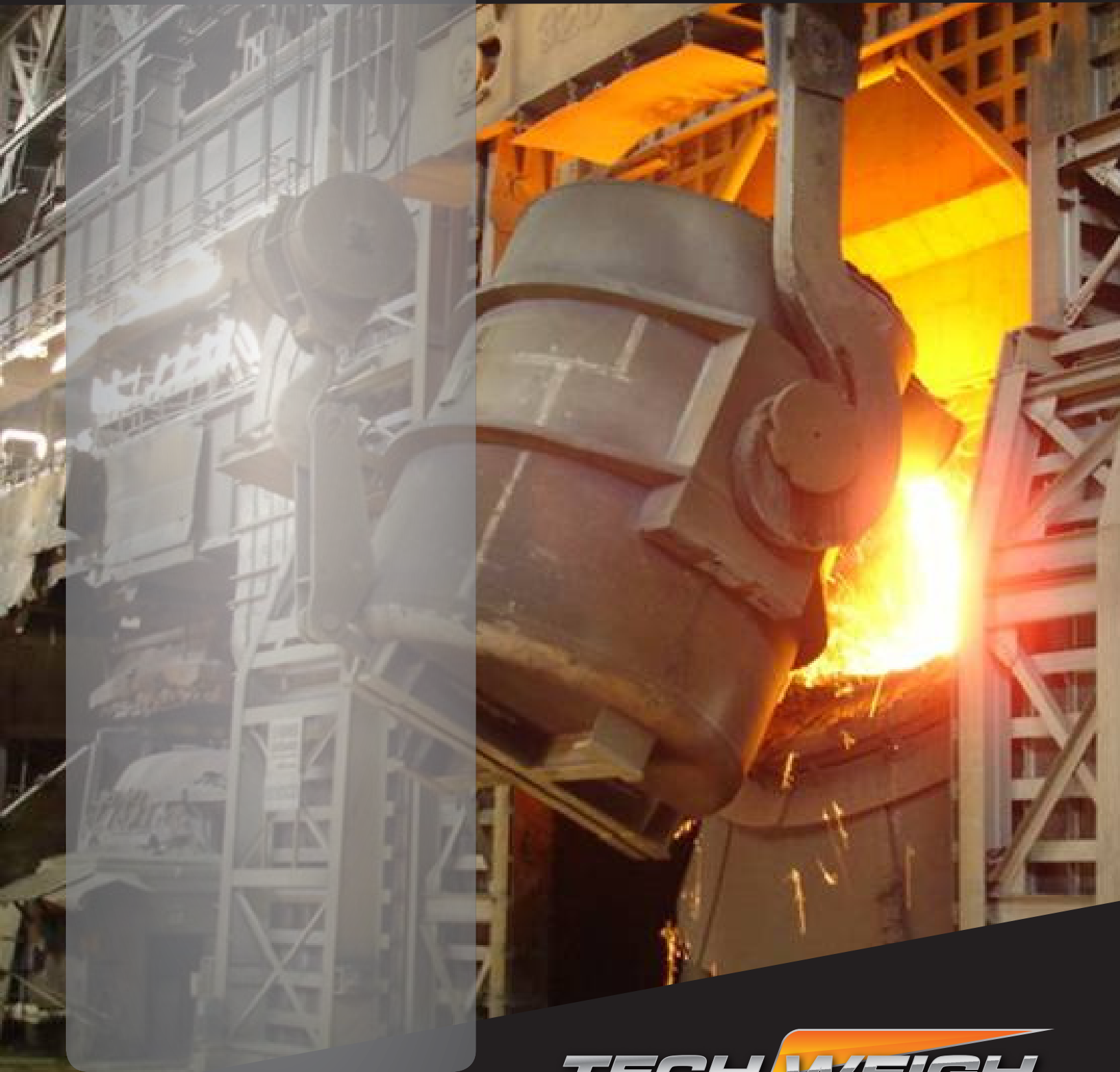


Crane Weighing

Complete Systems



TECHWEIGH

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1. 3-Point Ladle Weighing System

This system is designed to weigh the ladle at three points (2 at the main hoist and 1 at the auxillary hoist), to measure the amount of liquid metallic while pouring into a furnace. This will improve the yield as well as end point control.

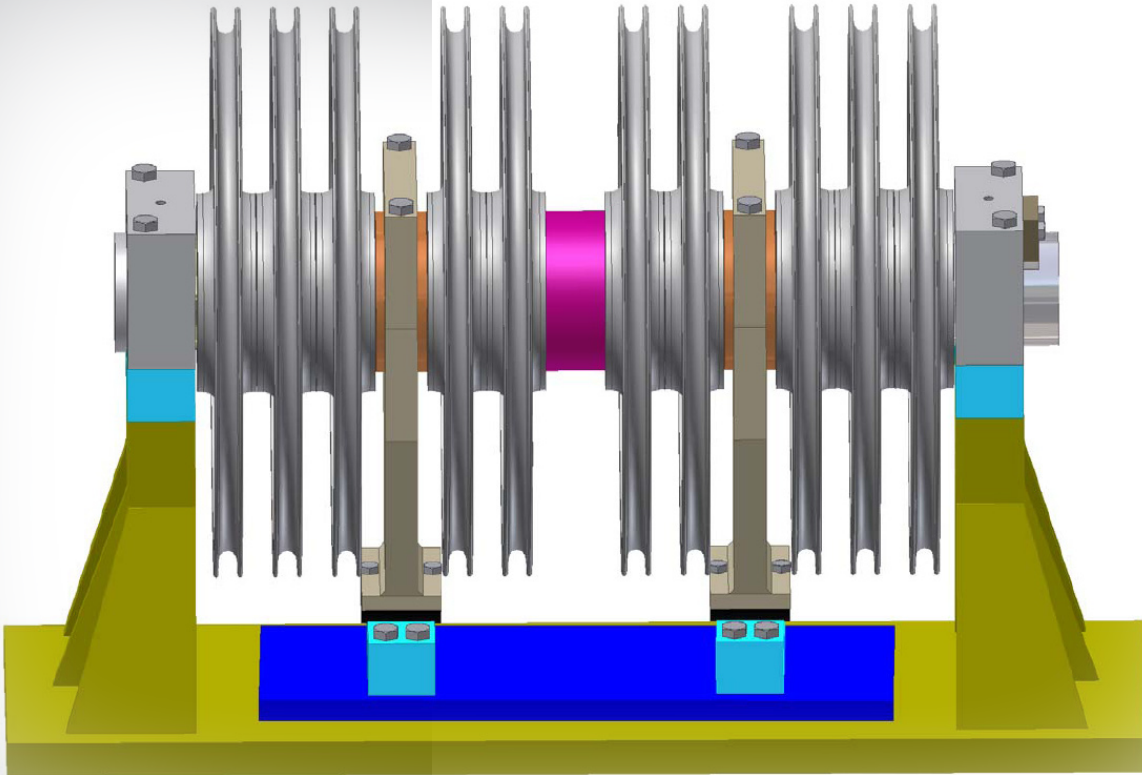


Figure 1. Main Hoist

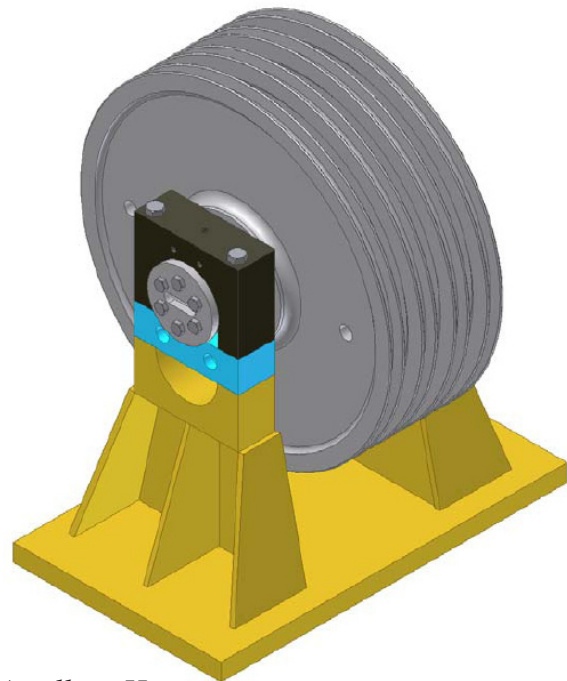
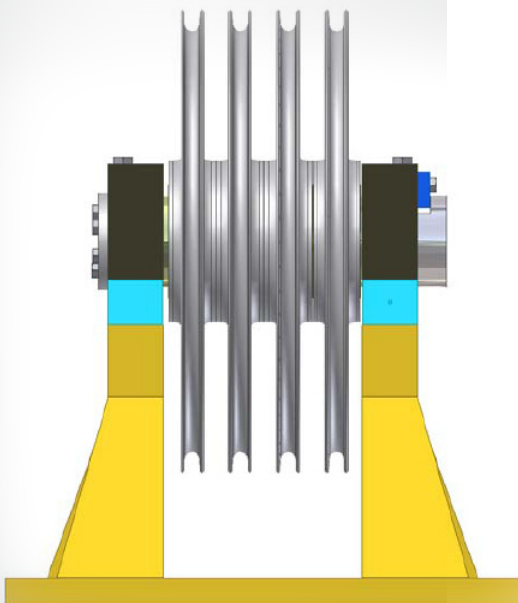


Figure 2. Auxillary Hoist

** Load cell assemblies are represented by the teal blocks in Figures 1 & 2.

Ladle Weigh System Applications:

- 3-Point Weighing of scrap and hot metal charge of the BOF.
- Weighing hot metal as pouring into furnace.
- Weighing metallics at caster.
- Process Weighing
 - Filling ingots
 - Emptying ladle
 - Measuring residual steel in ladle
 - Measuring tare weight of ladle

Ladle Weigh System Features:

- Each system is designed and manufactured to retrofit into customer's existing applications.
- Full installations are available.
- Improvements in yield, quality and end point control.
- Full turnkey installations available.



2. 920i Programmable Indicator/Controller



920i is easy to use and is truly the first of its kind to blend revolutionary user interfaces, total flexibility and ultimate processing performance with the simplicity of a basic weight meter.

Programmable keys provide instant access to frequently used functions such as selecting a formula, starting a batch, beginning a data collection sequence or searching or sorting a file. When process changes, soft keys can easily be modified in the field.

From simple transaction and inventory records to complex data manipulation, the 920i will manage critical information in a way that best fits. Battery-backed memory allows customized database files to store information like id numbers, transactions, formulas, label formats and PLUs. With up to 14MB optional memory.

Standard Features:

- Large 4.6" W x 3.4" H, 320 x 240 pixel back-lit LCD graphical display
- Selectable character sizes from .25" to 1.2"
- Display up to four scale channels with required Legal-for-Trade information
- 32 scale accumulators
- Five displayed soft keys with 10 user-defined and 14 preset functions
- Front panel or serial configuration/calibration
- NEMA 4X/IP66 stainless steel enclosure
- Four bi-directional communication ports
- Operator prompts
- Four on-board digital I/O
- 100 set-points
- Two option card slots
- 1000-ID truck registers for in/out weighing
- Programmable ticket formats
- ESP event-driven processing
- User programmable 128K flash memory
- Power for 16 (350 ohm) load cells per channel or 32 total per A/D option card



Measurement
Canada
Approved

Option Cards:

- Digital I/O 24, channel
- A/D dual or single channel
- Analog output selectable (0-10V, 4-20mA)
- Memory module, 1MN
- Two channel serial (accommodates RS-232, RS-485 and 20mA current loop)
- Expansion board (2 and 6 port)

3. Peripheral Equipment

3.1 Scoreboards

SURVIVOR®
LaserLight™ Series



Standard Features:

- Six high-intensity red digits (double-row discrete LED)
- Four high-intensity red annunciators for gross, net, lb, kg
- Available in 4" (101.6mm) and 6" (152.4mm) digit sizes
- Auto learn mode of communication protocols
- Hold displayed weight (demand input)
- Software selectable stand still mode, no updates while in motion
- Software configuration menu
- Durable weather-tight enclosure
- Adjustable daylight/night intensity
- Non-glare contrast filtered lens
- Mirror function
- RS-232, 20 mA, and RS-485 communications
- Auto sensing 115/230 VAC power supply
- 6" (152.4mm) LaserLight enclosure mounting holes match SURVIVOR IQ F40 Series remote display
- Porous polyethylene breather vent

3.2 Printers

SP2200 Ticket Printer



Standard Features:

- Double-strike high speed, 180 characters per second (cps)
- Single copy or up to five-part multicopy forms
- Functions in slave capacity, printing information sent via RS-232 or weight extraction smart mode, processing information before printing
- Cash drawer kick-out function
- Inexpensive ink cartridge for no-mess ribbon changes
- Battery back-up; optional time/date and consecutive number (or ID) are retained for a year or more in the event of a power failure
- Compatible with all types of printers

3.3 Junction Boxes

JB4SS TuffSeal™ Signal Trim Junction Box



Standard Features:

- Stainless steel, NEMA 4X enclosure
 - Shunt jumpers to disable unused load cell parts
 - PreVent® breather vent
 - Conformal coated circuit board
- Number of Cells:
- 2-4 single cells
 - Expansion port

3.4 Radio Systems

ConnexLink™ Wireless Radio
900MHZ Transceivers



Standard Features:

- Durable industrial enclosure with mounted flanges
- Transmits around corners and through walls
- Reliable communications up to 115200kbps
- Supports point-to-point and point-to-multipoint applications

3.5 Smart Boxes

iQUBE Smart Box



Standard Features:

- 4-channel model, 8-channel model, and 8-channel model with 8 digital I/O
- NEMA 4X polycarbonate enclosure
- Multi-level transient protection
- 4-platforms and 16-cell summing capacities
- Daisy chain up to 3 master/slaves iQUBEs for multiple scale applications
- Cal-Match™ algorithm automatically trims and calibrates scale in one pass of test weights (stopping for each mount)
- Theoretical calibration allows you to enter factory sensitivity and capacity values to calibrate the scale without test weights
- Manual software trimming
- Load cell substitution supports cells of unmatched capacities
- Serial (RS-485) connectivity-full duplex
- Bi-color LEDs offer diagnostics capabilities by checking and illustrating load cell status in real time
- Cell-Emulator load cell algorithm compensates for excessive drift, A/D failures, connection errors, excitation voltage shifts, and more. It allows the scale to function properly until a permanent repair is available
- Configure with Revolution III™ software for use with analog devices and iRev™ software for the iQUBE and the 920i

3.5 Electronics

Panasonic Toughbook CF-19



Standard Features:

- Windows® XP Professional
- Full magnesium alloy case with hand strap
- Standard 10.4" touchscreen or dual touch LCD (touchscreen and digitizer) models
- 1,000 Nit screen brightness
- Intel® Centrino® 2 with vPro™ processor Technology with Intel® Core™ 2 Duo processor
- Wireless, Fully-rugged PC Convertible to Tablet PC
- 3-foot drop approved
- Sealed all-weather design
- 160GB shock-mounted, quick-release hard drive
- MIL-STD-810F and IP54- compliant
- Standard 120 VAC, 60Hz Operation Power Adapter for Panasonic Toughbook CF-19. Part Number PA1560-731. Rugged ABS Case. Sealed for resistance to moisture and shock.
- Mounting Bracket for Power Adapter. Part Number ASMTL-00332.



This catalogue describes the TWS Crane Weighing System.
A brief description of each unit is provided, including data and dimensions.
TWS reserves the right to change design, data and dimensions without prior notice.

TWS Crane Weighing System

Technical Weighing Services, INC.
1004 Reder Rd
Griffith, IN 46319

Tel: 219.924.3366
Fax: 219.924.4566

www.techweigh.com

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IN SCALE TECHNOLOGY**