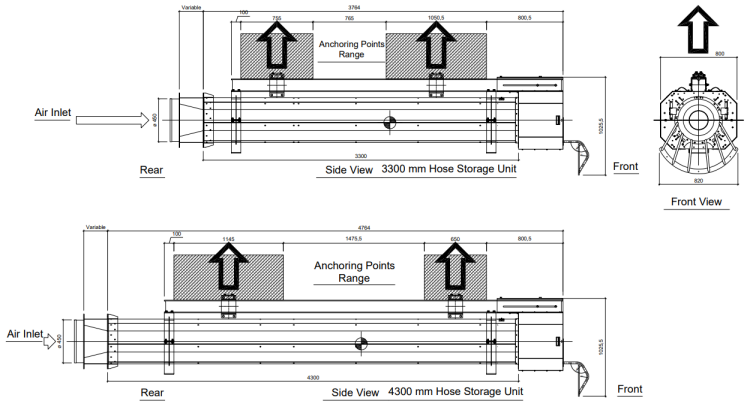
TECHNICAL DATA

- Digital control with PLC
- High ERR coefficient with inverter control
- VFD on compressors and condensing fans
- Main blower air flow inverter controlled
- Standard refrigerant R410A or HFO R513A as option
- Smoke detector
- Efficient condensate water pumps system
- MODBUS RS485/Ethernet supervision system
- Manual aircraft class selection
- Condenser air top expulsion
- 480 V, 60 Hz electrical feed (optional)
- Trailed mounted with hose basket
- Self-propelled version with diesel engine generator

HOSE

- Double yellow layer polyester 1100dtex PVC coated, 2 mm foam (optional 5mm) and air insulation, 5 mm zinc coated steel spire
- Breaking resistance: 2700 N/5cm (ISO 142/1)
- Thermal conductivity: 0.06 W/m °K (2mm insulation)
- Flame retardant: M2/B1/BS/B-s2-d0/NFPA 70
- Service pressure: 12.000 Pa
- Test pressure: 20.000 Pa
- 8” aircraft swivel coupler



	Lenght*	Width	Height	Weight
20m HOSE	4304,5 mm	822 mm	1044,5 mm	500 Kg
30m HOSE	5004,5 mm	822 mm	1044,5 mm	580 Kg

**Optional length on request*

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ATES ITALIANA

COMPLETE RANGE OF GROUND SUPPORT EQUIPMENT



S.H.R. ®™4M

AIR HANDLING HOSE RETRIEVER for PCAir SYSTEM

MAIN FEATURES

S.H.R. ®™4M

The most advanced and intelligent Hose Handling System in the market. Design is the result of long study and of field experience. 500 units in service all around the world.

- Driving head extracting and retrieving the hose with four motor/belts assemblies VFD driven without mechanical transmission, chain, gears, shafts.
- Adjustable belts pressure on hose to achieve the maximum efficiency in any condition and weather.
- External tube in anodized aluminium of different lengths depending from hose lenght required, total corrosion resistance and appealing appearance.
- Driving head manufactured in AISI 304 Stainless Steel. (Optional AISI 316).
- “Tube in Tube” in stainless steel to reduce and maintain constant pressure losses.
- Electrical control box in S.S. IP 65 mounted on bridge boogie for easier maintenance and control. PLC display on box door. Includes the retriever controls.
- Quick disconnect connectors for easy removal of head or control box.
- Driving head sliding forward for easy replacement of A/C hose.
- Extended hose lifetime: not less than two years, from field service return.

CONTROL BOX

The control box is installed at the bridge boogie and includes the fixed controls. Connections to gear motors and limit switches are by removable connectors, to enable an easy disassembling of head and control box. The control box includes a Variable Frequency Drive controlling the gear motors, the extension speed and the overload limit. The retriever’s functions and safety are controlled by PLC.



RADIO CONTROL



The radio control sender, on the aircraft coupler, is equipped with hose extraction and retraction controls. The receiver is installed outside the control box. The radio control operates at 870 MHz civil frequency; at the start, a single transmission channel is established between sender and receiver, avoiding interference and allowing up to four retrievers to be operated simultaneously.

LIMIT SWITCHES

A proximity switch stops the hose when totally extracted.
A pair of photocell limit switches stop the hose when totally retracted.

AIR SUPPLY HOSE AND COUPLER

The aircraft supply hose is manufactured in polyester fabric, PVC coated, yellow color, with internal insulation. Hose lengths are connected, at both ends, by zip and velcro, covering and protecting the zip. The S.H.R.®™ 4M can be equipped with 20 or 30 m of hose ending by a cone reduction to 200 mm inner diameter. Different hose lengths available on request.
The first, inner hose length is fixed, by a clamp, on a magnetic collar. The collar moves forward and back with the spiral hose inside the aluminium hose storage tube, around the inner channel. Its function is to center the spiral hose in respect to the inner channel, and to detect the “hose all out” condition.

OPTIONS

Air pressure, flow and temperature can be taken at retriever inlet. Readings are available at control box display.
In addition, the S.H.R.®™ 4M can be equipped with radio transmitted air temperature on the aircraft coupler. Temperature readings are available at HMI interface. Ground version available.

CODES AND STANDARDS

Machinery Directive	2006/42/UE
Low Voltage Directive	2014/35/UE
Electromagnetic Compatibility Directive (EMC)	2014/30/UE
Low Voltage switchgear and controlgear assemblies	CEI EN 61439-1
Standards for power panels	CEI EN 61439-2
Radio Equipment Directive	2014/53/UE