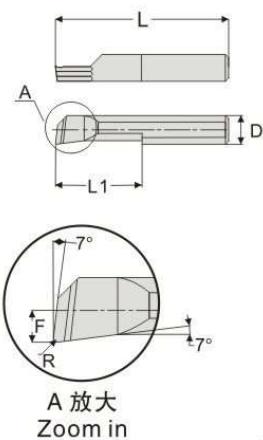
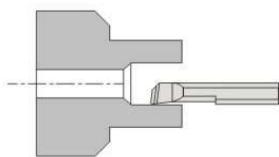


# MTR型镗孔加工 MTR type boring

**HAFFMAN**  
High Precision Tools

## MTR □ R□L□



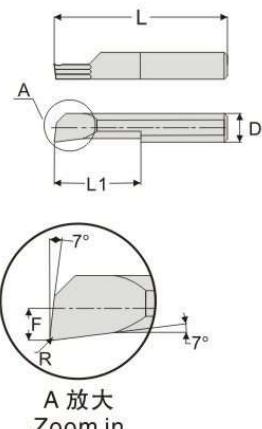
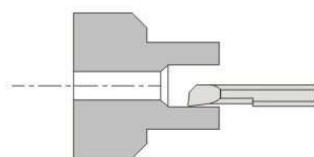
### 技术参数(Technical parameters):

D	MODEL	L	L1	R	F	最小孔径 Minimum bore diameter
3.0	MTR 2 R0.15 L5	50	5	0.15	0.8	2.1
	MTR 2 R0.15 L10	50	10	0.15	0.8	2.1
	MTR 3 R0.15 L10	50	10	0.15	1.3	3.1
	MTR 3 R0.15 L15	50	15	0.15	1.3	3.1
	MTR 3 R0.2 L10	50	10	0.2	1.3	3.1
	MTR 3 R0.2 L15	50	15	0.2	1.3	3.1
4.0	MTR 4 R0.15 L10	50	10	0.15	1.7	4.1
	MTR 4 R0.15 L15	50	15	0.15	1.7	4.1
	MTR 4 R0.15 L22	50	20	0.15	1.7	4.1
	MTR 4 R0.2 L10	50	10	0.2	1.7	4.1
	MTR 4 R0.2 L15	50	15	0.2	1.7	4.1
	MTR 4 R0.2 L22	50	20	0.2	1.7	4.1
5.0	MTR 5 R0.1 L15	50	15	0.1	2.2	5.1
	MTR 5 R0.1 L22	50	22	0.1	2.2	5.1
	MTR 5 R0.2 L15	50	15	0.2	2.2	5.1
	MTR 5 R0.2 L22	50	22	0.2	2.2	5.1
6.0	MTR 6 R0.1 L15	50	15	0.1	2.8	6.1
	MTR 6 R0.1 L22	50	22	0.1	2.8	6.1
	MTR 6 R0.2 L15	50	15	0.2	2.8	6.1
	MTR 6 R0.2 L22	50	22	0.2	2.8	6.1
8.0	MTR 7 R0.2 L22	60	22	0.2	3.3	7.1
	MTR 8 R0.2 L15	60	15	0.2	3.8	8.1
	MTR 8 R0.2 L25	60	25	0.2	3.8	8.1
10.0	MTR 10 R0.2 L35	75	35	0.2	4.8	10.1

# MNR型镗孔加工 MNR type boring

**HAFFMAN**  
High Precision Tools

**MNR □ R□L□**



## 技术参数(Technical parameters):

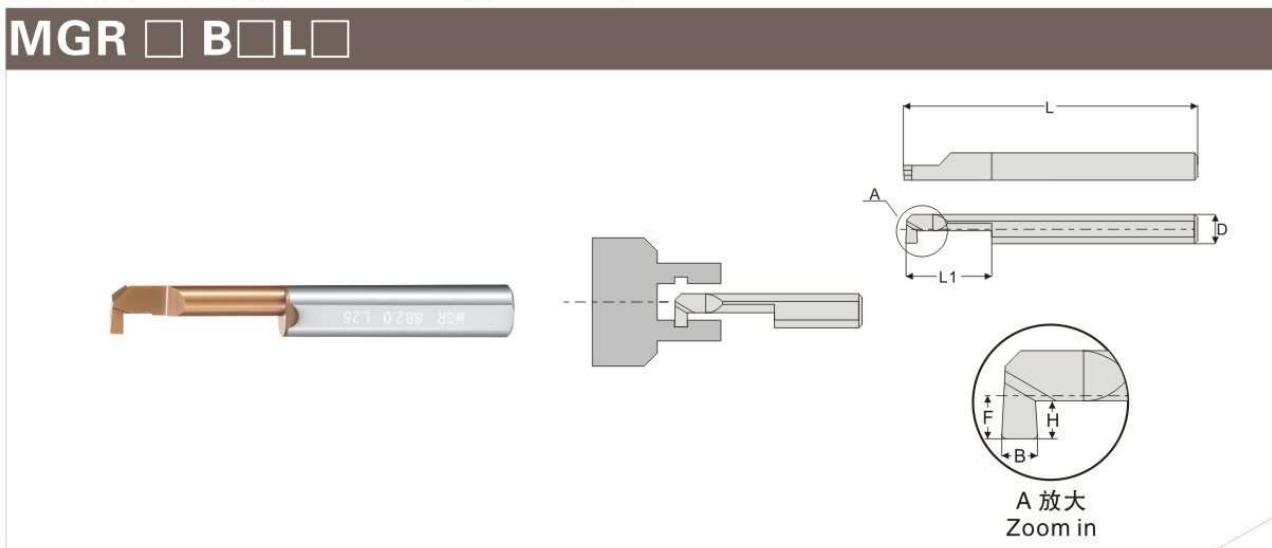
D	MODEL	L	L1	R	F	最小孔径 Minimum bore diameter
3.0	MNR 2 R0.15 L5	50	5	0.15	0.8	2.1
	MNR 2 R0.15 L10	50	10	0.15	0.8	2.1
	MNR 3 R0.15 L10	50	10	0.15	1.3	3.1
	MNR 3 R0.15 L15	50	15	0.15	1.3	3.1
	MNR 3 R0.2 L10	50	10	0.2	1.3	3.1
	MNR 3 R0.2 L15	50	15	0.2	1.3	3.1
4.0	MNR 4 R0.15 L10	50	10	0.15	1.7	4.1
	MNR 4 R0.15 L15	50	15	0.15	1.7	4.1
	MNR 4 R0.15 L22	50	20	0.15	1.7	4.1
	MNR 4 R0.2 L10	50	10	0.2	1.7	4.1
	MNR 4 R0.2 L15	50	15	0.2	1.7	4.1
	MNR 4 R0.2 L22	50	20	0.2	1.7	4.1
5.0	MNR 5 R0.1 L15	50	15	0.1	2.2	5.1
	MNR 5 R0.1 L22	50	22	0.1	2.2	5.1
	MNR 5 R0.2 L15	50	15	0.2	2.2	5.1
	MNR 5 R0.2 L22	50	22	0.2	2.2	5.1
6.0	MNR 6 R0.1 L15	50	15	0.1	2.8	6.1
	MNR 6 R0.1 L22	50	22	0.1	2.8	6.1
	MNR 6 R0.2 L15	50	15	0.2	2.8	6.1
	MNR 6 R0.2 L22	50	22	0.2	2.8	6.1
8.0	MNR 7 R0.2 L22	60	22	0.2	3.3	7.1
	MNR 8 R0.2 L15	60	15	0.2	3.8	8.1
	MNR 8 R0.2 L25	60	25	0.2	3.8	8.1
10.0	MNR 10 R0.2 L35	75	35	0.2	4.8	10.1



# MGR型镗孔加工 MGR type boring

**HAFFMAN**  
High Precision Tools

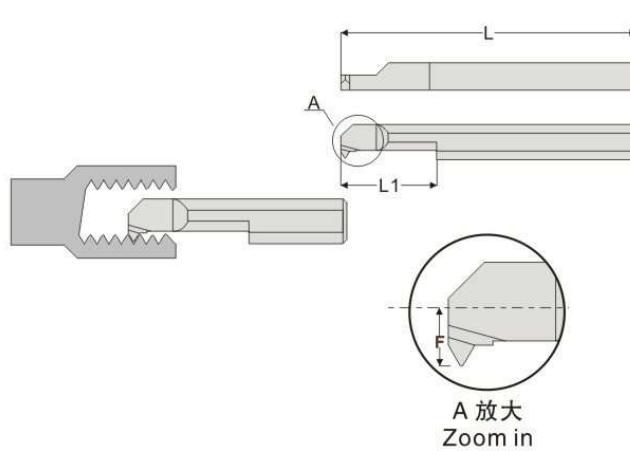
## MGR □ B□L□



### 技术参数(Technical parameters):

D	MODEL	L	L1	R	F	最小孔径 Minimum bore diameter
4.0	MGR 4 B1.0 L10	50	10	0.15	1.8	4.1
	MGR 4 B1.0 L15	50	15	0.15	1.8	4.1
	MGR 4 B1.5 L10	50	10	0.15	1.8	4.1
	MGR 4 B1.5 L15	50	15	0.15	1.8	4.1
5.0	MGR 5 B1.0 L15	50	15	0.15	2.3	5.1
	MGR 5 B1.0 L22	50	22	0.15	2.3	5.1
	MGR 5 B1.5 L15	50	15	0.15	2.3	5.1
	MGR 5 B1.5 L22	50	22	0.15	2.3	5.1
	MGR 5 B2.0 L15	50	15	0.2	2.3	5.1
	MGR 5 B2.0 L22	50	22	0.2	2.3	5.1
6.0	MGR 6 B1.0 L15	50	15	0.15	2.8	6.1
	MGR 6 B1.0 L22	50	22	0.15	2.8	6.1
	MGR 6 B1.5 L15	50	15	0.15	2.8	6.1
	MGR 6 B1.5 L22	50	22	0.15	2.8	6.1
	MGR 6 B2.0 L15	50	15	0.2	2.8	6.1
	MGR 6 B2.0 L22	50	22	0.2	2.8	6.1
8.0	MGR 8 B1.0 L25	60	25	0.15	3.8	8.1
	MGR 8 B1.5 L25	60	25	0.15	3.8	8.1
	MGR 8 B2.0 L25	60	25	0.2	3.8	8.1

## MIR □ A□L□



### 技术参数(Technical parameters):

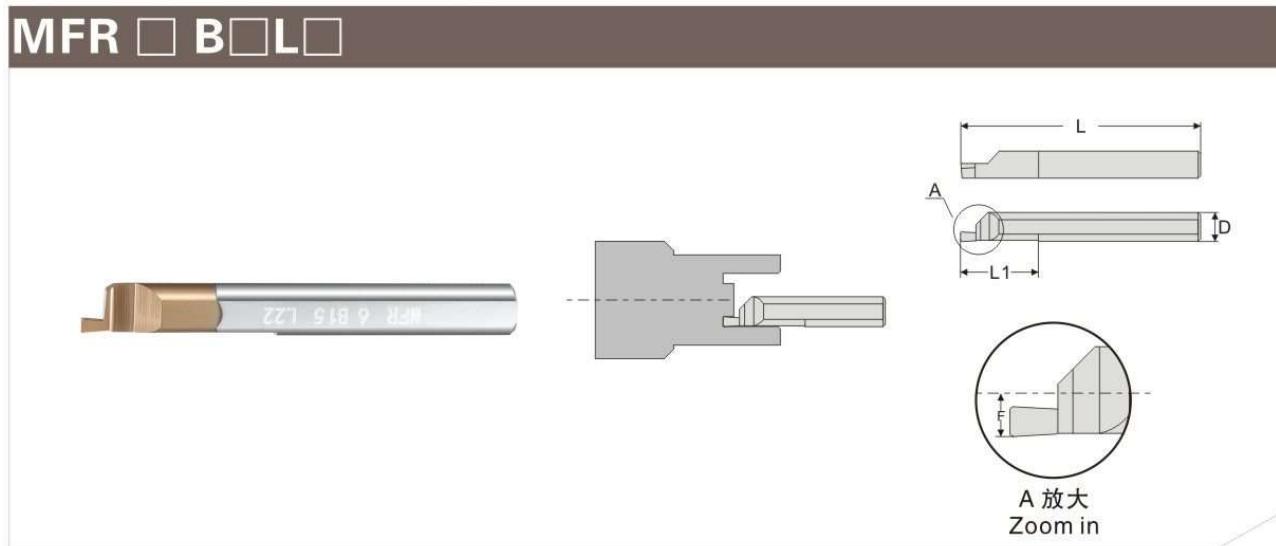
D	MODEL	L	L1	R	F	最小孔径 Minimum bore diameter
3.0	MIR 3 A55 L10	50	10	0.07	1.3	3.1
	MIR 3 A55 L15	50	15	0.07	1.3	3.1
	MIR 3 A60 L10	50	10	0.07	1.3	3.1
	MIR 3 A60 L15	50	15	0.07	1.3	3.1
4.0	MIR 4 A55 L10	50	10	0.07	1.8	4.1
	MIR 4 A55 L15	50	15	0.07	1.8	4.1
	MIR 4 A60 L10	50	10	0.07	1.8	4.1
	MIR 4 A60 L15	50	15	0.07	1.8	4.1
5.0	MIR 5 A55 L15	50	15	0.07	2.3	5.1
	MIR 5 A55 L22	50	22	0.07	2.3	5.1
	MIR 5 A60 L15	50	15	0.07	2.3	5.1
	MIR 5 A60 L22	50	22	0.07	2.3	5.1
6.0	MIR 6 A55 L15	50	15	0.07	2.8	6.1
	MIR 6 A55 L22	50	22	0.07	2.8	6.1
	MIR 6 A60 L15	50	15	0.07	2.8	6.1
	MIR 6 A60 L22	50	22	0.07	2.8	6.1



# MFR型镗孔加工 MFR type boring

**HAFFMAN**  
High Precision Tools

## MFR □ B□L□



### 技术参数(Technical parameters):

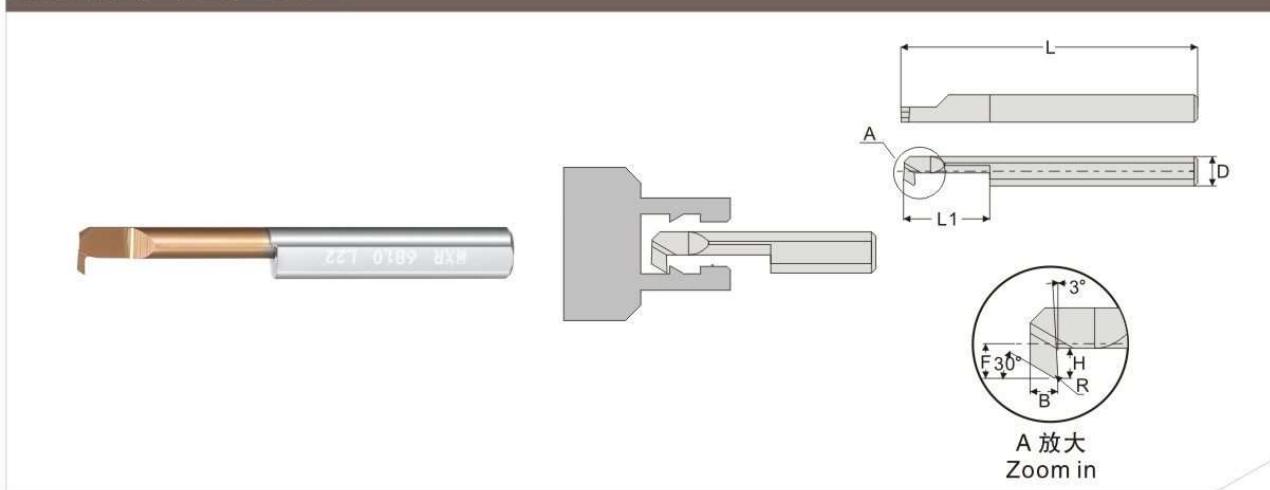
D	MODEL	L	L1	R	F	最小孔径 Minimum bore diameter
4.0	MFR 4 B1.0 L10	50	10	0.15	1.8	5.0
	MFR 4 B1.0 L15	50	15	0.15	1.8	5.0
5.0	MFR 5 B1.0 L15	50	15	0.15	2.3	6.0
	MFR 5 B1.0 L22	50	22	0.15	2.3	6.0
	MFR 5 B1.5 L15	50	15	0.15	2.3	6.0
	MFR 5 B1.5 L22	50	22	0.15	2.3	6.0
6.0	MFR 6 B1.0 L15	50	15	0.15	2.8	8.0
	MFR 6 B1.0 L22	50	22	0.15	2.8	8.0
	MFR 6 B1.5 L15	50	15	0.15	2.8	8.0
	MFR 6 B1.5 L22	50	22	0.15	2.8	8.0
	MFR 6 B2.0 L15	50	15	0.2	2.8	8.0
	MFR 6 B2.0 L22	50	22	0.2	2.8	8.0



# MXR型镗孔加工 MXR type boring

**HAFFMAN**  
High Precision Tools

## MXR □ B□L□



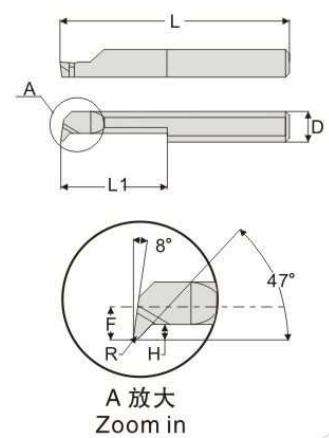
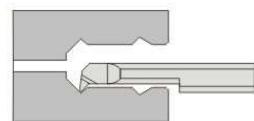
### 技术参数(Technical parameters):

D	MODEL	L	L1	R	F	最小孔径 Minimum bore diameter
4.0	MXR 4 B1.0 L10	50	10	0.15	1.8	5.0
	MXR 4 B1.0 L15	50	15	0.15	1.8	5.0
5.0	MXR 5 B1.0 L15	50	15	0.15	2.3	6.0
	MXR 5 B1.0 L22	50	22	0.15	2.3	6.0
	MXR 5 B1.5 L15	50	15	0.15	2.3	6.0
	MXR 5 B1.5 L22	50	22	0.15	2.3	6.0
6.0	MXR 6 B1.0 L15	50	15	0.15	2.8	8.0
	MXR 6 B1.0 L22	50	22	0.15	2.8	8.0
	MXR 6 B1.5 L15	50	15	0.15	2.8	8.0
	MXR 6 B1.5 L22	50	22	0.15	2.8	8.0
	MXR 6 B2.0 L15	50	15	0.2	2.8	8.0
	MXR 6 B2.0 L22	50	22	0.2	2.8	8.0

# MQR型镗孔加工 MQR type boring



**MQR □ R□L□**



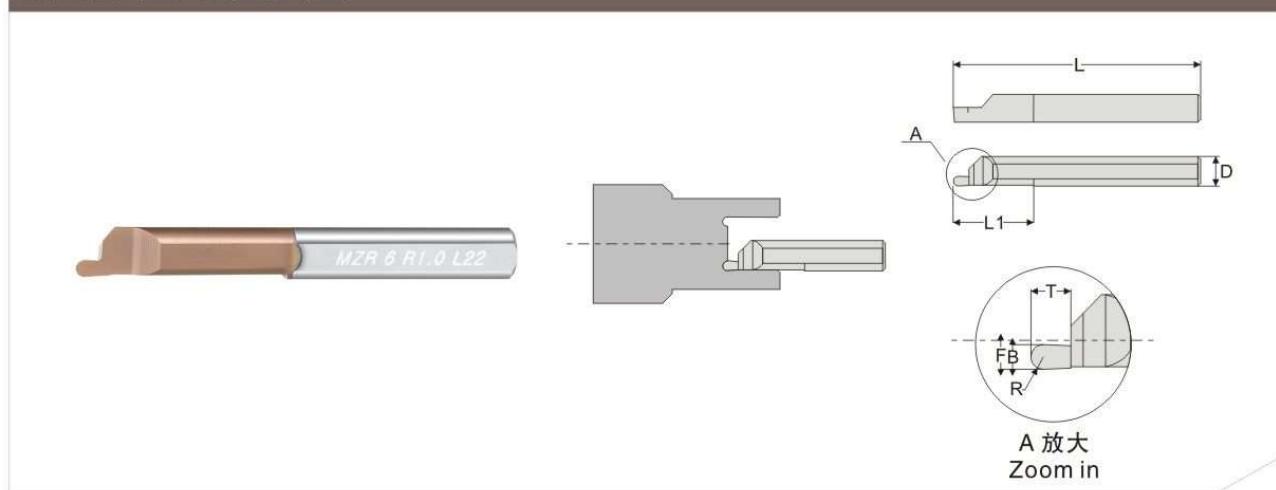
## 技术参数(Technical parameters):

D	MODEL	L	L1	R	F	最小孔径 Minimum bore diameter
4.0	MQR 4 R0.2 L10	50	10	0.2	1.8	4.1
	MQR 4 R0.2 L15	50	15	0.2	1.8	4.1
5.0	MQR 5 R0.2 L15	50	15	0.2	2.3	5.1
	MQR 5 R0.2 L22	50	22	0.2	2.3	5.1
6.0	MQR 6 R0.2 L15	50	15	0.2	3.3	6.1
	MQR 6 R0.2 L22	50	22	0.2	2.3	6.1

# MZR型镗孔加工 MZR type boring

**HAFFMAN**  
High Precision Tools

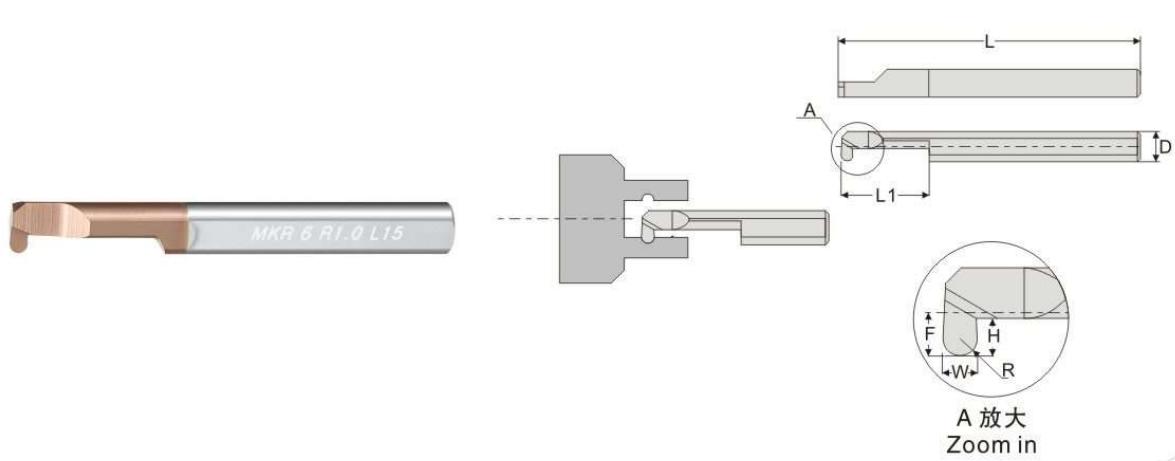
## MZR □ R□L□



### 技术参数(Technical parameters):

D	MODEL	L	L1	R	F	最小孔径 Minimum bore diameter
4.0	MZR 4 R0.5 L10	50	10	0.5	1.8	5.0
	MZR 4 R0.5 L15	50	15	0.5	1.8	5.0
	MZR 4 R0.75 L10	50	10	0.75	1.8	5.0
	MZR 4 R0.75 L15	50	15	0.75	1.8	5.0
5.0	MZR 5 R0.5 L15	50	15	0.5	2.3	6.0
	MZR 5 R0.5 L22	50	22	0.5	2.3	6.0
	MZR 5 R0.75 L15	50	15	0.75	2.3	6.0
	MZR 5 R0.75 L22	50	22	0.75	2.3	6.0
	MZR 5 R1.0 L15	50	15	1.0	2.3	6.0
	MZR 5 R1.0 L22	50	22	1.0	2.3	6.0
6.0	MZR 6 R0.5 L15	50	15	0.5	2.8	8.0
	MZR 6 R0.5 L22	50	22	0.5	2.8	8.0
	MZR 6 R0.75 L15	50	15	0.75	2.8	8.0
	MZR 6 R0.75 L22	50	22	0.75	2.8	8.0
	MZR 6 R1.0 L15	50	15	1.0	2.8	8.0
	MZR 6 R1.0 L22	50	22	1.0	2.8	8.0

## MKR □ R□L□



## 技术参数(Technical parameters):

D	MODEL	L	L1	R	F	最小孔径 Minimum bore diameter
4.0	MKR 4 R0.5 L10	50	10	0.5	1.8	5.0
	MKR 4 R0.5 L15	50	15	0.5	1.8	5.0
	MKR 4 R0.75 L10	50	10	0.75	1.8	5.0
	MKR 4 R0.75 L15	50	15	0.75	1.8	5.0
5.0	MKR 5 R0.5 L15	50	15	0.5	2.3	6.0
	MKR 5 R0.5 L22	50	22	0.5	2.3	6.0
	MKR 5 R0.75 L15	50	15	0.75	2.3	6.0
	MKR 5 R0.75 L22	50	22	0.75	2.3	6.0
	MKR 5 R1.0 L15	50	15	1.0	2.3	6.0
	MKR 5 R1.0 L22	50	22	1.0	2.3	6.0
6.0	MKR 6 R0.5 L15	50	15	0.5	2.8	8.0
	MKR 6 R0.5 L22	50	22	0.5	2.8	8.0
	MKR 6 R0.75 L15	50	15	0.75	2.8	8.0
	MKR 6 R0.75 L22	50	22	0.75	2.8	8.0
	MKR 6 R1.0 L15	50	15	1.0	2.8	8.0
	MKR 6 R1.0 L22	50	22	1.0	2.8	8.0

