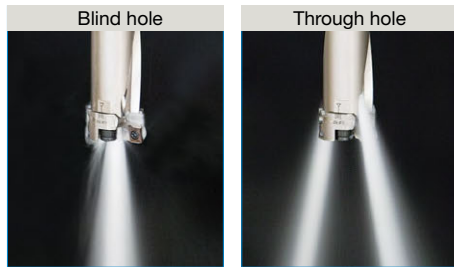
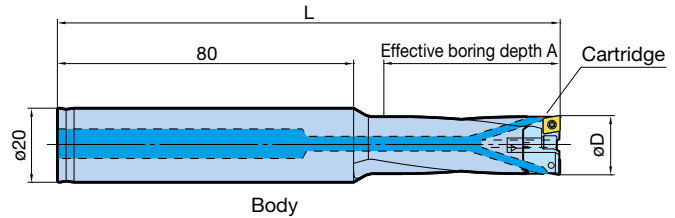


## MW BORING HEAD PAT. (for roughing)

Achieves high efficiency small diameter rough boring with 2 inserts.

Center through



Threads for plug screws are prepared in the coolant holes to change the coolant directions.

Diameter $\phi D$	Model	Cartridge Model	L	A	Clamp Bolt Set	Belleville Spring Set	Weight (kg)
16 - 19	<b>ST20-MW1619-45</b>	<b>MW1619E</b>	136	45	MW16SS	MW16BS	0.24
	-60		151	60			0.26
18 - 21	<b>-MW1821-50</b>	<b>MW1821E</b>	141	50			0.26
	-65		156	65			0.28

Cartridge models are a 2-piece set.

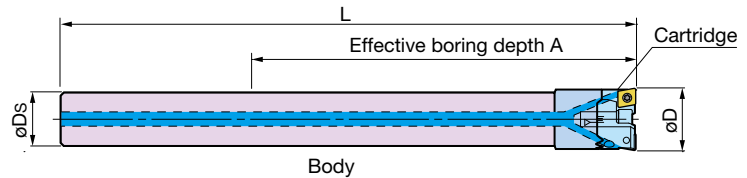
1. Clamp Bolts and Belleville Springs are included with the body. However, cartridges are not included and must be ordered separately.
2. Cartridge includes insert clamping screws and wrench.
3. The weight is that of the body and cartridge combined.
4. Inserts must be ordered separately.

## [Carbide shank type]

**NEW**

- Carbide shank for enhanced deep hole boring performance (for through-hole)

Carbide



is made of carbide.

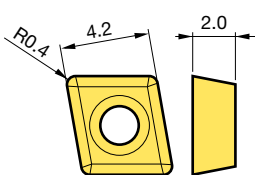


Diameter $\phi D$	Model	Cartridge Model	$\phi D_s$	L	A	Clamp Bolt Set	Belleville Spring Set	Weight (kg)
16 - 19	<b>ST14W-MW16-110</b>	<b>MW1619E</b>	14	151	110	MW16SS	MW16BS	0.36
18 - 21	<b>ST16W-MW18-115</b>	<b>MW1821E</b>	16	172	115			0.54

Cartridge models are a 2-piece set.

1. Clamp Bolts and Belleville Springs are included with the body. However, cartridges are not included and must be ordered separately.
2. Cartridge includes insert clamping screws and wrench.
3. The weight is that of the body and cartridge combined.
4. Inserts must be ordered separately.
5. The carbide shank and boring head are integrated and cannot be sold separately.
6. **Exclusive for use with through holes. Do not use it with blind holes.**

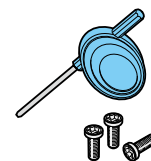
- Insert (optional)



Workpiece material	Insert Model	Materials
Steel/Stainless steel	<b>MW0404F Z30P</b>	P30 equivalent carbide substrate TiAlN + AlCrN coating
Cast iron/Ductile	<b>MW0404S Z30K</b>	K20 equivalent carbide substrate TiAlN + AlCrN coating
Non-ferrous metal/Aluminum	<b>MW0404E D15N</b>	K15 equivalent carbide substrate DLC coating

1. Inserts sold in packets of 10 pcs.  
Example: MW0404F Z30P... 10 pcs

- Insert Clamping Screw Set (optional)



Set Model	Thread size	Wrench
<b>S1.6S-T6</b>	M1.6 x 4.2	FA-T6

1. The set contains ten screws and a wrench.  
※ Wrenches are also sold individually.