

Doctor Systems Doctor Blades Doctor Consulting



J-SONIC

Doctor Systems

Doctor Blades

Doctor Consulting



Inherit magic of technology Aim a magician of technology

I wish I could do this thing. I wish it could be done ...

One of Japanese anime theme song starts with this line that everyone would have had in their mind for sure.

In our childhood, such dreams made our days exciting and special.

We realize when grown up, however, would not always turn out how you wish them to be. Even so we believe all the items and appliances in the society are based on dreams that something could be done exactly how you wish.

A witch in the fairy tale casts a spell and makes magic happen...

We know such magic is not possible, but we also believe shaping your imagination into the product, even if the process is different, is something you can call magic.

We live with the greatest technology some generations of engineers have shaped and evolved with their efforts.

Can't we call them magicians as they have shown how beautiful it is not to give up and to put the best effort they could give to make it happen?

We aim to enhance the technical capabilities that those preceding engineers have founded and evolved, with respect and appreciation towards them in addition to challenging spirit always on our mind.

For this aim, we make step by step that we can do now, steadily.

We wish, one day, something we wished in the past comes true .

Looking forwards to having such day, we sincerely cherish the opportunity to work with you .

Nice to meet you We are J-SONIC

J-SONIC Corporation
President and CEO
Tsuyoshi Takeda

» Doctor ~ Product and Features

Doctor, specifically by Doctor Blade, removes contaminants on any industrial rolls.

Playing the role of quality watcher on the rolls, our Doctor contributes to best operation condition in producing high-performance production materials such as paper, steel and film, with its distinct functions and reliable performance.

Doctor consists of Doctor Blade, which touches on the roll, Blade Holder that controls the blade, and other supporting parts. Doctor can be customized in almost any ways with additional functions or other control systems in accordance with the conditions.

Each element of Doctor, so-called Doctor System, is maximized in respective performance by adopting the best materials and/ or functions to given environmental conditions in your factory.

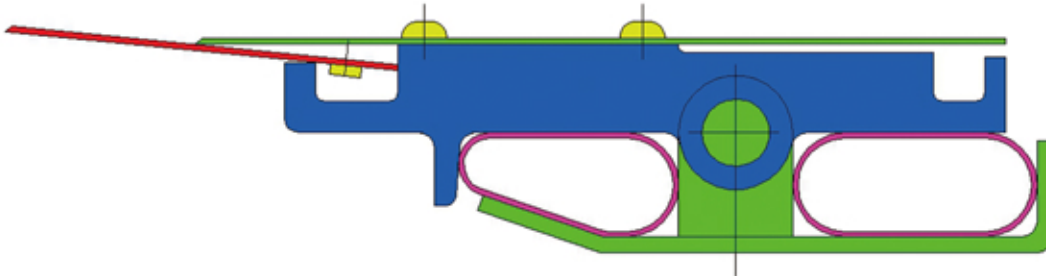
We make sure our abundant experience and technical expertise provide support in every step from designing and actual implementation to consultation for existing Doctor's betterment, in order for your steady production operation.



Doctor Equipment

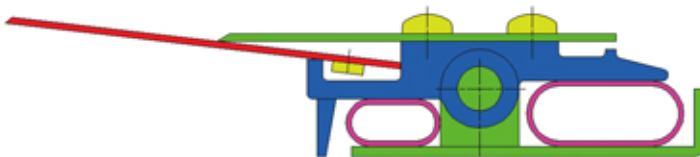
» Types of Blade Holders and Features

| Double Air Tube Type (STD)

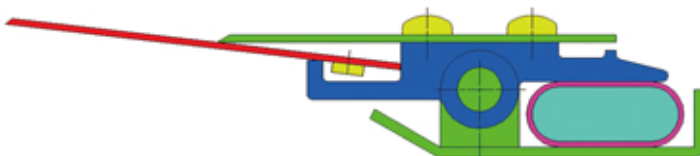


Two air tubes embodied inside the holder enables pressurization/ opening.
Having pressurization/ opening system within the holder makes the size of Doctor compact.
Volume of pressure can be controlled offline by changing air tube pressure.
With elasticity of tubes and holder, volume of pressure is automatically adjusted and keeps touch of the blade on the roll equal throughout the blade that results in steady and durable operation.

| Double Air Tube Type (Compact)

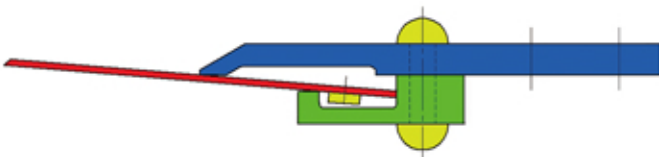


Compact type of Double Air Tube (at your left) is successfully scaled down, keeping structure and functions as they are in original type. Despite its space-saving size, this showcases excellent performance with lightness and high rigidity.



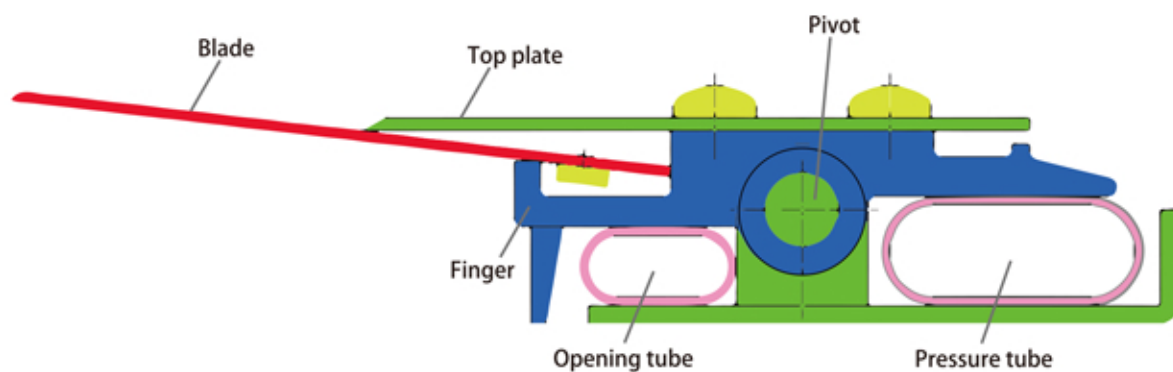
Oil Tube Type (at your right), an elaborated type, puts oil instead of air to a pressure tube, particularly for the condition where the air is limited.

| Solid Type



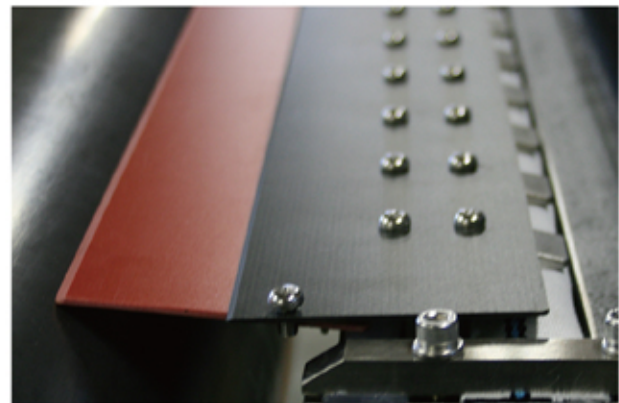
The holder needs its own dead load or pressurization mechanism, including pneumatic cylinder, since it does not have moving part. It proves versatile as well as its high rigidity due to its simple structure.

» Double Air Tube Type Doctor ~ Structure and Features



With two air tubes cover the entire device, this specific Doctor has the system to pressurize its blade. Compressed air in the factory provides primary resource to respective air tubes for operation.

Doctor Blade touches the roll once pressure tube is pressurized as torque is generated around pivot while finger acting as the contact. Contact pressure, proportionate to the pressure of supplying air tube, can be adjusted by control panel.



Doctor Equipment

When pressurize opening tube, Doctor Blade is led to detach from the roll. This demonstrates its outstanding maintenance capability, exchanging expendable blade and others.

Sending the fluid pressure in the tubes, which is elastic, the touch of the blade is automatically adjusted that shows outstanding 'Doctoring effect' (any positive effects brought by using Doctor).

Double Air Tube Type Doctor is controlled offline by exclusively developed control panel for its safe performance.

How well is your Doctor doing?

There has been no maintenance since first installation long time ago.

Despite the fact operating Doctor (or just assume so), there is quality issue that concludes in malfunction where the blade was overused and worn out.

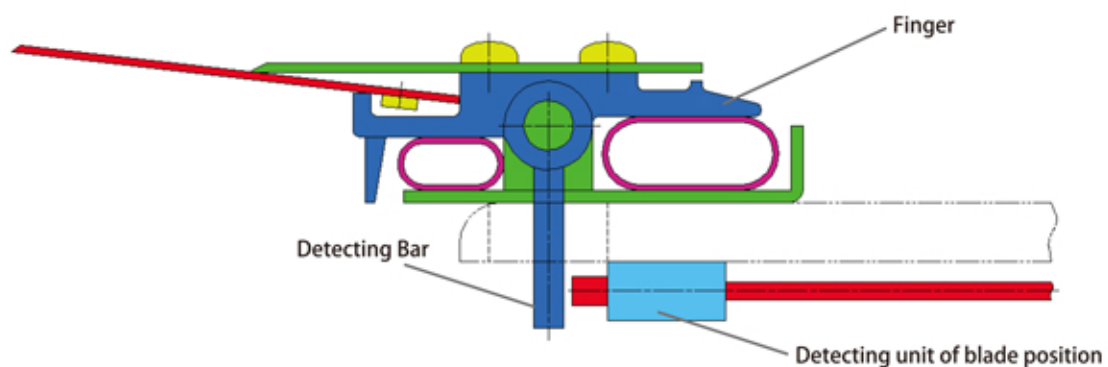
When try to turn on Doctor, it does not as it is already broken.

There is insufficient manpower to designate any of them on check or management of the device.

Our Smart Doctor will solve your problems!



» Smart Doctor ~Built-in Self-diagnosis function~ [Patented]



Self-diagnosis function is built in to Double Air Tube Type Doctor.

This function enables to detect malfunction and state of Doctor by detectors for worn-out blades and broken air tubes.

The mechanism of malfunction detecting and checking can be customized as per the environment as well as requests upon designing. It can be a simple air- switch type or a mechanism connects to the upper control device via electric censor.

» Doctor Blade ~ Product and Features

Equipping the best and most efficient blade, which touches the roll in subject, helps keep fine quality in your products, and keep Doctor perform well.

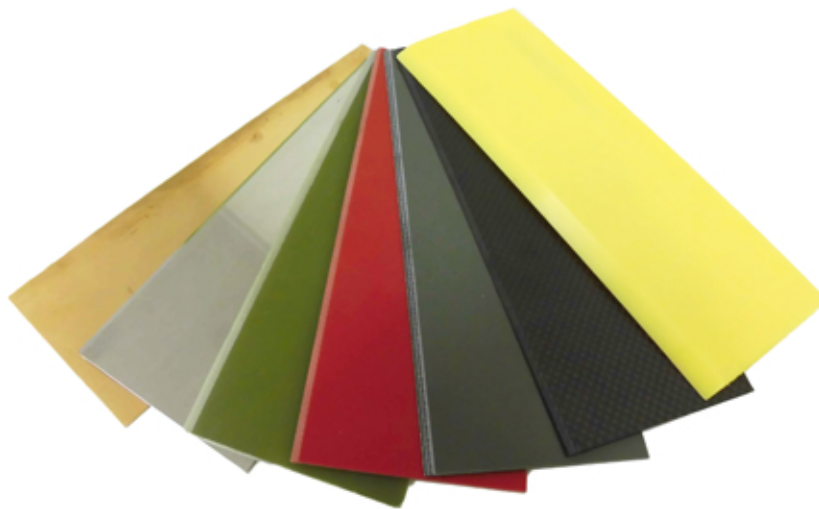
We should select the best Doctor Blade, according to your factory's environmental conditions on which Doctor is implemented, including operational conditions and types of contaminants to be removed.

Doctor Blade, as the one and only to touch the roll of your product, is created from materials of selective high quality with high level of delicacy.

As an expendable item, its cycle cost and delivery speed also should be considered upon your choice of blade and material.

We, with accumulated expertise and experience, will propose the best and yet practical Doctor Blade for you.

» Doctor Blade ~ Types and materials



Doctor Blade

Doctor Blade will be designed, taking into consideration the material of the subject roll and the environment that Doctor is used for, from the various types we could offer.

We offer a wide range of materials and forms in addition to the choice of metallic and resin for the best Doctor Blade for your usage.

Please feel free to contact us for selection of Doctor Blade.

Metallic blades and features

Stainless Steel



Stainless steel can use for various purposes, ranging from martensitic type, which features high hardness, to austenitic type, which has high corrosion resistance.

- JIS Steel Grade (and equivalents)
SUS420, SUS304, SUS316
Hardness: approx. Hs65 ~ 30

Phosphor bronze



Blade made by Phosphor bronze is characterized by the lowest friction among metallic types and avoids harming the roll of your product. This material is also characterized with its high abrasion resistance.

- JIS Steel Grade (and equivalents)
PBP-3EH
Hardness: approx. Hs29

SK (Carbon Steel)



This specialized steel proves both high delicacy and hardness in blade, bluing high quality carbon steel. The blade is finely sharp to bring high Doctoring effect.

- JIS Steel Grade (and equivalents)
SK85
Hardness: approx. Hs65

Polyethylene



Ultra High Molecular Weight Polyethylene (UHMWPE) is elaborated in its high resistance to abrasion further exclusively for our blade development. This type can go well with many kinds of rubber rolls including synthetic rubber and polyurethane rubber. There are others, integrated with additives to elaborate its abrasion resistance, antistatic element, are also available.

Commercial name : UHMW-PE

Fiber



Fiber Reinforced Plastics (FRP) blade is of epoxy resin in nature and laminated with glass fiber. This type is versatile, adopting the grade which represents both high strength and abrasion resistance. There are other options available, with additive to elaborate its thermostability, and with abrasives for more polished surface.

Commercial name: Glass Epoxy

Carbon



Fiber blade laminated by carbon fiber instead of glass fiber. This brings excellent Doctoring effect in various circumstances, utilizing strengths of fiber blade. The content of carbon fiber in the blade can be customized between 25 ~ 100%.

Commercial name: Carbon Composite

Thanks to development in blade materials, we can offer more materials than listed here. Please consult us for details.

» Company guide

Name	J-SONIC Corporation
History	Est. Oct-1 / 2014
Capital	15,000,000 yen
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Dealings bank	Shizuoka Bank , Seishin Shinkin
Line of Business	Design,production,sales,and repair of industrial machinery Doctor Systems /remodeling,design,production,sales,repair Doctor Blades / sales and production
Web Site	http://www.j-sonic.co.jp
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