

7. FLUX SYSTEM



- Flux pressure tank devices, HDT-type
- Automatic flux recycling machine AWS 214021
- Flux pressure chamber device



7.1. FLUX PRESSURE TANK SYSTEM, TYPE HDT

- Incl. TÜV acceptance certificate.
- Useable with an AWS 214021-23 recycling machine for up to three feed and suction positions.
- Primary circuit for continuous adding of fresh flux. The composition of the flux remains substantially unchanged.
- Two capacitive solid matter sensors inside the flux funnel for - + 250 degree C min. and max. flux level.
- 1 sensor inside the pressure tank – cone for min. flux level – control with indicator light as warning lamp.
- Automatic flux conveyance through sensor-controlled, pneumatically operated membrane valve.
- Additional active venturi inside the feed line for the loosening and air throughput of the dense flow.
- Generous screw surfaces for an easy mounting to columns or booms of manipulators. Optionally, 4 stands can be mounted easily.



TECHNICAL DATA:

Capacity:	200, 500 or 1000 l
Permissible working pressure:	3 bar
Permissible working temperature:	+ 150° C
Air network pressure, to be supplied by the customer:	6 bar
Nominal width connecting hose:	19 mm
Mains voltage:	400/230 V 50 Hz



7.2. AUTOMATIC FLUX RECYCLING MACHINE AWS 214021

- Required for a welding head in connection with the pressure tank HDT 200, HDT 500 or HDT 1000.
- 40l capacity of the store funnel. Gravity feed towards filling position.
- Completion of used flux through the pressure tank.
- Removal by suction through high performance vacuum and blow ejector for suction heights of 0.5 to 3 m.
- Air consumption approx. 800 l/min of low-tension air with 3 l/min of flux to be sucked.
- Short, flux saving suction way and low conveyance speed through suction tube, nominal diameter 50 mm.
- Cyclone with flux saving rubber coating.
- The escaping exhaust air corresponds to the Technical Instructions on Air Quality Control (TA-Air). Compressed air with a receiver pressure of 6 bar is required for the operation of the dedusting appliance.
- Slag drawer for the removal of the slag sucked.
- Two capacitive level sensors, thermoresistant - 250 ° C, inside the store funnel for flux min./max. Together with the membrane valve at the pressure tank, they provide for the level regulation.
- As soon as the min. sensor has acted following a defined period of time, the device will be switched to „ Stop welding“.





7.3. PRESSURE CHAMBER DEVICE

The device serves for the continuous suctioning of flux and the discontinuous flux conveyance into a buffer tank (flux funnel) at the front of the welding head. When streaming into the conveyor chamber, approx. 17% of the flux which is sucked back into the store funnel, will be mixed with fresh flux from the integrated fresh flux silo. The continuous adding of fresh flux to the

circulatory ensures that the flux quality remains

constant. Thanks to the continuous recirculation of sucked off flux into the conveyance process, the capacity of the pressure chamber device is 6 to 7 times above the capacity of a flux appliance without integrated flux recirculation.

Using a fast emptying flap, the device can be prepared quickly for a new type of flux.

7.3.1. STRUCTURAL COMPONENTS

- Heating elements, funnels with shutting flaps, capacitive level sensor for „flux - min“.
- Fully automatic, electro-pneumatic, accumulator-supported dedusting device for three conical filter elements with folded (pleated) filter materials. The escaping exhaust air corresponds to the Technical Instructions on Air Quality Control (TA-Air). Compressed air with a receiver pressure of 6 bar is required for the operation of the dedusting appliance. The dedusted filter cake will again be added to the flux cycle.
- Suction through high performance vacuum and blow ejector for suction heights of 0.5 to 3 m. Air consumption approx. 800 l/min of low-tension air with 3 l/min of flux to be sucked. Short, flux saving suction way and low conveyance speed through suction tube, nominal diameter 50 mm..
- Cyclone with flux saving rubber coating.
- Slag drawer for the removal of the slag sucked.
- Store funnel with a capacity of 20 litres and a view glass for the flux sucked off.
- Pressure chamber with a capacity of 3 litres, electro-pneumatic shutting flap, capacitive level sensors for the level regulation and refilling.
- The control cabinet, including the components for the air supply and the evaluation devices for the level sensors is provided at the fresh flux silo.
- The electrical control is located inside the central control cabinet of the handling machine.



7.3.2. TECHNICAL DATA

Pressure chamber installations	AWS 212007	AWS 212005	AWS 212006
Total size of the installation HxWxD	1429 x 1320 x 617 mm	1681 x 1200 x 670 mm	1981 x 1450 x 670 mm
Empty weight approx.	180 kg	230 kg	250 kg
Capacity	75 l.	130 l.	250 l.

* Specifications subject to alterations

