



**P&F100S - vertical Power & Free floor conveyor .**

**P&F100S**

**POWER & FREE FLOOR CONVEYOR**

The new CALDAN P&F100S is the further development and Power & Free version of our renowned HD100S "Stepper". Based on the proven CALDAN triple rail system, and the design principle of high presentation accuracy and stability, the new P&F100S takes floor conveyor technology to a new level.

The accumulation and separation of trolleys is highly reliable, and a smooth trolley transfer is achieved by using conventional switching gates without expensive transfer units.

The system conveys work pieces on vertical rise and fall sections without tilting - the work piece remains vertical at all times. This allows for the system to be designed with less space requirements and thus requiring less energy in ovens etc., as the work pieces can be conveyed at closer pitches around the system.

Further advantages include the use of a more economical jig design, less influence of gravity force on jigs / wagons and minimised risk of parts falling from jigs in the vertical rise and fall sections.

As with all CALDAN products, the system has been designed and pre-built in our R&D department, and fully tested before being introduced to the market place.





**P&F100S**

**TECHNICAL SPECIFICATIONS**

The Power & Free floor conveyor, Type P&F100S, consists of three CALDAN profiles. In the lower "Power" profile the cardan chain is driven by one or more drive units.

In the upper "Free" profiles the purpose designed trolleys are driven by power chain carriers, via pivotal pawls attached to the front and back of the trolley.

The trolley body is made of 0.23 inches (6 mm) laser cut and folded plates and is equipped with 4 sealed load carrying wheels and 4 sealed horizontal wheels for side guiding.

Both the power chain carrier pitch and the accumulation distance are designed according to customer specification.

Each trolley can be separated from the power chain and accumulated in in-line zones. When reaching a closed accumulation stop or when reaching the tail of the previous trolley, the accumulation lever is lowered and the trolley pawl units are lifted.

**Chain carrier pitch:**  
7.08 / 10.62 inches (180 / 270 mm)

**Max. temperature (surrounding):**  
482 °F (250° C)

**Max. load per 4-wheeled trolley:**  
220 Lbs (50 kg)

**Standard length, straight profile:**  
118.11 inches - equipped with flanges  
(3.000 mm)

**Trolley bearings:**  
Closed and greased for low maintenance

**Horizontal curves:**  
Degree: 90° / 45° / 30° / 15°  
Radius: 27.55 / 39.37 inches  
(700 / 1.000 mm)

**Vertical curves:**  
Degree (depending on work-load):  
30° / 15°  
Radius: 98.43 (59) inches  
(2.500 (1.500) mm)

Special dimensions on request.

**Drive unit:**  
Straight double sided version with caterpillar chain drives

**Tension unit:**  
Manual and pneumatic version  
**Switching gate:**  
Pneumatic blade version  
(without separate transfer sections).  
R = 27.55 inches (700 mm)

**Accumulation stops:**  
Pneumatic version  
**Lubrication:**  
Pneumatic point lubrication – automatic

**Accumulation:**  
In-line

**Special features:**  
Turning stations and drop sections