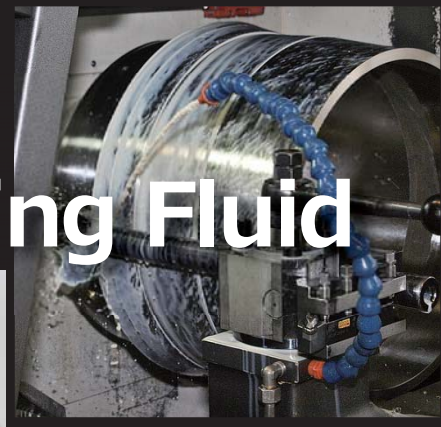


Next Generation All-Round Machining Fluid



Strong Alkaline Electrolyzed Water Generator

Environmental regeneration Products

Re-AL

『Re-AL』

Excellent in cooling capability, permeability, lubricating property, and rust-preventing property

POINT 1

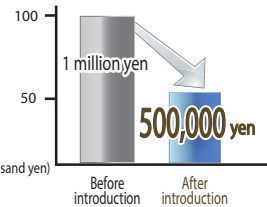
Tool purchasing cost decreases by half



Smaller water droplets have higher cooling capability and permeability, making tool blades and workpieces undergo less thermal deformation

● Tool purchasing cost

(Example: Company O which spends 1 million yen a year for purchasing tools)



50% of cost reduction



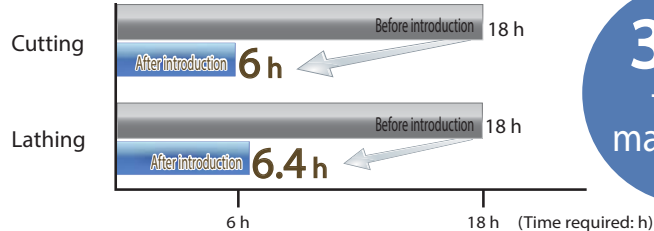
* Calculated in Japanese yen

POINT 2

3 times faster machining

● Machining speed

(Example: Company K which spends 18 hours for machining 100 workpieces)

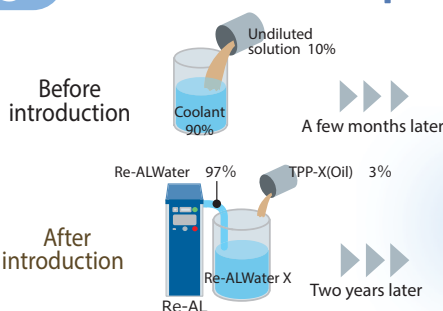


3 times faster machining

Excellent in preservation property, deodorization ability, detergency, and anti-bacterial effects

POINT 3

No waster liquid is discharged



(Example: Company O which collects waste liquid three times and disposes of 120 cans of it a year)

Waste liquid collection and disposal are required

Cost for collecting waste liquid: 165,000 yen
Cost for disposing of waste liquid: 720,000 yen
Total: 885,000 yen a year



No collection required

Cost for waster liquid 0 yen



Running costs

Calculation conditions (Example: Company O)

Cutting machine: 20 units (operating 16 hours a day)

- Cost for purchasing tools: 1 million yen a year
- Volume of machining fluid used: 7,200 L a year
- Cost for waste liquid
Waste liquid collection 3 times a year
Waste liquid disposal 120 cans a year

Expense item	Before introduction	After introduction
Cost for purchasing tools	1,000,000 yen a year	500,000 yen a year
Cost for machining fluid	4,680,000 yen a year	1,800,000 yen a year
Cost for Re-AL Water	-----	56,000 yen a year
Cost for waste liquid	885,000 yen a year	0 yen a year
Electricity expense	-----	9,800 yen a year
Total	6,565,000 yen	2,365,800 yen

Reduction of approx. 4,200,000 yen a year

64% of cost reduction



Comments from users



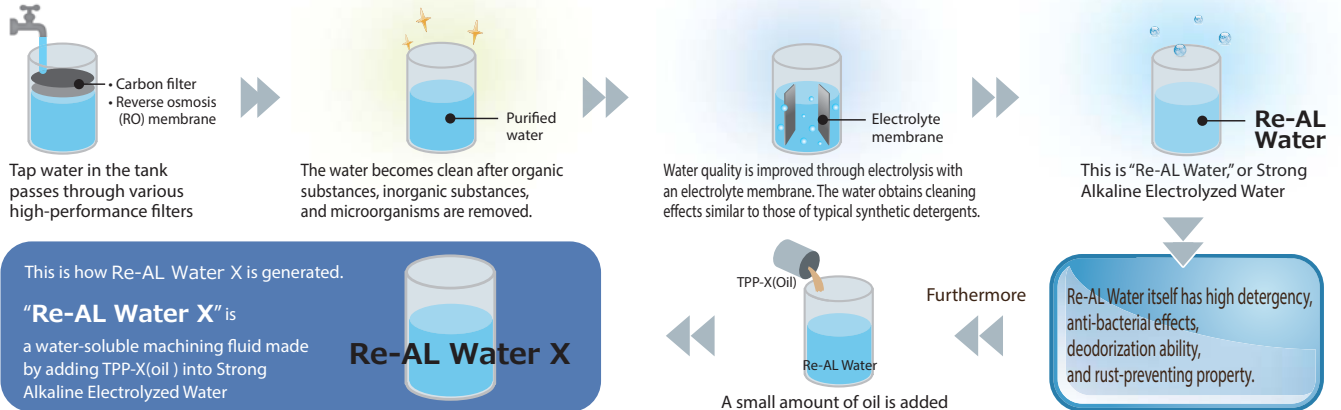
- Service lives of tools have been doubled.
- The time taken for cutting has reduced to one-third.
- The time taken for grinding has reduced to one-half.
- Machining is complete in one session without offset, reducing time required.
- Burrs can now be suppressed, which allows spare time to be used for other tasks.
- Successful heat change suppression reduces changes in dimensions after machining.

Benefits from introducing Re-AL



What is Re-AL Water X ?

Next generation water-soluble machining fluid made of Strong Alkaline Electrolyzed Water (Re-AL Water) with a small amount of oil (TPP-X)

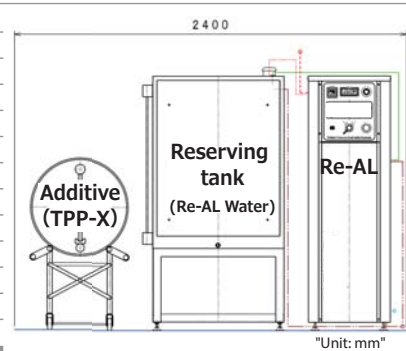


Successful introduction

- Automobile manufacturer:** Tool grinding
- Automobile parts machining:** Lathe
- Joint manufacturer:** Lathe
- Cutting instrument manufacturer:** Lathe, MC
- Rotary press manufacturer:** MC, lathe, surface grinding, cylindrical grinding
- Gear wheel manufacturer:** Hobbing, rack milling, lathe
- Machine tool parts machining:** Surface grinding, cylindrical grinding
- Precision component machining:** MC, lathe, surface grinding

Specifications

Raw material	Drinkable tap water*
Raw water temperature	15 to 35°C
Raw water pressure	0.1 to 0.5 Mpa
Ambient temperature	10 to 30°C
Filter	Pre-filter x 1 Carbon filter x 1 RO membrane x 1
Pump	100 VAC 0.2 kW
Electrolyte membrane	Ion exchange membrane
Electrolyte	Potassium carbonate (K ₂ CO ₃)
Production capacity	36 L/hour
Water quality	pH12.0 to 12.5 (25°C±3%)
Power supply	Single phase 100 VAC (200 VAC, optional)
Additive(TPP-X)	200L
Reserving tank (Re-AL Water)	500L



* Pretreatment equipment is required when undrinkable water is used.

First, Inquiry about demonstration at this number try Re-AL for one of your machine tools.

Distributor: