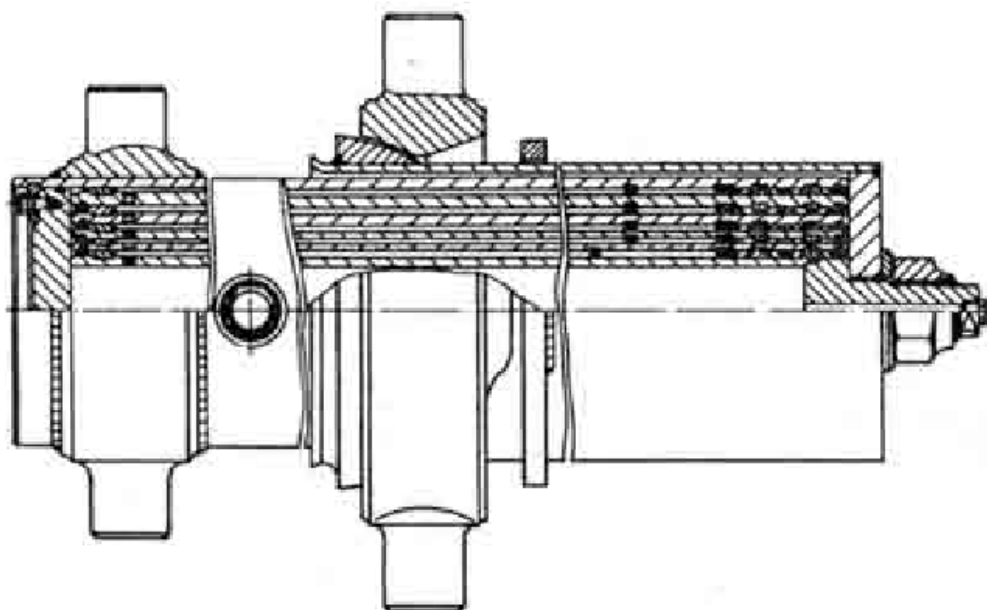




ENKELWERKENDE TELESCOOP CILINDERS

SINGLE ACTING TELESCOPIC CYLINDERS



dvaD
PRODUCTION

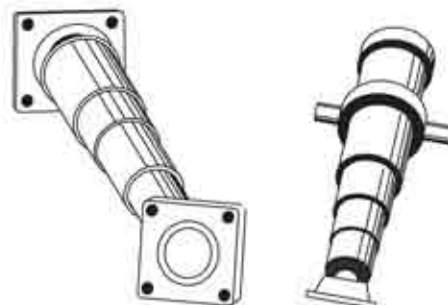
Dutch Hydraulic Consultants BV	Tel. : +31-(0)6-83695868
Achterweg ZZ 8	Mail : info@dhc-hydraulic.nl
3216 AB Abbenbroek	Web : www.dhc-hydraulic.nl
Nederland	

Telescopic cylinders

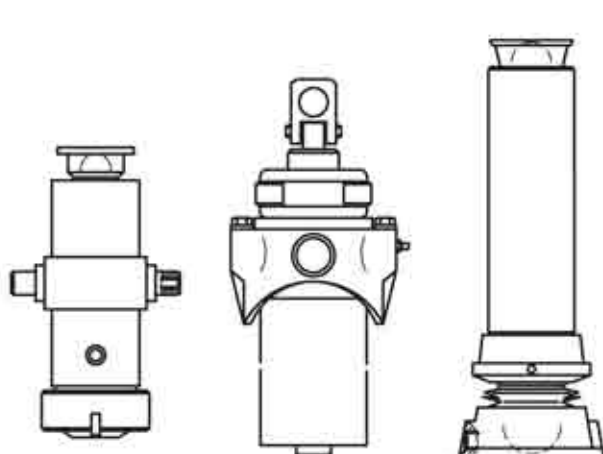
With trunnions or swivel supports

DESCRIPTION

- The telescopic hydraulic cylinders are mainly designed for installation in vehicles for tipping purposes.
- This is a special cylinder with telescopic pistons. The telescopic cylinders have relatively small installation space for long strokes.
- Design variants: with trunnions, cardan suspension and hinged swivel supports.
- Cylinders are fabricated of high grade steel tubes.
- Piston rods (telescops) are made of hardened steel, while sliding surfaces are hard-chromium plated.
- High-quality sealing material contributes to long service life and high reliability under all service duties.



CROSSECTION - MODE OF OPERATION



D

TECHNICAL DATA

Symbol



GENERAL

Line connection	threaded ports
Loading direction	along the cylinders axis
Mounting position	vertical
Ambient temperature [°C]	up to +50

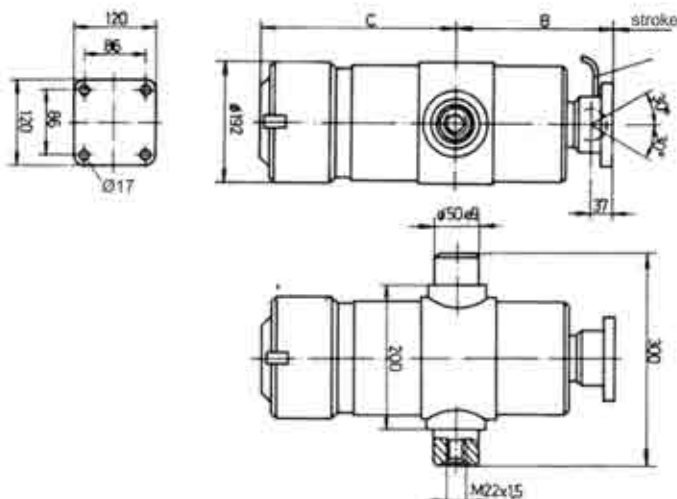
HYDRAULIC

Nominal pressure [bar]	160 or 200
Force, stroke	given in following tables
Working fluid	mineral oil
	viscosity [mmVs]
	temperature [°C]
	10 to 400
	-20 to +70

Telescopic cylinders

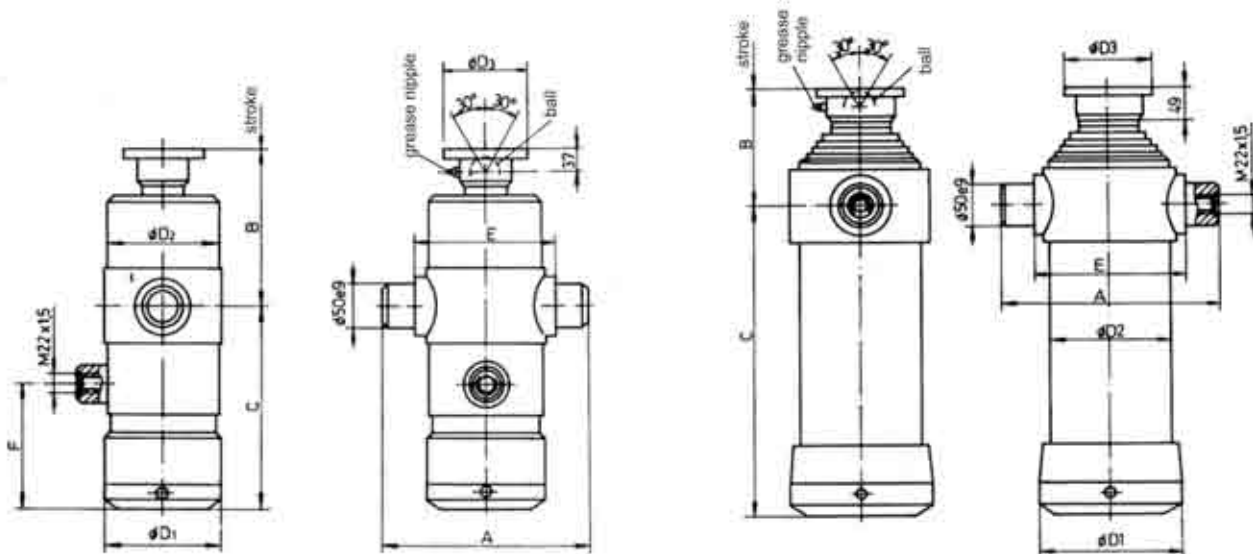
With trunnions or swivel supports

MOUNTING DRAWINGS



Designation	Dimen.[mm]		Stroke [mm]	Working diameters [mm]					Force [kN]	Working pressure [bar]	Displa- cement [l]	Mass [kg]
	B	C		135	112	92	75	60				
73-29400	300	260	1480						140	160	13,7	87
73-2900/1	280	430	2000								23,6	131
73-34800	280	325	1660						140		15,4	93
73-34900	300	190	1200								11,7	80
73-72800	197	210	735						60		4	29

It is designed for single side tipping (in combination with the cardan joint it can be also used for 3-side tipping).

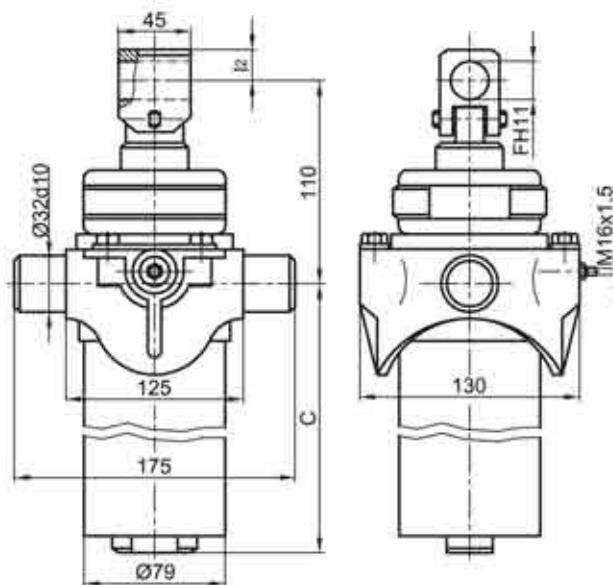


Designation	Dimensions [mm]							Stroke [mm]	Working diameters [mm]				Force [kN]	Working pressure [bar]	Displa- cement [l]	Mass [kg]
	A	B	C	D ₁	D ₂	D ₃	F		112	92	75	60				
73-21 8000	240	120	255	138	145	110	160	670					60	160	4	
73-218100	260	160	410	165	164	120	180	1600					80		10	

It is designed for single side tipping (in combination with the cardan joint it can be also used for 3-side tipping).

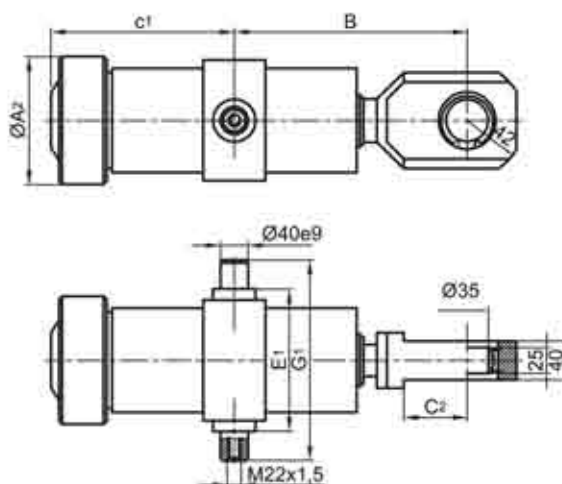
Telescopic cylinders

With trunnions or swivel supports



Designation	Dim. [mm]		Stroke [mm]	Working diameters [mm]				Force [kN]	Working pressure [bar]	Displacement [l]	Mass [kg]
	C	F		64	52	60	52				
40-700 A	301	25	520					52 34	160	1,6	14,4
40-700/2	281	20	500					39 26	120	1,5	13,7

It is designed for 3-side tipping.

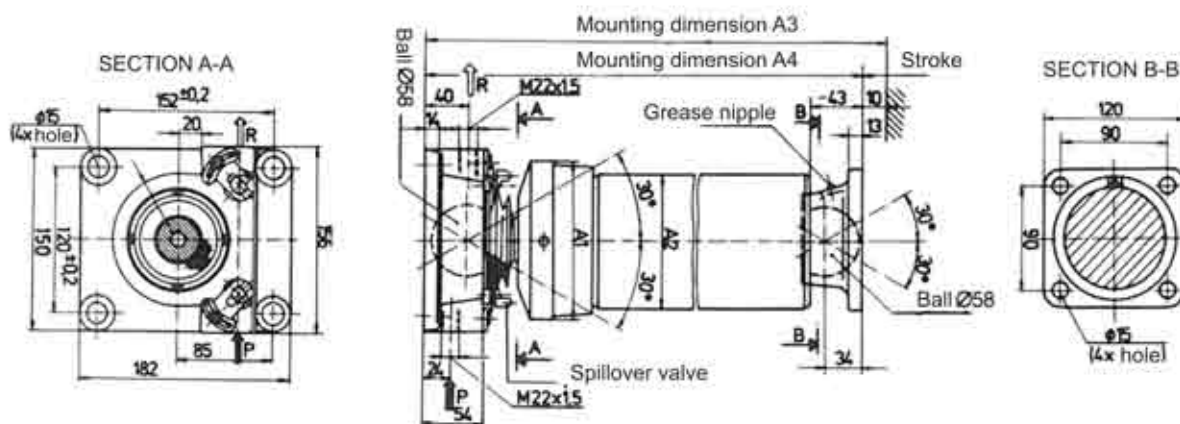


Designation	Dimensions [mm]							Stroke [mm]	Working diameters [mm]				Force [kN]	Working pressure [bar]	Displacement [l]	Mass [kg]
	A ₁	A ₂	B	C ₁	C ₂	E ₁	G ₁		112	92	75	60				
73-28900	140	165	180	200	45	180	260	990					80 70 45	160	5,8	44,0
73-29000			180	190	40	160	240	735					60			
73-30400	120	138	250	180	45	195	275	880					45			
73-32600/1			180	250											4,3	35,0

It is designed for one-side tipping, although it can be used in combination with cardan joint, for 3-side tipping as well

Telescopic cylinders

With trunnions or swivel supports



Designation	Dimension [mm]				Stroke [mm]	Working diameters [mm]				Force [kN]	Working pressure [bar]	Displacement [l]	Mass [kg]
	ØA1	ØA2	ØA3	ØA4		112	92	75	60				
25-100M	115	138	473	463	735					50	160	4,0	35,5
										45			
26-100M	138	165	475	465	990					80		6,5	46,0
										70			
										45			

It is designed for 3-side tipping.



Designation	Dimensions [mm]				Stroke [mm]	Working diameters [mm]				Force [kN]	Working pressure [bar]	Displacement [l]	Mass [kg]
	FA1	FA2	A3	A4		112	92	75	60				
25-500M	138	115	473	463	735					50	160	3,9	33
										45			
26-400M	165	138	483	473	765					80		4,9	60
										70			

Connecting port position:

- for cylinder 25-500M = opposite of the grease nipple
- for cylinder 25-400M = on the grease nipple side

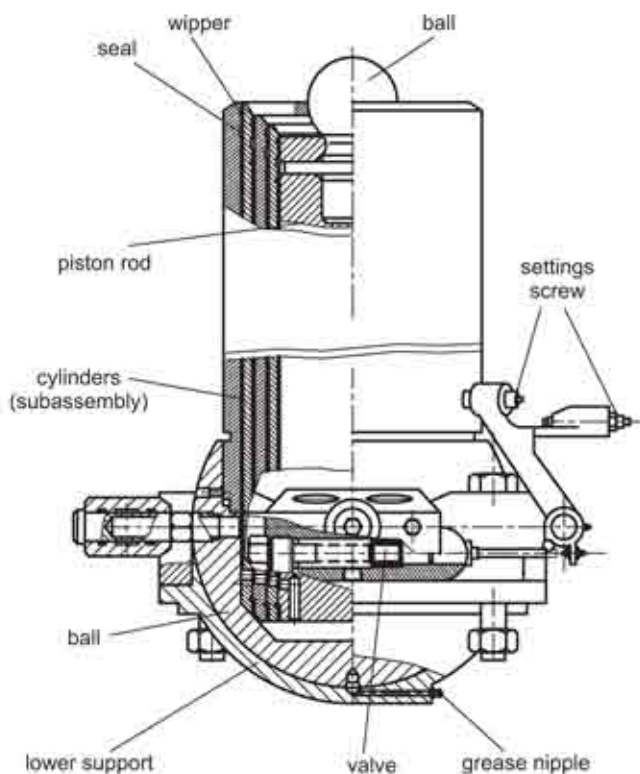
It is designed for 3-side tipping.

Telescopic cylinders

With swivel supports

DESCRIPTION

- The telescopic hydraulic cylinders are mainly designed for installation in vehicles for tipping purposes.
- This is a special cylinder with telescopic pistons. The telescopic cylinders have relatively small installation space for long strokes.
- Design: with swivel supports and spillover valve for cushioning stop at ultimate working position.



- Cylinders are fabricated of high grade steel tubes.
- Piston rods (telescopes) are made of hardened steel, while slide surfaces are hard-chromium plated.
- High-quality sealing material contributes to long service life and high reliability under all service duties.
- The cylinders are designed for 3-side tipping



D

TECHNICAL DATA

Symbol



GENERAL

Line connection	threaded ports
Loading direction	along the cylinder axis
Mounting position	vertical
Ambient temperature [°C]	up to +50
Mass [kg]	see mounting drawings

HYDRAULIC

Nominal pressure [bar]		200
Force, stroke		see mounting drawings
Working fluid	mineral oil	
	viscosity [mm ² /s]	10 to 400
	temperature [°C]	-20 to +80

DESIGNATION

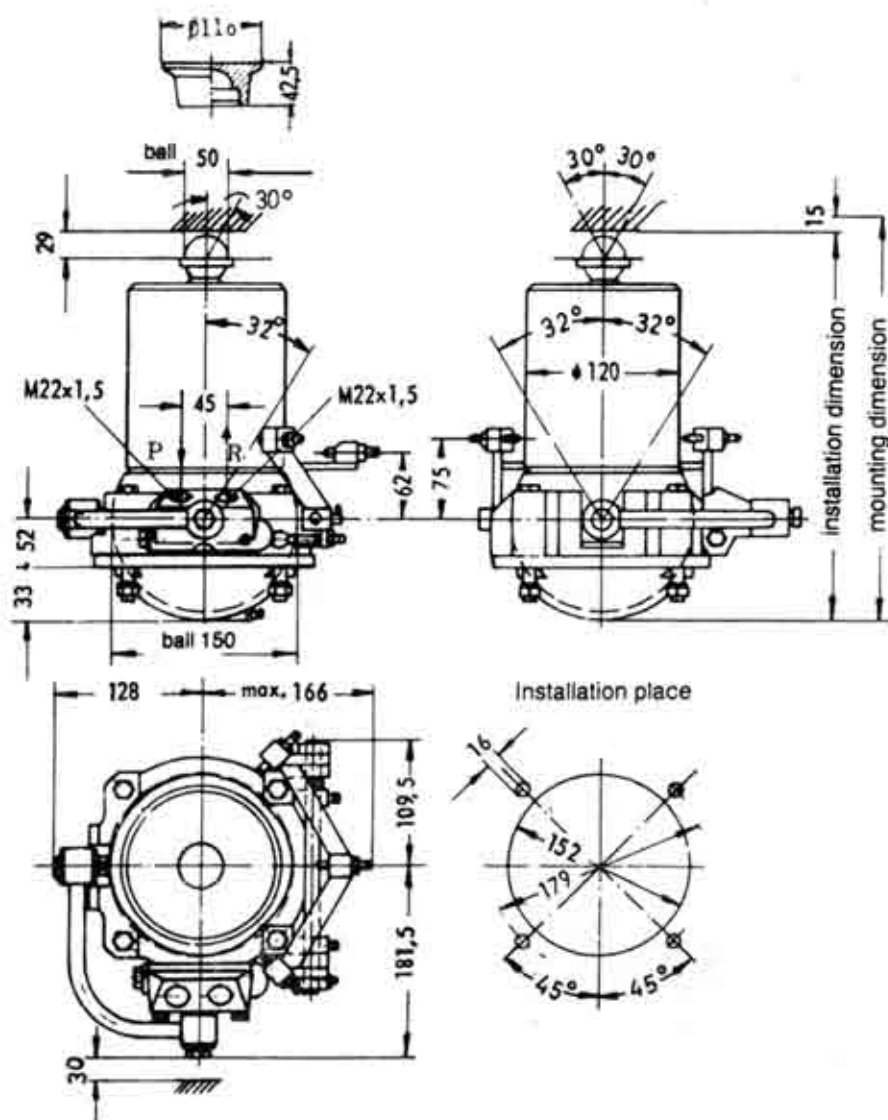
- The cylinder is to be ordered according to the designation from the table.
- Upper support is to be ordered separately with reference to number 73-142520/1.

Telescopic cylinders

With swivel supports

MOUNTING DRAWINGS

Upper support

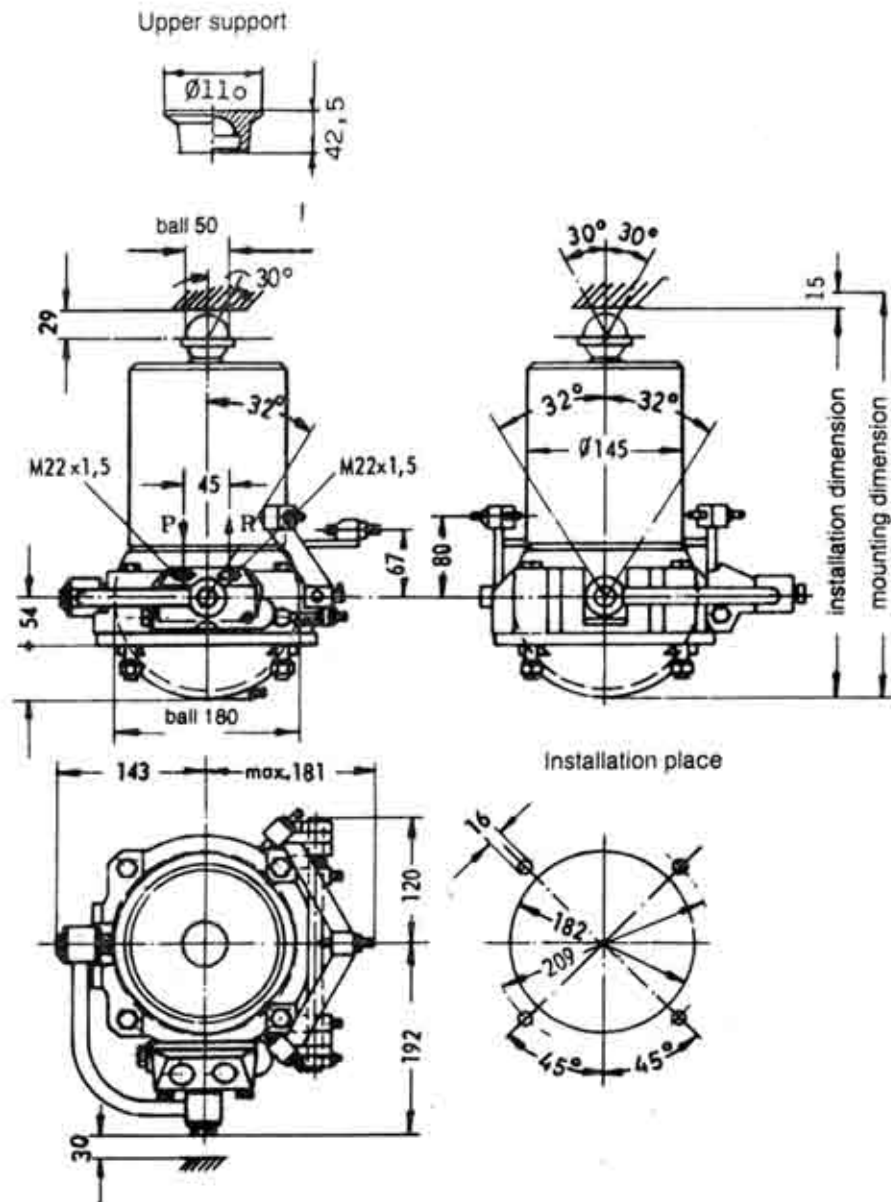


Designation	Installation dim. [mm]	Stroke [mm]	Working diameters [mm]						Forces [kN]	Displac. [l]	Mass [kg]
			171	143	118	97	78	60			
97/78/60x575	367	575							80		
97/78/60x665	397	665									
73-150600	427	755								4,45	
97/78/60x845	457	845									
73-144000	497	965							56,5	5,7	
73-150700	537	1085								6,35	
97/78/60x1205	577	1205									
97/78/60x1325	617	1325									
97/78/60x1445	657	1445									
97/78/60x1565	697	1565									
97/78/60x1685	737	1685									
97/78/60x1805	777	1805									

Upper support: 73 -142520/1

Telescopic cylinders

With swivel supports

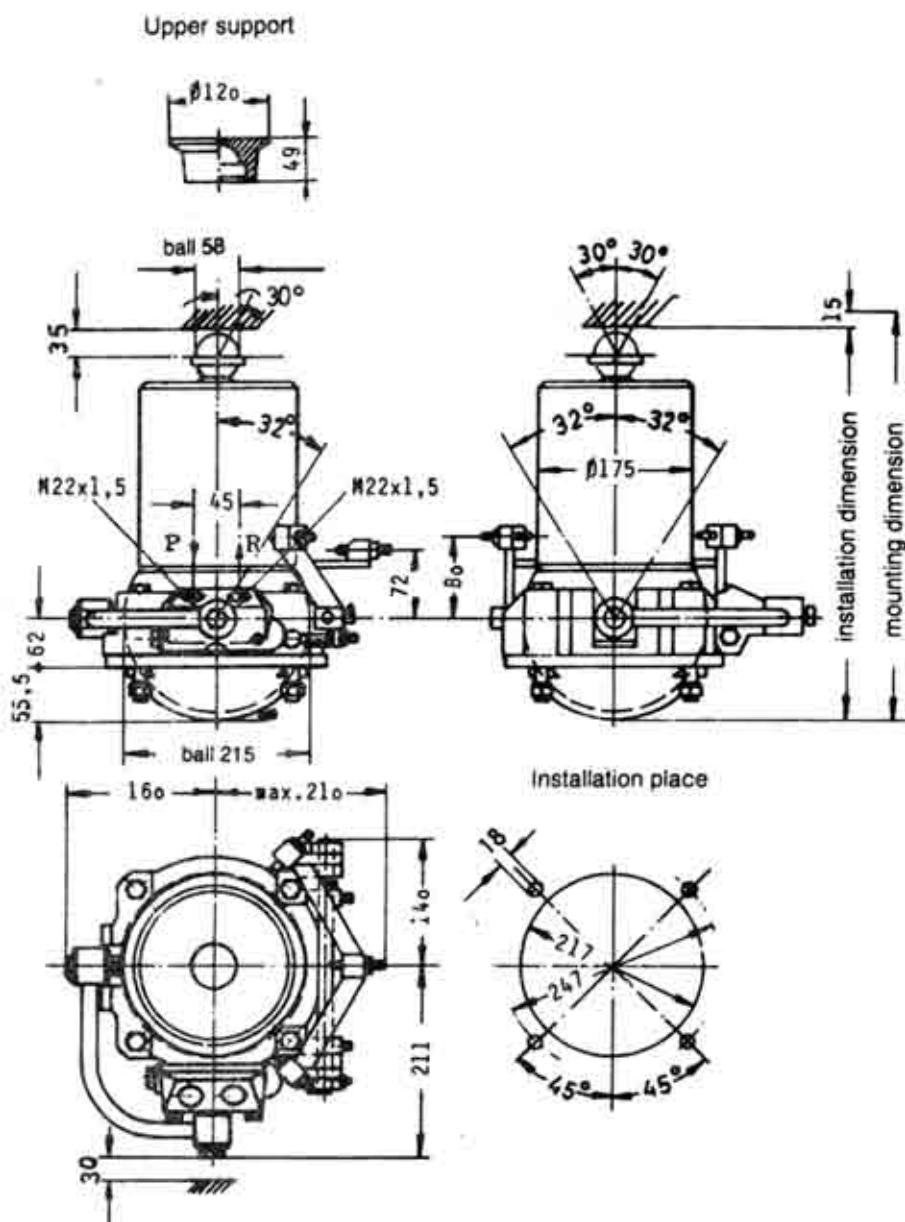


Designation	Installation dim. [mm]	Stroke [mm]	Working diameters [mm]						Forces [kN]	Displac. [l]	Mass [kg]
			171	143	118	97	78	60			
118/97/78/60x773	368	773									
118/97/78/60x893	398	893									
118/97/60x1013	428	1013									
118/97/78/60x1133	458	1133							100		
73-142500	498	1293							95,6	9,63	100,00
118/97/78/60x1453	538	1453							56,5		
73-1 55300	578	1613								11,95	
118/97/78/60x1773	618	1773									
118/97/78/60x1933	658	1933									
118/97/78/60x2093	698	2093									
146-7300	738	2253									
118/97/78/60x2413	778	2413									

Upper support: 73-142520/1

Telescopic cylinders

With swivel supports

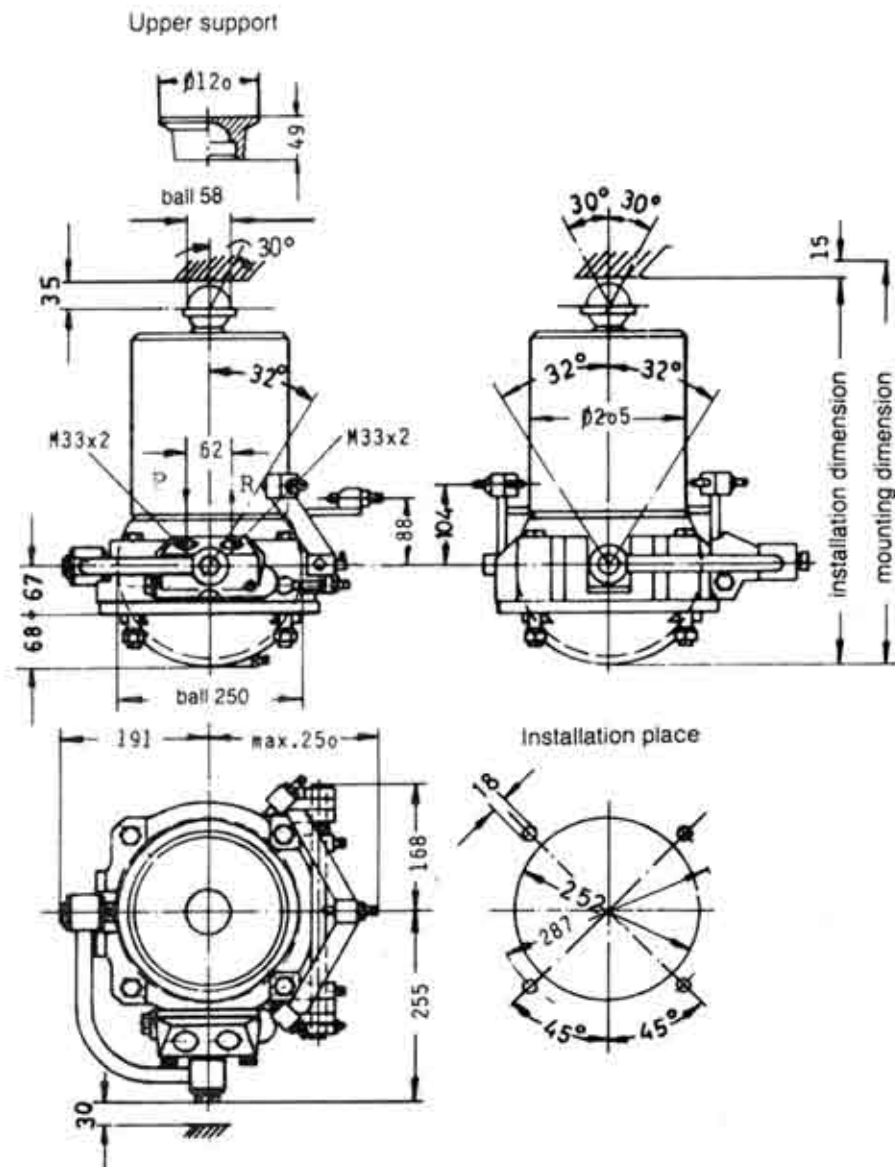


Designation	Installation dim. [mm]	Stroke [mm]	Working diameters [mm]						Forces [kN]	Displac. [l]	Mass [kg]
			171	143	118	97	78	60			
143/118/97/78x889	385	779									
143/118/97/78x899	415	899									
143/118/97/78x1019	445	1019							160		
73-198300	475	1139								12,9	
73-167900	515	1299							147,9	14,45	123,7
143/118/97/78x1459	555	1459									
143/118/97/78x1619	595	1619							95,5		
143/118/97/78x1779	635	1779									
143/118/97/78x1939	675	1939									
143/118/97/78x2099	715	2099									
149/119/07/78x2259	755	2259									
143/118/97/78x2419	795	2419									

Upper support: 25 -174/1

Telescopic cylinders

With swivel supports



Designation	Installation dim. [mm]	Stroke [mm]	Working diameters [mm]						Forces [kN]	Displac. [l]	Mass [kg]
			171	143	118	97	78	60			
171/143/118/97/78x985	383	985									
171/143/118/97/78x1135	413	1135									
171/143/118/97/78x1285	443	1285							200		
73-140000	473	1435							148	20,3	124,5
73-154500	513	1635							95,5	23,2	132,5
146-9800	553	1835									
73-198200	593	2035								27,2	
171/143/118/97/78x2235	633	2235									
171/143/118/97/78 X 2435	673	2435									
171/1 43/1 1 8/97/78 x 2635	713	2635									
73-150200	753	2835								40,2	180,5
171/1 43/1 1 8/97/78 X 3035	793	3035									
146-6100	857	3253								46	197,5

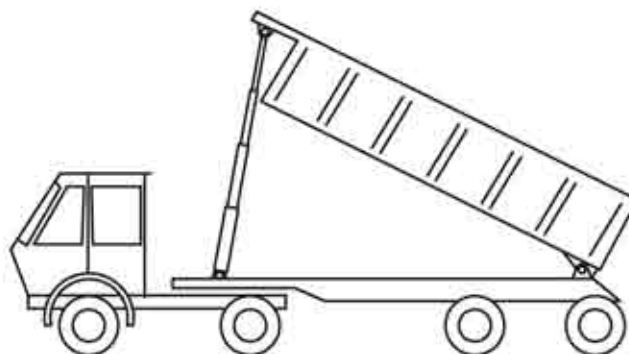
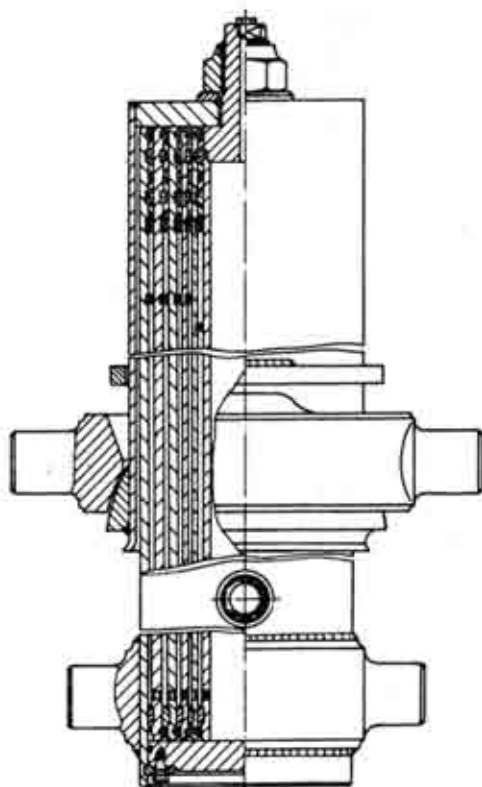
Upper support: 25-174/1

Telescopic cylinders

Long-stroke

DESCRIPTION

- Special construction of cylinders with big ratio between extended length of cylinder and piston diameter.
- It is mainly designed for installation in vehicles for tipping purposes.



- Robust construction.
- Cylinders are fabricated of high-grade steel.
- Piston rods (telescopes) are made of hardened steel, while slide surfaces are hard-chromium plated.
- High-quality sealing material contributes to long service life and high reliability under all service duties.
- Variety of installing forms, suspension modes and operation directions.

TECHNICAL DATA

Symbol



GENERAL

Line connections	threaded ports
Loading direction	along the cylinder axis
Mounting position	vertical
Ambient temperature [°C]	up to +50
Mass [kg]	see mounting drawings

HYDRAULIC

Nominal pressure [bar]	see mounting drawings	
Force, stroke	see mounting drawings	
Working fluid	mineral oil	
	viscosity [mm ² /s]	10 to 400
	temperature [°C]	-20 to +80

DESIGNATION

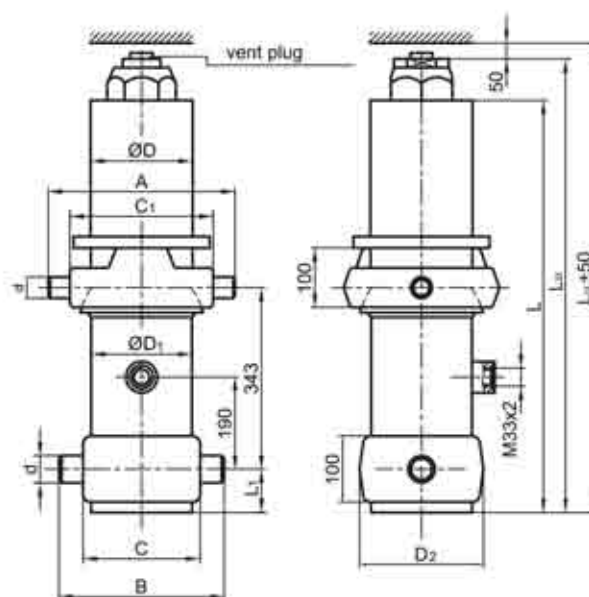
The cylinders are to be ordered according to the designations from the tables.

Telescopic cylinders

Long-stroke



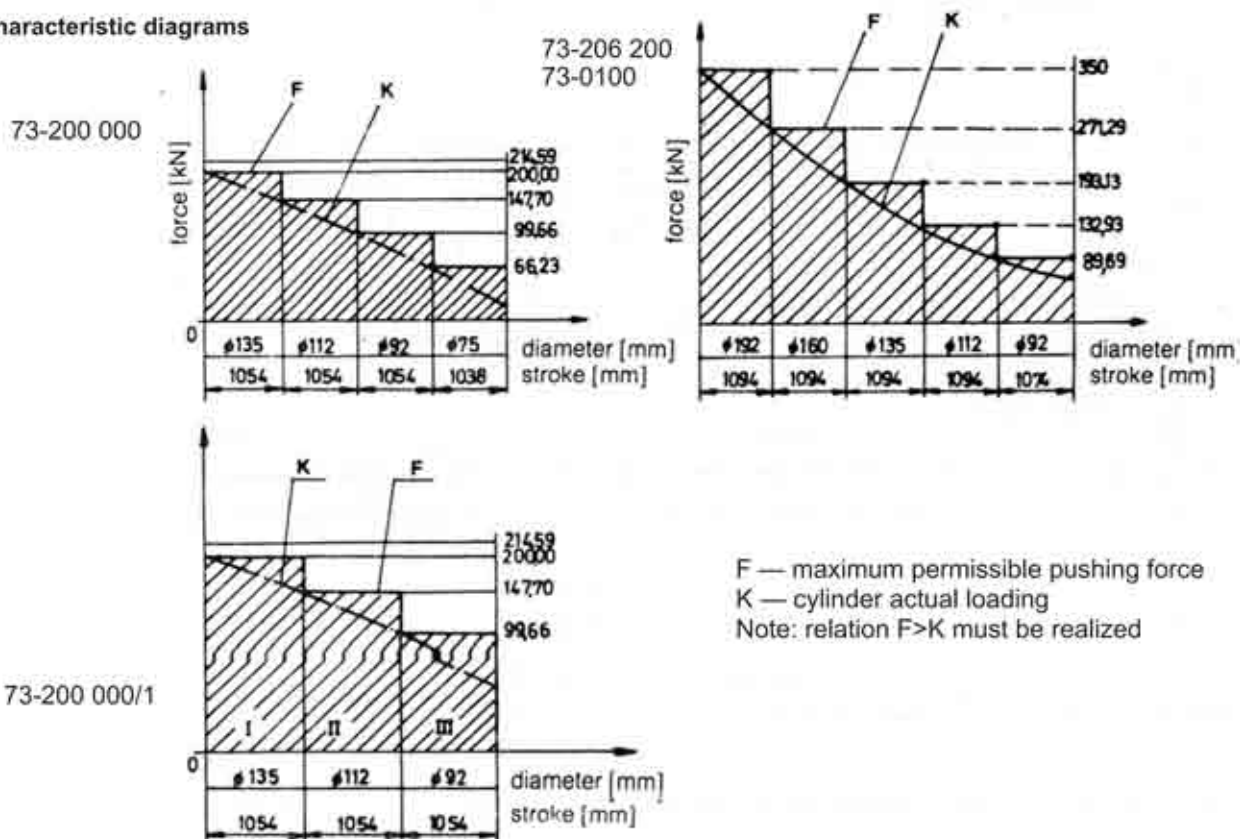
MOUNTING DRAWINGS



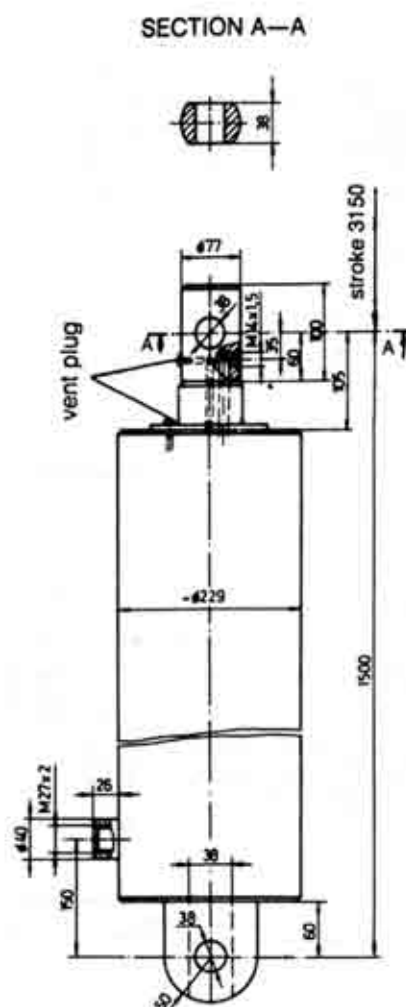
Designation	Working pressure [bar]	No. of stages	Displacement [l]	Mass [kg]
73-200 000	150	4	41	
73-200 000/1		3	36	
73-206 200	135	5	97	
73-0100		5	125	

Designation	Lu	H	A	B	C	C ₁	D	D ₁	D ₂	D ₃	d	L	L ₁
73-200 000	1401	4200	400	340	200	260	190	160	190	250	50	1315	70
73-200 000/1		3162											
73-206 200	1466	5450	480	385	240	340	241	219	235	330	60	1380	90
73-0100	1937	6250											

Characteristic diagrams

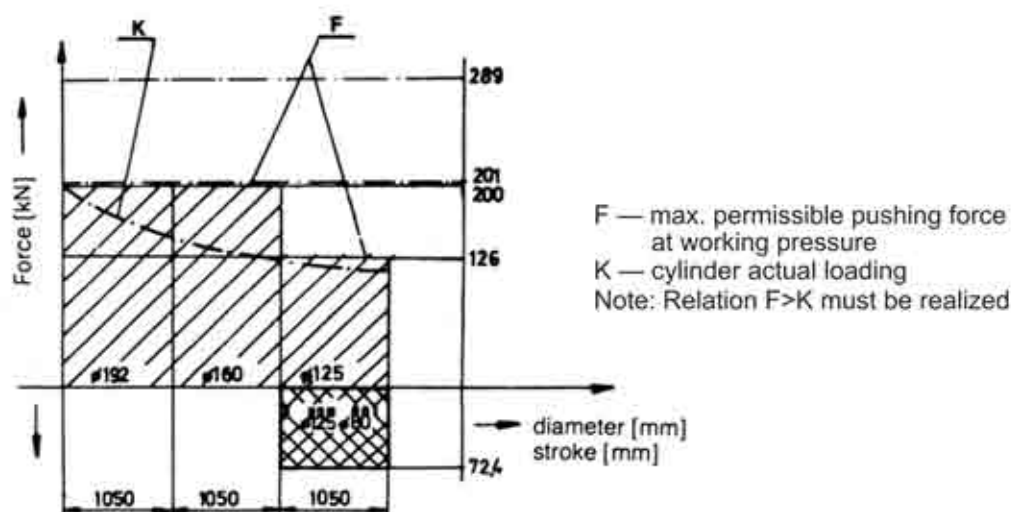


Long-stroke



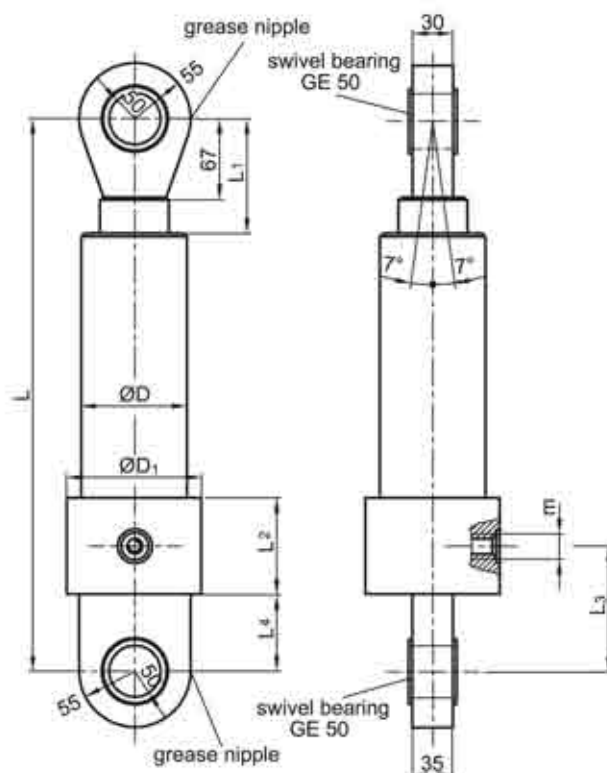
Designation	Working pressure [bar]	No. of stages	Displacement (l)	Mass [kg]
146-0900	100	3	68	

Characteristic diagrams



Telescopic cylinders

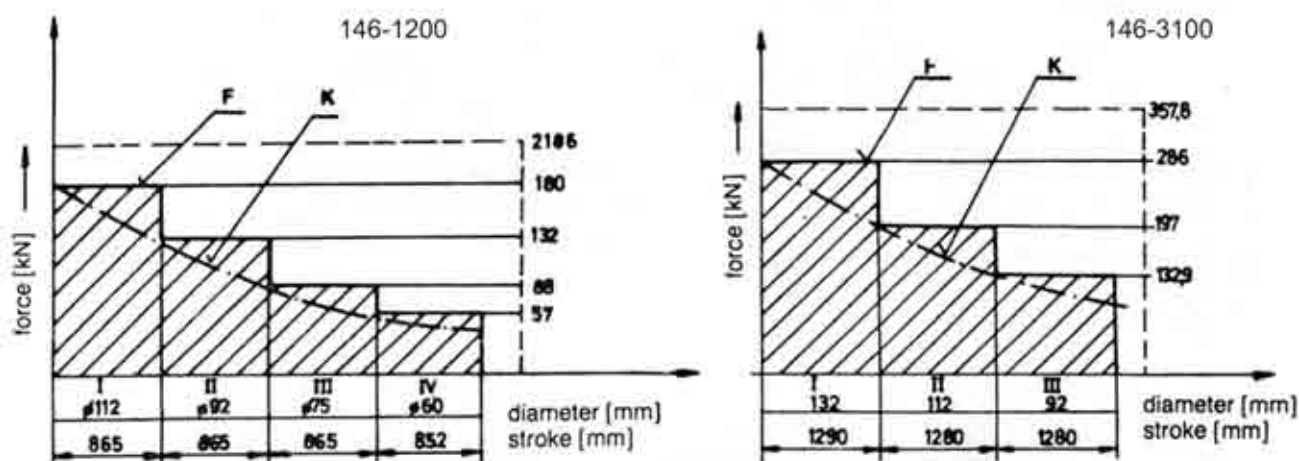
Long-stroke



Designation	Working pressure [bar]	No. of stages	Displacement [l]	Mass [kg]
146-1200	200	4	23	
146-3100	250	3	30	

Designation	ØD	ØD ₁	L	H	L ₁	L ₂	L ₃	L ₄	m
146-1200	146	152	1230	3447	100	90	88	58	M27x2
146-3100	159	175	1800	3850	115	115	92	57	M33x2

Characteristic diagrams:



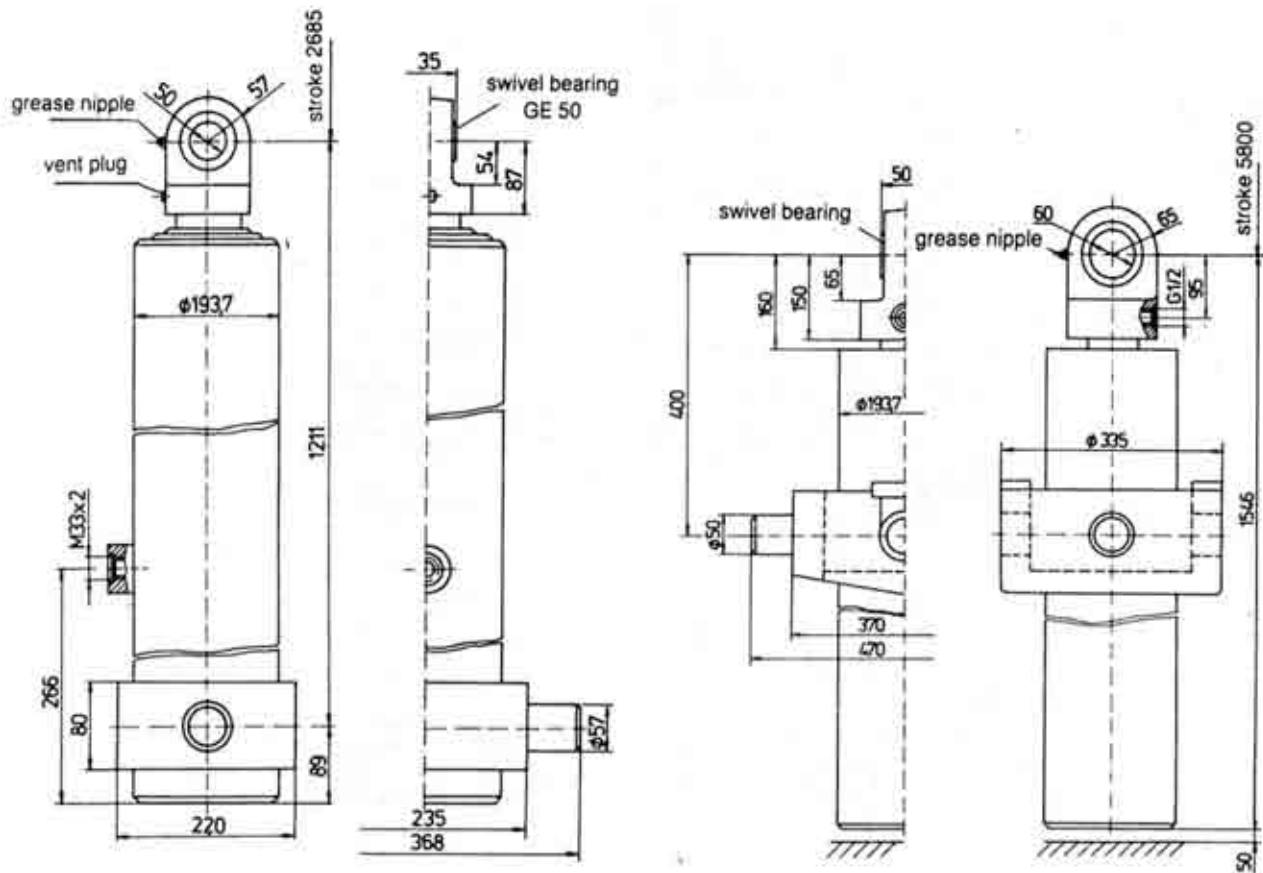
F — max. permissible pushing force at working pressure

K — cylinder actual loading

Note: Relation $F > K$ must be realized

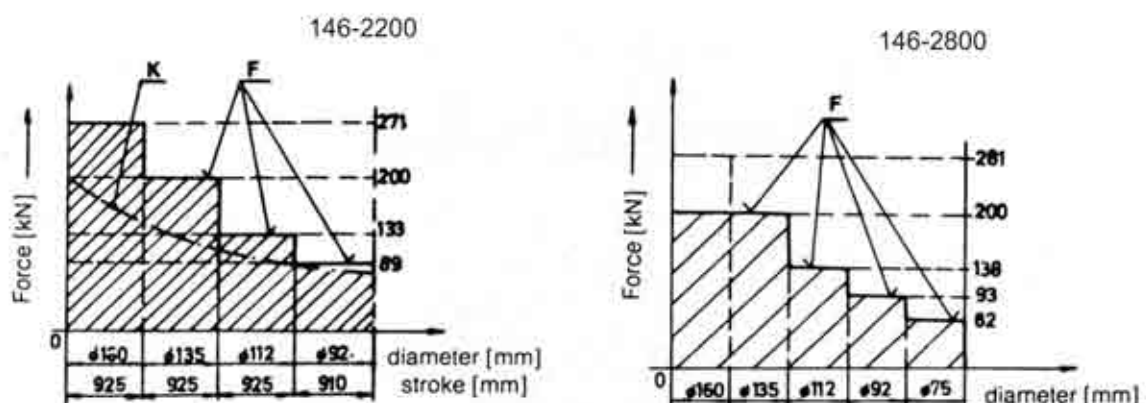
Telescopic cylinders

Long-stroke



Designation	Working pressure [bar]	No. of stages	Displacement [l]	Mass [kg]
146-2200	135	4	55	
146-2800	140	5		

Characteristic diagrams



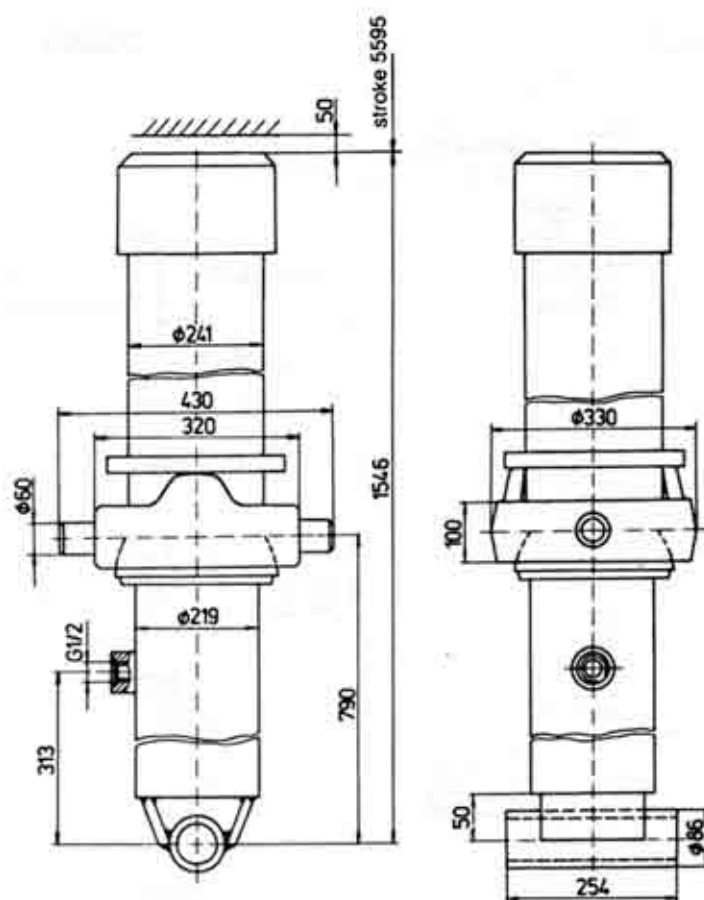
F — maximum permissible pushing force

K — cylinder actual loading

Note: relation $F > K$ must be realized

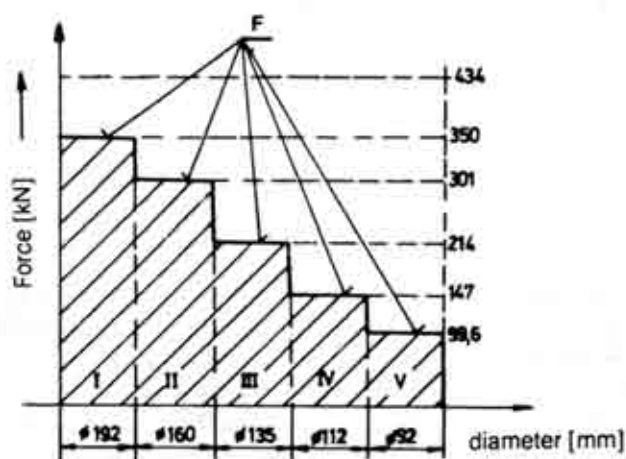
Telescopic cylinders

Long-stroke



Designation	Working pressure [bar]	No. of stages	Displacement [l]	Mass [kg]
146-1600	150	5	101	

Characteristic diagrams:



F — max. permissible pushing force at working pressure

K — cylinder actual loading

Note: Relation $F > K$ must be realized