

# 3 DIE LIFTERS

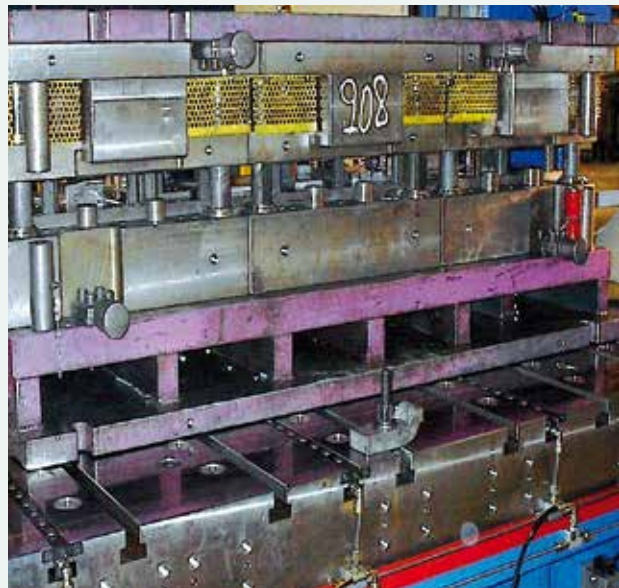
## INTRODUCTION

For a simple and quick movement of the dies on the press bed, EAS offers a comprehensive product portfolio of so called die lifters. When dies are weighing more than 500 kg the conventional way of changing dies becomes heavy, protracted and often dangerous. Long downtimes result in unproductive manufacturing. Die lifters make a die change easier and above all quick which increases the productivity.

These die lifters are spring, hydraulic or air operated lifting bars. On these bars are either balls or rollers mounted over which the die can be simply moved into its position or outside the press. These die lifters are fitting the standard DIN 650

metric T-slot dimensions as well as rectangular U shape slots and for the inch sizes of T-slot EAS offers the DL series. Normally the die lifters are just below the press bed surface and the die cannot be moved but after be activated by either a spring, by hydraulic pressure or by air pressure the die lifter is "lifted" a few mm above the press bed surface, clearing the die from the bed, which makes it then easy and simple to move the die.

MB

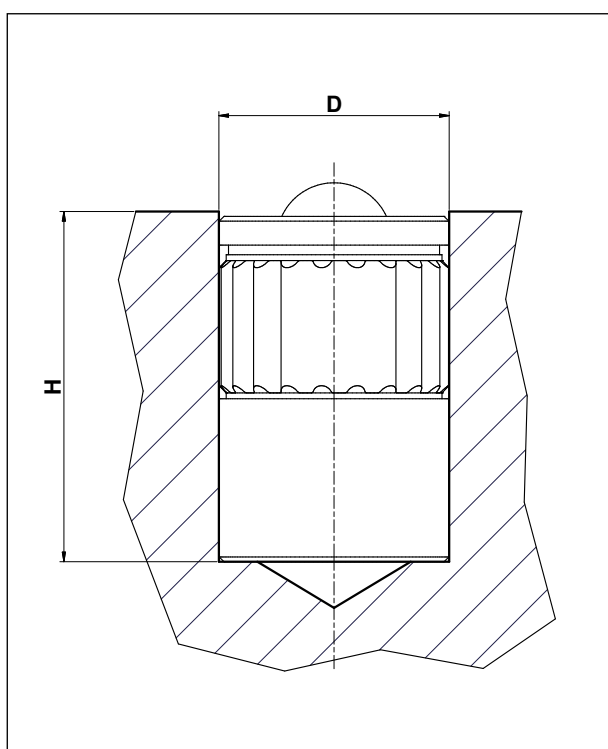
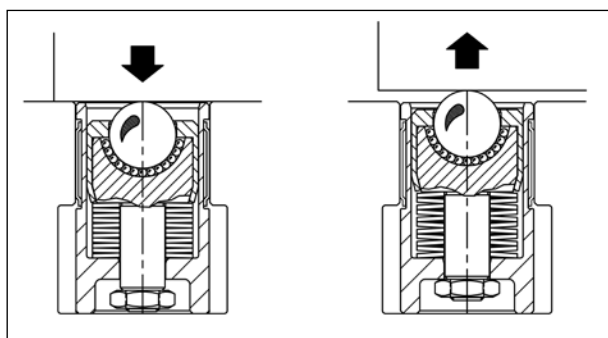


## 3.1 SINGLE SPRING LOADED DIE LIFTER SERIES SMB

Available from 20kg till 100kg lifting capacity



Simple spring loaded die lifters are very suitable for small and mid size dies. They do not require any power source. By closing and clamping the die the clamping elements overcome the spring force and clamp the die onto the press table. When the die clamps are released, the spring loaded balls lift the die back into its original position where it can be moved. The MB series can be mounted individual.



SELECTION CHART					
EAS Model Number	Lifting (kg)	Capacity (kN)	Dimensions in mm		
			Dia.	Height	Stroke
SMB 18	20	0,2	20	28,5	2,5
SMB 22	40	0,4	24	36	3
SMB 28	60	0,6	30	47	4
SMB 36	100	1	36	59	4,5

To build in SMB series please manufacture holes according following dimensions:

SELECTION CHART		
EAS Model Number	Dimensions in mm	
	D	H
SMB 18	20 Hg	28,5
SMB 22	24 Hg	36
SMB 28	30 Hg	47
SMB 36	40 Hg	59

## 3.2 SPRING LOADED DIE LIFTERS SERIES EMB



As the single units these die lifter bars do not require a power source to be actuated as they are activated by the spring package underneath the ball. Balls allow more movement of the die than rollers. Because balls do have a point connection with the die, the to be lifted load is smaller than with comparable rollers with a line connection. Load distribution over several balls allows a smooth movement and it makes it possible to move the die with little effort in any direction.



### SELECTION CHART

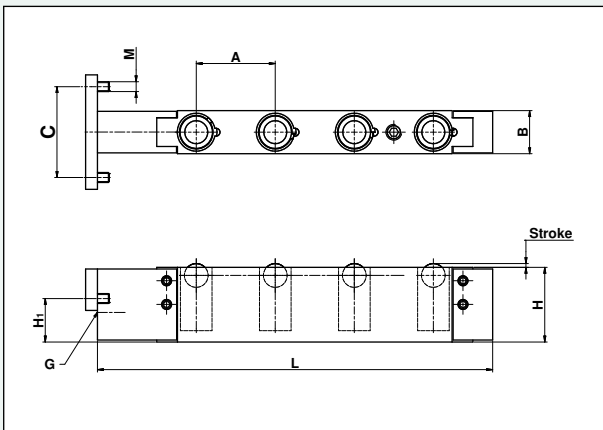
EAS Model Number	Qty of balls	Lifting (kg)	Capacity (kN)	Dimensions in mm				
				Length	T-slot size	Height	Width	Stroke
EMB 18-4	4	80	0,8	100	18	29,8	17,8	2,3
EMB 18-6	6	120	1,2	140	18	29,8	17,8	2,3
EMB 18-8	8	160	1,6	180	18	29,8	17,8	2,3
EMB 18-10	10	200	2	220	18	29,8	17,8	2,3
EMB 18-12	12	240	2,4	260	18	29,8	17,8	2,3
EMB 18-14	14	280	2,8	300	18	29,8	17,8	2,3
EMB 18-16	16	320	3,2	340	18	29,8	17,8	2,3
EMB 22-4	4	160	1,6	150	22	37,8	21,8	3,5
EMB 22-6	6	240	2,4	210	22	37,8	21,8	3,5
EMB 22-8	8	320	3,2	270	22	37,8	21,8	3,5
EMB 22-10	10	400	4	330	22	37,8	21,8	3,5
EMB 22-12	12	480	4,8	390	22	37,8	21,8	3,5
EMB 22-14	14	560	5,6	450	22	37,8	21,8	3,5
EMB 22-16	16	640	6,4	510	22	37,8	21,8	3,5
EMB 22-18	18	720	7,2	570	22	37,8	21,8	3,5
EMB 22-20	20	800	8,0	630	22	37,8	21,8	3,5
EMB 28-4	4	240	2,4	210	28	47,8	27,8	4,0
EMB 28-6	6	360	3,6	300	28	47,8	27,8	4,0
EMB 28-8	8	480	4,8	390	28	47,8	27,8	4,0
EMB 28-10	10	600	6	480	28	47,8	27,8	4,0
EMB 28-12	12	720	7,2	570	28	47,8	27,8	4,0
EMB 28-14	14	840	8,4	660	28	47,8	27,8	4,0
EMB 28-20	20	1200	12,0	930	28	47,8	27,8	4,0

\* DIN 650

# 3 DIE LIFTERS

## 3.3 HYDRAULIC OPERATED BALL DIE LIFTERS, SERIES EHB

Max. hydraulic pressure is 150 bar



### DESCRIPTION

Hydraulic die lifters are used for heavy dies. The EAS hydraulic operated die lifters are available with balls( EHB series) and with rollers(EHR series).

With the hydraulic ball is each ball working as a hydraulic piston. When the balls are pressurized the balls make contact with the die and lift the die above the table. When the die is in position the balls are depressurized to allow the lowering of the die on the bolster table.

Balls have the advantage that the die can be positioned in all directions while a roller only allow this in one direction.

Available for T-slots or U size openings for 22 and 28 mm. Lifting stroke is 2 mm for size 22 and 3 mm for size 28. Length up to 1080 mm are made out of one piece. Longer die lifters are connected with each other.

For Imperial T-slots size 1 inch, the EHB-1 series is available which is the same as the EHB 22 series but with an oil connection of # 4 SAE.

For example EHB 1-5 has a lifting capacity of 4,7 kN and a length of 240 mm = 9.45 inch.

### SELECTION CHART

EAS Model Number	Dimensions in mm							Lifting stroke mm
	A	B	C	G	H	H1	M	
EHB 22	40	21,8	46	G 1/4"	37,8	22	M5x 12	2
EHB 28	45	27,8	50	G 1/4"	47,8	39	M6x 12	3

EHB



SELECTION CHART				
EAS Model Number	Amount of balls	lifting kg	capacity kN	length L mm
EHB 22-4	4	380	3,8	200
EHB 22-5	5	470	4,7	240
EHB 22-6	6	570	5,7	280
EHB 22-7	7	660	6,6	320
EHB 22-8	8	760	7,6	360
EHB 22-9	9	840	8,5	400
EHB 22-10	10	940	9,4	440
EHB 22-11	11	1040	10,4	480
EHB 22-12	12	1140	11,4	520
EHB 22-13	13	1230	12,3	560
EHB 22-14	14	1320	13,2	600
EHB 22-15	15	1410	14,1	640
EHB 22-16	16	1500	15,0	680
EHB 22-17	17	1600	16,0	720
EHB 22-18	18	1700	17,0	760
EHB 22-19	19	1790	17,9	800
EHB 22-20	20	1880	18,8	840
EHB 22-21	21	1980	19,8	880
EHB 22-22	22	2080	20,8	920
EHB 22-23	23	2170	21,7	960
EHB 22-25	25	2370	23,7	1040
EHB 22-27	27	2560	25,6	1123
EHB 22-32	32	3040	30,4	1323

Available from EHB 22-4 till EHB 22-52

SELECTION CHART				
EAS Model Number	Amount of balls	lifting kg	capacity kN	length L mm
EHB 28-4	4	530	5,3	220
EHB 28-5	5	660	6,6	265
EHB 28-6	6	790	7,9	310
EHB 28-7	7	950	9,2	355
EHB 28-8	8	1060	10,6	400
EHB 28-9	9	1170	11,7	445
EHB 28-10	10	1320	13,2	490
EHB 28-11	11	1450	14,5	535
EHB 28-12	12	1580	15,8	580
EHB 28-13	13	1710	17,1	625
EHB 28-14	14	1840	18,4	670
EHB 28-15	15	1980	19,8	715
EHB 28-16	16	2120	21,2	760
EHB 28-17	17	2240	22,4	805
EHB 28-18	18	2370	23,7	850
EHB 28-19	19	2490	24,9	895
EHB 28-20	20	2630	26,3	940
EHB 28-21	21	2770	27,7	985
EHB 28-22	22	2900	29,0	1030
EHB 28-27	27	3120	21,2	1258
EHB 28-30	30	3510	35,1	1393

Available from EHB 28-4 till EHB 28-48

# 3 DIE LIFTERS

## 3.4 HYDRAULIC OPERATED ROLLER DIE LIFTERS, SERIES EHR

EHR



Max. hydraulic pressure is 150 bar.  
Temperature 5°-60°C

### DESCRIPTION

With the die lifters equipped with rollers one can lift more weight as the rollers can carry more weight than a ball. With these rollers one can only move the die in the direction of the die lifter and not, as with balls, in all directions.

The total die lifter bar is being hydraulically lifted by hydraulic pistons under the bar.

Available for T-slots and U shape openings for 22, 28 and 36 mm as well as for 3/4" and 1"  
Length up till 1060 mm are made out of one bar and if a longer die lifter is required the bars are connected with each other.

### Ordering code: EHR A-B

EHR = EAS Hydraulic roller

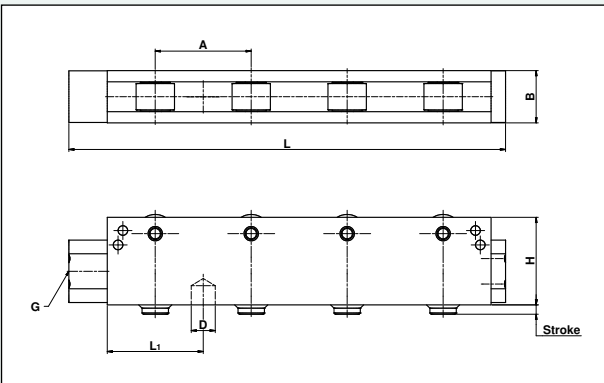
A= size of the T-slot dimensions 22=22 mm, 28=28 mm and 35=36 mm

B= amount of rollers

### Ordering code example: EHR 36-5

This is a hydraulic roller die lifter for 36 mm T-slot with 5 rollers. From the selection chart you can see that the length is 480 mm and the lifting capacity 21,2 kN.

The total lifting capacity can be calculated with the amount of die lifters, for example 3 rows of lifter with a length of 480 mm be able to lift  $3 \times 21,2 = 63,6$  kN or 6360 kg.



SELECTION CHART							
EAS Model Number	Dimensions in mm						Lifting stroke mm
	A	B	D	G	H	L1	
EHR 22	40	21,8	Ø10x8	G 1/8"	37,7	40	3,8
EHR 28	50	27,8	Ø10x8	G 1/4"	47,7	50	4,3
EHR 36	90	35,8	Ø14x11	G 1/4"	60,7	90	4,3

EHR 22 is available from EHR 22-4 till EHR 22-52 (2102 mm)

EHR 28 is available from EHR 28-4 till EHR 28-42 (2130 mm)

EHR 36 is available from EHR 36-4 till EHR 36-24 (2190 mm)

## SELECTION CHART

EAS Model Number	Amount of rollers	lifting kg	capacity kN	length L mm
EHR 22-4	4	760	7,6	182
EHR 22-5	5	950	9,5	222
EHR 22-6	6	1140	11,4	262
EHR 22-7	7	1330	13,3	302
EHR 22-8	8	1520	12,2	342
EHR 22-9	9	1710	17,1	382
EHR 22-10	10	1900	19,0	422
EHR 22-11	11	2090	20,9	462
EHR 22-12	12	2280	22,8	502
EHR 22-13	13	2470	24,7	542
EHR 22-14	14	2660	26,6	582
EHR 22-15	15	2850	28,5	622
EHR 22-16	16	3040	30,4	662
EHR 22-17	17	3230	32,3	702
EHR 22-18	18	3420	34,2	742
EHR 22-19	19	3610	36,1	782
EHR 22-20	20	3800	38,0	822
EHR 22-21	21	3990	39,9	862
EHR 22-22	22	4180	41,8	902
EHR 22-23	23	4370	43,7	942
EHR 22-24	24	4560	45,6	982
EHR 22-25	25	4750	47,5	1022
EHR 22-26	26	4940	49,4	1062
EHR 22-32	32	6080	60,8	1302
EHR 28-4	4	1056	10,5	230
EHR 28-5	5	1320	13,2	280
EHR 28-6	6	1584	15,8	330
EHR 28-7	7	1848	18,5	380
EHR 28-8	8	2112	21,1	430
EHR 28-9	9	2376	23,7	480
EHR 28-10	10	2640	26,4	530
EHR 28-11	11	2904	29,4	580
EHR 28-12	12	3168	31,7	630
EHR 28-13	13	3432	34,3	680
EHR 28-14	14	3696	36,9	730
EHR 28-15	15	3960	39,6	780
EHR 28-16	16	4224	42,2	830
EHR 28-17	17	4488	44,9	880
EHR 28-18	18	4752	47,5	930
EHR 28-19	19	5016	50,2	980
EHR 28-20	20	5280	52,8	1030
EHR 28-21	21	5544	55,4	1080
EHR 28-24	24	6360	63,6	1230
EHR 28-27	27	7160	71,6	1380

## SELECTION CHART

EAS Model Number	Amount of rollers	lifting kg	capacity kN	length L mm
EHR 36-4	4	1700	17,0	390
EHR 36-5	5	2125	21,2	480
EHR 36-6	6	2550	25,5	570
EHR 36-7	7	2975	29,7	660
EHR 36-8	8	3400	34,0	750
EHR 36-9	9	3825	38,2	840
EHR 36-10	10	4250	42,5	930
EHR 36-11	11	4675	46,7	1020
EHR 36-12	12	5100	51,0	1110
EHR 36-14	14	5950	59,5	1290
EHR 36-16	16	6800	68,0	1470
EHR 36-18	18	7650	76,5	1650



## 3.5 HYDRAULIC OPERATED ROLLER DIE LIFTER, IMPERIAL SIZES, SERIES DL



### Features:

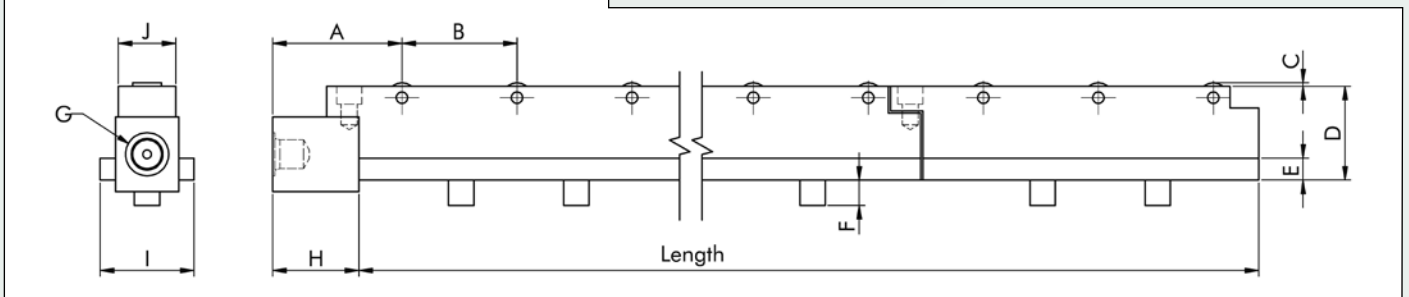
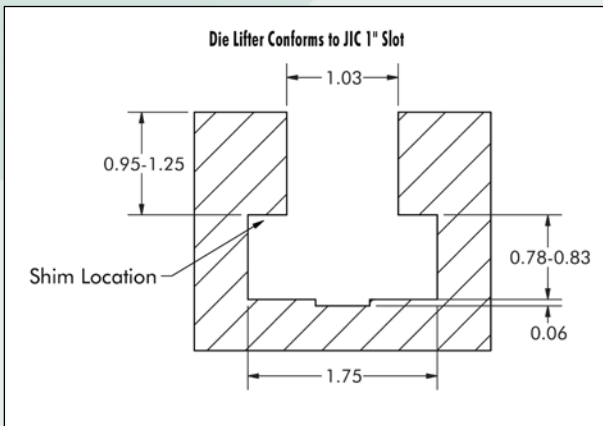
- T – shape design, enables die lifter to fit in a standard 1 inch /JIC slot
- Steel rollers to minimize wear to the die and enables easier die movement
- Includes die lifter retainer latches the die lifter into the T-slot for more safety
- Die lifters stroke is .44 inches or 11 mm

### Specifications:

- Operating pressure is 5000 psi or 350 bar
- Seal material is Urethen and optional is Viton.

Die lifters have a T shaped body, equipped with rollers on the top and a series of hydraulic cylinders along the bottom. When pressure is to the lifters, plungers extend to raise the unit so that the rollers make contact with the die above it. The die can then freely roll along the length of the die lifter.

When the die is in position, the die lifter is de pressurized to allow the unit to lower the die. and then clear the dies bottom surface.



### SELECTION CHART

EAS Model Number	Lifting capacity LBS	Length L inches	Oil volume in <sup>3</sup>	Dimensions in inches									
				A	B	C	D	E	F	G	H	I	J
DL-6	1100	6"	0,25	2,25"	2,0"	0,06"	1,63"	0,38"	0,44"	SAE 4.437-20UNF	1,5"	1,63"	1,0"
DL-12	2800	12"	0,55	2,25"	2,0"	0,06"	1,63"	0,38"	0,44"	SAE 4.437-20UNF	1,5"	1,63"	1,0"
DL-18	3900	18"	0,8	2,25"	2,0"	0,06"	1,63"	0,38"	0,44"	SAE 4.437-20UNF	1,5"	1,63"	1,0"
DL-24	5600	24"	1,1	2,25"	2,0"	0,06"	1,63"	0,38"	0,44"	SAE 4.437-20UNF	1,5"	1,63"	1,0"
DL-30	6700	30"	1,3	2,25"	2,0"	0,06"	1,63"	0,38"	0,44"	SAE 4.437-20UNF	1,5"	1,63"	1,0"

You can extend the length with 6" and 12" increments.



# 3 DIE LIFTERS

## 3.6 AIR OPERATED ROLLER AND BALL DIE LIFTERS, SERIES DAR AND DAB

DAR



### DESCRIPTION

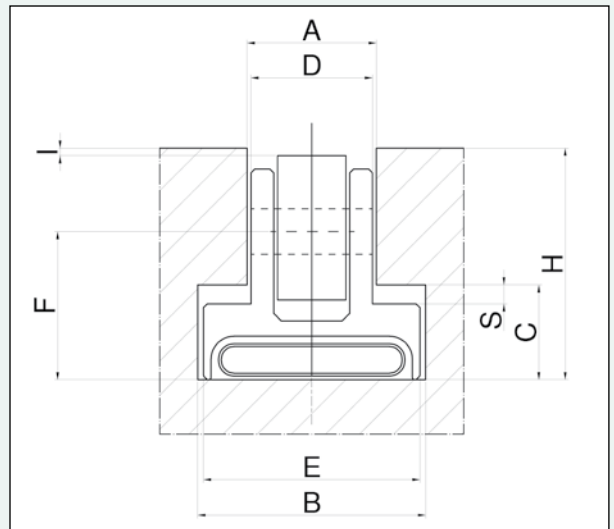
As an alternative to spring loaded and hydraulic operated die lifters, EAS offers also pneumatic operated die lifters. These air operated die lifters use 6 bar air pressure and come with a manual air valve and quick air connection coupler. Using air as a power source is in many cases an economic alternative to a hydraulic power source.

The die lifters are available as rollers and the bar is made out of aluminum. Standard sizes are according the metric DIN 650 T-slots size T 22, T 28 and T 36 mm, as well as imperial 1" T-slot size.

Max air pressure is 20 bar. Normal operating pressure 6 bar air.

EAS offers also an aluminum die lifer housing for the DAR 28 size. With this housing and the integrated die lifters one can simply design die change tables.

Optional : Ball lifters available on request. The ball diameter  $D=20$  and each ball can carry 25 kg. Capacity per meter is limited by the force the balls can carry and not what the die lifter housing can lift.



### SELECTION CHART

EAS Model Number	Lifting per meter at 6 bar (kg)	Capacity (kN)	Dimensions in mm								
			A	B	C	D	E	F	H	I	S
DAR 22-....*	1300	13	22H12	40	18	21,5	39		39	1	3
DAR 28-....*	1700	17	28H12	46	20	27	45		48	1,5	4
DAR 36-....*	2500	25	34H12	60	25	32	57	39	61	2	5
DAB 22-....*	900	9	22H12	40	18	21,5	39		39	1	3
DAB 28-....*	900	9	28H12	46	20	27	45		48	1,5	4
DAB 36-....*	1800	18	34H12	60	25	32	57		61	2	5

\* Please indicate your length



### Ordering code die lifters: DAR A-B / DAB A-B

DAR = Die lifter Air with Rollers

DAB = Die lifter Air with Balls

A = T-slot size 22, 28 or 36 for the metric sizes and 1 for 1" imperial size

B = length of the die lifter in mm

Example DAR 28-600 is a die lifter for T-slot size 28 mm and with length of 600 mm. Lifting capacity is 0,6 x 1700 kg = 1020 kg or 10,2 kN

Ordering code housing (die lifter not included and need to be ordered separately).

### Ordering Code Example:

DAH 28-1200 is the housing for the DAR 28 or DAB 28 die lifter with a length of 1200 mm.

