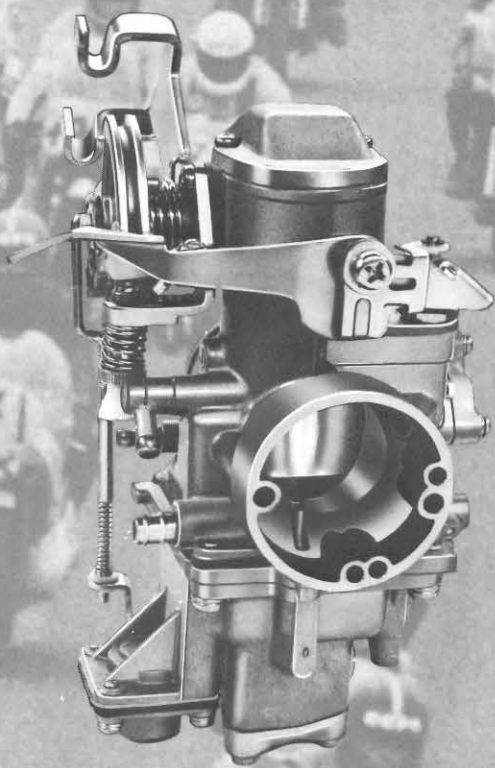


# MIKUNI VM CARBURETTOR



**MIC**

**MIKUNI KOGYO CO., LTD.**

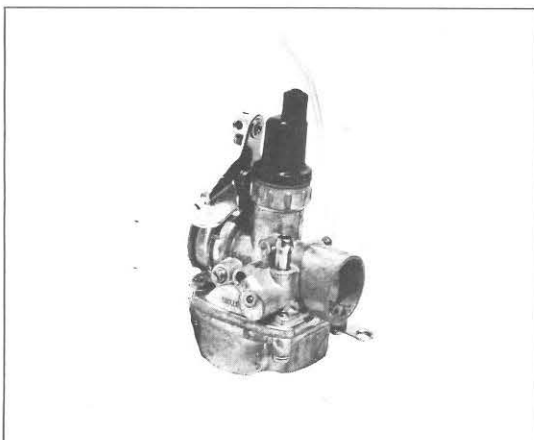
## MIKUNI VM-Type Carburetors

MIKUNI VM-Type carburetors are available in a wide range of models to meet varying requirements of many different engines. Shown here are representative models, with pictures on the left.



### VM13SC300

Venturi Diameter : 10mm and 13mm  
Suitable for : 30cc – 70cc 2-cycle Engine  
Fixing to Engine : 20mm dia. × 14mm H Clip type  
Fixing to Air Cleaner : 20mm dia.  
Semi-automatic Starter System is also available.



### VM14SC8

Venturi Diameter : 14mm and 15mm  
Suitable for : 50cc – 80cc 2-cycle Engine  
Fixing to Engine : 20mm dia. × 14mm H Clip type  
Fixing to Air Cleaner : 28mm dia.



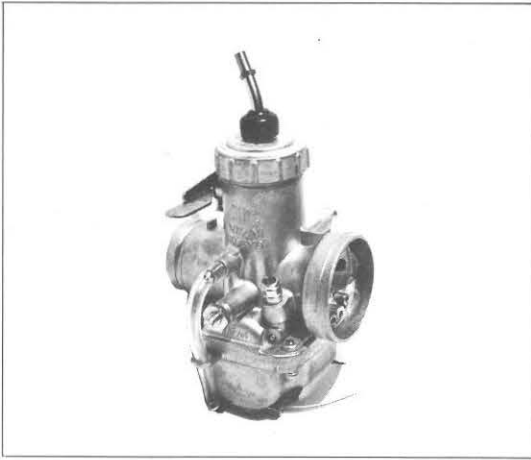
### VM17SC100

Venturi Diameter : 17mm and 18mm  
Suitable for : 70cc – 100cc 2-cycle Engine  
Fixing to Engine : 23mm dia. × 14mm H Clip type  
Fixing to Air Cleaner : 32mm dia.

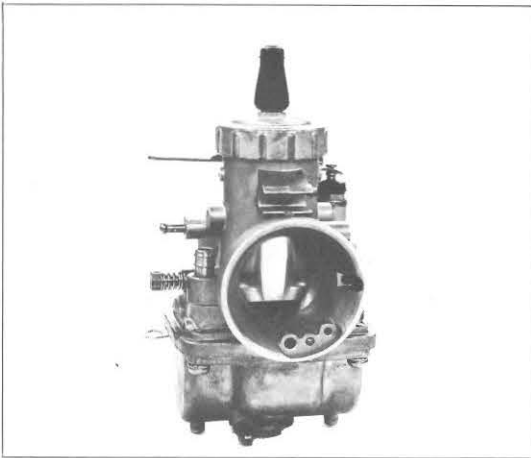


### VM24SH300

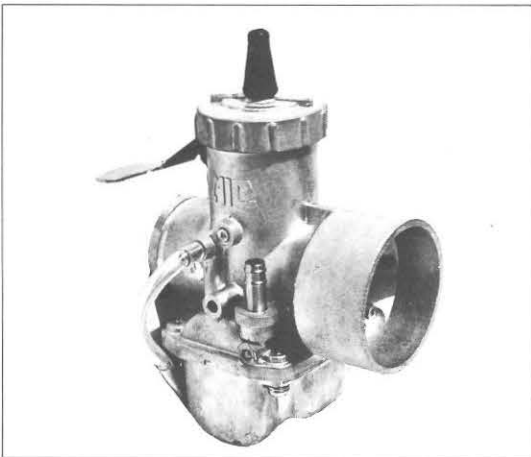
Venturi Diameter : 24mm and 26mm  
Suitable for : 100cc – 125cc 2-cycle Engine  
Fixing to Engine : 50.8mm Pitch Flange type  
Fixing to Air Cleaner : 43mm dia.



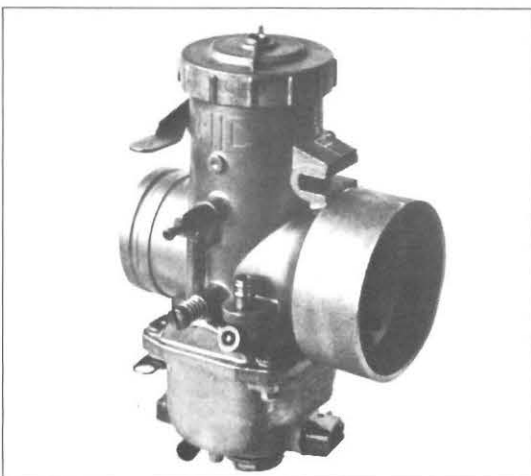
**VM30SS100**  
Venturi Diameter : 30mm  
Suitable for : 150cc – 250cc 2-cycle Engine  
Fixing to Engine : 37mm dia. Spigot type  
Fixing to Air Cleaner : 50mm dia.



**VM34SS1**  
Venturi Diameter : 30mm, 32mm and 34mm  
Suitable for : 200cc – 440cc 2-cycle Engine  
Fixing to Engine : 40mm dia. Spigot type  
Fixing to Air Cleaner : 57.5mm dia.



**VM36SS20**  
Venturi Diameter : 36mm and 38mm  
Suitable for : 250cc – 500cc 2-cycle Engine  
Fixing to Engine : 43mm dia. Spigot type  
Fixing to Air Cleaner : 62mm dia.

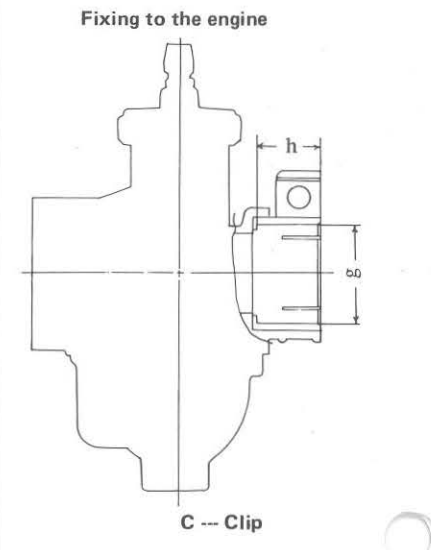
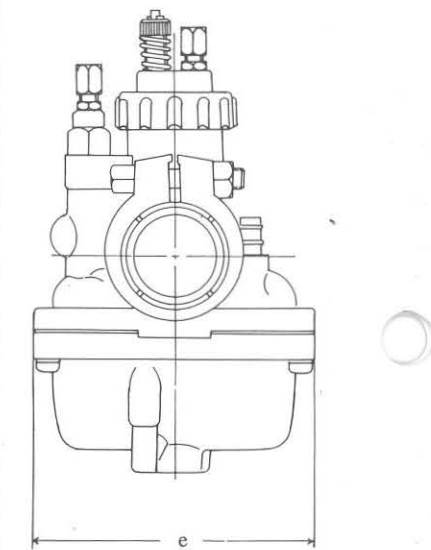
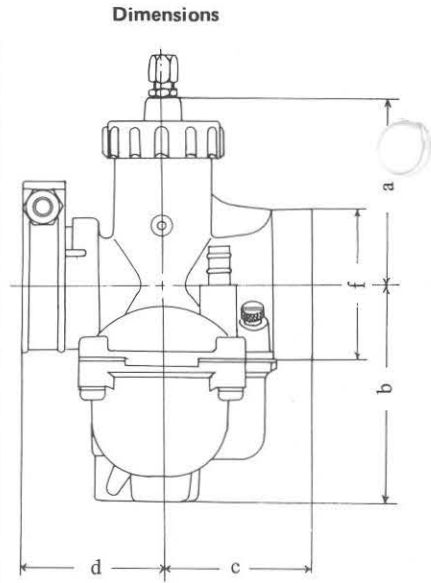


**VM44SC1**  
Venturi Diameter : 40mm and 44mm  
Suitable for : 440cc – 600cc 2-cycle Engine  
Fixing to Engine : 52mm dia. Spigot type  
Fixing to Air Cleaner : 70mm dia.

## STANDARD VM-TYPE CARBURETTORS

Table 1

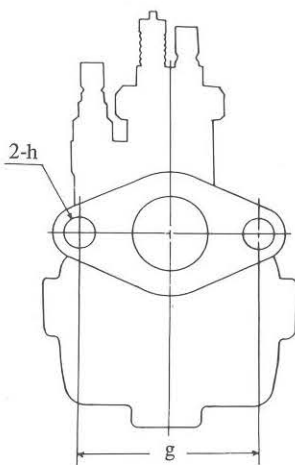
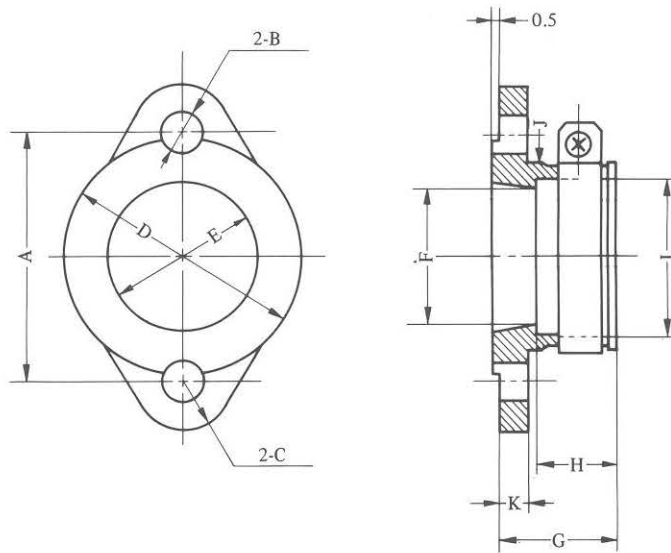
Model of Carburettor Body	Venturi Dia	Dimensions(mm)						Fixing (mm)				Position of throttle adjuster	Position of air screw	Starting system	Material
		a	b	c	d	e	f	Type	g	h	i				
VM11C100	11 } 13	32	51.5	23	25	57.5	52	C	16	13		Left		Choke	Zn
VM13SC300	10 } 13	38.5	44	36.5	33	53	20	C	20	14		"	Left	Starter	"
VM13C200	13 } 15	40	50	35	31	57.5	62	C	20	14		"	"	Choke	"
VM14SC8	14 } 15	40	56	35	32	59	28	C	20	14		"	Left or Right	Starter	"
VM16SC3	16	40	55	35	32	59	28	C	20	14		Left or Top	Left	"	"
VM16SH10	13 } 16	45.5	55	34	22	69	28	H	42	6.3		"	"	"	"
VM17SC100	17 } 18	54.5	49.5	37	30	60	32	C	23	14		Left, Right or Top	Left, Right or Center	"	"
VM20SC150	19 } 22	50	53.5	40	33	68	35	C	26	15		Top	Left, Right or Center	"	"
VM20SH300	20 } 22	48.5	61.5	38	28	76.5	43	H	50.8	8.3		Left	Left	"	"
VM24SH300	24 } 26	55	60.5	38	28	76.5	43	H	50.8	8.3		"	"	"	"
VM24SH100	24 } 26	65.5	53	41	43.5	81.5	43	H	48	8.3		Left, Right or Top	Left or Right	"	"
VM24SC200	24 } 26	68	59.5	43	39	70	44	C	31	18		"	Left, Right or Center	"	"
VM28SC550	26 } 28	53.5	66	44	49	72	44	C	35	33		Left or Right	Left or Right	"	Al
VM28SH50	26 } 30	66	66	52	46	82.5	43	H	58.6 } 60	8.5		Left, Right or Top	Left or Right	"	Zn
VM30SS100	30	67	69	44.5	47	71	50	S	37	35		Left	Right	"	Al
VM32SS200	32 } 34	68	79.8	52	46	84	47	S	40	38		Left or Right	Left or Right	"	Zn
VM34SS1	30 } 34	76.5	73.5	48 or 57.5	44.5	83.4	57.5	S	40	38		Left or Right	Right	"	Al
VM36SS20	36 } 38	81	78.5	48 or 67	49	80.4	62	S	43	41		Left or Right	"	"	"
VM44SC1	40 } 44	88	93	51 or 67	49	79.4	70	S	52	50		Left or Right	"	"	"



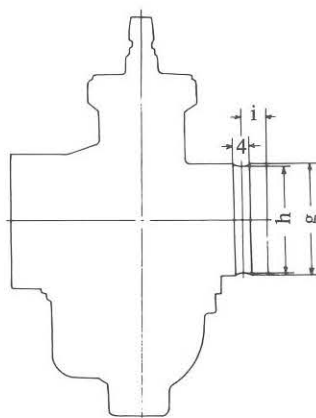
# RUBBER FLANGE FOR MOTORCYCLE AND SNOWMOBILE

(millimeter)

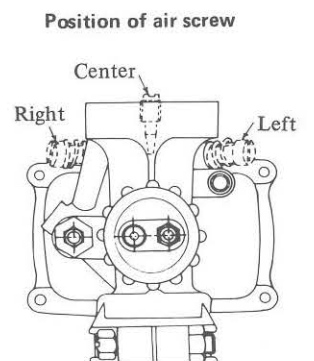
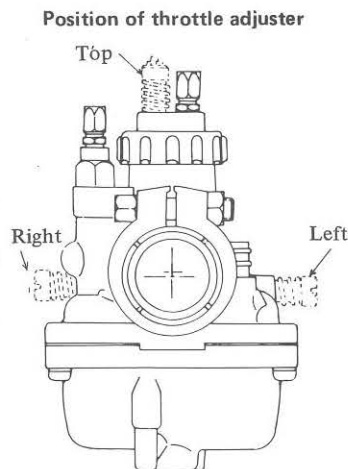
	DIMENSION		R	$\phi$	$\phi$	$\phi$	$\phi$	G	H	$\phi$	R	K	USED FOR CARBURETTOR	MATERIAL
	PART NO	A												
for Motorcycle	I-VM28-200-1	60	8.5	10.5	54	31	29.5	27.5	17.5	35	7.5	7	VM26-28	SPCC GR71T
	I-VM34-200-1	60	8.5	10.5	54	37	35.5	25	15	40	7	7	VM30-32-34	SPCC GR71T
	I-VM36-200-1	70	8.5	10	54	39.5	38.5	25	15	43	8	7	VM36-38	SPCC GR71T
	I-VM44-200-1	84	8.5	10.5	67	47	46	25.5	15	52	8	9	VM40-44	SPCC GR73
for Snowmobile	I-VM30-200-1	57.2	8.5	10	58	31.5	31.5	23	15	37	7	6	VM26-28-30	SPCC TS-72
	I-VM32-200-1	74.6	8.5	10	60	35.5	35.5	32	18	40	8	8	VM32-34	SPCC TS-72
	I-VM38-200-1	74.6	8.5	10	60	38.5	38.5	28	15	43	8	8	VM36-38	SPCC TS-72
	I-VM40-200-1	74.6	8.5	10.5	68	47	46	32	15	52	8	9	VM40-44	SPCC TS-72



H --- Flange (Hor.position)



S --- Spigot



## FEATURES:

Mikuni carburettor is the product of over 30 years of research and experience. It is designed for the best possible performance of the engine.

### (1) Wide Applications

Mikuni carburettors are available in various sizes for four- and two-cycle engines ranging from 30cc to 1,100cc in piston displacement.

### (2) Consistent Performance

The float chamber having twin float is located directly under the carburettor body and the center of float gravity is concentric with the needle jet. This prevents drop of engine performance resulting from fluctuation of the fuel level at the time of sudden acceleration/deceleration, sudden turning or tilting of vehicles.

### (3) High Intake Efficiency

The main air passage is free of obstacles when the throttle valve is fully open. Therefore high intake efficiency can be obtained.

## SELECTION OF A CARBURETTOR

(1) The power of an engine can be considered roughly proportional to the volume of air sucked in to the engine. Therefore, the selection of a carburettor should be made by taking into account the displacement, engine r.p.m., the number of cylinders, the design of an engine (2-stroke or 4-stroke), etc.

In selecting a carburettor, refer to Fig. 1 for a single-cylinder engine, and Fig. 2 for a two-cylinder engine.

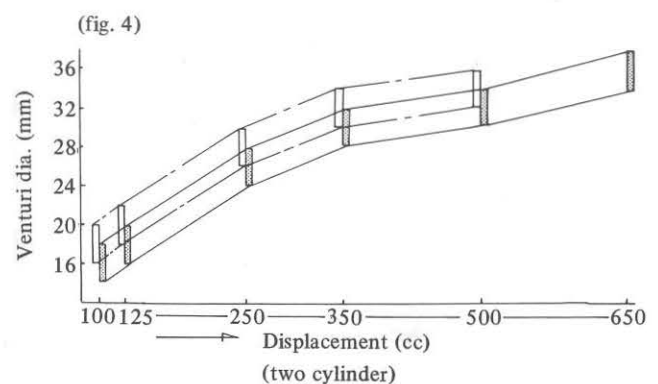
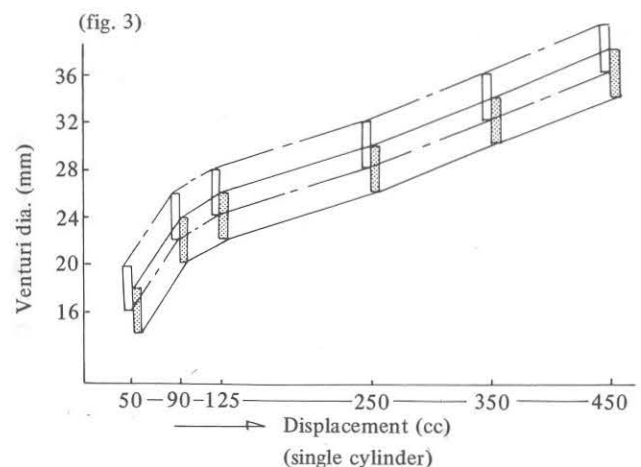
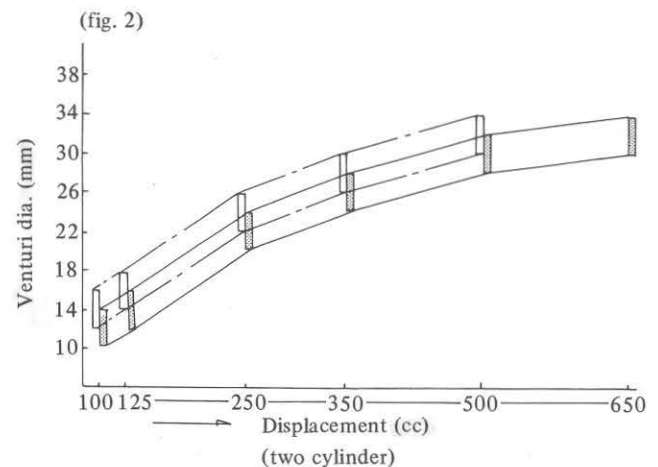
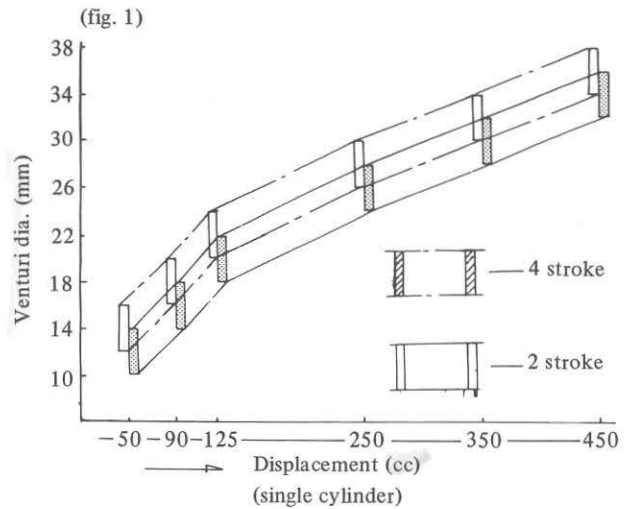
When selecting a carburettor for increasing the power (tuning up) in the high speed range as in racing, refer to Fig. 3 for a single-cylinder engine and Fig. 4 for a two-cylinder engine by taking into account remodelling of an engine with respect to the design of inlet and exhaust ports, compression ratio, etc.

(2) As shown in Table 1, the air screw (AS) comes in three different types, depending on where it is mounted --- on the left, or in the center, or on the right as seen from the air cleaner side. Refer to Table 1 and select one which is easy to adjust.

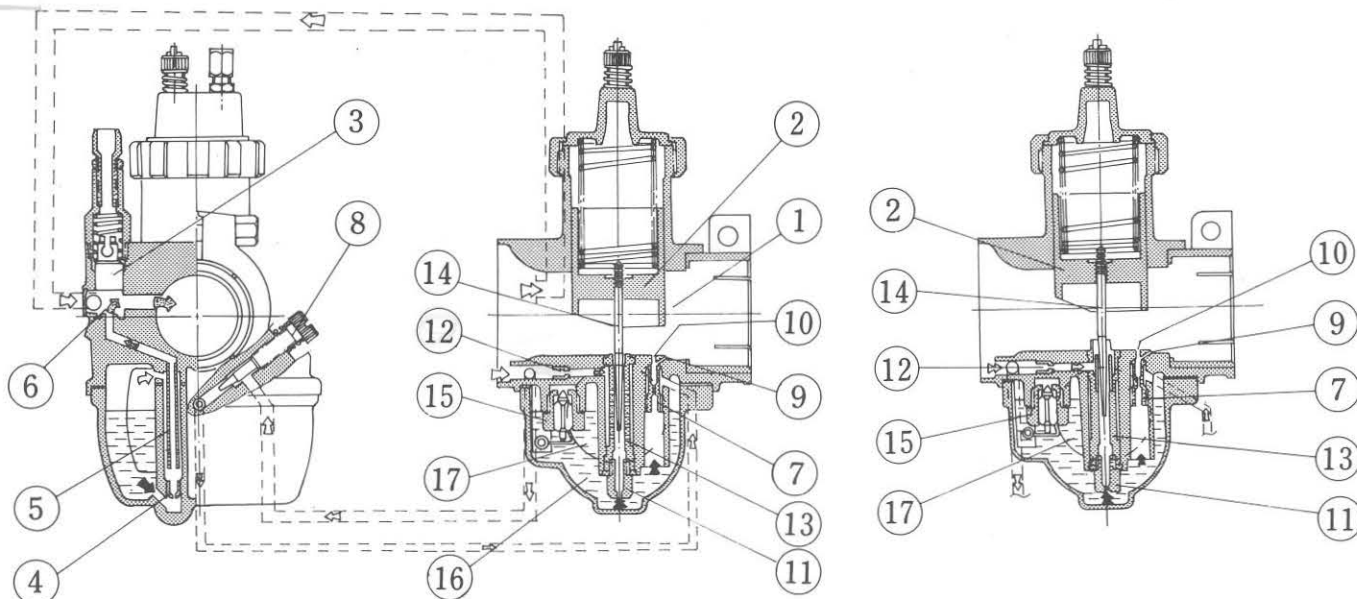
## FUNCTION AND CONSTRUCTION

Most Mikuni carburettors employ the starter system instead of the choke to allow easy starting in cold weather through improved intake efficiency. The carburettor consists of the pilot system which delivers fuel to the engine at idling and low speeds and the main system which delivers fuel at medium and high speeds. The mechanism is designed to give the engine the highest possible performance throughout the entire RPM range.

**Starting** --- When the engine is started by closing the main air passage (1) with the throttle valve (2), and by opening the starter plunger (3) in full, fuel is metered with the starter jet (4). The fuel then mixes with bleed







air in the starter pipe (5) and again mixes with air in the starter plunger chamber (6) to make a fuel-air mixture most suitable to the engine for the initial starting.

**Slow-speed driving** --- The fuel at idling and low speeds is metered with the pilot jet (7) and mixed with the air controlled by the air screw (8), and the fuel-air mixture is supplied to the engine through the pilot outlet (9) and the bypass (10). There are two types of fuel system for slow speed driving, namely, one-hole fuel nozzle without bypass and two-hole fuel nozzle. Most carburetors with small venturi dia. (below 18mm) employ the 1-hole system.

**Medium- and high-speed driving** --- There are two types of fuel supply system for medium- and high-speed driving. One is the bleed type which is chiefly used for a 4-stroke engine or a 2-stroke engine with the rotary valve and the reed valve. The other is the primary type which is chiefly used for a 2-stroke engine with the piston valve.

**Bleed Type** --- The fuel at medium- and high-speed driving flows through the main jet (11) and mixes in the needle jet (13) with the air metered with the air jet (12). The fuel-air mixture is then supplied to the engine through openings of the needle jet (13) and the jet needle (14). The fuel is controlled by the needle jet and the jet needle during medium-speed driving, and by the main jet during high-speed driving.

**Primary Type** --- This differs from the bleed type in that the fuel, after having flowed through openings of the needle jet and the jet needle, is mixed with the air metered with the air jet. In other respects of the construction, the primary type is almost the same as the bleed type.

**Fuel Level** --- When the fuel flows to the float chamber (16) through the needle valve (15) and has reached a fixed fuel level, the float rises and the needle valve is closed by means of float buoyancy to maintain the

fixed fuel level.

## CARBURETOR ADJUSTMENTS

### 1. Main Jet

Select the smallest size with which you can obtain the highest speed (highest output), with caution not to overheat the engine. The size number of the main jet comes in multiples of 5 under #200, and in multiples of 10 above #200.

### 2. Air Screw

Determine best idling with the use of air screw, after sufficiently warming up the engine. In that case, if the number of return turns of the air screw is more than  $2\frac{1}{2}$ , use a smaller pilot jet. If the number of return turns of the air screw is less than  $\frac{1}{2}$ , on the other hand, use a larger pilot jet. The size number of the pilot jet comes in multiples of 5.

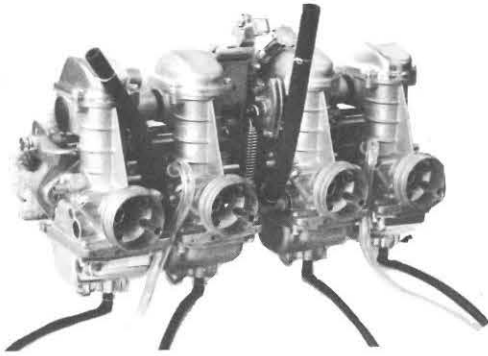
### 3. Cutaway of Throttle Valve

After air screw adjustment, open the throttle valve little by little. When you hit the point where the explosion sounds irregular, secure the throttle valve in that position and open the starter. Then, if the explosion sounds more irregular, make the cutaway of the throttle valve larger. If the irregular sound stops when the starter is opened, on the other hand, make the cutaway of the throttle valve smaller. The size of the throttle valve cutaway comes in multiples of 0.5mm.

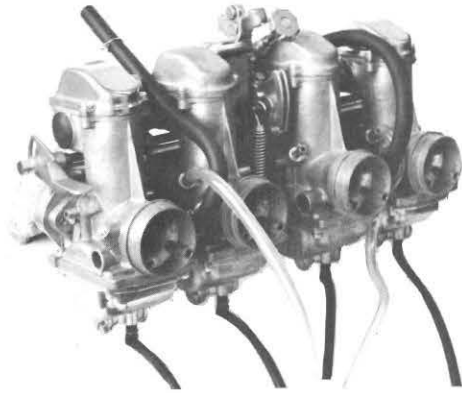
### 4. Jet Needle

The adjustments in the foregoing paragraphs 2 and 3 apply up to about  $\frac{1}{4}$  throttle valve opening. When throttle valve opening is wider than that, steps of the jet needle come into play. For adjustment of jet needle steps, follow the same procedure as in paragraph 3 by checking irregular sounds of explosion. Adjust the fuel-air ratio, as required, by means of the jet needle steps.

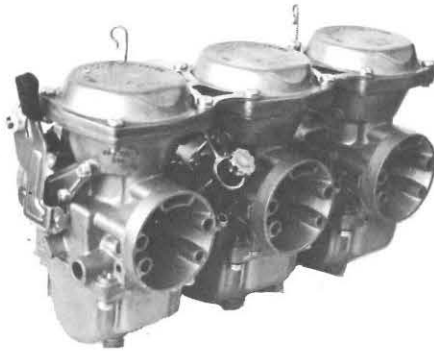
MULTIPLE CARBURETTORS AND HIGH-POWERED CARBURETTORS



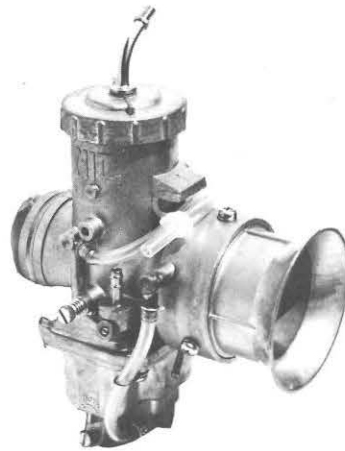
**VM22 Quadruple Carburettor**  
for SUZUKI GS550  
and KAWASAKI KZ650



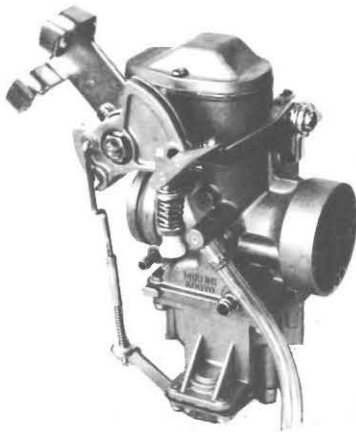
**VM26 Quadruple Carburettor**  
for SUZUKI GS750 GS1000  
and KAWASAKI KZ750 KZ1000



**BS34 Triple Carburettor**  
for YAMAHA XS750



**VM44 High-Powered Carburettor**



**VM34 Active Return Throttle Valve Type Carburettor**

● Manufacturer —  
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● Export Division —

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