

# *P92 - Parting off, grooving and turning*

*A great variety of applications*

- ▶ *Grooving*
- ▶ *Turning*
- ▶ *Parting off*



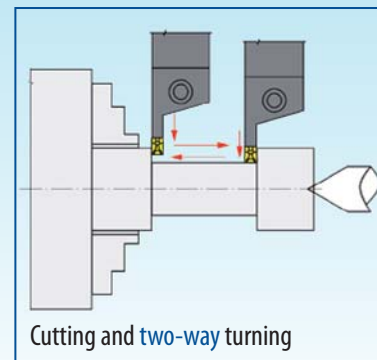
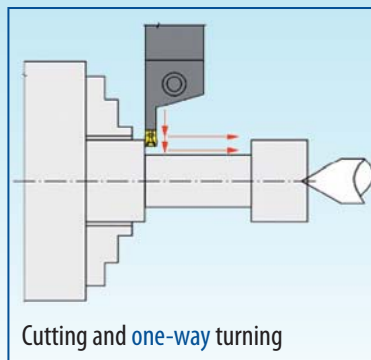
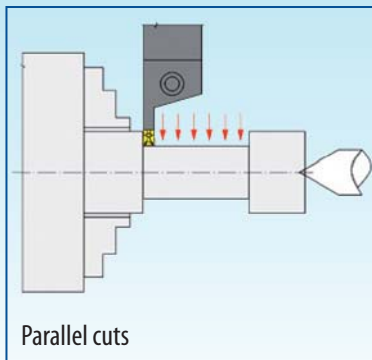
# P92 - Parting off, grooving and turning

## A great variety of applications

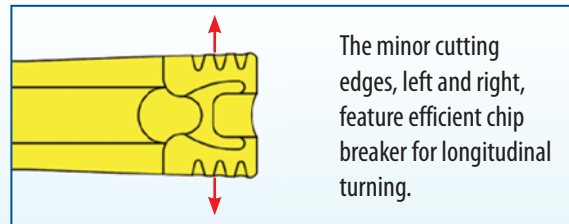
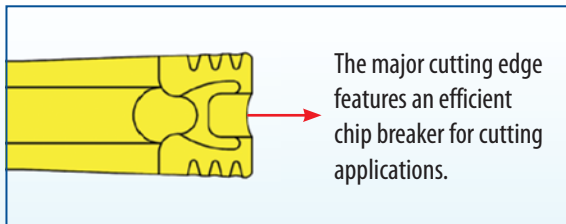
### Cutting and turning machining

The major cutting edge cuts a groove and then the minor edge turns in longitudinal direction

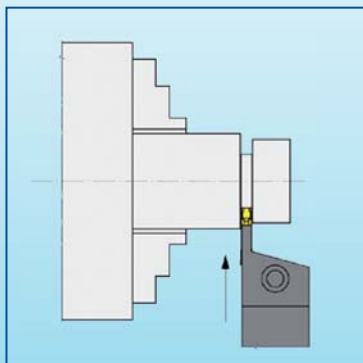
### Different methods of cutting and turning



### The cutting edges



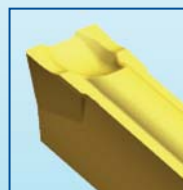
### Grooving



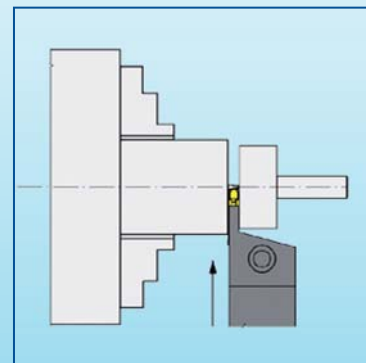
**Grooving: MTNS**  
insert with solid and rounded cutting edge

The major cutting edge cuts a groove.

### Parting off



**Parting off: BTNN**  
insert featuring a large and efficient chip breaker



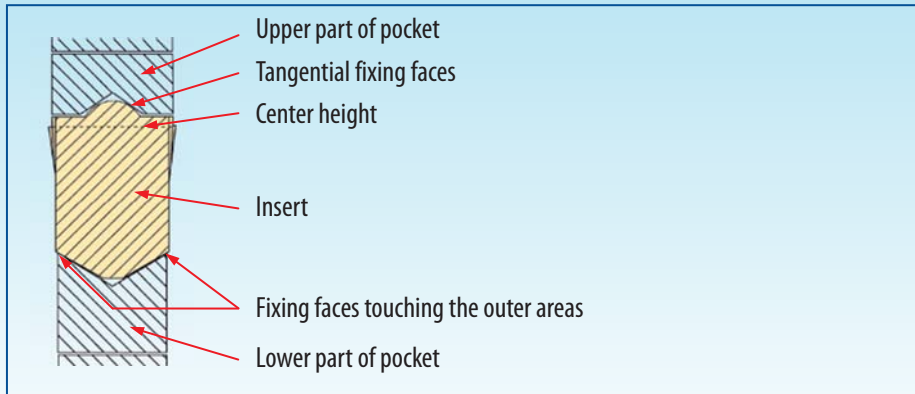
The major edge parts off a component from the bar.

# P92 - Parting off, grooving and turning

## A great variety of applications

### Team work: Insert and holder

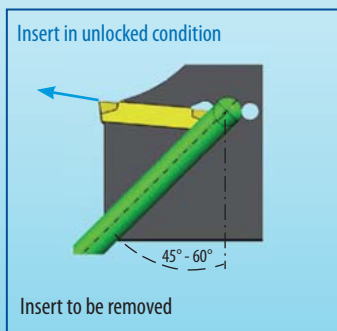
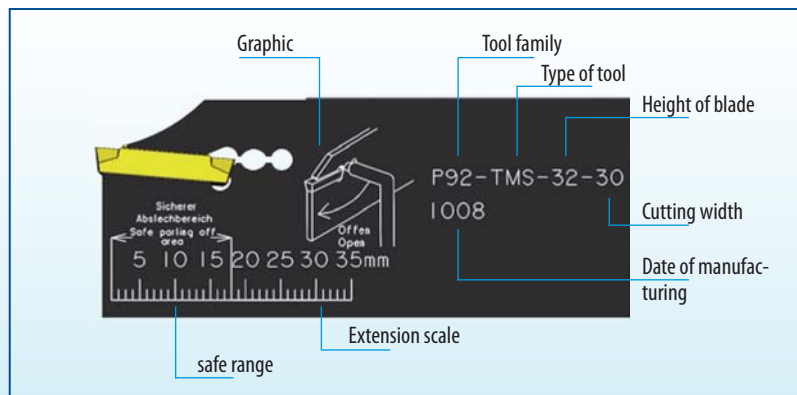
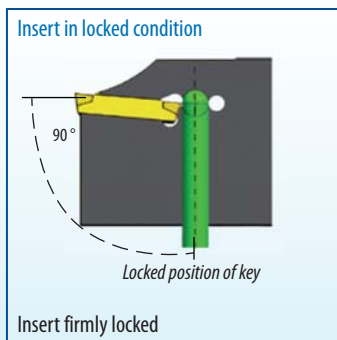
The insert has to fit perfectly into the pocket for all machining operations.



Cross section of insert pocket

### TWIN blade P92-TMS

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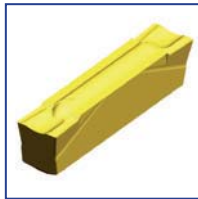


#### Advantages

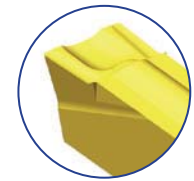
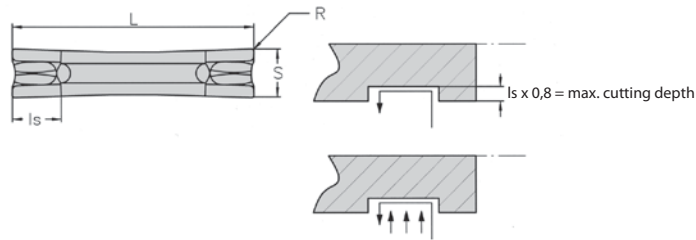
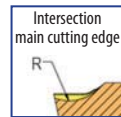
- ✓ Increased profitability compared to blades holding 1-edge inserts
- ✓ Reinforced solidity
- ✓ Perfect clamping
- ✓ Easy handling
- ✓ Marking for easy understanding
- ✓ Excellent tool life together with parting off inserts BTNN and A BTNN
- ✓ Steady run

Inserts for grooving and turning

3



**BTNG**  
System P92



Enlarged view

WG260 Ref.	GF110 ID-Nr.	GF110 NANOSPEED ID-Nr.	GF110 TILOX ID-Nr.	(C)	L	Is	R	S ±0,025
BTNG 202	32649	34264	34263	N	20,00	2,00	0,2	2,00
BTNG 2,5	32652	34005	34004	N	20,00	2,00	0,2	2,50
BTNG 302	13403	13404	-	N	20,00	3,50	0,2	3,00
BTNG 304	13405	13406	-	N	20,00	3,50	0,4	3,00
BTNG 402	13407	13408	-	N	20,00	3,50	0,2	4,00
BTNG 404	13409	13410	-	N	20,00	3,50	0,4	4,00
BTNG 408	13411	13412	-	N	20,00	3,50	0,8	4,00
BTNG 504	13402	13124	-	N	25,00	4,20	0,4	5,00
BTNG 508	13396	13395	-	N	25,00	4,20	0,8	5,00
BTNG 604	19292	20502	-	N	30,00	4,90	0,4	6,00
BTNG 608	19293	20503	-	N	30,00	4,90	0,8	6,00
BTNG 808	19294	20504	-	N	30,00	6,40	0,8	8,00
BTNG 812	19295	20505	-	N	30,00	6,40	1,2	8,00
BTNG 1008	19296	20506	-	N	30,00	8,10	0,8	10,00
BTNG 1012	19297	20507	-	N	30,00	8,10	1,2	10,00

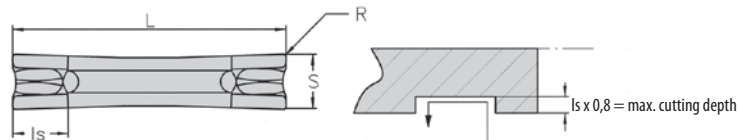
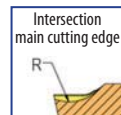
BTNG-Finishing

Fitting tool holders at the bottom

Grooved cutting edge. Horizontal turning edges with parallel chip breakers. The **precision ground micrograin insert** is recommended especially for heat resistant alloys.



**BTNX**  
System P92



Enlarged view

WG300 Ref.	KM TILOX ID-Nr.	GS 530 NANOSPEED ID-Nr.	(C)	L	Is	R	S
BTNX 202	38825	32658	N	20,10	2,00	0,2	2,05 <sup>+0,10</sup>
BTNX 2,5	38824	32661	N	20,10	2,00	0,2	2,62 <sup>+0,10</sup>
BTNX 302	38826	12669	N	20,00	3,50	0,2	3,05 <sup>+0,15</sup>
BTNX 304	38827	12687	N	20,00	3,50	0,4	3,05 <sup>+0,15</sup>
BTNX 404	38828	12691	N	20,00	3,50	0,4	4,05 <sup>+0,15</sup>
BTNX 408	38829	12686	N	20,00	3,50	0,8	4,05 <sup>+0,15</sup>
BTNX 504	38830	12692	N	25,00	4,20	0,4	5,05 <sup>+0,25</sup>
BTNX 508	38831	12685	N	25,00	4,20	0,8	5,05 <sup>+0,25</sup>

BTNX-Semi finishing

Grooved cutting edge. Horizontal turning edges with parallel chip breakers. The **TiN-coated cermet insert** is recommended for high speed finishing. The insert can be used universally. The grade KM TILOX is recommended for semi finishing to roughing machining.

Fitting tool holders



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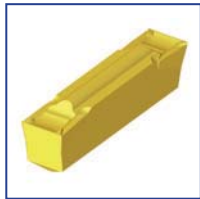
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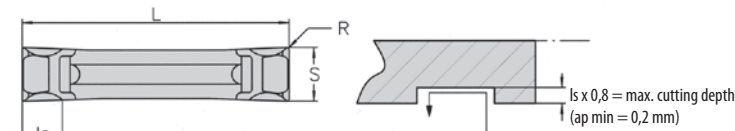
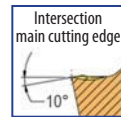
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**Inserts for grooving and turning**



**CTDS**  
System P92



Enlarged view

WG300 Ref.	PM NANOSPEED ID-Nr.	PM TILOX ID-Nr.	KM TILOX ID-Nr.	⌀	L	ls	R	S
CTDS 302	10418	10417	15318	N	20	3,0	0,2	3,0 <sup>+0,15</sup>
CTDS 402	10422	10421	21412	N	20	3,0	0,2	4,0 <sup>+0,20</sup>
CTDS 502	10426	10425	-	N	25	3,0	0,2	5,0 <sup>+0,25</sup>

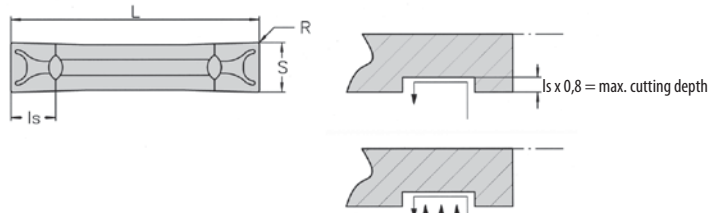
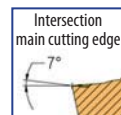
**CTDS-Super finishing**

**Fitting tool holders at the bottom**

Chamfered cutting edge and sharply ground turning edges. Excellent chip control even on turning with small cutting depths.



**MTNS**  
System P92



Enlarged view

WG300 Ref.	PM NANOSPEED ID-Nr.	KM NANOSPEED ID-Nr.	PM ALOX ID-Nr.	KM TILOX ID-Nr.	PM TILOX ID-Nr.	GF110 TILOX ID-Nr.	GF110 ALOX ID-Nr.	KM CARBOSPEED ID-Nr.	⌀	L	ls	R	S
MTNS 202	-	33879	-	33878	-	-	-	43918	N	20,10	2,0	0,2	2,05 <sup>+0,10</sup>
MTNS 2,5	-	33889	-	33888	-	-	-	43919	N	20,10	2,0	0,2	2,62 <sup>+0,10</sup>
MTNS 302	11011	-	11008	38482	11010	26719	44290	43920	N	20,00	3,5	0,2	3,0 <sup>+0,15</sup>
MTNS 304	11015	-	11012	38541	11014	26720	36063	43921	N	20,00	3,5	0,4	3,0 <sup>+0,15</sup>
MTNS 402	11019	-	11016	38542	11018	26721	44291	43922	N	20,00	3,5	0,2	4,0 <sup>+0,20</sup>
MTNS 404	11023	-	11020	38543	11022	26722	44275	43923	N	20,00	3,5	0,4	4,0 <sup>+0,20</sup>
MTNS 408	21555	-	21344	13170	43814	43815	44292	43816	N	20,00	3,5	0,8	4,0 <sup>+0,15</sup>
MTNS 504	11031	-	11028	38544	11030	25964	39451	43817	N	25,00	4,2	0,4	5,0 <sup>+0,25</sup>
MTNS 508	43821	-	43822	13413	43823	24807	44293	40998	N	25,00	4,2	0,8	5,05 <sup>+0,25</sup>
MTNS 604	43827	-	43828	19268	43829	26723	44294	43836	N	30,00	4,9	0,4	6,05 <sup>+0,25</sup>
MTNS 608	21557	-	32197	19269	40340	20861	21022	43837	N	30,00	4,9	0,8	6,05 <sup>+0,25</sup>
MTNS 612	-	-	-	19270	-	-	-	43840	N	30,00	4,9	1,2	6,05 <sup>+0,25</sup>
MTNS 808	21559	-	28346	19271	-	-	-	43841	N	30,00	6,4	0,8	8,05 <sup>+0,25</sup>
MTNS 812	-	-	-	19272	-	-	-	43842	N	30,00	6,4	1,2	8,05 <sup>+0,25</sup>
MTNS 1008	-	-	-	19274	-	-	-	43843	N	30,00	8,1	0,8	10,05 <sup>+0,25</sup>
MTNS 1012	-	-	-	19275	-	-	-	43844	N	30,00	8,1	1,2	10,05 <sup>+0,25</sup>

**MTNS-Roughing**

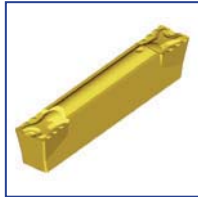
Cutting edge with large parting off chip breakers. Excellent chip control in the range  $ls \times 0,8$ . Especially recommended for carbon steels, low and high alloy steels.

**Fitting tool holders**

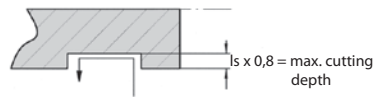
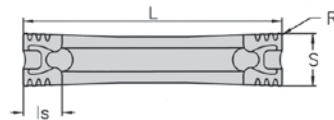
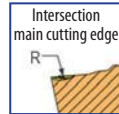


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Inserts for grooving and turning



**MTNZ**  
System P92



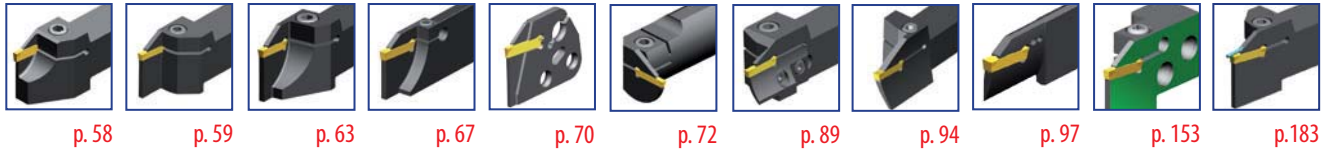
Enlarged view

WG300 Ref.	PM NANOSPEED ID-Nr.	KM NANOSPEED ID-Nr.	PM ALOX ID-Nr.	PM TILOX ID-Nr.	KM TILOX ID-Nr.	⌀	L	ls	R	S
MTNZ 304	42791	42790	42793	42792	41018	N	20,00	3,5	0,4	3,075 ±0,075
MTNZ 3,5	11035		11032	11034		N	20,00	3,5	0,2	3,550 ±0,080
MTNZ 402	11039	15723	11036	11038	15724	N	20,00	3,5	0,2	4,000 ±0,200
MTNZ 404	42797	42796	42799	42798	41017	N	20,00	3,5	0,4	4,100 ±0,100
MTNZ 504	11043		11040	11042		N	25,00	4,2	0,4	5,000 ±0,250
MTNZ 508	42801	42800	42803	42802	41000	N	25,00	4,2	0,8	5,125 ±0,125
MTNZ 604	42805	42804	42807	42806	41019	N	30,00	4,9	0,4	6,125 ±0,125
MTNZ 608	42809	42808	42811	42810	41196	N	30,00	4,9	0,8	6,125 ±0,125
MTNZ 808	42814	42813	42816	42815	42812	N	30,00	6,4	0,8	8,125 ±0,125
MTNZ 812	42818	42817	42820	42819	41197	N	30,00	6,4	1,2	8,125 ±0,125

MTNZ-Roughing

Grooved cutting edge and wave shaped turning edges. Chip control even when machining high alloy steels and stainless steels.

Fitting tool holders



How to write an order:

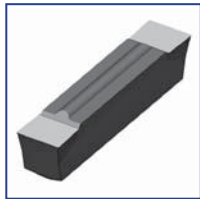
1 St. P92 CXCBL 1212 K30 10 or: 1 St. **ID-Nr. 28189**  
 10 St. MTNZ 304 PM NANOSPEED or: 10 St. **ID-Nr. 42791**

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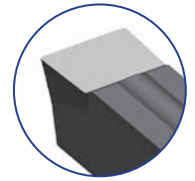
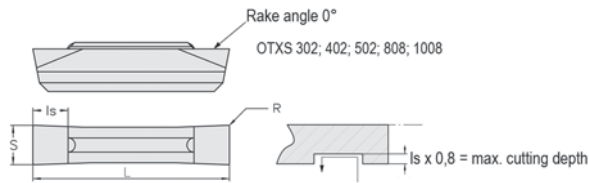
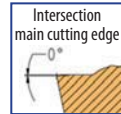
**... all operations with 1 tool holder and 1 insert ...**

- Face turning
- Profiling
- Grooving
- Large groove cutting
- Roughing
- Finishing
- Chamfering
- Parting-off

**Inserts for grooving and turning**



**OTXS**  
System P92

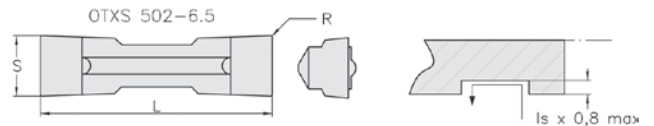


Enlarged view

WG300 Ref.	PM ID-Nr.	KM ID-Nr.	(C)	L	Is	R	S
OTXS 302	11199	11198	N	20	3,5	0,2	3,0 <sup>+0,15</sup>
OTXS 402	11201	11200	N	20	3,5	0,2	4,0 <sup>+0,20</sup>
OTXS 502	11203	11202	N	25	4,2	0,2	5,0 <sup>+0,25</sup>
OTXS 502 6,5	11205	11204	N	25	4,9	0,2	6,5 <sup>+0,25</sup>
OTXS 808	-	20544	N	30	6,4	0,8	8,05 <sup>+0,25</sup>
OTXS 1008	-	20543	N	30	8,1	0,8	10,05 <sup>+0,25</sup>

**OTXS-Semi finishing**

Ground top rake with 0° rake angle. Recommended for cast materials and for **customers applications**.



**Fitting tool holders**

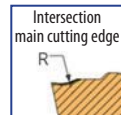


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**new**



**STNZ / STNG**  
System P92



Enlarged view

WG300 Ref.	KM ID-Nr.	KM Aluspeed ID-Nr.	KM HYPERSPEED ID-Nr.	KM TILOX ID-Nr.	(C)	L	R	S
STNZ 504	-	45003	45009	45117	N	25,0	0,4	5,25 <sup>±0,075</sup>
STNG 502	45014	45004	45010	45118	N	25,0	0,2	5,10 <sup>-0,050</sup>
STNG 504	45015	45005	45011	45119	N	25,0	0,4	5,10 <sup>-0,050</sup>

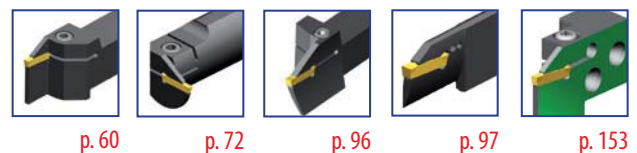
**Comment:**

STNZ/STNG has been developed, to machine materials, which are difficult to cut, like:

- nonferrous heavy metals
- nickel alloys
- plastic materials
- composite materials
- aluminum alloys

STNZ = polished surfaces, honed edges  
STNG = polished surfaces, sharp cutting edges

**Fitting tool holders**



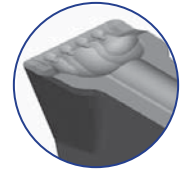
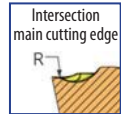
„Gozilla“ Cutting inserts for face grooving

new



**GTNS**  
System P92

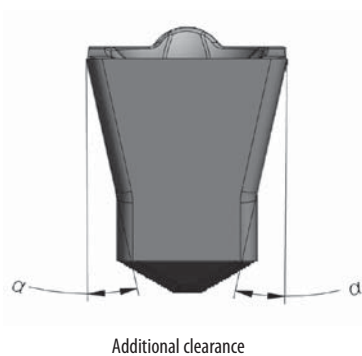
„Gozilla“



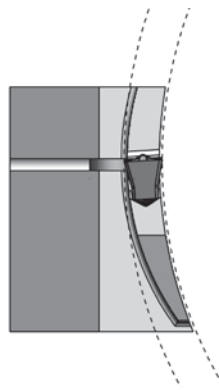
Enlarged view

WG300 Ref.	KM CARBOSPEED ID-Nr.	PM CARBOSPEED ID-Nr.	KM ALOX ID-Nr.	KM TILOX ID-Nr.	PM ALOX ID-Nr.	PM TILOX ID-Nr.	⌀	Ls	L	R	S ±0,125
GTNS 504	48309	48310	48308	40195	48307	40194	N	1,5	25,0	0,4	5,125

Fitting tool holders at the bottom



Additional clearance



**Chip breaker:**

Especially developed for effective chip flow when face grooving.

**Insert:**

Developed for machining of stainless and alloys steels.

**Clearance:**

Especially for face grooving.

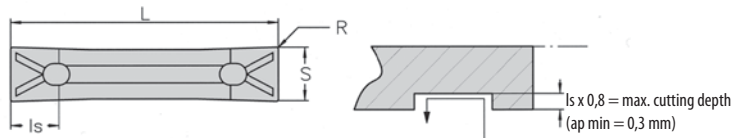
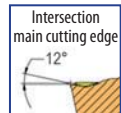
**Remark:**

To be used as well for radial grooving and parting off

Inserts for grooving and turning



**VTNS**  
System P92 P



Enlarged view

WG300 Ref.	PM NANOSPEED ID-Nr.	PM ALOX ID-Nr.	PM TILOX ID-Nr.	KM TILOX ID-Nr.	⌀	L	Ls	R	S
VTNS 302	11445	11442	11444	30668	N	20	3,0	0,2	3,0 <sup>+0,15</sup>
VTNS 3,5	11449	11446	11448	-	N	20	3,0	0,2	3,55 <sup>±0,035</sup>
VTNS 402	11453	11450	11452	-	N	20	3,5	0,2	4,0 <sup>+0,20</sup>
VTNS 502	11457	11454	11456	-	N	25	4,2	0,2	5,0 <sup>+0,25</sup>

**VTNS-Roughing to finishing**

Horizontal cutting edge with V-shaped chip breaker. Horizontal turning edges with large chip spaces to allow deep cuts. Especially recommended for carbon steels, low alloy steels and free cutting materials.

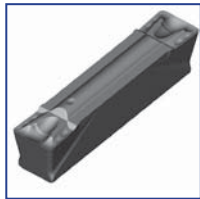
Fitting tool holders



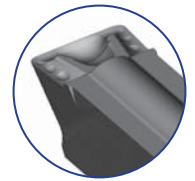
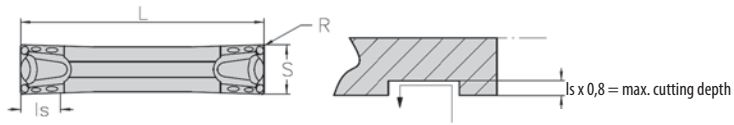
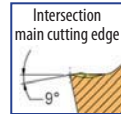
Technical section page 185 onwards



**Inserts for grooving and turning**



**XTNS**  
System P92



Enlarged view

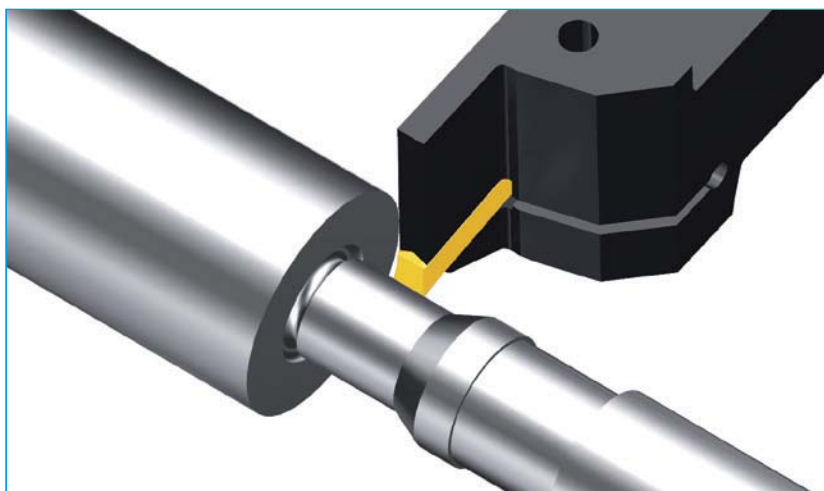
WG300 Ref.	KM TILOX ID-Nr.	GF110 TILOX ID-Nr.	(C)	L	ls	R	S
XTNS 202	14268	38917	N	20,15	2,00	0,2	2,05 <sup>+0,10</sup>
XTNS 302	14055	38918	N	20,15	3,00	0,2	3,05 <sup>+0,15</sup>
XTNS 304	14053	38919	N	20,15	3,00	0,4	3,05 <sup>+0,15</sup>
XTNS 404	38903	38920	N	20,15	3,40	0,4	4,05 <sup>+0,15</sup>
XTNS 408	38904	38921	N	20,15	3,40	0,8	4,05 <sup>+0,15</sup>
XTNS 504	38905	-	N	25,15	4,20	0,4	5,05 <sup>+0,25</sup>
XTNS 508	38906	-	N	25,15	4,20	0,8	5,05 <sup>+0,25</sup>
XTNS 604	38910	-	N	30,10	4,50	0,4	6,05 <sup>+0,25</sup>
XTNS 608	38911	-	N	30,10	4,50	0,8	6,05 <sup>+0,25</sup>
XTNS 612	38912	-	N	30,10	4,50	1,2	6,05 <sup>+0,25</sup>
XTNS 808	38913	-	N	30,10	6,00	0,8	8,05 <sup>+0,25</sup>
XTNS 812	38914	-	N	30,10	6,00	1,2	8,05 <sup>+0,25</sup>
XTNS 1008	38915	-	N	30,10	6,00	0,8	10,05 <sup>+0,25</sup>
XTNS 1012	38916	-	N	30,10	6,10	1,2	10,05 <sup>+0,25</sup>

**XTNS - Roughing to finishing**

A 9° declining major cutting edge with a reinforcing chamfer and a 24° positive entry to the chip former, achieve excellent chip control especially on difficult to cut materials. The minor cutting edges with 16° positive entry angle achieve efficient profile turning creating clean surfaces. Although the insert has been developed for universal cutting and turning, parting off tests with KM TILOX proved excellent tool life on stainless steels, e.g. 1.4404 (X2 CrNiMo1810). Therefore the insert is also recommended for stainless steel parting off.

The best tool life on parting off hexagon material 1.4571 Ø 38 has been 409 pcs so far. This could be increased to an amazing 678 pcs with the same speeds. (Vc: 60 m/min; f: 0,05 mm/Rev.)

**Fitting tool holders**

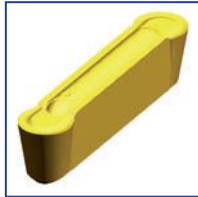


**Recommendation: Overhead positioning**

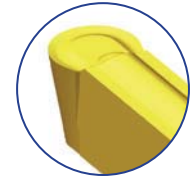
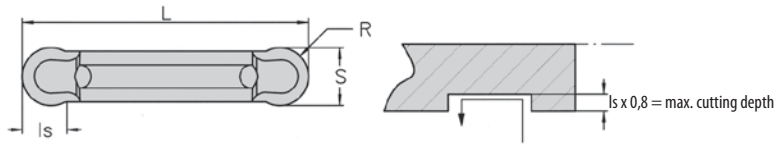
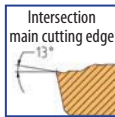
- Avoiding chip build-up
- Reducing danger of tool fracturing caused by chip build-up
- Fine surfaces



Inserts for copying and turning



**RTNG**  
System P92



Enlarged view

WG260 Ref.	GF 110 ID-Nr.	GF 110 NANOSPEED ID-Nr.	(C)	L	Is	R	S +0,025
RTNG 210	34649	34650	N	20,00	1,71	1,0	2,00
RTNG 315	19302	20471	N	20,00	2,60	1,5	3,00
RTNG 420	13415	12681	N	20,00	3,40	2,0	4,00
RTNG 525	13416	13417	N	25,00	4,10	2,5	5,00
RTNG 630	19303	20508	N	30,00	4,90	3,0	6,00
RTNG 840	19304	20509	N	30,00	6,50	4,0	8,00
RTNG 1050	19310	20510	N	30,00	8,10	5,0	10,00

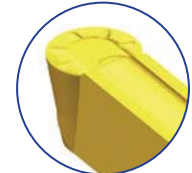
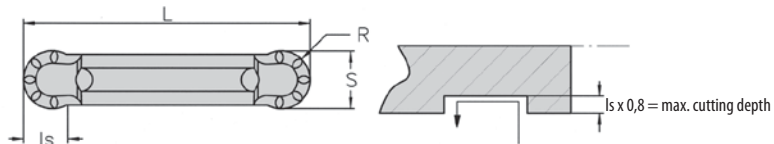
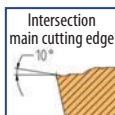
RTNG-Finishing

Precision ground full radius insert. Horizontal cutting edge with parallel chip breaker. The **micrograin** insert is especially recommended for heat resistant alloys.

Fitting tool holders



**RTNX**  
System P92



Enlarged view

WG300 Ref.	KM TILOX ID-Nr.	(C)	L	Is	R	S
RTNX 210	31706	N	20,10	1,76	1,1	2,05 +0,10
RTNX 315	19298	N	20,00	2,60	1,5	3,05 +0,15
RTNX 420	13067	N	20,00	3,40	2,0	4,05 +0,15
RTNX 525	13414	N	25,00	4,10	2,5	5,05 +0,25
RTNX 630	19299	N	30,00	4,90	3,0	6,05 +0,25
RTNX 840	19300	N	30,00	6,50	4,0	8,05 +0,25
RTNX 1050	19301	N	30,00	8,10	5,0	10,05 +0,25

RTNX-Roughing

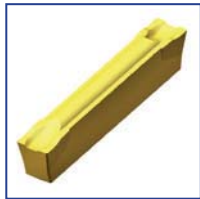
Full radius insert. The horizontal cutting edge with its chip breaker rips makes short chips on almost all materials.

Fitting tool holders

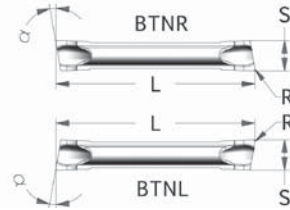
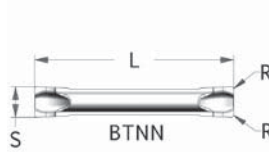
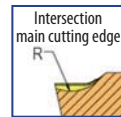


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**Parting off and grooving inserts with 2 edges**



**BTNN/R/L**  
System P92



Enlarged view

WG300 Ref.	KM NANOSPEED ID-Nr.	PM NANOSPEED ID-Nr.	KM TILOX ID-Nr.	PM TILOX ID-Nr.	KM CARBOSPEED ID-Nr.	GS 530 NANOSPEED ID-Nr.	⌀	L	R	S	$\alpha^\circ$
BTNN 1,5	-	45058	30595	-	43845	43561	N	15,50	0,2	1,50	0
BTNN 2	34208	45059	30944	-	43846	-	N	20,02	0,2	2,05	0
BTNN 2,5	33999	45060	30850	-	43847	-	N	20,03	0,2	2,50	0
BTNN 3	-	20532	12689	20917	43848	-	N	20,10	0,2	3,05	0
BTNN 4	-	20533	15843	30597	43849	-	N	20,10	0,2	4,05	0
BTNR 1,5 6D	-	45061	30576	-	43850	-	R	15,50	0,2	1,50	6
BTNR 1,5 10D	-	45062	30666	-	43852	-	R	15,50	0,2	1,50	10
BTNR 1,5 16D	-	45063	30667	-	43854	-	R	15,50	0,2	1,50	16
BTNR 2 6D	34210	45064	34209	-	43855	-	R	20,02	0,2	1,99	6
BTNR 2 10D	34207	45065	34206	-	43856	-	R	20,02	0,2	1,99	10
BTNR 2,5 6D	34003	45066	34002	-	43857	-	R	20,03	0,2	2,49	6
BTNR 2,5 10D	34001	45067	34000	-	43858	-	R	20,03	0,2	2,49	10
BTNR 3 6D	-	20534	12690	-	43859	-	R	20,10	0,2	3,05	6
BTNR 3 10D	-	20536	19665	-	43860	-	R	20,10	0,2	3,05	10
BTNR 4 6D	-	20538	15844	-	43861	-	R	20,10	0,2	4,05	6
BTNR 4 10D	-	20540	19667	-	43864	-	R	20,10	0,2	4,05	10
BTNL 1,5 6D	-	45068	30665	-	43866	-	L	15,50	0,2	1,50	6
BTNL 1,5 10D	-	45069	30663	-	43867	-	L	15,50	0,2	1,50	10
BTNL 1,5 16D	-	45070	30664	-	43869	-	L	15,50	0,2	1,50	16
BTNL 2 6D	33994	45071	33993	-	43870	-	L	20,02	0,2	1,99	6
BTNL 2 10D	34205	45072	34204	-	43871	-	L	20,02	0,2	1,99	10
BTNL 2,5 6D	33996	45073	33995	-	43872	-	L	20,03	0,2	2,49	6
BTNL 2,5 10D	33998	45074	33997	-	43873	-	L	20,03	0,2	2,49	10
BTNL 3 6D	-	20535	12688	-	43874	-	L	20,10	0,2	3,05	6
BTNL 3 10D	-	20537	19666	-	43875	-	L	20,10	0,2	3,05	10
BTNL 4 6D	-	20539	15845	-	43877	-	L	20,10	0,2	4,05	6
BTNL 4 10D	-	20541	19668	-	43879	-	L	20,10	0,2	4,05	10

**BTN Parting off chip breaker**

Grooved parting off edge with reinforced flanks. The deep and spacious chip-trough gives excellent chip control. Efficient on almost all materials.

**Fitting tool holders**



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p. 63

p. 67

p. 70

p. 72

p. 89

p. 94

p. 97

p. 153

p.183

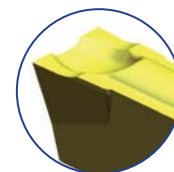
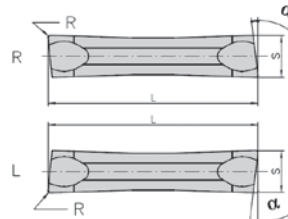
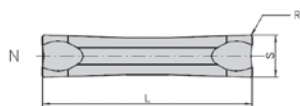
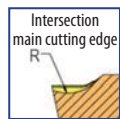
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Parting off and grooving inserts

new



**BTNNF/RF/LF**  
System P92



Enlarged view

WG300 Ref.	GF 110 Nanospeed ID-Nr.	(C)	L	R	S ±0,1
BTNNF1,5	48311	N	14,90	0,0	1,50
BTNNF 2	48312	N	19,40	0,0	2,00
BTNRF1,5 6D	48313	R	14,90	0,0	1,50
BTNRF 2 6D	48314	R	19,40	0,0	2,00
BTNLF 1,5 6D	48315	L	14,90	0,0	1,50
BTNLF 2 6D	48316	L	19,40	0,0	2,00

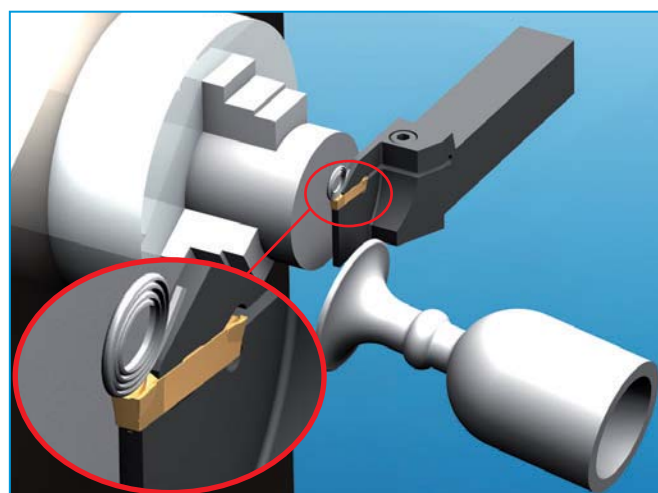
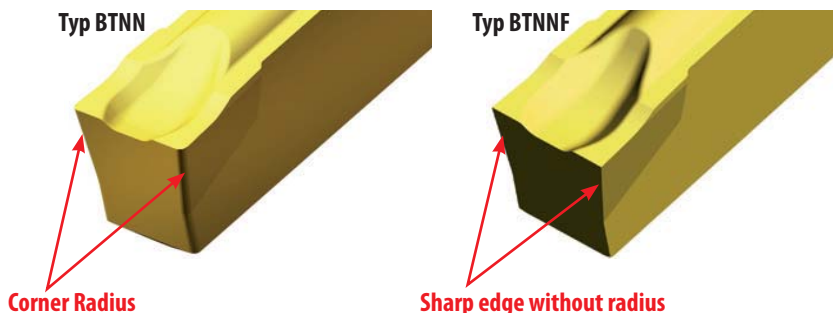
**Remark:**

Sharply ground cutting edge without corner radius.  
Recommended for automatic lathe cutting jobs.

Fitting tool holders



The difference



**The way towards the center isn't easy at all:**

When beginning the operation all conditions are ideal:

- cutting speed (Vc)
- cooling and
- chip removal

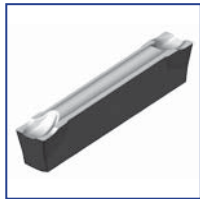
**In the end of the operation:**

- cutting speed 0!
- cooling inefficient!
- chip removal: may stick!

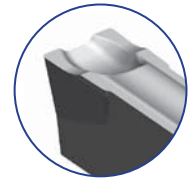
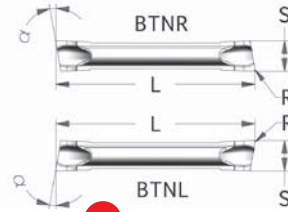
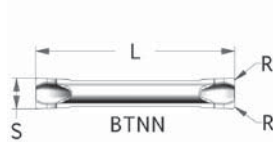
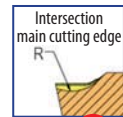
**BTN Parting off chip breaker**

Grooved parting off edge with reinforced flanks. The deep and spacious **chip-trough** gives excellent chip control. Efficient on almost all materials.

**Parting off and grooving inserts with special surface preparation and cutting edge honing**



**BTNN/R/L**  
System P92



Enlarged view

WG300 Ref.	GF110 Nirospeed	GF110 Carbospeed	GF110 Nanospeed	GF110 Hyperspeed	GF110 Hardspeed	(C)	L	R	S	$\alpha^\circ$
		ID-Nr.	ID-Nr.	ID-Nr.	ID-Nr.					
BTNN 1,5	49079	45075	45076	45077	47696	N	15,5	0,2	1,50	0
BTNN 2	49080	45078	45079	45080	47697	N	20,02	0,2	2,05	0
BTNN 2,5	49081	45081	45082	45083	47698	N	20,03	0,2	2,50	0
BTNN 3	47993	42824	42825	42826	47699	N	20,10	0,2	3,05	0
BTNN 4	49082	45085	45086	45087	47700	N	20,1	0,2	4,05	0
BTNL 1,5 7D	49088	49098	49108	-	47711	L	15,50	0,2	1,50	7
BTNL 2 7D	49089	49099	49109	-	47712	L	20,02	0,2	2,05	7
BTNL 2,5 7D	49090	49100	49110	-	47713	L	20,03	0,2	2,50	7
BTNL 3 7D	49091	49101	49111	-	47714	L	20,10	0,2	3,05	7
BTNL 4 7D	49092	49102	49112	-	47715	L	20,10	0,2	4,05	7
BTNR 1,5 7D	49083	49093	49103	-	47706	R	15,50	0,2	1,5	7
BTNR 2 7D	49084	49094	49104	-	47707	R	20,02	0,2	2,05	7
BTNR 2,5 7D	49085	49095	49105	-	47708	R	20,03	0,2	2,50	7
BTNR 3 7D	49086	49096	49106	-	47709	R	20,10	0,2	3,05	7
BTNR 4 7D	49087	49097	49107	-	47710	R	20,10	0,2	4,05	7

**Fitting tool holders**

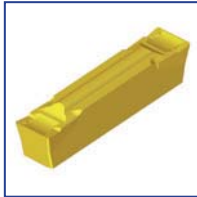


**The new high performance coatings**

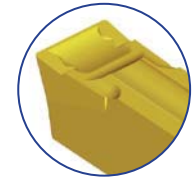
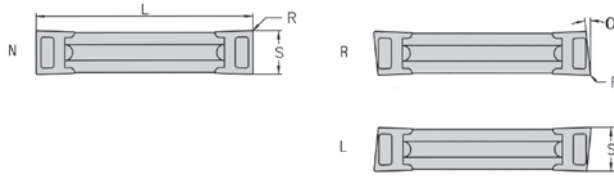
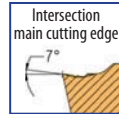
<b>CARBOSPEED</b>	<b>NANOSPEED</b>	<b>HYPERSPEED</b>
A new generation of a heat- and wear resisting nitride coating	A super nitride coating	A super nitride coating
It has been developed especially to machine low and high alloy steels.	It has been developed especially to machine steels in general and stainless steels.	It has been developed especially to machine difficult to cut materials.
<b>HARDSPEED</b>	<b>NIROSPEED</b>	
A super nitride coating	A super nitride coating	
It has been developed to machine especially hard and difficult to cut materials.	Recommended for stainless steels and nickel alloys.	

Complete information see page 192

Parting off and grooving inserts with 2 edges



**CTD/R/L-ALU**  
System P92



Enlarged view

WG300 Ref.	KM	KM ALUSPEED	PM NANOSPEED	( )	L	R	S	$\alpha^\circ$
	ID-Nr.	ID-Nr.	ID-Nr.					
CTD 3 ALU	10400	10709	10402	N	20	0,2	3,0 <sup>+0,15</sup>	0
CTD 4 ALU	10405	30661	10407	N	20	0,2	4,0 <sup>+0,20</sup>	0
CTD 5 ALU	10410	38483	10412	N	25	0,2	5,0 <sup>+0,25</sup>	0
CTL 3 6D ALU	10428	30662	10432	L	20	0,2	3,0 <sup>+0,15</sup>	6
CTL 4 6D ALU	10440	36195	10444	L	20	0,2	4,0 <sup>+0,20</sup>	6
CTL 5 6D ALU	10452	10454	10456	L	25	0,2	5,0 <sup>+0,25</sup>	6
CTR 3 6D ALU	10427	30598	10431	R	20	0,2	3,0 <sup>+0,15</sup>	6
CTR 4 6D ALU	10439	38484	10443	R	20	0,2	4,0 <sup>+0,20</sup>	6
CTR 5 6D ALU	10451	10453	10455	R	25	0,2	5,0 <sup>+0,25</sup>	6

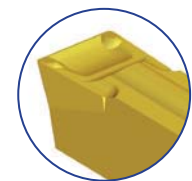
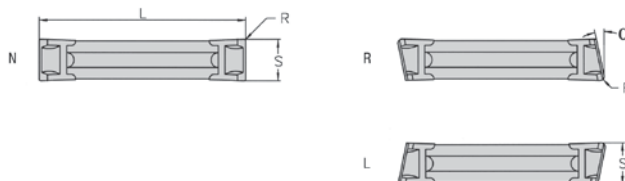
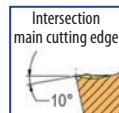
ALU chip breaker...

Fitting tool holders at the bottom

Horizontal ground cutting edge. The flat chip chamber conveys chips at high speed. Recommended for: Nonferrous heavy metals, Machining steels, Thinwalled parts, Unstable components and Pipes.



**CTD/R/L-IT**  
System P92



Enlarged view

WG300 Ref.	PM NANOSPEED	PM TILOX	KM TILOX	KM CARBOSPEED	( )	L	R	S	$\alpha^\circ$
	ID-Nr.	ID-Nr.	ID-Nr.	ID-Nr.					
CTD 3	10404	10403	23613	43880	N	20	0,2	3,0 <sup>+0,15</sup>	0
CTD 4	10409	10408	18387	43881	N	20	0,2	4,0 <sup>+0,20</sup>	0
CTD 5	10414	10413	43883	43882	N	25	0,2	5,0 <sup>+0,25</sup>	0
CTL 3 6D	10438	10436	21757	-	L	20	0,2	3,0 <sup>+0,15</sup>	6
CTL 4 6D	10450	10448	-	-	L	20	0,2	4,0 <sup>+0,20</sup>	6
CTL 5 6D	10462	10460	-	-	L	25	0,2	5,0 <sup>+0,25</sup>	6
CTR 3 6D	10437	10435	28953	-	R	20	0,2	3,0 <sup>+0,15</sup>	6
CTR 4 6D	10449	10447	-	-	R	20	0,2	4,0 <sup>+0,20</sup>	6
CTR 5 6D	10461	10459	-	-	R	25	0,2	5,0 <sup>+0,25</sup>	6

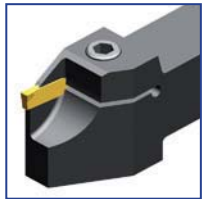
IT Classic chip breaker...

Horizontal, chamfered parting off edge with reinforced flanks and large chip breaker. To be used universally and especially on interrupted cuts. Alloy steels, stainless steels, interrupted cuts.

Fitting tool holders

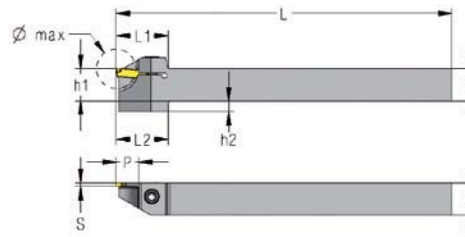


**Holders for parting off, grooving and turning for cutting width 1,5 mm**



**P92 CXCBL**  
System P92

LH holder



**P92 CXCBR**  
System P92

RH holder



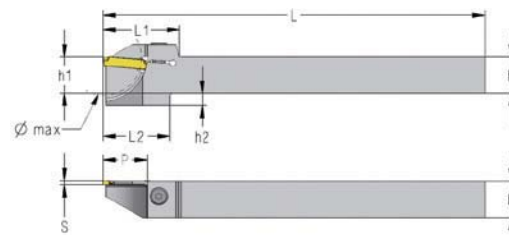
WG380 Ref.	ID-Nr.	(C)	Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 CXCBL 0808 K15 08	33450	L	16	8	8	4	8	8	1,5	125	19	19	10
P92 CXCBL 1010 K15 08	30110	L	16	10	10	6	10	8	1,5	125	19	19	10
P92 CXCBL 1010 K15 14	44738	L	28	10	10	6	10	14	1,5	125	25	22	10
P92 CXCBL 1212 K15 08	30109	L	16	12	12	4	12	8	1,5	125	19	19	10
P92 CXCBL 1212 K15 14	44739	L	28	12	12	4	12	14	1,5	125	25	22	10
P92 CXCBL 1616 K15 08	30100	L	16	16	16	-	16	8	1,5	125	19	-	10
P92 CXCBL 1616 K15 14	44740	L	28	16	16	-	16	14	1,5	125	25	-	10
P92 CXCBL 2020 K15 14	44741	L	28	20	20	-	25	14	1,5	125	25	-	10
P92 CXCBL 2525 M15 14	33460	L	28	25	25	-	25	14	1,5	150	30	-	1
P92 CXCBR 0808 K15 08	33449	R	16	8	8	4	8	8	1,5	125	19	19	10
P92 CXCBR 1010 K15 08	30124	R	16	10	10	6	10	8	1,5	125	19	19	10
P92 CXCBR 1010 K15 14	44733	R	28	10	10	6	10	14	1,5	125	25	22	10
P92 CXCBR 1212 K15 08	30125	R	16	12	12	4	12	8	1,5	125	19	19	10
P92 CXCBR 1212 K15 14	44734	R	28	12	12	4	12	14	1,5	125	25	22	10
P92 CXCBR 1616 K15 08	30126	R	16	16	16	-	16	8	1,5	125	19	-	10
P92 CXCBR 1616 K15 14	44735	R	28	16	16	-	16	14	1,5	125	25	-	10
P92 CXCBR 2020 K15 14	44736	R	28	20	20	-	25	14	1,5	125	25	-	10
P92 CXCBR 2525 M15 14	33459	R	28	25	25	-	25	14	1,5	150	30	-	1

**new**



**P92 CXCBL...14**  
System P92

LH holder



**P92 CXCBR...14**  
System P92

RH holder



**new**

**Comment**

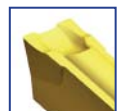
Tool holders with an extension of 17 mm offer an enlarged range for parting off. When used for turning, moderate feeds should be applied.

Holder and inserts with the same "S" dimension fit together.

**Fitting inserts**

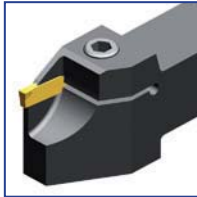


p.205-206,216



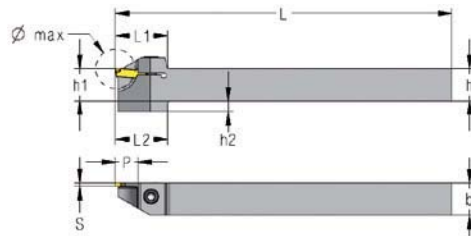
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HOLDERS for parting off, grooving and turning for cutting width 2 and 2,5 mm

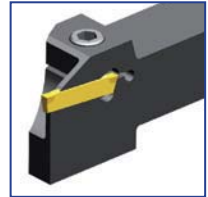


**P92 CXCBL**  
System P92

LH holder



**P92 CXCBR**  
System P92



RH holder

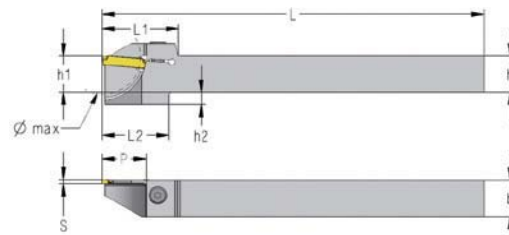
WG380 Ref.	ID-Nr.	(L/R)	Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 CXCBL 0808 K20+25 11	33444	L	22	8	8	4	8	11	2+2,5	125	19,5	19,5	10
P92 CXCBL 1010 K20+25 11	33445	L	22	10	10	6	10	11	2+2,5	125	19,5	19,5	10
P92 CXCBL 1212 K20+25 11	33448	L	22	12	12	4	12	11	2+2,5	125	19,5	19,5	10
P92-CXCBL 1212 K20+25 14	44742	L	28	12	12	4	12	14	2+2,5	125	25	22	10
P92 CXCBL 1616 K20+25 11	33452	L	22	16	16	-	16	11	2+2,5	125	19,5	-	10
P92 CXCBL 1616 K20+25 17	33473	L	34	16	16	5	16	17	2+2,5	125	34	26	1
P92 CXCBL 2020 K20+25 14	33454	L	28	20	20	-	20	14	2+2,5	125	30	-	1
P92 CXCBL 2020 K20+25 17	33474	L	34	20	20	-	20	17	2+2,5	125	34	-	1
P92 CXCBL 2525 M20+25 14	33455	L	28	25	25	-	25	14	2+2,5	150	30	-	1
P92 CXCBL 2525 M20+25 17	33475	L	34	25	25	-	25	17	2+2,5	150	34	-	1
P92 CXCBR 0808 K20+25 11	33336	R	22	8	8	4	8	11	2+2,5	125	19,5	19,5	10
P92 CXCBR 1010 K20+25 11	33446	R	22	10	10	6	10	11	2+2,5	125	19,5	19,5	10
P92 CXCBR 1212 K20+25 11	33447	R	22	12	12	4	12	11	2+2,5	125	19,5	19,5	10
P92-CXCBR 1212 K20+25 14	44737	R	28	12	12	4	12	14	2+2,5	125	25	22	10
P92 CXCBR 1616 K20+25 11	33451	R	22	16	16	-	16	11	2+2,5	125	19,5	-	10
P92 CXCBR 1616 K20+25 17	33470	R	34	16	16	5	16	17	2+2,5	125	34	26	1
P92 CXCBR 2020 K20+25 14	33453	R	28	20	20	-	20	14	2+2,5	125	30	-	1
P92 CXCBR 2020 K20+25 17	33471	R	34	20	20	-	20	17	2+2,5	125	34	-	1
P92 CXCBR 2525 M20+25 14	33456	R	28	25	25	-	25	14	2+2,5	150	30	-	1
P92 CXCBR 2525 M20+25 17	33472	R	34	25	25	-	25	17	2+2,5	150	34	-	1

new



**P92 CXCBL...14**  
System P92

LH holder



**P92 CXCBR...14**  
System P92



RH holder

new

**Comment**

Tool holders with an extension of 17 mm offer an enlarged range for parting off. When used for turning, moderate feeds should be applied.

Holder and inserts with the same "S" dimension fit together.

**Advantage!**

In these tool holders 2 different insert fit: width 2,0 mm or 2,5 mm.

**Fitting inserts**



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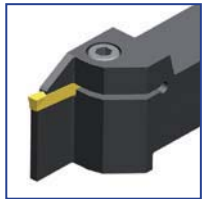
p. 53



Tailor made hi pressure cooling system available.  
More information at page 182

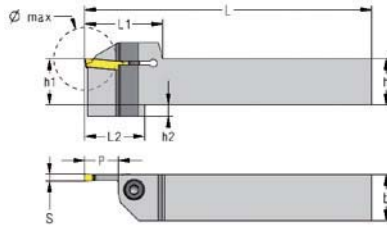


**Holders for parting off, grooving and turning for cutting width range 3 to 3,5 mm**

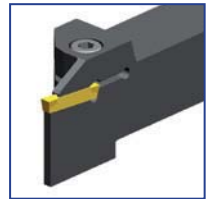


**P92 CXCBL**  
System P92

LH holder



**P92 CXCBR**  
System P92



RH holder

WG380 Ref.	ID-Nr.	(C)	Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 CXCBL 1212 K30 10	28189	L	20	12	12	5	12	10	3,0	125	21,0	22	11
P92 CXCBL 1212 K30 14	19698	L	28	12	12	5	12	14	3,0	125	34,0	26	1
P92 CXCBL 1616 K30 10	38514	L	20	16	16	5	16	10	3,0	125	28,0	22	1
P92 CXCBL 1616 K30 14	10092	L	28	16	16	5	16	14	3,0	125	34,0	26	1
P92 CXCBL 1616 K30 17	10094	L	34	16	16	5	16	17	3,0	125	37,0	29	1
P92 CXCBL 2020 K30 10	38515	L	20	20	20	5	20	10	3,0	125	30,0	26	1
P92 CXCBL 2020 K30 14	10096	L	28	20	20	5	20	14	3,0	125	34,0	26	1
P92 CXCBL 2020 K30 17	10098	L	34	20	20	5	20	17	3,0	125	37,0	29	1
P92 CXCBL 2525 M30 10	31254	L	20	25	25	-	25	10	3,0	150	30,0	-	2
P92 CXCBL 2525 M30 14	10108	L	28	25	25	-	25	14	3,0	150	34,0	-	2
P92 CXCBL 2525 M30 17	10110	L	34	25	25	-	25	17	3,0	150	37,0	-	2
P92 CXCBL 2020 K35 17	10100	L	34	20	20	5	20	17	3,5	125	37,0	29	1
P92 CXCBL 2525 M35 17	10112	L	34	25	25	-	25	17	3,5	150	37,0	-	2
P92 CXCBR 1212 K30 10	28188	R	20	12	12	5	12	10	3,0	125	21,0	22	11
P92 CXCBR 1212 K30 14	19533	R	28	12	12	5	12	14	3,0	125	34,0	26	1
P92 CXCBR 1616 K30 10	38516	R	20	16	16	5	16	10	3,0	125	28,0	22	1
P92 CXCBR 1616 K30 14	10091	R	28	16	16	5	16	14	3,0	125	34,0	26	1
P92 CXCBR 1616 K30 17	10093	R	34	16	16	5	16	17	3,0	125	37,0	29	1
P92 CXCBR 2020 K30 10	38517	R	20	20	20	5	20	10	3,0	125	30,0	26	1
P92 CXCBR 2020 K30 14	10095	R	28	20	20	5	20	14	3,0	125	34,0	26	1
P92 CXCBR 2020 K30 17	10097	R	34	20	20	5	20	17	3,0	125	37,0	29	1
P92 CXCBR 2525 M30 10	36432	R	20	25	25	-	25	10	3,0	150	30,0	-	2
P92 CXCBR 2525 M30 14	10107	R	28	25	25	-	25	14	3,0	150	34,0	-	2
P92 CXCBR 2525 M30 17	10109	R	34	25	25	-	25	17	3,0	150	37,0	-	2
P92 CXCBR 2020 K35 17	10099	R	34	20	20	5	20	17	3,5	125	37,0	29	1
P92 CXCBR 2525 M35 17	10111	R	34	25	25	-	25	17	3,5	150	37,0	-	2

**Comment**

Tool holders with an extension of 17 mm offer an enlarged range for parting off. When used for turning, moderate feeds should be applied.

Holder and inserts with the same "S" dimension fit together.

**Fitting inserts**



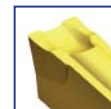
Torque  
p.205-206,216



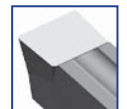
p. 46



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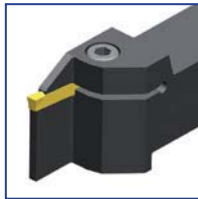
p. 53



p. 180

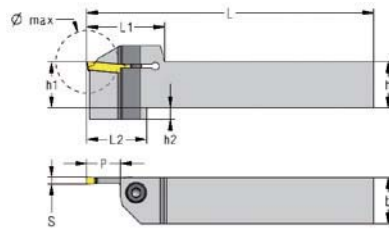
**Tailor made hi pressure cooling system available.**  
More information at page 182

HOLDERS for parting off, grooving and turning for cutting width range 4 to 5 mm

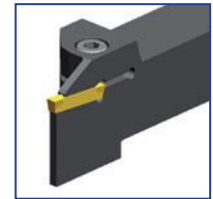


**P92 CXCBL**  
System P92

LH holder



**P92 CXCBR**  
System P92



RH holder

WG380 Ref.	ID-Nr.	(C)	Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 CXCBL 1212 K40 10	28190	L	20	12	12	5	12	10	4	125	28,0	22	11
P92 CXCBL 1212 K40 14	19756	L	28	12	12	5	12	14	4	125	34,0	26	1
P92 CXCBL 1616 K40 10	38523	L	20	16	16	5	16	10	4	125	28,0	22	1
P92 CXCBL 1616 K40 14	19476	L	28	16	16	5	16	14	4	125	34,0	26	1
P92 CXCBL 1616 K40 17	28191	L	34	16	16	5	16	17	4	125	37,0	29	1
P92 CXCBL 2020 K40 10	38524	L	20	20	20	5	20	10	4	125	30,0	26	1
P92 CXCBL 2020 K40 14	10102	L	28	20	20	5	20	14	4	125	34,0	26	1
P92 CXCBL 2020 K40 17	10104	L	34	20	20	5	20	17	4	125	37,0	29	1
P92 CXCBL 2525 M40 10	38525	L	20	25	25	-	25	10	4	150	30,0	-	2
P92 CXCBL 2525 M40 14	10114	L	28	25	25	-	25	14	4	150	34,0	-	2
P92 CXCBL 2525 M40 17	10116	L	34	25	25	-	25	17	4	150	37,0	-	2
P92 CXCBL 2020 K50 10	19568	L	20	20	20	5	20	10	5	125	34,5	30	1
P92 CXCBL 2020 K50 20	44224	L	40	20	20	5	20	20	5	125	40,0	33	2
P92 CXCBL 2525 M50 10	38526	L	20	25	25	-	25	10	5	150	34,5	-	2
P92 CXCBL 2525 M50 20	10118	L	40	25	25	-	25	20	5	150	40,0	-	2
P92 CXCBR 1212 K40 10	25920	R	20	12	12	5	12	10	4	125	28,0	22	11
P92 CXCBR 1212 K40 14	19697	R	28	12	12	5	12	14	4	125	34,0	26	1
P92 CXCBR 1616 K40 10	20619	R	20	16	16	5	16	10	4	125	28,0	22	1
P92 CXCBR 1616 K40 14	19477	R	28	16	16	5	16	14	4	125	34,0	26	1
P92 CXCBR 1616 K40 17	23199	R	34	16	16	5	16	17	4	125	37,0	29	1
P92 CXCBR 2020 K40 10	38527	R	20	20	20	5	20	10	4	125	30,0	26	1
P92 CXCBR 2020 K40 14	10101	R	28	20	20	5	20	14	4	125	34,0	26	1
P92 CXCBR 2020 K40 17	10103	R	34	20	20	5	20	17	4	125	37,0	29	1
P92 CXCBR 2525 M40 10	38528	R	20	25	25	-	25	10	4	150	30,0	-	2
P92 CXCBR 2525 M40 14	10113	R	28	25	25	-	25	14	4	150	34,0	-	2
P92 CXCBR 2525 M40 17	10115	R	34	25	25	-	25	17	4	150	37,0	-	2
P92 CXCBR 2020 K50 10	16033	R	20	20	20	5	20	10	5	125	34,5	30	1
P92 CXCBR 2020 K50 20	44223	R	40	20	20	5	20	20	5	125	40,0	33	2
P92 CXCBR 2525 M50 10	38529	R	20	25	25	-	25	10	5	150	34,5	-	2
P92 CXCBR 2525 M50 20	10117	R	40	25	25	-	25	20	5	150	40,0	-	2

**Comment**

Tool holders with an extension of 17 mm offer an enlarged range for parting off. When used for turning, moderate feeds should be applied.

Holder and inserts with the same "S" dimension fit together.

**Fitting inserts**



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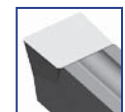
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p. 52

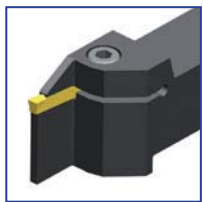


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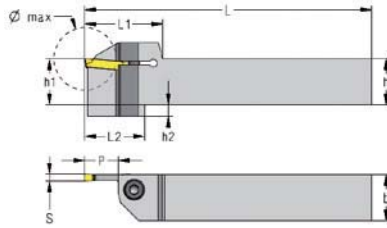
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**Holders for parting off, grooving and turning for cutting width range 6 to 10 mm**

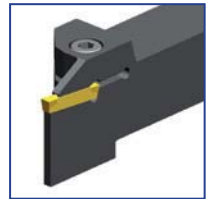


**P92 CXCBL**  
System P92

LH holder



**P92 CXCBR**  
System P92



RH holder

WG380 Ref.	ID-Nr.	(C)	Ø max	h	h1	h2	b	P	S	L	L1	L2	
P92 CXCBL 2020 M60 10	21252	L	20	20	20	5	20	10	6	150	38	30	2
P92 CXCBL 2020 M60 20	19757	L	40	20	20	5	20	20	6	150	43	35	2
P92 CXCBL 2525 M60 10	38520	L	20	25	25	-	25	10	6	150	38	-	2
P92 CXCBL 2525 M60 20	19347	L	40	25	25	-	25	20	6	150	40	-	2
P92 CXCBL 3225 P60 26	19349	L	52	32	32	-	25	26	6	170	45	-	2
P92 CXCBL 2020 M80 10	21255	L	20	20	20	5	20	10	8	150	37	28	2
P92 CXCBL 2020 M80 14	30298	L	28	20	20	5	20	14	8	150	40	31	2
P92 CXCBL 2020 M80 20	21097	L	40	20	20	5	20	20	8	150	46	37	3
P92 CXCBL 2525 M80 10	38521	L	20	25	25	-	25	10	8	150	38	-	2
P92 CXCBL 2525 M80 20	19354	L	40	25	25	-	25	20	8	150	43	-	3
P92 CXCBL 3225 P80 26	19350	L	52	32	32	-	25	26	8	170	47	-	3
P92 CXCBL 3225 P100 26	19352	L	52	32	32	-	25	26	10	170	47	-	3
P92 CXCBR 2020 M60 10	21253	R	20	20	20	5	20	10	6	150	38	30	2
P92 CXCBR 2020 M60 20	19758	R	40	20	20	5	20	20	6	150	43	35	2
P92 CXCBR 2525 M60 10	20803	R	20	25	25	-	25	10	6	150	38	-	2
P92 CXCBR 2525 M60 20	19327	R	40	25	25	-	25	20	6	150	40	-	2
P92 CXCBR 3225 P60 26	19348	R	52	32	32	-	25	26	6	170	45	-	2
P92 CXCBR 2020 M80 10	21254	R	20	20	20	5	20	10	8	150	37	28	2
P92 CXCBR 2020 M80 14	30297	R	28	20	20	5	20	14	8	150	40	31	2
P92 CXCBR 2020 M80 20	21096	R	40	20	20	5	20	20	8	150	46	37	3
P92 CXCBR 2525 M80 10	38522	R	20	25	25	-	25	10	8	150	38	-	2
P92 CXCBR 2525 M80 20	19355	R	40	25	25	-	25	20	8	150	43	-	3
P92 CXCBR 3225 P80 26	19351	R	52	32	32	-	25	26	8	170	47	-	3
P92 CXCBR 3225 P100 26	19353	R	52	32	32	-	25	26	10	170	47	-	3

**Comment**

Tool holders with an extension of 17 mm offer an enlarged range for parting off. When used for turning, moderate feeds should be applied.

Holder and inserts with the same "S" dimension fit together.

**Fitting inserts**



Torque  
p.205-206,216



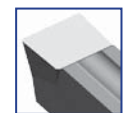
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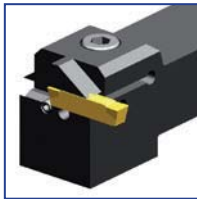


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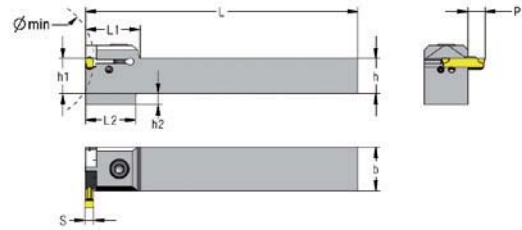
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90° - Holders for many different turning applications



**P92 90 UNI**  
System P92

RH and LH pocket



WG380 Ref.	ID-Nr.	(C)	Dmin	h	h1	h2	b	P	S	L	L1	L2	
P92 90 CXCBRL 1616 K30 UNI	38485	R + L	>70	16	16	4	16	5	3	125	25	26	1+13
P92 90 CXCBRL 2020 K30 UNI	38486	R + L	>70	20	20	-	20	5	3	125	25	-	1+13
P92 90 CXCBRL 2525 M30 UNI	38487	R + L	>70	25	25	-	25	5	3	150	25	-	1+13
P92 90 CXCBRL 2020 K60 UNI	24260	R + L	>120	20	20	-	20	11,0	6	125	34	-	14+20
P92 90 CXCBRL 2525 M60 UNI	24261	R + L	>120	25	25	-	25	11,0	6	150	34	-	14+20
P92 90 CXCBRL 3232 P60 UNI	24262	R + L	>120	32	32	-	32	11,0	6	170	34	-	14+20
P92 90 CXCBRL 2020 K80 UNI	24263	R + L	>120	20	20	5	20	11,0	8	125	40	31	3+21
P92 90 CXCBRL 2525 M80 UNI	24264	R + L	>120	25	25	-	25	11,0	8	150	40	-	3+21
P92 90 CXCBRL 3232 P80 UNI	24265	R + L	>120	32	32	-	32	11,0	8	170	40	-	3+21

**Remark**

Holder and inserts with the same "S" dimension fit together.



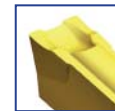
Torque  
p.205-206,216



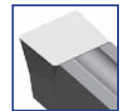
p. 46



p. 52



p. 53

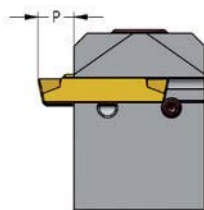


p. 180

**Fitting inserts**

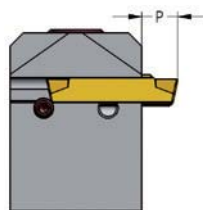
**UNI-Holder for clockwise (CW) and counter clockwise (CCW) run**

Insert positioned for clockwise (CW) run, face grooving  
Insert positioned for counter clockwise (CCW) run, grooving



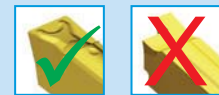
P92 inserts

Insert positioned for counter clockwise (CCW) run, face grooving  
Insert positioned for clockwise (CW) run, grooving

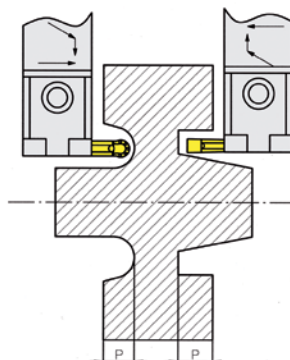


P92 inserts

2 tapped holes for a positioning pin permit the use of P92 inserts for CW and CCW run!

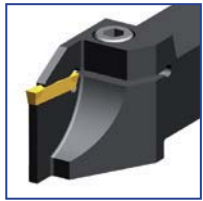


**Face turning**  
with RTNX 840 TILOX



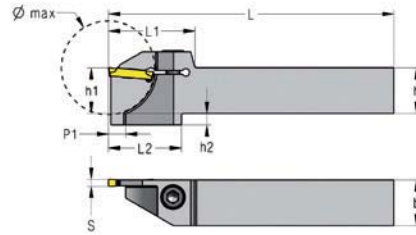
**Face turning**  
with MTNS 812 TILOX

**Holder for deep cuts from Ø 42 mm up to Ø 56 mm and deep grooving**

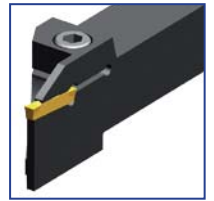


**P92 A CXCBL**  
System P92

LH holder



**P92 A CXCBR**  
System P92



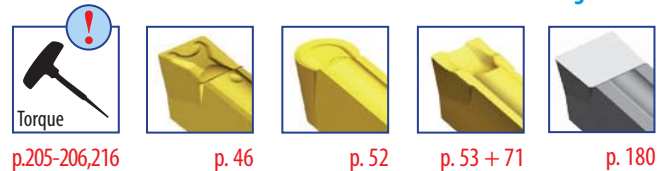
RH holder

WG380 Ref.	ID-Nr.	(C)	Ø max	h	h1	h2	b	P1	S	L	L1	L2	
P92 A CXCBL 1616 K30 42	35158	L	42	16	16	5	16	7,0	3,0	125	39	31	1
P92 A CXCBL 2020 K30 42	35160	L	42	20	20	5	20	7,0	3,0	125	39	31	1
P92 A CXCBL 2020 K30 56	24890	L	56	20	20	5	20	20,5	3,0	125	46	38	1
P92 A CXCBL 2020 K40 56	28182	L	56	20	20	5	20	20,5	4,0	125	46	38	1
P92 A CXCBL 2525 M30 42	35163	L	42	25	25	-	25	-	3,0	150	39	-	1
P92 A CXCBL 2525 M30 56	24891	L	56	25	25	-	25	13,0	3,0	150	46	-	1
P92 A CXCBL 2525 M40 56	28181	L	56	25	25	-	25	13,0	4,0	150	46	-	1
P92 A CXCBR 1616 K30 42	35159	R	42	16	16	5	16	7,0	3,0	125	39	31	1
P92 A CXCBR 2020 K30 42	35161	R	42	20	20	5	20	7,0	3,0	125	39	31	1
P92 A CXCBR 2020 K30 56	25568	R	56	20	20	5	20	20,0	3,0	125	46	38	1
P92 A CXCBR 2020 K40 56	28184	R	56	20	20	5	20	20,0	4,0	125	46	38	1
P92 A CXCBR 2525 M30 42	35162	R	42	25	25	-	25	-	3,0	150	39	-	1
P92 A CXCBR 2525 M30 56	25685	R	56	25	25	-	25	13,0	3,0	150	46	-	1
P92 A CXCBR 2525 M40 56	28180	R	56	25	25	-	25	13,0	4,0	150	46	-	1

**Remark**

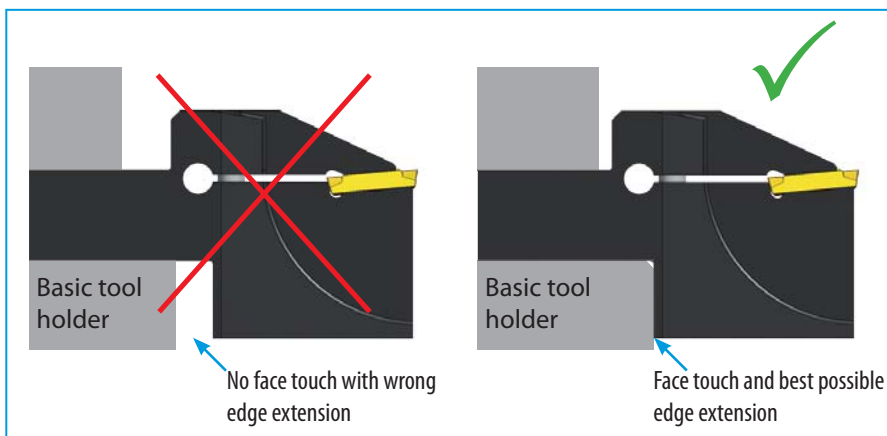
P92 A-inserts and P92 A CXCBL...holder join together to form an extremely solid unit owing to long guide surfaces between insert and pocket and reinforced tool holders. A-type tools are therefore recommended for heavy duty cutting, deep cuts and to achieve clean faces.

**Fitting inserts**



**Recommendation**

For deep grooving inserts with 2-edges are recommended.  
Holders and inserts with the same "S" dimension fit together.



**Please note!**

On parting off operations always select the **strongest tool holders**. This is a big advantage!  
Make sure the holder's rear face **touches** the front face of the slide or basic tool holder firmly. If not, vibrations and fast edge wear will be the negative result of such improper set up.

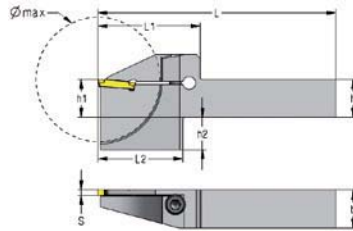
Tailor made hi pressure cooling system available.  
More information at page 182

Holder for deep cuts from  $\varnothing$  65 mm up to  $\varnothing$  80 mm and deep grooving

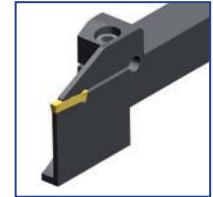


**P92 A CXCB L**  
System P92

LH holder



**P92 A CXCB R**  
System P92



RH holder

WG380 Ref.	ID-Nr.	(C)	$\varnothing$ max	h	h1	h2	b	S	L	L1	L2	
P92 A CXCB L 2020 K30	10136	L	65	20	20	17	20	3,0	125	54	45	12
P92 A CXCB L 2020 K35	10138	L	65	20	20	17	20	3,5	125	54	45	12
P92 A CXCB L 2020 K40	10140	L	65	20	20	17	20	4,0	125	54	45	12
P92 A CXCB L 2020 M50	10142	L	80	20	20	17	20	5,0	150	62	52	12
P92 A CXCB L 2525 M30	10144	L	65	25	25	12	25	3,0	150	54	45	12
P92 A CXCB L 2525 M35	10146	L	65	25	25	12	25	3,5	150	54	45	12
P92 A CXCB L 2525 M40	10148	L	65	25	25	12	25	4,0	150	54	45	12
P92 A CXCB L 2525 P50	10150	L	80	25	25	12	25	5,0	170	62	52	12
P92 A CXCB R 2020 K30	10135	R	65	20	20	17	20	3,0	125	54	45	12
P92 A CXCB R 2020 K35	10137	R	65	20	20	17	20	3,5	125	54	45	12
P92 A CXCB R 2020 K40	10139	R	65	20	20	17	20	4,0	125	54	45	12
P92 A CXCB R 2020 M50	10141	R	80	20	20	17	20	5,0	150	62	52	12
P92 A CXCB R 2525 M30	10143	R	65	25	25	12	25	3,0	150	54	45	12
P92 A CXCB R 2525 M35	10145	R	65	25	25	12	25	3,5	150	54	45	12
P92 A CXCB R 2525 M40	10147	R	65	25	25	12	25	4,0	150	54	45	12
P92 A CXCB R 2525 P50	10149	R	80	25	25	12	25	5,0	170	62	52	12

**Remark**

P92 A-inserts and P92 A CXCB...holder join together to form an extremely solid unit owing to long guide surfaces between insert and pocket and reinforced tool holders. A-type tools are therefore recommended for heavy duty cutting, deep cuts and to achieve clean faces.

**Fitting inserts**



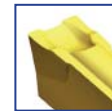
Torque  
p.205-206,216



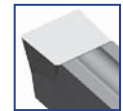
p. 46



p. 52



p. 53 + 71

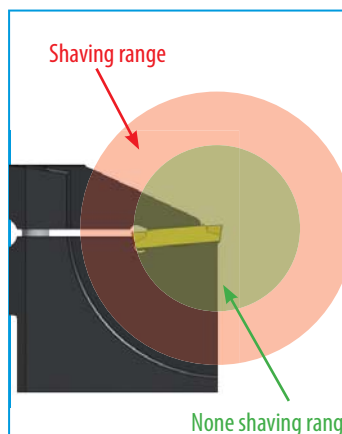


p. 180

**Recommendation**

For cutting deep chambers inserts with 2-edges are recommended.

Holders and inserts with the same "S" dimension fit together.



**Shaving**

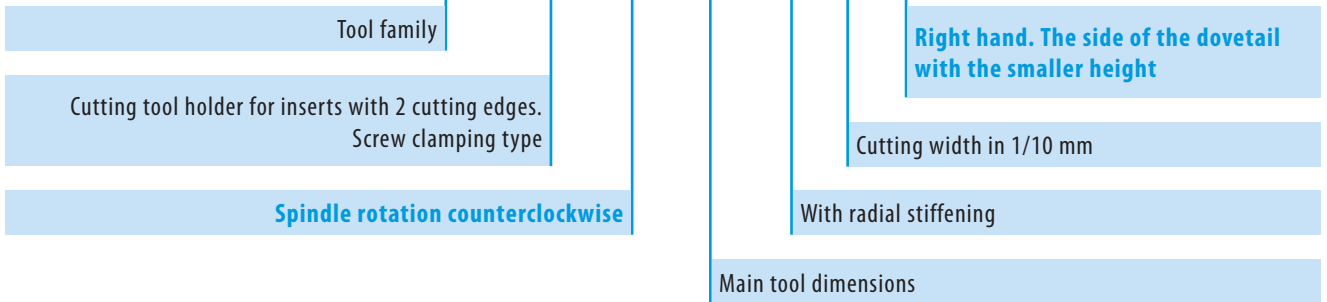
If the cutting depth exceeds the length of the cutting insert, the second edge of the insert penetrates into the slot and may cause shaving marks on the component. To prevent from shaving the insert type A-BTNN is recommended.

**How to write an order:**

1 St.	P92 A CXCB R 2020 K30	or:	1 St.	<b>recommended</b> ID-Nr. 10135
10 St.	A BTNN 3 KM TILOX	or:	10 St.	<b>ID-Nr. 13953</b>

**Designation Code**

**P92 CXCB R 2608 X 20 R**



**How to select the blade to fit your machine tool**

To select a fitting blade for your machine tool, you have to determine:

- ▶ Spindle rotation CW: LH blade is required  
CCW: RH blade is required
- ▶ The dovetail's small side when looked from the front side of the blade.

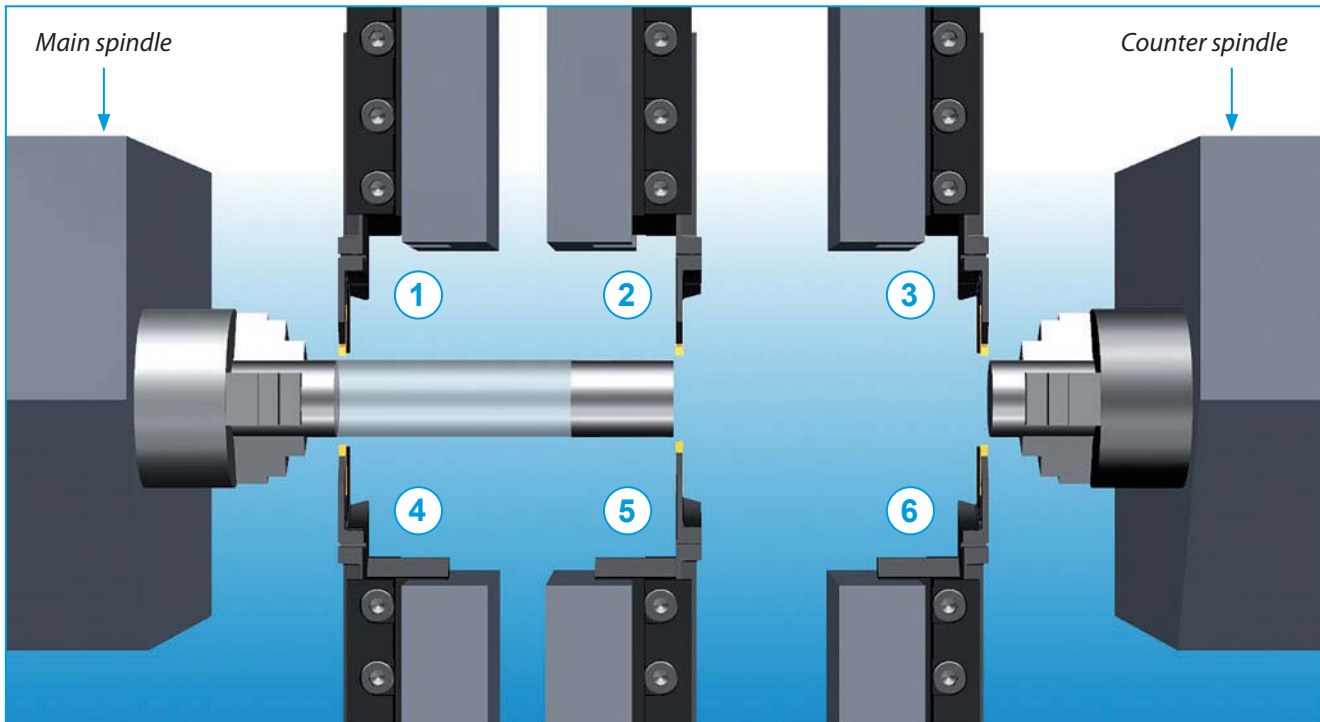
	<b>Type 1</b>
	<b>Type 2</b>
	<b>Type 3</b>
	<b>Type 4</b>


**Remarks:**

- ▶ These dovetail tool blades fit into many basic tool holders of automatic lathes like Traub, EMCO, Tornos, Bechler etc. **AND they also fit into the tool blocks on page 143.**

Application field of dove-tail blades

3

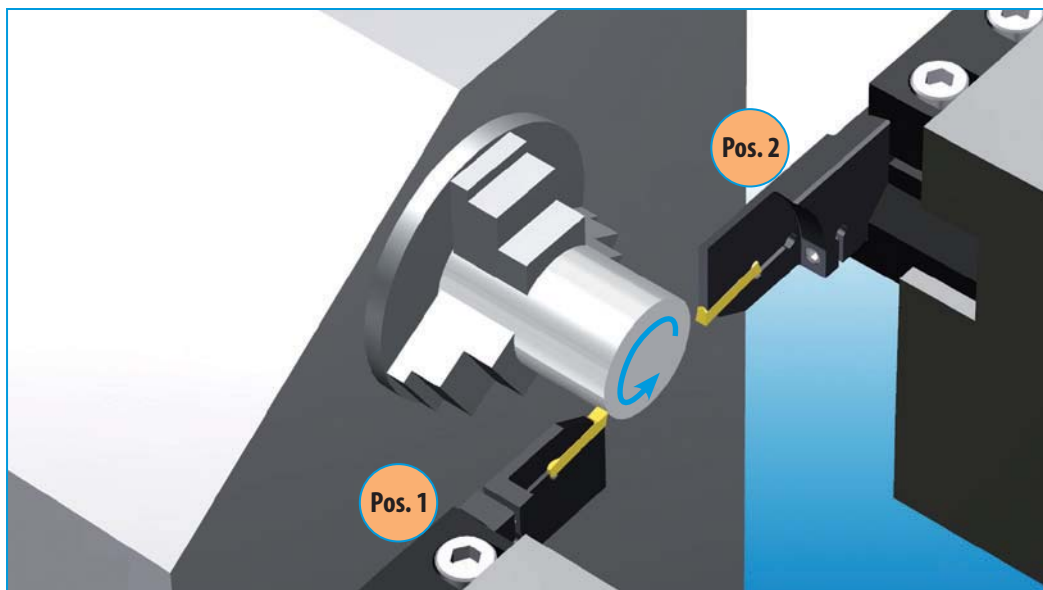


Nr.	Working position	Rotation		Type
1	Main spindle Behind center line	clockwise		LL (Type 1)
2	Main spindle Behind center line	clockwise		LR (Type 2)
3	Counter spindle Behind center line	counter clockwise (getrennt von Hauptspindel)		RR (Type 3)
4	Main spindle In front of center line	counter clockwise		RR (Type 3)
5	Main spindle In front of center line	counter clockwise		RL (Type 4)
6	Counter spindle In front of center line	clockwise (getrennt von Hauptspindel)		LL (Type 1)

A few application examples of dovetail blades on different machine tool positions.

**Remark:**

You'll find these blades on pages 67, 125, 133 and 134



**Example for application**

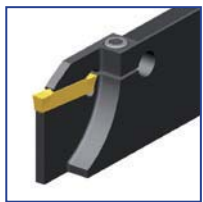
Counter clockwise rotation regular and overhead, machining with a BTNN 3 GF110 NANOSPEED insert.

**Pos. 1:**  
Blade R-R in front of bar

**Pos. 2:**  
Blade R-R overhead behind the bar

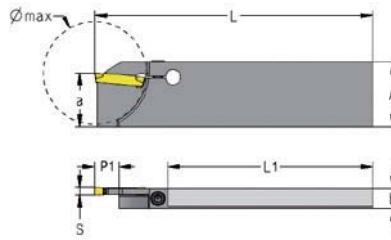


**Reinforced parting off blades with dovetail shank**



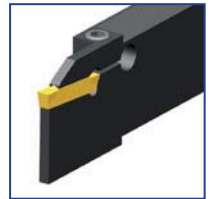
**P92..CXCBL**  
**2608X..R/L**  
System P92

LH blade



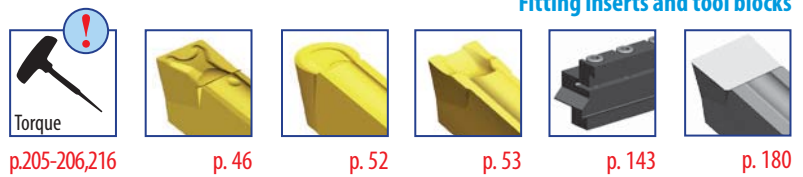
**P92 CXCBR**  
**2608X..R/L**  
System P92

RH blade



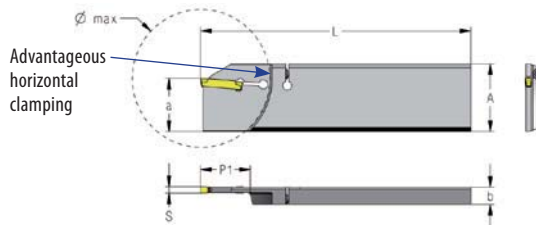
WG380 Ref.	ID-Nr.	( )	A	a	Ø max	b	P1	S	L	L1	
P92 CXCBL 2608 X30R	19669	L	26	21,4	42	8	9,0	3,0	110	81,3	10
P92 CXCBL 2608 X30L	21614	L	26	21,4	42	8	9,0	3,0	110	81,3	10
P92 CXCBR 2608 X30R	21222	R	26	21,4	42	8	9,0	3,0	110	81,3	10
P92 CXCBR 2608 X30L	21613	R	26	21,4	42	8	9,0	3,0	110	81,3	10

**Fitting inserts and tool blocks**



**P92..CXCBL**  
**3208X..R/L**  
System P92

LH blade



**P92 CXCBR**  
**3208X..R/L**  
System P92

RH blade

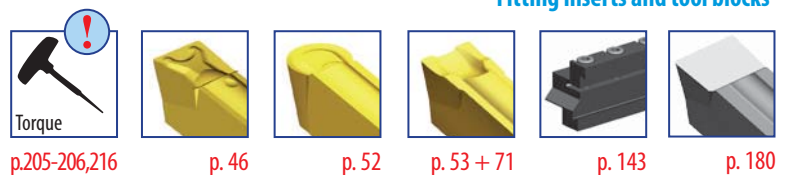


WG380 Ref.	ID-Nr.	( )	A	a	Ø max	b	P1	S	L	
P92 CXCBL 3208 X30R 65	31784	L	32	25,0	65	8	22,0	3,0	126	42
P92 CXCBL 3208 X30L 65	31788	L	32	25,0	65	8	22,0	3,0	126	42
P92 CXCBR 3208 X30R 65	31780	R	32	25,0	65	8	22,0	3,0	126	42
P92 CXCBR 3208 X30L 65	29826	R	32	25,0	65	8	22,0	3,0	126	42

**Comment**

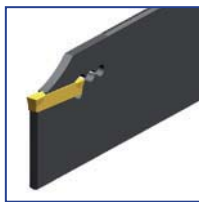
Blades and tool blocks with the same "A" dimension fit together.  
Holder and inserts with the same "S" dimension fit together.

**Fitting inserts and tool blocks**

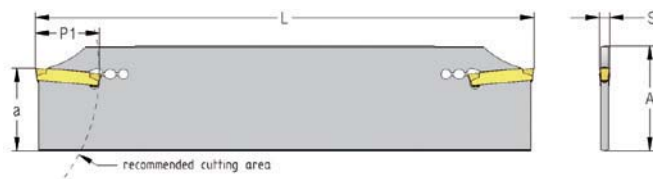


Example for application you will find on page 66

TWIN blade parting off blade



**P92 TMS**  
System P92



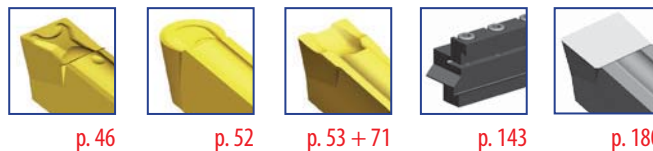
WG310 Ref.	ID-Nr.	(C)	A	a	P1	S	L	
P92 TMS 26 20+25	36644	N	26	21,4	18,5	2+2,5	110	28
P92 TMS 26 30	36645	N	26	21,4	18,5	3,0	110	28
P92 TMS 32 20+25	36643	N	32	25,0	18,5	2+2,5	150	28
P92 TMS 32 30	33429	N	32	25,0	18,5	3,0	150	28
P92 TMS 32 40	36642	N	32	25,0	18,5	4,0	150	28
P92 TMS 32 50 <span style="color:red">new</span>	44524	N	32	25,0	23,5	5,0	150	28
P92 TMS 32 60 <span style="color:red">new</span>	44537	N	32	25,0	28,5	6,0	150	28

**Remark**

Blades and tool blocks with the same "A" dimension fit together.

If the cutting depth exceeds the length of the cutting insert, the second edge of the insert penetrates into the slot and may cause shaving marks on the components faces. To prevent from shaving the insert type A-BTNN is recommended.

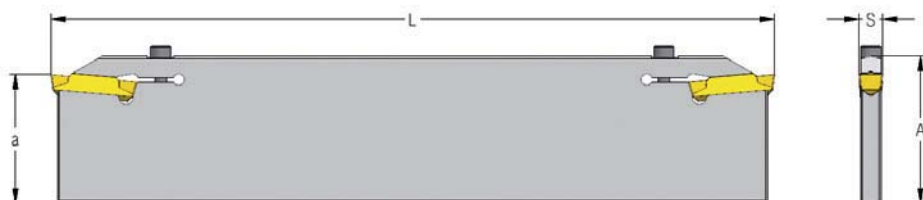
**Fitting inserts and tool blocks**



Holders and inserts with the same "S" dimension fit together.



**P92 TMS 52**  
System P92



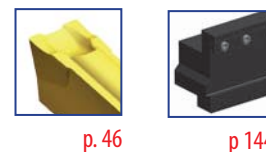
WG310 Ref.	ID-Nr.	(C)	A	a	S	L	
P92 TMS 52 80	31464	N	52,6	45,0	8,0	250	11
P92 TMS 52 100	44539	N	52,6	45,0	10,0	250	11

**Remark**

These blades fit in basic tool holders and tool blocks.

Holders and inserts with the same "S" dimension fit together.

**Fitting inserts**

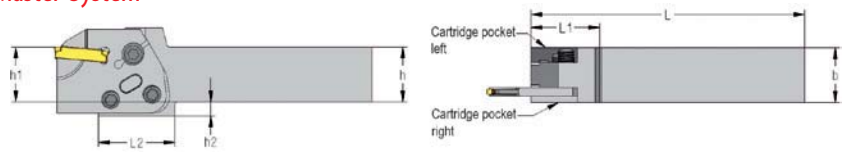


**HOLDERS WITH CARTRIDGES FOR PARTING OFF, GROOVING AND TURNING**

**new**



**P92 C N...H** The Multi-Master-System  
System P92



WG386 Ref.	ID-Nr.	( )	h	h1	h2	b	L	L1	L2	
P92 C N 2020 H	44744	N	20	20	8	20	100	24	20	36+37
P92 C N 2525 H	44745	N	25	25	3	25	100	24	20	36+37

**Comment:**

On these tool holders, five different cartridges will fit. These holders can be used as left hand **and** right hand holders.

**Fitting cartridges**



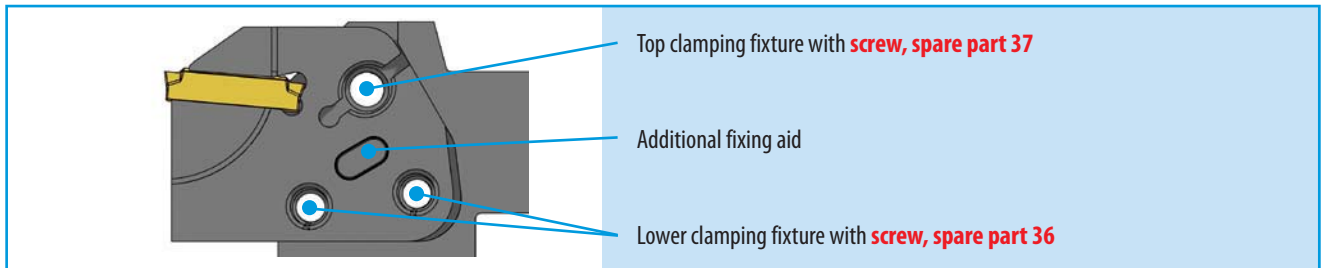
p.205-206,216



p. 70



p. 70

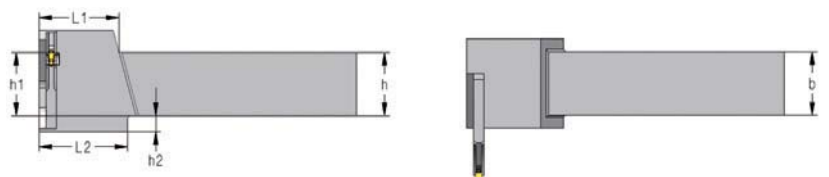


**new**



**P92 C90 R/L**  
System P92

RH holder



WG386 Ref.	ID-Nr.	( )	h	h1	h2	b	L	L1	L2	
P92 C90 L 2020 H	44748	L	20	20	8	20	100	20	20	36+37
P92 C90 L 2525 H	44749	L	25	25	3	25	100	20	20	36+37
P92 C90 R 2020 H	44746	R	20	20	8	20	100	20	20	36+37
P92 C90 R 2525 H	44747	R	25	25	3	25	100	20	20	36+37

**Comment:**

On these holders, seven different cartridges will fit.

**Fitting cartridges**



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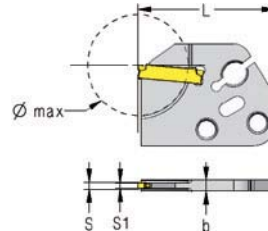
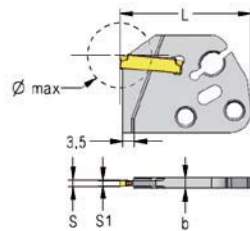
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Cartridges for holders for parting off, grooving and turning

new



**P92 CN (Type A)**  
System P92



**P92 CN (Type B)**  
System P92



WG386 Ref.	ID-Nr.	( )	Ømax	b	S1	S	L	P1	Type
P92-CN 15 16	44750	N	16	3,2	1,0	1,5	36,8	12	A
P92-CN 15 20	44822	N	20	3,2	1,0	1,5	41,0	16	A
P92-CN 20+25 20	44751	N	20	3,2	1,6	2,0+2,5	41,0	16	A
P92-CN 20+25 32	44752	N	32	3,2*	1,6	2,0+2,5	41,0	16	B

**Comment:**

These reinforced cartridges allow to use very small inserts. An advantage, especially, when producing short components on multi spindle automatics.

They fit on special basic tool holders, e.g. on:

- New Britain
- Conomatic
- Wickman
- Acme Gridley
- Tornos

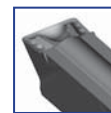
**Fitting inserts**



p.205-206,216



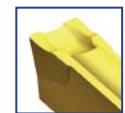
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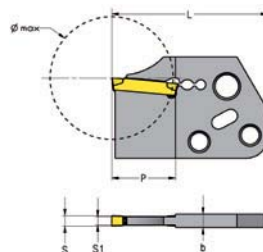



p.53 + 55

new



**P92 CT**  
System P92



WG386 Ref.	ID-Nr.	( )	Ømax	b	S1	S	L	P	P1	
P92-CT N 15 28	44823	N	28	3,2	1	1,5	42,5	14	17,5	28
P92-CT N 20+25 32	44753	N	32	3,2	1,6	2,0+2,5	45,8	16	20,8	28
P92-CT N 30 32	44754	N	32	4,0	2,4	3,0	45,8	16	20,8	28

**Comment:**

These cartridges allow to use small inserts. An advantage, especially, when producing short components on multi spindle automatics.

They fit on special basic tool holders, e.g. on:

- New Britain
- Conomatic
- Wickman
- Acme Gridley
- Tornos

**Fitting inserts**



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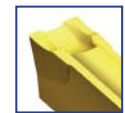
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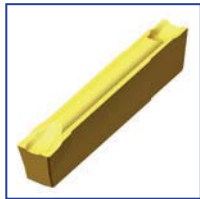


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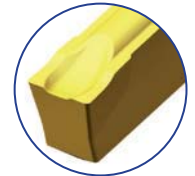
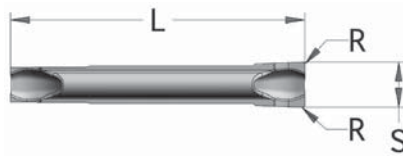


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**Parting off inserts for deep cuts**



**A-BTNN**  
System P92



Enlarged view

WG300 Ref.	PM NANOSPEED ID-Nr.	KM TILOX ID-Nr.	⌀	L	R	S $\pm 0,15$
A BTNN 3	24050	13953	N	20,10	0,2	3,05
A BTNN 4	24051	20291	N	20,10	0,2	4,05

**BTN-insert, reduced type with 1 cutting edge**

Deep cutting depth and clean turning faces. **Reduces feed** while cutting depth increases.

Grooved parting off edge with reinforced flanks. The deep and spacious **chip-trough** gives excellent chip control. Efficient on almost all materials.

**Fitting tool holders**



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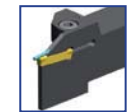
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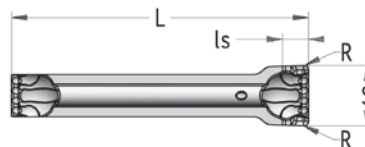
**Remark**

P92 A-inserts and P92 A CXC...holder join together to form an extremely solid unit owing to long guide surfaces between insert and pocket and reinforced tool holders. A-type tools are therefore recommended for heavy duty cutting, deep cuts and to achieve clean faces.

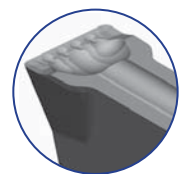
**new**



**A-GTNS**  
System P92



One edge



Enlarged view

WG300 Ref.	KM CARBOSPEED ID-Nr.	PM CARBOSPEED ID-Nr.	KM TILOX ID-Nr.	PM TILOX ID-Nr.	⌀	ls	L	R	S $\pm 0,125$
A GTNS 504	48473	48474	48472	40196	N	1,5	25,0	0,4	5,125

**Passende Halter**



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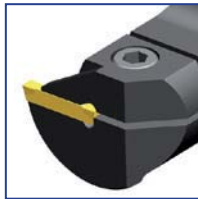


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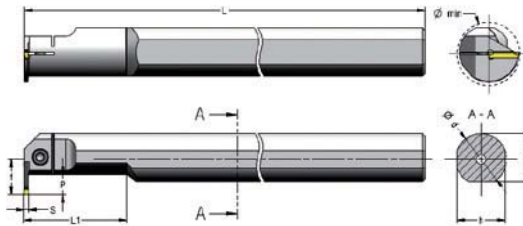
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Boring bars with internal cooling for grooving and turning



**P92 CGL**  
System P92

LH boring bar



**P92 CGR**  
System P92

RH boring bar



WG390 Ref.	ID-Nr.	( )	Ømin	Ø d	h	b	f	P	S	L	L1	
P92 CGL 0016 P15	33461	L	20	16	15	15,5	11	7	1,5	170	26	7
P92 CGL 0020 R15	34954	L	25	20	18	18,5	13	7	1,5	200	40	6
P92 CGL 0020 R20+25	33463	L	25	20	18	18,5	13	7	2,0+2,5	200	40	6
P92 CGL 0020 R30	10066	L	25	20	18	18,5	13	7	3,0	200	40	6
P92 CGL 0020 R35	10068	L	25	20	18	18,5	13	7	3,5	200	40	6
P92 CGL 0020 R40	10070	L	25	20	18	18,5	13	7	4,0	200	40	6
P92 CGL 0025 R20+25	33465	L	32	25	23	23,0	17	10	2,0+2,5	200	50	14
P92 CGL 0025 R30	10072	L	32	25	23	23,0	17	10	3,0	200	50	14
P92 CGL 0025 R35	10074	L	32	25	23	23,0	17	10	3,5	200	50	14
P92 CGL 0025 R40	10076	L	32	25	23	23,0	17	10	4,0	200	50	14
P92 CGL 0032 S20+25	33467	L	40	32	30	30,0	22	12	2,0+2,5	250	64	14
P92 CGL 0032 S30	10078	L	40	32	30	30,0	22	12	3,0	250	64	14
P92 CGL 0032 S35	10080	L	40	32	30	30,0	22	12	3,5	250	64	14
P92 CGL 0032 S40	10082	L	40	32	30	30,0	22	12	4,0	250	64	14
P92 CGL 0032 S50	10084	L	44	32	30	30,0	26	16	5,0	250	64	14
P92 CGL 0040 T40	10086	L	52	40	38	38,0	30	16	4,0	300	80	2
P92 CGL 0040 T50	10088	L	52	40	38	38,0	30	16	5,0	300	80	2
P92 CGL 0040 T60	19357	L	52	40	38	38,0	30	16	6,0	300	80	2
P92 CGR 0016 P15	33337	R	20	16	15	15,5	11	7	1,5	170	26	7
P92 CGR 0020 R15	34953	R	25	20	18	18,5	13	7	1,5	200	40	6
P92 CGR 0020 R20+25	33462	R	25	20	18	18,5	13	7	2,0+2,5	200	40	6
P92 CGR 0020 R30	10065	R	25	20	18	18,5	13	7	3,0	200	40	6
P92 CGR 0020 R35	10067	R	25	20	18	18,5	13	7	3,5	200	40	6
P92 CGR 0020 R40	10069	R	25	20	18	18,5	13	7	4,0	200	40	6
P92 CGR 0025 R20+25	33464	R	32	25	23	23,0	17	10	2,0+2,5	200	50	14
P92 CGR 0025 R30	10071	R	32	25	23	23,0	17	10	3,0	200	50	14
P92 CGR 0025 R35	10073	R	32	25	23	23,0	17	10	3,5	200	50	14
P92 CGR 0025 R40	10075	R	32	25	23	23,0	17	10	4,0	200	50	14
P92 CGR 0032 S20+25	33466	R	40	32	30	30,0	22	12	2,0+2,5	250	64	14
P92 CGR 0032 S30	10077	R	40	32	30	30,0	22	12	3,0	250	64	14
P92 CGR 0032 S35	10079	R	40	32	30	30,0	22	12	3,5	250	64	14
P92 CGR 0032 S40	10081	R	40	32	30	30,0	22	12	4,0	250	64	14
P92 CGR 0032 S50	10083	R	44	32	30	30,0	26	16	5,0	250	64	14
P92 CGR 0040 T40	10085	R	52	40	38	38,0	30	16	4,0	300	80	2
P92 CGR 0040 T50	10087	R	52	40	38	38,0	30	16	5,0	300	80	2
P92 CGR 0040 T60	19356	R	52	40	38	38,0	30	16	6,0	300	80	2

Remark

Boring bars and inserts with the same "S" dimension fit together.

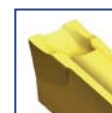
Fitting inserts



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Torque

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