

HIGASHIDA

THREAD ROLLING MACHINE

Founded in 1922, Higashida had supplied more than 12,000 machineries so far.

Higashida started manufacturing thread rolling machines in 1947 and ever since then, they have been always one of the top Japanese thread rolling machine manufacturers.



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MAX THREAD DIAMETER

MAX. THREAD DIAMETER

MODEL	SIZE
HR-XA	M2.6
HKR-B3	M4
HKR-C3	M6
HR-DM3	M8
HKR-E	M10
HR-FM	M12
HRG-H130	M16
HRH-H155	M20
HRI-H155	M24

FEATURES

- * High precision thread and form rolling are assured.
- * Rigidity has been remarkably improved to cope with various hard to roll products.
- * Simple and easy to handle.
- * A number of leading well known Japanese fasteners and parts manufacturers have been continuously and increasingly using with satisfaction.
- * Excellent variation of machines (size, speed, type, etc.) has been giving a great advantage to many companies in selecting the most suitable machines.

VARIATION OF THE MACHINES

1. HIGH SPEED TYPE



HKR-B3 (M4)
HKR-C3 (M6)
HR-DM3 (M8)
HKR-E (M10)
HR-FM (M12)

2. SEMI INCLINED CONVERTIBLE (pipe feeder and chute rail feeder) TYPE

(for small head & headless blanks)



HRC-M (M6)

3. HORIZONTAL TYPE

(for top heavy, small dia or headless blanks)



HKR-BS (M4)
HKR-CS (M6)
HKR-ES (M10)
HRE-2 (M10)

4. HR TYPE

(With 2 Step Speed Reduction : Middle - Large Size)

Knurls, points, grooves, bur-nishing and other form rolling.



HRF (M12)
HRG-H130 (M16)
HRH-H155 (M20)
HRI-H155 (M24)

5. HR-XA TYPE

(for micro screws)



HR-XA (M1 - M2.5)

HKR-B3 (M2 - M4) High Speed Rolling Machine

Features

As the results of the most up-to-date improvements in dynamic balance, decreasing weight of moving area and parts, etc., stable and super speed operation has been realized.

Stable start even at high speed has been achieved because of 20 degree wedge type starter (die steel) mechanism.

Tool steel and special bronze materials are used for sliding section. As the results of severe accuracy control of the section, high precision thread and form rolling is practical and reliable.

Chute rail is treated with induction hardening, moreover hardened chip installed at the lower edge of the rail is replaceable.

The most suitable speed for each blank can be selected freely and easily by turning the volume of inverter. Output per minute can be read directly in a digital indicator.

Working height is designed to be comfortable and healthy for operator.



MODEL HKR-B3 (M4)

Specifications

Machine Type: HKR-B3

Max. Thread Diameter: M5

Max. Thread Length: 30 mm

Output/minute: 100 - 400 pcs.

Die Dimensions: W/F #0, GW32

Main Motor: 3.7 kw

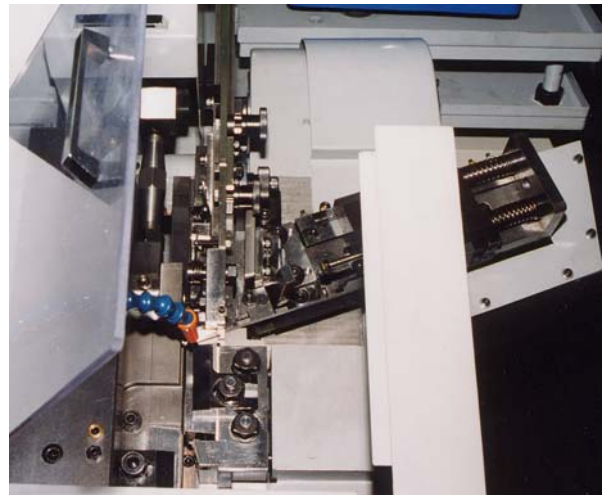
Speed Variator: Inverter*

Blank Feeder: Vibratory Feeder*

Optional Equipments: Various Checkers and Vibratory for chute etc.

Measurement: 1,350 x 950 x 1,600 mm

Weight: 900 kg



*Other types of speed variators or blank feeders are also available on request.

HKR-C3 (M4 - M6) High Speed Rolling Machine

Features

As the results of the most up-to-date improvements in dynamic balance, decreasing weight of moving area and parts, etc., stable and super speed operation has been realized.

Stable start even at high speed has been achieved because of 20 degree wedge type starter (die steel) mechanism.

Tool steel and special bronze materials are used for sliding section. As the results of severe accuracy control of the section, high precision thread and form rolling is practical and reliable.

Chute rail is treated with induction hardening, moreover hardened chip installed at the lower edge of the rail is replaceable.

Recognized rigidity has been further increased. More powerful motor (5.5 kw) has been employed. These improvements meet wider range of harder applications.

The most suitable speed for each blank can be selected freely and easily by turning the volume of inverter. Output per minute can be read directly in a digital indicator.



MODEL HKR-C3 (M6)

Specifications

Machine Type: HKR-C3

Max. Thread Diameter: M6

Max. Thread Length: 50 mm

Output/minute: 80 - 330 pcs.

Die Dimensions: W/F #1015, GW52

Main Motor: 5.5 kw

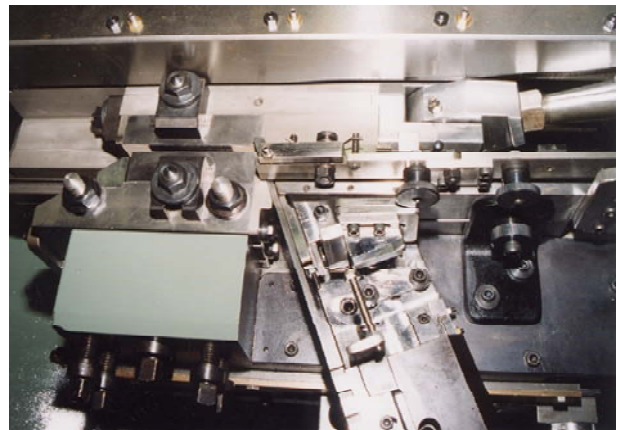
Speed Variator: Inverter*

Blank Feeder: Vibratory Feeder*

Optional Equipments: Various Checkers and Vibratory for chute etc.

Measurement: 1,600 x 1,150 x 1,700 mm

Weight: 1,300 kg



*Other types of speed variators or blank feeders are also available on request.

HR-DM3

M8 Middle Speed Rolling Machine

High speed and efficiency for M6 - M8 class thread rolling.

High accuracy for $\varnothing 5$ class groove making and form rolling operation.

Excellent in every point, such as accuracy, power, functions, easy operation, etc.

Features

Strict accuracy control of sliding area, which is made of die steel and special bronze materials, allow high precision thread and form rolling operation.

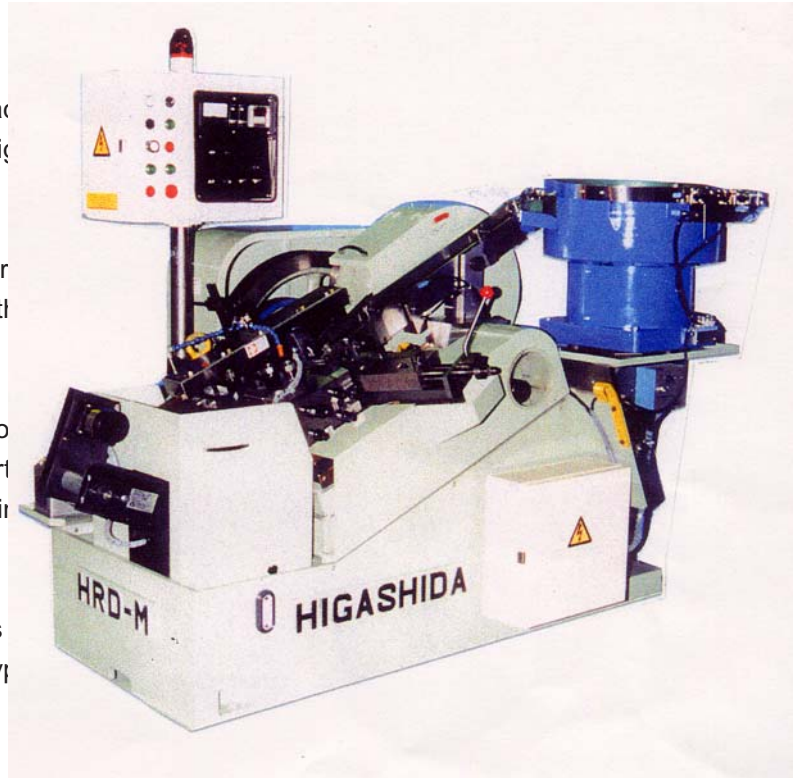
Chute rail is treated with induction hardening, moreover hardened chip installed at the lower edge of the rail is replaceable.

It is equipped with hanging device (40 mm) which is convenient for rolling long shank parts, large dia. parts etc. Rolling above flange is also possible by lowering chute rail. (option)

Stable start has been achieved for various shapes of blanks, because of 20 degree wedge (die steel) type starter mechanism.

Rigidity is strengthened and 5.5 kw motor type is optionally available. The machine can cope widely with more difficult parts.

The machine is equipped with non-step variable speed controller so that the most suitable speed can be freely selected for each product. On inverter type, output/min. can be found in digital panel.



MODEL HR-DM (M8)

Specifications

Machine Type: HR-DM3

Max. Thread Diameter: M8

Min. Thread Diameter: M4

Max. Thread Length: 75 mm (100 mm on H102 model)

Output/minute: 40 - 150 pcs. (130 pcs. on H102 model)

Standard Dies: 125/140 x 32 x 76H (W/F #10)

Main Motor: 3.7 kw or 5.5 kw

Speed Variator: Belt Drive or Inverter

Blank Feeder: Vibratory Feeder

Optional Equipments: Various Checkers etc.

Measurement: 1,700 x 1,200 x 1,650 mm

Weight: 1,800 kg

HKR-E

M10 High Speed Multi Function Rolling Machine

Features

As the results of the most up-to-date improvements in dynamic balance, decreasing weight of moving area and parts, etc., stable and super speed operation has been realized.

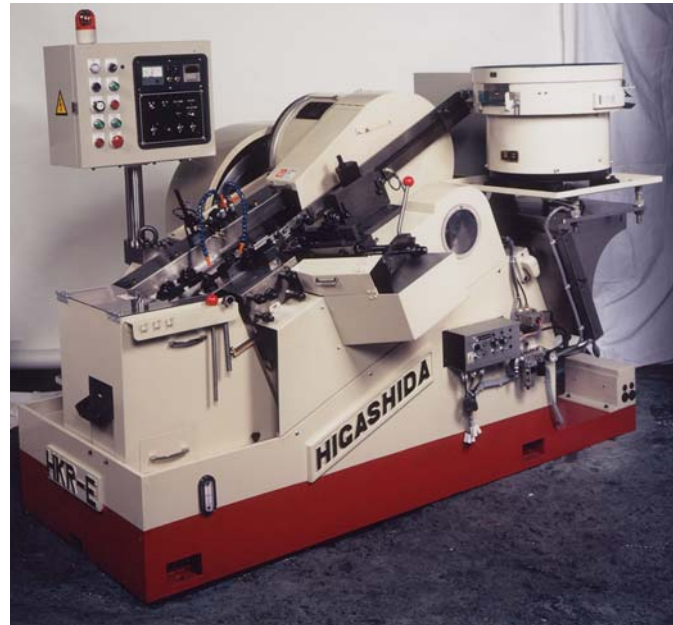
Stable start even at high speed has been achieved because of 20 degree wedge (die steel) type starter mechanism.

Tool steel and special bronze materials are used for sliding section. As the results of severe accuracy control of the section, high precision thread and form rolling is practical and reliable.

Chute rail is treated with induction hardening, moreover hardened chip installed at the lower edge of the rail is replaceable.

Convenient up and down adjusting system is adopted for chute rail. This enables rolling under blank hanging condition in case of long shank length, half thread screws, square neck screws and screws with large flange at middle part of shank. By lowering chute rail, portion above flange can be also rolled.

Non-step variable speed changer is mounted as a standard design. Brake motor is available as optional equipment. The convenience will be surprising.



MODEL HKR-E (M10)

Specifications

Machine Type: HKR-E
Max. Thread Diameter: M10
Max. Thread Length: 75 mm
Output/minute: 55 - 200 pcs.
Die Dimensions: W/F #20, GW100
Main Motor: 7.5 kw
Speed Variator: Belt Drive Nonstep Speed Variator*
Blank Feeder: Vibratory Feeder*
Optional Equipments: Various Checkers and Brake Motor etc.
Measurement: 2,200 x 1,350 x 1,800 mm
Weight: 3,000 kg

*Other types of speed variators or blank feeders are also available on request.

HR-FM

(for M12)

High Accuracy, Powerful and Multi Function Rolling Machine

Features

Stable start has been achieved for various shapes of blanks, because of 20 degree wedge (die steel) type starter mechanism.

Strict accuracy control of sliding area, which is made of die steel and special bronze materials, allow high precision thread and form rolling operation.

Chute rail is treated with induction hardening, moreover hardened chip installed at the lower edge of the rail is replaceable.

Convenient up and down adjusting system is adopted for chute rail. This enables rolling parts with long shank length, half thread, square neck and large diameter possible. Also by lowering chute rail, rolling above flange is possible.

Non-step variable speed changer is mounted as a standard design. Brake motor is available as optional equipment. The convenience will be surprising.



MODEL HR-FM (M12)

Specifications

Machine Type: HR-FM

Max. Thread Diameter: M12

Max. Thread Length: 100 mm

Output/minute: 120 pcs.

Standard Dies: 190/203 x 38 x 102H (W/F #30)

Main Motor: 11 kw

Speed Variator: Belt Drive Nonstep, Variable Speed Motor

Blank Feeder: Vibratory Feeder, etc.

Optional Equipments: Various Checkers and Brake Motor

Measurement: 2,200 x 1,400 x 1,800 mm

Weight: 3,800 kg

HRC-M

(M6 X 50 mm, 160 - 400 pcs. / minute)

Special Rolling Machine



SEMI-INCLINED
CONVERTIBLE TYPE
(Pipe feeder / chute rail
feeder)

MODEL HKC-M (M6)

Features

Because of 15° semi inclined design, smooth feeding of both headless blanks by pipe chute and normal blanks by chute rail is possible on 1 machine.

For headless blanks, air cylinder type 1 pc each feeding device and work bottom support device with scale are applied.

2 pcs. air vibrators are employed to assist smooth flow of blanks.

20° starter for smooth biting

Speed can be changed by inverter smoothly and simply

HORIZONTAL TYPE ROLLING MACHINE

In addition to thread rolling, the machines realize various jobs such as roll forming of V grooves, R grooves, knurls and groove knurl combined, radius point, cone point w/radius tip, chamfer point and even bur-nishing of shaft and spherical part at low tool cost of flat dies at higher speed and more reliable and consistent accuracy than cutting operation.

Roll forming is the lowest cost operation and horizontal type machine is the best basic machine.

Features

Severer controlled accuracy of recognized slide mechanism enabled high precision thread and form rolling.

Because of level design of slide, unbalanced design blanks (top heavy, barrel type shank, extremely small head dia.) or headless design blanks can be rolled excellently.

2 types of feeders, Pipe Type and Special Chute Rail Type are available.

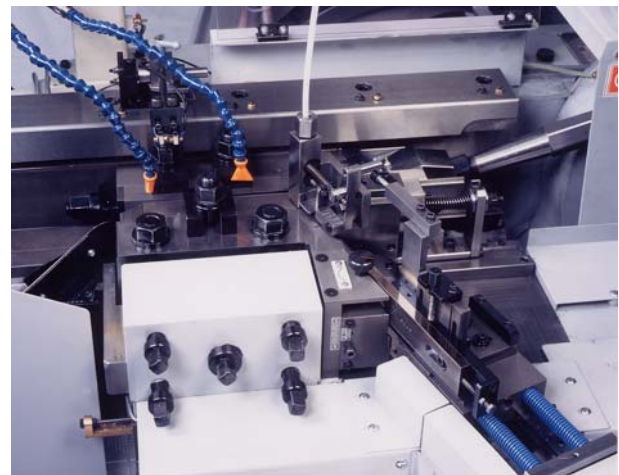
Low feeding position and high discharging position assure higher workability.

In Pipe Type feeder, 1 Piece Feed Device and Blank Bottom Support Positioning Device with scale is employed.

In Chute Rail Type feeder, 2 pcs. vibrators or straight feeder is employed to help smooth flow of blanks.



MODEL HRE-2 (M10)



	HKR-BS	HKR-CS	HKR-ES
Max. Rolling Dia.	M4	M6	M10
Max. Rolling Length	30	50	75
Output/Minute	75 ~ 300	65 ~ 260	40 ~ 160
Die Dimensions	W/F #0 GW32	W/F #1015 GW52	W/F #20 GW100
Main Motor	2.2 KW	3.7 KW	7.5 KW
Speed Variator	Inverter or V belt		
Optional equipments	Brake etc.		
Max. Floor Space	1350 X 850	1600 X 1150	1950 X 1350
Net Weight	900 KGS	1200 KGS	2800 KGS

HR SERIES

(With 2 Step Speed Reduction : Middle - Large Size)

* The supply record of more than 7,000 sets proves the excellent features of easy operation, set up and maintenance.

* The rigidity of the machine and accuracy of slide assure satisfactory forming

knurls, points, grooves, burnishing

and other **form rolling**



Features



MODEL HRH-H155

- Strict accuracy control of sliding area allows high precision thread and form rolling.
- Hardened tool steel and special bronze materials are used for sliding section and this has been displaying remarkable wear, seizure and heat resistance.
- Lower gravity center and outstanding rigidity are strictly maintained.
- 2 step speed reduction brings big torque.
- Because of gentle slope slide, blank supply position can be lower and product discharge position can be lower for better working efficiency.

	HRE	HRF	HRG-H130	HRH-H155	HRI-H155
Max. Rolling Dia.	M10	M12	M16	M20	M24
Max. Product Length	75 (SPECIAL=100)	100 (SPECIAL=100)	125	150	150
Output / Minute	80 pcs.	65 pcs.	65 pcs.	55 pcs.	50 pcs.
Die Dimensions	150/165 X 73 X 76	190/203 X 38 X 102	230/250 X 38 X 130	280/310 X 50 X 155	380/420 X 50 X 155
Main Motor(optional)	3.7KW(5.5KW)	5.5KW(7.5KW)	7.5KW(11KW)	15KW(18.5KW)	22KW(30KW)
Reduction Ratio (2 steps)	1 : 8	1 : 10	1 : 10	1 : 8.5	1 : 8
Speed Variator	Inverter or V belt	Inverter or V belt	Inverter or V belt	Inverter or V belt	Inverter or V belt
Feeding Equipments	Dipping / Parts Feeder / Sliding Conveyor	Dipping / Parts Feeder / Sliding Conveyor	Dipping / Parts Feeder / Sliding Conveyor	Dipping / Parts Feeder / Sliding Conveyor	Dipping / Parts Feeder / Sliding Conveyor
Optional Equipments	Checker Unit etc.	Checker Unit etc.	Checker Unit etc.	Checker Unit etc.	Checker Unit etc.
Machine Dimensions	L1700 x W1250 X H1600	L2000 x W1550 X H1750	L2300 x W1650 X H1800	L2900 x W2000 X H1850	L3600 x W2200 X H2100
Machine Net Weight	2,000kg	2,800kg	3,500kg	5,500kg	12,000kg

FOR MICRO SCREWS M1 ~ M2.5

HR-XA

Because of gear-less drive mechanism, smooth and low noise high speed operation has been achieved.

45 ° insertion angle with die steel wedge and entirely new unit designed starter mechanism have realized correct and stable separating and starting of miniature size work pieces.

Recognized accuracy of sliding mechanism has been improved to suit high accuracy processing such as special form rolling.

Main part of chute rail and chute rail cover are made of SUS304 (magnetizing free stainless steel).

Rail chute end tips are made of tool steel and replaceable.

Designed to be compact yet comfortable height for the operator is kept.

Machine frame and bed have enough strength and built-in type heavy oil pan.

Equipped with frequency converter to control production speed.

Production speed can be seen on the digital display.

Central lubricating pump with low oil level shutoff. For coolant, geared pump is employed.



Max. Thread dia.	M2.5
Min. Thread dia.	M1
Max. Shank length	20 mm
Output / min.	100 ~ 500 pcs. Infinitely variable.
Standard die size	51 / 64 x 16 x 25
Semi standard die	45 / 55 x 15 x 20 • W.F. #00
Main motor	1.5kw • 4P
Feeding equipment	ø170 ~ ø250 Vibratory bowl feeder
Optional equipment	Checkers, Rail chute vibrator, etc.
Machine dimension	900 mm (L) x 700 (W) x 1300 (H)
Net weight	450 kg

SAMPLE PRODUCTS MANUFACTURED BY HIGASHIDA MACHINE



