

## Getriebe mit Passfederverbindung zum Ritzel mit Zahnstange Gearbox with Keyway Connection to the Pinion with Rack

Passfederverbindungen haben sich in der Praxis aufgrund ihrer Wirtschaftlichkeit bewährt und überzeugen durch eine einfache Montage/Demontage. Vorteilhaft ist zudem der genaue und zentrische Sitz der Nabe.

In practice, keyway connections have proved themselves economical and are convincing thanks to their simple fitting/removal. In addition, the precise and central seat of the hub is an advantage.



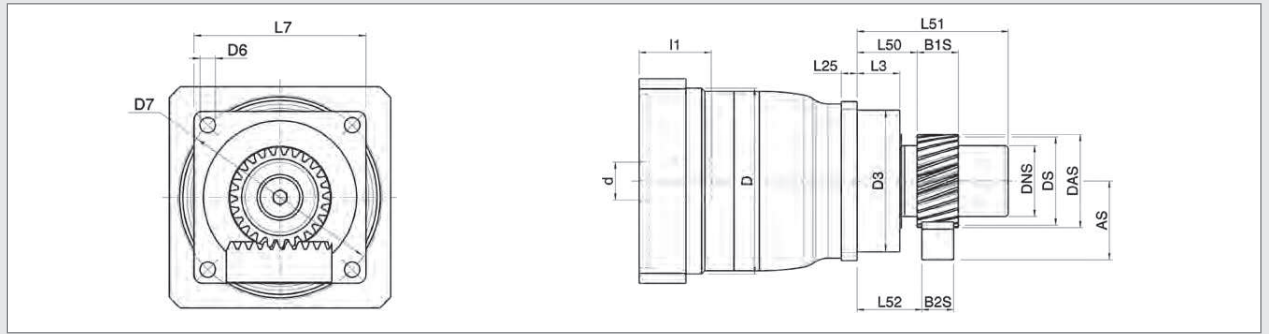
MPRN 050 – 300 Technische Daten

MPRN 050 – 300 Technical Data

Getriebeübersetzung			3 / 12		4 - 10   16 - 100		3	16	100
Größe	Modul	z	F <sub>uzul</sub>	T <sub>2bzul</sub>	F <sub>uzul</sub>	T <sub>2bzul</sub>	v <sub>zul</sub>	v <sub>zul</sub>	v <sub>zul</sub>
Size	Module		[N]	[Nm]	[N]	[Nm]	[m/min]	[m/min]	[m/min]
	[mm]								
050	2	18	1700	32	1800	34	240	45	7
100	2	22	3500	82	3500	82	290	55	8
200	2	26	5000	138	5000	138	260	49	8
300	3	24	9000	315	9000	315	290	55	8

## MPRN 050-300 – Abmessungen 1-stufig

### MPRN 050-300 – Dimensions 1-stage



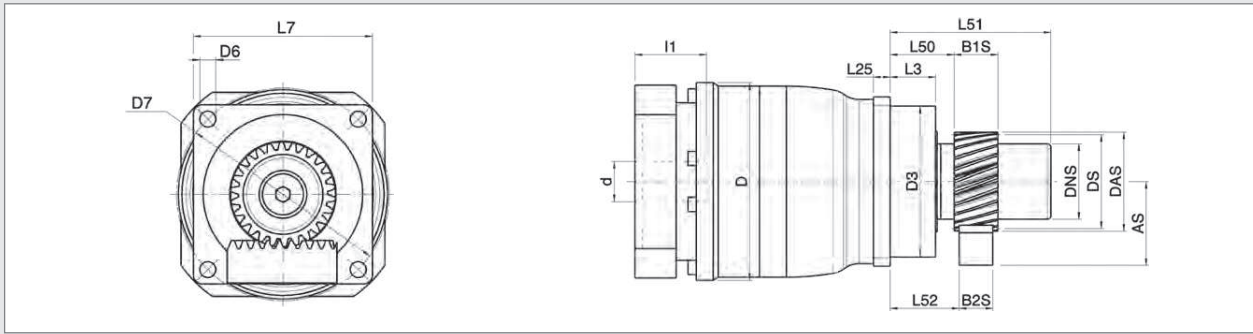
Maße Getriebe

gearbox dimensions

gearing data

d <sup>F7</sup>	x	l1	Größe Übersetzung		D	D3 <sup>96</sup>	D6	D7	L3	L7	L25	Verzahnungsdaten										
			Size	Ratio								Modul Module	z	AS	B1S	B2S	DAS	DNS	DS	L50	L51	L52
11	x	23	050	3 - 10	72	60	5,5	68	18,0	62	6	2	18	41,9	26	24	43,80	-	38,20	26	52,0	27
14	x	30																				
19	x	40																				
11	x	23	100	3 - 10	94	70	6,6	85	17,5	76	7	2	22	45,7	26	24	51,49	40	46,69	27	62,0	28
14	x	30																				
19	x	40																				
24	x	50	200	3 - 10	120	90	9,0	120	27,0	101	10	2	26	49,6	26	24	59,17	45	55,17	38	95,5	39
19	x	40																				
24	x	50																				
28	x	60	300	3 - 10	154	130	11,0	165	27,0	141	12	3	24	64,2	31	29	82,39	58	76,39	50	122,0	51
32	x	60																				
38	x	80																				
24	x	50																				
28	x	60																				
32	x	60																				
38	x	80																				
42	x	110																				
48	x	110																				

## MPRN 050-300 – Abmessungen 2-stufig MPRN 050-300 – Dimensions 2-stage



Maße Getriebe

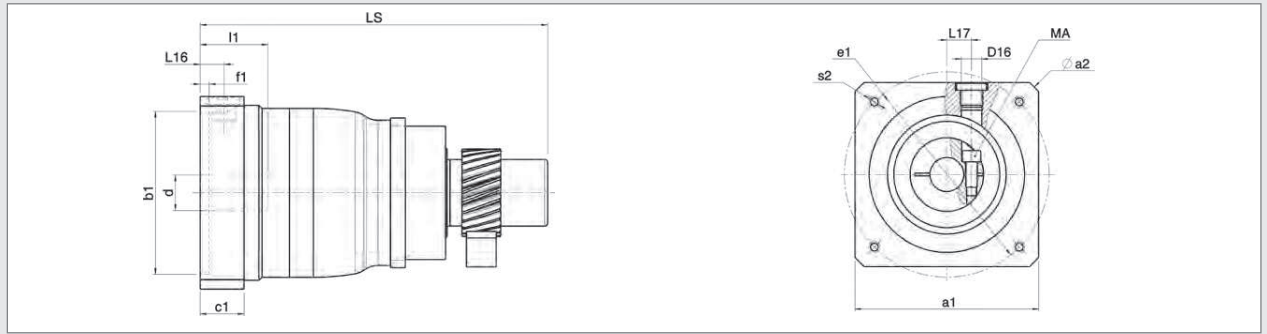
gearbox dimensions

Verzahnungsdaten

gearing data

d <sup>F7</sup>	x	l1	Größe Übersetzung		D	D3 <sup>g6</sup>	D6	D7	L3	L7	L25	Modul										
			Size	Ratio								Module	z	AS	B1S	B2S	DAS	DNS	DS	L50	L51	L52
11	x	23	050	12 - 100	72	60	5,5	68	18,0	62	6	2	18	41,9	26	24	43,80	-	38,20	26	52,0	27
14	x	30										2	22	45,7	26	24	51,49	40	46,69	27	62,0	28
11	x	23	100	12 - 100	94	70	6,6	85	17,5	76	7	2	26	49,6	26	24	59,17	45	55,17	38	95,5	39
14	x	30										2	26	49,6	26	24	59,17	45	55,17	38	95,5	39
11	x	23	200	12 - 100	120	90	9,0	120	27,0	101	10	2	24	64,2	31	29	82,39	58	76,39	50	122,0	51
14	x	30										3	24	64,2	31	29	82,39	58	76,39	50	122,0	51
19	x	40	300	12 - 100	152	130	11,0	165	27,0	141	12	3	24	64,2	31	29	82,39	58	76,39	50	122,0	51
19	x	40										3	24	64,2	31	29	82,39	58	76,39	50	122,0	51
24	x	50	300	12 - 100	152	130	11,0	165	27,0	141	12	3	24	64,2	31	29	82,39	58	76,39	50	122,0	51
28	x	60										3	24	64,2	31	29	82,39	58	76,39	50	122,0	51
32	x	60	300	12 - 100	152	130	11,0	165	27,0	141	12	3	24	64,2	31	29	82,39	58	76,39	50	122,0	51
												3	24	64,2	31	29	82,39	58	76,39	50	122,0	51

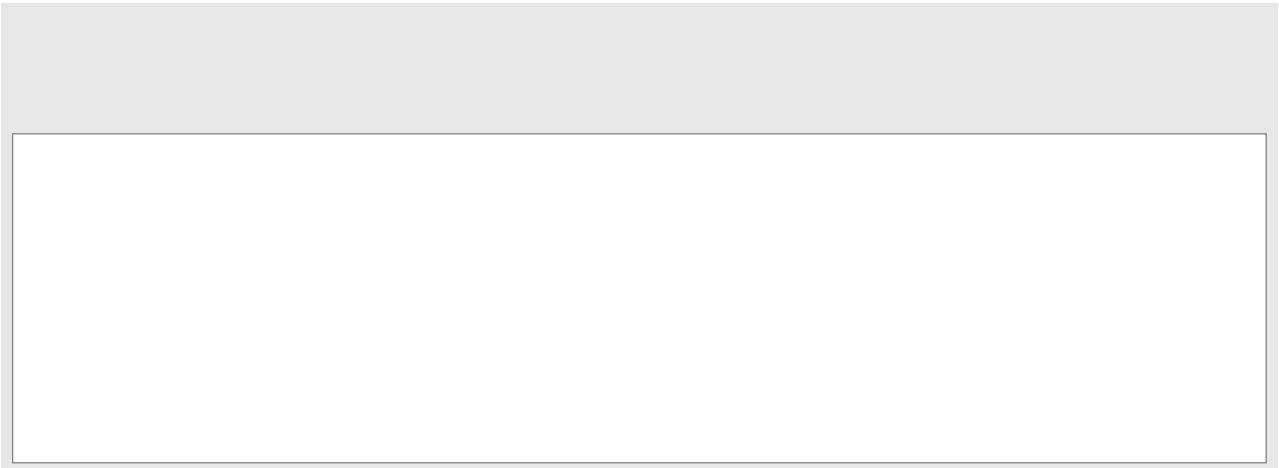
## MPRN 050-300 – Abmessungen Motoranbau 1-stufig MPRN 050-300 – Dimensions Motor Mounting 1-stage



Maße Getriebe

gearbox dimensions

d <sup>F7</sup>	x	l1	Größe Size	LS	L16	L17	c1	f1	D16	Schraubentyp Screw type	MA [Nm]
11	x	23	050	141,0	10,5	10	18,5	4,5	M10x1	M5 / 12.9	9
14	x	30		141,0	10,5	10 - 12	18,5	4,5	M10x1	M5 / 12.9	9
19	x	40		150,0	10,5	12 - 16	18,5	4,5	M10x1	M6 / 12.9	16
11	x	23	100	174,5	13,5	10	24,5	4,5	M12x1,5	M5 / 12.9	9
14	x	30		174,5	13,5	10 - 12	24,5	4,5	M12x1,5	M5 / 12.9	9
19	x	40		174,5	13,5	12 - 16	24,5	4,5	M12x1,5	M6 / 12.9	16
24	x	50		184,5	13,5	16 - 21	24,5	4,5	M12x1,5	M8 / 12.9	40
19	x	40	200	233,3	16,0	12 - 16	29,5	6,0	M16x1,5	M6 / 12.9	16
24	x	50		233,3	16,0	16 - 21	29,5	6,0	M16x1,5	M8 / 12.9	40
28	x	60		233,3	16,0	21 - 24	29,5	6,0	M16x1,5	M10 / 12.9	80
32	x	60		233,3	16,0	21 - 24	29,5	6,0	M16x1,5	M10 / 12.9	80
38	x	80		258,3	16,0	24 - 26	29,5	6,0	M16x1,5	M10 / 12.9	80
24	x	50	300	305,5	20,5	16 - 21	36,5	6,0	M20x1,5	M8 / 12.9	40
28	x	60		305,5	20,5	21 - 24	36,5	6,0	M20x1,5	M10 / 12.9	80
32	x	60		305,5	20,5	21 - 24	36,5	6,0	M20x1,5	M10 / 12.9	80
38	x	80		305,5	20,5	24 - 26	36,5	6,0	M20x1,5	M10 / 12.9	80
42	x	110		339,5	20,5	26	36,5	6,0	M20x1,5	M12 / 12.9	135
48	x	110		339,5	20,5	26	36,5	6,0	M20x1,5	M12 / 12.9	135



Maße Motor

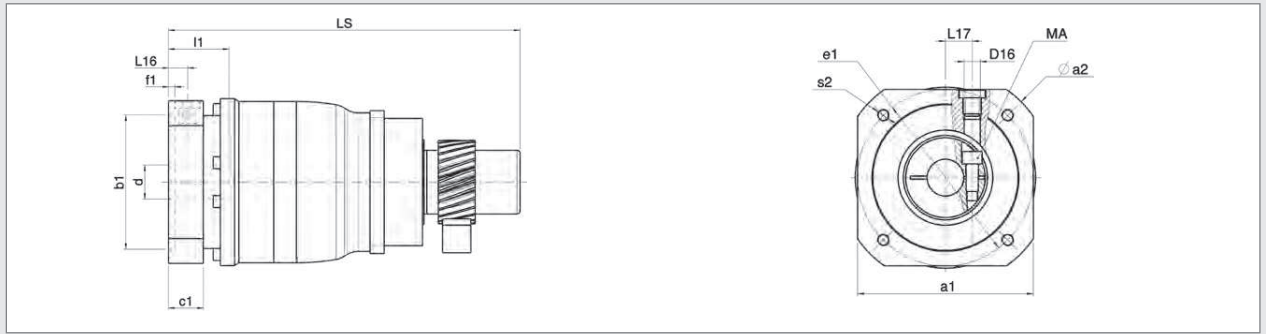
motor dimensions

a1		75	75	75	95	95	75	75	95	75	95	95	95	120	115	120	120	130	130	150	140	150	160	150	160	200	250	
a2		90	90	90	120	120	90	90	120	102	120	120	120	140	140	140	160	160	160	186	190	186	190	186	190	250	300	
b1	<sup>68</sup>	40	40	50	50	50	60	60	60	60	70	70	80	80	95	95	95	110	110	110	110	110	110	130	130	180	230	
e1		63	63	70	70	95	75	75	75	90	85	90	100	100	115	115	130	130	130	130	145	145	165	165	165	215	265	
s2		M4	M5	M5	M5	M6	M5	M6	M6	M5	M6	M6	M6	M6	M8	M8	M8	M8	M8	M8	M8	M8	M8	M10	M10	M10	M12	M12
		x8	x10	x10	x10	x12	x10	x12	x12	x10	x12	x12	x12	x12	x16	x16	x16	x16	x16	x16	x16	x16	x16	x20	x20	x20	x24	x24
											Ø7								Ø9							Ø11		

		X	X	X			X	X		X																		
		X	X	X			X	X		X	X		X	X		X												
													X	X				X										
					X	X			X																			
					X	X			X			X	X		X													
													X		X					X								
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																												X

## MPRN 050-300 – Abmessungen Motoranbau 2-stufig

## MPRN 050-300 – Dimensions Motor Mounting 2-stage



Maße Getriebe

gearbox dimensions

d <sup>F7</sup>	x	l1	Größe Size	LS	L16	L17	c1	f1	D16	Schraubentyp Screw type	MA [Nm]
11	x	23	050	169,5	10,5	10	18,5	4,5	M10x1	M5 / 12.9	9
14	x	30		169,5	10,5	10 - 12	18,5	4,5	M10x1	M5 / 12.9	9
11	x	23	100	194,5	10,5	10	18,5	4,5	M10x1	M5 / 12.9	9
14	x	30		194,5	10,5	10 - 12	18,5	4,5	M10x1	M5 / 12.9	9
11	x	23	200	247,3	13,5	10	24,5	4,5	M12x1,5	M5 / 12.9	9
14	x	30		247,3	13,5	10 - 12	24,5	4,5	M12x1,5	M5 / 12.9	9
19	x	40	300	247,3	13,5	12 - 16	24,5	4,5	M12x1,5	M6 / 12.9	16
19	x	40		324,0	16,0	12 - 16	29,5	6,0	M16x1,5	M6 / 12.9	16
24	x	50	300	324,0	16,0	16 - 21	29,5	6,0	M16x1,5	M8 / 12.9	40
28	x	60		324,0	16,0	21 - 24	29,5	6,0	M16x1,5	M10 / 12.9	80
32	x	60		324,0	16,0	16 - 24	29,5	6,0	M16x1,5	M10 / 12.9	80



Maße Motor

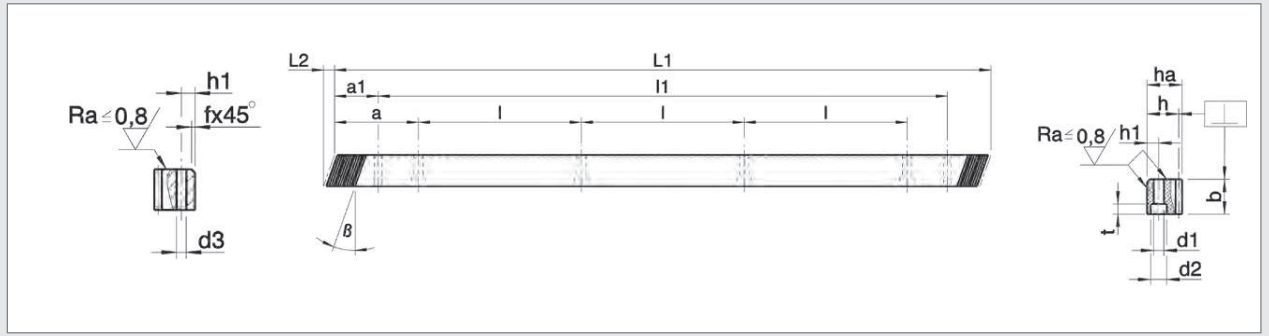
motor dimensions

a1		75	75	75	95	95	75	75	95	75	95	95	95	120	115	120	120	130	130	140	160	160	200	
a2		90	90	90	120	120	90	90	120	102	120	120	120	140	140	140	160	160	160	190	190	190	250	
b1	<sup>Ø8</sup>	40	40	50	50	50	60	60	60	60	70	70	80	80	95	95	95	110	110	110	110	130	180	
e1		63	63	70	70	95	75	75	75	90	85	90	100	100	115	115	130	130	130	145	165	165	215	
s2		M4	M5	M5	M5	M6	M5	M6	M6	M5	M6	M6	M6	M6	M8	M8	M8	M8	M8	M8	M8	M10	M10	M12
		x8	x10	x10	x10	x12	x10	x12	x12	x10	x12	x12	x12	x12	x16	x16	x16	x16	x16	x16	x16	x20	x20	x24
											Ø7								Ø9			Ø11		

		X	X	X			X	X		X														
		X	X	X			X	X		X	X		X		X									
		X	X	X			X	X		X														
		X	X	X			X	X		X	X		X		X									
						X	X			X														
						X	X			X			X	X		X								
																			X					
																			X	X	X			
																			X	X	X	X		
																						X	X	
																						X	X	

# MPRN 050-300 – Abmessungen Zahnstange

## MPRN 050-300 – Rack Dimensions



Material | material 1.0503 [C45]

induktiv gehärtet | induction hardened 50-55 HRC

Schrägungswinkel  
helix angle 19°31'42'' rechtssteigend  
right-hand

Eingriffswinkel | pressure angle 20°

Verzahnungsqualität | toothing quality 6 h23

ab | from 2000 mm 6 h24

Maße Zahnstange

rack dimensions

Modul Module	L1 theor. nominal	L2	z**	b	h <sub>a</sub>	h	f <sup>+0.5</sup>	a	l	h <sub>1</sub>	d <sub>1</sub>	d <sub>2</sub>	t	a <sub>1</sub>	l <sub>1</sub>	d <sub>3</sub>	[kg]	Bestell Nr.
																		Part No.
2	500,00	8,5	75	24	24	22	2	62,5	125	8	7	11	7	31,7	436,6	5,7	2,1	143-020-405
2	1000,00	8,5	150	24	24	22	2	62,5	125	8	7	11	7	31,7	936,6	5,7	4,1	143-020-410
3	500,00	10,3	50	29	29	26	2	62,5	125	9	10	15	9	35,0	430,0	7,7	2,9	143-030-405
3	1000,00	10,3	100	29	29	26	2	62,5	125	9	10	15	9	35,0	930,0	7,7	5,9	143-030-410
4	506,66	13,8	38	39	39	35	2	62,5	125	12	10	15	9	33,3	433,0	7,7	5,4	143-040-405
4	1000,00	13,8	75	39	39	35	2	62,5	125	12	10	15	9	33,3	933,4	7,7	10,7	143-040-410
4	2000,00	13,8	150	39	39	35	2	62,5	125	12	10	15	9	33,3	1933,4	7,7	21,4	143-040-420

z\*\*... Zähnezahl | number of teeth