

Technical Data

Pump Name

3M 65-160/9.2

Customer	Date2024-01-16	Company
Contact	Item no.	Issued by
Phone	Project	Phone
E-mail	Project ID	E-mail

Requested data

1	Pump type	CENTRIFUGAL PUMPS	Fluid	Water
2	Number of pumps / Reserve	1 / 0	Liquid temperature °C	20
3	Flow m³/h		Kin. viscosity cSt	1.005
4	Head m		Vapour pressure MPa	0.00234
5	Geodetic head m		PH value	
6	Inlet pressure (pin) MPa	0	Density kg/m³	998.3
7	Available system NPSH		Solids Weight %	0
8	Ambient temperature °C	20		

Pump

9	Pump Name	3M 65-160/9.2	Frequency Hz	50
10	Design	CENTRIFUGAL PUMPS	Installation type	STANDARD
11	Manufacturer	EBARA	Impeller Diameter	Max. mm161
12	Speed rpm	2900		Designed mm161
13	No. of Stage	1		Min. mm161
14	Connection Suction side	DIN 2532	Flow	Operating m³/h
15	Connection Discharge side	DIN 2532		Max- m³/h132
16	Max Working Pressure MPa	1		Min- m³/h42
17	Shut-off head MPa	0.36	Head	Operating m
18	Total weight kg	See the table of "Dimensions".		- (Qmax.) m16.9
19	Shaft power kW			- (Qmin.) m34.3
20			Max. Shaft Power at max. impeller kW	9.19
21	Required pump NPSH m		Efficiency %	

Materials

22	Impeller	AISI 316L		
23	Casing	AISI 304		
24	Shaft	AISI 304		
25				
26				
27				

Motor

28	Manufacturer	EPE Standard	Insulation class	F
29	Type	TEFC_3M65-160/9.2_400_Three Phase	Phases	3~
30	Specific design	IE3 / 50 Hz / Pole pairs 1	Frame size	
31	Rated power kW	9.2	Weight kg	
32	Number of poles	2	Electric voltage V	400
33	Speed rpm	2900	Electric current A	17.2
34	Degree of protection	IP 55		
35				

Remarks

Performance Curve

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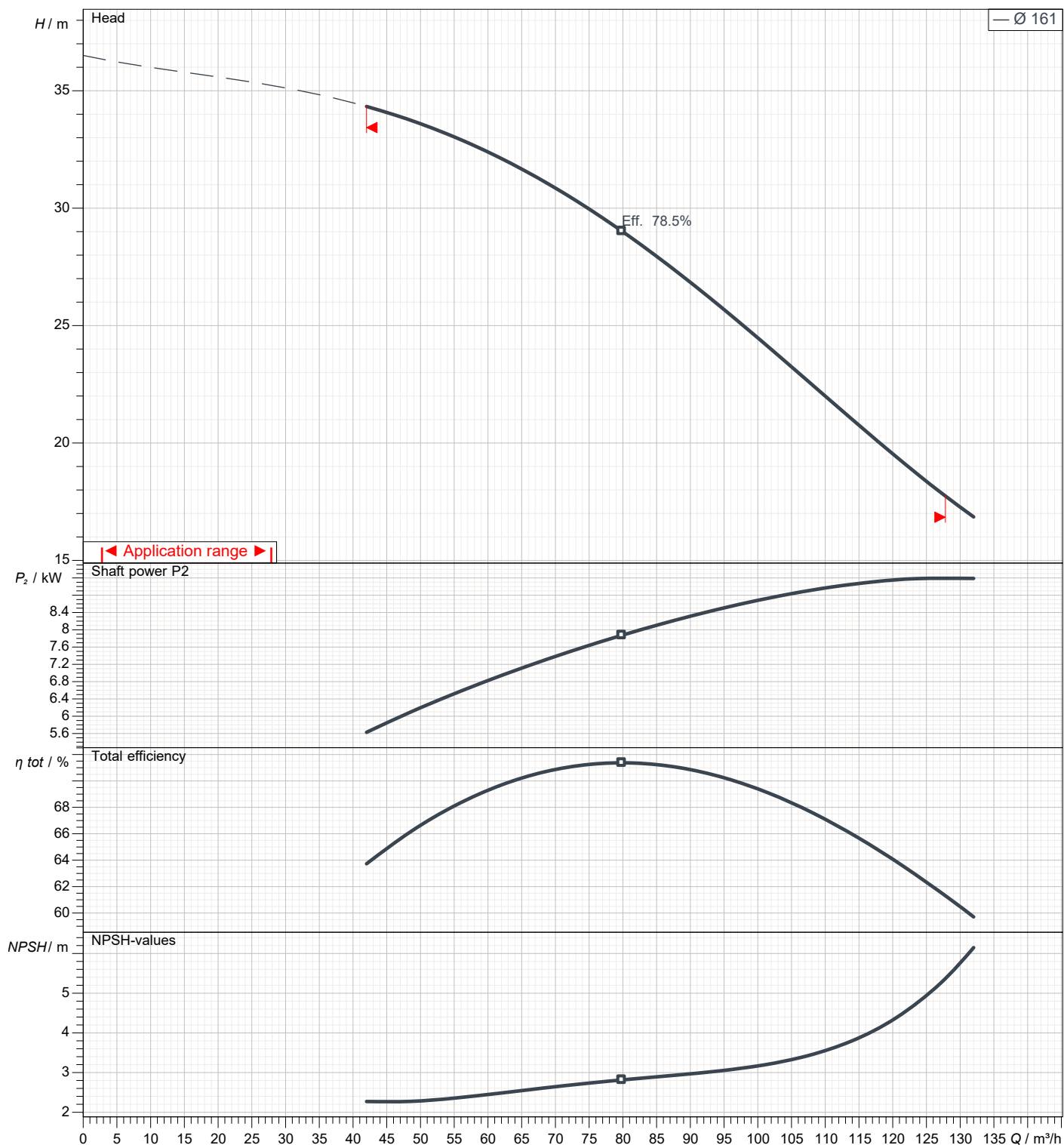
Requested data

1	Flow	m³/h		Operating flow	m³/h		Frequency	Hz	50
2	Head	m		Operating head	m		Number of poles		2
3	Geodetic head	m		Impeller diameter designed	mm	161	Speed	rpm	2900

Pump

Test standard: ISO 9906:2012 - Grade3B

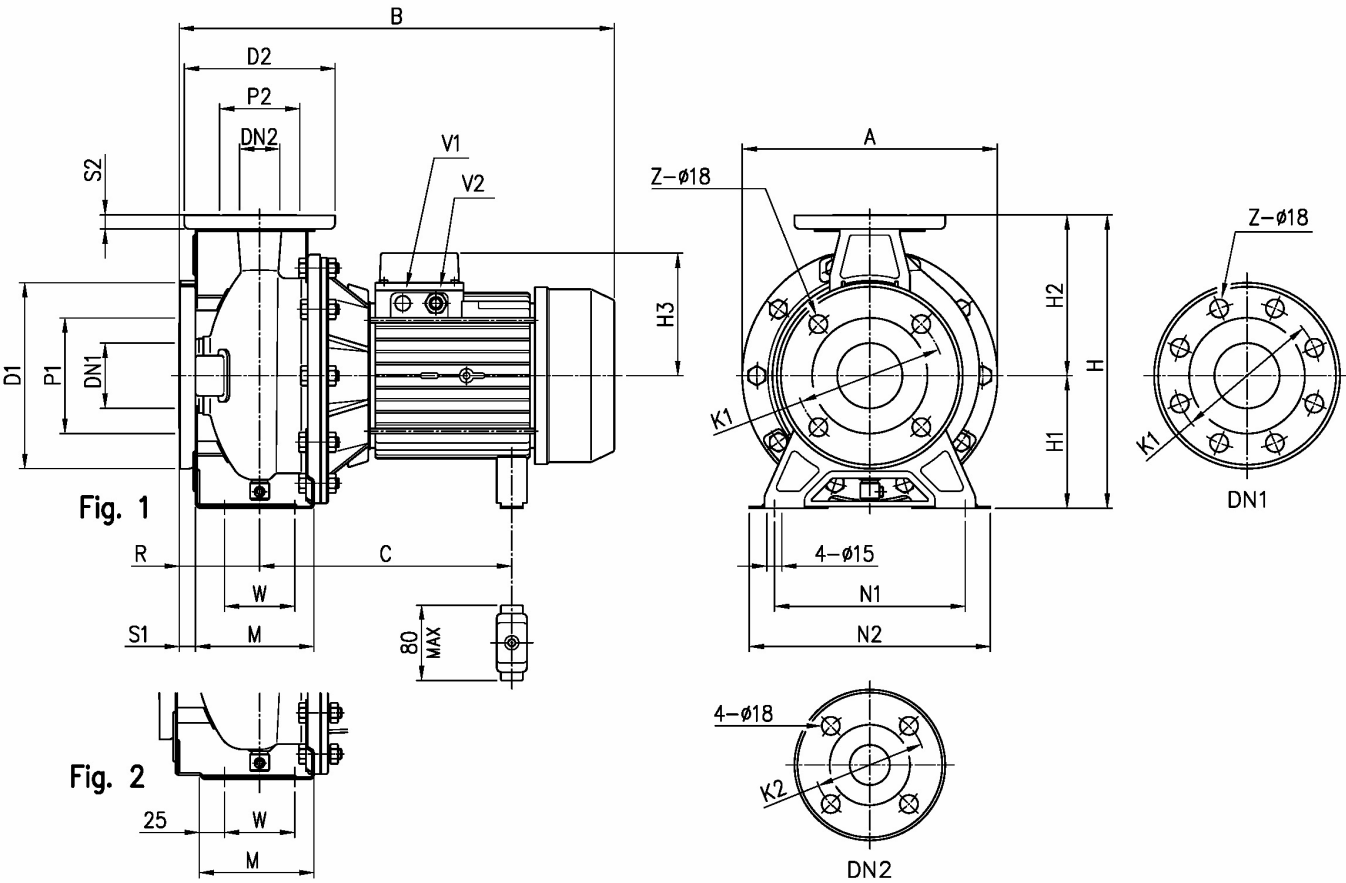
Water; 20°C; 998.3kg/m³; 1cSt



Dimensions

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Dimensions in mm									
1	A	296	H3	178					
2	B	595	M	140					
3	C	329	N1	212					
4	Dia D1	200	N2	280					
5	Dia D2	185	R	100					
6	Dia DN1	80	S1	18					
7	Dia DN2	65	S2	16					
8	Dia K1	160	V2	PG 21					
9	Dia K2	145	W	95					
10	Dia P1	134	Weight P&M	61 kg					
11	Dia P2	115	Z	8					
12	Fig	2	Z option	4					
13	H	360							
14	H1	160							
15	H2	200							

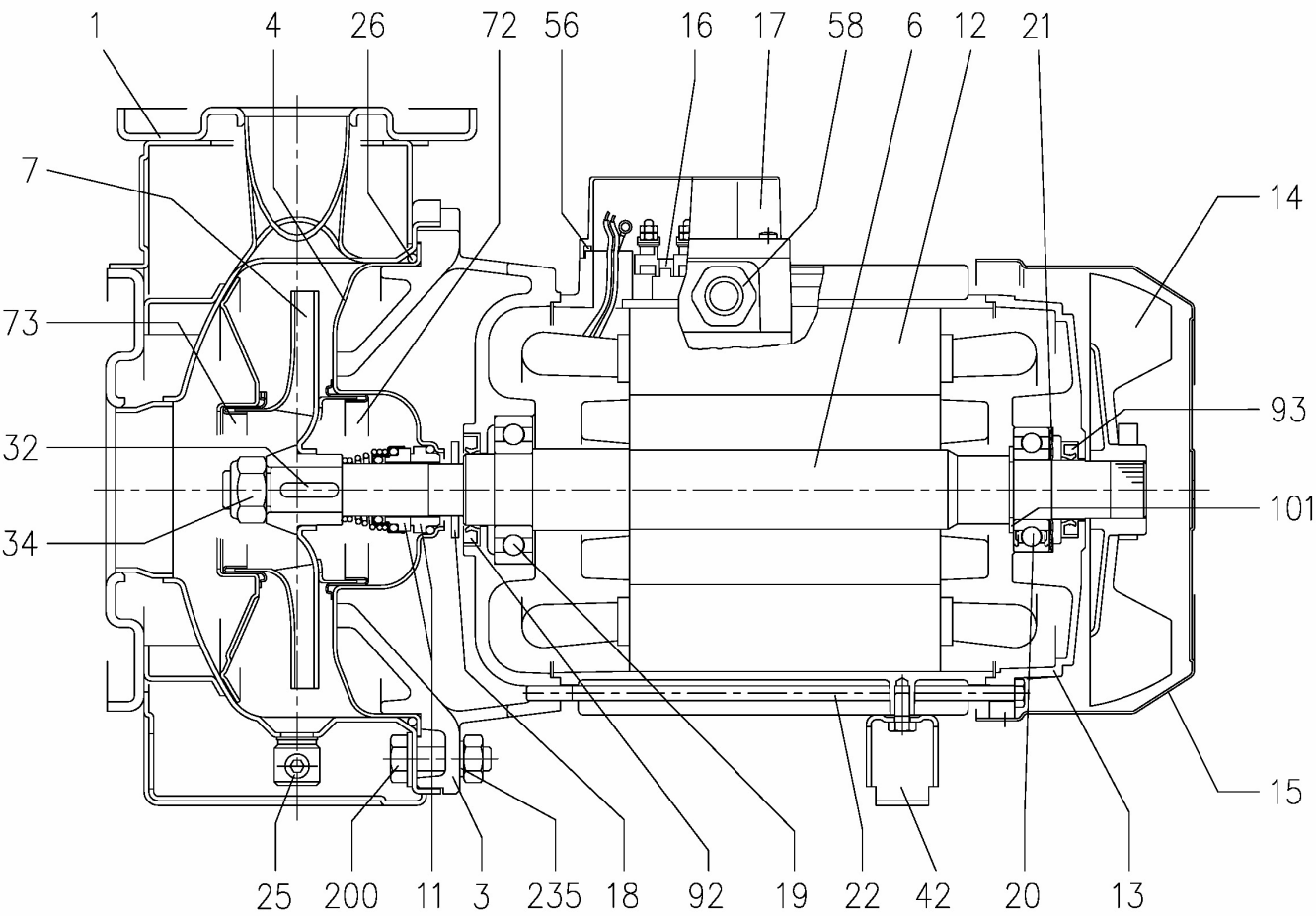
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Construction

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N°	PART NAME	MATERIAL		DIMENSIONS	STANDARD	Q.TY
		3M	3LM			
1	Casing	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
3	Motor bracket	[9]				1
4	Casing cover	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
6	Shaft with rotor-Part in contact with liquid	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
7	Impeller	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
11	Mechanical seal	Carbon/Ceramic/NBR	SiC/SiC/FPM	[8]		1
12	Motor frame with stator	-				1
13	Motor cover	Aluminium				1
14	Fan	PA				1
15	Fan cover	Fe P04 Galvanized				1
16	Terminal	-				1
17	Terminal box cover	Aluminium (three phase version)				1
18	Splash ring	Up to 11 kW 15 kW and above	NBR /	40x21.5x3 50x29.5x3	EBARA DRAWING	1
19	Bearing	-		See table p.324		1
20	Bearing	-		See table p.324		1
21	Adjusting ring	Steel C70				1
22	Tie rod	Up to 3 kW For 4 - 5.5 - 7.5 kW 9.2 e 11kW	Fe 42 Galvanized		M5 M6 M8	EBARA DRAWING
	Screw	15 kW and above	Galvanized Steel 8.8 strenght class ISO 898-1		M10x40	UNI 5739
25	Draing plug	EN 1.4401 (AISI 316) / PTFE		R 1/8" L=8	DIN 906	1
26	"O" ring	32-125, 40-125 32-160, 40-160, 50-125 32-200, 40-200, 50-160, 50-200, 65-160, 65-200	NBR [7]	FPM	158.11x5.34 183.52x5.34 227.96x5.34	OR 6625 OR 6720 OR 6895
32	Key	Up to 11 kW 15 kW and above	EN 1.4401 (AISI 316)		A 6x6x25 A 8x7x30	UNI 6604
34	Impeller nut	Up to 11kW 50-200/15 15 kW and above	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)	M16x1.5 M18x1.5 M20x1.5	UNI 7474
42	Foot	Aluminium / Galvanized steel			EBARA DRAWING	[1]
56	Box gasket	NBR				1
58	Fasting nut	-				[2]
72	Casing ring [3]	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
73	Casing ring	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
92	Lip seal	Up to 3kW From 4 to 7.5 kW From 9.2 kW to 11 kW From 15 kW to 22 kW	-	-	25x40x7 30x47X7 40x55x7 45x60x7	DIN 3760 without spring
093	Lip seal	Up to 4 kW From 5.5 kW to 7.5 kW From 9.2 kW to 11 kW From 15 kW to 22 kW	-	-	25x40x7 30x47X7 40x55x7 45x60x7	DIN 3760 without spring
101	Snap ring (only 9.2 and 11kW)	Carbon tool steels TC 80		Ø 40	UNI 7435	1
200	Screw	32-125, 40-125 40-160, 40-200, 50-125, 50-160, 50-200, 65-125, 65-160, 65-200	Stainless steel A2 70 class ISO 3506/1		M 8x30 M 10x35	UNI 5739
235	Washer	32-125, 40-125 40-160, 40-200, 50-125, 50-160, 50-200, 65-125, 65-160, 65-201	EN 1.4301 (AISI 304)		8.4x17 10.5x21	UNI 6592
206	Screw for bracket [5]	Galvanized Steel 8.8 strenght class ISO 898-1		M 10x40	UNI 5739	4
244	Pin [6]	-	EN 1.4301 (AISI 304)	4x15		1

[1] Quantity =0 for 65-160/15

Quantity =1 for 32-40-50 and 65 up to 11kW

Quantity =2 for 65-200/15, 65-200/18.5, 65-200/22

[2] Quantity =1 up to 11kW

Quantity =2 from 15kW to 22kW

[3] For version 32-200/3, 32-200/4, 32-200/5.5, 40-200/5.5, 40-200/7.5, 40-200/11, 50-160/5.5, 50-160/7.5, 50-200/9.2, 50-200/11, 50-200/15

[4] Quantity =10 for 32-160, 40-160, 50-125, 65-125

Quantity =12 for 32-200, 40-200, 50-160, 50-200, 65-160, 65-200

[5] For 15kW and above

[6] Only for 65-160/15 and 65-200

[7] FPM for H-HS-HW-HSW version

EPDM for E version, Q1AEGG, Q1Q1EGG, Q1U3EGG, U3CEGG, U3U3EGG (U3U3EGG not available for model 65-160/15 and 65-200)

[8] Special version: see CONSTRUCTION 3

[9] Cast iron EN-GJL-200-EN 1561 for 32-200/3 and models with 15, 18.5, 22 kW motor
Aluminum AL-EN-1706-AC-46000-D for all the others.

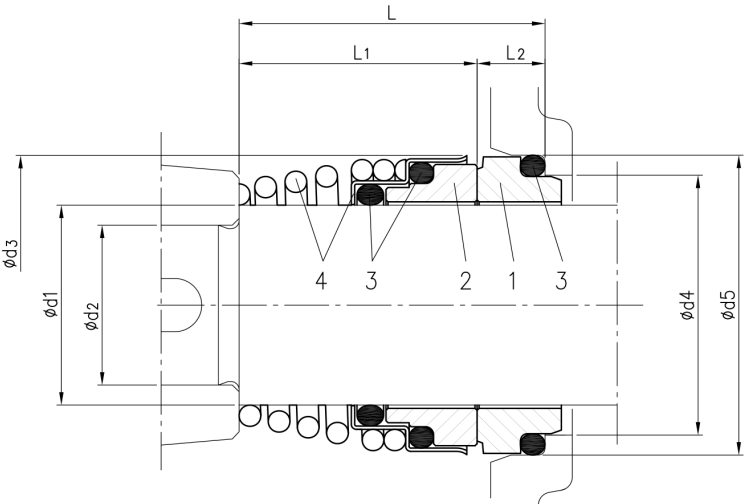
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Version	Pump type	Dimensions								Material			
		d1	d2	d3	d4	d5	L	L1	L2	1 Stationary seal ring	2 Rotary seal ring	3 Rubber	4 Frame + Spring
Standard	32-125/160/200	22	19	38	31	37	37.5	27.5	10	Carbon	Ceramic	NBR	EN 1.4401 (AISI 316)
	40-125/160/200												
	50-125/160/200												
	65-125												
	65-160/7.5-9.2-11	30	24	46	39	45	42.5	32.5	10				
	65-160/15												
65-200													