



4B Components Ltd.
729 Sabrina Drive
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USA

A Worldwide Manufacturer of:
High Quality, Technologically Advanced
Material Handling & Electronic Components

For Sales or 24 Hour Technical Support: 309-698-5611

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TECHNOLOGY · INNOVATION · QUALITY · VALUE

Would you like to receive product and service updates from 4B by email?

The screenshot shows the 4B Components website interface. At the top, there is a navigation bar with links for Home, Products, Where to Buy, About 4B, News & Events, Contact 4B, and Technical Support. Below this is a 'SUBSCRIPTION MANAGER' window with a form to enter an email address and buttons for 'Subscribe', 'Get my profile', and 'Unsubscribe All'. To the left of the form are 'QUICK LINKS' and 'FEATURED LINKS'. Below the form is a 'NEW PRODUCT SPOTLIGHT' section for the 'Stainless Steel Heavy Duty Rotach Encoder', which includes details about its construction, output rates, and CSA approval. At the bottom of the page, there is a 'CLICK HERE & SUBSCRIBE' button for 'The Scoop' 4B Components Newsletter.

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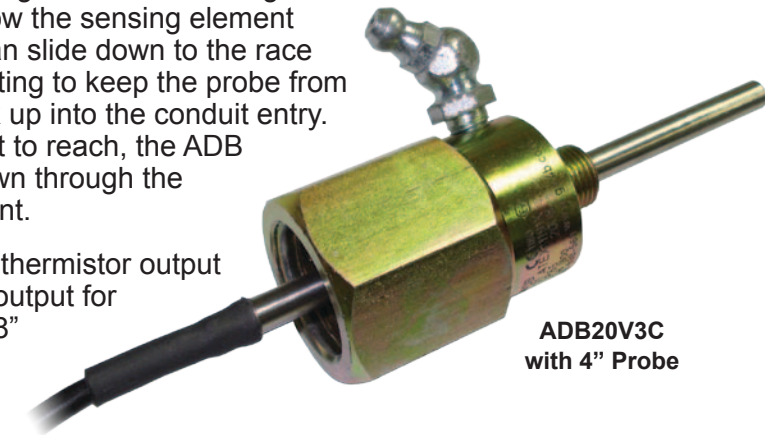


4B Components, Limited - East Peoria, IL 309-698-5611

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ADJUSTABLE DEPTH BEARING TEMPERATURE SENSORS

Our new line of adjustable depth bearing (ADB) temperature sensors offers improved accuracy of temperature monitoring on all bearing sizes. Just like our line of WDB2 sensors, the new ADB sensors will replace your current 1/8" NPT bearing grease zerk fitting and allow you to grease through without removing the sensor. The key improvement with the ADB series is that now the sensing element will be fitted in the tip of a stainless steel probe which you can slide down to the race of the bearing. The probe is fastened with a compression fitting to keep the probe from backing out, and it also prevents grease from escaping back up into the conduit entry. Additionally, if the bearing grease zerk is recessed or difficult to reach, the ADB sensor can be mounted on a standoff with the probe slid down through the standoff and into the bearing for a more precise measurement.



ADB20V3C
with 4" Probe

The ADB style sensors are available with our standard NTC thermistor output for Hotbus and Watchdog systems, or a 4-wire PT100 RTD output for PLC and DCS systems. Probes are available in 2", 4", and 8" lengths, other lengths are available upon request. All ADB bearing temperature sensors are CSA Class II Division 1 approved, and have a 1/2" NPT conduit entry.

WEBSITE REVIEW

Looking for a product manual? Need some technical tips? Want an AutoCAD file for a technical drawing? No problem!

Would you like to see a product in "action"? Need help with installation on-site? Done!

All of this, and much more is available on the 4B website under the *Technical Support* area.

Technical Support



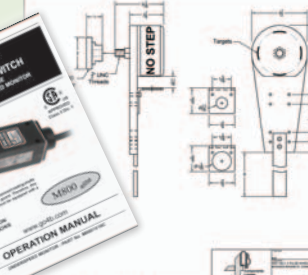
Product Videos



Site Visits



Product Manuals



AutoCAD Files



INDUSTRY SPOTLIGHT

Dust Explosions

NFPA 61 is an existing standard for the prevention of fires and dust explosions in agricultural and food processing facilities. Standard 61 was developed by the National Fire Protection Association (NFPA) to provide guidance on how to reduce combustible dust hazards. Dust explosion accidents around the world injure hundreds and cause billions of dollars in damages each year. However, these dust explosion accidents can be controlled with careful planning, training, and monitoring systems.

Examples of facilities covered by NFPA 61 include: bakeries, grain elevators, feed mills, flour mills, corn mills, rice milling, dry milk products, mix plants, soybean and other oil seed preparation operations, cereal processing, cake food processing, tortilla plants, chocolate processing, pet food processing, cake mix processing, sugar refining and processing and seed plants.

Five elements needed for a dust explosion are:

1. Combustible dust (fuel)
2. Ignition source (heat)
3. Oxygen in air (oxidizer)
4. Dispersion of dust particles in sufficient quantity and concentration
5. Confinement of the dust cloud

The first three elements make up what is traditionally known as "the fire triangle". The addition of elements 4 and 5 to the fire triangle creates what is known as the "explosion pentagon". If a dust cloud is ignited within a confined space, it burns very rapidly and may explode. If one of the elements of the explosion pentagon is missing, a catastrophic explosion can not occur.

Since many dust explosions happen during processing, storage and conveying of foodstuffs, having a monitoring system in place at a facility can prevent unnecessary downtime and protect the facility from catastrophic destruction and potential loss of life.

4B Components offers Class II, Division 1 approved speed monitors, belt alignment sensors, bearing temperature monitoring systems, and level indicators that help to minimize the risk of ignition sources in agricultural and food processing facilities. For any questions, or if you would like to receive a free recommendation from our engineers regarding your specific monitoring needs, just give us a call (309) 698-5611.



Watchdog™ Elite Hazard Monitoring System:

- Belt Speed
- Belt Misalignment
- Bearing Temperature
- Pulley Alignment
- Plug Condition
- Acceleration

Have you ever wondered what type of elevator bucket would best suit your particular elevator leg application? Should your elevator leg be fitted with steel, high density polyethylene, nylon or urethane buckets? What size of bucket would best perform for the leg capacity required? You don't have to look any further than 4B, because we have them all! From the agricultural style buckets to the industrial type buckets, you will not find a better selection of buckets for your applications. All you need to do is call 4B with your questions regarding the best selection for your leg, and one of our engineers will assist you in designing a bucket system that will perform to your expectations. With just a small amount of elevator leg criteria required, a design tailored to your needs will be developed. The minimum amount of information required should include the following: Leg height, both head and boot pulley diameters and pulley face width, leg casing dimensions, and type of material to be handled. We will then return a professionally detailed design, with all the specifications you require to make your informed decisions. It is just that easy! 4B stocks some of the most widely used and commonly known elevator buckets as outlined below:

AGRICULTURAL BUCKETS -

- CC-S® – The premier injection molded CC style polymer bucket with heavy wall thickness and unsurpassed capacities.
- STARCO™ – Purposely molded low profile polymer and seamless steel buckets, closely spaced for high capacities
- SUPER STARCO™ – Ultra High capacity low profile polymer and seamless steel construction closely spaced buckets
- GB SPIDEX™ – Super strong seamless steel bottomless bucket system for maximum capacities
- BIG J JUMBO™ – Extremely tough and durable seamless steel buckets for any granular application and abrasive grain applications
- FABRICATED CC STYLE – A tried and true specialized style for handling various granular free flowing materials

INDUSTRIAL BUCKETS -

- SUPER STARCO™ – Ultra High Capacity low profile seamless steel buckets that deliver clean discharge
- STARCO™ JUMBO - Deep drawn seamless steel designed to replace fabricated steel buckets.
- AA STYLE IRON – Industrial strength long wearing malleable iron
- AA NYLON - Heavy duty toughened Nylon, HDP or Urethane for any industrial material application
- AC NYLON – Deep angle back cast nylon bucket for light or heavy duty industrial applications
- AD DIN NYRIM – A premier high capacity molded nylon/rubber mix bucket for the toughest of industrial applications
- POLYPENCO NYLATRON – Cast Nylon bucket for tough industrial applications
- SEAMLESS STEEL BUCKETS – Offered in various patterns with hundreds of sizes to select from

FABRICATED BUCKETS -

- AA, AC, ACS, SC LF, MF, HF – Buckets are manufactured to a customer's exact specifications. Buckets can be fabricated from steel, stainless steel, or hot dipped galvanized steel

With all of the diverse bucket styles and sizes manufactured by 4B, there is one amongst the many that will offer what you require economically, and in quality and performance. Our elevator bucket designs are supported by extremely professional technical service second to none in the industry. Give us a call or visit us on the web at: www.go4b.com.



CC-S®



Starco™



Super Starco™



GB Spidex™



Polypenco



Starco™ Jumbo

ROGER'S REVIEW

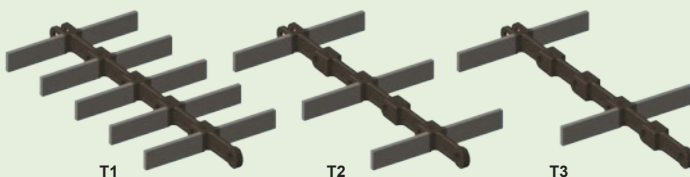


Roger Bruère Technical Sales Engineer

Several factors must be considered during the forged chain flight selection phase. The chart on the right can be used as a guide for selecting the ideal flight style for a given application.

Another area of consideration is the spacing between flights. Flight spacing is relative to the ability of the chain/flight to carry an overburden of material without losing its "en-masse" effect. Since there are many factors that contribute to this, consult 4B for guidance on your application needs.

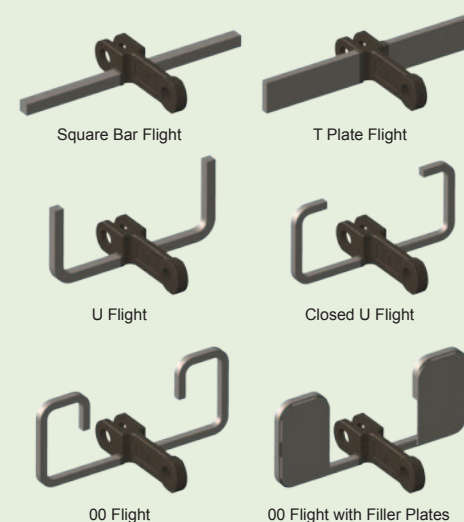
Typical T Plate Flight Spacing



Forged Chain Flight Selection Guide

Method of Transport	Material Characteristics	Material Examples	Typical Conveyor Inclination	Typical Flight Style by Conveyor Inclination
En-Masse*	Free flowing, Powdered, granular, typically smaller than 1" particle size	Grain, pellets, animal feed, wood chips	0° to 90°	Square Bar: 0°- 5° T Plate: 0°- 10° U Style: 10°- 25° Closed U: 25°- 90° 00 Style: 25°- 90°
Drag	Abrasive, sluggish, irregular sizes, typically bigger than 1" particle size	Sludge, ash, aggregates, coal, clinker, chemicals, cement	0° to 45°	Tall T Plate: 0°- 45° 00 Style with filler plates: 0°- 45°

* Movement of the chain while surrounded by material will cause the material to flow through an enclosed flat-bottom conveyor. There is no dragging or scraping action. The skeletal flight configuration of the chain induces the material to flow in a solid column. As the material flows "en-masse" there is no movement between particles and little to no breakage of the material.



SPARKY'S SHOCKERS

Testing & Commissioning Service



Brian Knapp Technical Manager - Electronics

Have you tested your hazard monitoring equipment recently? Nearly every plant has potential hazards from hot bearings, belt misalignments, and belt slippage. Through day to day operations the sensors that monitor these hazards may become damaged or their wires can become broken or disconnected. Routine testing and maintenance is the only way to ensure that everything is up to spec and nothing has been

bypassed in the PLC or in the field. The 4B Tech Team provides an inspection and testing service to examine all of your 4B hazard monitoring equipment. A 4B technician will inspect and document every 4B sensor and control unit on site, and verify that the control units will alarm and shutdown equipment as expected. We will provide a description and photograph, if applicable, of any potential problems that we find with installation, wiring, location, or use of sensors/controllers. In addition to documenting everything we test, we will also tag the control units and send the plant manager a full report, including any 4B recommendations.

We encourage you to schedule this service at least annually and will offer discounted rates for a second visit within 12 months and third visit within 24 months of the first. To make an appointment with the 4B Tech Team, give me a call at (309) 698-5611 or email me at bknapp@go4b.com.