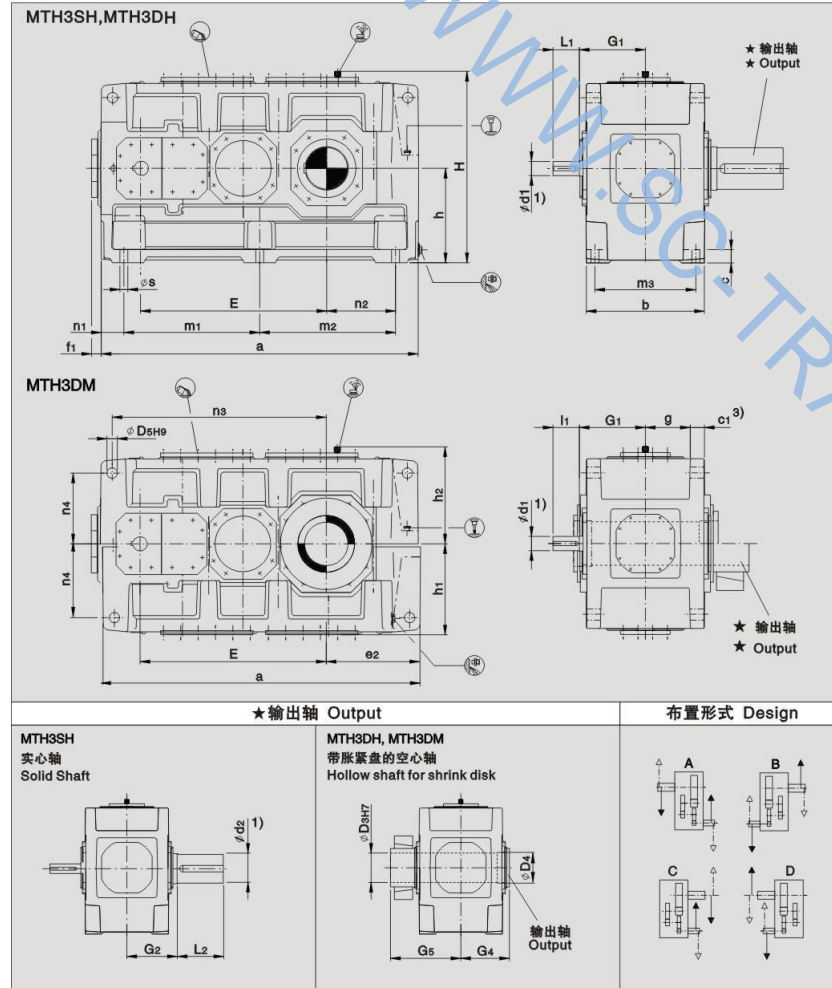
规格 Size	尺寸 mm Dimensions in mm													
	齿轮箱 Gear units													
	g	h	h ₁	h ₂	H	m ₁	m ₂	m ₃	n ₁	n ₂	n ₃	n ₄	s	
13	211.5	440	450	460	900	597.5	597.5	475	100	305	940	340	35	
14	211.5	440	450	460	900	597.5	737.5	475	100	375	1010	340	35	
15	238	500	490	500	1000	720	720	535	120	365	1135	375	42	
16	238	500	490	500	1000	720	810	535	120	410	1180	375	42	
17	259	550	555	560	1110	750	750	600	135	390	1175	425	42	
18	259	550	555	560	1110	750	870	600	135	450	1235	425	42	
19	299	620	615	620	1240	860	860	690	155	435	1365	475	48	
20	299	620	615	620	1240	860	980	690	155	495	1425	475	48	
21	310	700	695	690	1390	1000	1000	720	170	485	1615	520	56	
22	310	700	685	690	1390	1000	1110	720	170	540	1670	520	56	

规格 Size	尺寸 mm Dimensions in mm								润滑油 Oil		重量 Weight		
	输出轴 Output				MTH3DH MTH3DM				MTH3.H	MTH3.M	MTH3.H	MTH3.M	
	d_2	G ₂	l_2	D ₂	G ₃	D ₃	G ₄	G ₅	(l)	(l)	(kg)	(kg)	
13	200	335	350	19	335	190	195	335	480	160	125	2295	2155
14	210	335	350	210	335	210	215	335	480	165	130	2625	2490
15	230	380	410	230	380	230	235	380	550	235	190	3475	3260
16	240	380	410	240	380	240	245	380	550	245	195	3875	3625
17	250	415	410	250	415	250	260	415	600	305	240	4560	4250
18	270	415	470	275	415	280	285	415	600	315	250	5030	4740
19	290	465	470	-	-	285	295	465	670	420	390	5050	4750
20	300	465	500	-	-	310	315	465	670	450	415	6650	6250
21	320	490	500	-	-	330	335	490	715	470	515	6950	6550
22	340	490	550	-	-	340	345	490	725	480	540	7550	7050

4) 根据用户要求供货 On request



平行轴齿轮箱 Helical Gear Units 三级传动 Three Stage 卧式安装 Horizontal
类型 MTH3.H, MTH3.M Types MTH3.H, MTH3.M 规格 23...26 Sizes 23...26



1) $k_s \leq \Phi 50$ $m_6 > \Phi 50$
有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.
2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.
3) 扭力支撑位于工作机侧。 Torque support on driven machine side.

平行轴齿轮箱 Helical Gear Units 三级传动 Three Stage
卧式安装 Horizontal 类型 MTH3.H, MTH3.M Types MTH3.H, MTH3.M
规格 23...26 Sizes 23...26

规格 Size	尺寸mm Dimensions in mm												
	输入轴 Input										G1		
	in = 22.4 - 45		in = 25 - 50		in = 50 - 63		in = 56 - 71		in = 71 - 90			in = 80 - 100	
d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁		
23	130	240			110	205			90	170		510	
24			130	240			110	205			90	170	510
25	150	245			130	245			100	210		570	
26			150	245			130	245			100	210	570

规格 Size	尺寸mm Dimensions in mm										
	齿轮箱 Gear units										
a	b	c	c ₁	D ₅	e ₂	E	f ₁	g	h	h ₁	
23	2530	930	115	120 ± 2	80	730	1505	35	342	780	770
24	2660	930	115	120 ± 2	80	795	1570	35	342	780	770
25	2830	1045	130	120 ± 2	90	790	1659	65	400	860	860
26	3010	1045	130	120 ± 2	90	880	1785	65	400	860	860

规格 Size	尺寸mm Dimensions in mm										
	齿轮箱 Gear units										
h ₂	H	m ₁	m ₂	m ₃	n ₁	n ₂	n ₃	n ₄	s		
23	790	1570	1085	1085	810	180	550	1725	580	56	
24	790	1570	1085	1215	810	180	615	1790	580	56	
25	860	1720	1215	1215	910	200	590	1965	660	66	
26	860	1720	1215	1395	910	200	680	2055	660	66	

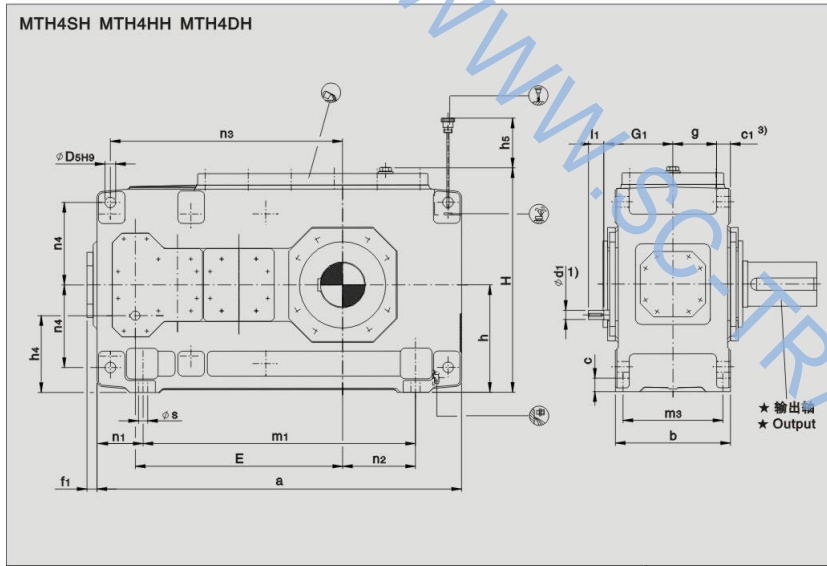
规格 Size	尺寸mm Dimensions in mm							润滑油 Oil		重量 Weight	
	输出轴 Output							MTH3.H (1)	MTH3.M (1)	MTH3.H (Kg)	MTH3.M (Kg)
	D ₂ ¹⁾	G ₂	l ₂	D ₃	D ₄	G ₄	G ₅				
23	360	540	590	360	365	540	785	620	690	11500	10600
24	380	540	590	380	385	540	805	650	725	13400	12500
25	400	605	650	400	405	605	875	880	970	16100	15200
26	420	605	650	430	435	605	900	935	1030	17600	16500



平行轴齿轮箱 Helical Gear Units
类型 MTH4.H Type MTH4.H

四级传动 Four Stage
规格 7...12 Size 7...12

卧式安装 Horizontal

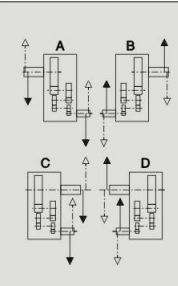
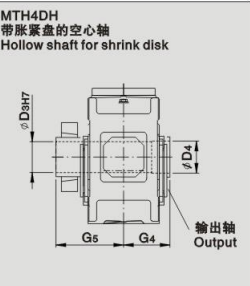
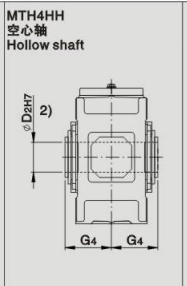
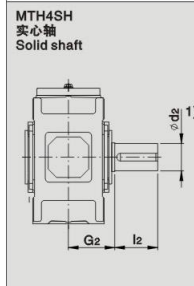


★ 输出轴 Output

★ 输出轴 Output

★ 输出轴 Output

布置形式 Design



1) $k_2 \leq \Phi 50$ $m_2 > \Phi 50$

有关平键 GB/T1095-1979型和中心孔, 参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.

2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.

3) 扭力支撑位于工作机侧。 Torque support on driven machine side.

平行轴齿轮箱 Helical Gear Units
类型 MTH4.H Type MTH4.H

四级传动 Four Stage
规格 7...12 Sizes 7...12

卧式安装 Horizontal

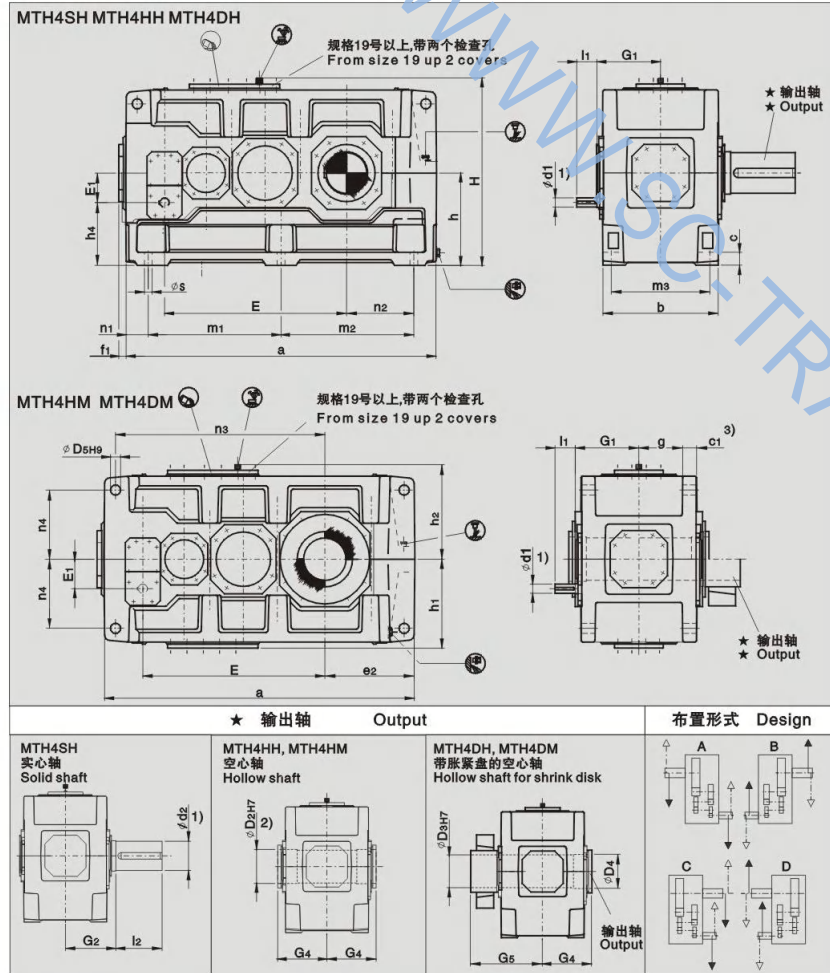
规格 Size	尺寸 mm Dimensions in mm								G1
	输入轴 Input								
	iv = 100 - 180		iv = 125 - 224		iv = 200 - 355		iv = 250 - 450		
	d1 ¹⁾	l1	d1 ¹⁾	l1	d1 ¹⁾	l1	d1 ¹⁾	l1	
7	30	50			24	40			180
8			30	50			24	40	180
9	35	60			28	50			215
10			35	60			28	50	215
11	45	100			32	80			250
12			45	100			32	80	250

规格 Size	尺寸 mm Dimensions in mm																		
	齿轮箱 Gear units																		
	a	b	c	c1	Ds	E	f1	g	h	h4	h5	H	m1	m2	n1	n2	ns	n4	s
7	845	300	35	36 ± 1	28	495	37	114	280	200	140	572	605	260	120	130	560	215	24
8	950	300	35	36 ± 1	28	540	37	114	280	200	140	582	710	260	120	190	605	215	24
9	1000	370	40	45 ± 1.5	36	580	43	140	320	230	150	662	710	320	145	155	660	245	28
10	1100	370	40	45 ± 1.5	36	630	43	140	320	230	150	662	810	320	145	205	710	245	28
11	1200	430	50	54 ± 1.5	40	705	47	161	380	270	165	782	870	370	165	180	805	300	35
12	1355	430	50	54 ± 1.5	40	775	47	161	380	270	165	790	1025	370	165	265	875	300	35

规格 Size	尺寸 mm Dimensions in mm										润滑油 Oil (l)	重量 Weight (kg)
	输出轴 Output											
	MTH4SH		MTH4HH		MTH4DH							
	d2 ¹⁾	G2	l2	D2 ²⁾	G4	D3	D4	G4	G5			
7	120	195	210	115	195	120	120	195	280	25	550	
8	130	195	250	125	195	130	130	195	285	27	645	
9	140	235	250	135	235	140	145	235	330	48	875	
10	160	235	300	150	235	150	155	235	350	50	1010	
11	170	270	300	165	270	165	170	270	400	80	1460	
12	180	270	300	180	270	180	185	270	405	87	1725	



平行轴齿轮箱 Helical Gear Units 四级传动 Four Stage 卧式安装 Horizontal
类型 MTH4.H, MTH4.M Types MTH4.H, MTH4.M 规格 13...22 Sizes 13...22



1) $k \leq \phi 50$ $m \leq \phi 50$
有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.
2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.
3) 扭力支撑位于工作机侧。 Torque support on driven machine side.

平行轴齿轮箱 Helical Gear Units 四级传动 Four Stage 卧式安装 Horizontal
类型 MTH4.H, MTH4.M Types MTH4.H, MTH4.M 规格 13...22 Sizes 13...22

规格 Size	尺寸mm Dimensions in mm										G ₁	
	输入轴 Input											
	In = 100-180		In = 112-200		In = 125-224		In = 200-355		In = 224-400			In = 250-450
d ₁ 1)	l ₁	d ₁ 1)	l ₁	d ₁ 1)	l ₁	d ₁ 1)	l ₁	d ₁ 1)	l ₁	d ₁ 1)	l ₁	
13	50	100					38	80				305
14					50	100						305
15	60	135					50	110				345
16			60	135					50	110		345
17	60	105					50	80				380
18			60	105					50	80		380
19	75	105					60	105				440
20			75	105					60	105		440
21	90	165					70	140				460
22			90	165					70	140		460

规格 Size	尺寸mm Dimensions in mm										
	齿轮箱 Gear units										
a	b	c	c ₁	D ₅	e ₂	E	E ₁	f ₁	g	h	
13	1395	550	60	61 ± 2	48	405	820	130	47	211.5	440
14	1535	550	60	61 ± 2	48	475	890	130	47	211.5	440
15	1680	625	70	72 ± 2	55	485	987	160	56	238	500
16	1770	625	70	72 ± 2	55	530	1033	160	56	238	500
17	1770	690	80	81 ± 2	55	525	1035	160	53	259	550
18	1890	690	80	81 ± 2	55	585	1095	160	53	259	550
19	2030	790	90	91 ± 2	65	590	1190	185	53	299	620
20	2150	790	90	91 ± 2	65	650	1250	185	53	299	620
21	2340	830	100	100 ± 2	75	655	1387	225	62	310	700
22	2450	830	100	100 ± 2	75	710	1442	225	62	310	700

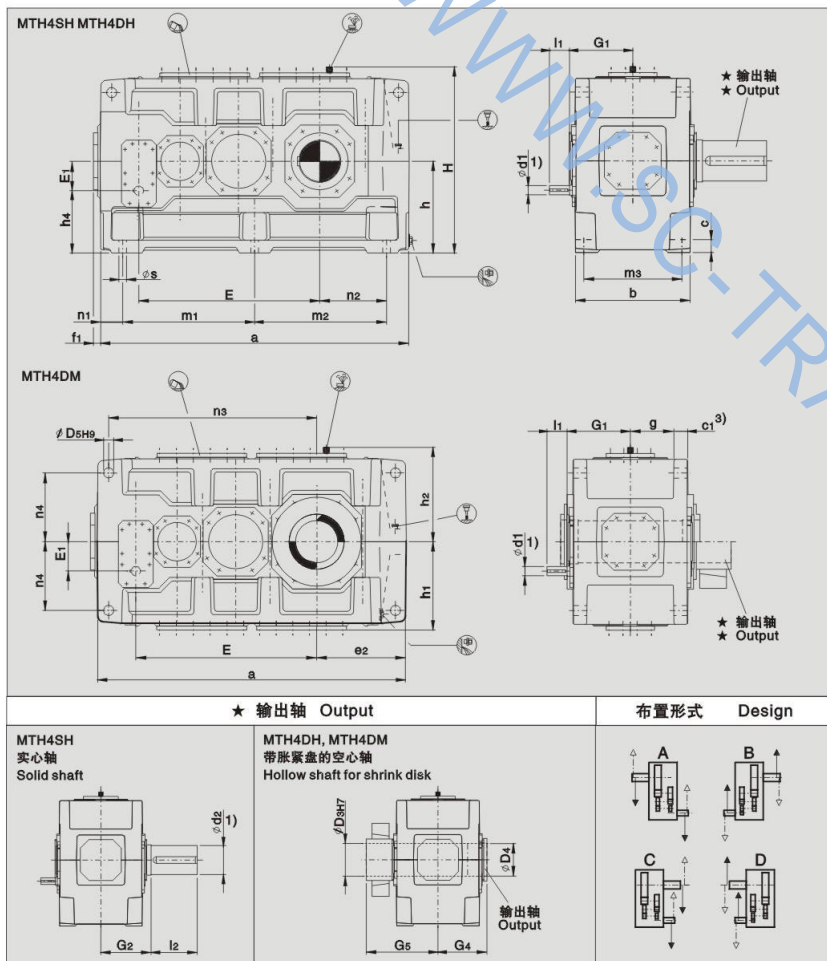
规格 Size	尺寸mm Dimensions in mm												
	齿轮箱 Gear units												
h ₁	h ₂	h ₄	H	m ₁	m ₂	m ₃	n ₁	n ₂	n ₃	n ₄	s		
13	450	460	310	900	597.5	597.5	475	100	305	940	340	35	
14	450	460	310	900	597.5	737.5	475	100	375	1010	340	35	
15	490	500	340	1000	720	720	535	120	365	1135	375	42	
16	490	500	340	1000	720	810	535	120	410	1180	375	42	
17	555	560	390	1110	750	750	600	135	390	1175	425	42	
18	555	560	390	1110	750	870	600	135	450	1235	425	42	
19	615	620	435	1240	860	860	690	155	435	1365	475	48	
20	615	620	435	1240	860	980	690	155	495	1425	475	48	
21	685	690	475	1390	1000	1000	720	170	485	1615	520	56	
22	685	690	475	1390	1000	1110	720	170	540	1670	520	56	

规格 Size	尺寸mm Dimensions in mm								润滑油 Oil		重量 Weight		
	输出轴 Output								MTH4.H	MTH4.M	MTH4.H	MTH4.M	
	d ₂ 1)	G ₂	l ₂	D ₂ 2)	e ₂	D ₃	D ₄	G ₄	G ₅	(l)	(l)	(kg)	(kg)
13	200	335	350	19	33	190	195	335	480	130	120	2390	2270
14	210	335	350	21	33	210	215	335	480	140	125	2730	2600
15	230	380	410	230	300	230	235	380	550	230	170	3635	3440
16	240	380	410	240	300	240	245	380	550	235	175	3965	3740
17	250	415	410	250	415	250	260	415	600	290	225	4680	4445
18	270	415	470	275	415	280	285	415	600	305	230	5185	4915
19	290	465	470	-	-	285	295	465	670	360	310	5700	5300
20	300	465	500	-	-	310	315	465	670	380	330	6400	5950
21	320	490	500	-	-	330	335	490	715	395	430	7750	7250
22	340	490	550	-	-	340	345	490	725	420	450	8350	7750



平行轴齿轮箱 Helical Gear Units 四级传动 Four Stage 卧式安装 Horizontal
类型 MTH4.H, MTH4.M Types MTH4.H, MTH4.M 规格 23...26 Sizes 23...26

平行轴齿轮箱 Helical Gear Units 四级传动 For Stage 卧式安装 Horizontal
类型 MTH4.H, MTH4.M Types MTH4.H, MTH4.M 规格 23...26 Sizes 23...26



1) $k_6 \leq \Phi 50$ $m_6 > \Phi 50$
有关平键 GB/T1095-1979型和中心孔, 参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.
2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.
3) 扭力支撑位于工作机侧。 Torque support on driven machine side.

规格 Size	尺寸 mm Dimensions in mm								G ₁
	输入轴 Input								
	i _N = 100 - 180		i _N = 112 - 200		i _N = 200 - 355		i _N = 224 - 400		
	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	
23	90	130			70	105			505
24			90	130			70	105	505
25	100	205			85	170			565
26			100	205			85	170	565

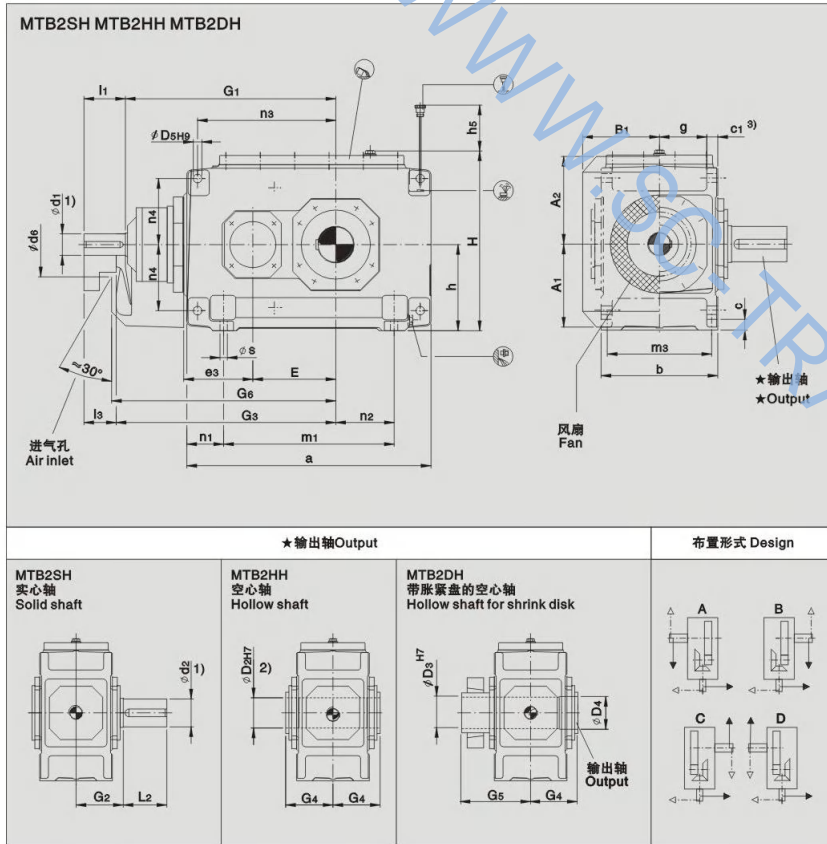
规格 Size	尺寸 mm Dimensions in mm										
	齿轮箱 Gear units										
	a	b	c	c ₁	D ₅	e ₂	E	E ₁	f ₁	g	h
23	2530	930	115	120 ± 2	80	730	1505	225	35	342	780
24	2660	930	115	120 ± 2	80	795	1570	225	35	342	780
25	2830	1045	130	120 ± 2	90	790	1695	265	65	400	860
26	3010	1045	130	120 ± 2	90	880	1785	265	65	400	860

规格 Size	尺寸 mm Dimensions in mm												
	齿轮箱 Gear units												
	h ₁	h ₂	h ₄	H	m ₁	m ₂	m ₃	n ₁	n ₂	n ₃	n ₄	s	
23	770	790	555	1570	1085	1085	810	180	550	1725	580	56	
24	770	790	555	1570	1085	1215	810	180	615	1790	580	56	
25	860	860	595	1720	1215	1215	910	200	590	1965	660	66	
26	860	860	595	1720	1215	1395	910	200	680	2055	660	66	

规格 Size	尺寸 mm Dimensions in mm							润滑油 Oil		重量 Weight	
	输出轴 Output							MTH4.H (l)	MTH4.M (l)	MTH4.H (kg)	MTH4.M (kg)
	MTH4SH		MTH4DH		MTH4DM						
	d ₂ ¹⁾	G ₂	l ₂	D ₃	D ₄	G ₄	G ₅				
23	30	540	590	360	365	540	785	520	500	11600	10700
24	38	540	590	380	385	540	805	550	600	13500	12600
25	40	605	650	400	405	605	875	735	800	16100	15200
26	42	605	650	430	435	605	900	780	850	17600	16500



直交轴齿轮箱 Bevel-helical Gear Units 二级传动 TwoStage 卧式安装 Horizontal
类型 MTB2.H Type MTB2.H 规格 1...12 Sizes 1...12



- 1) $k_e \leq \Phi 50$ $m_e > \Phi 50$
有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.
- 2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.
- 3) 扭力支撑位于工作机侧。 Torque support on driven machine side.

直交轴齿轮箱 Bevel-helical Gear Units 二级传动 Two Stage 卧式安装 Horizontal
类型 MTB2.H Type MTB2.H 规格 1...12 Sizes 1...12

规格 Size	尺寸 mm Dimensions in mm									G ₁	G ₃
	输入轴 Input										
	iN=5-11.2			iN=6.3-14			iN=12.5-18				
	d ₁ ¹⁾	h	ls	d ₁ ¹⁾	h	ls	d ₁ ¹⁾	h	ls		
1	28	55	40				20	50	35	300	315
2	30	70	50				25	60	40	340	360
3	35	80	60				28	60	40	390	410
4	45	100	80							465	485
5	55	110	80							535	565
6				55	110	80				570	600
7	70	135	105							640	670
8				70	135	105				685	715
9	80	165	130							755	790
10				80	165	130				805	840
11	90	165	130							925	960
12				90	165	130				995	1030

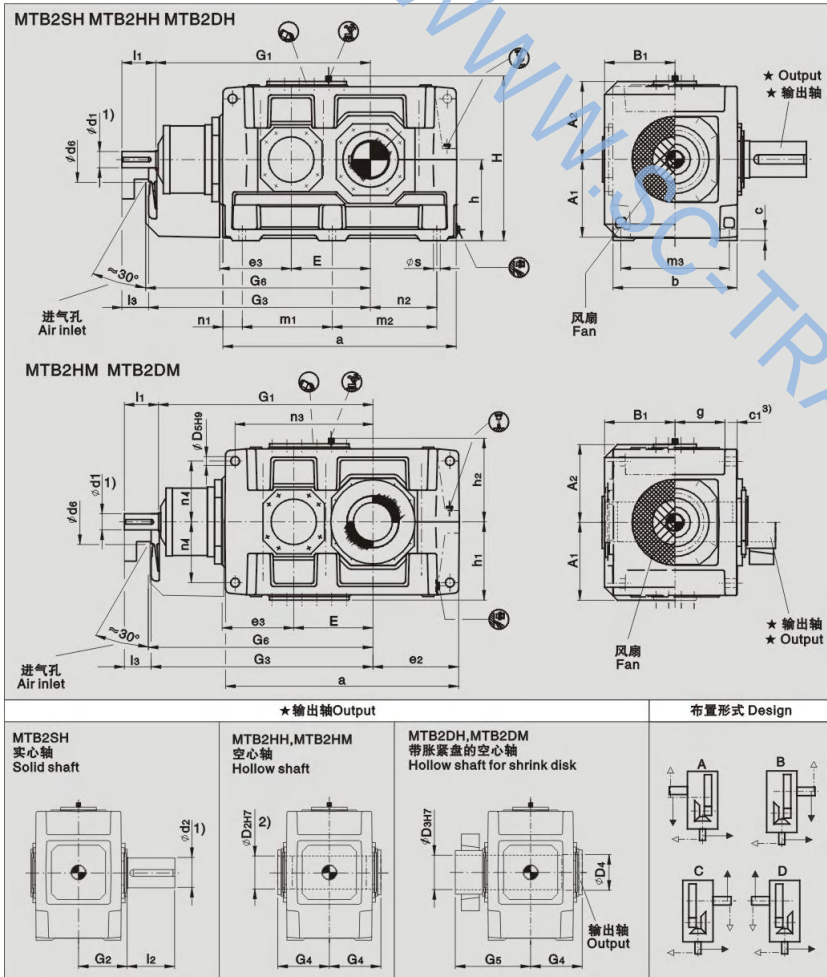
规格 Size	尺寸 mm Dimensions in mm											
	齿轮箱 Gear units											
	a	A ₁	A ₂	b	B ₁	c	c ₁	D _s	d _e	e ₃	E	g
1	305	125	130	180	128	18	16 ± 1	12	110	90	90	74
2	355	140	145	205	143	18	20 ± 1	14	110	110	110	82.5
3	405	170	170	225	163	22	24 ± 1	18	120	130	130	88.5
4	505	195	200	270	188	28	30 ± 1	24	150	160	160	105
5	565	220	235	320	215	28	30 ± 1	24	160	185	185	130
6	645	220	235	320	215	28	30 ± 1	24	160	185	220	130
7	690	270	285	380	250	35	36 ± 1	28	210	225	225	154
8	795	270	285	380	250	35	36 ± 1	28	210	225	270	154
9	820	310	325	440	270	40	48 ± 1.5	36	195	265	265	172
10	920	310	325	440	270	40	48 ± 1.5	36	195	265	315	172
11	975	370	385	530	328	50	54 ± 1.5	40	210	320	320	211
12	1130	370	385	530	328	50	54 ± 1.5	40	210	320	390	211

规格 Size	尺寸 mm Dimensions in mm										
	齿轮箱 Gear units										
	G _e	h	h _s	H	m ₁	m _s	n ₁	n ₂	n ₃	n ₄	s
1	325	130	80	275	185	155	60	70	160	105	12
2	370	145	80	305	225	180	65	75	195	115	12
3	420	175	90	360	245	195	80	70	235	132.5	15
4	495	200	80	415	295	235	105	85	285	150	19
5	575	230	150	482	355	285	105	100	330	180	19
6	615	230	150	482	435	285	105	145	365	180	19
7	685	280	180	582	450	340	120	130	405	215	24
8	730	280	190	582	555	340	120	190	450	215	24
9	805	320	205	662	530	390	145	155	480	245	28
10	855	320	215	662	630	390	145	205	530	245	28
11	980	380	240	790	645	470	165	180	580	300	35
12	1050	380	250	790	800	470	165	265	650	300	35

规格 Size	尺寸 mm Dimensions in mm								润滑油 Oil 轴封 Shaft seal	重量 Weight (kg)	
	输出轴 Output				MTB2DH						
	MTB2SH	MTB2HH	MTB2DH	MTB2DH	G ₂	G ₄	G ₅	G ₅			
	d ₂ ²⁾	G ₂	L ₂	D ₂ ²⁾	G ₄	D ₃	D ₄	G ₄	G ₅		
1	45	120	80	-	-	-	-	-	-	2	65
2	55	135	110	55	135	60	60	135	180	4	90
3	65	145	140	65	145	70	70	145	200	6	140
4	80	170	170	80	170	85	85	170	235	10	235
5	100	200	210	95	200	100	100	200	275	16	360
6	110	200	210	105	200	110	110	200	275	19	410
7	120	235	210	115	235	120	120	235	320	31	615
8	130	235	250	125	235	130	130	235	325	34	700
9	140	270	250	135	270	140	145	270	365	48	1000
10	160	270	300	150	270	150	155	270	385	50	1155
11	170	320	300	165	320	165	170	320	450	80	1640
12	180	320	300	180	320	180	185	320	455	95	1910



直交轴齿轮箱 Bevel-helical Gear Units 二级传动 Two Stage 卧式安装 Horizontal
类型 MTB2.H, MTB2.M Types MTB2.H, MTB2.M 规格 13...18 Sizes 13...18



1) $k_2 \leq \Phi 50$ $m_2 > \Phi 50$
有关平键 GB/T1095-1979型和中心孔, 参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.
2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.
3) 扭力支撑位于工作机侧。 Torque support on driven machine side.

直交轴齿轮箱 Bevel-helical Gear Units 二级传动 Two Stage 卧式安装 Horizontal
类型 MTB2.H, MTB2.M Types MTB2.H, MTB2.M 规格 13...18 Sizes 13...18

规格 Size	尺寸 mm Dimensions in mm														G ₁	G ₃
	输入轴 Input															
	i _n = 5 - 11.2			i _n = 5.6 - 11.2			i _n = 5.6 - 12.5			i _n = 6.3 - 14			i _n = 7.1 - 12.5			
d ₁ ¹⁾	h	l _s	d ₁ ¹⁾	L ₁	l _s	d ₁ ¹⁾	h	l _s	d ₁ ¹⁾	h	l _s	d ₁ ¹⁾	h	l _s		
13	110	205	165												1070	1110
14									110	205	165				1140	1180
15	130	245	200												1277	1322
16						130	245	200							1323	1368
17				150	245	200									1435	1480
18												150	245	200	1495	1540

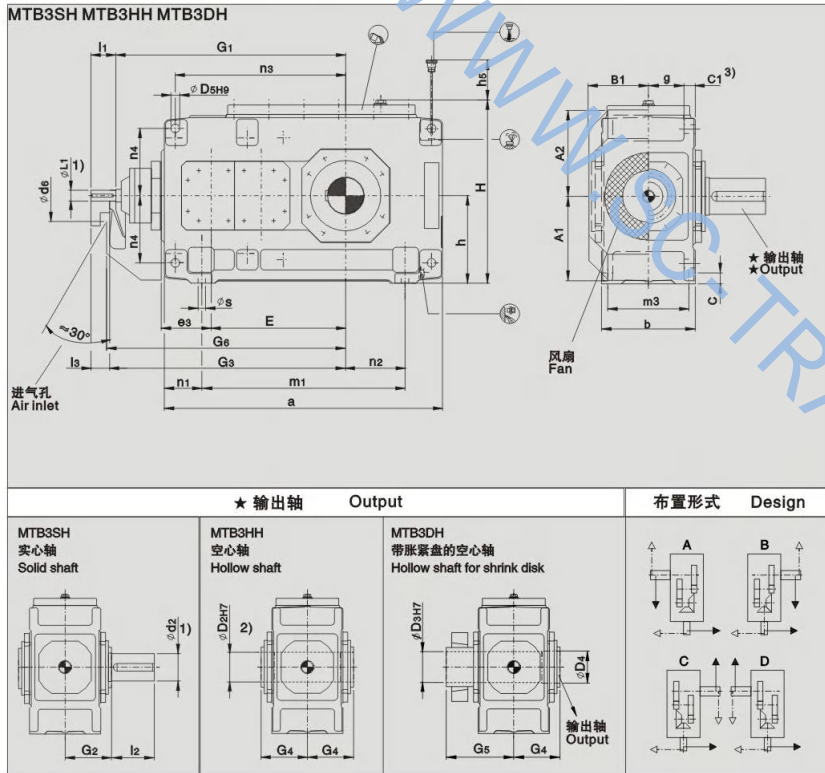
规格 Size	尺寸 mm Dimensions in mm												
	齿轮箱 Gear units												
a	A ₁	A ₂	b	B ₁	c	c ₁	d ₆	D ₅	e ₂	e ₃	E	g	
13	1130	430	450	655	375	60	61 ± 2	245	48	405	380	370	264
14	1270	430	450	655	375	60	61 ± 2	245	48	475	380	440	264
15	1350	490	495	765	435	70	72 ± 2	280	55	485	450	442	308
16	1440	490	495	765	435	70	72 ± 2	280	55	530	450	488	308
17	1490	540	555	885	505	80	81 ± 2	380	65	525	510	490	356
18	1610	540	555	885	505	80	81 ± 2	380	65	585	510	550	356

规格 Size	尺寸 mm Dimensions in mm													
	齿轮箱 Gear units													
G ₂	h	h ₁	h ₂	H	m ₁	m ₂	m ₃	n ₁	n ₂	n ₃	n ₄	s		
13	1130	440	450	460	900	465	580	100	305	675	340	35		
14	1200	440	450	460	900	465	605	100	375	745	340	35		
15	1340	500	490	500	1000	555	555	120	365	805	375	42		
16	1385	500	490	500	1000	555	645	120	410	850	375	42		
17	1500	550	555	560	1110	610	610	135	390	895	420	48		
18	1560	550	555	560	1110	610	730	135	450	955	420	48		

规格 Size	尺寸 mm Dimensions in mm									润滑油 Oil		重量 Weight	
	输出轴 Output									MTB2.H	MTB2.M	MTB2.H	MTB2.M
	MTB2SH	MTB2HH	MTB2HM	MTB2DH	MTB2DM	轴封 (I) Shaft seal							
d ₂ ¹⁾	G ₂	l ₂	D ₂ ²⁾	G ₄	D ₃	D ₄	G ₄	G ₅	(kg)	(kg)			
13	200	390	350	-	-	-	-	-	140	120	2450	2350	
14	210	390	350	210	390	210	215	390	155	130	2825	2725	
15	230	460	410	-	-	-	-	-	220	180	3990	3795	
16	240	460	410	240	450	240	245	450	230	190	4345	4160	
17	250	540	410	-	-	-	-	-	320	260	5620	5320	
18	270	540	470	275	510	280	285	510	335	275	6150	5860	



直交轴齿轮箱 Bevel-helical Gear Units 三级传动 Three Stage 卧式安装 Horizontal
类型 MTB3.H Type MTB3.H 规格 3...12 Sizes 3...12



- 1) $k_e \leq \Phi 50$ $m_e > \Phi 50$
有关平键 GB/T1095-1979型和中心孔, 参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.
- 2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.
- 3) 扭力支撑位于工作机侧。 Torque support on driven machine side.

直交轴齿轮箱 Bevel-helical Gear Units 三级传动 Three Stage 卧式安装 Horizontal
类型 MTB3.H Type MTB3.H 规格 3...12 Sizes 3...12

规格 Size	尺寸mm Dimensions in mm													G ₁	G ₃	
	输入轴 Input															
	i _N = 12.5 - 45			i _N = 16 - 56			i _N = 20 - 45			i _N = 50 - 71			i _N = 63 - 90			
d ₁ ¹⁾	l ₁	l ₃	d ₁ ¹⁾	l ₁	l ₃	d ₁ ¹⁾	l ₁	l ₃	d ₁ ¹⁾	l ₁	l ₃	d ₁ ¹⁾	l ₁	l ₃		
3						28	55	40	20	50	35				430	445
4	30	70	50						25	60	40				500	520
5	35	80	60						28	60	40				575	595
6				35	80	60						28	60	40	610	630
7	45	100	80						35	80	60				690	710
8				45	100	80						35	80	60	735	755
9	55	110	80						40	100	70				800	830
10				55	110	80						40	100	70	850	880
11	70	135	105						50	110	80				960	990
12				70	135	105						50	110	80	1030	1060

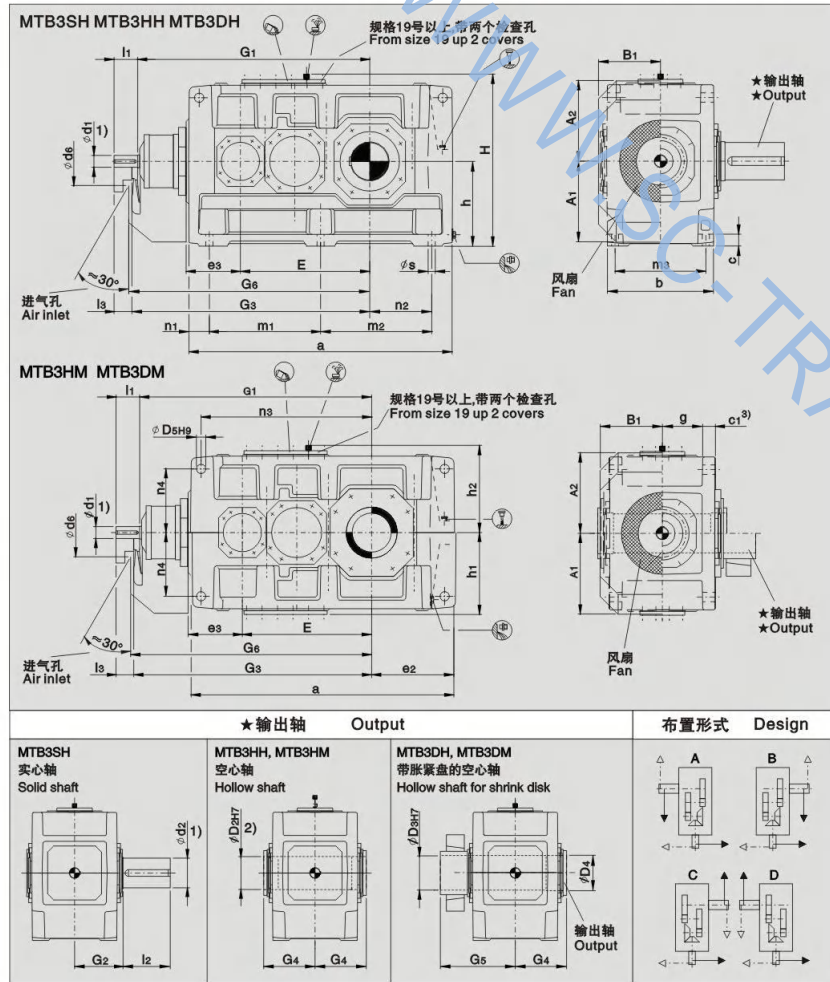
规格 Size	尺寸mm Dimensions in mm											
	齿轮箱 Gear units											
	a	A ₁	A ₂	b	B ₁	c	c ₁	d ₆	D ₅	e ₃	E	g
3	450	170	170	190	128	22	24 ± 1	90	18	90	220	71
4	565	195	200	215	143	28	30 ± 1	110	24	110	270	77.5
5	640	220	235	255	168	28	30 ± 1	130	24	130	315	97.5
6	720	220	235	255	168	28	30 ± 1	130	24	130	350	97.5
7	785	275	275	300	193	35	36 ± 1	165	28	160	385	114
8	890	275	275	300	193	35	36 ± 1	165	28	160	430	114
9	925	315	325	370	231	40	45 ± 1.5	175	36	185	450	140
10	1025	315	325	370	231	40	45 ± 1.5	175	36	185	500	140
11	1105	370	385	430	263	50	54 ± 1.5	190	40	225	545	161
12	1260	370	385	430	263	50	54 ± 1.5	190	40	225	615	161

规格 Size	尺寸mm Dimensions in mm										
	齿轮箱 Gear units										
	G ₆	h	h ₆	H	m ₁	m ₃	n ₁	n ₂	n ₃	n ₄	s
3	45	175	100	360	290	160	80	65	285	132.5	15
4	530	200	100	415	355	180	105	85	345	150	19
5	605	230	130	482	430	220	105	100	405	180	19
6	740	230	130	482	510	220	105	145	440	180	19
7	720	280	170	572	545	260	120	130	500	215	24
8	765	260	160	582	650	260	120	190	545	215	24
9	845	320	175	662	635	320	145	155	585	245	28
10	895	320	175	662	735	320	145	205	635	245	28
11	1010	380	220	782	775	370	165	180	710	300	35
12	1080	380	210	790	930	370	165	265	780	300	35

规格 Size	尺寸mm Dimensions in mm								润滑油 Oil (l)	重量 Weight (kg)	
	输入轴 Input				输出轴 Output						
	MTB3SH		MTB3HH		MTB3DH		MTB3DH				
d ₂ ¹⁾	G ₂	l ₂	D ₃ ²⁾	G ₄	D ₃	D ₄	G ₄	G ₅			
3	65	125	140	65	125	70	70	125	180	6	130
4	80	140	170	80	140	85	85	140	205	9	210
5	100	165	210	95	165	100	100	165	240	14	325
6	110	165	210	105	165	110	110	165	240	15	380
7	120	195	210	115	195	120	120	195	280	25	550
8	130	195	250	125	195	130	130	195	285	28	635
9	140	235	250	135	235	140	145	235	330	40	890
10	160	235	300	150	235	150	155	235	350	42	1020
11	170	270	300	165	270	165	170	270	400	66	1455
12	180	270	300	180	270	180	185	270	405	72	1730



直交轴齿轮箱 Bevel-Helical Gear Units 三级传动 Three Stage 卧式安装 Horizontal
类型 MTB3.H, MTB3.M Types MTB3.H, MTB3.M 规格 13...22 Sizes 13...22



1) $k_8 \leq \Phi 50$ $m_6 > \Phi 50$

有关平键 GB/T1095-1979型和中心孔, 参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.

2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.

3) 扭力支撑位于工作机侧。 Torque support on driven machine side.

直交轴齿轮箱 Bevel-helical Gear Units 三级传动 Three Stage 卧式安装 Horizontal
类型 MTB3.H, B3.M Types MTB3.H, MTB3.M 规格 13...22 Sizes 13...22

规格 Size	尺寸mm Dimensions in mm														G ₁	G ₃				
	输入轴 Input																			
	in=12.5-45			in=14-50			in=16-56			in=50-71			in=56-80				in=63-90			
d ₁ ¹⁾	h	ls	d ₁ ¹⁾	h	ls	d ₁ ¹⁾	h	ls	d ₁ ¹⁾	h	ls	d ₁ ¹⁾	h	ls	d ₁ ¹⁾	h	ls			
13	80	165	130				80	165	130							60	140	105	1125	1160
14										70	140	105							1195	1230
15	90	165	130																1367	1402
16				90	165	130							70	140	105				1413	1448
17	110	205	165							80	170	130							1560	1600
18				110	205	165							80	170	130				1620	1660
19	130	245	200							100	210	165							1832	1877
20				130	245	200							100	210	165				1892	1937
21	130	245	200							100	210	165							1902	1947
22				130	245	200							100	210	165				1957	2002

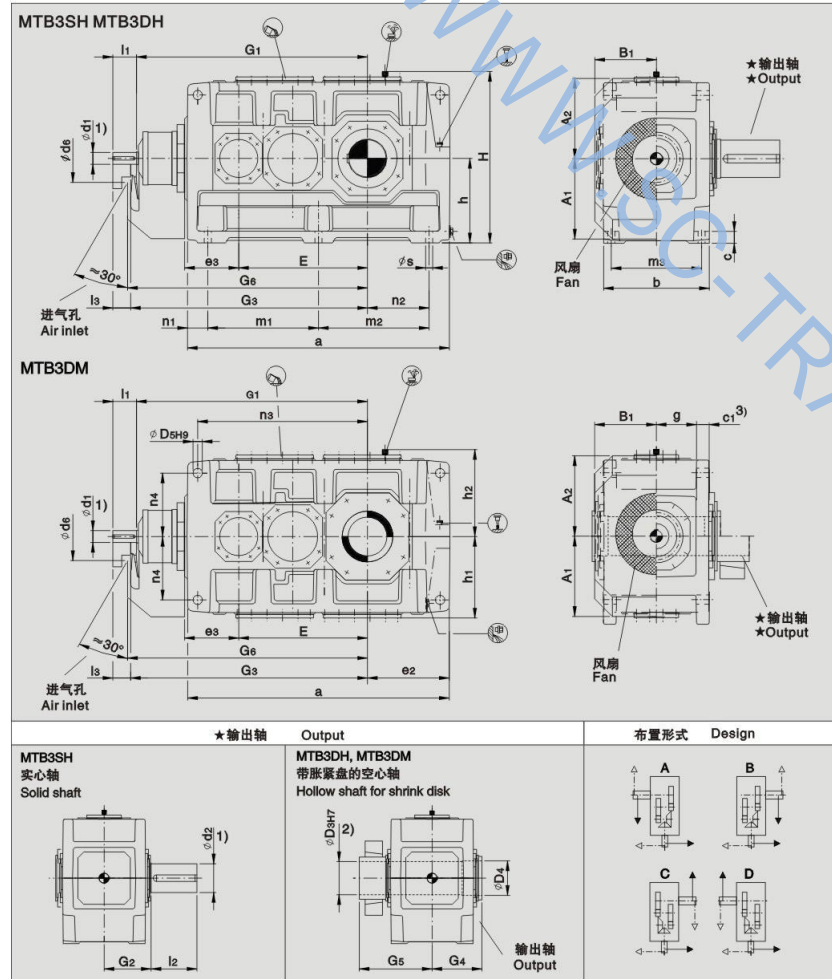
规格 Size	尺寸mm Dimensions in mm														
	齿轮箱 Gear units														
a	A ₁	A ₂	b	B ₁	c	c ₁	d ₆	D ₅	e ₂	e ₃	E	g			
13	1290	425	435	550	325	60	61 ± 2	210	48	405	265	635	211.5		
14	1430	425	435	550	325	60	61 ± 2	210	48	475	265	705	211.5		
15	1550	485	520	625	365	70	72 ± 2	210	55	485	320	762	238		
16	1640	485	520	625	365	70	72 ± 2	210	55	530	320	808	238		
17	1740	535	570	690	395	80	81 ± 2	230	55	525	370	860	259		
18	1860	535	570	690	395	80	81 ± 2	230	55	585	370	920	259		
19	2010	610	630	790	448	90	91 ± 2	245	65	590	420	997	299		
20	2130	610	630	790	448	90	91 ± 2	245	65	650	420	1057	299		
21	2140	690	690	830	473	100	100 ± 2	280	75	655	450	1067	310		
22	2250	690	690	830	473	100	100 ± 2	280	75	710	450	1122	310		

规格 Size	尺寸mm Dimensions in mm														
	齿轮箱 Gear units														
G ₆	h	h ₁	h ₂	H	m ₁	m ₂	m ₃	n ₁	n ₂	n ₃	n ₄	s			
13	1180	440	450	460	900	545	545	475	100	305	835	340	35		
14	1250	440	450	460	900	545	685	475	100	375	905	340	35		
15	420	500	490	500	1000	655	655	535	120	365	1005	375	42		
16	1470	500	490	500	1000	655	745	535	120	410	1050	375	42		
17	520	550	555	560	1110	735	735	600	135	390	1145	425	42		
18	1630	550	555	560	1110	735	855	600	135	450	1205	425	42		
19	1900	620	615	620	1240	850	850	690	155	435	1345	475	48		
20	1960	620	615	620	1240	850	970	690	155	495	1405	475	48		
21	1970	700	685	690	1390	900	900	720	170	485	1400	520	56		
22	2025	700	685	690	1390	900	1010	720	170	540	1455	520	56		

规格 Size	尺寸mm Dimensions in mm								润滑油 Oil		重量 Weight	
	输入轴 Input				输出轴 Output				MTB3.H	MTB3.M	MTB3.H	MTB3.M
D ₂ ¹⁾	G ₂	l ₂	D ₂ ¹⁾	G ₂	D ₃	D ₄	G ₄	G ₆	(l)	(l)	(kg)	(kg)
13	200	335	350	190	190	195	335	480	130	110	2380	2280
14	210	335	350	210	210	215	335	480	140	115	2750	2615
15	230	380	410	230	230	235	380	550	210	160	3730	3540
16	240	380	410	240	240	245	380	550	220	165	3955	3765
17	250	415	410	250	250	260	415	600	290	230	4990	4760
18	270	415	470	275	280	285	415	600	300	235	5495	5240
19	290	465	470	-	285	295	465	670	380	360	6240	6050
20	300	465	500	-	310	315	465	670	440	420	6950	6710
21	320	490	500	-	330	335	490	715	370	420	8480	8190
22	340	490	550	-	340	345	490	725	430	490	9240	8950



直交轴齿轮箱 Bevel-helical Gear Units 三级传动 Three Stage 卧式安装 Horizontal
类型 MTB3.H, MTB3.M Types MTB3.H, MTB3.M 规格 23...26 Sizes 23...26



1) $k \leq \Phi 50$ $m \geq \Phi 50$
有关平键 GB/T1095-1979型和中心孔, 参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.
2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.
3) 扭力支撑位于工作机侧。 Torque support on driven machine side.

直交轴齿轮箱 Bevel-helical Gear Units 三级传动 Three Stage 卧式安装 Horizontal
类型 MTB3.H, MTB3.M Types MTB3.H, MTB3.M 规格 23...26 Sizes 23...26

规格 Size	尺寸 mm Dimensions in mm													
	输入轴 Input													
	IN=20-45			IN=22.4-50			IN=50-71			IN=56-80			G1	G3
	d1 1)	l1	ls	d1 1)	l1	ls	d1 1)	l1	ls	d1 1)	l1	ls		
23	150	245	200				110	210	165				2130	2175
24				150	245	200				110	210	165	2195	2240
25	150	245	200				110	210	165				2270	2315
26				150	245	200				110	210	165	2360	2405

规格 Size	尺寸 mm Dimensions in mm												
	齿轮箱 Gear units												
	a	A1	A2	b	B1	c	c1	d6	D5	e2	e3	E	g
23	2380	770	770	930	528	115	120 ± 2	350	80	730	490	1185	342
24	2510	770	770	930	528	115	120 ± 2	350	80	795	490	1250	342
25	2580	845	865	1045	585	130	120 ± 2	380	90	790	490	1325	400
26	2760	845	865	1045	585	130	120 ± 2	380	90	880	490	1415	400

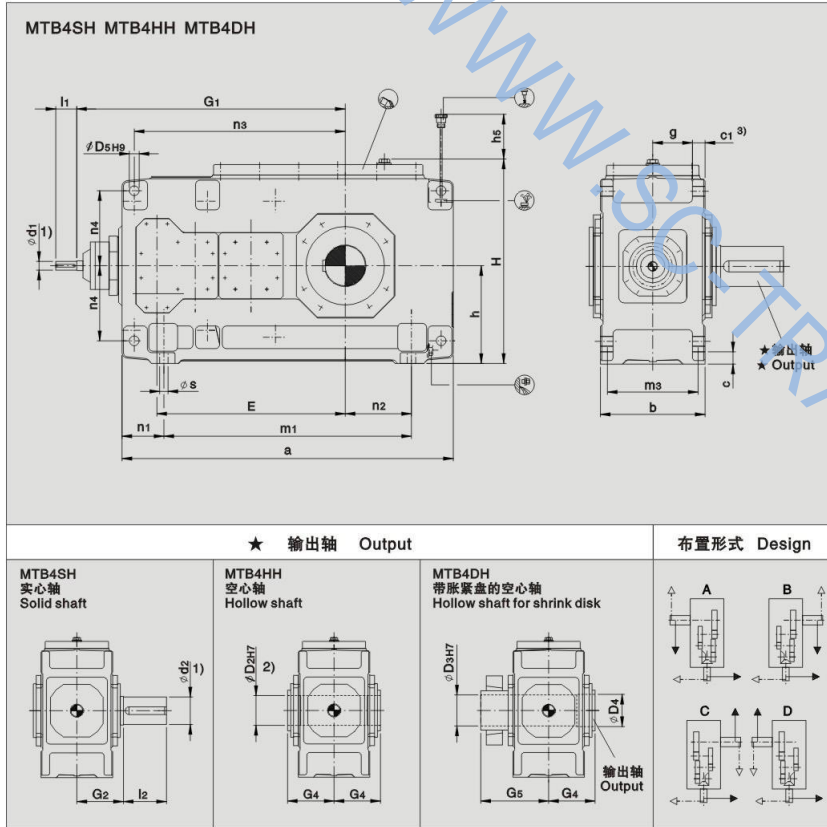
规格 Size	尺寸 mm Dimensions in mm												
	齿轮箱 Gear units												
	G6	h	h1	h2	H	m1	m2	ms	n1	n2	ns	n4	s
23	2200	780	770	790	1570	1010	1010	810	180	550	1560	580	56
24	2265	780	770	790	1570	1010	1140	810	180	615	1625	580	56
25	2315	860	860	860	1720	1090	1090	910	200	590	1685	660	66
26	2430	860	860	860	1720	1090	1270	910	200	680	1775	660	66

规格 Size	尺寸 mm Dimensions in mm							润滑油 Oil		重量 Weight	
	输出轴 Output										
	MTB3SH		MTB3DH		MTB3DM			MTB3.H	MTB3.M	MTB3.H	MTB3.M
	d2 1)	G2	l2	D3	D4	G4	G5	(l)	(l)	(kg)	(kg)
23	360	540	590	360	365	540	785	520	560	11500	10600
24	380	540	590	380	385	540	805	600	650	13400	12500
25	400	605	650	400	405	605	875	720	790	16000	15100
26	420	605	650	430	435	605	900	840	920	17500	16400

WWW.52-TRANSMISSION.CC



直交轴齿轮箱 Bevel-helical Gear Units 四级传动 Four Stage 卧式安装 Horizontal
类型 MTB4.H Type MTB4.H 规格 5...12 Sizes 5...12



1) $k_6 \leq \Phi 50$ $m_6 > \Phi 50$
有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.
2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.
3) 扭力支撑位于工作机侧。 Torque support on driven machine side.

直交轴齿轮箱 Bevel-helical Gear Units 四级传动 Four Stage 卧式安装 Horizontal
类型 MTB4.H Type MTB4.H 规格 5...12 Sizes 5...12

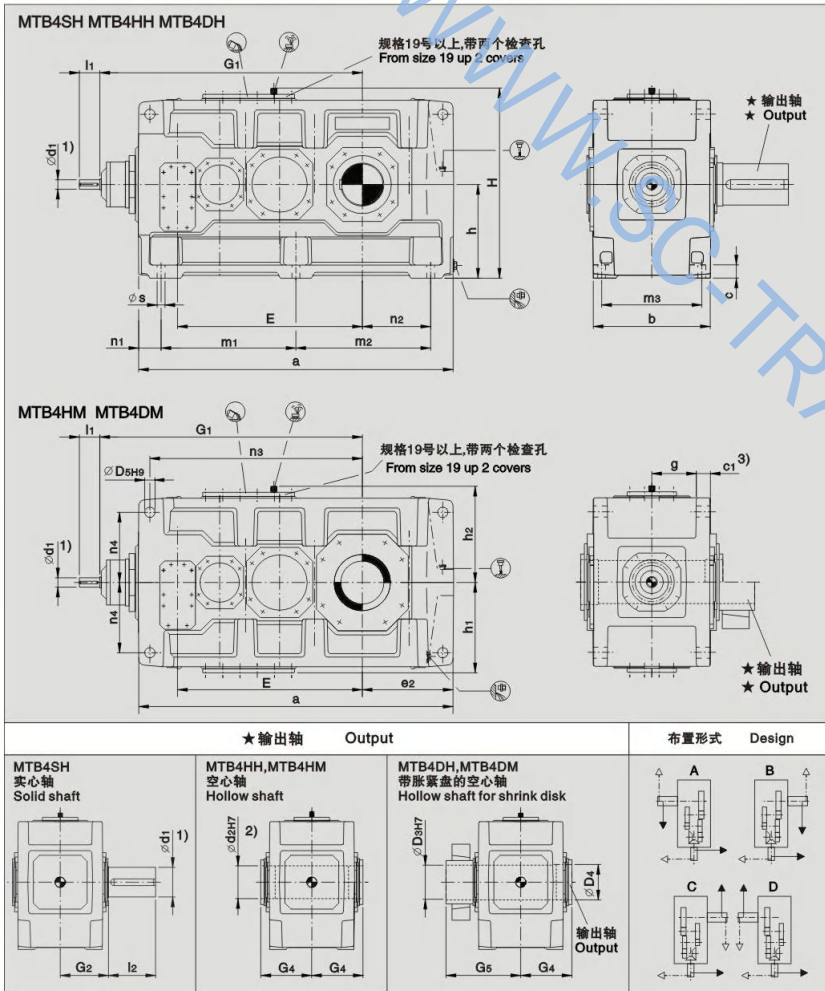
规格 Size	尺寸 mm Dimensions in mm								
	输入轴 Input								
	in = 80 - 180		in = 100 - 224		in = 200 - 315		in = 250 - 400		
d1 1)	l1	d1 1)	l1	d1 1)	l1	d1 1)	l1	G1	
5	28	55			20	50			615
6			28	55			20	50	650
7	30	70			25	60			725
8			30	70			25	60	770
9	35	80			28	60			840
10			35	80			28	60	890
11	45	100			35	80			1010
12			45	100			35	80	1080

规格 Size	尺寸 mm Dimensions in mm																
	齿轮箱 Gear units																
	a	b	c	c1	D5	E	g	h	h5	H	m1	m3	n1	n2	n3	n4	s
5	690	255	28	30 ± 1	24	405	97.5	230	100	482	480	220	105	100	455	180	19
6	770	255	28	30 ± 1	24	440	97.5	230	100	482	560	220	105	145	490	180	19
7	845	300	35	36 ± 1	28	495	114	280	140	572	605	260	120	130	560	215	24
8	950	300	35	36 ± 1	28	540	114	280	130	582	710	260	120	190	605	215	24
9	1000	370	40	45 ± 1.5	36	580	140	320	135	662	710	320	145	155	660	245	28
10	1100	370	40	45 ± 1.5	36	630	140	320	135	662	810	320	145	205	710	245	28
11	1200	430	50	54 ± 1.5	40	705	161	380	170	782	870	370	165	180	805	300	35
12	1355	430	50	54 ± 1.5	40	775	161	380	160	790	1025	370	165	265	875	300	35

规格 Size	尺寸 mm Dimensions in mm										润滑油 Oil (l)	重量 Weight (kg)
	输出轴 Output											
	MTB4SH		MTB4HH		MTB4DH							
d2 1)	G2	l2	D2 2)	G4	D3	D4	G4	G5				
5	100	165	210	95	165	100	100	165	240	16	335	
6	110	165	210	105	165	110	110	165	240	18	385	
7	120	195	210	115	195	120	120	195	280	30	555	
8	130	195	250	125	195	130	130	195	285	33	655	
9	140	235	250	135	235	140	145	235	330	48	890	
10	160	235	300	150	235	150	155	235	350	50	1025	
11	170	270	300	165	270	165	170	270	400	80	1485	
12	180	270	300	180	270	180	185	270	405	90	1750	



直交轴齿轮箱 Bevel-helical Gear Units 四级传动 Four Stage 卧式安装 Horizontal
类型 MTB4.H, MTB4.M Types MTB4.H, MTB4.M 规格 13...22 Sizes 13...22



1) $k_6 \leq \Phi 50$ $m_6 > \Phi 50$
有关平键 GB/T1095-1979型和中心孔, 参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.
2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.
3) 扭力支撑位于工作机侧。 Torque support on driven machine side.

直交轴齿轮箱 Bevel-helical Gear Units 四级传动 FourStage 卧式安装 Horizontal
类型 MTB4.H, MTB4.M Types MTB4.H, MTB4.M 规格 13...22 Sizes 13...22

规格 Size	尺寸 mm Dimensions in mm										G1		
	输入轴 Input												
	In=80-180		In=90-200		In=100-224		In=200-315		In=224-355			In=250-400	
	d1 1)	l1	d1 1)	l1	d1 1)	l1	d1 1)	l1	d1 1)	l1	d1 1)	l1	
13	55	110					40	100				1170	
14					55	110					40	100	1240
15	70	135					50	110					1402
16			70	135					50	110			1448
17	70	135					50	110					1450
18			70	135					50	110			1510
19	80	165					60	140					1680
20			80	165					60	140			1740
21	90	165					70	140					1992
22			90	165					70	140			2047

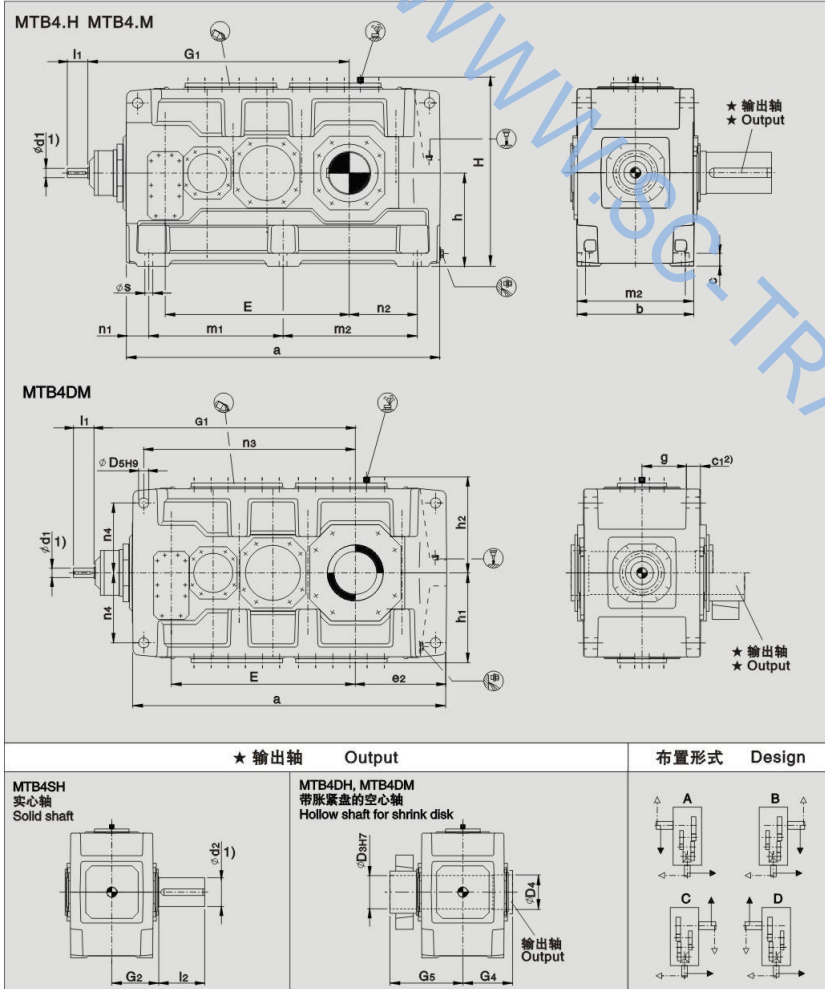
规格 Size	尺寸 mm Dimensions in mm									
	齿轮箱 Gear units									
	a	b	c	c1	D5	e2	E	g	h	h1
13	1395	550	60	61 ± 2	48	405	820	211.5	440	450
14	1535	550	60	61 ± 2	48	475	890	211.5	440	450
15	1680	625	70	72 ± 2	55	485	987	238	500	490
16	1770	625	70	72 ± 2	55	530	1033	238	500	490
17	1770	690	80	81 ± 2	55	525	1035	259	550	555
18	1890	690	80	81 ± 2	55	585	1095	259	550	555
19	2030	790	90	91 ± 2	65	590	1190	299	620	615
20	2150	790	90	91 ± 2	65	650	1250	299	620	615
21	2340	830	100	100 ± 2	75	655	1387	310	700	685
22	2450	830	100	100 ± 2	75	710	1442	310	700	685

规格 Size	尺寸 mm Dimensions in mm									
	齿轮箱 Gear units									
	h2	H	m1	m2	m3	n1	n2	n3	n4	s
13	460	900	597.5	597.5	475	100	305	940	340	35
14	460	900	597.5	737.5	475	100	375	1010	340	35
15	500	1000	720	720	535	120	365	1135	375	42
16	500	1000	720	810	535	120	410	1180	375	42
17	560	1110	750	750	600	135	390	1175	425	42
18	560	1110	750	870	600	135	450	1235	425	42
19	620	1240	860	860	690	155	435	1365	475	48
20	620	1240	860	980	690	155	495	1425	475	48
21	690	1390	1000	1000	720	170	485	1615	520	56
22	690	1390	1000	1110	720	170	540	1670	520	56

规格 Size	尺寸 mm Dimensions in mm										润滑油 Oil		重量 Weight	
	输入轴 Input										MTB4.H		MTB4.M	
	MTB4SH		MTB4HH		MTB4HM		MTB4DH		MTB4DM		(l)	(l)	(kg)	(kg)
	d1 1)	G2	l2	d2 2)	G1	D3	D4	G4	G5	(l)	(l)	(kg)	(kg)	
13	200	335	350	190	335	190	195	335	480	145	120	2395	2280	
14	210	335	350	210	335	210	215	335	480	150	125	2735	2605	
15	230	380	410	230	380	230	235	380	550	230	170	3630	3435	
16	240	380	410	240	380	240	245	380	550	235	175	3985	3765	
17	250	415	410	250	415	250	260	415	600	295	230	4695	4460	
18	270	415	470	275	415	280	285	415	600	305	235	5200	4930	
19	290	465	470	-	-	285	295	465	670	480	440	5750	5400	
20	300	465	500	-	-	310	315	465	670	550	510	6450	6000	
21	320	490	500	-	-	330	335	490	715	540	590	7850	7350	
22	340	490	550	-	-	340	345	490	725	620	680	8400	7850	



直交轴齿轮箱 Bevel-Helical Gear Units 四级传动 Four Stage 卧式安装 Horizontal
类型 MTB4.H, MTB4.M Types MTB4.H, MTB4.M 规格 23...26 Sizes 23...26



1) $k_6 \leq \Phi 50$ $m_6 > \Phi 50$
有关平键 GB/T1095-1979型和中心孔, 参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.
2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.
3) 扭力支撑位于工作机侧。 Torque support on driven machine side.

直交轴齿轮箱 Bevel-Helical Gear Units 四级传动 Four Stage 卧式安装 Horizontal
类型 MTB4.H, MTB4.M Types MTB4.H, MTB4.M 规格 23...26 Sizes 23...26

$i_N = 200 - 315$

规格 Size	尺寸mm Dimensions in mm								
	输入轴 Input								
	iN=80-180		iN=90-200		iN=200-315		iN=224-355		G1
d1 ¹⁾	l1	d1 ¹⁾	l1	d1 ¹⁾	l1	d1 ¹⁾	l1		
23	90	165			70	140			2110
24			90	165			70	140	2175
25	110	205			80	170			2395
26			110	205			80	170	2485

规格 Size	尺寸mm Dimensions in mm									
	齿轮箱 Gear units									
	a	b	c	c1	D5	e2	E	g	h	h1
23	2530	930	115	120±2	80	730	1505	342	780	770
24	2660	930	115	120±2	80	795	1570	342	780	770
25	2830	1045	130	120±2	80	790	1695	400	860	860
26	3010	1045	130	120±2	80	880	1785	400	860	860

规格 Size	尺寸mm Dimensions in mm									
	齿轮箱 Gear units									
	h2	H	m1	m2	m3	n1	n2	n3	n4	s
23	790	1570	1085	1285	810	180	550	1725	580	56
24	790	1570	1085	1215	810	180	615	1790	580	56
25	860	1720	1215	1215	910	200	590	1965	660	66
26	860	1720	1215	1305	910	200	680	2055	660	66

规格 Size	尺寸mm Dimensions in mm								润滑油 Oil		重量 Weight	
	输入轴 Input								MTB4.H	MTB4.M	MTB4.H	MTB4.M
	MTB4SH		MTB4DH		MTB4DM		(1)	(1)				
d1 ¹⁾	G2	l2	D2	D3	G4	G5						
23	360	540	590	360	365	540	785	710	790	11600	10700	
24	380	540	590	360	365	540	805	810	910	13500	12600	
25	400	605	650	400	405	605	875	1000	1110	16100	15200	
26	420	605	650	430	435	605	900	1100	1200	17600	16500	



平行轴齿轮箱 Helical Gear Units
类型 MTH2.V Type MTH2.V

二级传动 Two Stage
规格 3...12 Sizes 3...12

立式安装 Vertical

MTH2SV MTH2HV MTH2DV
采用浸油润滑 With dip lubrication

补油油箱 Oil compensating tank

★输出轴 Output

MTH2SV MTH2HV MTH2DV
采用强制润滑 With forced lubrication

油泵 Pump

★输出轴 Output

有关供油方式(浸油润滑或强制润滑),参见332-340页
Oil supply(dip or forced lubrication), see pages 332-340.

★输出轴 Output		布置形式 Design	
MTH2SV 实心轴 Solid shaft	MTH2HV 空心轴 Hollow shaft	MTH2DV 带胀紧套的空心轴 Hollow shaft for shrink disk	油泵 Pump
		布置形式A+D根据用户要求供货 Design A+D on request	

1) $k_e \leq \Phi 50$ $m_e > \Phi 50$
有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.
2) 键槽 GB/T1095-1979 Keyway GB/T1095-1979.
3) 扭力支撑位于工作侧 Torque support on driven machine side.
4) 有关油泵,油管和护盖的安装空间及确切尺寸,请与我们联系 Space for pump, pipes and cover, for exact dimension, please refer to us.

平行轴齿轮箱 Helical Gear Units
类型 MTH2.V Type MTH2.V

二级传动 Two Stage
规格 3...12 Sizes 3...12

立式安装 Vertical

规格 Size	尺寸 mm Dimensions in mm								
	输入轴 Input								
	$i_N = 6.3 - 11.2$		$i_N = 8 - 14$		$i_N = 12.5 - 22.4$		$i_N = 16 - 28$		G ₁
$d_1^{1)}$	l_1	$d_1^{1)}$	l_1	$d_1^{1)}$	l_1	$d_1^{1)}$	l_1		
3	35	60			28	50			135
4	45	100			32	80			170
5	50	100			38	80			195
6			50	100			38	80	195
7	60	135			50	110			210
8			60	135			50	110	210
9	75	140			60	140			240
10			75	140			60	140	240
11	90	165			70	140			275
12			90	165			70	140	275

规格 Size	尺寸 mm Dimensions in mm									
	齿轮箱 Gear units									
	a	b ₁	c	e ₄	e ₅	e ₆	E	f ₁	f ₂	f ₃
3	450	150	24 ± 1	175	185	290	220	28	20	-
4	565	150	30 ± 1	200	215	320	270	28	22	-
5	640	240	30 ± 1	230	252	385	315	38	28	150
6	720	240	30 ± 1	230	252	425	350	38	28	150
7	785	240	36 ± 1	280	292	425	385	42	30	145
8	890	240	36 ± 1	280	302	485	430	42	32	145
9	925	330	45 ± 1.5	320	342	560	450	42	32	135
10	1025	330	45 ± 1.5	320	342	610	500	42	32	135
11	1105	330	54 ± 1.5	380	402	595	545	48	35	145
12	1260	330	54 ± 1.5	380	410	680	615	48	35	145

规格 Size	尺寸 mm Dimensions in mm											
	齿轮箱 Gear units											
	h	h ₁	h ₂	h ₃	m ₁	m ₂	n ₁	n ₂	p ₁ ⁴⁾	p ₂ ⁴⁾	s	
3	95	165	-	180	410	265	20	125	35	210	18	
4	107.5	165	-	180	505	300	30	160	35	220	24	
5	27.5	205	190	240	580	360	30	175	35	270	24	
6	127.5	205	190	240	660	360	30	220	35	270	24	
7	50	205	165	250	715	430	35	215	35	330	28	
8	150	205	165	250	820	430	35	275	35	330	28	
9	185	275	205	330	845	490	40	260	40	370	36	
10	185	275	205	330	945	490	40	310	40	370	36	
11	215	275	240	340	1005	600	50	295	50	440	40	
12	215	275	240	340	1160	600	50	380	50	440	40	

规格 Size	尺寸 mm Dimensions in mm								润滑油 Oil		重量 Weight (kg)	
	输出轴 Output								浸油润滑 Dip lubrication (l)	强制润滑 Forced Lubrication (l)		
	MTH2SV				MTH2HV							
	$d_2^{1)}$	G ₂	l ₂	D ₂ ³⁾	G ₄	D ₃	D ₄	G ₄	G ₅			
3	65	125	140	65	105	70	70	125	180	14	-	115
4	80	140	170	80	140	85	85	140	205	25	-	190
5	100	165	210	95	165	100	100	165	240	23	10	300
6	110	165	210	105	165	110	110	165	240	27	11	355
7	120	195	210	115	195	120	120	195	280	58	22	505
8	130	195	250	125	195	130	130	195	285	62	25	590
9	140	235	250	135	235	140	145	235	330	100	42	830
10	160	235	300	150	235	150	155	235	350	110	46	960
11	170	270	300	165	270	165	170	270	400	160	60	1335
12	180	270	300	180	270	180	185	270	405	180	70	1615



平行轴齿轮箱 Helical Gear Units
类型 MTH2.V Type MTH2.V

二级传动 Two Stage
规格 13...18 Sizes 13...18

立式安装 Vertical

MTH2SV MTH2HV MTH2DV
采用强制润滑 With forced lubrication

有关供油方式(浸油润滑或强制润滑),参见332-340页
Oil supply(dip or forced lubrication), see pages 332-340.

★ 输出轴 Output

MTH2SV 实心轴 Solid shaft			MTH2HV 空心轴 Hollow shaft			MTH2DV 带胀紧盘的空心轴 Hollow shaft for shrink disk			布置形式 Design	
			布置形式A+D 根据用户要求供货 Design A+D on request							

- 1) $k_e \leq \Phi 50$ $m_e > \Phi 50$
有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.
- 2) 键槽 GB/T1095-1979 Keyway GB/T1095-1979.
- 3) 扭力支撑位于工作机侧 Torque support on driven machine side.
- 4) 有关油泵、油管和护盖的安装空间及确切尺寸,请与我们联系。 Space for pump, pipes and cover; for exact dimensions, please refer to us.
- 5) 规格13和15号速比只有 $i=6.3-18$;规格17号:速比只有 $i=6.3-16$ Size 13 and 15: only $i=6.3-18$, Size 17: only $i=6.3-16$.

平行轴齿轮箱 Helical Gear Units
类型 MTH2.V Type MTH2.V

二级传动 Two Stage
规格 13...18 Sizes 13...18

立式安装 Vertical

规格 Size	尺寸 mm Dimensions in mm										G ₁		
	输入轴 Input												
	i=6.3-11.2		i=7.1-12.5		i=8-14		i=12.5-20		i=14-22.4			i=16-25	
	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	
13	100	205					85	170					330
14					100	205					85	170	330
15	120	210					100	210					365
16			120	210					100	210			365
17	125	245					110	210					420
18			125	245					110	210			420
19													
20													
21													
22													

根据用户要求供货
On request

规格 Size	尺寸 mm Dimensions in mm														s	
	齿轮箱 Gear units															
	a	b	c	E	f ₁	f ₂	f ₃	h	h ₂	m ₁	m ₂	n ₁	n ₂	p ₁ ⁴⁾		p ₂ ⁴⁾
13	1290	900	61 ± 2	635	53	35	130	272.5	300	1195	680	50	360	50	500	48
14	1430	900	61 ± 2	705	53	35	130	272.5	300	1335	680	50	430	50	500	48
15	1550	980	72 ± 2	762	63	42	130	310	340	1435	750	60	430	50	570	55
16	1640	980	72 ± 2	808	63	42	130	310	340	1525	750	60	475	50	570	55
17	1740	1110	81 ± 2	860	60	42	170	340	374	1610	850	70	465	70	630	55
18	1860	1110	81 ± 2	920	60	42	170	340	374	1730	850	70	525	70	630	55
19																
20																
21																
22																

根据用户要求供货
On request

规格 Size	尺寸 mm Dimensions in mm								润滑油 Oil (l)	重量 Weight (kg)	
	输出轴 Output										
	MTH2SV		MTH2HV ⁵⁾		MTH2DV ⁵⁾						
	d ₂ ¹⁾	G ₂	l ₂	D ₂ ²⁾	G ₄	D ₃	D ₄	G ₄	G ₅		
13	200	335	350	190	335	190	195	335	480	80	1860
14	210	335	350	210	335	210	215	335	480	90	2430
15	230	380	410	230	380	230	235	380	550	140	3240
16	240	380	410	240	380	240	245	380	550	150	3465
17	250	415	410	250	415	250	260	415	600	175	4420
18	270	415	470	275	415	280	285	415	600	185	4870
19											
20											
21											
22											

根据用户要求供货
On request



平行轴齿轮箱 Helical Gear Units
类型 MTH3.V Type MTH3.V

三级传动 Three Stage
规格 5...12 Sizes 5...12

立式安装 Vertical

MTH3SV MTH3HV MTH3DV
采用浸油润滑 With dip lubrication

补油油箱 Oil compensating tank

★ 输出轴 ★ Output

MTH3SV MTH3HV MTH3DV
采用强制润滑 With forced lubrication

油泵 Pump

★ 输出轴 ★ Output

有关供油方式(浸油润滑或强制润滑),参见332-340页 Oil supply(dip or forced lubrication),see pages 332-340.

★ 输出轴 Output

布置形式 Design

MTH3SV 实心轴 Solid shaft	MTH3HV 空心轴 Hollow shaft	MTH3DV 带胀紧套的空心轴 Hollow shaft for shrink disk	油泵 Pump
------------------------------	-------------------------------	--	------------

布置形式A+D根据用户要求供货 Design A+D on request

1) $k_e \leq \Phi 50$ $m_e > \Phi 50$

有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole,see page 316.

2) 键槽 GB/T1095-1979 Keyway GB/T1095-1979

3) 扭力支撑位于工作机侧 Torque support on driven machine side.

4) 有关油泵、油管和护盖的安装空间及确切尺寸,请与我们联系。 Space for pump, pipes and cover; for exact dimensions, please refer to us.

平行轴齿轮箱 Helical Gear Units
类型 MTH3.V Type MTH3.V

三级传动 Three Stage
规格 5...12 Sizes 5...12

立式安装 Vertical

规格 Size	尺寸 mm Dimensions in mm												
	输入轴 Input												
	In=25-45		In=31.5-56		In=50-63		In=63-80		In=71-90		In=90-112		G1
D1 ¹⁾	l1	d1 ¹⁾	l1	d1 ¹⁾	l1	d1 ¹⁾	l1	d1 ¹⁾	l1	d1 ¹⁾	l1		
5	40	70			30	50			24	40			160
6			40	70			30	50			24	40	160
7	45	80			35	60			28	50			185
8			45	80			35	60			28	50	185
9	60	125			45	100			32	80			230
10			60	125			45	100			32	80	230
11	70	120			50	80			42	70			255
12			70	120			50	80			42	70	255

规格 Size	尺寸 mm Dimensions in mm									
	齿轮箱 Gear units									
	a	b1	c	e4	e5	e6	E	f2	f3	h
5	690	240	30 ± 1	230	252	385	405	28	190	127.5
6	770	240	30 ± 1	230	252	425	440	28	190	127.5
7	845	240	36 ± 1	280	292	425	495	30	185	150
8	950	240	36 ± 1	280	312	485	540	32	185	150
9	1000	330	45 ± 1.5	320	342	560	580	32	170	185
10	1100	330	45 ± 1.5	320	342	610	630	32	170	185
11	1200	330	54 ± 1.5	380	402	595	705	35	170	215
12	1355	330	54 ± 1.5	380	410	680	775	35	170	215

规格 Size	尺寸 mm Dimensions in mm										
	齿轮箱 Gear units										
	h1	h2	h3	m1	m2	n1	n2	p1 ⁴⁾	p2 ⁴⁾	s	
5	205	190	240	630	360	30	175	35	270	24	
6	205	190	240	710	360	30	220	35	270	24	
7	205	165	250	775	430	35	215	35	330	28	
8	205	165	250	880	430	35	275	35	330	28	
9	275	205	330	920	490	40	260	40	370	36	
10	275	205	330	1020	490	40	310	40	370	36	
11	275	240	340	1100	600	50	295	50	440	40	
12	275	240	340	1255	600	50	380	50	440	40	

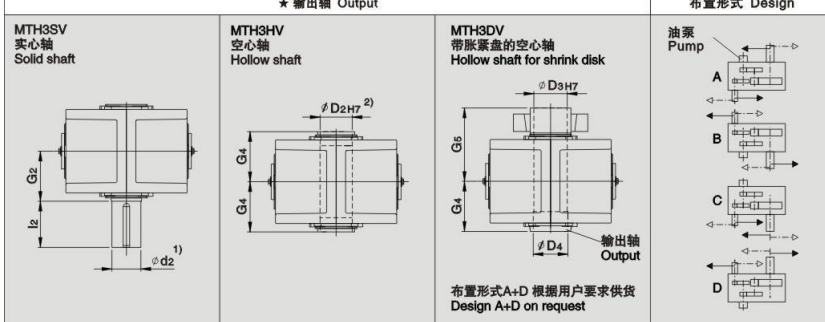
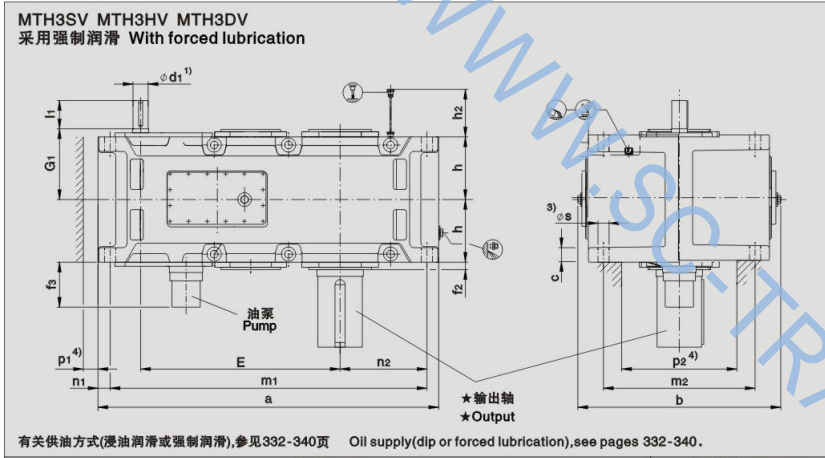
规格 Size	尺寸 mm Dimensions in mm								润滑油 Oil		重量 Weight (kg)	
	输出轴 Output								浸油润滑 Dip lubrication (l)	强制润滑 Forced lubrication (l)		
	MTH3SV	MTH3HV	MTH3DV									
	d2 ¹⁾	G2	l2	D2 ²⁾	G4	D3	D4	G4	G5			
5	100	165	210	95	165	100	100	165	240	35	13	320
6	110	165	210	105	165	110	110	165	240	37	15	365
7	120	195	210	115	165	120	120	195	280	60	25	540
8	130	195	250	125	195	130	130	195	285	72	30	625
9	140	235	250	135	235	140	145	235	330	100	40	875
10	160	235	300	150	235	150	155	235	350	110	45	1020
11	170	270	300	165	270	165	170	270	400	170	66	1400
12	180	270	300	180	270	180	185	270	405	190	75	1675



平行轴齿轮箱 Helical Gear Units
类型 MTH3.V Type MTH3.V

三级传动 Three Stage
规格 13...18 Sizes 13...18

立式安装 Vertical



1) $k_8 \leq \Phi 50$ $m_6 > \Phi 50$
有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole,see page 316.
2) 键槽 GB/T1095-1979 Keyway GB/T1095-1979.
3) 扭力支撑位于工作机侧 Torque support on driven machine side.
4) 有关油泵、油管和护盖的安装空间及确切尺寸,请与我们联系 Space for pump, pipes and cover;for exact dimensions,please refer to us.

平行轴齿轮箱 Helical Gear Units
类型 MTH3.V Type MTH3.V

三级传动 Three Stage
规格 13...18 Sizes 13...18

立式安装 Vertical

尺寸 mm Dimensions in mm																			
规格 Size	输入轴 Input																		
	in=22.4-45		in=25-50		in=28-56		in=50-63		in=56-71		in=63-90		in=71-90		in=80-100		in=90-112		G1
	d1 ¹⁾	lr	d1 ¹⁾	lr	d1 ¹⁾	lr	d1 ¹⁾	lr	d1 ¹⁾	lr	d1 ¹⁾	lr	d1 ¹⁾	lr	d1 ¹⁾	lr	d1 ¹⁾	lr	
13	85	160			85	160			60	135			50	110			50	110	310
14													60	140					350
15	100	200					75	140					60	140					350
16			100	200					75	140					60	140			380
17	100	200					75	140					60	140					380
18			100	200					75	140					60	140			380
19	根据用户要求供货 On request																		
20	根据用户要求供货 On request																		
21	根据用户要求供货 On request																		
22	根据用户要求供货 On request																		

尺寸 mm Dimensions in mm															
规格 Size	齿轮箱 Gear units														
	a	b	c	E	f ₂	f _s	h	h ₂	m ₁	m ₂	n ₁	n ₂	p ₁ ⁴⁾	p ₂ ⁴⁾	s
13	1395	900	61 ± 2	820	35	170	272.5	300	1300	680	50	360	50	500	48
14	1535	900	61 ± 2	890	35	170	272.5	300	1440	680	50	430	50	500	48
15	1680	980	72 ± 2	987	42	170	310	340	1565	750	60	430	50	570	55
16	1770	980	72 ± 2	1033	42	170	310	340	1655	750	60	475	50	570	55
17	1770	1110	81 ± 2	1035	42	210	340	374	1640	850	70	465	70	630	55
18	1890	1110	81 ± 2	1095	42	210	340	374	1760	850	70	525	70	630	55
19	根据用户要求供货 On request														
20	根据用户要求供货 On request														
21	根据用户要求供货 On request														
22	根据用户要求供货 On request														

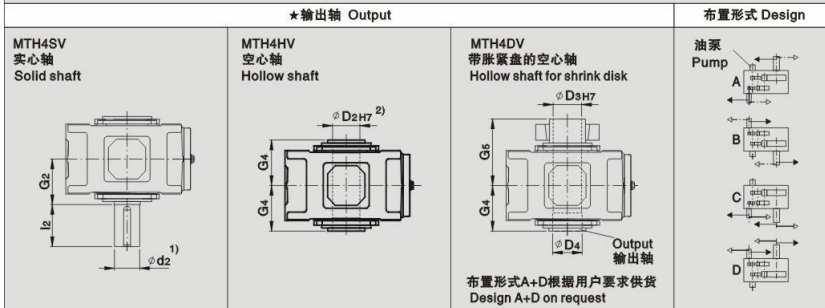
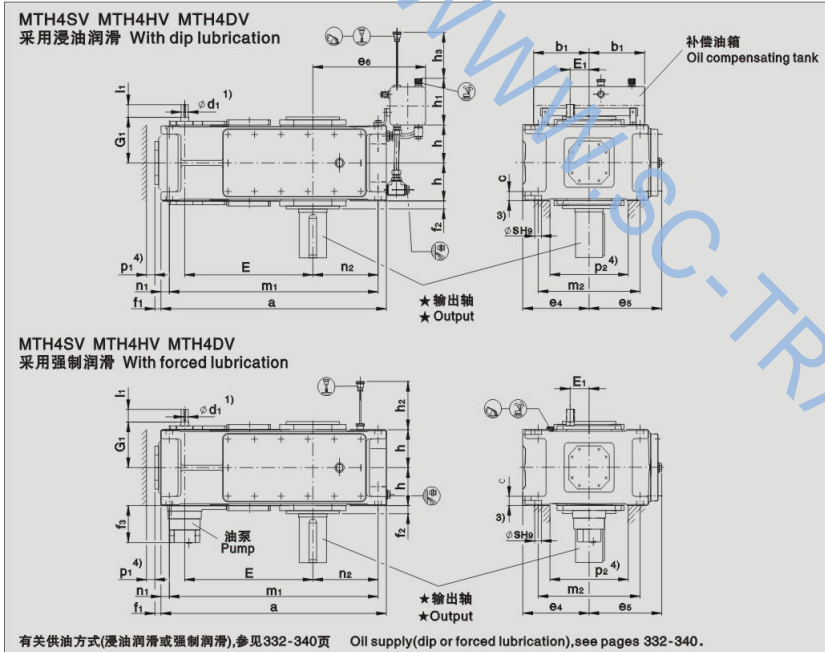
尺寸 mm Dimensions in mm										润滑油 Oil (l)	重量 Weight (kg)
规格 Size	输出轴 output										
	d ₁ ¹⁾	G ₂	l ₂	D ₂ ²⁾	G ₄	D ₃	D ₄	G ₄	G ₅		
13	200	335	350	190	335	190	195	335	480	115	2155
14	210	335	350	210	335	210	215	335	480	126	2490
15	230	350	410	230	380	230	235	380	550	180	3260
16	240	380	410	240	380	240	245	380	550	190	3625
17	250	415	410	250	415	250	260	415	600	190	4250
18	270	415	470	275	415	280	285	415	600	200	4740
19	根据用户要求供货 On request										
20	根据用户要求供货 On request										
21	根据用户要求供货 On request										
22	根据用户要求供货 On request										



平行轴齿轮箱 Helical Gear Units
类型 MTH4.V Type MTH4.V

四级传动 Four Stage
规格 7...12 Sizes 7...12

立式安装 Vertical



1) $k_e \leq \Phi 50$ $m_e > \Phi 50$
有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole,see page 316.
2) 键槽 GB/T1095-1979 Keyway GB/T1095-1979.
3) 扭力支撑位于工作机侧 Torque support on driven machine side.
4) 有关油泵、油管和护盖的安装空间及确切尺寸, 请与我们联系 Space for pump, pipes and cover,for exact dimensions,please refer to us.

平行轴齿轮箱 Helical Gear Units
类型 MTH4.V Type MTH4.V

四级传动 Four Stage
规格 7...12 Sizes 7...12

立式安装 Vertical

规格 Size	尺寸 mm Dimensions in mm								
	输入轴 Input								
	i _N =100-180		i _N =125-224		i _N =200-355		i _N =250-450		
	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	
7	30	50			24	40			180
8			30	50			24	40	180
9	35	60			28	50			215
10			35	60			28	50	215
11	45	100			32	80			250
12			45	100			32	80	250

规格 Size	尺寸mm Dimensions in mm										
	齿轮箱 Gear units										
	a	b ₁	c	e ₄	e ₅	e ₆	E	E ₁	f ₁	f ₂	f ₃
7	845	240	36 ± 1	280	292	425	495	80	37	30	160
8	950	240	36 ± 1	280	302	485	540	80	37	32	160
9	1000	330	45 ± 1.5	320	342	560	580	90	43	32	170
10	1100	330	45 ± 1.5	320	342	610	630	90	43	32	170
11	1200	330	54 ± 1.5	380	402	595	705	110	47	35	170
12	1355	330	54 ± 1.5	380	410	680	775	110	47	35	170

规格 Size	尺寸mm Dimensions in mm										
	齿轮箱 Gear units										
	h	h ₁	h ₂	h ₃	m ₁	m ₂	n ₁	n ₂	p ₁ ⁴⁾	p ₂ ⁴⁾	s
7	150	205	165	250	775	430	35	215	35	330	28
8	150	205	165	250	880	430	35	275	35	330	28
9	185	275	205	330	920	490	40	260	40	370	36
10	185	275	205	330	1020	490	40	310	40	370	36
11	215	275	240	340	1100	600	50	295	50	440	40
12	215	275	240	340	1255	600	50	380	50	440	40

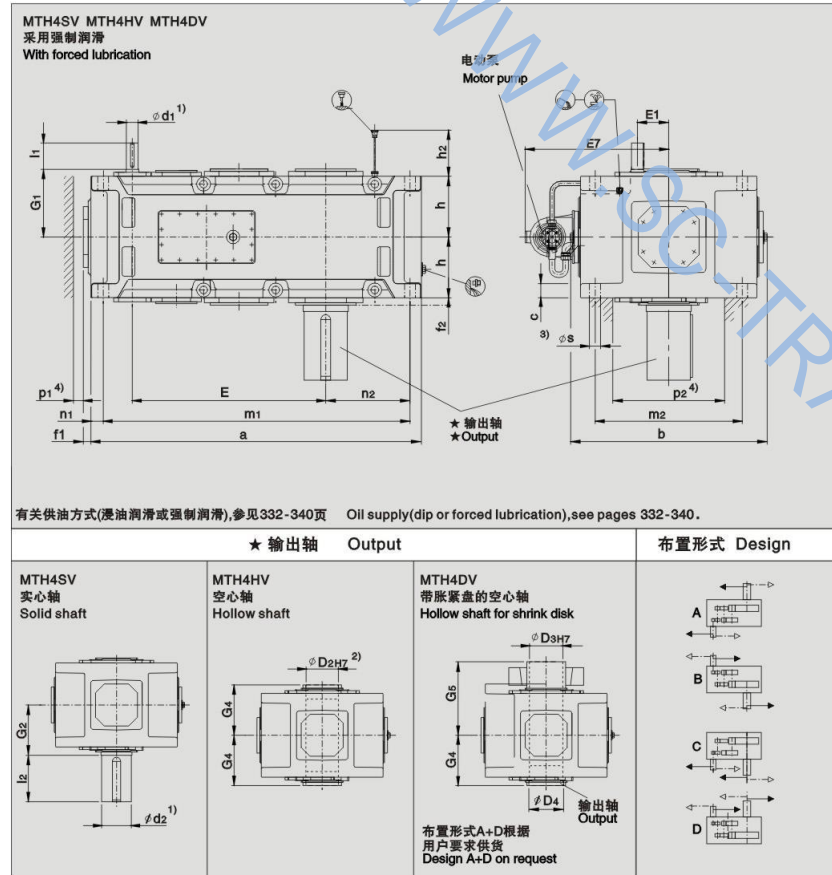
规格 Size	尺寸 mm Dimensions in mm								润滑油 Oil		重量 Weight (kg)	
	输出轴 Output								浸油润滑 Dip lubrication (l)	强制润滑 Forced lubrication (l)		
	MTH4SV	MTH4HV	MTH4DV									
	d ₂ ¹⁾	G ₂	D ₂ ²⁾	G ₄	D ₃	D ₄	G ₄	G ₅				
7	120	195	210	115	195	120	120	195	280	50	20	550
8	130	195	210	125	195	130	130	195	285	60	25	645
9	140	235	250	135	235	140	145	235	330	95	38	875
10	160	235	300	150	235	150	155	235	350	110	45	1010
11	170	270	300	160	270	165	170	270	400	165	65	1460
12	180	270	300	180	270	180	185	270	405	180	75	1725



平行轴齿轮箱 Helical Gear Units
类型 MTH4.V Type MTH4.V

四级传动 Four Stage
规格 13...18 Sizes 13...18

立式安装 vertical



1) $k_e \leq \Phi 50$ $m_e > \Phi 50$
有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole,see page 316.
2) 键槽 GB/T1095-1979 Keyway GB/T1095-1979.
3) 扭力支撑位于工作机侧 Torque support on driven machine side.
4) 有关油泵、油管和护盖的安装空间及确切尺寸,请与我们联系 Space for pump, pipes and cover;for exact dimensions,please refer to us.

平行轴齿轮箱 Helical Gear Units
类型 MTH4.V Type MTH4.V

四级传动 Four Stage
规格 13...18 Sizes 13...18

立式安装 Vertical

规格 Size	尺寸 mm Dimensions in mm										G ₁		
	输入轴 Input												
	In=100-180		In=112-200		In=125-224		In=200-355		In=224-400			In=250-450	
	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	
13	50	100					38	80					305
14					50	100					38	80	305
15	60	135					50	110					345
16			60	135					50	110			345
17	60	105					50	80					380
18			60	105					50	80			380
19													
20													
21													
22													

根据用户要求供货
On request

规格 Size	尺寸 mm Dimensions in mm																
	齿轮箱 Gear units																
	a	b	c	e ₇	E	E ₁	f ₁	f ₂	h	h ₂	m ₁	m ₂	n ₁	n ₂	p ₁ ⁴⁾	p ₂ ⁴⁾	s
13	1395	900	61±2	695	820	130	47	35	272.5	300	1300	680	50	360	50	500	48
14	1535	900	61±2	695	890	130	47	35	272.5	300	1440	680	50	430	50	500	48
15	1680	980	72±2	735	987	160	56	42	310	340	1565	750	60	430	50	570	55
16	1770	980	72±2	735	1033	160	56	42	310	340	1655	750	60	475	50	570	55
17	1770	1110	81±2	795	1035	160	53	42	340	374	1640	850	70	465	70	630	55
18	1890	1110	81±2	795	1095	160	53	42	340	374	1760	850	70	525	70	630	55
19																	
20																	
21																	
22																	

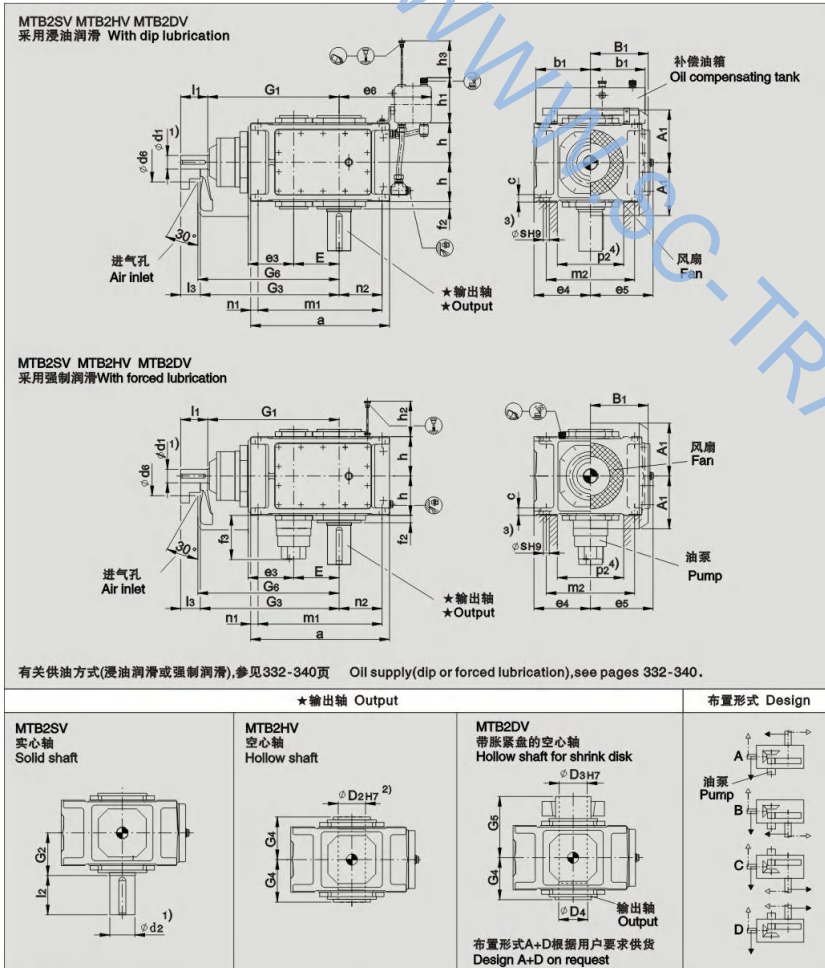
根据用户要求供货
On request

规格 Size	尺寸 mm Dimensions in mm								润滑油 Oil (l)	重量 Weight (kg)	
	输出轴 Output										
	MTH4SV		MTH4HV		MTH4DV						
	d ₂ ¹⁾	G ₂	l ₂	D ₂ ¹⁾	G ₄	D ₃	D ₄	G ₄	G ₅		
13	200	335	350	190	335	190	195	335	480	95	2270
14	210	335	350	210	335	210	215	335	480	105	2600
15	230	380	410	230	380	230	235	380	550	150	3440
16	240	380	410	240	380	240	245	380	550	160	3740
17	250	415	410	250	415	250	260	415	600	190	4445
18	270	415	470	275	415	280	285	415	600	200	4915
19											
20											
21											
22											

根据用户要求供货
On request



直交轴齿轮箱 Bevel-helical Gear Units 二级传动 Two Stage 立式安装 Vertical
类型 MTB2.V Type MTB2.V 规格 1...12 Sizes 1...12



有关供油方式(浸油润滑或强制润滑),参见332-340页 Oil supply(dip or forced lubrication),see pages 332-340.

★输出轴 Output

布置形式 Design

1) $k_s \leq \phi 50$ $m_e > \phi 50$

有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole,see page 316.

2) 键槽 GB/T1095-1979 Keyway GB/T1095-1979.

3) 扭力支撑位于工作机侧 Torque support on driven machine side.

4) 有关油泵、油管和护盖的安装间距及确切尺寸,请与我们联系 Space for pump, pipes and cover;for exact dimensions,please refer to us.

直交轴齿轮箱 Bevel-helical Gear Units 二级传动 Two Stage
立式传动 Vertical 类型 MTB2.V Type MTB2.V 规格 1...12 Sizes 1...12

规格 Size	尺寸 mm Dimensions in mm										
	输入轴 Input										
	IN= 5 - 11.2			IN= 6.3 - 14			IN= 12.5 - 18			G ₁	G ₃
	d ₁ ¹⁾	l ₁	l ₂	d ₁ ¹⁾	l ₁	l ₂	d ₁ ¹⁾	l ₁	l ₂		
1	28	55	40				20	50	35	300	315
2	30	70	50				25	60	40	340	360
3	35	80	60				28	60	40	390	410
4	45	100	80							465	485
5	55	110	80							535	565
6				55	110	80				570	600
7	70	135	105							640	670
8				70	135	105				685	715
9	80	165	130							755	790
10				80	165	130				805	840
11	90	165	130							925	960
12				90	165	130				995	1030

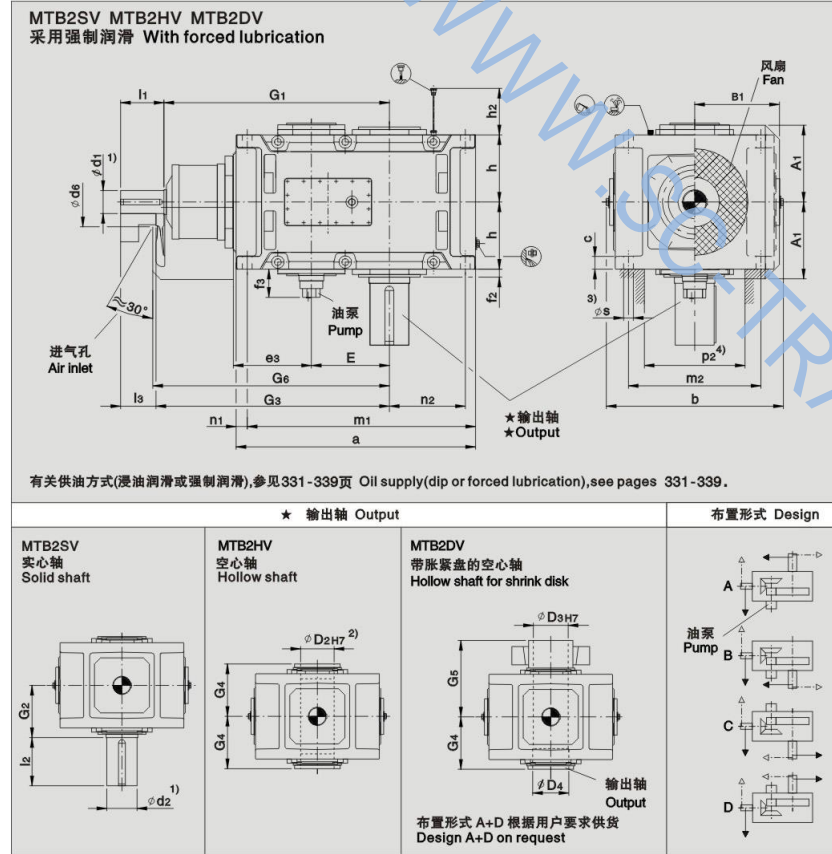
规格 Size	尺寸 mm Dimensions in mm											
	齿轮箱 Gear units											
	a	A ₁	b ₁	B ₁	c	d _s	e _s	e ₄	e ₅	e ₆	E	f ₂
1	305	128	150	130	16±1	100	90	130	145	280	90	22
2	355	143	150	145	20±1	110	110	145	160	285	110	22
3	405	163	150	170	24±1	120	130	175	185	290	130	24
4	505	188	150	200	30±1	150	160	200	215	320	160	26
5	565	215	240	235	30±1	160	185	230	252	385	185	30
6	645	215	240	235	30±1	160	185	230	252	425	220	30
7	690	250	240	285	36±1	210	225	280	302	425	225	32
8	795	250	240	285	36±1	210	225	280	302	485	270	32
9	820	270	330	325	48±1.5	195	265	320	342	560	265	45
10	920	270	330	325	48±1.5	195	265	320	342	610	315	45
11	975	328	330	385	54±1.5	210	320	380	410	595	320	47
12	1130	328	330	385	54±1.5	210	320	380	410	680	390	47

规格 Size	尺寸 mm Dimensions in mm											
	齿轮箱 Gear units											
	f ₃	G ₆	h	h ₁	h ₂	h ₃	m ₁	m ₂	n ₁	n ₂	p ₂ ⁴⁾	s
1	-	325	90	165	-	170	275	210	15	115	150	12
2	-	370	102.5	165	-	170	315	315	20	120	170	14
3	-	420	112.5	165	-	180	365	365	20	130	200	18
4	-	495	135	165	-	180	445	300	30	160	220	24
5	90	575	160	205	245	240	505	360	30	175	270	24
6	100	610	160	205	245	240	585	360	30	220	270	24
7	200	685	190	205	220	250	620	430	35	215	330	28
8	200	730	190	205	220	250	725	430	35	275	330	28
9	200	805	220	275	250	330	740	490	40	260	370	36
10	200	855	220	275	250	330	840	490	40	310	370	36
11	200	980	265	275	300	340	875	600	50	295	440	40
12	200	1050	265	275	300	340	1030	600	50	380	440	40

规格 Size	尺寸 mm Dimensions in mm										润滑油 Oil		重量 Weight (kg)
	输出轴 Output										浸油润滑 Dip lubrication (l)	强制润滑 Forced lubrication (l)	
	MTB2SV			M/B2HV			MTB2DV						
	d ₂ ¹⁾	G ₂	l ₂	D ₂ ²⁾	G ₄	D ₃	D ₄	G ₄	G ₅				
1	45	120	80	-	-	-	-	-	-	7	-	65	
2	55	135	110	55	18	60	80	135	180	11	-	90	
3	65	145	140	65	14	70	70	145	200	16	-	140	
4	80	170	170	80	170	85	85	170	235	28	-	235	
5	100	200	210	95	200	100	100	200	275	41	20	380	
6	110	200	210	105	200	110	110	200	275	50	23	410	
7	120	235	210	115	235	120	120	235	320	75	35	615	
8	130	235	250	125	235	130	130	235	325	90	38	700	
9	140	270	250	135	270	140	145	270	360	115	53	1000	
10	160	270	300	150	270	150	155	270	385	135	60	1155	
11	170	320	300	165	320	165	170	320	450	190	86	1640	
12	180	320	300	180	320	180	185	320	455	215	95	1910	



直交轴齿轮箱 Bevel-helical Gear Units 二级传动 Two Stage 立式安装 Vertical
类型 MTB2.V Type MTB2.V 规格 13...18 Sizes 13...18



1) $k_8 \leq \phi 50$ $m_8 > \phi 50$
有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole,see page 316.
2) 键槽 GB/T1095-1979 Keyway GB/T1095-1979.
3) 扭力支撑位于工作侧 Torque support on driven machine side.
4) 有关油泵、油管和护盖的安装空间及确切尺寸,请与我们联系 Space for pump, pipes and cover;for exact dimensions,please refer to us.

直交轴齿轮箱 Bevel-helical Gear Units 二级传动 Two Stage 立式安装 Vertical
类型 MTB2.V Type MTB2.V 规格 13...18 Sizes 13...18

规格 Size	尺寸 mm Dimensions in mm										G1	G3				
	输入轴 Input															
	IN = 5 - 11.2			IN = 5.6 - 11.2			IN = 5.6 - 12.5			IN = 6.3 - 14			IN = 7.1 - 12.5			
$d_1^{(1)}$	l_1	l_3	$d_1^{(1)}$	l_1	l_3	$d_1^{(1)}$	l_1	l_3	$d_1^{(1)}$	l_1	l_3	$d_1^{(1)}$	l_1	l_3		
13	110	205	165												1070	1110
14									110	205	165				1140	1180
15	130	245	200												1277	1322
16							130	245	200						1323	1368
17				150	245	200									1435	1480
18												150	245	200	1495	1540

规格 Size	尺寸mm Dimensions in mm									
	齿轮箱 Gear units									
	a	A1	b	B1	c	d _e	e _s	E	f ₂	f ₃
13	1130	375	900	450	61 ± 2	245	380	370	38	200
14	1270	375	900	450	61 ± 2	245	380	440	45	200
15	1350	435	980	495	72 ± 2	280	450	442	75	200
16	1440	435	980	495	72 ± 2	280	450	488	75	200
17	1490	505	1110	555	81 ± 2	380	510	490	98	200
18	1610	505	1110	555	81 ± 2	380	510	550	98	200

规格 Size	尺寸 mm Dimensions in mm									
	齿轮箱 Gear units									
	G _e	h	h ₂	m ₁	m ₂	n ₁	n ₂	p ₂ ⁽⁴⁾	s	
13	1130	325	350	1035	680	50	360	500	48	
14	1200	325	350	1175	680	50	430	500	48	
15	1340	380	430	1235	750	60	430	570	55	
16	1365	380	430	1325	750	60	475	570	55	
17	1500	437.5	480	1360	840	70	465	630	65	
18	1560	437.5	480	1480	840	70	525	630	65	

规格 Size	尺寸 mm Dimensions in mm									润滑油 Oil (l)	重量 Weight (kg)
	输出轴 Output										
	MTB2SV			MTB2HV		MTB2DV					
$d_2^{(1)}$	G ₂	l_2	D ₂ ⁽²⁾	G ₄	D ₃	D ₄	G ₄	G ₅			
13	200	390	350	-	-	-	-	-	100	2350	
14	210	390	350	210	390	210	215	390	535	110	2725
15	230	460	410	-	-	-	-	-	145	3795	
16	240	460	410	240	450	240	245	450	620	160	4160
17	250	540	410	-	-	-	-	-	210	5320	
18	270	540	470	275	510	280	285	510	700	220	5860



直交轴齿轮箱 Bevel-helical Gear Units 三级传动 Three Stage 立式安装 Vertical
类型 MTB3.V Type MTB3.V 规格 3...12 Sizes 3...12

MTB3SV MTB3HV MTB3DV
采用浸油润滑 With dip lubrication

MTB3SV MTB3HV MTB3DV
采用强制润滑 With forced lubrication

有关供油方式(浸油润滑或强制润滑),参见332-340页 Oil supply(dip or forced lubrication), see pages 332-340.

		* 输出轴 Output		布置形式 Design	
MTB3SV	实心轴 Solid shaft			A	
MTB3HV	空心轴 Hollow shaft			B	
MTB3DV	带胀紧套的空心轴 Hollow shaft for shrink disk			C	
				D	

布置形式 A+D 根据用户要求供货 Design A+D on request

- $k_e \leq \Phi 50$ $m_e > \Phi 50$
有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole, see page 316.
- 键槽 GB/T1095-1979 Keyway GB/T1095-1979.
- 扭力支撑位于工作机侧 Torque support on driven machine side.
- 有关油泵、油管和护盖的安装空间及确切尺寸,请与我们联系 Space for pump, pipes and cover, for exact dimensions, please refer to us.

直交轴齿轮箱 Bevel-helical Gear Units 三级传动 Three Stage 立式安装 Vertical
类型 MTB3.V Type MTB3.V 规格 3...12 Sizes 3...12

规格 Size	尺寸 mm Dimensions in mm												G ₁	G _s			
	输入轴 Input																
	in = 12.5 - 45			in = 16 - 56			in = 20 - 45			in = 50 - 71					in = 63 - 90		
	d ₁ ¹⁾	l ₁	l _s	d ₁ ¹⁾	l ₁	l _s	d ₁ ¹⁾	l ₁	l _s	d ₁ ¹⁾	l ₁	l _s	d ₁ ¹⁾	l ₁	l _s		
3							28	55	40	20	50	35				430	445
4	30	70	50							25	60	40				500	520
5	35	80	60							28	60	40				575	595
6				35	80	60							28	60	40	610	630
7	45	100	80							35	80	60				690	710
8				45	100	80							35	80	60	735	755
9	55	110	80							40	100	70				800	830
10				55	110	80							40	100	70	850	880
11	70	135	105							50	110	80				960	990
12				70	135	105							50	110	80	1030	1060

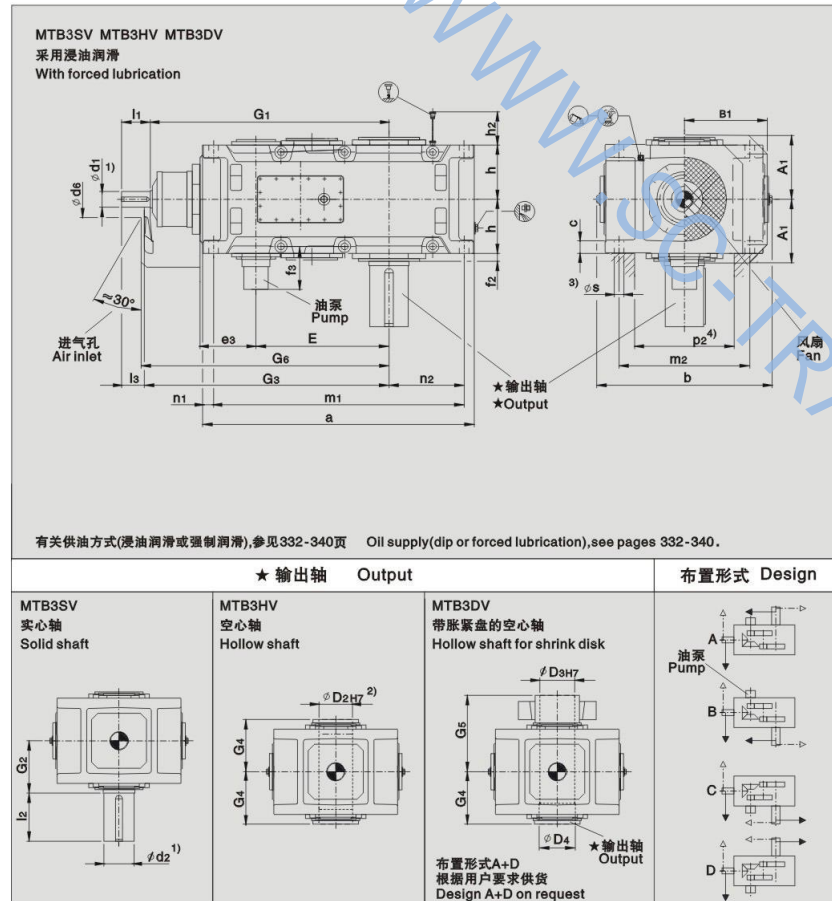
规格 Size	尺寸 mm Dimensions in mm											
	齿轮箱 Gear units											
	a	A ₁	b ₁	B ₁	c	d _s	e _s	e ₄	e ₅	e ₆	E	f ₂
3	450	128	150	170	24 ± 1	90	90	175	185	290	220	20
4	565	143	150	200	30 ± 1	110	110	200	215	320	270	22
5	640	168	240	235	30 ± 1	130	130	230	252	385	315	28
6	720	168	240	235	30 ± 1	130	130	230	252	425	350	28
7	785	193	240	275	36 ± 1	165	160	280	292	425	385	30
8	890	193	240	275	36 ± 1	165	160	280	302	485	430	32
9	925	231	330	325	45 ± 1.5	175	185	320	342	560	450	32
10	1025	231	330	325	45 ± 1.5	175	185	320	342	610	500	32
11	1105	263	330	385	54 ± 1.5	190	225	380	402	595	545	35
12	1260	263	330	385	54 ± 1.5	190	225	380	410	680	615	35

规格 Size	尺寸 mm Dimensions in mm											
	齿轮箱 Gear units											
	a	G ₆	h	h ₁	h ₂	h ₃	m ₁	m ₂	n ₁	n ₂	p ₂ ⁴⁾	s
3	-	455	95	165	-	180	410	265	20	125	210	18
4	-	530	107.5	165	-	180	505	300	30	160	220	24
5	190	605	127.5	205	180	240	580	360	30	175	270	24
6	190	640	127.5	205	180	240	660	360	30	220	270	24
7	180	720	150	205	165	250	715	430	35	215	330	28
8	190	765	150	205	165	250	820	430	35	275	330	28
9	180	845	185	275	205	330	845	490	40	260	370	36
10	180	895	185	275	205	330	945	490	40	310	370	36
11	180	1010	215	275	240	340	1005	600	50	295	440	40
12	180	1080	215	275	240	340	1060	600	50	380	440	40

规格 Size	尺寸 mm Dimensions in mm								润滑油 Oil		重量 Weight (kg)	
	输出轴 Output				输入轴 Input				浸油润滑 Dip lubrication (l)	强制润滑 Forced lubrication (l)		
	d ₂ ¹⁾	G ₂	l ₂	D ₂ ²⁾	G ₄	D ₃	D ₄	G ₄	G ₅			
3	65	125	140	65	125	70	70	125	180	15	-	130
4	80	140	170	80	140	85	85	140	205	28	-	210
5	100	165	210	95	165	100	100	165	240	32	12	325
6	110	165	210	105	165	110	110	165	240	35	13	380
7	120	195	210	115	195	120	120	195	280	52	22	550
8	130	195	250	125	195	130	130	195	285	67	28	635
9	140	235	250	135	235	140	145	235	330	115	48	890
10	160	235	300	150	235	150	155	235	350	125	52	1020
11	170	270	300	165	270	165	170	270	400	180	75	1455
12	180	270	300	180	270	180	185	270	405	200	85	1730



直交轴齿轮箱 Bevel-helical Gear Units 三级传动 Three Stage 立式安装 Vertical
类型 MTB3.V Type MTB3.V 规格 13...18 Sizes 13...18



直交轴齿轮箱 Bevel-helical Gear Units 三级传动 Three Stage 立式安装 Vertical
类型 MTB3.V Type MTB3.V 规格 13...18 Sizes 13...18

规格 Size	尺寸 mm Dimensions in mm														G ₁	G _s				
	输入轴 Input																			
	In=12.5-45			In=14-50			In=16-56			In=50-71			In=56-80				In=63-90			
d ₁ ¹⁾	l ₁	l _s	d ₁ ¹⁾	l ₁	l _s	d ₁ ¹⁾	l ₁	l _s	d ₁ ¹⁾	l ₁	l _s	d ₁ ¹⁾	l ₁	l _s	d ₁ ¹⁾	l ₁	l _s			
13	80	165	130						60	140	105							1125	1160	
14							80	165	130							60	140	105	1195	1230
15	90	165	130						70	140	105								1367	1402
16				90	165	130						70	140	105					1413	1448
17	110	205	165						80	170	130								1580	1800
18				110	205	165						80	170	130					1620	1660
19									根据用户要求供货											
20									Onrequest											
21																				
22																				

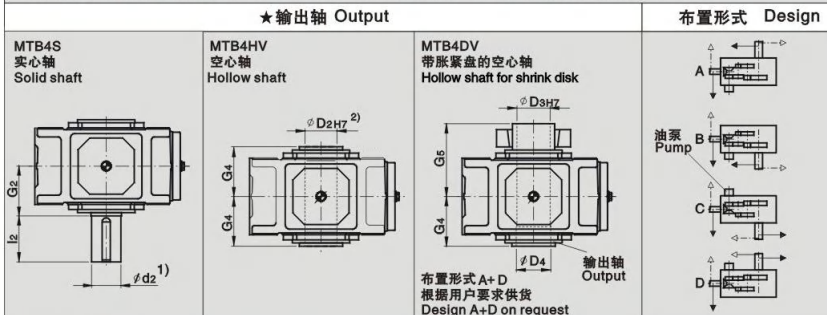
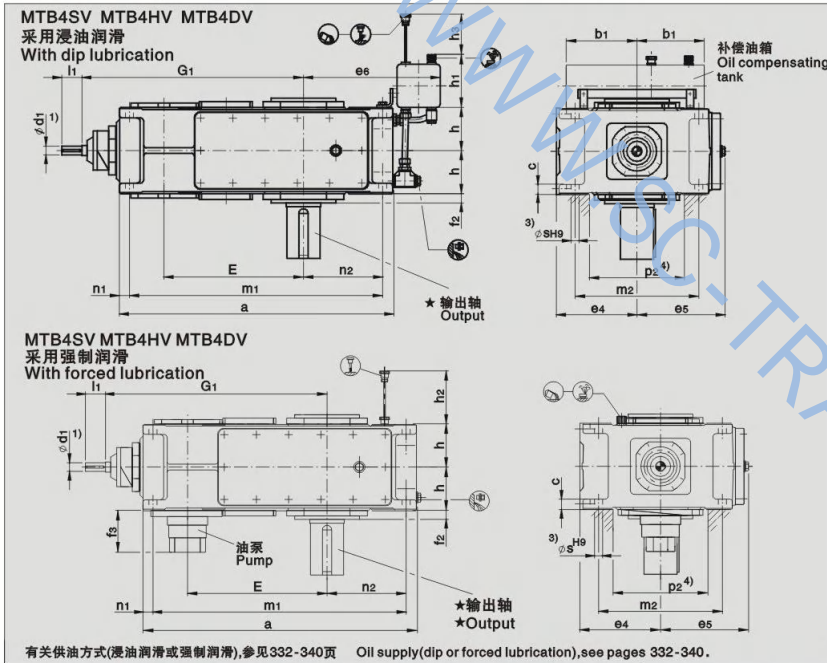
规格 Size	尺寸 mm Dimensions in mm									
	齿轮箱 Gear units									
	a	A ₁	b	B ₁	c	d _s	e ₃	E	f ₂	f _s
13	1290	325	900	475	61 ± 2	210	265	635	35	170
14	1430	325	900	475	61 ± 2	210	265	705	35	170
15	1550	365	980	520	72 ± 2	210	320	762	42	170
16	1640	365	980	520	72 ± 2	210	320	808	42	170
17	1740	395	1110	570	81 ± 2	230	370	860	42	170
18	1860	395	1110	570	81 ± 2	230	370	920	42	170
19										
20										
21										
22										

规格 Size	尺寸 mm Dimensions in mm								
	齿轮箱 Gear units								
	G _e	h	h ₂	m ₁	m ₂	n ₁	n ₂	p ₂ ⁴⁾	s
13	1180	272.5	300	1195	680	50	360	500	48
14	1250	272.5	300	1335	680	50	430	500	48
15	1420	310	340	1435	750	60	430	570	55
16	1470	310	340	1525	750	60	475	570	55
17	1600	340	380	1610	850	70	465	630	55
18	1680	340	380	1730	850	70	525	630	55
19									
20									
21									
22									

规格 Size	尺寸 mm Dimensions in mm									润滑油 Oil (l)	重量 Weight (kg)
	输出轴 Output										
	MTB3SV			MTB3HV			MTB3DV				
	d ₂ ¹⁾	G ₂	l ₂	d ₂ ¹⁾	G ₄	D _s	D ₄	G ₄	G ₅		
13	200	335	350	190	335	195	95	335	480	95	2260
14	210	335	350	210	335	210	215	335	480	110	2615
15	230	380	410	230	380	230	235	380	550	165	3540
16	240	380	410	240	380	240	245	380	550	190	3765
17	250	415	410	250	415	250	260	415	600	210	4760
18	270	415	470	275	415	280	285	415	600	240	5240
19											
20											
21											
22											



直交轴齿轮箱 Bevel-helical Gear Units 四级传动 Four Stage 立式安装 Vertical
类型 MTB4.V Type MTB4.V 规格 5...12 Sizes 5...12



1) $k_e \leq \Phi 50$ $m_e > \Phi 50$
有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole,see page 316.
2) 键槽 GB/T1095-1979 Keyway GB/T1095-1979.
3) 扭力支撑位于工作机侧 Torque support on driven machine side.
4) 有关油泵、油管和护盖的安装空间及确切尺寸, 请与我们联系 Space for pump, pipes and cover,for exact dimensions,please refer to us.

直交轴齿轮箱 Bevel-helical Gear Units 四级传动 Four Stage
立式安装 Vertical 类型 MTB4.V Type MTB4.V 规格 5... 12 Sizes 5... 12

规格 Size	尺寸 mm Dimensions in mm								
	输入轴 Input				输出轴 Output				
	In = 80 - 180		In = 100 - 224		In = 200 - 315		In = 250 - 400		
$d_1^{1)}$	l_1	$d_1^{1)}$	l_1	$d_1^{1)}$	l_1	$d_1^{1)}$	l_1	G_1	
5	28	55			20	50			615
6			28	55			20	50	650
7	30	70			25	60			725
8			30	70			25	60	770
9	35	80			28	60			840
10			35	80			28	60	890
11	45	100			35	80			1010
12			45	100			35	80	1080

规格 Size	尺寸mm Dimensions in mm								
	齿轮箱 Gear units								
	a	b_1	c	e_4	e_5	e_6	E	f_2	f_3
5	690	240	30 ± 1	230	252	385	405	28	200
6	770	240	30 ± 1	230	252	425	440	28	200
7	845	240	36 ± 1	280	292	425	495	30	120
8	950	240	36 ± 1	280	302	485	540	32	120
9	1000	330	45 ± 1.5	320	342	560	580	32	120
10	1100	330	45 ± 1.5	320	342	610	630	32	120
11	1200	330	54 ± 1.5	380	402	595	705	35	130
12	1355	330	54 ± 1.5	380	410	680	775	35	130

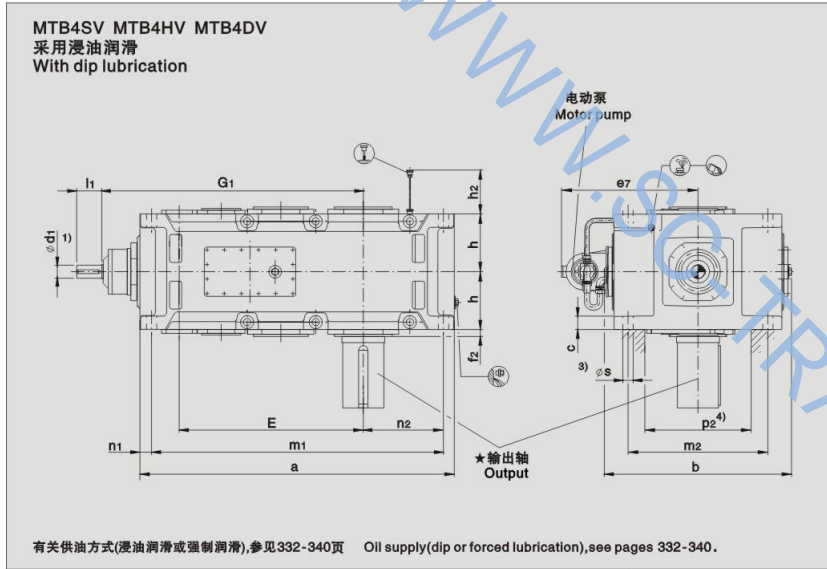
规格 Size	尺寸mm Dimensions in mm									
	齿轮箱 Gear units									
	h	h_1	h_2	h_3	m_1	m_2	n_1	n_2	p_2	s
5	127.5	205	190	240	630	360	30	175	270	24
6	27.5	205	190	240	710	360	30	220	270	24
7	150	205	165	250	775	430	35	215	330	28
8	150	205	165	250	880	430	35	275	330	28
9	185	275	205	330	920	490	40	260	370	36
10	185	275	205	330	1020	490	40	310	370	36
11	215	275	240	340	1100	600	50	295	440	40
12	215	275	240	340	1255	600	50	380	440	40

规格 Size	尺寸mm Dimensions in mm								润滑油 Oil		重量 Weight (kg)	
	MTB4SV				MTB4DV				浸油润滑 Dip lubrication (l)	强制润滑 Forced lubrication (l)		
	$d_2^{1)}$	G_2	l_2	$D_2^{2)}$	G_4	D_3	D_4	G_4				G_5
5	100	165	210	95	165	100	100	165	240	36	15	335
6	110	165	210	105	165	110	110	165	240	40	16	385
7	120	195	210	115	195	120	120	195	280	60	30	555
8	130	195	250	125	195	130	130	195	285	70	35	655
9	140	235	250	135	235	140	145	235	330	110	60	890
10	160	235	300	150	235	150	155	235	350	130	67	1025
11	170	270	300	165	270	165	170	270	400	180	75	1485
12	180	270	300	180	270	180	185	270	405	195	85	1750



直交轴齿轮箱 Bevel-helical Gear Units
类型 MTB4V. Type MTB4V.

四级传动 Four Stage 立式安装 Vertical
规格 13 ...18 Sizes 13 ...18



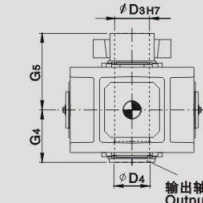
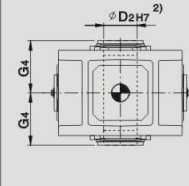
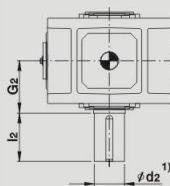
★输出轴 Output

布置形式 Design

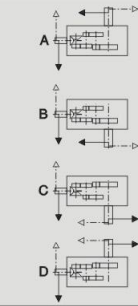
MTB4SV
实心轴
Solid shaft

MTB4HV
空心轴
Hollow shaft

MTB4DV
带胀紧盘的空心轴



布置形式 A+ D
Design A+D on request



1) $k_s \leq \Phi 50$ $m_e > \Phi 50$

有关平键 GB/T1095-1979型和中心孔,参见第316页。 For parallel key GB/T1095-1979 and for center hole,see page 316.

2) 键槽 GB/T1095-1979 Keyway GB/T1095-1979.

3) 扭力支撑位于工作机侧 Torque support on driven machine side.

4) 有关油泵、油管和护盖的安装空间及确切尺寸, 请与我们联系 Space for pump, pipes and cover;for exact dimensions,please refer to us.

直交轴齿轮箱
立式安装
规格 13 ... 18

Bevel-helical Gear Units
Vertical 类型 MTB4.V
Sizes 13 ... 18

四级传动
Type MTB4.V

Four Stage

规格 Size	尺寸 mm Dimensions in mm												G ₁	
	输入轴 Input													
	i _N = 80 - 180		i _N = 90 - 200		i _N = 100 - 224		i _N = 200 - 315		i _N = 224 - 355		i _N = 250 - 400			
	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	l ₁		
13	55	110					40	100						1170
14					55	110						40	100	1240
15	70	135					50	110						1402
16			70	135					50	110				1448
17	70	135					50	110						1450
18			70	135					50	110				1510
19														
20							根据用户要求供货							
21							On request							
22														

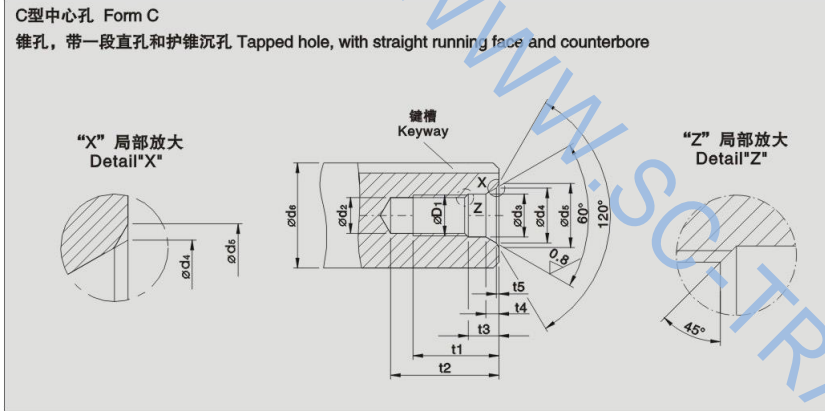
规格 Size	尺寸mm Dimensions in mm													
	齿轮箱 Gear units													
	a	b	c	e ₇	E	f ₂	h	h ₂	m ₁	m ₂	n ₁	n ₂	P ₂	s
13	1395	900	61 ± 2	695	820	35	272.5	300	1300	680	50	360	500	48
14	1535	900	61 ± 2	695	890	35	272.5	300	1440	680	50	430	500	48
15	1680	980	72 ± 2	735	987	42	310	340	1565	750	60	430	570	55
16	1770	980	72 ± 2	735	1033	42	310	340	1655	750	60	475	570	55
17	1770	1110	81 ± 2	795	1035	42	340	374	1640	850	70	465	630	55
18	1890	1110	81 ± 2	795	1095	42	340	374	1780	850	70	525	630	55
19														
20							根据用户要求供货							
21							On request							
22														

规格 Size	尺寸mm Dimensions in mm									润滑油 Oil (l)	重量 Weight (kg)
	输出轴 Output										
	MTB4SH			MTB4HV		MTB4DV					
	d ₂ ¹⁾	G ₂	l ₂	D ₂ ²⁾	G ₄	D ₃	D ₄	G ₄	G ₅		
13	200	335	350	190	335	190	195	335	480	130	2280
14	210	335	350	210	335	210	215	335	480	150	2605
15	230	380	410	230	380	230	235	380	550	200	3435
16	240	380	410	240	380	240	245	380	550	235	3765
17	250	415	410	250	415	250	260	415	600	215	4460
18	270	415	470	275	415	280	285	415	600	250	4930
19											
20						根据用户要求供货					
21						On request					
22											



齿轮箱 Gear Units

C 型轴端中心孔, 符合 GB145-1985 标准 Centre Holes, Form C in Shaft Ends GB145-1985



推荐尺寸 Recommended diameters		C型 Form C												
ds ¹⁾		C 中心孔 C- Centering	d1	d2	d3	d4	d5	t1 +2	t2		t3 +1	t4 ≈	t5 ≈	
大于 above	至 to								min.	max.				
16	21	C 6	M6	5	6.4	9.6	10.5	16	20	22	5	2.8	0.4	
21	24	C 8	M8	6.8	8.4	12.2	13.2	19	25	28	6	3.3	0.4	
24	30	C 10	M10	8.5	10.5	14.9	16.3	22	30	34	7-5	3.8	0.6	
30	38	C 12	M12	10.2	13	18.1	19.8	28	37	42	9.5	4.4	0.7	
38	50	C 16	M16	14	17	23	25.3	36	45	50	12	5.2	1.0	
50	85	C 20	M20	17.5	21	28.4	31.3	42	53	59	15	6.4	1.3	
85	130	C 24	M24	21	25	34.2	38	50	63	68	18	8	1.6	
130*	225*	C 30	M30*	26.5	31	44	48	60	77	83	17	11	1.9	
225*	320*	C 36	M36*	32	37	55	60	74	93	99	22	15	2.3	
220*	500*	C 42	M42*	37.5	43	65	71	84	105	111	26	19	2.7	

1) 工件加工后最终尺寸 1) Diameter of the finished work piece

*) 不是根据GB145-1985确定的尺寸 *) Dimensions not acc. to GB145-1985

齿轮箱 Gear units

选择 ISO 配合精度 Selection of ISO fits

平键和键槽 Parallel keys and keyways

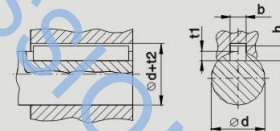
选择 ISO 配合精度 Selection of ISO fits	轴 shaft d		轴公差 Shaft tolerance	孔公差 Bore tolerance
	大于 Above mm	至 To mm		
轴公差根据我公司标准确定 The shaft tolerance shall be confirmed according to standards of our company.		50	k6	H7
	50		m6	

对于重载工件条件, 如带载反向回转, 建议采用比较紧密的配合, 轮毂键槽宽度亦应选择 ISO P9 公差等级。

For heavy-duty operating conditions, e.g. reversing under load, it is recommended that a tighter fit and for the hub keyway width the ISO P9 tolerance is selected.

平键 Parallel keys	直径 Diameter d		宽度 ¹⁾ Width b mm	高度 Height h mm	轴键槽深度 Depth of key- way in shaft t1 mm	轮毂键槽深度 Depth of key- way in hub d + t2 GB/T1095- 1979 mm
	大于 Above mm	至 To mm				
平键紧固方式, 采用无锥度联接。 Drive type fastening without taper action	17	22	6	6	3.5	d + 2.8
	22	30	8	7	4	d + 3.3
	30	38	10	8	5	d + 3.3
	38	44	12	8	5	d + 3.3
	44	50	14	9	5.5	d + 3.8
	50	58	16	10	6	d + 4.3
	58	65	18	11	7	d + 4.4
	65	75	20	12	7.5	d + 4.9
	75	85	22	14	9	d + 5.4
	85	95	25	14	9	d + 5.4
	95	110	28	16	10	d + 6.4
	110	130	32	18	11	d + 7.4
	130	150	36	20	12	d + 8.4
	150	170	40	22	13	d + 9.4
	170	200	45	25	15	d + 10.4
	200	230	50	28	17	d + 11.4
230	260	56	32	20	d + 12.4	
260	290	63	32	20	d + 12.4	
290	330	70	36	22	d + 14.4	
330	380	80	40	25	d + 15.4	
380	440	90	45	28	d + 17.4	

平键和键槽根据 GB/T1095-1979 标准确定
Parallel key and keyway acc. to GB/T1095-1979

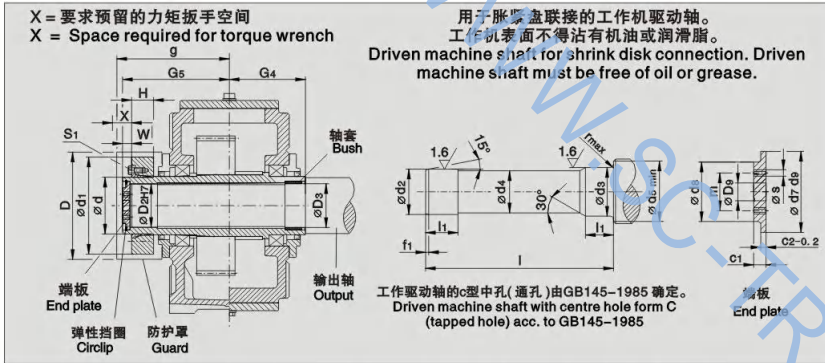


1) 重载工作条件下轮毂平键槽宽度 b 的公差带应按 ISO JS9 或 ISO P9 确定。

1) The tolerance zone for the hub keyway width b for parallel keys is ISO JS9, or ISO P9 for heavy-duty operating conditions.



齿轮箱 Gear Units 带胀紧盘的空心轴 Hollow Shaft For Shrink Disk
类型 MTH2,MTH3,MTH4,MTB3,MTB4 Type MTH2,MTH3,MTH4,MTB3,B4
规格 3...26 Sizes 3...26



齿轮箱规格 Gear unit size	工作机驱动轴 ²⁾ Driven machine shaft		端板 End plate		弹性挡圈 Ring Circlip	空心轴 Hollow shaft	胀紧盘 ¹⁾ Shrink disk	螺钉 Screw																						
	d ₂	d ₃	d ₄	d ₅					f ₁	l	r	c ₁	c ₂	d ₇	d ₈	D ₉	m	s	数量 Qty.	GB89/3.2-86	D ₂	D ₃	G ₄	G ₅	类型 Type	d	d ₁	H	W	s ₁
	mm																													
3	70 ge	70 ge	69.5	80	4	286	38	2	17	7	75	55	22	40	M8	2	75x2.5	70	70	125	180	90-32	90	155	38	20	M 10			
4	85 ge	85 he	84.5	95	4	326	48	2	17	7	90	70	22	50	M8	2	90 x 3	85	85	140	205	110-32	110	185	49	20	M 12			
5	100 ge	100 he	99.5	114	5	383	53	2	20	8	105	80	26	55	M10	2	105 x 4	100	100	165	240	125-32	125	215	53	20	M 12			
6	110 ge	110 he	109.5	124	5	383	58	3	20	8	115	85	26	60	M10	2	115 x 4	110	110	165	240	140-32	140	230	58	20	M 14			
7	120 ge	120 he	119.5	134	5	453	68	3	20	8	125	90	26	65	M12	2	125 x 4	120	120	195	280	155-32	155	263	62	23	M 14			
8	130 ge	130 he	129.5	145	6	458	73	3	20	8	135	100	26	70	M12	2	135 x 4	130	130	195	285	165-32	165	290	68	23	M 16			
9	140 ge	145 me	139.5	160	6	539	82	4	23	10	150	110	33	80	M12	2	150 x 4	140	140	235	330	175-32	175	300	68	28	M 16			
10	150 ge	155 me	149.5	170	6	559	92	4	23	10	160	120	33	90	M12	2	160 x 4	150	155	235	350	200-32	200	340	85	28	M 16			
11	165 fe	170 me	164.5	185	7	644	112	4	23	10	175	130	33	90	M12	2	175 x 4	165	170	270	400	220-32	220	370	103	30	M 20			
12	180 fe	185 me	179.5	200	7	649	122	4	23	10	190	140	33	100	M16	2	190 x 4	180	185	270	405	240-32	240	405	107	30	M 20			
13	190 fe	195 me	189.5	213	7	789	137	5	23	10	200	150	33	110	M16	2	200 x 4	190	195	335	480	280-32	280	430	119	30	M 20			
14	210 fe	215 me	209.5	233	8	784	147	5	23	14	220	170	33	130	M16	2	220 x 5	210	215	335	480	280-32	280	460	132	30	M 20			
15	230 fe	235 me	229.5	253	8	899	157	5	23	14	240	190	33	140	M16	2	240 x 5	230	235	390	550	300-32	300	485	140	35	M 24			
16	240 fe	245 me	239.5	263	8	899	157	5	23	14	250	190	33	150	M20	2	250 x 5	240	245	380	550	320-32	320	520	140	35	M 24			
17	250 fe	260 me	249.5	278	8	982	177	5	23	14	265	200	33	150	M20	2	265 x 5	250	260	415	600	340-32	340	570	155	35	M 24			
18	280 fe	285 me	279.5	306	9	982	177	5	30	14	290	210	33	160	M20	2	290 x 5	280	285	415	600	380-32	380	590	162	35	M 24			
19	285 fe	295 me	284.5	316	9	1100	187	5	32	15	300	220	33	170	M24	2	300 x 5	285	295	465	670	380-32	380	640	166	40	M 27			
20	310 fe	315 me	309.5	336	9	1100	187	5	32	15	320	230	33	180	M24	2	320 x 5	310	315	465	670	390-32	390	650	166	40	M 27			
21	330 fe	335 me	329	358	9	1160	205	5	40	20	340	250	45	190	M24	2	340 x 6	330	335	490	715	420-32	420	670	186	45	M 27			
22	340 fe	345 me	339	368	9	1170	215	5	40	20	350	260	45	200	M24	2	350 x 6	340	345	490	725	440-32	440	720	194	45	M 27			
23																														
24																														
25																														
26																														

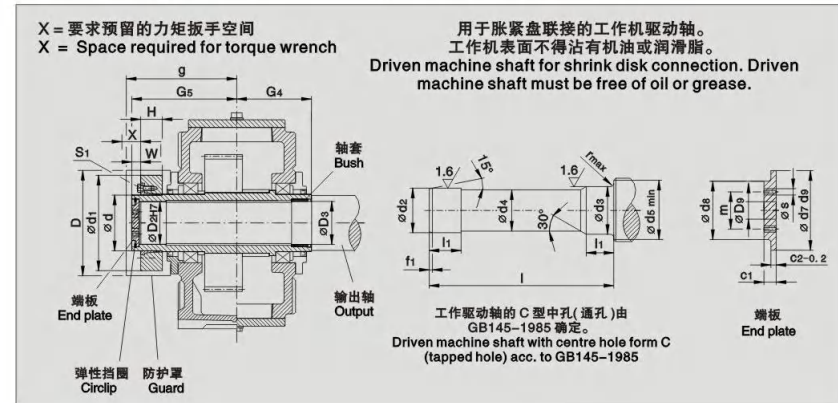
根据用户要求供货
On request

1) 胀紧盘不在我们的供货范围之内。如有需要的话, 请另行订货。
Shrink disk does not belong to our scope of supply. Please order separately, if required.

2) 工作机驱动轴材质: 60或强度更高的钢。根据用户要求, 胀紧盘可布置在工作机侧。工作机驱动轴尺寸函索即复。
Material of driver machine shaft: 60 or higher strength. Shrink disk on machine side on request. Shrink disk is supplied as loose item. Dimensions of machine shaft on request.



齿轮箱 Gear units 带胀紧盘联接的空心轴 Hollow shafts for shrink disks
类型 MTB2D. Type MTB2D.
规格 2 ... 18 Sizes 2 ... 18



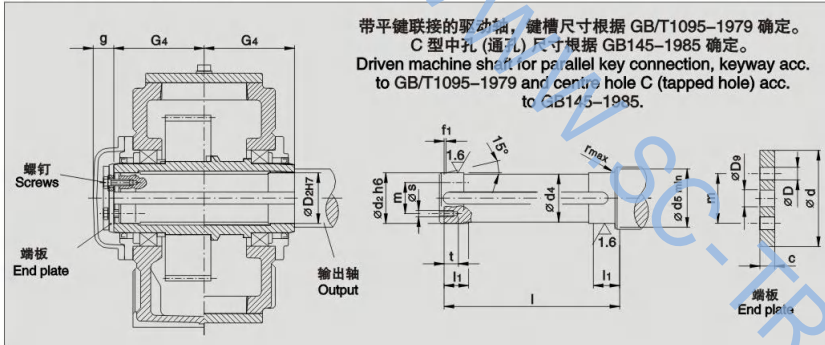
齿轮箱规格 Gear unit size	工作机驱动轴 ²⁾ Driven machine shaft		端板 End plate		弹性挡圈 Ring Circlip	空心轴 Hollow shaft	胀紧盘 ¹⁾ Shrink disk	螺钉 Screw	防护罩 Guard																						
	d ₂	d ₃	d ₄	d ₅						f ₁	l	r	c ₁	c ₂	d ₇	d ₈	D ₉	m	s	数量 Qty.	GB89/3.2-86	D ₂	D ₃	G ₄	G ₅	类型 Type	d	d ₁	H	W	s ₁
	mm																														
2	60 ge	60 ge	59.5	70	3	300	38	2	13	6	65	47	22	35	M6	2	65x2.5	60	60	135	180	80-32	80	141	31	16	M 10	180	200		
3	70 ge	70 he	69.5	80	4	326	38	2	17	7	75	55	22	40	M8	2	75x2.5	70	70	145	200	90-32	90	155	38	20	M 10	200	220		
4	85 ge	85 he	84.5	95	4	386	48	2	17	7	90	70	22	50	M8	2	90 x 3	85	85	170	235	110-32	110	185	49	20	M 12	235	250		
5	100 ge	100 he	99.5	114	5	453	53	2	20	8	105	80	26	55	M10	2	105 x 4	100	100	200	275	125-32	125	215	53	20	M 12	275	285		
6	110 ge	110 he	109.5	124	5	453	58	3	20	8	115	85	26	60	M10	2	115 x 4	110	110	200	275	140-32	140	230	58	20	M 14	285	285		
7	120 ge	120 he	119.5	134	5	538	68	3	20	8	125	90	26	65	M12	2	125 x 4	120	120	235	320	155-32	155	263	62	23	M 14	330	335		
8	130 ge	130 he	129.5	145	6	538	73	3	20	8	135	100	26	70	M12	2	135 x 4	130	130	235	325	165-32	165	290	68	23	M 16	340	340		
9	140 ge	145 me	139.5	160	6	609	82	4	23	10	150	110	33	80	M12	2	150 x 4	140	145	270	365	175-32	175	300	68	28	M 16	360	380		
10	150 ge	155 me	149.5	170	6	609	92	4	23	10	160	120	33	90	M12	2	160 x 4	150	155	270	385	200-32	200	340	85	28	M 16	395	400		
11	165 fe	170 me	164.5	185	7	744	112	4	23	10	175	130	33	90	M12	2	175 x 4	165	170	320	450	220-32	220	370	103	30	M 20	435	470		
12	180 fe	185 me	179.5	200	7	749	122	4	23	10	190	140	33	100	M16	2	190 x 4	180	185	320	455	240-32	240	405	107	30	M 20	450	470		
14	210 fe	215 me	209.5	233	8	804	147	5	23	14	220	170	33	130	M16	2	220 x 5	210	215	390	535	280-32	280	460	132	30	M 20	525	555		
16	240 fe	245 me	239.5	263	8	1038	157	5	23	14	250	190	33	150	M20	2	250 x 5	240	245	450	620	320-32	320	520	140	35	M 24	595	645		
18	280 fe	285 me	279.5	306	9	1177	177	5	30	14	290	210	33	160	M20	2	290 x 5	280	285	510	700	360-32	360	590	162	35	M 24	635	725		

1) 胀紧盘不在我们的供货范围之内。如有需要的话, 请另行订货。
Shrink disk does not belong to our scope of supply. Please order separately, if required.

2) 工作机驱动轴材质: 60或强度更高的钢。根据用户要求, 胀紧盘可布置在工作机侧。工作机驱动轴尺寸函索即复。
Material of driver machine shaft: 60 or higher strength. Shrink disk on machine side on request. Shrink disk is supplied as loose item. Dimensions of machine shaft on request.



齿轮箱 Gear Units 带平键联接的空心轴 Hollow Shafts for Parallel Key Connections
 类型 MTH2, MTH3, MTH4, MTB3, MTB4 Types MTH2, MTH3, MTH4, MTB3, MTB4
 规格 3 ...18 Sizes 3 ... 18

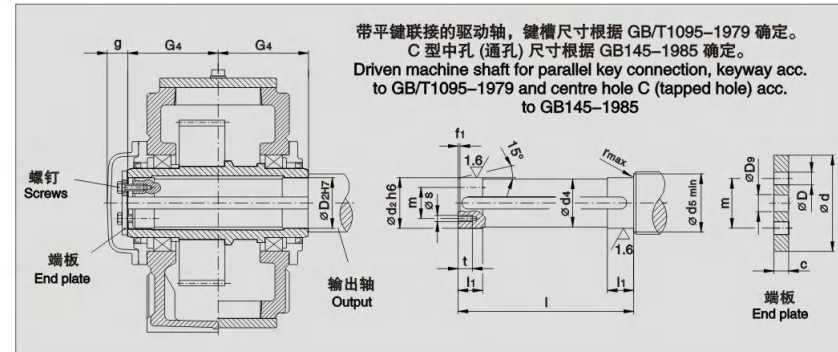


齿轮箱规格 Gear unit size	类型 MTH2, MTH3, MTH4, MTB3, MTB4 Types MTH2, MTH3, MTH4, MTB3, MTB4														空心轴 Hollow shaft				
	工作机驱动轴 ¹⁾ Driven machine shaft							端板 End plate							螺钉 Screw		空心轴 Hollow shaft		
	d ₂	d ₄	d ₅	f ₁	l	l ₁	r	s	t	c	D	D ₉	d	m	规格 Size	数量 Qty.	D ₂	G ₄	g
3	65	64.5	73	4	248	30	1.2	M 10	18	8	11	18	78	45	M 10 x 25	2	65	125	35
4	80	79.5	88	4	278	35	1.2	M 10	18	10	11	22	100	60	M 10 x 25	2	80	140	35
5	95	94.5	105	5	328	40	1.6	M 10	18	10	11	26	120	70	M 10 x 25	2	95	165	40
6	105	104.5	116	5	328	45	1.6	M 10	18	10	11	26	120	70	M 10 x 25	2	105	165	40
7	115	114.5	126	5	388	50	1.6	M 12	20	12	13.5	26	140	80	M 12 x 30	2	115	195	40
8	125	124.5	136	6	388	55	2.5	M 12	20	12	13.5	26	150	85	M 12 x 30	2	125	195	40
9	135	134.5	147	6	467	60	2.5	M 12	20	12	13.5	33	160	90	M 12 x 30	2	135	235	45
10	150	149.5	162	6	467	65	2.5	M 12	20	12	13.5	33	185	110	M 12 x 30	2	150	235	45
11	165	164.5	177	7	537	70	2.5	M 16	28	15	17.5	33	195	120	M 16 x 40	2	165	270	45
12	180	179.5	192	7	537	75	2.5	M 16	28	15	17.5	33	220	130	M 16 x 40	2	180	270	45
13	190	189.5	206	7	667	80	3	M 16	28	18	17.5	33	230	140	M 16 x 40	2	190	335	45
14	210	209.5	226	8	667	85	3	M 16	28	18	17.5	33	250	160	M 16 x 40	2	210	335	45
15	230	229.5	248	8	756	100	3	M 20	38	25	22	39	270	180	M 20 x 55	4	230	380	60
16	240	239.5	258	8	756	100	3	M 20	38	25	22	39	280	180	M 20 x 55	4	240	380	60
17	250	249.5	270	8	826	110	4	M 20	38	25	22	39	300	190	M 20 x 55	4	250	415	60
18	275	274.5	295	9	826	120	4	M 20	38	25	22	39	330	210	M 20 x 55	4	275	415	60

1) 工作机驱动轴材质: 60 或强度更高的钢。平键不在我们的供货范围 之内。如果需要的话, 请另行订货。
 Material of driven machine shaft: 60 or higher strength. Parallel key does not belong to our scope of supply .
 Please order separately, if required.



齿轮箱 Gear Units 带平键联接的空心轴 Hollow Shafts for Parallel Key Connections
 类型 MTB2H. Type MTB2H.
 规格 2 ...18 Sizes 2 ... 18



齿轮箱规格 Gear unit size	类型 MTB2H. Type MTB2H.														空心轴 Hollow shaft				
	工作机驱动轴 ¹⁾ Driven machine shaft							端板 End plate							螺钉 Screw		空心轴 Hollow shaft		
	d ₂	d ₄	d ₅	f ₁	l	l ₁	r	s	t	c	D	D ₉	d	m	规格 Size	数量 Qty.	D ₂	G ₄	g
2	55	54.5	63	3	268	30	1.2	M 8	15	8	9	18	70	40	M 8 x 20	2	55	135	35
3	65	64.5	73	4	288	30	1.2	M 10	18	8	11	18	78	45	M 10 x 25	2	65	145	35
4	80	79.5	88	4	338	35	1.2	M 10	18	10	11	22	100	60	M 10 x 25	2	80	170	35
5	95	94.5	105	5	398	40	1.6	M 10	18	10	11	26	120	70	M 10 x 25	2	95	200	40
6	105	104.5	116	5	398	45	1.6	M 10	18	10	11	26	120	70	M 10 x 25	2	105	200	40
7	115	114.5	126	5	468	50	1.6	M 12	20	12	13.5	26	140	80	M 12 x 30	2	115	235	40
8	125	124.5	136	6	468	55	2.5	M 12	20	12	13.5	26	150	85	M 12 x 30	2	125	235	40
9	135	134.5	147	6	537	60	2.5	M 12	20	12	13.5	33	160	90	M 12 x 30	2	135	270	45
10	150	149.5	162	6	537	65	2.5	M 12	20	12	13.5	33	185	110	M 12 x 30	2	150	270	45
11	165	164.5	177	7	637	70	2.5	M 16	28	15	17.5	33	195	120	M 16 x 40	2	165	320	45
12	180	179.5	192	7	637	75	2.5	M 16	28	15	17.5	33	220	130	M 16 x 40	2	180	320	45
14	210	209.5	226	8	777	85	3	M 16	28	18	17.5	33	250	160	M 16 x 40	2	210	390	45
16	240	239.5	258	8	865	100	3	M 20	38	25	22	39	280	180	M 20 x 55	4	240	450	60
18	275	274.5	295	9	1016	120	4	M 20	38	25	22	39	330	210	M 20 x 55	4	275	510	60

1) 工作机驱动轴材质: 60 或强度更高的钢。平键不在我们的供货范围之内。如果需要的话, 请另行订货。
 Material of driven machine shaft: 60 or higher strength. Parallel key does not belong to our scope of supply .Please order separately, if required.



直交轴齿轮箱 Bevel-helical Gear Units 实际速比 Actual Ratios
类型 MTB2..,MTB3..,MTB4.. Types MTB2..,MTB3..,MTB4.. 规格 1 ... 13 Sizes 1 ... 13

IN	实际速比 i Actual ratios i												
	齿轮箱规格 Gear unit sizes												
	1	2	3	4	5	6	7	8	9	10	11	12	13
5.0	4.980	5.043	4.895	4.936	5.006		4.865		5.002		4.897		4.967
5.6	5.566	5.636	5.471	5.480	5.488		5.333		5.485		5.534		5.613
6.3	6.455	6.526	6.334	6.296	6.386	6.205	6.206	6.195	6.387	6.271	6.296	6.226	6.386
7.1	7.068	7.158	6.947	6.959	7.058	6.802	6.860	6.725	7.055	6.875	7.037	7.036	7.138
8.0	7.668	7.765	7.536	7.549	7.657	7.915	7.880	7.825	8.101	8.000	7.994	8.005	8.108
9.0	8.829	8.941	8.678	8.693	8.817	8.749	8.589	8.649	8.810	8.842	8.693	8.947	8.817
10	10.027	10.154	9.855	9.872	10.108	9.490	9.823	9.935	10.099	10.157	9.965	10.164	10.108
11.2	10.938	11.077	10.751	10.769	10.923	10.928	10.615	10.804	10.914	11.045	10.769	11.052	10.923
12.5	12.458	12.615	12.244	12.034	12.703	12.528	12.433	12.385	12.554	12.662	12.334	12.670	12.482
14	14.005	14.182	13.765	13.484	13.964	13.538	13.515	13.385	14.137	13.683	13.821	13.692	13.721
16	15.441	15.636	15.176	15.601	15.835	15.826	16.275	15.773	15.952	15.693	15.522	16.888	15.354
18	17.595	17.818	17.294	17.482	17.407	17.307	17.692	17.041	17.863	17.724	17.393	17.572	17.675
20			19.336	19.614	19.645	19.729	19.948	20.648	20.259	19.940	19.744	19.995	20.276
22.4			21.609	21.919	21.954	21.575	22.146	22.308	22.208	22.520	21.643	22.114	22.226
25			25.021	25.380	25.421	24.349	25.446	25.152	25.843	25.400	25.185	25.103	25.864
28			27.442	27.836	27.881	27.211	28.125	27.923	28.563	27.842	27.836	27.517	28.587
31.5			29.769	30.196	30.245	31.508	30.509	32.084	30.965	32.400	31.975	32.021	32.838
35.5			34.279	34.771	34.827	34.557	35.131	35.461	35.679	35.811	34.771	35.392	35.709
40			38.928	39.487	39.551	37.486	39.896	38.468	40.902	38.846	39.861	40.654	40.936
45			42.467	43.077	43.146	43.166	43.523	44.296	44.202	44.732	43.077	44.209	44.238
50			48.365	49.060	49.139	49.021	49.568	50.304	50.341	51.280	49.060	50.681	50.383
56			54.371	55.152	55.240	53.477	55.723	54.877	56.592	55.417	55.152	54.769	56.639
63			59.947	60.808	60.906	60.904	61.438	62.499	62.396	63.114	60.808	62.376	62.448
71			68.312	69.293	69.404	68.467	70.011	70.259	71.102	70.951	69.293	70.121	71.161
80				77.598	75.489	79.267	77.465	79.497	78.228	80.949	77.313	82.118	
90					86.720	86.022	88.585	88.274	88.842	89.143	89.869	88.101	90.016
100					100.413	96.178	102.572	99.945	102.869	99.667	103.259	102.921	104.750
112					110.130	107.484	112.498	111.694	112.824	111.384	114.129	114.262	115.777
125					119.466	124.455	122.035	129.330	122.389	128.971	123.804	131.287	125.592
140					137.567	136.499	140.525	141.846	140.933	141.452	142.562	145.106	144.621
160					156.225	148.071	159.585	153.871	160.047	153.443	161.897	157.408	165.791
180					170.427	170.506	174.092	177.184	174.597	176.692	176.615	181.258	179.166
200					194.098	193.631	198.272	201.215	198.847	200.656	201.145	205.841	204.050
224					218.199	211.234	222.891	219.506	223.537	218.898	226.121	224.554	229.386
250					240.578	240.572	245.752	249.995	246.464	249.300	249.313	255.742	252.913
280					274.147	270.443	280.042	281.036	280.855	280.256	284.101	287.497	288.204
315					302.121	298.181	308.618	309.861	309.513	309.000	313.091	316.984	317.612
355						339.788		353.097		352.116		361.214	
400						374.460		389.127		388.046		398.073	
450													



直交轴齿轮箱 Bevel-helical Gear Units 实际速比 Actual Ratios
类型 MTB2.., MTB3.., MTB4.. Types MTB2.., MTB3.., MTB4.. 规格 14 ... 26 Sizes 14 ... 26

IN	实际速比 i Actual ratios i												
	齿轮箱规格 Gear unit sizes												
	14	15	16	17	18	19	20	21	22	23	24	25	26
		4.963											5.0
		5.609	5.630	5.514									5.6
6.156	6.340	6.362	6.234										6.3
6.957	7.132	7.192	7.012	7.239									7.1
7.915	8.101	8.090	7.965	8.143									8.0
8.847	8.810	9.190	8.862	9.250									9.0
10.049	10.099	9.993	9.930	10.059									10
10.928	10.914	11.456	10.731	11.531									11.2
12.528	12.172	12.380	12.770	12.462	12.062			12.256					12.5
13.538	13.810	13.832	13.790	14.654	13.709	13.698	13.902	13.719					14
15.552	15.215	15.665	16.226	16.014	15.192	15.640	15.436	15.538					16
17.007	17.262	17.290	17.522	18.620	17.267	17.252	17.510	17.279					18
20.376	19.379	19.581	19.762	20.348	19.607	19.698	19.883	19.570	19.591			19.284	20
22.282	21.900	21.982	22.333	22.950	22.158	22.368	22.470	22.222	22.139	21.930	21.793	22.206	22.4
25.131	24.916	24.842	25.409	25.936	25.048	25.278	25.400	25.113	25.027	24.783	24.635	25.095	25
27.548	27.847	28.263	28.398	29.507	28.175	28.576	28.571	28.389	28.151	28.015	27.711	28.368	28
32.057	31.634	31.588	32.259	32.979	32.005	32.143	32.456	31.933	31.979	31.513	31.478	31.909	31.5
35.432	34.400	35.883	35.080	37.463	34.904	36.513	35.294	36.275	34.775	35.797	34.231	36.248	35.5
40.700	39.435	39.021	40.215	40.738	39.899	39.706	40.461	39.446	39.866	38.927	39.241	39.417	40
44.259	42.617	44.732	43.460	46.702	43.117	45.518	43.725	45.221	43.082	44.626	42.407	45.187	45
50.737	48.536	48.341	49.496	50.469	49.106	49.190	49.798	48.889	49.065	48.226	48.297	48.833	50
54.331	54.512	55.055	55.641	57.479	55.203	56.022	55.961	55.656	55.158	54.924	54.294	55.615	56
62.445	60.158	61.892	61.348	64.616	60.865	62.978	61.722	62.567	60.815	61.744	59.863	62.520	63
70.200	68.552	69.239	69.909	71.243	69.358	69.438	70.335	68.984	69.301	68.076	68.216	68.933	71
77.400	76.131	77.761	76.506	81.184	79.977	79.127	77.639	78.610	76.497	77.575	78.100	78.551	80
88.200	85.645	88.655	83.865	88.846	87.670	91.242	87.739	86.772	86.448	85.631	88.260	89.933	90
101.780	99.664	97.150	97.993	97.391	102.020	100.017	99.821	98.061	98.353	96.770	100.414	101.633	100
111.569	110.155	113.052	107.865	113.333	112.759	116.389	111.565	111.565	109.924	110.097	112.228	115.629	112
129.831	126.535	124.952	129.904	125.263	129.526	128.641	126.738	124.690	124.870	123.049	127.487	129.232	125
143.498	137.599	143.532	134.736	143.889	140.851	147.769	137.815	141.643	135.788	139.780	138.634	146.803	140
155.663	157.741	156.082	154.462	156.477	161.470	160.680	157.989	154.029	155.665	152.002	158.928	159.639	160
179.284	170.467	178.930	166.923	179.755	174.496	184.212	170.735	176.576	168.224	174.252	171.749	183.008	180
205.467	194.143	193.365	190.107	193.646	198.732	199.073	194.448	190.821	191.588	188.310	195.603	197.772	200
222.065	218.249	220.222	213.712	220.769	221.408	226.722	218.592	217.324	215.377	214.464	219.891	225.240	224
252.907	240.634	247.586	235.631	248.182	246.322	254.874	241.012	244.309	237.467	241.094	242.444	253.208	250
284.310	274.210	272.957	268.510	273.636	280.692	281.015	274.641	269.366	270.602	265.822	276.274	279.178	280
313.470	302.191	311.045	295.909	311.818	309.334	320.226	302.666	306.952	298.215	302.913	304.465	318.133	315
357.210		342.784		343.636		352.902		338.273		333.823		350.596	355
393.660													400
													450

直交轴齿轮箱 Bevel-helical Gear Units

转动惯量 J₁ Mass Moments of Inertia J₁

类型 MTB2...MTB3...MTB4... Types MTB2...MTB3...MTB4... 规格 1 ... 13 Sizes 1 ... 13

转动惯量J₂(单位 kgm²)是指相对于齿轮箱输出轴d₂的转动惯量,可按下式计算: J₂= I_n²XJ₁。

转动惯量J₁(单位 kgm²)是指相对于齿轮箱输入轴d₁的转动惯量,输入轴不带风扇。

如果输入轴d₁上带有风扇,则应加上J_L。

The mass moment of inertia J₂ in kgm² refers to the output shaft d₂ of a gear unit and is calculated with the following formula: J₂ = I_n²XJ₁.

The mass moment of inertia J₁ in kgm² refers to the input shaft d₁ of a gear unit without fan.

For shaft d with fan, J_L has to be added.

In	转动惯量 J ₁ (单位 kgm ²)是指相对于齿轮箱输入轴d ₁ 的转动惯量 Mass moment of Inertia J ₁ in kgm ² referring to shaft d ₁												
	齿轮箱规格 Gear unit sizes												
	1	2	3	4	5	6	7	8	9	10	11	12	13
5.0	0.0021	0.0049	0.0314	0.0314	0.0707		0.1988		0.4403		1.2743		2.7700
5.6	0.0019	0.0043	0.0096	0.0262	0.0604		0.1691		0.3744		1.0697		2.3418
6.3	0.0016	0.0035	0.0076	0.0228	0.0495	0.0805	0.1365	0.2276	0.2988	0.4986	0.8428	1.4755	1.8526
7.1	0.0014	0.0033	0.0071	0.0197	0.0420	0.0687	0.1207	0.1931	0.2543	0.4229	0.7257	1.2273	1.6222
8.0	0.0012	0.0027	0.0057	0.0152	0.0321	0.0555	0.0875	0.1542	0.1874	0.3346	0.5250	0.9645	1.1744
9.0	0.0010	0.0023	0.0052	0.0129	0.0295	0.0470	0.0786	0.1352	0.1709	0.2837	0.4753	0.8231	1.0617
10	0.00084	0.0018	0.0039	0.0104	0.0250	0.0363	0.0681	0.0985	0.1456	0.2097	0.4072	0.6005	0.8214
11.2	0.00079	0.0017	0.0037	0.0093	0.0214	0.0327	0.0590	0.0879	0.1241	0.1897	0.3493	0.5392	0.7959
12.5	0.00054	0.0012	0.0028			0.0274		0.0752		0.1599		0.4557	
14	0.00043	0.00098	0.0023			0.0235		0.0650		0.1363		0.3909	
16	0.00040	0.00082	0.0019										
18	0.00031	0.00063	0.0015										
J _L	0.005	0.006	0.010	0.020	0.045	0.045	0.100	0.100	0.100	0.290	0.290	0.690	0.690
12.5				0.0073	0.0159		0.0445		0.0995	0.2740		0.6152	
14				0.0071	0.0156		0.0436		0.0967	0.2671		0.6026	
16				0.0060	0.0136	0.0174	0.0368	0.0487	0.0842	0.1084	0.2344	0.3029	0.5141
18				0.0059	0.0133	0.0168	0.0363	0.0474	0.0825	0.1040	0.2300	0.2925	0.5068
20			0.0023	0.0055	0.0124	0.0145	0.0339	0.0393	0.0770	0.0897	0.2146	0.2527	0.4742
22.4			0.0021	0.0047	0.0105	0.0141	0.0282	0.0385	0.0657	0.0870	0.1822	0.2461	0.4026
25			0.0017	0.0039	0.0083	0.0130	0.0243	0.0356	0.0534	0.0805	0.1462	0.2270	0.3196
28			0.0015	0.0036	0.0077	0.0111	0.0209	0.0296	0.0452	0.0687	0.1286	0.1926	0.2714
31.5			0.0013	0.0029	0.0062	0.0087	0.0162	0.0253	0.0348	0.0555	0.0936	0.1539	0.2004
35.5			0.0011	0.0024	0.0055	0.0080	0.0137	0.0218	0.0315	0.0470	0.0837	0.1349	0.1819
40			0.00089	0.0019	0.0041	0.0065	0.0110	0.0169	0.0265	0.0363	0.0720	0.0983	0.1539
45			0.00083	0.0018	0.0039	0.0057	0.0098	0.0142	0.0227	0.0326	0.0626	0.0877	0.1312
50			0.00057	0.0013	0.0030	0.0043	0.0081	0.0114	0.0178	0.0274	0.0469	0.0751	0.1028
56			0.00046	0.0011	0.0025	0.0040	0.0068	0.0102	0.0146	0.0235	0.0384	0.0649	0.0853
63			0.00042	0.00087	0.0021	0.0031	0.0059	0.0084	0.0124	0.0184	0.0326	0.0489	0.0725
71			0.00033	0.00067	0.0016	0.0026	0.0047	0.0070	0.0100	0.0150	0.0262	0.0400	0.0585
80					0.0021			0.0061		0.0128		0.0339	
90					0.0016			0.0048		0.0102		0.0272	
J _L			0.005	0.006	0.010	0.010	0.020	0.020	0.045	0.045	0.100	0.100	0.290
80					0.0024		0.0057		0.0129	0.0350		0.0795	
90					0.0021		0.0049		0.0110	0.0291		0.0678	
100					0.0018	0.0024	0.0040	0.0058	0.0086	0.0131	0.0250	0.0358	0.0549
112					0.0016	0.0022	0.0037	0.0049	0.0079	0.0111	0.0215	0.0297	0.0465
125					0.0013	0.0018	0.0030	0.0040	0.0064	0.0087	0.0167	0.0254	0.0359
140					0.0011	0.0016	0.0025	0.0038	0.0057	0.0081	0.0141	0.0219	0.0323
160					0.00091	0.0013	0.0020	0.0031	0.0043	0.0065	0.0113	0.0170	0.0271
180					0.00085	0.0011	0.0018	0.0025	0.0040	0.0058	0.0101	0.0143	0.0233
200					0.00058	0.00082	0.0013	0.0020	0.0031	0.0043	0.0083	0.0114	0.0182
224					0.00047	0.00066	0.0011	0.0018	0.0025	0.0041	0.0070	0.0102	0.0149
250					0.00043	0.00059	0.00089	0.0014	0.0021	0.0031	0.0060	0.0084	0.0127
280					0.00033	0.00047	0.00069	0.0011	0.0016	0.0026	0.0048	0.0071	0.0102
315					0.00028	0.00043	0.00058	0.00091	0.0014	0.0021	0.0040	0.0061	0.0081
355						0.00034		0.00069		0.0016		0.0048	
400						0.00028		0.00059		0.0014		0.0041	

直交轴齿轮箱 Bevel-helical Gear Units

转动惯量 J₁ Mass Moments of Inertia J₁

类型 MTB2...MTB3...MTB4... Types MTB2...MTB3...MTB4... 规格 14...26 Sizes 14...26

转动惯量J₂(单位 kgm²)是指相对于齿轮箱输出轴d₂的转动惯量,可按下式计算: J₂= I_n²XJ₁。

转动惯量J₁(单位 kgm²)是指相对于齿轮箱输入轴d₁的转动惯量,输入轴不带风扇。

如果输入轴d₁上带有风扇,则应加上J_L。

The mass moment of inertia J₂ in kgm² refers to the output shaft d₂ of a gear unit and is calculated with the following formula: J₂ = I_n²XJ₁.

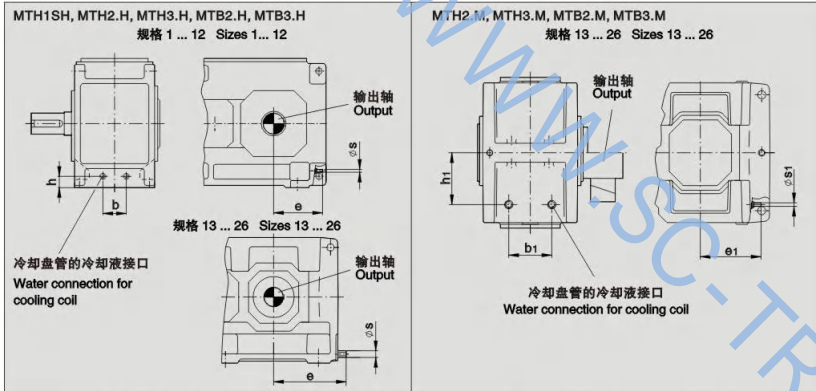
The mass moment of inertia J₁ in kgm² refers to the input shaft d₁ of a gear unit without fan.

For shaft d with fan, J_L has to be added.

In	转动惯量 J ₁ (单位 kgm ²)是指相对于齿轮箱输入轴d ₁ 的转动惯量 Mass moment of Inertia J ₁ in kgm ² referring to shaft d ₁																												
	齿轮箱规格 Gear unit sizes																												
	14	15	16	17	18	19	20	21	22	23	24	25	26													N			
5.0		6.1753																											5.0
5.6		5.3415	6.6007	10.3549																									5.6
6.3	3.0962	4.4466	5.6746	8.5744																									6.3
7.1	2.5972	3.7296	4.7073	7.1324					9.0369																				7.1
8.0	2.0500	2.7508	3.9356	5.0109	7.4979																								8.0
9.0	1.7802	2.5048	3.9105	4.5186	5.2942																								9.0
10	1.2968	2.1468	2.6398	3.8518	4.7581																								10
11.2	1.1653	1.7964	2.2495	3.3164	4.0340																								11.2
12.5	1.0001	1.7964	1.8843	3.4725																									12.5
14	0.8634																												14
16																													16
18																													18
J _L	0.690	0.690	0.690	0.690	0.690																								J _L
12.5		1.6952		3.4843		7.8896		8.3877																					12.5
14		1.6558	1.7505	3.4451	3.5988	7.7305	8.0659	8.2186	8.6052																				14
16	0.6638	1.4797	1.7023	3.0661	3.5397	6.9989	7.8400	7.4408	8.3643																				16
18	0.6456	1.4545	1.5152	3.0418	3.1370	6.8398	6.9560	7.2717	7.4142																				18
20	0.5424	1.3716	1.4843	2.8806	3.1004	6.3626	6.8399	6.7643	7.2972	12.93																			20
22.4	0.5919	1.1459	1.3952	2.4284	2.9267	5.4882	6.4527	5.8027	6.8842	10.90	13.15	13.51																	22.4
25	0.4938	0.9016	1.1644	1.9196	2.4645	4.5614	5.5587	4.8075	5.8965	8.99	11.07	11.03																	25
28	0.4185	0.7728	0.9159	1.6758	1.9474	3.8203	4.6166	4.0148	4.8809	7.45	9.12	9.06	11.34	28															28
31.5	0.3817	0.5815	0.7842	1.2159	1.6981	2.8212	3.8639	2.9719	4.0729	5.24	7.55	6.49	9.30	31.5															31.5
35.5	0.2812	0.5032	0.5703	1.0968	1.2332	2.5642	2.8550	2.6917	3.0169	4.70	5.32	5.76	6.68	35.5															35.5
40	0.2070	0.4300	0.5137	0.9481	1.1114	2.1920	2.5928	2																					



齿轮箱 Gear Units 冷却盘管 Cooling Coils 卧式安装 Horizontal 规格 1 ... 26 Sizes 1 ... 26
类型 MTH..H, MTH..M, MTB..H, MTB..M Types MTH..H, MTH..M, MTB..H, MTB..M

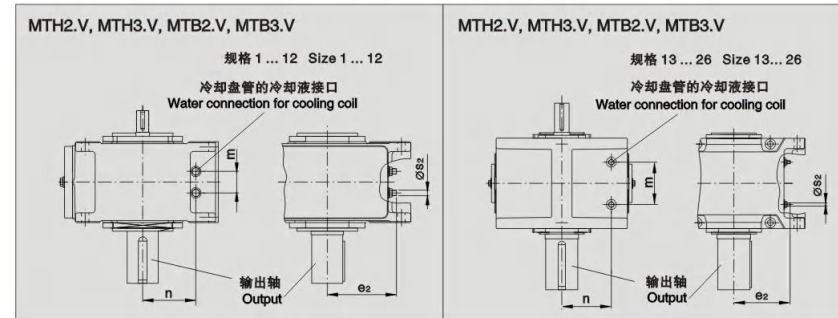


规格 Size	类型 MTH1SH Type MTH1SH					类型 MTH2.H/MTB3.H Type MTH2.H/MTB3.H					类型 MTH3.H Type MTH3.H					类型 MTB2.H Type MTB2.H				
	b mm	e mm	h mm	s mm	1)	b mm	e mm	h mm	s mm	1)	b mm	e mm	h mm	s mm	1)	b mm	e mm	h mm	s mm	1)
1	30	150	45	G 1/4	4	-	-	-	-	-	-	-	-	-	-	64	125	40	G 1/4	4
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	130	40	G 1/4	4
3	48	205	74	G 1/2	4	34	130	55	G 1/2	4	-	-	-	-	-	58	140	52	G 1/2	4
4	-	-	-	-	-	34	155	60	G 1/2	4	-	-	-	-	-	74	160	54	G 1/2	4
5	88	270	90	G 1/2	4	68	170	64	G 1/2	4	70	175	60	G 1/2	4	130	175	62	G 1/2	8
6	-	-	-	-	-	70	215	68	G 1/2	4	70	220	69	G 1/2	4	120	220	68	G 1/2	4
7	124	310	135	G 1/2	4	100	210	83	G 1/2	4	80	210	83	G 1/2	4	140	210	80	G 1/2	8
8	-	-	-	-	-	100	270	83	G 1/2	4	80	270	83	G 1/2	4	140	270	80	G 1/2	4
9	116	365	110	G 1/2	8	140	245	110	G 1/2	8	150	245	107	G 1/2	4	232	245	110	G 1/2	8
10	-	-	-	-	-	100	295	95	G 1/2	8	90	295	95	G 1/2	4	150	295	90	G 1/2	8
11	146	425	130	G 1/2	8	110	275	95	G 1/2	8	200	275	115	G 1/2	8	312	275	115	G 1/2	8
12	-	-	-	-	-	200	360	109	G 1/2	8	200	360	115	G 1/2	8	300	360	115	G 1/2	8
13	152	480	150	G 1/2	8	252	455	116	G 1/2	8	252	460	116	G 1/2	8	324	460	116	G 1/2	8
14	-	-	-	-	-	252	525	116	G 1/2	8	252	530	116	G 1/2	8	324	530	116	G 1/2	8
15	172	560	130	G 1/2	8	290	535	119	G 1/2	8	290	540	119	G 1/2	8	396	540	119	G 1/2	8
16	-	-	-	-	-	290	580	119	G 1/2	8	290	585	119	G 1/2	8	396	585	119	G 1/2	8
17	202	600	145	G 1/2	8	340	575	134	G 1/2	8	300	580	134	G 1/2	8	468	580	134	G 1/2	8
18	-	-	-	-	-	340	635	134	G 1/2	8	300	640	134	G 1/2	8	468	640	134	G 1/2	8
19	根据用户要求供货 On request																			
20-26	根据用户要求供货 On request																			

规格 Size	类型 MTH2.M/MTB3.M Type MTH2.M/MTB3.M					类型 MTH3.M Type MTH3.M					类型 MTB2.M Type MTB2.M									
	b ₁ mm	e ₁ mm	h ₁ mm	s ₁ mm	1)	b ₁ mm	e ₁ mm	h ₁ mm	s ₁ mm	1)	b ₁ mm	e ₁ mm	h ₁ mm	s ₁ mm	1)					
13	252	335	300	G 1/2	8	252	335	300	G 1/2	8	324	335	300	G 1/2	8					
14	252	405	300	G 1/2	8	252	405	300	G 1/2	8	324	405	300	G 1/2	8					
15	290	395	335	G 1/2	8	290	395	340	G 1/2	8	396	390	345	G 1/2	8					
16	290	440	335	G 1/2	8	290	440	340	G 1/2	8	396	435	345	G 1/2	8					
17	340	425	380	G 1/2	8	300	425	380	G 1/2	8	324	425	395	G 1/2	8					
18	340	485	380	G 1/2	8	300	485	380	G 1/2	8	324	485	395	G 1/2	8					
19-26	根据用户要求供货 On request																			

1) 冷却液需要量 (l/min) Required cooling water quantity (l/min) 冷却盘管适用于淡水、海水和半咸水。Cooling coil suitable for fresh, sea and brackish

齿轮箱 Gear Units 冷却盘管 Cooling Coils 立式安装 Vertical 规格 1... 26 Sizes 1 ... 26
类型 MTH..V, MTB..V Types MTH..V, MTB..V



规格 Size	类型 MTH2.V/MTB3.V Type MTH2.V/MTB3.V					类型 MTH3.V Type MTH3.V					类型 MTB2.V Type MTB2.V									
	m mm	n mm	e2 mm	s2	1)	m mm	n mm	e2 mm	s2	(1)	m mm	n mm	e2 mm	s2	(1)					
1	-	-	-	-	-	-	-	-	-	-	64	90	125	G 1/4	4					
2	-	-	-	-	-	-	-	-	-	-	78	105	130	G 1/4	4					
3	34	120	130	G 1/2	4	-	-	-	-	-	58	123	140	G 1/2	4					
4	34	140	155	G 1/2	4	-	-	-	-	-	74	146	160	G 1/2	4					
5	68	166	170	G 1/2	4	70	170	175	G 1/2	4	130	188	175	G 1/2	8					
6	70	162	215	G 1/2	4	70	161	220	G 1/2	4	120	162	220	G 1/2	4					
7	100	197	210	G 1/2	4	80	197	210	G 1/2	4	140	200	210	G 1/2	8					
8	100	197	270	G 1/2	4	80	197	270	G 1/2	4	140	200	270	G 1/2	4					
9	140	210	245	G 1/2	8	150	213	245	G 1/2	4	232	210	245	G 1/2	8					
10	100	225	295	G 1/2	8	90	225	295	G 1/2	4	150	230	295	G 1/2	8					
11	110	285	275	G 1/2	8	200	265	275	G 1/2	8	312	265	275	G 1/2	8					
12	200	271	360	G 1/2	8	200	265	360	G 1/2	8	300	265	360	G 1/2	8					
13	252	300	335	G 1/2	8	252	300	335	G 1/2	8	324	300	335	G 1/2	8					
14	252	300	405	G 1/2	8	252	300	405	G 1/2	8	324	300	405	G 1/2	8					
15	340	335	395	G 1/2	8	290	340	395	G 1/2	8	396	345	390	G 1/2	8					
16	290	335	440	G 1/2	8	290	340	440	G 1/2	8	396	345	435	G 1/2	8					
17	340	380	425	G 1/2	8	300	380	425	G 1/2	8	324	395	425	G 1/2	8					
18	340	380	485	G 1/2	8	300	380	485	G 1/2	8	324	395	485	G 1/2	8					
19-26	根据用户要求供货 On request																			

类型 Types	规格 Size	冷却盘管适用于 Cooling coil for											
		浸油润滑 Dip lubrication				法兰泵强制润滑 Forced lubrication with flanged on pump				电动机泵强制润滑 Forced lubrication with motor pump			
		适用布置形式 for design				适用布置形式 for design				适用布置形式 for design			
		A	B	C	D	A	B	C	D	A	B	C	D
MTH2.V	4	x	x	x	x	-	-	-	-	-	-	-	-
	5-12	x	x	x	x	-	-	x	-	-	-	x	-
MTH3.V	5-12	x	x	x	x	-	-	x	-	-	-	x	-
	13-18	-	-	-	-	-	-	-	-	x	-	-	-
MTB2.V	4	x	x	x	x	-	-	-	-	-	-	-	-
	5-12	x	x	x	x	x	x	-	-	-	-	-	-
MTB3.V	4	x	x	x	x	-	-	-	-	-	-	-	-
	5-12	x	x	x	x	-	-	x	-	-	-	x	x
13-18	-	-	-	-	-	-	-	-	-	x	-	-	-

X = 可供货 x = Possible variants
1) 冷却液需要量 (l/min) Required cooling water quantity (l/min) 冷却盘管适用于淡水、海水和半咸水。Cooling coil suitable for fresh, sea and brackish.

齿轮箱 Gear Units 润滑油供给方式可选方案 Oil Supply for
类型 MTH2 ... MTH4, MTB2 ... MTB4 Types MTH2... MTH4, MTB2... MTB4
规格 1 ... 18 立式安装 Sizes 1 ... 18 Vertical

各种润滑油供给方式 Oil supply variants
立式安装齿轮箱所用的各种润滑油供给方式列于表1
Oil supply variants for vertical gear units can be derived from table 1.

类型 Types	规格 Size	浸油润滑 Dip lubrication	法兰泵强制润滑 Forced lubrication, flanged on pump		电动机强制润滑 Forced lubrication, motor pump	
			IN	n1max	IN	n1max
MTH2.V	4	X	-	-	-	-
	5 ... 12	X	X	-	X	-
	13 ... 18	-	X	-	-	-
MTH3.V	5 ... 12	X	X	-	X	-
	13 ... 18	-	X	-	X	-
MTH4.V	7 ... 12	X	X	-	X	-
	13 ... 18	-	-	-	X	-
MTB2.V	4	X	-	-	-	-
	5 ... 12	X	X	-	X	-
	13 ... 18	-	X	-	X	-
MTB3.V	4	X	X	-	X	-
	5 ... 12	X	X	-	X	-
	13 ... 18	-	X	-	X	-
MTB4.V	5 ... 12	X	X	-	X	-
	13 ... 18	-	-	-	X	-

X=可供货 X=Possible variants

- 1) 采用实心轴、带储油管的齿轮箱所用的各种润滑油供给方式见338页表14。
- 1) For possible variants for gear units with solid shaft and oil retaining tube, see page 338, table 14 .

推荐供油方式 Preferred order:

规格 6 号 (含) 以下各型: 浸油润滑, 规格 7 号以上各型: 强制润滑
up to size 6: dip lubrication from size 7 up: forced lubrication

对各种润滑油供给方式的说明 Notes on the individual oil supply variants

浸油润滑 Dip lubrication:

当用浸油润滑时, 所有需要润滑的零部件均需浸在润滑油液中。

附带的补偿油箱用于储藏涨溢的油液。

选择依据参见332页。

In case of dip lubrication, all parts to be lubricated are lying in the oil.
an oil compensating tank has been fitted for oil expansion.
criteria for selection, see page 332

强制润滑 Forced lubrication:

当采用强制润滑时, 所有未浸在润滑油液中的零部件均通过一个法兰联接油泵或单独的电动机泵进行飞溅润滑。

选择依据参见333-336页。

In case of forced lubrication, all parts which are not lying in oil are splash lubricated by means of a flanged-on pump or by a separate motor pump. criteria for selection, see pages 333-336

齿轮箱 Gear Units 浸油润滑方式 Dip Lubrication for
类型 MTH2...MTH4, MTB2...MTB4 Types MTH2...MTH4, MTB2...MTB4
规格 1 ... 12 立式安装 Sizes 1...12 Vertical

当选用浸油润滑方式时, 应满足下列要求: a)最大输入转速n1, 参见表2; b)允许油温参见表3。
For the design with dip lubrication the following criteria have to be observed:
a)Maximum input speed n1, See table 2. b)Permissible oil temperatures, see table 3.

规格 Size	类型 Types											
	MTH2.V		MTH3.V		MTH4.V		MTB2.V		MTB3.V		MTB4.V	
	IN	n1max	IN	n1max	IN	n1max	IN	n1max	IN	n1max	IN	n1max
1	-	-	-	-	-	-	5-6.3 7.1-8 9-18	1200 1500 1800	-	-	-	-
	-	-	-	-	-	-	8-5.6 6.3-9 9-10 11.2-18	1000 1200 1500 1800	-	-	-	-
	6.3-7.1 8-10 11.2-22.4	1200 1500 1800	-	-	-	-	5-7.1 8-9 10-12.5 14-18	1000 1200 1500 1800	20-71	1800	-	-
2	-	-	-	-	-	-	5-6.3 7.1-8 9-18	1200 1500 1800	-	-	-	-
	-	-	-	-	-	-	8-5.6 6.3-9 9-10 11.2-18	1000 1200 1500 1800	-	-	-	-
	6.3-10 11.2-12.5 14-22.4	1200 1500 1800	-	-	-	-	5-5.6 6.3-7.1 8-9 10-11.2	750 900 1000 1200	12.5-71	1800	-	-
3	-	-	-	-	-	-	5-6.3 7.1-8 9-18	1200 1500 1800	-	-	-	-
	-	-	-	-	-	-	8-5.6 6.3-9 9-10 11.2-18	1000 1200 1500 1800	-	-	-	-
	6.3-9 10-12.5 14-16 18-22.4	1000 1200 1500 1800	25-90	1800	-	-	6.3-7.1 8-9 10-11.2	750 900 1000	12.5-71	1800	80-315	1800
4	-	-	-	-	-	-	5-6.3 7.1-8 9-18	1200 1500 1800	-	-	-	-
	-	-	-	-	-	-	8-5.6 6.3-9 9-10 11.2-18	1000 1200 1500 1800	-	-	-	-
	8-11.2 12.5-16 18-20 22.4-28	1000 1200 1500 1800	31.5-112	1800	-	-	9 10-11.2 12.5-14	750 900 1000	16-90	1800	100-400	1800
5	-	-	-	-	-	-	5-6.3 7.1-8 9-18	1200 1500 1800	-	-	-	-
	-	-	-	-	-	-	8-5.6 6.3-9 9-10 11.2-18	1000 1200 1500 1800	-	-	-	-
	6.3-7.1 8-9 10-11.2 12.5-16 18-22.4	750 900 1000 1200 1500	25-90	1800	100-355	1800	9-10 11.2	750 900	12.5-25 28-71	1500 1800	80-315	1800
6	-	-	-	-	-	-	5-6.3 7.1-8 9-18	1200 1500 1800	-	-	-	-
	-	-	-	-	-	-	8-5.6 6.3-9 9-10 11.2-18	1000 1200 1500 1800	-	-	-	-
	6.3-7.1 8-9 10-11.2 12.5-16 18-22.4	750 900 1000 1200 1500	31.5-112	1800	125-450	1800	11.2-12.5 14	750 900	16-31.5 35.5-90	1500 1800	100-400	1800
7	-	-	-	-	-	-	5-6.3 7.1-8 9-18	1200 1500 1800	-	-	-	-
	-	-	-	-	-	-	8-5.6 6.3-9 9-10 11.2-18	1000 1200 1500 1800	-	-	-	-
	6.3-7.1 8-9 10-11.2 12.5-16 18-22.4	1200 1500 1800	25-90	1800	100-355	1800	5-5.6 6.3-7.1 8-10 11.2	900 1000 1200 1500	12.5-71	1800	80-315	1800
8	-	-	-	-	-	-	5-6.3 7.1-8 9-18	1200 1500 1800	-	-	-	-
	-	-	-	-	-	-	8-5.6 6.3-9 9-10 11.2-18	1000 1200 1500 1800	-	-	-	-
	6.3-7.1 8-9 10-11.2 12.5-16 18-22.4	1200 1500 1800	31.5-112	1800	125-450	1800	6.3-7.1 8-9 10-12.5 14	900 1000 1200 1500	16-90	1800	100-400	1800
9	-	-	-	-	-	-	5-6.3 7.1-8 9-18	1200 1500 1800	-	-	-	-
	-	-	-	-	-	-	8-5.6 6.3-9 9-10 11.2-18	1000 1200 1500 1800	-	-	-	-
	6.3-7.1 8-9 10-11.2 12.5-16 18-22.4	1200 1500 1800	25-90	1800	100-355	1800	5.6-6.3 7.1-8 9-10 11.2	750 900 1000 1200	12.5-22.4 25-71	1500 1800	80-315	1800
10	-	-	-	-	-	-	5-6.3 7.1-8 9-18	1200 1500 1800	-	-	-	-
	-	-	-	-	-	-	8-5.6 6.3-9 9-10 11.2-18	1000 1200 1500 1800	-	-	-	-
	6.3-7.1 8-9 10-11.2 12.5-16 18-22.4	1000 1200 1500 1800	25-90	1800	100-355	1800	5.6-6.3 7.1-8 9-10 11.2	750 900 1000 1200	12.5-22.4 25-71	1500 1800	80-315	1800
11	-	-	-	-	-	-	5-6.3 7.1-8 9-18	1200 1500 1800	-	-	-	-
	-	-	-	-	-	-	8-5.6 6.3-9 9-10 11.2-18	1000 1200 1500 1800	-	-	-	-
	6.3-7.1 8-9 10-11.2 12.5-16 18-22.4	1000 1200 1500 1800	31.5-112	1800	125-450	1800	7.1-8 9-10 11.2-12.5 14	750 900 1000 1200	16-28 31.5-90	1500 1800	100-400	1800
12	-	-	-	-	-	-	5-6.3 7.1-8 9-18	1200 1500 1800	-	-	-	-
	-	-	-	-	-	-	8-5.6 6.3-9 9-10 11.2-18	1000 1200 1500 1800	-	-	-	-
	6.3-7.1 8-9 10-11.2 12.5-16 18-22.4	1000 1200 1500 1800	25-90	1800	100-355	1800	5.6-6.3 7.1-8 9-10 11.2	750 900 1000 1200	12.5-22.4 25-71	1500 1800	80-315	1800

n1和IN值不在表2所列范围内的齿轮箱必须采用强制润滑方式。

Gear units with n1 and IN which are not listed in table 2 must be designed for forced lubrication

40℃ 以下的 ISO - VG 粘度 mm²/s (cst) Viscosity ISO - VG at 40 °C in mm²/s(cst)	浸油允许极限温度 ℃ Permissible temperature limit in °C for dip lubrication			
	矿物油 Mineral oil		合成油 Synthetic oil	
	-15	-12	-25	-25
VG 220	-15	-12	-25	-25
VG 320	-15	-12	-25	-25
VG 460	-15	-12	-25	-25

若油温低于表中所示数值, 则必须对润滑油进行加热。

If the temperatures are below the values as listed in the table, the oil must be heated.

当采用浸油润滑时, 油温不得低于所用润滑油的倾点。

In case of dip lubrication, the oil temperature must not blow the pour point of the selected oil.



平行轴齿轮箱 Helical Gear Units 强制润滑方式 Forced Lubrication for
类型 MTH2 ... MTH4 Types MTH2 ... MTH4 规格 5 ... 18 立式安装 Sizes 5 ... 18 Vertical

40 °C 以下的 ISO - VG粘度, mm ² /s (cSt) Viscosity ISO - VG at 40 °C in mm ² /s (cSt)	强制润滑允许极限温度°C Permissible temperature limit in °C for forced feed lubrication			
	矿物油 Mineral oil		合成油 Synthetic oil	
	最低 min	最高 max	最低 min	最高 max
VG 220	10	80	0	90
VG 320	15	90	5	100
VG 460	20	95	10	105

强制润滑:

当使用强制润滑时, 工作粘度不得超过 1800cSt。最低工作粘度不得小于 25cSt。当油温低于表 4 所列的数值时, 必须提供浸油润滑方式, 或者对润滑油进行加热。

Forced lubrication:

In case of forced lubrication, the operating Viscosity 1800 cSt must not be exceeded during starting. A minimum operating viscosity of 25 cSt must be sured. If the temperatures are below the values as listed in table 4, dip Lubrication has to be provided or the oil must Beheated.

立式安装平行轴箱采用法兰泵 Assignment of flanged-on pumps to vertical helical gear units								
类型 Types	n ₁ r/min	齿轮箱规格 Gearunit size		法兰泵规格 Flanged-on pumps size	齿轮箱规格 Gearunitsize			法兰泵规格 Flanged-on Pump size
		5,7,9,11	6,8,10,12		13,15,17	14	16,18	
		速比 Ratio i:N			速比 Ratio i:N			
MTH2.V ¹⁾	750 - 1800	6.3-22.4	8 - 28	KSW1	6.3-22.4	8 - 28	7.1-25	KSW2
MTH3.V ¹⁾	1201 - 1800	25-35.5	31.5-45	KSW2	22.4-35.5	28 - 45	25 - 40	KSW3
		40 - 71	50 - 90	KSW3	40 - 71	50 - 90	45 - 80	KSW4
		80 - 90	100 - 112	*	80 - 90	100 - 112	90 - 100	*
	901 - 1200	25 - 50	31.5-63	KSW3	22.4-25	28-31.5	25 - 28	KSW3
		56 - 90	71 - 112	*	28 - 45	35.5-56	31.5-50	KSW4
					50 - 90	63 - 112	56 - 100	*
750 - 900	25-35.5	31.5-45	KSW3	22.4-35.5	28 - 45	25 - 40	KSW4	
	40 - 90	50 - 112	*	40 - 90	50 - 112	45 - 100	*	
MTH4.V ¹⁾	1201 - 1800	100 - 180	125 - 224	KSW3	100 - 355	125 - 450	112 - 400	*
		200 - 335	250 - 450	*				
	901 - 1200	100 - 125	125 - 160	KSW3				
		140 - 335	180 - 450	*				
750 - 900	100 - 335	125 - 450	*					

* = 所需电动泵, 参见表7
* = Motor pump require, see table 7.

1) 布置形式B,D.
Design BD.

平行轴齿轮箱 Helical Gear Units 强制润滑方式 Forced Lubrication for
类型 MTH2 ... MTH4 Types MTH2 ... MTH4 规格 5... 18 立式安装 Sizes 5 ... 18 Vertical

立式安装平行轴箱采用法兰泵 Assignment of flanged-on pumps to vertical helical gear units								
类型 Types	n ₁ r/min	齿轮箱规格 Gear unit size		法兰泵规格 Flanged-on pump size	齿轮箱规格 Gear unit size			法兰泵规格 Flanged-on Pump size
		5,7,9,11	6,8,10,12		13,15,17	14	16,18	
		速比 Ratio i:N			速比 Ratio i:N			
MTH2.V ¹⁾	750 - 1800	6.3-22.4	8 - 28	KSW1	6.3-22.4	8 - 28	7.1-25	KSW2
MTH3.V ¹⁾	1201 - 1800	25-40	31.5-50	KSW2	22.4-50	28 - 63	25 - 56	KSW3
		45 - 90	56 - 112	KSW3	56-90	71 - 112	63 - 90	KSW4
							100	*
	901 - 1200	25 - 56	31.5-71	KSW3	22.4-31.5	28-40	25 - 35.5	KSW3
		63 - 90	80 - 112	*	35.5 - 56	45-71	40-63	KSW4
					63 - 90	80-112	71 - 100	*
750 - 900	25-45	31.5-56	KSW3	22.4-25	28 - 31.5	25 - 28	KSW3	
	50 - 90	63 - 112	*	28-45	35.5 - 56	31.5 - 50	KSW4	
MTH4.V ¹⁾	1201 - 1800	100 - 224	125 - 280	KSW3	100 - 355	125 - 450	112 - 400	*
		250 - 355	315 - 450	*				
	901 - 1200	100 - 140	125 - 180	KSW3				
		160 - 355	200 - 450	*				
	750 - 900	100 - 112	125 - 140	KSW3				
		125 - 335	160 - 450	*				

* = 所需电动泵, 参见表7
* = Motor pump require, see table 7.

1) 布置形式A,C Design A,C

立式安装平行轴箱采用法兰泵 Assignment of flanged-on pumps to vertical helical gear units			
类型 Types	规格 Sizes	布置方式 Design	油泵 Pump
MTH2.V	5 ... 18	A / B / C / D	1)
MTH3.V	5 ... 18	A / C	SF 2/8
	5 ... 12	B/D	SF 2/8
	13 ... 18		SF 2/13
MTH4.V	7 ... 12	A/C	SF 2/8
	13 ... 18		SF 2/13
	7 ... 18	B / D	SF 2/13

1) 只提供法兰泵 Flanged-on pump only

直交轴齿轮箱 Helical Gear Units 强制润滑方式 Forced Lubrication for
类型 MTB2 ... MTB4 Types MTB2 ... MTB4 规格 5 ... 18 立式安装 Sizes 5 ... 18 Vertical

表格 8 Table 8

40°C以下的ISOVG-粘度, mm²/s(cSt) Viscosity ISO-Vgat40°C in mm²/s(cSt)	强制润滑允许极限温度°C Permissible temperature limit in °C for forced feed lubrication			
	矿物油 Mineral oil		合成油 Synthetic oil	
	最低 min	最高 max	最低 min	最高 max
VG220	10	80	0	90
VG320	15	90	5	100
VG460	20	95	10	105

强制润滑 Forced lubrication;
当使用强制润滑时, 工作粘度不得超过1800cSt。
最低工作粘度不得小于25cSt。
当油温低于表8所列的数值时, 必须提供湿油润滑方式, 或者对润滑油进行加热。
In case of forced lubrication, the operating Viscosity 1800cSt must not be exceeded during starting.
A minimum operating viscosity of 25cSt must be ensured. If the temperatures are below the values as listed in table 8, dip Lubrication has to be provided or the oil must be heated

表格 9 Table 9

立式安装直交轴箱采用法兰泵 Assignment of flanged-on pumps to vertical bevel-helical gear units

类型 Types	n r/min	齿轮箱规格 Gear unit size		法兰泵规格 Flanged-on Pump size	齿轮箱规格 Gear unit size			法兰泵规格 Flanged-on Pump size
		5,7,9,11	6,8,10,12		13,15,17	14	16,18	
		速比 Ratio in			速比 Ratio in			
MTB2.V ¹⁾	1201-1800	5-6.3	6.3-8	KSW1	5-8	6.3-10	5.6-9	KSW2
		7.1-11.2	9-14	KSW2	9-11.2	11.2-14	10-12.5	KSW3
	901-1200	5-8	6.3-10	KSW2	5	6.3	5.6	KSW2
		9-11.2	11.2-14	KSW3	5.6-11.2	7.1-14	6.3-12.5	KSW3
	750-900	5-6.3	6.3-8	KSW2	5-10	6.3-12.5	5.6-11.2	KSW3
		7.1-10	9-12.5	KSW3	11.2	14	12.5	*
		11.2	14	*				
MTB3.V ¹⁾	1201-1800	12.5-35.5	16-45	KSW2	12.5-35.5	16-45	14-40	KSW3
		40-71	50-90	KSW3	40-71	50-90	45-80	KSW4
	901-1200	12.5-25	16-31.5	KSW2	12.5-25	16-31.5	14-28	KSW3
		28-50	35.5-63	KSW3	28-50	35.5-63	31.5-56	KSW4
	750-900	56-71	71-90	*	56-71	71-90	63-80	*
		12.5-35.5	16-45	KSW3	12.5-35.5	16-45	14-40	KSW4
		40-71	50-90	*	40-71	50-90	45-80	*
MTB4.V ¹⁾	1201-1800	80-125	100-160	KSW2	80-315	100-400	90-355	*
		140-250	180-315	KSW3				
	280-315	355-400	*					
	901-1200	80-180	100-224	KSW3				
		200-315	250-400	*				
	750-900	80-125	100-160	KSW3				
140-315		180-400	*					

*=所需电动泵, 参见表 11。 * = Motor pump require, see table 11.

1) 布置形式 A, B Design A, B
2) 布置形式 C, D Design C, D

直交轴齿轮箱 Helical Gear Units 强制润滑方式 Forced Lubrication for
类型 MTB2 ... MTB4 Types MTB2 ... MTB4 规格 5 ... 18 立式安装 Sizes 5 ... 18 Vertical

表 10 Table 10

立式安装直交轴箱采用法兰泵 Assignment of flanged-on pumps to vertical bevel-helical gear units

类型 Types	n r/min	齿轮箱规格 Gear unit size		法兰泵规格 Flanged-on pump size	齿轮箱规格 Gear unit size			法兰泵规格 Flanged-on pump size
		5, 7, 9, 11	6, 8, 10, 12		13, 15, 17	14	16, 18	
		速比 Ratio			速比 Ratio			
MTB2.V ¹⁾	1201-1800	5-6.3	6.3-8	KSW 1	5-6.3	6.3-8	5.6-7.1	KSW 2
		7.1-11.2	9-14	KSW 2	7.1-11.2	9-14	8-12.5	KSW 3
	901-1200	5-8	6.3-10	KSW 2	5-10	6.3-12.5	5.6-11.2	KSW 3
		9-11.2	11.2-14	KSW 3	11.2	14	12.5	*
	750-900	5-6.3	6.3-8	KSW 2	5-7.1	6.3-9	5.6-8	KSW 3
		7.1-10	9-12.5	KSW 3	8-11.2	10-14	9-12.5	*
		11.2	14	*				
MTB3.V ²⁾	1201-1800	12.5-35.5	16-45	KSW 2	12.5-22.4	16-28	14-25	KSW 2
		40-71	50-90	KSW 3	25-50	31.5-63	28-56	KSW 3
	901-1200	12.5-25	16-31.5	KSW 2	12.5-35.5	16-45	14-40	KSW 3
		28-50	35.5-63	KSW 3	40-56	50-71	45-63	KSW 4
	750-900	56-71	71-90	*	63-71	80-90	71-80	*
		12.5-35.5	16-45	KSW 3	12.5-25	16-31.5	14-28	KSW 3
		40-71	50-90	*	28-40	35.5-50	31.5-45	KSW 4
		40-71	50-90	*	45-71	56-90	50-80	*
MTB4.V ¹⁾	1201-1800	80-100	100-224	KSW 3	80-315	100-400	90-355	*
		200-315	250-400	*				
	80-125	100-180	KSW 3					
	140-315	180-400	*					
750-900	80-90	100-112	KSW 3					
	100-315	125-400	*					

*=所需电动泵, 参见表 11。 * = Motor pump required, see table 11
1) 布置形式 C, D Design C, D
2) 布置形式 A, B Design A, B

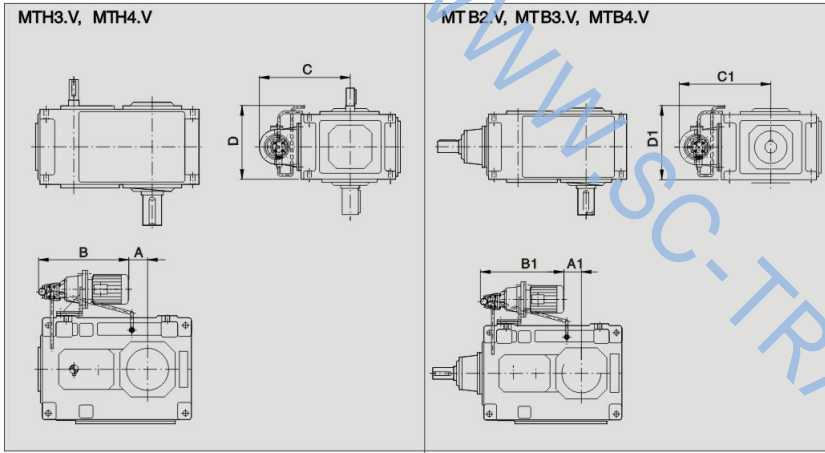
表 11 Table 11

立式安装直交轴箱采用法兰泵 Assignment of flanged-on pumps to vertical helical gear units

类型 Types	规格 Size	布置方式 Design	油泵 Pump
MTB2.V	5 ... 12	A / B	SF 2/5
	13 ... 18		SF 2/8
MTB3.V	5 ... 12	A / B	SF 2/8
	13 ... 18		SF 2/13
MTB4.V	5 ... 12	A / B	SF 2/8
	13 ... 18		SF 2/13
MTB3.V	5 ... 12	C / D	SF 2/8
	13 ... 18		SF 2/13
MTB4.V	5 ... 12	C / D	SF 2/8
	13 ... 18		SF 2/13



齿轮箱 Gear Units 电动泵强制润滑方式 Mounted Motor Pumps
类型 MTH3, MTH4, MTB2, MTB3, MTB4 Types MTH3, MTH4, MTB2, MTB3, MTB4
规格 5 ... 18 立式安装 Sizes 5 ... 18 Vertical



表格 12 Table 12
安装尺寸 Mounting dimensions on mm

类型 Types	规格 Size	布置形式 Design	A	B	C	D
MTH3.V	5/6	A/B/C/D	-30/5	560	480	385
	7/8	A/B/C/D	55/100	585	550	430
	9/10	A/B/C/D	140/190	610	565	500
	11/12	A/B/C/D	375/445	530	625	560
	13/14	A/C	155/225	880	670	700
	13/14	B/D	100/170	935	670	700
	15/16	A/C	275/320	965	710	770
	15/16	B/D	220/265	1020	710	770
MTH4.V	17/18	A/C	250/310	1040	770	835
	17/18	B/D	195/255	1095	770	835
	7/8	A/C	55/100	600	550	430
	7/8	B/D	0/45	680	550	430
	9/10	A/C	140/190	625	565	500
	9/10	B/D	85/135	705	565	500
	11/12	A/C	375/445	550	625	560
	11/12	B/D	320/390	635	625	560
MTB2.V	13/14	A/B/C/D	135/205	910	670	700
	15/16	A/B/C/D	255/300	1000	710	775
	17/18	A/B/C/D	230/290	1070	775	835

表格 13 Table 13
安装尺寸 Mounting dimensions on mm

类型 Types	规格 Size	布置形式 Design	A ₁	B ₁	C ₁	D ₁
MTB2.V	5/6	A/B/C/D	-160/-125	480	470	415
	7/8	A/B/C/D	5/50	480	525	510
	9/10	A/B/C/D	60/110	480	565	570
	11/12	A/B/C/D	150/220	480	625	660
	13/14	A/B/C/D	-70/0	755	670	805
	15/16	A/B/C/D	15/60	780	710	910
	17/18	A/B/C/D	-5/55	890	775	1025
	17/18	A/B/C/D	-85/-50	480	480	365
MTB3.V	7/8	A/B/C/D	-5/40	480	550	430
	9/10	A/B/C/D	85/115	480	565	500
	11/12	A/B/C/D	280/350	480	625	560
	13/14	A/B/C/D	35/105	810	670	700
	15/16	A/B/C/D	120/165	875	710	775
	17/18	A/B/C/D	165/225	970	775	835
MTB4.V	5/6	A/B/C/D	-35/0	480	480	385
	7/8	A/B/C/D	55/100	480	550	430
	9/10	A/B/C/D	140/190	615	565	500
	11/12	A/B/C/D	375/445	530	625	560
	13/14	A/B/C/D	135/205	905	670	700
	15/16	A/B/C/D	255/300	990	710	775
	17/18	A/B/C/D	230/290	1065	775	835

齿轮箱 Gear Units
采用实心轴、带储油管的齿轮箱的润滑油供给方式
Oil Supply for Gear Units With Solid Shaft and Oil Retaining
类型 MTH2 ... MTH4, MTB2 ... MTB4 Types MTH2 ... MTH4, MTB2 ... MTB4
规格 5 ... 18 立式安装 Sizes 5 ... 18 Vertical

表14 Table 14
可选润滑油供给方式
Possible oil supply variants

类型 Types	规格 Size	布置形式 Design		
		B	C	
MTH2SV	5-6	O ¹⁾	-	
	7-12	O ²⁾	-	
	13-18	O ³⁾	-	
MTH3SV	5-7	O	-	
	7-12	O	-	
	13-18	O	-	
MTH2SV	5-6	-	O	
	7-12	-	O	
	13-18	-	O	
MTB3SV	5-6	-	O	
	7-12	-	O	
	13-18	-	O	
MTB4SV	5-6	-	O	
	7-12	-	O	
	13-18	-	O	

- = 布置形式不允许 Design not possible

O = 可选强制润滑 Forced lubrication possible

1) 对于规格5号齿轮箱, 仅适用于速比 $i \leq 16$ For size 5 only possible up to $i \leq 16$

2) 对于规格7号齿轮箱, 仅适用于速比 $i \leq 16$ For size 7 only possible up to $i \leq 16$

对于规格11号齿轮箱, 仅适用于速比 $i \leq 18$ For size 11 only possible up to $i \leq 18$

3) 对于规格13号齿轮箱, 仅适用于速比 $i \leq 16$ For size 13 only possible up to $i \leq 16$

对于规格17号齿轮箱, 仅适用于速比 $i \leq 16$ For size 17 only possible up to $i \leq 16$

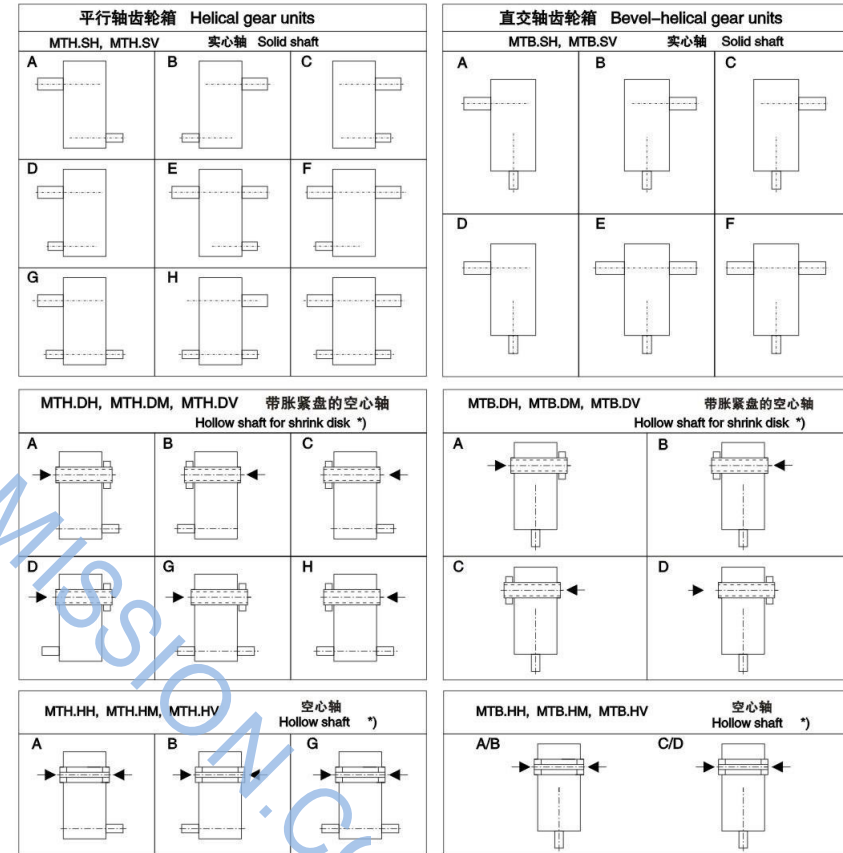


齿轮箱 GearUnit 润滑油供给方式监测之件 Oil Supply for
 类型 MTH2... MTH4, MTB2... MTB4 Types MTH2... MTH4, MTB2... MTB4
 立式安装 Vertical 规格 5...18 Sizes 5...18

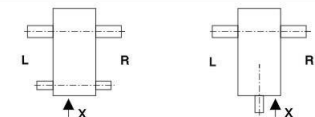
齿轮箱规格 5...12 Gear unit size 5...12	齿轮箱规格 13...18 Gear unit size 13...18
a) 过滤器 Coarse filter	a) 双切换过滤器 Double change-over filter
b) 压力监测开关 Pressure monitor	b) 压力监测开关 Pressure monitor
	c) 压力表连接 G 1/2 Connection for pressure gauge G 1/2

a) 过滤器用于滤除和收集杂质颗粒，以保护传动装置的安全。
 双切换过滤器带有并排布置的两个滤筒，设有一个光电污染指示器。
 压差 $\Delta p = 2\text{bar}$ ；1个切换触点
 电器参数最大额定值
 切换电压 $U \leq 250\text{V DC+AC}$
 切换电流 $I \leq 1\text{A}$
 切换容量 $P \leq 30\text{W}$ 或 $\leq 60\text{VA}$
 保护级别：IP65
 b) 当油压降至 0.5bar 以下时，压力监测开关通过报警系统可发出光、声报警信号，或关闭该系统。
 技术参数：
 最大切换能力：
 (交流) $2\text{A}/250\text{V, AC}/250\text{VA}$
 (直流) $4\text{A}/200\text{V, DC}/20\text{W}$
 保护级别：IP65
 a) Coarse filters serve to protect downstream units by catching and collecting dirt particles.
 Double change-over filters with opposed cylinders have an opot-electrical contamination indicator.
 Differential pressure $\Delta p = 2\text{bar}$; 1 change over contact.
 Electrical maximum ratings:
 Switching voltage $U \leq 250\text{V DC+AC}$
 Switching current $I \leq 1\text{A}$
 Switching capability $P \leq 30\text{W}$ or $\leq 60\text{VA}$
 Type of protection IP65
 b) When the oil pressure drops below 0.5bar , the pressure monitor in combination with a warning system can give an optical or acoustical warning or switch off the system'
 Technical data:
 Max. switching capacity:
 $2\text{A}/250\text{V, AC}/250\text{VA}$ (alternating current)
 $4\text{A}/200\text{V, DC}/20\text{W}$ (direct current)
 Type of protection IP65

齿轮箱 Gear Units 布置形式 Design
 类型 MTH2 ... MTH4 ..., MTB2 ... MTB4 Types MTH2 ... MTH4, MTB2 ... MTB4
 规格 1 ... 26 Sizes 1 ... 26



箭头表示工作机驱动轴插入方向
 The arrow indicates the direction of insertion of the driven machine shaft.
 附边 Attachment side



X 终端面上D₁的视图
 View on end face of D₁

L LH 边上的连接件
 Attachment on LH side
 R RH 边上的连接件
 Attachment on RH side