


Pneumatic Tube System



WE MOVE YOUR WORLD

**We connect
your world.**

 Pneumatic Tube Systems.



WINDOW TECHS
BRINGING LIGHT TO LIFE

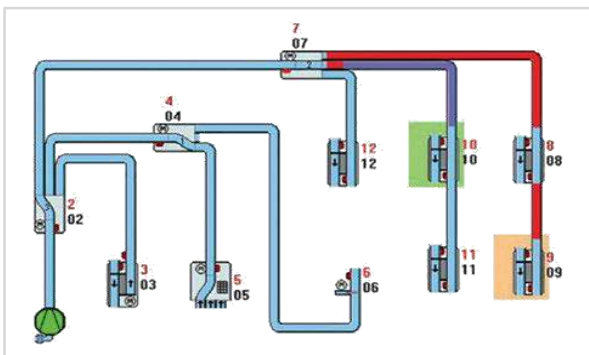
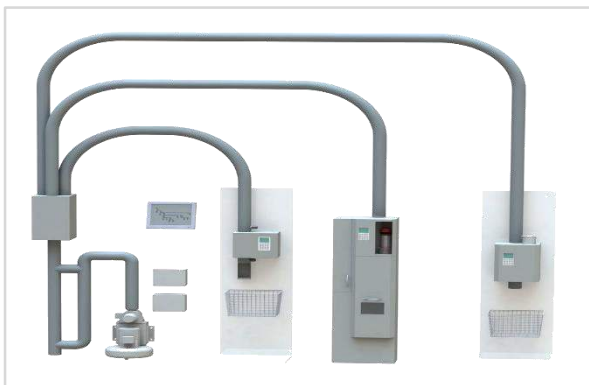
ABOUT

Pneumatic tubes or capsule pipelines, also known as Pneumatic Tube Transport or PTT) are systems that propel tubes by compressed air or partial vacuum. Unlike conventional pipelines, which transport fluids, they are used for transporting solid objects.

Today, Window Techs is a Pioneer in healthcare innovation and services by working with PTS-tec , an Austrian company with over 30 years of experience with major hospital pneumatic tube systems.



GENERAL



The base of each system is a blower which provides the required positive or negative pressure. The power should be matched to the load weight, the route length and the track height.

Via diverters the tube is split into multiple strands, which lead to the separate stations.

In any system there is a central controller, which converts the data from Ethernet to CAN bus, it transmits the data from the PC to the devices. This is responsible for the control of the individual line. Carriers are sent and received from the stations.

Our MC2000 Pipe Control Software calculates the shortest route to their destination.

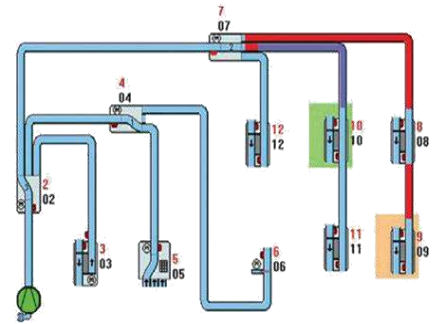
For all the systems, this software is the same, thus allowing an initially small system to extend to a complex system easily.

Each system needs a so-called free-run-station at which it is possible to eject several carriers, Endstations or Diverter Endstation are frequently used for this purpose.

MC2000 SOFTWARE & FEATURES

VISUALIZATION AND CONFIGURATION

The entire pneumatic tube system is displayed via a graphic visualization system. System components could be configured and changed graphically. Information on past and current transports is shown.



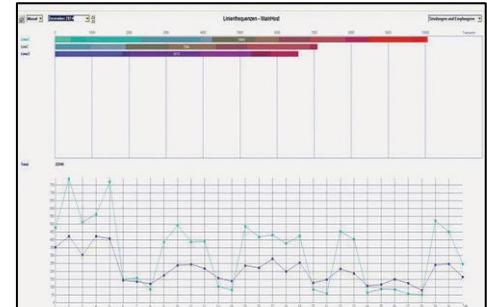
ALARM CONTACT

The purpose of a fire protection contact is to alert the pneumatic tube system in the event of fire. This capability is used to prevent fans from transporting smoke from the source of the fire to other rooms. The activation of a fire protection contact causes the entire system or parts of it to shut down. This significantly improves the safety of employees and personnel in the event of fire.



HISTORY & EVALUATION

An overview of all transport statistics are shown both via graphics and in a table-format. Ranges of statistics to be shown can be defined individually: daily, monthly, annually or for specific days. This feature gives you a glance at how the pneumatic tube system eases your normal workday.



IDENTIFICATION SYSTEM

The identification systems ensure that only authorized personnel can send and receive capsules. Furthermore, there are several security levels and these can be different e.g. for physicians and nurses. An appropriate record is created each time a basket is opened.



REMOTE MAINTENANCE

Our technical service team will assist you in an emergency within the shortest time possible via remote access.



SPEED ADJUSTMENT

Different goods require different transport speeds. The default speed is approximately 6 m/s, which has to be slowed for blood samples to about 3 m/s to avoid distorting laboratory results. Modern fan-speed controls allow for a dynamic adjustment of transport speeds.



E-MAIL, SMS OR PHONE NOTIFICATION

A notification can be sent to the user when a capsule has reached its destination. This message can be sent via email, SMS or over the phone. In the event of a disruption, the responsible technician is notified about the problem via email or phone. This message may also include information regarding the location and cause of the disruption.



PIPE IDS-BROWSER BASED CARRIER TRACKING

Carrier tracking is available to every pneumatic tube user. The system operates via a web interface and doesn't require the rollout or installation of specialized software. It can be used immediately from every device on the network.



STATIONS

END STATION

[110/160]

- Carriers can be sent, received and pass through
- Receiving from above or below
- Sending automatically or by confirming the start button
- Pneumatic brake
- No air outlet from the station
- Metal housing in RAL7035
- Open sending storage for one carrier
- LCD graphic display with soft membrane keypad touch buttons or touch screen (option)
- RFID reader circuit board
- Inbuilt of Rohr Bahn optical sensors

The end station serves as a sending and receiving station.

It has an open sending storage for one carrier and a robust steel housing. Sending can be done automatically or by confirming the start button.

After receiving, the carrier it pneumatically braked and then removed gently.

The end station can be used as a free-run-station.



PASSING-THROUGH STATION

[110/160]

- Carriers can be sent, received and pass through
- Receiving from above or below
- Sending automatically or by confirming the start button
- Pneumatic brake
- No air outlet from the station
- Metal housing in RAL7035
- Open sending storage for one carrier
- LCD graphic display with soft membrane keypad touch buttons or touch screen (option)
- RFID reader circuit board
- Inbuilt of Rohr Bahn optical sensors

The Pass-Through Station serves as a sending and receiving.

It has an open sending storage for one carrier and a robust steel housing. Sending can be done automatically or by confirming the start button.

After receiving the carrier it pneumatically braked and then removed gently.



STATIONS

FRONTLOADING STATION

[110/160]



- Carriers can be sent, received and passed through
- Receiving from above or below
- Simultaneous sending and receiving
- Pneumatic brake
- No air outlet from the station
- Metal housing in RAL7035
- LCD graphic display with soft membrane keypad touch buttons or touch screen (option)
- RFID reader circuit board
- Inbuilt of Rohr Bahn optical sensors

This station serves as a sending and receiving station. A big advantage is that sending and receiving are possible at the same time and thus long waiting times can be prevented.

A further advantage is the pleasant loading height, which enables easier handling especially for very heavy carriers. After entering the address, the door opens automatically. When the carrier is placed and the door is closed, an optical signal indicates whether the transport is confirmed.

COMPACT STATION

[110/160]

- Carriers can be sent and received
- Receiving from above
- Metal housing in RAL7035
- Sending automatically or by confirming the start button
- Pneumatic brake
- Open sending storage
- LCD graphic display with soft membrane keypad touch buttons or touch screen (option)
- Space-saving design
- RFID reader circuit board
- Inbuilt of Rohr Bahn optical sensors



The compact station serves as a sending and receiving station. Due to its compact design, it can be fitted into even smaller spaces.

It has two positions sending and receiving position.

Also simultaneous sending and receiving of carriers is possible, though several carriers may be discharged. The compact station can be used as a free-run-station.

STATIONS



MULTI SENDING STATION

[110/160]

- Station is used only as sender
- Send up to 3 carriers at the same time
- Metal housing in RAL7035
- Sending automatically or by confirming the start button
- Open sending storage for 3 carriers
- LCD graphic display with soft membrane keypad touch buttons or touch screen (option)
- RFID reader circuit board
- Inbuilt of Rohr Bahn optical sensors

The Mult sending-station is used as a sending station only. It allows to send up to three carriers at the same time.) or it is often used in the laboratory for large numbers of empty carriers to send back.

The carriers are returned automatically to their home address (after reading out the transponder Data) or sent to a specific address.

LAB RECEIVING STATION

[110/160]

- Station serves only as receiver
- Ejecting of several carriers at the same time
- Metal housing in RAL7035
- Compact design
- Additional chute for mild reception is also appropriate for the receiving of blood test
- RFID reader circuit board
- Inbuilt of Rohr Bahn optical sensors

The MS-Receiving station in the metal chasing is used as a receiving station only. It is mainly used in bidirectional lines as a receiving station in the laboratory. The integrated pneumatic brake and an additional reception chute ensures a smooth reception of the laboratory carriers.



STATIONS



SEMI- MODULAR FRONT LOADING STATION

[110/160]

- Carrier Shelf - 3 Carriers
- Lockable basket for up to 3 Carriers
- LCD graphic display with soft membrane keypad touch buttons or touch screen (option)
- Matching appearance
- Simple planning / Assembling
- Suitable for niche installation
- Combinable with various authorization systems
- Complete steel cover
- Easy Hygienic cleaning
- RFID reader circuit board
- Inbuilt of Rohr Bahn optical sensors

MODULAR FRONT-LOADING STATION

[110/160]

- Carrier Shelf - 6 Carriers
- Lockable basket for up to 6 Carriers
- LCD graphic display with soft membrane keypad touch buttons or touch screen (option)
- Metal coating to ceiling
- Matching appearance
- Simple planning / Assembling
- Suitable for niche installation
- Combinable with various authorization systems
- Complete steel cover
- Easy hygienic cleaning
- RFID reader circuit board
- Inbuilt of Rohr Bahn optical sensors



STATIONS

AUTOMATIC UNLOADING STATION

[110/160]

- Opens and closes the carriers automatically
- Returns empty carriers to their home address
- No manual intervention by staff is required
- Using standard pneumatic Carriers
- High receiving and sending capacity
- RFID reader circuit board
- Inbuilt of Rohr Bahn optical sensors

In the automatic unloading station carriers will be opened without manual intervention, emptied and closed again. The carriers are automatically sent back to their home address.

Laboratory personnel receive only the contents of the carrier, thus valuable time is saved.

The main purpose of the unloading station is to provide a high sending and reception frequency.

Application examples include Laboratories, Money Unloading directly into a Tresor, etc...

Advantage of our unloading station is that no special laboratory carrier is required.



Automatic loading Station

[110/160]

- Automatic carrier loading station
- Optimal for automatic transportation of e.g. unit doses to their destination points after their automatic consignment in pharmacies
- Carriers get automatically loaded and transported to the carrier's destination controlled by RFID
- Software communication with sub systems via adaptive software interfaces



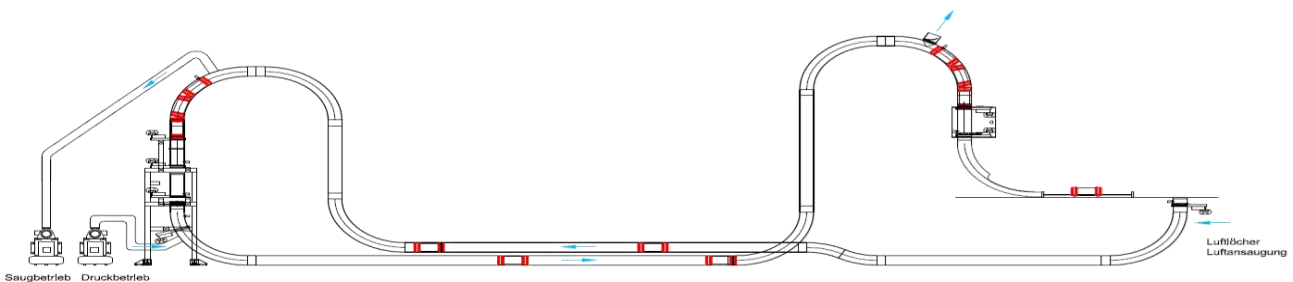
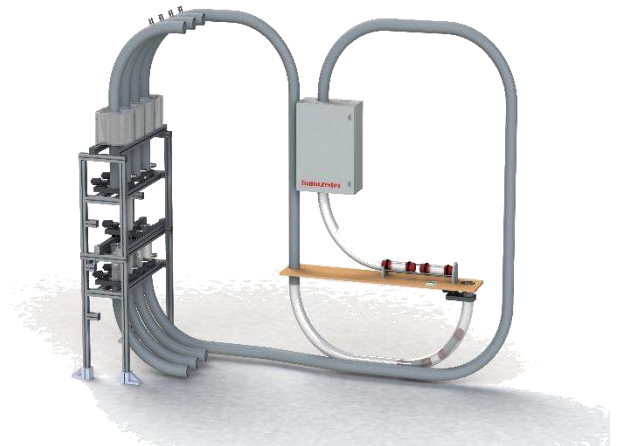
LABORATORY SOLUTION

[110/160]



- Combination of a separate receiving and separate sending station
- Raises the through put significantly
- Received carriers gets gently discharged and stored on a motorized conveyor belt
- Multi carrier station for (back) sending carriers to their home station or entered destination address

- For big pneumatic tube systems with min. one central transfer unit and higher through put requirements.
- Stations connection via „laboratory direct lines“ for gentle multi carrier transport, one directional lines.
- Offer the possibility to send and receive several carriers at the same time



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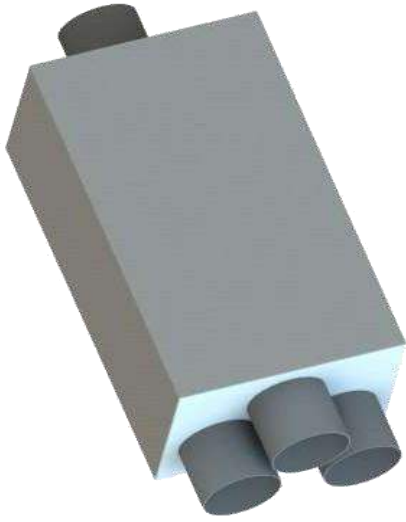
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DIVERTER



DIVERTER 3-WAY

[110/160]

- Metal housing in RAL7035
- Distribution of the driving tube in 3 directions
- Vertical or horizontal installation method
- Adjustable base position
- Sealing ensures quiet and safe movements

The diverter is used in applications when the driving tube is divided into several strands. A 3-way diverter is dividing the incoming pipe into 3 directions, the base position of the diverter is adjustable.

Diverter can be installed vertically or horizontally.

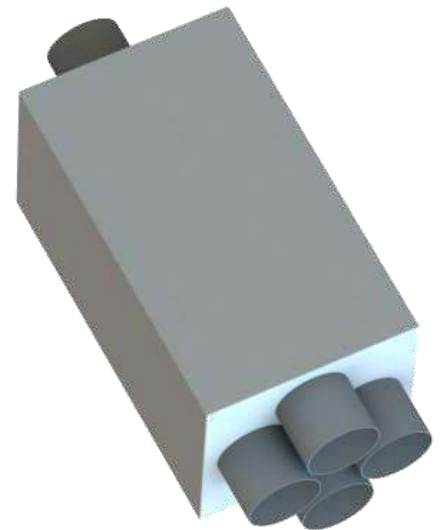
DIVERTER 4-WAY

[110/160]

- Metal housing in RAL7035
- Distribution of the driving tube in 4 directions
- Vertical or horizontal installation method
- Adjustable base position
- Sealing ensures quiet and safe movements

A noiseless carrier transportation is provided through wear-free sealing.

The diverter is used in applications when the driving tube is divided into several strands. A 4-way diverter is dividing the incoming pipe into 4 directions, the base position of the diverter is adjustable. Diverter can be installed vertically or horizontally. A noiseless carrier transportation is provided through wear-free sealing.

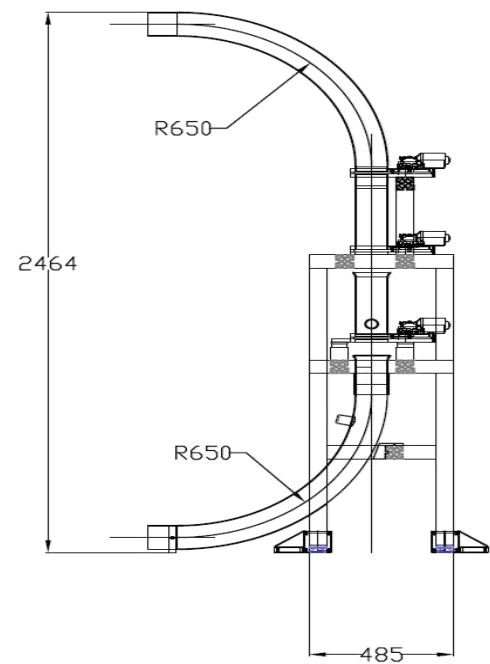
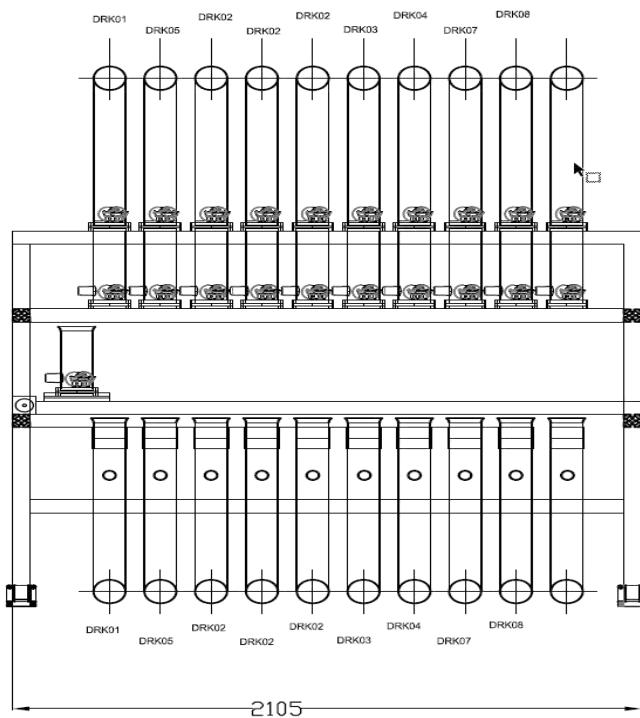


CENTRAL TRANSFER UNIT-CTU

[110/160]

- Carrier storage
- Small size
- Easy wall mounting
- Motor valve for separating
- Connection of up to 32 lines
- DC motor
- Intelligent distribution of Carriers
- No necessity for a control cabinet
- Integrates all the electronics in the device

The CTU can interconnect up to 32 lines. Due to its small size it can easily be mounted on the wall. In addition, it can also be stabilized with a substructure. All electronics are already integrated in the device, so no additional control cabinet is necessary. It is much faster than a diverter-distributor due to the small paths. In comparison to conventional designs, this CTU saves a lot of space with its small construction style.



BLOWER



BLOWER INCL REVERSING UNIT

The Blower generates the necessary air pressure. The reversing unit changes the direction of air suction pressure, without changing the blower direction. It has a neutral position, and it is designed for a high switching frequency. Optionally, the Blower can also be extended with a frequency converter, which controls the frequency for slow and fast driving. This is mainly used while sending sensitive goods.



BLOWER UNITS WITHOUT REVERSING UNIT

The Blower generates the necessary air pressure. The Air-Diverter unit changes the direction of air suction pressure, without changing the blower direction. Available from 1 KW - 8 KW with Volumetric Flow - 3m³ /min to 11m³ /min to suit the need of the system networks based on diameter, length of tube network & payload capacities etc.

BLOWER ACCESSORIES



Air Diverter



Blower Control Units



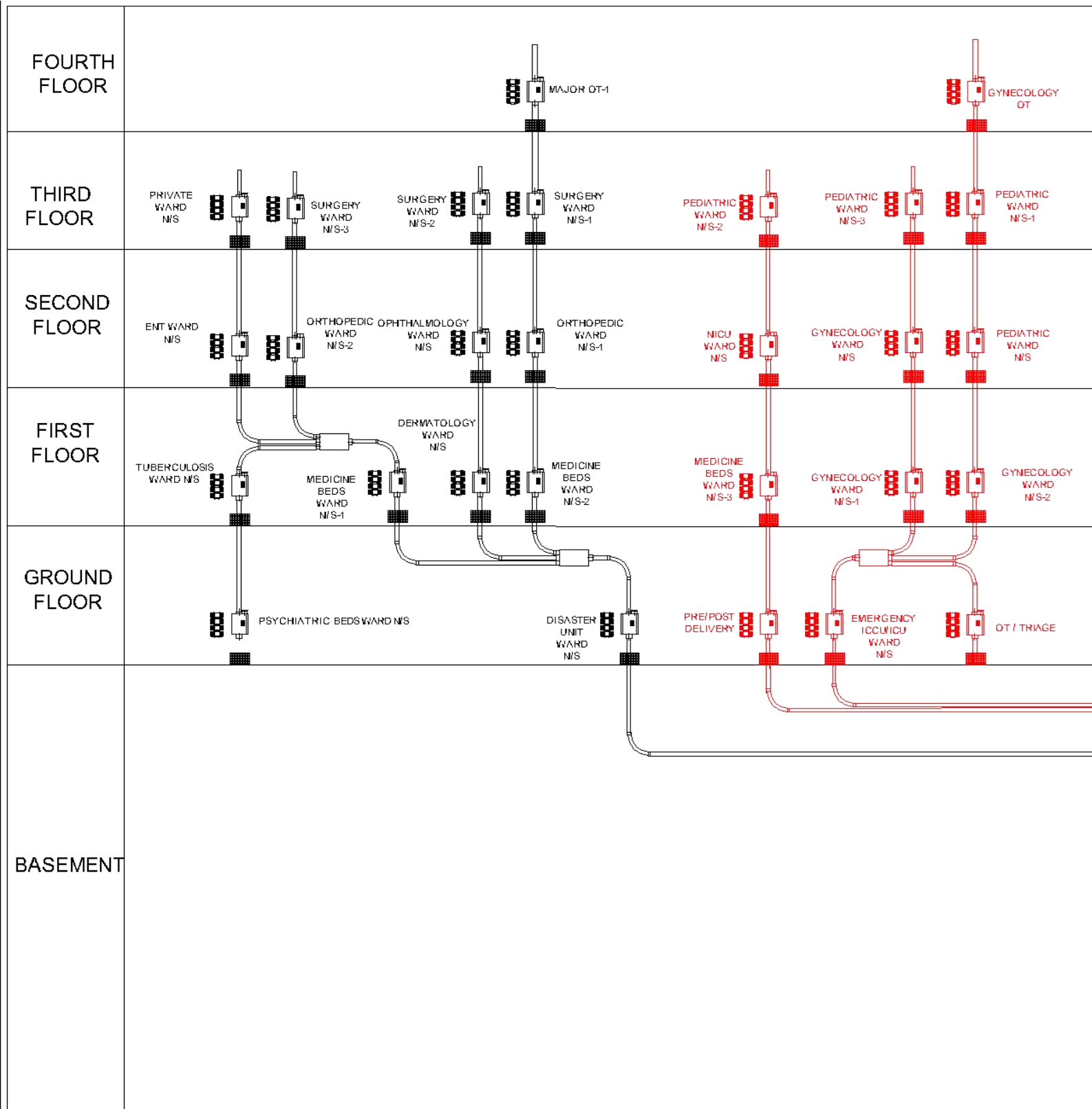
VFD
Frequency
Converter

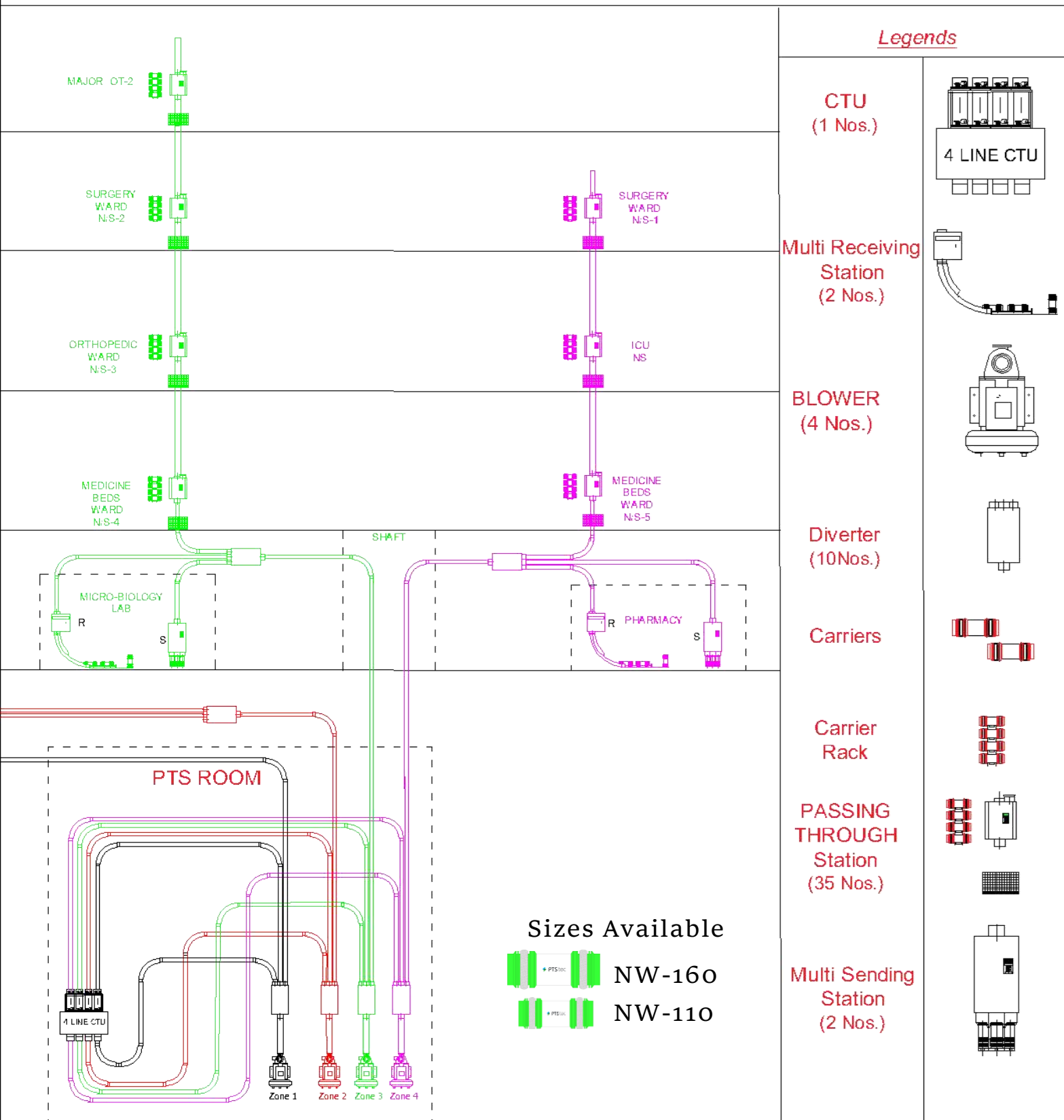


Power Supply



Air Filter





Sizes Available



NW-160

NW-110

CARRIERS

SLIDE LID PTS CARRIER NW 110/160

- Dual sided slide lip
- Usable with transponder technology
- A snapping of the slide lip ensures a safety transport

Tube Size (MM)	Loading Size (MM)
NW 110	330 X 76
NW 110	230 X 86
NW 160	330 X 121
NW 160	420 X 121

Colour options



FLAT TOP CARRIER NW 110/160

- Dual sided slide lip
- Usable with transponder technology
- Usable for automatic loading & unloading

Tube Size (MM)	Loading Size (MM)
NW 110	330 X 76
NW 110	230 X 86
NW 160	330 X 121
NW 160	420 X 121

Colour options



LEAK PROOF CARRIER NW 110/160

- Dual sided slide lip
- Usable with transponder technology
- Usable for automatic loading & unloading

Tube Size (MM)	Loading Size (MM)
NW 110	330 X 76
NW 110	230 X 86
NW 160	330 X 121
NW 160	420 X 121

Colour options



ACCESSORIES



THERMO BAGS

The thermic isolation helps to keep the probe temperature constant and thereby makes even more precise analysis results possible. At the same time, the thermal pocket is shock-absorbing. For temperature regulation, there is the additional possibility to add cold and heatpads.



TRANSPORT BAGS

These are used in different versions for the transport of sample tubes, with and without accompanying notes, as well as all kinds of small parts such as screws, electronic components, and much more. The transported good is placed in the carrier with the transportation bag. The bag works shock-absorbing prevents leakage of liquids.



FOAM INLETS

Foam inlets retain the probes from unnecessary shock through the tumbling of the sample inside the carrier.



VELCRO RINGS

Available for all well-established carrier types.



FELT RINGS

Available for all well-established carrier types



CARRIER RETAINER

-Open carrier retainer for 4/5 carrier
-Closed carrier retainers



PAD RINGS & DRIVER RINGS

Available for all well-established carrier types.



RFID & TRANSPONDER TECHNOLOGY

Transponders and transponder technology expansion available for all well-established carrier types



CATCH TRAY

- Grid tray
- lockable baskets

TUBE & BEND

GREY TUBE

- Precise driving pipe
- Light grey
- Hard PVC
- Outside diameter 110/160mm
- Wall thickness 3.2mm



TRANSPARENT TUBE

- Precise driving pipe
- Light grey
- Hard PVC
- Outside diameter 110/160mm
- Wall thickness 3.2mm



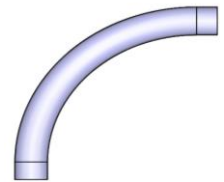
GREY TUBE BEND

- Precise driving pipe
- Light grey
- Radius 800mm - 1250mm
- 90 degrees
- Outside diameter 110/160mm
- Wall thickness 3.2mm

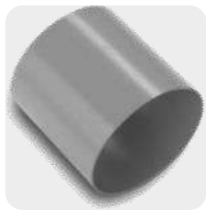


TRANSPARENT TUBE BEND

- Precise driving pipe
- Transparent
- Radius 800mm - 1250mm
- 90 degrees
- Outside diameter 110/160mm
- Wall thickness 3.2mm



TUBE ACCESSORIES



PVC Sleeve



PVC Sleeve
Transparent



Tube Clip



Tube Clamp



Glue/Cleaner



Fire Protection
Sleeve



Cable Ties

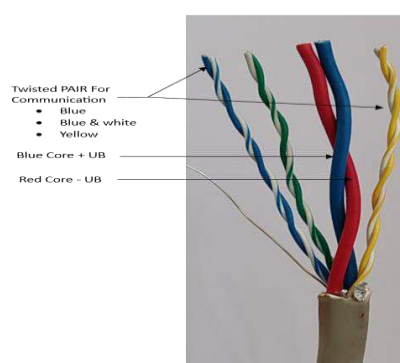
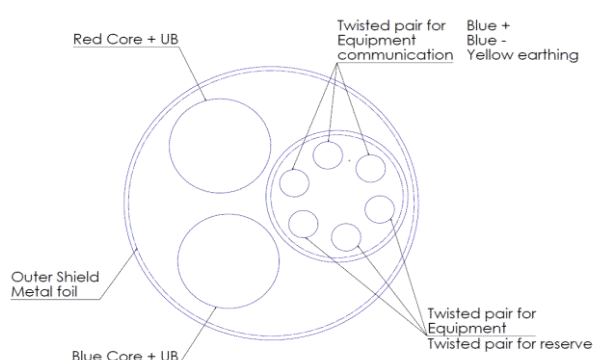
CONTROL CABLE

Control cable are designed to transmit power, control signals, and data signals, all within one cable. This cable is widely used for Pneumatic tube systems, where it is necessary to send both electrical power and control signals over long distances.

2X1.5:

Bare copper conductor finely stranded (class 5) /Insulation cover - PVC/ colors - Red/Blue

Nominal voltage	U ₀ /U _{max} . [V]	300/500
Testing voltage	[V]AC	2000
Insulating resistance	min. [MΩkm]	20



3X2X0.6:

conductor-CU blank Ø 0,6 mm Insulation cover - PVC

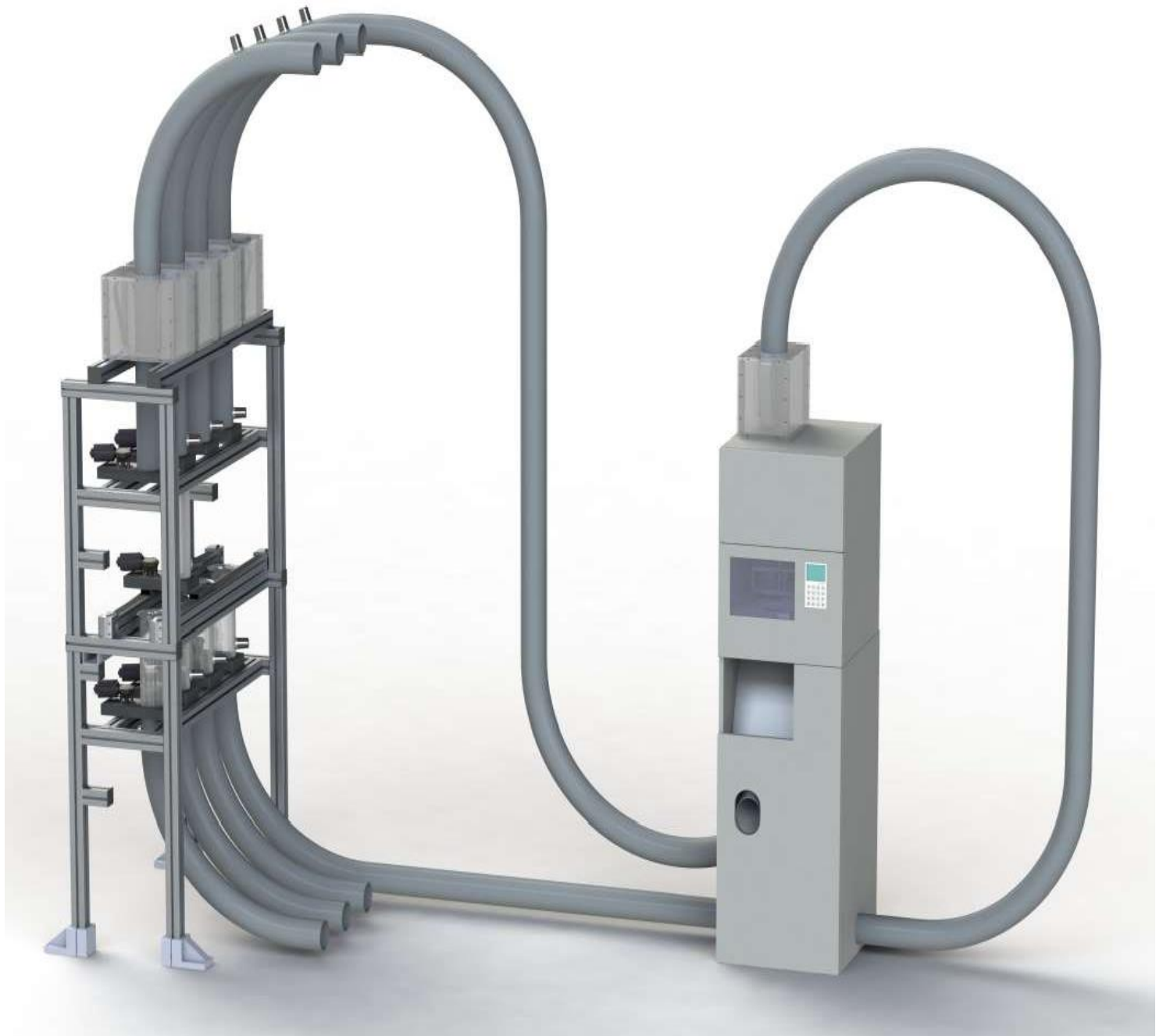
Colour-(white/blue-blue), (white/yellow- yellow), (white/green-green) Cores stranded in pairs

Conductor resistance loop	[Ω/km]	135,8
Nominal voltage	[V _{eff}]	200
Testing voltage	Core [V]AC	500
	Shield [V]AC	2000
Insulation resistance	min. [MΩkm]	20

FEW OF OUR CLIENTS

- Institute of Kidney Diseases and Research Center, Institute, Ahmedabad
- LNJP Hospital (Casualty Block), New Delhi
- Dada Dev Hospital, Dwarka, New Delhi
- Madipur Hospital, New Delhi
- M.T. Agarwal Municipal Hospital, Mumbai
- Micro Lab, Bangalore
- Civil Hospital, Gandhinagar Ahmedabad
- JJ Hospital, Mumbai
- Koriyawas Medical Collage, Haryana
- King George's Medical University Lucknow, Uttar Pradesh





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