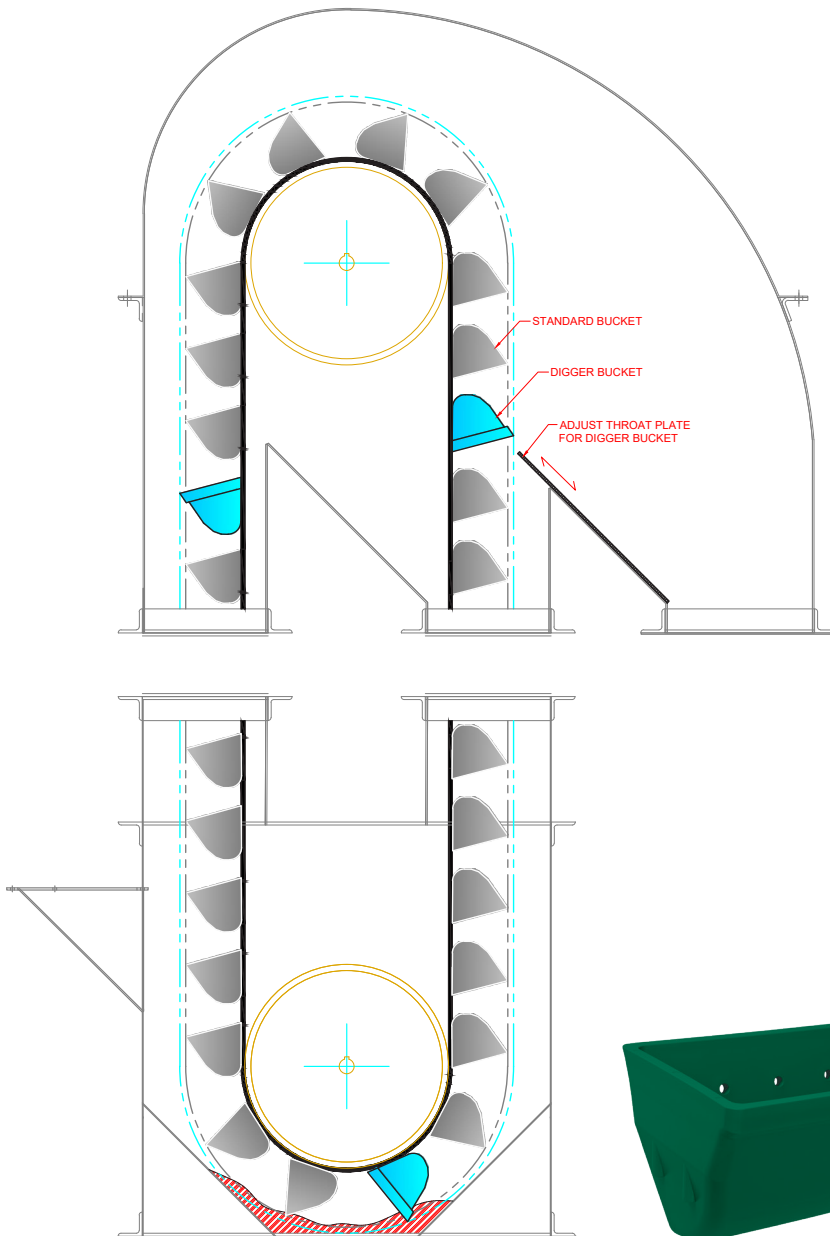


# REASONS FOR USING “DIGGER” ELEVATOR BUCKETS



“Digger” buckets are used primarily for clearing out the build-up of material in the bottom or along the sides of the bucket elevator casing, specifically those materials that tend to absorb moisture, pack down and harden such as sand, cement, salt, sugar, animal feed and fertilizer. The abrasive nature of the products can contribute to premature wear along the front, corners and sides of standard elevator buckets and also damage or break the elevator buckets. These worn buckets will eventually diminish the total elevator throughput. By clearing out the path through the abrasive material, digger buckets prolong the life and improve the overall efficiency of the elevator system.

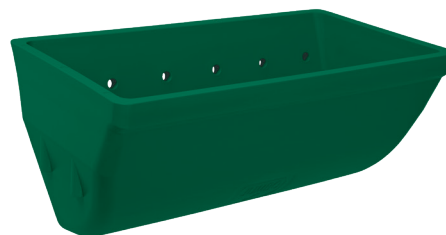
High Density Polyethylene (HDPE) elevator buckets have become the industry norm in most agricultural and light industrial bucket elevator applications. When compared to metal equivalents, they are non-sparking, lighter weight, corrosion resistant and resilient when impacted. However, when faced with abrasive products, they require some additional assistance.



Digger buckets are typically constructed from metal and are designed to be placed approximately every tenth (10th) bucket in the series, depending upon the application. Their dimensions should be  $\frac{1}{4}$ " to  $\frac{1}{2}$ " (6 - 12mm) greater in length and projection than the other buckets in the series. These greater dimensions allow the digger buckets to break-up the hardened material and cut a path for the other buckets to follow.

Metal digger buckets can be pressed or fabricated from carbon steel or stainless steel. They are normally fabricated with a wear lip along the front face or wrapping around all three sides. It is also possible to employ a nylon resin elevator bucket as a digger bucket for HDPE buckets, depending on the application. If a digger bucket with greater outside dimensions cannot be found, then spacers can be used. A spacer is placed between the elevator belt and the back of the digging elevator bucket. This spacer pushes the projection of the digging bucket out beyond that of the standard buckets. The most common type of spacer is a thick washer but a scrap piece of conveyor belt can be used. When using digger buckets, it is important to adjust the position of the discharge throat plate so that it clears the digger buckets.

Employing digger buckets to break-up hardened materials allows the rest of the buckets to wear longer and perform more efficiently. Digger buckets allow you to realize the benefits of plastic elevator buckets without the concern of breakage and premature wear.



Typical Nylon Digger Bucket



Typical Steel Digger Bucket