

HFB

Hand Free Arm

Accurate screw tightening by keeping the vertical working.

Vertical work with swivel attachment

Vertical work with stationary attachment

Horizontal work with swivel attachment

HFB Hand Free Arm

Depending on the tool and the work, different attachments can be used in combination. The mounted tool can be moved vertically, horizontally, or to the same angle, so that the best arm for the work environment can be selected.

D Type Stationary Attachment

Holder Type Attachment

R Type Swivel Attachment

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.

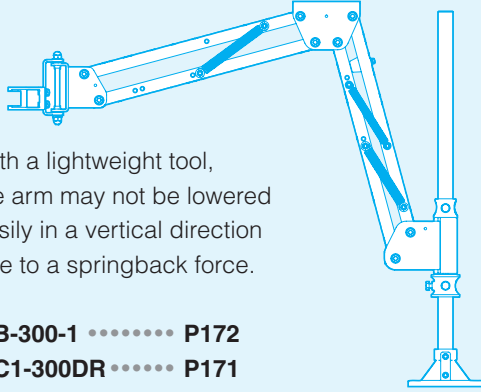
HAND TOOLS
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CONSTRUCTION BITS
RECIPROCATING SAW BLADES
ELECTRIC TOOLS
AIR TOOLS
AIR NIPPERS
STATIC SOLUTIONS
GASOLINE ENGINE TOOLS

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.
 - Balancing effect for weight load reduction.



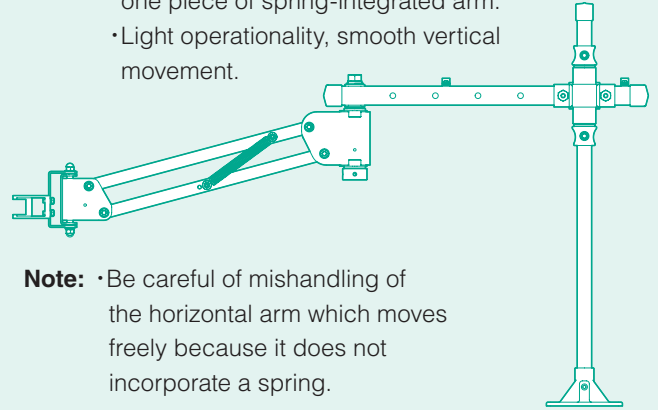
Note: • With a lightweight tool, the arm may not be lowered easily in a vertical direction due to a springback force.

Model: HFB-300-1 P172
 HFC1-300DR P171
 HFKCC-3-1DR P175

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.
 - Light operability, smooth vertical movement.



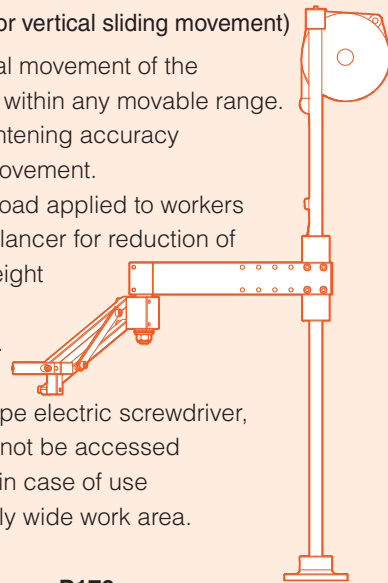
Note: • Be careful of mishandling of the horizontal arm which moves freely because it does not incorporate a spring.

Model: HFAC-3-1DR P174

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.



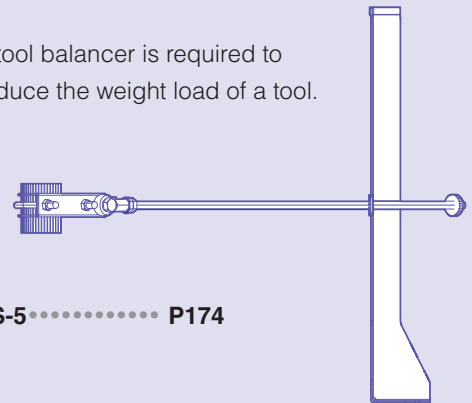
Note: • With a lever type electric screwdriver, the lever may not be accessed appropriately in case of use in a horizontally wide work area.

Model: VAB-5 P170

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.

Note: • A tool balancer is required to reduce the weight load of a tool.



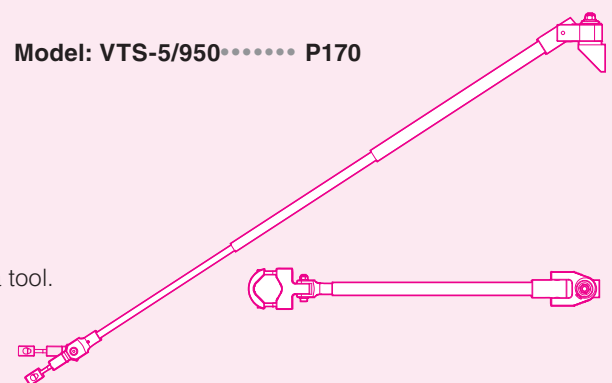
Model: VRS-5 P174

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.

Note: • 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 P170

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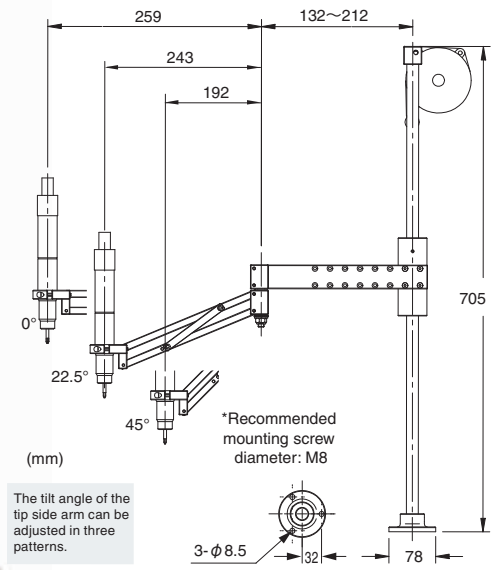
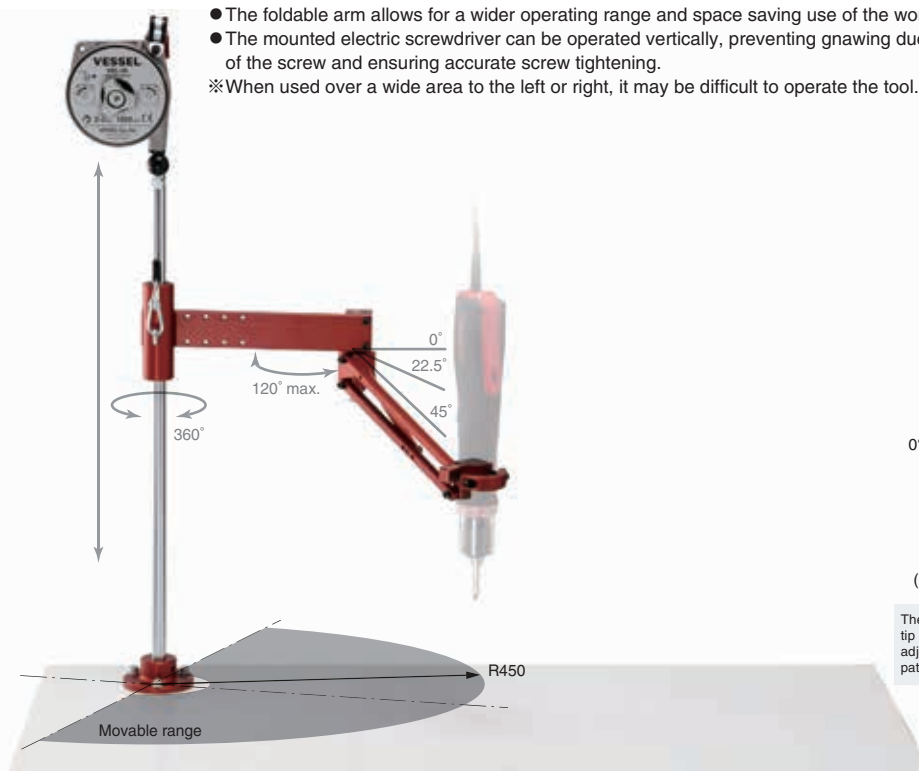
STATIC SOLUTIONS

GASOLINE ENGINE TOOLS

Vertical Arm

VAB-5

- The foldable arm allows for a wider operating range and space saving use of the workbench.
- The mounted electric screwdriver can be operated vertically, preventing gnawing due to tilting of the screw and ensuring accurate screw tightening.
- ※When used over a wide area to the left or right, it may be difficult to operate the tool.



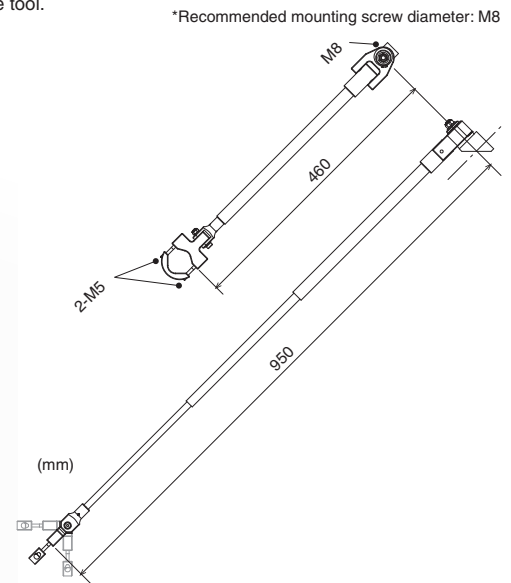
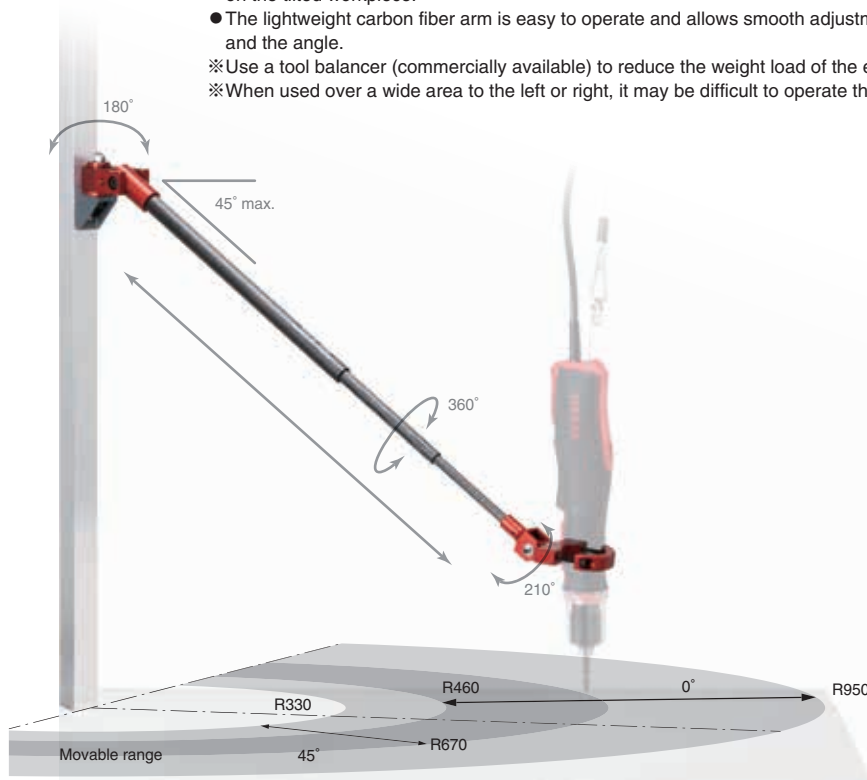
Code No.	Model No.	Max. Reaction Force (N·m)	Maximum Load (kg)	Installed Tool O/D (φmm)	Height (mm)	Movable Range (mm)	Weight (kg)	JAN (4907587)
551082	VAB-5	5	1.2	25~42	705	to R450 (When the arm angle is 22.5 degrees)	3.1 (Accessories included)	314505

Applicable: VE series (Electric Screwdriver) All models Accessory: Tool balancer (VBL-30)

Sliding Arm

VTS-5/950

- The tool holder and arm can be freely moved to support the horizontal screw tightening and the work on the tilted workpiece.
- The lightweight carbon fiber arm is easy to operate and allows smooth adjustment of the working position and the angle.
- ※Use a tool balancer (commercially available) to reduce the weight load of the electric screwdriver.
- ※When used over a wide area to the left or right, it may be difficult to operate the tool.



Code No.	Model No.	Max. Reaction Force (N·m)	Maximum Load (kg)	Installed Tool O/D (φmm)	Arm Length (mm)	Movable Range (mm)	Weight (kg)	JAN (4907587)
551083	VTS-5/950	5	1.2	25~42	460~950	R330 to 670 (When the arm angle is 45 degrees)	0.53 (Accessories included)	314512

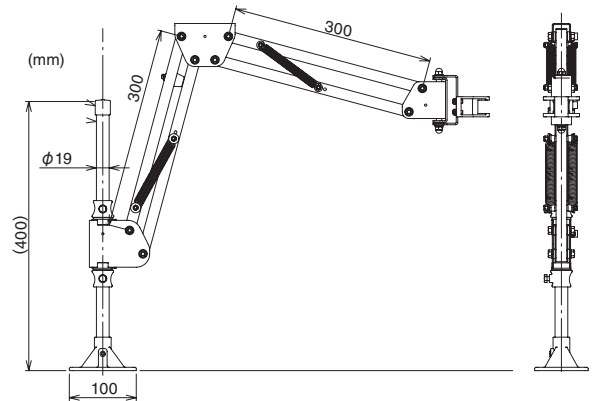
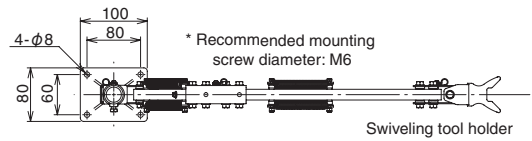
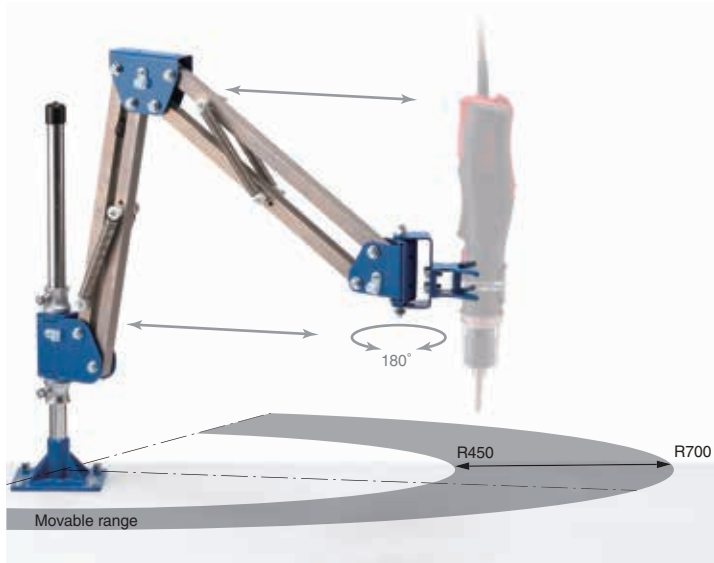
Applicable: VE series (Electric Screwdriver) All models Accessory: Universal adapter (already installed)

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Hand Free Arm

HFC1-300DR

- Dedicated to tool loads of around 1kg with cost-saving materials such as pipes and fittings.
- The tool for tightening screws can be moved vertically, horizontally, and at the same angle.
- The tool mounting part can be swiveled so that the tool can be operated without changing the way to hold even in work that requires a lot of movement.



Code No.	Model No.	Max. Reaction Force (N·m)	Allowable Load (kg)	Installed Tool O/D (φmm)	Arm Length (mm)	Movable Range (mm)	Weight (kg)	JAN (4907587)
552051	HFC1-300DR	4.5	0.8~1.2	35~45	300+300	R450~700	2.7 (Accessories not included)	315182

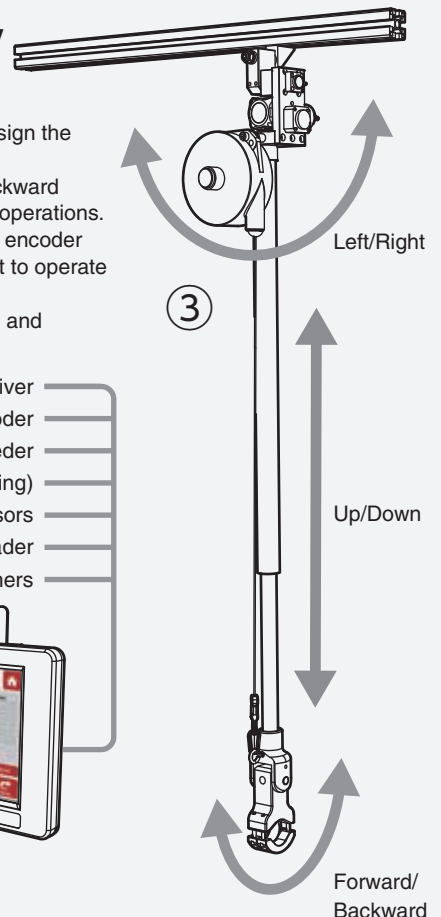
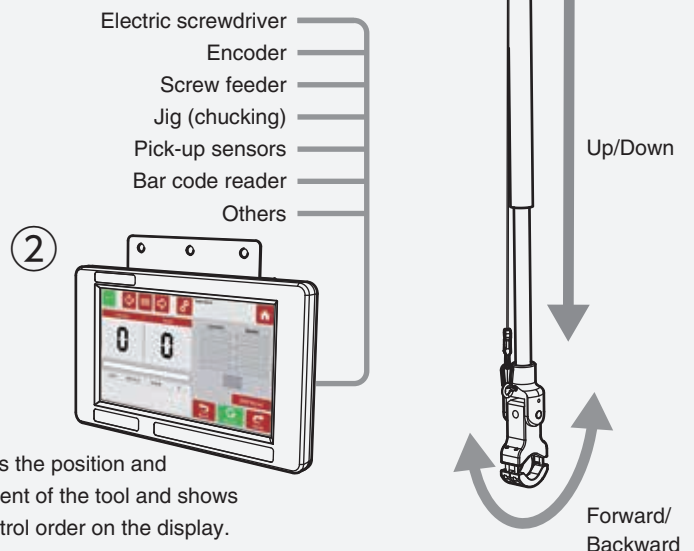
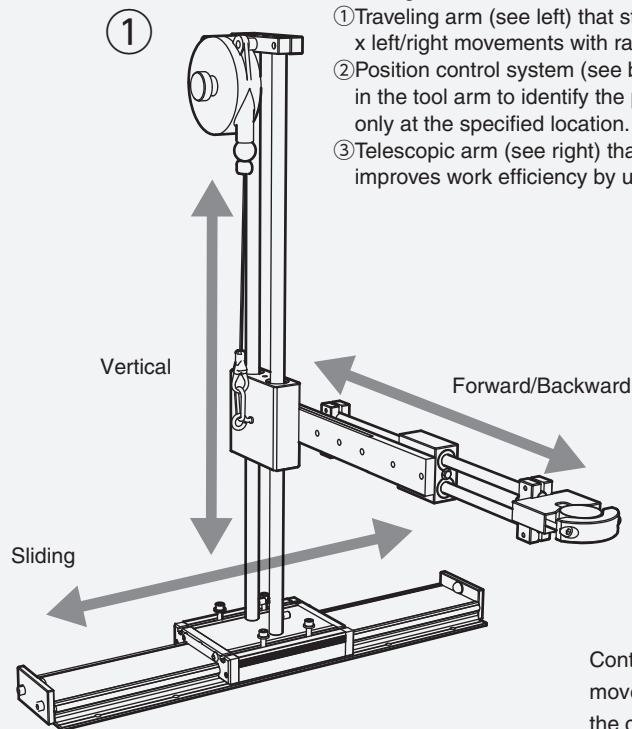
Applicable: VE-3000/ VE-4000(P), AC/ VE-4500(P), AC, -HS4/ VE-5000(P), R, S, -DL5, SOP, RSOP, SSOP/ VE-6000P, 6000(P)-DL5, 6000(P)RSOP
 Accessories: Rubber sheet x 2, Hose band x 1, Hex bolt/nut M6 x 4, Tool kit x 1set

ONE POINT

Tool arm to increase accuracy and efficiency of work [custom made].

In addition to the tool arms listed in the catalogue, we can design the followings as custom-made model:

- ① Traveling arm (see left) that stabilizes vertical x forward/backward x left/right movements with rails for more precise fastening operations.
- ② Position control system (see below), which incorporates an encoder in the tool arm to identify the position of the tool and allow it to operate only at the specified location.
- ③ Telescopic arm (see right) that reduces the load on the tool and improves work efficiency by using a suspended tool arm.



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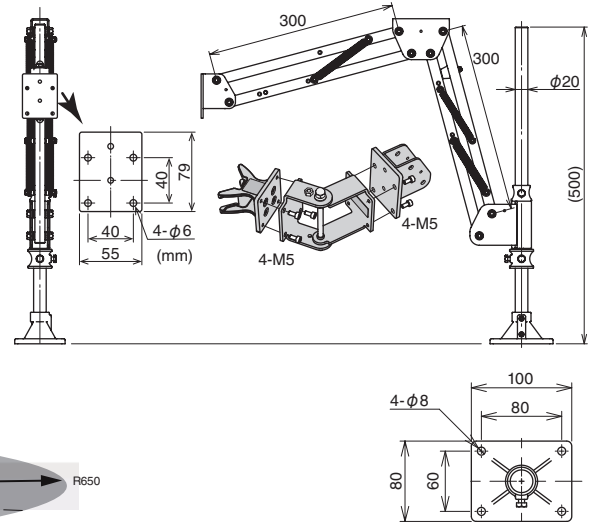
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Hand-Free® Arm

HFB-300-1



※1 Except when using the HFB-R Swivel attachment.
 ※2 The max reaction force varies depending on the attachment.

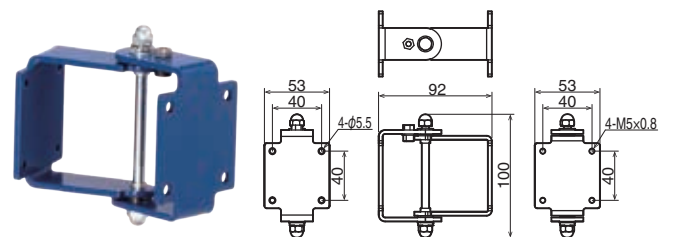
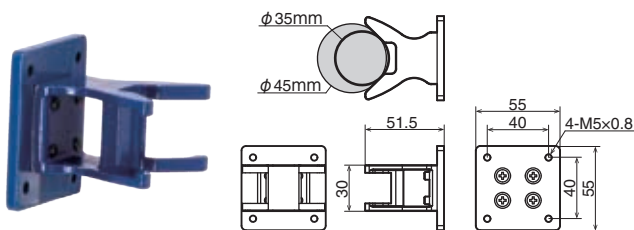


Code No.	Model No.	Max. Reaction Force (N·m)	Allowable Load (kg)	Arm Length (mm)	Movable Range (mm)	Weight (kg)	JAN (4907587)
552081	HFB-300-1	※	0.8~1.2	300+300	R400~650	3.96	012128

※The max reaction force varies depending on the attachment.
 Accessories: Hex bolt/nut M6 x 4, Tool kit x 1set

D Type Stationary Attachment | HFB-D

R Type Swivel Attachment | HFB-R



Code No.	Model No.	Max. Reaction Force (N·m)	Mounted Tool Outer Dia. (φmm)	Weight (g)	JAN (4907587)
552082	HFB-D	5.2	35~45	210	012135

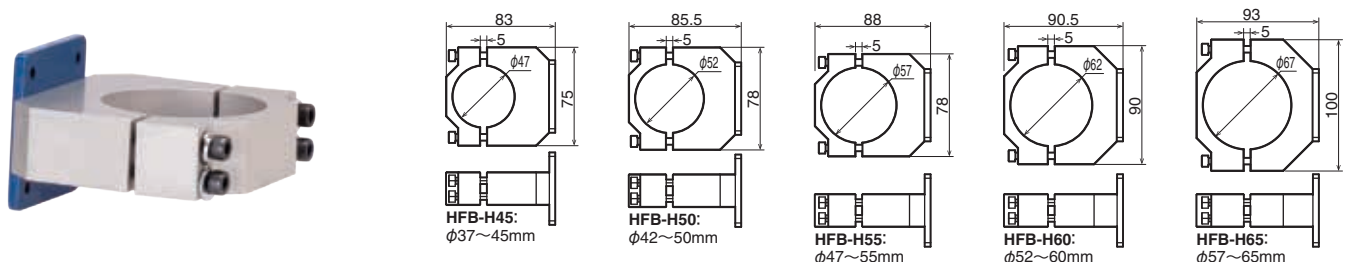
Applicable: VE-3000/VE-4000(P), AC/VE-4500(P), AC, -HS4/VE-5000(P), R, S, -DL5, SOP, RSOP, SSOP/VE-6000P, 6000(P)-DL5, 6000(P)RSOP
 Accessories: Rubber sheet x 2, Hose band x 1, Cap bolt M5x8mm x 4

Code No.	Model No.	Max. Reaction Force (N·m)	Applicable holders	Weight (g)	JAN (4907587)
552083	HFB-R	5.2※	HFB-D / HFB-H45, H50, H55, H60, H65	310	012142

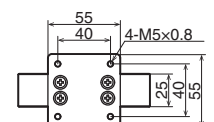
※Varies depending on the attachment which is mounted.

Holder Type Attachment

HFB-H



Code No.	Model No.	Max. Reaction Force (N·m)	Mounted Tool Outer Dia. (φmm)	Weight (g)	JAN (4907587)
552084	HFB-H45	10	37~45	380	012159
552085	HFB-H50	10	42~50	390	012166
552086	HFB-H55	10	47~55	370	012173
552087	HFB-H60	10	52~60	410	012180
552088	HFB-H65	10	57~65	570	012197

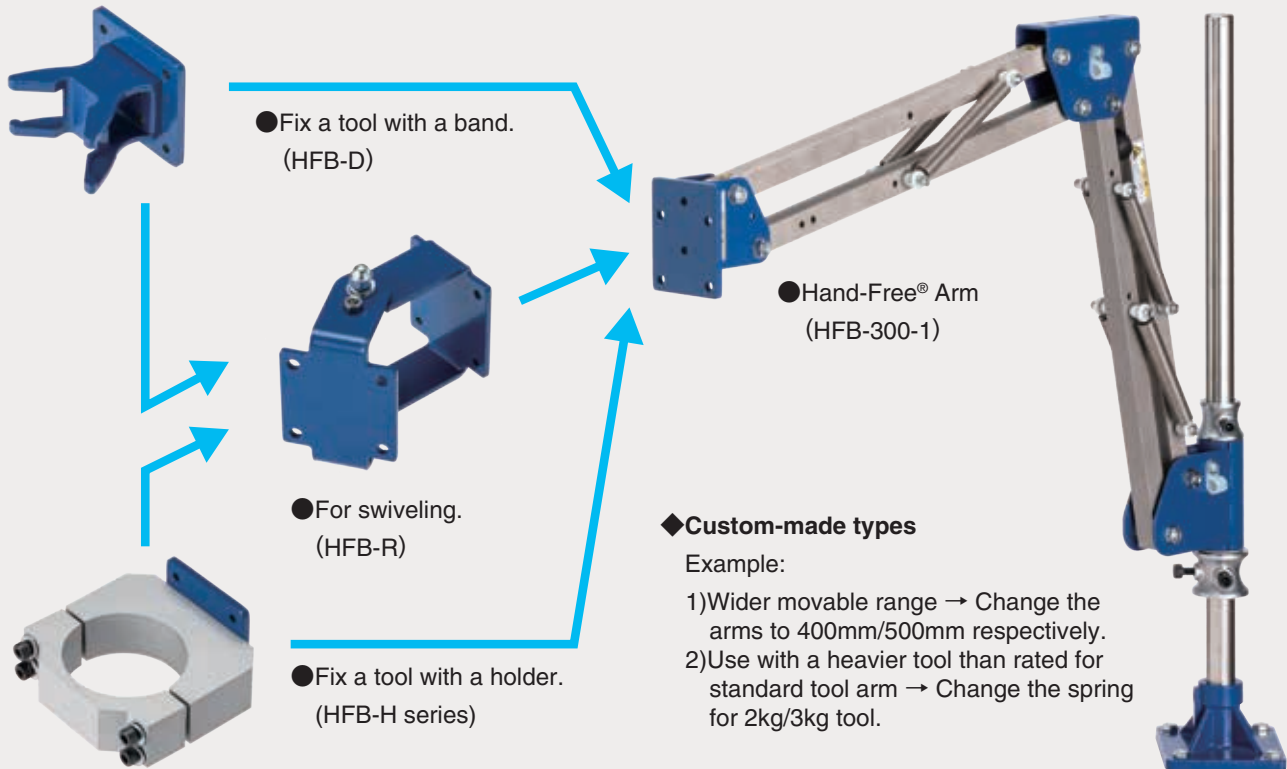


Applicable model: HFB-H45[VE-4000/VE-4500/VE-5000/VE-6000 series]

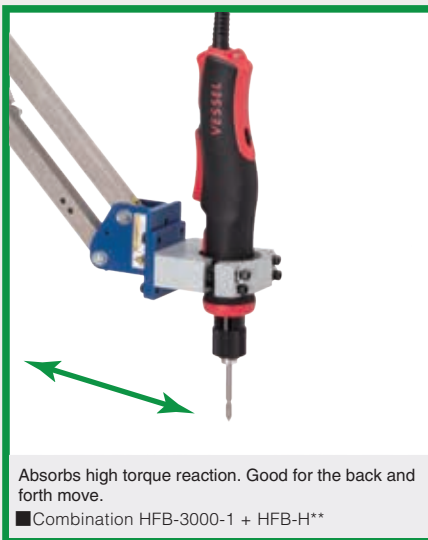
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ONE POINT

Different attachments can be used in combination to suit the tool and the work.



Vertical work with stationary attachment



Vertical work with swivel attachment



Horizontal work with swivel attachment



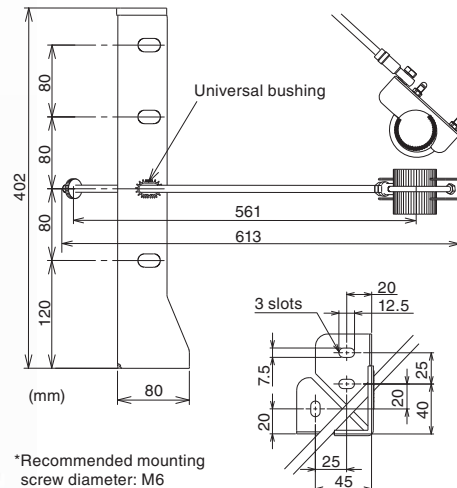
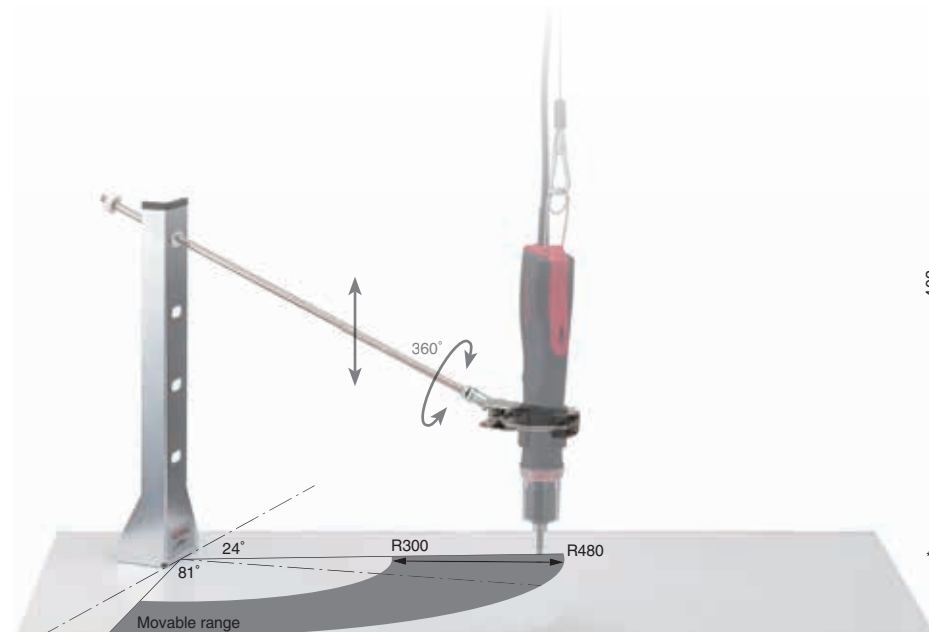
◆ How to select a suitable Hand-Free® Arm (Holder Attachment Type)

- ① Check the weight, outer diameter, and reaction force (torque) of the mounted tool.
- ② Select the attachment(s) suitable for the outer diameter and the reaction force.
- ③ Tip mounting weight should be less than the total sum of the weight of the tool and the attachment(s).
- ④ Inquire us when a tool arm suitable for larger movable range than our standard is desired.

Reaction Control Arm

VRS-5

- Simplified arm to suppress recoil when the screw seated by using high-torque models (VE-5000/6000).
- The tool holder and arm can be freely moved to support the horizontal screw tightening and the work on the tilted workpiece.
- ※ Use a tool balancer (commercially available) to reduce the weight load of the electric screwdriver.



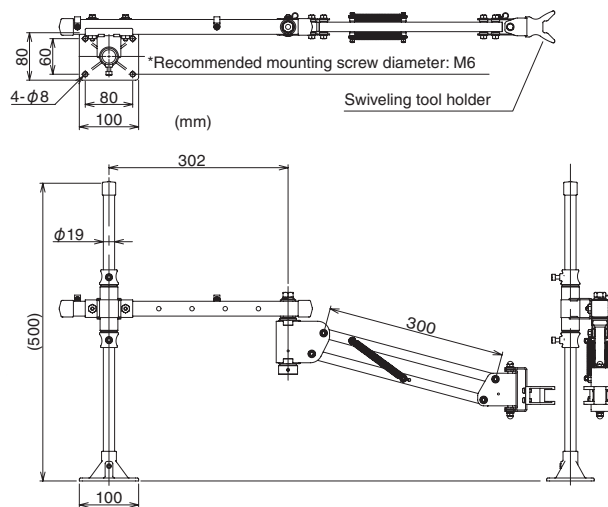
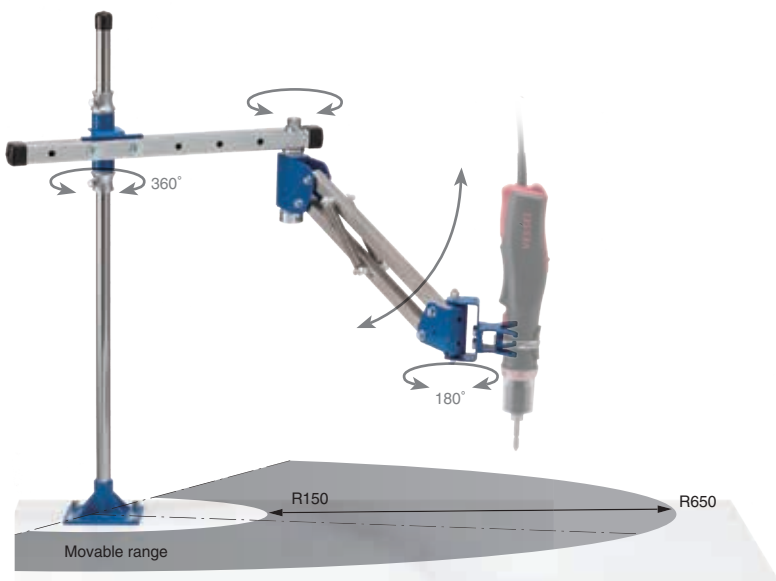
Code No.	Model No.	Max. Reaction Force (N·m)	Maximum Load (kg)	Installed Tool O/D (φmm)	Shaft Length (mm)	Movable Range (mm)	Weight (kg)	JAN (4907587)
551081	VRS-5	4.5	1.1	40	561	R300~480	0.85	314499

Applicable models: VE-6000 series (all models) Accessories: Universal bushing (1 spare), Rubber cover bushing

Hand Free Arm

HFAC-3-1DR

- Suitable for working in narrow area and with small workpieces.
- Dedicated to tool loads of around 1kg with cost-saving materials such as pipes and fittings.
- The tool for tightening screws can be moved vertically, horizontally, and at the same angle.
- The tool mounting part can be swiveled so that the tool can be operated without changing the way to hold even in work that requires a lot of movement.
- Can freely move the tool up to the pillar side, allowing the work in a compact workspace.
- Reduced number of springs makes the tool arm move up and down lightly and stably.



Code No.	Model No.	Max. Reaction Force (N·m)	Allowable Load (kg)	Tool O/D (φmm)	Arm Length (mm)	Movable Range (mm)	Weight (kg)	JAN (4907587)
552055	HFAC-3-1DR	4.5	0.6~1.0	35~45	302+300	R150~650	3.1(Accessories not included)	315229

Applicable models: VE-3000/ VE-4000(P), AC/ VE-4500(P), AC, -HS4/ VE-5000(P), R, S, -DL5, SOP, RSOP, SSOP/ VE-6000P, 6000(P)-DL5, 6000(P)RSOP
 Accessories: Rubber sheet x 2, Hose band x 1, Hex bolt/nut M6 x 4, Tool kit x 1set

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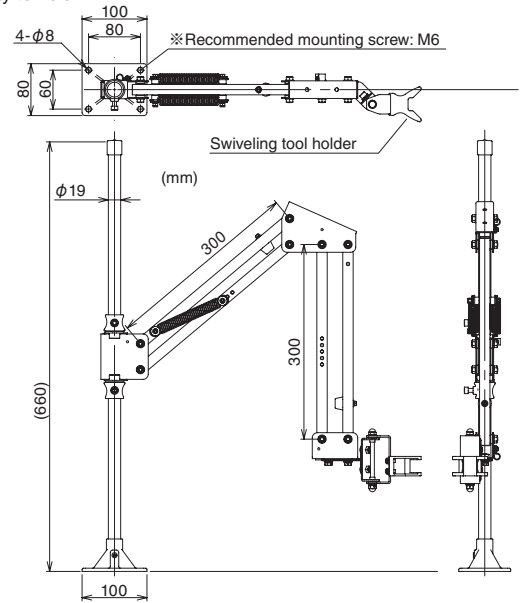
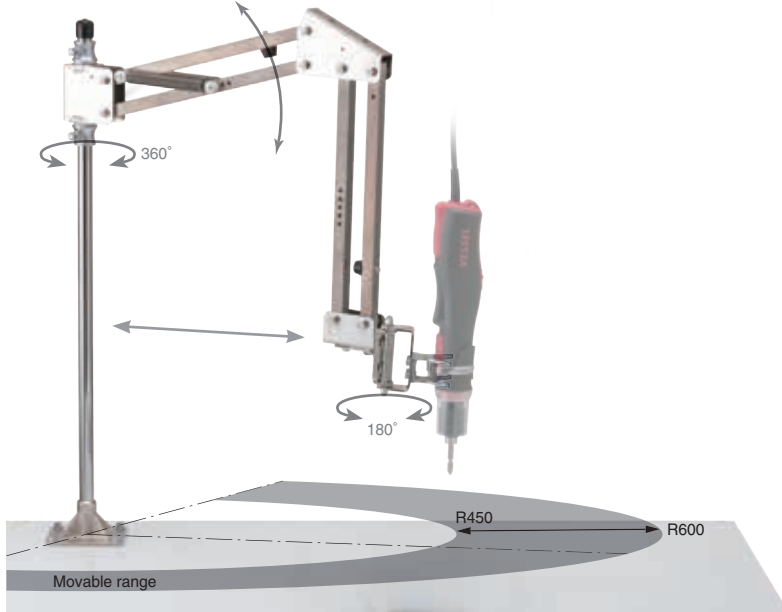
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Hand Free Arm

HFKCC-3-1DR



- Compared with the HFS and the HFC, more suitable for working in a narrow area and with small workpieces.
- Dedicated to tool loads of around 1kg with cost-saving materials such as pipes and fittings.
- Optimized for use in the electronics field, where paint peeling is not an issue, by using plated parts.
- The tool for tightening screws can be moved vertically, horizontally, and at the same angle.
- The tool mounting part can be swiveled so that the tool can be operated without changing the way to hold even in work that requires a lot of movement.
- Simple arm movement makes vertical work easy.



Code No.	Model No.	Max. Reaction Force (N·m)	Allowable Load (kg)	Tool O/D (φmm)	Arm Length (mm)	Movable Range (mm)	Weight (kg)	JAN (4907587)
552056	HFKCC-3-1DR	4.5	0.6~1.0	35~45	300+300	R450~600	2.9(Accessories not included)	315236

Applicable models: VE-3000/ VE-4000(P), AC/ VE-4500(P), AC, -HS4/ VE-5000(P), R, S, -DL5, SOP, RSOP, SSOP/ VE-6000P, 6000(P)-DL5, 6000(P)RSOP
 Accessories: Rubber sheet x 2, Hose band x 1, Hex bolt/nut M6 x 4, Tool kit x 1set

Springs for Hand-Free®



Code No.	Code in manual
551088	No.6176
551089	No.6223
551090	No.6243
551091	No.6244
551092	No.6258

Order from the pillar →	Base-side arm		Tip-side arm	
	No.1	No.2	No.1	No.2
Model No.	Code in manual	Code in manual	Code in manual	Code in manual
HFB-300-1	No.6223	No.6176	No.6223	—
HFB-300-2	No.6258	No.6223	No.6258	—
HFB-300-3	No.6243	No.6258	No.6258	No.6223
HFC1-300DR	No.6244	—	No.6223	—
HFAC-3-1DR	—	—	No.6223	—
HFKCC-3-1DR	No.6258	—	—	—

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