

CUPLA & TOOLS FOR DIE CASTING CATALOG







CUPLA QUICK CONNECT COUPLINGS

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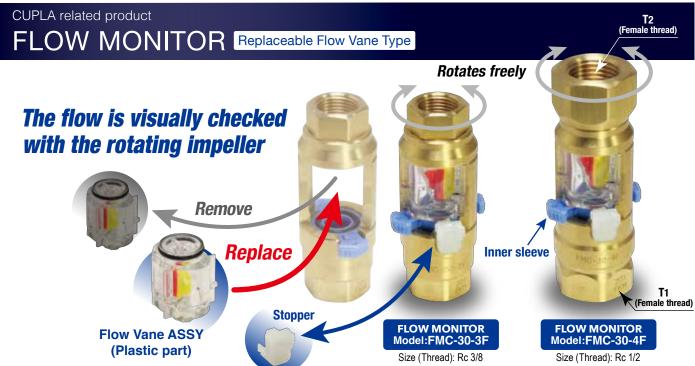
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Notice Working pressure: The normal allowable fluid pressure under continuous use. Continuously exceeding the working pressure may cause leakage or damage.



The flow of cooling water can be checked at a glance.

- Fluid flow from low flow rate (2 L/min) can be visually checked with the rotating two-colored impeller.
- Flow Vane ASSY can be replaced without removing it from the piping (both models).
- The stopper prevents unintended removal of the plastic parts.
- The installation and replacement is easy since the screw part of T2 side rotates freely to the left and right.



Note: This product cannot be used for gas. If oil is used, the durability may reduce depending on the compatibility of the oil or additive with the plastic part. Please use the FLOW MONITOR after thorogh evaluation.

opoomoanomo				
Model	FMC-30-3F	FMC-30-4F		
Size (Thread)	Rc 3/8	Rc 1/2		
Body material	Bra	ass		
Flow Vane ASSY	Outer cylinder:	Polycarbonate		
material	Impeller: Polycarbonate			
(Plastic part)	Inner sleeve, Stopper: Polyamide			
Working pressure	1.0 MPa, 10 kgf/cm ² , 10 bar, 145 PSI			
Working flow range	2 to 20 L/min			
Seal material (Mark)	Fluoro rubber (FKM)			
Working temperature range	+10°C to	+80°C		
Mass	167 g	256 g		

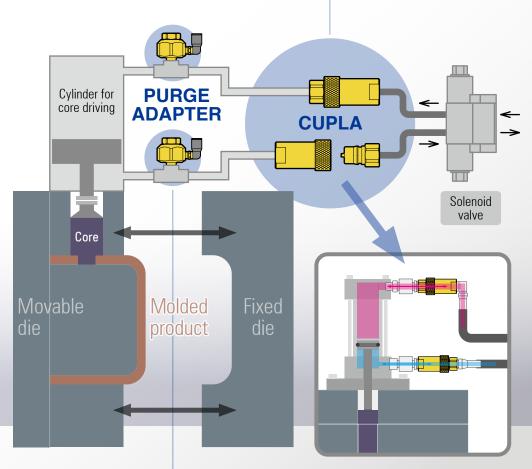


For core driving cylinders when clamping and opening of molds.





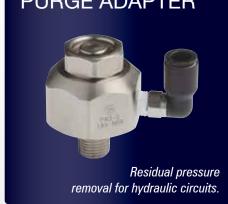




For hydraulic driving

Example of piping

PURGE ADAPTER



Application





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

For hydraulic driving

HSP CUPLA DC Type

Semi-standard



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.







Hvdraulic oil Two-way shut-off

Specifications

Just Push

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

For hydraulic driving

PURGE ADAPTER





Eliminates residual pressure instantly

Purge residual pressure Tube fittings are not included.

Please purchase them separately.

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.





Hydraulic oil

Specifications

Model	PAD-2	PAD-3FM	PAD-4FM	PAD-6FM	PAD-8FM		
Body material	Steel (Nickel plated)						
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	0 bar, 5080 F	PSI		
Seal material	Nitrile rubber						
Mark	NBR						
Working temperature range		-	5°C to +80°0)			

Residual Pressure Release Jig ZN series

For HSP CUPLA DC Type, SP CUPLA Type A



CUPLA accessories



Sleeve stopper mechanism prevents accidental disconnection.

For hydraulic driving 350 CUPL



"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.







Two-way shut-off (Non-spill)

Hydraulic oil

Applicable fluid

For hydraulic driving

FLAT FACE CUPLA



Equipped with sleeve stopper mechanism.



F35 Type

FLAT FACE CUPLA

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

- 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.



35 N MPa



Two-way shut-off

(Non-spill)



FF Type

FLAT FACE CUPLA

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

1.5 to 2 times flow rate of FLAT



35.0 MPa



FACE CUPLA F35 type.



(Non-spill)

Hydraulic oil



poomoanomo							
Name		350 CUPLA	FLAT FACE	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"					
	MPa	34.5		35.0			
Working pressure	kgf/cm ²	352		357			
working pressure	bar	345		350			
	PSI	5000		508	80		
Seal material		Fluoro rubber		Nitrile rubber			
Mark		FKM		NBR			
Working temperature	range	-20°C to +180°C -20°C to +80°C					
Remarks		Standard material		Made-to-order item	Standard material		

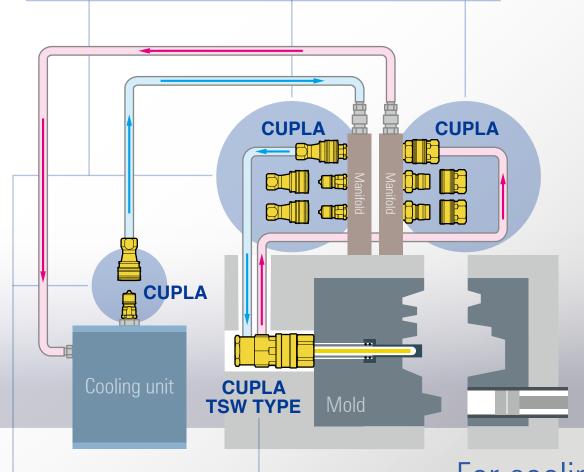


To achieve high-cycle cooling and efficient exchange of die.













For cooling Example of piping

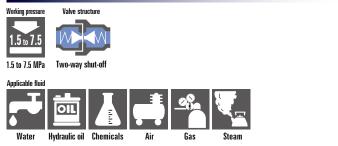


For cooling SP CUPLA Type A



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.



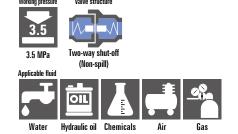
Note: Depending on the temperature of steam / hot water, the heat may damage seal materials.

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 Type A 1						ZEROSPILL CUPLA *2			
Body material			Brass Stainless steel (SUS304), Steel (Nickel plated)			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 proceure	kgf/cm ²	51	31	20	15	76	46	31	20	36		
Working pressure	bar	50	30	20	15	75	45	30	20	35		
	PSI	725	435	290	218	1090	653	435	290	508		
O l l - l - Ma		Nitrile rubber, NBR, -20°C to +80°C										
Seal material, Ma Working temperature	,									/I, -20°C to +180°C		

Ethylene-propylene rubber, 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.

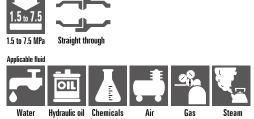
^{*2:} Applicable fluids depend on the body material and seal material. Acceptable working temperature range depends on operating conditions



For cooling TSP CUPLA



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



Valve structure

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

For cooling TSP CUPLA Socket with Ball Valve



One-piece design of TSP CUPLA socket and ball valve.

- Sleeve stopper mechanism prevent accidental disconnection during 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.

Name			TSP CUPLA 1						TSP CUPLA Socket With Ball Valve	
Body material		Brass		Stainless steel (SUS304), Steel (Nickel plated)				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
On all wants wild Ma			Fluoro rubber, FKM, -20°C to +180°C					30°C	Cupla part: Fluoro rubber, FKM, -5°C to +120°C	
Seal material, Ma Working temperature	,		Nitrile rubber, NBR, -20°C to +80°C				C to +8	0°C	Ball valve part: Fluoropolymer resin, -5°C to +120°C	
Q 11 P 1 111 1	3	Eth	ylene-p	ropylen	e rubbe	r, EPDN	Л, -40°C	to +150	0°C	-

^{*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



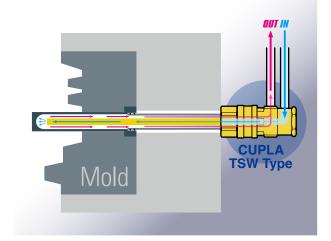
Made-to-order item

Made-to-order item

Mold

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.









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

For cooling

MULTI CUPLA



Cooling

Confirmation of

water flow

CUPLA

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.





Water

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



POVER TOOLS SANDING / FILING

Pneumatic type only

CONTENTS

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).





Portable precision finishing file

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

21 mm

Model	SH-100A	ASH-900			
Air pressure	0.6 MPa , 6 kg	gf/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			



Portable precision finishing file

SUPER HAND LIGHT

4 mm stroke.

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				



Pneumatic die grinder

AIR SONIC

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

<u>'</u>							
Model	L-25B (mm size)	L-25B (Inch size)	L-35C (mm size)	L-35C (Inch size)			
Air pressure	0.6 MPa , 6 kgf/cm² , 85 PSI						
Air consumption (No-load)	0.4 m³/min , 14.1 CFM						
Free speed	27000 m	in-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						

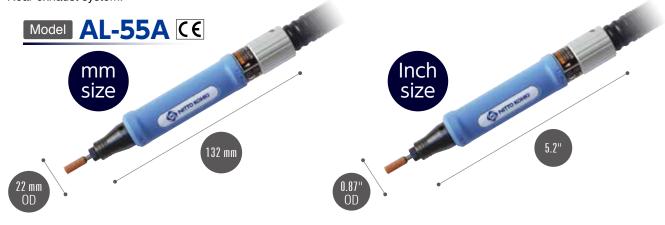


Pneumatic die grinder

AIR SONIC

High speed rotation 56500 rpm.

- 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.



Model	AL-55A (mm size)	AL-55A (Inch size)				
Air pressure	0.6 MPa , 6 kgf/cm² , 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				





Pneumatic belt sander

Ideal for sanding and grinding in narrow spaces, recessed areas and on curved surfaces.

- Quick belt change.
- Rear exhaust system.





- Belt size 20 mm (W) The Idle Pulley for B-20CL is supported on one side only.

Model B-20CL-A C€

Belt size 20 mm (W) The Idle Pulley for B-20CL-A is supported on both sides.

Belt size 30 mm (W) The Idle Pulley for B-30CL is supported on one side only.





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 m³/min , 28.9 CFM	
Free speed	17000 min ⁻¹ (rpm)	18000 min ⁻¹ (rpm)		15000 min ⁻¹ (rpm)	
Belt speed	1120 m/min , 3675 FPM	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	



Model B-30CL C€

Pneumatic belt sander

BABY BELTON

Ideal for deburring, chamfering, bead grinding, and polishing applications.

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



0 0 0 0 111 0 111 0 111 0					
Model	BB-10B (Lever switch type)	BB-10B (Ring switch type)	BB-20		
Air pressure	0.6 MPa , 6 kgf/cm² , 85 PSI				
Air consumption (No-load)	0.2 m³/min , 7.1 CFM		0.43 m³/min , 15.2 CFM		
Free speed	17000 min ⁻¹ (rpm)				
Belt speed	1120 m/min , 3675 FPM		1100 m/min , 3608.9 FPM		
Belt size	10 × 330 mm , 3/8" × 13"		20 × 330 mm , 3/4" × 13"		
Inlet size	Rc 1/4				
Weight	0.55 kg , 1.2 lbs	0.5 kg , 1.1 lbs	0.8 kg , 1.76 lbs		



^{*} Figures may vary depending on applications.



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.





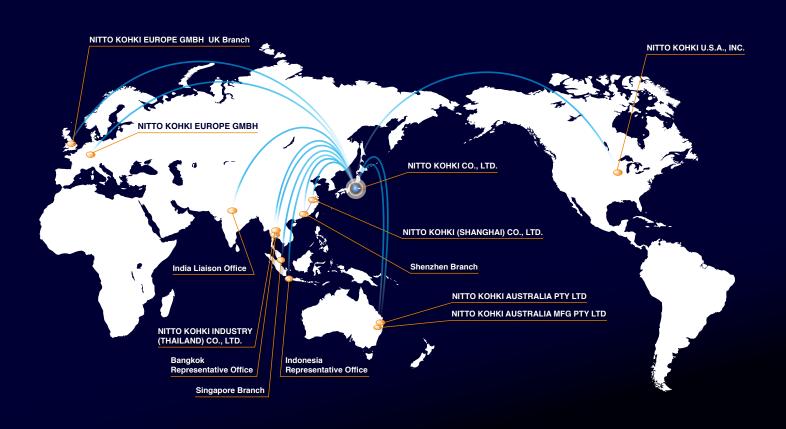
•			
Model	BC-005		
Air pressure	0.6 MPa , 6 kgf/cm² , 85 PSI		
Air consumption (No-load)	0.22 m³/min , 7.76 CFM		
Free speed	420 min ⁻¹ (rpm)		
Deburring hole diameter	3 to 34 mm , 0.11" to 1.33"		
Countersink shank size*	6, 8, 10, 12 mm		
Inlet size	Rc 1/8		
Weight (Without hose)	0.75 kg , 1.65 lbs		
•			

^{*} Chuck 12 mm is optional

Countersinks are not provided with the tool. Please purchase them locally.



NITTO KOHKI's GLOBAL NETWORK















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