DRO PROS
The Digital Readout Experts

2010-A Harbison Drive #213
Vacaville, CA 95687
Toll Free (877) 628-6028
Local (707) 452-8437
www.dropros.com

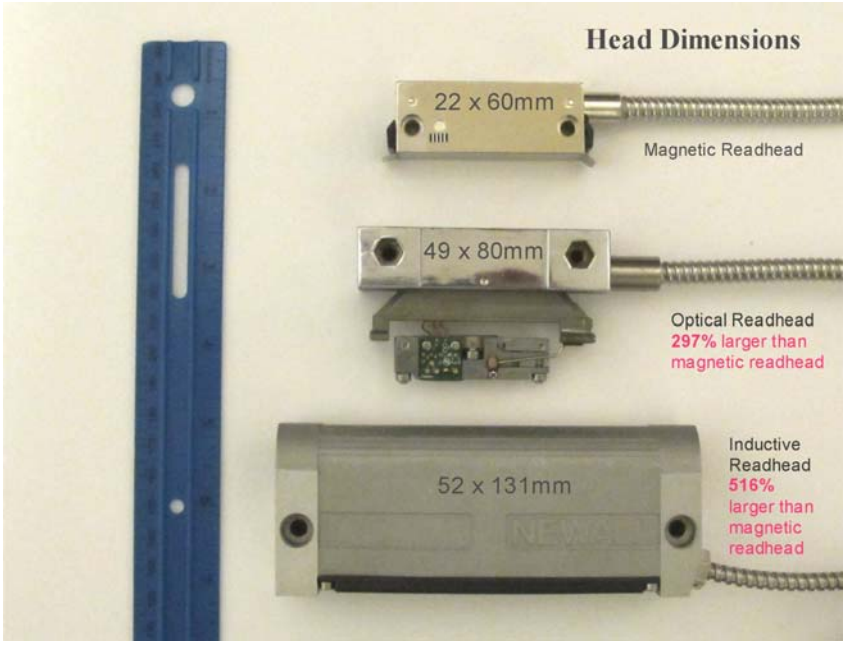
This letter seeks to explain the differences in current digital readout technology.

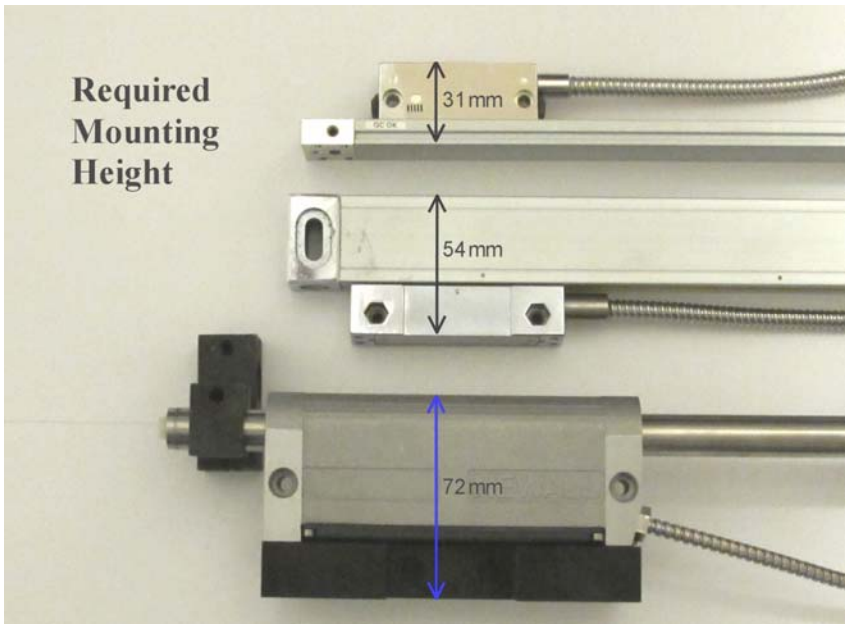
There are currently three technologies available for digital readout systems. They are **optical**, **inductive**, and **magnetic**.

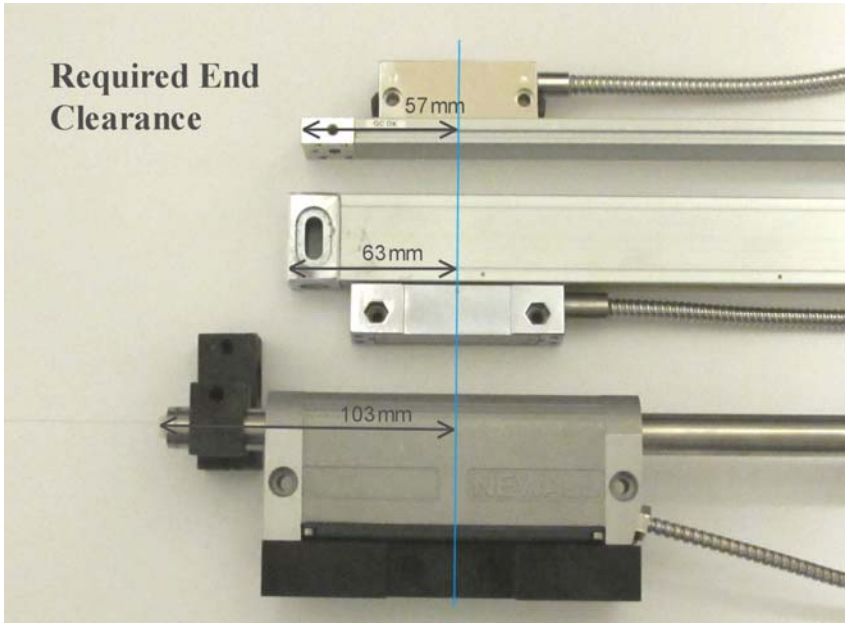
Optical scales, more commonly known as glass scales, are by far the most popular technology today. They rely upon an optical encoder and receiver mounted inside of an aluminum extrusion. The biggest advantage of glass scales is their affordability. The biggest drawback of glass scales is that if contaminated by coolant or oil, they are rendered useless. While in reality glass scales seldom get contaminated, it's a contention that keeps the inductive scale manufacturers in business. Additionally, as their name implies, glass scales have a relatively fragile glass element inside of the scale body.

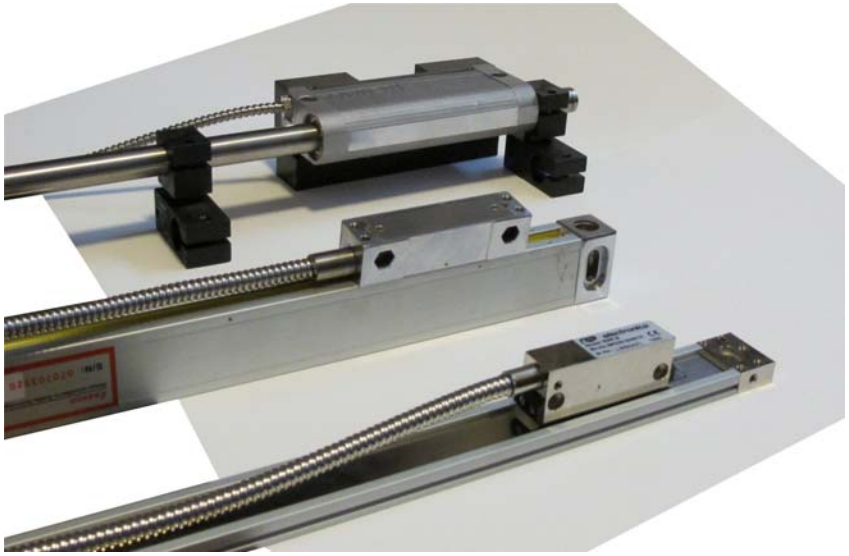
Inductive scales. The biggest advantage of inductive scales is they're impervious to contamination. The disadvantages are they're bulky, expensive, and difficult to mount.

Magnetic scales combine the best of optical and inductive technology. Magnetic scales are impervious to coolant or liquid, yet are slimmer than either of the other two technologies. They're easier to mount, more durable, and can be cut to exactly the length the customer wants. In general, magnetic scale kits are slightly more expensive than optical scales, but a fraction of inductive kit pricing. In summary, magnetic scales combine all the advantages of the other two technologies, without retaining the negative qualities of being higher priced or difficult to install that inductive scales suffer from.




Required
Mounting
Height
31 mm
54 mm
72 mm


Required End
Clearance
57 mm
63 mm
103 mm



	Magnetic Scales	Glass Scales	Inductive Scales
Profile	1-1/4" thick	2-1/8" thick	2-7/8" thick
Ease of installation	Flat scale "bar" easily mounts directly to machine	Scale and readhead joined together – cannot be disassembled	Round “bar” must be offset – cannot be mounted flat against the machine
Price	Complete kit starts at only $760	~ $700	$1,500 +
Cost to repair	Readhead and / or scale can be purchased separately	Readhead and scale must be purchased as a complete assembly	Parts extremely expensive
Resistance to contaminants	Impervious to contaminants	Optical technology susceptible to contamination	Impervious to contaminants
Can scales be cut to a custom length?	Yes	No	No
Scale durability	Virtually indestructible	Glass prone to breakage, contamination	Rod susceptible to damage
Overall length	2 ½” longer than travel	5" longer than travel	10” longer than travel
Upgradeable software	Convenient USB	Not available	Not available
Bracket system	Anodized black, custom brackets	“Universal brackets“ require extensive modification	Complicated bracket system must be “offset”

In short, magnetic scales are a game changer. Magnetic scales will change scale technology as we know it!

DRO PROS