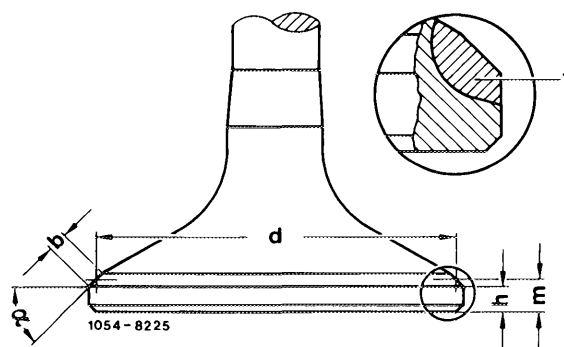


05–280 Checking and machining valves

Data		Intake valve	Exhaust valve
Valve retainer dia.		44.10–44.30	37.00–37.20
Valve stem dia.		8.95–8.97	10.94–10.96
Valve length		116.8–117.2	117.8–118.2
Code No. at shaft end		E 116 01 or E 116 02	A 110 00 or 110 00 C
Filled-in sodium		without	with
Valve seat plating		with	with
Height of valve reatiner	when new	1.5	2.5
	limit value	1.0	2.0
Width "b" of valve seat		1.8–2.5	1.5–2.5
Diameter "d" at valve seat center		43.2	36.1
Height "m" up to valve	when new	2.1–2.3	3.1–3.3
	limit value	1.6–1.8	2.6–2.8
Adjusting angle for machining valves			45°
Permissible radial runout vertically in relation to valve seat and on valve stem when mounted at valve stem			0.03
Permissible axial runout at end of valve stem when mounted at valve stem.			0.015

1 Valve seat plating



Conventional tools

Valve cone grinder

or

Valve cone machining tools

e.g. Krupp, D-5320 Bad Meckenheim  
model VS

e.g. Hunger, D-8000 München 55,  
type VKDR 1, order No. 203.00.200

## Note

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Exhaust valves are filled with sodium!

When scrapping valves, pay attention to safety rules. Do not melt valves filled with sodium since there is a risk of explosion and do not use such valves for making tools (punch etc.) without first removing filled-in sodium.

Be careful when removing sodium from valves, since sodium mixed with water and watery solutions reacts heavily-explosive, while the resulting hydrogen gas may cause fires.

Sodium from cut up or broken up valves can be neutralized in a mixture comprising 2 liters of spirit of alcohol and 1 liter of water put into a vessel and placed in the open air.

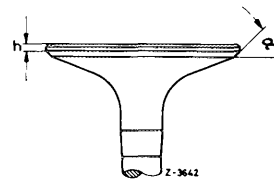
Valves filled with sodium can be collected and shipped for neutralizing to: Garantieprüfstelle Werk Stuttgart-Untertürkheim.

## Checking and machining

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1 Clean valves and check visually.

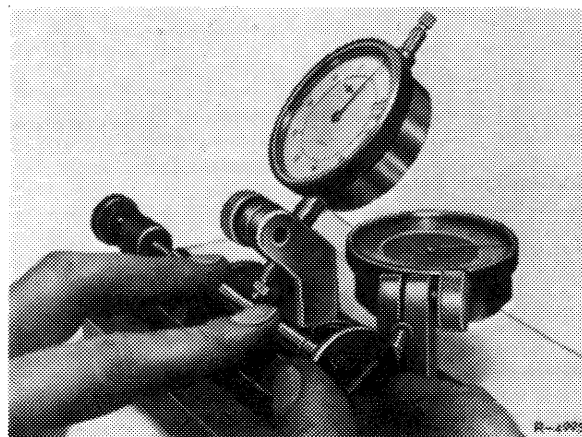
Valves with a burnt valve retainer, with insufficient height "h" of valve retainer and valves with worn-out or score valve stem should be replaced.



2 Permissible radial runout at valve stem, check valve seat.

3 Check axial runout at end of valve stem.

Replace valve, if a limit value is attained.



4 Machine valve seat and face of valve stem.

Refer to operating instructions of machining tool.

5 Measure runout on valve seat and height "h" of valve disc.

When the limit values are attained, replace valve.

