

QUICK CONNECT COUPLINGS & POWER TOOLS

CUPLA & TOOLS FOR DIE CASTING CATALOG

Xk003b



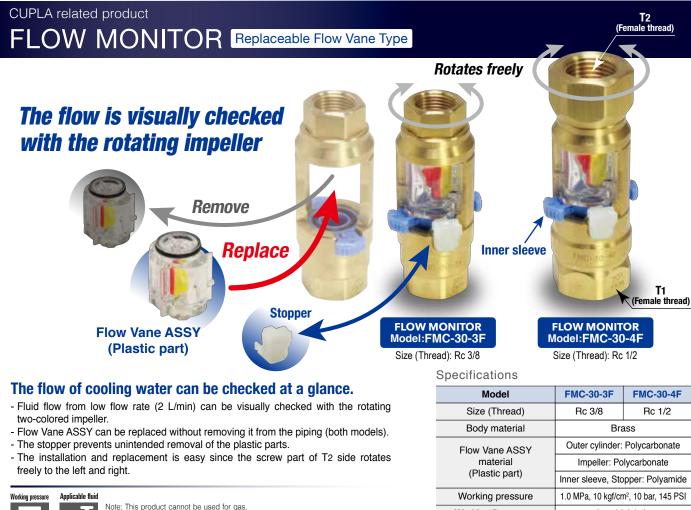
CUPLA Quick Connect & TOOLS Power Tools FOR DIE CASTING

CUPLA QUICK CONNECT COUPLINGS

CONTENTS

- P-01 FLOW MONITOR Replaceable Flow Vane Type
- P-03 HSP CUPLA DC Type
- P-03 PURGE ADAPTER
- P-04 350 CUPLA
- P-04 FLAT FACE CUPLA F35 Type
- P-04 FLAT FACE CUPLA FF Type
- P-06 SP CUPLA Type A
- P-06 ZEROSPILL CUPLA
- P-07 TSP CUPLA
- P-07 TSP CUPLA Socket with Ball Valve
- P-08 CUPLA TSW Type For Spot Cooling
- P-08 MULTI CUPLA

Notice Working pressure: The normal allowable fluid pressure under continuous use. Continuously exceeding the working pressure may cause leakage or damage.



1 0 MPa Water

Dody matorial		200			
Flow Vane ASSY	Outer cylinder: Polycarbonate				
material	Impeller: Polycarbonate				
(Plastic part)	Inner sleeve, Stopper: Polyamide				
Working pressure	1.0 MPa, 10 kgf/cn	n², 10 bar, 145 PSI			
Working flow range	2 to 20 L/min				
Seal material (Mark)	Fluoro rub	ber (FKM)			
Working temperature range	+10°C to	o +80°C			
Mass	167 g	256 g			

For core driving cylinders when clamping and opening of molds.



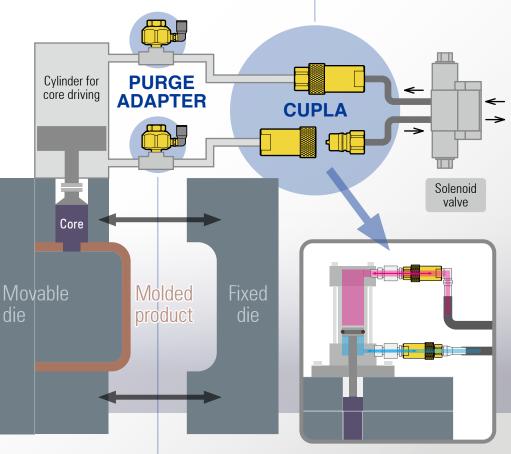
Strengthened type of HSP CUPLA.



design" reduces both air admixture and liquid spillage.



Flat contact face design minimizes air admixture and liquid spillage.



For hydraulic driving Example of piping

PURGE ADAPTER



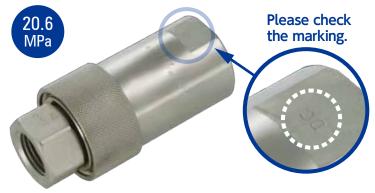
Residual pressure removal for hydraulic circuits.

Application



"Electroless nickel phosphorus plating" which is not soluble to flame-retardant "water glycol type hydraulic fluid" is entirely adopted.

For hydraulic driving HSP CUPL DC Type A_{A}



Strengthened type of HSP CUPLA.

- Valve material with excellent impact resistance is adopted. Ideal for die-casting machines with large pressure fluctuations. - HSP CUPLA and HSP CUPLA DC Type are interchangeable with the same size.



For hydraulic driving PURGE ADAPTER



Purge Adapter for hydraulic lines.

- Attach to hydraulic lines to purge residual pressure effectively.
- One push of the "Residual pressure purge button" drains oil from "Drain removal port", and the residual pressure is removed.

Working pressure	Applicable fluid
35.0	OIL
35.0 MPa	Hydraulic oil

Spec	ifica	tions
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Model	PAD-2	PAD-3FM	PAD-4FM	PAD-6FM	PAD-8FM
Body material		Stee	el (Nickel pla	ited)	
Application	R 1/4	R 3/8 × Rc 3/8	R 1/2 Rc 1/2	R 3/4 × Rc 3/4	R 1 × Rc 1
Working pressure	35.	0 MPa, 357	kgf/cm ² , 350) bar, 5080 I	SI
Seal material		I	Nitrile rubbe	r	
Mark			NBR		
Working temperature range					

working temperatur

Residual Pressure Release Jig ZN series For HSP CUPLA DC Type, SP CUPLA Type A



HSP CUPLA DC Type Name Body material Special steel (Nickel plated) Size (Thread) 1/4", 3/8", 1/2", 3/4", 1" MPa 20.6 kgf/cm² 210 Working pressure bar 206 PSI 2990 Seal material Nitrile rubber NBR Mark Working temperature range -20°C to +80°C

Specifications

Just Push

	NDR
re range	-5°C to +80°C
handle	Just by turning CUPLA accessories

CUPLA accessories

Eliminates residual pressure instantly

Purge residual pressure Tube fittings are not included.

Please purchase them separately.

Semi-standard

Push to

Sleeve stopper mechanism prevents accidental disconnection.

For hydraulic driving

For hydraulic driving 350 CUPL 34.5



"Airless valve shut-off design" reduces both air admixture and liquid spillage.

- Ideal for hydraulic lines with large pressure fluctuations.
- Both socket and plug have built-in automatic shut-off valves to prevent fluid spill out when disconnected. Easy to handle.









F35 Type

FLAT FACE CUPLA

For high pressure. Flat contact face design minimizes air admixture and liquid spillage.

stopper mechanism.

- Minimizes air admixture during connection to keep the possible malfunction of equipment at minimum level.
- Easy to clean dust and foreign matters adhered on the surface of coupling.
- The special design reduces pressure loss considerbly. Both socket and plug have built-in automatic shut-off valves that prevent fluid spill out on disconnection.



FLAT FACE CUPLA

1.5 to 2 times flow rate of FLAT FACE CUPLA F35 type.

- * Compared with Nitto Kohki's 35 MPa CUPLA.
- Best suited for hydraulic lines with drastic high pressure pulsation.









Specifications

poolinoationio								
Name		350 CUPLA	FLAT FACE	CUPLA F35	FLAT FACE CUPLA FF			
Body material		Special steel (Nickel plated)						
Size (Thread)		1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2"	1/4", 3/8", 1/2", 3/4", 1"		3/8", 1/2", 3/4", 1"			
	MPa	34.5	35.0					
kgf/cm ²		352	357					
Working pressure bar		345 350						
PSI		5000	5080					
Seal material		Fluoro rubber		Nitrile rubber				
Mark		FKM		NBR				
Working temperature r	ange	-20°C to +180°C		-20°C to +80°C				
Remarks		Standard material		Made-to-order item	Standard material			

To achieve high-cycle cooling and efficient exchange of die.

TSP CUPLA



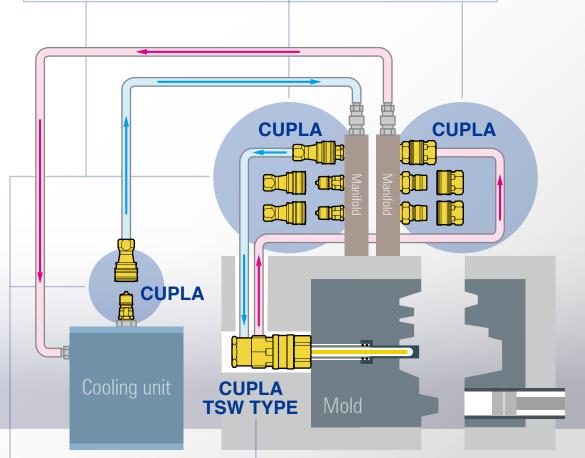
Both plug and socket with valveless structure drastically saves pressure loss.



TSP Cupla socket and ball valve.



and plug prevent fluid spill out on disconnection.



For cooling Example of piping









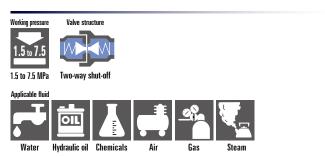
Self-aligned valve design provides better seal

The design of the valve head makes smooth self-aligned return to its original position when socket and plug are disconnected. This mechanism enhances safety sealing of individual socket or plug when disconnected (1 to 8 SP-A Type).



Valves in both socket and plug prevent fluid spill out on disconnection.

- Plugs with male thread end are also available.
- Steel couplings are nickel plated.



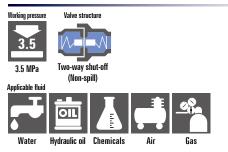
Note: Depending on the temperature of steam / hot water, the heat may damage seal materials.

For cooling ZEROSPILL CUPLA



Unique seal design reduces both liquid spillage and air ingress.

- Valve design offers smooth zero-friction movement.
- Push to connect design.
- Automatic shut-off valves in both socket and plug prevent fluid spill out on disconnection.



Specifications

Name			SP	CUPLA	• Туре	A *1		ZEROSPILL CUPLA *2			
Body material		Bra	ass				el (SUS3 kel plate		Brass	Stainless steel (SUS304)	
Size (Thread)		1/8", 1/4" 3/8"	1/2", 3/4" 1"	1 1/4" 1 1/2"	2"	1/8", 1/4" 3/8"	1/2", 3/4" 1"	1 1/4" 1 1/2"	2"	1/4", 3/8", 1/2", 3/4", 1"	
	MPa	5.0	3.0	2.0	1.5	7.5	4.5	3.0	2.0	3	5
Working pressure	kgf/cm ²	51	31	20	15	76	46	31	20	3	6
working pressure	bar	50	30	20	15	75	45	30	20	3	5
	PSI	725	435	290	218	1090	653	435	290	50)8
Seal material, Mark, Working temperature range			Nitrile rubber, NBR, -20°C to +80°C								
			Fluoro rubber, FKM, -20°C to +180°C								
						Ethy	lene-pr	opylene	e rubbe	r, EPDM, -40°C to +150°C	

*1: Plugs with male thread end mounting nitrile rubber or ethylene-propylene rubber are made-to-order items. Seal material available for steel body is nitrile and fluoro rubber.

*2: Applicable fluids depend on the body material and seal material. Acceptable working temperature range depends on operating conditions.

CUPLA Quick Connect Couplings



Working pressure 15 to 7.5 MPa Applicable fluid

Water Hydraulic oil Chemicals Air Gas Steam

Note: Depending on the temperature of steam / hot water, the heat may damage seal materials.

- connection. (when the valve is open.)
- Socket valve open and shut off while socket and plug are connected.
- Ball valve design provides for high flow rate.



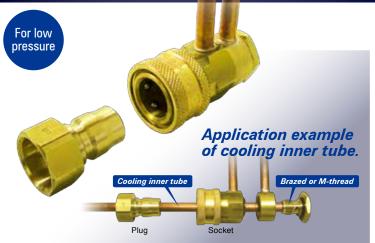
Suitable for high viscosity fluids such as grease.

Specifications

Name	Name TSP CUPLA *1						TSP CUPLA Socket With Ball Valve			
Body material			ass			el (SUS3 kel plate		Brass		
Size (Thread)		1/8", 1/4" 3/8", 1/2"	3/4" 1"	1 1/4" 1 1/2"	2"	1/8", 1/4" 3/8", 1/2"	3/4" 1"	1 1/4" 1 1/2"	2"	1/4", 3/8", 1/2", 3/4", 1"
	MPa	5.0	3.0	2.0	1.5	7.5	4.5	3.0	2.0	1.0
Working pressure	kgf/cm ²	51	31	20	15	76	46	31	20	10
working pressure	bar	50	30	20	15	75	45	30	20	10
	PSI	725	435	290	218	1090	653	435	290	145
Seal material, Mark, Working temperature range		Fluoro rubber, FKM, -20°C to +180°C								Cupla part: Fluoro rubber, FKM, -5°C to +120°C
			Nit	rile rubb	oer, NB	R, -20°0	C to +8	0°C		Ball valve part: Fluoropolymer resin, -5°C to +120°C
		Eth	ylene-p	ropylen	e rubbe	er, EPDN	1, -40°C	to +150	С°С	-

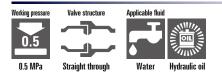
*1: SUS316 is available as option. Working pressure, and working temperature range of TSP Cupla for braided hoses depend upon the specifications of braided hoses to be used. Seal material available for braided hoses is nitrile rubber only. Seal material available for steel body is nitrile rubber only.

For cooling CUPLA TSW Type For Spot Cooling



Ideal for improving the efficiency of setup change and repair work of die-casting molds.

- Connecting / disconnecting of piping is "one-touch", contributing to reduction changeover and repair time.
- The cooling tube (plug side) and the hose attachment part (socket side) can be separated. Reuse of the hose side is possible.



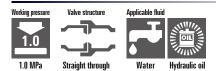
For cooling

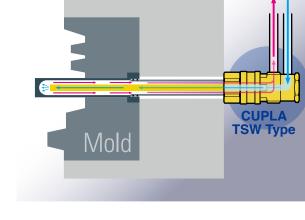


Ideal for shortening mold setup time.

- Connect and disconnect 12 lines of drainage tubes for local cooling simultaneously. (ø4 mm tube)
- Significant reduction in setup time when exchanging mold.
- The plug side has a plate to fix to the equipment.
- Main body material is aluminum alloy (hard alumite). Socket is lightweight, 250 g.
 By adopting end-face seal, enhanced operability with low connection resistance when connected.

For consultation with other than the specifications, please contact Nitto Kohki.

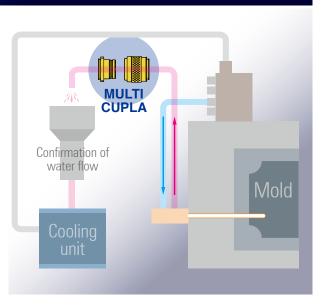




Specifications

Name	CUPLA TSW Type
Body material	Brass
Applicable fluid	Water, Hot water
Working pressure	0.5 MPa, 5 kgf/cm ² , 5 bar, 72.5 PSI
Seal material	Fluoro rubber
Mark	FKM
Working temperature range	0°C to +150°C

Made-to-order item



Specifications

opoonioutiono					
Name	MULTI CUPLA				
Body material	Aluminum alloy (Hard alumite)				
Size (Thread)	M5 (Tube fitting optional)				
Working pressure	1.0 MPa, 10 kgf/cm ² , 10 bar, 145 PSI				
Seal material	Fluoro rubber				
Mark	FKM				
Working temperature range	+80°C				

NITTO KOHKI CO., LTD.



Made-to-order item

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CUPLA Duick Connect & **Tools** Power FOR DIE CASTING

POWER TOOLS SANDING / FILING

CONTENTS

Pneumatic type only

P-10 SUPER HAND

- P-10 SUPER HAND LIGHT
- P-11 AIR SONIC
- P-12 BELTON
- P-12 BABY BELTON
- P-13 COMPACT MULTI SANDER
- P-13 BURR CUTTER

Notice Air pressure at the inlet of the tool must not exceed 0.6 MPa (6 kgf/cm²).



SUPER HAND

Fast, efficient filing, sanding and deburring tools.

- Eliminates time consuming manual hand-filing operations.
- Ideal for industrial production filing applications on steel, aluminum, brass, wood and other materials.
- Unique and compact design delivers reduced vibration performance while reducing operator fatigue.
- Interchangeable files.
- Rear exhaust system.

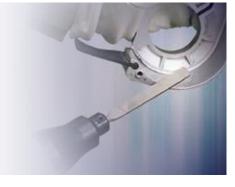




Specifications

0.83"

Model	SH-100A	ASH-900			
Air pressure	0.6 MPa , 6 kgf/cm ² , 85 PSI				
Air consumption (No-load)	0.24 m³/min , 8.5 CFM	0.13 m³/min , 7.1 CFM			
Stroke speed	3700 min ⁻¹	6300 min ⁻¹			
Stroke length	9 mm				
File shank size	6.3 mm	5.0 mm			
Inlet size	Rc	1/4			
Weight	1.1 kg , 2.4 lbs	0.5 kg , 1.1 lbs			



Tools Power Tools

Portable precision finishing file SUPER HAND LIGHT

Lightweight, ultra-low vibration filer for aluminum die cast and machined parts filing.



Model	SHL-40
Air pressure	0.6 MPa , 6 kgf/cm ² , 85 PSI
Air consumption (No-load)	0.07 m³/min , 2.5 CFM
Stroke speed	9000 min ⁻¹
Stroke length	4 mm
File shank size	3 mm
Inlet size	Rc 1/4
Weight	0.4 kg , 0.88 lbs

GRINDING

TOOLS Power

High speed rotation 56500 rpm.

Pneumatic die grinder

Ideal for most deburring, finishing and grinding applications.

- Precision machined with heavy-duty spindle and support bearings.
- Rear exhaust with noise reduction system.
- Suitable for industrial and production applications.
- Locking throttle lever helps prevent accidental start-up.
- Accepts most stone-type and rotary carbide burrs with 6 mm shanks.



Specifications

Model	L-25B (mm size)	L-25B (Inch size)	L-35C (mm size)	L-35C (Inch size)
Air pressure	0.6 MPa , 6 kgf/cm ² , 85 PSI			
Air consumption (No-load)	0.4 m³/min	, 14.1 CFM	0.35 m³/min	, 12.4 CFM
Free speed	27000 min ⁻¹ (rpm)		37500 min⁻¹ (rpm)	
Chuck size	6 mm	1/4"	6 mm	1/4"
Inlet size	Rc 1/4			
Weight (Without hose)	0.6 kg , 1.3 lbs 0.45 kg , 1.0 lbs		, 1.0 lbs	

Pneumatic die grinder

- Smooth high speed rotation and low vibration enables precision grinding.
- Stepless speed change from 0 to 56500 rpm meets a wide range of grinding applications.
- Compact and light weight for comfortable operation over long periods of time.
- Triangular grip fits operator's hand. Special plastic grip prevents cold hands and absorbs vibration.
- Rear exhaust system.



Specifications

Model	AL-55A (mm size)	AL-55A (Inch size)
Air pressure	0.6 MPa , 6 kgf/cm ² , 85 PSI	
Air consumption (No-load)	0.17 m³/min , 6.0 CFM	
Free speed	56500 min ⁻¹ (rpm)	
Chuck size	3 mm	1/8"
Inlet size	G 1/4	1/4"
Weight (Without hose)	0.27 kg	0.60 lbs

Ideal for sanding and grinding in narrow spaces,

Ideal for deburring, chamfering, bead grinding,

recessed areas and on curved surfaces.

Pneumatic belt sander

RFI TON

- Quick belt change.
- Rear exhaust system.



Specifications

Model	B-10CL	B-20CL	B-20CL-A	B-30CL	
Air pressure	0.6 MPa , 6 kgf/cm ² , 85 PSI				
Air consumption (No-load)	0.4 m³/min , 14.1 CFM	0.48 m³/min , 16.9 CFM		0.82 m ³ /min , 28.9 CFM	
Free speed	17000 min ⁻¹ (rpm)	000 min ⁻¹ (rpm) 18000 min ⁻¹ (rpm)		15000 min ⁻¹ (rpm)	
Belt speed	1120 m/min , 3675 FPM	A 2770 m/min , 9087 FPM		2310 m/min , 7578 FPM	
Belt size	10 × 330 mm , 3/8" × 13"	20 × 520 mm , 3/4" × 20-1/2"		30 × 540 mm , 3/8" × 13"	
Weight	0.9 kg , 1.5 lbs	1.6 kg , 3.5 lbs	1.5 kg , 3.3 lbs	2.4 kg , 5.3 lbs	
Vibration level (According to ISO20463)*	1.21 m/s ²	1.32 m/s ²	1.09 m/s ²	1.88 m/s ²	



and polishing applications.

* Figures may vary depending on applications.

Pneumatic belt sander **BABY BELTON**

- Compact and lightweight, yet powerful.
- Reversible rotation direction.
- Ergonomically designed for left or right hand operator convenience.



Specifications

BB-10B (Lever switch type)	BB-10B (Ring switch type)	BB-20
0.6 MPa , 6 kgf/cm ² , 85 PSI		
0.2 m³/min , 7.1 CFM		0.43 m³/min , 15.2 CFM
17000 min ⁻¹ (rpm)		
1120 m/min , 3675 FPM		1100 m/min , 3608.9 FPM
10 × 330 mm , 3/8" × 13"		20 × 330 mm , 3/4" × 13"
Rc 1/4		
0.55 kg , 1.2 lbs	0.5 kg , 1.1 lbs	0.8 kg , 1.76 lbs
	0.2 m³/min 1120 m/min 10 × 330 mn	0.6 MPa , 6 kgf/cm ² , 85 PSi 0.2 m ³ /min , 7.1 CFM 17000 min ⁻¹ (rpm) 1120 m/min , 3675 FPM 10 × 330 mm , 3/8" × 13" Rc 1/4

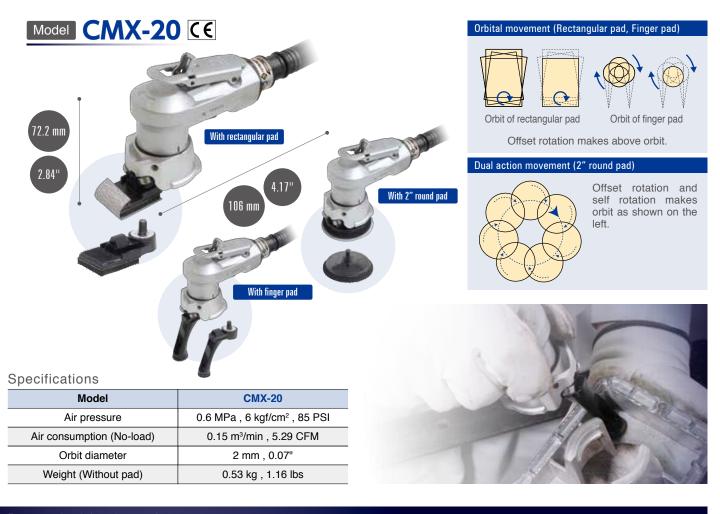


Pneumatic sander

COMPACT MULTI SANDER

Excellent for sanding on narrow, confined, and hard-to-reach areas with three types of pads.

- By replacement of the pad, both random orbital action and multiple movement are available with one set.
- Finish sanding on a small part is possible with a small pad.
- Sanding in a confined space is possible due to compact and lightweight body.



Pneumatic deburring tool BURR CUTTER

For deburring machined holes.

- While gripping the lever, push the countersink into the machined holes to remove burrs.
- Optimum speed can be obtained by the adjust valve, resulting in clear deburred surfaces.
- Push-to-engage type prevents the countersink from coming off the hole and damaging the workpiece.
- Replacement of the countersink is easy and quick with a set of three quick change chucks provided.



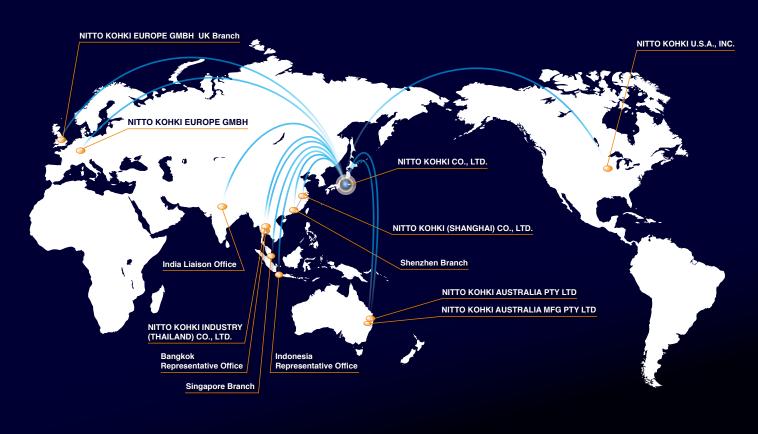


Specifications

1		
Model	BC-005	
Air pressure	0.6 MPa , 6 kgf/cm ² , 85 PSI	
Air consumption (No-load)	0.22 m³/min , 7.76 CFM	
Free speed	420 min ⁻¹ (rpm)	
Deburring hole diameter	3 to 34 mm , 0.11" to 1.33"	
Countersink shank size*	6, 8, 10, 12 mm	
Inlet size	Rc 1/8	
Weight (Without hose)	0.75 kg , 1.65 lbs	

* Chuck 12 mm is optional. Countersinks are not provided with the tool. Please purchase them locally.

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