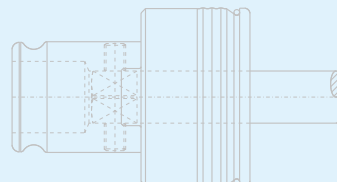
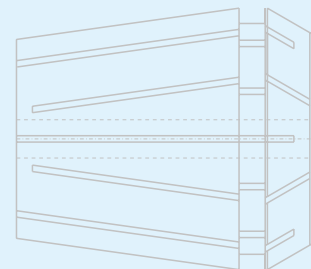
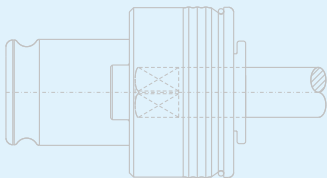
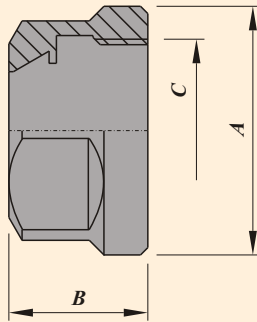


ACCESSORIES



HEXAGONAL NUT FOR 'ER' COLLET CHUCK

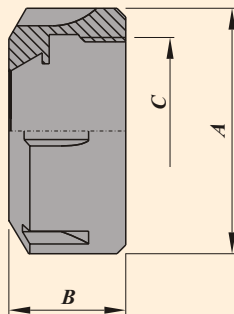
DIN 6499



TYPE	A	B	C	Spanner to be used
UM/ER 11	19.0	11.3	M 14 x 0.75	GS 17
UM/ER 16	28.0	17.50	M 22 x 1.50	GS 25
UM/ER 20	34.0	19.0	M 25 x 1.50	GS 30

SLOTTED NUT FOR 'ER' COLLET CHUCK

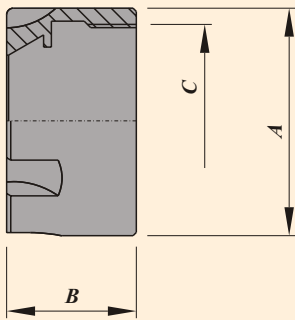
DIN 6499



TYPE	A	B	C	Spanner to be used
UM/ER 20	34.0	19.0	M 25 x 1.50	E 20
UM/ER 25	42.0	20.0	M 32 x 1.50	E 25
UM/ER 32	50.0	22.3	M 40 x 1.50	E 32
UM/ER 40	63.0	25.3	M 50 x 1.50	E 40
UM/ER 50	78.0	35.3	M 64 x 2.00	E 50

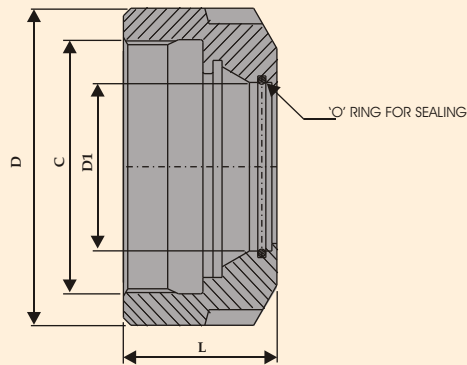
MINI NUT FOR 'ER' COLLET CHUCK

For minimum external diameter.



TYPE	A	B	C	Spanner to be used
UM/ER 8M	12.0	10.8	M 10 x 0.75	E 8M
UM/ER 11M	16.0	11.3	M 13 x 0.75	E 11M
UM/ER 16M	22.0	17.0	M 19 x 1.00	E 16M
UM/ER 20M	28.0	19.0	M 24 x 1.00	E 20M
UM/ER 25M	35.0	20.0	M 30 x 1.00	E 25M

SEALING NUT

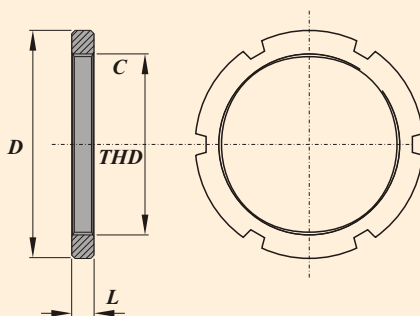


Type	L	D	D1	C
UM/ER 16S	22.50	28.00	13.00	M22X1.5
UM/ER 20S	24.00	34.00	16.00	M25X1.5
UM/ER 25S	25.00	42.00	21.00	M32X1.5
UM/ER 32S	27.50	50.00	27.00	M40X1.5
UM/ER 40S	30.50	63.00	33.50	M50X1.5
UM/ER 50S	42.40	78.00	43.50	M64X2

NOTE: Also available in MINI NUT type : ER 'M'

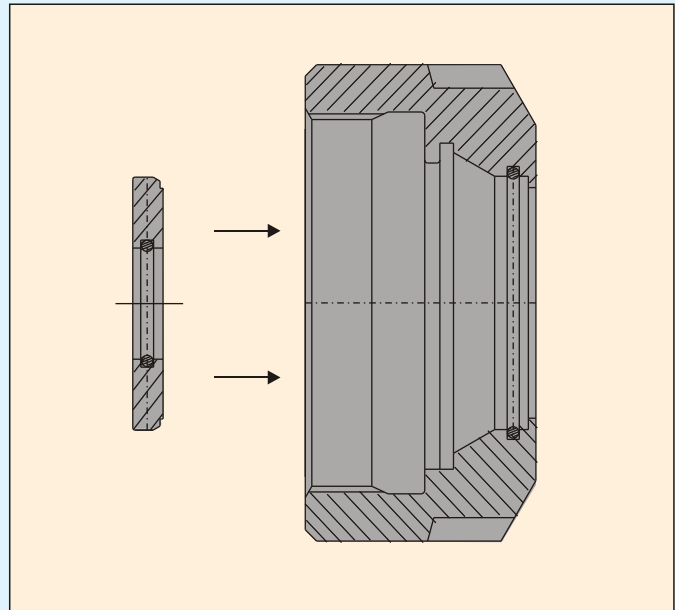
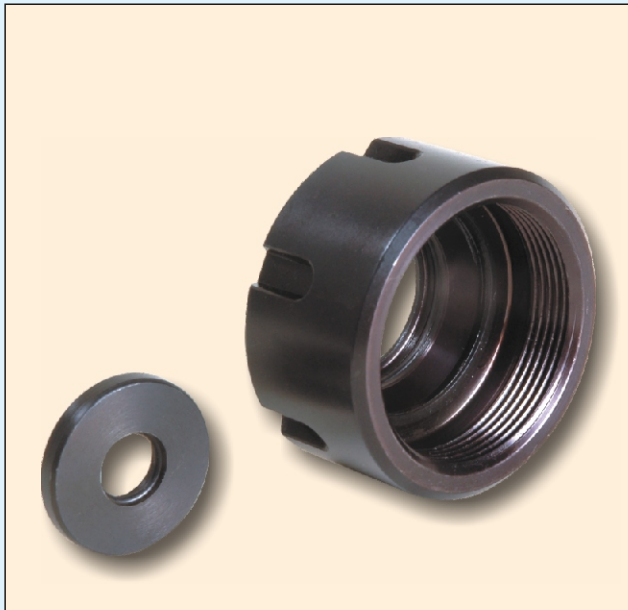
Note: For more information about Sealing Nuts And Sealing Disk refer Page no 57,58.

LOCK NUT



TYPE	L	D	C
UM/ER 16L	5	28	M 22 X 1.5
UM/ER 20L	5	34	M 25 X 1.5
UM/ER 25L	5	42	M 32 X 1.5
UM/ER 32L	5	50	M 40 X 1.5
UM/ER 40L	5	63	M 50 X 1.5

SEALING NUTS AND SEALING DISK

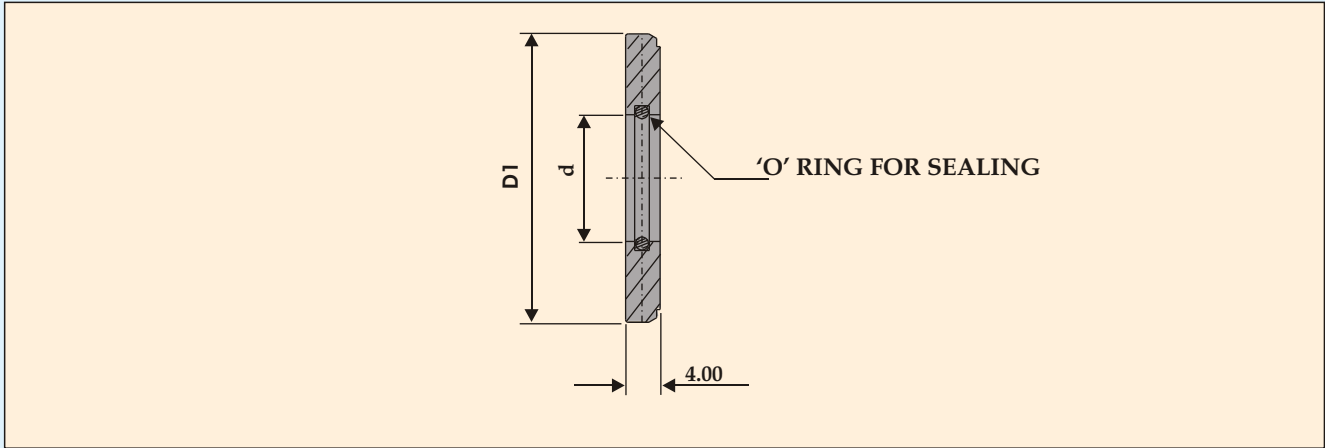


TECHNICAL INFORMATION :

Sealing Nuts along with Sealing Disk has a compact design with very short extension of damping nuts which gives the following benefits.

- 1) It protects against all kind of dirt and chips entering the slots of the collet.
- 2) Coolant through tools can be used, which gives improved cooling and lubrication of tools and hence increases the tool life.
- 3) Improved chip removal.
- 4) Sealing Disk are available from Dia.06 mm in range of 0.5mm. Hence easy changing of Sealing Disk according to required Application.
- 5) No need of expensive sealed collets. Regular collets are best Suitable.

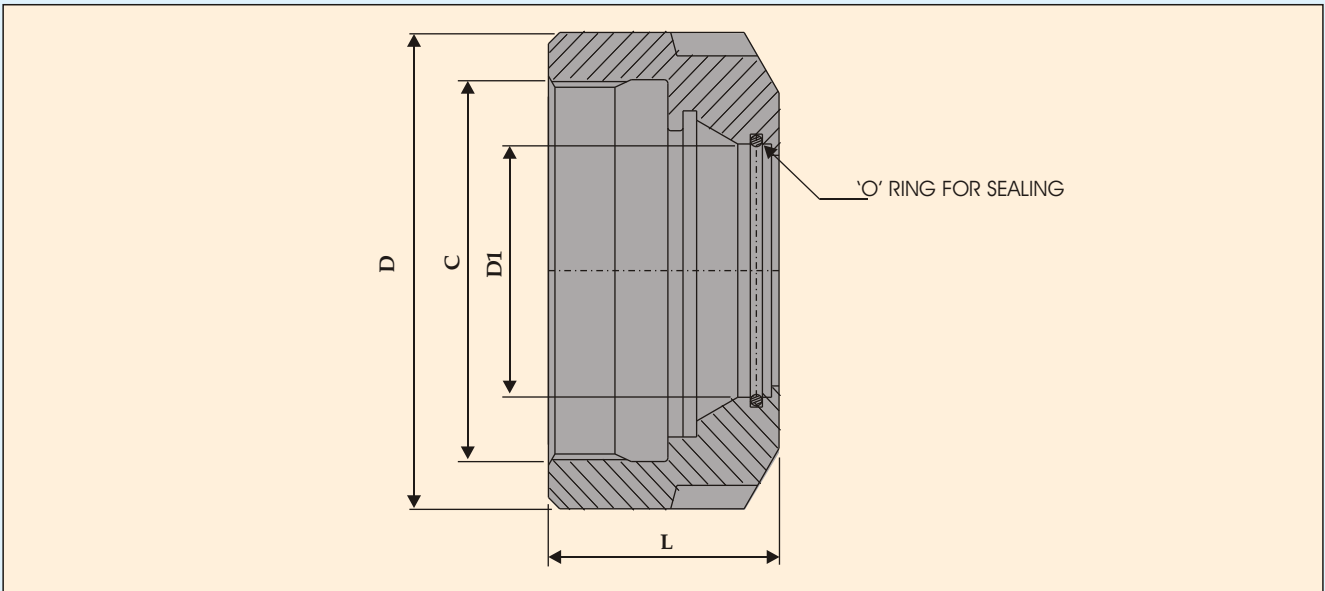
SEALING DISK



Type	D1	d (Sealing disk holding range in steps of 0.5mm)
ER 16	13.00	6-10
ER 20	16.00	6-13
ER 25	21.00	6-16
ER 32	27.00	6-20
ER 40	33.00	6-26
ER 50	43.50	10-34

Ordering Example :-
 Sealing Disk ER 16 : 8.0mm =2 Nos
 Sealing Disk ER 25 : 6.50mm =2 Nos

SEALING NUT



Type	L	D	D1	C
UM/ER 16S	22.50	28.00	13.00	M22X1.5
UM/ER 20S	24.00	34.00	16.00	M25X1.5
UM/ER 25S	25.00	42.00	21.00	M32X1.5
UM/ER 32S	27.50	50.00	27.00	M40X1.5
UM/ER 40S	30.50	63.00	33.50	M50X1.5
UM/ER 50S	42.40	78.00	43.50	M64X2

NOTE: Also available in MINI NUT type : ER 'M'

SPANNER TYPE : GS

TYPE	A	B	Suitable for Nut
GS 17	40	155	UM/ER 11
GS 25	53	210	UM/ER 16

SPANNER TYPE : E

TYPE	A	B	Suitable for Nut
E 20	55	180	UM/ER 20
E 25	65	210	UM/ER 25
E 32	75	250	UM/ER 32
E 40	90	290	UM/ER 40
E 50	110	350	UM/ER 50

SPANNEER TYPE : EM (MINI)

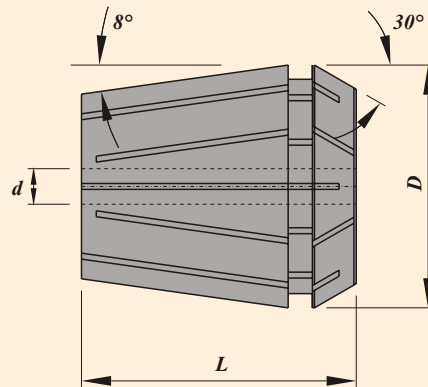
TYPE	A	B	Suitable for Nut
E 8M	12.4	70	ER 8M
E 11M	16.8	90	ER 11M
E 16M	22.5	110	ER 16M
E 20M	29.0	120	ER 20M
E 25M	36.0	130	ER 25M

SPANNER TYPE : HS

TYPE	B	Suitable for Nut
HS 25	160	UM/RDO 25
HS 35	228	UM/RDO 35
HS 44	280	UM/RDO 44

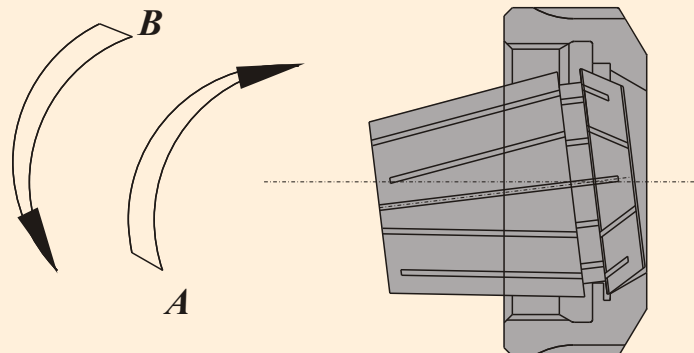
ER COLLET STANDARD

ER TYPE COLLETS DIN 6499



Collet Designation	Bore Range 'd'			Clamping Capacity per set		Each Collet collapse by mm	D mm	L mm
	From mm	To	in steps mm	From mm	To mm			
ER 8	0.5	5	0.5	0.5	5.0	0.5	8.5	13.5
ER 11	0.5	7	0.5	0.5	7.0	0.5	11.5	18.0
ER 16	0.5	10	1.0	0.5	10.0	1.0	17.0	27.0
ER 20	1.0	13	1.0	1.0	13.0	1.0	21.0	31.0
ER 25	1.0	16	1.0	1.0	16.0	1.0	26.0	35.0
ER 32	2.0	20	1.0	2.0	20.0	1.0	33.0	40.0
ER 40	3.0	26	1.0	3.0	26.0	1.0	41.0	46.0
ER 50	10.0	34	2.0	10.0	34.0	2.0	52.0	60.0

The collet must always be inserted into the nut before setting the tool into the collet. The collet is fitted inside the nut by applying slight pressure A. It is removed by applying B to the collet. Never tighten the chuck without a correct size tool shank being present in the collet. Failure to observe this guideline can result in collet breakage.

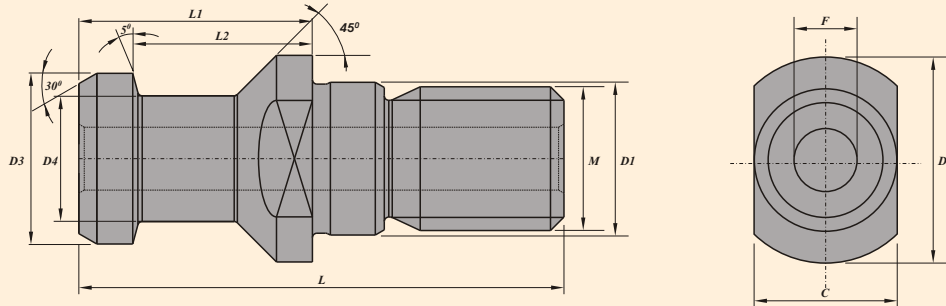


SEE EXTRACTION MARK ON FACE OF NUT FOR REFERENCE.

PULL STUDS

THROUGH COOLANT

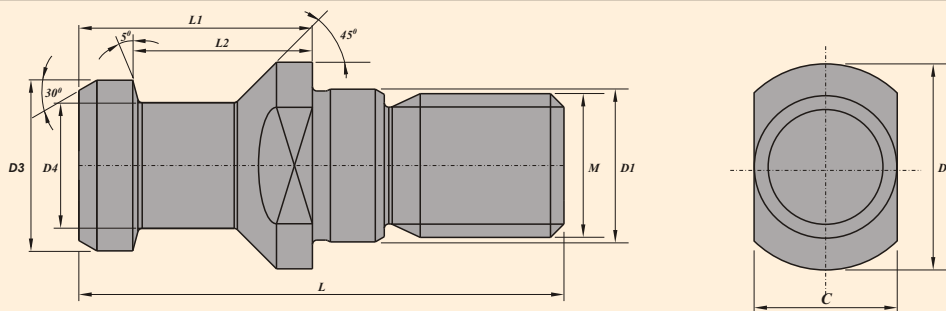
DIN 69872



ISO	M	D	D1	D3	D4	L	L1	L2	C	F
30	M12	17	13	13	9	44	24	19	14	3
40	M16	23	17	19	14	54	26	20	19	7
50	M24	36	25	28	21	74	34	25	30	11.5

WITHOUT THROUGH COOLANT

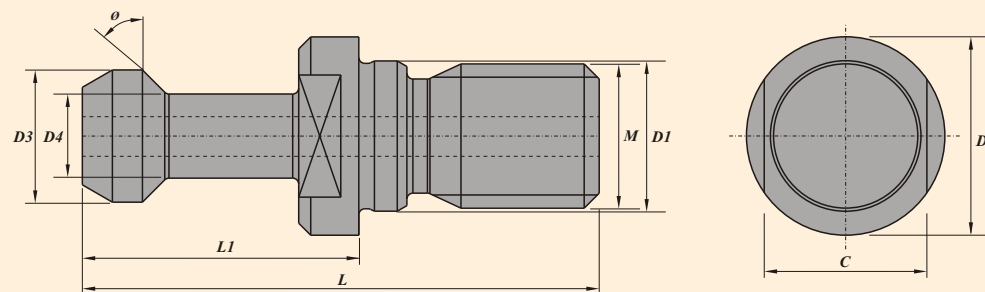
DIN 69872



ISO	M	D	D1	D3	D4	L	L1	L2	C
30	M12	17	13	13	9	44	24	19	14
40	M16	23	17	19	14	54	26	20	19
50	M24	36	25	28	21	74	34	25	30

THROUGH COOLANT

MAS-BT

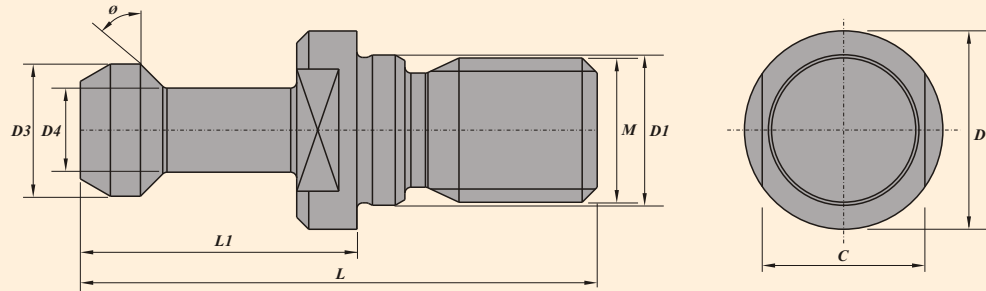


ISO	A	M	L1	L	D	D1	D3	D4	C
30	30	M12	23	43	16	12,5	11	7	13
30	45	M12	23	43	16	12,5	11	7	13
40	30	M16	35	60	23	17	15	10	19
40	45	M16	35	60	23	17	15	10	19
40	90	M16	35	60	23	17	15	10	19
50	30	M24	45	85	38	25	23	17	30
50	45	M24	45	85	38	25	23	17	30
50	90	M24	45	85	38	25	23	17	30

PULL STUDS

WITHOUT THROUGH COOLANT

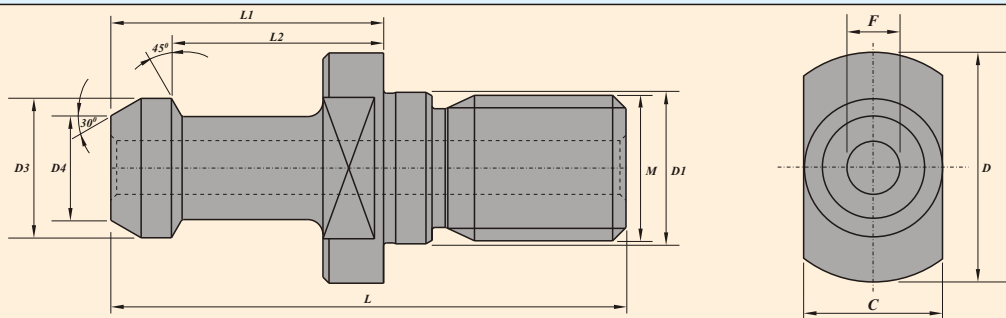
MAS-BT



ISO	A	M	L1	L	D	D1	D3	D4	C
30	30	M12	23	43	16	12,5	11	7	13
30	45	M12	23	43	16	12,5	11	7	13
40	30	M16	35	60	23	17	15	10	19
40	45	M16	35	60	23	17	15	10	19
40	90	M16	35	60	23	17	15	10	19
50	30	M24	45	85	38	25	23	17	30
50	45	M24	45	85	38	25	23	17	30
50	90	M24	45	85	38	25	23	17	30

THROUGH COOLANT

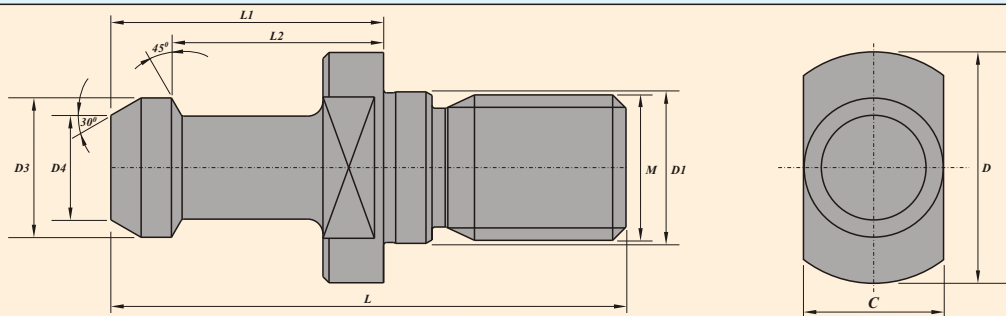
ISO 7388/2-B



ISO	M	D	D1	D3	D4	L	L1	L2	C	F
30	M12	16	13	12	8	44	24	19	14	3
40	M16	23	17	19	14	54	26	20	19	7
50	M24	36	25	28	21	74	34	25	30	11.5

WITHOUT THROUGH COOLANT

ISO 7388/2-B



ISO	M	D	D1	D3	D4	L	L1	L2	C
30	M12	16	13	12	8	44	24	19	14
40	M16	23	17	19	14	54	26	20	19
50	M24	36	25	28	21	74	34	25	30