

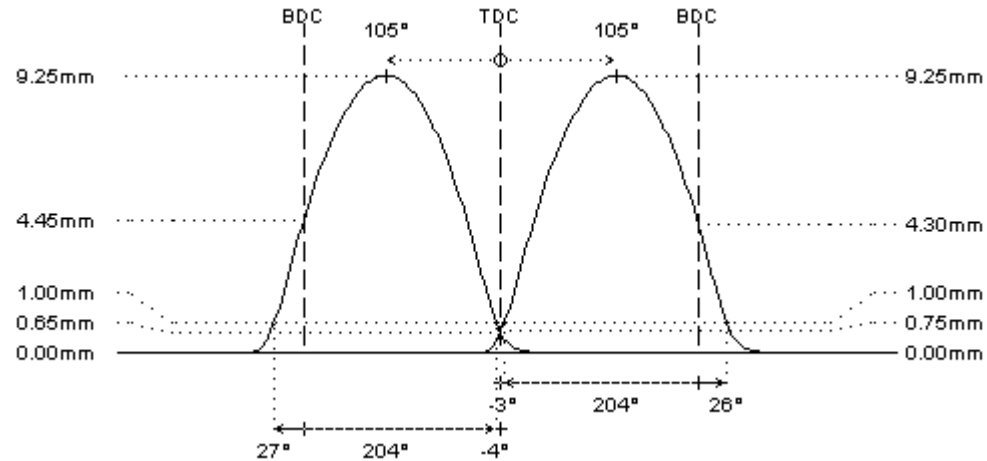
# 1303909

sport

Bmw M50 (25 6 S2) 192hp, vanos in  
I-6cyl 2.5L 24v DOHC (DTH/DTH)



	intake	exhaust
<b>camshaft data:</b>		
lash ramp	: hydro	hydro
duration @ 0.1mm	: 240°	240°
duration @ 1.0mm	: 203°	203°
valve lift	: 9.25mm	9.25mm
cam lift	:	
lobe angle	: 105°	105°
timing @ 1.0mm	: -3° / 26°	27° / -4°
valve lift @ TDC	: 0.75mm	0.65mm
<b>parts setup:</b>		
cam wheels :	:	:
follower	: O.E.M.	: O.E.M.
valve lash	: O.E.M.	: O.E.M.
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	: O.E.M.	: O.E.M.
lower retainer	: O.E.M.	: O.E.M.
exterior spring	: O.E.M.	: O.E.M.
interior spring	:	:
fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm



### REMARKS :

- # - cast iron camshafts
- available in steel billet (on request)
- # The VANOS (VVT) system on the intake camshaft changes the valve timing:
  - M50TU /B20: from 105° to 80° (exhaust: 105° fix)
  - M50TU /B25: from 110° to 85° (exhaust: 101° fix)The data are shown for full intake retard (disengaged VVT). Check distance between valves and piston to be 1mm at least with VVT engaged. Wrong installation will cause severe engine damage!

### REMARKS :

# original valve spring info is not available

# 1303910

sport

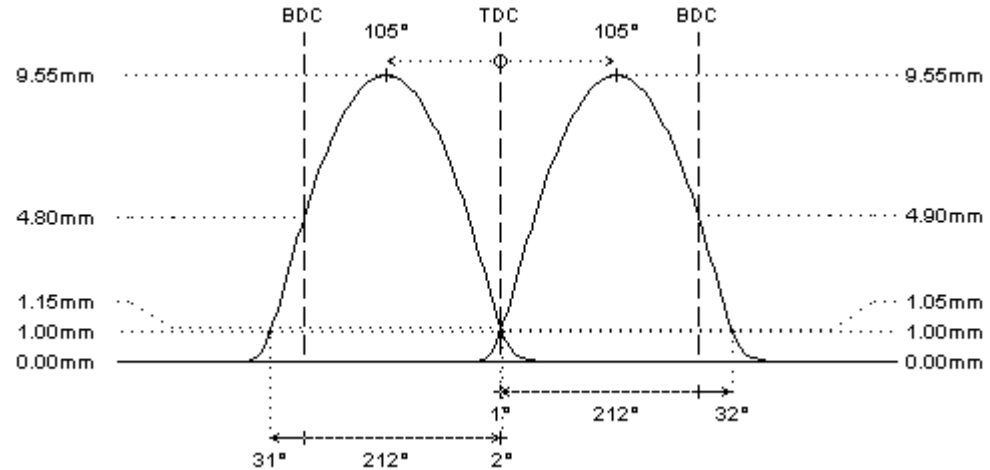
Bmw M50 (25 6 S2) 192hp, vanos in  
I-6cyl 2.5L 24v DOHC (DTH/DTH)



	intake	exhaust
<b>camshaft data:</b>		
lash ramp	: hydro	hydro
duration @ 0.1mm	: 250°	250°
duration @ 1.0mm	: 213°	213°
valve lift	: 9.55mm	9.55mm
cam lift	:	
lobe angle	: 105°	105°
timing @ 1.0mm	: 1° / 32°	31° / 2°
valve lift @ TDC	: 1.05mm	1.15mm
<b>parts setup:</b>		
cam wheels :	:	:
follower	: O.E.M.	: O.E.M.
valve lash	: O.E.M.	: O.E.M.
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	: O.E.M.	: O.E.M.
lower retainer	: O.E.M.	: O.E.M.
exterior spring	: O.E.M.	: O.E.M.
interior spring	:	:
fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

### REMARKS :

# original valve spring info is not available



### REMARKS :

- # - cast iron camshafts  
- available in steel billet (on request)
- # The VANOS (VVT) system on the intake camshaft changes the valve timing:
  - M50TU /B20: from 105° to 80° (exhaust: 105° fix)
  - M50TU /B25: from 110° to 85° (exhaust: 101° fix)The data are shown for full intake retard (disengaged VVT). Check distance between valves and piston to be 1mm at least with VVT engaged. Wrong installation will cause severe engine damage!
- # ONLY for dirt track applications and pro street use with adjustable engine management or carburetors

# 1303911

hot street - dirt track

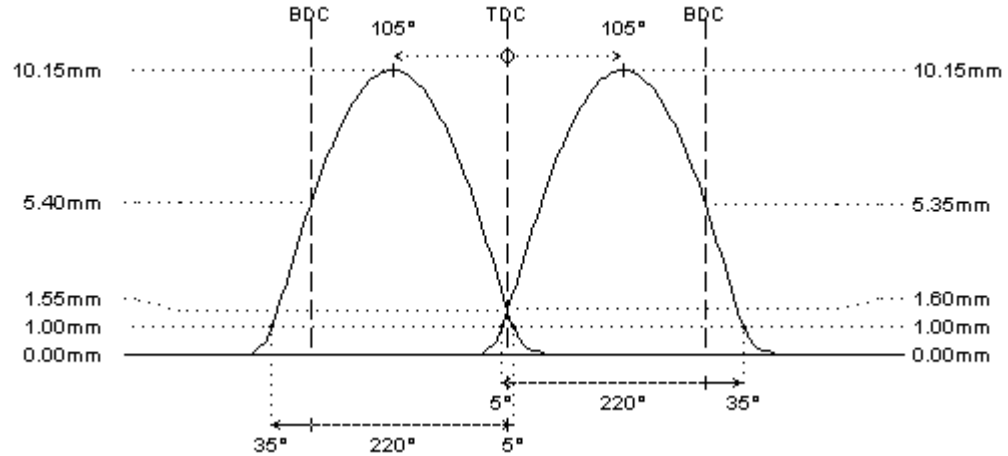
Bmw M50 (25 6 S2) 192hp, vanos in  
I-6cyl 2.5L 24v DOHC (DTH/DTH)



	intake	exhaust
<b>camshaft data:</b>		
lash ramp	: hydro	hydro
duration @ 0.1mm	: 257°	257°
duration @ 1.0mm	: 220°	220°
valve lift	: 10.15mm	10.15mm
cam lift	:	
lobe angle	: 105°	105°
timing @ 1.0mm	: 5° / 35°	35° / 5°
valve lift @ TDC	: 1.60mm	1.55mm
<b>parts setup:</b>		
cam wheels :	:	:
follower :	O.E.M.	O.E.M.
valve lash :	O.E.M.	O.E.M.
valve :	O.E.M.	O.E.M.
valve locks :	O.E.M.	O.E.M.
upper retainer :	O.E.M.	O.E.M.
lower retainer :	O.E.M.	O.E.M.
exterior spring :	O.E.M.	O.E.M.
interior spring :		
fitted load / length :	0kg @ 0.0mm	0kg @ 0.0mm
max. load / lift :	0kg @ 0.0mm	0kg @ 0.0mm

### REMARKS :

# original valve spring info is not available



### REMARKS :

- # - cast iron camshafts  
- available in steel billet (on request)
- # The VANOS (VVT) system on the intake camshaft changes the valve timing:
  - M50TU /B20: from 105° to 80° (exhaust: 105° fix)
  - M50TU /B25: from 110° to 85° (exhaust: 101° fix)The data are shown for full intake retard (disengaged VVT). Check distance between valves and piston to be 1mm at least with VVT engaged. Wrong installation will cause severe engine damage!
- # ONLY for dirt track applications and pro street use with adjustable engine management or carburetors

# 1303912

hot street - dirt track

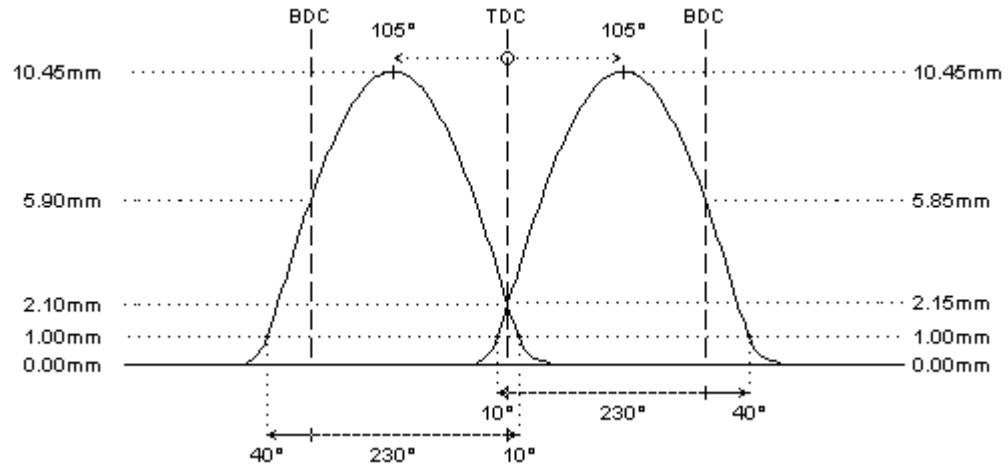
Bmw M50 (25 6 S2) 192hp, vanos in  
I-6cyl 2.5L 24v DOHC (DTH/DTH)



	intake	exhaust
<b>camshaft data:</b>		
lash ramp	: hydro	hydro
duration @ 0.1mm	: 268°	268°
duration @ 1.0mm	: 230°	230°
valve lift	: 10.45mm	10.45mm
cam lift	:	
lobe angle	: 105°	105°
timing @ 1.0mm	: 10° / 40°	40° / 10°
valve lift @ TDC	: 2.15mm	2.10mm
<b>parts setup:</b>		
cam wheels :	:	:
follower	: O.E.M.	: O.E.M.
valve lash	: O.E.M.	: O.E.M.
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	: <b>✗ not available</b>	: <b>✗ not available</b>
lower retainer	: <b>✗ not available</b>	: <b>✗ not available</b>
exterior spring	: <b>✗ not available</b>	: <b>✗ not available</b>
interior spring	:	:
fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

## REMARKS :

# valve spring kit can be developed on request



## REMARKS :

- # - cast iron camshafts  
- available in steel billet (on request)
- # The VANOS (VVT) system on the intake camshaft changes the valve timing:
  - M52 /B20: from 110° to 85° (exhaust: 105° fix)
  - M52 /B25: from 110° to 85° (exhaust: 105° fix)
  - M52 /B28: from 115° to 90° (exhaust: 105° fix)The data are shown for full intake retard (disengaged VVT). Check distance between valves and piston to be 1mm at least with VVT engaged. Wrong installation will cause severe engine damage!
- # lock or limit range of VANOS system
- # ONLY for dirt track applications and pro street use with adjustable engine management or carburetors

# 1303913

hot street - dirt track

Bmw M50 (25 6 S2) 192hp, vanos in  
I-6cyl 2.5L 24v DOHC (DTH/DTH)



	intake	exhaust
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**camshaft data:**

lash ramp	: hydro	hydro
duration @ 0.1mm	: 275°	275°
duration @ 1.0mm	: 237°	237°
valve lift	: 11.15mm	11.15mm
cam lift	:	
lobe angle	: 105°	105°
timing @ 1.0mm	: 14° / 43°	44° / 13°
valve lift @ TDC	: 2.70mm	2.65mm

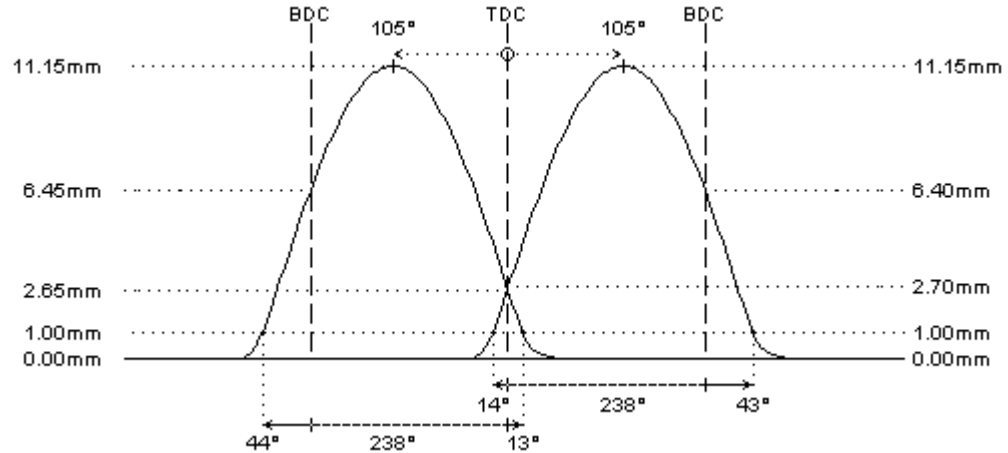
**parts setup:**

cam wheels :	:	:
follower :	O.E.M.	O.E.M.
valve lash :	O.E.M.	O.E.M.
valve :	O.E.M.	O.E.M.
valve locks :	O.E.M.	O.E.M.
upper retainer :	<b>✗ not available</b>	<b>✗ not available</b>
lower retainer :	<b>✗ not available</b>	<b>✗ not available</b>
exterior spring :	<b>✗ not available</b>	<b>✗ not available</b>
interior spring :		

fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

**REMARKS :**

# valve spring kit can be developed on request



**REMARKS :**

- # - cast iron camshafts  
- available in steel billet (on request)
- # The VANOS (VVT) system on the intake camshaft changes the valve timing:
  - M50TU /B20: from 105° to 80° (exhaust: 105° fix)
  - M50TU /B25: from 110° to 85° (exhaust: 101° fix)The data are shown for full intake retard (disengaged VVT). Check distance between valves and piston to be 1mm at least with VVT engaged. Wrong installation will cause severe engine damage!
- # lock or limit range of VANOS system
- # ONLY for dirt track applications and pro street use with adjustable engine management or carburetors

# 1303956

hot street - dirt track

Bmw M50 (25 6 S2) 192hp, vanos in  
I-6cyl 2.5L 24v DOHC (DTH/DTH)



**intake**                      **exhaust**

**camshaft data:**

lash ramp	: 0.20mm	0.20mm
duration @ 0.1mm	: 282°	274°
duration @ 1.0mm	: 244°	236°
valve lift	: 11.50mm	11.00mm
cam lift	:	
lobe angle	: 106°	106°
timing @ 1.0mm	: 16° / 48°	44° / 12°
valve lift @ TDC	: 3.20mm	2.65mm

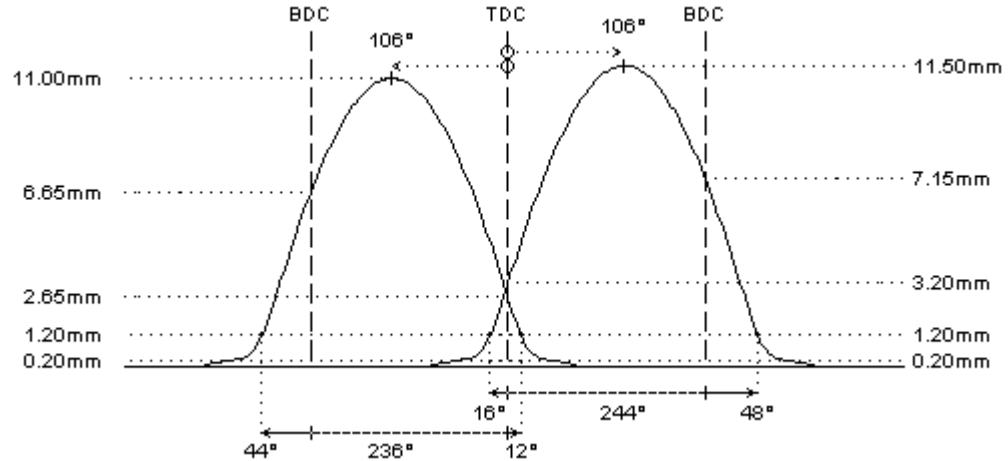
**parts setup:**

cam wheels :	:	:
follower	:  CC005	:  CC005
valve lash	:  N/A	:  N/A
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	:  not available	:  not available
lower retainer	:  not available	:  not available
exterior spring	:  not available	:  not available
interior spring	:	:

fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

**REMARKS :**

# valve spring kit can be developed on request



**REMARKS :**

- # - cast iron camshafts  
- available in steel billet (on request)
- # valve clearance is to be adjusted using mechanical lash caps. these can have different shapes according to the application:
  - plates available in different diameters and thickness
  - cups for different valve stem diameters. these center on either tappet or valve stem
  - other specific shapes available on request
- # FOR COMPETITION APPLICATIONS ONLY. Following details must be verified:
  - the camshafts must turn smooth in the cylinderhead, provide free travel by machining where needed
  - distance between valve seal and retainer at full lift must be 0.6mm at least
  - minimum valve spring travel of 1.0mm at full lift must be provided
  - distance between valve and piston 1.0mm (pref. 1.5mm). check 5-15° before TDC on exhaust, and after TDC on intake
- # original valve spring info is not available
- # lock or limit range of VANOS system
- # ONLY for dirt track applications and pro street use with adjustable engine management or carburetors

# 1303957

tarmac rally - race

Bmw M50 (25 6 S2) 192hp, vanos in

I-6cyl 2.5L 24v DOHC (DTH/DTH)



**intake**                      **exhaust**

**camshaft data:**

lash ramp	: 0.20mm	0.20mm
duration @ 0.1mm	: 290°	282°
duration @ 1.0mm	: 252°	244°
valve lift	: 12.00mm	11.50mm
cam lift	:	
lobe angle	: 106°	106°
timing @ 1.0mm	: 20° / 52°	48° / 16°
valve lift @ TDC	: 3.75mm	3.20mm

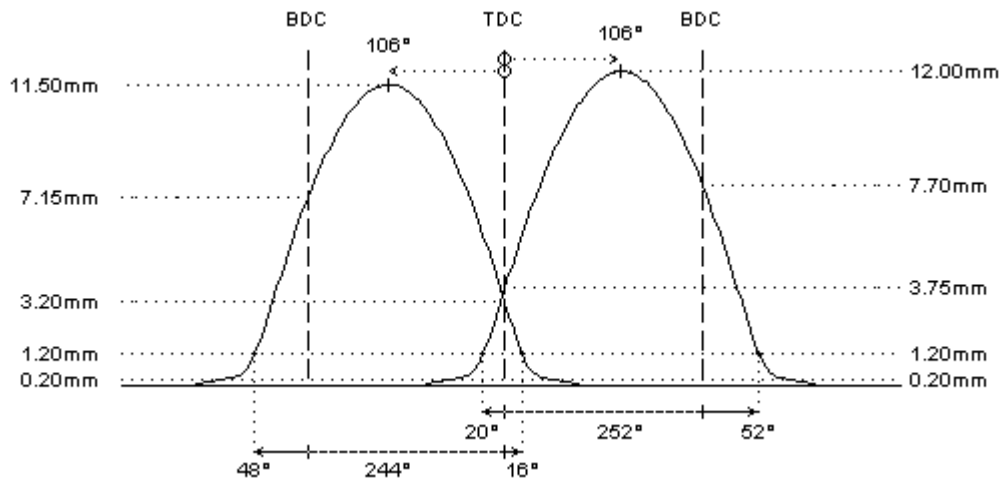
**parts setup:**

cam wheels :	:	:
follower	: <b>CC005</b>	: <b>CC005</b>
valve lash	: <b>N/A</b>	: <b>N/A</b>
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	: <b>not available</b>	: <b>not available</b>
lower retainer	: <b>not available</b>	: <b>not available</b>
exterior spring	: <b>not available</b>	: <b>not available</b>
interior spring	:	:

fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

**REMARKS :**

# valve spring kit can be developed on request



**REMARKS :**

- # - cast iron camshafts  
- available in steel billet (on request)
- # valve clearance is to be adjusted using mechanical lash caps. these can have different shapes according to the application:
  - plates available in different diameters and thickness
  - cups for different valve stem diameters. these center on either tappet or valve stem
  - other specific shapes available on request
- # FOR COMPETITION APPLICATIONS ONLY. Following details must be verified:
  - the camshafts must turn smooth in the cylinderhead, provide free travel by machining where needed
  - distance between valve seal and retainer at full lift must be 0.6mm at least
  - minimum valve spring travel of 1.0mm at full lift must be provided
  - distance between valve and piston 1.0mm (pref. 1.5mm). check 5-15° before TDC on exhaust, and after TDC on intake
- # original valve spring info is not available
- # disable VANOS system
- # ONLY for use in competition engines with independent engine management (throttle position sensor) or carburetors

# 1303958

tarmac rally - race

Bmw M50 (25 6 S2) 192hp, vanos in

I-6cyl 2.5L 24v DOHC (DTH/DTH)



**intake**                      **exhaust**

**camshaft data:**

lash ramp	: 0.20mm	0.20mm
duration @ 0.1mm	: 298°	290°
duration @ 1.0mm	: 260°	252°
valve lift	: 12.50mm	12.00mm
cam lift	:	
lobe angle	: 104°	104°
timing @ 1.0mm	: 26° / 54°	50° / 22°
valve lift @ TDC	: 4.55mm	4.00mm

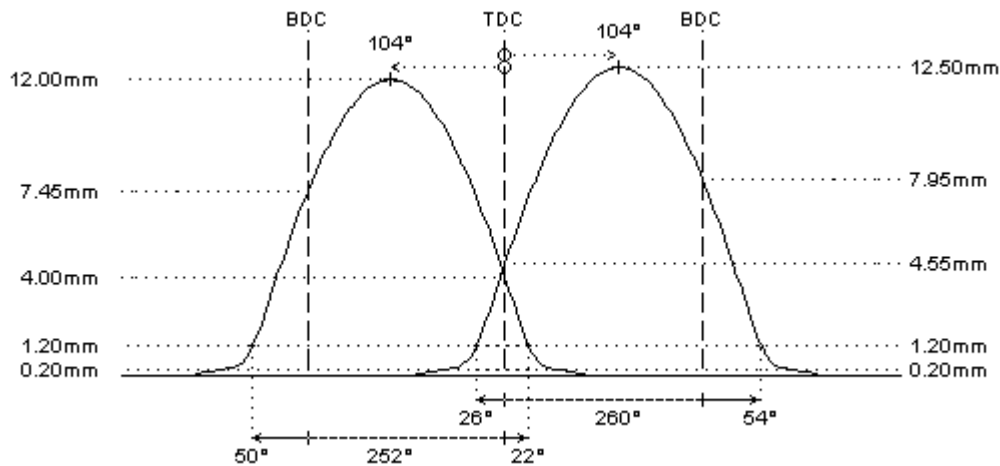
**parts setup:**

cam wheels :	:	:
follower	:  CC005	:  CC005
valve lash	:  N/A	:  N/A
valve	: O.E.M.	: O.E.M.
valve locks	: O.E.M.	: O.E.M.
upper retainer	:  not available	:  not available
lower retainer	:  not available	:  not available
exterior spring	:  not available	:  not available
interior spring	:	:

fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm

**REMARKS :**

# valve spring kit can be developed on request



**REMARKS :**

- # - cast iron camshafts  
- available in steel billet (on request)
- # valve clearance is to be adjusted using mechanical lash caps. these can have different shapes according to the application:
  - plates available in different diameters and thickness
  - cups for different valve stem diameters. these center on either tappet or valve stem
  - other specific shapes available on request
- # FOR COMPETITION APPLICATIONS ONLY. Following details must be verified:
  - the camshafts must turn smooth in the cylinderhead, provide free travel by machining where needed
  - distance between valve seal and retainer at full lift must be 0.6mm at least
  - minimum valve spring travel of 1.0mm at full lift must be provided
  - distance between valve and piston 1.0mm (pref. 1.5mm). check 5-15° before TDC on exhaust, and after TDC on intake
- # original valve spring info is not available
- # disable VANOS system
- # ONLY for use in competition engines with independent engine management (throttle position sensor) or carburetors

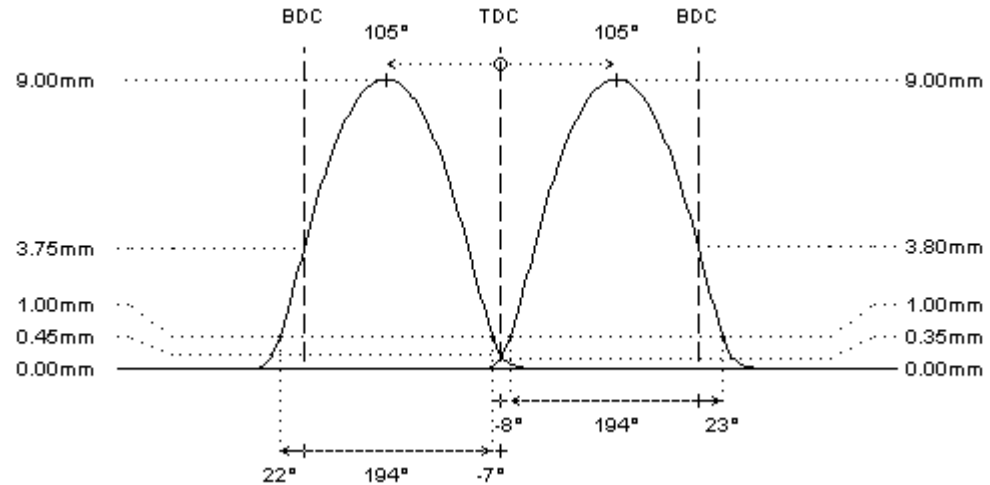


O.E.M.

Bmw M50 (25 6 S2) 192hp, vanos in  
I-6cyl 2.5L 24v DOHC (DTH/DTH)



	intake	exhaust
<b>camshaft data:</b>		
lash ramp	: hydro	hydro
duration @ 0.1mm	: 230°	231°
duration @ 1.0mm	: 195°	195°
valve lift	: 9.00mm	9.00mm
cam lift	:	
lobe angle	: 105°	105°
timing @ 1.0mm	: -8° / 23°	22° / -7°
valve lift @ TDC	: 0.35mm	0.45mm
<b>parts setup:</b>		
cam wheels :	:	:
follower :	O.E.M.	O.E.M.
valve lash :	O.E.M.	O.E.M.
valve :	O.E.M.	O.E.M.
valve locks :	O.E.M.	O.E.M.
upper retainer :	O.E.M.	O.E.M.
lower retainer :	O.E.M.	O.E.M.
exterior spring :	O.E.M.	O.E.M.
interior spring :		
fitted load / length	: 0kg @ 0.0mm	: 0kg @ 0.0mm
max. load / lift	: 0kg @ 0.0mm	: 0kg @ 0.0mm



**REMARKS :**

- # - cast iron camshafts
- available in steel billet (on request)
- # The VANOS (VVT) system on the intake camshaft changes the valve timing:
  - M50TU /B20: from 105° to 80° (exhaust: 105° fix)
  - M50TU /B25: from 110° to 85° (exhaust: 101° fix)The data are shown for full intake retard (disengaged VVT). Check distance between valves and piston to be 1mm at least with VVT engaged. Wrong installation will cause severe engine damage!

**REMARKS :**

# original valve spring info is not available