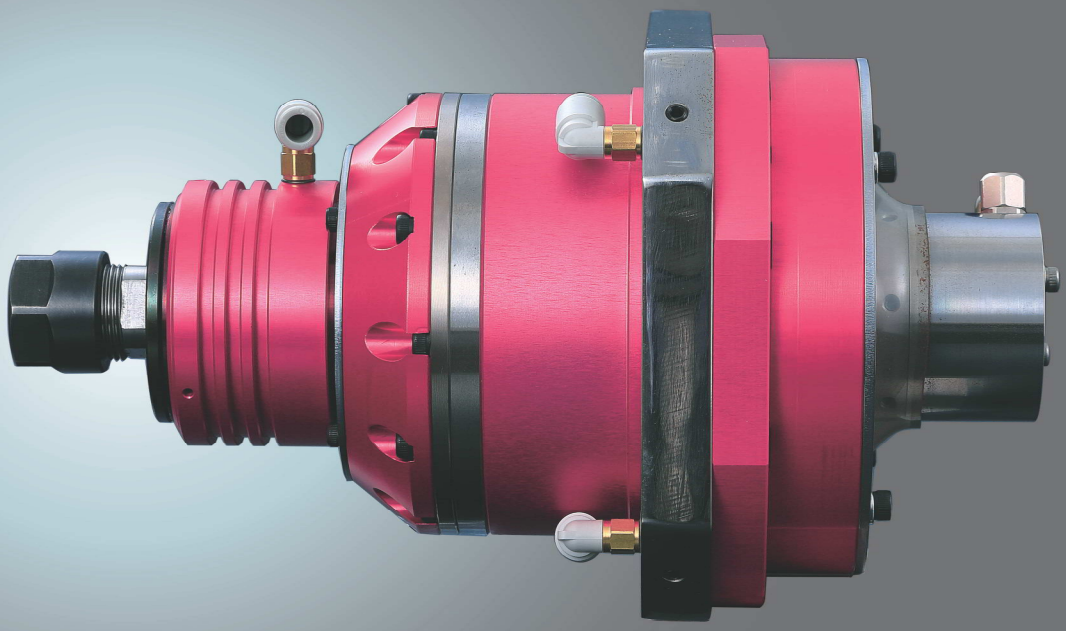
DEBURRING KREUZ

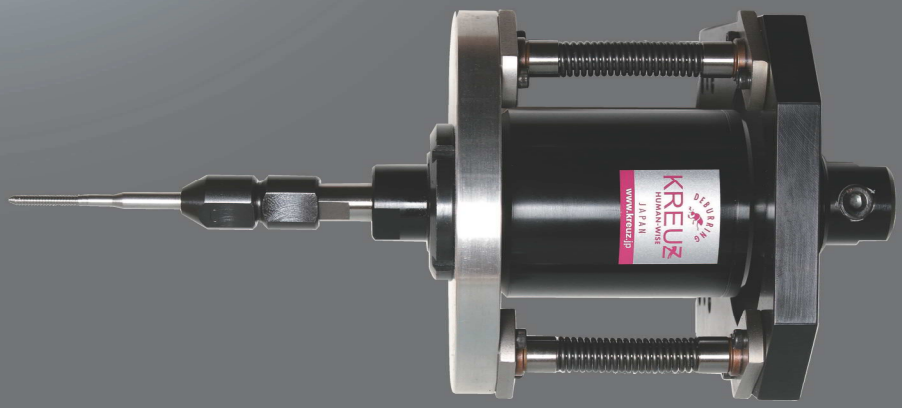
Deburring Tooling

Spindle Motor

Air scaler

Floting attachment



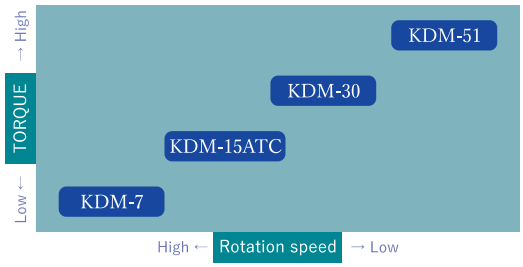


KREUZ Co.,LTD.

Tooling for deburring

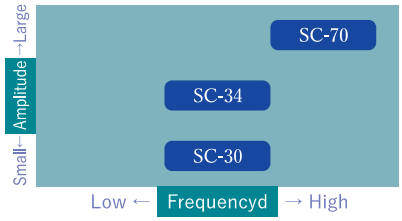
There are various methods for deburring.
We provied spindle motors, air scalers and floating device
to perform deburring together with cutting tool,brushs and files.

Electric spindle motor



We have a lineup of drive tools that can handle various deburring such as fine burrs after machining using brushes,
rough burrs of casting materials using Φ200 grindstone,
and burrs that require multiple tools.
All products can be used with Kreuz robots,
general-purpose 6-axis robot,and various dedicated machines.

Air scaler〈Air type reciprocating drive〉



Air scaler is good for deburring lies burrs which is difficult to deburr with rotary tools or filing deburring brittle materials burrs at the parting line of the sand core.

Dedicated floating device

	Where to use	Flowting attachments
Body mounting	KDM-7	FL-P
	KDM-30	KDM-30FS
	KDM-51	KDM-51SP
Tool installation	SC-70	FL-S
	SC-30	HL-T-002
	SC-34	HL-T-004

To automated deburring, it is required to perform deburring while chasing the shape of the material.
The floting device is important for chasing performance, there are 2 types, one is used attaching with the machine directly, the other is use with attachied to the tools.

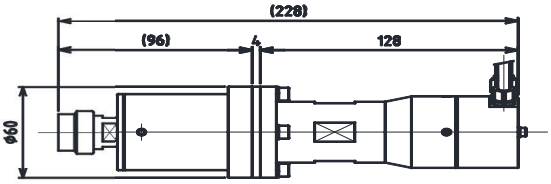
※1 Main body mounting:The attachment which let drive tools itself possible to correspond to big burrs with pushing.
※2 Tool mounting:The holder which let operate deburring tools directly. It is possible to deburr at narrow position as interference of the jig is reduced.

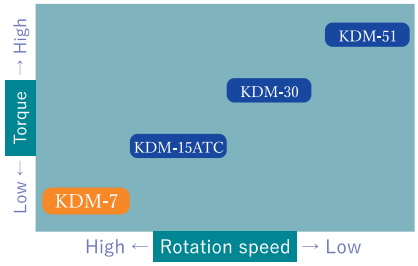
Electric spindle motor

KDM-7

Small type spindle motor.
It can be used as a deburring spindle by attaching it to a robot or dedicated machine together with corresponding floating device.

Rated output (Kw)	Rated torque (Nm)	Maximum/minimum rotation speed (min⁻¹)	Mass (kg)	Collet chuck nut
0.7	0.32	20,000 3,000	2.1	ER16





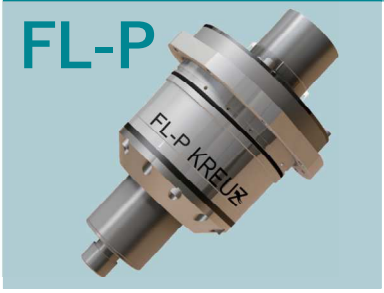
Specification

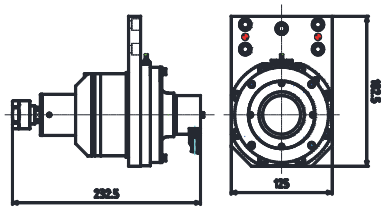
Construction	2 pieces of motor part and spindle part
Cooling air pressure	0.3MPa or less
Coolin g air consumption	120L/min
Option	Collet chuck(Φ4.0mm～Φ10.0mm) Collet nut Dedicated spanner Power cable
Driver	Inverter Yaskawa Electric V1000 (Kreuz specifications)

Dedicated floating device

Floating device for exclusive use of KDM-7.According to the burr size, you can change the pressing force by the air.The overload sensor can detect irregularities during deburring.

FL-P





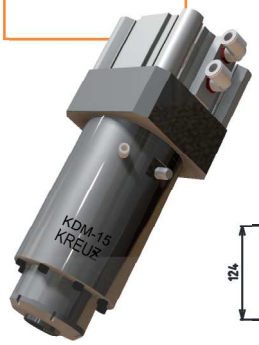
Specification

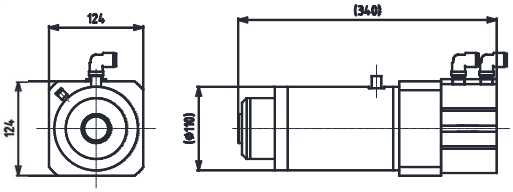
Construction	KDM-7 + FL-P
Total mass	7.5kg
Motion	Omnidirectional:2 degree Axial direction:Press 5mm
Sensor	Overload sensor
Mechanism	Variable pressing force mechanism (air pressure)
Attachment	FL-P flange (Can be changed for each mounting destination)

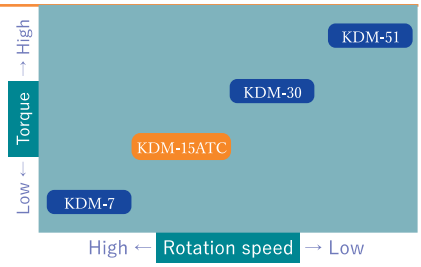
KDM-15 ATC

BT30 spindle motor with ATC function.
A revolver type tool changer can also be provided.

Rated output (Kw)	Rated torque (Nm)	Maximum/minimum rotation speed (min⁻¹)	Mass (kg)	Collet chuck nut
1.5	1.19	15,000 6,000	15	BT30







Specification

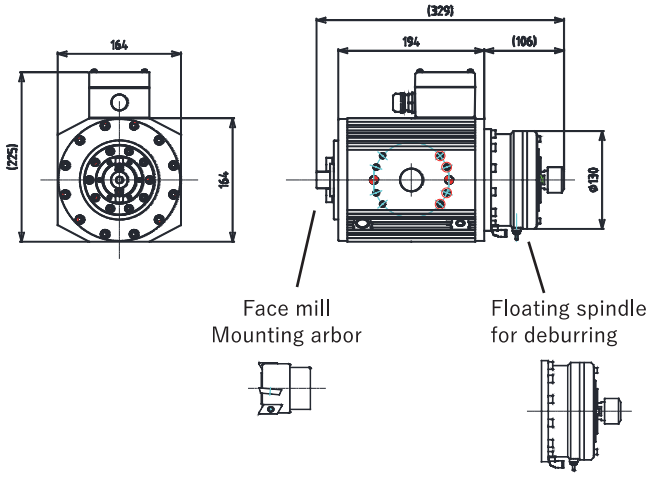
Construction	With automatic tool change function(ATC) Spindle Motor
Cooling air pressure	0.3MPa or less
Cooling air consumption	120L/min
ATC air pressure	0.7MPa
Collet holder	BT30
Pull stud	MAS1
Option	Collet chuck(Φ4.0mm～Φ10.0mm) Collet nut　Dedicated spanner Power cable
Driver	Inverter　Yaskawa Electric V1000 (Kreuz specifications)

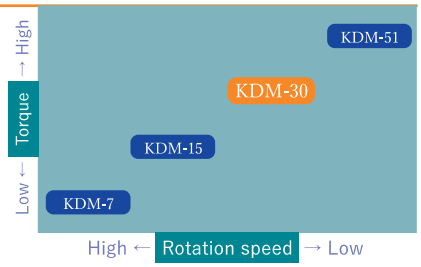
Electric spindle motor

KDM-30

Double-headed spindle motor
Face mill and deburring are possible at the same time without tool changing built-in floating fanctioned spindle is attached at deburring side.

Rated output (Kw)	Rated torque (Nm)	Maximum/minimum rotation speed (min⁻¹)	Mass (kg)	Collet chuck nut
3.0	2.9	10,000 5,000	20	Milling arbor ER20





Double-sided spindle motor

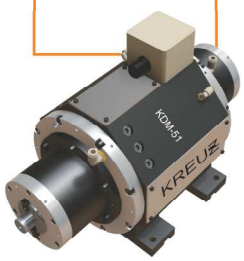
Construction	Double-headed type (front milling cutter / deburring tool)
Cooling air pressure	Less than 0.3MPa
Cooling air consumption	360L/min
Maximum diameter of cooling milling cutter	360L/min Φ50mm
driver	Inverter Mitsubishi Electric (FR-E740-5.5K,FR-E840-5.5K-1)

Floating spindle for deburring〈KDM-30FS〉

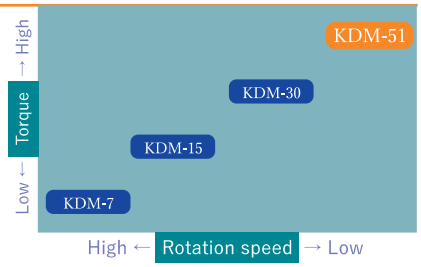
Floating operat ion	Omnidirectional：2 degree Axial direction：3 mm
Sensor	Overload sensor
Option	ER20 Collet chuck(Φ4.0mm～Φ13.0mm) Collet nut Dedicated spanner Power cable

KDM-51

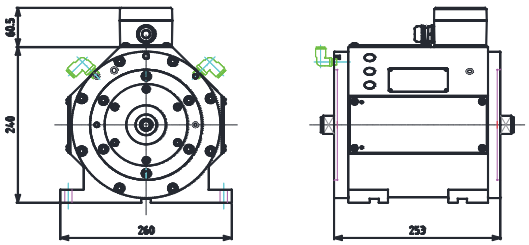
Double-headed spindle motor
Spindle tools can be mounted from three types: face mill, BT30, and ER collet chuck according to performance.



Rated output (Kw)	Rated torque (Nm)	Maximum/minimum rotation speed (min⁻¹)	Mass (kg)	Spindle
5.0	9.0	6,000 3,000	35	Chose from 3 types



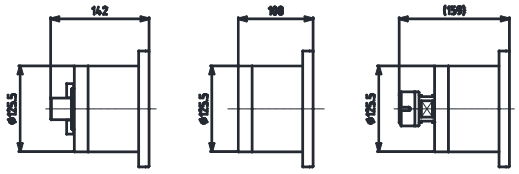
Motor parts



Double-sided spindle motor

Construction	Double-headed type (spindle selection)
Cooling air pressure	Less than 0.4MPa
Cooling air consumption	500L/min
Driver	Inverter Mitsubishi Electric (FR-A740-7.5K,FR-A840-7.5K-1)

Spindle parts



<Face Mill> <BT30> <ER collet chuck>

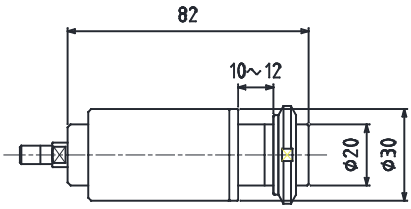
Spindle

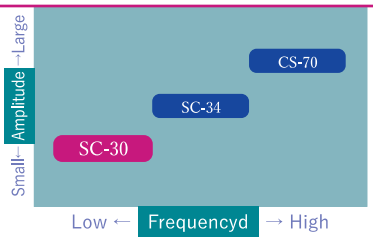
Face Mill Arbor	Φ25.4mm、Φ31.75mm、Φ50.8mm
BT30	Milling chuck
Collet chuck	ER25（max.Φ16mm）、ER32（max.Φ20mm）

Air scaler

SC-30

Frequency (Hz)	Amplitude (mm)	Mass (g)
150	1～1.5	150



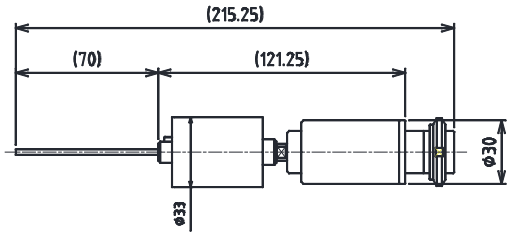


Specification

Air pressure	0.3MPa
Air consumption	25L/min
Fixed	Bearing nut

Dedicated floating attachment

HL-T-002



Tool: Burr stick
Flowting Holder: HL-T-002

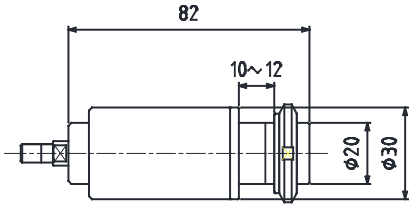
Specification

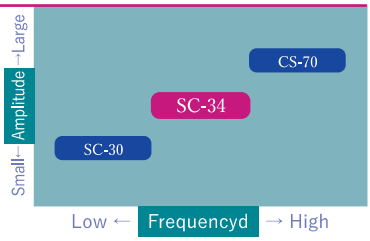
Scaler	SC-30
Flowting holder	HL-T-002
Tool	Burr stick (shank Φ2.5mm)
Total mass	210g
Motion	Parallel Φ10mm

SC-34

Dedicated for parting line processing of sand core products.
It can use HL floater and burr stick.

Frequency (Hz)	Amplitude (mm)	Mass (g)
150	1～1.5	325





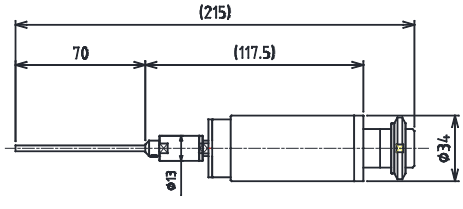
Specification

Air pressure	0.3MPa
Air consumption	25L/min
Fixed	Bearing nut

Tooling for core sand core

Burr stick + HL-T-004 + SC-34

Foating device exclusive use for SC-70 〈FL-S〉
The overload sensor can detect irregularities during deburring.



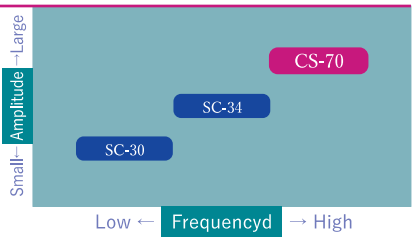
Tool: Burr stick
Flowting Holde: HL-T-004

Specification

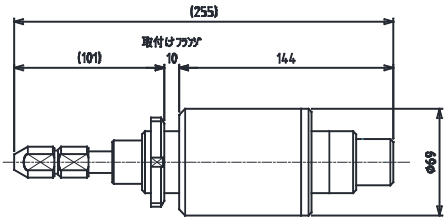
Scaler	SC-34
Flowting holder	HL-T-004
Took	Burr stick (shank Φ2.5mm)
Total mass	350g
Motion	Omnidirectional : 4 degree

SC-70

A special tool 〈N file〉 is attached
to process thin burrs that easily stick to the wall surface,
such as parting lines for aluminum die-cast products.



Frequency (Hz)	Amplitude (mm)	Mass (kg)
180	5	1.15



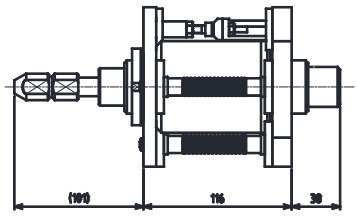
Specification

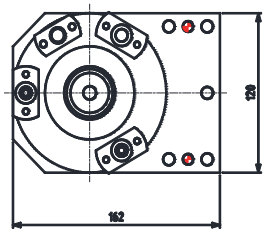
Air pressure	0.4MPa
Air consumption	50L/min
Tool holder	dedicated shape (nut type)

Dedicated floating device

FL-S

Foating device exclusive use for SC-70 〈FL-S〉
The overload sensor can detect irregularities during deburring.





Specification

Construction	KSC-70 + FL-S
Total mass	4.2kg
Motion	Maximum Φ10mm (Φ5mm when overload detected)
Sensor	Overload sensor
Attachment	FL-S flange (can be changed for each mounting destination)

Product composition

Spindle Motor
KDM-7
KDM-30
KDM-51

(Compressed air)
Mist separator / regulator / pressure SW

(Cooling)
OUTΦ6

Inverter
V1000

Inverter E700 or E800

Spindle Motor
KDM-15ATC

(Compressed air)
Mist separator/pressure SW

(Cooling)
regulator

OUTΦ6

(ATC operation)
Pressure booster valve/ three-way valve

OUTΦ8

Inverter V1000

Combination use
KDM-7 + FL-P

(Compressed air)
ist separator/regulator/pressure SW

(Cooling)
OUTΦ6

Variable pressing force
Pressure booster valve
/ three-way valve

OUTΦ8

Inverter V1000

Air scaler
SC-30
SC-34
SC-70

(Compressed air)
Mist separator, regulator, ON-OFF valve, lubricator

Drive source)
OUTΦ10

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