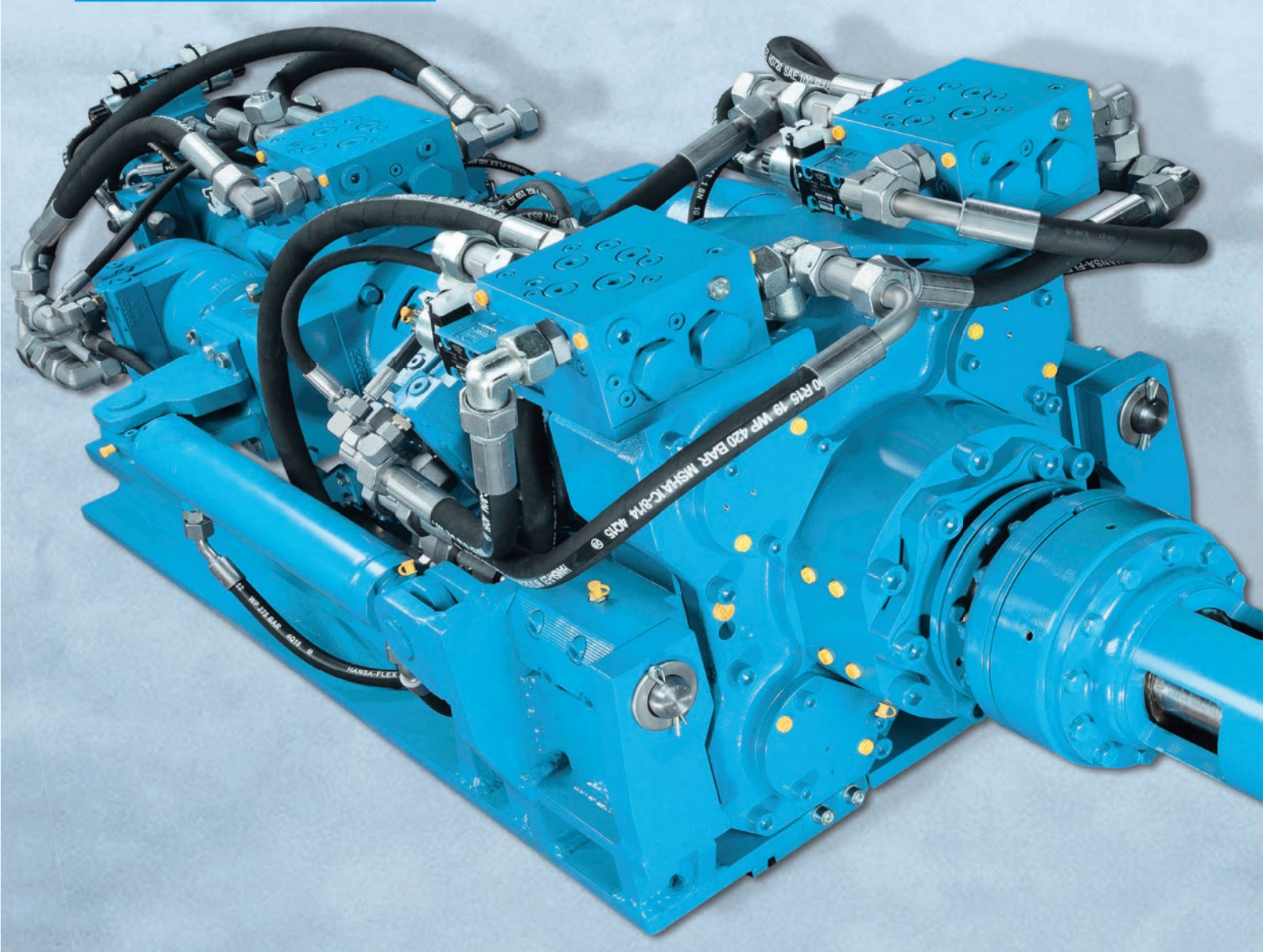
Materials Services
Infrastructure

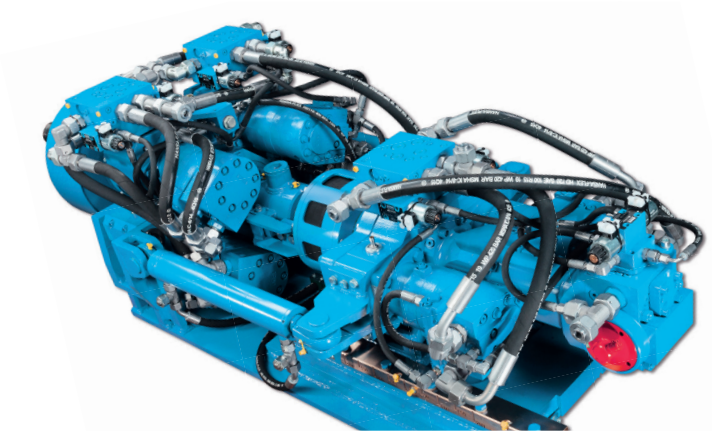
KRUPP Double Head HR60-HB45.

thyssenkrupp



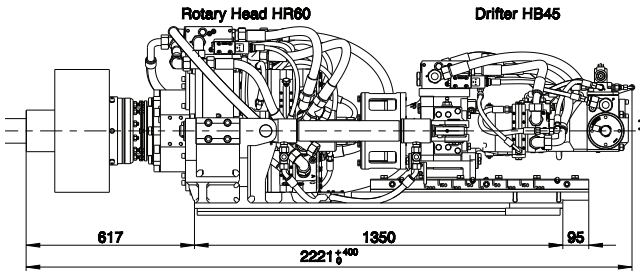
KRUPP Double Head System HR60-HB45

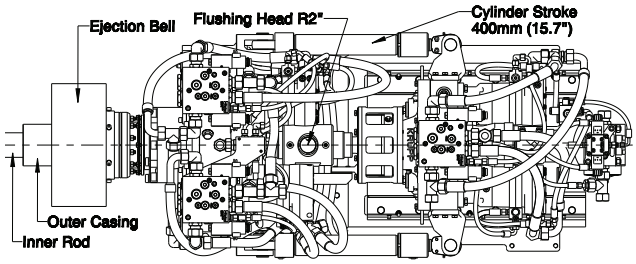
Compact design – the ideal double head system assembled to one slege plate for larger drill rigs.

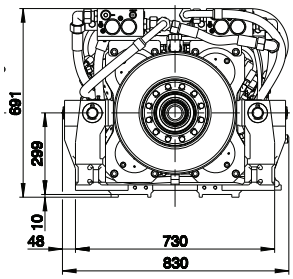


- Especially designed as low profile double head system for overburden drilling, to drill very close in front of a wall; only 400 mm distance between drilling axle and top edge of the rotary drive system.
- With cylinders arranged between the rotary head and the drifter a relative adjustment between outer casing and inner rod of 400 mm (+/- 200 mm) is possible.
- Casing diameter up to 300 mm (12 inch).
- Optional: electric or hydraulic changeover for the rotary drive speed and for the percussion mechanism frequency.
- Options: flushing head, discharge ejection bell, integrated RPM sensor and central lubrication system.

Main Dimensions

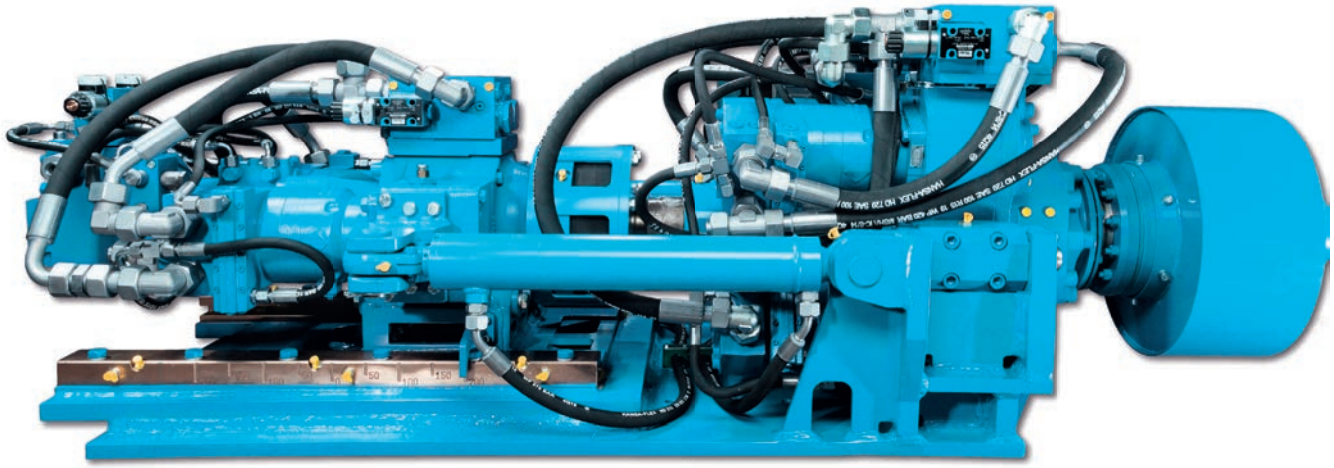






Weight
Rotary Head + Drifter approx. 1150 kg
Sledge approx. 530 kg

Retraction Force
HR60 max. 250 kN
HB45 max. 120 kN



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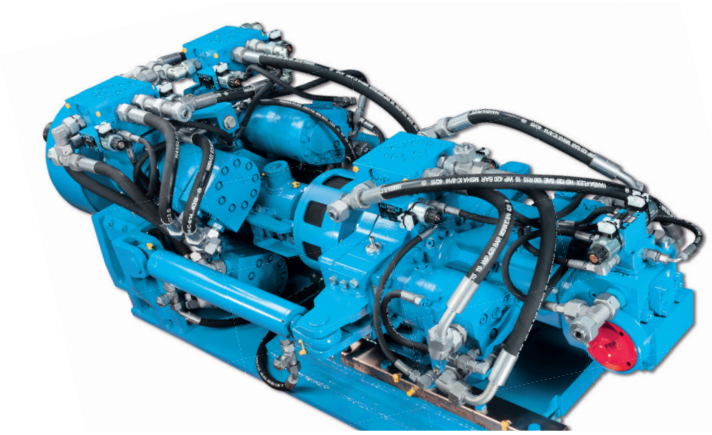

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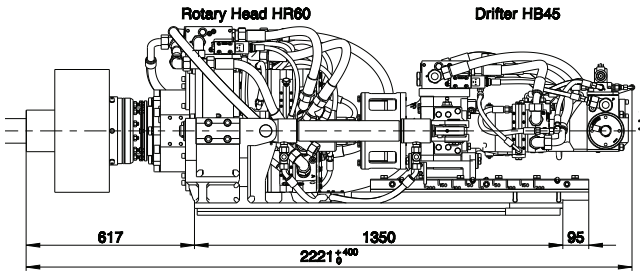

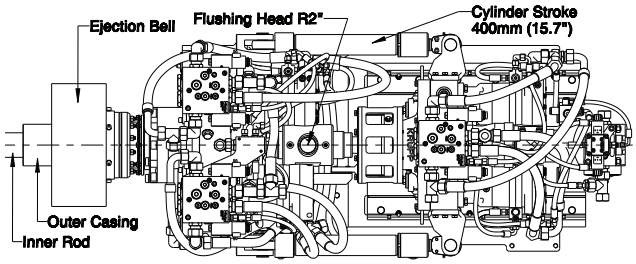

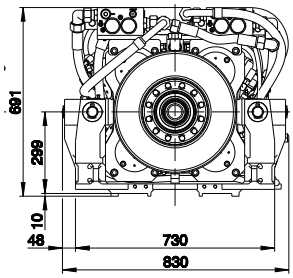

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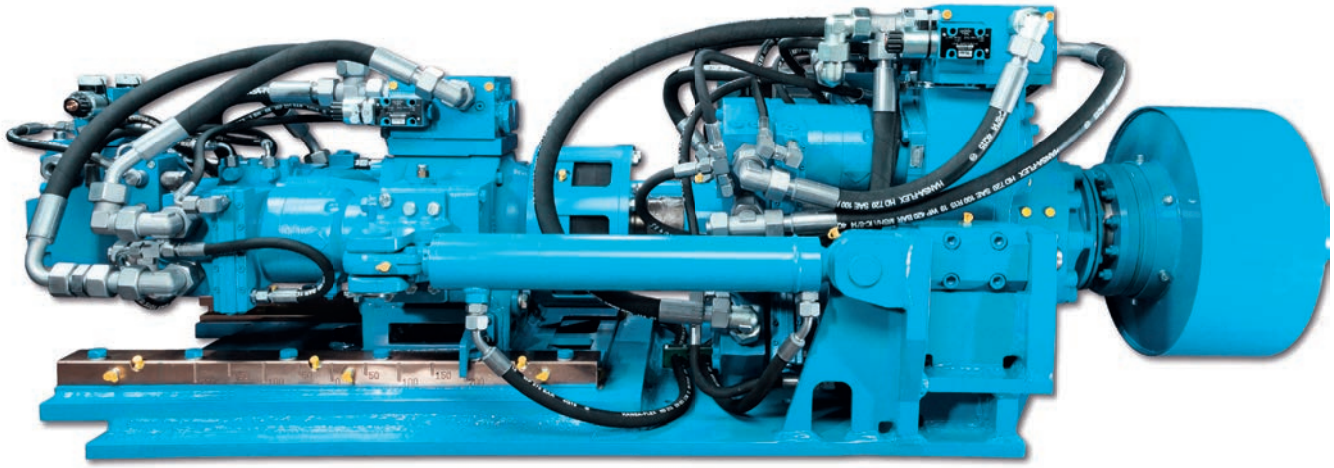

Rotary Drives HR60 (for outside casings)

Motor-Version 2x HP480 ccm + 2x HP677 ccm

Pressure at rotary drive			170 bar				200 bar				240 bar				280 bar			
Gear			4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st
Oil flow rate (lpm)	150	Torque (Nm)	6,100	9,200	12,200	18,400	7,400	11,100	14,800	22,200	8,600	13,000	17,300	25,900	10,100	15,100	20,200	30,300
		Speed (rpm)	60	40	30	18	60	40	30	18	60	40	30	18	60	40	30	18
	240	Torque (Nm)	6,100	9,200	12,200	18,400	7,400	11,100	14,800	22,200	8,600	13,000	17,300	25,900	10,100	15,100	20,200	30,300
		Speed (rpm)	96	64	48	28	96	64	48	28	96	64	48	28	96	64	48	28
	340	Torque (Nm)	6,100	9,200	12,200	18,400	7,400	11,100	14,800	22,200	8,600	13,000	17,300	25,900	10,100	15,100	20,200	30,300
		Speed (rpm)	136	91	68	40	136	91	68	40	136	91	68	40	136	91	68	40

1st gear (parallel mode), 2nd gear (parallel + 2-speed mode), 3rd gear (serial mode), 4th gear (serial + 2-speed mode)

Motor-Version 4x HP677 ccm (standard)

Pressure at rotary drive			170 bar				200 bar				240 bar				280 bar			
Gear			4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st
Oil flow rate (lpm)	150	Torque (Nm)	7,200	10,700	14,300	21,500	8,600	13,000	17,300	25,900	10,100	15,200	20,200	30,400	11,800	17,700	23,600	35,400
		Speed (rpm)	51	34	26	15	51	34	26	15	51	34	26	15	51	34	26	15
	240	Torque (Nm)	7,200	10,700	14,300	21,500	8,600	13,000	17,300	25,900	10,100	15,200	20,200	30,400	11,800	17,700	23,600	35,400
		Speed (rpm)	82	55	41	24	82	55	41	24	82	55	41	24	82	55	41	24
	340	Torque (Nm)	7,200	10,700	14,300	21,500	8,600	13,000	17,300	25,900	10,100	15,200	20,200	30,400	11,800	17,700	23,600	35,400
		Speed (rpm)	116	77	58	34	116	77	58	34	116	77	58	34	116	77	58	34

1st gear (parallel mode), 2nd gear (parallel + 2-speed mode), 3rd gear (serial mode), 4th gear (serial + 2-speed mode)

Rotary Drives HB45 (for inner rods)

Motor-Version 2x HP480 ccm

Pressure at rotary drive			140 bar				200 bar				240 bar				280 bar			
Gear			4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st
Oil flow rate (lpm)	90	Torque (Nm)	1,300	2,100	3,100	4,700	2,100	3,300	4,600	7,000	2,500	3,900	5,400	8,300	3,000	4,600	6,400	9,700
		Speed (rpm)	121	80	60	40	121	80	60	40	121	80	60	40	121	80	60	40
	150	Torque (Nm)	900	1,800	2,800	4,400	1,700	2,900	4,400	6,700	2,100	3,600	5,200	8,000	2,600	4,300	6,200	9,400
		Speed (rpm)	201	134	101	67	201	134	101	67	201	134	101	67	201	134	101	67
	170	Torque (Nm)	800	1,600	2,700	4,300	1,500	2,800	4,300	6,600	1,900	3,400	5,100	7,900	2,400	4,100	6,100	9,300
		Speed (rpm)	228	152	114	76	228	152	114	76	228	152	114	76	228	152	114	76

1st gear (parallel mode), 2nd gear (parallel + 2-speed mode), 3rd gear (serial mode), 4th gear (serial + 2-speed mode)

Motor-Version 2x HP677 ccm (standard)

Pressure at rotary drive			140 bar				200 bar				240 bar				280 bar			
Gear			4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st
Oil flow rate (lpm)	90	Torque (Nm)	1,900	3,000	4,300	6,600	2,900	4,700	6,500	9,900	3,500	5,500	7,700	11,600	4,200	6,500	9,000	13,600
		Speed (rpm)	86	57	43	29	86	57	43	29	86	57	43	29	86	57	43	29
	150	Torque (Nm)	1,300	2,500	4,000	6,200	2,400	4,100	6,200	9,500	3,000	5,000	7,400	11,300	3,600	6,000	8,700	13,300
		Speed (rpm)	143	95	71	48	143	95	71	48	143	95	71	48	143	95	71	48
	170	Torque (Nm)	1,100	2,300	3,900	6,100	2,200	3,900	6,000	9,300	2,700	4,800	7,200	11,100	3,400	5,800	8,500	13,100
		Speed (rpm)	162	108	81	54	162	108	81	54	162	108	81	54	162	108	81	54

1st gear (parallel mode), 2nd gear (parallel + 2-speed mode), 3rd gear (serial mode), 4th gear (serial + 2-speed mode)

Other motor versions are available

Percussion Unit

Operating pressure (kp/cm²)	180 - 200 bar
Oil flow rate (l/min)	70 - 90 lpm
Impact rate (min^{-1})	1,200 / 1,800 / 2,500 bpm
Single impact energy (Joule)	590 / 400 / 340 Nm

Shank Adaptors (Striker Bars)

Male thread	C64 left, C64 right
Other shank adaptors (striker bars) are available	

Materials Services
Infrastructure

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Rotary Drives HR60 (for outside casings)

Motor-Version 2x HP480 ccm + 2x HP677 ccm

Pressure at rotary drive			170 bar				200 bar				240 bar				280 bar			
Gear			4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st
Oil flow rate (lpm)	150	Torque (Nm)	6,100	9,200	12,200	18,400	7,400	11,100	14,800	22,200	8,600	13,000	17,300	25,900	10,100	15,100	20,200	30,300
		Speed (rpm)	60	40	30	18	60	40	30	18	60	40	30	18	60	40	30	18
	240	Torque (Nm)	6,100	9,200	12,200	18,400	7,400	11,100	14,800	22,200	8,600	13,000	17,300	25,900	10,100	15,100	20,200	30,300
		Speed (rpm)	96	64	48	28	96	64	48	28	96	64	48	28	96	64	48	28
	340	Torque (Nm)	6,100	9,200	12,200	18,400	7,400	11,100	14,800	22,200	8,600	13,000	17,300	25,900	10,100	15,100	20,200	30,300
		Speed (rpm)	136	91	68	40	136	91	68	40	136	91	68	40	136	91	68	40

1st gear (parallel mode), 2nd gear (parallel + 2-speed mode), 3rd gear (serial mode), 4th gear (serial + 2-speed mode)

Motor-Version 4x HP677 ccm (standard)

Pressure at rotary drive			170 bar				200 bar				240 bar				280 bar			
Gear			4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st
Oil flow rate (lpm)	150	Torque (Nm)	7,200	10,700	14,300	21,500	8,600	13,000	17,300	25,900	10,100	15,200	20,200	30,400	11,800	17,700	23,600	35,400
		Speed (rpm)	51	34	26	15	51	34	26	15	51	34	26	15	51	34	26	15
	240	Torque (Nm)	7,200	10,700	14,300	21,500	8,600	13,000	17,300	25,900	10,100	15,200	20,200	30,400	11,800	17,700	23,600	35,400
		Speed (rpm)	82	55	41	24	82	55	41	24	82	55	41	24	82	55	41	24
	340	Torque (Nm)	7,200	10,700	14,300	21,500	8,600	13,000	17,300	25,900	10,100	15,200	20,200	30,400	11,800	17,700	23,600	35,400
		Speed (rpm)	116	77	58	34	116	77	58	34	116	77	58	34	116	77	58	34

1st gear (parallel mode), 2nd gear (parallel + 2-speed mode), 3rd gear (serial mode), 4th gear (serial + 2-speed mode)

Rotary Drives HB45 (for inner rods)

Motor-Version 2x HP480 ccm

Pressure at rotary drive			140 bar				200 bar				240 bar				280 bar			
Gear			4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st
Oil flow rate (lpm)	90	Torque (Nm)	1,300	2,100	3,100	4,700	2,100	3,300	4,600	7,000	2,500	3,900	5,400	8,300	3,000	4,600	6,400	9,700
		Speed (rpm)	121	80	60	40	121	80	60	40	121	80	60	40	121	80	60	40
	150	Torque (Nm)	900	1,800	2,800	4,400	1,700	2,900	4,400	6,700	2,100	3,600	5,200	8,000	2,600	4,300	6,200	9,400
		Speed (rpm)	201	134	101	67	201	134	101	67	201	134	101	67	201	134	101	67
	170	Torque (Nm)	800	1,600	2,700	4,300	1,500	2,800	4,300	6,600	1,900	3,400	5,100	7,900	2,400	4,100	6,100	9,300
		Speed (rpm)	228	152	114	76	228	152	114	76	228	152	114	76	228	152	114	76

1st gear (parallel mode), 2nd gear (parallel + 2-speed mode), 3rd gear (serial mode), 4th gear (serial + 2-speed mode)

Motor-Version 2x HP677 ccm (standard)

Pressure at rotary drive			140 bar				200 bar				240 bar				280 bar			
Gear			4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st	4th	3rd	2nd	1st
Oil flow rate (lpm)	90	Torque (Nm)	1,900	3,000	4,300	6,600	2,900	4,700	6,500	9,900	3,500	5,500	7,700	11,600	4,200	6,500	9,000	13,600
		Speed (rpm)	86	57	43	29	86	57	43	29	86	57	43	29	86	57	43	29
	150	Torque (Nm)	1,300	2,500	4,000	6,200	2,400	4,100	6,200	9,500	3,000	5,000	7,400	11,300	3,600	6,000	8,700	13,300
		Speed (rpm)	143	95	71	48	143	95	71	48	143	95	71	48	143	95	71	48
	170	Torque (Nm)	1,100	2,300	3,900	6,100	2,200	3,900	6,000	9,300	2,700	4,800	7,200	11,100	3,400	5,800	8,500	13,100
		Speed (rpm)	162	108	81	54	162	108	81	54	162	108	81	54	162	108	81	54

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