

# AHK series (4-stage)

## Overview

- Heavy Duty right angel Hypoid gearbox
- Black coated steel housing, aluminum output and motor adapter flange
- Steel output shaft, flange ISO 9409
- Helical gear technology
- Nominal Torques:
  - $T_{2N}$  : 1.975 Nm – 10.980 Nm
- Ratios
  - 4-stage : 1.225 / 1.400 / 1.750 / 2.000 / 2.800 / 3.500 / 5.000 / 7.000 / 10.000
- Low Backlash
  - 4-traps :  $\leq 2$  arcmin
- High Efficiency
  - 4-stage :  $\geq 90\%$
- Easy mount
- Low noise
- Compact structure
- Sizes available: AHKA285 / AHKA355 / AHKA450



# Specifications

Model		Stage	Ratio <sup>1</sup>	AHK285	AHK355	AHK450
Nominal output torque $T_{2N}$	Nm	4	1.225	3.350	5.630	10.980
			1.440	3.350	5.630	10.980
			1.750	3.350	5.630	10.980
			2.000	3.350	5.630	10.980
			2.800	2.555	4.825	9.600
			3.500	3.350	5.630	10.980
			5.000	3.350	5.350	9.050
			7.000	2.625	4.960	10.115
			10.000	1.975	3.870	8.325
Emergency stop torque $T_{2NOT}^3$	Nm	4	1.225~10.0002 times nominal output torque $T_{2N}$			
Max. Acceleration torque $T_{2B}$	Nm	4	1.225~10.0001,5 times nominal output torque $T_{2N}$			
No load running torque <sup>(3)</sup>	arcmin	4	1.225~10.0000,4		0,4	1
Backlash <sup>(2)</sup>	arcmin	4	1.225~10.000 $\leq$ 2		$\leq$ 2	$\leq$ 2
Torsional rigidity	Nm/ arcmin	4	1.225~10.0001.275		2.500	5.100
Nominal input speed $N_{1N}$	rpm	4	1.225~10.0003.700		3.700	3.400
Max. input speed $N_{1B}$	rpm	4	1.225~10.0005.500		5.500	5.00
Max. radial load $F_{2a}$	N	4	1.225~10.00039.200		101.500	143.700
Max. Bending moment $M_{2k}$	Nm	4	1.225~10.0009.230		29.100	63.300
Service Life <sup>(4)</sup>	hr	4	1.225~10.00020.000			
Operating temperature	°C	4	1.225~10.000-10°C ~+ 90°C			
Degree of Protection		4	1.225~10.000IP65			
Lubrication		4	1.225~10.000Synthetisch lubrication grease (NYOGEL 792D)			
Degree of Protection		4	1.225~10.000All directions			
Running noise ( $n_1=3000$ rpm, No Load)	dB(A)	4	1.225~10.000 $\leq$ 72		$\leq$ 74	$\leq$ 76
Efficiency	%	4	1.225~10.000 $\geq$ 90 %			

(1) Ratio (  $i = N_{in} / N_{out}$  )

(2) Backlash is measured at 2% of Nominal output torque  $T_{2N}$ .

(3) These values are measured by gearbox with ratio = 10.000 (4-stage) at 3.000 rpm without load.

(4) Continuous operation (S1) is not recommended.

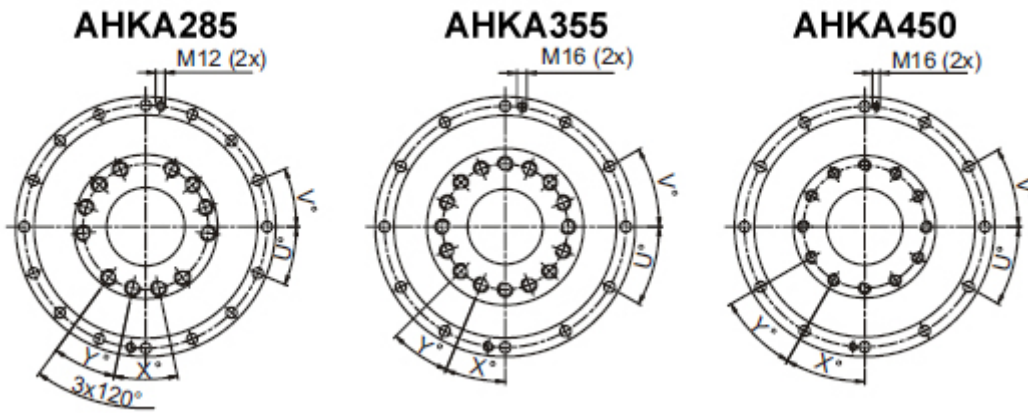
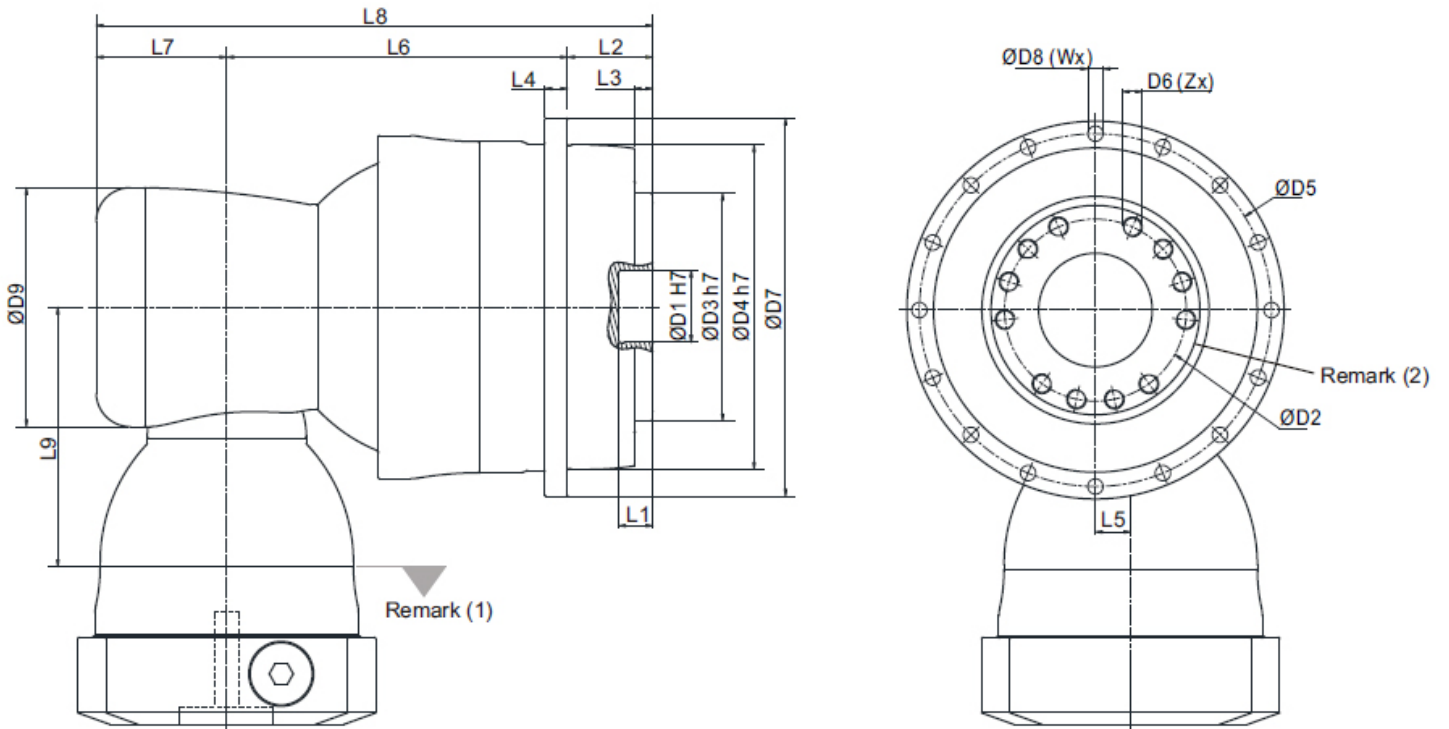
# Inertia

Model	AHKA285	AHKA355	AHKA450
$\varnothing^{(A)}$ (C3)	4-st.	4-st.	4-st.
24	5,63	5,63	-
28	7,18	7,18	-
32	10,10	10,10	12,63
35	15,54	15,54	17,75
38	21,32	21,32	23,26

(A)  $\varnothing$  = Input shaft diameter

# Sizes

## AHK 4-stage series:



Dimensions	AHKA285	AHKA355	AHKA450
D1 H7	100	120	155
D2	160	200	250
D3 h7	200	250	315
D4 h7	285	355	450
D5	310	385	490
D6 x spoed x diepte	M20 x 2.5P x 31	M24 x 3P x 32	M30 x 3.5P x 40
D7	332	415	530
D8	13,5	17,5	22
D9	210	210	255
L1	16	35	24

L2	75	80	85
L3	16,5	20	20
L4	20	45	60
L5	31	31	36
L6	300	332	447,5
L7	115	115	131
L8	490	527	663,5
L9	228	228	265,5
X in degrees	24	22,5	30
Y in degrees	24	22,5	30
Z	12	16	12
U in degrees	22,5	30	30
V degrees	22,5	30	30
W	16	12	12

(1) Input dimensions vary according to motor flange. Please contact Apex Dynamics for details.