

GLS-2800 GLS-3300

SERIES

HIGH SPEED CNC TURNING CENTER



THE ULTIMATE MACHINING POWER
GOODWAY®

HIGH SPEED CNC TURNING CENTERS

With the latest machine tools technology and high quality components, GOODWAY brings you the new GLS-2800 / GLS-3300 series high speed CNC turning center. This series is based on high precise linear guide ways and featured big bore, high power, fast cut and more to provide you machining solution with high efficiency cutting power. Besides, The GLS-2800 / GLS-3300 series equipped with an optional live tooling turret, C-axis, Y-axis and sub-spindle, G.LINC 350 intelligent control system and various automation equipment to reach a complete series and easily meet your machining needs of today and tomorrow.



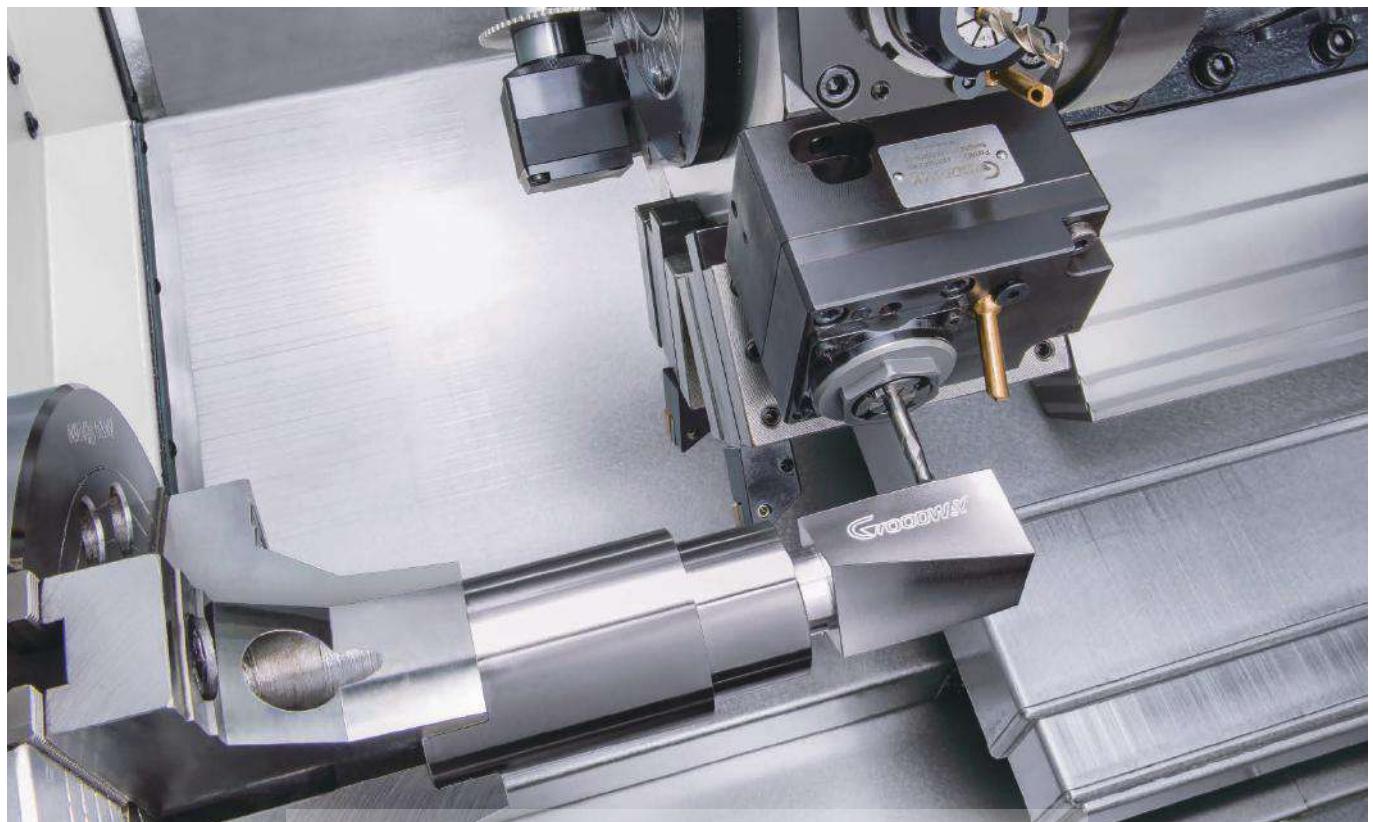
(GLS-2800MS model shown)

GOODWAY HIGH SPEED CUTTING SERIES

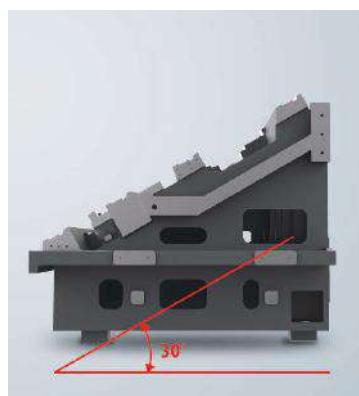


Model	Chuck size	Bar capacity
GLS-150	6" (Big bore)	Ø51 mm
GLS-1500	6" (Big bore)	Ø51 mm
GLS-200	8" (Big bore)	Ø65 mm
GLS-2000	8" (Big bore)	Ø65 mm
GLS-2800	10"	Ø75 mm
GLS-3300	12"	Ø90 mm

Please contact GOODWAY for detailed information.



Equipped with an optional live tooling turret, C-axis, Y-axis and sub-spindle and other advanced features allows GLS-2800/3300 can work on turning, milling, drilling, tapping and off-center milling tasks. The machining capability equals the integration of turning center and machining center, which significantly lowers machining cycle time and manpower, and also prevent accuracy error of switching work-piece to another machine.



TRUE SLANT BED STRUCTURE

The 30° true slant bed design provides superior support and heavy cutting ability, also excellent chips removal and convenient loading process.



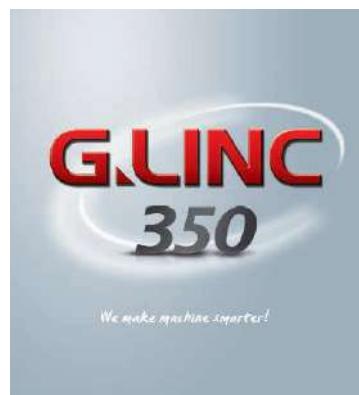
HIGH SPEED LINEAR GUIDE WAYS

X / Z axes and Y-axis (opt.) utilize the high speed high precise linear guide way design to provide the optimal motion and efficiency.



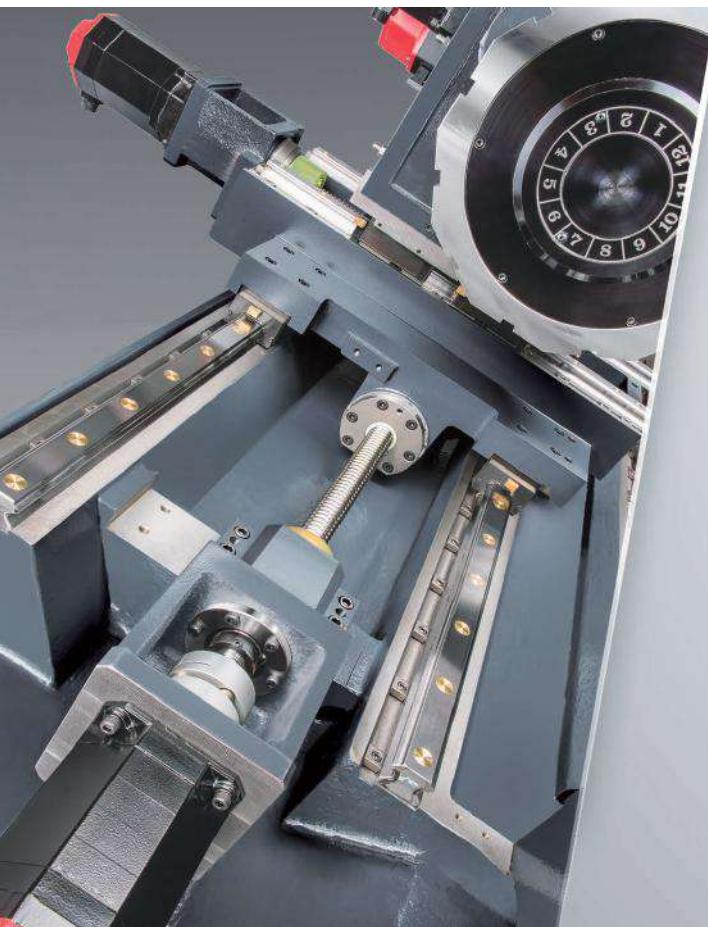
HIGH POWER SPINDLE

18.5 kW high power motor (GLS-3300) with spindle torque output up to 757 Nm, which can easily overcome all kinds of different materials.



INTELLIGENT SYSTEM (OPT.)

Advanced GOODWAY G.LINC 350 intelligent system combines high class hardware and complete intelligent assisting features which can make machine smarter.



SUPER RIGID STRUCTURE

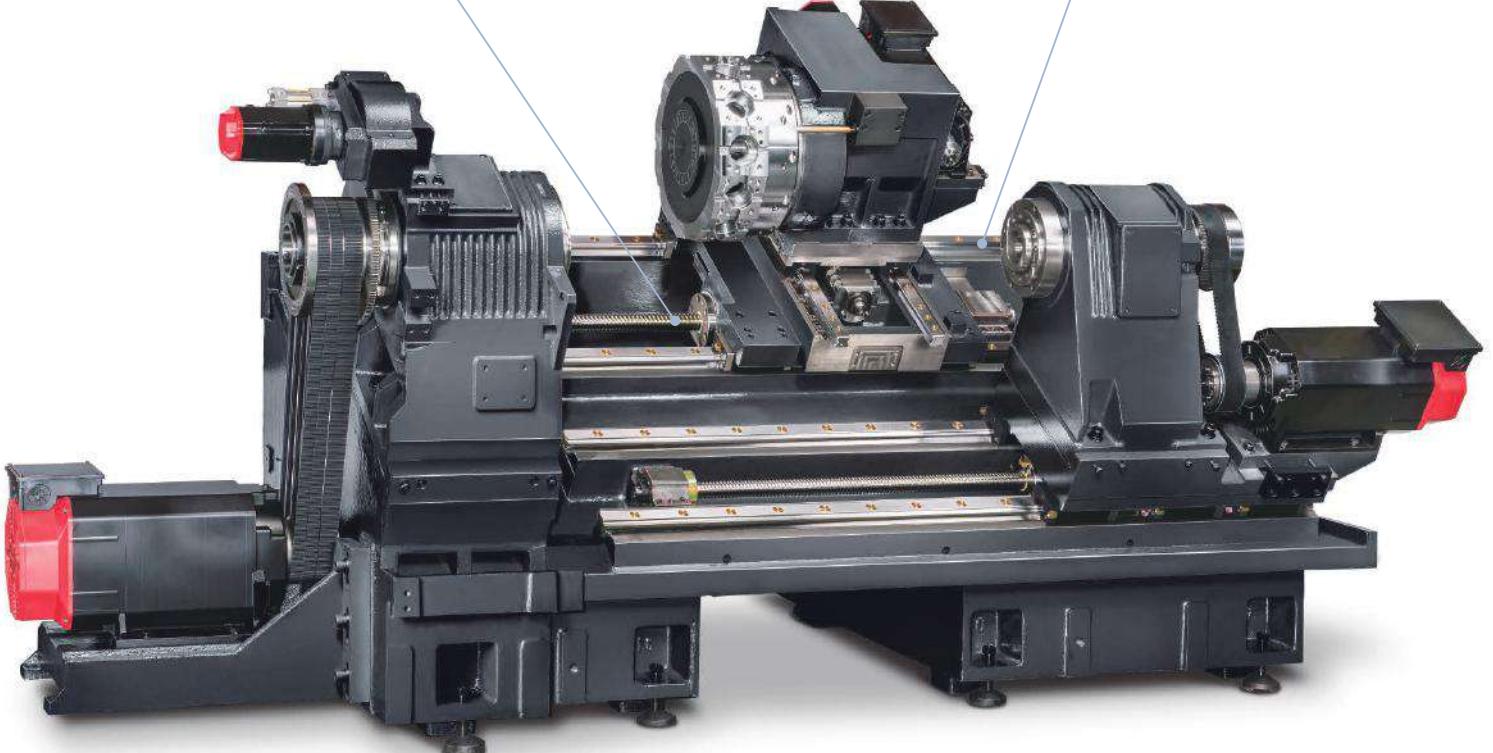
- ▶ Major structural components have been combined into one solid platform. The low center of gravity 30° slant bed design provides the most rigid foundation possible for the headstock, turret, and tailstock.
- ▶ Built to withstand years and years of rigorous high production turning, the heavily ribbed, one-piece, thermally balanced bed and casting parts are of "MEEHANITE" casting, which can provide more efficient anti-damping and decrease lower deformation to allow much longer lasting and stand out among others.
- ▶ All casting structure are detected by using Finite Element Methods(FEM) to optimize the intensity, which can efficiently lower the deformation and strengthen the machine rigidity to ensure stable positioning and repeatability accuracy.
- ▶ X / Z axes adopt the higher level FANUC αi series absolute servo motor that can provide rapid acceleration/deceleration and powerful thrust, which can efficiently lower the machining cycle time.

- ▶ C3 class hardened and precision ground ball screws ensure the highest accuracy and durability possible.

- 1 Ball screws are through per-compaction to eliminate backlash.
- 2 Ball screws are through precise detection to ensure the parallelism with linear guide ways.

- ▶ X & Z axes utilize high performance ball type linear guide way design which provides high precision high speed and low abrasion advantages.

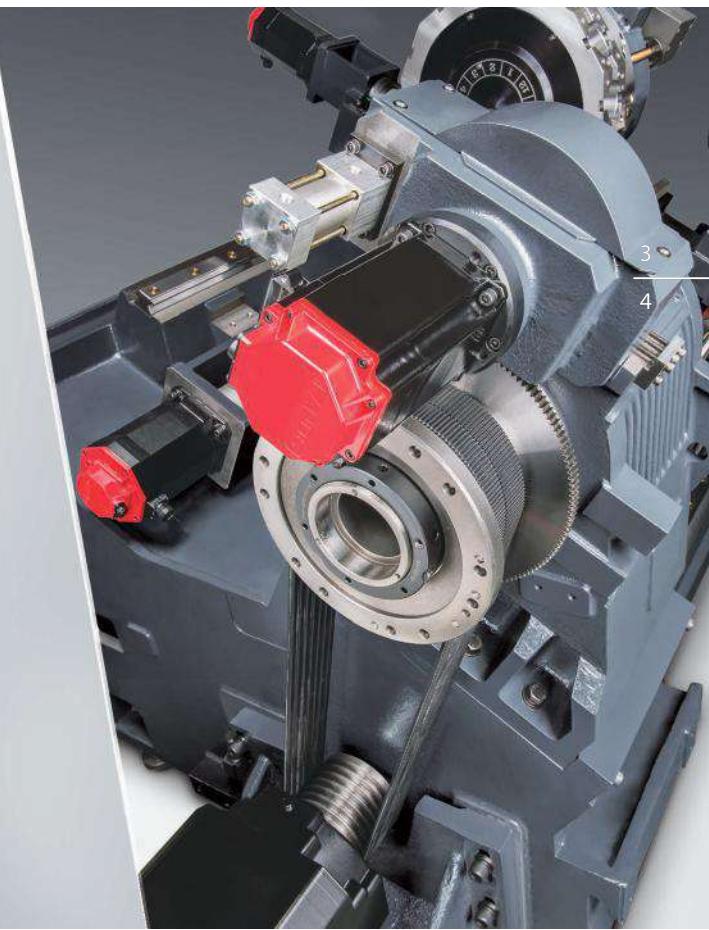
(Roller type linear guide ways are available for option)



(Casting structure of GLS-2800MS model shown)

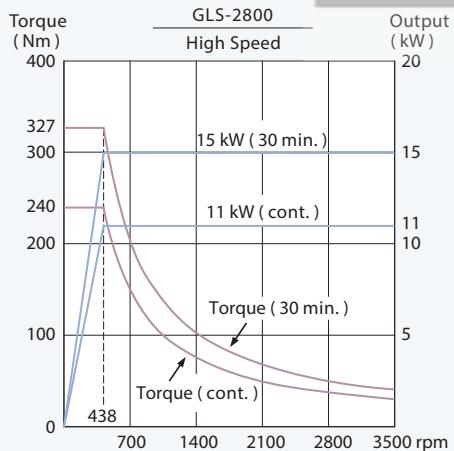
ULTIMATE TURNING POWER

- The heavy-duty headstock is one-piece casting reinforced with heat dispensing fins, which can fasten heat radiation, minimize thermal displacement and lower accuracy error of thermal deformation.
- P4 grade (Class 7) super-high precision bearings are directly assembled for maximum level of support and precision. Bearing configuration adopts optimal 2-point support design for heavy-duty cutting with stable performance and long term high accuracy durability.
- Specialized high performance V-type belt driven spindle motor can lower the effects of heat generated by motor. Pulley ratios has been adjusted to tune the motor's maximum speed to match the spindle's maximum speed, which result in full output at the lowest speed and maximize torque.

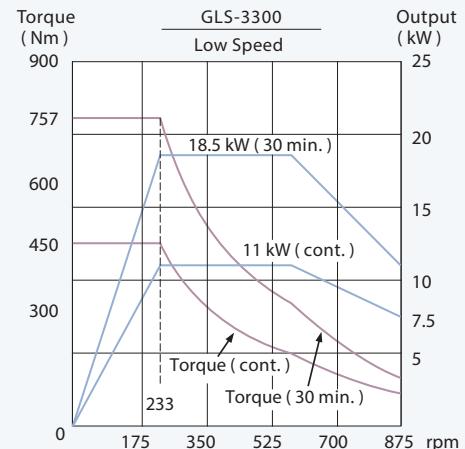
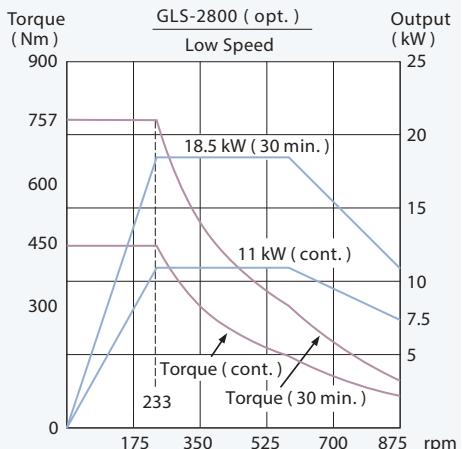
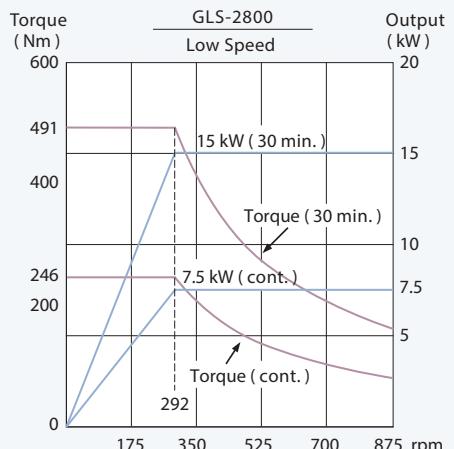
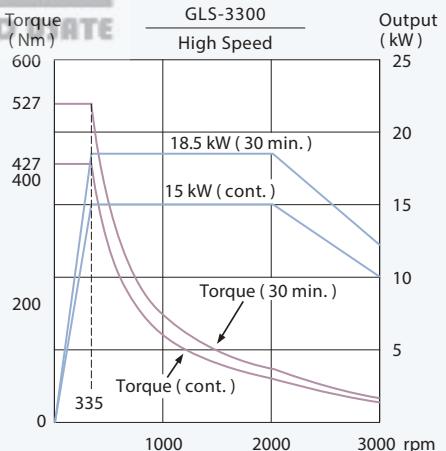
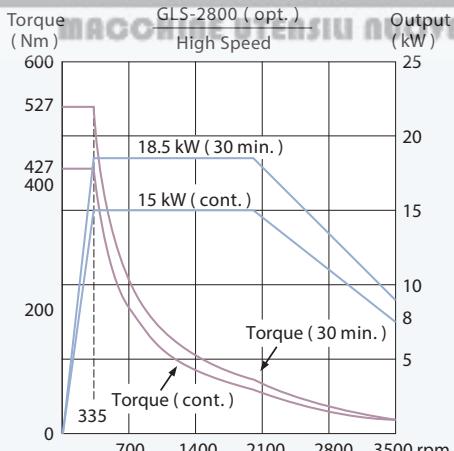


Spindle Output

[GLS-2800]

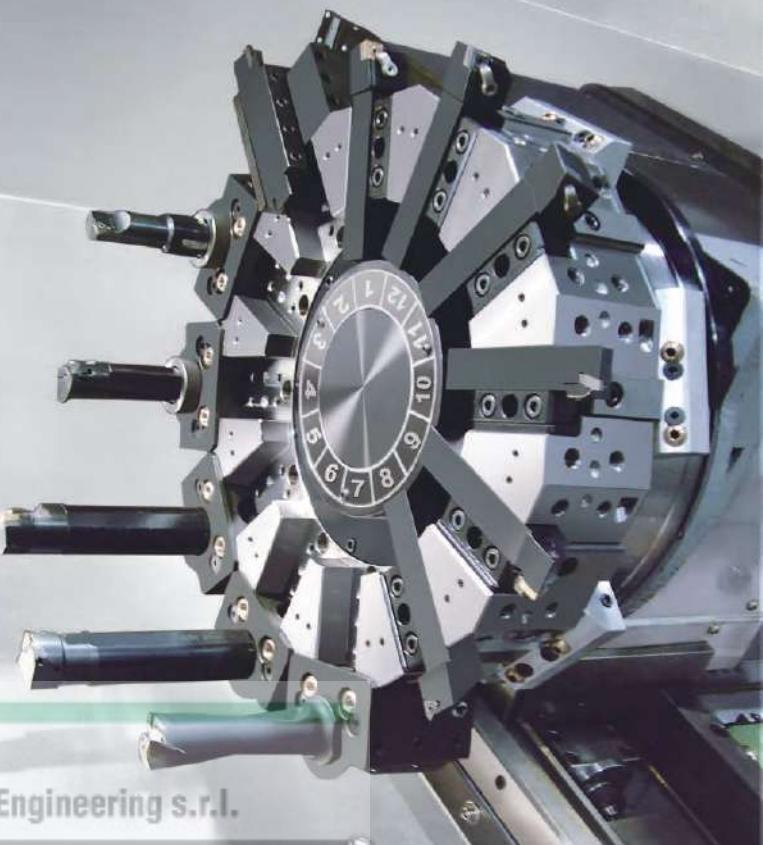
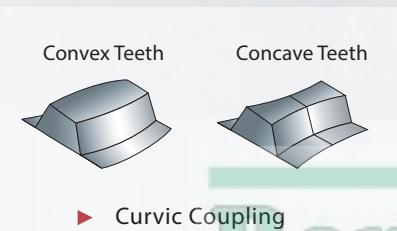


Ber. Co. Engineering s.r.l. [GLS-3300]



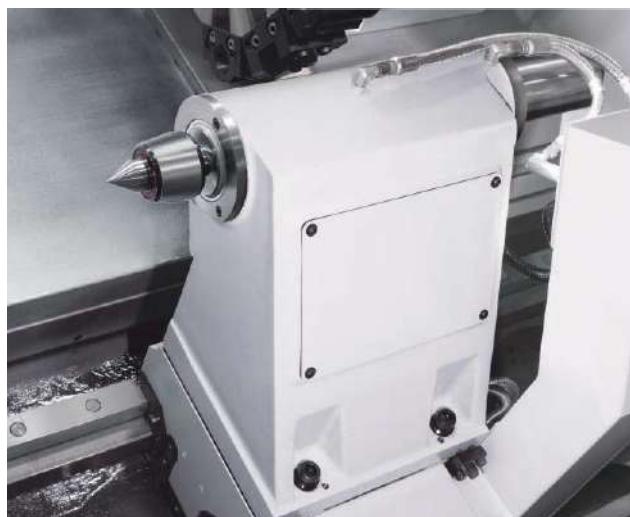
ADVANCED TURRET TECHNOLOGY

- ▶ Heavy load servo motor tool indexing system provides 10 or 12-station turret with a 0.3 second indexing time.
- ▶ High precision curvic couplings with large diameter Ø 250 mm positioning tool plate. With 6,400 kg clamping force, it makes sure the rigidity of turret in any machining conditions.
- ▶ The curvic couplings provide auto-centering, auto-clean and a large contact area which are designed to distinct from traditional couplings.



Ber.Co Engineering s.r.l.

MACCHINE UTENSILI NUOVE ED USATE



SUPER RIGID TAILSTOCK

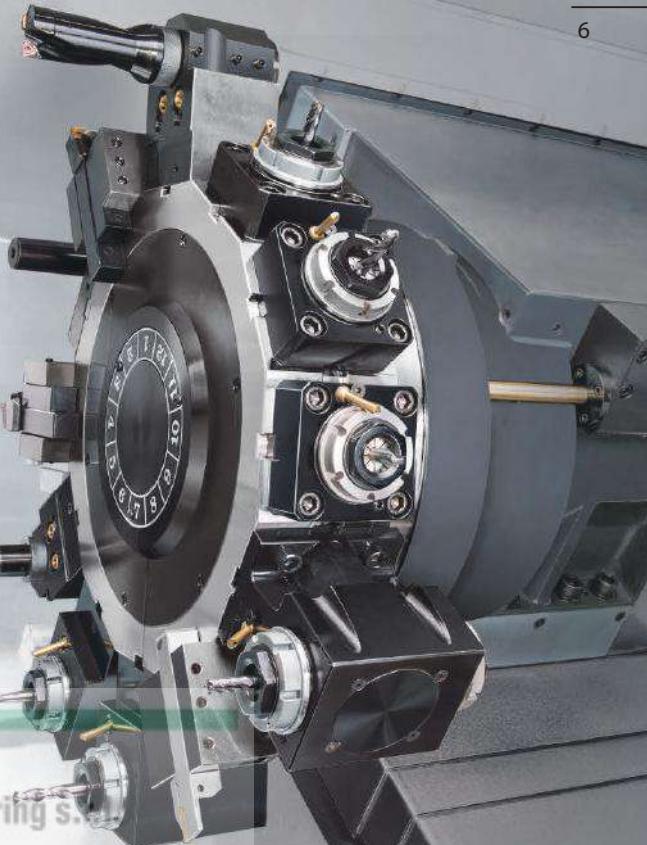
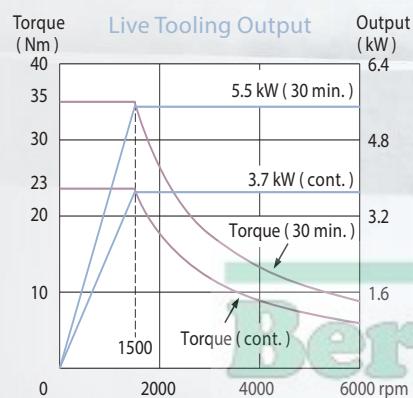
- ▶ Programmable base tailstock can efficiently achieve tough machining tasks, and it has been simplified through use of custom software interface. Z-axis carriage automatically locks on to the base of the tailstock and drags it to the desired position.
- ▶ The adjustment of the quill (MT#4) is programmable and thrust can be adjusted by hydraulic.

- ▶ Core components such as spindles, turrets, tailstocks are precisely developed by GOODWAY in a constantly temperature controlled A/C system to achieve the strict accuracy requirements and the best quality.



POWERFUL LIVE TOOLING TURRET

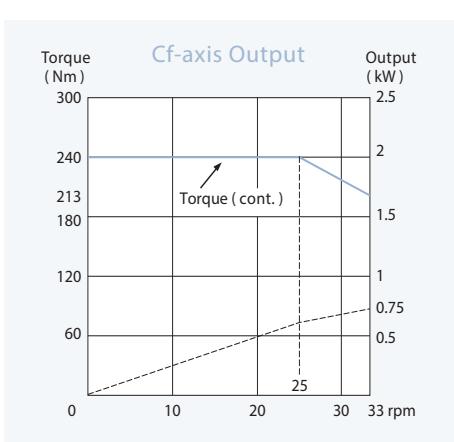
- ▶ Super rigid 3-piece curvic coupling design, turret can remain the same place during indexing to achieve the faster indexing.
- ▶ The 12-station GOODWAY live tooling turret offers 12 stations available for live tooling (live tooling tools rotate in working position only) and features a non-lifting turret disk.
- ▶ With the latest technology, live tooling is driven by an AC servo motor to provide ample power, in the form of torque. Now, even the toughest of jobs may be tackled without a sweat.



MACCHINE UTENSILI NUOVE ED USATE

HIGH PRECISE C-AXIS

- ▶ C-axis adopts super rigid Cf-axis with disk brake system, and with the FANUC servo motor generating 240 Nm (cont.) of torque it offers excellent surface finishes and accuracy. Plus, dynamic accuracy is within $\pm 0.02^\circ$ even under heavy cutting condition.

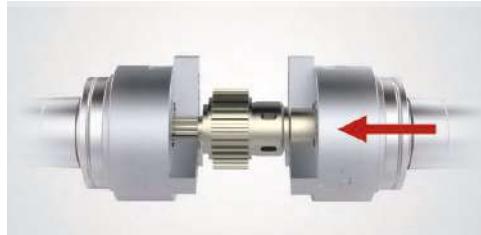
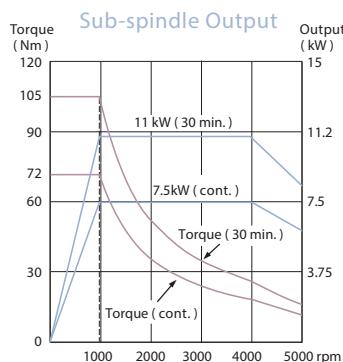


BACK-END MACHINING CAPABILITY

All series could select the optional sub-spindle to machine the back-end after receiving the part. Ø 51 mm bar capacity adopts 8" chuck featuring ejector, which allow the finished parts can smoothly drop on parts catcher successfully. All the processes from loading the parts can all be done in one machine without a pause.



MACCHINE UTENSILI NUOVE ED USATE



Automatic part transfer of work piece from main spindle to sub-spindle saves manpower and cycle time, while reducing accuracy lost, which will occur if manually handling the part from machine to machine.



The sub-spindle configuration is also ideal for machining long work pieces such as small diameter shafts. Both ends of the work piece can be supported by the main and sub spindles, allowing the middle section(s) to be accurately machined.

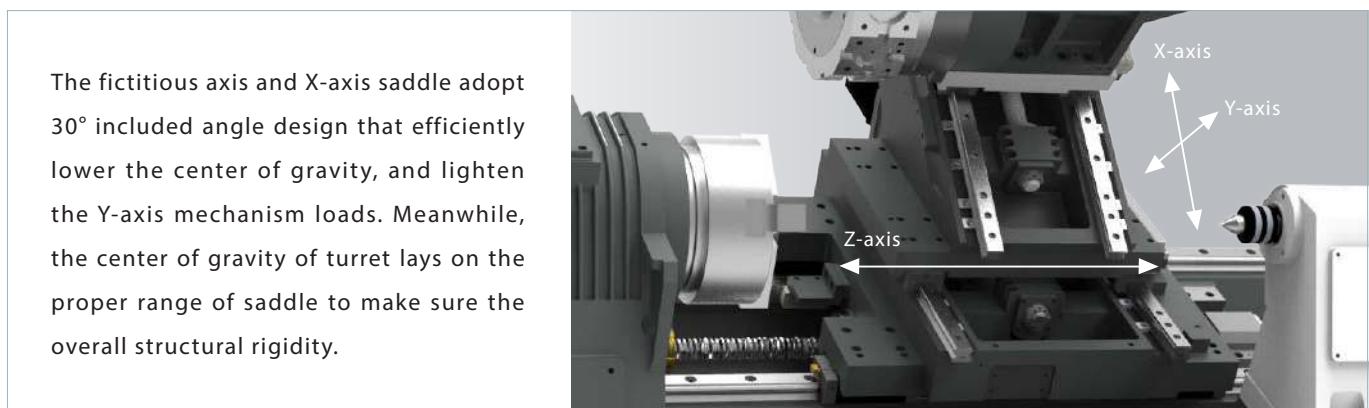


- ▶ Sub-spindle can be controlled by Cs-axis to achieve back-end machining, which allows conveniently operating, fast positioning, and higher accuracy.
- ▶ Z₂-axis adopts high performance linear guide way design, which is driven by FANUC direct driven motor, provides the optimal axial accuracy.

Y-AXIS CONTROL CAPABILITY

The optional Y-axis control can achieve X, Y, Z, C axes simultaneously machining, which allow the series can work on Y-axis 100 mm off-center milling (off-center ± 50 mm), drilling, and tapping as well as improving the machining accuracy from a regular 3 axes simultaneously machining processes.

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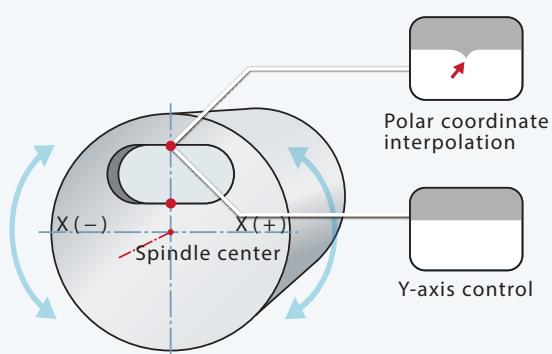


UNIQUE Y-AXIS MACHINING CAPABILITY



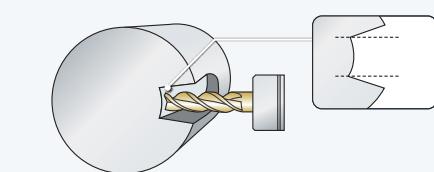
HIGH PRECISION Y-AXIS MACHINING CAPABILITY

Polar coordinate interpolation V.S Y-axis control

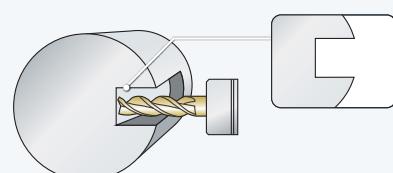


- ▶ The polar coordinate interpolation can work on trouching or contouring. X-axis reverses at cross point of the center point of workpiece and contour, which makes tool not able to be completely contouring and remains worse accuracy.
- ▶ With Y-axis control, it can avoid the situation above and remain better accuracy.

O.D.Troughing



- ▶ Not Featuring Y-axis, width of troughs are not perfectly parallel with worse accuracy.



- ▶ Featuring Y-axis, width of trough remains parallel with better accuracy.

GLINC 350

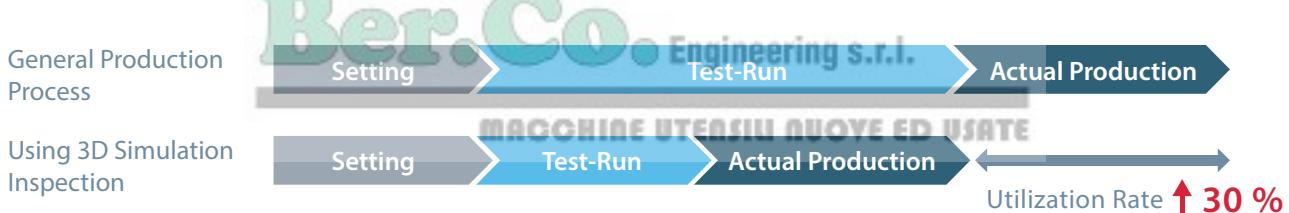
Option

Makes Your Machine Smarter

- Advanced Hardware
- Outstanding Operability
- Streamlined Programming
- High Security and Shortened Machining Setting
- Reliable Continuous Operation
- Shortened Troubleshooting Time
- Improved Utilization Rate
- 3D cutting simulation preview

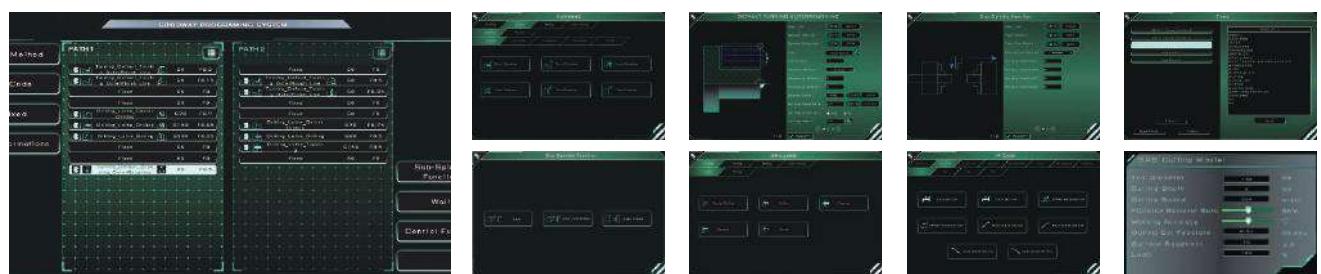


Significant Production Efficiency



Comprehensive Functions

Programming	⇒	Setting	⇒	Test-Run	⇒	Actual Production	⇒	Daily Used
Dynamic graphic display		3D advance tool path and cutting simulation		Tool load monitor		Tool load monitor		Safety signal viewer
Program management				Program check		3D Real-time cutting simulation		Fast alarm check productivity
Friendly programing environment				Smart balance ejection		Interference check (31i option needed)		Productivity management
Programming auxiliary				3D Real-time cutting simulation		Load monitoring		Twin operation system switch
Manual Guide i				Interference check (31i option needed)				Maintenance management
Embedded E-manual								NFC apply authority management and record



STANDARD / OPTIONAL FEATURES

Standard Features



CHIP CONVEYOR

The standard chip conveyor features adjustable timers that allow the operator to set operation intervals according to the amount of chips generated by the machine. Thus, reducing coolant loss to a minimum.



3-JAW CHUCK
W /SOFT JAWS
X 1 SET



TRI-COLOR
STATUS LIGHT

Optional Features

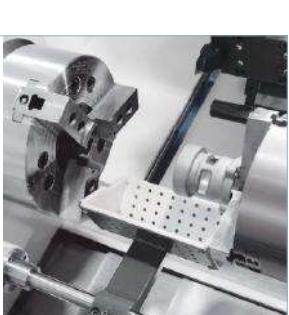
TOOL	CODE	COLS	SP1	SP2	SP3	SP4	SP5	SP6	SP7	SP8	SP9	SP10	SP11	SP12	SP13	SP14	SP15	SP16	SP17	SP18	SP19	SP20	SP21	SP22	SP23	SP24	SP25	SP26	SP27	SP28	SP29	SP30	SP31	SP32	SP33	SP34	SP35	SP36	SP37	SP38	SP39	SP40	SP41	SP42	SP43	SP44	SP45	SP46	SP47	SP48	SP49	SP50	SP51	SP52	SP53	SP54	SP55	SP56	SP57	SP58	SP59	SP60	SP61	SP62	SP63	SP64	SP65	SP66	SP67	SP68	SP69	SP70	SP71	SP72	SP73	SP74	SP75	SP76	SP77	SP78	SP79	SP80	SP81	SP82	SP83	SP84	SP85	SP86	SP87	SP88	SP89	SP90	SP91	SP92	SP93	SP94	SP95	SP96	SP97	SP98	SP99	SP100	SP101	SP102	SP103	SP104	SP105	SP106	SP107	SP108	SP109	SP110	SP111	SP112	SP113	SP114	SP115	SP116	SP117	SP118	SP119	SP120	SP121	SP122	SP123	SP124	SP125	SP126	SP127	SP128	SP129	SP130	SP131	SP132	SP133	SP134	SP135	SP136	SP137	SP138	SP139	SP140	SP141	SP142	SP143	SP144	SP145	SP146	SP147	SP148	SP149	SP150	SP151	SP152	SP153	SP154	SP155	SP156	SP157	SP158	SP159	SP160	SP161	SP162	SP163	SP164	SP165	SP166	SP167	SP168	SP169	SP170	SP171	SP172	SP173	SP174	SP175	SP176	SP177	SP178	SP179	SP180	SP181	SP182	SP183	SP184	SP185	SP186	SP187	SP188	SP189	SP190	SP191	SP192	SP193	SP194	SP195	SP196	SP197	SP198	SP199	SP200	SP201	SP202	SP203	SP204	SP205	SP206	SP207	SP208	SP209	SP210	SP211	SP212	SP213	SP214	SP215	SP216	SP217	SP218	SP219	SP220	SP221	SP222	SP223	SP224	SP225	SP226	SP227	SP228	SP229	SP230	SP231	SP232	SP233	SP234	SP235	SP236	SP237	SP238	SP239	SP240	SP241	SP242	SP243	SP244	SP245	SP246	SP247	SP248	SP249	SP250	SP251	SP252	SP253	SP254	SP255	SP256	SP257	SP258	SP259	SP260	SP261	SP262	SP263	SP264	SP265	SP266	SP267	SP268	SP269	SP270	SP271	SP272	SP273	SP274	SP275	SP276	SP277	SP278	SP279	SP280	SP281	SP282	SP283	SP284	SP285	SP286	SP287	SP288	SP289	SP290	SP291	SP292	SP293	SP294	SP295	SP296	SP297	SP298	SP299	SP300	SP301	SP302	SP303	SP304	SP305	SP306	SP307	SP308	SP309	SP310	SP311	SP312	SP313	SP314	SP315	SP316	SP317	SP318	SP319	SP320	SP321	SP322	SP323	SP324	SP325	SP326	SP327	SP328	SP329	SP330	SP331	SP332	SP333	SP334	SP335	SP336	SP337	SP338	SP339	SP340	SP341	SP342	SP343	SP344	SP345	SP346	SP347	SP348	SP349	SP350	SP351	SP352	SP353	SP354	SP355	SP356	SP357	SP358	SP359	SP360	SP361	SP362	SP363	SP364	SP365	SP366	SP367	SP368	SP369	SP370	SP371	SP372	SP373	SP374	SP375	SP376	SP377	SP378	SP379	SP380	SP381	SP382	SP383	SP384	SP385	SP386	SP387	SP388	SP389	SP390	SP391	SP392	SP393	SP394	SP395	SP396	SP397	SP398	SP399	SP400	SP401	SP402	SP403	SP404	SP405	SP406	SP407	SP408	SP409	SP410	SP411	SP412	SP413	SP414	SP415	SP416	SP417	SP418	SP419	SP420	SP421	SP422	SP423	SP424	SP425	SP426	SP427	SP428	SP429	SP430	SP431	SP432	SP433	SP434	SP435	SP436	SP437	SP438	SP439	SP440	SP441	SP442	SP443	SP444	SP445	SP446	SP447	SP448	SP449	SP450	SP451	SP452	SP453	SP454	SP455	SP456	SP457	SP458	SP459	SP460	SP461	SP462	SP463	SP464	SP465	SP466	SP467	SP468	SP469	SP470	SP471	SP472	SP473	SP474	SP475	SP476	SP477	SP478	SP479	SP480	SP481	SP482	SP483	SP484	SP485	SP486	SP487	SP488	SP489	SP490	SP491	SP492	SP493	SP494	SP495	SP496	SP497	SP498	SP499	SP500	SP501	SP502	SP503	SP504	SP505	SP506	SP507	SP508	SP509	SP510	SP511	SP512	SP513	SP514	SP515	SP516	SP517	SP518	SP519	SP520	SP521	SP522	SP523	SP524	SP525	SP526	SP527	SP528	SP529	SP530	SP531	SP532	SP533	SP534	SP535	SP536	SP537	SP538	SP539	SP540	SP541	SP542	SP543	SP544	SP545	SP546	SP547	SP548	SP549	SP550	SP551	SP552	SP553	SP554	SP555	SP556	SP557	SP558	SP559	SP560	SP561	SP562	SP563	SP564	SP565	SP566	SP567	SP568	SP569	SP570	SP571	SP572	SP573	SP574	SP575	SP576	SP577	SP578	SP579	SP580	SP581	SP582	SP583	SP584	SP585	SP586	SP587	SP588	SP589	SP590	SP591	SP592	SP593	SP594	SP595	SP596	SP597	SP598	SP599	SP600	SP601	SP602	SP603	SP604	SP605	SP606	SP607	SP608	SP609	SP610	SP611	SP612	SP613	SP614	SP615	SP616	SP617	SP618	SP619	SP620	SP621	SP622	SP623	SP624	SP625	SP626	SP627	SP628	SP629	SP630	SP631	SP632	SP633	SP634	SP635	SP636	SP637	SP638	SP639	SP640	SP641	SP642	SP643	SP644	SP645	SP646	SP647	SP648	SP649	SP650	SP651	SP652	SP653	SP654	SP655	SP656	SP657	SP658	SP659	SP660	SP661	SP662	SP663	SP664	SP665	SP666	SP667	SP668	SP669	SP670	SP671	SP672	SP673	SP674	SP675	SP676	SP677	SP678	SP679	SP680	SP681	SP682	SP683	SP684	SP685	SP686	SP687	SP688	SP689	SP690	SP691	SP692	SP693	SP694	SP695	SP696	SP697	SP698	SP699	SP700	SP701	SP702	SP703	SP704	SP705	SP706	SP707	SP708	SP709	SP710	SP711	SP712	SP713	SP714	SP715	SP716	SP717	SP718	SP719	SP720	SP721	SP722	SP723	SP724	SP725	SP726	SP727	SP728	SP729	SP730	SP731	SP732	SP733	SP734	SP735	SP736	SP737	SP738	SP739	SP740	SP741	SP742	SP743	SP744	SP745	SP746	SP747	SP748	SP749	SP750	SP751	SP752	SP753	SP754	SP755	SP756	SP757	SP758	SP759	SP760	SP761	SP762	SP763	SP764	SP765	SP766	SP767	SP768	SP769	SP770	SP771	SP772	SP773	SP774	SP775	SP776	SP777	SP778	SP779	SP780	SP781	SP782	SP783	SP784	SP785	SP786	SP787	SP788	SP789	SP790	SP791	SP792	SP793	SP794	SP795	SP796	SP797	SP798	SP799	SP800	SP801	SP802	SP803	SP804	SP805	SP806	SP807	SP808	SP809	SP810	SP811	SP812	SP813	SP814	SP815	SP816	SP817	SP818	SP819	SP820	SP821	SP822	SP823	SP824	SP825	SP826	SP827	SP828	SP829	SP830	SP831	SP832	SP833	SP834	SP835	SP836	SP837	SP838	SP839	SP840	SP841	SP842	SP843	SP844	SP845	SP846	SP847	SP848	SP849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LOAD MONITORING

The load monitoring function is used to detect abnormal load of tools by monitoring the variation in spindle motor and servo motor loads during the cutting process. When abnormal loads are detected, the machine will stop at program end (M30) or immediately (feed hold status) according to tool life value or tool break value respectively.

PARTS CATCHER

The optional parts catchers can be programmed to catch finished parts after cut-off. Part conveyor systems are also available.



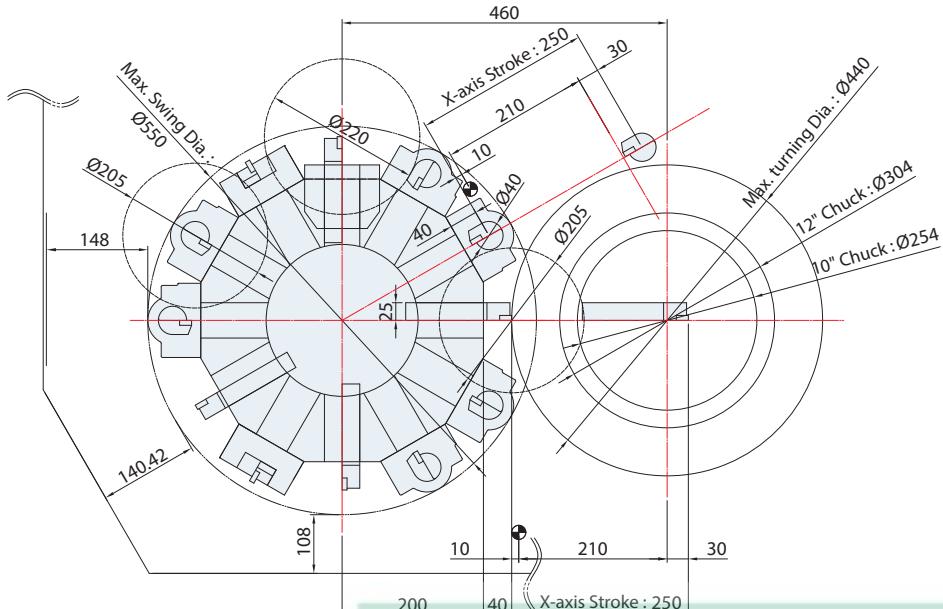
TOOL PRESETTER

The optional RENISHAW HPMA tool presetter allows tool check task easier.

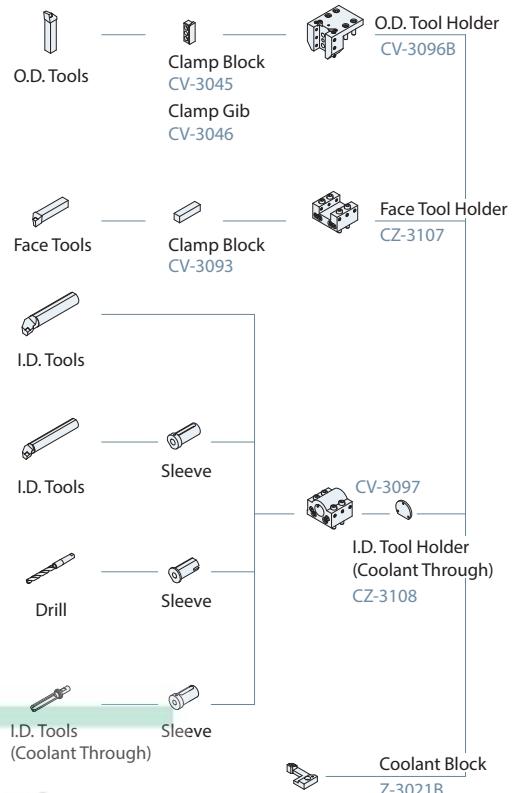


12-Station Turret

Interference Diagram



Tooling System

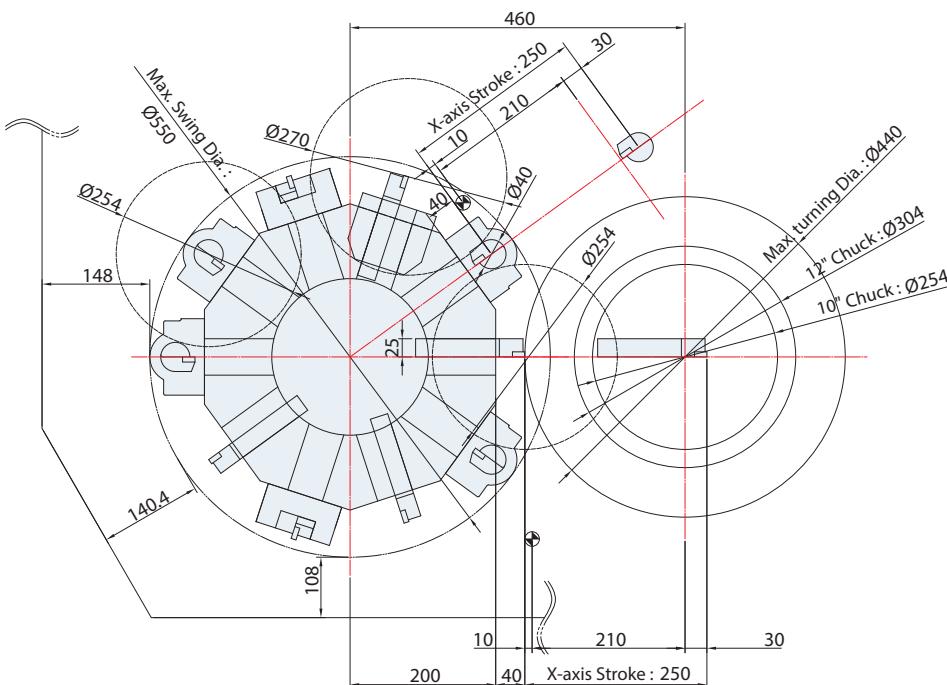


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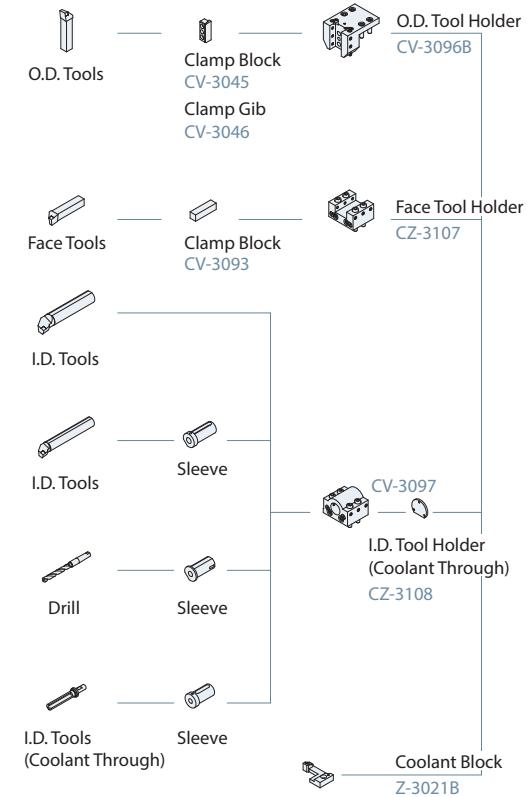
10-Station Turret

MACCHINE UTENSILI NUOVE ED USATE

Interference Diagram



Tooling System

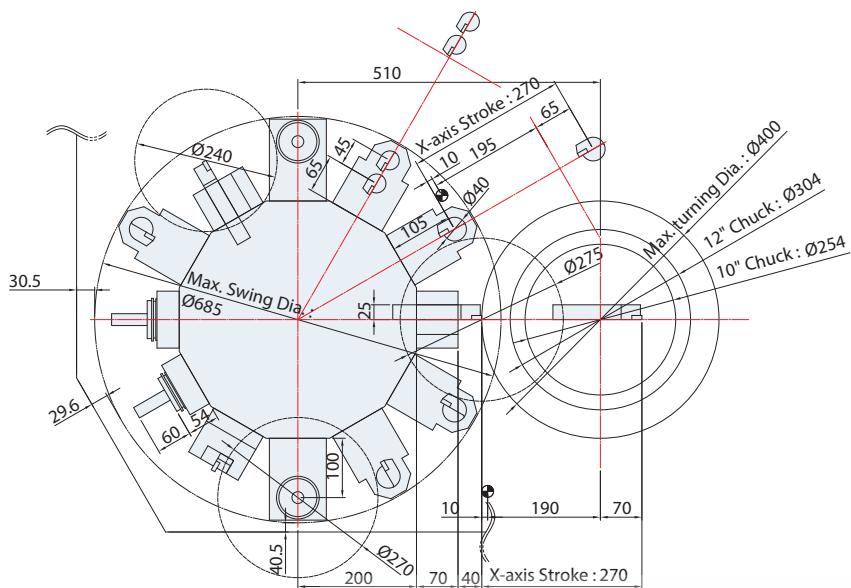


12-Station Live Tooling Turret

12-Station Live Tooling Turret + Y-axis

Interference Diagram

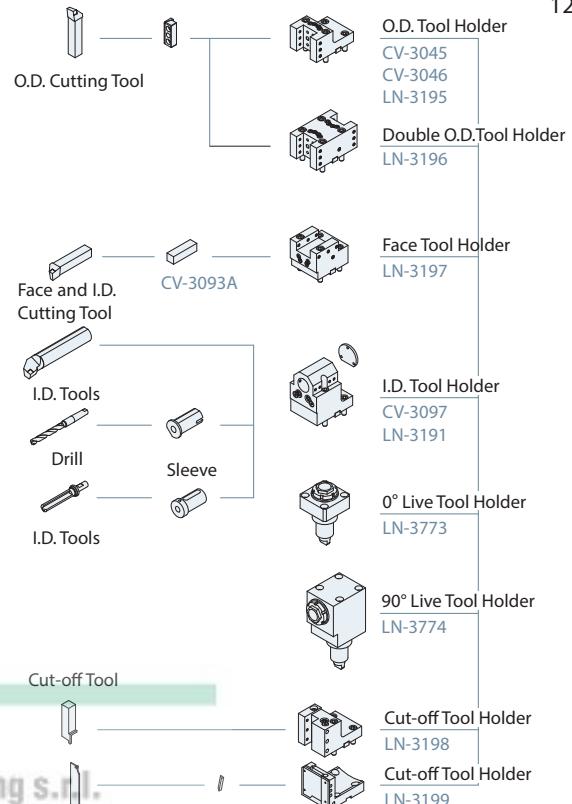
► Turning tool



Tooling System

11

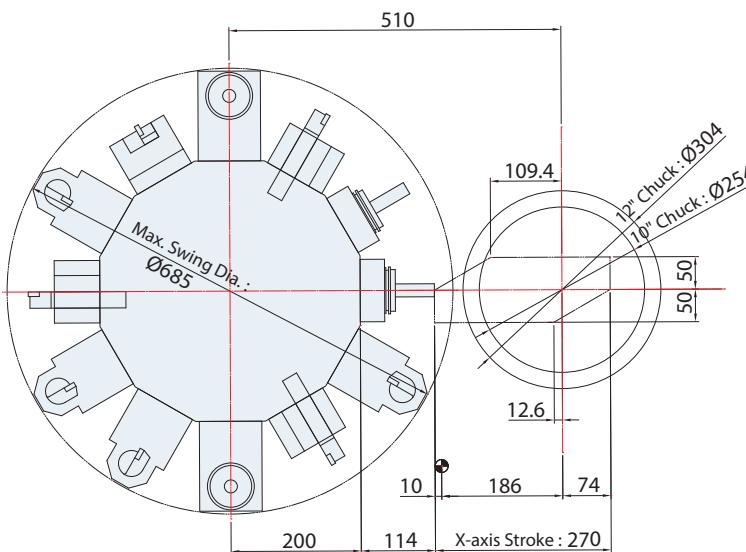
12



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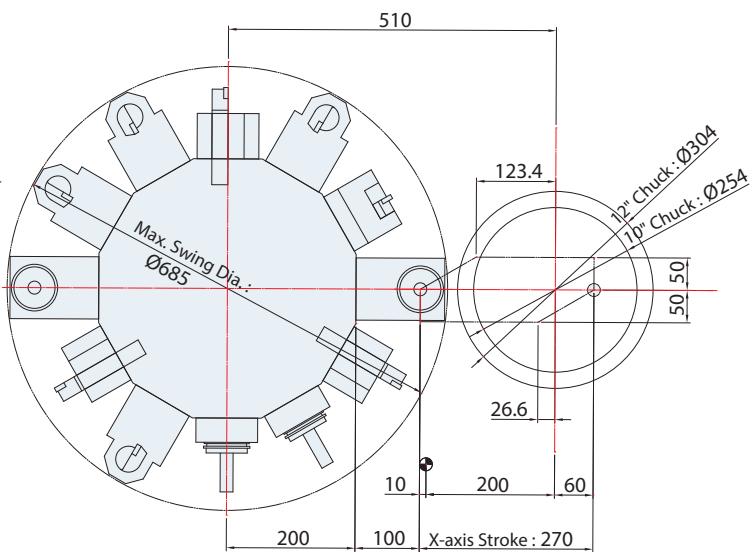
Interference Diagram

► 0° Live tool

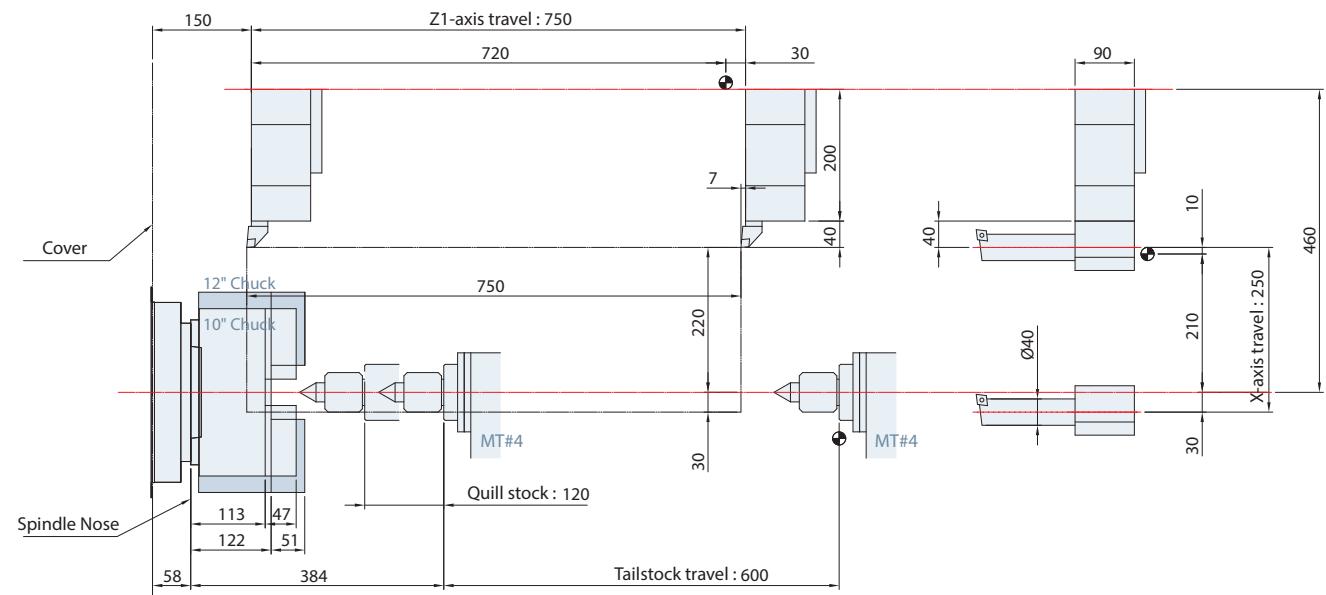
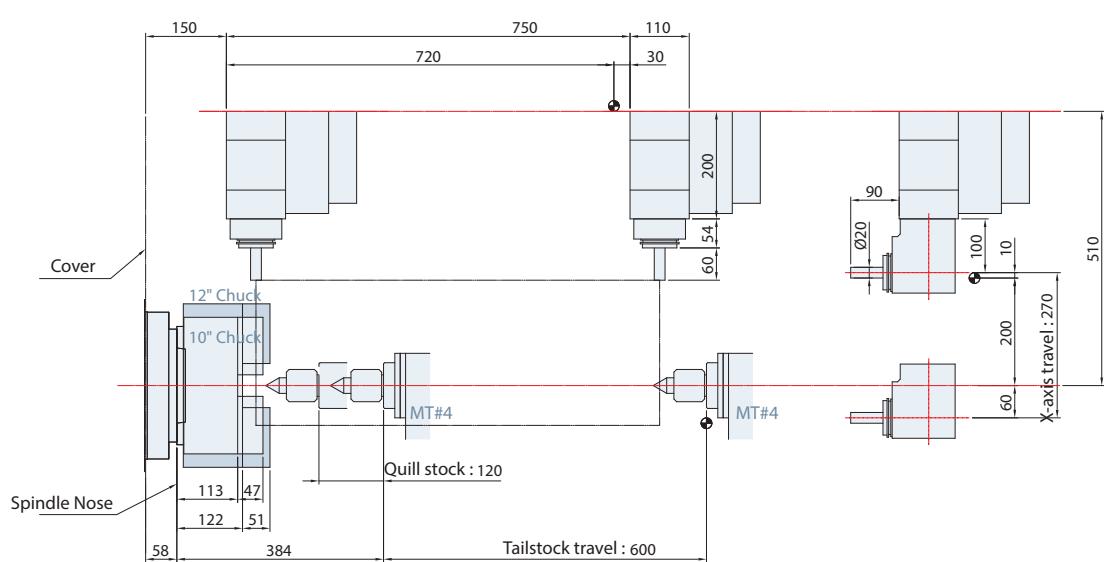
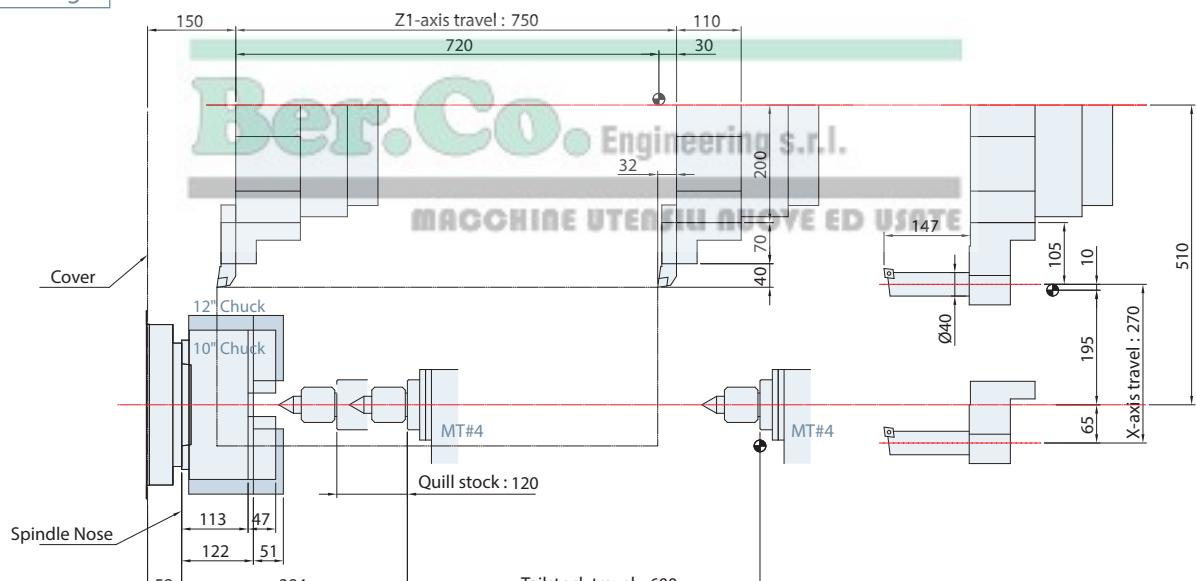


Interference Diagram

► 90° Live tool



Unit : mm

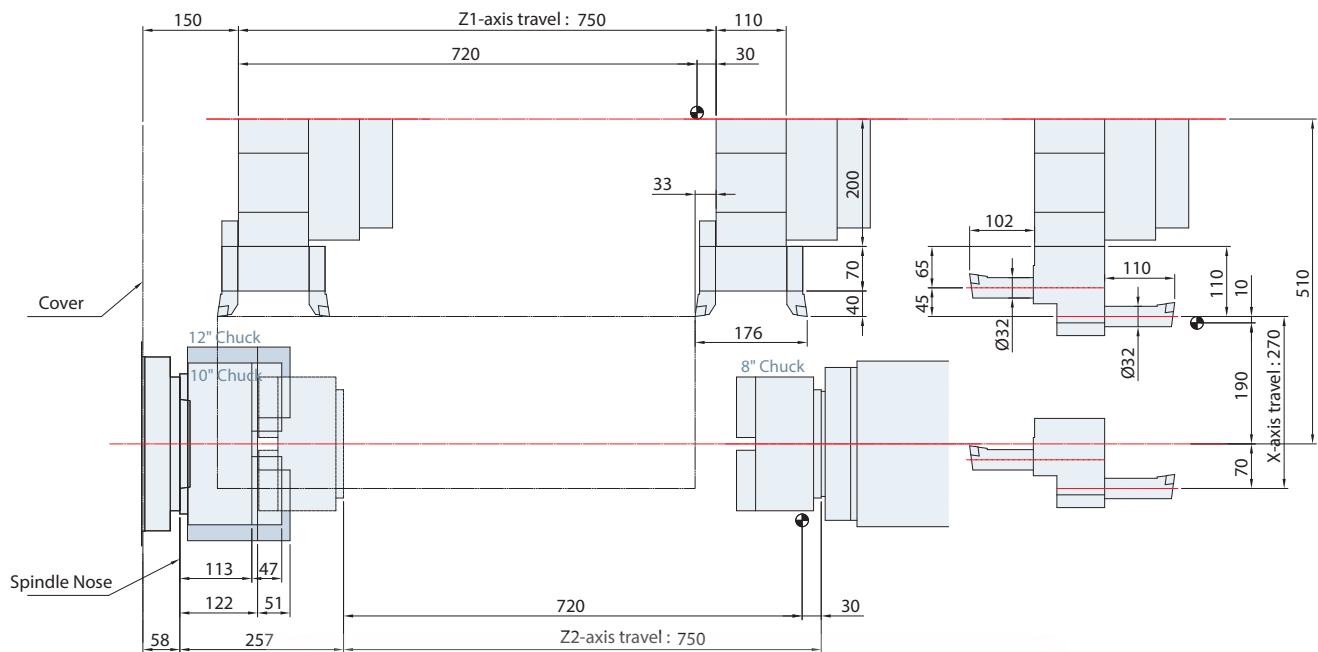
12-Station Turret**10-Station Turret****Work Range****12-Station Live Tooling Turret****Work Range**

12-Station Live Tooling Turret + Sub-spindle

Work Range

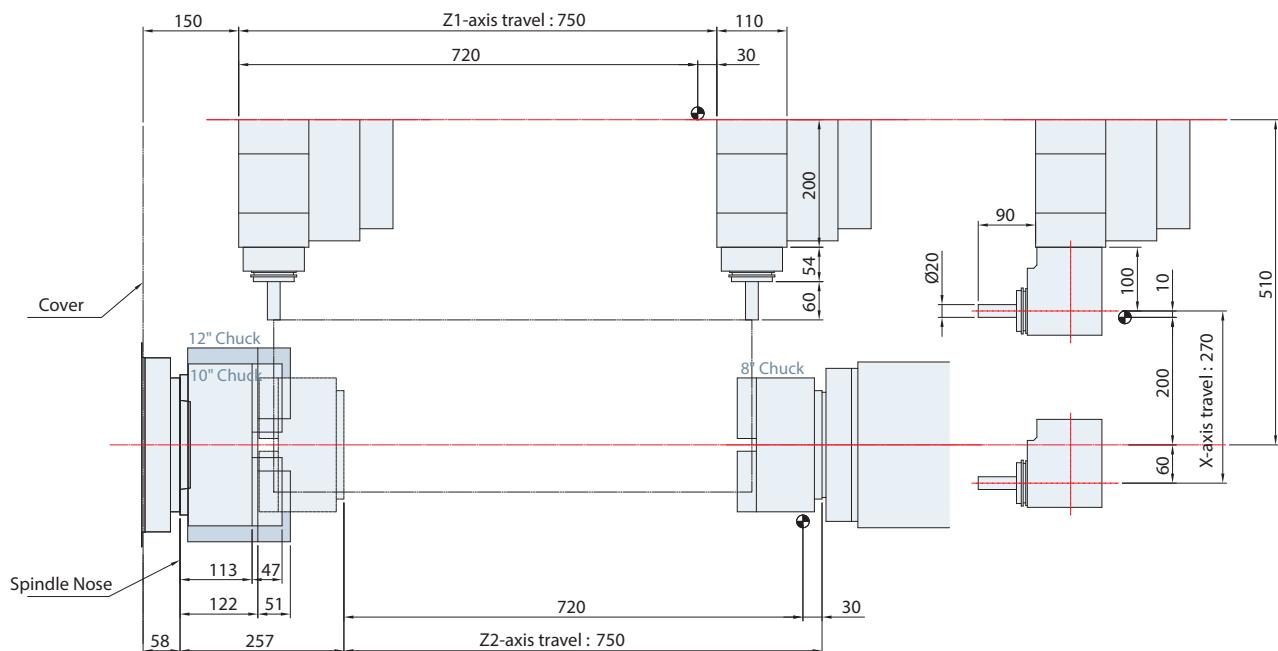
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14



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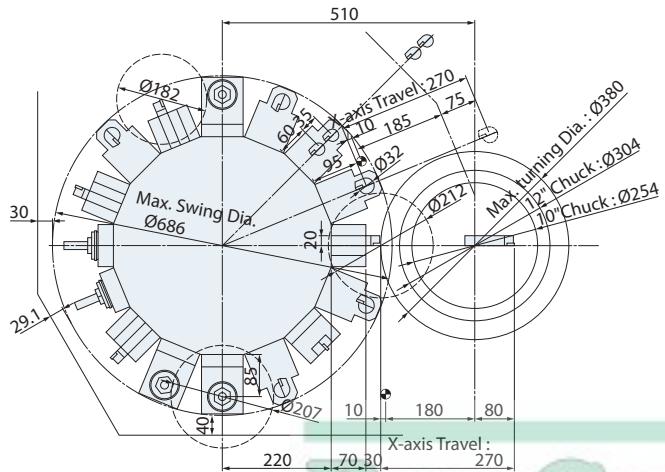


Unit : mm

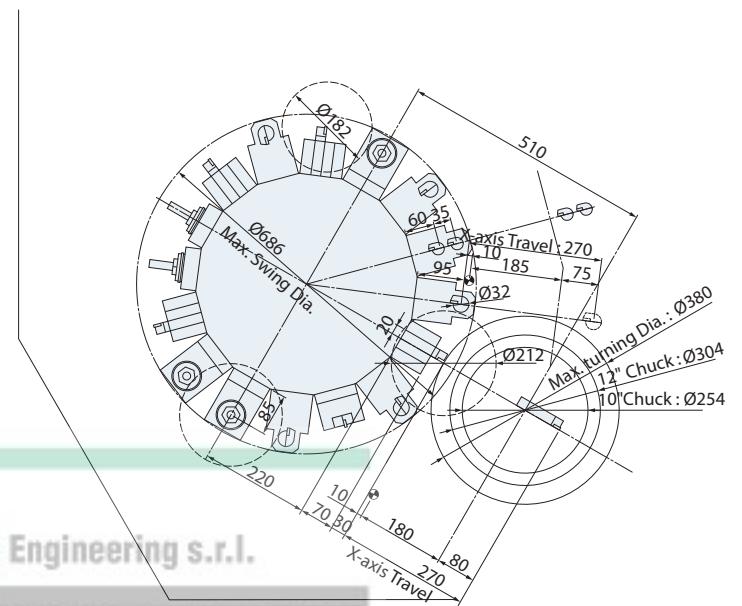
16-Station Live Tooling Turret

Interference Diagram

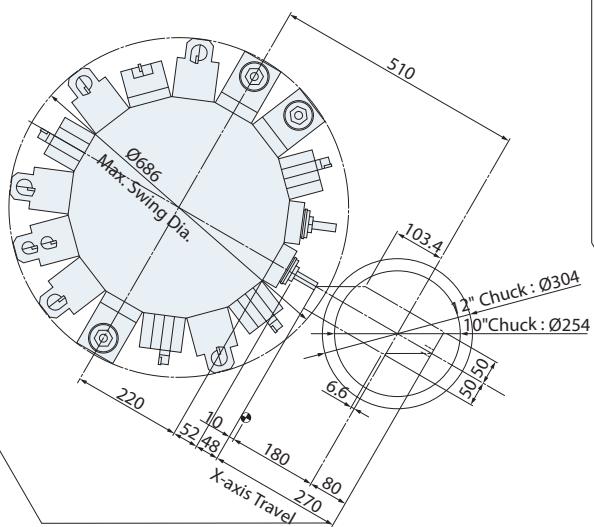
[Standard model]



【 Y-axis model 】 ► Turning tool



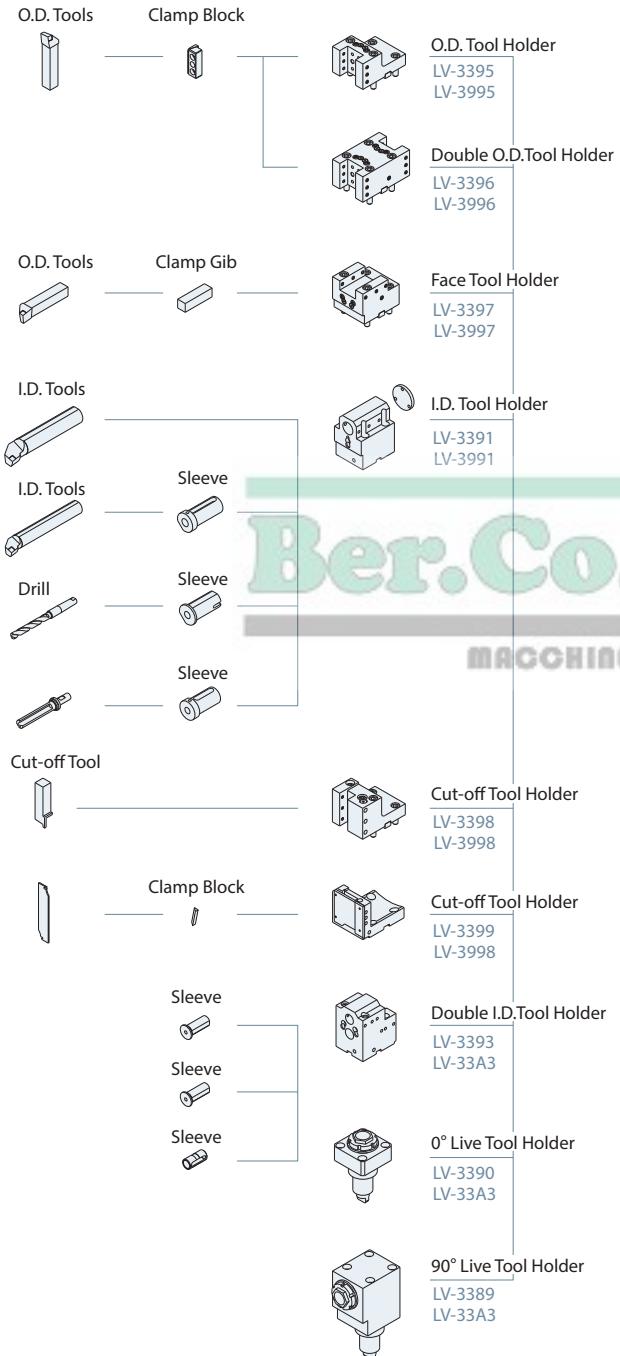
[Y-axis model] ► 0° Live tool



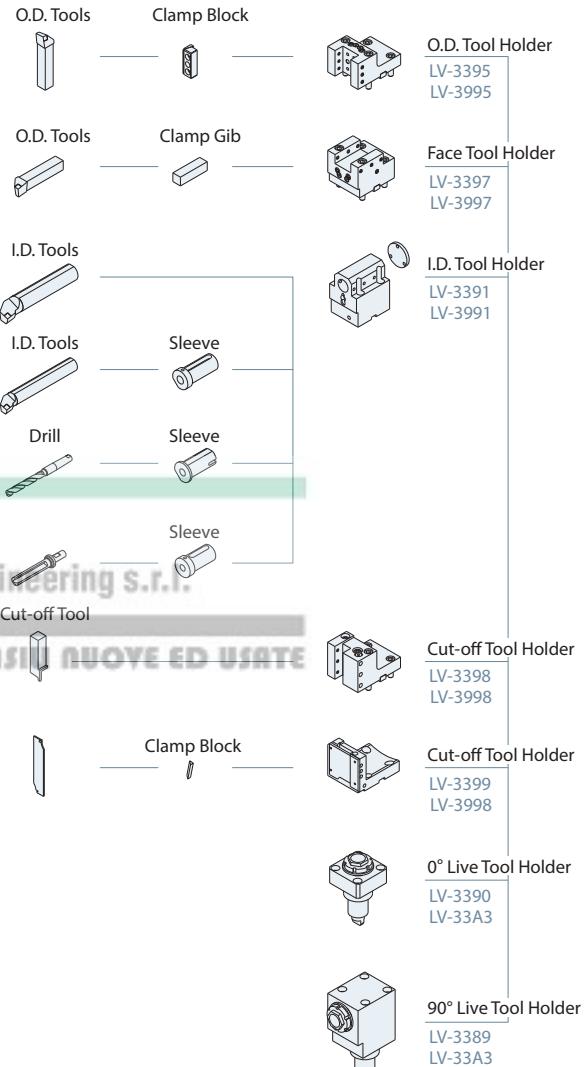
[Y-axis model] ► 90° Live tool

Tooling System

► With Sub-spindle



► Without Sub-spindle

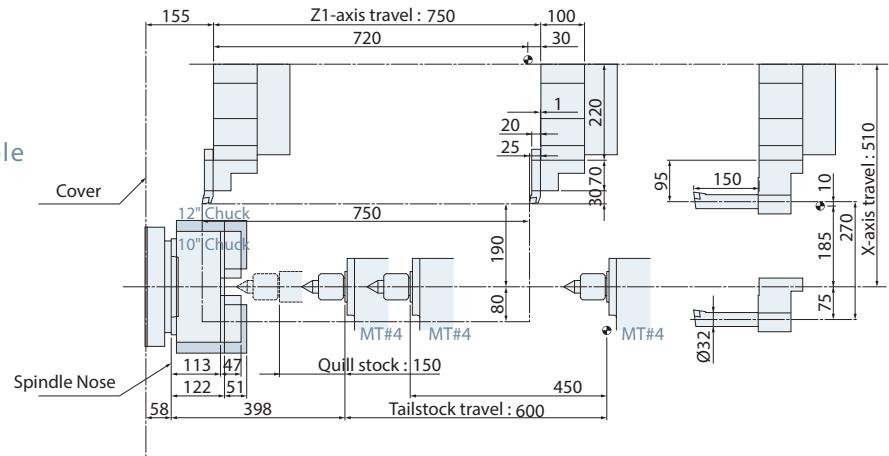


16-Station Live Tooling Turret

Work Range

Hydraulic type LP-1 programmable tail stock (live center MT#4)

Turning tool ▶



Live tool ▶

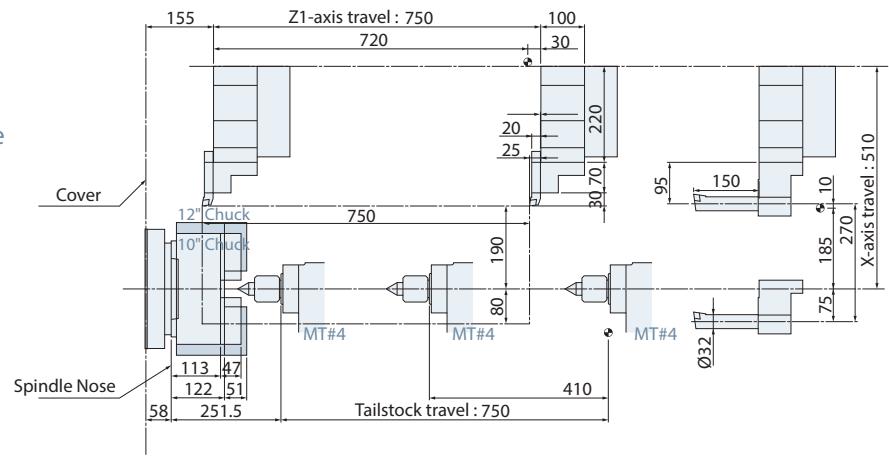
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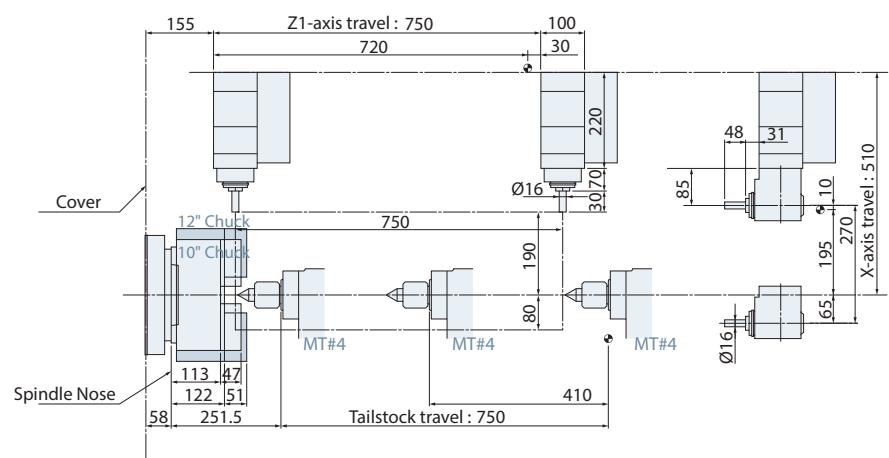
Work Range

Servo driven programmable live center MT#4 tail stock

Turning tool ▶



Live tool ▶

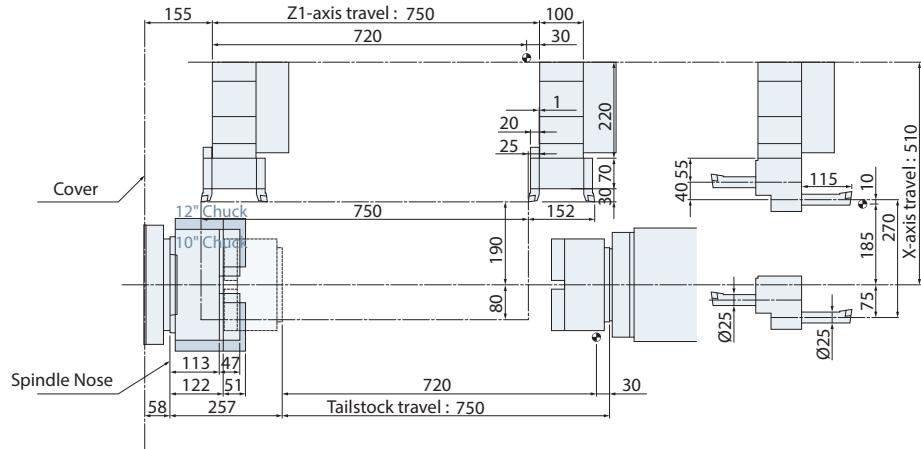


16-Station Live Tooling Turret

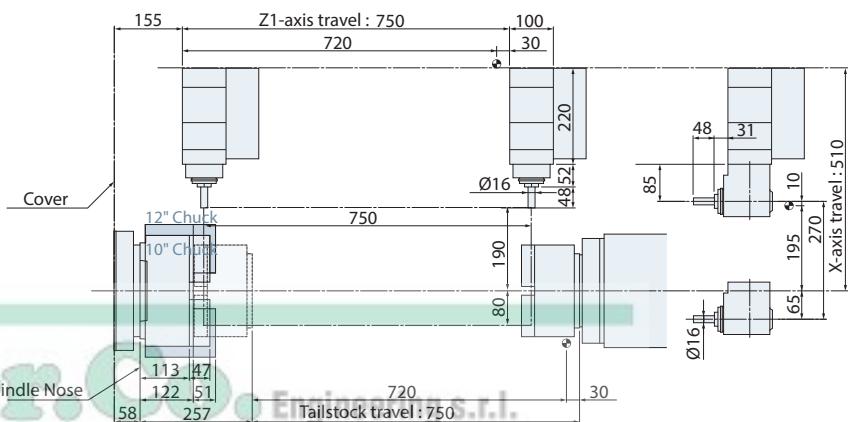
Work Range

8" chuck sub-spindle

Turning tool ➤



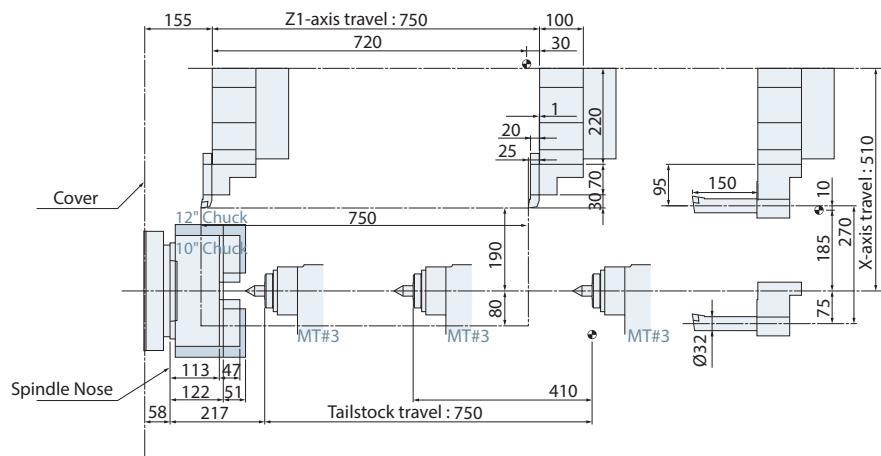
Live tool ►



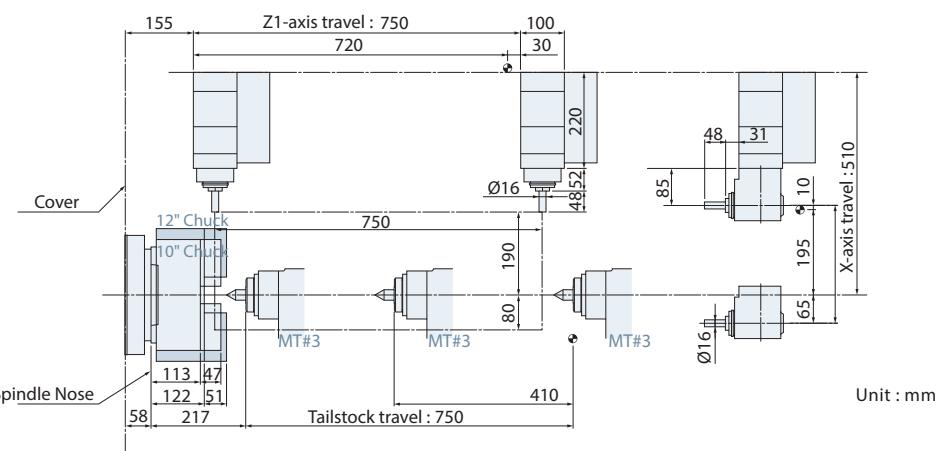
Work Range

Servo driven type tail stock for dead center MT#3

Turning tool ►



Live tool ►



FEATURES

S : Standard O : Option
- : Not Available C : Contact GOODWAY

SPINDLE

		G152800	G153300
Main spindle motor configuration	Belt driven	S	S
Rigid tapping & spindle orientation		S	S
Spindle disk brake		O	O
Cf-axis & spindle disk brake*1		O	O
Sub-spindle & 8" hydraulic cylinder		O	O

WORK HOLDING

Hydraulic hollow cylinder for chuck	10"	S	-
	12"	-	S
Hydraulic hollow 3-jaw chuck	10"	S	-
	12"	-	S
Hard jaws		O	O
Collet chuck		O	O
Special work holding chuck		C	C
In spindle work stopper		O	O
Spindle liner (guide bushing)		O	O
Foot switch for chuck operation		S	S
Quill hydraulic tailstock		O	O
MT#4 live center		O	O
Foot switch for tailstock operation		O	O
Two-stage programmable pressure	Chuck clamping	O	O
	Tailstock thrust	O	O

TURRET

10-station turret		O	O
12-station turret		S	S
12-station live tooling turret		O	O
16-station live tooling turret		O	O
Tool holder & sleeve package		S	S
Live tooling tool holders (0°x2, 90°x2)*1		O	O

MEASUREMENT

RENISHAW HPMA tool presetter		O	O
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COOLANT

	3 kg/cm ²	S	S
Coolant pump	5 kg/cm ²	O	O
	10 kg/cm ²	O	O
High-pressure coolant system	20 kg/cm ²	C	C
Roll-out coolant tank		S	S
Oil skimmer		O	O
Coolant flow switch		O	O
Coolant level switch		O	O
Coolant intercooler system		O	O

CHIP DISPOSAL

Chip conveyor with auto timer	Right discharge	S	S
	Rear discharge	C	C
Chip cart with coolant drain		O	O
Chuck air blow		O	O
Tailstock air blow		O	O
Coolant gun		O	O
Oil mist collector		O	O

AUTOMATIC OPERATION SUPPORT

Parts catcher		O	O
Work-piece transport conveyor		O	O
Bar feeder		O	O
Bar feeder interface		O	O
Gantry-type loader / unloader		O	O
Auto door		O	O
Extra M-code output	4 sets (8)	O	O
	8 sets (16)	O	O

SAFETY

Fully enclosed guarding		S	S
Door interlock (incl. Mechanical lock)		S	S
Impact resistant viewing window		S	S
Tailstock stroke out-end check		S	S
Chuck cylinder stroke out-end check		S	S
Chuck cylinder check valve		S	S
Low hydraulic pressure detection switch		S	S
Over travel (soft limit)		S	S
Load monitoring function*2		O	O

OTHERS

Tri-color operation status light tower		S	S
Florescent work light		S	S
External work light		O	O
Electrical cabinet	Heat exchanger	S	S
	A/C cooling system	O	O
Complete hydraulic system		S	S
Advanced auto lubrication system		S	S
Foundation leveling & maintenance tool kit		S	S
Emergency maintenance electrical part package		S	S
Operation & maintenance manuals		S	S

FANUC CONTROL FUNCTIONS

	Oi-TF	3i
Display	10.4" color LCD	S S
Graphic function	Standard	S S
	Dynamic	O O
	512K bytes	S -
	1M bytes	- S
Part program storage size	2M bytes	O O
	4M bytes	- O
	8M bytes	- O
	400	S -
Registerable programs	1,000	O S
	4,000	- O
	99	- S
	128	S -
Tool offset pairs	200	O O
	400	- O
	499	- O
	999	- O
	2000	- O
Servo HRV control	HRV 3	S S
Automatic data backup		S S
Synchronous / Composite control		O O
Inch / metric conversion		S S
Polar coordinate interpolation		S S
Cylindrical interpolation		S S
Multiple repetitive cycle		S S
Rigid tapping		S S
Unexpected disturbance torque detection function		S S
Spindle orientation		S S
Constant surface speed control		S S
Spindle speed fluctuation detection		S S
Embedded macro		O O
Spindle synchronous control		S S
Background editing		S S
Tool radius / Tool nose radius compensation		S S
Multi-language display		S S
Cs contouring control		S S
Polygon turning		S S
Helical interpolation		O O
Direct drawing dimension programming		S S
Thread cutting retract		S S
Variable lead threading		S S
Multiple repetitive cycle II		S S
Canned cycles for drilling		S S
Tool nose radius compensation		S S
Chamfering / Corner R		S S
AI contour control I		O S
Multi part program editing		S S
Manual handle retrace		O O
Manual intervention and return		S O
External data input		S S
Addition of custom macro		S S
Increment system C		S S
Run hour & parts counter		S S
Auto power-off function		S S
RS-232 port		S S
Memory card input / output (CF + USB)		S S
Ethernet		S S

*1 Available for live tooling turret or Y-axis model.

*2 Available for Oi-TF controller.

MACHINE SPECIFICATIONS

■ : Metric ■ : Inch

CAPACITY	GLS-2800		GLS-3300
Max. swing diameter		Ø 760 mm 30"	
Swing over saddle		Ø 440 mm 17.32"	
Max. turning diameter		Ø 440 mm 17.32"	
Standard turning diameter		Ø 254 mm 10"	
Max. turning length	720 mm 28.35"		710 mm 27.95"
Hydraulic chuck	10"		12"
Bar capacity	Ø 75 mm 3"		Ø 90 mm 3.5"
SPINDLE			
Hole through spindle	Ø 90 mm 3.5"		Ø 101 mm 4"
Spindle bearing diameter	Ø 130 mm 5.12"		Ø 140 mm 5.51"
Hydraulic cylinder	10"		12"
Spindle nose	A2-8		A2-8
Motor output (cont. / 30 min.)	High	11 / 15 kW 15 / 20 HP	15 / 18.5 kW 20 / 25 HP
	Low	7.5 / 15 kW 10 / 20 HP	11 / 18.5 kW 15 / 25 HP
Motor full output speed		750 RPM	575 RPM
Spindle drive system		Direct Belt Drive	
Spindle drive ratio		7 : 12	7 : 12
Spindle speed range		3,500 RPM	3,000 RPM
Spindle full output speed		438 RPM	335 RPM
C-AXIS SPINDLE (OPTIONAL)			
Cf-axis drive motor	FANUC AC Servo motor		
Min. spindle indexing angle	± 0.001°		
Dynamic accuracy	± 0.002°		
X & Z AXES			
X-axis travel	250 mm 9.84"		
Z-axis travel	750 mm 29.53"		
X / Z axes rapids	30 m/min. 1,181 IPM		
Slide way type	Linear Guide Way		
Feed rates	1~4,800 mm/min. 1~189 IPM		
X-axis servo motor	AC 2.7 kW 3.6 HP		
Z-axis servo motor	AC 2.7 kW 3.6 HP		
X-axis ball screw Ø / pitch	Ø 36 mm / Pitch 8 1.42"		
Z-axis ball screw Ø / pitch	Ø 40 mm / Pitch 8 1.5"		
X / Z axes thrust (cont.)	X : 960 kgf 2,100 lbf / Z : 1,410 kgf 3,100 lbf		
TURRET			
Stations	12 / 10		
Indexing drive	FANUC AC Servo motor		
Indexing speed	0.3 sec. Adjacent / 0.5 sec. 180 degrees (Single step)		
Accuracy	Positioning : ± 0.00069°, Repeatability : ± 0.00027°		
O.D. tool shank size	□ 25 mm 1"		
I.D. tool shank size	Ø 40 mm 1-1/2"		

Specifications are subject to change without notice.

MACHINE SPECIFICATIONS

12-STATION LIVE TOOLING TURRET (OPT.)	GLS-2800	GLS-3300
Max. turning length	690 mm <i>27.16"</i>	680 mm <i>26.77"</i>
Stations	12	
Live tooling stations	12 (Live tooling tools rotate in working position only.)	
Live tooling drive motor	3.7 / 5.5 kW (cont. / 30 min.) <i>5 HP / 7 HP</i>	
Live tooling torque	23.5 / 35 Nm (cont. / 30 min.) <i>17.3 / 25.8 lb-ft</i>	
Index speed	0.3 sec. Adjacent / 0.5 sec. 180 degrees (Single step)	
O.D. tool shank size	<input type="checkbox"/> 25 mm <i>1"</i>	
I.D. tool shank size	Ø 40 mm <i>1-1/2"</i>	
Live tooling shank size	ER32 (Ø 20 mm) <i>3/4"</i>	
Live tooling RPM range	6,000 RPM	
16-STATION LIVE TOOLING TURRET (OPT.)		
Max. turning length	700 mm <i>27.55"</i>	690 mm <i>27.16"</i>
Stations	16	
Live tooling stations	16	
Live tooling drive motor	3.7 / 5.5 kW (cont. / 30 min.) <i>5 HP / 7 HP</i>	
Live tooling torque	23.5 / 35 Nm (cont. / 30 min.) <i>17.3 / 25.8 lb-ft</i>	
Index speed	0.3 sec. Adjacent / 0.5 sec. 180 degrees (Single step)	
O.D. tool shank size	<input type="checkbox"/> 20 mm <i>1"</i>	
I.D. tool shank size	Ø 32 mm <i>1-1/2"</i>	
Live tooling shank size	ER25 (Ø16 mm) <i>5/8"</i>	
Live tooling RPM range	6,000 rpm	
Y-AXIS (OPT.)		
Max. turning diameter	Ø 400 mm <i>15.75"</i>	
Max. turning length	720 mm <i>28.35"</i>	710 mm <i>27.95"</i>
Max. Y-axis travel	100 (-50 , +50) mm <i>4" (±2")</i>	
Y-axis axes rapids	12 m/min. <i>472 IPM</i>	
Slide way type	Linear Guide Way	
Feed rates	1 ~ 4,800 mm/min. <i>1 ~ 189 IPM</i>	
Y-axis servo motor	AC 2.7 kW <i>3.6 HP</i>	
Y-axis ball screw Ø / pitch	Ø 36 mm / Pitch 8 <i>1.42"</i>	
Y-axis thrust (cont.)	960 kgf <i>2,100 lbf</i>	
TAILSTOCK (OPT.)		
Quill center taper	MT#4 (Live center)	
Quill diameter / travel	Ø 70 mm / 150 mm <i>2.76" / 5.9"</i>	
Tailstock base travel	600 mm <i>23.62"</i>	
Programmable quill / base	Yes / Yes	
Programmable base type	Positioned by Z-axis carriage	

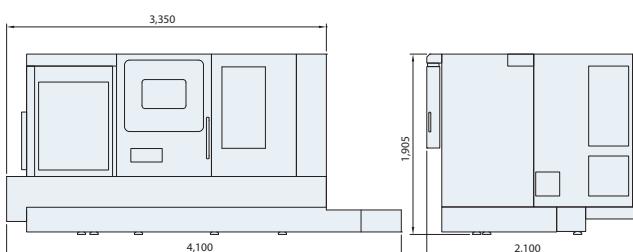
Specifications are subject to change without notice.

SUB-SPINDLE (OPT.)	GLS-2800	GLS-3300
Hole through spindle	Ø 66 mm 2.59"	
Bar capacity	Ø 51 mm 2"	
Spindle bearing diameter	Ø 100 mm 4"	
Spindle nose	A2-6	
Motor output	7.5 / 11 kW (cont. / 30 min.) 10 HP / 15 HP	
Spindle drive system	Direct Belt Drive	
Spindle drive ratio	2 : 3	
Spindle speed range	5,000 RPM	
Spindle full output speed	1,000 RPM	
Spindle torque	72 / 105 Nm (cont. / 30 min.) 53 / 77 lb-ft	
Z2-axis travel	750 mm 29.53"	
Z2-axis rapids	30 m/min. 1,181 IPM	
Slide way type	Linear Guide Way	
Z2-axis ball screw Ø / pitch	Ø 36 mm / Pitch 10 1.42"	
Z2-axis thrust (cont.)	960 kgf 2,100 lbf	
GENERAL		
Repeatability	± 0.003 mm ± 0.00012"	
Positioning accuracy	0.015 mm 0.00059"	
CNC controller	FANUC Oi-TF (opt. 31i)	
Voltage / Power requirement	AC 200 / 220 +10% to -15% 3 phase / 30 kVA	
Hydraulic capacity	30 L 7 gal	
Coolant tank capacity	350 L 92 gal	
Coolant pump / pressure	0.5 kW (3/4 HP , 60 Hz) rated at 3 bar (43.5 PSI)	
Machine weight	6,000 Kg 13,300 lb Machine w / Y-axis : 6,500 Kg 14,400 lb	
Dimensions L × W × H	3,350 x 2,100 x 1,905 mm 132" x 83" x 75" Machine w / Y-axis : 3,350 x 2,100 x 2,255 mm 132" x 83" x 89"	

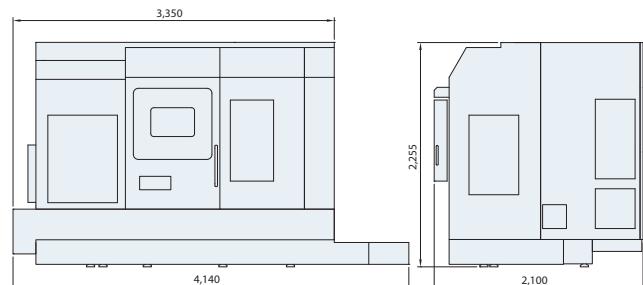
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MACHINE DIMENSIONS

GLS-2800 / GLS-3300



Y-axis model



Unit : mm



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GOODWAY MACHINE CORP.

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