

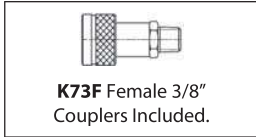
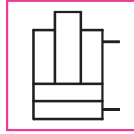
Double-Acting, Oil Return, High Tonnage Cylinders

COS Series

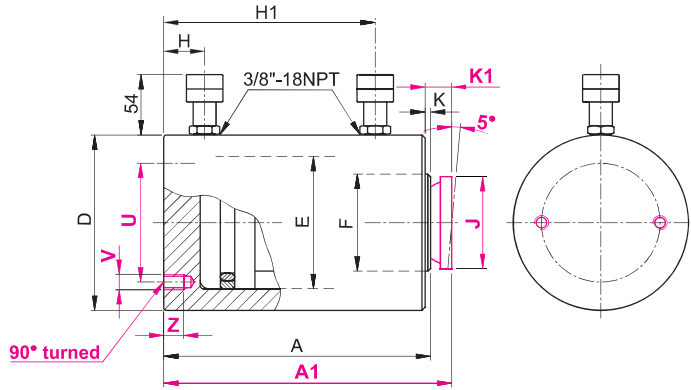
Capacity:
50 - 500 tonnes

Stroke:
25 - 300 mm

Maximum Operating Pressure:
700 bar (10,000 psi)



- Extremely solid robust cylinders.
- Concentric machined grooves on piston rod end improve load grip.
- Nitride anti-corrosive treatment provides excellent corrosion & wear resistance in harsh environments.
- Wiper seal prevents dirt penetration & extends cylinder life.
- Double-acting operation for fast retraction.
- Lifting eyelets equipped on all models.
- Suitable for use in civil & marine engineering industries for lifting, holding & lowering of heavy loads, pile or foundation testing etc.
- **'N' version** – Cylinder with end of stroke ring nut.
- **'F' version** – Cylinder with base mounting holes.
- **'T' version** – Cylinder with integrated tilt saddle.



All models can operate with off-centred load up to **8%** of their nominal capacity

Safety relief valve prevents damage in case of over-pressurisation in the retract chamber.



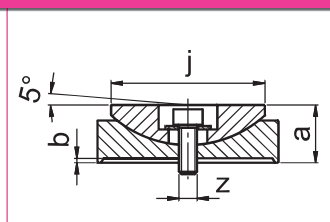
ZTT Tilt Saddle (Optional) – to reduce the effects of any off-centred loads. *Refer Details Below*

MODEL CODING

COS	50	N	###	#
Series	Pushing Force in tonne	N = Standard	Stroke in mm	F = with base mounting holes T = with integrated tilt saddle **

** Cylinders with non-standard force & stroke can be supplied upon request.

ACCESSORIES: ZTT TILT SADDLES



MODEL	For use with	a	b	j	z	kg
ZTT50	COS50N ###	25	1	68	M8	0,9
ZTT100	COS100N ###	34	2	88	M10	1,7
ZTT150	COS150N ###	45	3	118		3,4
ZTT200	COS200N ###	54	3	148		7,0
ZTT250	COS250N ###	58		158	9,5	
ZTT300	COS300N ###			11,3		
ZTT350	COS350N ###	71	3	196	M12	18,0
ZTT400	COS400N ###				20,7	
ZTT500	COS500N ###				23,8	

SELECTION CHART

Force (PUSH)	Force (PULL)	Stroke	Effective Area (PUSH)	Effective Area (PULL)	Oil Volume (PUSH)	Oil Volume (PULL)	MODEL	Closed Height	Closed Height with Integrated Tilt Saddle	Outside Dia.	Bore Dia.	Piston Rod Dia.	Coupler Height		Integrated Tilt Saddle Dia. ('T' Version)	Rod Protrusion	Rod Protrusion with Integrated Tilt Saddle ('T' Version)	PCD Mounting Holes ('F' Version)	Mounting Holes/ Holes Depth ('F' Version)	Weight			
								A	A1				D	E							F	H	H1
Tonnes (kN)		mm	cm ²	cm ²	cm ³	cm ³		mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
50 (496)	15 (144)	50	70,86	20,57	354	103	COS50N50	149	154	127	95	80	20	104	68	1	6	95	2xM12 15	14			
		100	70,86	20,57	709	206	COS50N100	199	204					154						18			
		150	70,86	20,57	1063	309	COS50N150	249	254					204						22			
100 (929)	38 (379)	50	132,71	54,14	664	271	COS100N50	171	178	175	130	100	28	124	88	2	9	130	2xM12 17	30			
		100	132,71	54,14	1327	542	COS100N100	221	228					174						38			
		150	132,71	54,14	1991	813	COS100N150	271	278					224						45			
		200	132,71	54,14	2655	1084	COS100N200	321	328					274						52			
150 (1407)	62 (616)	25	201	88	503	220	COS150N25	167	176	213	160	120	30	106	118	3	12	130	4xM12 17	45			
		50	201	88	1005	440	COS150N50	192	201					131						50			
		100	201	88	2011	880	COS150N100	242	251					181						61			
		150	201	88	3016	1319	COS150N150	292	301					231						71			
		200	201	88	4021	1759	COS150N200	342	351					281						82			
		250	201	88	5027	2199	COS150N250	392	401					331						93			
200 (1984)	76 (748)	25	283,43	106,86	709	267	COS200N25	181	190	252	190	150	32	117	148	3	12	140	4xM16 20	69			
		50	283,43	106,86	1418	534	COS200N50	206	215					142						76			
		100	283,43	106,86	2835	1068	COS200N100	256	265					192						92			
		150	283,43	106,86	4253	1602	COS200N150	306	315					242						107			
		200	283,43	106,86	5671	2136	COS200N200	356	365					292						123			
		250	283,43	106,86	7088	2670	COS200N250	406	415					342						138			
		300	283,43	106,86	8506	3204	COS200N300	456	465					392						153			
250 (2424)	85 (835)	25	346,29	119,29	866	298	COS250N25	197	206	280	210	170	34	128	158	3	12	150	4xM16 20	92			
		50	346,29	119,29	1732	597	COS250N50	222	231					153						102			
		100	346,29	119,29	3464	1194	COS250N100	272	281					203						122			
		150	346,29	119,29	5195	1791	COS250N150	322	331					253						141			
		200	346,29	119,29	6927	2388	COS250N200	372	381					303						161			
		250	346,29	119,29	8659	2985	COS250N250	422	431					353						180			
		300	346,29	119,29	10391	3581	COS250N300	472	481					403						200			
300 (2908)	94 (923)	25	415,43	131,86	1039	330	COS300N25	203	212	305	230	190	38	130	158	3	12	170	4xM16 20	113			
		50	415,43	131,86	2077	660	COS300N50	228	237					155						125			
		100	415,43	131,86	4155	1319	COS300N100	278	287					205						148			
		150	415,43	131,86	6232	1979	COS300N150	328	337					255						172			
		200	415,43	131,86	8310	2639	COS300N200	378	387					305						195			
		250	415,43	131,86	10387	3299	COS300N250	428	437					355						219			
		300	415,43	131,86	12464	3958	COS300N300	478	487					405						242			
350 (3436)	103 (1011)	25	490,86	144,43	1227	361	COS350N25	210	222	332	250	210	39	132	196	3	15	200	4xM16 20	138			
		50	490,86	144,43	2454	723	COS350N50	235	247					157						153			
		100	490,86	144,43	4909	1445	COS350N100	285	297					207						183			
		150	490,86	144,43	7363	2168	COS350N150	335	347					257						213			
		200	490,86	144,43	9817	2890	COS350N200	385	397					307						242			
		250	490,86	144,43	12272	3613	COS350N250	435	447					357						272			
		300	490,86	144,43	14726	4335	COS350N300	485	497					407						302			
400 (4008)	112 (1099)	25	572,57	157	1431	393	COS400N25	217	229	356	270	230	42	135	196	3	15	230	4xM16 20	165			
		50	572,57	157	2863	785	COS400N50	242	254					160						182			
		100	572,57	157	5726	1571	COS400N100	292	304					210						215			
		150	572,57	157	8588	2356	COS400N150	342	354					260						248			
		200	572,57	157	11451	3142	COS400N200	392	404					310						281			
		250	572,57	157	14314	3927	COS400N250	442	454					360						313			
		300	572,57	157	17177	4712	COS400N300	492	504					410						346			
500 (4948)	154 (1512)	25	706,86	216	1767	540	COS500N25	225	237	396	300	250	50	140	196	3	15	250	4xM16 20	212			
		50	706,86	216	3534	1080	COS500N50	250	262					165						232			
		100	706,86	216	7069	2160	COS500N100	300	312					215						271			
		150	706,86	216	10603	3240	COS500N150	350	362					265						312			
		200	706,86	216	14137	4320	COS500N200	400	412					315						352			
		250	706,86	216	17671	5400	COS500N250	450	462					365						391			
		300	706,86	216	21206	6480	COS500N300	500	512					415						431			

Nominal value shown in 'Tonnes', see kN for the exact force @ 700 bar,