

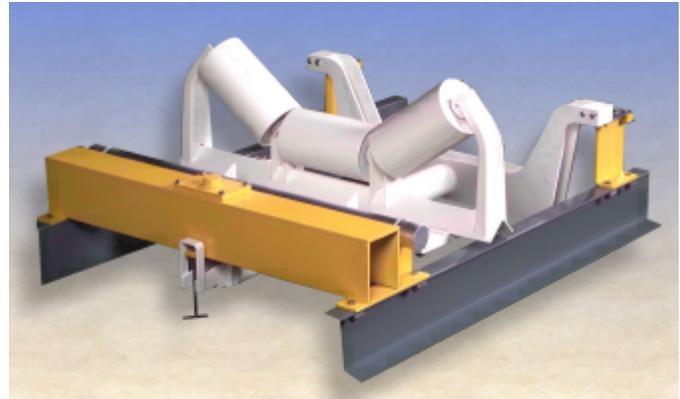


**BUILT SMART
BUILT TO SURVIVE**

Models 1RF-3A and 1RF-4A “QUARRY KING” Belt Scales

- **Excellent Value.**
- **Easy to install/startup.**
- **Accurate measurement.**
- **Long term calibration stability.**
- **Quick calibration method using supplied test weight.**
- **Easy to re-rate.**

Outdoor conveyor weighing of dusty fines and “stone like” aggregate materials where rugged construction and spill-proof/jam-proof suspension design are the most essential attributes. Teaming with Thayer Scale’s proven “Rocking Flexure” fulcrums is a completely new “pipestem” single idler suspension system incorporating built-in storage means for its calibration weight (no test chains required).



Single Idler “QUARRY KING”

This combination of unique elements provides important advantages for neglected-maintenance operations where on-going dust build-up and spilled aggregates are known to foul conventional suspension designs. Applications include trough belt conveyors of 14-48” widths (Series 1RF-3A for 14”, 18”, 24”, 30”; Series 1RF-4A for 36”, 42”, 48”) operating at speeds up to 600 fpm and inclines up to 18 degrees.

The “Quarry King” suspension system is fabricated from slim flat metal elements (carbon steel standard, stainless steel optional) which are precision laser cut from sheet stock and welded to, and branch outwardly from, a centrally positioned tubular “spine” shaft running axially to the conveyor run, directly under the centerline of the belting. These elements, two of which support the weigh idler, lie in a vertical plane so as to eliminate tare build up areas. There are no structural elements running parallel to and in close proximity with the conveyor side stringers as in conventional designs to trap and hold aggregate material spilling from the edge of the belting.

The suspension system is longitudinally restrained and pivoted at the in-feed (approach) end on Thayer Scale’s proprietary RF Fulcrum arrangement, while the downstream end is supported from a single NTEP certified strain gage load cell loaded in pure tension, protected from effects of all extraneous lateral forces. A key advantage is that the load cell can be quickly and easily removed and replaced without disturbing the weigh idler itself, thereby eliminating the tedious task is re-setting and aligning the idler, and conducting another material test upon re-commissioning. The non-weighed Bridge Element that supports the load cell also includes the supporting brackets for storing the Test Weight which can be easily moved to its “calibration” position on the suspension system whenever desired.

Accurate belt speed measurement requires the use of a precision wheel in contact with the tension side of the belt in the area where the scale is located. The Thayer belt travel pulser assembly includes a precision cast/machined wheel with a “pre-calibrated” circumferential tolerance of $\pm 0.05\%$, has provisions to maintain constant pressure against the belt under all operating conditions, and is self-steering to avoid slip errors

The “Quarry King” belt scale is available with all models of THAYER Belt Scale Integrators.

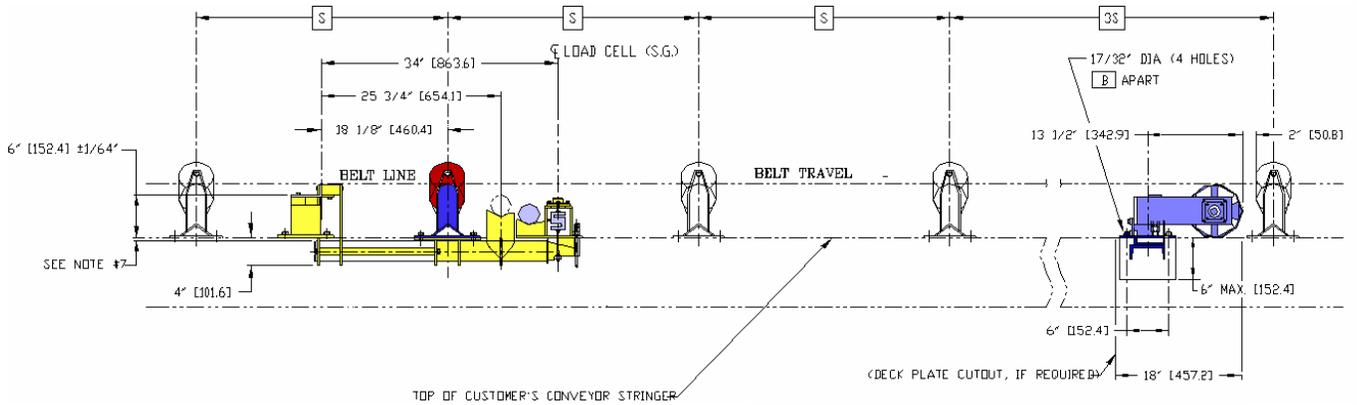
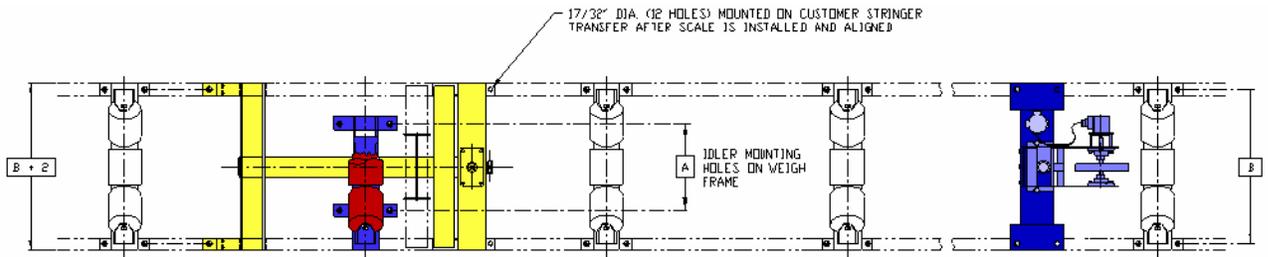
Thayer Scale-Hyer Industries, Inc.

P.O. Box 669, 91 Schoosett Street, Pembroke, MA 02359

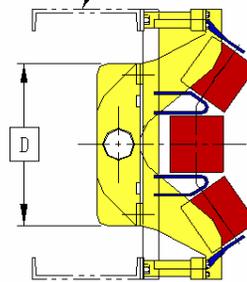
Ph: (781) 826-8101 FAX: (781) 826-7944

E-MAIL Sales@ThayerScale.com

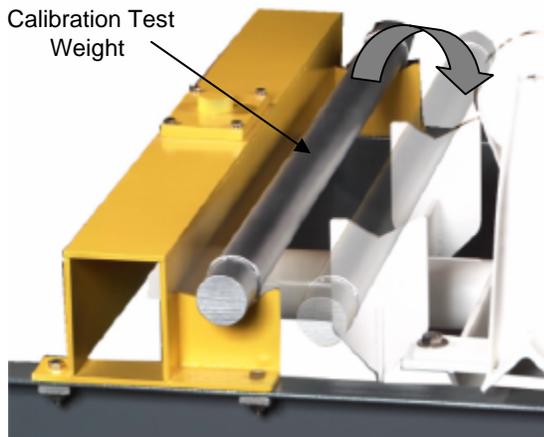
THAYER 1RF-3A Quarry Kings Belt Scale



TYPICAL CHANNEL TYPE CONVEYOR STRINGERS (BY CUSTOMER)



MODEL NUMBER	BELT WIDTH	A	B	D
1RF-3A-SG-14	14" [355.6]	13" [330.2]	23" [584.2]	15" [381.0]
1RF-3A-SG-18	18" [457.2]	17" [431.8]	27" [685.8]	19" [482.6]
1RF-3A-SG-24	24" [609.6]	23" [584.2]	33" [838.2]	25" [635.0]
1RF-3A-SG-30	30" [762.0]	29" [736.6]	39" [990.6]	31" [787.4]



- Load Cell: Single NTEP-approved, single-point, stainless steel, strain gauge load cell with various rated capacities to meet the application.
- Accuracy $\pm 1\%$ totalized weight over a 3:1 design capacity range (when installed on a Thayer approved conveyor).
- Calibration: Static test weight (supplied).
- Temperature operating range: 0 - 110° F.

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