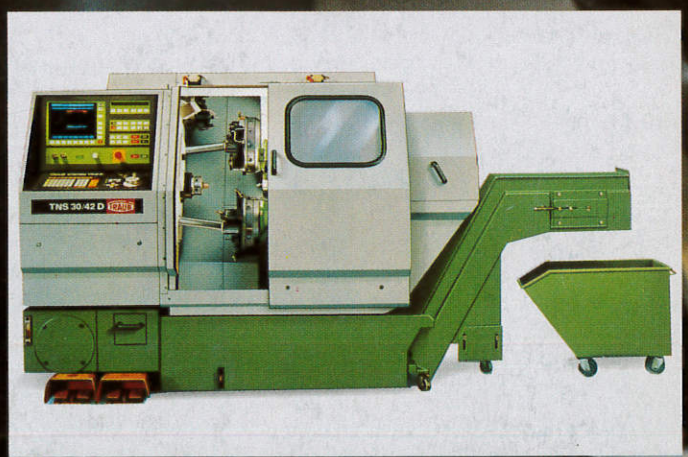
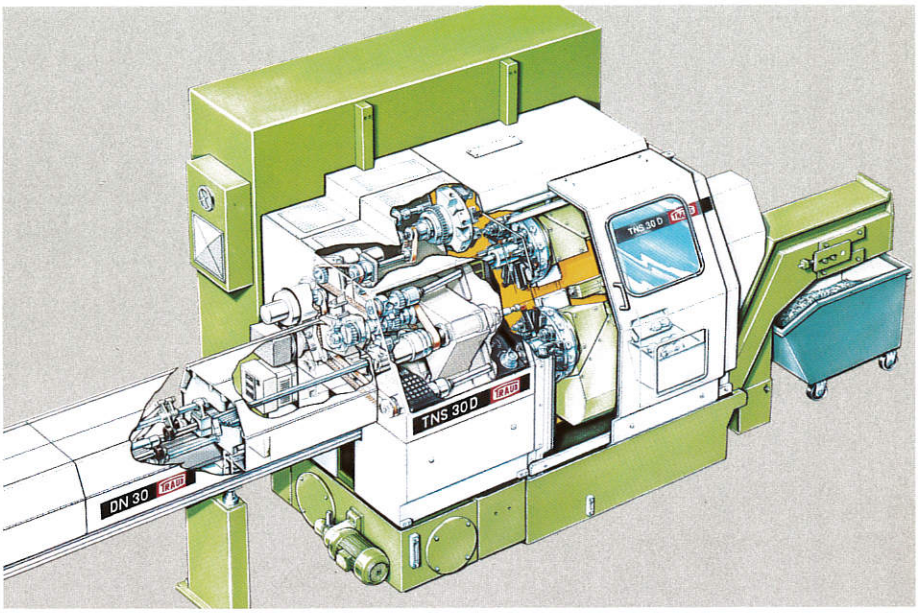
TRAUB-TNS 30



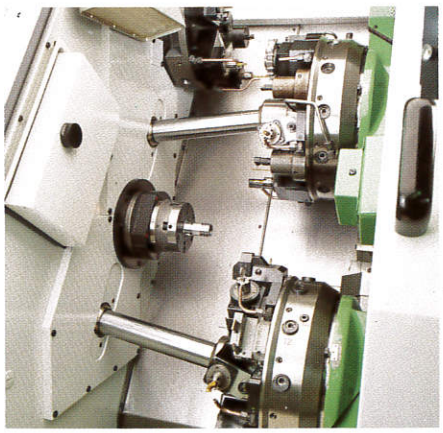
The latest technology

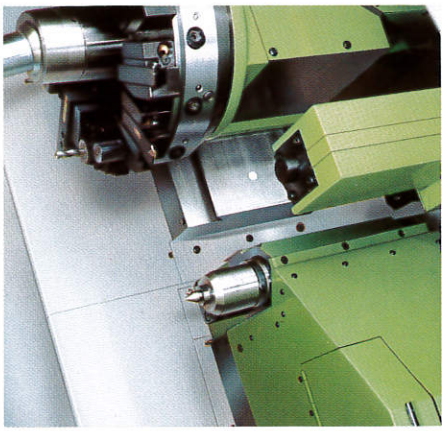


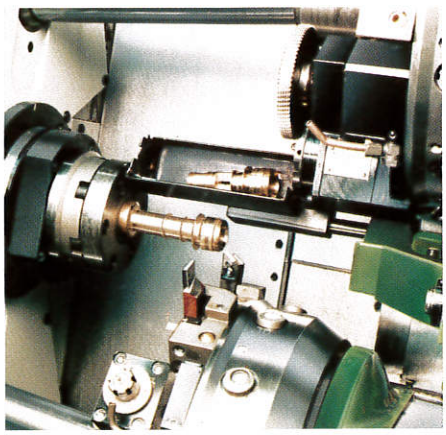
Turned parts are rarely finished workpieces. To enable complete machining of the parts, a wide range of attachments was created for the TNS 30 series machines. Whatever the workpiece is - you can select the machine version - adapted from the basic version - for the requirements you have.

The perfect machine system - adaptable to any machining problem

- One or two slides
- One, two or three turrets
- Complete machining by 3 turrets accommodating 28 tools of which 16 are rotating, drilling, milling and threading tools for longitudinal, transverse and angular machining operations
- Speeds can be programmed independently of each other
- Synchronous drive for rotating tools for polygon turning, thread milling, etc. and for pick-up spindles (turret 1, top)
- C axis for main spindle
- C axis for pick-up spindle
- Twin-turret operation: two tools simultaneously machine the workpiece from turret 1 and 2
- Twin-spindle operation: In parallel to rear-end machining by turret 3, turret 2 starts machining of the next component
- Equipment for process monitoring and automation





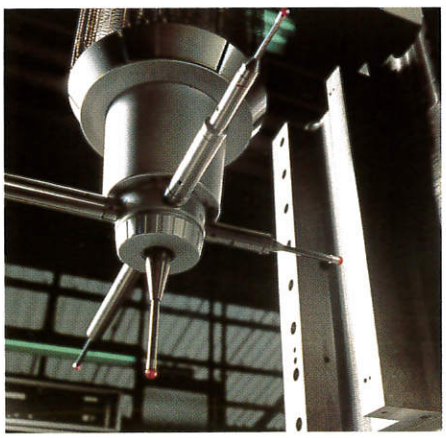


Single or twin-slide machine?

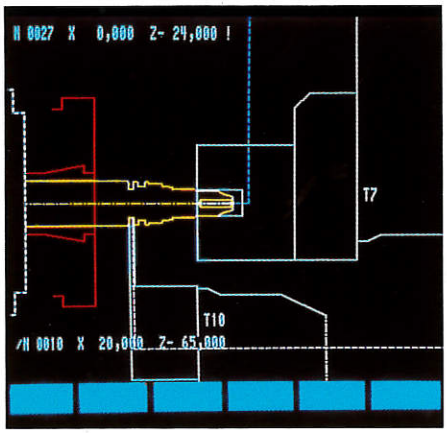
The right machine for every application: The advantages of the TNS 30 single-slide version, i.e. very short programming, setup and running-in times, will prove particularly attractive when workpieces in small to medium batches predominate. Simultaneous use of both slides significantly increases the productivity of the TNS 30 D, especially when machining larger to mass production batches.

Accuracy

Geometrical accuracy of each machine is checked to DIN 8611, dynamical accuracy by turning a series of test parts.
In case of extremely precise demands the statistical working accuracy is determined to VDI/DGQ 3442 by applying laser interferometer measurement. Ball screw pitch errors detected will then be compensated by the CNC control system.



"Directed" by your man with our control system



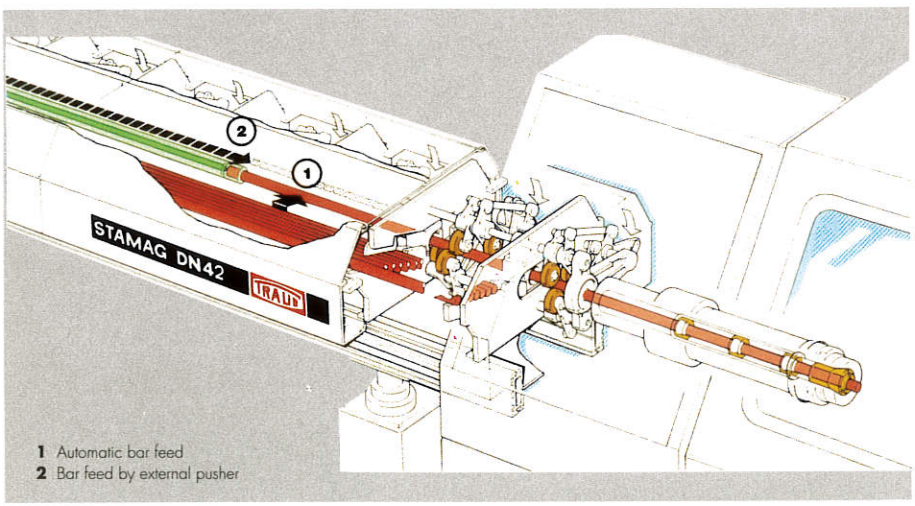
If the operator works with the operator-friendly TRAUB-control system to which is at the same time integrated in the new shopfloor-orientated programming system TRAUB-IPS, he is able to directly guide the machine perfectly and effectively - whether he is an NC beginner or an NC ace.

Instead of unaccustomed, impractical inputs a few pictorial symbols familiar to any operator are sufficient to define complete machining cycles.

Chucking equipment, operating steps and practical machining cycles are offered as menu on the CRT.

The control system suggests per machining cycle the most suitable tool, displays it graphically on the CRT and suggests the most optimal equipment for the set-up. Your operator has only to select!
Prior to the first cut the operator can supervise the complete machining cycles simulated on the CRT , with real on the CRT, with real representation of the work-holding means, the workpiece, the tools and turret, the working area plus tailstock .....Thus collisions are practically eliminated and a higher production rate due to shorter running- in times is achieved. If your operator can "direct" in this way, your gain is manifold: more flexibility, shorter in-process and delivery times ... and a content worker.

Comprehensive literature,user reports and the video film **IPS** are available.



1 Automatic bar feed
2 Bar feed by external pusher

TRAUB-DN bar loading magazine

The CNC bar loading magazines of the DN series with up to 42 mm bar diameter are optimally adapted to the TNS 30 series. The loading magazine feeds the bars fully-automatically to the machine. In the magazine, the bars are guided by noiseless, pliable rollers, in the main spindle very accurately by the reduction sleeve.

TRAUB-FHS handling system

In combination with turning machines, gantry loaders have clearly replaced free-standing robots. TRAUB has equipped all turning cells exclusively with its FHS series CNC gantry loaders. Without safety risks, the operator has free access to the operating zone of the control system from where he can clearly observe and supervise the turning process and all cycles of the handling system.

A turner's day

1

Cover

Material:AlCuMgPb
Blank: Bar ø 38 mm

Cycle time: 7'13''
(completely machined)

4

Abutment

Material:MS58
Blank: Bar ø 30 mm

Cycle time: 2'0''
(completely machined)

6. 1.

Valve spool

Material:9 S MnPb28
Blank: Bar ø 30 mm

Cycle time: 8'30''
(completely machined

2

Setting collar

Material:AlCuMgPb
Blank: Bar ø 38 mm

Cycle time: 5'24''
(completely machined

5

Register

Material:AlCuMgPb
Blank: Bar ø 25 mm

Cycle time: 2'25''
(completely machined

6. 2

Valve spool

Material:see 6.1
Blank: see 6.1

Cycle time: 5'30''
(completely machined

3

Bush

Material:AlCuMgPb
Blank: Bar ø 25 mm

Cycle time: 3'54''
(completely machined

Machining of a parts family
(6.1 - 6.3)
All workpieces of the parts family are produced:

- with the same setup
- by one NC program
- in arbitrary sequence
- in differing quantities

6. 3

Valve spool

Material:see 6.1
Blank: see 6.1

Cycle time: 5'30''

Technical Data

All data subject to amendment without notice

		TNS 30	TNS 30 D	TNS 30/42	TNS 30/42 D
Working capacity					
Spindle capacity (max. bar dia)	mm	30	30	42	42
Cuck dia.	mm			**140**	
Turning dia.	mm			140	
Turning length	mm			220	
Swing dia. over bed	mm			390	
Swing dia. over cross slide	mm			150	
Slide traverses, longitudinal	mm			220	
Slide traverses, transverse	mm			140	
Spindle nose: parallel register, dia.	mm			110	
Spindle outside dia. in bearings	mm	70	70	80	80
Main drive					
DC motor, infinitely variable					
Rating with 100 %/60 %/40 % duty cycle	kW	16 / 20 / 24.6		16 / 20 / 24.6	
Max. main spindle speed	rpm	8000		5600	
Three-phase AC motor, infinitely variable					
Rating with 100 %/60 % duty cycle	kW	19 / 22		19 / 22	
Max. main spindle speed	rpm	8000		5600	
Compound slide					
Number		1	2	1	2
Rapid traverse/contouring rate in X and Z direction	m/min	16/10	16/10	16/10	16/10
Feed thrust, X direction	N	4500	4500	4500	4500
Feed thrust, Z direction	N	8000	8000	8000	8000
Tool turrets					
Number of turrets		1	2	1	2
Number of tool registers		12	2 x 12	12	2 x 12
type: parallel shank DIN 69 880	mm	30 Ø	30 Ø	30 Ø	30 Ø
Indexing time: 1 station/every further station	sec	0.6 / 0.25	0.6 / 0.25	0.6 / 0.25	0.6 / 0.25
Drive for turret tools					
Number of driven tools		6	2 x 6	6	2 x 6
Drive by servo-motor, infinitely variable					
Rating with 40 %/20 %/10 % duty cycle	kW		2.5 / 3.5 / 4.7		
Max. torque (on drive pinion of toolholder)	Nm		15		
Synchronous drive by main spindle (only upper turret), rating	kW		as main drive		
Rear machining on part-off face					
Tool carrier for fixed tools: number of tools			3		
register dia.	mm		25		
Tool turret for driven tools: number of tools			4		
tool register: parallel shank DIN 69 880	mm		30 Ø		
Drive rating with 40 %/20 %/10 % duty cycle	kW		2.5 / 3.5 / 4.7		
Max. torque (on drive pinion of toolholder)	Nm		15		
Machine dimensions					
Length/depth/height	mm		2436/2010/2090		
Weight	kg	3800	4300	3800	4300
Rating	kW	34	34	34	34