

**CDI**

**CD52-A30 / CD52-A45  
SUBSEA, NON-INTRUSIVE  
MAGNETIC PIG PASSAGE SIGNALER**



# CD52-A30 / CD52-A45 SUBSEA PIPELINE PIG DETECTORS

Pipeline pigs are a routine part of modern pipeline operations, and keeping track of those pigs in the pipeline network has become an ever-increasing part of what pipeline integrity specialists must do. With the simplicity of a small permanent magnet installed onto the pigs, the CD52-A30 and CD52-A45 can track it throughout a pipeline network, and these systems have been designed to be flexible and affordable enough to use for both temporary and permanent deployments. If you have need of signaling pig passages below the waves, the CD52-A30 can get the job done.

## NON-INTRUSIVE

The CD52 family of products allow for easy, clamp-on, non-intrusive pig passage detection to depths of **3000 meters** (9850 ft) for the CD52-A30 or **4500 meters** (14750 ft) for the CD52-A45. Non-intrusive means fewer problems with maintenance and corrosion and no possibilities of leaks. Simple isolation pads may be placed between the detector and the pipe to ensure zero possibility of galvanic corrosion.



## FIELD PROVEN

CDI has been manufacturing the patented CD52 family of pig signaler for almost 10 years. With thousands of systems installed around the globe, the CD52 family has a reliable performance record in burning deserts, frozen tundras and everything in between. Many of CDI's customers and large oil and gas producers who rely upon the CD52 family of equipment to set valves, control pump stations and interface to SCADA systems.

## BATTERY POWERED

The CD52-A30 and CD52-A45 are fully battery powered and require no existing infrastructure. Two common D-Cell lithium batteries provide a full five (5) years of life. Changing batteries is as simple as unscrewing the face of the unit, removing the old batteries and inserting two new ones.

## SENSING MEANS

The sensing means of the CD52-A30 and CD52-A45 is a set of patented, non-intrusive proprietary noise cancelling antennas<sup>1</sup>. This clever antenna scheme was invented by CDI specifically for use in pig passage detection and is available in all CD52 family products. Using this antenna system gives the CD52-A30 its ability to reject nearby magnetic noise and halt costly false positive triggering. Simply placing a small, safe, permanent magnet onto the pig is all it takes to start using the CD52-A30 or CD52-A45 system.

## TOPSIDE SIGNALING

A small, battery powered acoustic pinger allows remote signaling of a pig passage to any surface going vessel. Each signaler



can represent a passage with its own pinger frequency. Simply lower the receiving acoustic transducer over the side of the vessel and listen for the 1 second pings. By default the CD52-A30 and CD52-A45 pig signalers ping to indicate a pig passage for a period of 36 hours.

## PORTABLE

The CD52-A30/A45 system is small and lightweight enough at 35 lbs (16kg) to be deployed by divers, while at the same time being robust and durable enough to survive the rigors of deep-sea deployment using ROVs. The CD52-A30 and CD52-A45 may be optionally purchased with a protective cage shown above. But regardless of the configuration chosen, the systems can be on site and ready for work within days.

### At A Glance

- Subsea, Non-Intrusive Pig Passage Detection
- Safe, Magnet Based Signaling
- Years of Proven Service
- Temporary or Permanent Deployment
- Battery Powered, 5 Year Life
- 22% Chrome Duplex Stainless Steel Housing & Frame
- Pinger / Xenon Flasher Options
- ROV or Diver deployable

<sup>1</sup> United States Patent Number 6489771

# CD52-A30 / A45 PRODUCT SPECIFICATIONS

## SUBSEA PIG DETECTOR OPERATIONAL SPECIFICATIONS

Principle of operation	Non-Intrusive, Passive Magnetic Detection
Type of pig	Any
Direction of Travel	Fully Bi-Directional
Minimum Pig Speed	0.01 – 20 meters/second
Method of Installation	Diver or ROV fixed to pipe, non-intrusive
Sensor Type	Patented, Noise-Cancelling Wire-Wound Antennas
Output and User Interface Options	Dry Contact Closure (useable with SCADA, etc.) Programmable Duration Visual Indications Differentiating Pinger Frequencies
Passage Indications (Visual)	Pig Passage Counter (Displayed Continually) LEDs Blink Pig Passage Count LCD Flash One Hr, Solid for 12 Hrs, Auto Reset LED Flash, 36 hrs Default* Xenon Flasher Option, 36 Hrs Default*

## POWER SPECIFICATIONS, CD52-A30 DETECTOR

Power Source Operation	One (1) Lithium D-Cell Suitable for Low Temperature
Battery Life, CD52-A30/A45	5 years (1825 days)

## POWER SPECIFICATIONS, ACOUSTIC PINGER OPTION

Power Source	Lithium Battery Pack
Pulse Rate	One 10ms Ping Each Second
Battery Life	> 30 days ‡

## POWER SPECIFICATIONS, XENON FLASHER OPTION

Power Source	Lithium Battery Pack
Flash Rate	One Flash per Second
Battery Life	> 30 days ‡

## PERMANENT MAGNETS FOR PIPELINE PIGS

CD52-M0	¾" – 4" Pipelines
CD52-M1	4" – 12" Pipelines
CD52-M2	14" – 30" Pipelines
CD53-M3	32" – 48" Pipelines

## SYSTEM DETAIL SPECIFICATIONS

	STANDARD CD52-A30	DEEP WATER CD52-A45
Water Depth	3000m / 9842 ft	4500m / 14764 ft
Maximum Operating Pressure	303 bar / 4388 psi	453 bar / 6575 psi
Housing Material	316 Stainless Steel 22/25% Chrome Duplex Stainless Steel Optional	316 Stainless Steel 22/25% Chrome Duplex Stainless Steel Optional
Overall Dimensions	16" x 10" x 18" [0.4m x 0.25m x 0.45m]	16" x 10" x 18" [0.4m x 0.25m x 0.45m]
Design Life	20 Years	20 Years



\* User Programmable Duration

‡ Minimum 30 days of ping/flash time available. Overall battery life is dependent upon requested duration of ping/flash after each pig passage.