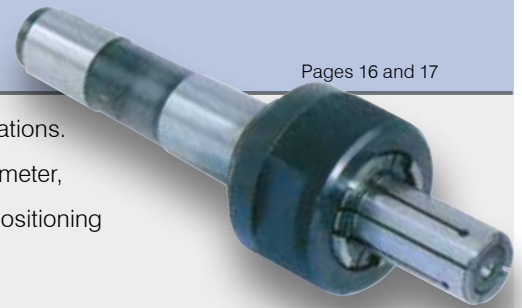


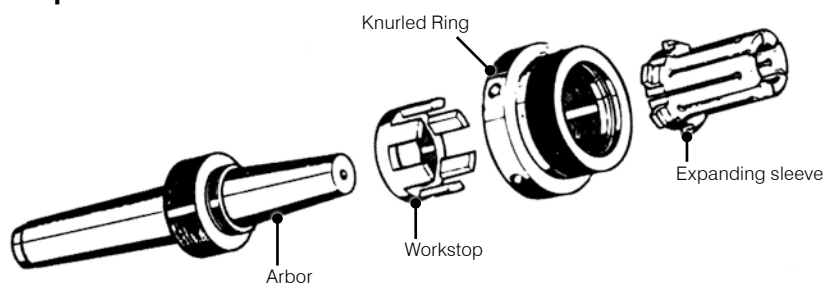
TMCMN

Pages 16 and 17



TMCMN mandrels are designed for turning, milling, grinding and inspection operations. They offer expansibility from 0.5 to 1 mm depending on the expanding sleeve diameter, and can clamp workpieces with diameters from 5.5 to 79.7 mm. A workstop for positioning the workpiece in the axial direction is included. They can be used for clamping workpieces with a blind hole or short workpieces.

Clamping take place as follows:



The expanding sleeve can be used in common with TEPN

When placing an order for arbors and expanding sleeves, please provide the order codes individually. They will be shipped without being assembled.

TMCM

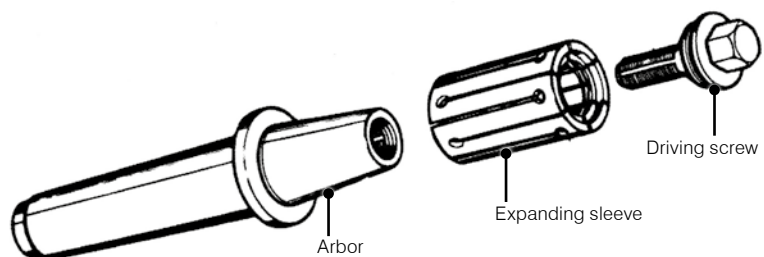
Pages 18



TMCM mandrels are intended for turning, milling, grinding, gear hobbing, balancing, and inspection operations. The workpiece is positioned axially either by the workstop or a spacer. Expansibility is from 1 to 2 mm, depending on the diameter of the expanding sleeve. Workpieces with diameters from 14.7 to 82.7 mm can be clamped.

Clamping takes place as follows:

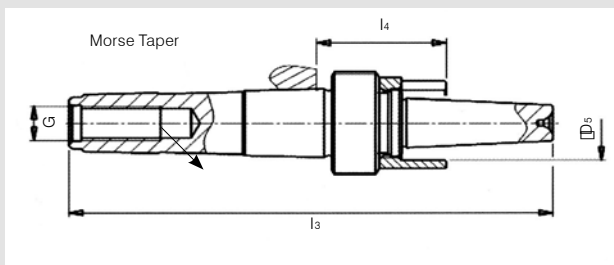
The workpiece is inserted into the expanding sleeve from the front and the driving screw is tightened using a wrench. The workpiece is clamped when the expanding sleeve is pushed up onto the tapered arbor by tightening the driving screw.



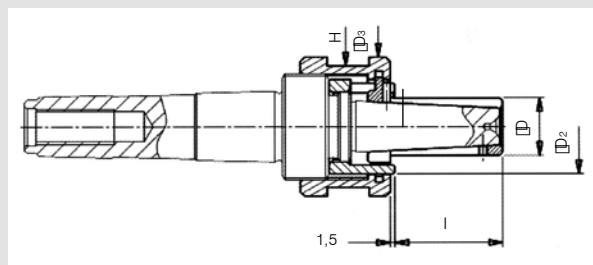
When placing an order for arbors and expanding sleeves, please provide the order codes individually. They will be shipped without being assembled.



■ ARBOR



■ EXPANDING SLEEVE (1)



Subject to technical changes.
For more detailed information, please ask our customer service.

Order Code	Workpiece Diameter Range	Morse Taper N°	l ₃	l ₄	D ₅	G
TMCMN-1×3	5,5 - 7,5	3	126,0	34,0	8,5	M12
TMCMN-1×4		4	149,0	35,5		M16
TMCMN-2×3	7,5 - 9,5	3	134,5	38,5	10,5	M12
TMCMN-2×4		4	157,5	40,0		M16
TMCMN-3×3	9,5 - 12,0	3	139,5	39,5	13,2	M12
TMCMN-3×4		4	162,5	41,0		M16
TMCMN-4×3	12,0 - 15,0	3	147,5	41,5	16,0	M12
TMCMN-4×4		4	170,5	43,0		M16
TMCMN-5×3	14,5 - 19,5	3	152,5	42,5	21,0	M12
TMCMN-5×4		4	175,5	44,0		M16
TMCMN-6×3	19,5 - 25,0	3	158,5	42,5	26,0	M12
TMCMN-6×4		4	181,5	44,0		M16

When placing an order, please specify the order code and quantity. Dimensions (mm)

Order Code	D	D ₂	D ₃	H	I	Expansibility	Maximum Torque Nm
TN55-1 TN60-1 TN65-1 TN70-1	5,5 6,0 6,5 7,0	10,8	19,5	17	12	0,5	1,5
TN75-2 TN80-2 TN85-2 TN90-2	7,5 8,0 8,5 9,0						
TN95-3 TN100-3 TN105-3 TN110-3 TN115-3	9,5 10,0 10,5 11,0 11,5						
TN120-4 TN125-4 TN130-4 TN135-4 TN140-4 TN145-4	12,0 12,5 13,0 13,5 14,0 14,5						
TN145-5 TN150-5 TN155-5 TN160-5 TN165-5 TN170-5 TN175-5 TN180-5 TN185-5 TN190-5	14,5 15,0 15,5 16,0 16,5 17,0 17,5 18,0 18,5 19,0	26,8	38,0	32	30	0,5	23
TN195-6 TN200-6 TN205-6 TN210-6 TN215-6 TN220-6 TN225-6 TN230-6 TN235-6 TN240-6 TN245-6	19,5 20,0 20,5 21,0 21,5 22,0 22,5 23,0 23,5 24,0 24,5						

1) The expanding sleeve is shipped with the knurled ring fitted. Dimensions (mm)
When placing an order, please specify the order code and quantity.

Morse taper expanding Mandrels



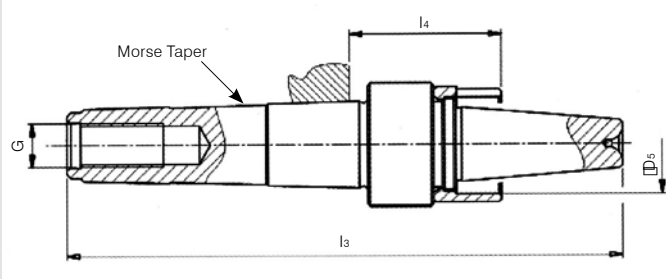
TMCMN

Expanding Mandrels TOBLER

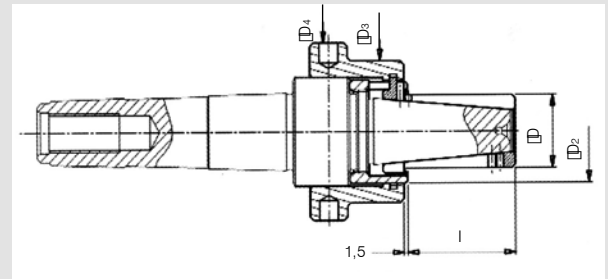
■ Clamping range Ø24.7 to 79,7 mm



■ ARBOR



■ EXPANDING SLEEVE (1)



Subject to technical changes.
For more detailed information, please ask our customer service.

Order Code	Workpiece Diameter Range	Morse Taper N°	l ₃	l ₄	D ₅	G
TMCMN-7×3	24,7 - 29,7	3	175,0	53,5	31,0	M12
TMCMN-7×4		4	198,0	55,0		M16
TMCMN-8×4	29,7 - 34,7	4	201,5	55,0	36,0	M16
TMCMN-9×4	34,7 - 39,7	4	208,0	55,0	41,0	M16
TMCMN-10×4	39,7 - 44,7	4	213,5	55,0	46,0	M16
TMCMN-11×4	44,7 - 54,7	4	237,0	60,0	55,5	M16
TMCMN-12×4	54,7 - 64,7	4	248,5	63,0	65,5	M16
TMCMN-13×4	64,7 - 79,7	4	261,5	65,0	83,0	M16

When placing an order, please specify the order code and quantity. Dimensions (mm)
 Ask for quotations for price and delivery of TMCMN-11 to TMCMN-13.

Order Code	D	D ₂	D ₃	D ₄	I	Expansibility	Maximum Torque Nm
TN247-7 TN257-7 TN267-7 TN277-7 TN287-7	24,7 25,7 26,7 27,7 28,7	36,8	54,0	69	42,5	1	80
TN297-8 TN307-8 TN317-8 TN327-8 TN337-8	29,7 30,7 31,7 32,7 33,7						
TN347-9 TN357-9 TN367-9 TN377-9 TN387-9	34,7 35,7 36,7 37,7 38,7						
TN397-10 TN407-10 TN417-10 TN427-10 TN437-10	39,7 40,7 41,7 42,7 43,7						
TN447-11 TN457-11 TN467-11 TN477-11 TN487-11 TN497-11 TN507-11 TN517-11 TN527-11 TN537-11	44,7 45,7 46,7 47,7 48,7 49,7 50,7 51,7 52,7 53,7						
TN547-12 TN557-12 TN567-12 TN577-12 TN587-12 TN597-12 TN607-12 TN617-12 TN627-12 TN637-12	54,7 55,7 56,7 57,7 58,7 59,7 60,7 61,7 62,7 63,7	71,8	93,0	107	85,0	1	250
TN647-13 TN657-13 TN667-13 TN677-13 TN687-13 TN697-13 TN707-13 TN717-13 TN727-13 TN737-13 TN747-13 TN757-13 TN767-13 TN777-13 TN787-13	64,7 65,7 66,7 67,7 68,7 69,7 70,7 71,7 72,7 73,7 74,7 75,7 76,7 77,7 78,7						

1) The expanding sleeve is shipped with the ring fitted. Dimensions (mm)
 When placing an order, please specify the order code and quantity.