



Parameter	30	50	80	100
Ratio	30	50	80	100
The absolute value of the ratio (rigid wheel fixed, flexible wheel output, wave generator input), negative sign means the input and output directions are opposite	-30=60/ (60-62)	-50=100/ (100-102)	-80=160/ (160-162)	-100=200/ (200-202)
Number of teeth in rigid wheel	62	102	162	202
Number of teeth in flexible wheel	60	100	160	200
Nominal torque (N.m)	2.1	3.5	4.5	5
Peak torque at start-stop (N.m)	4.1	8.3	10.2	11
Maximum of average load torque (N.m)	3.1	5.5	8.5	8.9
Max intermittent torque (N.m)	8.2	17	22	25
Backlash (Arcses)	≤20	≤20	≤10	≤10
Maximum input speed (r/min)	8500			
Average input speed (r/min)	3500			
Inertia (1/4GD) (Kgcm <sup>2</sup> )	1.4×10 <sup>-2</sup>			
Efficiency in nominal torque (25° C)	62%	65%	60%	60%
Rigidity (spring constant) (×10 <sup>7</sup> 4N.m/rad)	0.158	0.320	0.432	0.432
Weight (g)	176			
Minimum motor power to adapt (W)	30			
Harmonic drive gearbox model	AM-45XBC-30	AM-45XBC-50	AM-45XBC-80	AM-45XBC-100

**AM-40XBC example of combination**

**Shaft assemble data**

Shaft Dia	ø5h7
Shaft length	14.7

With 2-M3×4GB/T77-2000 hexagon flat-end set screws

Coreless Motor (w/E):  
AM-CL35\*\*\*  
AMCL40\*\*\*

Brushless Motor (w/E):  
AM-BL36\*\*\*  
AM-BL40\*\*\*

Recommend Encoder:  
Suitable for Coreless Motor:  
Encoder S: AM-EN2211S\*\*\*  
Encoder T: AM-EN2412T\*\*\*

Suitable for Brushless Motor:  
Encoder S: AM-EN2211S\*\*\*  
Encoder T: AM-EN3612T\*\*\*

**Gear Motor Length "LT":**

Gear Motor	L <sub>T</sub>	Harmonic L <sub>1</sub>	Motor L <sub>2</sub>	Encoder L <sub>3</sub>
92	31.5	60.5	-	
117.2	31.5	75	10.7	
104	31.5	60.5	12	
133.5	31.5	90	12	

For more motor and encoder specs, see Assun Motor website.