



CYCLO Product Overview

BEE4
EMPOWERING SUPPLIER

SANS	ISO 9001
SANS	ISO 14001
SANS	OHSAS 18001

CYCLO DRIVE 6000 SERIES



Gear motor

Sizes: 34 models
 Torque ratings: 7.2 to 68,200Nm
 Power ratings: 0.12 to 55Kw
 Ratio range: 6:1 to 119:1 (single)
 104:1 to 7,569:1 and larger (multi stage)
 Mounting: Horizontal & vertical
 Fitted with IEC BMG motor



Gearbox (IEC ready)

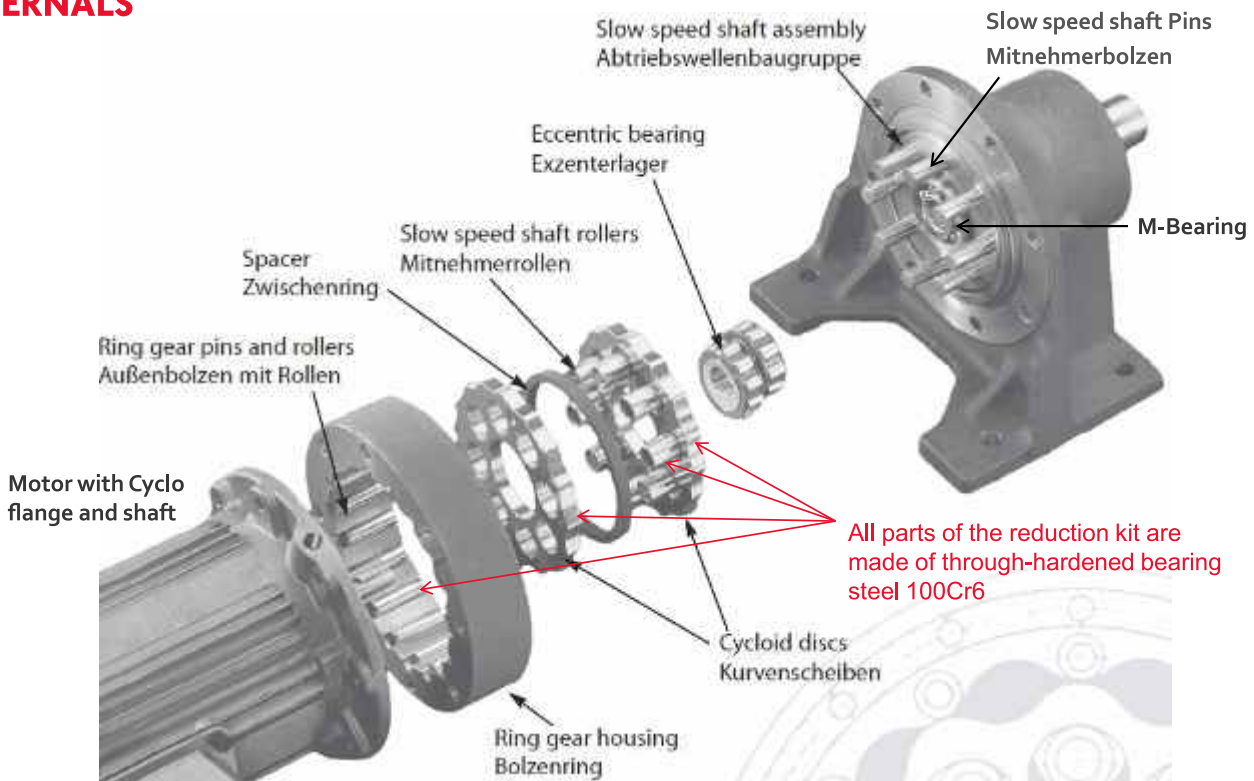


Gearbox (free input shaft)

FEATURES

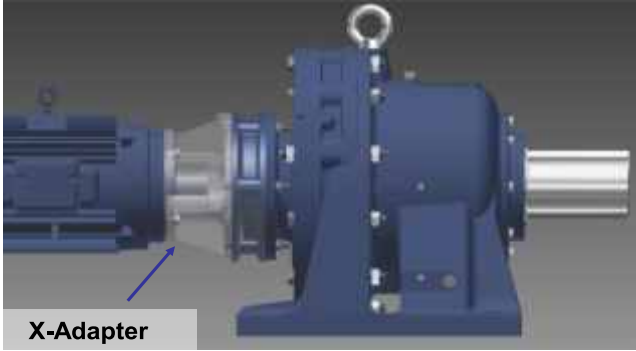
- High overload capacity, 500% momentary shock load
- Long service life
- High efficiency
- Compact design
- Available as geared units and geared motors
- Ideal for operating under difficult conditions
- Lifetime grease lubrication on some sizes
- No thermal factor limitations
- Low noise
- Large range of ratios
- Unmatched reliability
- Overall economy
- Energy saving motors - BMG SYNERGY IE2 IEC
- Exceptional performance even at high ratios

INTERNALS



CYCLO DRIVE 6000 SERIES

High shock overload capacity because there are at least 30% of the disc profile in contact to the stationary ring gear housing. Only compression forces, no sheare forces.



STANDARD IEC MOTOR FLANGE

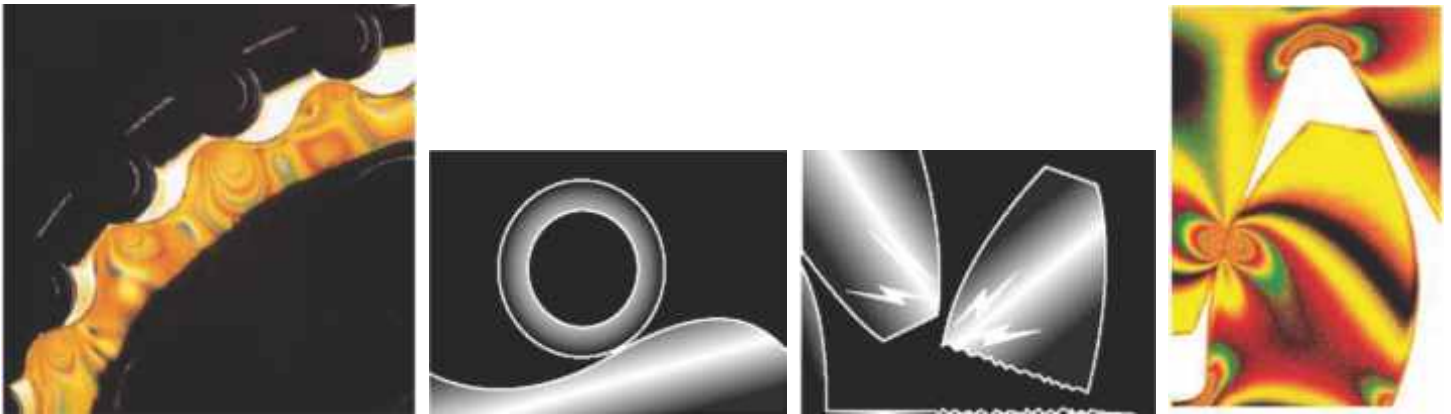
The pictures of the photoelastic study of stres below show the result.

FEATURES

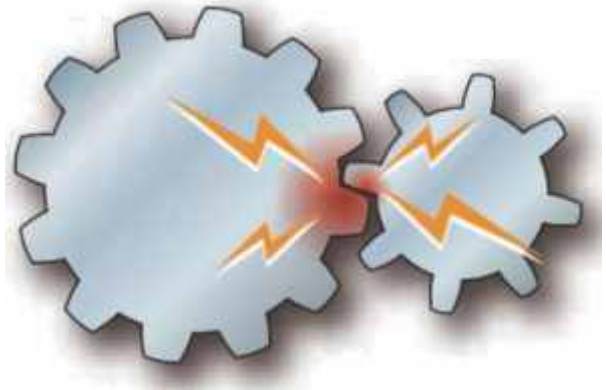
All torque transmitting parts have smooth rolling contact. The load is shared by a number of teeth, there is no possibility for tooth break. Shock overload capacity up to 500%

POINT LOADING

The torque transmitting parts of involute gears have high share forces and teeth can break off at high shock overload.



- Many teeth in contact

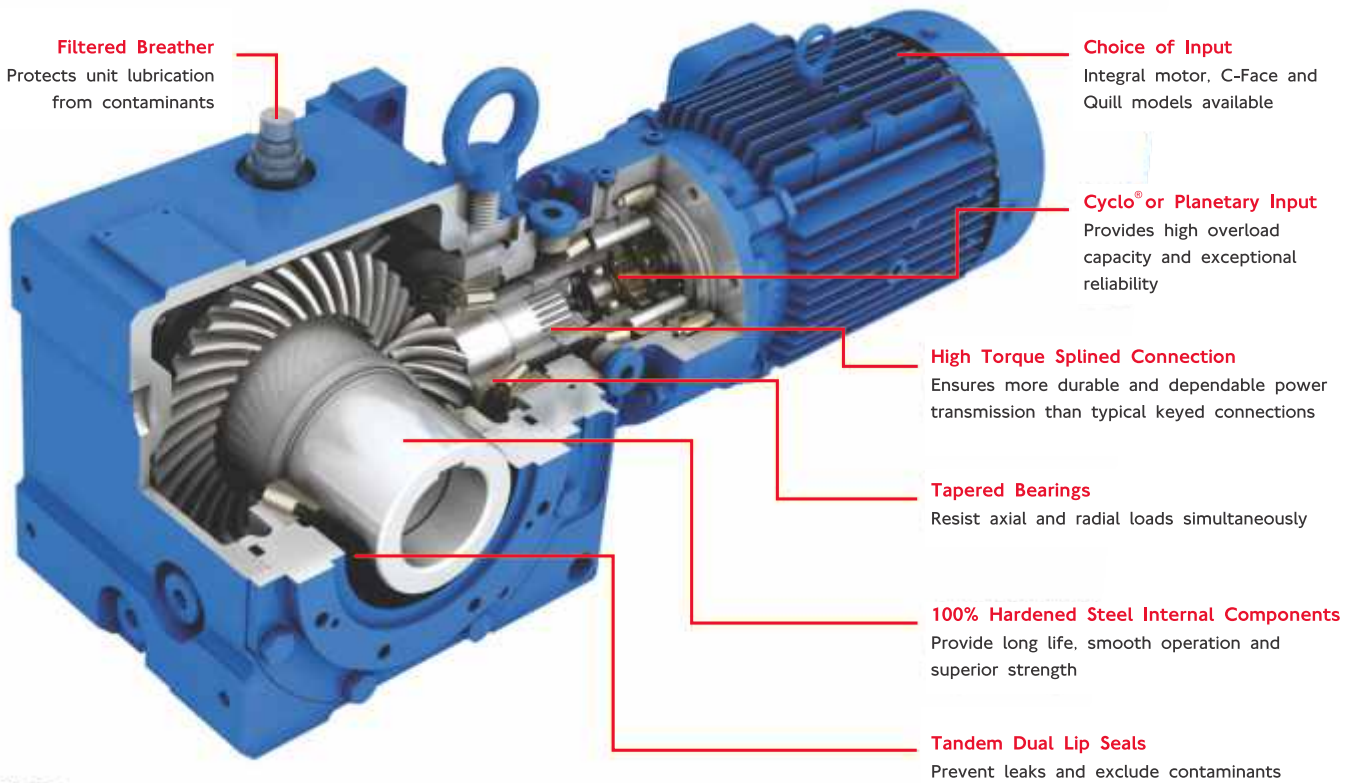


- High shock load capacity (500%)

CYCLO BBB RANGE

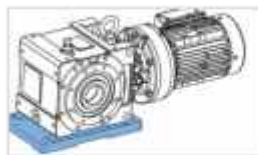
The rugged Cyclo® BBB series features ductile iron housing for superior strength

The Cyclo® Bevel BuddyBox® Series (Cyclo® BBB4) built by Sumitomo is a robust, state-of-the-art, mid-sized family of speed reducers and gearmotors. The Cyclo® BBB4 is a unique combination of features that result in a highly reliable, efficient and durable gearbox: the all-steel internal construction, Cyclo® or planetary gear inputs, and the ductile iron housing, provide unmatched ruggedness.

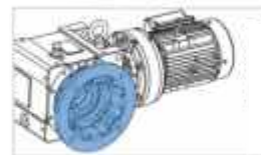


Multiple Mounting Options

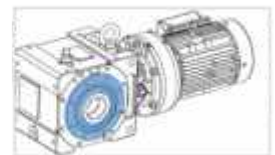
Foot, Flange and U Face mount are available options for the Cyclo® BBB4 Series.



Foot



Flange



U Face

Specification Summary:

Sizes	6 frame sizes, 105 to 2329 lbs (48 to 1059 kg)
Torque Capacity	Up to 159,983 lb•in (17,400 N•m)
HP Rating	1/8 to 100 HP (0.10 TO 60kW)
Ratio Range	11:1 to 26,00:1 and greater
Mounting	Hollow shaft, Foot Flange, Face
Motor Standards	NEMA, IEC, JIS, UL, CSA, CE



CYCLO BBB RANGE



Features for the Cyclo® Bevel BuddyBox® 4 Series

- **Ductile Iron Housing**
Ductile iron housing is twice as strong as cast iron, making it one of the most rugged bevel gearboxes available.
- **Optional Taconite Sealing System**
Heavy-duty, fortified, grease purgeable system withstands the most demanding applications.
- **Increased Overhung Load Capacity**
Cyclo® BBB4 has over 375% more overhung load capacity than previous models
- **Increased Ratings**
The newly redesigned Cyclo® BBB4 series has been optimised for increased power ratings over the previous generations.
- **New Larger Frame Size**
New F Size yields higher torque and can accommodate larger shaft diameters
- **New Ratios Available**
46 standard and 87 optional ratios added

Cyclo® BBB4 Applications

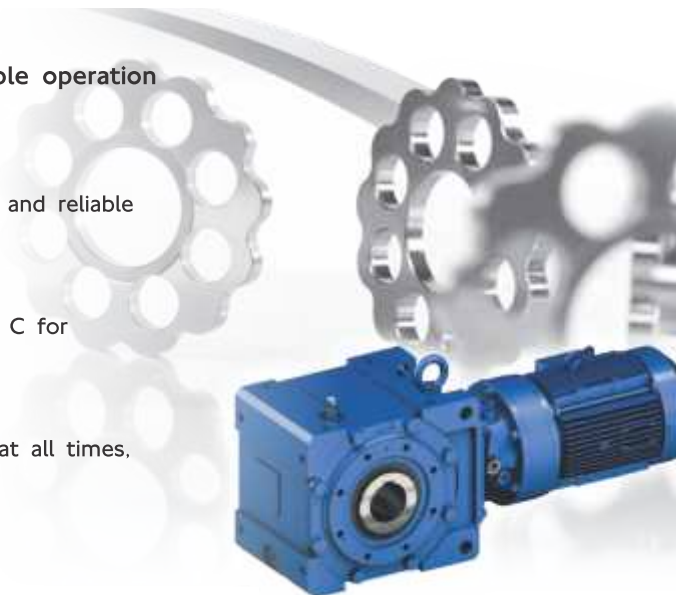
- Conveyors
- Mixers and agitators
- Bending and straightening machines
- Water treatment clarifiers
- Construction machinery
- Crane and hoisting systems
- Saw mills and timber processing machines
- Roller mill drives
- Paper machinery
- Food and beverage machinery
- Metal working machines and pumps
- Recycling / waste management equipment



Cyclo® Technology: Unparalleled Performance

Sumitomo's unique Cyclo® technology offers quiet, efficient and reliable operation with high torque density and compact size:

- **Cycloidal "Gearless" Speed Reduction**
Torque transmitting parts roll, rather than grind, providing quiet, efficient and reliable performance
- **Superior Materials**
52100 bearing grade steel rotating components, hardened to 58 Rockwell C for unmatched durability and reliability
- **Long Life and High Shock Load Capacity**
The Cyclo® input has two-thirds of its reduction components in contact at all times, resulting in exceptionally rugged, shock resistant performance
- **Sumitomo Standard 24-month Warranty**
Our standard warranty is not limited by hours of operation.



CYCLO BBB RANGE

Input and Output Options

Taper-Grip® Bushing

The patented Sumitomo Taper-Grip® bushing system enhances the Cyclo® BBB4 value by offering a simple shaft-mounting device that provides self-aligning, backlash-free torque transmission to the driven shaft.

The unique design provides easy unit mounting and removal from the driven shaft and resistance to fretting and corrosion. Multiple stock bore sizes available for quick delivery.



Taper-Grip® Bushing



Integral Motor



Quill Adapter



C-Face Adapter



Shrink Disc



Keyed Hollow Shaft



Solid Shaft

Cyclo® Bevel BuddyBox® 4 Series Frame Size Details

Frame Size	POWER		BORE RANGE			
	Max Torque lb.in (N.m)	Max Motor Power HP (kW)	Taper-Grip® Bushing inch (mm)	Shrink Disc (mm)	Keyed Hollow Shaft inch (mm)	Solid Shaft inch (mm)
Size A*	9,470 (1,070)	25 (20)	1 to 2-1/4 (23 to 55)	(55)	1-1/4 to 2-3/16 (45 to 55)	2 (55)
Size B*	18,851 (2,130)	40 (29)	1-1/8 to 2-3/4 (30 to 65)	(65)	1-3/8 to 2-5/8 (55 to 65)	2-7/8 (65)
Size C*	37,701 (4,260)	25 (56)	1-1/2 to 3 (40 to 75)	(75)	2-3/16 to 3-3/16 (60 to 80)	3-1/8 (75)
Size D*	77,172 (8,720)	80 (60)	2-3/16 to 3-7/16 (55 to 85)	(85)	2-3/8 to 3-3/4 (70 to 90)	3-5/8 (85)
Size E*	102,660 (11,600)	100 (75)	2-11/16 to 4 (65 to 100)	(100)	2-11/16 to 4 (80 to 110)	4-7/16 (100)
Size F	153,990 (17,400)	100 (75)	3-15/16 to 4-15/16 (100 to 120)	(120)	3-7/16 to 4-3/4 (80 to 120)	4-3/4 (120)

* Cyclo® BBB4 Frame Sizes A-E are dimensionally identical to the Cyclo® BBB3

24 HR TOLL-FREE EMERGENCY
BRANCH HELPLINE:

0800 022 224

WEBSITE:

www.bmgworld.net



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