

Balancer Applications

All for the "Working People".

Human Assist Applications

PAW Series
Powerful Arm

FAW Series
Flex Arm

CAW Series
Compact Arm

SAW Series
Support Arm

Selectable for various situations

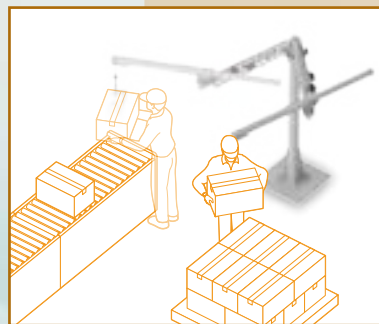
FAW Series

Flex Arm

FAW Series

Flexible installation for
work in low-ceiling areas

Catalog No. CC-1615AA



Application ▶ P. 7



Click!

Payload
up to **50kg**

* Including weight of
attachmentMulti-
functional

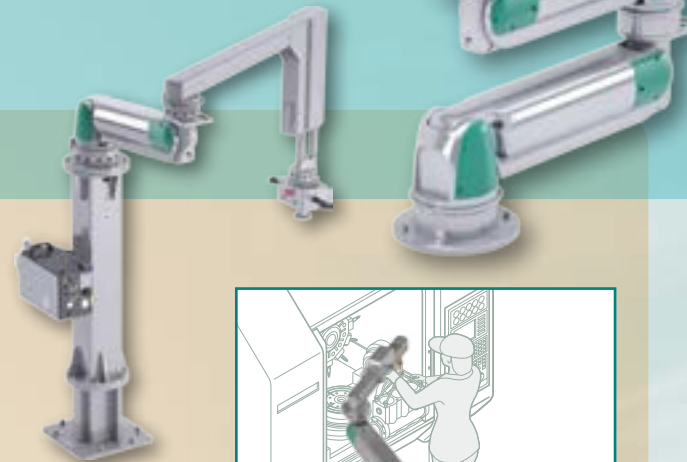
PAW Series

PowerArm

PAW Series

High rigidity and compactness for
complex tasks such as inverting

Catalog No. CC-1418AA



Click!

Application ▶ P. 1

Payload
up to **115kg**

* Varies depending on the
combination. Including
weight of attachment.

SAW Series

Support Arm

SAW Series

For heavier workpiece transfer tasks

Catalog No. LN-007AA



Application ▶ P. 17

* Japan only release

Payload
up to **130kg**

* Including weight of
attachmentLow
PayloadHigh
Payload

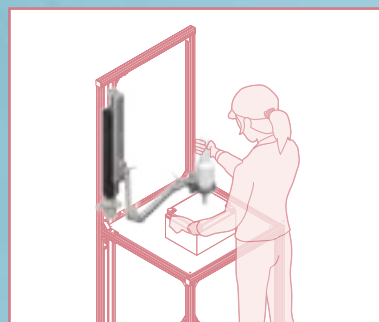
CAW Series

Compact Arm

CAW Series

Easy one-handed operation
for repetitive tool work

Catalog No. CC-1613AA



Application ▶ P. 12



Click!

Payload
up to **15kg**

* Including weight of
attachment

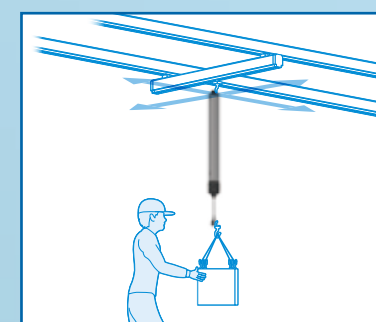
Simple

Balance Cylinder

BBS Series

Simple and highly safe,
can be installed on any
customer equipment

Catalog No. LN-011AA



Application ▶ P. 18



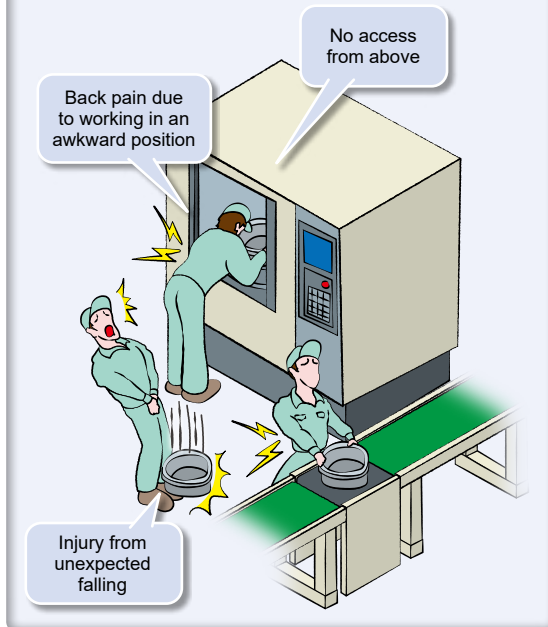
Click!

Payload
up to **190kg**

* Please consult us
if a larger payload
is required

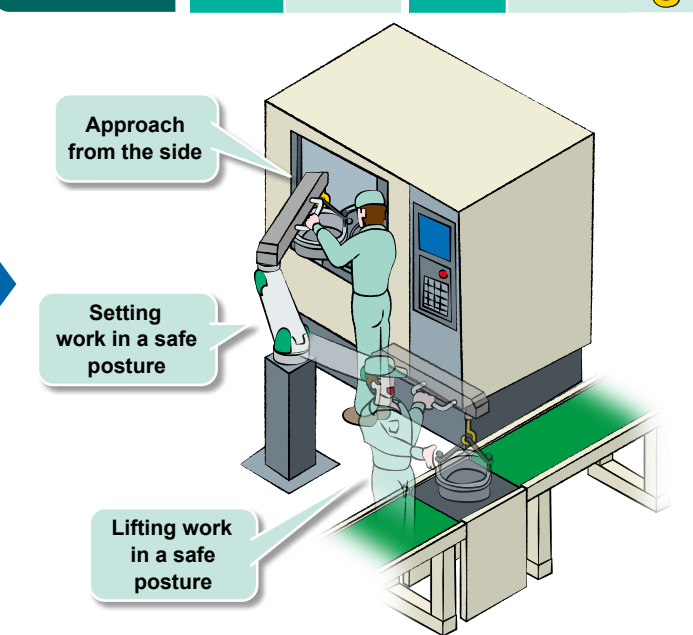
Case 01 Workpiece setting on a processing machine Machine Tool

Before



After

Axis Configuration	Extension + ø100	Attachment	Hook
--------------------	------------------	------------	------



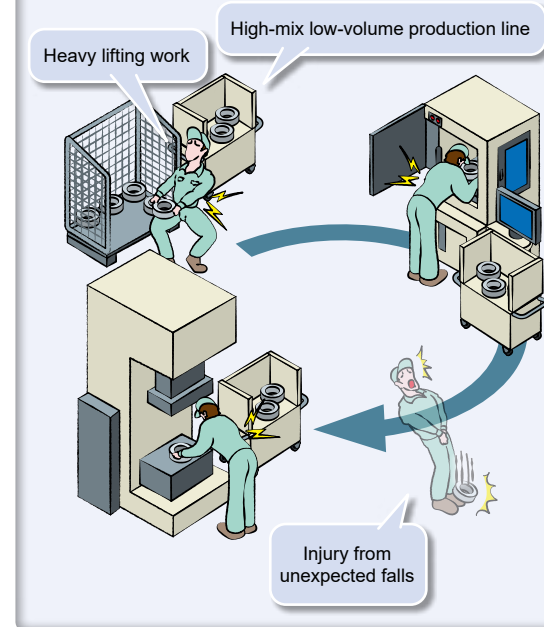
Workpiece Weight	30 kg
Frequency of Use	60 times/day

Point

Access from the side Back pain prevention

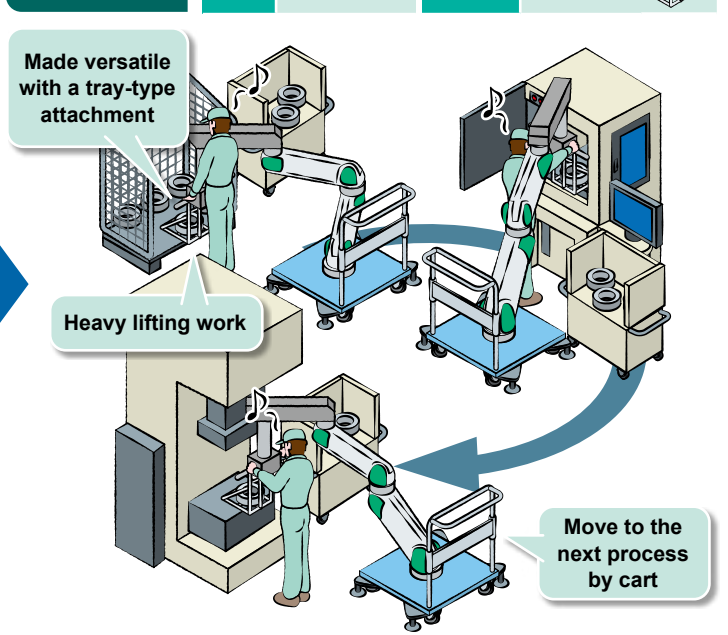
Case 03 Work assistance for multiple processes Machine Tool

Before



After

Axis Configuration	Extension + ø100 + ø125	Attachment	Tray with rollers
--------------------	-------------------------	------------	-------------------



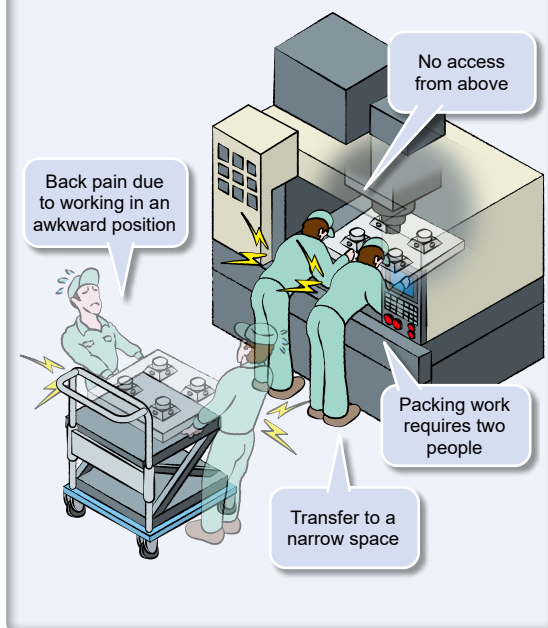
Workpiece Weight	30 kg
Frequency of Use	3 cycles/day

Point

Movement by cart Safety Measures
Made versatile with an attachment

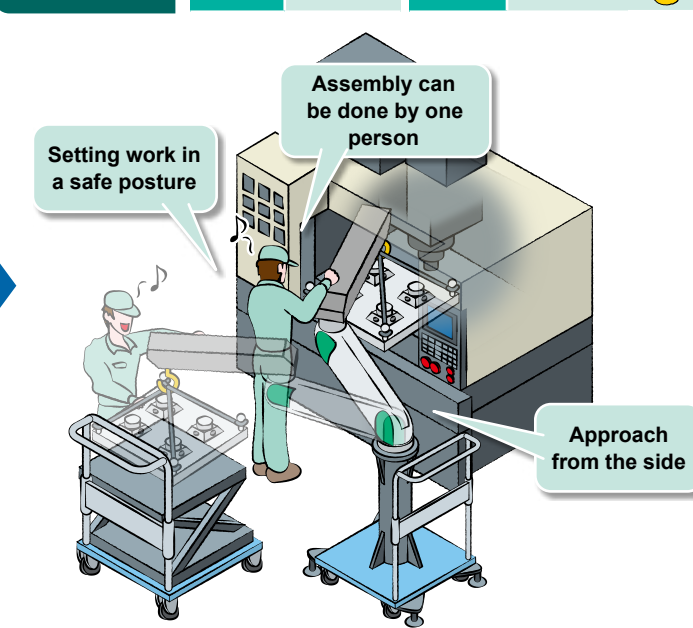
Case 02 Fixture changeover for a Vertical Machining Center Machine Tool

Before



After

Axis Configuration	Extension + ø100	Attachment	Hook
--------------------	------------------	------------	------



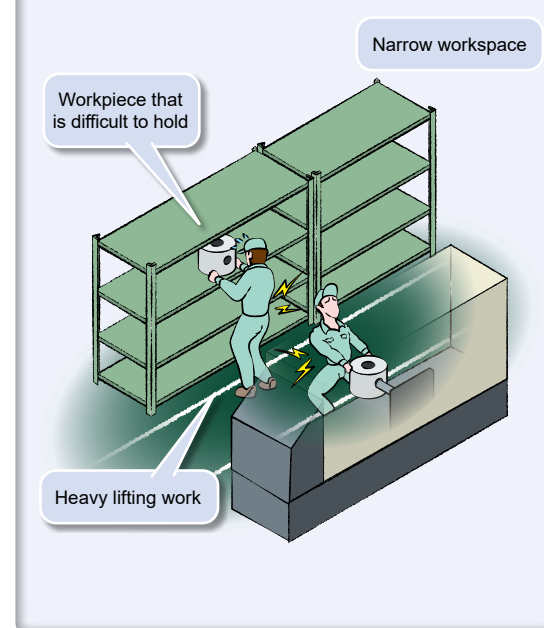
Workpiece Weight	30 kg
Frequency of Use	3 times/day

Point

Access from the side Back pain prevention Labor Saving

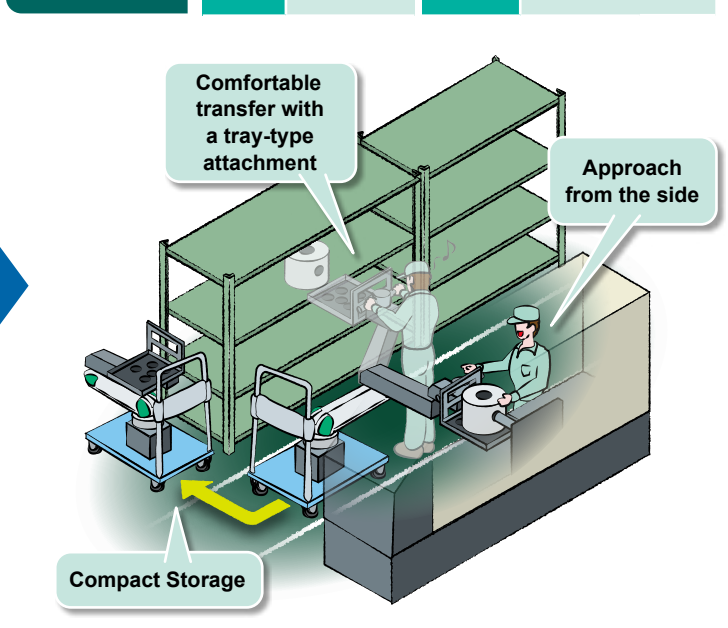
Case 04 Workpiece setting in a narrow workspace Other Manufacturing Industries

Before



After

Axis Configuration	Extension + ø100	Attachment	Tray with rollers
--------------------	------------------	------------	-------------------



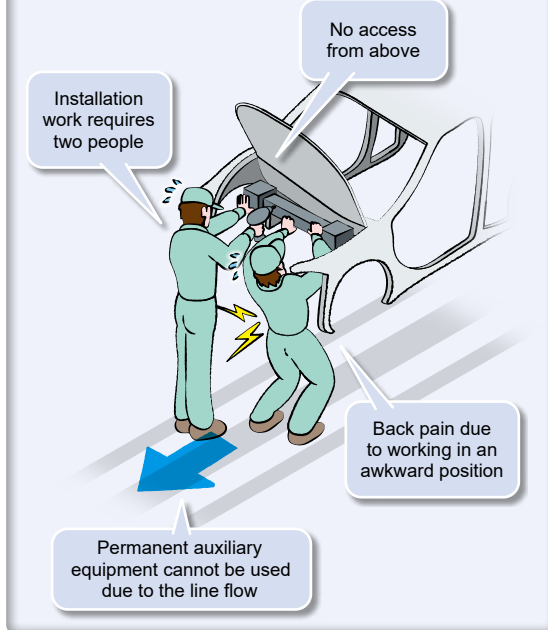
Workpiece Weight	20 kg
Frequency of Use	20 times/day

Point

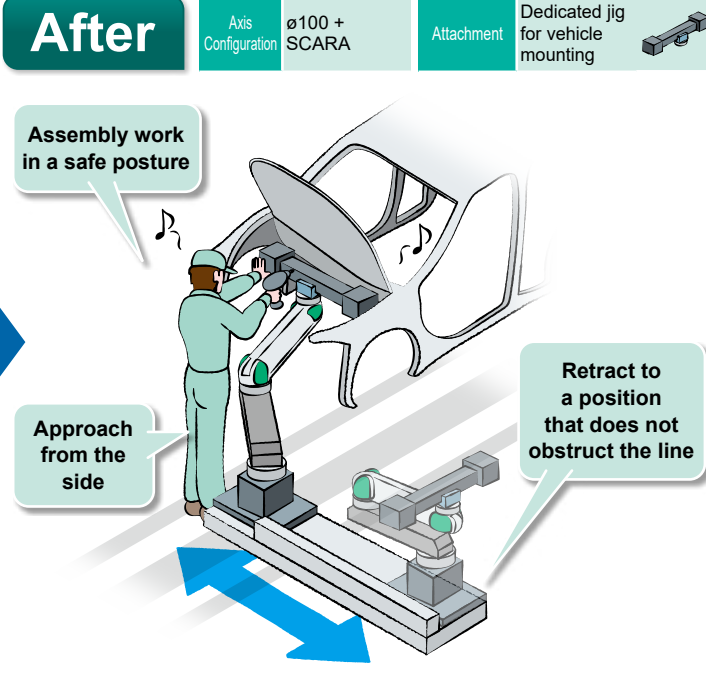
Movement by cart Compact Narrow Space

Case 05 Assistance for automotive parts assembly work Automotive

Before



After



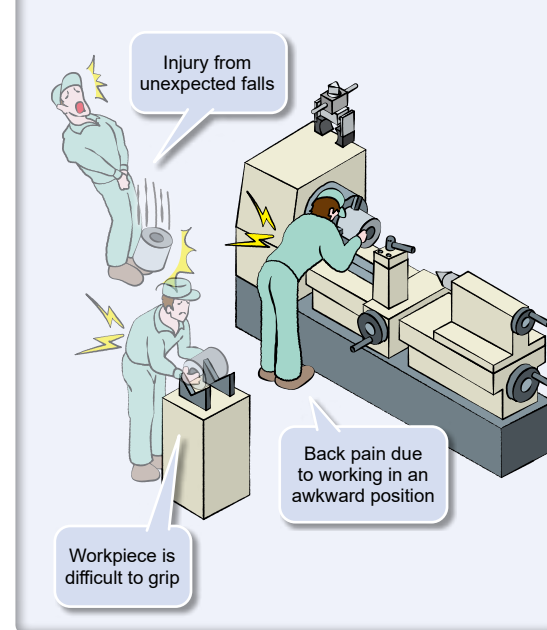
Workpiece Weight 40 kg
Frequency of Use 300 times/day

Point

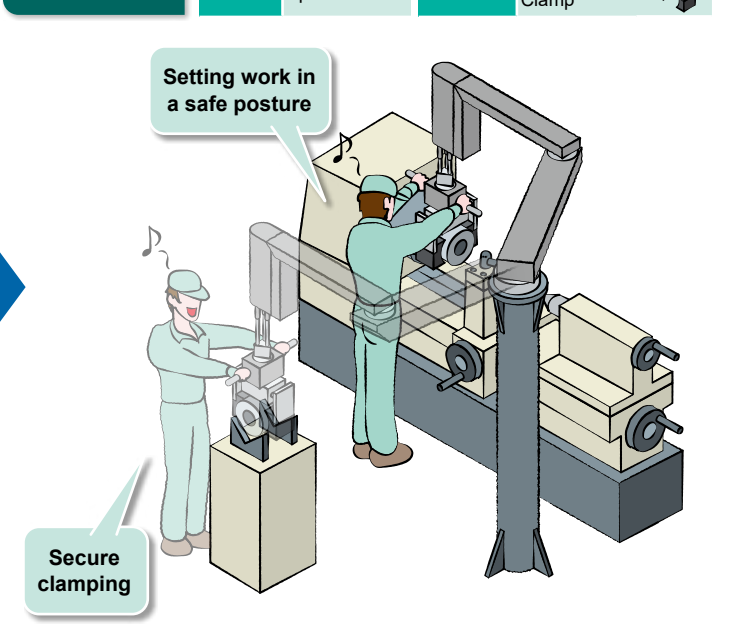
Access from the side
Back pain prevention
Compact
Labor Saving

Case 07 Setting of round bar workpiece on a lathe Machine Tool

Before



After



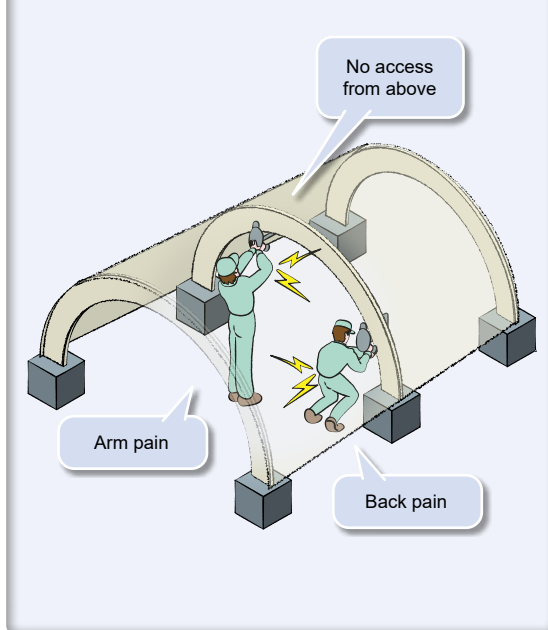
Workpiece Weight 20 kg
Frequency of Use 30 times/day

Point

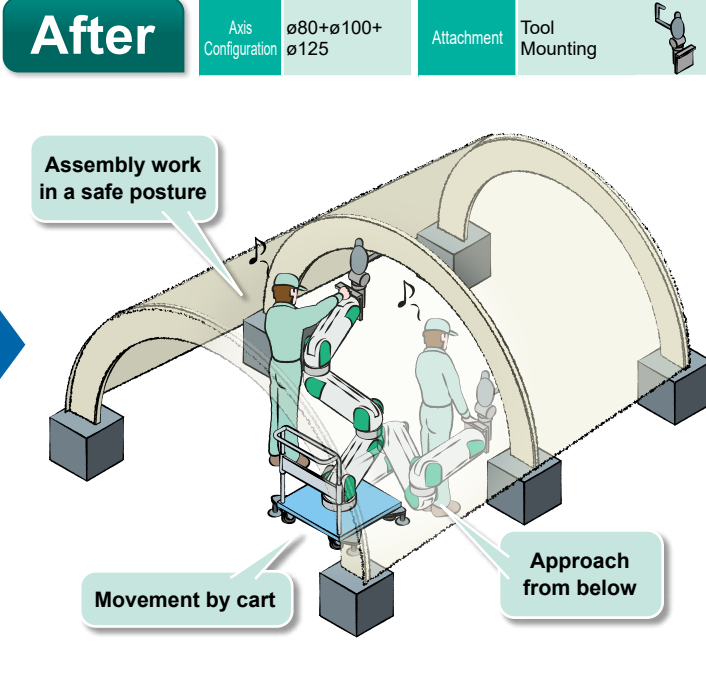
Safety Measures
Back pain prevention

Case 06 Work assistance in a low-ceiling space Aircraft

Before



After



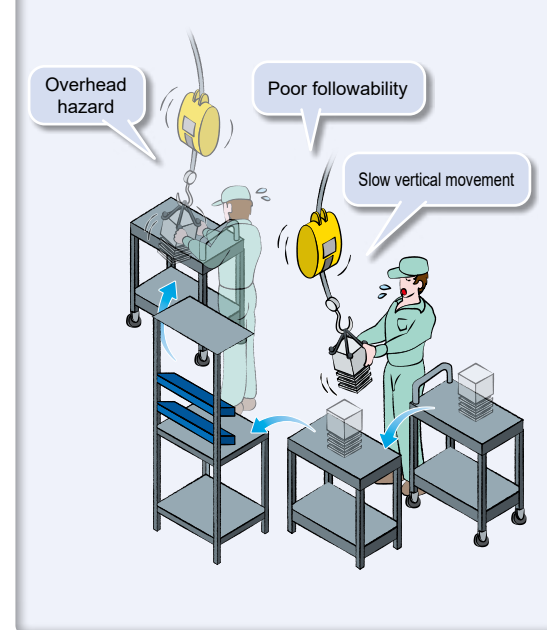
Workpiece Weight 20 kg
Frequency of Use 8 hours/day

Point

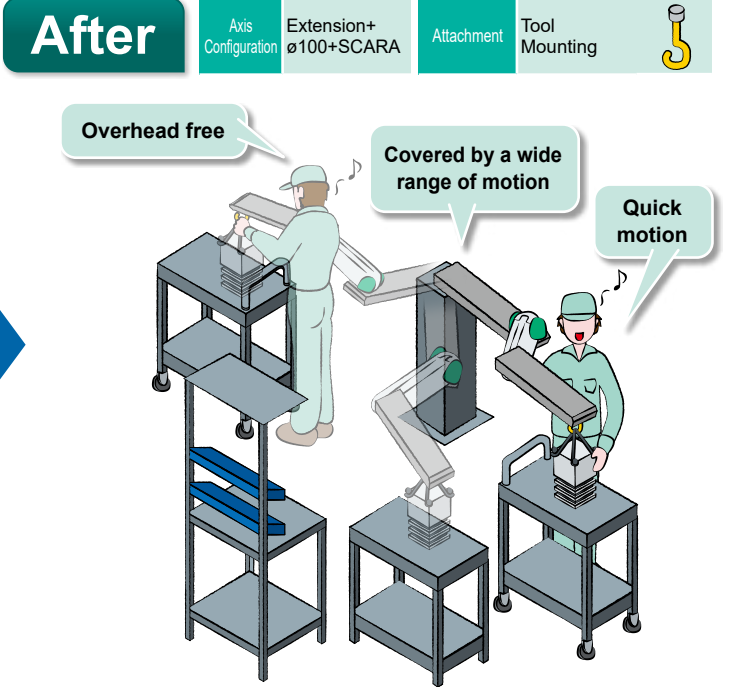
Work posture improvement
Movement by cart
Access from below

Case 08 Inter-process transfer during parts assembly Other Manufacturing Industries

Before



After



Workpiece Weight 50 kg
Frequency of Use 5 times/day

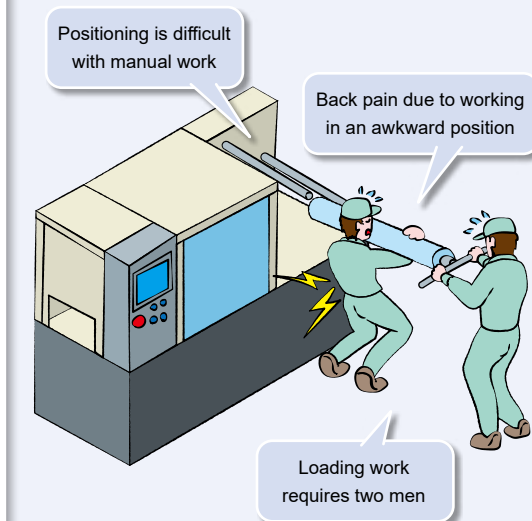
Point

Safety Measures
Improved work efficiency
Wide range of motion

Case 09 Loading packaging film rolls

Food

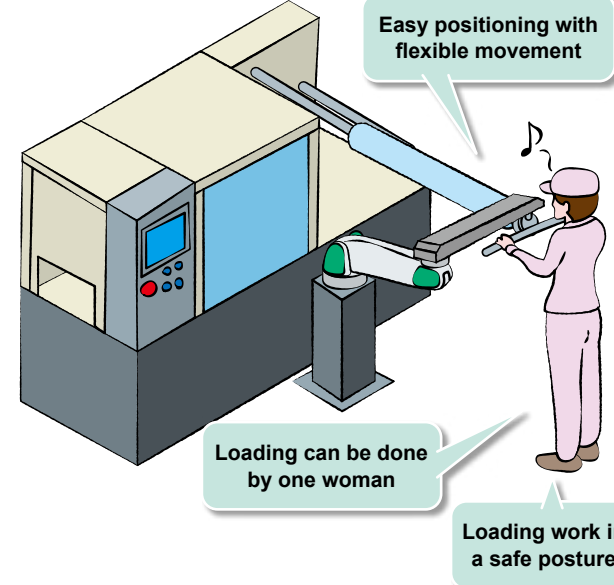
Before



Workpiece Weight 30 kg
Frequency of Use 5 times/day

After

Axis Configuration Extension + $\phi 125$ Attachment Roll Inner Diameter Clamp



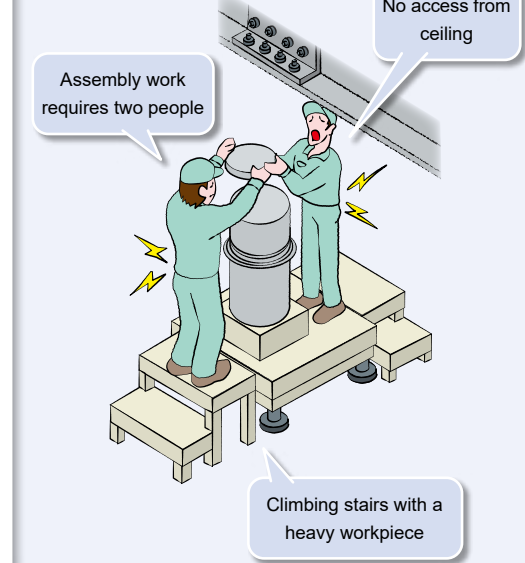
Point

Labor Saving Back pain prevention Diversity

Case 11 Assistance for parts assembly at heights

Precision Machinery

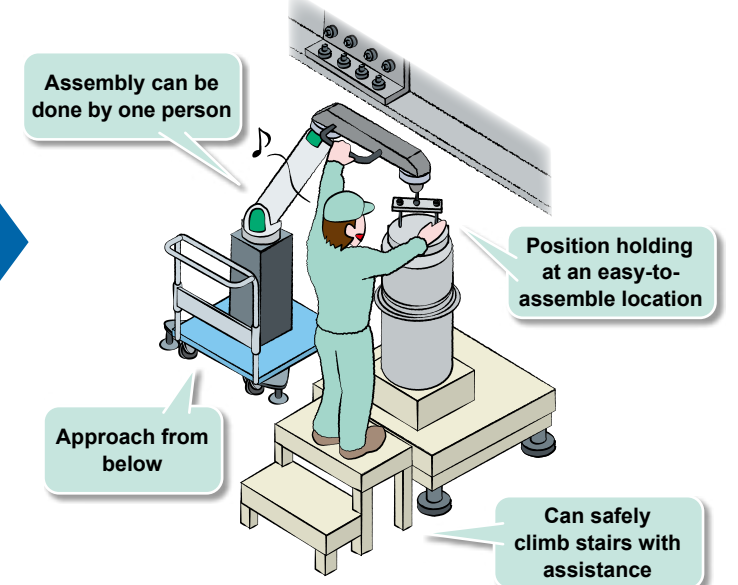
Before



Workpiece Weight 30 kg
Frequency of Use 5 times/day

After

Axis Configuration Extension + $\phi 125$ Attachment Hook



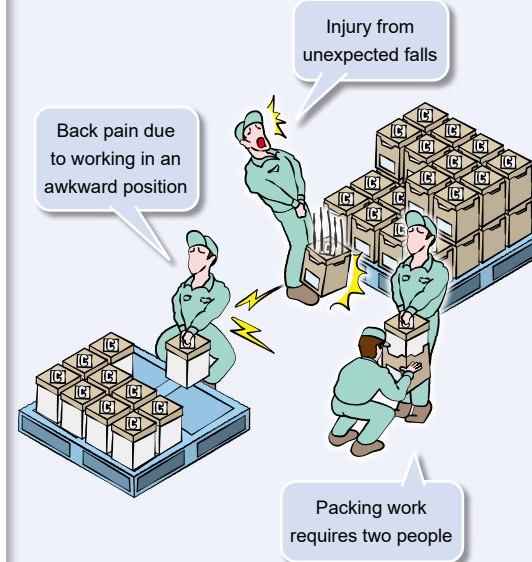
Point

Labor Saving Safety Measures Improved work efficiency

Case 10 Cardboard curing during 18-liter can transfer

Food

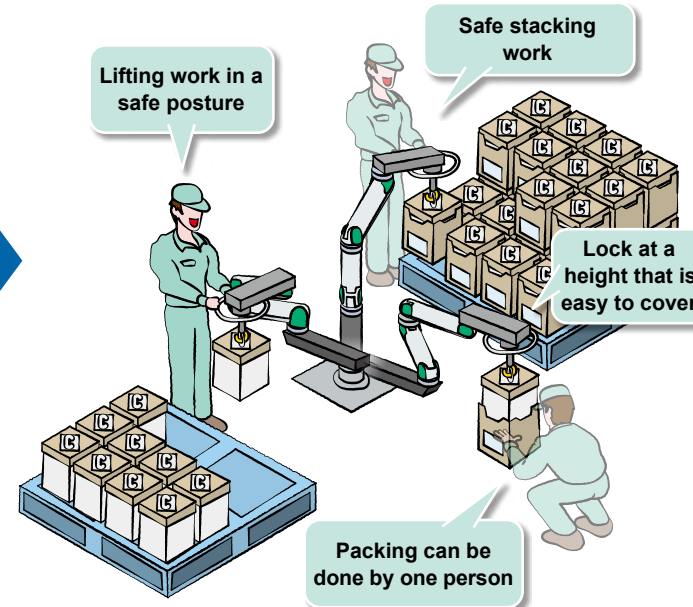
Before



Workpiece Weight 20 kg
Frequency of Use 300 cans/week

After

Axis Configuration $\phi 80 + \phi 100 +$ SCARA Attachment Hook



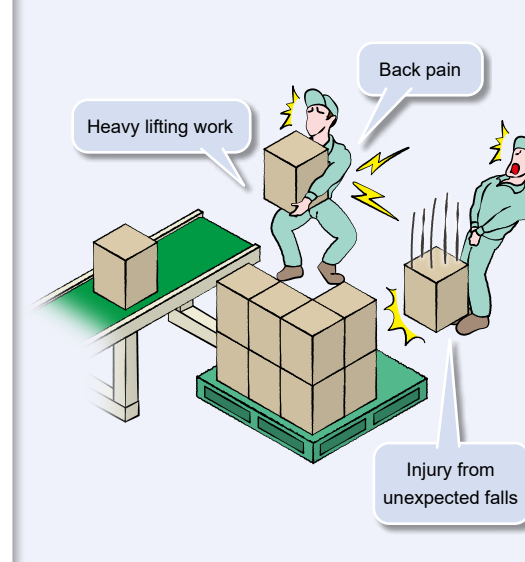
Point

Labor Saving Safety Measures Back pain prevention

Case 12 Transfer from conveyor to pallet

Food

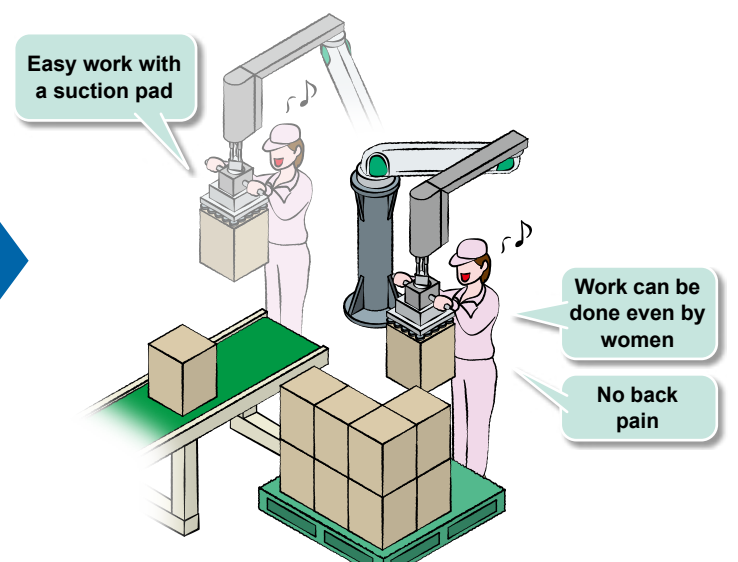
Before



Workpiece Weight 30 kg
Frequency of Use 100 times/day

After

Axis Configuration Palletizing Specification Attachment Suction Pad

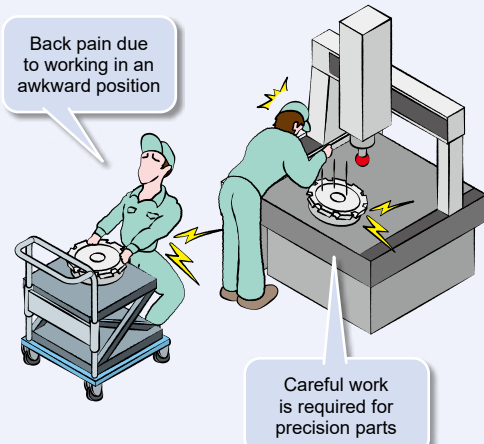


Point

Diversity Safety Measures Back pain prevention

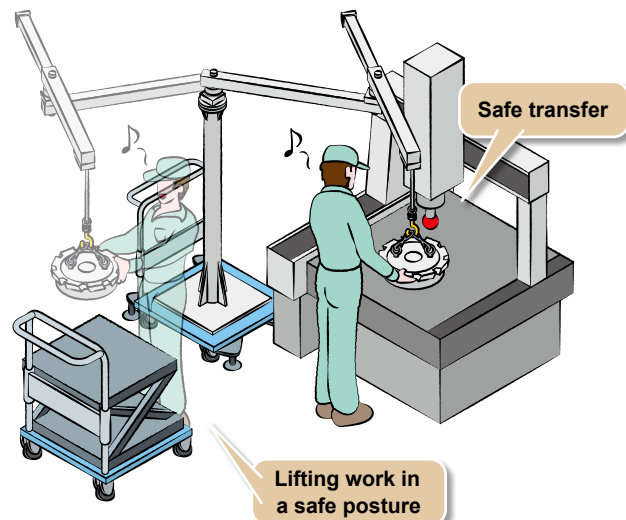
Case 13 Face milling cutter inspection process Machine Tool

Before



After

Mounting Method Pallet Fixed Attachment Wire



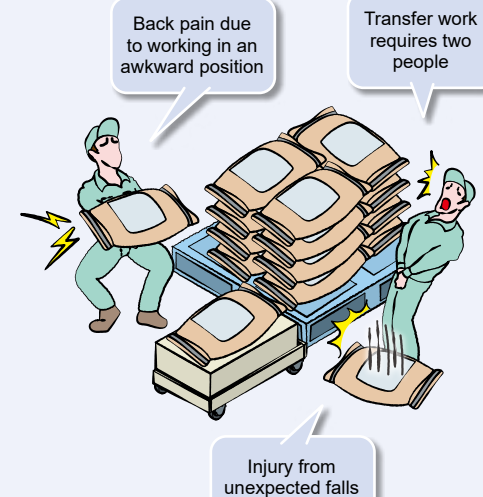
Workpiece Weight 20 kg
Frequency of Use 20 times/day

Point

Balancing motion Pallet Fixed Safety Measures

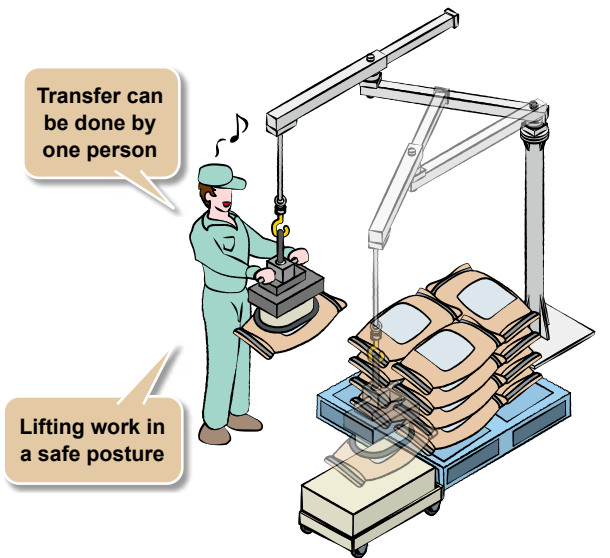
Case 15 Palletizing of Kraft Bags Chemical

Before



After

Mounting Method Floor Fixed Attachment Dedicated Vacuum Suction for Kraft Bags



Workpiece Weight 20 kg
Frequency of Use 80 times/day

Point

Back pain prevention Labor Saving

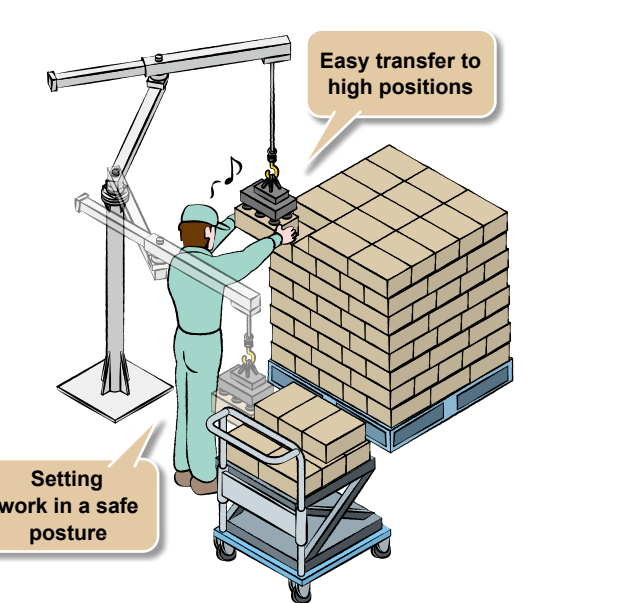
Case 14 Cardboard shipping process Food

Before



After

Mounting Method Floor Fixed Attachment Vacuum Suction Unit for Cardboard



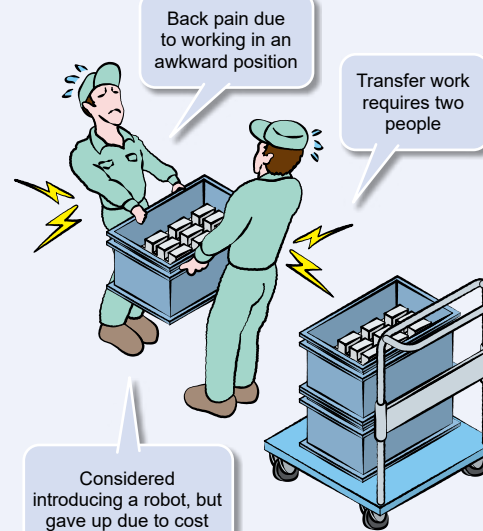
Workpiece Weight 12 kg
Frequency of Use 50 times/day

Point

Diversity High place support Back pain prevention

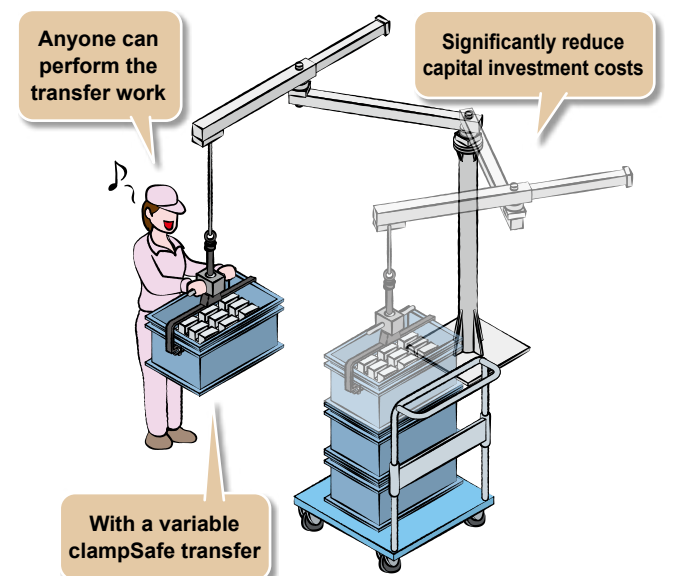
Case 16 Container (Banju) shipping process Food

Before



After

Mounting Method Floor Fixed Attachment Dedicated Clamp for Containers



Workpiece Weight 15 kg
Frequency of Use 30 times/day

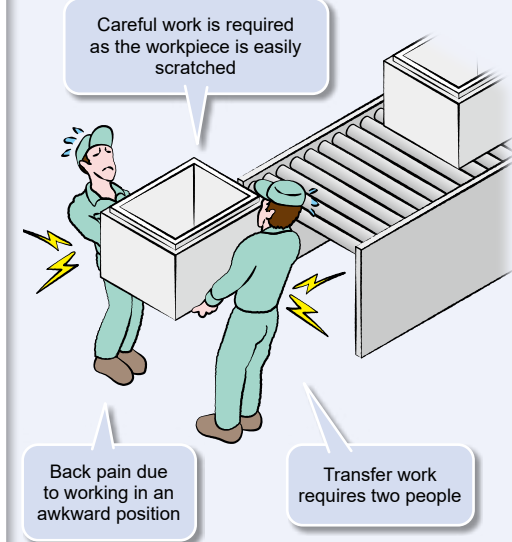
Point

Capital investment reduction Variable Clamp Easy Operation

Case 17 Styrofoam transfer

Other Manufacturing Industries

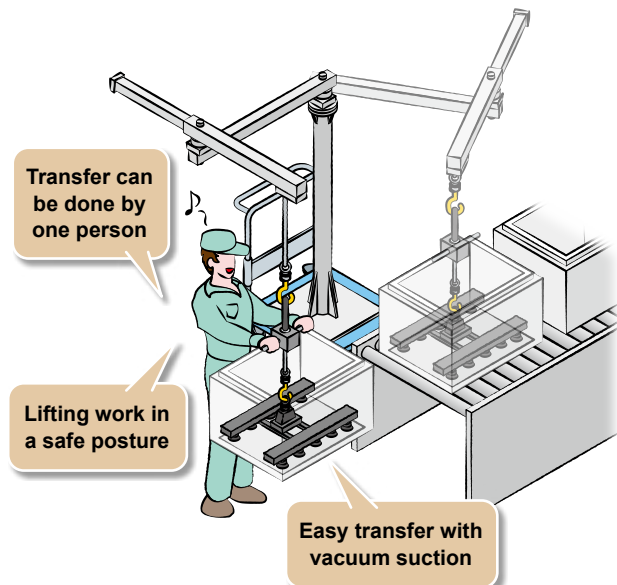
Before



Workpiece Weight 25 kg
Frequency of Use 10 times/day

After

Mounting Method Pallet Fixed Attachment Dedicated Vacuum Suction



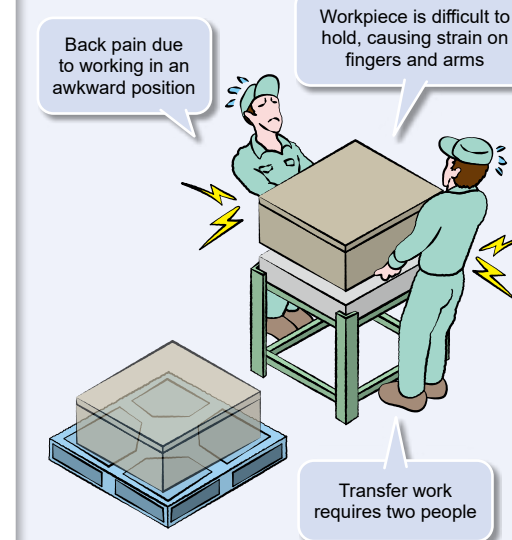
Point

Safety Measures Subsidy Target

Case 19 Control box parts transfer

Electrical Machinery

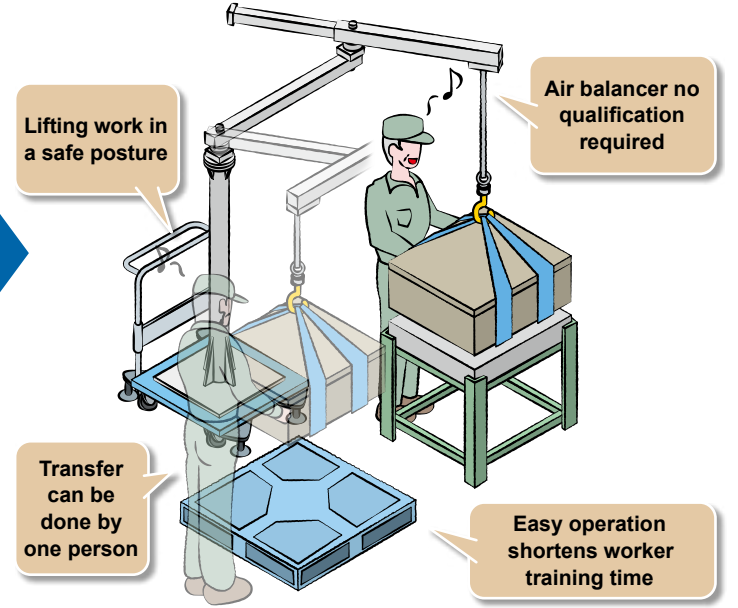
Before



Workpiece Weight 20 kg
Frequency of Use 5 times/day

After

Mounting Method Pallet Fixed Attachment Sling Belt



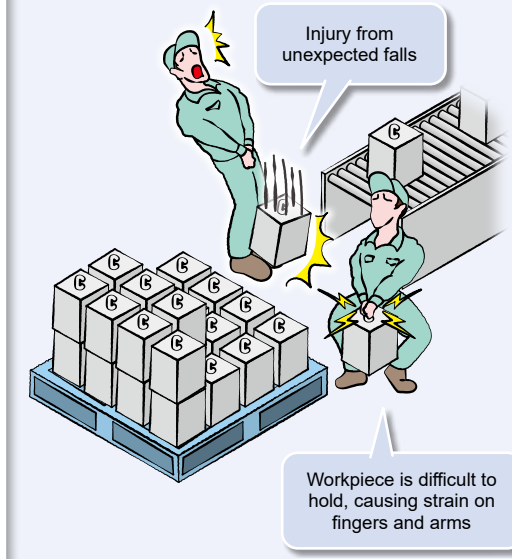
Point

Balancing motion Capital investment reduction Easy Operation

Case 18 18-liter can shipping process

Chemical

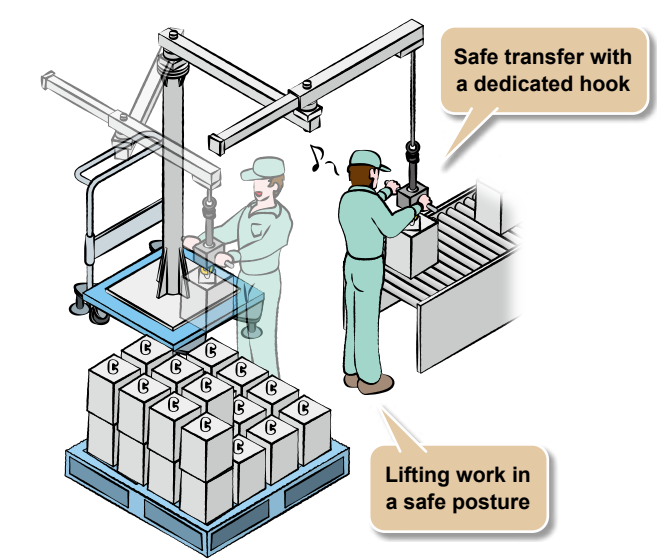
Before



Workpiece Weight 22 kg
Frequency of Use 80 times/day

After

Mounting Method Pallet Fixed Attachment Dedicated Hook for 18-liter Cans



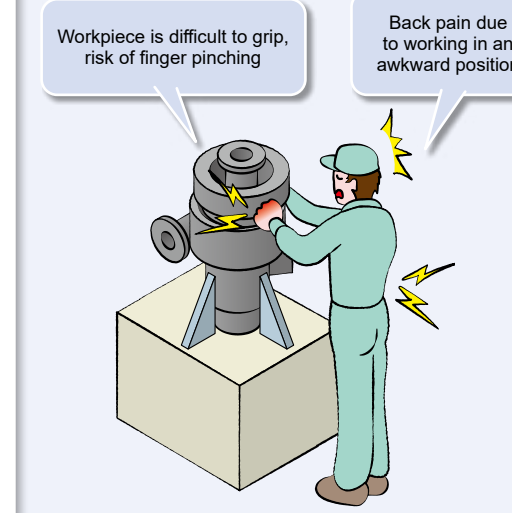
Point

Labor Saving Reduced strain on fingers
Back pain prevention Easy Operation

Case 20 Pump assembly assistance

Machinery and Equipment

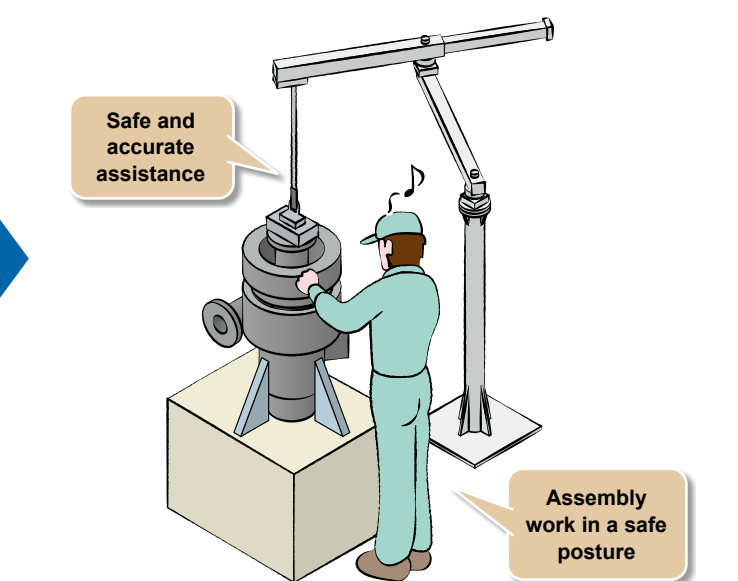
Before



Workpiece Weight 30 kg
Frequency of Use 10 times/day

After

Mounting Method Floor Fixed Attachment Lifting Magnet



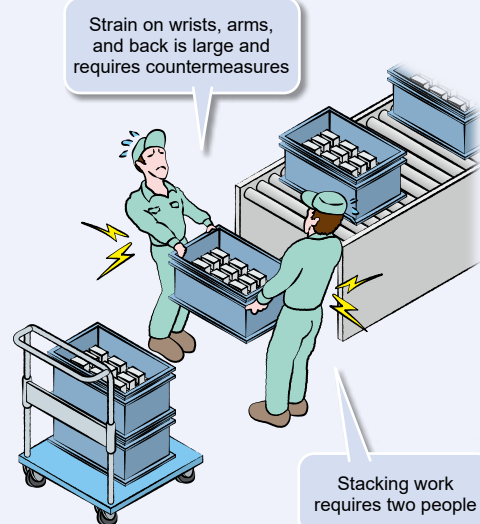
Point

Pinch prevention Back pain prevention

Case 21 Container shipping work

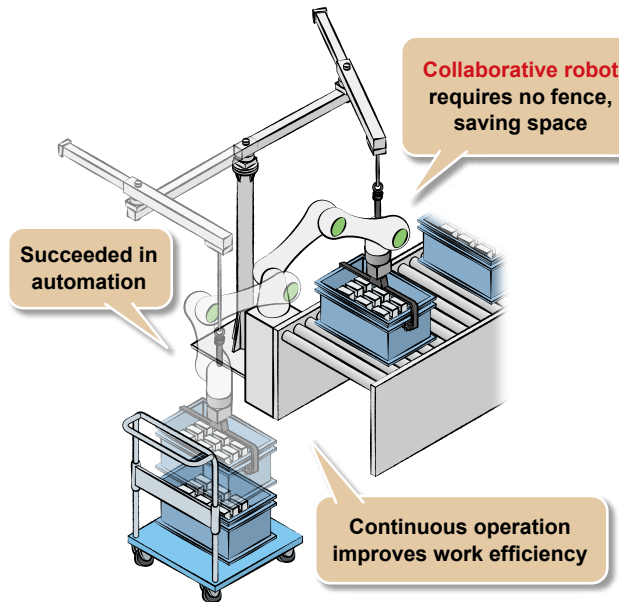
Other Manufacturing Industries

Before



After

Mounting Method Floor Fixed Attachment Dedicated Clamp for Containers



Workpiece Weight 30 kg
Frequency of Use 50 times/day

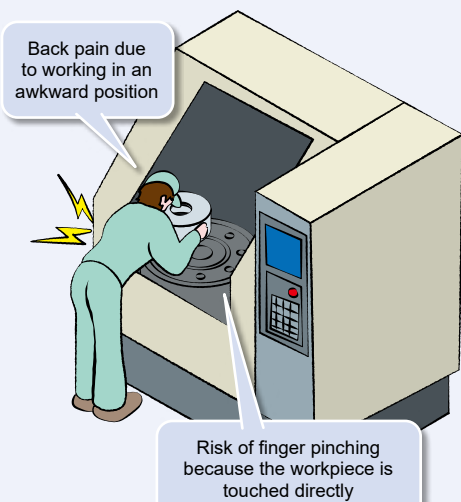
Point

Unmanned Operation Space Saving Mobile Type

Case 22 Input of metal parts

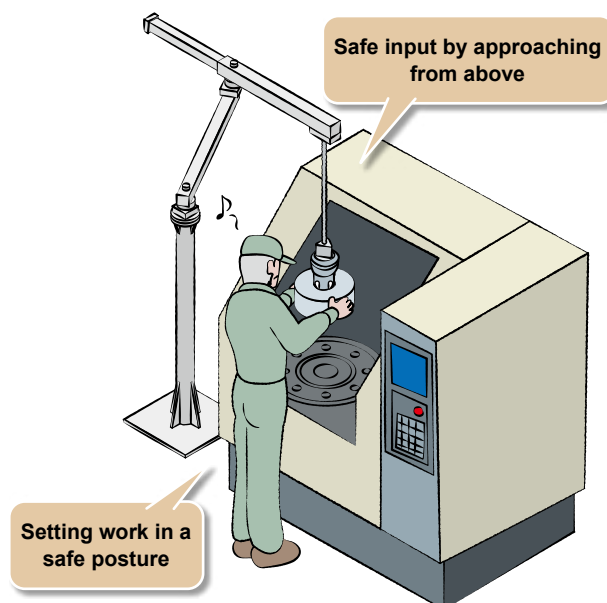
Machine Tool

Before



After

Mounting Method Floor Fixed Attachment Inner Diameter Chuck



Workpiece Weight 15 kg
Frequency of Use 20 times/day

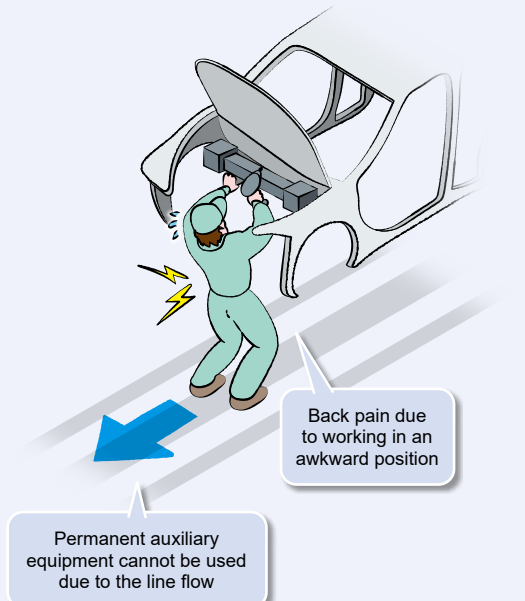
Point

Back pain prevention Safety Measures

Case 23 Screw tightening on an automobile assembly line

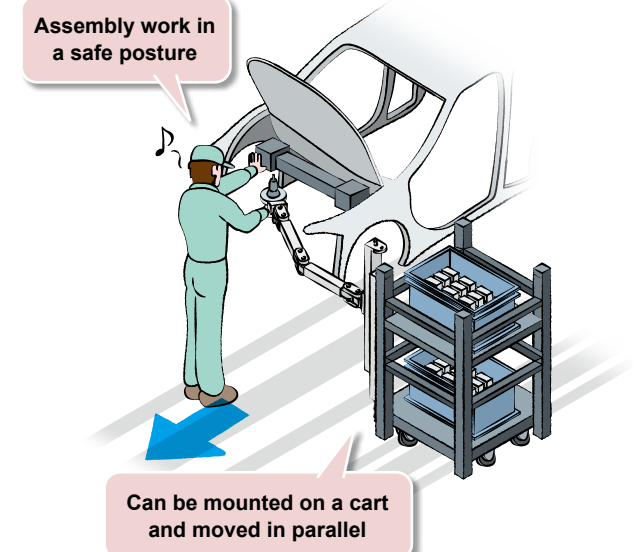
Automotive

Before



After

Axis Configuration Low Payload Model (5 kg spec) Tool Oil Pulse Wrench



Workpiece Weight 2 kg
Frequency of Use 60 times/day

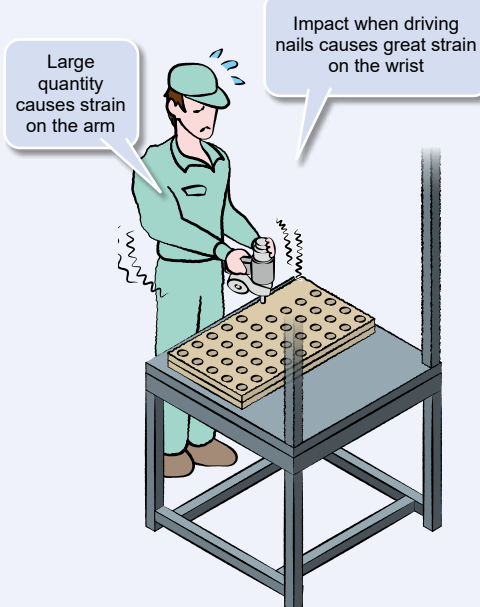
Point

Posture Improvement Back pain prevention Vibration Suppression

Case 24 Nailing Machine Completion Test

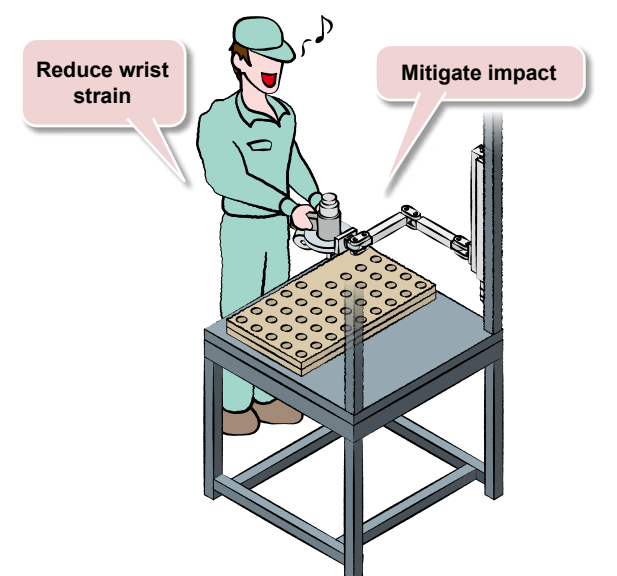
Machinery and Equipment

Before



After

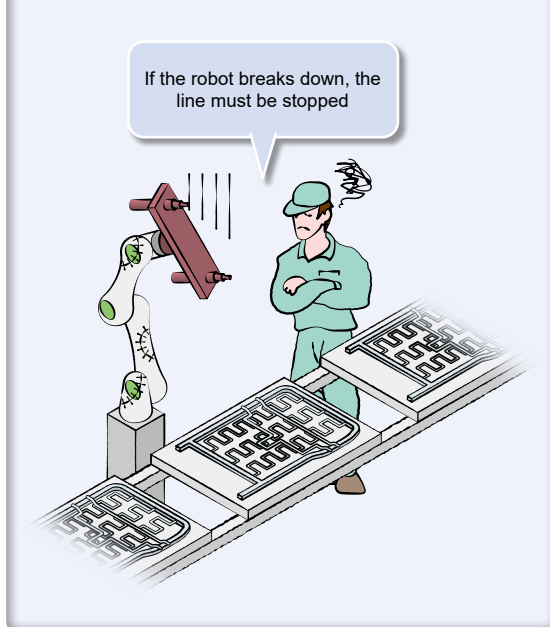
Axis Configuration Low Payload Model (5 kg spec) Tool Nailing Machine



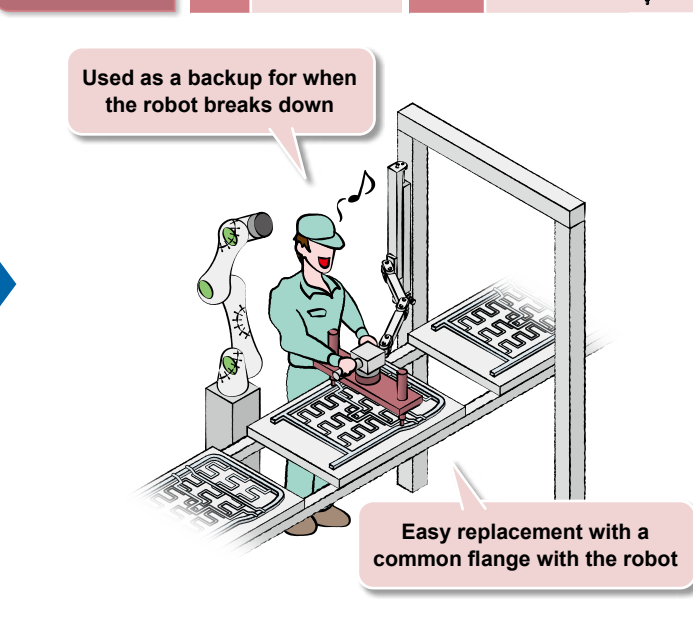
Workpiece Weight 2 kg
Frequency of Use 50 times/day

Point

Wrist Protection Vibration Suppression

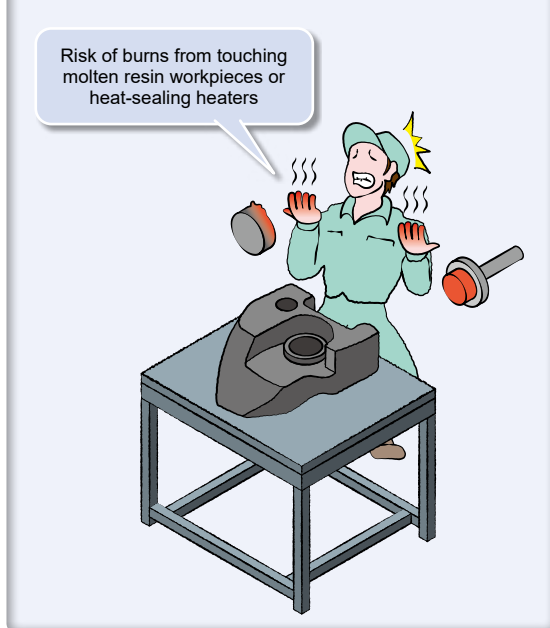
Case 25 Backup for automotive seat assembly process **Automotive****Before****After**

Axis Configuration High Load Model (15 kg spec) Tool Riveter Unit

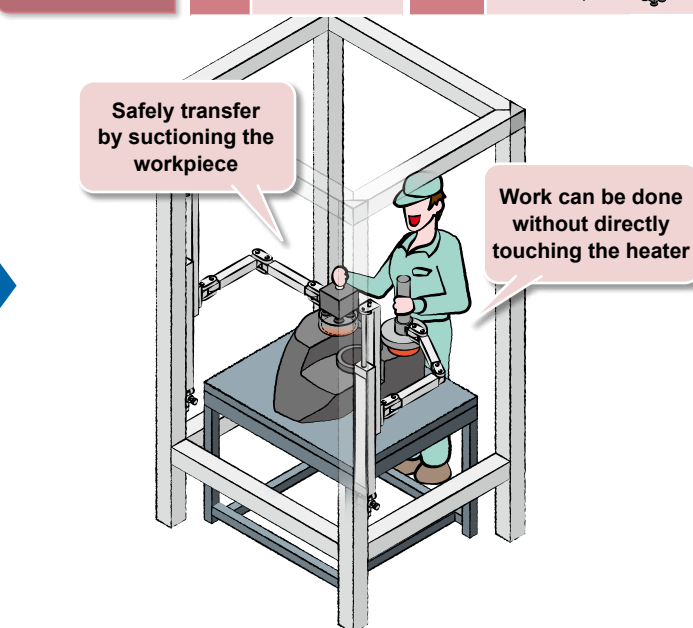


Workpiece Weight 7 kg
Frequency of Use For Backup

Point For Backup Compact Vertical Motion

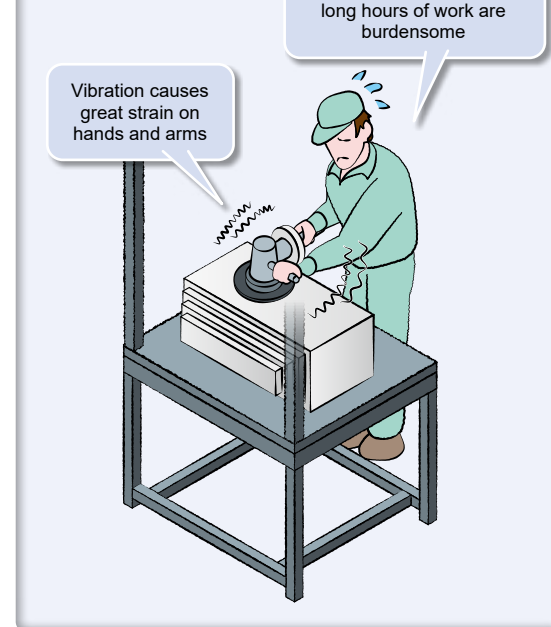
Case 26 Automotive fuel tank assembly process **Automotive****Before****After**

Axis Configuration High Load Model (15 kg spec) Tool Heater Unit Resin Workpiece

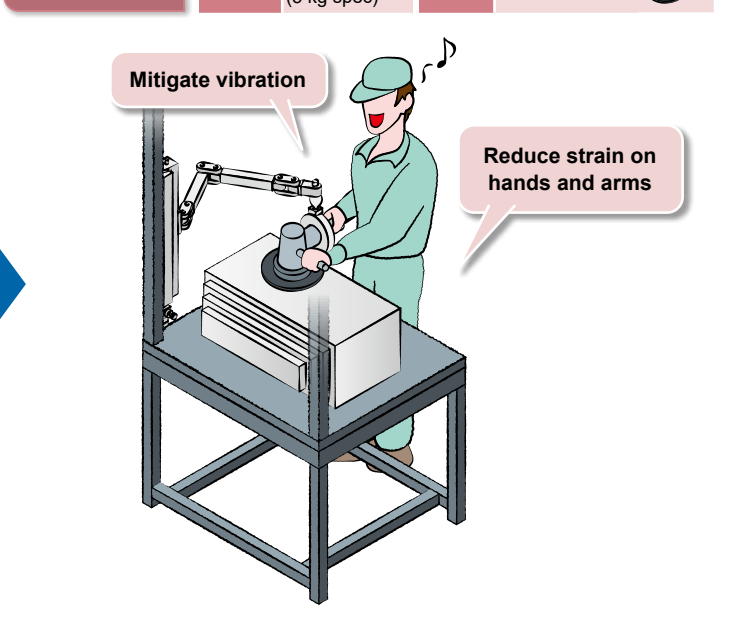


Workpiece Weight 8 kg
Frequency of Use 50 times/day

Point Burn prevention Compact

Case 27 Grinding and polishing of metal parts **Metal Products****Before****After**

Axis Configuration Low Payload Model (5 kg spec) Tool Air Grinder

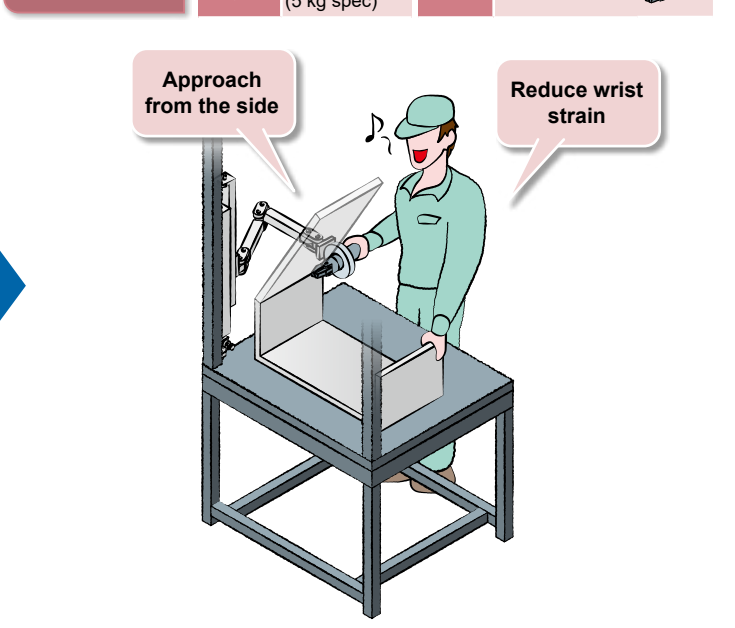


Workpiece Weight 2 kg
Frequency of Use 5 hours/day

Point Vibration Suppression Suppression of grip strength decline Safety Measures

Case 28 Metal parts cutting **Metal Products****Before****After**

Axis Configuration Low Payload Model (5 kg spec) Tool Air Nipper



Workpiece Weight 1.5 kg
Frequency of Use 3 hours/day

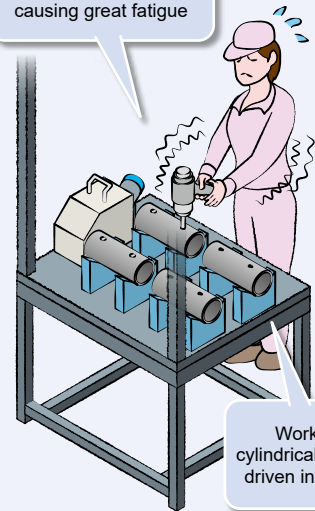
Point Reaction Force Suppression Safety Measures

Case 29 Motorcycle parts manufacturing

Automotive

Before

Riveting is done several hundred times a day, causing great fatigue



Workpiece is cylindrical and may be driven in at an angle

After

Axis Configuration

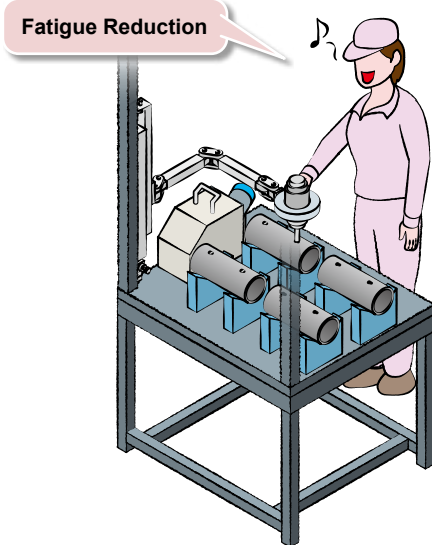
Low Payload Model
(5 kg spec)

Tool

Riveter



Fatigue Reduction



Stable operation reduces mistakes

Workpiece Weight 2 kg
Frequency of Use 100 times/day

Point

Vertical Motion

Weight Reduction

Case 30 Submersible pump cleaning work

Machinery and Equipment

Before

Needle scaler vibration is large, requiring a changeover in half a day

Fatigue is great due to the weight of the needle scaler



After

Axis Configuration

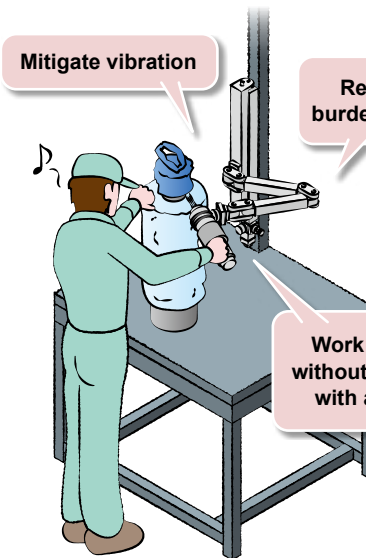
Low Payload Model
(5 kg spec)

Tool

Needle Scaler



Mitigate vibration



Reduce the burden of weight

Work can be done without slowing down with a rotating jig

Workpiece Weight 2 kg
Frequency of Use 8 hours/day

Point

Vibration Suppression

Free Motion

Work environment improvement

Case 31 Circuit board assembly process

Electronics

Before

Move for each assembly



Light workpiece, but requires several hundred operations per day

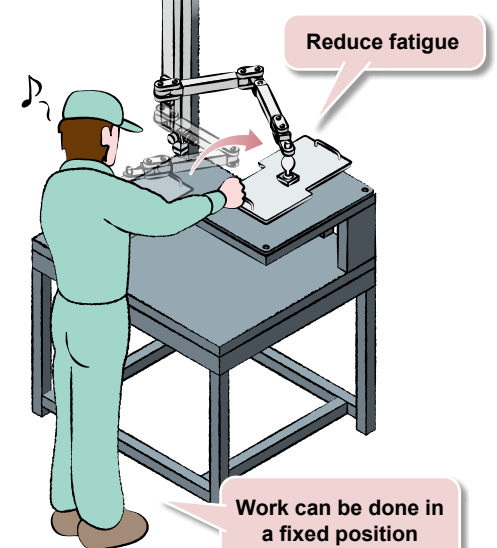
After

Axis Configuration

Low Payload Model
(5 kg spec)

Tool

Dedicated Weight



Reduce fatigue

Work can be done in a fixed position

Workpiece Weight 1 kg
Frequency of Use 100 times/day

Point

Repetitive work reduction

Wrist Protection

Case 32 Fixed-volume injection into a pail can

Pharmaceutical

Before

If the nozzle is not inserted vertically into the pail can, metal powder will be mixed in.



External pressure from piping puts a strain on arms and back

After

Axis Configuration

High Payload Model
(15 kg spec)

Tool

Nozzle + Piping



Approach vertically

Reduce external pressure and weight from piping

Workpiece Weight 12 kg
Frequency of Use 8 hours/day

Point

Quality Stability

Arm Lock

Case 33 Roll change for packaging machine Pharmaceutical

Before

After

Axis Configuration: Standard Model Attachment: Roll Inner Diameter Clamp

Workpiece Weight	100 kg
Frequency of Use	4 times/month

Point Posture Improvement Labor Saving Safety Measures

Case 35 Loading parts into a cleaning tank Metal Products

Before

After

Axis Configuration: ø50 to 500 Stroke Wire

Workpiece Weight	30 kg
Frequency of Use	5 times/day

Point Process Reduction Labor Saving Safety Measures

Case 34 Workpiece transfer to a processing machine Machine Tool

Before

After

Axis Configuration: Custom arm length model Attachment: Hook

Workpiece Weight	100 kg
Frequency of Use	4 times/month

Point Posture Improvement Labor Saving Safety Measures

Case 36 Automotive parts transfer Automotive

Before

After

Axis Configuration: ø63-800 stroke with fall prevention Dedicated Jig

Workpiece Weight	20 kg
Frequency of Use	20 times/day

Point Capital investment reduction Easy Operation

Human Assist Applications

Related Products

Air Booster ABP Series

- High-pressure air up to twice the primary pressure (equivalent) is possible without electricity
- Compact design, flexible installation
- Total cost reduction is possible for the entire factory



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Portable Air Supply Unit Limited to Japan

- Easy to carry
It is shaped like a carrying case, so anyone can easily carry it
- Supplies clean air
Compressed air is cooled by an aftercooler.
Supplies clean air with drain and foreign matter removed
- Continuous use possible
Improves heat dissipation around the pump and suppresses temperature rise during long-term use



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Precision Regulator RP1000/RP2000 Series

[RP1000 Series]

- Precise pressure control is possible in the pressure range of 0.003 to 0.4 MPa
- Compact size of □42 mm
- Energy-saving type with low air consumption
- Stable flow characteristics with small pressure drop



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[RP2000 Series]

- Compact size of □50 mm but with a large exhaust flow rate type
- High-precision pressure control is possible regardless of the flow rate from 0.03 to 0.85 MPa
- Stable flow characteristics with small pressure drop
- Low-friction packing is used for moving parts to achieve a long service life



Suction Pad Series

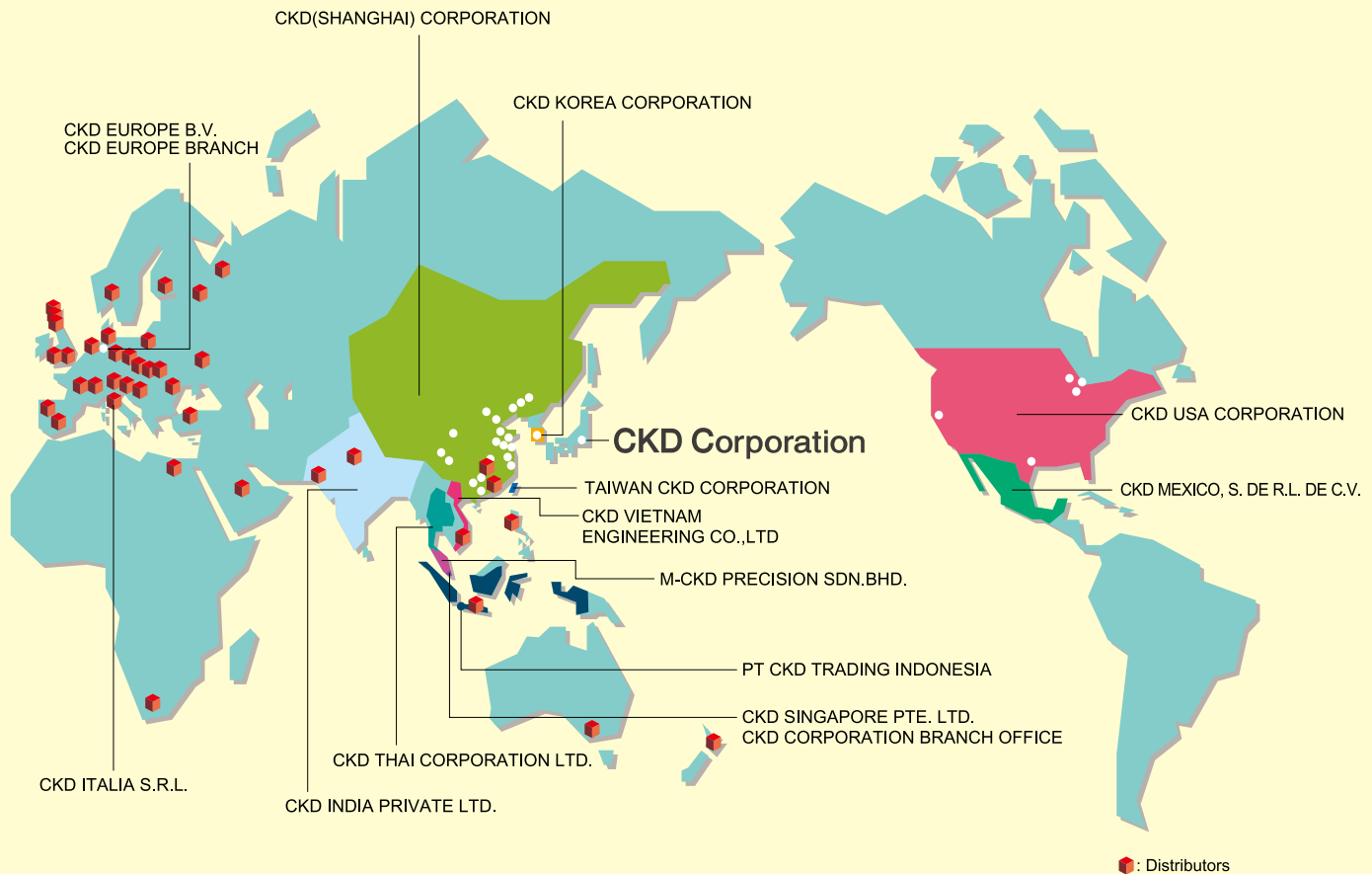
- A wide variety of variations are available to support all kinds of workpieces and diverse transfer environments
- A wide variety of materials, shapes, and pad diameters are available to match the workpiece size, weight, and characteristics.



Click!



For details, refer to "Model No." on the CKD Components website (<https://www.ckd.co.jp/kiki/en/>).



Red cube icon: Distributors

CKD Corporation

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ASIA

喜開理(上海)機器有限公司

CKD(SHANGHAI)CORPORATION

- 営業部/上海浦西事務所(SALES HEADQUARTERS / SHANGHAI PUXI OFFICE)
Room 612, 6th Floor, Yuanzhongkeyan Building, No. 1905
Hongmei Road, Xuhui District, Shanghai 200233, China
PHONE +86-21-60906046 FAX +86-21-60906046
- 上海浦東事務所(SHANGHAI PUDONG OFFICE)
- 寧波事務所(NINGBO OFFICE)
- 杭州事務所(HANGZHOU OFFICE)
- 無錫事務所(WUXI OFFICE)
- 昆山事務所(KUNSHAN OFFICE)
- 蘇州事務所(SUZHOU OFFICE)
- 南京事務所(NANJING OFFICE)
- 合肥事務所(HEFEI OFFICE)
- 成都事務所(CHENGDU OFFICE)
- 武漢事務所(WUHAN OFFICE)
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- 天津事務所(TIANJIN OFFICE)
- 青島事務所(QINGDAO OFFICE)
- 濰坊事務所(WEIFANG OFFICE)
- 濟南事務所(JINAN OFFICE)
- 烟台事務所(YANTAI OFFICE)

CKD INDIA PRIVATE LTD.

- HEADQUARTERS
Unit No. 607, 6th Floor, Welldone Tech Park, Sector 48,
Sohna Road, Gurgaon-122018, Haryana, India
PHONE +91-124-418-8212
- BANGALORE OFFICE
- PUNE OFFICE
- CHENNAI OFFICE
- MUMBAI OFFICE
- HYDERABAD OFFICE

- 2-250 Oujji, Komaki City, Aichi 485-8551, Japan
- PHONE +81-568-74-1338 FAX +81-568-74-1165

PT CKD TRADING INDONESIA

- HEAD OFFICE
Menara Bidakara 2, 18th Floor, Jl. Jend. Gatot Subroto Kav.
71-73, Pancoran, Jakarta 12870, Indonesia
PHONE +62-21-2938-6601 FAX +62-21-2906-9470
- MEDAN OFFICE
- BEKASI OFFICE
- KARAWANG OFFICE
- SEMARANG OFFICE
- SURABAYA OFFICE

CKD KOREA CORPORATION

- HEADQUARTERS
(3rd Floor), 44, Sinsu-ro, Mapo-gu, Seoul 04088, Korea
PHONE +82-2-783-5201~5203 FAX +82-2-783-5204
- 水原營業所(SUWON OFFICE)
- 天安營業所(CHEONAN OFFICE)
- 蔚山營業所(ULSAN OFFICE)

M-CKD PRECISION SDN.BHD.

- HEAD OFFICE
Lot No.6, Jalan Modal 23/2, Seksyen 23, Kawasan MIEL,
Fasa 8, 40300 Shah Alam, Selangor Darul Ehsan, Malaysia
PHONE +60-3-5541-1468 FAX +60-3-5541-1533
- JOHOR BAHRU BRANCH OFFICE
- PENANG BRANCH OFFICE

CKD SINGAPORE PTE. LTD.

- No.33 Tannery Lane #04-01 Hoesteel Industrial
Building, Singapore 347789, Singapore
PHONE +65-67442623 FAX +65-67442486

CKD CORPORATION BRANCH OFFICE

- No.33 Tannery Lane #04-01 Hoesteel Industrial
Building, Singapore 347789, Singapore
PHONE +65-67447260 FAX +65-68421022

CKD THAI CORPORATION LTD.

- HEADQUARTERS
19th Floor, Smooth Life Tower, 44 North Sathorn Road,
Silom, Bangrak, Bangkok 10500, Thailand
PHONE +66-2-267-6300 FAX +66-2-267-6304-5
- NAVANAKORN OFFICE
- EASTERN SEABOARD OFFICE
- LAMPHUN OFFICE
- KORAT OFFICE
- AMATANAKORN OFFICE
- PRACHINBURI OFFICE
- SARABURI OFFICE

台灣喜開理股份有限公司

TAIWAN CKD CORPORATION

- HEADQUARTERS
16F-3, No. 7, Sec. 3, New Taipei Blvd., Xinzhuang Dist.,
New Taipei City 242, Taiwan
PHONE +886-2-8522-8198 FAX +886-2-8522-8128
- 新竹營業所(HSINCHU OFFICE)
- 台中營業所(TAICHUNG OFFICE)
- 台南營業所(TAINAN OFFICE)
- 高雄營業所(KAOHSIUNG OFFICE)

CKD VIETNAM ENGINEERING CO.,LTD.

- HEADQUARTERS
18th Floor, CMC Tower, Duy Tan Street, Cau Giay
District, Hanoi, Vietnam
PHONE +84-24-3795-7631 FAX +84-24-3795-7637
- HO CHI MINH OFFICE

EUROPE

CKD EUROPE B.V.

- HEADQUARTERS
Beechavenue 125A, 1119 RB Schiphol-Rijk, the Netherlands
PHONE +31-23-554-1490
- CKD EUROPE GERMANY OFFICE
- CKD EUROPE UK
- CKD EUROPE CZECH O.Z.

CKD CORPORATION EUROPE BRANCH

- Beechavenue 125A, 1119 RB Schiphol-Rijk, the Netherlands
PHONE +31-23-554-1490

CKD ITALIA S.R.L.

- Via di Fibianna 15 Calenzano (FI) CAP 50041, Italy
PHONE +39 0558825359 FAX +39 0558827376

NORTH AMERICA & LATIN AMERICA

CKD MEXICO, S. DE R.L. DE C.V.

- Cerrada la Noria No. 200 Int. A-01, Querétaro Park II,
Parque Industrial Querétaro, Santa Rosa Jáuregui,
Querétaro, C.P. 76220, México
PHONE +52-442-161-0624

CKD USA CORPORATION

- HEADQUARTERS
1605 Penny Lane, Schaumburg, IL 60173, USA
PHONE +1-847-648-4400 FAX +1-847-565-4923
- LEXINGTON OFFICE
- SAN ANTONIO OFFICE
- SAN JOSE OFFICE/ TECHNICAL CENTER
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