

TCM series offers an integral premium covering price, quality & service, all of which are based on cost effectiveness and certified by US customers over the last 20 years

TCM SERIES

20SI 32SI 38SI
38H 42H



TCM
INDUSTRY

TCM INDUSTRY

moves forward into industry 4.0
based on the root technology

TCM Industry is a machine tool specialized company who develops, produces, and sells CNC Swiss type auto lathes based on casting technology regarded as the root of the industry. With our mission statement as Creative Innovation, Thinking Action, Quality Responsibility, we've been supplied large-sized casting to major machine tool companies in Japan and aimed at maximization of production efficiency by introducing flexible production system which enable us to produce all models of TCM series in one production line.

TaeChang Metal Industry
established

1987

Technology Exchange
conducted with YUKAWA IRON CASTING WORKS Co., Ltd

1990

Foundry Division

Machine Division



2005
MMTC acquired by TCM

2004

KSI/MMTC established for R&D & Manufacturing of Swiss lathes
located in Westminster, Colorado, United States

Mazak & Toshiba Machine
contracted to supply beds

2006

IMTS 2006
SQC 20_32_38Ø displayed

Selected as Promising
Small-Medium Company

2008

IMTS 2008
SQC & SQC_SM
20_32_38Ø displayed

2011

TCM SERIES

TCM Swiss type auto lathes,
take the lead in the cost effectiveness trend

TCM Industry sold SQC-SQX-SM models in the US market for the last 20 years after acquiring MMTC, located in Colorado, United States, and succeeded in the local US market as well as extending the sales to the world market with integrating models, TCM series.

Based on casting technology accumulated over the past 30 years, we now take the lead in the cost effectiveness trend over pure price competitiveness.

4th Successive Winner
at Casting Competition
in 2013-16

Selected as INNO BIZ

Selected as Root Technology
Specialized Company

2015

TCM series released
S type 20S 26S 32S 38S

2016

2017

2021

Product Enhancement
SII type 20SII 32SII 38SII

2022

TCM38H released

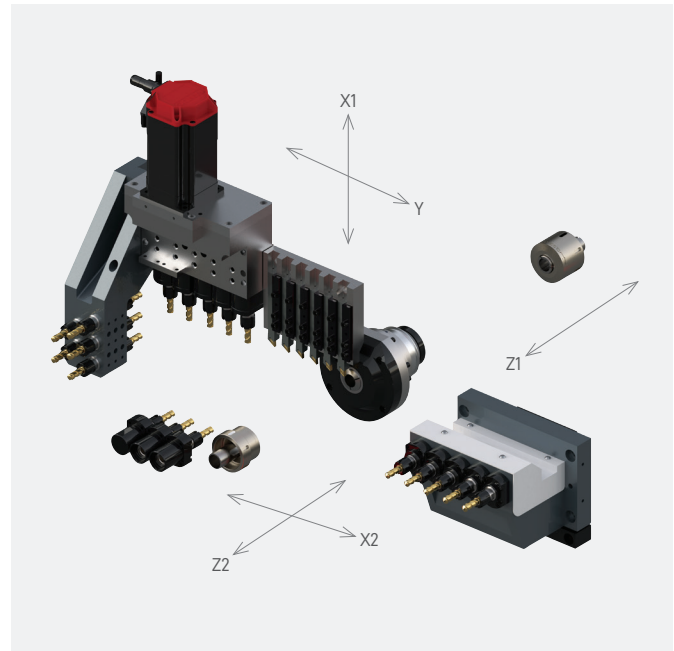
2024

New Model, TCM42H

TCM20SII

TCM series
SII type

The More for Less Versatile enough to tackle any job



Specifications	Unit	20SII
Max Machining Diameter	mm	Ø20
Max Machining Length	mm	300/1 chucking
Main Spindle	rpm	10,000
	kW	2.2/3.7
Sub Spindle	rpm	8,000
	kW	1.5/2.2
Weight	kg	3,500

No of Tools	Unit	20SII	
Total	each	29	
OD	each	6	
ID (Front)	each	10	Front 5+Rear 5 (ER16M)
Cross	each	5	ER16M
Back	each	5	2 Driven+3 Fixed (ER16M)
Sub (Eccentric)	each	3	2 Driven+1 Fixed (ER16M)

Feed Drive System	Unit	Z1	X1	Y	Z2	X2
Feed Distance	mm	300	70	398.5	300	403
Rapid Feed Speed	m/min	32	20	32	32	32



300mm/1 chucking
Max Machining Length



29 tools
Total No. of Tools

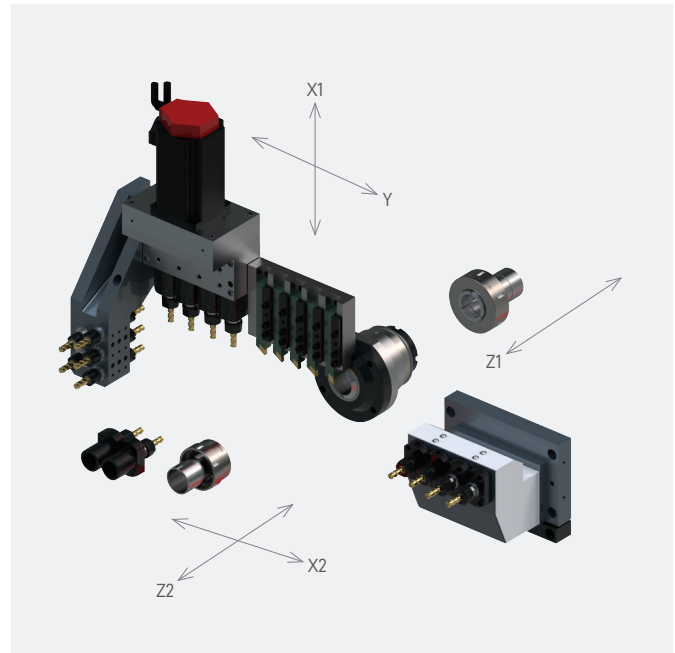


3,500kg
Weight

TCM 32SII 38SII

TCM Series
SII Type

The More for Less Reliable enough to tackle any job



Specifications	Unit	32SII	38SII
Max Machining Diameter	mm	Ø32	Ø38
Max Machining Length	mm	300/1 chucking	
Main Spindle	rpm	8,000	
	kW	5.5/7.5	
Sub Spindle	rpm	8,000	
	kW	1.5/2.2	
Weight	kg	3,500	

No of Tools	Unit	32SII	38SII
Total	each	25	
OD	each	5	
ID (Front)	each	10	Front 5+Rear 5 (ER16M 3EA/ER20M 2EA)
Cross	each	4	ER16
Back	each	4	2 Driven+2 Fixed (ER16)
Sub (Eccentric)	each	2	2 Driven (ER16)

Feed Drive System	Unit	Z1	X1	Y	Z2	X2
Feed Distance	mm	300	70	397.5	300	403
Rapid Feed Speed	m/min	32	20	32	32	32



300mm/1 chucking
Max Machining Length



25 tools
Total No. of Tools

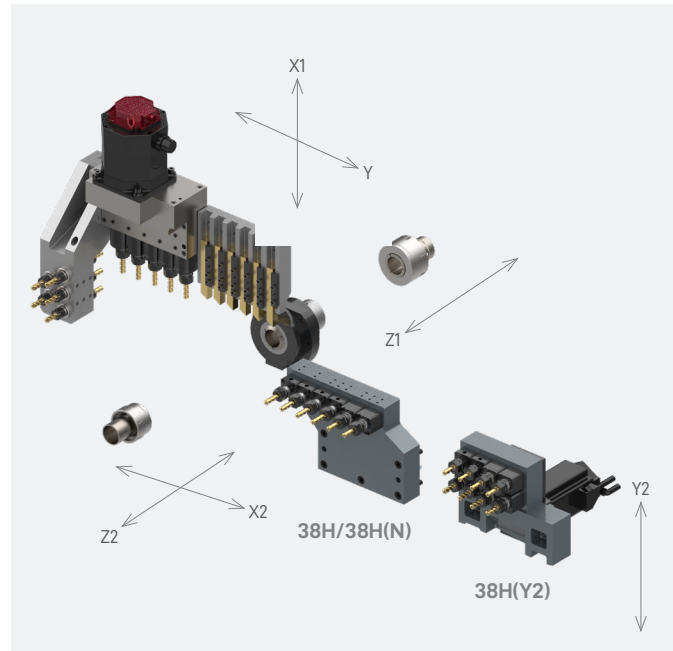


3,500kg
Weight

TCM 38H

TCM Series
H Type

The More for Less More than enough to tackle any job



Specifications	Unit	38H	38H(N)	38H(Y2)
Max Machining Diameter	mm		Ø38	
Max Machining Length	mm	320	100 (350)	320
Main Spindle	rpm		6,500	
	kW		5.5/7.5	
Sub Spindle	rpm		6,500	
	kW		2.5/5.5	
Weight	kg		4,500	

No of Tools	Unit	38H	38H(N)	38H(Y2)
Total	each	27	27	29
OD	each		6	
ID (Front)	each		10 Front 5+Rear 5 (ER20M)	
Cross	each		5 (ER16)	
Back	each	6 Front 2+Rear 4 (ER16)	6 Front 2+Rear 4 (ER16)	8 Front 4+Rear 4 (ER16)
Sub (Eccentric)	each		N/A	

Travel	Unit	Z1	X1	Y	Z2	X2	Y2
Distance	mm	320	80	477.5	300	425	72
Rapid Feed Speed	m/min	32	20	32	32	32	20



320mm/1 chucking
Max Machining Length



27/29 tools
Total No. of Tools

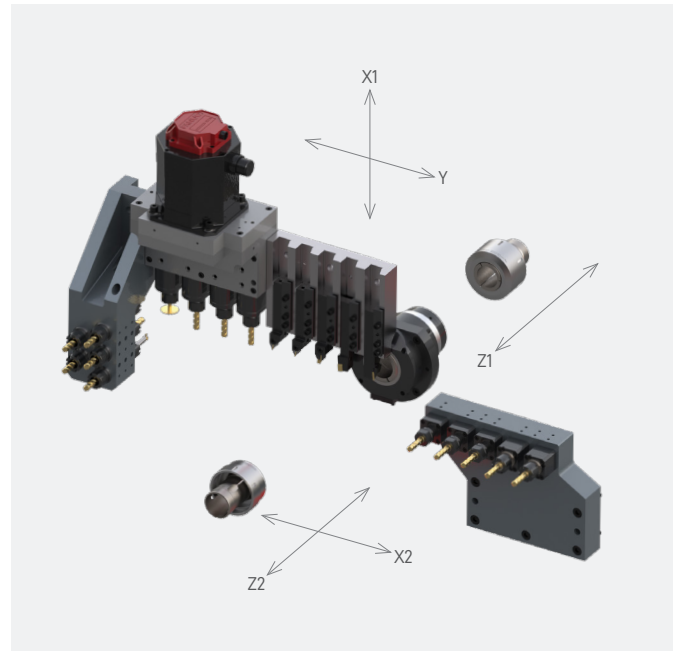


4,500kg
Weight

TCM 42H

TCM Series
H Type

The More for Less Big enough to tackle any job



Specifications	Unit	42H
Max Machining Diameter	mm	Ø42
Max Machining Length	mm	320/1 chucking
Main Spindle	rpm	6,500
	kW	5.5/7.5
Sub Spindle	rpm	6,500
	kW	2.5/5.5
Weight	kg	4,500

No of Tools	Unit	42H	
Total	each	24	
OD	each	5	
ID (Front)	each	10	Front 5 + Rear 5 (ER20M)
Cross	each	4	ER20M
Back	each	5	2 Driven & 3 Fixed (ER20M)
Sub (Eccentric)	each	N/A	

Travel	Unit	Z1	X1	Y	Z2	X2
Distance	mm	320	80	477.5	300	425
Rapid Feed Speed	m/min	32	20	32	32	32



320mm/1 chucking
Max Machining Length

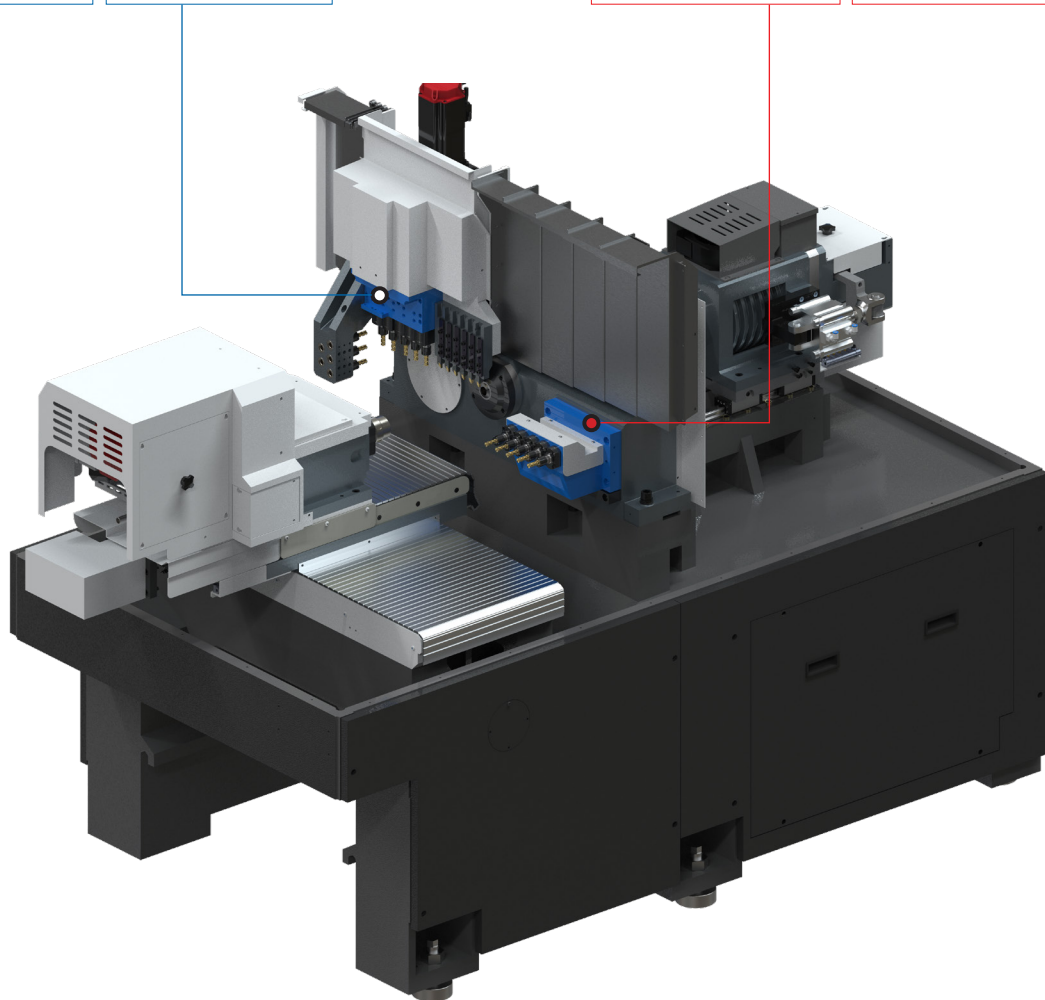


24 tools
Total No. of Tools



4,500kg
Weight

Optimized Special Tools

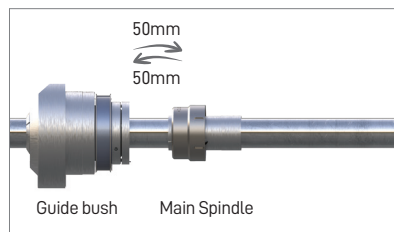


Differentiated Strengths

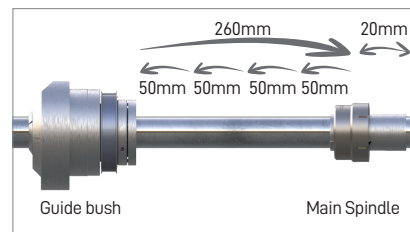
ICS



Intelligence Chucking System takes advantage of the ample 300mm stroke to reduce the number of bar rechucks during long production runs. Instead of rechecking for each part the spindle feeds 280mm of material to make multiple parts in a single chucking operation and increments forward for each part. See how this can save even more off your cycle time.



Intelligence Chucking System Off



Intelligence Chucking System On

RTC



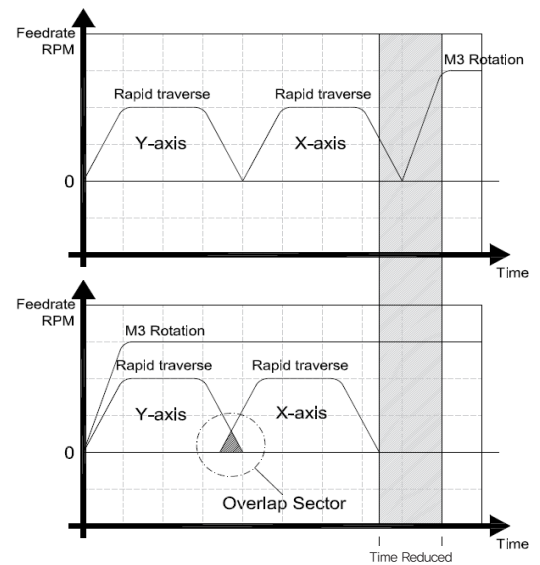
Rapid Tool Change calculates the smoothest and most efficient transition path from tool to tool saving time on every tool change. Savings that add up to a significant reduction of cycle time, which means more profits for you.

```

T0101;
M3 S3200;
G0 X27. Z0.;
G99 G1 X25.5 F0.3;

T0101; M3 S3200 X27.Z0.;
G99 G1 X25.5 F0.3;
    
```

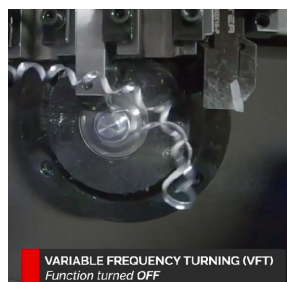
Before vs. After changing the programs



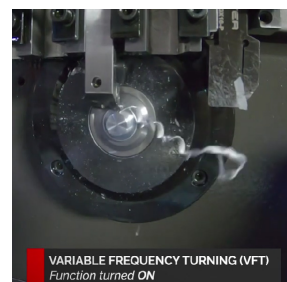
VFT



Variable Frequency Turning uses a modified sine wave equation to move the cutting tool at varying intervals to allow for greater chip thinning and chip breakage. This allows for better heat dissipation, chip control, and less machine downtime for taking care of chip issues.

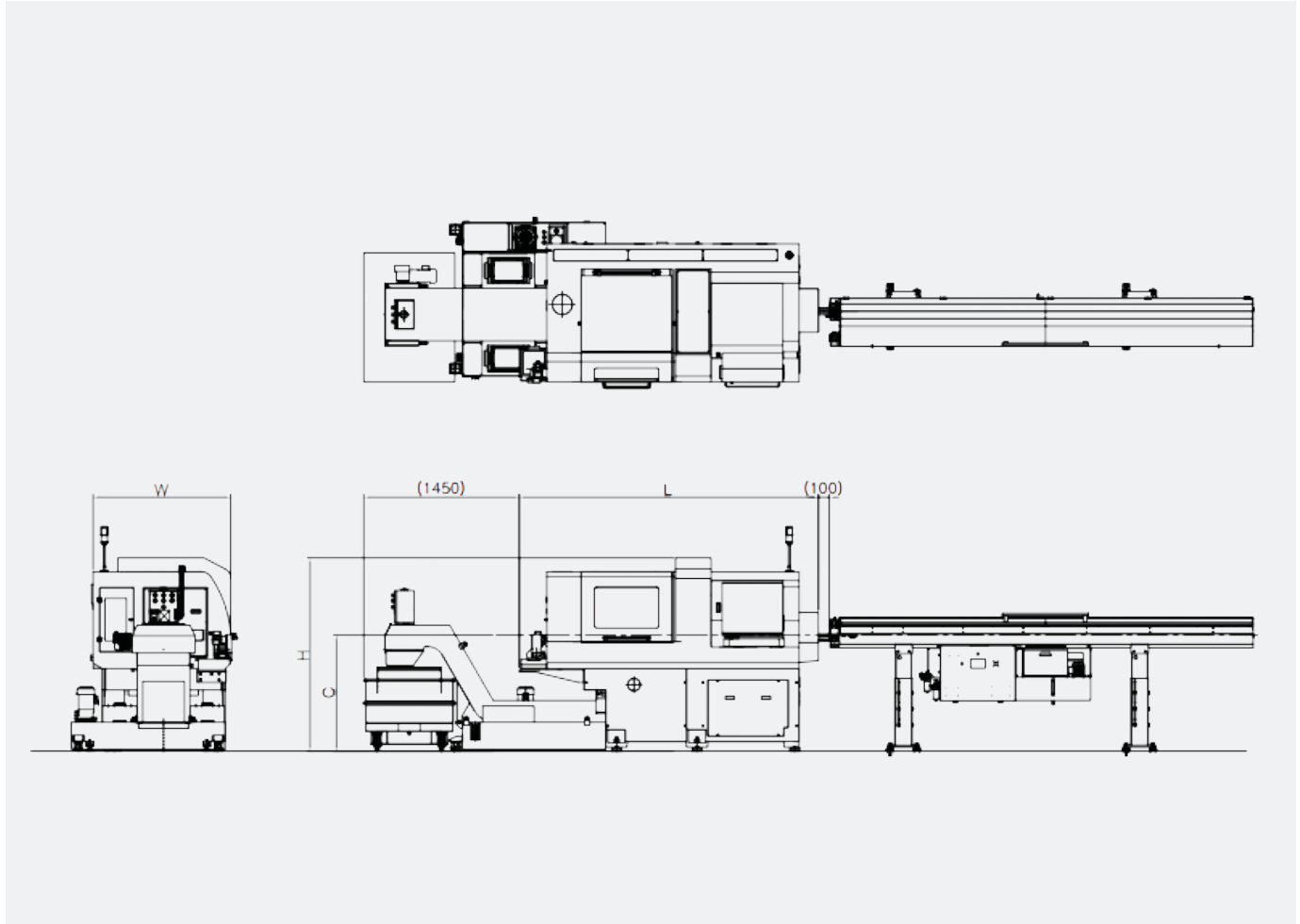


Variable Frequency Turning Off



Variable Frequency Turning On

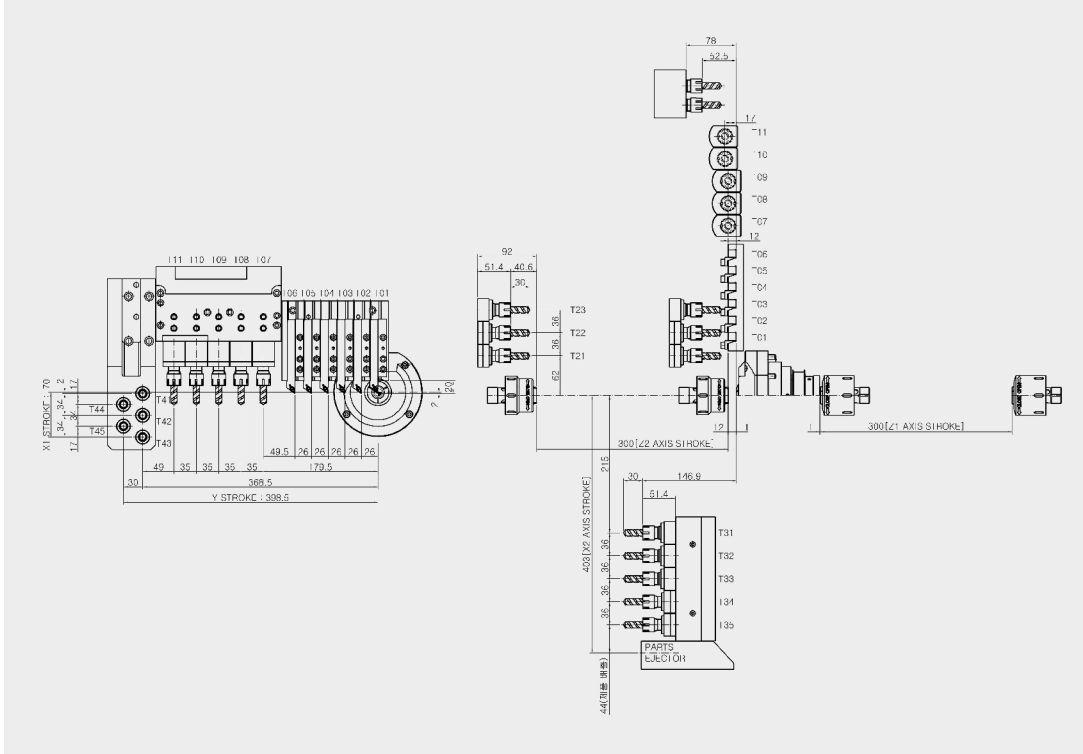
Dimensions



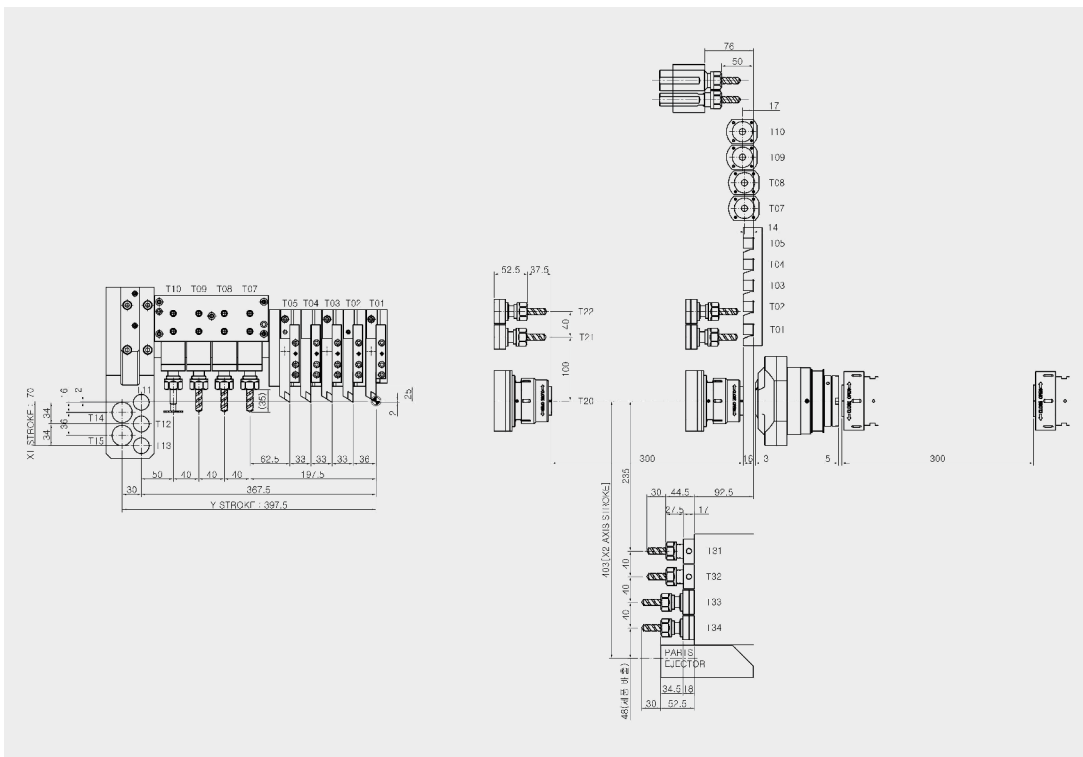
TCM series	Unit	SII type	H type
Length(L)	mm	2,785	3,130
Width(W)	mm	1,285	1,470
Height(H)	mm	1,800	1,785
Center Height(C)	mm	1,080	1,060
Weight	kg	3,500	4,500

Tool Layouts

TCM 20SI

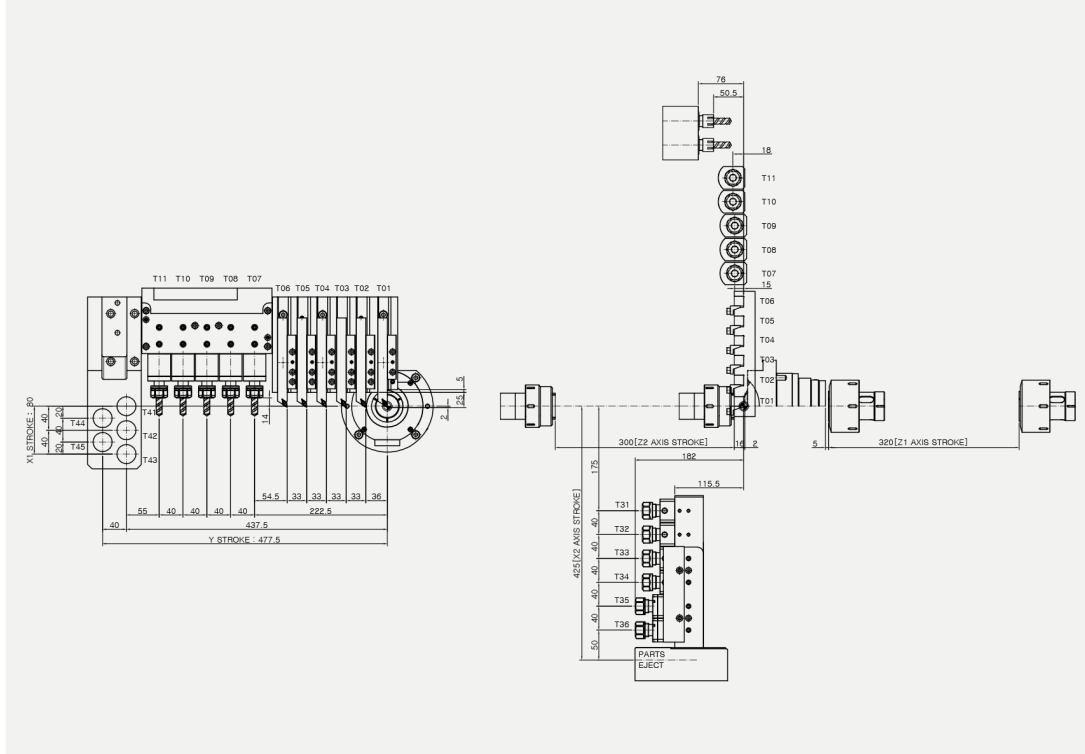


TCM 32SI 38SI

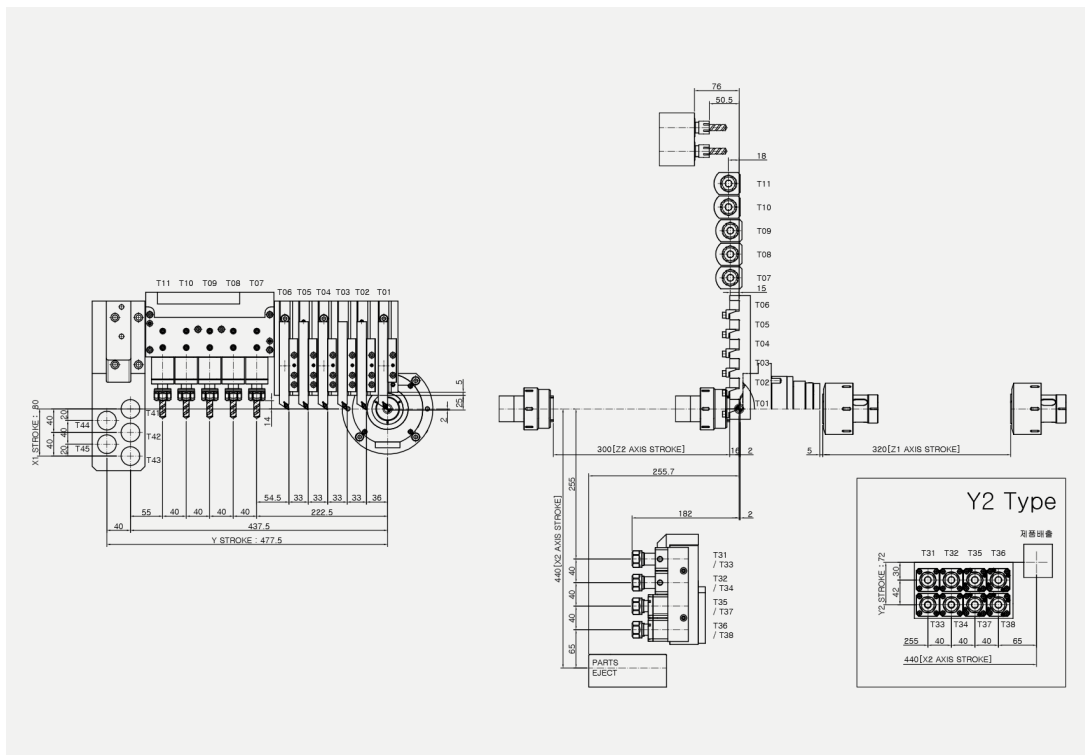


Tool Layouts

TCM 38H

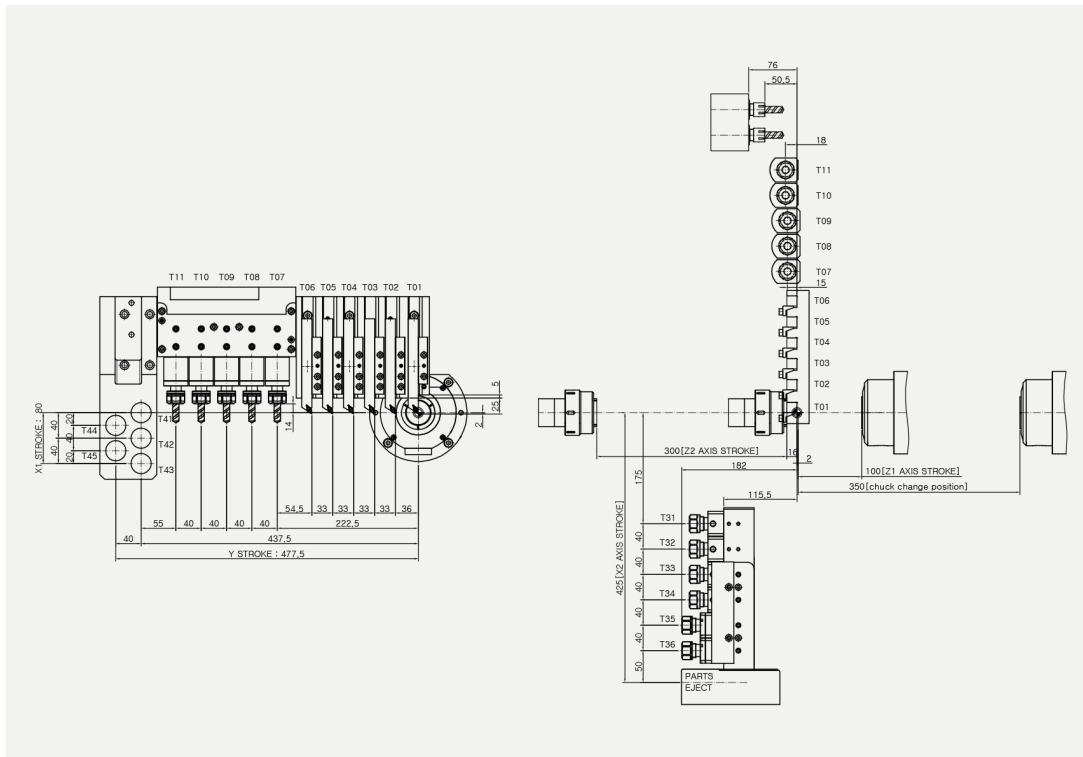


TCM 38H (Y2)

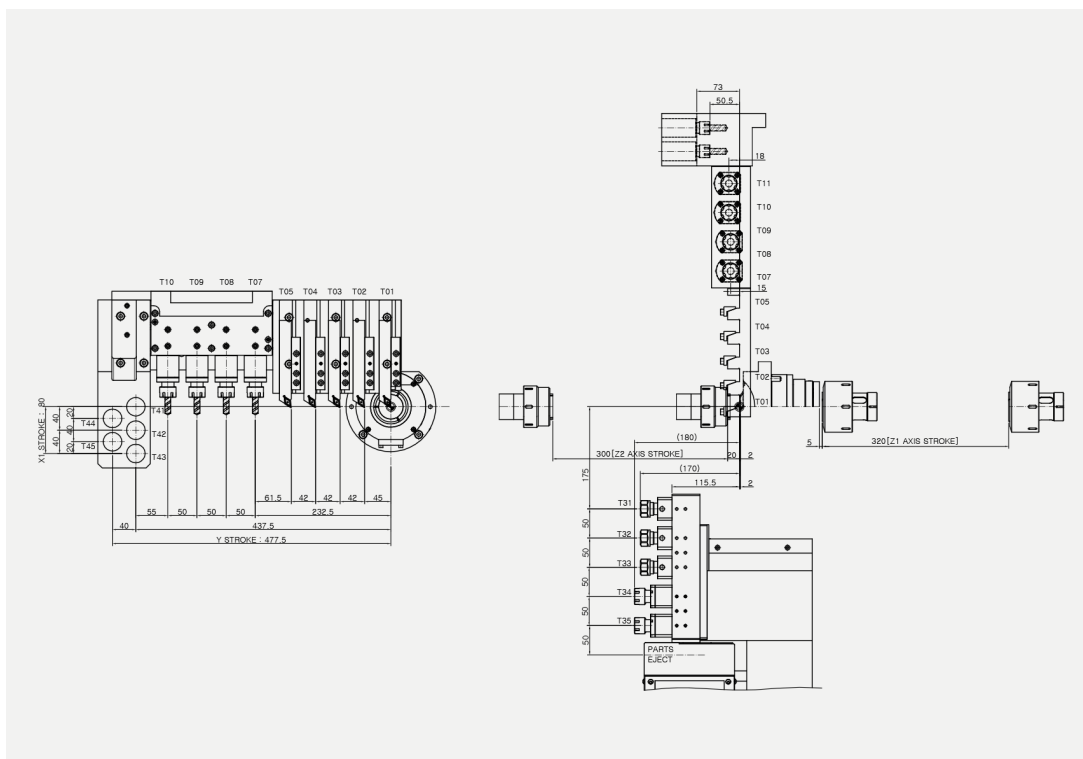


Tool Layouts

TCM38H(N)



TCM42H



Standard & Optional Specifications

S Standard_OPT Option_- N/A

	TCM series	SII type			H type		
		20SII	32SII	38SII	38H	38H(N)	38H(Y2)
Coolant Pump	Medium Pressure Coolant Pump 15bar		OPT			OPT	
	High Pressure Coolant Pump 70bar_4sol		OPT			OPT	
	High Pressure Coolant Pump 120bar_4sol		OPT			OPT	
	- Oil Chiller (for High Pressure)		OPT			OPT	
	- Oil Mist Collector (for High Pressure)		OPT			OPT	
	High Pressure Coolant Pump & Chiller 70bar_4sol		OPT			OPT	
	High Pressure Coolant Pump & Chiller 120bar_4sol		OPT			OPT	
Chip Conveyor	Chip Conveyor		OPT			OPT	
	Smart Chip Conveyor		OPT			OPT	
Machining	Total Control of Main & Sub Spindles' C axis		S			S	
	OD Tools		S			S	
	Cross Drills		S			S	
	Milling Unit		S			S	
	FR/RR Drilling Unit		S			S	
	Back Tools		S			S	
	Sub Tools		S			-	
	Rotary Guide Bush Holder Unit		S			S	
	Parts Conveyor		S			S	
	Back Slotting Unit		OPT			OPT	
	3 Spindle Face Counter Drill/Milling Unit		OPT			OPT	
	"3 Spindle Face Counter Drill/Milling Unit 0-90° Angular Adjustable"		OPT			OPT	
	Thread Whirlig Unit		OPT			OPT	
Barfeeder	Barload BWG326	OPT	-			-	
	Barload AUTO538	-	OPT			OPT	-
	Barload VITO545	-	OPT			OPT	
	LNS GT326	OPT	-			-	
	LNS XH552	-	OPT			OPT	
Etc.	Fanuc Service Warranty		OPT			OPT	
	Automatic Shut-off Device		S			S	
	Indoor Lighting (LED)		S			S	
	Signal Lamp		S			S	
	Cut Off Tool Breakage Detector (S/W)		S			S	
	Tools-Life Management System		S			S	
	Prevention Collision System		S			S	
	MPG (Mounted on the OP)		S			S	
	Intelligence Chucking System (ISP)		S			S	
	Rapid Tool Change (RTC)		S			S	
	Variable Frequency Turnning (VFT)		OPT			OPT	

Technical Specifications

TCM series	Unit	SII type			H type			
		20SII	32SII	38SII	38H	38H(N)	38H(Y2)	42H
Fanuc Controller		0iTF Plus			0iTF Plus			
Main Spindle	Max Machining Diameter	mm	Ø20	Ø32	Ø38	Ø38	Ø38	Ø42
	Max Machining Distance/1 chucking	mm		300		320	"100 *350"	320
						*By changing a collet chuck		
Sub Spindle	Max Machining Diameter	mm	Ø20	Ø32	Ø38	Ø38	Ø38	Ø42
	Max Front Discharge Length	mm		100			100	
No of Tools	Total	each	29	25		27	29	24
	OD	each	6	5		6		5
	Front (ID)	Front/Rear	5/5	5/5		5/5		5/5
	Cross	Driven	5	4		5		4
	Back	Driven/Fixed	2/3	2/2		2/4	4/4	2/3
	Sub (Eccentric)	Driven/Fixed	2/1	2/-			-	
Tools	OD	mm	□12	□16		□16		□20
	ID (Front)		ER16M	ER16M/ER20M		ER20M		ER20M
	Cross		ER16M	ER16		ER16		ER20M
	Max Main Drilling	mm	Ø10	Ø10		Ø13		Ø13
	Max Main Tapping		M8	M8		M10		M10
	Max Cross Drilling	mm	Ø8	Ø8		Ø10		Ø10
	Max Cross Tapping		M6	M6		M10		M10
	Max Cross Slotting (WidthXDepth)	mm	1.5X4.0	1.5X4.0		1.5X4.0		1.5X4.0
	Max Back Drilling (Fixed)	mm	Ø10	Ø10		Ø10		Ø13
	Max Back Drilling (Driven)	mm	Ø8	Ø8		Ø10		Ø13
	Max Back Tapping (Fixed)		M8	M8		M10		M10
	Max Back Tapping (Driven)		M6	M6		M10		M10
	Motor	Max Main Motor rpm	rpm	10,000	8,000		6,500	
Max Main Motor Power		kW	2.2/3.7	5.5/7.5		5.5/7.5		
Max Sub Motor rpm		rpm	8,000	8,000		6,500		
Max Sub Motor Power		kW	1.5/2.2	1.5/2.2		2.2/5.5		
Max Cross Motor rpm		rpm	6,000	6,000		6,000		
Max Cross Motor Power		kW	1.0	1.0		2.2		
Max Back Motor rpm		rpm	6,000	6,000		6,000		
Max Back Motor Power		kW	1.0	1.0		1.0		
Collet Chuck	Main Spindle		TF25	TF44	TF48		TF48	TF48
	Guide Bush		TD25NS	TD32S	TD38		TD38	TD42
	Sub Spindle		TF25	TF37	TF44		TF44	TF48
Stroke	Z1	mm	300	300		320	"100 *350"	320
	X1	mm	70	70			80	
	Y1	mm	398.5	397.5			477.5	
	Z2	mm	300	300			300	
	X2	mm	403	403			425	
	Y2							72
General Info	Air Flow Rate	liter/min		120~150			120~150	
	Cooling Tank Capacity	liter		200			250	
	Electrical Power Consumption	kVA		15			15	
	Cable Size	SQ		16			16	
	Weight	kg		3,500			4,500	

TCM Industry's expertise is based on casting technology accumulated over the past 30 years. Having established vertical integration from casting to machining & assembly, we now take the lead in the costeffectiveness trend over pure price competitiveness.



For more information, please contact with us by e-mail or telephone:

 www.tcmindustry.com

 50-25, Dongsansaneopdanji-ro, Yeonmu-eup, Nonsan-si, Chungcheongnam-do,
Republic of Korea

 + 82 41 742 8154

 + 82 41 741 8154

 hjlee@tcmindustry.com | yjlee@tcmindustry.com