

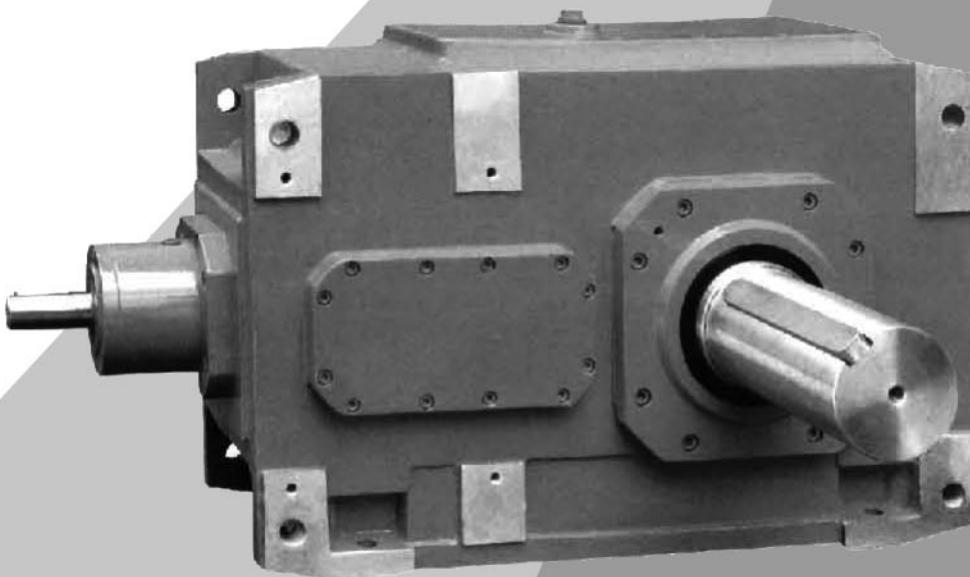


SFT 赛孚特

中国智造 转动世界

H/B SERIES

H/B 系列大功率减速机



齿轮箱 Gear Units

目录 Contents

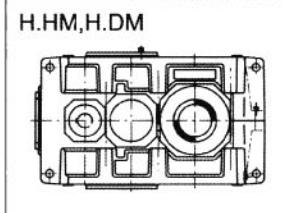
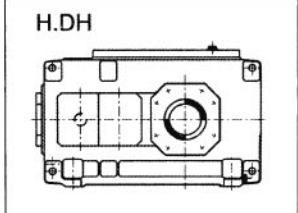
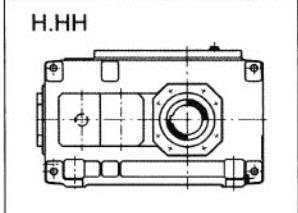
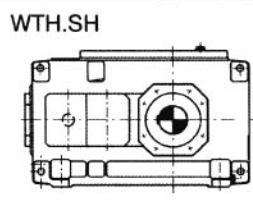
基本类型概括 Summary of basic types		(160~162)页 Pages (160~162)	
齿轮箱型号表示方法 Gear units designation of types		(163)页 Pages (163)	
齿轮箱选型, 额定功率, 输出扭矩, 允许的附加径向力 Selection of gear units, nominal power ratings, output torque, permissible additional radial forces.		(164~184)页 Pages (164~184)	
安装方式 Mounting	卧式安装 Horizontal	平行轴齿轮箱 Helical gear units H1SH	(185~186)页 Pages (185~186)
		平行轴齿轮箱 Helical gear units H2SH, H2HH, H2DH, H2HM, H2DM H3SH, H3HH, H3DH, H3HM, H3DM H4SH, H4HH, H4DH, H4HM, H4DM	(187~204)页 Pages (187~204)
		直行轴齿轮箱 Bevel-helical gear units B2SH, B2HH, B2DH, B2HM, B2DM B3SH, B3HH, B3DH, B3HM, B3DM B4SH, B4HH, B4DH, B4HM, B4DM	(205~220)页 Pages (205~220)
	立式安装 Vertical	平行轴齿轮箱 Helical gear units H2SV, H2HV, H2DV H3SV, H3HV, H3DV H4SV, H4HV, H4DV	(221~232)页 Pages (221~232)
		直行轴齿轮箱 Bevel-helical gear units B2SV, B2HV, B2DV B3SV, B3HV, B3DV B4SV, B4HV, B4DV	(233~244)页 Pages (233~244)
		平键及键槽的配合精度, 选用标准ISO Selection of ISO fits, parallel keys and keyways	(245~246)页 Pages (245~246)
带胀紧盘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		(247~250)页 Pages (247~250)	
冷却盘管 Cooling coils		(251~252)页 Pages (251~252)	
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)		(253~260)页 Pages (253~260)	
减速机电机法兰联接 Gear units motor mounting with flanges		(261~262)页 Pages (261~262)	
布置形式 Design		(263)页 Pages (263)	

齿轮箱 Gear Units

基本类型概括 Summary of Basic Types

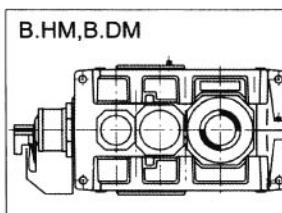
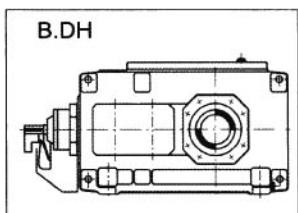
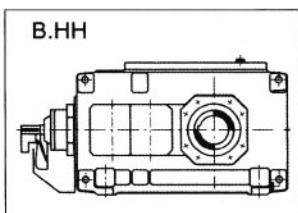
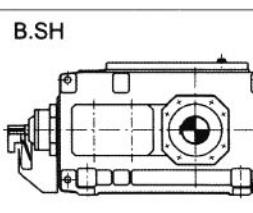
卧式安装
平行轴齿轮箱
类型 H1...,H2...,H3...,H4..
1...4-级传动, $iN=1.25-450$

Horizontal mounting position
Helical gear units
Types H1...,H2...,H3...,H4..
1...4-stage, $iN=1.25-450$



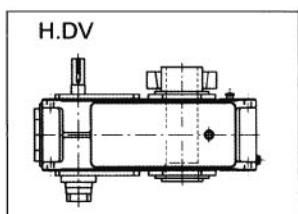
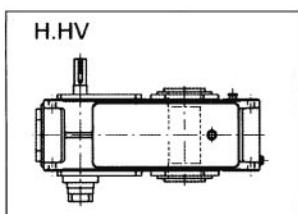
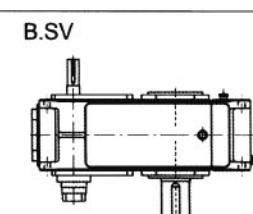
直交轴齿轮箱
类型 B2...,B3...,B4..
2...4-级传动, $iN=5-400$

Bevel-helical gear units
Types B2...,B3...,B4..
2...4-stage, $iN=5-400$



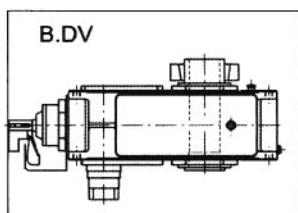
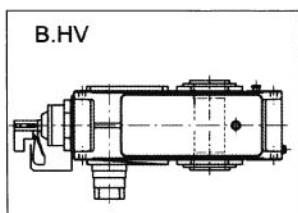
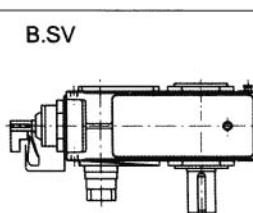
立式安装
平行轴齿轮箱
类型 H2.V,H3.V,H4.V
2...4-级传动, $iN=6.3-450$

Vertical mounting position
Helical gear units
Types H2.V,H3.V,H4.V
2...4-stage, $iN=6.3-450$



直交轴齿轮箱
类型 B2.V,B3.V,B4.V
2...4-级传动, $iN=5-400$

Bevel-helical gear units
Types B2.V,B3.V,B4.V
2...4-stage, $iN=5-400$



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（根据客户要求供货。）

安装方式

- 齿轮箱即可卧式安装，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供设备运行可靠性，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 productrange.

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。减速机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。实际油量应以油标上的标记为准。
- 润滑油粘度须以减速机铭牌上的数值为准。
- 减速机供货时带径向轴封。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 reductors 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 reductors 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 号以上减速机箱体地脚上配有千斤顶螺丝，箱盖上配有调平面。

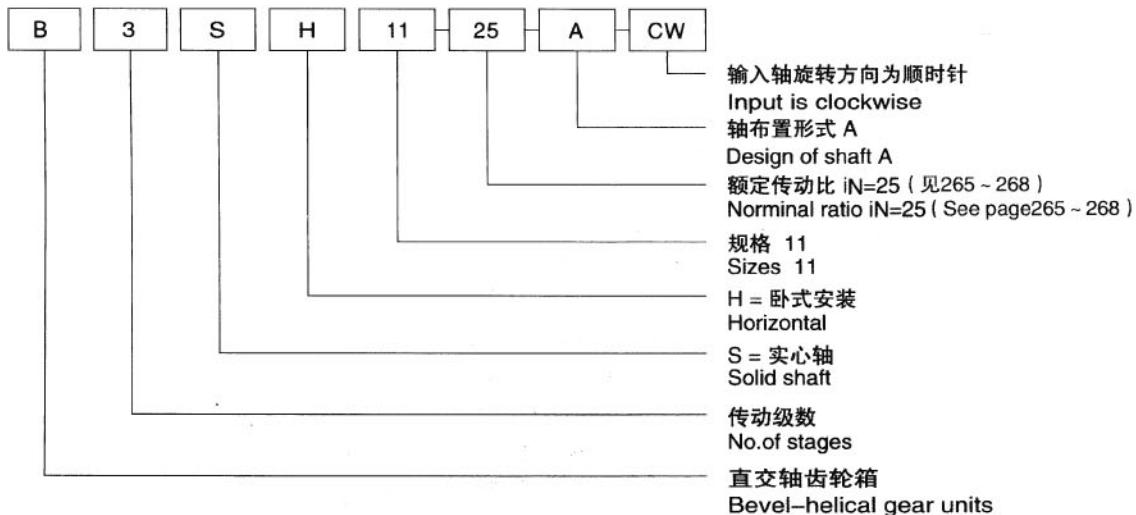
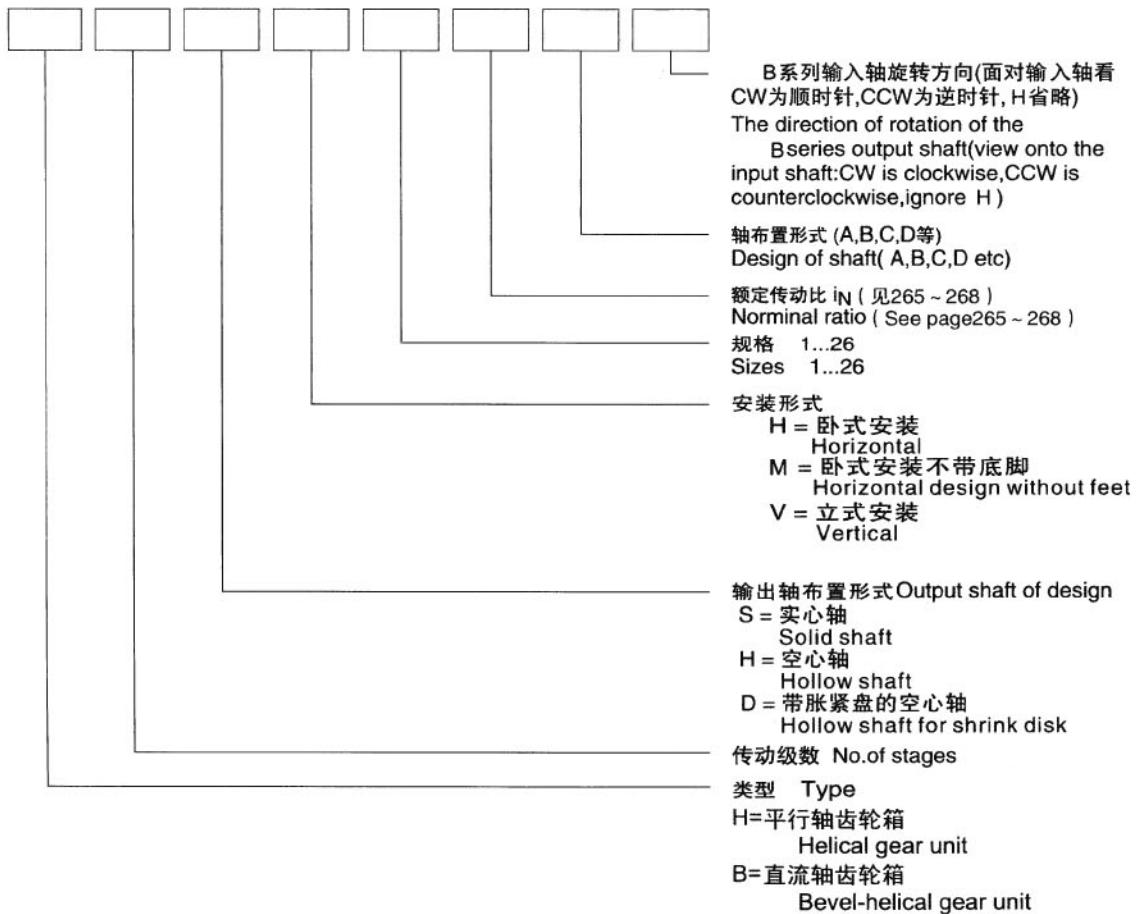
From size 13 up jack screws in the housing feet, and leveling pads on the upper housing part.

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

型号表示方法 Designation of Types



齿轮箱 Gear Units

选型指南 Guidelines for the Selection

1.确定齿轮箱的类型及规格 1.Determination of gear unit type and size	1.1 计算传动比 Find the transmission ratio $i_s = \frac{n_1}{n_2}$								
	1.2 确定齿轮箱的额定功率 Determine nominal power rating of the gear unit $P_N \geq P_2 \times f_1 \times f_2 \times S_A$ 如果不满足下列条件, 请向我们咨询 It is not necessary to consult us, if: $3.33 \times P_2 \geq P_N$								
	1.3 校核最大扭矩, 如峰值工作扭矩、起动扭矩或制动扭矩, 看其是否满足要求 1.3 Check for maximum torque, e. g. peak operating-, starting- or braking torque $P_N \geq \frac{T_A \times n_1}{9550} \times f_3$ 齿轮箱的规格和传动级数列在额定功率选型表中, 可根据 <i>iN</i> 和 <i>PN</i> 确定。 Gear unit sizes and number of reduction stages are given in rating tables depending on <i>iN</i> and <i>PN</i>								
	1.4 检查输出轴上是否允许有附加载荷; 见183~184页。 1.4 Check whether additional forces on the output shaft are permissible; see pages 183~184								
	1.5 根据265~268页上的表检查实际传动比是否满足要求 1.5 Check whether the actual ratio <i>i</i> as per table on pages 265~268 is acceptable								
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">安装方式 Mounting position</th> </tr> <tr> <th style="text-align: center;">卧式安装 Horizontal</th> <th style="text-align: center;">立式安装 Vertical</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;">2.确定供油方式 2.Determination of oil supply</td> <td style="padding: 5px;"> 所有需要润滑的零部件均浸在润滑油中, 或采用飞溅润滑方式, 也可按用户要求提供强制润滑方式。 All parts to be lubricated are lying in the oil or are splash lubricated. Forced lubrication on request 可选润滑油供给方式: —浸油润滑 —通过法兰联接泵或电动泵进行强制润滑。 有关合适的供油方式和选择标准, 参见266~273页。 Possible oil supply variations: —Dip lubrication —Forced lubrication by means of flanged-onpump or motor pump. For preferred variants and criteria for selection, page 266~273. </td> </tr> <tr> <td style="padding: 5px;">3.确定所需要的热容量PG 3.Determination of required thermal capacity PG</td> <td style="padding: 5px;"> 3.1 如满足以下条件, 则齿轮箱可不带辅助冷却装置: 3.1 Adequate for gear unit without auxiliary cooling, if: $P_2 \leq P_G = P_{G1} \times f_4 \times f_5 \times f_6 \times f_7$ 3.2 如满足以下条件, 则齿轮箱带冷却风扇可满足要求: 3.2 Adequate for gear unit with fan cooling, if: $P_2 \leq P_G = P_{G2} \times f_4 \times f_5 \times f_8 \times f_{10}$ 3.3 如满足以下条件, 则齿轮箱带冷却盘管可满足要求: 3.3 Adequate for gear unit with fitted cooling coil, if: $P_2 \leq P_G = P_{G3} \times f_5 \times f_7 \times f_8 \times f_{11}$ 3.3 如满足以下条件, 则齿轮箱带冷却盘管和风扇可满足要求: 3.3 Adequate for gear unit with cooling coil and fan, if: $P_2 \leq P_G = P_{G4} \times f_5 \times f_7 \times f_8 \times f_{12}$ 3.5 如需要较高的热容量, 则可按用户要求提供外部润滑油冷却装置进行冷却。 3.5 For higher thermal capacities, cooling by external oil cooler on request </td> </tr> </tbody> </table>	安装方式 Mounting position		卧式安装 Horizontal	立式安装 Vertical	2.确定供油方式 2.Determination of oil supply	所有需要润滑的零部件均浸在润滑油中, 或采用飞溅润滑方式, 也可按用户要求提供强制润滑方式。 All parts to be lubricated are lying in the oil or are splash lubricated. Forced lubrication on request 可选润滑油供给方式: —浸油润滑 —通过法兰联接泵或电动泵进行强制润滑。 有关合适的供油方式和选择标准, 参见266~273页。 Possible oil supply variations: —Dip lubrication —Forced lubrication by means of flanged-onpump or motor pump. For preferred variants and criteria for selection, page 266~273.	3.确定所需要的热容量PG 3.Determination of required thermal capacity PG	3.1 如满足以下条件, 则齿轮箱可不带辅助冷却装置: 3.1 Adequate for gear unit without auxiliary cooling, if: $P_2 \leq P_G = P_{G1} \times f_4 \times f_5 \times f_6 \times f_7$ 3.2 如满足以下条件, 则齿轮箱带冷却风扇可满足要求: 3.2 Adequate for gear unit with fan cooling, if: $P_2 \leq P_G = P_{G2} \times f_4 \times f_5 \times f_8 \times f_{10}$ 3.3 如满足以下条件, 则齿轮箱带冷却盘管可满足要求: 3.3 Adequate for gear unit with fitted cooling coil, if: $P_2 \leq P_G = P_{G3} \times f_5 \times f_7 \times f_8 \times f_{11}$ 3.3 如满足以下条件, 则齿轮箱带冷却盘管和风扇可满足要求: 3.3 Adequate for gear unit with cooling coil and fan, if: $P_2 \leq P_G = P_{G4} \times f_5 \times f_7 \times f_8 \times f_{12}$ 3.5 如需要较高的热容量, 则可按用户要求提供外部润滑油冷却装置进行冷却。 3.5 For higher thermal capacities, cooling by external oil cooler on request
安装方式 Mounting position									
卧式安装 Horizontal	立式安装 Vertical								
2.确定供油方式 2.Determination of oil supply	所有需要润滑的零部件均浸在润滑油中, 或采用飞溅润滑方式, 也可按用户要求提供强制润滑方式。 All parts to be lubricated are lying in the oil or are splash lubricated. Forced lubrication on request 可选润滑油供给方式: —浸油润滑 —通过法兰联接泵或电动泵进行强制润滑。 有关合适的供油方式和选择标准, 参见266~273页。 Possible oil supply variations: —Dip lubrication —Forced lubrication by means of flanged-onpump or motor pump. For preferred variants and criteria for selection, page 266~273.								
3.确定所需要的热容量PG 3.Determination of required thermal capacity PG	3.1 如满足以下条件, 则齿轮箱可不带辅助冷却装置: 3.1 Adequate for gear unit without auxiliary cooling, if: $P_2 \leq P_G = P_{G1} \times f_4 \times f_5 \times f_6 \times f_7$ 3.2 如满足以下条件, 则齿轮箱带冷却风扇可满足要求: 3.2 Adequate for gear unit with fan cooling, if: $P_2 \leq P_G = P_{G2} \times f_4 \times f_5 \times f_8 \times f_{10}$ 3.3 如满足以下条件, 则齿轮箱带冷却盘管可满足要求: 3.3 Adequate for gear unit with fitted cooling coil, if: $P_2 \leq P_G = P_{G3} \times f_5 \times f_7 \times f_8 \times f_{11}$ 3.3 如满足以下条件, 则齿轮箱带冷却盘管和风扇可满足要求: 3.3 Adequate for gear unit with cooling coil and fan, if: $P_2 \leq P_G = P_{G4} \times f_5 \times f_7 \times f_8 \times f_{12}$ 3.5 如需要较高的热容量, 则可按用户要求提供外部润滑油冷却装置进行冷却。 3.5 For higher thermal capacities, cooling by external oil cooler on request								

齿轮箱 Gear Units

符号说明 Key to Symbols

符号说明:

Key to symbols:

- E_D = 每小时工作周期,以百分比表示,如 $E_D=80\% / h$
 Operating cycle per hour in %, e.g. $E_D=80\% / h$
- f_1 = 工作机系数 (表1), 167页
 Factor for driven machine (table 1), pages 167
- f_2 = 原动机系数 (表2), 168页
 Factor for prime mover (table 2), page 168
- f_3 = 峰值扭矩系数 (表3), 168页
 Peak torque factor (table 3), page 168
- f_4, f_5 = 环境温度系数 (表4+表5), 168页
 Thermal factors (tables 4 + 5), page 168
- f_6, f_7 = 海拔高度系数 (表6+表7), 168页
 Factors for altitude (tables 6 + 7), page 168
- f_8 = 立式安装齿轮箱供油系数 (表8), 169页
 Oil supply factor for vertical gear units (Table 8), page 169
 对于卧式安装齿轮箱: $f_8=1$
 For horizontal gear units: $f_8=1$
- f_9, f_{10} = 热容量系数 (表9... 14), 169~170页
 Therm alcapacity factors(tables9...14),pages169~170
- a_1 = 规格系数
 Size factor
- a_2 = 传动比系数
 Transmission ratio factor
- i = 实际传动比
 Actual ratio
- i_N = 额定传动比
 Nominal ratio
- i_S = 要求传动比
 Required ratio
- n_1 = 输入转速 (1/min)
 Input speed (1/min)
- n_2 = 输出转速 (1/min)
 Output speed (1/min)
- P_G = 要求的热容量
 Required thermal capacity
- P_{G1} = 齿轮箱的热容量, 不带辅助冷却装置, 172~180页
 Thermal capacity for gear units without auxiliary cooling, pages 172~180
- P_{G2} = 齿轮箱的热容量, 带冷却风扇, 172~180页
 Thermal capacity for gear units with fan cooling, pages 172~180
- P_{G3} = 齿轮箱的热容量, 带内置冷却盘管, 172~180页
 Thermal capacity for gear units with built-in cooling coil, pages 172~180
- P_{G4} = 齿轮箱的热容量, 带内置冷却盘管和风扇, 172~180页
 Thermal capacity for gear units with built-in cooling coil and fan, pages 172~180
- P_N = 齿轮箱的额定功率(kW),见选型表,171~179页
 Nominal power rating of gear units(kW), see tables, pages 171~179
- P_2 = 工作机的额定功率 (kW)
 Power rating of driven machine (kW)
- t = 环境温度 (°C)
 Ambient temperature (°C)
- T_A = 输入轴最大扭矩, 如峰值工作扭矩、起动扭矩或制动扭矩 (N.m)
 Max. torque occurring on input shaft, e.g. peak operating-, starting- or braking torque(N.m)
- T_{2N} = 额定输出扭矩(kN.m),181~182页
 Nominal output torque (kN.m), pages 181~182
- SA = 减速机安全系数(表15) 168页
 Safety coefficient of speed reductor (table 15) Page 168

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: $P_1=75 \text{ kW}$

电机转速: $n_1=1500 \text{ rpm}$

最大起动扭矩: $T_A=720 \text{ N.m}$

工作机

皮带输送机功率: $P_2=66 \text{ kW}$

转速: $n_2=26 \text{ rpm}$

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): ($w \geq 4 \text{ m/s}$)

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 d_2 : 位于齿轮箱右侧 (面对输入轴), 即布置型式 C

输出轴 d_2 转动方向: ccw

KNOWN CRITERIA:

PRIME MOVER

Electric motor: $P_1=75 \text{ kW}$

Motor speed: $n_1=1500 \text{ rpm}$

Max. starting torque: $T_A=720 \text{ N.m}$

DRIVEN MACHINE

Belt conveyor: $P_2=66 \text{ kW}$

Speed: $n_2=26 \text{ rpm}$

Duty: 12 h/day

Starts per hour: 7

Operating cycle per hour: $E_D=100\%$

Ambient temperature: 30°C

Outdoor installation: ($w \geq 4 \text{ m/s}$)

Altitude: sea level

Reliability: normal

GEAR UNIT DESIGN

Bevel-helical reducers

Mounting position: horizontal

Output shaft d_2 : on right hand side design C

Direction of rotation of output shaft d_2 : ccw

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

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 B3, 规格 10, 对应的 $P_N=122 \text{ kW}$

Selected from power rating table: type B3, gear unit size 10, with $P_N=122 \text{ kW}$

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

1.3 检查起动扭矩 Checking the starting torque

$$P_N \geq \frac{T_A \times n_1}{9550} \times f_3 = \frac{720 \times 1500}{9550} \times 0.65 = 73.5 \text{ kW} \quad P_N = 96 \text{ kW} > 73.5 \text{ kW}$$

2. 确定热容量 Determination of thermal capacity

2.1 根据表中给出的B3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 B3

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

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

结论: 齿轮箱不带辅助冷却装置, 可满足要求!

Conclusion: A gear units without auxiliary cooling is sufficient!

表1

Table1

工作机最低工况系数f₁
Minimum working machine working condition coefficient f₁

工作机 Working machine		工作机最低工况系数f ₁ Minimum working machine working condition coefficient f ₁			工作机 Working machine			工作机最低工况系数f ₁ Minimum working machine working condition coefficient f ₁		
		≤0.5h	0.5-10h	>10h				≤0.5h	0.5-10h	>10h
污水 处理 Treatment	浓缩器(中心传动) Concentrator (central transmission)	-	-	1.2	起重 Hoisting 机械 machinery	回转机构 Rotary mechanism	2.50	2.75	3.00	
	压滤器 Filter press	1.00	1.30	1.5		俯仰机构 Elevation mechanism	2.50	2.75	3.00	
	絮凝器 Flocculator	0.80	1.00	1.3		行走机构 Walking mechanism	2.50	3.00	3.25	
	曝气机 Aerator	-	1.80	2		提升机构 Hoisting mechanism	2.50	2.75	3.00	
	搂集设备 Raking device	1.00	1.20	1.3		转臂式起重机 Rotary arm crane	2.50	2.75	3.00	
	纵向、回转组合搂集装置 Vertical and rotary combination raking device	1.00	1.30	1.5		挤压机 Extrusion press	-	-	1.60	
	预浓缩器 Pre-concentrator	-	1.10	1.3		调浆机 Size mixer	-	1.80	2.00	
	螺杆泵 Screw pump	-	1.30	1.5		橡胶砑光机 Rubber calender	-	1.50	1.75	
	水轮机 Hydraulic turbine	-	-	2		冷却圆筒 Cooling cylinder	-	1.30	1.50	
	离心泵 Centrifugal pump	1.00	1.20	1.3		混料机, 用于均匀介质 Mixer, for homogeneous medium	1.00	1.30	1.50	
钢铁 工业 industry	1个活塞容积试泵 1 piston volume test pump	1.30	1.40	1.8		混料机, 用于非均匀介质 Mixer, For inhomogeneous medium	1.40	1.60	1.80	
	>1个活塞容积试泵 >1 piston volume test pump	1.20	1.40	1.5		搅拌机, 用于密度均匀介质 Blender, for homogeneous density medium	1.00	1.30	1.50	
	拉线机 Wire drawing machine	1.25	1.50	1.75		搅拌机, 用于密度非均匀介质 Blender,For inhomogeneous density medium	1.20	1.50	1.75	
	绕线机 Reeling machine	1.00	1.25	1.5		烘炉 Baking oven	1.00	1.30	1.20	
	集中驱动轨道 (无反转) Centralized driving rail (without reverserotation)	1.25	1.50	1.75		离心机 Centrifugal machine	1.00	1.25	7.00	
	单独驱动轨道 (无反转) Individual driving rail (without reverserotation)	1.50	1.75	2	冷却塔 Cooling tower	冷却塔风扇 Cooling tower fan	-	-	2.00	
	集中驱动轨道 (有反转) Centralized driving rail (with reverse rotation)	1.75	2.25	2.5		风机(轴流和离心式) Fan (axial flow and centrifugal type)	-	1.40	1.50	
纺织 工业 industry	单独驱动轨道 (有反转) Individual driving rail (with reverse rotation)	2.00	2.25	2.75		蔗糖 Sucrose 生产 production	甘蔗切碎机 Sugarcane chopper	-	-	1.70
	可逆式中厚板轧机 Reversible middle thickness platerolling machine	-	2.50	2.75			甘蔗碾磨机 Sugarcane mill	-	-	1.70
	织机 Weaving machine	1.25	1.50	1.75		甜菜绞碎机 Beet mince	-	-	1.70	
	纺纱机 Spinning machine	1.00	1.25	1.5		榨取机, 机械制冷机, 蒸煮机 Squeezer, mechanical refrigerator, cooking machine	-	-	1.20	
	洗涤机 Washing machine	1.00	1.25	1.5		甜菜清洗机 Beet cleaner	-	-	1.40	
输送 Conveying	斗式输送机 Bucket conveyor	-	1.20	1.5	索道 Ropeway	甜菜切碎机 Beet choppe	-	-	1.50	
	绞车 Winding engine	1.40	1.60	1.8		运货索道 Cargo ropeway	-	1.30	1.40	
	卷扬机 Winding machine	-	1.50	1.8		往返系统空中索道 Reciprocating system aerial ropeway	-	1.60	1.80	
	货用电梯 Goods lift	-	1.20	1.5		T型杆升降机 T-shaped rod lifter	-	1.30	1.40	
	客用电梯 Passenger lift	-	1.50	1.8		连续索道 Continuous ropeway	-	1.40	1.60	
	刮板式输送机 Scraper conveyor	-	1.20	1.5	水泥 Cement 工业 industry	混凝土搅拌器 Concrete blender	-	1.50	1.50	
	自动扶梯 Escalator	-	1.20	1.4		破碎机 Cracking machine	-	1.20	1.40	
机械 machinery	轨道行走机构 Rail walking mechanism	-	1.50	-		回转窑 Rotary kiln	-	-	2.00	
	各种类型 Various types	-	1.80	2		管式磨机 Pipe type grinding machine	-	-	2.00	
	碎浆机驱动装置 Drive device of pulp shredder	2.00	2.00	2		选粉机 Powder choosing machine	-	1.60	1.60	
	往复式压缩机 Reciprocating compressor	-	1.80	1.9		辊压机 Roller press	-	-	2.00	

齿轮箱 Gear Units

服务系数 Service Factor

表2 原动机系数 Table 2 Factor for prime mover		f_2
电机, 液压马达, 气轮机 Electric motors, hydraulic motors turbines		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 1:100 to 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

表3 峰值扭矩系数 Table 3 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

表4 环境温度系数 Table 4 Thermal factor		f_4
不带辅助冷却装置或仅带冷却风扇 Without auxiliary cooling or with fan cooling		
环境温度 Ambient temperature	每小时工作周期(ED)百分比% Operating cycle per hour(ED)in %	
	100	80
	60	40
	20	
10°C	1.14	1.20
20°C	1.00	1.06
30°C	0.87	0.93
40°C	0.71	0.75
50°C	0.55	0.58
	0.64	0.74
	0.98	

表5 环境温度系数 Table 5 Thermal factor		f_5
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		
环境温度 Ambient temperature	每小时工作周期(ED)百分比% Operating cycle per hour(ED)in %	
	100	80
	60	40
	20	
10°C	1.04	1.10
20°C	1.00	1.06
30°C	0.93	0.99
40°C	0.88	0.93
50°C	0.81	0.86
	0.94	1.09
	1.45	

表6 海拔高度系数 Table 6 Factor for altitude		f_6
不带辅助冷却装置或只带冷却风扇 Without auxiliary cooling or with fan cooling		
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
1000	2000	3000
	4000	5000
f_6	1.0	0.95
	0.90	0.85
	0.80	

表7 海拔高度系数 Table 7 Factor for altitude		f_7
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		
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
1000	2000	3000
	4000	5000
f_7	1.0	0.98
	0.96	0.94
	0.92	

表15 减速机安全系数 Table 15 Factor safety				s_A
重要性与 安全要求 Importance and safety requirements	一般设备, 减速 器失效仅引起单 机停产且更换 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.	一般设备, 减速 器失效仅引起机 组、生产线或全 厂停产 The failure of ordinary equipment and speed reducer can only result in production halts or machines, production lines or the whole factory.	高度安全要求, 减速器失效引起 设备、人身 事故 Higher safety requirements, the failure of speed reducer can cause the incident of equipment and human body.	
	SA	1.3-1.7	1.5-2.0	1.7-2.5

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 Table 12 Thermal capacity factor for gear units with fan and cooling coil										f_{12}
齿轮箱 类型 Gear unit type	n r/min	安装地点 Place of installation				H3	750	0.94	0.95	1.00
		狭小空间安装 风速 Small confined spaces Wind velocity $\geq 0.5\text{m/s}$	室内大厅,大车间安装 风速 Large halls, workshops Wind velocity $\geq 1.4\text{m/s}$	室外安装 风速 In the open Wind velocity $\geq 4.0\text{m/s}$			1000	1.14–0.46 $\times a_1 \times a_2$	1.15–0.47 $\times a_1 \times a_2$	1.20–0.48 $\times a_1 \times a_2$
H1	750	0.98	0.98	1.00		B2	1500	1.51–2.10 $\times a_1 \times a_2$	1.52–2.00 $\times a_1 \times a_2$	1.57–2.00 $\times a_1 \times a_2$
	1000	1.19–0.09 $\times a_1 \times a_2$	1.20–0.09 $\times a_1 \times a_2$	1.22–0.09 $\times a_1 \times a_2$			1800	1.71–3.30 $\times a_1 \times a_2$	1.72–3.30 $\times a_1 \times a_2$	1.77–3.20 $\times a_1 \times a_2$
	1500	1.56–0.31 $\times a_1 \times a_2$	1.56–0.30 $\times a_1 \times a_2$	1.57–0.29 $\times a_1 \times a_2$			750	0.97	0.98	1.00
	1800	1.75–0.52 $\times a_1 \times a_2$	1.76–0.52 $\times a_1 \times a_2$	1.77–0.52 $\times a_1 \times a_2$			1000	1.17–0.08 $\times a_1 \times a_2$	1.18–0.08 $\times a_1 \times a_2$	1.21–0.12 $\times a_1 \times a_2$
H2	750	0.97	0.98	1.00		B3	1500	1.55–0.47 $\times a_1 \times a_2$	1.55–0.47 $\times a_1 \times a_2$	1.58–0.52 $\times a_1 \times a_2$
	1000	1.19–0.25 $\times a_1 \times a_2$	1.20–0.25 $\times a_1 \times a_2$	1.22–0.25 $\times a_1 \times a_2$			1800	1.74–0.81 $\times a_1 \times a_2$	1.75–0.82 $\times a_1 \times a_2$	1.77–0.84 $\times a_1 \times a_2$
	1500	1.59–1.06 $\times a_1 \times a_2$	1.59–1.00 $\times a_1 \times a_2$	1.61–1.00 $\times a_1 \times a_2$			750	0.97	0.97	1.00
	1800	1.82–1.80 $\times a_1 \times a_2$	1.82–1.80 $\times a_1 \times a_2$	1.84–1.80 $\times a_1 \times a_2$			1000	1.17–0.08 $\times a_1 \times a_2$	1.18–0.10 $\times a_1 \times a_2$	1.21–0.19 $\times a_1 \times a_2$

对于系数 $f_{12} < 0.5$, 请与我们联系 For factor $f_{12} < 0.5$, please refer to us!

表13 尺寸系数 Size factor a1 Table 13												
Size	3	4	5	6	7	8	9	10	11	12	13	14
a1	0.024	0.030	0.050	0.055	0.065	0.075	0.085	0.095	0.135	0.160	0.190	0.200
Size	15	16	17	18	19	20	21	22	23	24	25	26
a1	0.027	0.290	0.320	0.345	0.370	0.390	0.530	0.610				

*) 对于这些尺寸, 请与我们联系 *) for these sizes, please refer to us!

表14 传动比系数 Transmission ratio factor a2 Table 14														
i	H1SH	i	H2SH	i	H3SH	i	H4SH	i	B2SH	i	B3SH	i	B4SH	
1.25	13.000		6.3	1.800		22.4	0.320		100	0.020		5	3.500	
1.4	12.000		7.1	1.600		25	0.310		112	0.015		5.6	2.800	
1.6	10.000		8	1.400		28	0.270		125	0.012		6.3	2.400	
1.8	8.500		9	1.100		31.5	0.230		140	0.009		7.1	1.900	
2	8.000		10	0.890		35.5	0.190		160	0.007		8	1.600	
2.24	7.000		11.2	0.740		40	0.170		180	0.004		9	1.350	
2.5	6.500		12.5	0.630		45	0.160		200	0.002		10	1.200	
2.8	6.000		14	0.530		50	0.110		224	0.000		11.2	1.100	
3.15	3.500		16	0.450		56	0.080		250	0.000		12.5	0.950	
3.55	3.300		18	0.370		63	0.050		280	0.000		14	0.850	
4	2.900		20	0.330		71	0.045		315	0.000		16	0.800	
4.5	2.100		22.4	0.320		80	0.040		355	0.000		18	0.750	
5	1.600		25	0.310		90	0.035		400	0.000			50	
5.6	1.600		28	0.270		100	0.020		450	0.000			56	
						112	0.015						63	
													71	
													80	
													90	

齿轮箱 Gear Units

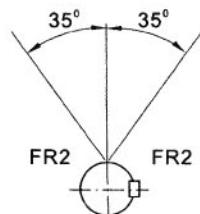
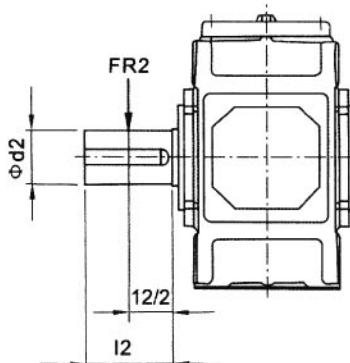
输出轴 d2 上允许的附加径向力 1) Permissible Additional Radial Forces on Output Shaft d2 1)

类型 H1S., H2S., H3S., H4S., B2S., B3S., B4S

Types H1S., H2S., H3S., H4S., B2S., B3S., B4S

作用力在轴端中部

Application of force on centre of shaft end



允许的作用力方向
Permissible direction of force

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) Gear unit sizes), 4																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
H1SH	A/B	2)	-	2)	-	2)	-	2)	-	2)	-	2)	-	2)	-	2)	-	2)	
H2S.	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
H3S.	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
H4S.	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
B2S.	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
B3S.	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
B4S.	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

1) 表中数据为最小值。如果给定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。请与我们取得联系。

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.

2) 根据用户要求供货。On request.

3) 当作用力不在轴端中部时，请参见第 197 页。For application of force outside the center of the shaft end, see page 197

4) 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 Geau Units

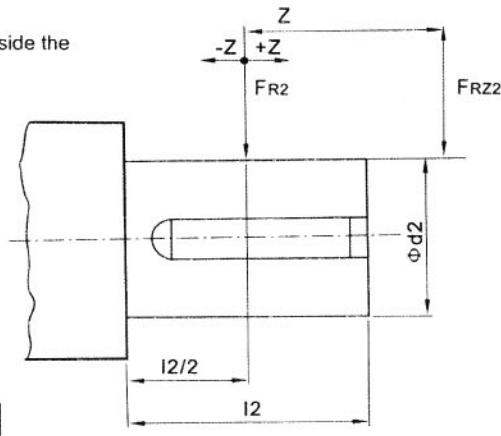
输出轴 d2 上允许的附加径向力 Permissible Additional Radial Forces on Output Shaft d2

类型 H1S., H2S., H3S., H4S., B2S., B3S., B4S

Types H1S., H2S., H3S., H4S., B2S., B3S., B4S

作用力不在轴端中部
 Application of force outside the centre of the shaft end

$$FRZ2 = FR2 \times K$$



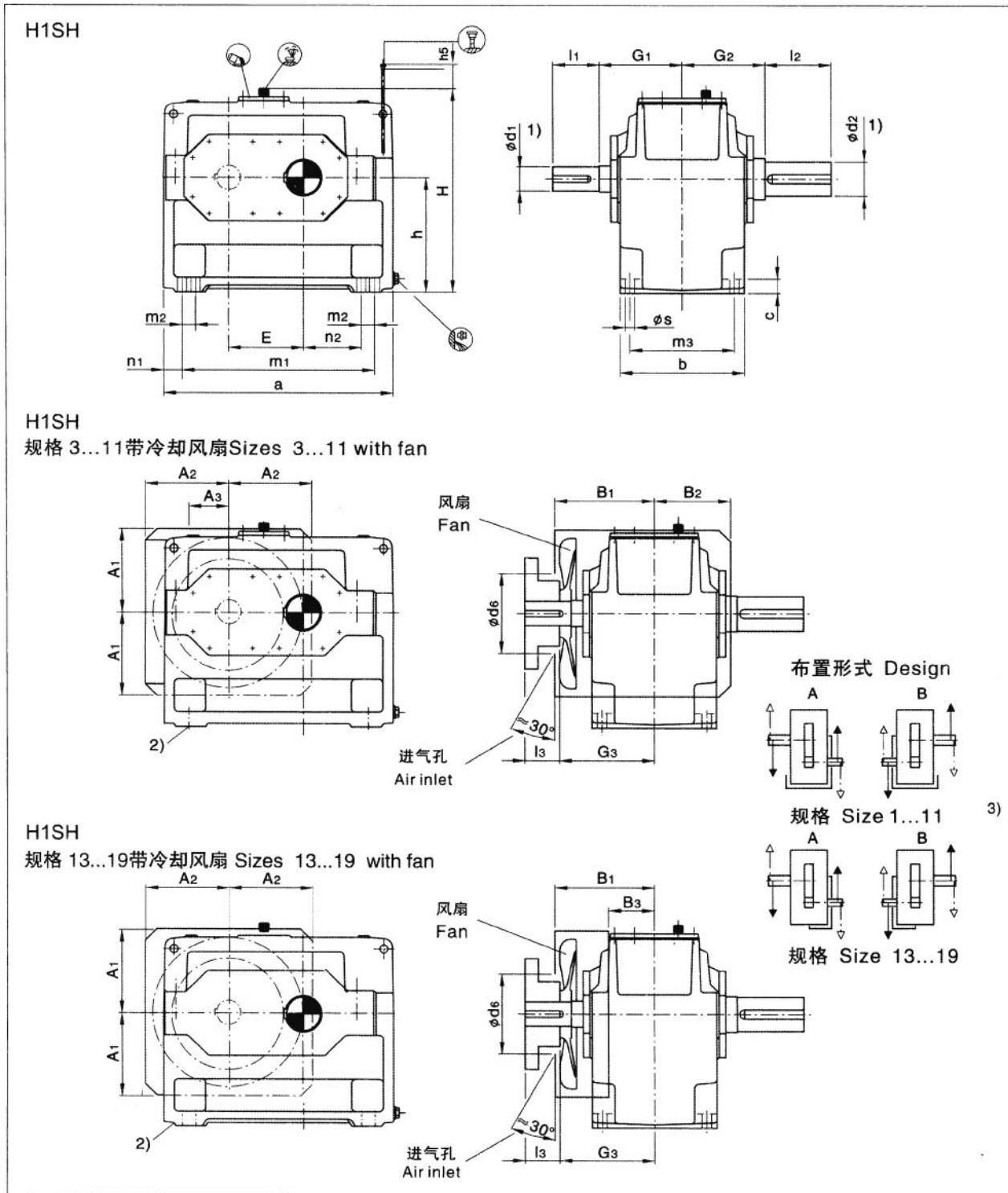
FRZ2 允许的轴端外部径向力
 FRZ2 Permissible external radial force

FR2 允许的附加径向力根据248页上的表确定
 FR2 Permissible additional radial force
 acc.to table page 248

K 作用力系数根据下表确定
 K Factor of application of force acc.to table

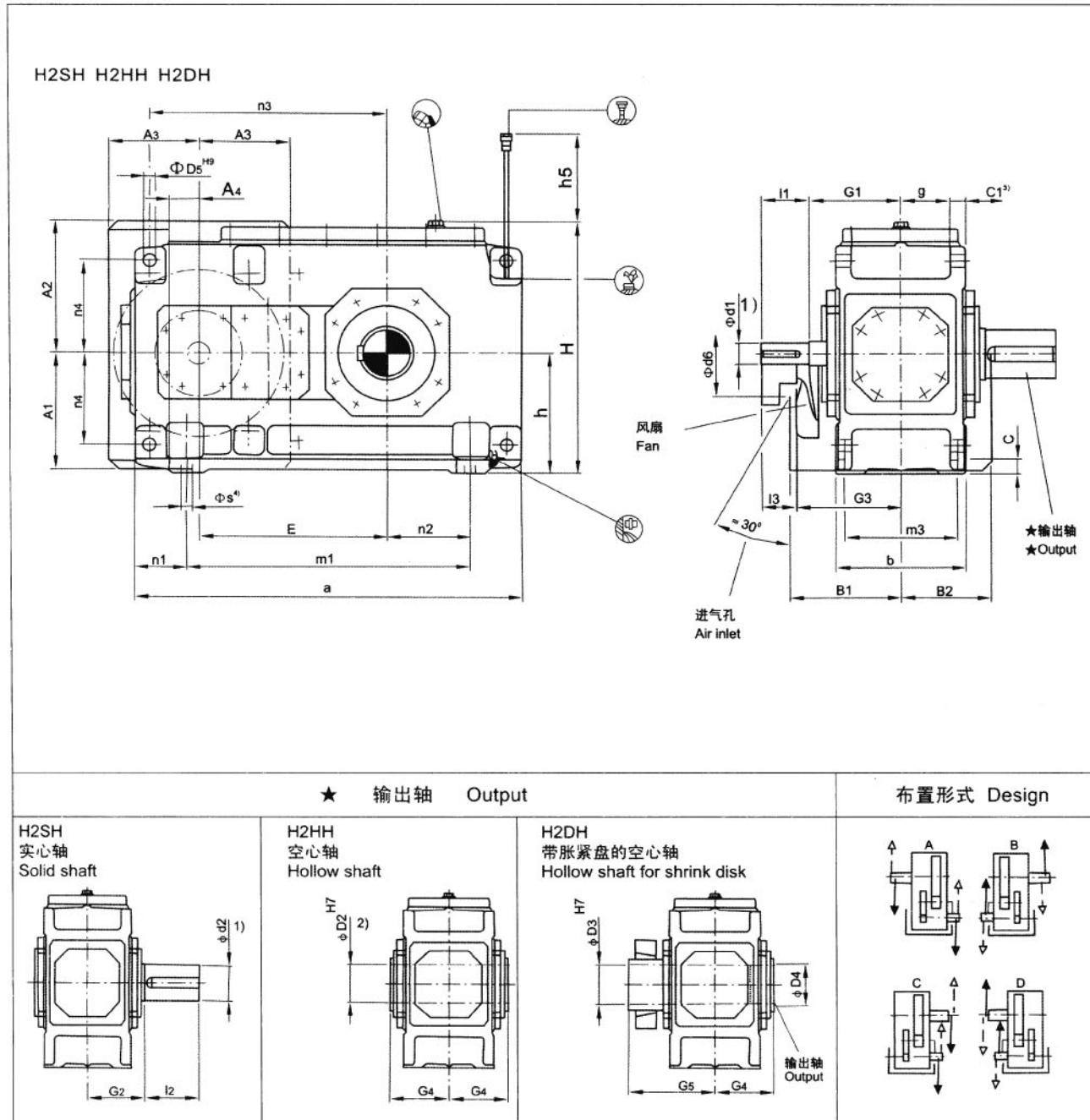
规格 Size	作用力系数 K Factor of application of force K														
	距离 Z (mm) Distance Z in mm														
	-200	-150	-100	-75	-50	-25	0	25	50	75	100	105	200	250	300
1						1.11	1.00	0.81	0.68	0.58	0.51				
2						1.11	1.00	0.83	0.71	0.63	0.56				
3					1.21	1.09	1.00	0.85	0.74	0.65	0.58	0.48			
4					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 H1SH Type H1SH 规格1...19 Size 1...19



平行轴齿轮箱 Helical Gear Units
 类型 H2.H Type H2.H

两级传动 Two stage 卧式安装 Horizontal
 规格 3...12 Sizes 3...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 258~259 页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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

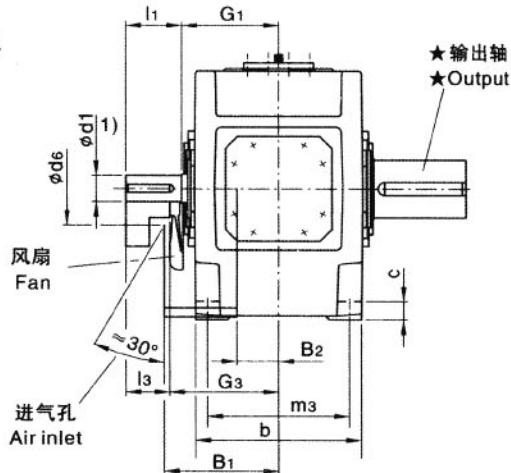
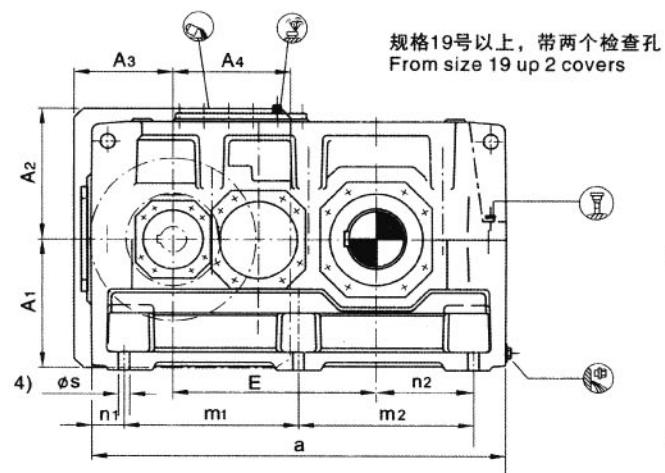
3) 扭力支撑位于工作机侧。Torque support on driven machine side.

4) 在安装螺栓前，应先拆下风扇罩 Remove air guide cover before fitting the foundation bolts.

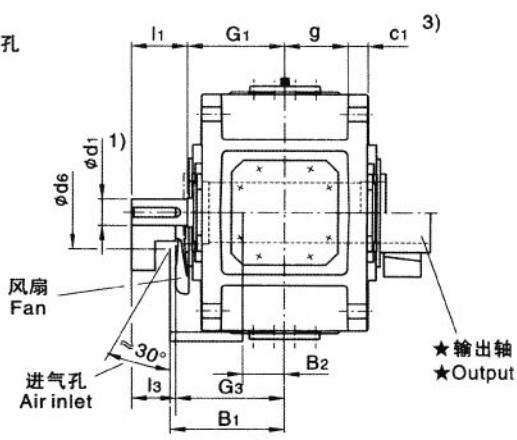
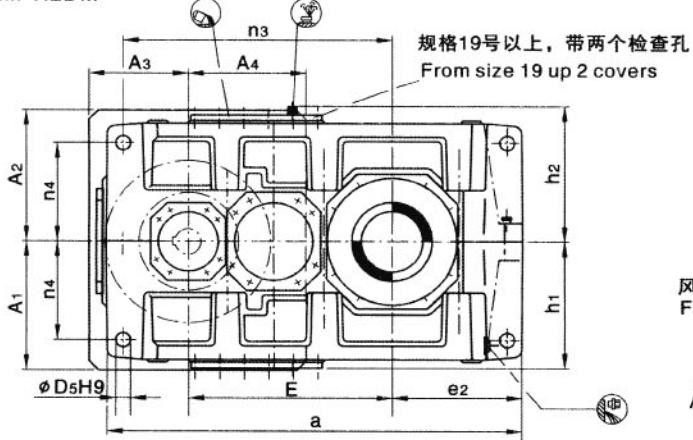
平行轴齿轮箱 Helical Gear Units
 类型 H2.H,H2.M Type H2.H,H2.M

两级传动 Two stage 卧式安装 Horizontal
 规格 13...22 Sizes 13...22

H2SH H2HH H2DH



H2HM H2DM



★ 输出轴 Output

布置形式 Design

H2SH 实心轴 Solid shaft	H2HH ⁵⁾ ,H2HM ⁵⁾ 空心轴 Hollow shaft	H2DH ⁵⁾ ,H2DM ⁵⁾ 带胀紧盘的空心轴 Hollow shaft for shrink disk	

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 258~259 页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259

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

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

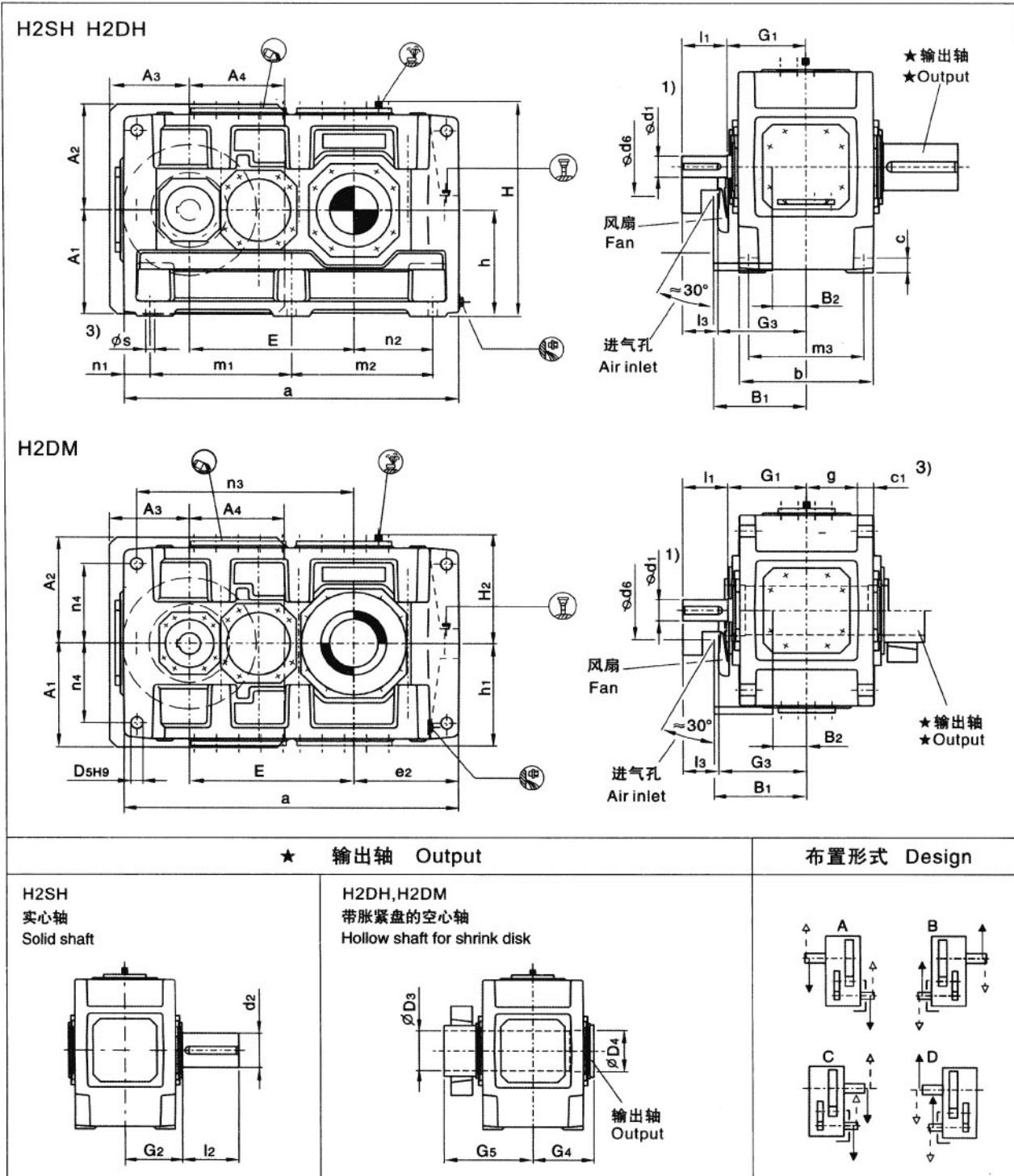
4) 在安装基础螺栓前，应拆下风扇罩。Remove air guide cover before fitting the foundation bolts.

5) 规格13和15：速比只有i=6.3-18；规格17号和19号：速比只有i=6.3-16

Size 13 and 15: only i=6.3-18; Size 17 and 19: only i=6.3-16.

平行轴齿轮箱 Helical Gear Units
 类型 H2.H,H2.M Type H2.H,H2.M

两级传动 Two stage 卧式安装 Horizontal
 规格 23...26 Sizes 23...26



1) $k_6 \leq \Phi 50$ $m_6 > \Phi 50$

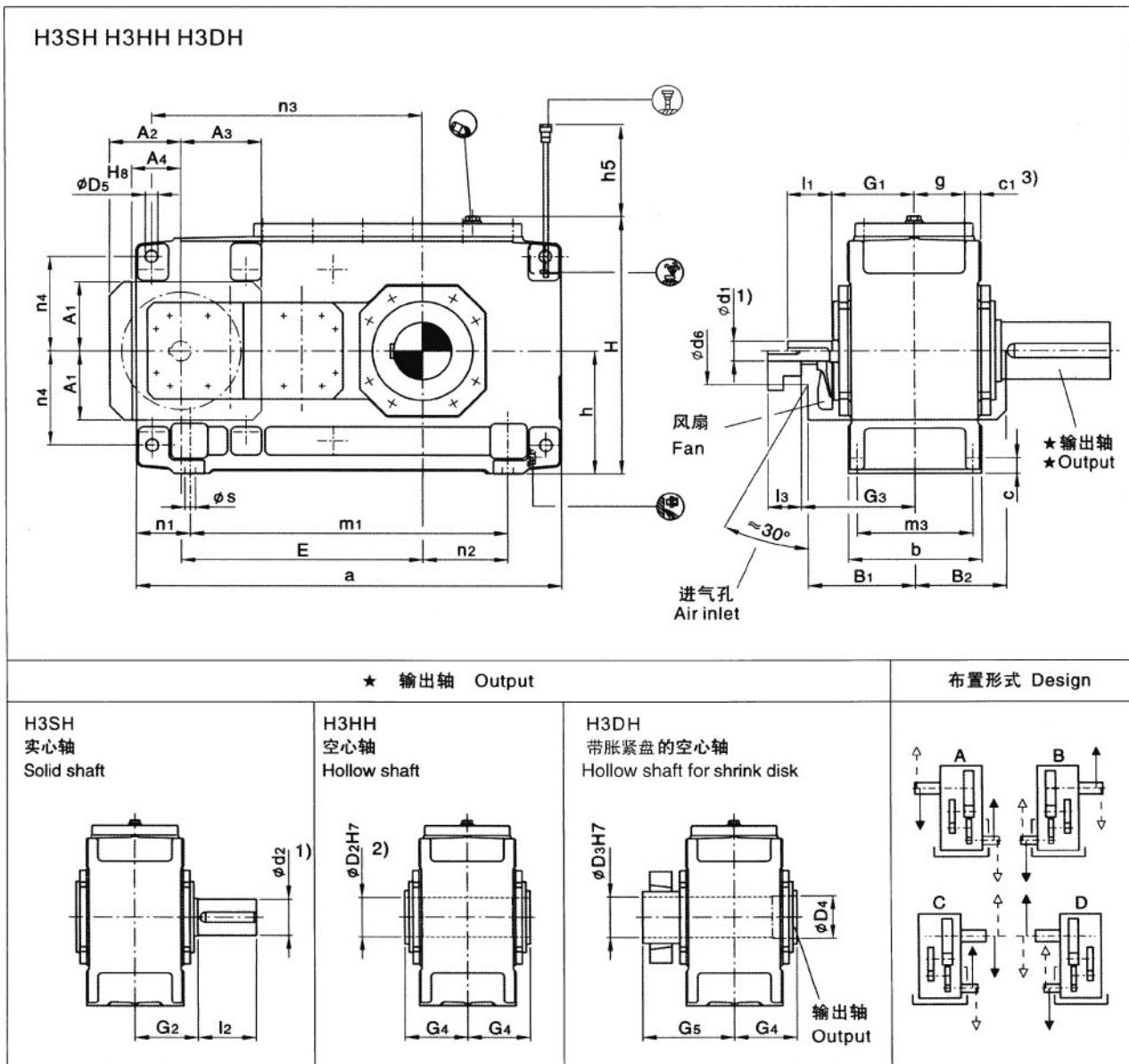
有关平键 GB/T1095-1979 型和中心孔，参见第 258~259 页。 For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 H3.H Type H3.H

三级传动 Three stage 卧式安装 Horizontal
 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258~259页。 For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 Reducers 三级传动 Three Stage 卧式安装 Horizontal
 类型 H3.H Type H3.H 规格 5...12 Sizes 5...12

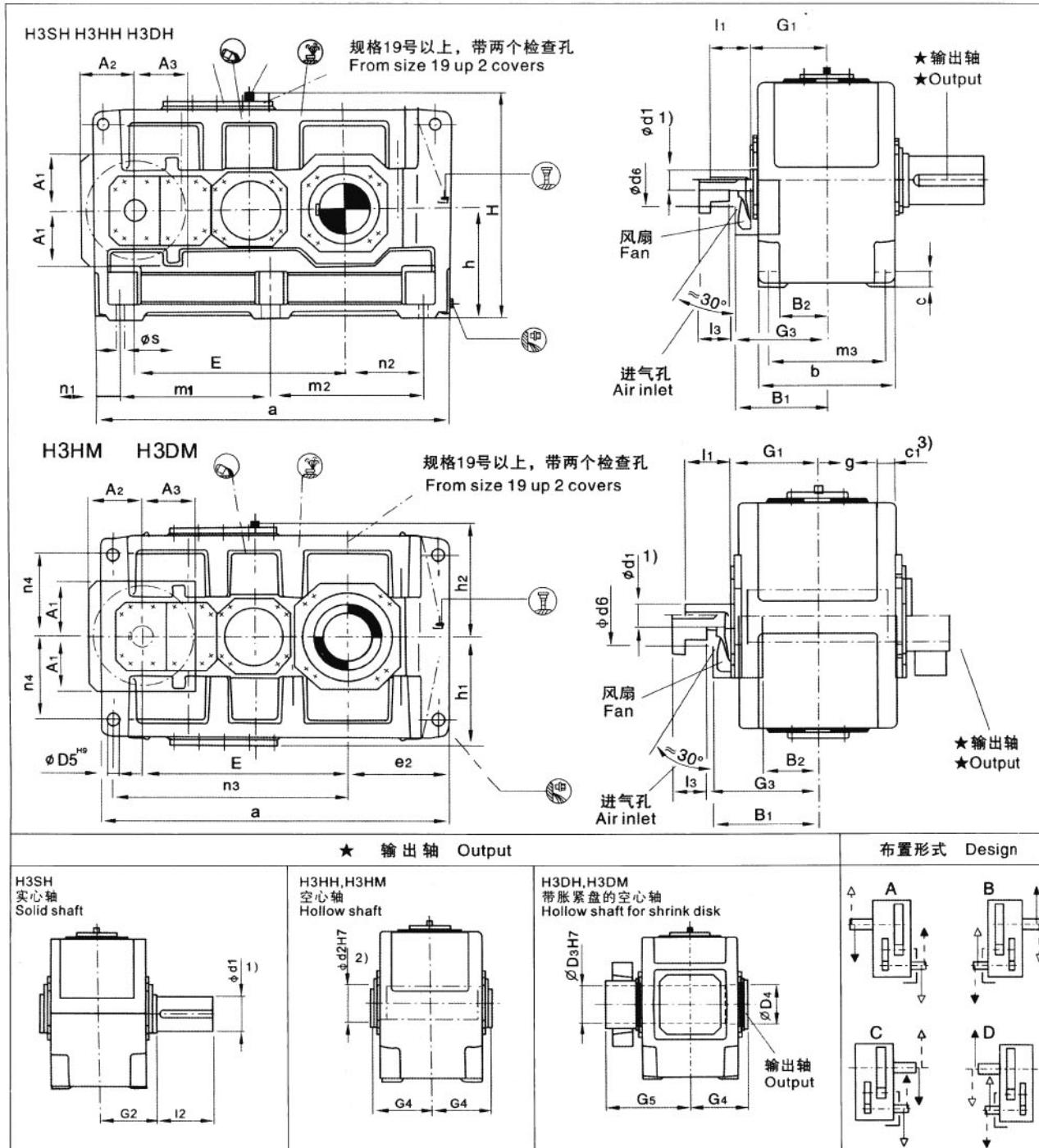
规格 Size	尺寸 mm Dimensions in mm																	
	输入轴 Input																	
	iN=25-45			iN=31.5-56			iN=50-63			iN=63-80			iN=71-90			iN=90-112		
	d1 ¹⁾	l1	l3	d1 ¹⁾	l1	l3	d1 ¹⁾	l1	l3	d1 ¹⁾	l1	l3	d1 ¹⁾	l1	l3	d1 ¹⁾	l1	l3
5	40	70	70				30	50	50				24	40	40			160 220
6				40	70	70				30	50	50				24	40	40 160 220
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	A1	A2	A3	A4	b	B1	B2	c	c1	d6	D5
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	h5	H	m1	m3	n1	n2	n3	n4	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	775	161	380	170	790	1025	370	165	265	875	300	35

规格 Size	尺寸 mm Dimensions in mm										润滑油 Lubrication (L)	重量 Weight (kg)		
	输出轴 Output													
	H3SH			H3HH			H3DH							
d2 ¹⁾	G2	l2	D2 ²⁾	G4	D3	D4	G4	G5						
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 H3.H, H3.M Types H3.H, H3.M 规格 13... 22 Sizes 13...22



1) $k_6 \leq \Phi 50$ $m_6 > \Phi 50$

有关键 GB/T1095-1979 型和中心孔, 参见第 258~259页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

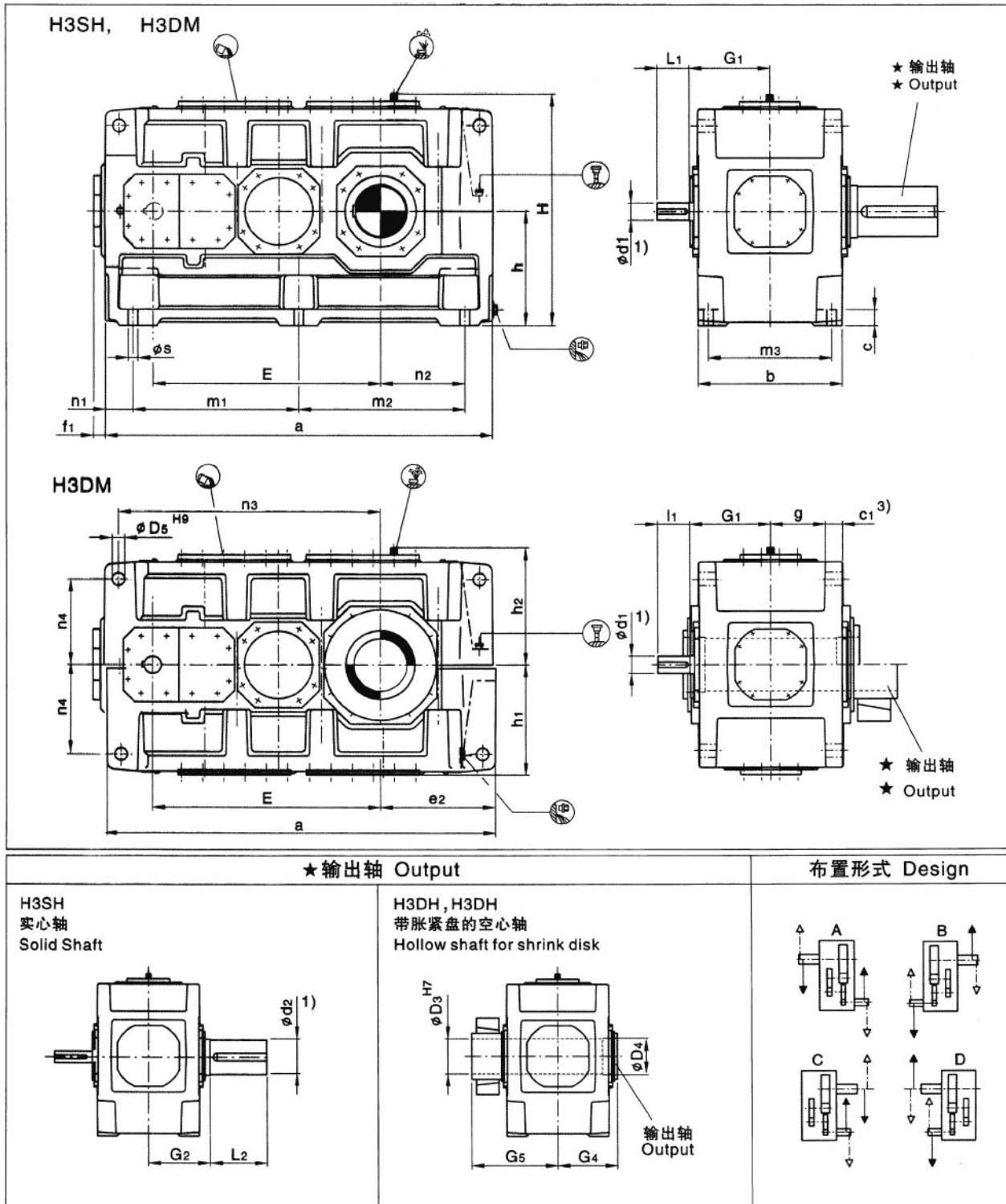
2) 键槽 GB/T1095-1979。 Keyway GB/T1095-1979.

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 H3.H, H3.M Types H3.H, H3.M

三级传动 Three Stage
 规格 23...26 Sizes 23...26

卧式安装 Horizontal



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258~259页。 For parallel key GB/T1095-1979 and for centre hole, see page258~259.

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												
	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	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

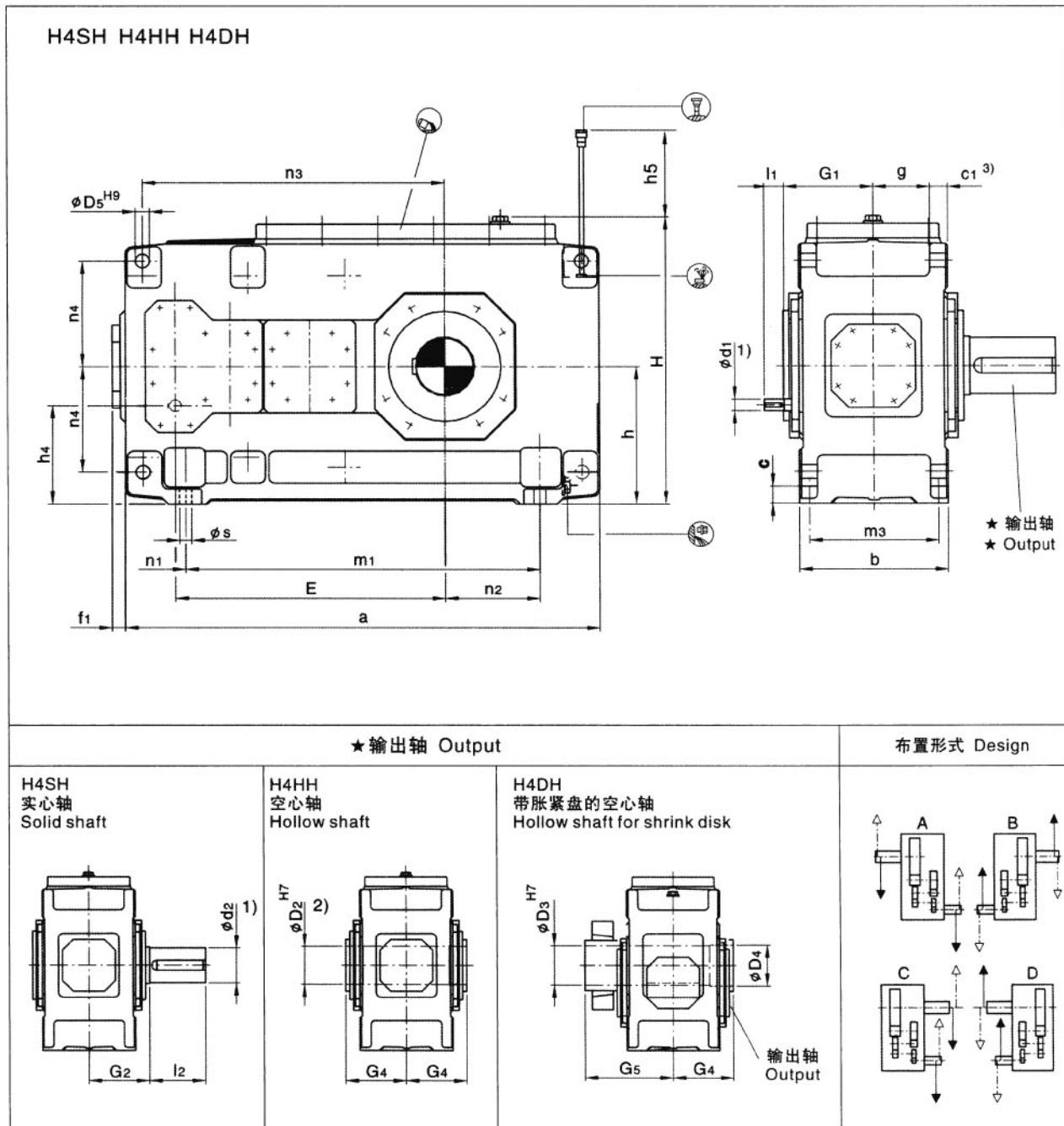
规格 Size	尺寸mm Dimensions in mm										
	齿轮箱 Gear units										
	h ₂	H	m ₁	m ₂	m ₃	n ₁	n ₂	n ₃	n ₄	s	
23	790	1570	1085	1085	810	180	550	1725	580	56	
24	790	1570	1085	1215	810	180	615	1790	580	56	
25	860	1720	1215	1215	910	200	590	1965	660	66	
26	860	1720	1215	1395	910	200	680	2055	660	66	

规格 Size	尺寸mm Dimensions in mm							润滑油 Lubrication		重量 Weight	
	输出轴 Output										
	H3SH			H3SH		H3SM		H3.H	H3.M	H3.H	H3.M
	D ₂ 1)	G ₂	l ₂	D ₃	D ₄	G ₄	G ₅	(L)	(L)	(Kg)	(Kg)
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 H4.H Type H4.H

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

卧式安装 Horizontal



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258~259页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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.

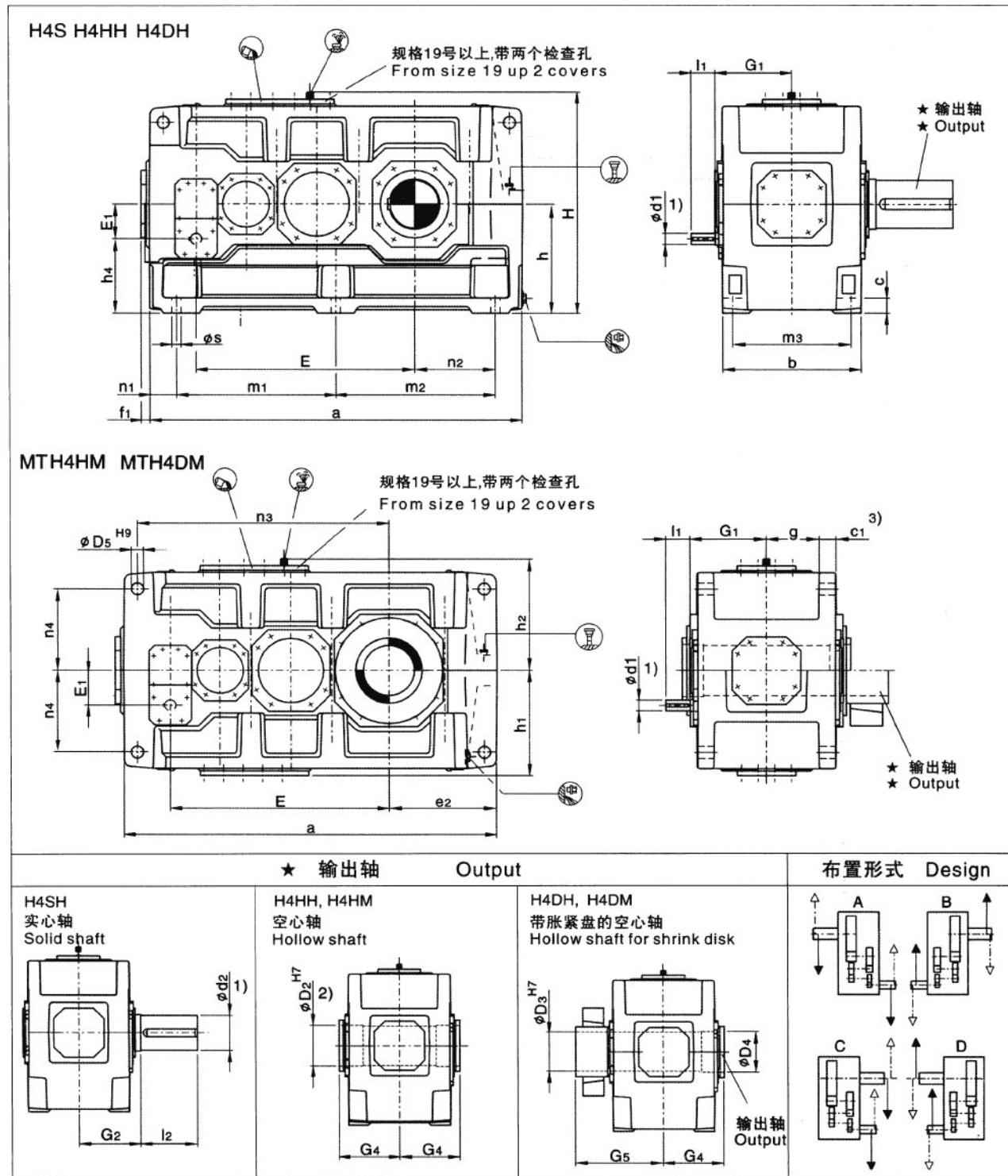
平行轴齿轮箱 Helical Gear Units 四级传动 Four Stage 卧式安装 Horizontal
 类型 H4.H Type H4.H 规格 7...12 Sizes 7...12

规格 Size	尺寸 mm Dimensions in mm								G1	
	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								
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	c ₁	D ₅	E	f ₁	g	h	h ₄	h ₅	H	m ₁	m ₃	n ₁	n ₂	n ₃	n ₄	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 Lubrication (L)	重量 Weight (kg)		
	输出轴 Output												
	H4SH			H4HH			H4DH						
	d ₂ ¹⁾	G ₂	l ₂	D ₂ ²⁾	G ₄	D ₃	D ₄	G ₄	G ₅				
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 H4.H, H4.M Types H4.H, H4.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258~259页。 For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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

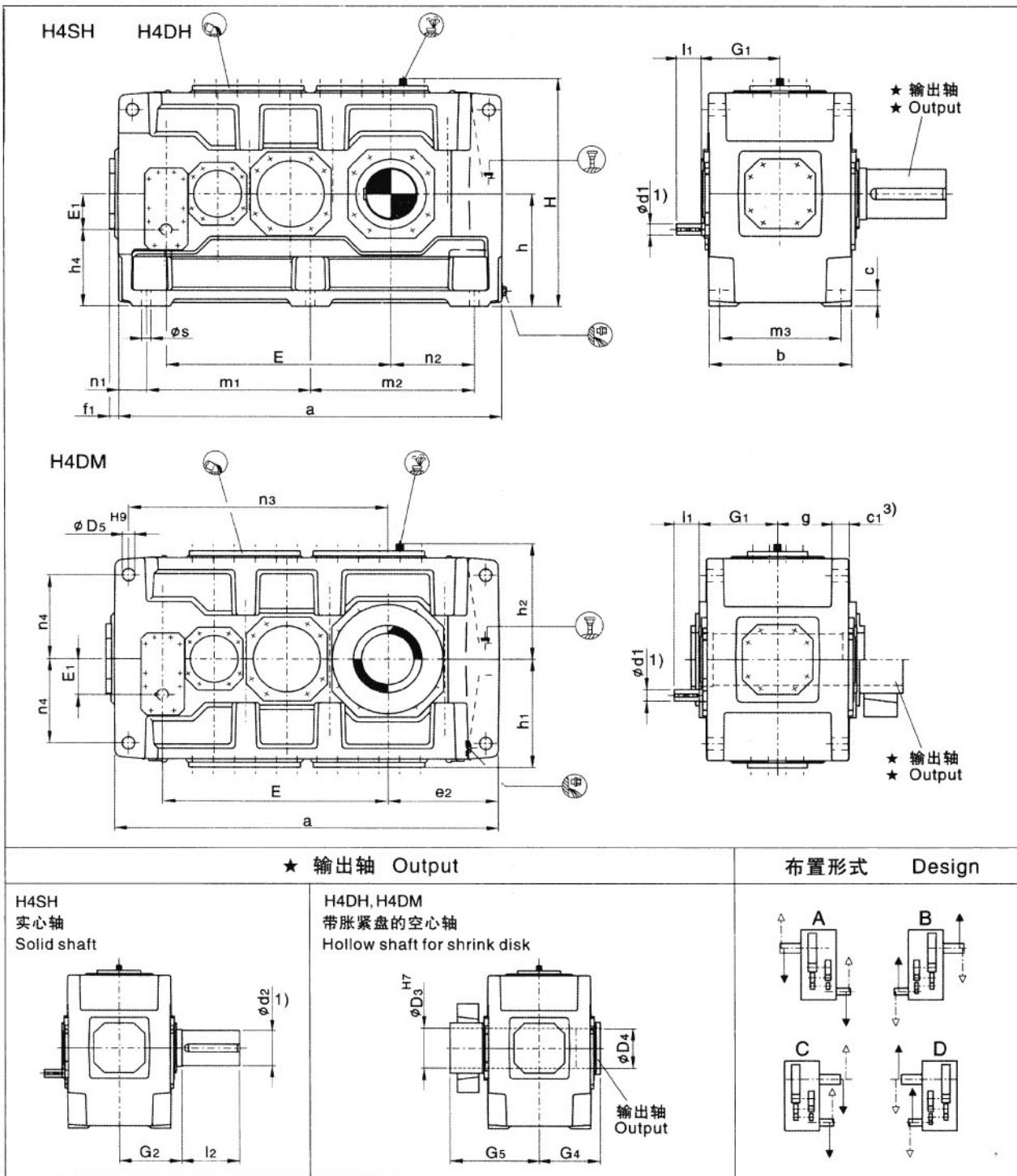
类型 H4.H, H4.M Types H4.H, H4.M 规格 13...22 Sizes 13...22

规格 Size	尺寸mm Dimensions in mm													
	输入轴 Input													
	<i>i_N</i> = 100 - 180		<i>i_N</i> = 112 - 200		<i>i_N</i> = 125 - 224		<i>i_N</i> = 200 - 355		<i>i_N</i> = 224 - 400		<i>i_N</i> = 250 - 450		<i>G₁</i>	
<i>d₁</i> ¹⁾	<i>l₁</i>													
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	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	<i>c₁</i>	D ₅	e ₂	E	E ₁	f ₁	g	h
13	1395	550	60	<i>61 ± 2</i>	48	405	820	130	47	211.5	440
14	1535	550	60	<i>61 ± 2</i>	48	475	890	130	47	211.5	440
15	1680	625	70	<i>72 ± 2</i>	55	485	987	160	56	238	500
16	1770	625	70	<i>72 ± 2</i>	55	530	1033	160	56	238	500
17	1770	690	80	<i>81 ± 2</i>	55	525	1035	160	53	259	550
18	1890	690	80	<i>81 ± 2</i>	55	585	1095	160	53	259	550
19	2030	790	90	<i>91 ± 2</i>	65	590	1190	185	53	299	620
20	2150	790	90	<i>91 ± 2</i>	65	650	1250	185	53	299	620
21	2340	830	100	<i>100 ± 2</i>	75	655	1387	225	62	310	700
22	2450	830	100	<i>100 ± 2</i>	75	710	1442	225	62	310	700

规格 Size	尺寸mm Dimensions in mm											
	齿轮箱 Gear units											
	<i>h₁</i>	<i>h₂</i>	<i>h₄</i>	H	<i>m₁</i>	<i>m₂</i>	<i>m₃</i>	<i>n₁</i>	<i>n₂</i>	<i>n₃</i>	<i>n₄</i>	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 Lubrication		重量 Weight	
	输出轴 Output												
	H4SH			H4HH	H4HM	H4DH			H4DM	H4.H	H4.M	H4.H	MTH4.M
<i>d₂</i> ¹⁾	G ₂	<i>l₂</i>	<i>D₂</i> ²⁾	G ₄	D ₃	D ₄	G ₄	G ₅	(L)	(L)	(kg)	(kg)	
13	200	335	350	190	335	190	195	335	480	130	120	2390	2270
14	210	335	350	210	335	210	215	335	480	140	125	2730	2600
15	230	380	410	230	380	230	235	380	550	230	170	3635	3440
16	240	380	410	240	380	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	6800	6300
20	300	465	500	-	-	310	315	465	670	380	330	8200	7700
21	320	490	500	-	-	330	335	490	715	395	430	9200	8600
22	340	490	550	-	-	340	345	490	725	420	450	9900	9400

平行轴齿轮箱 Helical Gear Units 四级传动 Four Stage 卧式安装 Horizontal
 类型 H4.H, H4.M Types H4.H, H4.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 258~259页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 H4.H, H4.M Types H4.H, H4.M 规格 23...26 Sizes 23...26

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								
23	90	130			70	105			505	
24			90	130			70	105	505	
25	100	205			85	170			565	
26			100	205			85	170	565	

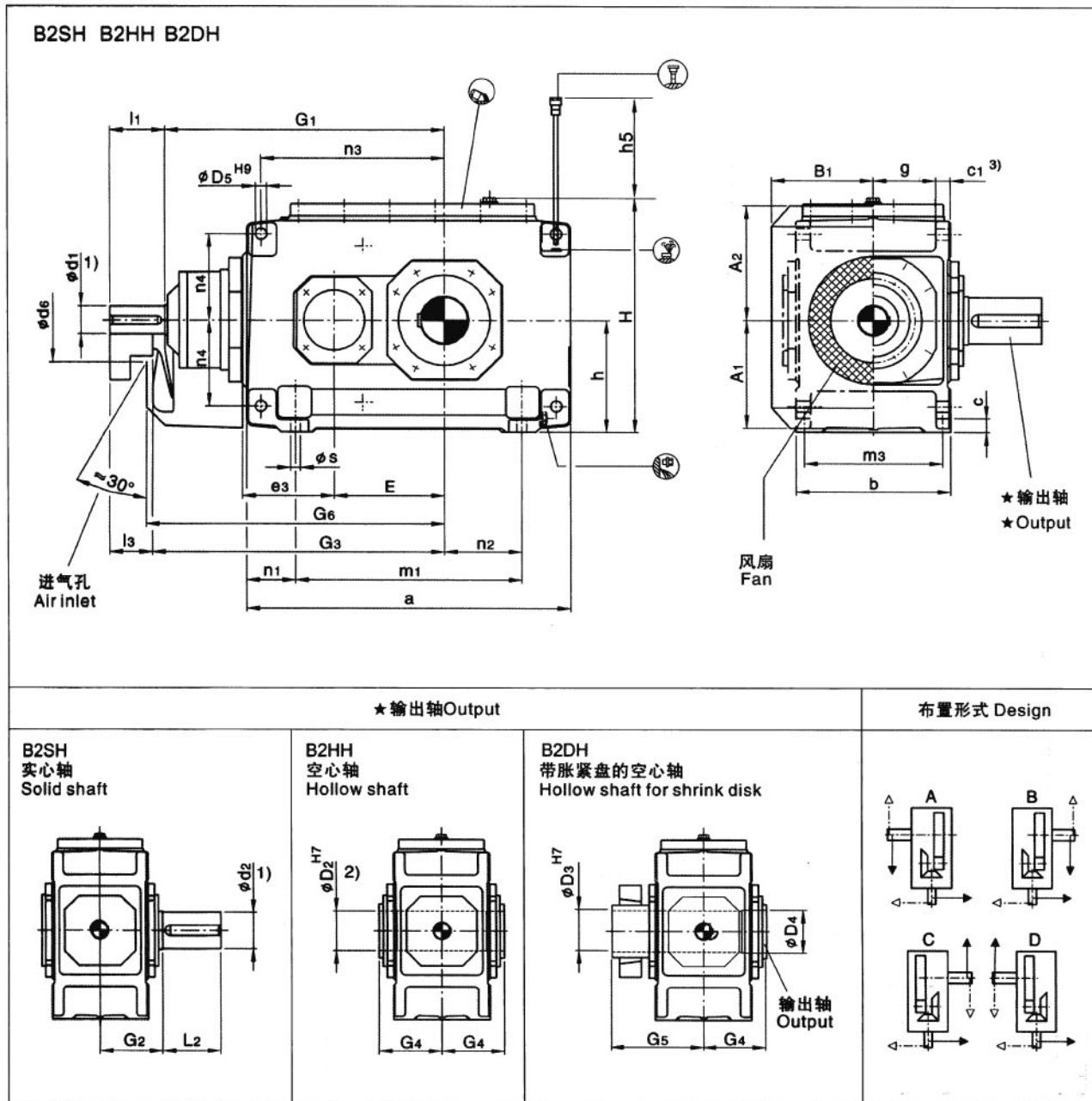
规格 Size	尺寸mm Dimensions in mm										
	齿轮箱 Gear units										
	a	b	c	c ₁	D ₅	e ₂	E	E ₁	f ₁	g	h
23	2530	930	115	120 ± 2	80	730	1505	225	35	342	780
24	2660	930	115	120 ± 2	80	795	1570	225	35	342	780
25	2830	1045	130	120 ± 2	90	790	1695	265	65	400	860
26	3010	1045	130	120 ± 2	90	880	1785	265	65	400	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 Lubrication		重量 Weight		
	输出轴 Output						H4.H	H4.M	H4.H	H4.M	
	H4SH		G ₂	I ₂	D ₃	D ₄	G ₄	G ₅	(L)	(L)	(kg)
23	360	540	590	360	365	540	785	520	500	11600	10700
24	380	540	590	380	385	540	805	550	600	13500	12600
25	400	605	650	400	405	605	875	735	800	16100	15200
26	420	605	650	430	435	605	900	780	850	17600	16500

直交轴齿轮箱 Bevel-helical Gear Units 二级传动 Two Stage
 类型 B2.H Type B2.H 规格 1...12 Sizes 1...12

卧式安装 Horizontal


 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 258~259页。 For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 B2.H Type B2.H 规格1...12 Size 1...12

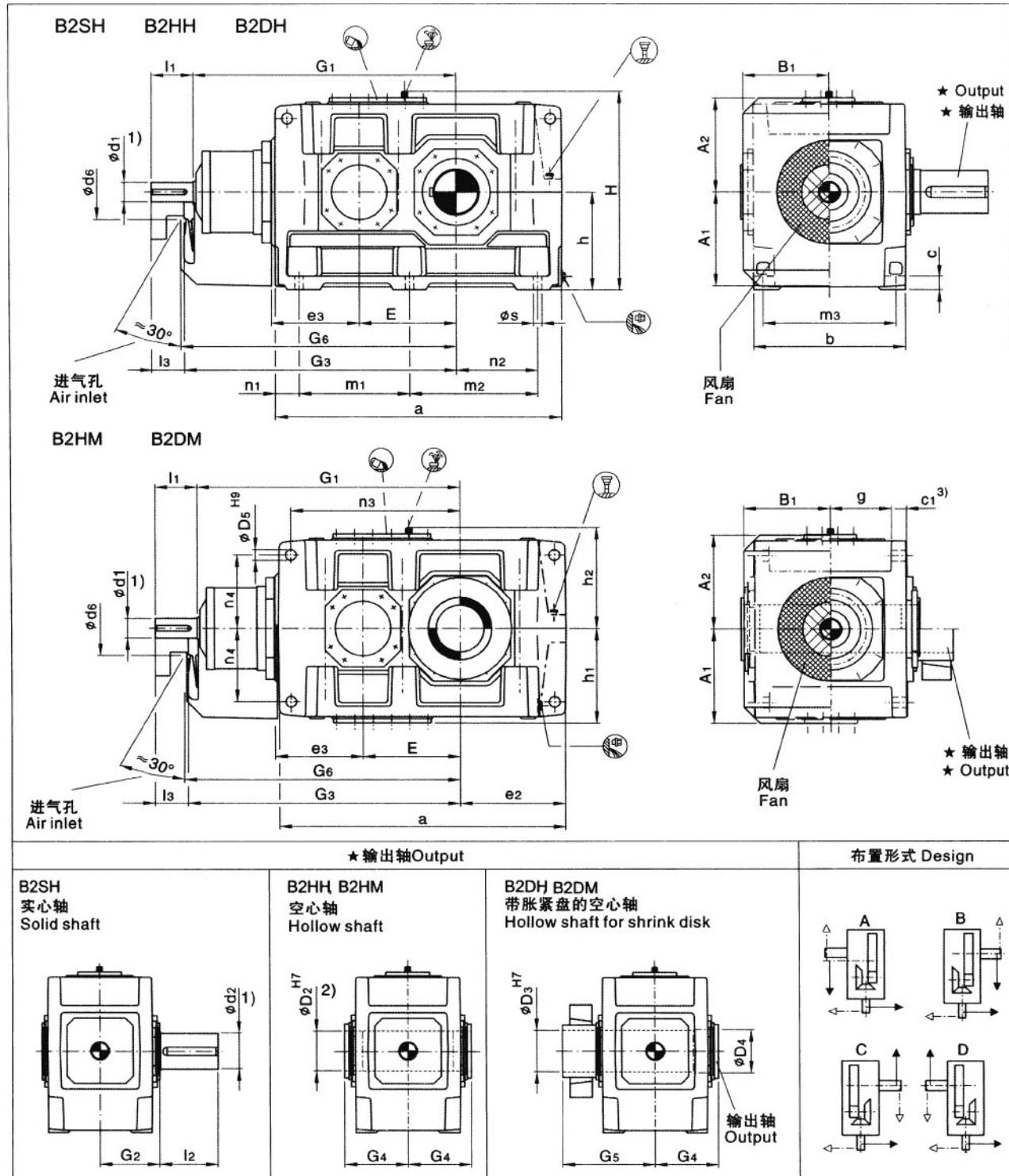
规格 Size	尺寸 mm Dimensions in mm										
	iN=5-11.2			iN=6.3-14			iN=12.5-18			G1	G3
	d1 ⁽¹⁾	I1	I3	d1 ⁽¹⁾	I1	I3	d1 ⁽¹⁾	I1	I3		
1	28	55	40				20	50	35	300	315
2	30	70	50				25	60	40	340	360
3	35	80	60				28	60	40	390	410
4	45	100	80							465	485
5	55	110	80							535	565
6				55	110	80				570	600
7	70	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				994	1030

规格 Size	尺寸 mm Dimensions in mm											
	齿轮箱 Gear units											
	a	A1	A2	b	B1	c	c1	D5	d6	e3	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										
	G6	h	h5	H	m1	m3	n1	n2	n3	n4	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	65	240	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	610	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Lubrication (L)	重量Weight (kg)		
	输出轴 Output												
	d2 ⁽¹⁾	G2	L2	D2 ⁽²⁾	G4	D3	D4	G4	G5				
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
 类型 B2.H, B2.M Types B2.H, B2.M

 二级传动 Two Stage 卧式安装 Horizontal
 规格 13...18 Sizes 13...18

 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258~259页。 For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 B2.H,B2.M Types B2.H, B2.M 规格13...18 Size 13...18

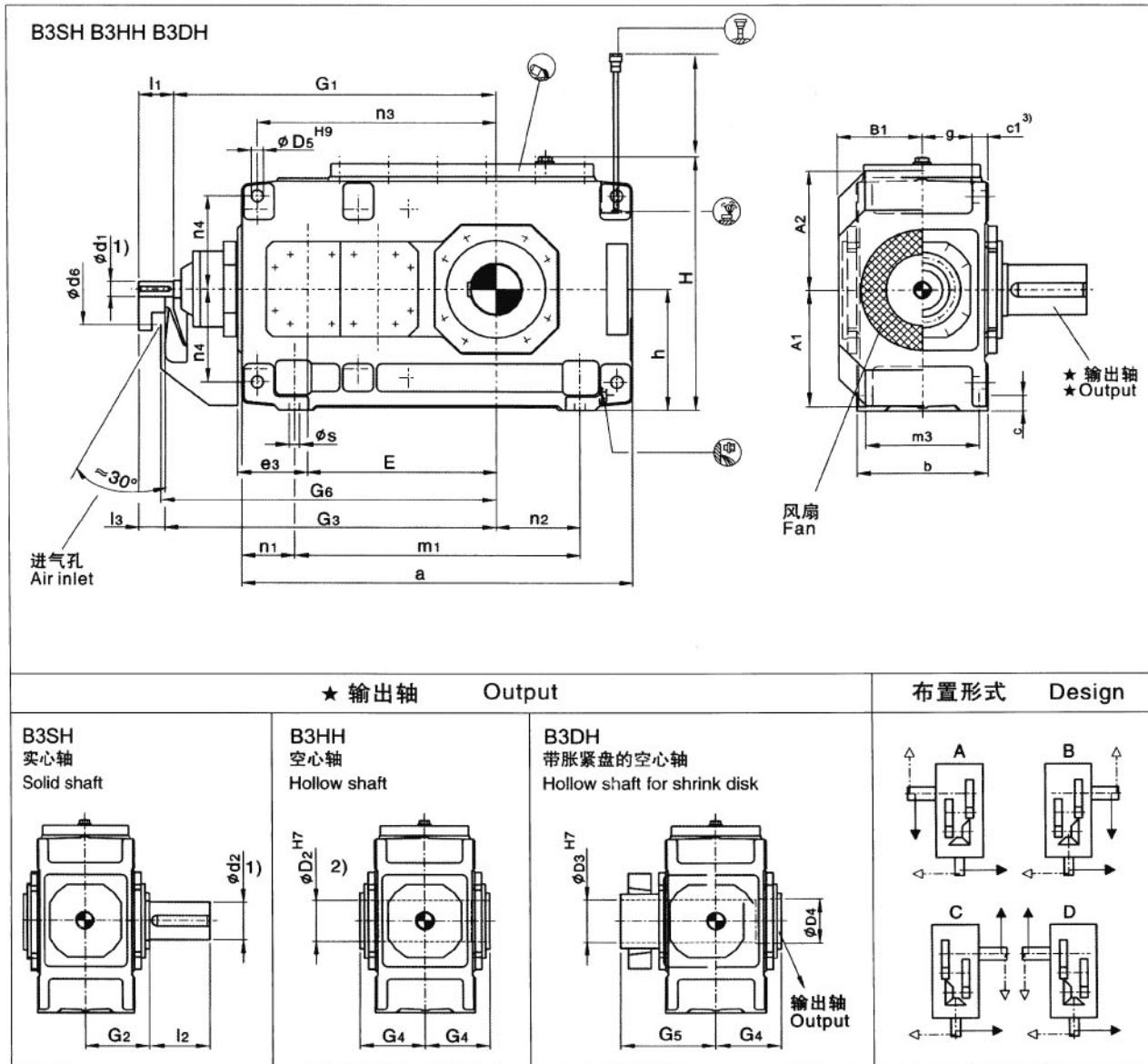
规格 Size	尺寸 mm Dimensions in mm														G1	G3		
	输入轴 Input																	
	iN=5-11.2			iN=5.6-11.2			iN=5.6-12.5			iN=6.3-14			iN=7.1-12.5					
	d1 ^u	I1	I3	d1 ^u	L1	I3	d1 ^u	I1	I3	d1 ^u	I1	I3	d1 ^u	I1	I3			
13	110	205	165													1070	1110	
14																1140	1180	
15	130	245	200					130	245	200							1277	1322
16																1323	1368	
17				150	245	200										1435	1480	
18																1495	1540	

規格 Size	尺寸 mm Dimensions in mm													g	
	齿轮箱 Gear units														
	a	A1	A2	b	B1	c	c1	d6	D5	e2	e3	E			
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		

規格 Size	尺寸 mm Dimensions in mm													s	
	齿轮箱 Gear units														
	G6	h	h1	h2	H	m1	m2	m3	n1	n2	n3	n4			
13	1130	440	450	460	900	465	465	580	100	305	675	340	35		
14	1200	440	450	460	900	465	605	580	100	375	745	340	35		
15	1340	500	490	500	1000	555	555	670	120	365	805	375	42		
16	1385	500	490	500	1000	555	645	670	120	410	850	375	42		
17	1500	550	555	560	1110	610	610	780	135	390	895	420	48		
18	1560	550	555	560	1110	610	730	780	135	450	955	420	48		

規格 Size	尺寸 mm Dimensions in mm										B2.H	B2.M	重量 Weight			
	输出轴 Output															
	B2SH			B2HH B2HM			B2DH		B2DM							
	d21)	G2	I2	D22)	G4	D3	D4	G4	G5				(kg)	(kg)		
13	200	390	350	-	-	-	-	-	-	140	120	2450	2350			
14	210	390	350	210	390	210	215	390	535	155	130	2825	2725			
15	230	460	410	-	-	-	-	-	-	220	180	3990	3795			
16	240	460	410	240	450	240	245	450	620	230	190	4345	4160			
17	250	540	410	-	-	-	-	-	-	320	260	5620	5320			
18	270	540	470	275	510	280	285	510	700	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 B3.H Types B3.H 规格3...12 Size 3...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258~259页。 For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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

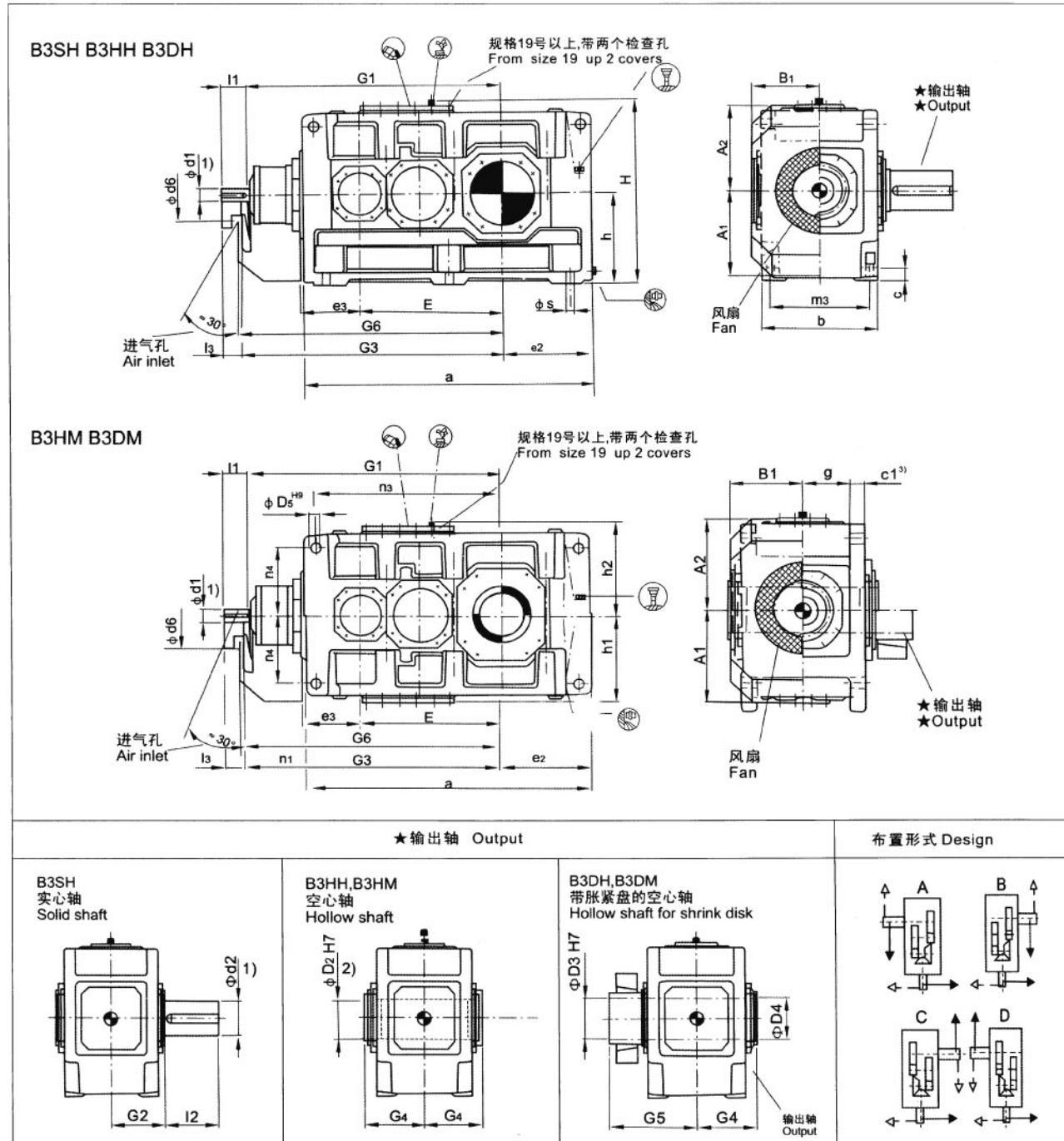
类型 B3.H Types B3.H 规格3...12 Size 3...12

规格 Size	尺寸mm Dimensions in mm															
	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			G_1
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
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	170	385	114
8	890	275	275	300	193	35	36 ± 1	165	28	170	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_5	H	m_1	m_3	n_1	n_2	n_3	n_4	s
3	455	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	640	230	130	482	510	220	105	145	440	180	19
7	720	280	170	572	545	260	120	130	500	215	24
8	765	280	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 Lubrication (L)	重量 Weight (kg)		
	输出轴 Output												
	B3SH			B3HH			B3DH						
d_2 ¹⁾	G_2	I_2	D_2 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 B3.H, B3.M Types B3.H, B3.M 规格 13...22 Sizes 13...22

 1) $k_6 \leq \Phi 50$ $m_6 > \Phi 50$

有关平键 GB/T 1095-1979 型和中心孔, 参见第 258~259 页。 For parallel key GB/T1095-1979 and for centre hole, see page258~259

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.

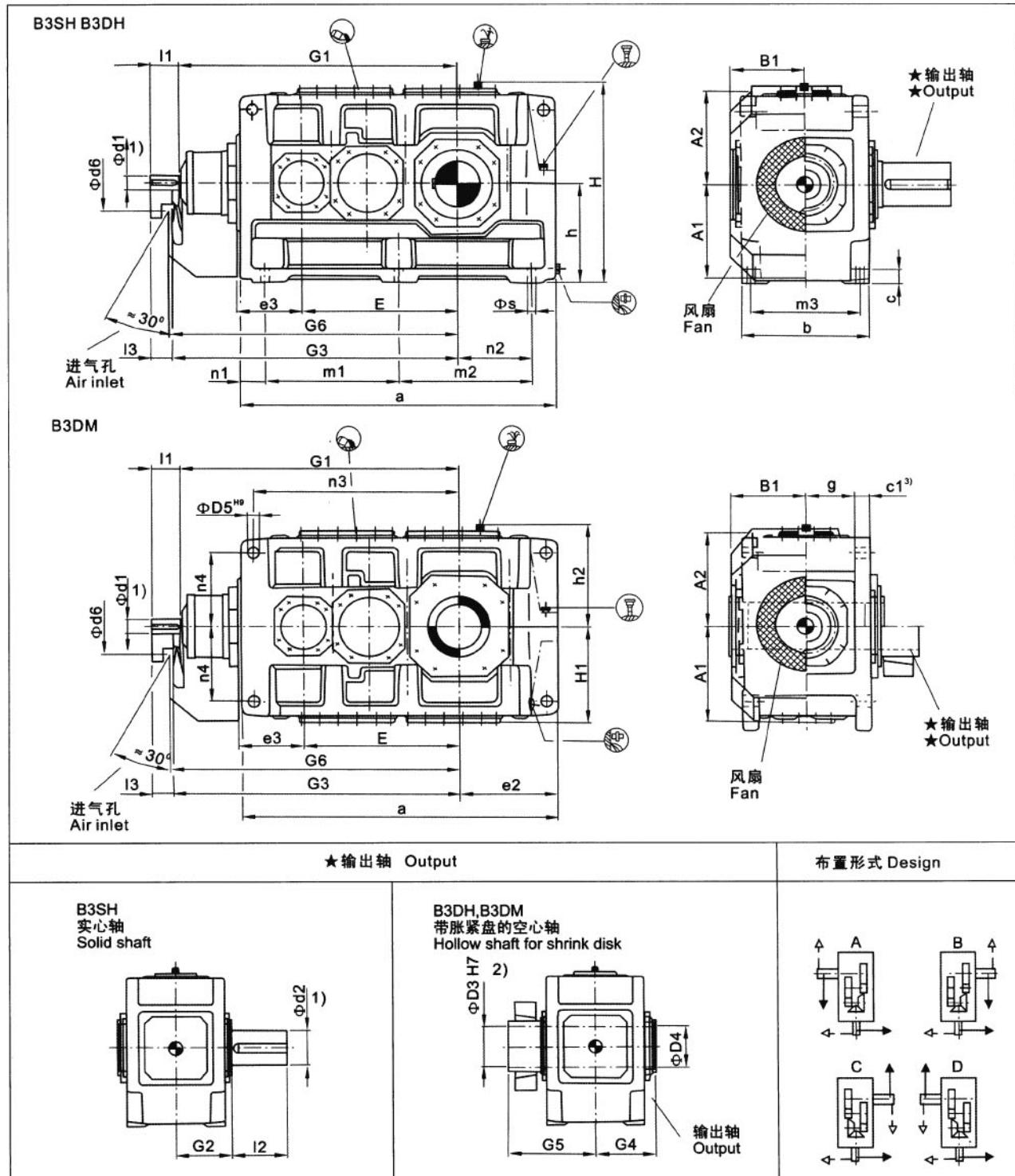
直交轴齿轮箱 Bevel-helical Gear Units 三级传动 Three Stage 卧式安装 Horizontal
 类型 B3.H, B3.M Types B3.H, B3.M 规格 13...22 Sizes 13...22

规格 Size	尺寸 mm Dimensions in mm																			
	输入轴 Input																			
	iN=12.5-45			iN=14-50			iN=16-56			iN=50-71			iN=56-80			iN=63-90			G1	G3
	d1"	I1	I3	d1"	I1	I3	d1"	I1	I3	d1"	I1	I3	d1"	I1	I3	L1	I3			
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	100	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	A1	A2	b	B1	c	c1	d6	D5	e2	e3	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												
	G6	h	h1	h2	H	m1	m2	m3	n1	n2	n3	n4	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	1420	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	1620	550	555	560	1110	735	735	600	135	390	1145	425	42
18	1680	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 Lubrication		重量 Weight	
	输出轴 Output					B3DH B3DM					B3.H	B3.M	B3.H	B3.M
	D21)	G2	I2	D22)	G4	D3	D4	G4	G5	(L)	(L)	(kg)	(kg)	
13	200	335	350	190	335	190	195	335	480	130	10	2380	2260	
14	210	335	350	210	335	210	215	335	480	140	115	2750	2615	
15	230	380	410	230	380	230	235	380	550	210	160	3730	3540	
16	240	380	410	240	380	240	245	380	550	220	165	3955	3765	
17	250	415	410	250	415	250	260	415	600	290	230	4990	4760	
18	270	415	470	275	415	280	285	415	600	300	235	5495	5240	
19	290	465	470	-	285	295	465	670	380	360	7000	6500		
20	300	465	500	-	310	315	465	670	440	420	8100	7600		
21	320	490	500	-	330	335	490	715	370	420	9200	8600		
22	340	490	550	-	340	345	490	725	430	490	9900	9400		

直交轴齿轮箱 Bevel-helical Gear Units 三级传动 Three Stage 卧式安装 Horizontal
 类型 B3.H, B3.M Types B3.H, B3.M 规格 23...26 Sizes 23...26

 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258~259页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 B3.H, B3.M Types B3.H, B3.M 规格 23...26 Sizes 23...26

規格 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	l3	d1 1)	l1	l3	d1 1)	l1	l3	d1 1)	l1	l3		
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

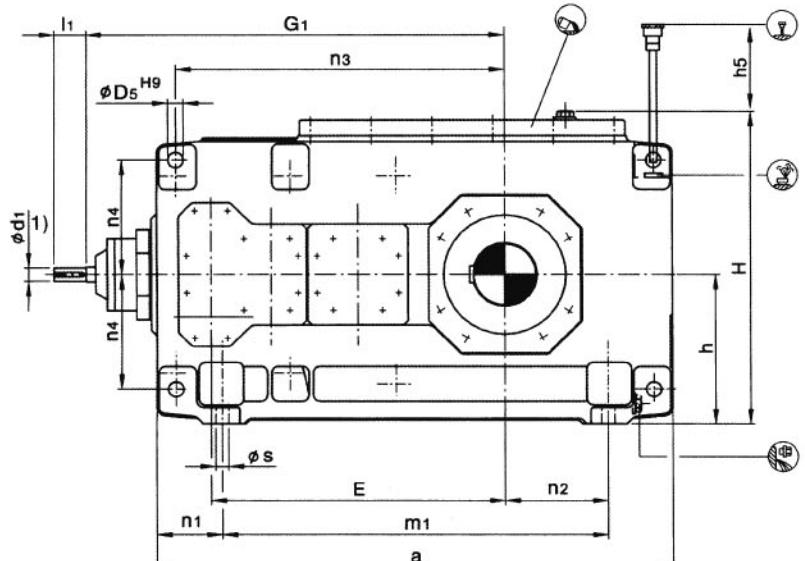
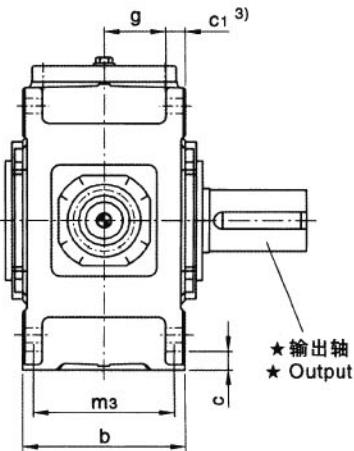
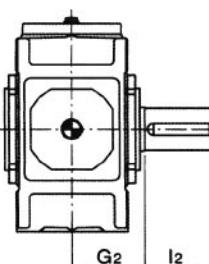
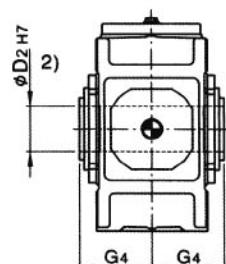
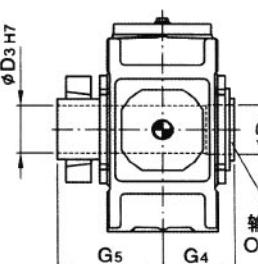
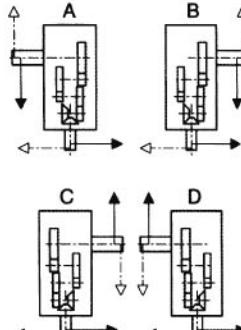
規格 Size	尺寸 mm Dimensions in mm												
	齿轮箱 Gear units												
	a	A1	A2	b	B1	c	c1	d6	D5	e2	e3	E	g
23	2380	770	770	930	528	115	120±2	350	80	730	490	1185	342
24	2510	770	770	930	528	115	120±2	350	80	795	490	1250	342
25	2580	845	865	1045	585	130	120±2	380	90	790	490	1325	400
26	2760	845	865	1045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

規格 Size	尺寸 mm Dimensions in mm												
	齿轮箱 Gear units												
	G6	h	h1	h2	H	m1	m2	m3	n1	n2	n3	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

規格 Size	尺寸 mm Dimensions in mm							润滑油 Lubrication		重量 Weight		
	输出轴 Output											
	B3SH			B3DH B3DM				B3.H	B3.M	B3.H	B3.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	

直交轴齿轮箱 Bevel-helical Gear Units 四级传动 Four Stage
 类型 B4.H Types B4. H 规格 5...12 Sizes 5...12

卧式安装 Horizontal

B4SH B4HH B4DH		
		
★ 输出轴 Output		布置形式 Design
B4SH 实心轴 Solid shaft	B4HH 空心轴 Hollow shaft	B4DH 带胀紧盘的空心轴 Hollow shaft for shrink disk
		
		输出轴 Output 

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 258~259 页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 B4.H Types B4. H 规格 5...12 Sizes 5...12

规格 Size	尺寸 mm Dimensions in mm											
	输入轴 Input						G1					
	iN = 80 - 180		iN = 100 - 224		iN = 200 - 315			iN = 250 - 400				
	d1 1)	l1	d1 1)	l1	d1 1)	l1		d1 1)	l1			
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	c ₁	D _s	E	g	h	h _s	H	m ₁	m ₃	n ₁	n ₂	n ₃	n ₄	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

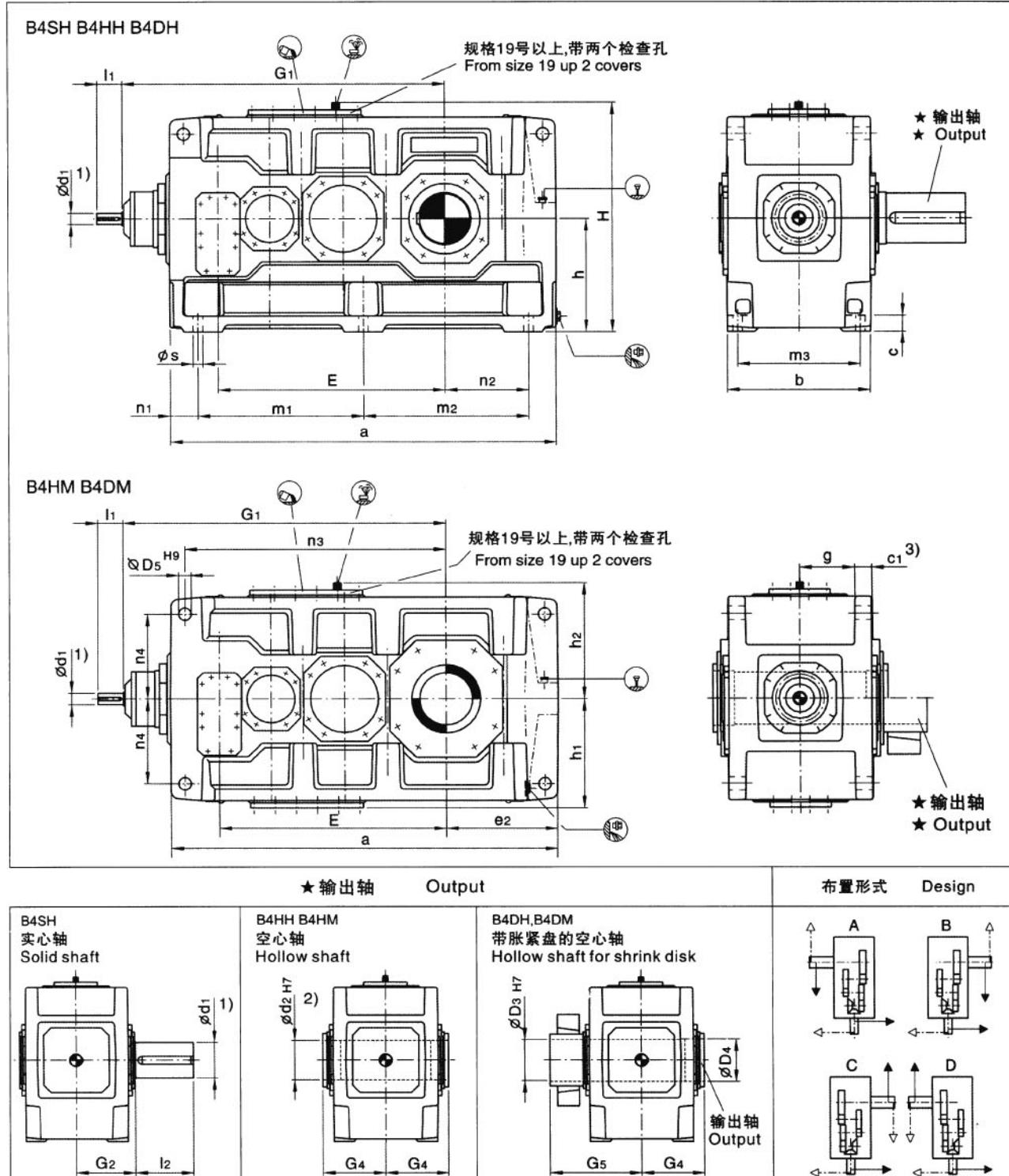
规格 Size	尺寸mm Dimensions in mm										润滑油 Lubrication (L)	重量 Weight (kg)		
	输出轴 Output													
	B4SH			B4HH		B4DH								
	d ₂ 1)	G ₂	l ₂	D ₂ 2)	G ₄	D ₃	D ₄	G ₄	G ₅					
5	100	165	210	95	165	100	100	165	240	16		335		
6	110	165	210	105	165	110	110	165	240	18		385		
7	120	195	210	115	195	120	120	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		

直交齿轮箱 Bevel-helical Gear Units
 类型 B4.H, B4.M Types B4.H, B4.M

四级传动 Four Stage

规格 13...22 Sizes 13...22

卧式安装 Horizontal



1) $k_6 \leq \varnothing 50$ $m_6 > \varnothing 50$

有关平键 GB/T1095-1979 型和中心孔, 参见第 258~259 页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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.

直交齿轮箱 Bevel-helical Gear Units
 类型 B4.H, B4.M Types B4.H, B4.M

四级传动 Four Stage

规格 13...22 Sizes 13...22

卧式安装 Horizontal

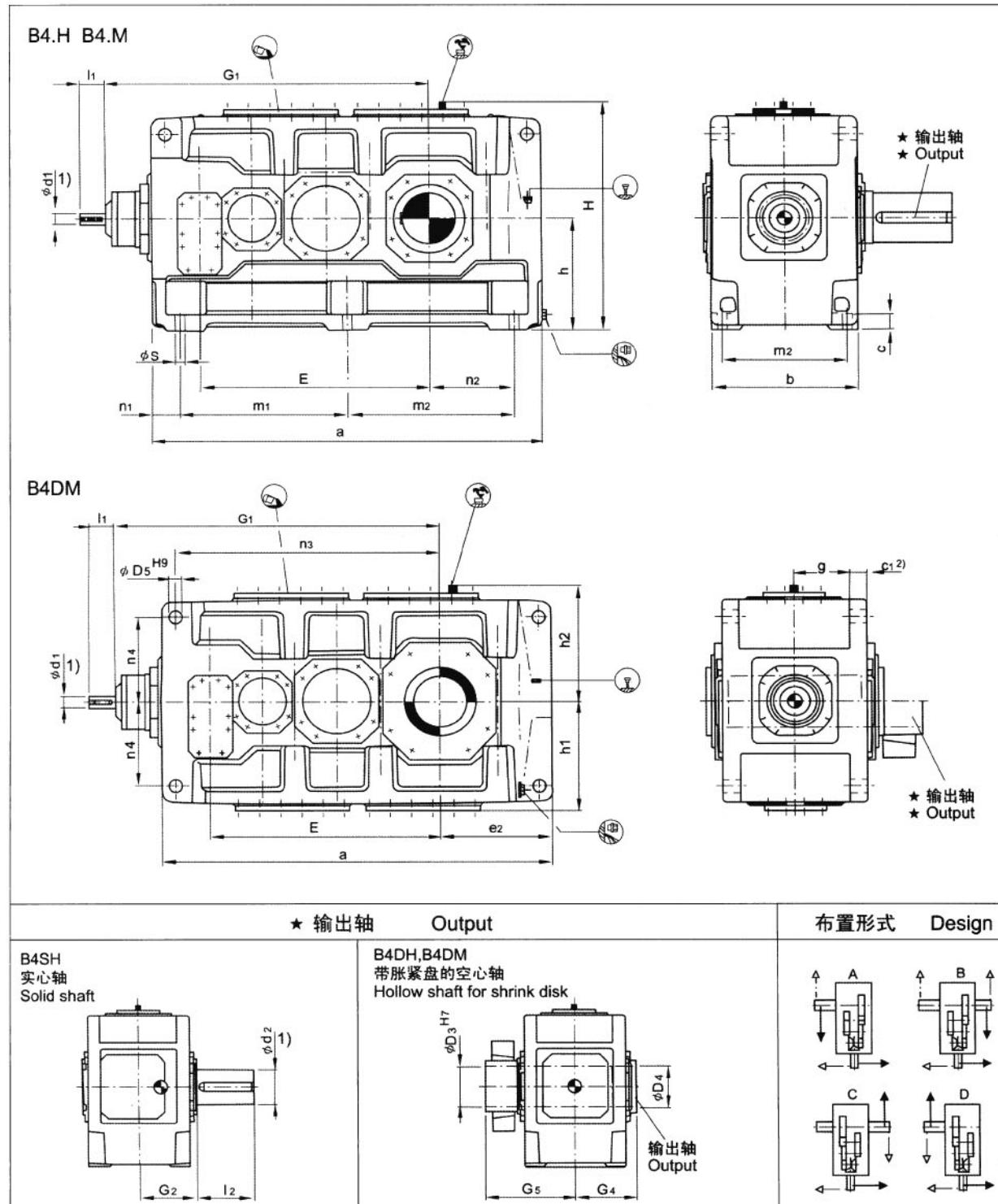
规格 Size	尺寸 mm Dimensions in mm											
	输入轴 Input											
	iN=80-180		iN=90-200		iN=100-224		iN=200-315		iN=224-355		iN=250-400	
	d1 ⁿ	I1	d1 ⁿ	I1	d1 ⁿ	I1	d1 ⁿ	I1	d1 ⁿ	I1	d1 ⁿ	I1
13	55	110					40	100				
14					55	110					40	100
15	70	135					50	110				
16		70	135				50	110		50	110	
17	70	135					50	110				
18		70	135						50	110		
19	80	165					60	140				
20		80	165						60	140		
21	90	165					70	140				
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 Lubrication		重量 Weight	
	输出轴 Output				B4SH B4HH B4HM B4DH B4DM								
	d1 ⁿ	G2	I2	D2 ⁿ	G4	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	6800	6300
20	300	465	500	-	-	310	315	465	670	550	510	8200	7700
21	320	490	500	-	-	330	335	490	715	540	590	9200	8600
22	340	490	550	-	-	340	345	490	725	620	680	9900	9400

直交轴齿轮箱 Bevel-helical Gear Units 四级传动 Four Stage 卧式安装 Horizontal
 类型 B4.H, B4.M Types B4.H, B4.M 规格 23...26 Sizes 23...26



1) $k6 \leq \phi 50$ $m6 > \phi 50$

有关平键 GB/T1095-1979 型和中心孔, 参见第 258~259页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 B4.H, B4.M Types B4.H, B4.M 规格 23...26 Sizes 23...26

规格 Size	尺寸 mm Dimensions in mm								G1	
	输入轴 Input									
	iN=80-180		iN=90-200		iN=200-315		iN=224-355			
	d1 ^o	l1	d1 ^o	l1	d1 ^o	l1	d1 ^o	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	

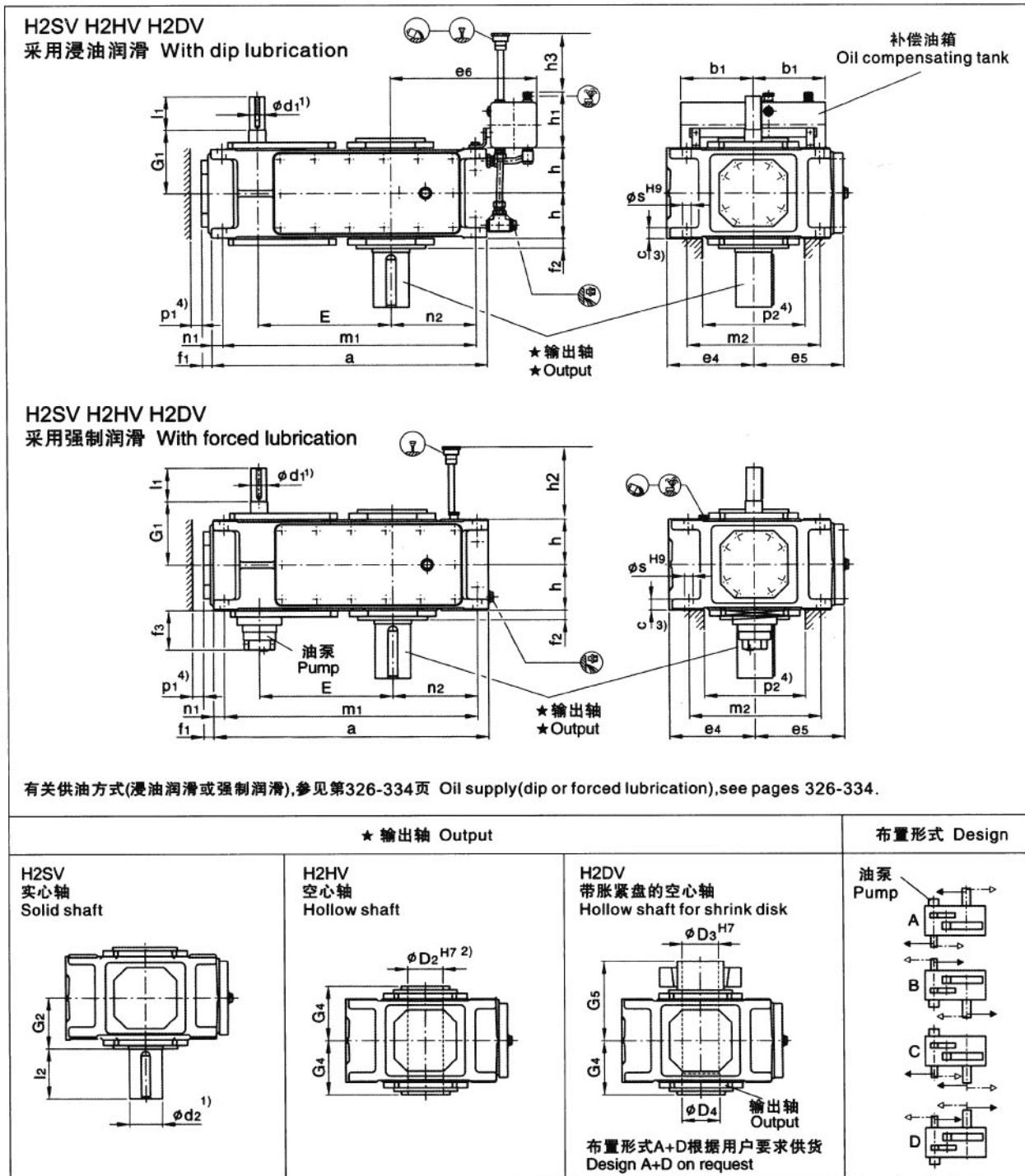
规格 Size	尺寸 mm Dimensions in mm									
	齿轮箱 Gear units									
	a	b	c	c1	D5	e2	E	g	h	h1
23	2530	930	115	120±2	80	730	1505	342	780	770
24	2660	930	115	120±2	80	795	1570	342	780	770
25	2830	1045	130	120±2	80	790	1695	400	860	860
26	3010	1045	130	120±2	80	880	1785	400	860	860

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 Lubrcation	重量 Weight		
	输出轴 Output								B4.H	B4.M	
	B4SH			B4DH		B4DM			(L)	(L)	
d2 ^o	G2	l2	D2	D3	G4	G5	(L)	(L)	(kg)	(kg)	
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 二级传动 Two Stage
 类型 H2.V Types H2.V 规格 3...12 Sizes 3...12

立式安装 Vertical



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 258~259页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 dimension, please refer to us

平行轴齿轮箱 Helical Gear Units 二级传动 Two Stage 立式安装 Vertical
 类型 H2.V Types H2.V 规格 3...12 Sizes 3...12

规格 Size	尺寸 mm Dimensions in mm								G1	
	输入轴 Input				i N = 12.5 - 22.4					
	i N = 6.3 - 11.2	i N = 8 - 14	d ₁ 1)	i N = 16 - 28	d ₁ 1)	i N = 16 - 28	d ₁ 1)	i N = 16 - 28		
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	

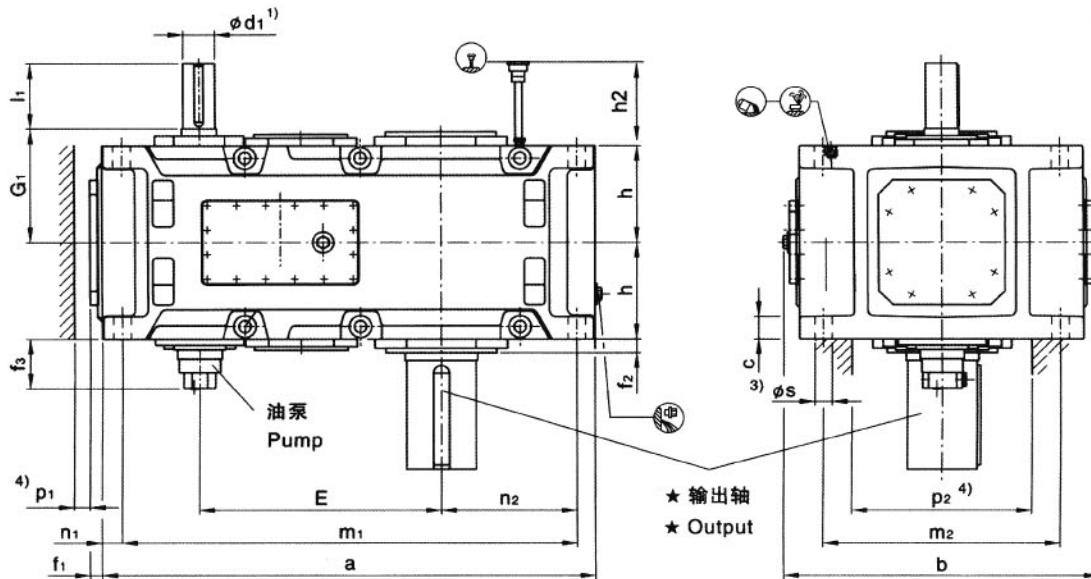
规格 Size	尺寸 mm Dimensions in mm									
	齿轮箱 Gear units									
	a	b ₁	c	e ₄	e ₅	e ₆	E	f ₁	f ₂	f ₃
3	450	150	24 ± 1	175	185	290	220	28	20	-
4	565	150	30 ± 1	200	215	320	270	28	22	-
5	640	240	30 ± 1	230	252	385	315	38	28	150
6	720	240	30 ± 1	230	252	425	350	38	28	150
7	785	240	36 ± 1	280	292	425	385	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⁾
3	95	165	-	180	410	265	20	125	35	210
4	107.5	165	-	180	505	300	30	160	35	220
5	127.5	205	190	240	580	360	30	175	35	270
6	127.5	205	190	240	660	360	30	220	35	270
7	150	205	165	250	715	430	35	215	35	330
8	150	205	165	250	820	430	35	275	35	330
9	185	275	205	330	845	490	40	260	40	370
10	185	275	205	330	945	490	40	310	40	370
11	215	275	240	340	1005	600	50	295	50	440
12	215	275	240	340	1160	600	50	380	50	440

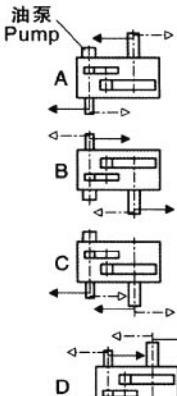
规格 Size	尺寸 mm Dimensions in mm								润滑油 Lubrication	重量 Weight		
	输出轴 Output				H2DV							
	H2SV		H2HV		D ₃	D ₄	G ₄	G ₅				
d ₂ 1)	G ₂	I ₂	D ₂ 2)	G ₄	D ₃	D ₄	G ₄	G ₅	Dip lubrication (L)	强制润滑 Forced lubrication (L)		
3	65	125	140	65	125	70	70	125	180	14	-	115
4	80	140	170	80	140	85	85	140	205	25	-	190
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 两级传动 Two Stage 立式安装 Vertical
 类型 H2.V Type H2.V 规格 13...18 Sizes 13...18

H2SV H2HV H2DV
 采用强制润滑 With forced lubrication



有关供油方式(强制润滑),参见第326-334页 Oil supply(forced lubrication), see pages 326-334.

★ 输出轴 Output			布置形式 Design
H2SV 实心轴 Solid shaft	H2HV 空心轴 Hollow shaft	H2DV 带胀紧盘的空心轴 Hollow shaft for shrink disk	

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 258~259页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 dimension, please refer to us.

5) 规格13和15号速比只有iN=6.3-18; 规格17号: 速比只有iN=6.3-16 Size 13 and 15: only iN=6.3-18, Size 17: only iN=6.3-16

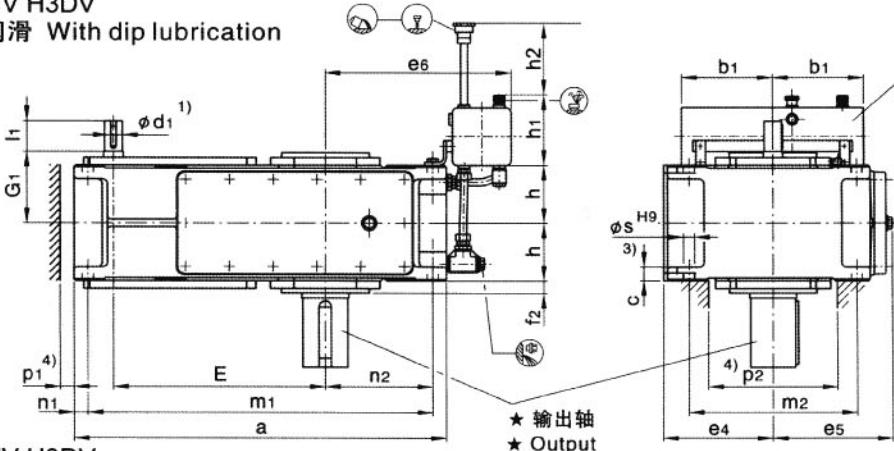
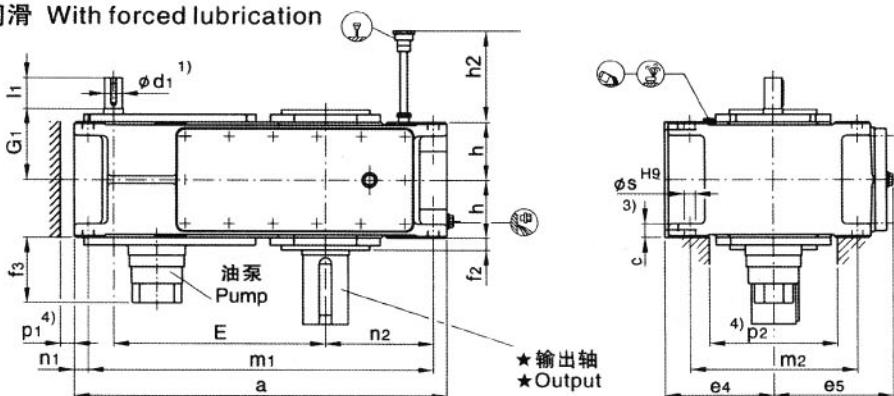
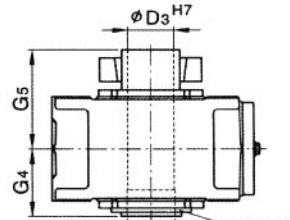
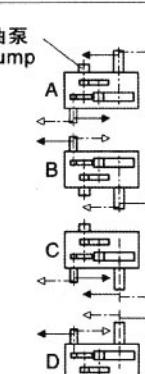
平行轴齿轮箱 Helical Gear Units 两级传动 Two Stage 立式安装 Vertical
 类型 H2.V Type H2.V 规格 13...18 Sizes 13...18

规格 Size	尺寸 mm Dimensions in mm												G1	
	输入轴 Input													
	iN=6.3-11.2		iN=7.1-12.5		iN=8-14		iN=12.5-20		iN=14-22.4		iN=16-25			
d1 ^①	I1	d1 ^①	I1	d1 ^①	I1	d1 ^①	I1	d1 ^①	I1	d1 ^①	I1			
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														

规格 Size	尺寸 mm Dimensions in mm															
	齿轮箱 Gear units															
	a	b	c	E	f1	f2	f3	h	h2	m1	m2	n1	n2	p1 ^④	p2 ^④	s
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																

规格 Size	尺寸 mm Dimensions in mm									润滑油 Lubrication (L)	重量 Weight (kg)		
	输出轴 Output												
	H2SV			H2HV 5)			H2DV 5)						
d2 ^①	G2	I2	D2 ^②	G4	D3	D4	G4	G5					
13	200	335	350	190	335	190	195	335	480	80	1880		
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													

平行轴齿轮箱 Helical Gear Units 三级传动 Three Stage 立式安装 Vertical
 类型 H3.V Type H3.V 规格 5...12 Sizes 5...12

H3SV H3HV H3DV 采用浸油润滑 With dip lubrication		
		补偿油箱 Oil compensating tank
		★ 输出轴 ★ Output
有关供油方式(浸油润滑或强制润滑),参见第 326-334页 Oil supply(dip or forced lubrication),see pages 326-334.		
★ 输出轴 Output		布置形式 Design
H3SV 实心轴 Solid shaft	H3HV 空心轴 Hollow shaft	H3DV 带胀紧盘的空心轴 Hollow shaft for shrink disk  油泵 Pump 

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 258~259页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 dimension, please refer to us

平行轴齿轮箱 Helical Gear Units 三级传动 Three Stage 立式安装 Vertical
 类型 H3.V Type H3.V 规格 5...12 Sizes 5...12

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	
D ₁ ¹⁾	I ₁	d ₁ ¹⁾	I ₁	d ₁ ¹⁾	I ₁	d ₁ ¹⁾	I ₁	d ₁ ¹⁾	I ₁	d ₁ ¹⁾	I ₁	G ₁
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

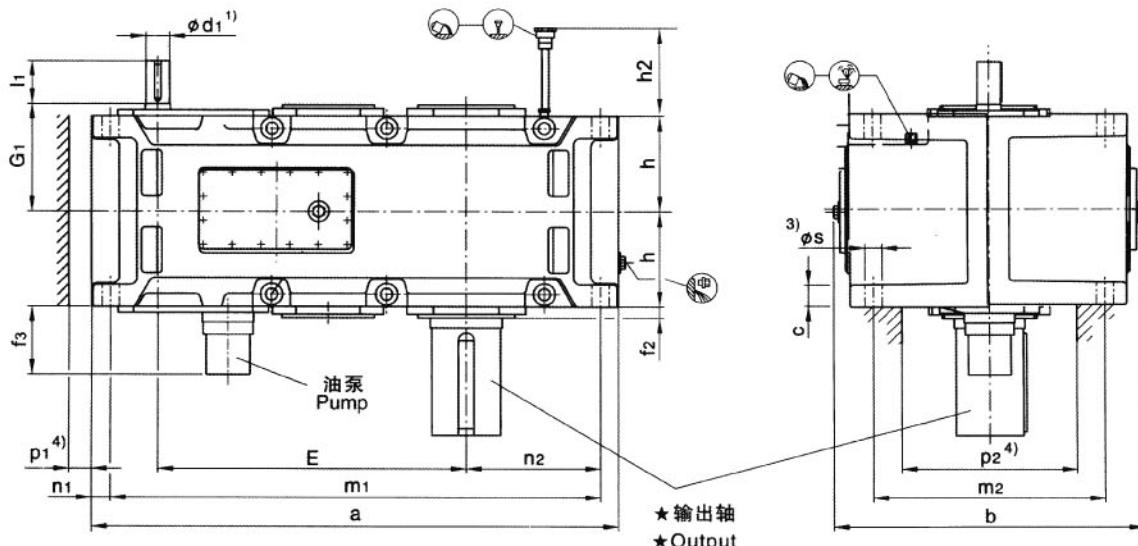
规格 Size	尺寸 mm Dimensions in mm									
	齿轮箱 Gear units									
	a	b ₁	c	e ₄	e ₅	e ₆	E	f ₂	f ₃	h
5	690	240	30 ± 1	230	252	385	405	28	190	127.5
6	770	240	30 ± 1	230	252	425	440	28	190	127.5
7	845	240	36 ± 1	280	292	425	495	30	185	150
8	950	240	36 ± 1	280	312	485	540	32	185	150
9	1000	330	45 ± 1.5	320	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									
	h ₁	h ₂	h ₃	m ₁	m ₂	n ₁	n ₂	p ₁ ⁴⁾	p ₂ 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

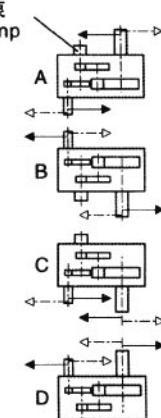
规格 Size	尺寸 mm Dimensions in mm									润滑油 Dip lubrication (L)	强制润滑 Forced lubrication (L)	重量 Weight (kg)			
	输出轴 Output														
	d ₂ ¹⁾	G ₂	I ₂	D ₂ ²⁾	G ₄	D ₃	D ₄	G ₄	G ₅						
5	100	165	210	95	165	100	100	165	240	35	13	320			
6	110	165	210	105	165	110	110	165	240	37	15	365			
7	120	195	210	115	195	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 三级传动 Three Stage 立式安装 Vertical
 类型 H3.V Type H3.V 规格 13...18 Sizes 13...18

H3SV H3HV H3DV
 采用强制润滑 With forced lubrication



有关供油方式(强制润滑),参见第 326-334页 Oil supply(forced lubrication),see pages 326-334.

★ 输出轴 Output			布置形式 Design
H3SV 实心轴 Solid shaft	H3HV 空心轴 Hollow shaft	H3DV 带胀紧盘的空心轴 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) $k_6 \leq \Phi 50$ $m_6 > \Phi 50$

有关平键 GB/T1095-1979 型和中心孔, 参见第 258~259页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 dimension, please refer to us

平行轴齿轮箱 Helical Gear Units 三级传动 Three Stage 立式安装 Vertical
 类型 H3.V Type H3.V 规格 13...18 Sizes 13...18

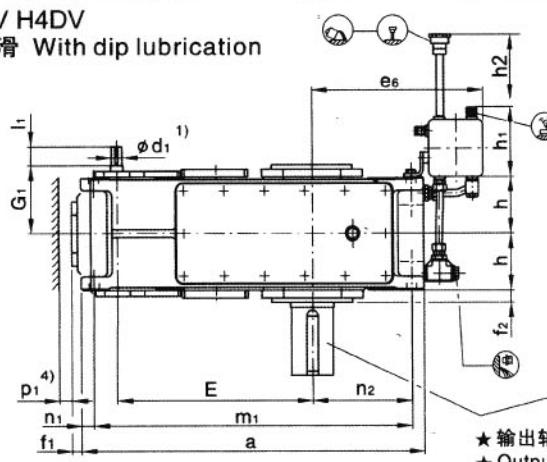
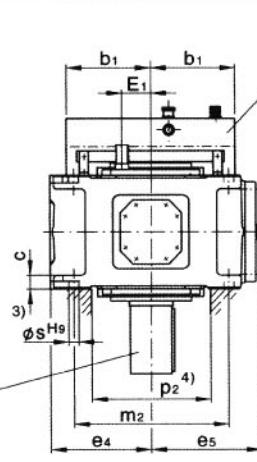
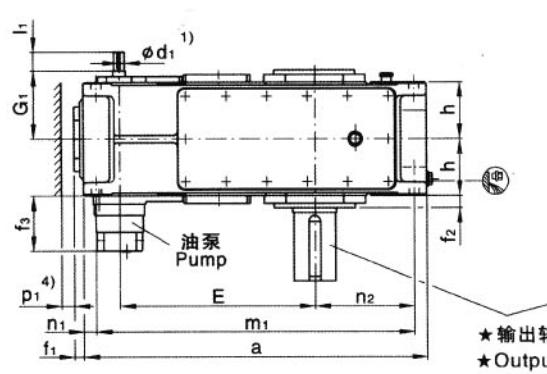
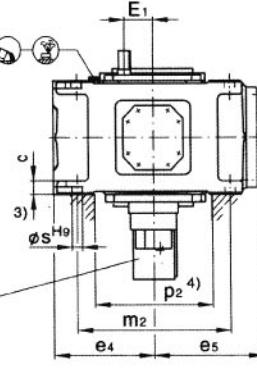
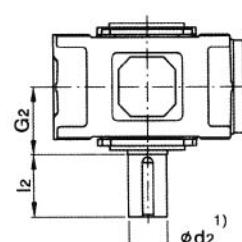
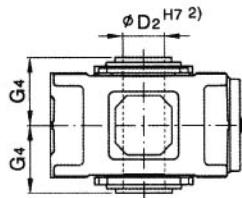
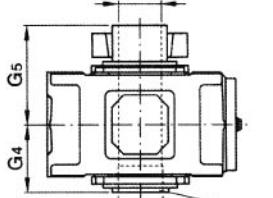
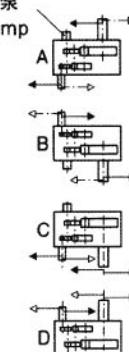
规格 Size	尺寸 mm Dimensions in mm																		
	输入轴 Input																		
	iN=22.4-45		iN=25-50		iN=28-56		iN=50-63		iN=56-71		iN=63-80		iN=71-90		iN=80-100		iN=90-112		
	d ₁ ¹⁾	l ₁	d ₁ ¹⁾	G ₁															
13	85	160					60	135					50	110					310
14					85	160						60	135				50	110	310
15	100	200					75	140					60	140					350
16		100	200					75	140						60	140			350
17	100	200					75	140					60	140					380
18		100	200					75	140						60	140			380
19																			
20																			
21																			
22																			

规格 Size	尺寸 mm Dimensions in mm														
	齿轮箱 Gear units														
	a	b	c	E	f ₂	f ₃	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															
20															
21															
22															

规格 Size	尺寸 mm Dimensions in mm										润滑油 Lubrication (L)	重量 Weight (kg)		
	H3SV			H3HV			H3DV							
	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		115	2155		
14	210	335	350	210	335	210	215	335	480		126	2490		
15	230	380	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														
20														
21														
22														

平行轴齿轮箱 Helical Reducers 四级传动 Four Stage 立式安装 Vertical

类型 H4.V Types H4.V 规格 7...12 Sizes 7...12

H4SV H4HV H4DV 采用浸油润滑 With dip lubrication  			
H4SV H4HV H4DV 采用强制润滑 With forced lubrication  			
有关供油方式(浸油润滑或强制润滑),参见第326-334页 Oil supply(dip or forced lubrication), see pages 326-334	★输出轴 Output	布置形式 Design	
H4SV 实心轴 Solid shaft 	H4HV 空心轴 Hollow shaft 	H4DV 带胀紧盘的空心轴 Hollow shaft for shrink disk  布置形式A+D根据用户要求供货 Design A+D on request	油泵 Pump 

 1) $k6 \leq \Phi 50$ $m6 > \Phi 50$

有关平键 GB/T1095-1979 型和中心孔, 参见第 258~259页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 dimension, please refer to us

平行轴齿轮箱 Helical Gear Units 四级传动 Four Stage 立式安装 Vertical

类型 H4.V Types H4.V 规格 7...12 Sizes 7...12

规格 Size	尺寸 mm Dimensions in mm								G1	
	输入轴 Input									
	iN=100-180		iN=125-224		iN=200-355		iN=250-450			
	d1 ^①	I1	d1 ^①	I1	d1 ^①	I1	d1 ^①	I1		
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	

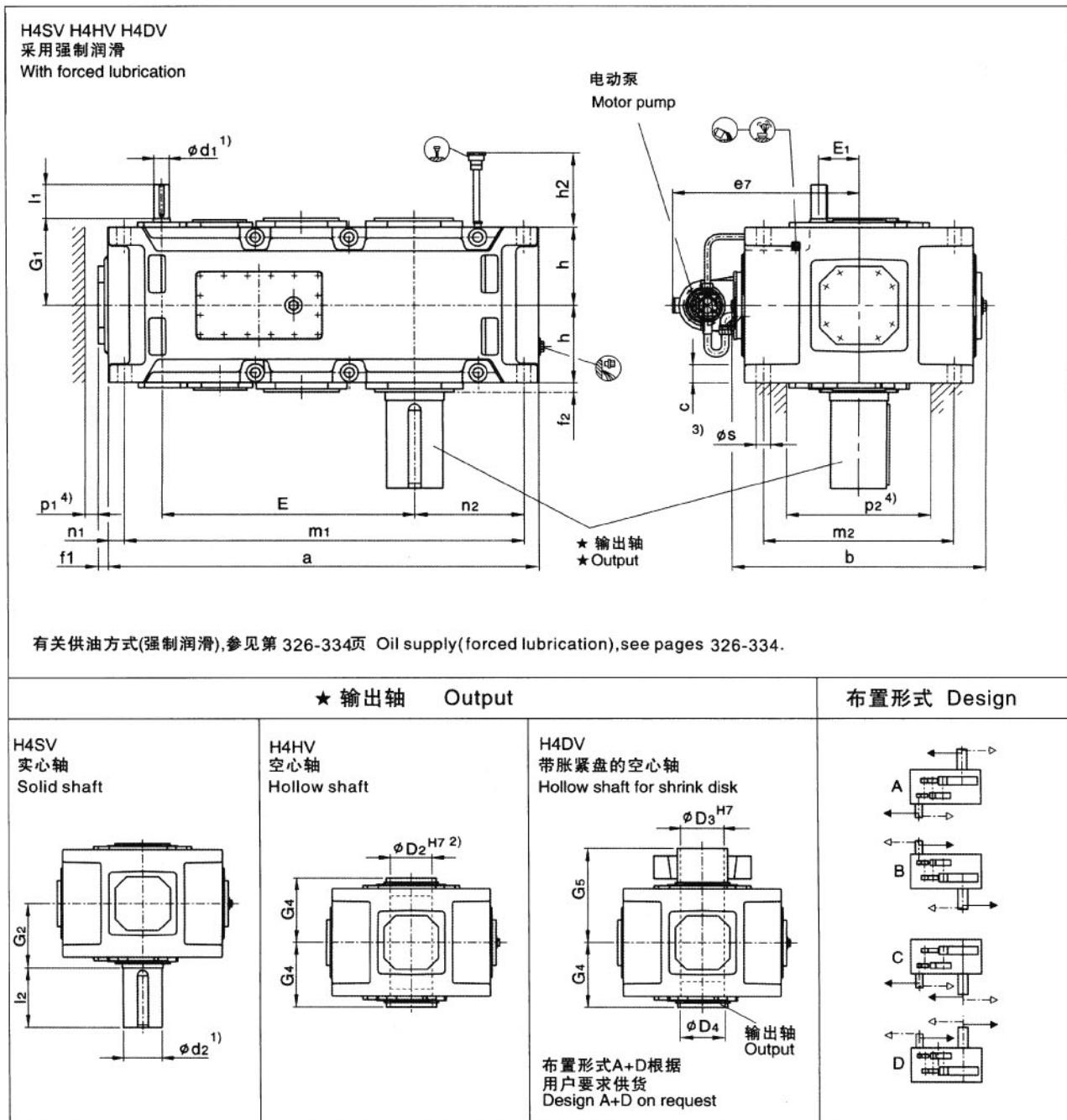
规格 Size	尺寸 mm Dimensions in mm										
	齿轮箱 Gear units										
	a	b1	C	ø4	e5	ø6	E	E1	I1	f2	f3
7	845	240	36±1	280	292	425	495	80	37	30	160
8	950	240	36±1	280	302	485	540	80	37	32	160
9	1000	330	45±1.5	320	342	560	580	90	43	32	170
10	1100	330	45±1.5	320	342	610	630	90	43	32	170
11	1200	330	54±1.5	380	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	h1	h2	h3	m1	m2	n1	n2	p1 ^④	p2 ^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 Lubrication		重量 Weight (kg)	
	输出轴 Output								浸油润滑 Dip lubrication (L)	强制润滑 Forced lubrication (L)		
	H4SV		H4HV		H4DV							
d2 ^②	G2	I2	D2 ^③	G4	D3	D4	G4	G5				
7	120	195	210	115	195	120	120	195	280	50	20	550
8	130	195	250	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	165	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 四级传动 Four Stage 立式安装 Vertical

类型 H4.V Types H4.V 规格 13...18 Sizes 13...18


 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 258~259页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 dimension, please refer to us

平行轴齿轮箱 Helical gear units 四级传动 Four Stage 立式安装 Vertical

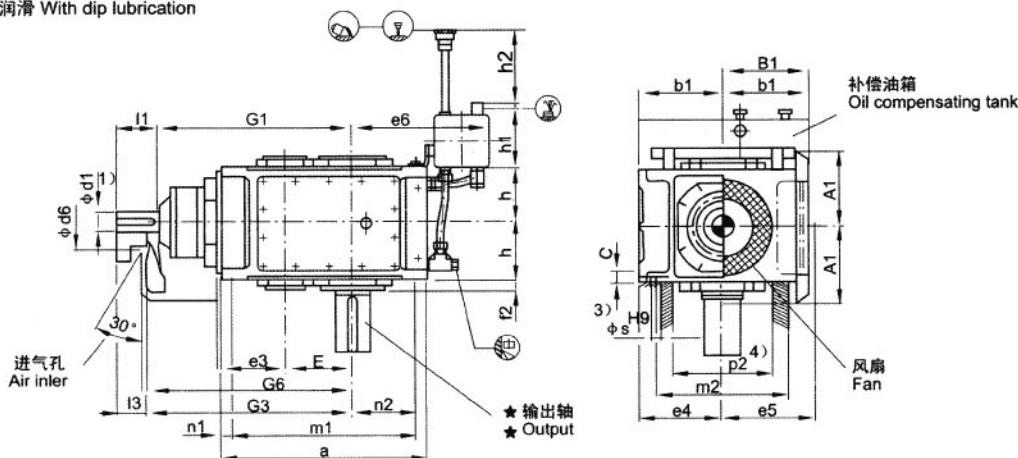
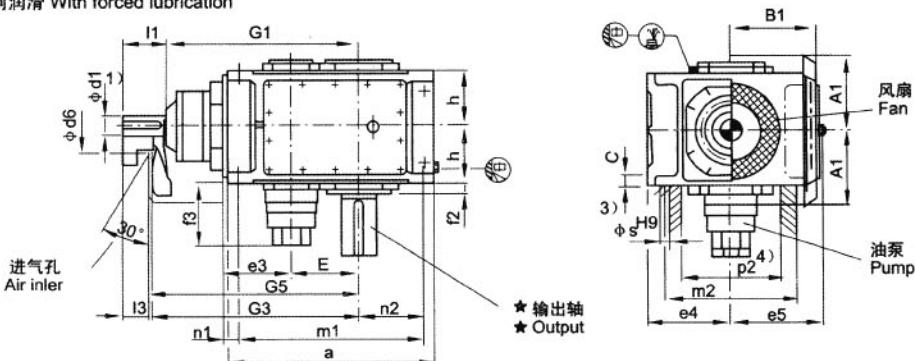
类型 H4.V Types H4.V 规格 13...18 Sizes 13...18

规格 Size	尺寸 mm Dimensions in mm												
	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											
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							根据用户要求供货 On request						
20													
21													
22													

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
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											根据用户要求供货 On request						
20																	
21																	
22																	

规格 Size	尺寸 mm Dimensions in mm										润滑油 Lubrication (L)	重量 Weight (kg)		
	输出轴 Output													
	H4SV			H4HV			H4DV							
	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						根据用户要求供货 On request								
20														
21														
22														

直交轴齿轮箱 Bevel-helical Gear Units 二级传动 Two Stage 立式安装 Vertical
 类型 B2.V Type B2.V 规格1...12 Sizes 1...12

 B2SV B2HV B2DV
 采用浸油润滑 With dip lubrication

 B2SV B2HV B2DV
 采用强制润滑 With forced lubrication


有关供油方式(浸油润滑或强制润滑),参见第 326-334 页 Oil supply (dip or forced lubrication), see pages 324-334.

★ 输出轴 Output			布置形式 Design
B2SV 实心轴 Solid shaft	B2HV 空心轴 Hollow shaft	B2DV 带胀紧盘的空心轴 Hollow shaft for shrink disk	

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

有关平键 GB/T 1095—1979 型和中心孔, 参见第 258~259 页。 For parallel key GB/T 1095-1979 and for centre hole, see page 258~259.

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 B2.V Type B2.V 规格1...12 Sizes 1...12

规格 Size	尺寸 mm Dimensions in mm										G1	G3
	输入轴 Input			iN = 6.3 - 14			iN = 12.5 - 18					
	d1 ¹⁾	l1	l3	d1 ¹⁾	l1	l3	d1 ¹⁾	l1	l3			
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	

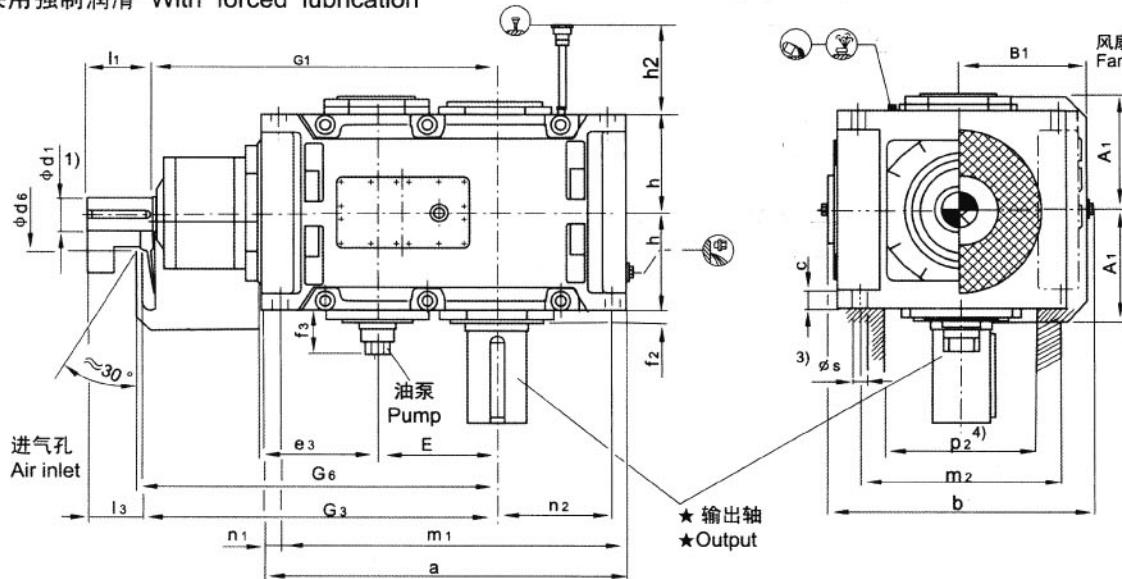
规格 Size	尺寸 mm Dimensions in mm												E	f2		
	齿轮箱 Gear units															
	a	A1	b1	B1	c	d6	e3	e4	e5	e6	E	f2				
1	305	128	150	130	16 ± 1	100	90	130	145	280	90	22				
2	355	143	150	145	20 ± 1	110	110	145	160	285	110	22				
3	405	163	150	170	24 ± 1	120	130	175	185	290	130	24				
4	505	188	150	200	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												s	
	齿轮箱 Gear units													
	f3	G6	h	h1	h2	h3	m1	m2	n1	n2	p2 ⁴⁾			
1	-	325	90	165	-	170	275	210	15	115	150	12		
2	-	370	102.5	165	-	170	315	315	20	130	170	14		
3	-	420	112.5	165	-	180	365	365	20	125	200	18		
4	-	495	135	165	-	180	445	300	30	160	220	24		
5	190	575	160	205	245	240	505	360	30	175	270	24		
6	190	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		

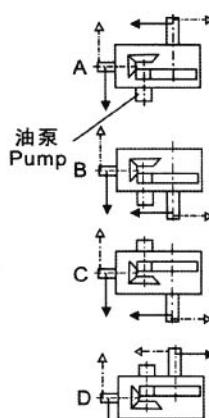
规格 Size	尺寸 mm Dimensions in mm									重量 Weight (kg)	
	输出轴 Output										
	B2SV			B2HV			B2DV				
d2 ¹⁾	G2	l2	D2 ²⁾	G4	D3	D4	G4	G5	Dip lubrication (L)	强制润滑 (L)	
1	45	120	80	-	-	-	-	-	7	-	65
2	55	135	110	55	135	60	60	135	180	11	90
3	65	145	140	65	145	70	70	145	200	16	140
4	80	170	170	80	170	85	85	170	235	28	235
5	100	200	210	95	200	100	100	200	275	41	20
6	110	200	210	105	200	110	110	200	275	50	23
7	120	235	210	115	235	120	120	235	320	75	35
8	130	235	250	125	235	130	130	235	325	90	38
9	140	270	250	135	270	140	145	270	360	115	53
10	160	270	300	150	270	150	155	270	385	135	60
11	170	320	300	165	320	165	170	320	450	190	86
12	180	320	300	180	320	180	185	320	455	215	95

直交轴齿轮箱 Bevel-helical Gear Units 二级传动 Two Stage 立式安装 Vertical
 类型 B2.V Type B2.V 规格 13...18 Sizes 13...18

B2SV B2HV B2DV
 采用强制润滑 With forced lubrication



有关供油方式（强制润滑），参见第 326-334 页 Oil supply(forced lubrication), see pages 326-334.

★ 输出轴 Output			布置形式 Design
B2SV 实心轴 Solid shaft	B2HV 空心轴 Hollow shaft	B2DV 带胀紧盘的空心轴 Hollow shaft for shrink disk	 <p>布置形式A+D根据用户要求供货 Design A+D on request</p>

1) $k_6 \leq \Phi 50$ $m > \Phi 50$

有关平键 GB/T1095-1979 型和中心孔，参见第 258~259 页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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 B2.V Type B2.V 规格 13...18 Sizes 13...18

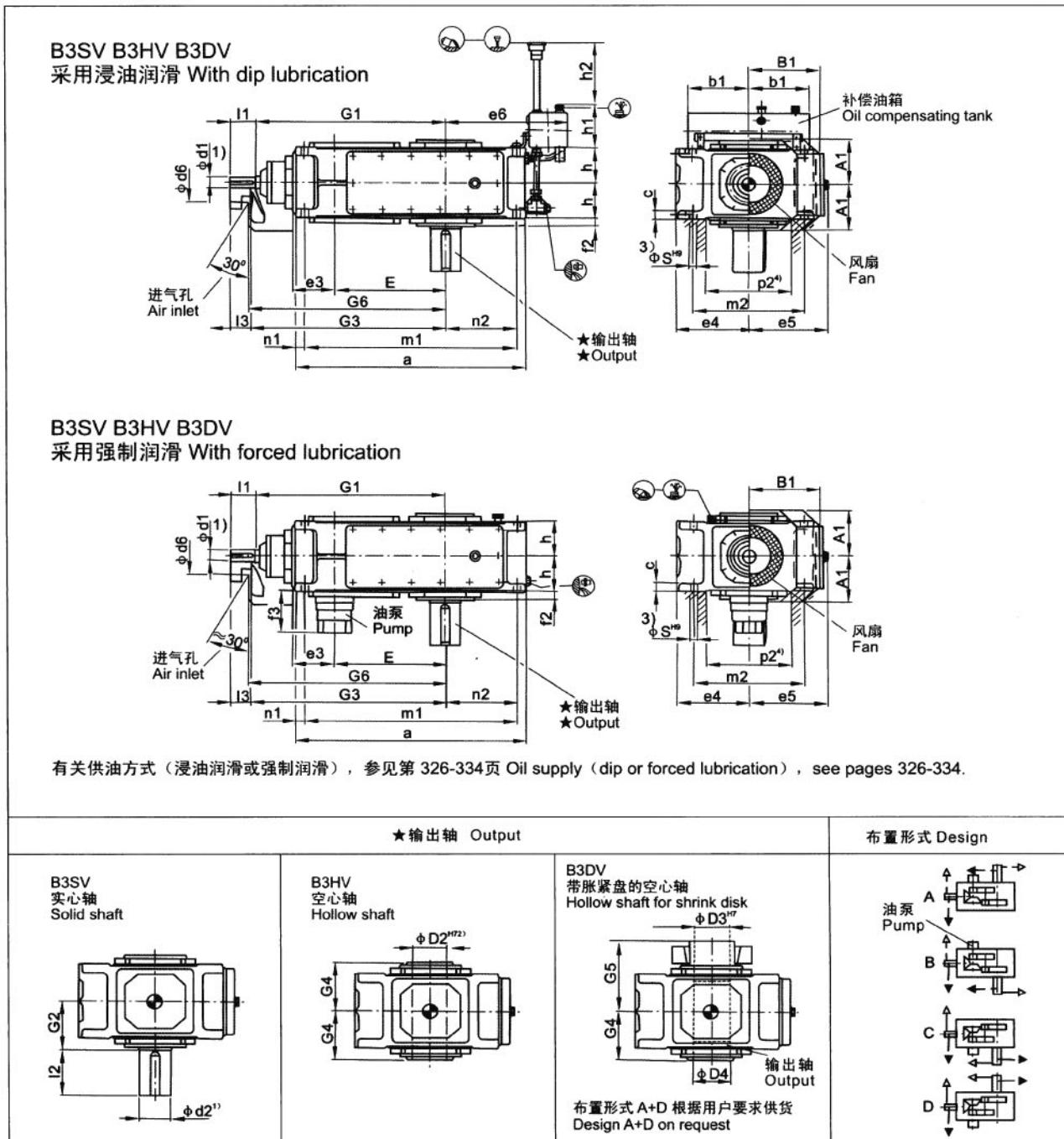
规格 Size	尺寸 mm Dimensions in mm																			
	输入轴 Input								iN = 7.1 - 12.5								G1	G3		
	iN = 5 - 11.2			iN = 5.6 - 11.2			iN = 5.6 - 12.5			iN = 6.3 - 14			iN = 7.1 - 12.5							
	d ₁ ¹⁾	l ₁	l ₃	d ₁ ¹⁾	l ₁	l ₃	d ₁ ¹⁾	l ₁	l ₃	d ₁ ¹⁾	l ₁	l ₃	d ₁ ¹⁾	l ₁	l ₃					
13	110	205	165														1070	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	A ₁	b	B ₁	c	d ₆	e ₃	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 ₆	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	1385	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 Lubrication (L)	重量 Weight (kg)		
	输出轴 Output												
	B2SV			B2HV			B2DV						
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 B3.V Type B3.V 规格 3...12 Sizes 3...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 258-259 页。For parallel key GB/T1095-1979 and for centre hole, see page 258-259.

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.

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 三级传动 Three Stage 立式安装 Vertical
 类型 B3.V Type B3.V 规格 3...12 Sizes 3...12

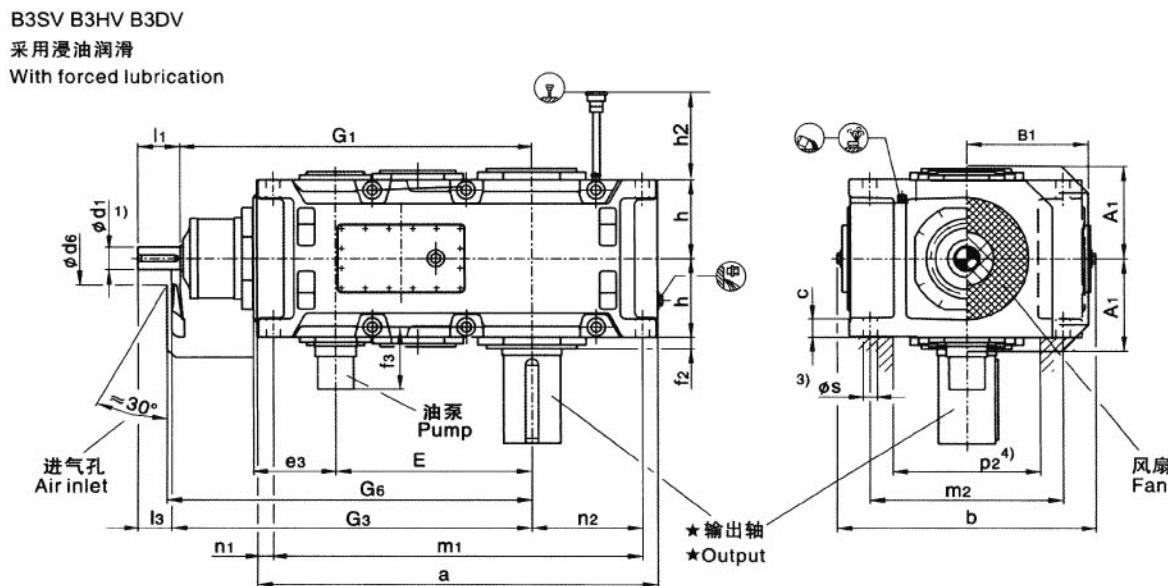
规格 Size	尺寸 mm Dimensions in mm																
	输入轴 Input																
	iN=12.5-45			iN=16-56			iN=20-45			iN=50-71			iN=63-90			G1	G3
	d1 ⁿ	I1	I3	d1 ⁿ	I1	I3	d1 ⁿ	I1	I3	d1 ⁿ	I1	I3	d1 ⁿ	I1	I3		
3							28	55	40	20	50	35				430	445
4	30	70	50							25	60	40				500	520
5	35	80	60							28	60	40				575	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	A1	b1	B1	c	d6	e3	e4	e5	e6	E	f2
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

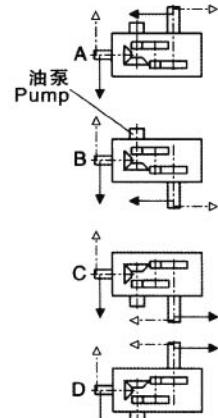
规格 Size	尺寸 mm Dimensions in mm											
	齿轮箱 Gear units											
	f3	G6	h	h1	h2	h3	m1	m2	n1	n2	p2 ⁿ	s
3	-	455	95	165	-	180	410	265	20	125	210	18
4	-	530	107.5	165	-	180	505	300	30	160	220	24
5	190	605	127.5	205	180	240	580	360	30	175	270	24
6	190	640	127.5	205	180	240	660	360	30	220	270	24
7	190	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 Lubrication		重量 Weight (kg)	
	输出轴 Output									浸油润滑 Dip lubrication (L)	强制润滑 Forced lubrication (L)		
	B3SV			B3HV			B3DV						
	d2 ⁿ	G2	I2	D2 ⁿ	G4	D3	D4	G4	G5				
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 B3.V Type B3.V 规格 13...18 Sizes 13..18



有关供油方式(强制润滑),参见第326-334页 Oil supply(forced lubrication), see pages 326-334.

★ 输出轴 Output			布置形式 Design
B3SV 实心轴 Solid shaft	B3HV 空心轴 Hollow shaft	B3DV 带胀紧盘的空心轴 Hollow shaft for shrink disk	 <p>布置形式A+D 根据用户要求供货 Design A+D on request</p>

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 258~259页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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.

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 三级传动 Three Stage 立式安装 Vertical
 类型 B3.V Type B3.V 规格 13...18 Sizes 13..18

规格 Size	尺寸 mm Dimensions in mm																				
	输入轴 Input																				
	iN=12.5-45			iN=14-50			iN=16-56			iN=50-71			iN=56-80			iN=63-90			G1	G3	
	d1 ^o	I1	I3	d1 ^o	I1	I3	d1 ^o	I1	I3	d1 ^o	I1	I3	d1 ^o	I1	I3	D1 ^o	I1	I3			
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							1560	1600	
18				110	205	165							80	170	130				1620	1660	
19																					
20																					
21																					
22																					
规格 Size	尺寸 mm Dimensions in mm																				
	齿轮箱 Gear units																				
	a	A1	b	B1	c	d6	e3	E	f2	f3											
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																				
	G6	h	h2	m1	m2	n1	n2	P2 ^o	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	1620	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																				
	输出轴 Output																				
	B3SV			B3HV			B3DV														
	d2 ^o	G2	I2	D2 ^o	G4	D3	D4	G4	G5												
13	200	335	350	190	335	195	95	335	480	95											
14	210	335	350	210	335	210	215	335	480	110											
15	230	380	410	230	380	230	235	380	550	165											
16	240	380	410	240	380	240	245	380	550	190											
17	250	415	410	250	415	250	260	415	600	210											
18	270	415	470	275	415	280	285	415	600	240											
19																					
20																					
21																					
22																					
	根据用户要求供货 Onrequest																				
	润滑油 Lubrication (L)																				
	重量 Weight (kg)																				

直交轴齿轮箱 Bevel-helical Gear Units

四级传动 Four Stage

立式安装 Vertical

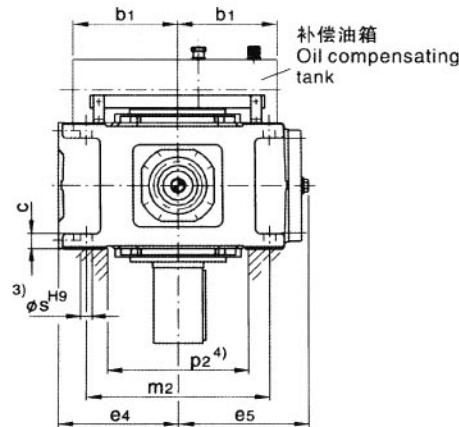
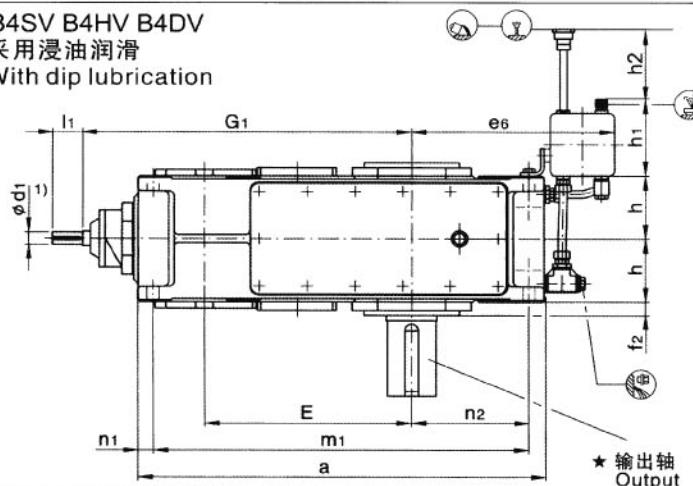
类型 B4.V Type B4.V

规格 5...12 Sizes 5...12

B4SV B4HV B4DV

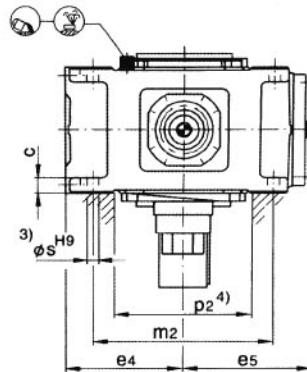
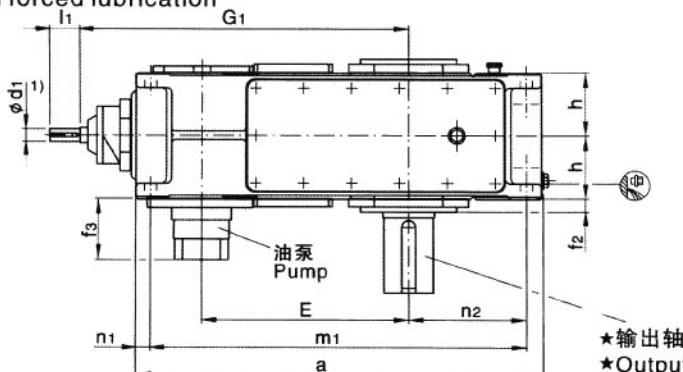
采用浸油润滑

With dip lubrication


B4SV B4HV B4DV

采用强制润滑

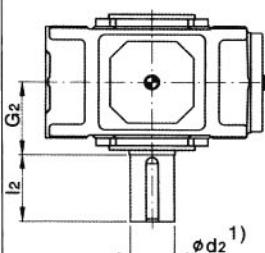
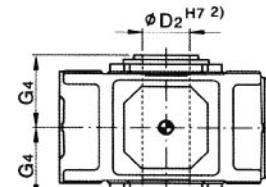
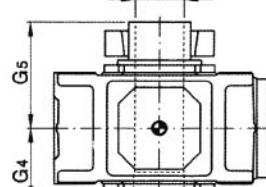
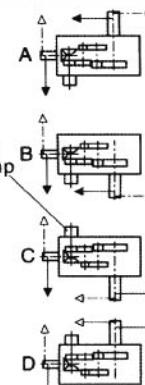
With forced lubrication



有关供油方式(浸油润滑或强制润滑),参见第 326-334页 Oil supply(dip or forced lubrication), see pages 326-334

★输出轴 Output

布置形式 Design

B4SV 实心轴 Solid shaft	B4HV 空心轴 Hollow shaft	B4DV 带胀紧盘的空心轴 Hollow shaft for shrink disk	
		 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 258~259 页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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.

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 B4.V Type B4.V 规格 5...12 Sizes 5...12

规格 Size	尺寸 mm Dimensions in mm								G1	
	输入轴 Input									
	iN=80-180		iN=100-224		iN=200-315		iN=250-400			
d1 ¹⁾	I1	d1 ¹⁾	I1	d1 ¹⁾	I1	d1 ¹⁾	I1			
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	b1	c	e4	e5	e6	E	f2	f3
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	h1	h2	h3	m1	m2	n1	n2	p2	s
5	127.5	205	190	240	630	360	30	175	270	24
6	127.5	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 Lubrication	重量 Weight (kg)		
	输出轴 Output												
	B4SV			B4HV		B4DV							
d2 ¹⁾	G2	I2	D2 ²⁾	G4	D3	D4	G4	G5		Dip lubrication (L)	Forced lubrication (L)		
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

四级传动 Four Stage

立式安装 Vertical

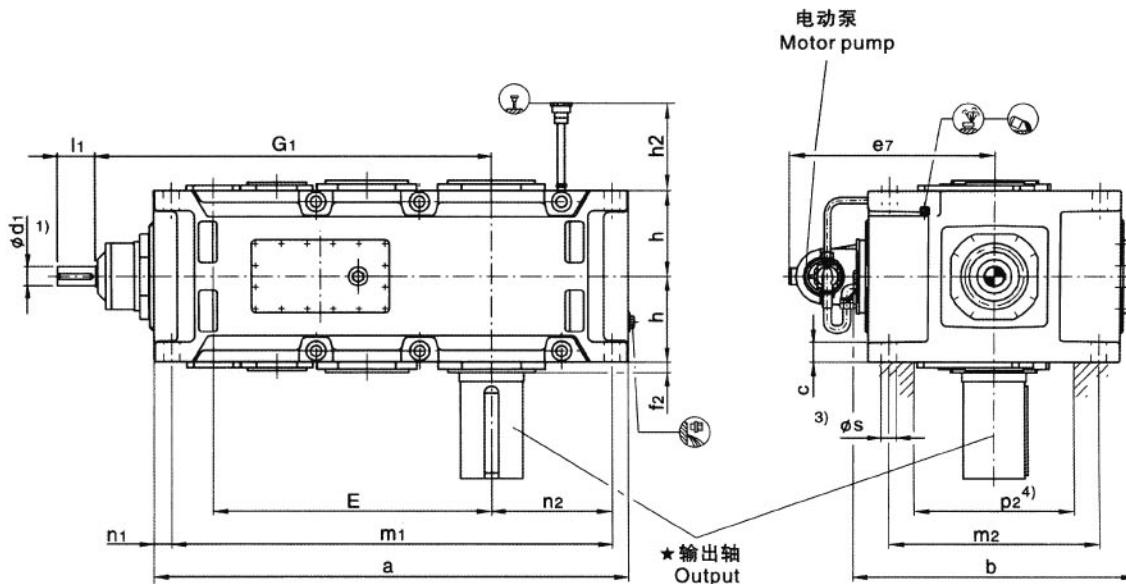
类型 B4.V Type B4.V

规格 13...18 Sizes 13...18

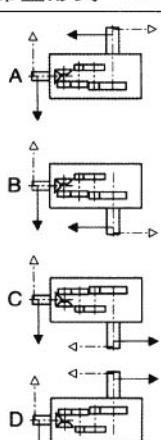
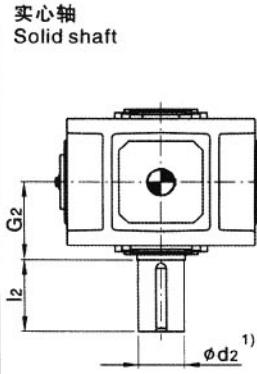
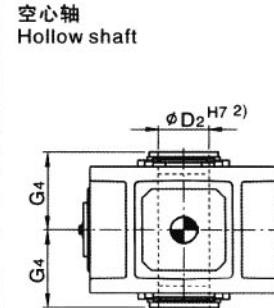
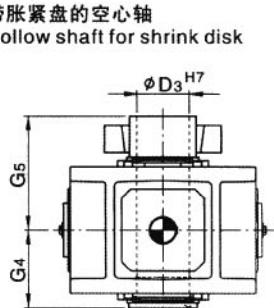
B4SV B4HV B4DV

采用浸油润滑

With dip lubrication



有关供油方式(强制润滑),参见第 326-334页 Oil supply(forced lubrication), see pages 326-334.

★ 输出轴 Output			布置形式 Design
B4SV 实心轴 Solid shaft	B4HV 空心轴 Hollow shaft	B4DV 带胀紧盘的空心轴 Hollow shaft for shrink disk	
			布置形式 A+ D Design A+D on request
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 258~259 页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.	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.

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 258~259 页。For parallel key GB/T1095-1979 and for centre hole, see page 258~259.

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.

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 尺寸 mm Dimensions in mm

立式安装 Vertical 类型 B4.V Type B4.V

规格 13...18 Sizes 13...18

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	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														
21														
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	1760	850	70	525	630	55
19														
20														
21														
22														

规格 Size	尺寸mm Dimensions in mm										润滑油 Lubrication (L)	重量 Weight (kg)		
	输出轴 Output													
	B4SH			B4HV			B4DV							
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														
21														
22														

根据用户要求供货

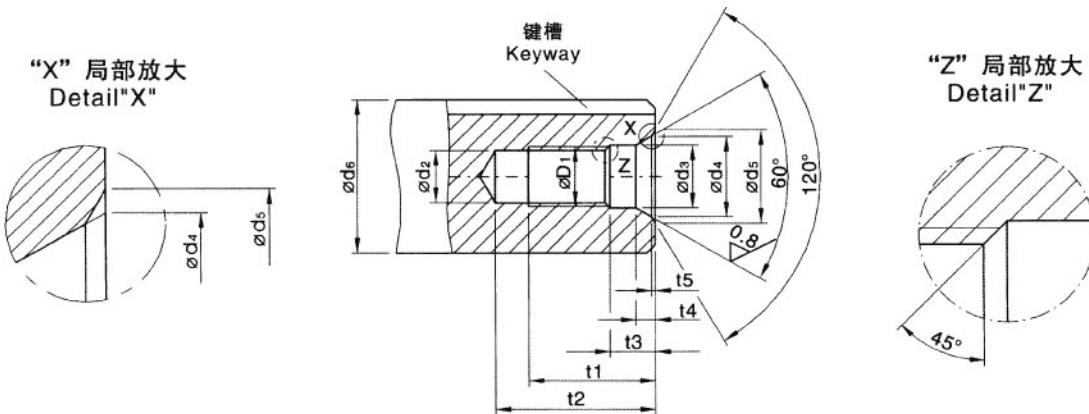
On request

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

C型中心孔 Form C

锥孔, 带一段直孔和护锥沉孔 Tapped hole, with straight running face and counterbore



推荐尺寸 Recommended diameters		C型 Form C											
大于 above	至 to	C 中心孔 C-Centering	d ₁	d ₂	d ₃	d ₄	d ₅	t ₁ +2	t ₂		t ₃ +1	t ₄ ≈	t ₅ ≈
		mm						mm	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

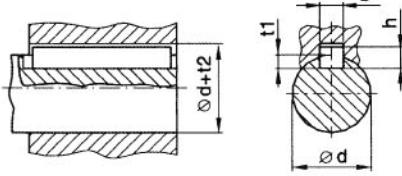
选择 ISO 配合精度 Selection of ISO fits

平键和键槽 Parallel keys and keyways

选择 ISO 配合精度 Selection of ISO fits					
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		H7	
轴公差根据 OMITER 标准确定 Shaft tolerance acc. To OMITER standard		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							
平键紧固方式，采用无锥度联接。 Drive type fastening without taper action			直径 Diameter d	宽度1) Width 1) b mm	高度 Height h mm	轴键槽深度 Depth of key- way in shaft t1 mm	
平键和键槽根据 GB/T1095-1979 标准确定 Parallel key and keyway acc. to GB/T1095-1979			大于 Above mm	至 To mm		轮毂键槽深度 Depth of key- way in hub d + t2 GB/T1095- 1979 mm	
			17	22	6	3.5	d +2.8
			22	30	8	4	d +3.3
			30	38	10	5	d +3.3
			38	44	12	5	d +3.3
			44	50	14	5.5	d +3.8
			50	58	16	6	d +4.3
			58	65	18	7	d +4.4
			65	75	20	7.5	d +4.9
			75	85	22	9	d +5.4
			85	95	25	9	d +5.4
			95	110	28	10	d +6.4
			110	130	32	11	d +7.4
			130	150	36	12	d +8.4
			150	170	40	13	d +9.4
			170	200	45	15	d +10.4
			200	230	50	17	d +11.4
			230	260	56	20	d +12.4
			260	290	63	20	d +12.4
			290	330	70	22	d +14.4
			330	380	80	25	d +15.4
			380	440	90	28	d +17.4

1) 重载工作条件下轮毂平键键槽宽度 b 的公差带应按 ISO JS9 或 ISOP9 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

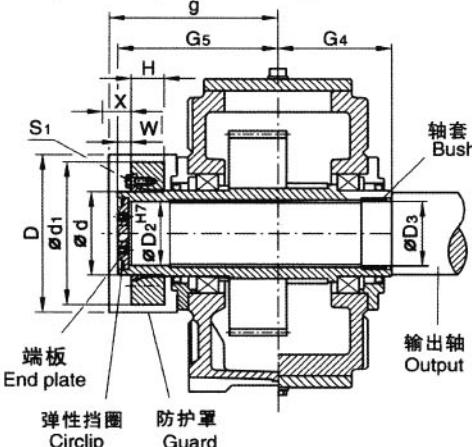
带涨紧盘的空心轴 Hollow Shaft For Shrink Disk

类型 H2,H3,H4,B3,B4 Type H2,H3,H4,B3,B4

规格 3...26 Sizes 3...26

X = 要求预留的力矩扳手空间

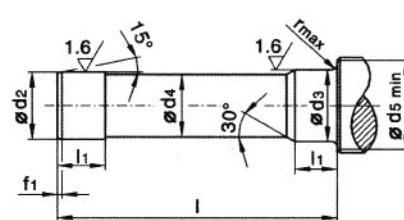
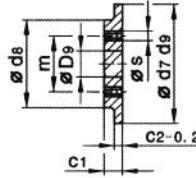
X = Space required for torque wrench



用于涨紧盘联接的工作机驱动轴。

工作机表面不得沾有机油或润滑脂。

Driven machine shaft for shrink disk connection. Driven machine shaft must be free of oil or grease.

工作驱动轴的c型中孔(通孔)由GB145-1985 确定。
Driven machine shaft with centre hole form C (tapped hole) acc. to GB145-1985端板
End plate

齿轮箱规格 Gear units 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				涨紧盘 ¹⁾ Shrink disk				螺钉 Screw						
	d ₂	d ₃	d ₄	d ₅	f ₁	I	l ₁	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	g6	70	g6	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	g6	85	h6	84.5	95	4	326	48	2	17	7	90	70	22	50	M8	2	90x3	85	85	140	205	110-32	110	185	49	20	M 12
5	100	g6	100	h6	99.5	114	5	383	53	2	20	8	105	80	26	55	M10	2	105x4	100	100	165	240	125-32	125	215	53	20	M 12
6	110	g6	110	h6	109.5	124	5	383	58	3	20	8	115	85	26	60	M10	2	115x4	110	110	165	240	140-32	140	230	58	20	M 14
7	120	g6	120	h6	119.5	134	5	453	68	3	20	8	125	90	26	65	M12	2	125x4	120	120	195	280	155-32	155	263	62	23	M 14
8	130	g6	130	h6	129.5	145	6	458	73	3	20	8	135	100	26	70	M12	2	135x4	130	130	195	285	165-32	165	290	68	23	M 16
9	140	g6	145	m6	139.5	160	6	539	82	4	23	10	150	110	33	80	M12	2	150x4	140	145	235	330	175-32	175	300	68	28	M 16
10	150	g6	155	m6	149.5	170	6	559	92	4	23	10	160	120	33	90	M12	2	160x4	150	155	235	350	200-32	200	340	85	28	M 16
11	165	f6	170	m6	164.5	185	7	644	112	4	23	10	175	130	33	90	M12	2	175x4	165	170	270	400	220-32	220	370	103	30	M 20
12	180	f6	185	m6	179.5	200	7	649	122	4	23	10	190	140	33	100	M16	2	190x4	180	185	270	405	240-32	240	405	107	30	M 20
13	190	f6	195	m6	189.5	213	7	789	137	5	23	10	200	150	33	110	M16	2	200x4	190	195	335	480	260-32	260	430	119	30	M 20
14	210	f6	215	m6	209.5	233	8	784	147	5	28	14	220	170	33	130	M16	2	220x5	210	215	335	480	280-32	280	460	132	30	M 20
15	230	f6	235	m6	229.5	253	8	899	157	5	28	14	240	180	39	140	M16	2	240x5	230	235	380	550	300-32	300	485	140	35	M 24
16	240	f6	245	m6	239.5	263	8	899	157	5	28	14	250	190	39	150	M20	2	250x5	240	245	380	550	320-32	320	520	140	35	M 24
17	250	f6	260	m6	249.5	278	8	982	177	5	30	14	265	200	39	150	M20	2	265x5	250	260	415	600	340-32	340	570	155	35	M 24
18	280	f6	285	m6	279.5	306	9	982	177	5	30	14	290	210	39	160	M20	2	290x5	280	285	415	600	360-32	360	590	162	35	M 24
19	285	f6	295	m6	284.5	316	9	1100	187	5	32	15	300	220	39	170	M24	2	300x5	285	295	465	670	380-32	380	640	166	40	M 27
20	310	f6	315	m6	309.5	336	9	1100	187	5	32	15	320	230	39	180	M24	2	320x6	310	315	465	670	390-32	390	650	166	40	M 27
21	330	f6	335	m6	329	358	9	1160	205	5	40	20	340	250	45	190	M24	2	340x6	330	335	490	715	420-32	420	670	186	45	M 27
22	340	f6	345	m6	339	368	9	1170	215	5	40	20	350	260	45	200	M24	2	350x6	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) 涨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, 涨紧盘可布置在工作机侧。工作机驱动轴尺寸函索即复。

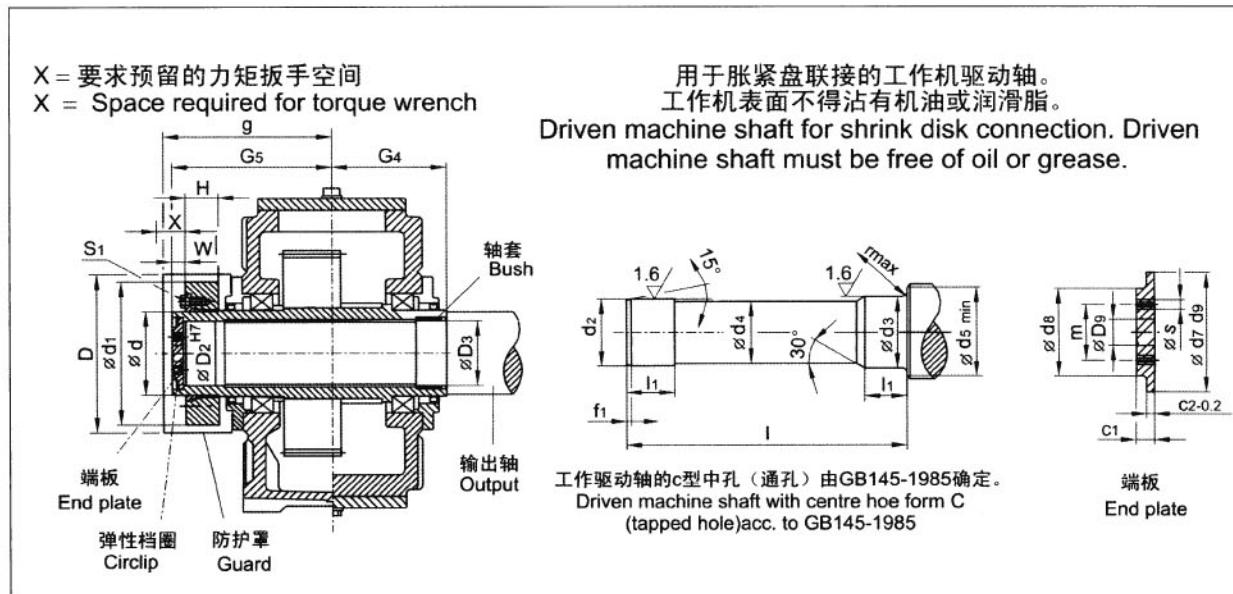
Material of driver machine shaft:60 or higher strength. Shrink disk on machine side on request. Shrink disk is supplied as loose item. Dimensions of machine shaft on request.

齿轮箱 Gear Units

类型 B2D Type B2D

带胀紧盘联接的空心轴 Hollow shafts for shrink disks

规格 2...18 Sizes 2...18



齿轮箱规格 Gear units size	类型 B2D Type B2D																												
	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							
	d2	d3	d4	d5	f1	l	l1	r	c1	c2	d7	d8	d9	m	s	数量 Qty	Gb89/ 3.2-86	D2	D3	G4	G5	类型 Type	d	d1	H	W	s1	D	g
mm																					mm								
2	60 g6	60 g6	59.5	70	3	300	36	2	13	6	65	47	22	35	M6	2	65X2.5	60	60	135	180	80-32	80	141	31	16	M10	180	200
3	70 g6	70 h6	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	M10	200	220
4	85 g6	85 h6	84.5	95	4	386	48	2	17	7	90	70	22	50	M8	2	90X3	85	85	170	235	110-32	110	185	49	20	M12	235	250
5	100 g6	100 h6	99.5	114	5	453	53	2	20	8	105	80	26	55	M10	2	105X4	100	100	200	275	125-32	125	215	53	20	M12	275	285
6	110 g6	110 h6	109.5	124	5	453	58	3	20	8	115	85	26	60	M10	2	15X4	110	110	200	275	140-32	140	230	58	20	M14	285	285
7	120 g6	120 h6	119.5	134	5	533	68	3	20	8	125	90	26	65	M12	2	125X4	120	120	235	320	155-32	155	263	62	23	M14	330	335
8	130 g6	130 h6	129.5	145	6	538	73	3	20	8	135	100	26	70	M12	2	135X4	130	130	235	325	165-32	165	290	68	23	M16	340	340
9	140 g6	145 m6	139.5	160	6	609	82	4	23	10	150	110	33	80	M12	2	150X4	140	145	270	365	175-32	175	300	68	28	M16	360	380
10	150 g6	155 m6	149.5	170	6	629	92	4	23	10	160	120	33	90	M12	2	160X4	150	155	270	385	200-32	200	340	85	28	M16	395	400
11	165 f6	170 m6	164.5	185	7	744	112	4	23	10	175	130	33	90	M12	2	175X4	165	170	320	450	220-32	220	370	103	30	M20	435	470
12	180 f6	185 m6	179.5	200	7	749	122	4	23	10	190	140	33	100	M16	2	190X4	180	185	320	455	240-32	240	405	107	30	M20	450	470
14	210 f6	215 m6	209.5	233	8	894	147	5	28	14	220	170	33	130	M16	2	220X5	210	215	390	535	280-32	280	460	132	30	M20	525	555
16	240 f6	245 m6	239.5	263	8	1039	157	5	28	14	250	190	39	150	M20	2	250X5	240	245	450	620	320-32	320	520	140	35	M24	595	645
18	280 f6	285 m6	279.5	306	9	1177	177	5	30	14	290	210	39	160	M20	2	290X5	280	285	510	700	360-32	360	590	162	35	M24	635	725

1)胀紧盘不在我们的供货范围之内。如果需要的话,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。

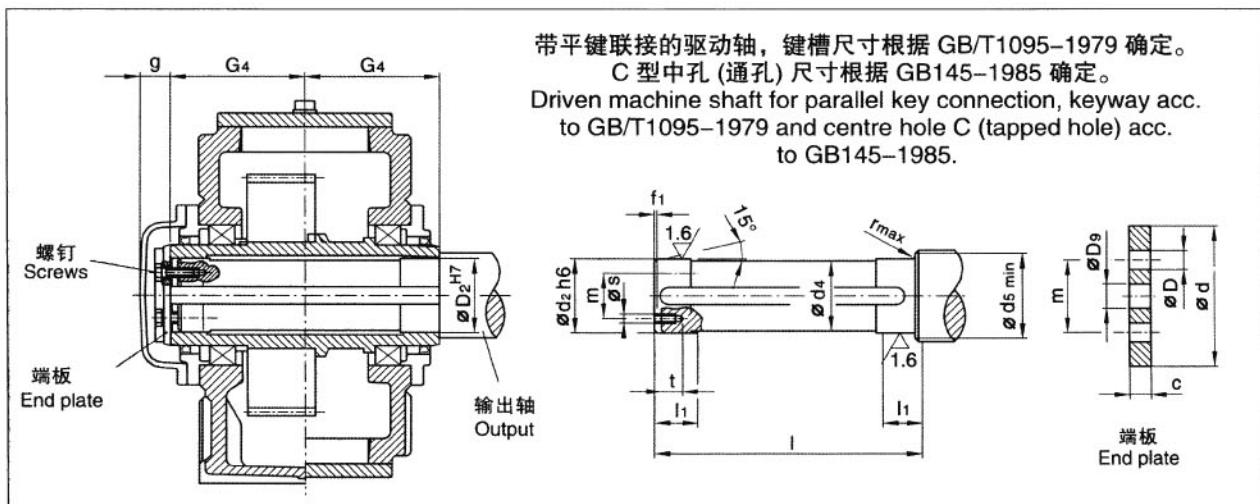
Material of driver machine shaft: 60 or higher strength. Shrink disk on machine side on request. Shrink disk is supplied as loose item. Dimensions of machine shaft on request.

齿轮箱 Gear Units

带平键联接的空心轴 Hollow Shafts for Parallel Key Connections

类型 H2,H3,H4,B3,B4 Type H2,H3,H4,B3,B4

规格 2...18 Sizes 2...18



齿轮箱 规格 Gear units size	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	
	mm										mm									
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 .

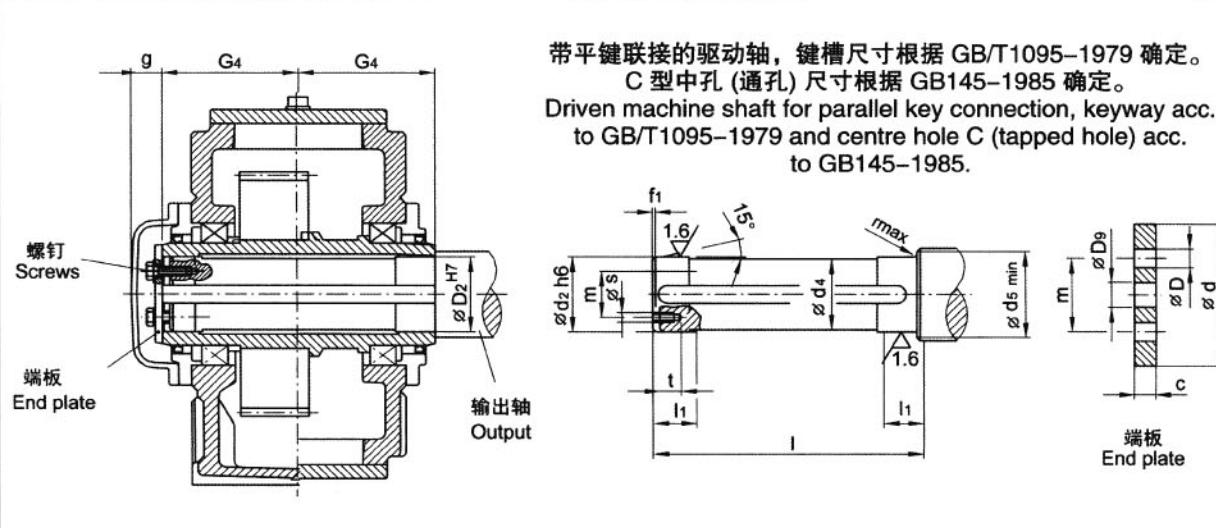
Please order separately, if required.

齿轮箱 Gear Units

类型 B2H Type B2H

带平键联接的空心轴 Hollow Shafts for Parallel Key Connections

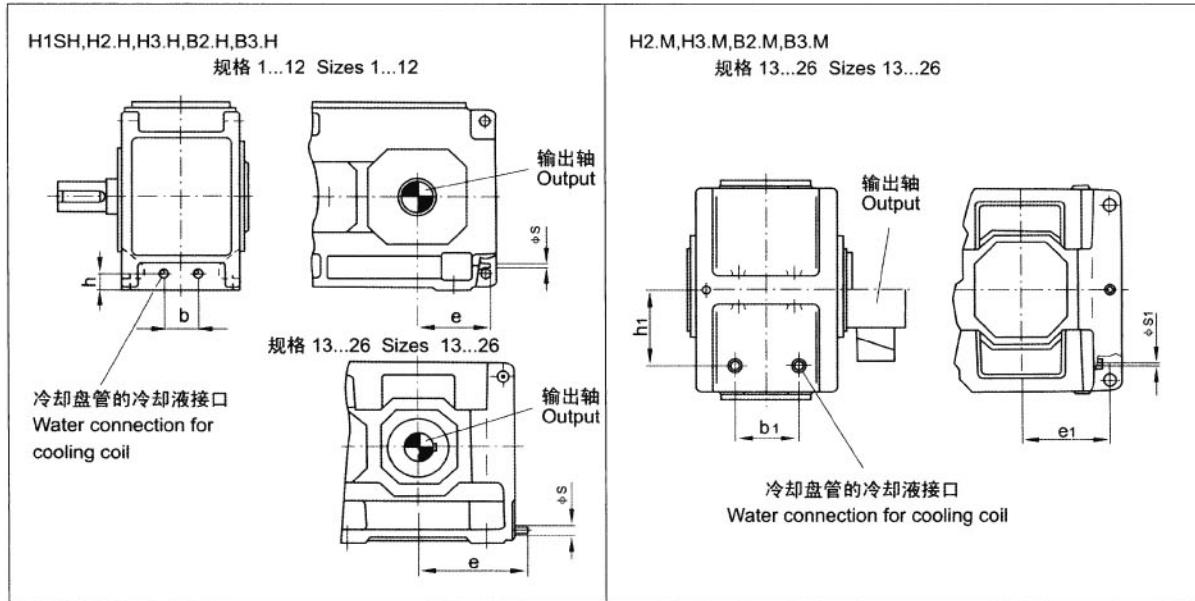
规格 2...18 Sizes 2... 18



齿轮箱 规格 Gear units size	工作机驱动轴1) Driven machine shaft										端板 End plate				螺钉 Screw		空心轴 Hollow shaft		
	d2	d4	d5	f1	I	I1	r	s	t	c	D	D9	d	m	规格 Size	数量 Qty	D2	G4	g
mm																			
2	55	54.5	63	3	268	30	1.2	M8	15	8	9	18	70	40	M8X20	2	55	135	35
3	65	64.5	73	4	288	30	1.2	M10	18	8	11	18	78	45	M10X25	2	65	145	35
4	80	79.5	88	4	338	35	1.2	M10	18	10	11	22	100	60	M10X25	2	80	170	35
5	95	94.5	105	5	398	40	1.6	M10	18	10	11	26	120	70	M10X25	2	95	200	40
6	105	104.5	116	5	398	45	1.6	M10	18	10	11	26	120	70	M10X25	2	105	200	40
7	115	114.5	126	5	468	50	1.6	M12	20	12	13.5	26	140	80	M12X30	2	115	235	40
8	125	124.5	136	6	468	55	2.5	M12	20	12	13.5	26	150	85	M12X30	2	125	235	40
9	135	134.5	147	6	537	60	2.5	M12	20	12	13.5	33	160	90	M12X30	2	135	270	45
10	150	149.5	162	6	537	65	2.5	M12	20	12	13.5	33	185	110	M12X30	2	150	270	45
11	165	164.5	177	7	637	70	2.5	M16	28	15	17.5	33	195	120	M16X40	2	165	320	45
12	180	179.5	192	7	637	75	2.5	M16	28	15	17.5	33	220	130	M16X40	2	180	320	45
14	210	209.5	226	8	777	85	3	M16	28	18	17.5	33	250	160	M16X40	2	210	390	45
16	240	239.5	258	8	896	100	3	M20	38	25	22	39	280	180	M20X55	4	240	450	60
18	275	274.5	295	9	1016	120	4	M20	38	25	22	39	330	210	M20X55	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.

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 H..H, H..M, B..H,B..M Types H..H, H..M, B..H, B..M


规格 Size	类型 H1SH Type H1SH					类型 H2.H/B3.H Type H2.H/B3.H					类型 H3.H Type H3.H					类型 B2.H Type B2.H				
	b mm	e mm	h mm	s	1)	b mm	e mm	h mm	s	1)	b mm	e mm	h mm	s	1)	b mm	e mm	h mm	s	1)
1	30	150	45	G1/4	4	-	-	-	-	-	-	-	-	-	-	64	125	40	G1/4	4
2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	130	40	G1/4	4
3	48	205	74	G1/2	4	34	130	55	G1/2	4	-	-	-	-	-	58	140	52	G1/4	4
4	-	-	-	-	-	34	155	60	G1/2	4	-	-	-	-	-	74	160	54	G1/2	4
5	88	270	90	G1/2	4	68	170	64	G1/2	4	70	175	60	G1/2	4	130	175	62	G1/2	8
6	-	-	-	-	-	70	215	68	G1/2	4	70	220	69	G1/2	4	120	220	68	G1/2	4
7	124	310	135	G1/2	4	100	210	83	G1/2	4	80	210	83	G1/2	4	140	210	80	G1/2	8
8	-	-	-	-	-	100	270	83	G1/2	4	80	270	83	G1/2	4	140	270	80	G1/2	4
9	116	365	110	G1/2	8	140	245	110	G1/2	8	150	245	107	G1/2	4	232	245	110	G1/2	8
10	-	-	-	-	-	100	295	95	G1/2	8	90	295	95	G1/2	4	150	295	90	G1/2	8
11	146	425	130	G1/2	8	110	275	95	G1/2	8	200	275	115	G1/2	8	312	275	115	G1/2	8
12	-	-	-	-	-	200	360	109	G1/2	8	200	360	115	G1/2	8	300	360	115	G1/2	8
13	152	480	150	G1/2	8	252	455	116	G1/2	8	252	460	116	G1/2	8	324	460	116	G1/2	8
14	-	-	-	-	-	252	525	116	G1/2	8	252	530	116	G1/2	8	324	530	116	G1/2	8
15	172	560	130	G1/2	8	290	535	119	G1/2	8	290	540	119	G1/2	8	396	540	119	G1/2	8
16	-	-	-	-	-	290	580	119	G1/2	8	290	585	119	G1/2	8	396	585	119	G1/2	8
17	202	600	145	G1/2	8	340	575	134	G1/2	8	300	580	134	G1/2	8	468	580	134	G1/2	8
18	-	-	-	-	-	340	635	134	G1/2	8	300	640	134	G1/2	8	468	640	134	G1/2	8
19	根据用户要求供货 On request					根据用户要求供货 On request					根据用户要求供货 On request					-				
20-26	-					-					-					-				

规格 Size	类型 H2.M/B3.Type H2.M/B3.M					类型 H3.Type H3.M					类型 B2.Type B2.M				
	b ₁ mm	e ₁ mm	h ₁ mm	s ₁	1)	b ₁ mm	e ₁ mm	h ₁ mm	s ₁	1)	b ₁ mm	e ₁ mm	h ₁ mm	s ₁	1)
13	252	335	300	G1/2	8	252	335	300	G1/2	8	324	335	300	G1/2	8
14	252	405	300	G1/2	8	252	405	300	G1/2	8	324	405	300	G1/2	8
15	290	395	335	G1/2	8	290	395	340	G1/2	8	396	390	345	G1/2	8
16	290	440	335	G1/2	8	290	440	340	G1/2	8	396	435	345	G1/2	8
17	340	425	380	G1/2	8	300	425	380	G1/2	8	324	425	395	G1/2	8
18	340	485	380	G1/2	8	300	485	380	G1/2	8	324	485	395	G1/2	8
19-26	根据用户要求供货 On request					根据用户要求供货 On request					-				

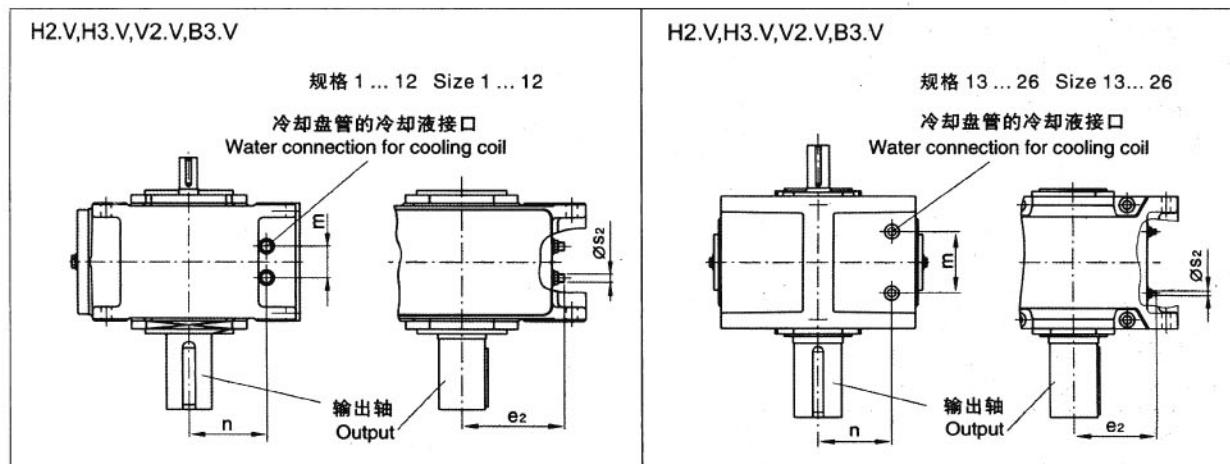
1) 冷却液需要量 (l/min)
 Required cooling water quantity (l/min) Cooling coil suitable for fresh, sea and brackish

齿轮箱 Gear Units

冷却盘管 Cooling Coils

立式安装 Vertical

类型 H..V, B..V Types H..V, B..V 规格 1...26 Sizes 1...26



规格 Size	类型 H2.V/B.V Type H2.V/B3.V					类型 H3.V Type H3.V					类型 B2.V Type B2.V				
	m mm	n mm	e ² mm	s ₂	(1)	m mm	n mm	e ² mm	s ₂	(1)	m mm	n mm	e ² mm	s ₂	(1)
1	-	-	-	-	-	-	-	-	-	-	64	90	125	G1/4	4
2	-	-	-	-	-	-	-	-	-	-	78	105	130	G1/4	4
3	34	120	130	G1/2	4	-	-	-	-	-	58	123	140	G1/2	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	168	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	290	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					根据用户要求供货 On request									

冷却盘管适用于 Cooling coil for															
类型 Types	规格 Size	浸油润滑 Dip lubrication				法兰泵强制润滑 Forced lubrication with flanged on pump				电动泵强制润滑 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		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		
WH2.V	4	x	x	x	x	-	-	-	-						
	5 - 12	x	x	x	x	-	x	-	x						
	13 - 18	-	-	-	-	-	x	-	x						
WH3.V	5 - 12	x	x	x	x	-	x	-	x						
	13 - 18	-	-	-	-	-	x	-	x						
	4	x	x	x	x	-	-	-	-						
WB2.V	5 - 12	x	x	x	x	x	x	-	-						
	13 - 18	-	-	-	-	x	x	-	-						
	4	x	x	x	x	-	-	-	-						
WB3.V	5 - 12	x	x	x	x	-	-	x	x						
	13 - 18	-	-	-	-	-	-	x	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 H2 ... H4, B2...B4 Types H2... H4, B2...B4
规格 1... 18立式安装 Sizes 1...18Vertical
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.
表1 Table 1

类型¹⁾ Types	规格Size	浸油润滑 Dip lubrication	法兰泵强制润滑 Forced lubrication, flanged on pump	电动泵强制润滑 Forced lubrication, motor pump
WH2.V	4	X	-	-
	5 ...12	X	X	-
	13 ...18	-	X	-
WH3.V	5 ...12	X	X	X
	13 ...18	-	X	X
WH4.V	7 ...12	X	X	X
	13 ...18	-	-	X
WB2.V	4	X	-	-
	5 ...12	X	X	X
	13 ...18	-	X	X
WB3.V	4	X	-	-
	5 ...12	X	X	X
	13 ...18	-	X	X
WB4.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260页表14。
1) For possible variants for gear units with solid shaft and oil retaining tube, see page281, 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, 所用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254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 ex-pansion.
criteria for selection, see page 254
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油泵进行飞溅润滑。
选择依据参见 255~259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 255~259

齿轮箱 Gear Units
浸油润滑方式 Dip Lubrication for
类型 H2 ... H4, B2...B4 Types H2... H4, B2...B4
规格 1... 12立式安装 Sizes 1...12Vertical

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.

表2 Table2

规格 Size	类型 Types											
	H2.V		H3.V		H4.V		B2.V		B3.V		B4.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	-	-	-	-
2	-	-	-	-	-	-	5 - 5.6 6.3 - 8 9 - 10 11.2 - 18	1000 1200 1500 1800	-	-	-	-
3	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	-	-
4	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	-	-
5	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
6	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
7	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
8	8-9 10-11.2 12.5-14 16-20 22.4-28	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
9	6.3-7.1 8-10 11.2-22.4	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
10	8-9 10-12.5 14-28	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
11	6.3-7.1 8-10 11.2-12.5 14-22.4	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
12	8-9 10-12.5 14-16 18-28	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

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

表3 Table3

40℃以下的ISO – VG粘度 mm ² /s (cst) Viscosity ISO – VG at 40 °C in mm ² /s(cst)	浸油允许极限温度, °C Permissible temperature limit in °C for dip lubrication			
	矿物油 Mineral oil	合成油 Synthetic oil	矿物油 Mineral oil	合成油 Synthetic oil
VG 220	-15			-25
VG 320	-12			-25
VG 460	-9			-25

若油温低于表中所列数值，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
 类型 H2 ... H4 Types H2... H4

强制润滑方式 Forced Lubrication for
 规格 5... 18 立式安装 Sizes 5...18 Vertical

表4 Table 4

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 ensured. If the temperatures are below the values as listed in table 4, dip Lubrication has to be provided or the oil must be heated.

表5 Table 5

立式安装平行轴齿轮箱采用法兰泵 Assignment of flanged-on pumps to vertical helical gear units								
类型 Types	n 1/min	齿轮箱规格 Gear units size		法兰泵规格 Flanged-on pumpsize	齿轮箱规格 Gear units 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			
H2.V ¹⁾	750 - 1800	6.3-22.4	8 - 28	KSW1	6.3-22.4	8 - 28	7.1-25	KSW2
H3.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	*
		25 - 50	31.5 - 63	KSW3	22.4 - 25	28 - 31.5	25 - 28	KSW3
H4.V ¹⁾	901 - 1200	56 - 90	71 - 112	*	28 - 45	35.5 - 56	31.5 - 50	KSW4
					50 - 90	63 - 112	56 - 100	*
		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	*
H4.V ¹⁾	750 - 900	100 - 180	125 - 224	KSW3				
		200 - 335	250 - 450	*				
		100 - 125	125 - 160	KSW3				
		140 - 335	180 - 450	*				
H4.V ¹⁾	1201 - 1800	750 - 900	100 - 335	125 - 450	*			
		100 - 355	125 - 450					
		901 - 1200	100 - 125	125 - 160	KSW3			
		140 - 335	180 - 450	*				
H4.V ¹⁾	901 - 1200	750 - 900	100 - 335	125 - 450	*			
		100 - 355	125 - 450					
		1201 - 1800	100 - 125	125 - 160	KSW3			
		140 - 335	180 - 450	*				
H4.V ¹⁾	750 - 900	100 - 335	125 - 450	*				
		100 - 355	125 - 450					
		901 - 1200	100 - 125	125 - 160	KSW3			
		140 - 335	180 - 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 H2 ... H4 Types H2... H4

规格 5... 18 立式安装 Sizes 5...18 Vertical

表6 Table6

立式安装平行轴齿轮箱采用法兰泵 Assignment of flanged-on pumps to vertical helical gear units								
类型 Types	n1 1/min	齿轮箱规格 Gear units size		法兰泵规格 Flanged-on pump size	齿轮箱规格 Gear units 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			
H2.V ¹⁾	750 - 1800	6.3-22.4	8 - 28	KSW1	6.3-22.4	8 - 28	7.1-25	KSW2
H3.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
H4.V ¹⁾	750 - 900	63 - 90	80 - 112	*	35.5 - 56	45-71	40-63	KSW4
					63 - 90	80-112	71 - 100	*
		25-45	31.5-56	KSW3	22.4-25	28 - 31.5	25 - 28	KSW3
	1201 - 1800	50 - 90	63 - 112	*	28-45	35.5 - 56	31.5 - 50	KSW4
					50-90	63 - 112	56-100	*
H4.V ¹⁾	901 - 1200	100 - 224	125 - 280	KSW3	100 - 355	125 - 450	112 - 400	*
		250 - 355	315 - 450	*				
	750 - 900	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

表7 Table 7

立式安装平行轴齿轮箱采用法兰泵 Assignment of flanged-on pumps to vertical helical gear units			
类型 Types	规格 Sizes	布置方式 Design	油泵 Pump
H2.V	5 ... 18	A / B / C / D	1)
H3.V	5 ... 18	A / C	SF 2/8
	5 ... 12		SF 2/8
	13 ... 18		SF 2/13
H4.V	7 ... 12	B/D	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 Bevel-helical Gear Units 强制润滑方式 Forced Lubrication for
 类型 B2...B4 Types B2...B4 规格 5 ... 18 Sizes 5 ... 18 立式安装 Vertical

表格 8 Table 8		强制润滑允许极限温度 °C Permissible temperature limit in °C for forced feed lubrication			
40°C 以下的ISOVG-粘度, mm²/s (cSt) Viscosity ISO-Vg at 40°C in mm²/s (cSt)		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
VG302		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，必须提供浸油润滑方式，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								
立式安装直交轴减速机采用法兰泵 Assignment of flanged-on pumps to vertical bevel-helical reducers								
类型 Types	n1 1/min	齿轮箱规格 Gear units size		法兰泵规格 Flanged-on Pump size	齿轮箱规格 Gear units 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			
B2.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	63	56	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	112	14	125	*
		112	14	*				
B3.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	*
B4.V ¹⁾	1201-1800	80-125	100-160	KSW2	80-315	100-400	90-355	*
		140-25	180-315	KSW3				
		280-315	355-400	*				
	901-1200	80-180	100-224	KSW3				
		200-315	250-400	*				
		80-125	100-160	KSW3				
	750-900	140-315	180-400	*				

* = 所需电动泵，参见表11。*=Motor pump require, see table11.

- 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 Bevel-helical Gear Units 强制润滑方式 Forced Lubrication for
 类型 B2...B4 Types B2...B4 规格 5 ...18 Sizes 5 ...18 立式安装 Vertical

表 10 Table 10								
立式安装直交齿轮箱机采用法兰泵 Assignment of flanged-on pumps to vertical bevel-helical gear units								
类型 Types	n1 1/min	齿轮箱规格 Gear units size		法兰泵规格 Flanged-on pump size	齿轮箱规格 Gear units 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		速比 Ratio			
		IN	IN		IN			
B2.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	*				
B3.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
					56-71	71-90	63-80	KSW 4
	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
		56-71	71-90	*	63-71	80-90	71-80	*
	750 - 900	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
					45-71	56-90	50-80	*
B4.V ¹⁾	1201 - 1800	80-100	100-224	KSW 3	80-315	100-400	90-355	*
		200-315	250-400					
	901 - 1200	80-125	100-160	KSW 3				
		140-315	180-400	*				
	750 - 900	80-90	100-112	KSW 3				
		100-315	125-400	*				

=所需电动泵, 参加表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

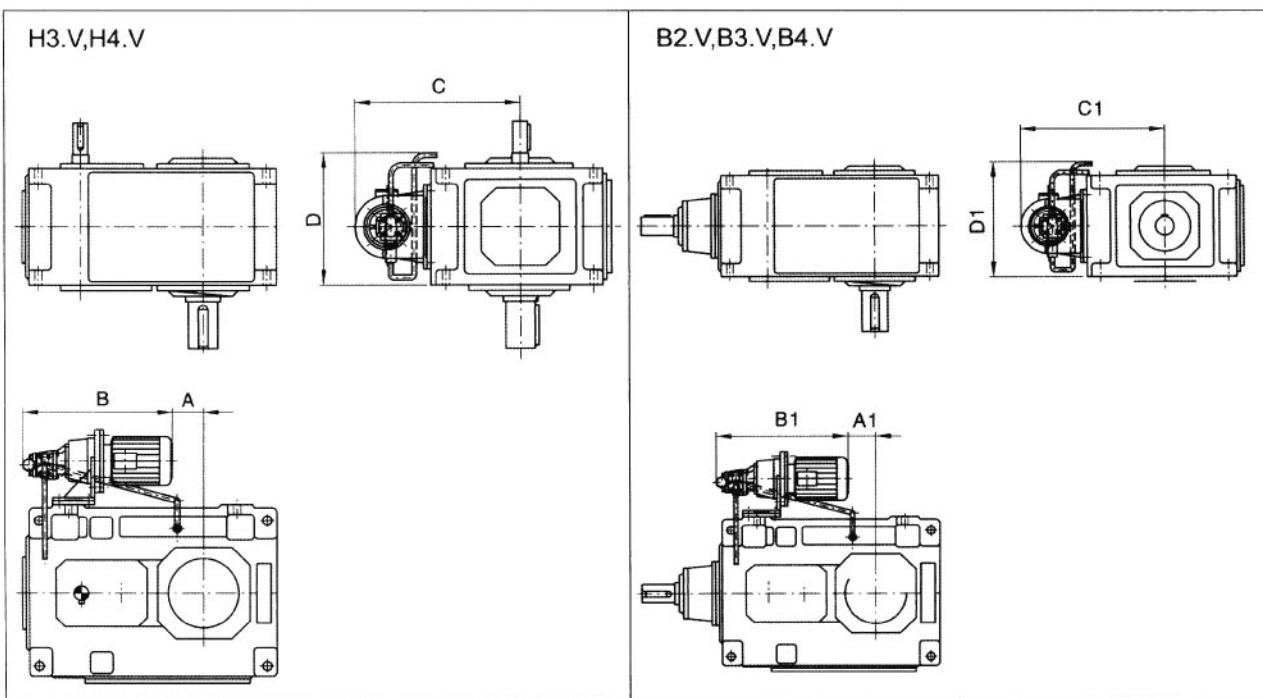
表 11 Table 11			
立式安装直交轴齿轮箱采用法兰泵 Assignment of flanged-on pumps to vertical helical gear units			
类型 Types	规格 Size	布置方式 Design	油泵 Pump
B2.V	5...12	A/B	SF 2/5
	13...18		SF 2/8
	5...18	C/D	SF 2/8
B3.V	5...12	A/B	SF 2/8
	13...18		SF 2/13
	5...12	C/D	SF 2/8
	13...18		SF 2/13
B4.V	5...12	A/B	SF 2/8
	13...18		SF 2/13
	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 H3,H4,B2,B3,B4 Type H3,H4,B2,B3,B4

立式安装 Vertical 规格 5...18 Size 5...18



表格 12 Table 12

表格 13 Table 13

安装尺寸 Mounting dimensions on mm

安装尺寸 Mounting dimensions on mm

类型 Types	规格 Size	布置形式 Design	A	B	C	D	类型 Types	规格 Size	布置形式 Design	A ₁	B ₁	C ₁	D ₁
H3.V	5 / 6	A/B/C/D	-30 / 5	560	480	385	B2.V	5 / 6	A/B/C/D	-160 / -125	480	470	415
	7 / 8	A/B/C/D	55 / 100	585	550	430		7 / 8	A/B/C/D	5 / 50	480	525	510
	9 / 10	A/B/C/D	140 / 190	610	565	500		9 / 10	A/B/C/D	60 / 110	480	565	570
	11 / 12	A/B/C/D	375 / 445	530	625	560		11 / 12	A/B/C/D	150 / 220	480	625	660
	13 / 14	A / C	155 / 225	880	670	700		13 / 14	A/B/C/D	-70 / 0	755	670	805
	13 / 14	B / D	100 / 170	935	670	700		15 / 16	A/B/C/D	15 / 60	780	710	910
	15 / 16	A / C	275 / 320	965	710	770		17 / 18	A/B/C/D	-5 / 55	890	775	1025
	15 / 16	B / D	220 / 265	1020	710	770		5 / 6	A/B/C/D	-85 / -50	480	480	365
	17 / 18	A / C	250 / 310	1040	770	835		7 / 8	A/B/C/D	-5 / 40	480	550	430
	17 / 18	B / D	195 / 255	1095	770	835		9 / 10	A/B/C/D	65 / 115	480	565	500
H4.V	7 / 8	A / C	55 / 100	600	550	430	B3.V	11 / 12	A/B/C/D	280 / 350	480	625	560
	7 / 8	B / D	0 / 45	680	550	430		13 / 14	A/B/C/D	35 / 105	810	670	700
	9 / 10	A / C	140 / 190	625	565	500		15 / 16	A/B/C/D	120 / 165	875	710	775
	9 / 10	B / D	85 / 135	705	565	500		17 / 18	A/B/C/D	165 / 225	970	775	835
	11 / 12	A / C	375 / 445	550	625	560	B4.V	5 / 6	A/B/C/D	-35 / 0	480	480	385
	11 / 12	B / D	320 / 390	635	625	560		7 / 8	A/B/C/D	55 / 100	480	550	430
	13 / 14	A/B/C/D	135 / 205	910	670	700		9 / 10	A/B/C/D	140 / 190	615	565	500
	15 / 16	A/B/C/D	255 / 300	1000	710	775		11 / 12	A/B/C/D	375 / 445	530	625	560
	17 / 18	A/B/C/D	230 / 290	1070	775	835		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 H2...H4,B2...B4 Type H2...H4,B2...B4

立式安装 Vertical 规格 5...18 Size 5...18

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
H2SV	5 - 6	O ¹⁾	-
	7 - 12	O ²⁾	-
	13-18	O ³⁾	-
H3SV	5 - 7	O	-
	7 - 12	O	-
	13-18	O	-
B2SV	5 - 6	-	O
	7 - 12	-	O
	13 - 18	-	O
B3SV	5 - 6	-	O
	7 - 12	-	O
	13 - 18	-	O
B4SV	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 $i \leq 16$

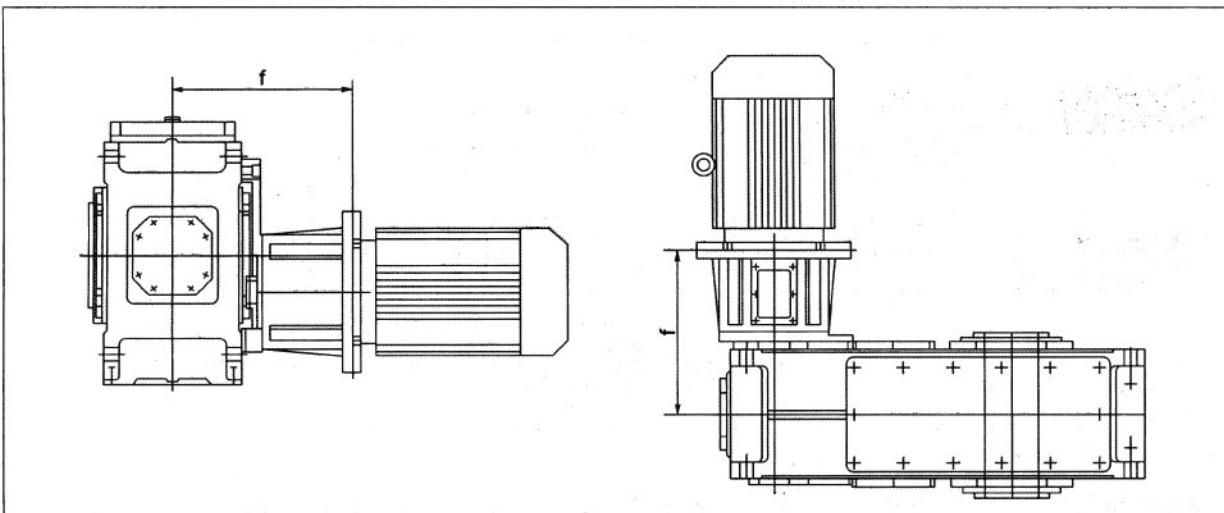
对于规格11号齿轮箱，仅适用于速比 $i \leq 18$ For size 11 only possible up to $i \leq 18$

3) 对于规格13号齿轮箱，仅适用于速比 $i \leq 18$ For size 13 only possible up to $i \leq 18$

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 $i \leq 16$

减速器
 电机法兰联接
 类型H2, H3, H4

Gear Units
 Motor mounting with flanges
 Type H2,H3,H4



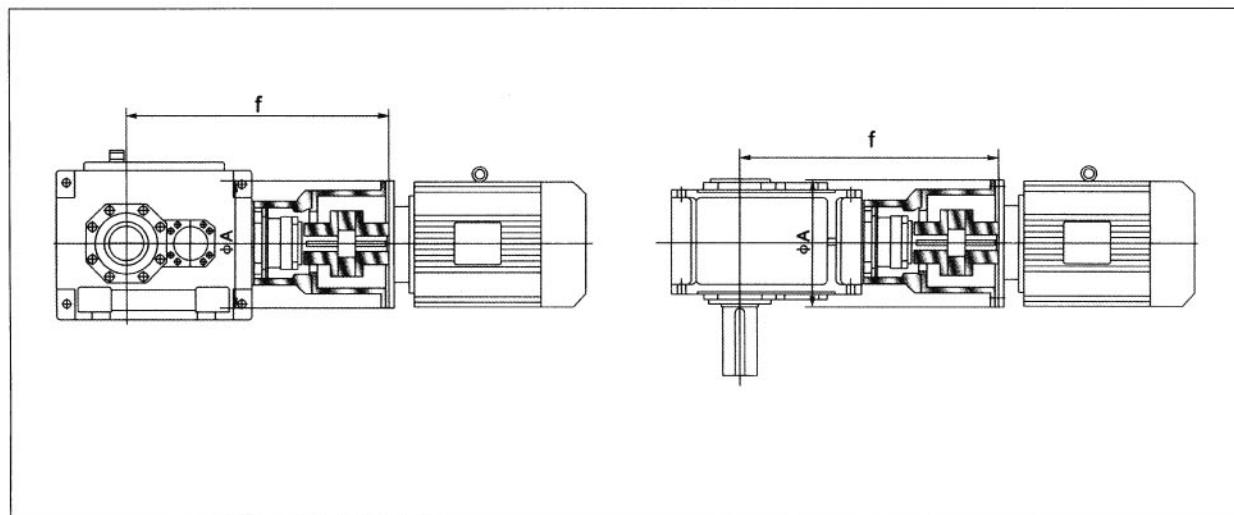
	H2..	
电机功率 Motor Power	4	5/6
	f	mm
11-15kW	403	
18.5-22kW	403	428
30kW	405	430
37-45kW	442	467
55kW		467

电机功率 Motor Power	H4..			
	7/8	9	10	11/12
	f mm			
	≥ 3.15	≤ 2.8	≥ 3.15	≤ 2.8
2.2-4kW	318			
5.5-7.5kW	341	379		384
11-15kW	383	421	430	426
18.5-22kW		421	430	426
30kW			432	
37-45kW			469	
55kW				474
				532
				532

电机功率 Motor Power	H3												
	规 格/ Size												
	7/8		9		10		11/12						
	f mm												
齿轮轴1:传动比in/Ratio in													
	≥ 3.15	≤ 2.8	$=3.15-4$ ≥ 4.5	≤ 2.8	$=3.15-4$ ≥ 4.5	≤ 2.8	≥ 4.5	$=3.15-4$ ≤ 2.8					
11-15kW	388		463	508	468	513							
18.5-22kW	388	413	463	508	468	513							
30kW	390	415	465	510	470	515							
37-45kW	427	452	502	547	507	552	507	532					
55kW	427	452	502	547	507	552	507	577					
75-90kW			502	547	507	552	507	532					
								577					

*标准电机安装尺寸参见第264页。/Fitting dimensions for standard motors see page 264.

减速器
 钟形罩式法兰联接
 类型H2, H3, H4

 Gear Units
 Motor mounting with bell housing flanges
 Type H2,H3,H4


电机功率 Motor Power	规 格/ Size									
	4		5		6		7		8	
	f	A	f	A	f	f	A	f	f	
mm										
11-15kW	708	350								
18.5-22kW	708	350								
30kW	710	400	790	400	825					
37-45kW			827	450	862	957	450	1002		
55kW					957	550	1002			
75-90kW					957	550	1002			

电机功率 Motor Power	规 格/ Size											
	4		5		6		7		8		9	
	f	A	f	A	f	f	A	f	f	A	f	f
mm												
2.2-4kW	648	250										
5.5-7.5kW	671	300	756	350	791							
11-15kW	713	350	788	350	823	933	400	978				
18.5-22kW	713	350	788	350	823	933	400	978	1053	420	1103	
30kW	715	400	780	400	825	935	400	980	1055	420	1105	1240
37-45kW			827	450	862	972	450	1017	1092	450	1142	1277
55kW						972	550	1017	1092	550	1142	1277
75-90kW						972	550	1017	1092	550	1142	1277
												1347

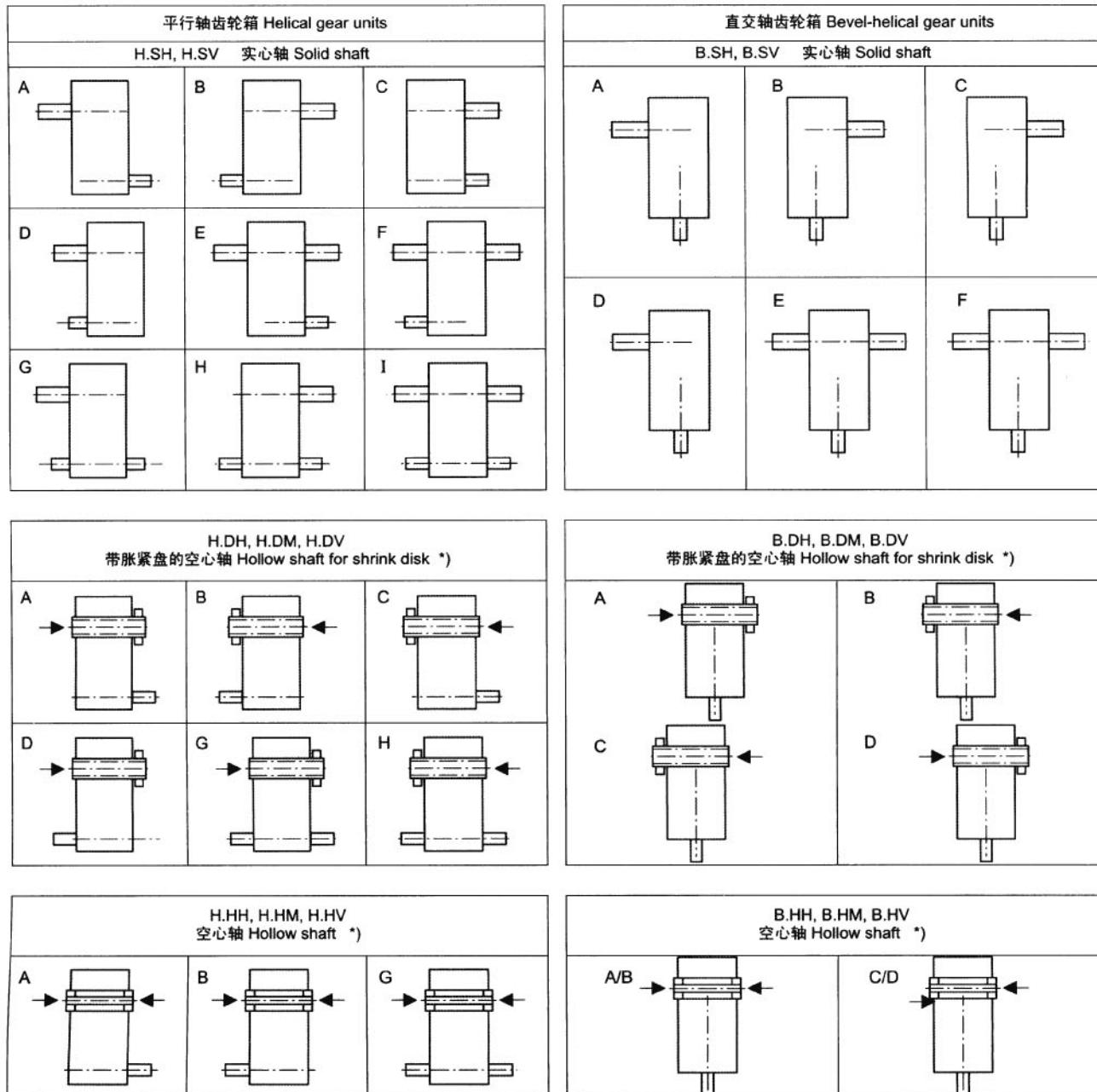
电机功率 Motor Power	规 格/ Size																					
	5		6		7		8		9		10		11		12		13		14		15	
	f	A	f	f	A	f	f	A	f	f	A	f	f	A	f	f	A	f	f	A	f	f
mm																						
2.2-4kW	753	250	780	873	250	918		350														
5.5-7.5kW	776	330	811	896	300	941	1021	350	1071													
11-15kW	818	350	853	938	350	983	1053	350	1003	1253	400	1323										
18.5-22kW	818	350	853	938	350	983	1053	400	1103	1253	400	1323	1423	420	1493							
30kW					940	400	985	1055	450	1105	1255	400	1325	1423	420	1493	1682	400	1728	1730	400	1790
37-45kW								1092		1142	1292	450	1362	1462	450	1532	1719	450	1765	1767	450	1827
55kW											1292	550	1362	1462	550	1532	1719	550	1765	1767	550	1827
75-90kW											1292	550	1362	1462	550	1532	1719	550	1765	1767	550	1827

*标准电机安装尺寸参见第264页。

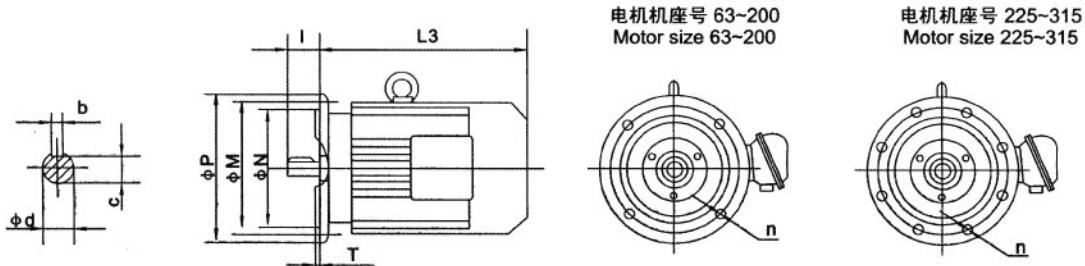
*Fitting dimensions for standard motors see page 264.

齿轮箱 Gear Units 布置形式 Design

类型 H2...H4...,B2...B4 Type H2...H4...,B2...B4 规格 1...26 Size 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.

标准普通电机的参数及安装尺寸
 standard and ordinary motor parameter and mounting dimension


电机 机座号 Motor size	4级 Class4		6级 Class6		8级 Class8		L3				安装尺寸 Mounting dimensions							M(kg)							
	P1 (kW)	n1 (r/min)	P1 (kW)	n1 (r/min)	P1 (kW)	n1 (r/min)	Y2	B	E	V	M	N	P	n	T	d	I	b	c	Y (铝壳) Aluminum housing	Y3	B	E	V	
63	0.12	1390					202	270	328		115	95j6	140	4×φ10	3	11j6	23	4	8.5	5.5	13			11	
	0.18	1390																		6	13.5	15		12	
71	0.25	1390	0.18	850			225	285	345		130	110j6	160	4×φ10	3.5	14j6	30	5	11	6.5	14	16	12	14	
	0.37	1390	0.25	850																7.5	14.5	16	13	15	
80	0.55	1390	0.37	885	0.18	645	255	290	350	310	165	130j6	200	4×φ12	3.5	19j6	40	6	15.5	10	15	31	20	16	
	0.75	1390	0.55	885	0.25	645														11	16	32	21	17	
90S	1.1	1400	0.75	910	0.37	670	270	310	370	320	165	130j6	200	4×φ12	3.5	24j6	50	8	20	16	23	35	27	23	
90L	1.5	1400	1.1	910	0.55	670	295	335	395	345	165	130j6	200	4×φ12	3.5	24j6	50	8	20	20	25	39	31	28	
100	2.2	1420		1.5	920	0.75	680	325	370	420	370	215	180j6	250	4×φ15	4	28j6	60	8	24	33	49	41	36	
	3	1420				1.1	680													35	53	44	36		
112M	4	1440	2.2	940	1.5	690	340	400	450	390	215	180j6	250	4×φ15	4	28j6	60	8	24	41	67	60	43		
132S	5.5	1440	3	960	2.2	710	390	430	505	450	265	230j6	300	4×φ15	4	38k6	80	10	33	65	93	85	63		
132M	7.5	1460		4	960		3	710	430	470	545	490	265	230j6	300	4×φ15	4	38k6	80	10	33	76	105	98	75
				5.5	960																				
160M	11	1460	7.5	960		4	720	505	545	610	550	300	250h6	350	4×φ19	5	42k6	110	12	37	118	150	143	116	
160L	15	1460		11	960	7.5	720													132	169	165	136		
180M	18.5	1470				7.5	720	560	585	655	595	300	250h6	350	4×φ19	5	42k6	110	12	37	164	205	203	169	
180L	22	1470	15	970	11	730	630	640	765	790	300	250h6	350	4×φ19	5	48k6	110	14	42.5	182	222	216	183		
200	30	1470		18.5	970		15	730	660	695	790	850	350	300h6	400	4×φ19	5	55k6	110	16	49	245	300	296	236
				22	970																				
225S	37	1480				18.5	730	675	705	860	910	400	350h6	450	8×φ19	5	60m6	140	18	53	258	360	370	291	
225M	45	1480	30	980	22	730	705	730	890	940	400	350h6	450	8×φ19	5	60m6	140	18	53	290	390	405	327		
250	55	1480	37	980	30	730	770	795		1060	500	450h6	550	8×φ19	5	65m6	140	18	58	388	530	498	393		
280S	75	1480	45	980	37	730	845	870		1160	500	450h6	550	8×φ19	5	75m6	140	20	67.5	510	660	633	520		
280M	90	1485	55	980	45	740	895	920		1260	500	450h6	550	8×φ19	5	75m6	140	20	67.5	606	785	723	610		
315S	110	1485	75	980	55	740	1100	1100		1330	600	550h6	660	8×φ19	6	80m6	170	22	71	910	1000	1150	950		
315M	132	1485	90	985	75	740	1180	1180		1380	600	550h6	660	8×φ19	6	80m6	170	22	71	1000	1100	1230	1030		
315L	160	1485	110	985	90	740		1270	1270		1450	600	550h6	660	8×φ24	6	80m6	170	22	71	1055	1100	1320	1100	
	200	1485	132	985	110	740														1128	1160	1420	1200		

注:由于结构需要及生产厂家不同,有时参数会有所变化,此表仅供参考,准确尺寸请来电垂询。

Note: Sometimes the parameters may be changed with the different structures and manufacturers, this table is only for reference, please refer to us for the exact dimensions.