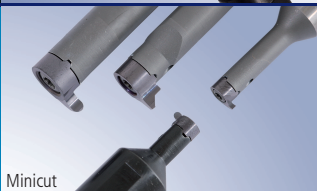




Ultramini



Minicut



System DED / System ZTP



Tool Holders



Rotaline



Mikromill



Minimill



System 500



Swissline



# BROACHING

KEYWAYS IN THE RANGE OF 2-20 mm AND HEXAGON

Express Delivery Only Item

premium carbide cutting tools



Dümmel



 **Dümmel**<sup>®</sup>  
WERKZEUGFABRIK

**Broaching**



**Broaching keyways in the range of  
2-20 mm and hexagon**



broaching keyways according  
DIN 138 and DIN 6885

summary



machining example  
broaching

... 238

Ø 6 mm

**type NHU / NPU**  
bore Ø from 6 mm  
width from 2 - 5 mm



**type NHU**

... 239



**type NPU**  
tolerance grade  
C11 / JS9 / P9 / H9

... 240



**type NPU 45°**  
chamfering

... 242

Ø 10 mm

**type NH10 / NP10**  
bore Ø from 10 mm  
width from 4 - 6 mm



**type NH10**

... 243



**type NP10**  
tolerance grade  
C11 / JS9 / P9 / H9

... 244

summary

broaching keyways according  
DIN 138 and DIN 6885



## Ø 17 mm

**type NHM / NPM**  
bore Ø from 17 mm  
width from 5 - 6 mm



**type NHM** . . . 247



**type NPM** . . . 249  
depth of groove  
up to 3.4 mm  
tolerance grade  
C11 / JS9 / P9 / H9

## Ø 15 mm

**type NHV15 / NV15**  
bore Ø from 15 mm  
width from 4 - 6 mm



**type NHV15** . . . 252



**type NV15** . . . 253  
depth of groove  
up to 3.3 mm  
tolerance grade C11/JS9/P9



broaching keyways according  
DIN 138 and DIN 6885

summary



Ø 22 mm

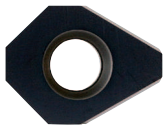
type NHV / NPV  
bore Ø from 22 mm  
width from 6 - 24 mm



type NHV . . . 255



type NPV . . . 257  
depth of groove  
up to 8.5 mm  
tolerance grade  
C11 / JS9 / P9 / H9



type NPV 45° . . . 259  
chamfering



type NPU / NP10 . . . 260  
for hexagon socket

summary

broaching keyways according  
DIN 138 and DIN 6885



**set NPU** . . . 261  
tolerance grade JS9



**set NP10** . . . 261  
tolerance grade JS9



**set NPV** . . . 261  
tolerance grade JS9

#### Technical instructions



general recommendation . . . 262

cutting data . . . 263



broaching keyways according  
DIN 138 and DIN 6885

broaching keyways  
on CNC turning machines



complete machining on cnc turning- and milling  
centres in one clamping. simple and efficient



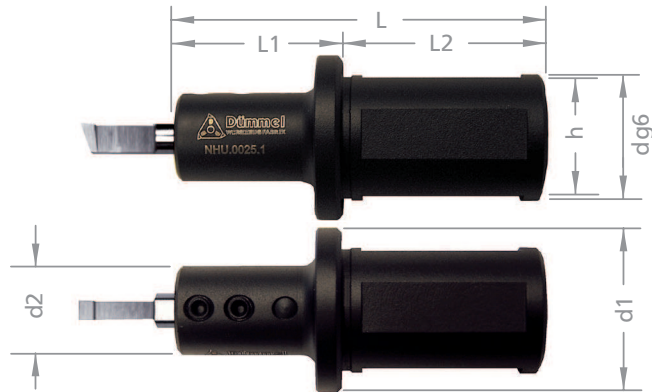
# Type NHU

broaching keyways according  
DIN 138 and DIN 6885



toolholder

bore-Ø from 6 mm



part number

dg6 d1 d2 L L1 L2 h

NHU.0020.1	20	33	18	73	33	40	18
NHU.0022.1	22	33	18	73	33	40	20
NHU.0025.1	25	33	18	73	33	40	23
NHU.0032.1	32	40	20	73	33	40	30

special toolholder for driven slotting tool



for broaching device

time of delivery

part number

version

»Schwarzer 1«	NHU.0012.1
»Schwarzer 2 in 1«	NHU.0015.1
»EWS Slot« + »Benz LinA«	NHU.0016.1
»Marchetti«	NHU.MT16.1
»WTO«	NHU.WT16.1

max. 4 Wochen / weeks  
max. 4 Wochen / weeks  
max. 4 Wochen / weeks  
max. 4 Wochen / weeks  
max. 4 Wochen / weeks

spare parts

screw 110.645 = M5x6  
key 111.645 = M5x8

for NHU.0032.1  
110.650 = M5x8



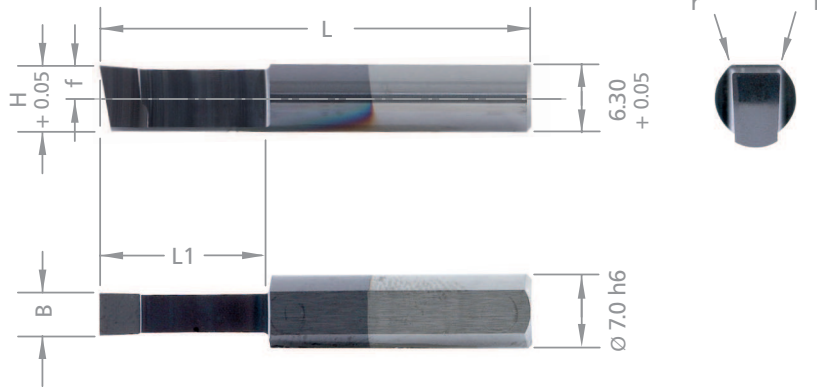


broaching keyways according  
DIN 138 and DIN 6885

## Type NPU

insert

bore  $\varnothing$  from 6 mm  
tolerance grade C11 / JS9 / P9 / H9



width of groove DIN  
dimensions in mm

part number

B

H

r

f

L

L1

useable from  $\varnothing$

toolholder type

NPU.0210.03.1  
NPU.0310.03.1  
NPU.0310.05.1  
NPU.0410.05.1  
NPU.0410.05.2

2.10  
3.10  
3.10  
4.10  
4.10

5.50  
6.20  
6.20  
6.20  
6.20

0.35  
0.35  
0.5  
0.5  
0.5

2.0  
2.7  
2.7  
2.7  
2.7

38  
38  
38  
40  
50

12.5  
12.5  
12.5  
15  
25

6.0  
7.0  
7.0  
7.0  
7.0

NHU  
NHU  
NHU  
NHU  
NHU

order-example:  
grade AL41F  
NPU.0210.03.1/AL41F

## Type NPU

insert

bore Ø from 6 mm  
tolerance grade C11 / JS9 / P9 / H9

broaching keyways according  
DIN 138 and DIN 6885



### insert JS9 slightly fit DIN 6885

part number							useable from Ø	toolholder type
	B	H	r	f	L	L1		
NPU.0200.01.1	2.00	5.50	0.1	2.0	38	12.5	6.0	NHU
NPU.0300.01.1	3.00	6.20	0.1	2.7	38	12.5	7.0	NHU
NPU.0400.01.1	4.00	6.20	0.1	2.7	40	15	7.0	NHU
NPU.0400.02.1	4.00	6.20	0.2	2.7	40	15	7.0	NHU
NPU.0400.02.2	4.00	6.20	0.2	2.7	50	25	7.0	NHU
NPU.0500.02.2	5.00	5.80	0.2	2.3	50	25	7.0	NHU

### insert P9 strong fit DIN 6885

NPU.0198.01.1	1.98	5.50	0.1	2.0	38	12.5	6.0	NHU
NPU.0298.01.1	2.98	6.20	0.1	2.7	38	12.5	7.0	NHU
NPU.0398.01.1	3.98	6.20	0.1	2.7	40	15	7.0	NHU
NPU.0398.02.2	3.98	6.20	0.2	2.7	50	25	7.0	NHU
NPU.0498.02.2	4.98	5.80	0.2	2.3	50	25	7.0	NHU

### insert H9 DIN 6885

NPU.020H.01.1	2.02	5.50	0.1	2.0	38	12.5	6.0	NHU
NPU.030H.01.1	3.02	6.20	0.1	2.7	38	12.5	7.0	NHU
NPU.040H.01.1	4.02	6.20	0.1	2.7	40	15	7.0	NHU
NPU.040H.02.2	4.02	6.20	0.2	2.7	50	25	7.0	NHU
NPU.050H.02.2	5.02	5.80	0.2	2.3	50	25	7.0	NHU

order-example:  
grade AL41F  
NPU.0210.03.1/AL41F



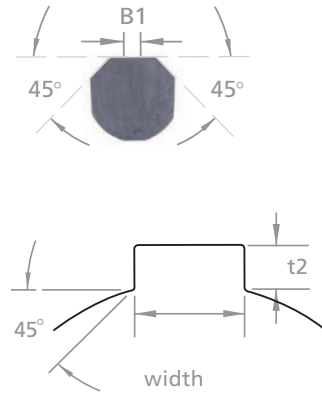
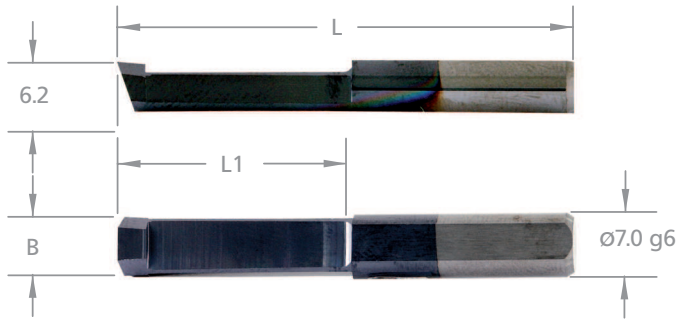


broaching keyways according  
DIN 138 and DIN 6885

## Type NPU 45°

insert chamfering

bore-Ø from 7 mm



part number

**B1 B L L1**

toolholder type

width of groove

**NPU.4545.1**

3.6 6.5 50 25

NHU

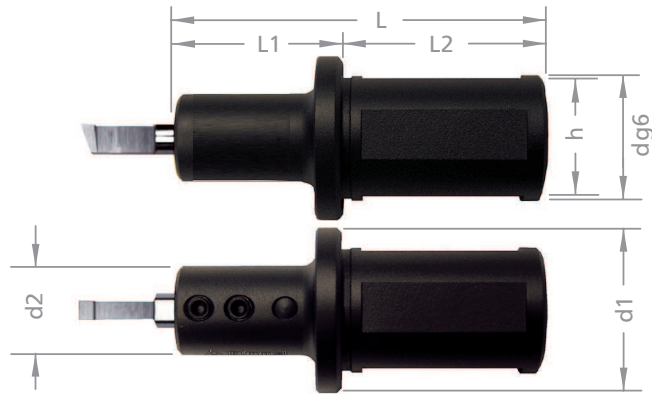
4 - 5 mm

# Type NH10

toolholder

bore-Ø from 10 mm

broaching keyways according  
DIN 138 and DIN 6885



part number

dg6 d1 d2 L L1 L2 h

NH10.0020.1	20	33	20	73	33	40	18
NH10.0022.1	22	33	20	73	33	40	20
NH10.0025.1	25	33	20	73	33	40	23
NH10.0032.1	32	40	20	73	33	40	30

special toolholder for driven slotting tool



for broaching device

part number

time of delivery

Version / version	»Schwarzer 1«	NH10.0012.1	max. 4 Wochen / weeks
	»Schwarzer 2 in 1«	NH10.0015.1	max. 4 Wochen / weeks
	»EWS Slot« + »Benz LinA«	NH10.0016.1	max. 4 Wochen / weeks
	»Marchetti«	NH10.MT16.1	max. 4 Wochen / weeks
	»WTO«	NH10.WT16.1	max. 4 Wochen / weeks

spare parts

screw 110.660 = M6x6  
key 111.300

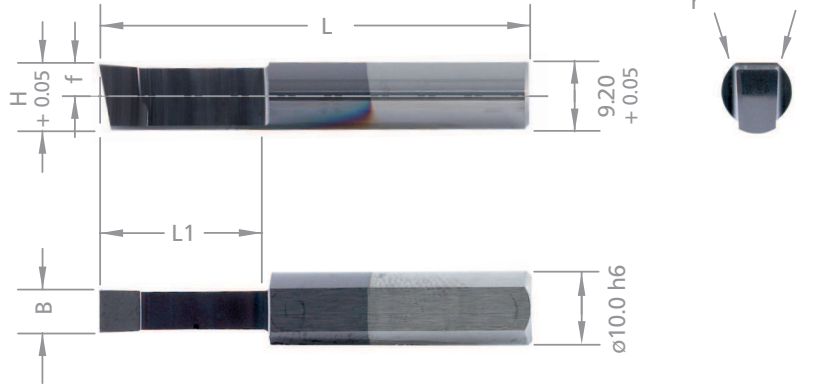


broaching keyways according  
DIN 138 and DIN 6885

## Type NP10

insert

bore-Ø from 10 mm  
tolerance grade C11 / JS9 / P9 / H9



width of groove DIN  
dimensions in mm

part number

B

H

r

f

L

L1

useable from Ø

toolholder type

NP10.410.05.2

4.10

9.0

0.5

4.0

50

25

10.0

NH10

NP10.410.05.3

4.10

9.0

0.5

4.0

66

41

10.0

NH10

NP10.510.05.2

5.10

9.0

0.5

4.0

50

25

10.0

NH10

NP10.510.05.3

5.10

9.0

0.5

4.0

66

41

10.0

NH10

order-example:  
grade AL41F  
NP10.410.05.2/AL41F

## Type NP10

insert

bore-Ø from 10 mm  
tolerance grade C11 / JS9 / P9 / H9

broaching keyways according  
DIN 138 and DIN 6885



### insert JS9 slightly fit DIN 6885

part number							useable from Ø	toolholder type
	B	H	r	f	L	L1		
NP10.400.02.2	4.00	9.0	0.2	4.0	50	25	10.0	NH10
NP10.400.02.3	4.00	9.0	0.2	4.0	66	41	10.0	NH10
NP10.500.02.2	5.00	9.0	0.2	4.0	50	25	10.0	NH10
NP10.500.02.3	5.00	9.0	0.2	4.0	66	41	10.0	NH10
NP10.600.02.3	6.00	8.5	0.2	3.5	66	41	10.0	NH10

### insert P9 strong fit DIN 6885

NP10.398.02.2	3.98	9.0	0.2	4.0	50	25	10.0	NH10
NP10.398.02.3	3.98	9.0	0.2	4.0	66	41	10.0	NH10
NP10.498.02.2	4.98	9.0	0.2	4.0	50	25	10.0	NH10
NP10.498.02.3	4.98	9.0	0.2	4.0	66	41	10.0	NH10
NP10.598.02.3	5.98	8.5	0.2	3.5	66	41	10.0	NH10

### insert H9 DIN 6885

NP10.040H.02.2	4.02	9.0	0.2	4.0	50	25	10.0	NH10
NP10.040H.02.3	4.02	9.0	0.2	4.0	66	41	10.0	NH10
NP10.050H.02.2	5.02	9.0	0.2	4.0	50	25	10.0	NH10
NP10.050H.02.3	5.02	9.0	0.2	4.0	66	41	10.0	NH10
NP10.060H.02.3	6.02	8.5	0.2	3.5	66	41	10.0	NH10

order-example:  
grade AL41F  
NP10.410.05.2/AL41F



# Type NHM

broaching keyways according  
DIN 138 and DIN 6885



toolholder

bore Ø from 17 mm



part number

D min. dg6 L1 SW L2 Ø D2

bush

toolholder

<b>NHM.17.0025.1</b>	17.0	25.0	99.0	23.0	44	58.0
<b>NHM.17.0025.2</b>	17.0	25.0	99.0	23.0	60	58.0
<b>NHM.17.0025.3</b>	17.0	25.0	119.0	23.0	84	58.0
<b>NHM.17.0032.1</b>	17.0	32.0	99.0	30.0	44	58.0
<b>NHM.17.0032.2</b>	17.0	32.0	99.0	30.0	60	58.0
<b>NHM.17.0032.3</b>	17.0	32.0	119.0	30.0	84	58.0

EH17.0025.1	616.0012.1HM
EH17.0025.2	616.0012.2HM
EH17.0025.3	616.0012.3HM
EH17.0032.1	616.0012.1HM
EH17.0032.2	616.0012.2HM
EH17.0032.3	616.0012.3HM

spare parts  
screw M5-MC  
key TX 20



broaching keyways according  
DIN 138 and DIN 6885

toolholder NHM

## Type NHM

toolholder

bore Ø from 17 mm

**Attention! Toolholder NHM is built out of two-parts.**  
toolholder 616.0012 ... + bush EH17 ...



special toolholder for driven slotting tool



for broaching device

		part number	time of delivery
version	»Schwarzer 1«	NHM.17.0012.1	max. 4 Wochen / weeks
	»Schwarzer 2 in 1«	NHM.17.0015.1	max. 4 Wochen / weeks
	»EWS Slot« + »Benz LinA«	NHM.17.0016.1	max. 4 Wochen / weeks



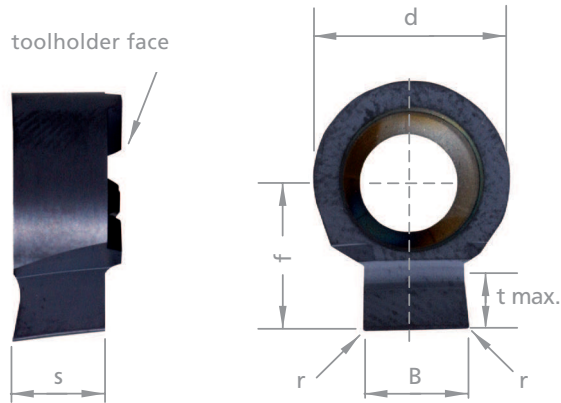
# Type NPM

bore Ø from 17 mm  
 depth of groove up to 3.4 mm  
 tolerance grade C11 / JS9 / P9 / H9

broaching keyways according  
 DIN 138 and DIN 6885



insert



width of groove DIN  
 dimensions in mm



part number	width of groove DIN						useable from Ø	toolholder type
	B	r	f	d	t max.	dimensions in mm		
NPM.0612.08	6.12	0.85	8.5	11.0	3.4	17.0	NHM	
insert JS9 slightly fit DIN 6885								
NPM.0500.02	5.0	0.2	8.5	11.0	2.7	17.0	NHM	
NPM.0600.02	6.0	0.2	8.5	11.0	3.4	17.0	NHM	

order-example:  
 grade AL41F  
 NPM.0612.08/AL41F



broaching keyways according  
DIN 138 and DIN 6885

insert P9 strong fit DIN 6885

## Type NPM

insert

bore Ø from 17 mm  
depth of groove up to 3.4 mm  
tolerance grade C11 / JS9 / P9 / H9



part number						t max.	useable from Ø	toolholder type
	B	r	f	d				
NPM.0498.02	4.98	0.2	8.5	11.0	2.7	17.0	NHM	
NPM.0598.02	5.98	0.2	8.5	11.0	3.4	17.0	NHM	
insert H9 DIN 6885								
NPM.050H.02	5.02	0.2	8.5	11.0	2.7	17.0	NHM	
NPM.060H.02	6.02	0.2	8.5	11.0	3.4	17.0	NHM	

order-example:  
grade AL41F  
NPM.0612.08/AL41F

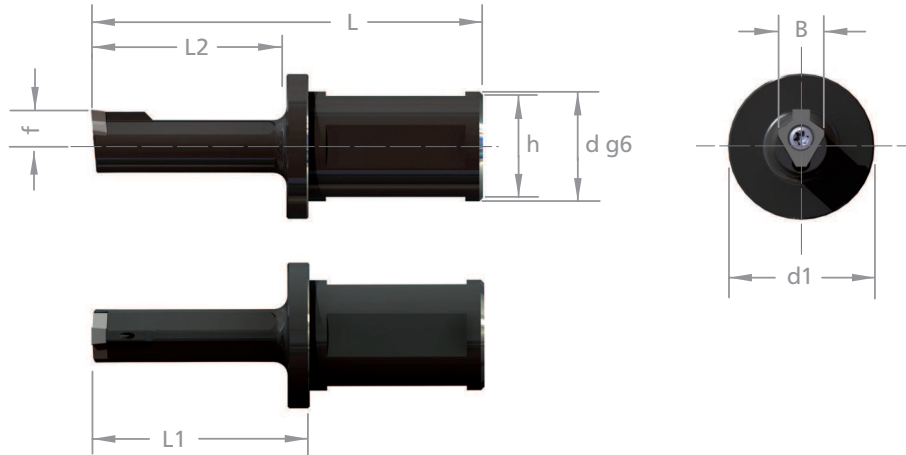


broaching keyways according  
DIN 138 and DIN 6885

## Type NHV15

toolholder  
with internal cooling

bore  $\varnothing$  from 15.0 mm



part number

d min. dg6 L1 L L2 h f d1

NHV.15.IK25.1	15.0	25.0	35.0	75.0	25.0	23.0	8.4	33.0
NHV.15.IK25.2	15.0	25.0	50.0	90.0	40.0	23.0	8.4	33.0
NHV.15.IK25.3	15.0	25.0	70.0	110.0	60.0	23.0	8.4	33.0

special toolholder for driven slotting tool



for broaching device

part number

time of delivery

Version / version	»Schwarzer 1«	NHV.15.0012.1	max. 4 Wochen / weeks
	»Schwarzer 2 in 1«	NHV.15.0015.1	max. 4 Wochen / weeks
	»EWS Slot« + »Benz LinA«	NHV.15.0016.1	max. 4 Wochen / weeks
	»Marchetti«	NHV.15.MT16.1	max. 4 Wochen / weeks
	»WTO«	NHV.15.WT16.1	max. 4 Wochen / weeks

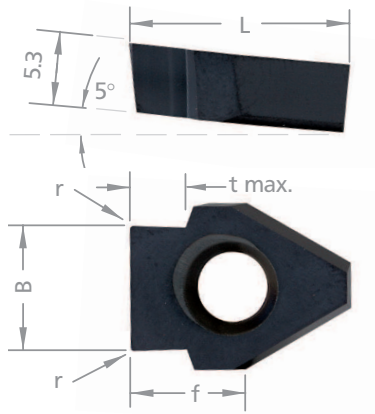
spare parts  
screw M4-NHV15  
key Torx TX15

## Type NV15

bore  $\varnothing$  from 15.0 mm  
 depth of groove up to 3.3 mm  
 tolerance grade C11 / JS9 / P9

insert

broaching keyways according  
 DIN 138 and DIN 6885



width of groove DIN  
 dimensions in mm

part number	B	r	f	L	t max.	useable from $\varnothing$	toolholder type
NV15.0410.050	4.1	0.5	6.5	13.0	2.2	15.0	NHV.15
NV15.0510.050	5.1	0.5	6.5	13.0	2.5	15.0	NHV.15
NV15.0612.085	6.12	0.85	6.5	13.0	2.6	15.0	NHV.15



broaching keyways according  
DIN 138 and DIN 6885

## Type NV15

insert

bore Ø from 15.0 mm  
depth of groove up to 3.3 mm  
tolerance grade C11 / JS9 / P9



insert JS9 slightly fit DIN 6885

part number						t max.	useable from Ø	toolholder type
	B	r	f	L				
NV15.0401.02	4.01	0.2	6.5	13.0	2.3	15.0	NHV.15	
NV15.0501.02	5.01	0.2	6.5	13.0	2.8	15.0	NHV.15	
NV15.0601.02	6.01	0.2	6.5	13.0	3.3	15.0	NHV.15	

insert P9 strong fit DIN 6885

NV15.0398.02	3.98	0.2	6.5	13.0	2.3	15.0	NHV.15
NV15.0498.02	4.98	0.2	6.5	13.0	2.8	15.0	NHV.15
NV15.0598.02	5.98	0.2	6.5	13.0	3.3	15.0	NHV.15

order-example:  
grade AL41F  
NV15.0401.02/AL41F

# Type NHV

broaching keyways according  
DIN 138 and DIN 6885



toolholder

bore Ø from 22 mm



part number

d min. dg6 L1 L L2 h f d1

NHV.22.0025.1	22	25	60	100	50	23	12	33
NHV.22.0025.2	22	25	85	125	75	23	12	33
NHV.30.0032.1	30	32	60	100	50	30	16.5	45
NHV.30.0032.2	30	32	85	125	75	30	16.5	45
NHV.30.0032.3	30	32	115	155	105	30	16.5	45
NHV.38.0032.1	38	32	60	100	50	30	22	45
NHV.38.0032.2	38	32	85	125	75	30	22	45
NHV.38.0032.3	38	32	115	155	105	30	22	45
NHV.45.0040.1	45	40	60	120	50	38	24	55
NHV.45.0040.3	45	40	115	175	105	38	24	55
NHV.45.0040.4	45	40	165	225	155	38	24	55

spare parts  
screw 85.818  
key Torx TX20



broaching keyways according  
DIN 138 and DIN 6885

## Type NHV

toolholder

bore Ø from 22 mm



special toolholder for driven slotting tool



for broaching device

part number

time of delivery

Version / version		part number	time of delivery
	»Schwarzer 1«	NHV.22.0012.1	max. 4 Wochen / weeks
	»Schwarzer 2 in 1«	NHV.22.0015.1	max. 4 Wochen / weeks
	»EWS Slot« + »Benz LinA«	NHV.22.0016.1	max. 4 Wochen / weeks
	»Marchetti«	NHV.22.MT16.1	max. 4 Wochen / weeks
	»WTO«	NHV.22.WT16.1	max. 4 Wochen / weeks

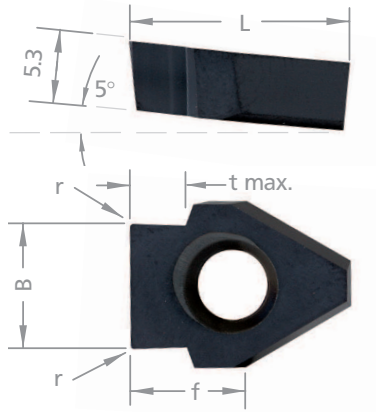
# Type NPV

bore Ø from 22 mm  
 depth of groove up to 8.5 mm  
 tolerance grade C11 / JS9 / P9 / H9

broaching keyways according  
 DIN 138 and DIN 6885



insert



width of groove DIN  
 dimensions in mm



part number	B	r	f	L	t max.	useable from Ø	toolholder type
NPV.0612.085	6.12	0.85	8.0	17.3	2.6	22.0	NHV22
NPV.0713.085	7.13	0.85	8.0	17.3	3.3	22.0	NHV22
NPV.0813.105	8.13	1.05	8.0	17.3	3.4	22.0	NHV22/NHV30
NPV.1013.105	10.13	1.05	10.9	20.1	4.2	40.0	NHV38
NPV.1215.135	12.15	1.35	10.9	20.1	5.1	40.0	NHV38
NPV.1215.175	12.15	1.75	10.9	20.1	6.6	40.0	NHV38
NPV.1215.225	12.15	2.25	10.9	20.1	8.5	40.0	NHV38





broaching keyways according  
DIN 138 and DIN 6885

## Type NPV

insert

bore Ø from 22 mm  
depth of groove up to 8.5 mm  
tolerance grade C11 / JS9 / P9 / H9

insert JS9 slightly fit DIN 6885

part number						useable from Ø	toolholder type
	B	r	f	L	t max.		
NPV.0501.02	5.01	0.2	8.0	17.3	2.7	22.0	NHV22
NPV.0601.02	6.01	0.2	8.0	17.3	3.4	22.0	NHV22
NPV.0801.02	8.01	0.2	8.0	17.3	4.1	22.0	NHV22/NHV30
NPV.1001.03	10.01	0.3	8.0	17.3	4.2	30.0	NHV30
NPV.1202.03	12.02	0.3	10.9	20.1	5.7	40.0	NHV38
NPV.1202.05	12.02	0.5	10.9	20.1	8.5	40.0	NHV38
NPV.1402.03	14.02	0.3	10.9	20.1	7.5	45.0	NHV45
NPV.1602.03	16.02	0.3	10.9	20.1	7.5	45.0	NHV45
NPV.1802.05	18.02	0.4	10.9	20.1	9.5	45.0	NHV45
NPV.2002.05	20.02	0.5	10.9	20.1	10.0	45.0	NHV45

insert P9 strong fit DIN 6885

NPV.0498.02	4.98	0.2	8.0	17.3	2.7	22.0	NHV22
NPV.0598.02	5.98	0.2	8.0	17.3	3.4	22.0	NHV22
NPV.0798.02	7.98	0.2	8.0	17.3	4.1	22.0	NHV22/NHV30
NPV.0998.03	9.98	0.3	8.0	17.3	4.2	30.0	NHV30
NPV.1197.03	11.98	0.3	10.9	20.1	5.7	40.0	NHV38
NPV.1397.03	13.97	0.3	10.9	20.1	7.5	45.0	NHV45
NPV.1597.03	15.97	0.3	10.9	20.1	7.5	45.0	NHV45
NPV.1797.05	17.97	0.4	10.9	20.1	9.5	45.0	NHV45
NPV.1997.05	19.97	0.5	10.9	20.1	10.0	45.0	NHV45

insert H9 DIN 6885

NPV.050H.02	5.02	0.2	8.0	17.3	2.7	22.0	NHV22
NPV.060H.02	6.02	0.2	8.0	17.3	3.4	22.0	NHV22
NPV.080H.02	8.02	0.2	8.0	17.3	4.1	22.0	NHV22/NHV30
NPV.100H.03	10.02	0.3	8.0	17.3	4.2	30.0	NHV30
NPV.120H.03	12.02	0.3	10.9	20.1	5.7	40.0	NHV38

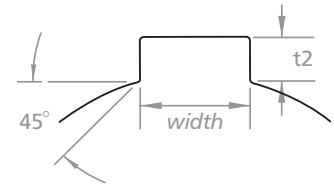
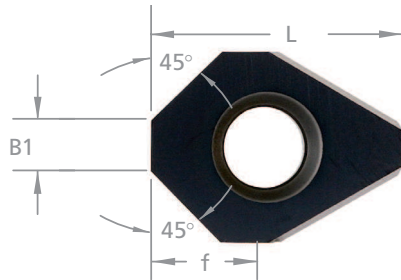
order-example:  
grade AL41F  
NPV.0612.085/AL41F

# Type NPV 45°

insert chamfering

bore Ø from 22 mm

broaching keyways according  
DIN 138 and DIN 6885



width of groove DIN  
dimensions in mm

part number	width of groove			toolholder type	width of groove
	B1	B	L		
NPV.3045.1	3.5	8.0	17.3	NHV 22	6 mm, 7 mm, 8 mm
NPV.6045.1	6.0	10.9	20.2	NHV 38	10 mm

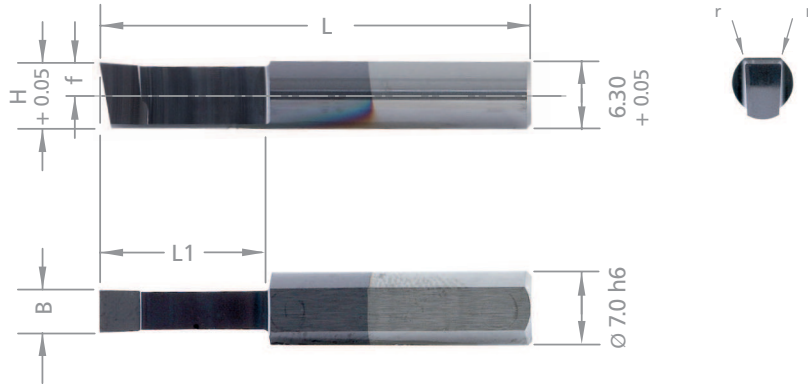


broaching keyways according  
DIN 138 and DIN 6885

## Type NPU / NP10

insert  
for hexagon socket

starting at wrenchsize 2.5 mm



width of groove DIN  
dimensions in mm

### insert type NPU

part number	wrench size	width of groove DIN			L	L1	blind hole Ø	toolholder type
		B -0.02	H +0.05	Ø h6				
NPU.SW25.25.01	2.5	1.48	2.0	7	30	4.0	2.5	NHU
NPU.SW30.30.01	3.0	1.77	2.5	7	30	4.5	3.0	NHU
NPU.SW35.35.01	3.5	2.07	2.9	7	30	5.5	3.5	NHU
NPU.SW40.40.01	4.0	2.35	3.3	7	35	6.0	4.0	NHU
NPU.SW45.45.01	4.5	2.64	3.8	7	35	7.0	4.5	NHU
NPU.SW50.50.01	5.0	2.95	4.2	7	35	9.0	5.0	NHU
NPU.SW60.60.01	6.0	3.53	5.2	7	35	9.0	6.0	NHU
NPU.SW80.80.01	8.0	4.70	5.7	7	37	12.0	8.0	NHU

### Schneideinsätze Typ NP10

### insert type NP10

part number	wrench size	B	H	Ø h6	L	L1	blind hole Ø	toolholder type
NP10.SW10.10.02	10.0	5.85	9.0	10	40	15.0	10.0	NH10
NP10.SW12.12.03	12.0	7.02	8.2	10	45	20.0	12.0	NH10
NP10.SW14.14.03	14.0	8.18	7.5	10	45	20.0	14.0	NH10
NP10.SW16.16.04	16.0	9.34	6.2	10	50	25.0	16.0	NH10

order-example:  
grade AL41F  
NPU.SW30.30.01/AL41F

## Sets

1. NPU / 2. NP10 / 3. NPV

tolerance grade JS9

broaching keyways according  
DIN 138 and DIN 6885



### Set 1 NPU



set consists of:

1 x NHU.0025.1  
1 x NPU.0200.01/AL41F  
1 x NPU.0300.01/AL41F  
1 x NPU.0400.01/AL41F

part number

SET-NPU



### Set / set 2 NP10



set consists of:

1 x NH10.0025.1  
1 x NP10.400.02.3/AL41F  
1 x NP10.500.02.3/AL41F

part number

SET-NP10

### Set / set 3 NPV



set consists of:

1 x NHV.22.0025.1  
1 x NPV.0501.02/AL41F  
1 x NPV.0601.02/AL41F  
1 x NPV.0801.02/AL41F

part number

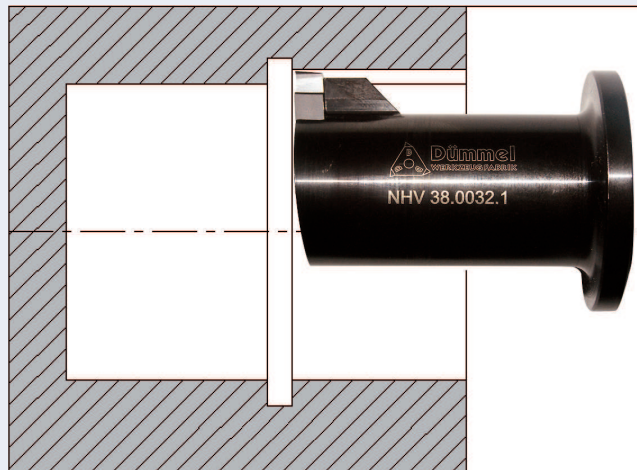
SET-NPV



broaching keyways according  
DIN 138 and DIN 6885

Technical instructions,  
general recommends

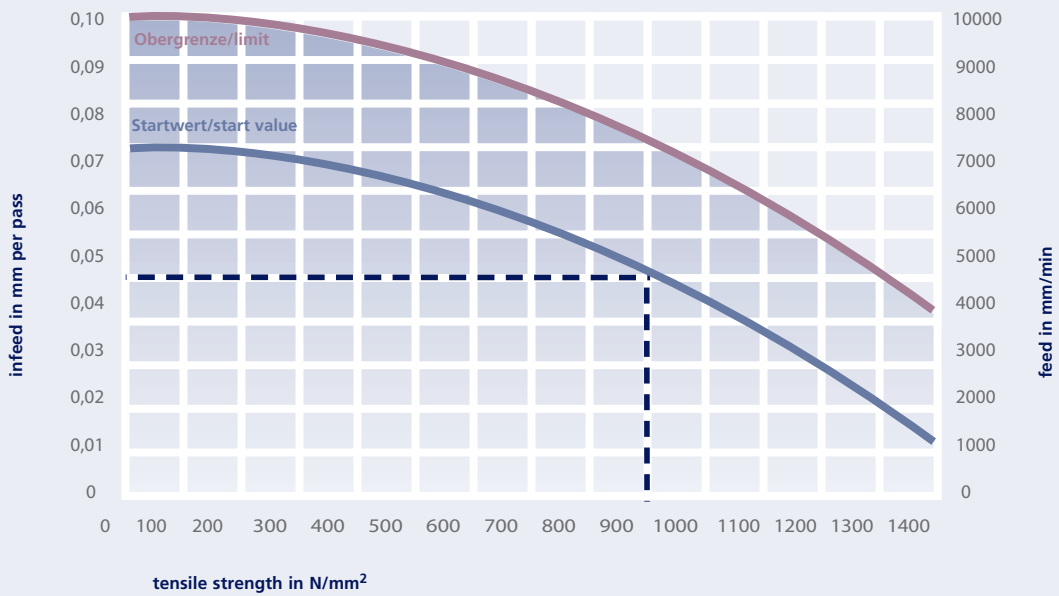
**Dümmel**  
WERKZEUGFABRIK



- an undercut is necessary at the end of the broached groove for tool run out.
- the insert should not touch the bottom of the groove as the tool retracts.
- setting of the tool is very important. Check accurate the component diameter before taking the first pass.
- using oil or emulsion helps to achieve better surface finish and flush chips out of the component.
- the tool should be set at the 12 o'clock position to ensure that chips fall away from the groove.
- avoid interrupted cutting



approximate value for broaching



Example:

42CrMo4 mit 1200 N/mm<sup>2</sup>

- Zustellung pro Hub  
0.05 - 0.06 mm
- Vorschub 5500 mm/min

heat-treated steel  
for instance 42CrMo4  
with 1200 N/mm<sup>2</sup>

- infeed per pass  
0.05 - 0.06 mm
- feed 5500 mm/min

