

Swiftlog[®]

Pneumatic Tube System



▪ Safe ▪ Secure ▪ Swift



Swiftlog® Pneumatic Tube Systems are assembled & made in India, with German technology, by Sun Meditek Limited, a company engaged in healthcare equipment since 1982 and over 20 years' experience in Pneumatic Tube Systems.

*"Our Vision is to become
World's largest &
best PTS company"* – Uday Narula, Leader Swiftlog®

Pneumatic Tube System

Pneumatic Tube System, or PTS, as it is popularly known as, is automation of spontaneous logistics or transport of materials through means of a network of tubes and compliment thus other in-house logistics. The PTS transports various materials at speeds between 3 to 6 meters per second with air-cushioned ride through the buildings and campus.

PTS can transport

- Lab Samples
- Reports & Documents
- Cash & Secured Materials
- Drugs & Pharmaceuticals

and much more...

Health Care

Our intelligent pneumatic tube systems for hospitals transports urgent specimen, blood, drugs, patient records and other goods at a fast speed (3-6 meters per second). This allows staff to concentrate on their important work instead of wasting precious time on errands. Transporting sensitive goods such as blood or other body fluids or medication involves risk. Therefore, we have developed leak-proof and secure carriers. They ensure safe transportation of the goods. For blood and other goods which need special treatment, we offer systems with individual speed settings. Thus, all goods transported arrive in best condition with minimal personnel cost.

Retail & Commercial Set Ups

In the retail & commercial set ups like banks etc, cash & documents can be transported with tube systems. This is either operated with a one-way system – from the cash desk to a central office or the safe – or with a two-way system. The transportation with one of our systems guarantees highest security for your staff, as they do not have carry large sums of money. This is especially important for supermarkets, but also for casinos, cinemas, retail outlets, cash-n-carry, and banks.

Industry

Widely spread-out buildings, long distances and complex processes make the manufacturing industry a challenging environment. Companies must comply with regulations and aim at producing at lowest costs. Our pneumatic tube systems support these goals, by reducing the time samples take to reach the quality assurance and testing areas. Even hot samples of up to 800 °C can be carried by means of specially developed steel carriers.

There are two types of systems available

NW110 which with a 110mm Ø tube network and can carry payloads of approx. 1 – 3kgs¹

NW160 which with a 110mm Ø tube network and can carry payloads of approx. 3 – 6kgs¹

Some other OD systems are also available design-to-build basis for special projects

The complete system is operated via main controller consisting of Control PC with peripherals, S-Control™ Software for controls, check, servicing, access, supervision, log, analysis, and graphic visualization software.

PTS systems designed for Commercial & Industrial facilities can be designed to have speeds of transport as high as 15-20mps!

¹depending on the blower capacity & ratings.

Swift-Control™ 6.0

The Swift-Control™ 6.0 Software is very user-friendly and has basic features that enable system set-up, check, servicing, controls, and supervision with real time monitoring for viewing and maintenance of system.

- **System Controls & Monitoring**

- System access and controls for each device on the network;
- Mechanical and electrical Control of all devices, run time configuration
- Network viewing & graphic visualization
- Display of system and device errors
- Graphic display of motor positions and activated optical-Digital tube switches
- Logs & record of transports with search functions for zone,
- device number, destination address, time periods and errors
- Display of the up-to-date system operating status
- System configuration & supervision
- Access and timetable features
- User profiles, rights, groups, and functions
- Multiple speed transports depending for sensitive materials
- Unlimited no of stations & devices possible
- Inventory controls; Location of carriers, Carrier re-distribution;

- **Reports & Analysis [Optional]**

- Traffic flow analysis; Delay analysis;
- Log reports, error logging
- BMS interface or slave monitor viewing

- **Security & Safety**

- Password access controls
- Device Locking in an event of failure / carrier
- basket full
- RFID Access [Optional]
- Fire Safety lock-out freeze function

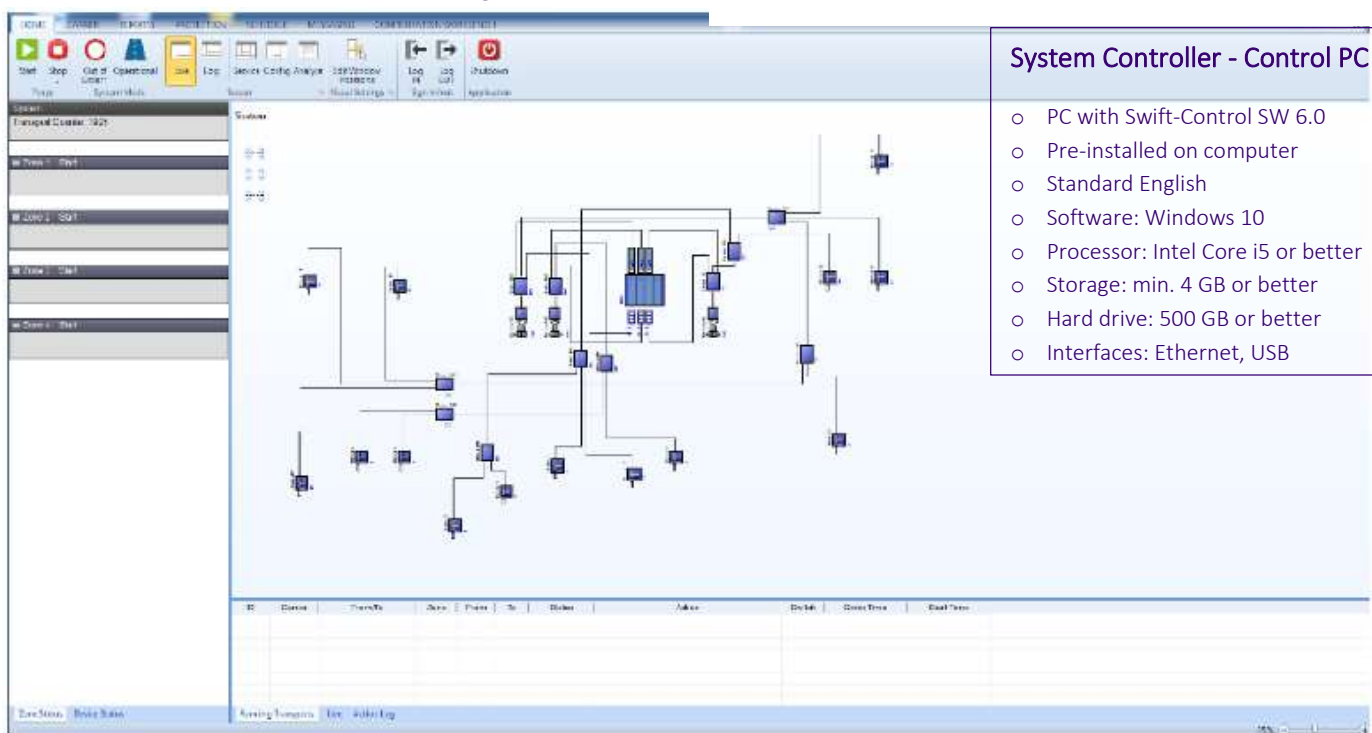
- **Carrier Functions**

- RFID function of carriers for auto-return to origin, prevent transport of un-recognised materials
- Automatic Return feature of carriers to origin or to station with highest deficit
- Divert Carrier function in case of absence, job rotation or vacation
- Priority Settings for urgent and emergency transports

- **Other Features [Optional]**

- Pro-remote accessibility via TeamViewer
- MultiCarrier function for multiple carrier transports for optimized frequency and over long distances
- Carrier re-distribution to deficit station

The system has high-speed communications with real time communication speeds of 70-90dps on RS485 protocol. The Swift-Control™ software is operable & accessible via license-key dongle only to prevent unauthorized access.



- System Controller - Control PC**
- PC with Swift-Control SW 6.0
 - Pre-installed on computer
 - Standard English
 - Software: Windows 10
 - Processor: Intel Core i5 or better
 - Storage: min. 4 GB or better
 - Hard drive: 500 GB or better
 - Interfaces: Ethernet, USB

SWIFT™ Bottom Load Station



■ Standard features

- Terminal or end station, compact design with bottom load
- 3" graphic display with membrane keypad
- Up to 10-digit station ID numbers
- Speed dial selection
- Screen saver
- LED Indicators for receiving, sending & service modes [in membrane key pad only]
- Standard Audio & Visual signal outputs additional destinations
- Follow-me function with confirmation of redirection / carrier diversion
- Deceleration for soft arrival of carriers
- Monitored position optical switches
- Carrier Receiving Basket with Upholstery & Carrier Rack
- Low-maintenance and low-noise linear gear mechanisms

■ Optional equipment

- 7" touch screen graphic display
- Access Card Reading Device
- RFID reading device

■ Over-all dimensions [HxWxD]:

- NW110 378 x 375 x 250mm
- NW160 375 x 500 x 302mm

■ Materials of Construction

- Steel with powder coating, hygienic materials, parts of PVC and other materials

The station conforms to the latest EN/CE norms and standards: 2014/30/EU EMV directions [official journal C246 of 13.07.18. 20016/42/EG machine directors (official journal L 157.S.24 – 9.06.06)]. The protection objectives of Low Voltage Directives 2014/35/EU in accordance with Annex 1 No. 1.5.1. of 2006/42/EG directives.



U-DASH™ Top Load Station



■ Standard features

- Pass through station with top load
- 3" graphic display with membrane keypad
- Up to 10-digit station ID numbers
- Speed dial selection
- Screen saver
- LED Indicators for receiving, sending & service modes [in membrane key pad only]
- Standard Audio & Visual signal outputs additional destinations
- Follow-me function with confirmation of redirection / carrier diversion
- Deceleration for soft arrival of carriers
- Monitored position optical switches
- Carrier Receiving Basket with Upholstery & Carrier Rack
- Low-maintenance and low-noise linear gear mechanisms

■ Optional equipment

- 7" touch screen graphic display
- Access Card Reading Device
- RFID reading device

■ Over-all dimensions [HxWxD]:

- NW110 620 x 460 x 255mm
- NW160 880 x 585 x 322mm

■ Materials of Construction

- Steel with powder coating, hygienic materials, parts of PVC and other materials

The station conforms to the latest EN/CE norms and standards: 2014/30/EU EMV directions [official journal C246 of 13.07.18. 20016/42/EG machine directors (official journal L 157.S.24 – 9.06.06]. The protection objectives of Low Voltage Directives 2014/35/EU in accordance with Annex 1 No. 1.5.1. of 2006/42EG directives.



FALCON™ Front Load Station



Standard features

- Pass through station with front load
- 3" graphic display with membrane keypad
- Up to 10-digit station ID numbers
- Speed dial selection
- Screen saver
- LED Indicators for receiving, sending & service modes [in membrane key pad only]
- Standard Audio & Visual signal outputs additional destinations
- Follow-me function with confirmation of redirection / carrier diversion
- Deceleration for soft arrival of carriers
- Monitored position optical switches
- Carrier Receiving Basket with Upholstery & Carrier Rack
- Low-maintenance and low-noise linear gear mechanisms

Optional equipment

- 7" touch screen graphic display
- Access Card Reading Device RFID reading device

Over-all dimensions [HxWxD]:

- NW160 800 x 500 x 500mm

Materials of Construction

- Steel with powder coating with hygienic material front door, parts of PVC and other materials

The station conforms to the latest EN/CE norms and standards: 2014/30/EU EMV directions [official journal C246 of 13.07.18. 20016/42/EG machine directors (official journal L 157.S.24 – 9.06.06)]. The protection objectives of Low Voltage Directives 2014/35/EU in accordance with Annex 1 No. 1.5.1. of 2006/42EG directives.



FALCON-eco™ Front Load Station



- **Standard features**
 - Pass through front load station
 - Economical simple design
 - 3" graphic display with membrane keypad
 - Up to 10-digit station ID numbers
 - Speed dial selection
 - Screen saver
 - LED Indicators for receiving, sending & service modes [in membrane key pad only]
 - Standard Audio & Visual signal outputs additional destinations
 - Follow-me function with confirmation of redirection / carrier diversion
 - Deceleration for soft arrival of carriers
 - Monitored position optical switches
 - Carrier Receiving Basket with Upholstery & Carrier Rack
 - Low-maintenance and low-noise linear gear mechanisms

- **Optional equipment**
 - 7" touch screen graphic display
 - Access Card Reading Device RFID reading device

- **Materials of Construction**
 - Steel with powder coating with hygienic material, parts of PVC and other materials

The station conforms to the latest EN/CE norms and standards: 2014/30/EU EMV directions [official journal C246 of 13.07.18. 20016/42/EG machine directors (official journal L 157.S.24 – 9.06.06)]. The protection objectives of Low Voltage Directives 2014/35/EU in accordance with Annex 1 No. 1.5.1. of 2006/42EG directives.



ARKRIS™ Multi-Send Station



Standard features

- Sending Station with 3-loading ports
- 3" graphic display with membrane keypad
- Speed dial selection
- Screen saver
- LED Indicators for sending & service modes [in membrane key pad only]
- Monitored position optical switches
- Carrier Rack
- Low-maintenance and low-noise linear gear mechanisms

Optional equipment

- 7" touch screen graphic display
- Access Card Reading Device
- RFID reading device

Over-all dimensions [HxWxD]:

- NW110 665 x 425 x 335mm
- NW160 776 x 504 x 365mm

Materials of Construction

- Steel with powder coating, parts of PVC and other materials

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SCHNELL™ Lab Receiving Station



Standard features

- Laboratory horizontal carrier receiving station & Multi-Receiving Station
- Receiving bend
- Motor-slide gate
- 3"graphic display with membrane keypad
- Deceleration for soft arrival of carriers
- Monitored position optical switches
- Carrier Rack
- Low-maintenance and low-noise linear gear mechanisms

Optional equipment

- 3"graphic display with membrane keypad
- 7"touch screen graphic display
- Receiving Platform Stainless Steel
- Motorized Belt Receiving Platform
- RFID reading device

Over-all dimensions [HxWxD]:

- NW110 180 x 250 x 30mm
- NW160 180 x 250 x 30mm

Materials of Construction

- Steel with powder coating, parts of PVC and other materials

The station conforms to the latest EN/CE norms and standards: 2014/30/EU EMV directions [official journal C246 of 13.07.18. 20016/42/EG machine directors (official journal L 157.S.24 – 9.06.06]. The protection objectives of Low Voltage Directives 2014/35/EU in accordance with Annex 1 No. 1.5.1. of 2006/42EG directives.



ARKRIS+SCHNELL™ Combo Lab Station



- **Standard features**
 - Laboratory horizontal carrier receiving station
 - 2-Sending Ports
 - Receiving bend
 - Motor-slide gate
 - 3"graphic display with membrane keypad
 - Deceleration for soft arrival of carriers
 - Monitored position optical switches
 - Carrier Rack
 - Low-maintenance and low-noise linear gear mechanism

- **Optional equipment**

- 7"touch screen graphic display
- Receiving Platform Stainless Steel
- Motorized Belt Receiving Platform
- RFID reading device

- **Over-all dimensions [HxWxD]:**

- NW110 378 x 375 x 250mm
- NW160 375 x 500 x 300mm

- **Materials of Construction**

- Steel with powder coating, parts of PVC and other materials

The station conforms to the latest EN/CE norms and standards: 2014/30/EU EMV directions [official journal C246 of 13.07.18. 20016/42/EG machine directors (official journal L 157.S.24 – 9.06.06)]. The protection objectives of Low Voltage Directives 2014/35/EU in accordance with Annex 1 No. 1.5.1. of 2006/42EG directives.



AVTAR™ Auto Return Station



▪ Standard features

- Automatic Carrier return station – dop & go
- Monitored position optical switches
- Carrier Receiving Basket with Upholstery & Carrier Rack
- Low-maintenance and low-noise linear gear mechanisms

▪ Optional equipment

- RFID reading device

▪ Over-all dimensions [HxWxD]:

- NW110 1030 x 434 x 250mm
- NW160 1260 x 585 x 325mm

▪ Materials of Construction

- Steel with powder coating, parts of PVC and other materials

The station conforms to the latest EN/CE norms and standards: 2014/30/EU EMV directions [official journal C246 of 13.07.18. 20016/42/EG machine directors (official journal L 157.S.24 – 9.06.06)]. The protection objectives of Low Voltage Directives 2014/35/EU in accordance with Annex 1 No. 1.5.1. of 2006/42EG directives.



Accessories

Carrier Receiving Basket with Upholstery

Steel Wired Basket



Carrier Rack

Steel Wire Rack



Power Pack

36v DC LVDC/SELV IP65



Audio-Visual Arrival Indicators

Tower Version



Wall Mountable



Up to 10 arrival signals per station, extendable to 20 signals. Each signal has its own separate address

Station Control Panels



Membrane Key Pad

Tableau Pad
3"-Graphic LCD display
Menu Arrow Keys Navigation
Speed Dial / Last Dial
LED Indicator



Touch Screen

Pre-Assembled Aluminium frame
7"-Touch-screen Panel
Menu Driven Navigation
Speed Dial / Last Dial

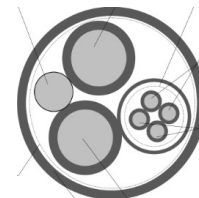
Optical Tube Switch



For direct connection to devices by sending communication signals to the System controller

- o Robust plastic housing
- o Full integration into SWIFT™ Control system
- o Volt-free output
- o Digital non-contact detection
- o Operating status LED

System Control Cable



Control Cable Core Structure

High speed communication system control cable SELV – Low Voltage [composite data-communications-power cable], RS-485 protocol based. Conductors easily identifiable individually by different sheath colours. Tinned copper wire braid screen covered around conductors for data exchange and addition Aluminium foil screen with copper drain wire covered around all conductors securely protected against electromagnetic interferences from the environment. Sheath material PVC. Outer sheath is colored blue.

Core structure: Li2Y (2x2x0,22CY) + LiY2x1,95 + (St)Y 300V

- o Combined data and power cable
- o 2 power cores 1,95mm² (red, blue)
- o 2 data cores 0,22mm² (red/black; blue/pink)
- o Operating temperature -40° to 80°
- o Operating voltage: max. 300V
- o Outer sheath is self-extinguishing and flame retardant
- o RF & EM screened

LAN / BUS Converter



High Speed LAN / Bus Converter for Ethernet interface signal to RS-485 signal

Over-all dimensions [HxWxD]:

250 mm x 175 mm x 75 mm

MEDITEK® Side-Channel Blower Units



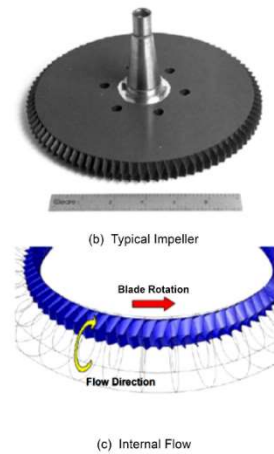
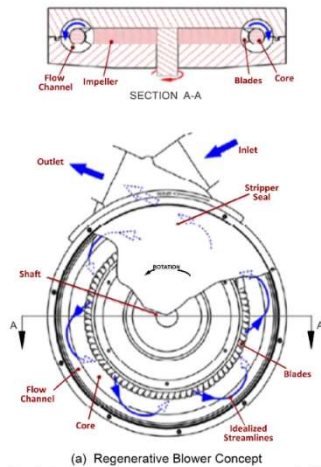
Side Channel Blower is a simple machine to impart momentum to air. Figure (a) shows the basic design concept for a Side Channel Blower, which comprises an impeller with blades located on its periphery that impels the gas through a channel surrounding a toroidal core that extends the length of the perimeter. The gas spirals around the core, interacting with the impeller blades several times before leaving the blower. In this way the Side Channel Blower uses a single impeller to impart multiple stages of pumping to the gas. Referring to Figure (a), the total pressure of the ventilation air increases continually as it flows clockwise around the periphery of the blower. The “Stripper seal” shown in the bottom drawing of Figure (a) prevents the high pressure exit gas from flowing directly into the inlet of the blower. Figure (b) shows a typical impeller from a Side Channel Blower, and Figure (c) provides a side view of a Side Channel Blower impeller and the flow path of gas around the toroidal core.

Standard Equipment: Blower Unit, Motor-Contactor Unit, Air-switch Device, Carrier Braking Device, Silencers, and installation accessories.

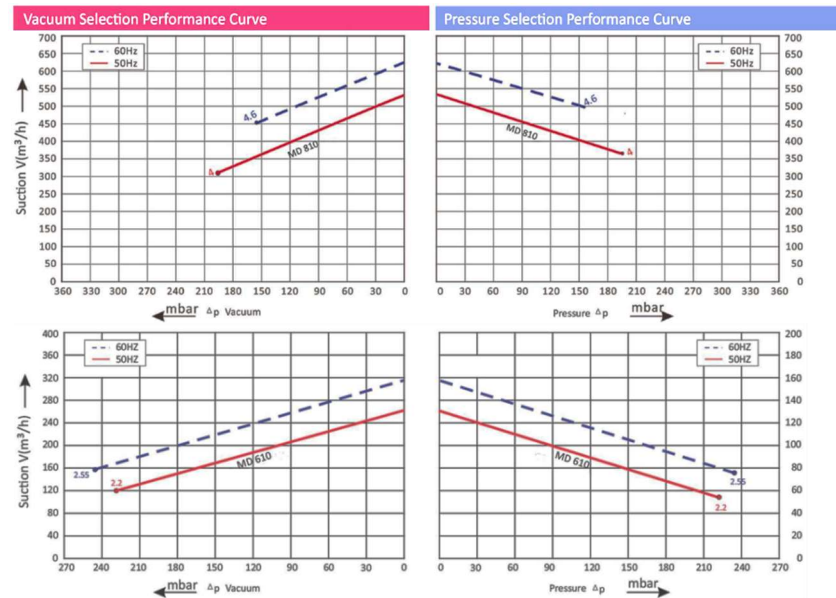
Optional Equipment: VFD Device, HEPA Filter Systems H13 with housing

Variable Frequency Drive [VFD]

Variable Frequency Drive [VFD] is an optional feature. A VFD works by converting the incoming electrical supply of fixed frequency into a variable frequency output. The frequency range is 40-75Hz. This variation in frequency allows the drive to control the way in which the motor operates — a low frequency for a slow speed, and a higher frequency for a faster speed.

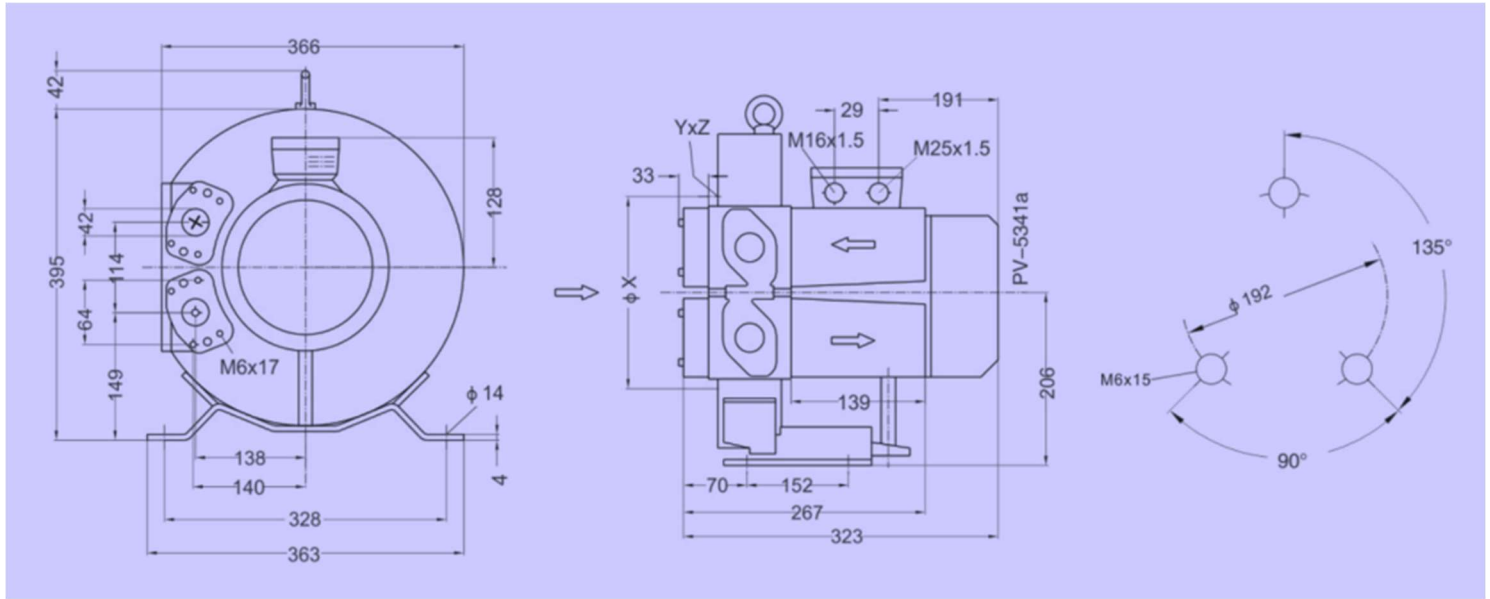


Performance Charts



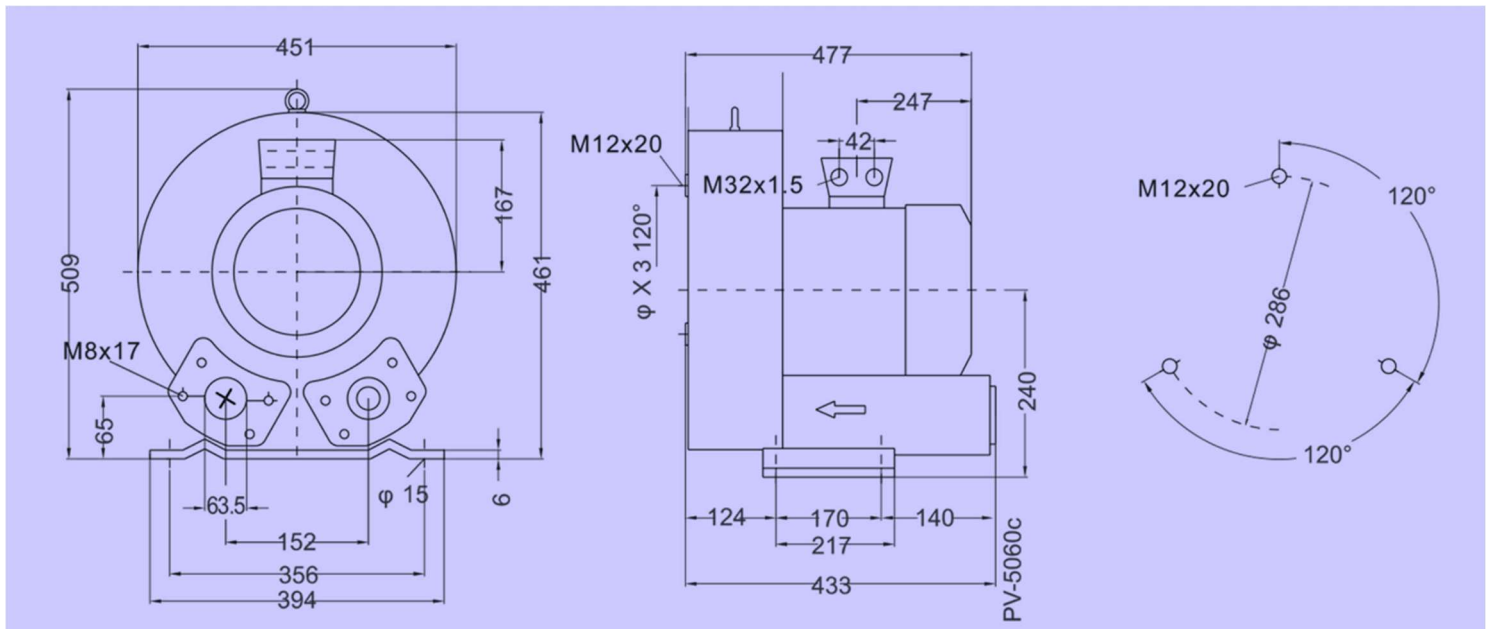
MEDITEK® Side-Channel Blower Units

MD610 MEDITEK® Side Channel Blower Model



Model	Frequency HZ	Output KW	Voltage V	Current A	Airflow m ³ /h	Pressure		Noise dB(A)	Weight kg
						Vacuum mbar	Pressure mbar		
3~ 50/60Hz IP54 INSULATION class F									
MD 610	50	2.2	200-240Δ/345-415Y	11.4Δ6.6Y	265	-235	220	69	28
MD 610	60	2.55	220-275Δ/380-480Y	11.2Δ6.5Y	315	-245	230	72	28

MD810 MEDITEK® Side Channel Blower Model

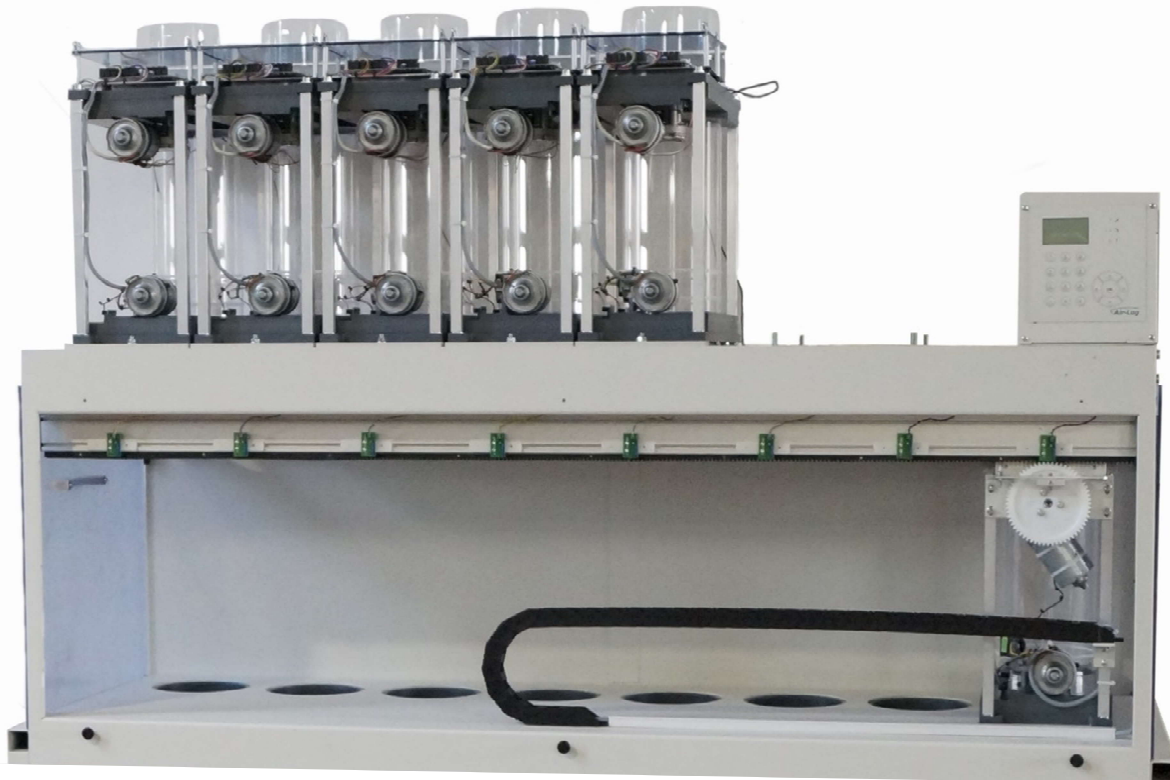


Model	Frequency HZ	Output KW	Voltage V	Current A	Airflow m ³ /h	Pressure		Noise dB(A)	Weight kg
						Vacuum mbar	Pressure mbar		
3~ 50/60Hz IP54 INSULATION class H with Thermal Protector									
MD 810	50	4	345-415Δ/600-720Y	8.05Δ/4.65Y	530	-200	220	70	54
MD 810	60	4.6	380-480Δ/660-720Y	9.26Δ/5.35Y	620	-160	160	74	54

Other models & variants with different capacities also available on request.

SWIFT-TRANSFER™ Linear Zone Transfer Unit

Linear Automatic Zone Transfer Unit that provides carrier storage, carrier priority-bypass, inter zone carrier transfers at high speeds available in combinations of 4, 8, 12 & 16 Zones and combinations thereof, improving through put and efficiency with provisions for multi carrier transports as well.



Standard features

- 3“graphic display with membrane keypad
- Carrier Storage of up to 5 carriers per line
- Allows Carriers to transfer from one zone line to another
- Emergency Carrier Priority By-pass
- Multiple SWIFT-TRANSFER™ Units can be combined
- High speed zone switching @ 4-6 seconds from Zone 1 to 8* zones
- MultiCarrier function
- Carrier Transfer Cradle with Low Maintenance & Low Noise linear gear mechanism
- Carrier Transfer Capacity of 350 – 500 carriers Per Hour³

Optional features

- RFID reading device

Over-all dimensions [HxWxD]:

System / Zones	Up to 4 Lines	Up to 8 Lines
NW110	592.5 x 683 x 455	650 x 898 x 565
NW160	592.5 x 1283 x 455	650 x 1710 x 565

Unit with higher Lines such as 12, 16 are also available.

Materials of Construction

- Steel with powder coating, parts of PVC and other materials



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Diverter Units



- 3-Way Diverter Units - Connects transport routes of various sections
- Allows Carriers to transfer smoothly
- Low Maintenance & Low Noise motor drive & gear assembly
- Can be mounted in any position or orientation
- Easy service access even if installed in ceilings
- All electrical functions can be checked directly at the diverter
- Fully integrated in the SWIFT™-Control systems
- Air tight design
- Integrated controlled position switch and secure snap of the through-driving tube in the correct position
- Special quick S-bend design

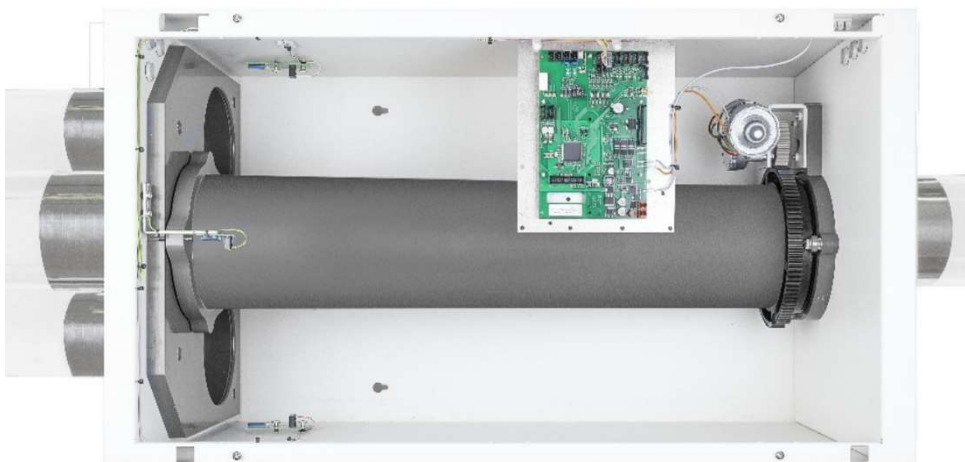
■ **Over-all dimensions [HxWxD]:**

System	3-Way
NW110	637 x 353 x 280mm
NW160	880 x 594 x 390mm

**4-Way & 6-Way Diverters available on request*

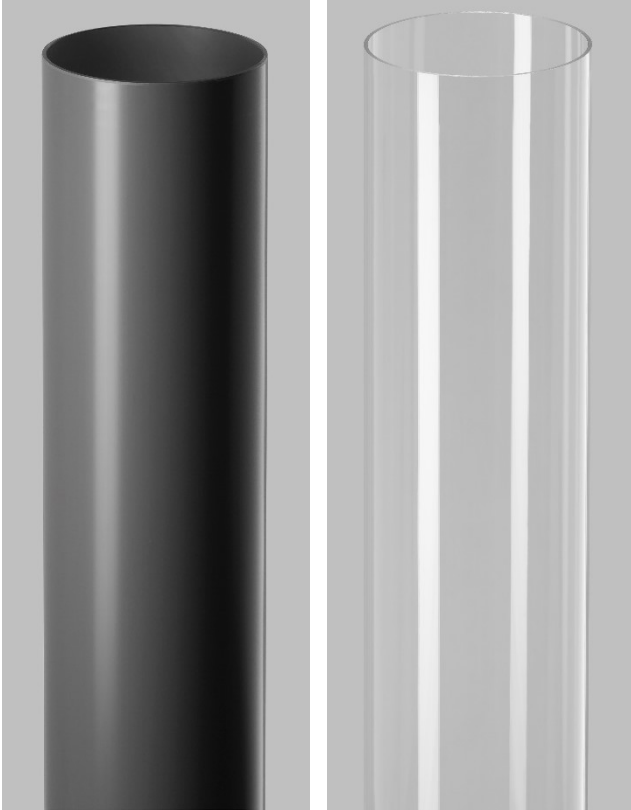
■ **Materials of Construction**

- Steel housing with powder coating, parts of PVC and other materials



The device conforms to the latest EN/CE norms and standards: 2014/30/EU EMV directions [official journal C246 of 13.07.18. 20016/42/EG machine directors (official journal L 157.S.24 – 9.06.06]. The protection objectives of Low Voltage Directives 2014/35/EU in accordance with Annex 1 No. 1.5.1. of 2006/42EG directives.

PTS Tube Network



uPVC Forwarding Tubes & Bends

Tubes and bends are smoothly connected with connecting sleeves welded together with special PVC welding glue after cleaning with PVC cleaner. Available in Grey & Transparent variants. The forwarding tubes conform to DIN 6660 for Fire behaviour: Difficult to inflame and with following characteristics:

- Material is Hard PVC [uPVC]
- Low elastic distortion
- High resistance to scratch & impact
- Physical tensile strength of 40 – 50 N/mm²
- Density of -1,42 – 1.54 g/cm³
- Low thermal expansion of 0.08mm / m*K
- Heat conductivity:0.16 W/mk;
- Fire behaviour: Difficult to inflame
- Operation Temperature:0-60°C,
- Electric surface resistance: >10¹² ohm

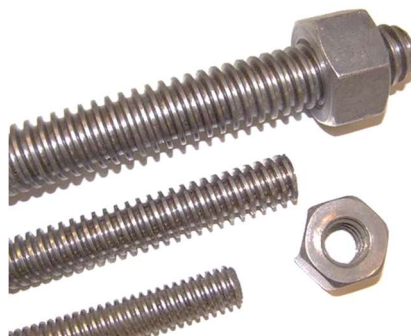


System	Forwarding Tube	Forwarding Bend	Connecting Sleeve
NW110	110mm Ø OD 2.3mm thickness	110mm Ø OD 2.3mm thickness 800mmR	110mm Ø OD 2.3mm thickness 110mmL
NW160	160mm Ø OD 3.2mm thickness	For 160mm Ø OD 3.2mm thickness 800mmR	For 160mm Ø OD 3.2mm thickness 150mmL

The Tubes and bends are mounted at site with thread bars & tube clips at intervals between 2.5 – 3m. Bends with other radii also available on request. Tubes & Bends with other ODs also available for special projects' needs. Galvanized / Stainless / Black Steel Tubes & Bends also available on request for special project needs.



Steel Tube Clip for NW110 / NW160



Thread Bar with Nut M8/M10



Steel Tube Clamp for NW110 / NW160

Carriers & Accessories



SWIFT-GO™

SWIFT-SMART™

SWIFT-SEAL™

Models & Features



Carrier Type

Standard Carrier

Smart Carrier

Leak Proof Carrier

Caps

PVC Swing / Swivel Caps with latch lock

PVC with Spring-loaded Caps with automatic lock and gear-wheel

PVC with flap Caps with latch lock

Middle Section Transparent

PC [polycarbonate]

RFID Transponder [Optional]

Key padlock [Optional]

Anti-wobble Velcro belt

Accessibility at both sides

Cap Colour [Standard]

Cap Colours [Optional]

Loading dimensions

internal height x internal Ø [mm]



220 / 330 x 76 [NW110]

230 / 330 / 400 x 120 [NW160]

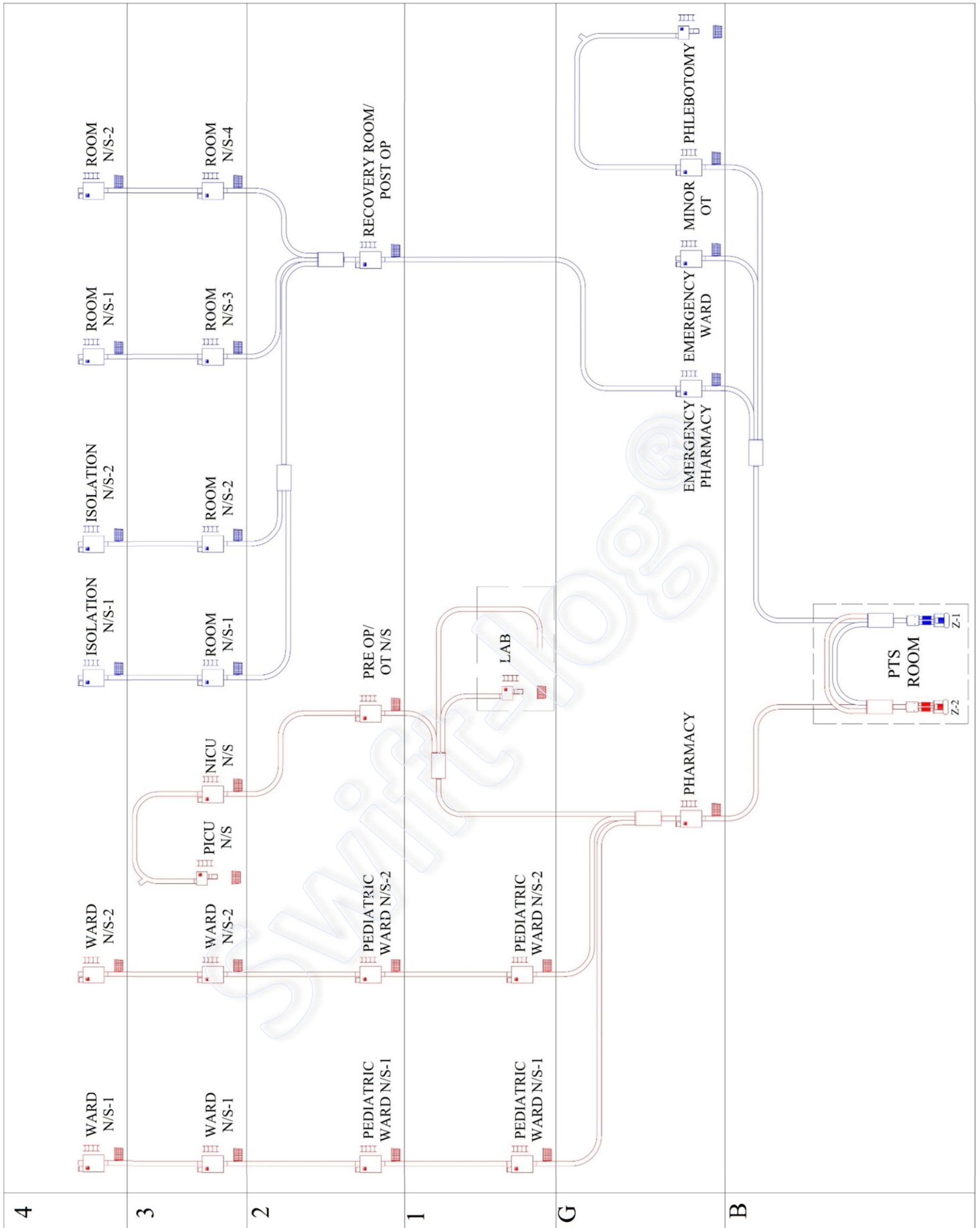


230 / 330 x 120 [NW160]



350 x 123 [NW160]

¹Payload of NW110 Carriers is 1-3kgs & of NW160 Carriers is 3-5 kgs depending on the blower capacity.



[Above is an example of Swift-Log Pneumatic Tube System layout]