

For reaction
suppression by
high-torque tool

Tool Arm Series

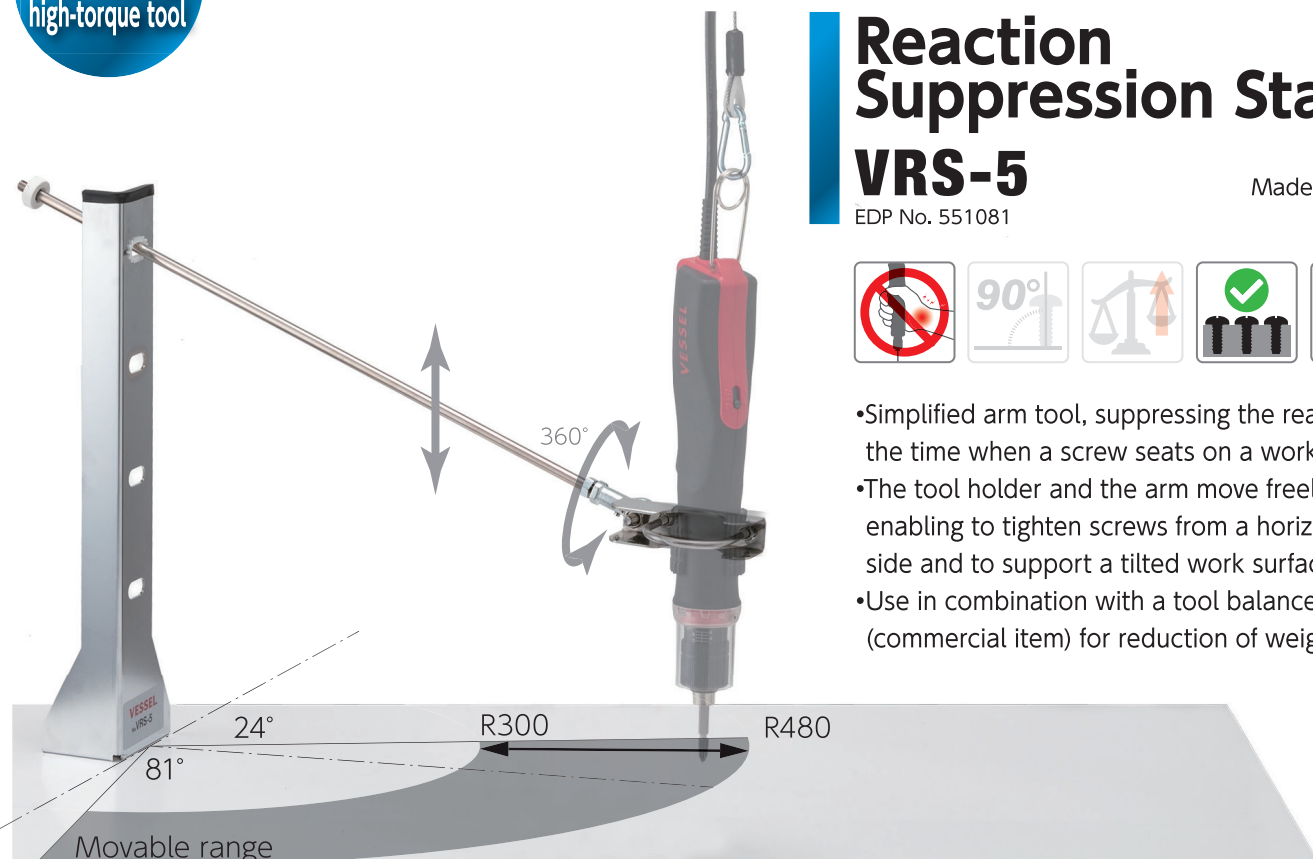
Reaction Suppression Stand VRS-5

EDP No. 551081

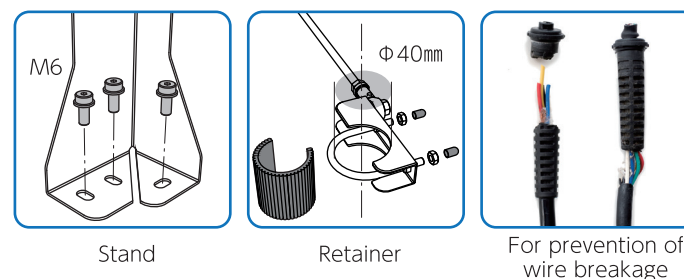
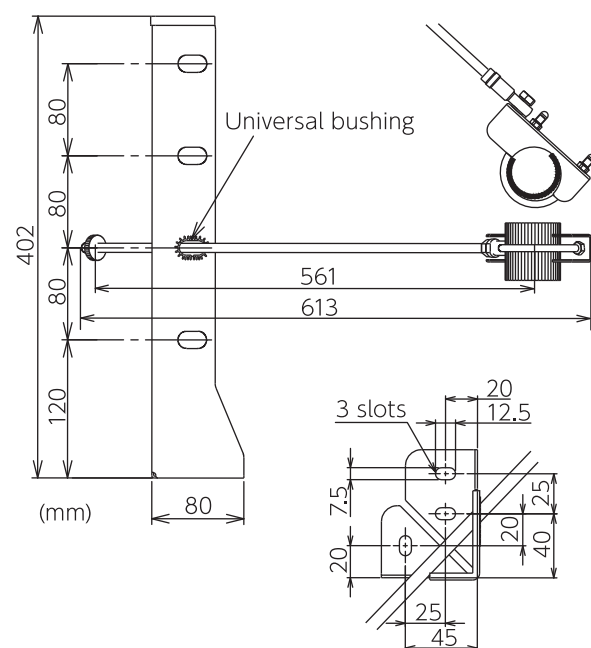
Made in Japan



- Simplified arm tool, suppressing the reaction at the time when a screw seats on a workpiece.
- The tool holder and the arm move freely, enabling to tighten screws from a horizontal side and to support a tilted work surface, too.
- Use in combination with a tool balancer (commercial item) for reduction of weight load.



No.VRS-5



Model No.	VRS-5
Maximum reaction force (N·m)	4.5
Maximum load (kg)	1.1
Mounted tool outer diameter (mm)	40
Shaft length (mm)	561
Movable range (mm)	R300~480
Weight (kg)	0.85
Accessories	Universal bushing (with 1 spare bushing), Rubber covered bushing
Operating temperature/humidity	0~40°C / 10~80%RH
Installation location	Indoor
Material	Steel (stand/shaft), SUS (retainer)
Applicable models	VE-6000 (P, SOP), VE-5000 (P, SOP)

* Recommended mounting thread diameter: M6



●Before mounting an electric screwdriver, make sure that it is a supported model. ●Using an incorrectly mounted electric screwdriver could cause an equipment failure or personal injury. ●Unplug the electric screwdriver before mounting. ●Do not use a C-clamp to install the tool arm. ●Do not mount inapplicable products on the tool arm.

VESSEL Co., Inc.

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E-mail : export@vessel.co.jp URL : <http://www.vessel.co.jp/english/>

Please purchase from the vendor below.

* Specifications, dimensions, and other information are subject to change without notice for product improvement.
20040721.01

VESSEL
Let us think.

New

Tool Arm Series



**Optimal solutions
before automatization!
Usable at will,
like your hand and arm.**

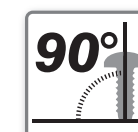
VESSEL Tool Arms are chosen for



- 1) Reduction of rotational load**
It reduces the reaction of the electric screwdriver to the hand holding it.



- 2) Reduction of weight load**
It reduces the feeling of fatigue in your hand and arm, caused by the weight of the electric screwdriver.



- 3) Improvement of vertical stability**
It allows screws to go in straight, which reduces failures in screw tightening.



- 4) Improvement of tightening accuracy**
It ensures consistent fastening quality with less irregularity.

Succession of SANWA GIKEN's Hand-Free®

VESSEL took over the trademarks and patents of SANWA GIKEN CO., LTD., manufacturer of "Hand-Free (R)", simplified compact tool arms.

Please contact us for replacement parts for or repair of the products that are currently in use, or custom-made products.



Collaboration with a Specialized Tool Arm Manufacturer

VESSEL is collaborating with a high-tech arm manufacturer, based in France, that possesses a wealth of know-how in automotive part assembly lines in Europe. Considering productivity improvement as our mission, we will support assembly shops in cooperation with solution partners to achieve customer satisfaction.



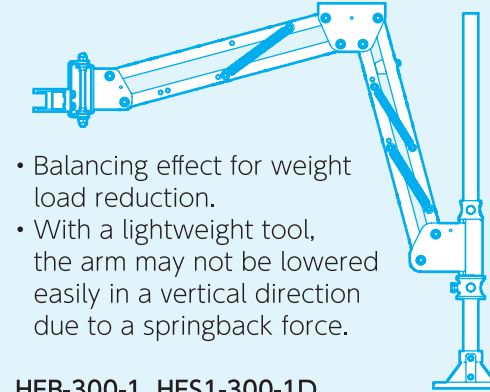
Arm Types

1) Double-link arm

(with two arms connected by a linked structure)

Advantages:

- Highly flexible with a wide range of arm movement.
- Stable tightening accuracy with horizontal movement of the electric screwdriver.



Note:

- Balancing effect for weight load reduction.
- With a lightweight tool, the arm may not be lowered easily in a vertical direction due to a springback force.

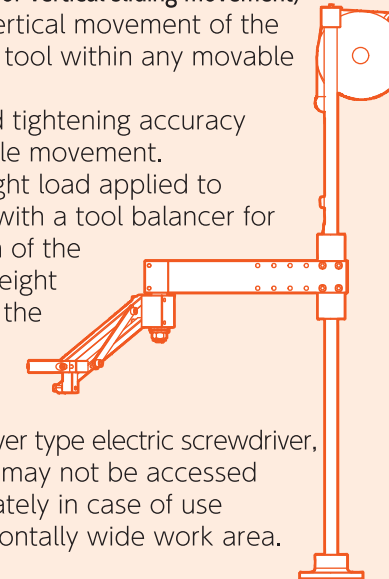
Model: HFB-300-1, HFS1-300-1D
HFC1-300DR, HFKCC-3-1DR

2) Linear arm with tool balancer

(with bearing bushing for vertical sliding movement)

Advantages:

- Allows vertical movement of the mounted tool within any movable range.
- Improved tightening accuracy with stable movement.
- Less weight load applied to workers with a tool balancer for reduction of the overall weight including the mounted tool.



Note:

- With a lever type electric screwdriver, the lever may not be accessed appropriately in case of use in a horizontally wide work area.

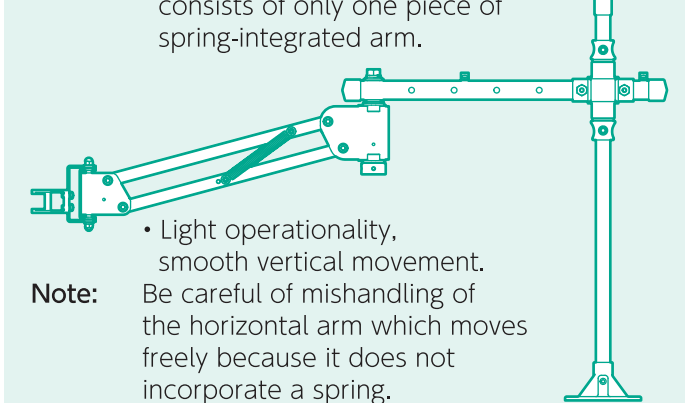
Model: VAB-5

3) Single-link arm

(combination of horizontal arm and spring-integrated arm)

Advantages:

- Suitable for use in a narrow space or on a small worktable than the double-link arm type.
- Simple movement as this type consists of only one piece of spring-integrated arm.



Note:

- Light operability, smooth vertical movement.
- Be careful of mishandling of the horizontal arm which moves freely because it does not incorporate a spring.

Model: HFAC-3-1DR

4) Simplified stand arm

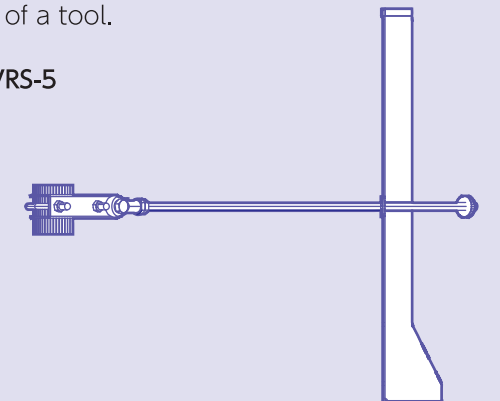
Advantages:

- Effective to reduce the rotational load of the electric screwdriver.
- Low cost due to simple structure design.
- Can be moved freely in all directions.

Notes:

- A tool balancer is required to reduce the weight load of a tool.

Model: VRS-5



5) Telescopic arm

(with carbon pipes that extend and contract)

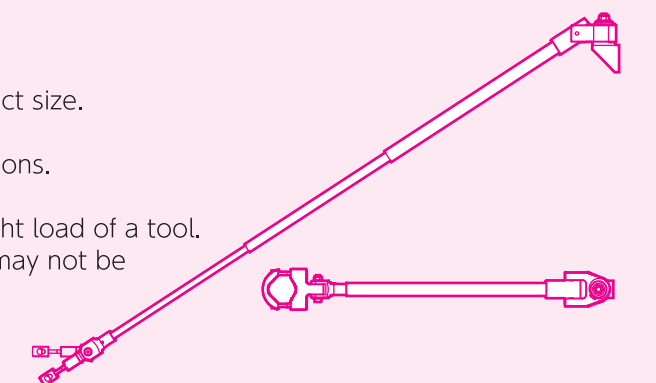
Advantages:

- Usable on a narrow workbench due to compact size.
- Made of a strong lightweight carbon fiber.
- Can be moved freely without load in all directions.
- Installable in ceilings and walls.

Notes:

- A tool balancer is required to reduce the weight load of a tool.
- With a lever type electric screwdriver, the lever may not be accessed appropriately in case of use in a horizontally wide work area.

Model: VTS-5/950



For
efficient use
of limited
space

Tool Arm Series

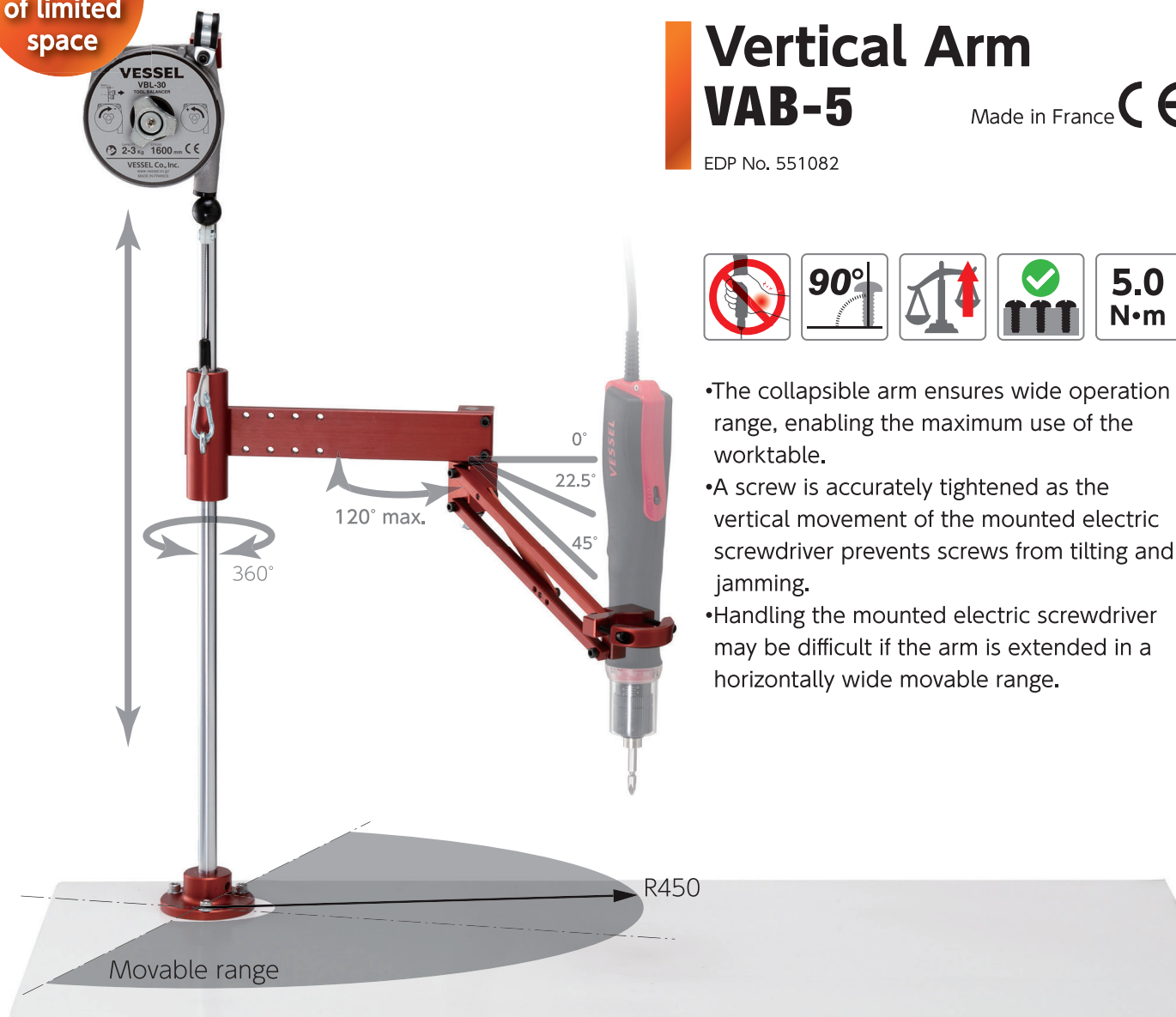
Vertical Arm VAB-5

Made in France 

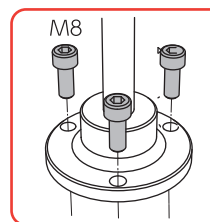
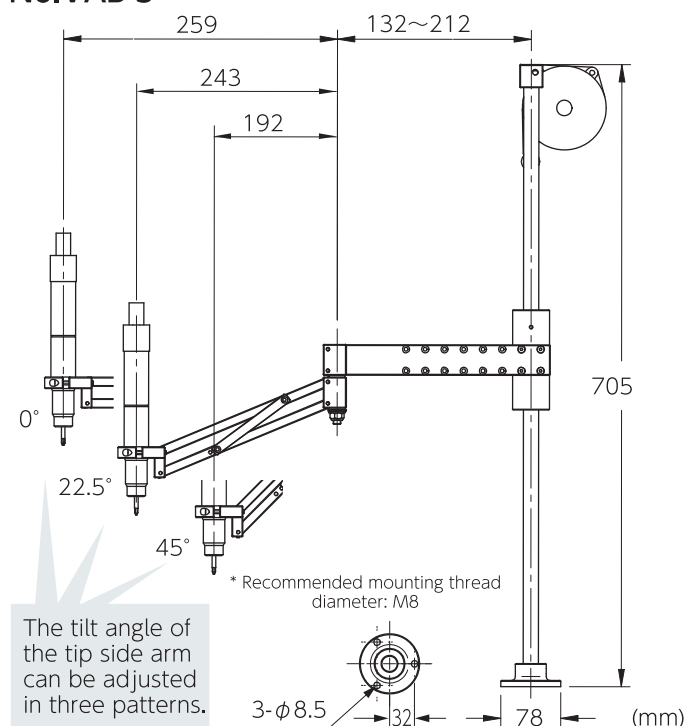
EDP No. 551082



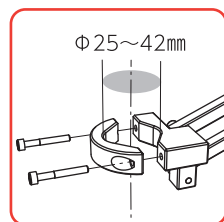
- The collapsible arm ensures wide operation range, enabling the maximum use of the worktable.
- A screw is accurately tightened as the vertical movement of the mounted electric screwdriver prevents screws from tilting and jamming.
- Handling the mounted electric screwdriver may be difficult if the arm is extended in a horizontally wide movable range.



No.VAB-5



Mounting bracket



Tool holder



Built-in ball bearing

Model No.	VAB-5
Maximum reaction force (N·m)	5
Maximum load (kg)	1.2
Mounted tool outer diameter (mm)	25~42
Height (mm)	705
Movable range (mm)	Upto R450 (when the angle of the tip arm and the horizontal arm is 22.5°)
Weight (kg)	3.1 (including accessories)
Accessories	Tool balancer (VBL-30)
Operating temperature/humidity	0~40°C / 10~80%RH
Installation location	Indoor
Material	Steel (main pillar), Aluminum (holder/arm)
Compatible standard	CE (Compliant with Machinery Directive 2006/42/EC)
Applicable models	All VE-series models

For
tilted work
surfaces

Tool Arm Series

Telescopic Arm VTS-5/950

Made in France 

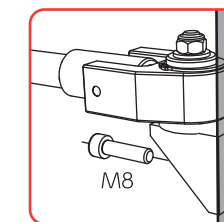
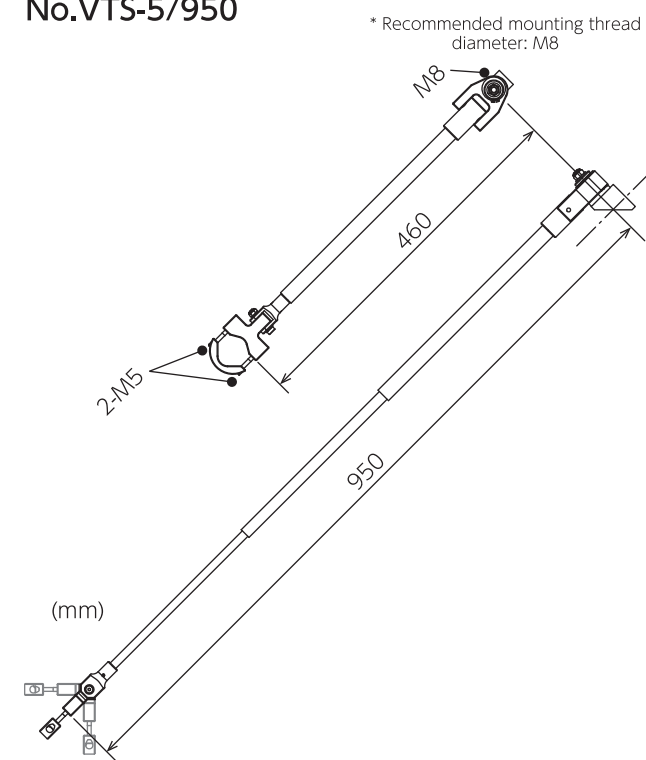
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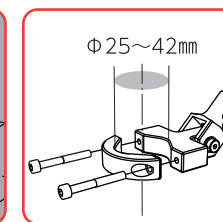
- The tool holder and the arm move freely, enabling to tighten screws from a horizontal side and to support a tilted work surface, too.
- The arm is made from carbon fiber, which is light-weight to enable smooth operation and position/angle adjustment.
- Use in combination with a tool balancer (commercial item) for reduction of weight load.
- Handling the mounted electric screwdriver may be difficult if the arm is extended in a horizontally wide movable range.



No.VTS-5/950



Universal adapter



Tool holder

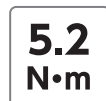
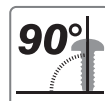


Also applicable to horizontal driving

Model No.	VTS-5/950
Maximum reaction force (N·m)	5
Maximum load (kg)	1.2
Mounted tool outer diameter (mm)	25~42
Arm length (mm)	460~950
Movable range (mm)	R330 to 670 (when arm angle is 45°)
Weight (kg)	0.53 (including accessories)
Accessories	Universal adapter (factory-mounted)
Operating temperature/humidity	0~40°C / 10~80%RH
Installation location	Indoor
Material	Aluminum (holder), Carbon fiber (arm)
Compatible standard	CE (Compliant with Machinery Directive 2006/42/EC)
Applicable models	All VE-series models

Wide
movable range
and Weight
reduction

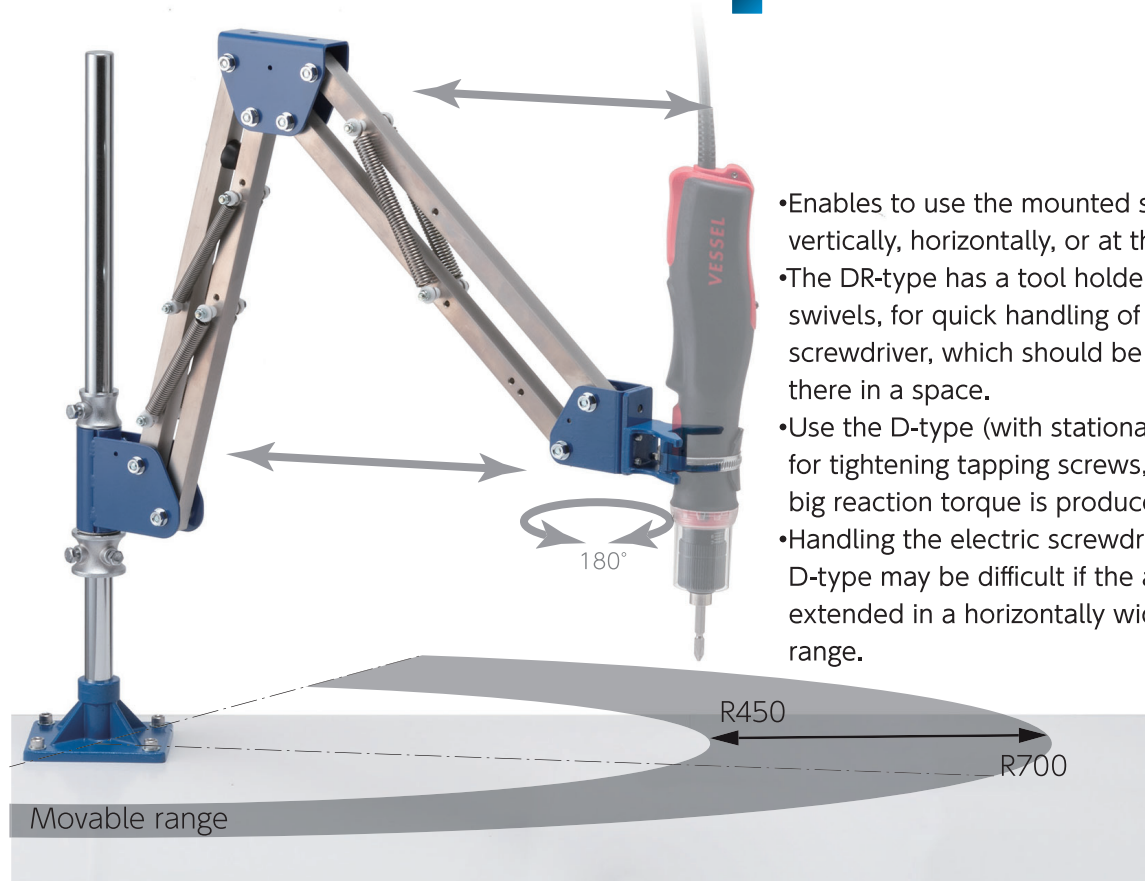
Tool Arm Series



Hand-Free® Arm HFS1-300-1D

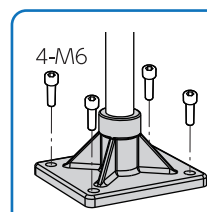
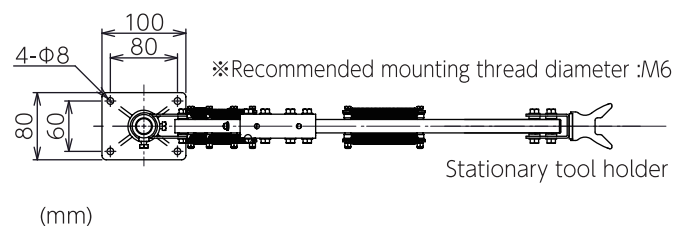
Made in Japan

EDP No. 552054

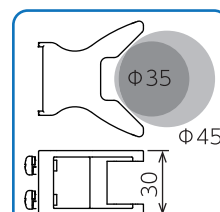


- Enables to use the mounted screwdriver vertically, horizontally, or at the same angle.
- The DR-type has a tool holder which swivels, for quick handling of the electric screwdriver, which should be used here and there in a space.
- Use the D-type (with stationary tool holder) for tightening tapping screws, during which big reaction torque is produced.
- Handling the electric screwdriver on the D-type may be difficult if the arm is extended in a horizontally wide movable range.

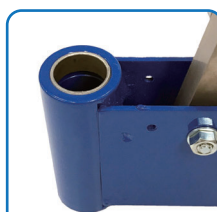
No.HFS1-300-1D



Mounting bracket



Tool holder



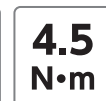
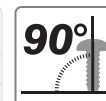
Metal bushing

Model No.	HFS1-300-1DR
Maximum reaction force (N·m)	5.2
Recommended load range (kg)	0.8~1.2
Mounted tool outer diameter (mm)	35~45
Arm length (mm)	300+300
Movable range (mm)	R450~700
Weight (kg)	4.1 (excluding accessories)
Accessories	Replacement kit, Rubber sheet, Hose band
Operating temperature/humidity	0~40°C / 10~80%RH
Installation location	Indoor
Material	Steel (main pillar, holder, bracket), Aluminum (arm)
Applicable models	VE-3000, VE-4000 (P, AC, PAC), VE-4500 (P, AC, PAC), VE-5000 (P, SOP), VE-6000 (P, SOP)

※Please contact us for the custom-made models for the arm length 400/500mm or the load 2kg/3kg.

Wide
movable range
and Weight
reduction

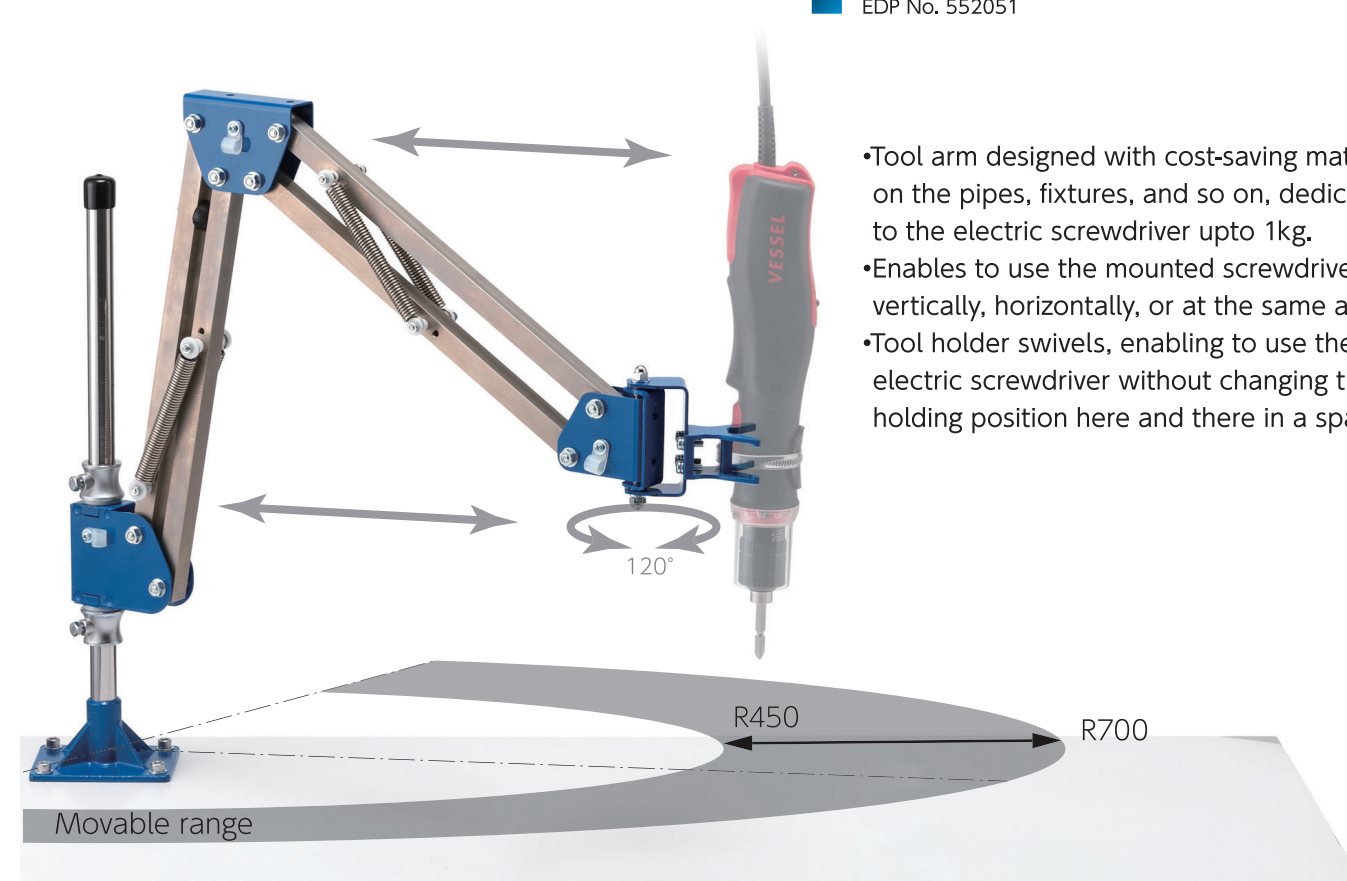
Tool Arm Series



Hand-Free® Arm HFC1-300DR

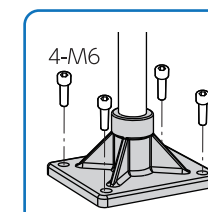
Made in Japan

EDP No. 552051

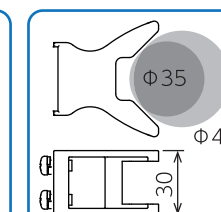


- Tool arm designed with cost-saving materials on the pipes, fixtures, and so on, dedicated to the electric screwdriver upto 1kg.
- Enables to use the mounted screwdriver vertically, horizontally, or at the same angle.
- Tool holder swivels, enabling to use the electric screwdriver without changing the holding position here and there in a space.

No.HFC1-300DR



Mounting bracket



Tool holder



Resin bushing

Model No.	HFC1-300DR
Maximum reaction force (N·m)	4.5
Recommended load range (kg)	0.8~1.2
Mounted tool outer diameter (mm)	35~45
Arm length (mm)	300+300
Movable range (mm)	R450~700
Weight (kg)	2.7 (excluding accessories)
Accessories	Replacement kit, Rubber sheet, Hose band
Operating temperature/humidity	0~40°C / 10~80%RH
Installation location	Indoor
Material	Steel (main pillar, holder, bracket), Aluminum (arm)
Applicable models	VE-3000, VE-4000(P, AC, PAC), VE-4500(P, AC, PAC), VE-5000(P, SOP), VE-6000(P, SOP)

■Replacement Spring for Hand-Free® Base-side arm(No.1) No.6258 / Tip-side arm(No.1) No.6223

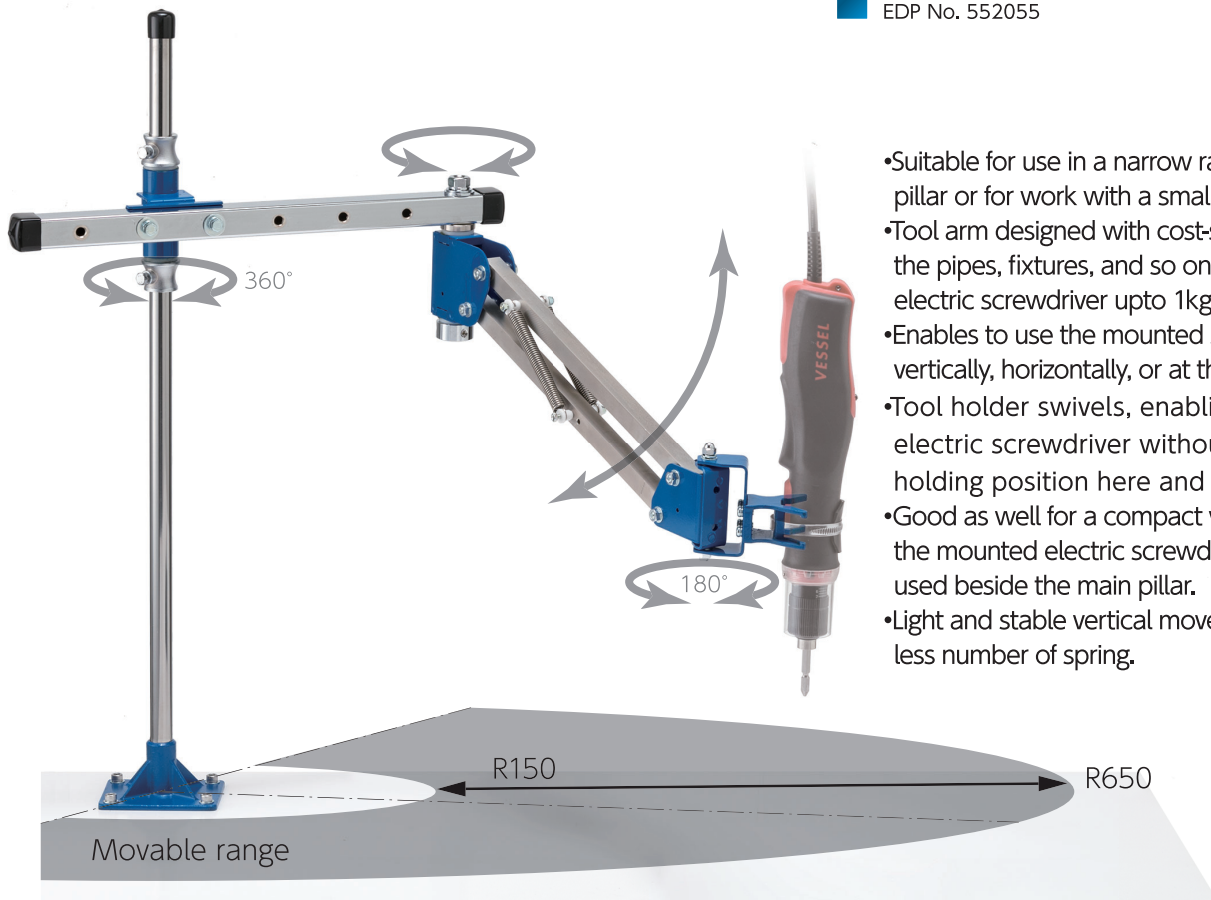
For improved productivity with a small range of movement

Tool Arm Series

Hand-Free® Arm HFAC-3-1DR

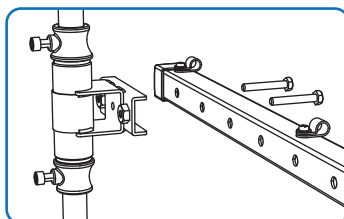
Made in Japan

EDP No. 552055

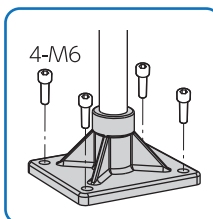


- Suitable for use in a narrow range near the main pillar or for work with a small product.
- Tool arm designed with cost-saving materials on the pipes, fixtures, and so on, dedicated to the electric screwdriver upto 1kg.
- Enables to use the mounted screwdriver vertically, horizontally, or at the same angle.
- Tool holder swivels, enabling to use the electric screwdriver without changing the holding position here and there in a space.
- Good as well for a compact workspace because the mounted electric screwdriver can be even used beside the main pillar.
- Light and stable vertical movement because of less number of spring.

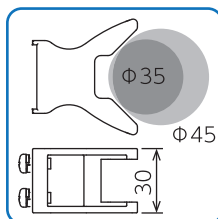
No.HFAC-3-1DR



Movable range can be adjusted.



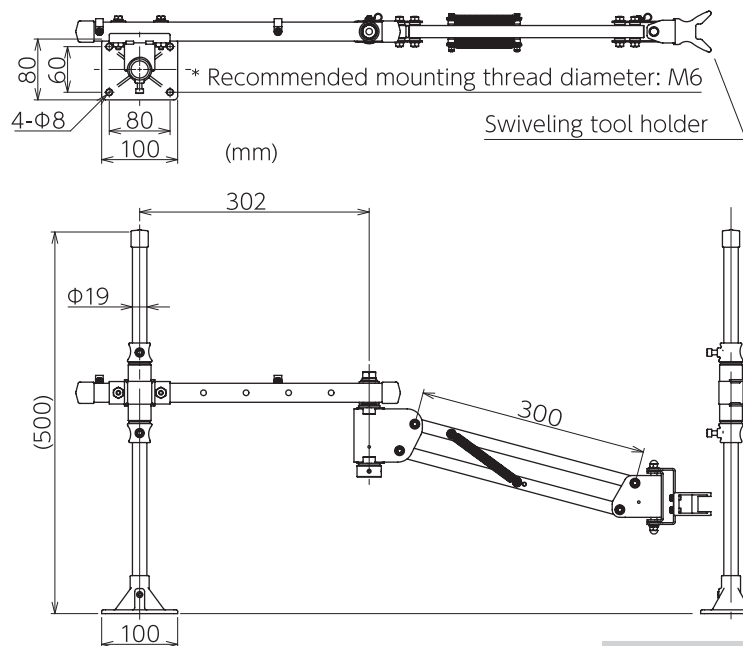
Mounting bracket



Tool holder



Resin bushing



Model No.	HFAC-3-1DR
Maximum reaction force (N·m)	4.5
Mounted tool weight (kg)	0.6~1.0
Mounted tool outer diameter (mm)	35~45
Arm length (mm)	302+300
Movable range (mm)	R150~650
Weight (kg)	3.1 (excluding accessories)
Accessories	Replacement kit, Rubber sheet, Hose band
Operating temperature/humidity	0~40°C / 10~80%RH
Installation location	Indoor
Material	Stainless steel (main pillar), Steel (holder), Aluminum and steel (arm)
Applicable models	VE-3000, VE-4000(P, AC, PAC), VE-4500(P, AC, PAC), VE-5000(P, SOP, PSOP), VE-6000(P, SOP, PSOP)

■Replacement Spring for Hand-Free® Tip-side arm(No.1) No.6223

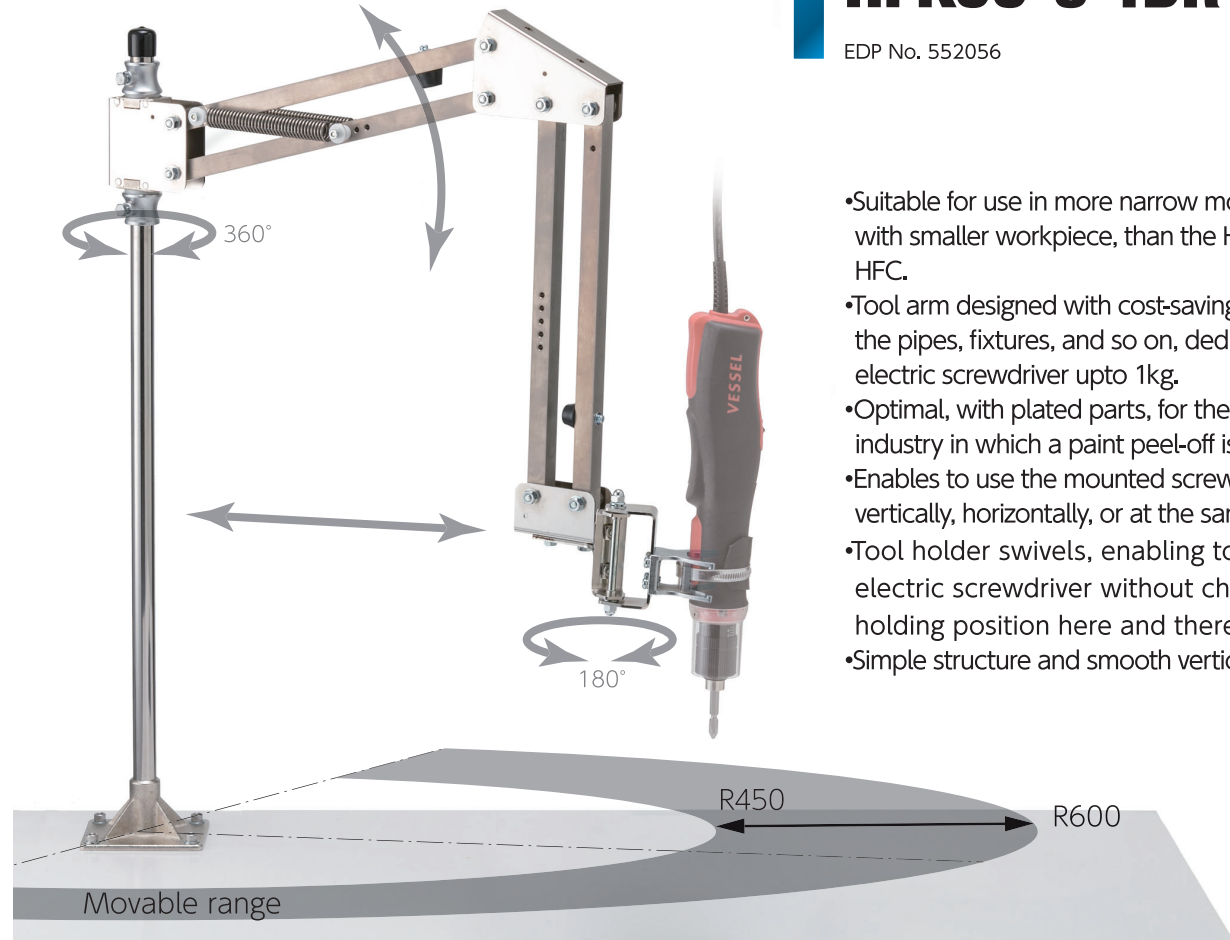
For improved productivity with simple movement

Tool Arm Series

Hand-Free® Arm HFKCC-3-1DR

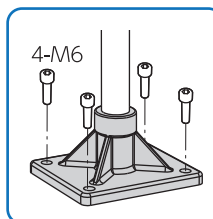
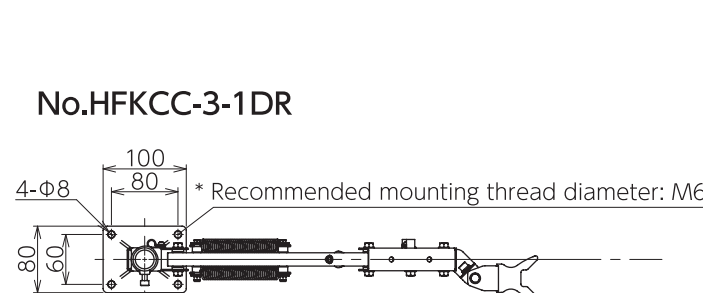
Made in Japan

EDP No. 552056

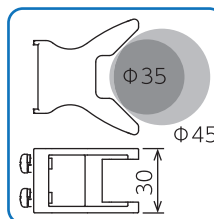


- Suitable for use in more narrow movable range or with smaller workpiece, than the HFS and the HFC.
- Tool arm designed with cost-saving materials on the pipes, fixtures, and so on, dedicated to the electric screwdriver upto 1kg.
- Optimal, with plated parts, for the electric industry in which a paint peel-off is not allowed.
- Enables to use the mounted screwdriver vertically, horizontally, or at the same angle.
- Tool holder swivels, enabling to use the electric screwdriver without changing the holding position here and there in a space.
- Simple structure and smooth vertical movement.

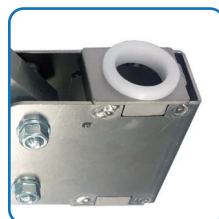
No.HFKCC-3-1DR



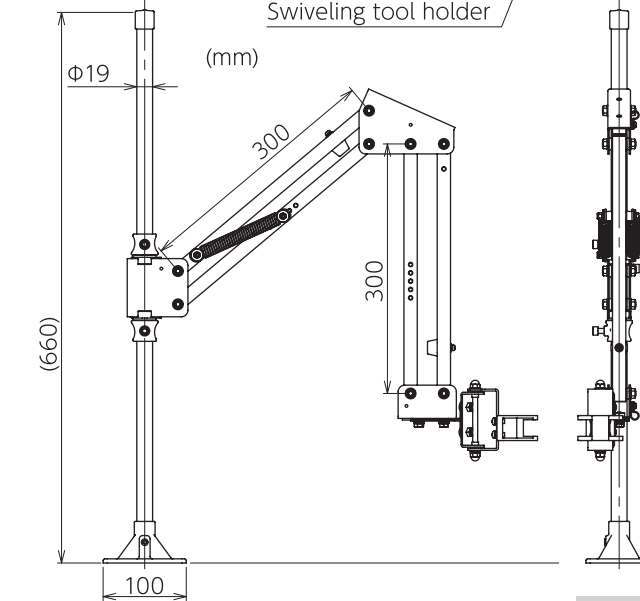
Mounting bracket



Tool holder



Resin bushing



Model No.	HFKCC-3-1DR
Maximum reaction force (N·m)	4.5
Mounted tool weight (kg)	0.6~1.0
Mounted tool outer diameter (mm)	35~45
Arm length (mm)	300+300
Movable range (mm)	R450~600
Weight (kg)	2.9 (excluding accessories)
Accessories	Replacement kit, Rubber sheet, Hose band
Operating temperature/humidity	0~40°C / 10~80%RH
Installation location	Indoor
Material	Stainless steel (main pillar), Steel (holder), Aluminum (arm)
Applicable models	VE-3000, VE-4000 (P, AC, PAC), VE-4500 (P, AC, PAC), VE-5000 (P, SOP, PSOP), VE-6000 (P, SOP, PSOP)

■Replacement Spring for Hand-Free® Base-side arm(No.1) No.6258