

Easy residual capacity calculator

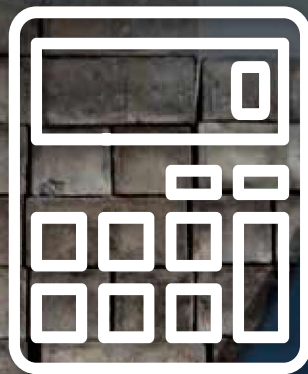
You need to know the residual capacity of your forklift and attachments so you can be sure it's safe to get on with the job. The user-friendly CAM attachments capacity calculator takes the stress out of these calculations.

Simply enter the specifications of your forklift, the attachment you're using and the load you're carrying, and this handy tool will indicate your residual capacity. Download your results and share them with colleagues. It's that easy!

Need a new attachment? Use the capacity calculator to check compatibility before you buy. Be sure you're getting the right attachment to complete your job with your forklift.



Scan the QR code or go to www.camattachments.com to calculate your residual capacity instantly!



Easily calculate the
residual capacity in 1 minute

Calculating sideshifting

Lateral sideshifting is essential because it increases versatility and facilitates the manoeuvring of the truck. Lift trucks use either integrated or separate sideshifting.

Integrated sideshifting uses the same cylinder that, in the case of a clamp, controls opening and clamping. It is obvious that the shifting decreases proportionally until it is equivalent to zero with the cylinder at the end of the stroke (clamp completely open or closed).

To check the shifting available in a clamp we can define:

- > A = maximum opening
- > B = minimum opening
- > C = load width

The calculation will be as follows:

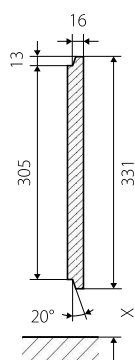
$$A - C =$$

$$C - B =$$

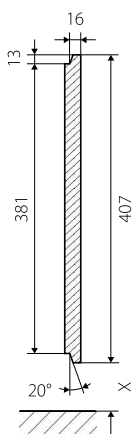
The smaller of the two values will be the total shifting available. Please note that the integrated sideshifter does not alter the weight – centre of gravity – and thickness values.

Lateral semi-integrated shifting is obtained by integrating a separate cylinder with relative slide system to the back of the clamp. The stroke will always be equal to 100 + 100 mm, regardless of the position of the cylinders. This type increases weight – centre of gravity – and thickness values of the clamp.

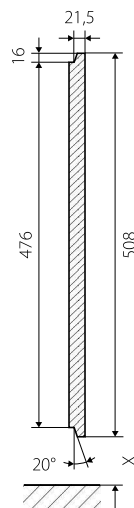
Carriage dimensions



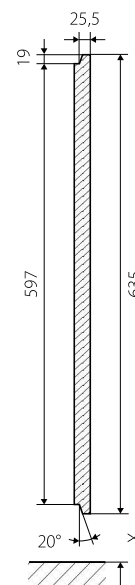
ISO 2328/FEM I



ISO 2328/FEM II



ISO 2328/FEM III



ISO 2328/FEM IV

ISO 2328/FEM	Lift truck capacity kg/mm	X mm
I A	From 0 to 999/500	76
I B		114
II A	From 1000 to 2500/500	76
II B		152
III A	From 2501 to 4999/500	76
III B		203
IV A	From 5000 to 8000/600	127
IV B		254



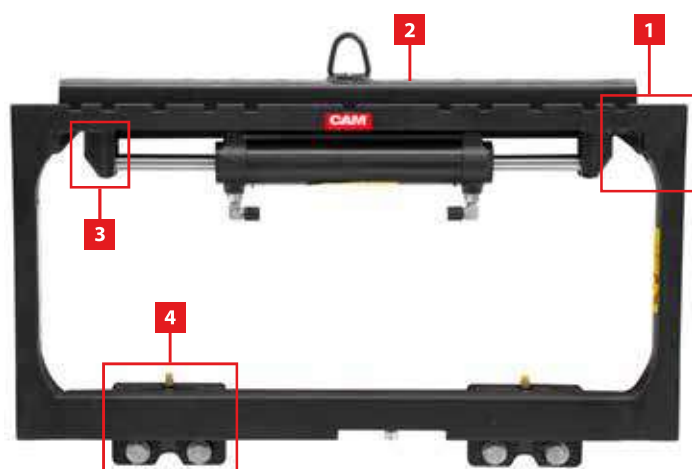
1. Sideshifters

Sideshifters are one of the most commonly used lifting attachments in operation today. This attachment allows you to shift a load from side to side for faster, more accurate lifting and placement. Other advantages of these attachments include lowering overall handling times, reducing damage to pallets or products and increasing manoeuvrability, even through tight corners.

Chapter overview

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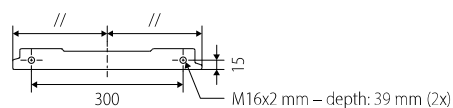
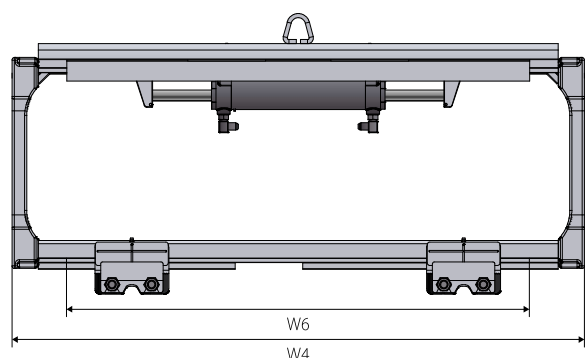
Sideshifters ISO/FEM 2 with sliding pads



With this SHP side shift forklift, moving loads from side to side is done quickly and easily. This enables fast lifting and accurate placement, which is why it's one of the most popular attachments in use today. The advantages don't end there. The overall handling time is reduced significantly, there's substantially less chance of damaging pallets or products, and the manoeuvrability increases, even in tight spaces. The SHP-sideshift is a standard high quality sideshift that meets the expectations of forklift drivers, thanks to its clever and user-friendly design.

Characteristics

1. Reinforced corners
2. New upper bar layout consisting of 2 forged side beams, 2 reinforcement strips and hot-rolled upper bar
3. New cylinder connection with one spring pin
4. New wear pads





Technical data

> W6 – Minimum width lift truck carriage

> Total sideshifter stroke: 100 + 100 mm

Model	Capacity kg/mm	W4 mm	W6 mm	LL mm	HCG mm	VCG mm	Weight kg	ISO 2328	RRP Euro
SHP225.080P.CD1	2500/500	800	780	58	23	224	42	2	430
SHP225.090P.CD1	2500/500	900	780	58	23	224	46	2	430
SHP225.092P.CD1	2500/500	920	780	58	23	224	46	2	430
SHP225.094P.CD1	2500/500	940	780	58	23	224	47	2	430
SHP225.098P.CD1	2500/500	980	780	58	23	224	48	2	430
SHP225.100P.CD1	2500/500	1000	780	58	23	224	49	2	430
SHP225.102P.CD1	2500/500	1020	780	58	23	224	49	2	430
SHP225.104P.CD1	2500/500	1040	780	58	23	224	50	2	430
SHP225.107P.CD1	2500/500	1070	780	58	23	224	51	2	430
SHP225.110P.CD1	2500/500	1100	780	58	23	224	52	2	430
SHP225.115P.CD1	2500/500	1150	780	58	23	224	54	2	430
SHP225.125P.CD1	2500/500	1250	980	58	23	224	57	2	650
SHP225.140P.CD1	2500/500	1400	980	58	23	224	67	2	730

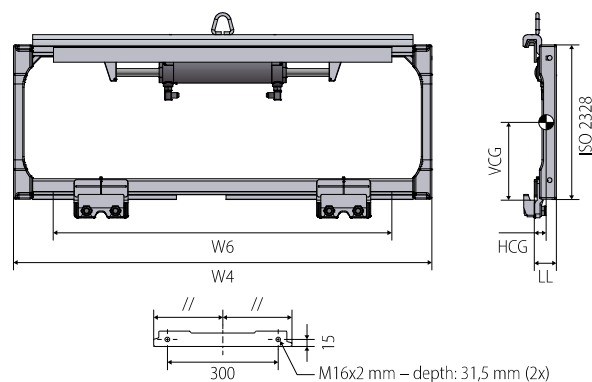
Advantages

- > Reinforced corners
- > Extremely strong, single-piece upper bar
- > Cylinder connects using a single spring pin
- > User-friendly design
- > Expertly manufactured
- > Superior mechanical strength

Available on request

- > Load backrest

Sideshifters ISO/FEM 3 with sliding pads



Technical data

> W6 – Minimum width lift truck carriage

> Total sideshifter stroke: 100 + 100 mm

Model	Capacity kg/mm	W4 mm	W6 mm	LL mm	HCG mm	VCG mm	Weight kg	ISO 2328	RRP Euro
SHP335.100P.CD1	3500/500	1000	980	68	29	281	67	3	600
SHP335.102P.CD1	3500/500	1020	980	68	29	281	67	3	600
SHP335.107P.CD1	3500/500	1070	980	68	29	282	70	3	610
SHP335.110P.CD1	3500/500	1100	980	68	29	282	71	3	610
SHP335.115P.CD1	3500/500	1150	980	68	29	283	73	3	610
SHP335.120P.CD1	3500/500	1200	980	68	29	284	75	3	620
SHP335.125P.CD1	3500/500	1250	980	68	29	285	77	3	660
SHP335.130P.CD1	3500/500	1300	980	68	29	285	86	3	680
SHP335.135P.CD1	3500/500	1350	1080	68	29	286	89	3	690
SHP335.140P.CD1	3500/500	1400	1080	68	29	287	90	3	700

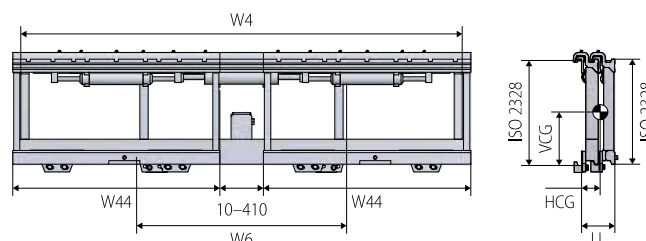
Advantages

- > Reinforced corners
- > Extremely strong, single-piece upper bar
- > Cylinder connects using a single spring pin
- > User-friendly design
- > Expertly manufactured
- > Superior mechanical strength

Available on request

- > Load backrest

Dual and triple sideshifters



Technical data

- > W6 – Minimum width lift truck carriage
- > Prices exclude forks

- > Technical data without forks
- > Flow divider

Model	Capacity kg/mm	W4 mm	W44 mm	W6 mm	LL mm	HCG mm	VCG mm	Weight kg	Stroke mm	ISO 2328 Truck carriage	ISO 2328 Sideshifter carriage	RRP Euro
Dual sideshifter												
2DL2220.170	2 x 1000/500	1700	750	1100	124	61	226	235	2 x 200	2	2	5000
2DL2220.200	2 x 1000/500	2000	900	1150	124	61	226	260	2 x 200	2	2	5250
2DL2220.215	2 x 1000/500	2150	1000	1200	124	61	226	281	2 x 200	2	2	5510
2DL3240.170	2 x 2000/500	1700	750	1100	134	57	227	286	2 x 200	3	2	6110
2DL3240.200	2 x 2000/500	2000	900	1150	134	58	227	298	2 x 200	3	2	6360
2DL3240.215	2 x 2000/500	2150	1000	1200	134	58	227	304	2 x 200	3	2	6590
Triple sideshifter												
3DL2220.170	2 x 1000/500	1700	750	1300	139	65	236	246	3 x 200	2	2	6690
3DL2220.200	2 x 1000/500	2000	900	1350	139	65	236	271	3 x 200	2	2	6960
3DL2220.215	2 x 1000/500	2150	1000	1400	139	65	236	292	3 x 200	2	2	7210
3DL3240.170	2 x 2000/500	1700	750	1300	139	67	285	335	3 x 200	3	2	7820
3DL3240.200	2 x 2000/500	2000	900	1350	139	67	285	379	3 x 200	3	2	8080
3DL3240.215	2 x 2000/500	2150	1000	1400	139	67	285	409	3 x 200	3	2	8320

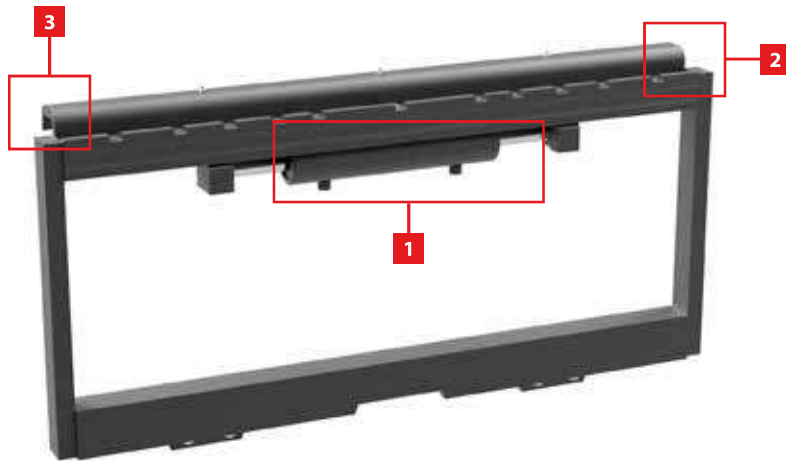
2DL: fixed rear frame (no sideshift).

3DL: main sideshifter on the rear frame

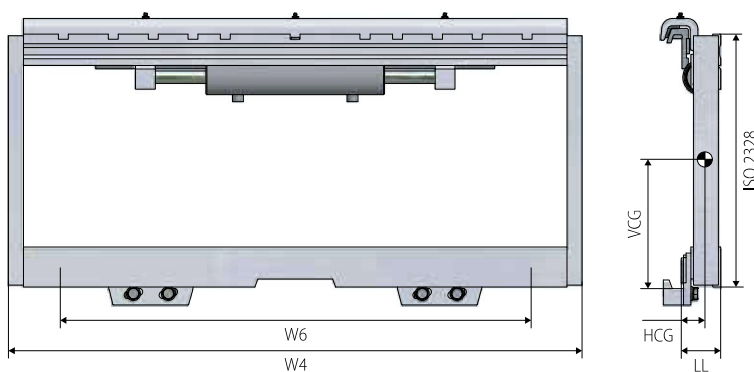
Available on request

- > Independent movement of the front sideshifters

Sideshifters ISO/FEM 1-2 with sliding pads



With this TRF sideshifting attachment, moving loads from side to side is done quickly and easily. This enables fast lifting and accurate placement, which is why it's one of the most popular attachments in use today. And the advantages don't end there. The overall handling time is reduced significantly, there's substantially less chance of damaging pallets or products, and the manoeuvrability increases, even in tight spaces. The TRF sideshifter is ideal for intensive use. Its double-action cylinder ensures consistent shifting speeds in either direction and can quickly be taken apart for easy maintenance. The upper bar is made from a single piece of steel, ensuring both strength and durability.



Characteristics

1. High-mounted cylinder for superior see-through visibility
2. Designed with a single-piece upper S-bar for extremely strong, robust construction
3. Pads are fully protected by the upper bar
4. Excellent durability and reliability
5. Easy maintenance and installation
6. Grease fittings on top of the upper bar





Technical data

> W6 – Minimum width lift truck carriage

> Total sideshifter stroke: 100 + 100 mm

Model	Capacity	W4	W6	LL	HCG	VCG	Weight	ISO 2328	RRP
	kg/mm	mm	mm	mm	mm	mm	kg		Euro
TRF112.080P	1000/500	800	700	70	34	183	45	1	570
TRF112.085P	1000/500	850	700	70	34	183	47	1	580
TRF112.100P	1000/500	1000	850	70	34	183	53	1	580
TRF225.080P	2500/600	800	700	70	34	225	47	2	580
TRF225.090P	2500/600	900	800	70	34	225	50	2	580
TRF225.092P	2500/600	920	800	70	34	225	51	2	580
TRF225.094P	2500/600	940	800	70	34	225	52	2	580
TRF225.097P	2500/600	970	840	70	34	226	53	2	580
TRF225.098P	2500/600	980	850	70	34	226	54	2	580
TRF225.100P	2500/600	1000	850	70	34	226	54	2	590
TRF225.102P	2500/600	1020	850	70	34	226	55	2	590
TRF225.104P	2500/600	1040	850	70	34	226	56	2	590
TRF225.107P	2500/600	1070	870	70	34	226	57	2	590
TRF225.110P	2500/600	1100	900	70	34	226	58	2	640
TRF225.115P	2500/600	1150	900	70	34	226	60	2	640
TRF225.126P	2500/600	1260	1000	70	34	228	68	2	820
TRF225.140P	2500/600	1400	1100	70	34	228	72	2	890

Advantages

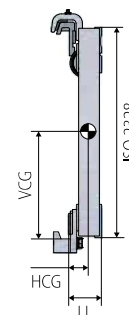
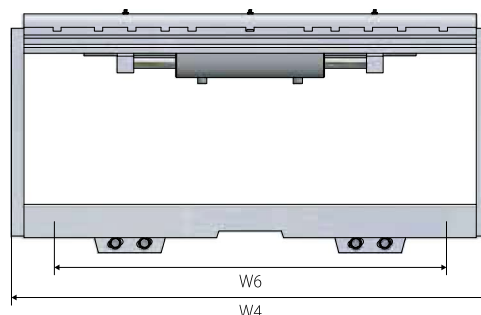
- > High-mounted cylinder for superior visibility
- > Extremely strong and robust, single-piece upper S bar
- > Fully protected pads
- > Grease fittings on top of the upper bar
- > Ideal for intensive use
- > Expertly manufactured
- > Superior mechanical strength

Available on request

- > Sideshifter for reach trucks
- > Custom-made sideshifters

Options	RRP
	Euro
Class 2 bronze lower pads	Consult your CAM attachments sales advisor
Class 2 bronze upper and lower pads	Consult your CAM attachments sales advisor

Sideshifters ISO/FEM 3-4 with sliding pads



Technical data

- > W6 – Minimum width lift truck carriage
- > Total sideshifter stroke: 100 + 100 mm (FEM 3)
- > Total sideshifter stroke: 150 + 150 mm (FEM 4)

Model	Capacity kg/mm	W4 mm	W6 mm	LL mm	HCG mm	VCG mm	Weight kg	ISO 2328	RRP Euro
TRF335.100P	3500/500	1000	900	80	35	305	79	3	780
TRF335.107P	3500/500	1070	950	80	35	308	83	3	850
TRF335.110P	3500/500	1100	1000	80	35	308	85	3	860
TRF335.115P	3500/500	1150	1000	80	35	309	88	3	880
TRF335.120P	3500/500	1200	1000	80	35	309	90	3	920
TRF335.125P	3500/500	1250	1100	80	35	314	95	3	930
TRF335.130P	3500/500	1300	1100	80	36	314	98	3	950
TRF335.135P	3500/500	1350	1100	80	36	314	100	3	970
TRF350.100P	5000/500	1000	900	80	36	277	98	3	1000
TRF350.107P	5000/500	1070	950	80	36	279	102	3	1000
TRF350.110P	5000/500	1100	950	80	36	279	104	3	1000
TRF350.115P	5000/500	1150	950	80	36	279	107	3	1090
TRF350.120P	5000/500	1200	1000	80	36	279	110	3	1110
TRF350.126P	5000/500	1260	1000	80	36	280	115	3	1170
TRF350.130P	5000/500	1300	1000	80	36	280	118	3	1180
TRF350.135P	5000/500	1350	1050	80	36	280	120	3	1190
TRF350.156P	5000/500	1560	1250	80	37	280	151	3	1360
TRF350.166P	5000/500	1660	1350	80	37	280	155	3	1410
TRF350.175P	5000/500	1750	1450	80	37	280	160	3	1480
TRF350.185P	5000/500	1850	1500	80	38	280	166	3	1560
TRF350.200P	5000/500	2000	1600	80	38	280	178	3	1470
TRF465.120P	6500/600	1200	1050	100	48	357	210	4	2430
TRF465.135P	6500/600	1350	1150	100	48	359	229	4	2550
TRF465.160P	6500/600	1600	1300	100	48	362	258	4	2670
TRF465.180P	6500/600	1800	1500	100	48	367	285	4	2810
TRF480.180P	8000/600	1800	1500	100	50	346	310	4	2879
TRF480.200P	8000/600	2000	1650	100	50	348	341	4	3210
TRF480.220P	8000/600	2200	1800	100	50	350	368	4	3210
TRF480.240P	8000/600	2400	1950	100	50	350	397	4	3510
TRF4120.220P	12000/600	2200	1850	115	55	350	520	4	6050
TRF4120.240P	12000/600	2400	1950	115	56	352	555	4	6450

Advantages

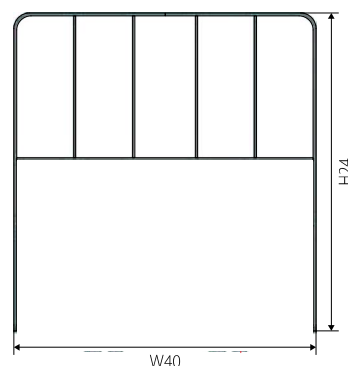
- > High-mounted cylinder for superior visibility
- > Extremely strong and robust, single-piece upper S-bar
- > Fully protected pads
- > Grease fittings on top of the upper bar
- > Ideal for intensive use
- > Expertly manufactured
- > High mechanical strength

Available on request

- > Load backrest
- > Sideshifter FEM 3 and FEM 4 with rollers

Options	RRP
	Euro
Class 3 or class 4 bronze lower pads	Consult your CAM attachments sales advisor
Class 3 or class 4 bronze upper and lower pads	Consult your CAM attachments sales advisor

Load backrest



Technical data

> Hardware kit included

Model	Usable for sideshifters		W40	H24	Weight	RRP
			mm	mm	kg	Euro
CC36334	SHP225.080P.CD1	SHP225.080P.LB2	825	1120	25	325
CC36336	SHP225.090P.CD1	SHP225.090P.LB2	925	1120	26	325
CC36338	SHP225.092P.CD1	SHP225.092P.LB2	945	1120	26	325
CC36340	SHP225.094P.CD1	SHP225.094P.LB2	965	1120	26	325
CC36342	SHP225.098P.CD1	SHP225.098P.LB2	1005	1120	26	325
CC36344	SHP225.100P.CD1	SHP225.100P.LB2	1025	1120	26	325
CC36346	SHP225.102P.CD1	SHP225.102P.LB2	1045	1120	27	325
CC36348	SHP225.104P.CD1	SHP225.104P.LB2	1065	1120	28	325
CC36350	SHP225.107P.CD1	SHP225.107P.LB2	1095	1120	28	325
CC36352	SHP225.110P.CD1	SHP225.110P.LB2	1125	1120	28	325
CC36354	SHP225.115P.CD1	SHP225.115P.LB2	1175	1120	29	325
CC36356	SHP225.125P.CD1	SHP225.125P.LB2	1275	1120	30	325
CC36358	SHP225.140P.CD1	SHP225.140P.LB2	1425	1120	31	325
CC36360	SHP335.100P.CD1	SHP335.100P.LB4	1025	1105	32	430
CC36362	SHP335.102P.CD1	SHP335.102P.LB4	1045	1105	33	430
CC36364	SHP335.107P.CD1	SHP335.107P.LB4	1095	1105	34	430
CC36366	SHP335.110P.CD1	SHP335.110P.LB4	1125	1105	35	430
CC36368	SHP335.115P.CD1	SHP335.115P.LB4	1175	1105	35	430
CC36370	SHP335.120P.CD1	SHP335.120P.LB4	1225	1105	36	430
CC36372	SHP335.125P.CD1	SHP335.125P.LB4	1275	1105	37	430
CC36374	SHP335.130P.CD1	SHP335.130P.LB4	1325	1105	37	430
CC36376	SHP335.135P.CD1	SHP335.135P.LB4	1375	1105	38	430
CC36378	SHP335.140P.CD1	SHP335.140P.LB4	1425	1105	40	430

Load backrests play an important role in keeping your drivers safe. They prevent your forklift's load from falling toward the driver. It features a steel grid above the forks and attaches to the sides of the forklift carriage with heavy-duty, steel framing. Thanks to the shape of the load backrest, the load rests easily against a square, flat surface, which improves the safety of loading and unloading.

Options

> High strength threadlocker 50 ml: BA57042

Technical data

Sideshifters

Model	Sideshifting						Hydraulic functions
	Operating pressure			Oil flow rate			
	Min	Recommended	Max	Min	Recommended	Max	
SHP225	130	160	220	4	10	15	1
SHP335	130	160	220	6	12	18	1
TRF 112	130	160	220	4	10	15	1
TRF 225	130	160	220	4	10	15	1
TRF 335	130	160	220	6	12	18	1
TRF 350	130	160	220	6	12	20	1
TRF 465	130	160	220	7	14	20	1
TRF 480	130	160	220	7	14	25	1
TRF4120	130	160	220	7	14	25	1
2DL	130	160	220	6	12	20	1
3DL	130	160	220	6	12	20	2