




**KAMAZ**  
Publicly  
Traded  
Company



# **MANUFACTURING OF FORGINGS**

**2019**

1. Manufacturing of forgings for cutting tooling, moulds, dies, spare parts for the equipment, reforge of metal based on the customer's dimensions.

2. A forging max. weight:

- a) – to 900 kg. from structural alloy steel;
- б) – to 500 kg. from tool alloy steel;
- в) – to 15 kg. from die forging.

3. Max. overall dimensions:

- a) plates 75x600x750
- б) shafts L – to 3000 mm. Ø to 320 mm.
- в) cubes 400x600x700 mm.
- г) rings Ø outer 900mm., Ø inner 800mm.  
L- to 250 mm.

### HOT FORGING SECTION

1. Equipment – two stamping lines on the basis of M 2140 and M 2145 hammers using K 18097 – 160 t., K 9536 – 400 t., K 8340 – 650 t. presses

2. Forging weight 0,5...15 kg.

3. Operations: stamping, annealing, air-hardening, descaling, fullering.

4. Drafts: 7° outer, 10° inner.

Monthly turnout is 30 t.

Model, Hammer MUF kg	STEEL GRADES	Step-shaped, single-diameter shafts			Stripe				CUBES, PLATES			
		Cross section, max	Leng th, max	Weight, max	Thick ness, max	Wid th, max	Leng th, max	Weig ht, max	Cube side, max	Plate length, max	Plate width, max	Weight, max
M1545 3150	structural , alloy steel, structural	320	3000	750	75	600	3000	750	400	750	600	750
	tool, alloy steel, tool	300	3000	750	75	400	3000	750	400	750	500	750
	High-cutting X12, X12M, X12Φ1, 7XГ2BM, 6X6B3MΦC, 4X5MΦC, XBГ, ШX15, 5X3B3MΦC	250	3000	750	75	250	2000	450	180	500	250	250
M1343 2000	structural , alloy steel, structural	200	3000	445	60	350	3000	500	300	650	350	445
	tool, alloy steel, tool	180	3000	445	60	300	3000	450	200	450	250	400
	High-cutting X12, X12M, X12Φ1, 7XГ2BM, 6X6B3MΦC, 4X5MΦC, XBГ, ШX15, 5X3B3MΦC	150	3000	250	60	180	2000	250	160	300	180	90
M4140 1000	structural , alloy steel, structural	80	800	35	25	180	1500	180	160	450	200	35
	tool, alloy steel, tool	70	800	30	25	140	1500	100	140	450	180	30
	High-cutting X12, X12M, X12Φ1, 7XГ2BM, 6X6B3MΦC, 4X5MΦC, XBГ, ШX15, 5X3B3MΦC	60	800	25	25	80	1000	80	80	450	80	25

Model, Hammer MUF kg	STEEL GRADES	Disks			Rings and rolled shells					Step-shaped bushings			TUBES				
		Ø max	Heig ht, min	Weig ht, max	Ø max	Heig ht, max	Side thick ness, max	Weig ht, max	Weig ht, max	Forgin g weight incl. conne cted rings max,	Ø Flan ge, max	Flan ge heig ht, min	Ø max	Ho le, max	Side thick ness , min	Side thickn ess, min	Weig ht, max
M1545 3150	structural , alloy steel, structural	700	75	450	900	250	70	40	450	280	400	60	350	150	50	600	750
	tool, alloy steel, tool	500	75	320	900	200	70	60	320								
	High-cutting X12, X12M, ШX15, X12Φ1, 7XГ2BM, 6X6B3MΦC, 4X5MΦC, XBГ, 5X3B3MΦC	400	75	90	600	150	75	70	200								
M1343 2000	structural , alloy steel, structural	500	60	90						130	300	45					
	tool, alloy steel, tool	400	60	60													
	High-cutting X12, X12M, X12Φ1, 7XГ2BM, 6X6B3MΦC, 4X5MΦC, XBГ, ШX15, 5X3B3MΦC	300	60	50													
M4140 1000	structural , alloy steel, structural	350	25	35						50	200	25					
	tool, alloy steel, tool	300	25	30													
	High-cutting X12, X12M, X12Φ1, 7XГ2BM, 6X6B3MΦC, 4X5MΦC, XBГ, ШX15, 5X3B3MΦC	230	25	25													

Model, Hammer MUF kg	STEEL GRADES	Step-shaped, single-diameter shafts			Stripe			
		Cross section, max		Weight, max	Thickness, max	Width, max	Length, max	Weight, max
M4136 400	structural , alloy steel, structural	50		10	20	80	1000	10
	tool, alloy steel, tool	45		8	20	60	1000	8
	High-cutting X12, X12M, X12Φ1, 7XГ2BM, 6X6B3MΦC, 4X5MΦC, XBГ, ШX15, 5X3B3MΦC	40		6	15	60	1000	6
M4134 250	structural , alloy steel, structural	35		5	10	60	1000	5
	tool, alloy steel, tool	30		4	10	50	1000	4
	High-cutting X12, X12M, X12Φ1, 7XГ2BM, 6X6B3MΦC, 4X5MΦC, ШX15, 5X3B3MΦC, XBГ,	25		3	10	50	800	3
MB412 150	structural , alloy steel, structural	30		3	3	40	800	3
	tool, alloy steel, tool	20		2	3	30	600	2

Model, Hammer MUF kg	STEEL GRADES	Disks			Step-shaped bushings		
		Ø max	Height, min	Weight, max	Forging weight incl. connected rings, max	Ø flange, max	Flange height, min
M4136 400	structural , alloy steel, structural	150	15	8	10	150	15
	tool, alloy steel, tool	150	15	6			
	High-cutting X12, X12M, X12Φ1, 6X6B3MΦC, 4X5MΦC, XBГ, ШX15, 5X3B3MΦC, 7XГ2BM,	120	15	4			
M4134 250	structural , alloy steel, structural	120	10	4	6	120	10
	tool, alloy steel, tool	100	10	2,5			
	High-cutting X12, X12M, X12Φ1, 6X6B3MΦC, 4X5MΦC, XBГ, ШX15, 5X3B3MΦC, 7XГ2BM,	60	10	2			
MB412 150	structural , alloy steel, structural	80	10	8			
	tool, alloy steel, tool	60	10	1			

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