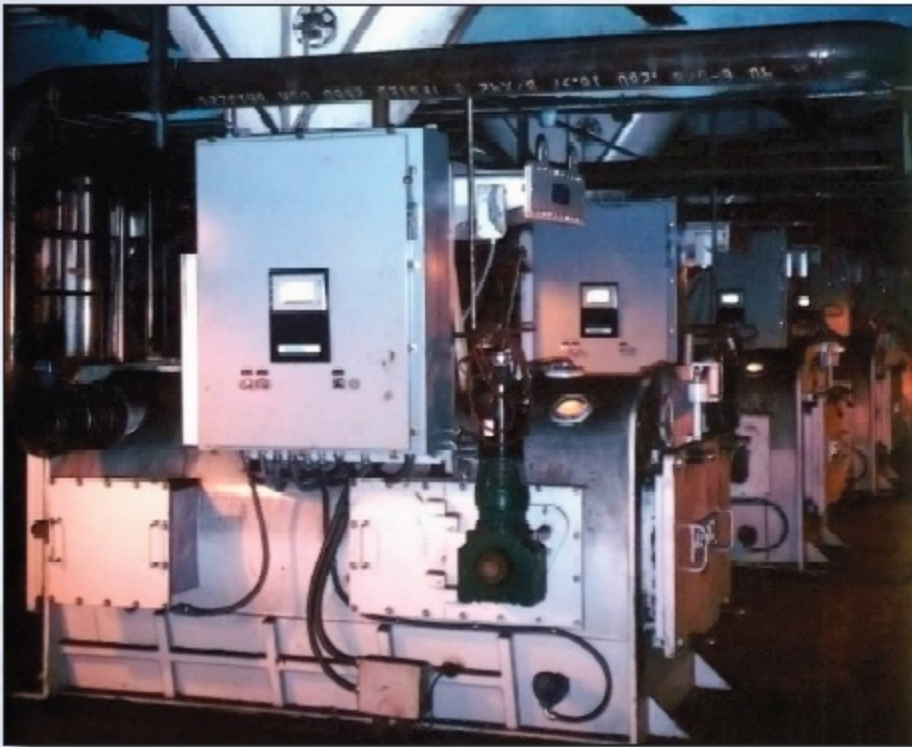


DYNAMIC INNOVATIONS SINCE 1908  
WEIGHING, FEEDING, CONTROLS & ENVIRONMENTAL SOLUTIONS

# 496SC COALOMETER<sup>®</sup> NFPA<sup>®</sup> GRAVIMERIK<sup>®</sup> SHORT CENTERLINE COAL FEEDER



  
**MERRICK**

**DAEDO**

# A TIME-TESTED DESIGN AND DISTINCTIVE FEATURES MAKE MODEL 496SC THE CHOICE FOR THE FUTURE

ENCLOSURE

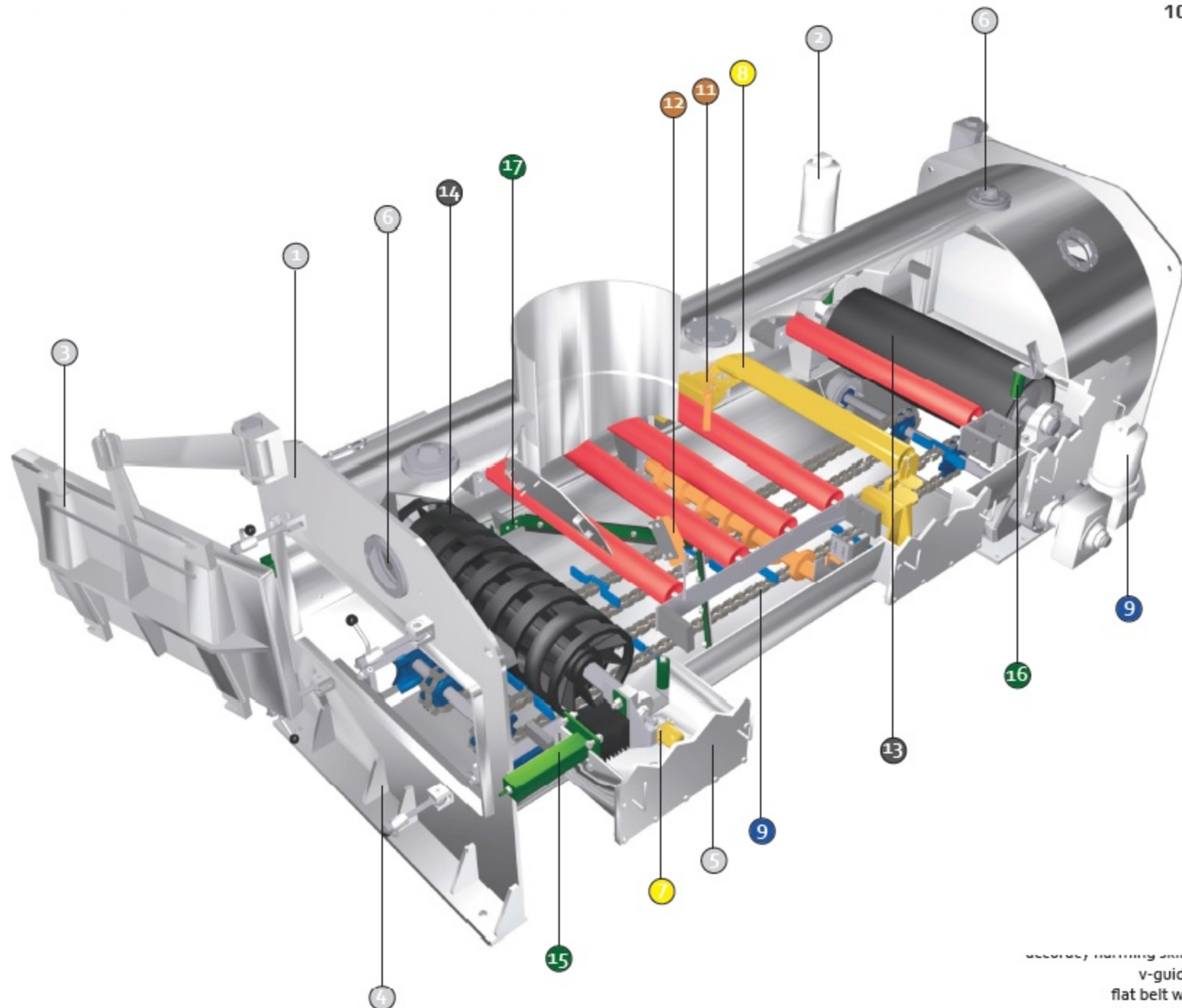
- 1. PRESSURIZED SHELL DESIGN**  
Exceeds NFPA 85 design criteria. Every critical area is reinforced with ribs and gussets. No castings are used on any pressure boundary or in any pressure retaining component.
- 2. TOTALLY ENCLOSED FEEDER DRIVE**  
A non-ventilated, vertically mounted AC motor with a high efficiency off-the-shelf gear reducer is directly mounted to the drive shaft.
- 3. EXCLUSIVE QUICK-ACCESS END DOORS**  
Located at either end of the feeder, each heavy-duty door is supported by a single hung davit that allows it to be completely swung away from the opening in a minimum amount of space. Swing away toggle clamps provide fast positive sealing of each door.
- 4. DURABLE CONSTRUCTION**  
For maximum life and reduced maintenance, any surface that comes into contact with coal is constructed of stainless steel or rubber.
- 5. REMOVABLE ACCESS PANELS**  
Oversized panels are located at the head and tail pulleys and at the weigh suspension, providing easy access for maintenance and inspection.
- 6. OBSERVATION PORTS AND LIGHTING**  
Strategically located observation ports provide excellent unobstructed views of the inside of the feeder.

WEIGHING

- 7. BELT SPEED ENCODER**  
Located on the tail pulley to measure true belt travel.
- MOTOR SPEED ENCODER**  
Allows for comparing motor speed to belt speed for slippage or breakage detection (not shown).
- 8. STAINLESS STEEL WEIGH SUSPENSION**  
The MERRICK Coalometer utilizes dual hermetically sealed, stainless steel load cells. The weigh suspension is designed for easy removal and maintenance and is constructed entirely of stainless steel.

CLEANOUT

- 9. CLEAN-OUT CONVEYOR**  
A drag chain-type conveyor thoroughly sweeps the stainless steel floor of the feeder into the discharge chute to minimize coal and dust build-up. The conveyor is driven by an AC motor with an integral high efficiency off-the-shelf gear reducer.
- INDEPENDENT DRAG CHAIN CONTROL**  
The integral clean-out conveyor (drag chain) can be controlled in one of two different modes: continuous or timed (not shown).



ALARM SENSORS

- 10. DISCHARGE PLUGGAGE SWITCH**  
Indicates coal pluggage in the discharge chute (not shown).
- 11. COAL-ON-BELT SWITCH**  
Identifies the presence or absence of material on the feeder belt.

PULLEYS

- 12. BELT TRACKING SWITCHES**  
Located on either side of the belt, these two-stage switches can first indicate an alarm and then can take additional action as programmed.
- 13. LAGGED HEAD PULLEY**  
Rubber coated head pulley is lagged and crowned to assure positive belt drive and tracking.

BELT

- 14. SELF-CLEANING TAIL PULLEY**  
A spiral wound crowned tail pulley helps keep the inside of the feeder belt clean and helps maintain positive belt tracking.
- 15. BELT TAKE-UPS**  
Constructed of stainless steel, take-ups are totally enclosed and adjustable from outside the feeder.

- BELT GUIDE ROLLERS (OPTIONAL)**  
Located on either side of the head and tail pulleys, aiding proper belt tracking.

- 17. BELT SCRAPERS**  
The head pulley a scraper is held positively to the belt by counterweights and scrapes the surface of the belt. A v-type plow scraper is located on the inside bottom belt strand to minimize coal build-up on the pulleys.

**CURBED FLAT BELT**  
MERRICK's unique inlet design, the need for secondary handling, skid boards, high belt curbing, or belttracking v-guides is eliminated, allowing a more accurate flat belt with a minimum one-inch curb (not shown).

## COAL VALVES

- Bunker Outlet  
Designed to cut through a standing column of material
- Knife Gate  
Provide "off-on" control of the material of varying sizes

## GENETIX® PROCESS CONTROLLER

Genetix® has the flexibility to accommodate both simple and complex system configurations. With Genetix® you can choose where to add intelligence to your process and the best method to seamlessly integrate the information into your plant control system. You can adapt Genetix® to your system and application needs.



BELT WIDTH	CAPACITY - see note 3 -	INLET SIZE INSIDE DIA. - see note 1, 2 -	INFEED TO DISCHARGE CENTERLINE DIM. - see note 1 -	APPROX. FEEDER WEIGHT
24" (609 mm)	100,000 lb/hr (45,500 kg/hr)	18" (457 mm)	3' 9" (1,143 mm)	?,000 lb (3,176 kg)
36" (914 mm)	200,000 lb/hr (91,000 kg/hr)	24" (610 mm)	4' 0" (1,219 mm)	?,500 lb (3,403 kg)
48" (1,219 mm)	300,000 lb/hr (136,000 kg/hr)	36" (914 mm)	4' 6" (1,371 mm)	?,000 lb (4,083 kg)

1. Dimensions shown are standard. MERRICK also has manufactured many special NFPA feeders to specific dimensional requirements.

2. MERRICK also specializes in Slot Inlet Model 496 Feeders. History and experience has shown that difficult flowing coals can be best handled by use of a tapered slot infeed.

3. Feedrates shown are maximum for given feeder size and are based on coal at 50 lb/cu. ft. (801 kg/cu. m.). Feeder size should also be selected based on material size being fed. Consult MERRICK for more information.

## FEEDER OPTIONS

- Stainless Steel Enclosure
- Stand Alone or Feeder-Mounted Control Cabinet
- Slot Infeed

## ANCILLARY EQUIPMENT

### COAL VALVES

#### Bunker Outlet Valves

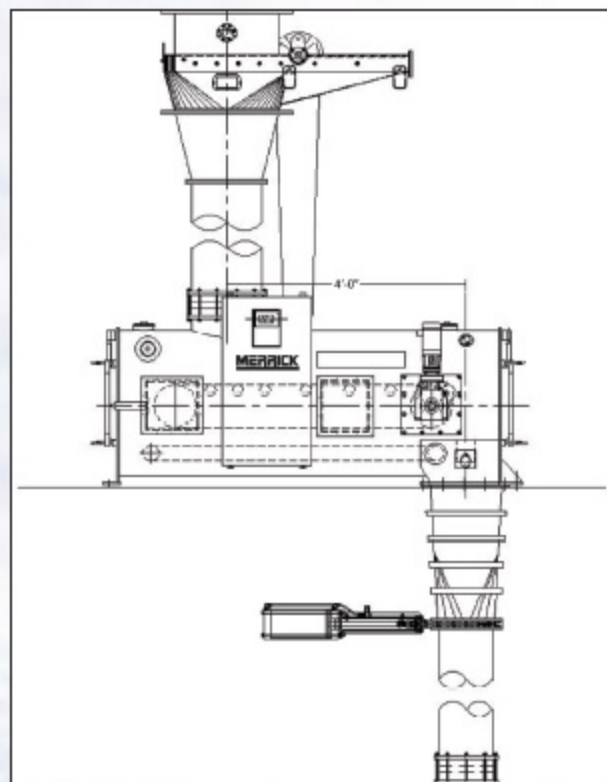
- Pressurized construction
- Stainless steel construction standard
- Double rack and pinion over gate drive (self cleaning)
- Electrically actuated, chain wheel, or handwheel operation
- Gate position indicators
- Gate removable without removing valve

#### Knife Gate Valves

- Designed for burner line applications (pneumatic actuator)
- Can be used for feeder discharge valve (electrically actuated, pneumatically actuated, chain wheel, or hand wheel operation)
- Dust-tight construction
- Gate position indicators

### FEEDER DISCHARGE HOPPERS

- Reinforced construction, designed to NFPA 85
- Stainless steel construction standard
- Special, polished interior finish available
- Temperature probe available



### COAL-IN-PIPE MONITORS

- Acoustic

### DOWNSPOUTS

- Stainless steel construction standard
- Special, polished interior finish available

FAMILY OF  
**MERRICK**  
COMPANIES

10 ARTHUR DRIVE  
LYNN HAVEN, FL 32444 USA  
CALL WORLDWIDE +1 850.265.3611  
EN ESPANOL +1 850.271.7834

[WWW.MERRICK-INC.COM](http://WWW.MERRICK-INC.COM)

103,113 & 114, 7<sup>TH</sup> MAIN, 3<sup>RD</sup> CROSS  
PEENYA INDUSTRIAL AREA 3<sup>RD</sup> PHASE  
BANGALORE-560058  
KARNATAKA STATE INDIA  
+91 80 28394500 (PHONE)  
+91 80 28394600 (PHONE)  
+91 80 28395500 (FAX)