

AUTOMATION SOLUTIONS FOR CUT TO LENGTH LINE IN METAL INDUSTRY



Multi Axis General Motion Controllers



Servo Drives



PM Servo Motors

GENERAL WORKING OF A TYPICAL START/STOP (FLYING) SHEAR

The Flying Shear is a common industrial application for cutting a metal sheet or rod of varying thickness into different set lengths, without stopping the line. It means that the main production process is not interrupted, and machine productivity is maximized.

The cutting tool is typically mounted on a carriage that moves either parallel to the product flow or at an angle across the product flow. The flying shear drive accelerates the carriage to synchronize with line speed. While synchronization the cut is done and the carriage then decelerates and returns to its original position to be cut again.

The motion controller is configured using real engineering units of choice such as mm or inches. the configuration of the system is done through an operator interface by entering configuration parameters directly on to the motion controller.



GENERAL WORKING OF A TYPICAL CONTINUOUS SHEAR

Continuous shear as the name suggests, run continuously for cutting the bar to a desired length. The shifter is used which moves the bar in the path of blade. Since the blades are rotating continuously, the system has kinetic energy required for cutting the bar and blades are not required to accelerate fast to line speed from zero speed.

BHARAT BIJLEE'S AUTOMATION SOLUTIONS

For cut to length line, Bharat Bijlee offers range of Automation Solutions -

- 1) Multi Axis General Motion Controllers
- 2) Servo Drives
- 3) PM Servo Motors

1) Multi Axis General Motion Controllers

C6 motion controller is a size-optimised control whose functionality and performance are designed to coordinate and synchronise the motion processes of multiple axes. The integrated EtherCAT master provides a rapid real-time bus system that in combination with computing performance and software functionalities represents a truly powerful and cost-effective system.

Equipped with all possible options, the C6 COMPACT can assume control of your entire system or merely look after the motion processes of your application as a subordinate system with numerous interfaces such as Profibus, CAN, Interbus and Ethernet.



- C6 Compact II controller
- C6 Smart controller

2) Servo Drives

Technical Specification

- Wide power range for 400 V from 2.6 A to 710 A connection
- 29 plug-in control terminals, PNP- / NPN logic switchable
- 2 analog inputs 0 ... 10 V, ± 10 V, 0 / 4 ... 20 mA
- 2 programmable analog outputs 0 ... ± 10 V
- Programmable digital inputs
- Programmable outputs: 2 x relay, 2 x transistor
- 4 programmable software inputs/outputs



- Decentralized automation in the drive actuator with standard functions, relieves superior control system.



Speed and torque control



Cam switch profile



Synchronous speed control
& electronics gearing



Positioning control



Single-axis positioning

3) PM Servo Motors

Motors are permanent magnet brushless AC servo motors. It consists of stator, permanent magnet rotor and high currency encoder (such as resolver, incremental encoder). The interior permanent magnet design is the key to achieving high torque and power density while eliminating problems with magnets placed directly on the air gap. The no housing stator core has a big temperature gradient and better cooling performance.



Key Features



Compact design with
high power density



Low noise and vibration



Low inertia, high response



Good quality permanent
magnet material, long life time



Constant nominal torque
on overall speed range

User Benefits



No miss cuts



Accuracy of cutting even for first cut



Increased productivity



Accuracy in cutting thus saving expensive steel material

ALL INDIA SERVICE NETWORK

- Regional Offices
- 🔥 Works
- Authorised Service Centre: Motors
- ✂ Service Centre: Servo Motors
- ✂ Service Centre: Drives



BRANCH OFFICES

Mumbai +91 22 2763 7200
Pune +91 20 6560 0478 / 77 / 76 / 80
Ahmedabad +91 079 6604 9200
New Delhi +91 11 2581 6931 / 6932 / 6933
Kolkata +91 033 4062 3076 / 033 4062 3077
Bengaluru +91 80 2559 2646 / 2137 / 2681
Chennai +91 44 5568 4688



+91 22 - 2763 7290 | serviceline@bharatbijlee.com



Bharat Bijlee Drives & Automation

Mobile App for Troubleshooting and Maintenance of Drives & Servo Motors
 Download for free from Google Play Store



REGISTERED OFFICE

Electric Mansion, 6th Floor,
 Appasaheb Marathe Marg,
 Prabhadevi, Mumbai 400 025
 T: +91 22 2430 6237 / 6375
 E: bblcorporate@bharatbijlee.com
 CIN: L31300MH1946PLC005017

WORKS

No. 2, MIDC Thane-Belapur Road, Airoli,
 Navi Mumbai 400 708
 T: +91 22 2763 7200 / +91 22 2760 0401
 www.bharatbijlee.com

Product improvement is a continuous process and technical information herein is subject to change.