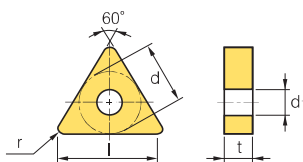


TN ○○



Dimensions (mm)			
Size	d	t	d ₁
11	6.35	3.18	2.40
16	9.525	3.18–4.76	3.81
22	12.7	4.76	5.16

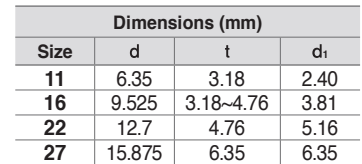
 Triangular **60° Negative**

[illegible]

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B187	PTFNR/L	B177	WTJNR/L	B179
MTFNR/L	B187	PTGNR/L	B178	WTXNR/L	B179
MTGNR/L	B188	PTTNR/L	B178		
MTJNR/L	B188	WTENN	B179		

 Triangular **60° Negative**



Inserts		Designation	Cermet		Coated		Coated														Uncoated		Cutting Condition				
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Medium to finishing	VC 	TNMG	160404-VC				●	●				●														0.10~0.35	0.30~2.00
			160408-VC				●	●				●														0.15~4.00	0.50~3.00
			160412-VC					●				●														0.15~4.50	0.50~3.00
			220408-VC				●	●																		0.15~0.40	0.50~3.00
			220412-VC				●	●																		0.15~0.45	0.50~3.00
Medium cutting	HM 	TNMG	110308-HM						●																	0.17~0.40	1.50~3.00
			160404-HM						●	●	●	●						●					●			0.05~0.30	0.90~4.00
			160408-HM					●	●	●	●												●			0.10~0.50	1.00~4.00
			160412-HM																				●			0.13~0.60	1.30~4.00
			220404-HM						●																	0.15~0.45	0.60~5.00
			220408-HM						●	●	●															0.18~0.48	0.80~5.80
Medium cutting	MP 	TNMG	110308-MP				●	●																		0.15~0.42	0.50~3.50
			160404-MP				●	●				●	●		●	●	●			●	●					0.10~0.40	0.40~3.50
			160408-MP				●	●				●			●	●	●				●	●				0.15~0.45	0.50~4.00
			160412-MP					●				●			●	●	●				●	●				0.15~0.50	0.80~4.50
			160416-MP																							0.18~0.50	1.00~4.50
			220404-MP				●	●				●			●	●	●									0.10~0.35	0.40~5.00
			220408-MP				●	●				●			●	●	●									0.15~0.45	0.50~5.50
			220412-MP				●	●				●			●	●	●									0.15~0.50	0.80~6.00
			220416-MP				●	●				●														0.20~0.55	1.00~6.00
		270612-MP																							0.28~0.60	1.20~8.00	
Medium cutting	VM 	TNMG	110308-VM																							0.05~0.30	0.80~4.00
			160404-VM	●					●	●		●						●	●							0.05~0.30	0.90~5.00
			160408-VM	●	●			●	●	●	●	●						●	●				●			0.10~0.50	1.00~5.00
			160412-VM	●				●		●								●	●							0.13~0.60	1.30~5.00
			220404-VM															●	●							0.05~0.30	0.90~6.60
			220408-VM							●			●					●	●		●					0.10~0.50	1.00~6.60
			220412-VM																							0.13~0.60	1.30~6.60

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B187	PTFNR/L	B177	WTJNR/L	B179
MTFNR/L	B187	PTGNR/L	B178	WTXNR/L	B179
MTGNR/L	B188	PTTNR/L	B178		
MTJNR/L	B188	WTENN	B179		

TN ○○



The technical drawing shows a triangular plate with a central circular hole. The top view is an equilateral triangle with side length l and an internal circular hole of diameter d . The top angle is labeled 60° . A fillet with radius r connects the outer edge to the inner hole. The cross-section view on the right shows a rectangular plate with thickness t and a central hole of diameter d .

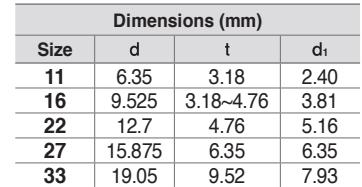
Dimensions (mm)			
Size	d	t	d ₁
11	6.35	3.18	2.40
16	9.525	4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35
33	19.05	9.52	7.93

[illegible]

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B187	PTFNR/L	B177	WTJNR/L	B179
MTFNR/L	B187	PTGNR/L	B178	WTXNR/L	B179
MTGNR/L	B188	PTTNR/L	B178		
MTJNR/L	B188	WTENN	B179		

 Triangular **60° Negative**

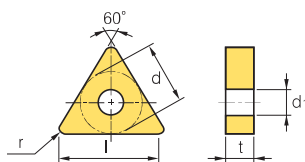


Inserts		Designation	Cermet		Coated		Coated														Uncoated		Cutting Condition					
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)	
Medium cutting		TNGG	110304R																							0.05~0.30	0.50~2.50	
			160402R																								0.08~0.30	0.50~3.50
			160404R	●																							0.12~0.30	1.00~3.50
			160408R																								0.15~0.35	1.30~3.50
			220404R																								0.12~0.30	1.00~5.00
			220408R																								0.15~0.35	1.30~5.00
			220412R																								0.17~0.40	1.50~5.00
			110304L																								0.05~0.30	0.50~2.50
			160402L																								0.08~0.30	0.50~3.50
			160404L	●																							0.12~0.30	1.00~3.50
			160408L																								0.15~0.35	1.30~3.50
			220404L																								0.12~0.30	1.00~5.00
			220408L																								0.15~0.35	1.30~5.00
			220412L																								0.17~0.40	1.50~5.00
Medium cutting		TNMG	160404-MK									●	●													0.05~0.30	0.90~3.50	
			160408-MK											●												0.10~0.50	1.00~4.00	
			160412-MK												●											0.12~0.60	1.20~4.50	
			160416-MK																							0.13~0.60	1.20~4.50	
			220404-MK																							0.17~0.45	1.50~5.00	
			220408-MK																							0.21~0.50	1.30~5.50	
			220412-MK																							0.23~0.52	1.40~5.50	
			220416-MK																							0.25~0.53	1.60~6.00	
			270612-MK																							0.25~0.55	3.00~7.00	
Roughing		TNMA	110308																							0.05~0.30	0.50~3.00	
			160404										●	●												0.10~0.30	1.00~4.00	
			160408										●	●												0.10~0.40	1.00~4.00	
			160412											●												0.10~0.50	1.50~4.50	
			160416											●												0.15~0.55	1.50~4.50	
			220404																							0.10~0.35	1.00~4.00	
			220408											●												0.15~0.40	1.50~5.00	
			220412											●												0.20~0.50	1.50~5.00	
			220416											●												0.25~0.55	1.50~5.00	
			220420																							0.30~0.65	2.00~5.00	
			220432																							0.35~0.70	2.00~5.00	
			270608																							0.20~0.45	2.00~7.00	
			270612																							0.25~0.55	3.00~7.00	
			270616																							0.30~0.65	3.00~7.00	
			330924																							0.35~0.75	3.00~9.00	

- : Stock item



TN ○○



Dimensions (mm)			
Size	d	t	d ₁
11	6.35	3.18	2.40
16	9.525	4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35

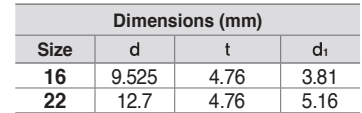
 Triangular **60° Negative**

[illegible]

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B187	PTFNR/L	B177	WTJNR/L	B179
MTFNR/L	B187	PTGNR/L	B178	WTXNR/L	B179
MTGNR/L	B188	PTTNR/L	B178		
MTJNR/L	B188	WTENN	B179		

 Triangular **60° Negative**

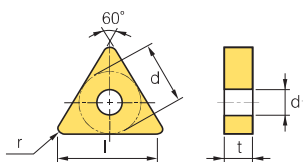
[illegible]

● : Stock item



Turning Insert (Negative)

TN ○○



Dimensions (mm)			
Size	d	t	d ₁
11	6.35	3.18	2.40
16	9.525	4.76	3.81
22	12.7	4.76	5.16
27	15.875	6.35	6.35

Workpiece	Steel	P																						Machining types
	Stainless steel	M																						
	Cast iron	K																						
	Non-ferrous metal	N																						
	Heat resistant alloy, Titanium alloy	S																						
	Hardened steel	H																						

● Continuous cutting
⦿ General cutting
* Interrupted cutting

Inserts		Designation	Cermet		Coated		Coated														Uncoated		Cutting Condition				
			CN1500	CN2500	CC1500	CC2500	NC3215	NC3225	NC3120	NC3030	NC3235	NC5330	NC6310	NC6315	NC9115	NC9125	NC9135	PC5300	PC5400	PC8105	PC8110	PC8115	PC9030	H01	H05	fn (mm/rev)	ap (mm)
Finishing	 [Wiper]	TNMG	160404-VW																							0.10~0.35	0.30~3.00
			160408-VW																							0.10~0.40	0.30~3.00
Medium cutting	 [Wiper]	TNMG	160408-LW																							0.15~0.50	0.70~4.50
			160412-LW																							0.20~0.60	1.00~5.00
Medium cutting		TNGN	110302																							0.05~0.25	0.20~2.50
			110304																							0.10~0.30	0.50~2.50
			110308																							0.10~0.30	0.80~2.50
			160302																							0.05~0.30	0.20~3.00
			160304																							0.10~0.30	0.50~4.00
			160308																							0.10~0.40	0.80~4.00
			160404																							0.10~0.40	0.50~4.00
			160408																							0.10~0.40	1.00~4.00
			160412																							0.10~0.50	1.50~4.50
			220404																							0.10~0.35	1.00~4.00
			220408																							0.15~0.40	1.50~5.00
			220412																							0.20~0.50	1.50~5.00
			220416																							0.25~0.55	1.50~5.00
			220424																							0.30~0.65	2.00~5.00
			270630																							0.35~0.70	2.00~5.00
Medium to finishing	 [Shaft]	TNMX	160404R-SR																							0.10~0.35	0.70~3.50
			160408R-SR																						0.12~0.40	1.00~3.50	
			160404L-SR																						0.10~0.35	0.70~3.50	
			160408L-SR																						0.12~0.40	1.00~3.50	
Medium cutting	 [Shaft]	TNMX	160404R-SH				●	●																	0.15~0.30	0.50~4.00	
			160408R-SH				●	●																	0.15~0.45	1.00~4.00	
			160404L-SH				●	●																	0.15~0.30	0.50~4.00	
			160408L-SH				●	●																	0.15~0.45	1.00~4.00	

➡ Cutting edge geometry **A37~A49**

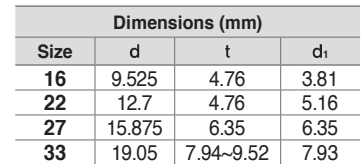
 Recommended chip breaker **B04~B15**

 Code system **B34~B35**

● : Stock item

Available tool holders					
Designation	Page	Designation	Page	Designation	Page
MTENN	B187	PTFNR/L	B177	WTJNR/L	B179
MTFNR/L	B187	PTGNR/L	B178	WTXNR/L	B179
MTGNR/L	B188	PTTNR/L	B178		
MTJNR/L	B188	WTENN	B179		

 Triangular **60° Negative**

[illegible]

● : Stock item

