

**Performance table flame cutting**  
**ZHD-R Methane (natural gas) - Heavy-duty ring nozzles**  
**ZIN451 6/95**

CUTTING  
WELDING  
SINCE 1898



Material-thickness mm	Cutting nozzle ZHD-R M	Heating nozzle ZHD-R M*	Pressures (bar)			Cutting speed mm / min	Nozzle distance mm	Kerf mm	Consumption ltrs / h			
			Methane	Heating oxygen	Cutting oxygen				Methane	Heating oxygen	Cutting oxygen	
3	3 - 6	3 - 100	0.1	1.0	1.0	730	3 - 5	0.9	800	870	500	
5					1.5	700						
6					2.5	680						
6	6 - 10				5.0	670						
8					6.0	650						
10					7.0	610						
10	10 - 20		0.2	2.0	7.0	600	4 - 8	1.8	900	1300	3200	
15					7.5	530						
20					8.5	470						
20	20 - 30				7.5	490						
25					8.5	460						
30					9.0	410						
30	30 - 45	0.2	2.0	8.0	420	5 - 10	2.3	900	1300	4900		
35				8.5	400							
40				8.5	380							
45				9.0	360							
45	45 - 60			8.0	360							
50				8.5	340							
55				8.5	330							
60				9.0	310							
60	60 - 80			8.0	310							
70				8.5	300							
80				9.0	280							
80	80 - 100			8.0	280							
90		8.5	260									
100		9.0	240									
100	P a. Y a. M 100 - 160	A a. P a. M 100 - 300	0.5	3.0	8.5	230	8 - 12	4.0	1600	2250	14000	
120					9.0	210						
140					9.0	190						
160					9.5	180						
160	160 - 230			3.5	3.5	6.5	170	10 - 15	5.0	1600	2250	19000
180						7.0	160					
200						7.5	150					
230						8.5	140					
230	230 - 300			4.0	4.0	6.5	130	6.0	1600	2250	27000	
250						7.0	120					
280						7.5	110					
300						8.5	110					

The indicated values are approximate values and refer only to unalloyed steel up to 0.3 % C and if using oxygen with a purity of 99.5 % minimum.

The indicated cutting speeds refer to straight cuts with a rust-free surface. Cutting areas of a quality class I according to DIN 2310 will be obtained.

The indicated cutting speeds have to be reduced: For shaping cuts with small radii: by approx. 10%, for angular cuts of 30°: by approx. 25%, for angular cuts of 45°: by approx. 45%.

Nozzle size and the appropriate adjusting values have to correspond to the effective cutting thickness.

The indicated pressures are overpressures in bar, each measured on the torch entry. In case of higher-powered machines, pressure drops in the hose pipes have to be taken into account.

\*In case of flame cutting machines supplied by the public network, and thus having normally a pressure inferior to 800mm water column (0,08 bar), we recommend to use heating nozzles with an additional heating circuit.

In case of machines with several torches and central gas supply, piercing unit. etc., we recommend to use a fuel-gas-compressor pump (pressure intensifier).